

THE UNIVERSITY OF CHICAGO

ALL FLESH IS GRASS: AGRARIAN IMPROVEMENT AND ECOLOGICAL
IMPERIALISM IN BRITAIN'S SETTLER EMPIRE, 1780-1840

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Dedicated to my parents, Kathy and Kerry Capps, for their fierce and fathomless love,

And to the memory of Alison Winter.

As for man, his days are as grass; as a flower of the field, so he flourisheth.
For the wind passeth over it, and it is gone; and the place thereof shall know it no more.
Psalm 103:15-16 (KJV)

For all flesh is as grass, and all the glory of man as the flower of the grass. The grass withereth,
and the flower thereof falleth away.
1 Peter 1:24 (KJV)

The voice said, Cry. And he said, What shall I cry? All flesh is grass, and all the goodliness
thereof is as the flower of the field.
Isaiah 40:6 (KJV)

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LIST OF ABBREVIATIONS

BL	The British Library (London, UK)
DTC	Dawson Turner Copies (British Museum of Natural History)
DWD	Diary of William Duckitt (National Library of South Africa)
EIC	East India Company
ENSO	El Nino Southern Oscillation
HRNSW	Historical Records of New South Wales
MERL	Museum of English Rural Life (Reading, UK)
NHM	The British Museum of Natural History (London, UK)
ML	Mitchell Library/State Library of New South Wales
NA	The National Archives and Public Records Office (UK)
NAS	The National Archives of Scotland (Edinburgh, UK)
NLS	The National Library of Scotland (Edinburgh, UK)
NLSA	The National Library of South Africa
NSW	New South Wales (Australia)
RBGK	Royal Botanic Gardens at Kew
RCC	Records of the Cape Colony
SRNSW	State Records New South Wales (Kingswood, NSW)
VOC	<i>Vereenigde Oost-Indische Compagnie</i> (Dutch East India Company)
WCA	Western Cape Archives (National Archives of South Africa)

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ABSTRACT

This dissertation explores the transfer and utilization of European pasture grasses and other fodder crops in New South Wales (Australia) and the Cape Colony (South Africa) in the late-eighteenth and early nineteenth centuries. It examines attempts in the period directly following the loss of the thirteen American colonies to replicate Enlightenment-era mixed husbandry (based in sown fodder crops) in these fledgling antipodean colonies. It calls into question Alfred Crosby's model of ecological imperialism (the spread of European biota in temperate colonial possessions) as a phenomenon occurring largely outside of official oversight; it destabilizes an enduring dichotomy in imperial historiography between land and labor intensive agriculture in the Old World and land extensive, destructive agriculture in the New World; and it suggests ways in which to merge scholarship on the ideological and scientific underpinnings of imperialism with the actual "groundwork" of settlement. The dissertation argues that a particular form of agrarian improvement (grass-based mixed husbandry) was the driving force of colonial agricultural development in New South Wales and the Cape in the period between 1780 and 1840, but that this distinctly metropolitan version of improvement came into constant conflict with new environmental, political, economic, and social realities in these fledgling colonies, as well as with competing models of improvement (e.g. commercial pastoralism). Ecological imperialism was highly orchestrated in these two colonies; however, in the period before the scientific governance of nature at the hands of a powerful colonial state, the combined environmental, political, economic, and social challenges to mixed husbandry meant that ecological imperialism was extremely hard-won—if it was won at all.

INTRODUCTION

Several years ago, Tom Brooking and Eric Pawson, both New Zealand historical geographers, issued an altar-call of sorts for new historical scholarship that addressed the “Silences of Grass” in the history of the British Empire, given that so much of its economic development has revolved around various forms of “worked up grass.” Brooking and Pawson point out that, despite its importance to the imperial economy, grass has been often overlooked or taken for granted in imperial histories.¹ “Colonial development,” they argue, “could hardly have occurred without grass and clover plants. However, today’s historians of empire seem no readier to acknowledge this than were observers at the time.”² Exploring agrarian development in New South Wales (Australia) and the Cape Colony (South Africa) in the late eighteenth and early nineteenth centuries, this dissertation helps to rectify this silence, affirming the centrality of grassland (sown and native) to the course of colonialism, and revealing how grass was never far from the minds of agrarian improvers and colonial officials. In addressing this silence, I also problematize the way that colonial agriculture and ecological imperialism have been analyzed in historical scholarship on the British Empire. Examining the transfer and spread of European

¹ Tom Brooking and Eric Pawson, “Silences of Grass: Retrieving the Role of Pasture Plants in the Development of New Zealand and the British Empire,” *The Journal of Imperial and Commonwealth History* 35, no. 3 (September 1, 2007): 417–35. See also Tom Brooking and Eric Pawson, *Seeds of Empire: The Environmental Transformation of New Zealand* (London: I. B. Tauris, 2010). Grass has not been completely silent in historical literature on empire, but the list is fairly short. John Sheail, “Grassland Management and the Early Development of British Ecology,” *British Journal for the History of Science* 19, no. 3 (1986); Pekka Hämäläinen, “The Politics of Grass: European Expansion, Ecological Change, and Indigenous Power in the Southwest Borderlands,” *William and Mary Quarterly* 67, no. 2 (April 2010): 173-208; E. L. Jones, “Creative Disruptions in Colonial American Agriculture, 1620-1820,” *Agricultural History* 48, no. 4 (October 1974); Fredrik Albritton Jonsson, “Climate Change and the Retreat of the Atlantic: The Cameralist Context of Pehr Kalm’s Voyage to North America, 1748–51,” *The William and Mary Quarterly* 72, no. 1 (January 1, 2015): 99–126;

² Brooking and Pawson, “Silences of Grass,” 418.

pasture grasses to British settler colonies in the late eighteenth and early nineteenth centuries has enabled me to ask much bigger questions about the relationships between political ideology and agricultural practice, between colonial ambition and ecological limits, between political economy and the economy of nature, between agrarian change in Britain and environmental change in the colonies.

This dissertation connects the mindwork and groundwork of colonial development during a period (1780-1830) that has, as C.A. Bayly observes, resisted definition.³ Bayly re-animated this “imperial meridian” as more than a liminal period between the decline of Britain’s “first” Atlantic empire and the emergence of its administrative and informal empire in the Age of Liberalism, but the period is equally difficult to characterize for historians interested in environmental transformations as a consequence of colonialism. Environmental change in colonial settlements between 1780 and 1830 was not a result of assertive scientific governance at the hands of a powerful colonial state, nor was it haphazard or anarchic, wholly ungoverned. Bayly’s solution to the problem of defining the political character of this period was to look at the dominant discourse of the age, agrarian improvement.⁴ The ideology of agrarian improvement was in this period wedded to patriotism and paternalism, which most often translated to the empire as authoritarianism (rather than mercantilism or liberalism). Agrarian improvement is the most appropriate framework for my analysis of colonial science, economic development, and environmental change of this period as well. Like Bayly, I look at colonial settlement during this period on its own terms, which involves a critical interrogation of the way this period has been approached by other historians of empire. By analyzing colonial

³ Christopher Alan Bayly, *Imperial Meridian: The British Empire and the World, 1780-1830* (London: Longman, 1989).

⁴ *Ibid.*, 89–92.

development and environmental change in connection with agrarian improvement, I also demonstrate the political, social, economic, and environmental complexities of translating imperial mindwork into groundwork.

What exactly do I mean by agrarian improvement? “Improvement” or “to improve,” as a term (and concept), is, as Raymond Williams has pointed out, one of those interesting words that today has a very general meaning (to make better), but came into the English language with a much more specific meaning. In its earliest use, to improve meant to invest, especially in connection to land. It was most commonly used to refer to the act of bringing wasteland or common land into productive cultivation or use. Throughout the long eighteenth century, the predominant meaning of improvement was the act of making land and stock more productive than it was formerly, or, in Williams’s Marxist framing, “the development of a modernizing agrarian capitalism.”⁵ I will explore this concept in much greater detail in the following, but for now I use agrarian improvement as a label for both a connected ideology and set of practices. Agrarian improvement as an ideology was the desire to make unproductive or underperforming lands yield more; increase the wealth, happiness, and security of all those who depend on the land for support (i.e. everyone); and to do so in a way that made both productivity and wealth stable (or, to use a modern term, sustainable). In other words, prosperity was bound to the integrity of the soil. Agrarian improvement as an ideology also reimagined (and the caused the reconfiguration) of the spatial organization of land and people.⁶

⁵ Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (Oxford: Oxford University Press, 1985), 161.

⁶ Bayly, *Imperial Meridian*, 88-9; Paul Slack, *The Invention of Improvement: Information and Material Progress in Seventeenth-Century England* (Oxford: Oxford University Press, 2015), 1–14; Brian Bonnyman, *The Third Duke of Buccleuch and Adam Smith: Estate Management and Improvement in Enlightenment Scotland* (Edinburgh: Edinburgh University Press, 2014), 6–8;

Agrarian improvement as a set of practices involved a variety of activities too numerous to list in detail here. But at its core, agrarian improvement was about keeping the soil in good heart. Agriculture, even at its best, is “controlled disturbance.”⁷ The taking of a crop is an erosion of the soil’s fertility (i.e. its ability to support the next crop). Universally, those who till the soil recognize this kind of limit, even if they ignore it.⁸ In most of human history, the restoration of lost fertility can only occur by letting land rest over time. But the practices of improvement, driven often by necessity, targeted those resting periods when land is unproductive. Agrarian improvement entails a cultivator taking over the function of time by restoring the fertility of the soil by direct action: inputs of manure, minerals, and decaying plant matter. In early modern Britain (and elsewhere) this was achieved primarily by the union of arable farming and close-range stock rearing on sown pastures and sown fodder crops (like clover, rye grass, and turnips), a system solidified over the Enlightenment period as “mixed husbandry,” whereby nutrients cycle through the soil, crops, and the guts of animals. At the heart of this union was grass, which I am using as a shorthand for a variety of fodder plants in the *poaceae* (true grass) and *fabaceae* (legume) families. It is for this reason that I am using grass as a lens through which to view colonial development.

Improvement as an ideology offered a way of looking at the world and of looking at lands, including those of “new” worlds, those unproductive wastelands; improvement in action, as this dissertation demonstrates, was a different story. An examination of the orchestration of

Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850* (Cambridge: Cambridge University Press, 1996), passim; Richard Harry Drayton, *Nature’s Government: Science, Imperial Britain, and the “Improvement” of the World* (New Haven: Yale University Press, 2000), passim.

⁷ Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (New York: Macmillan, 2003), 15.

⁸ Ibid.

agrarian improvement and the fate of mixed husbandry in New South Wales and the Cape, those post-American “redux” colonies, allows us to interrogate two dominant narratives in the historiography of empire, Crosby’s ecological imperialism thesis and the enduring dichotomy between metropolitan and colonial agricultural development. It also presents an opportunity to probe the limitations of the established methodologies of history of science, on one hand, and environmental history, on the other, in the historiography of the British Empire.

This dissertation owes a great debt, as any work on environmental change in European colonies does, to Alfred Crosby’s ecological imperialism thesis. In a nutshell, Crosby argues that the European conquest and ecological homogenization of what he calls the “Neo-Europes” (colonies of settlement in temperate regions) was made possible by the largely independent establishment and spread of Europe’s “portmanteau biota.”⁹ In other words, European plants, animals, and germs did much of the “work” of colonization, resulting in the ecological transformation of colonial landscapes. Of course, Crosby’s thesis is now 30 years old; but while many have criticized Crosby’s thesis as being rather too straightforward ecologically, spatially, and historically, it is hard to think of another historical “grand narrative” that has had more impact on how historians think about environment, population, and agriculture in empires.¹⁰

⁹ Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, 2nd ed. (Cambridge: Cambridge University Press, 2004), passim.

¹⁰ For significant critiques see Tim F. Flannery, *The Future Eaters: An Ecological History of the Australasian Lands and People* (Chatswood, N.S.W.: Reed, 1994); William Beinart and Karen Middleton, “Plant Transfers in Historical Perspective: A Review Article,” *Environment and History* 10, no. 1 (February 1, 2004): 3–29; Jodi Frawley and Iain McCalman, *Rethinking Invasion Ecologies from the Environmental Humanities* (Routledge, 2014); James Beattie, Edward Melillo, and Emily O’Gorman, *Eco-Cultural Networks and the British Empire: New Views on Environmental History* (London: Bloomsbury Publishing, 2014); Richard Grove and Vinita Damodaran, “Imperialism, Intellectual Networks, and Environmental Change; Unearthing the Origins and Evolution of Global Environmental History,” in *Nature’s End*, ed. Sverker Sörlin and Paul Warde (London: Palgrave Macmillan UK, 2009), 23–49,

Historical scholarship on invasive species, environmental degradation, and ecological change in colonial and post-colonial contexts has been built upon this thesis (and with good reason) for the last three decades. This dissertation is, by no means, a rejection of Crosby's thesis. There is no denying that landscapes and ecological communities throughout Australia and South Africa have been transformed over the last few centuries by the introduction of European plants and animals.¹¹ I am, however, pushing back against Crosby's time scale and characterization of agency in the process of ecological imperialism. In Crosby's formulation, the process of ecological imperialism occurred largely outside of official oversight, without much intentionality on the part of the men and women who provided the "ride" from Europe to these colonies. Ecological imperialism was un-orchestrated and un-governed, and was, in many ways, inevitable. While this thesis may be very appropriate in the Americas in the sixteenth, seventeenth, and early eighteenth century, it does not hold up as well in the late eighteenth and nineteenth centuries on two fronts: orchestration and execution. In the two cases I examine in this dissertation, New South Wales and the Cape (small and distant, but very important in this "regrouping" period), ecological imperialism was highly orchestrated, carefully coordinated by the movers and shakers of agrarian improvement in Britain; the fleets Britain sent to New South

http://link.springer.com/chapter/10.1007/978-0-230-24509-9_2. For works that build upon Crosby's thesis see Elinor G. K. Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (Cambridge: Cambridge University Press, 1994); Virginia DeJohn. Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford: Oxford University Press, 2004); William Beinart and Peter Coates, *Environment and History: The Taming of Nature in the USA and South Africa* (London: Routledge, 2002); Peter Coates, *American Perceptions of Immigrant and Invasive Species: Strangers on the Land*, 1 edition (Berkeley: University of California Press, 2007); Richard J. Hobbs, *Invasive Species in a Changing World* (Island Press, 2000); Pekka Hämäläinen, *The Comanche Empire* (New Haven: Yale University Press, 2008); Jared M. Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (W. W. Norton & Company, 1997).

¹¹ J. M. Suttie, Stephen G. Reynolds, and Caterina Batello, *Grasslands of the World* (Geneva: Food & Agriculture Org., 2005), 77–117, 343–75.

Wales in 1788 and to the Cape of Good Hope in 1800 were, as I call them “fleets of fodder.” These plants were critical components of the attempt to transfer Enlightenment-era mixed husbandry from Britain to these newly-acquired colonies. And in both colonies the spread of those fodder plants— and the system of husbandry intended to facilitate that spread—was incredibly difficult to establish or maintain due to a variety of political, social, economic, and environmental factors. Ecological imperialism was hard won—if it was won at all.

Next, examining this period (~1780-1830) in the history of the British empire on its own terms (i.e. agrarian improvement) destabilizes the dichotomy between metropolitan and colonial agriculture, a dichotomy that has gone largely uninterrogated in the historiography of the British Empire, even in histories of science and environmental histories.¹² The assumption is that wherever land is scarce and/or expensive and labor plentiful (as it was in much of the “Old World”), intensive agricultural practices (i.e. soil husbandry) will reign; wherever land is plentiful and cheap and labor scarce and/or expensive (the case in much of the “New World”)

¹² James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (Oxford: Oxford University Press, 2011); Anderson, *Creatures of Empire*; Beinart, Beinart, and Coates, *Environment and History*; William Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950* (Oxford: Oxford University Press, 2008); John Gascoigne, *The Enlightenment and the Origins of European Australia* (Cambridge: Cambridge University Press, 2002); D. W Meinig, *On the Margins of the Good Earth; the South Australian Wheat Frontier, 1869-1884*. (Chicago: Published for the Association of American Geographers by Rand McNally, 1962); Geoff Raby, *Making Rural Australia: An Economic History of Technical and Institutional Creativity, 1788-1860* (Oxford: Oxford University Press, 1996); Jefferson Dillman, *Colonizing Paradise: Landscape and Empire in the British West Indies* (Tuscaloosa, GA: University of Alabama Press, 2015); Michael Williams, *The Making of the South Australian Landscape; a Study in the Historical Geography of Australia*. (London; New York: Academic Press, 1974); Jeanette Hoorn, *Australian Pastoral: The Making of a White Landscape* (Sydney: Fremantle Press, 2007); David J. Webster, “The Political Economy of Food Production and Nutrition in Southern Africa in Historical Perspective,” *The Journal of Modern African Studies* 24, no. 3 (September 1, 1986): 447–63; B. R Davidson, *European Farming in Australia: An Economic History of Australian Farming* (Amsterdam; New York; New York: Elsevier Scientific Pub. Co. ; Distributors for the U.S. and Canada, Elsevier North-Holland, 1981).

extensive agricultural practices will be inevitable. In other words, Britain, unlike its colonies of settlement, could not afford to leave its fields fallow or let stock (and manure) roam too far from the farmhouse. In many ways this contrast was accurate. Certainly by the mid-eighteenth century, manuring, crop rotations with nitrogen-fixing legumes, drainage of “wastes,” and close-range stock breeding on sown grasses and foddors were becoming standard practices in Britain, part of what I call Enlightenment mixed-husbandry. And, indeed, in many of its settler colonies in North America and the Caribbean vast quantities of appropriated land were put into tillage on large-scale cash crop farms, soil was mined of nutrients until diminishing returns forced planters to leave the land to a long fallow or to abandon it completely to virgin soils elsewhere, and “domesticated” animals were allowed to rove unchecked over native grasslands.¹³ But at the end of the eighteenth century, as Britain simultaneously licked the wounds acquired in the American Revolution and flourished under the Agricultural Revolution, this dichotomy was fiercely challenged, a contestation that has been overlooked by both historians of science and environmental historians.

Today, the story most often told in the case of New South Wales and the Cape, is that mixed husbandry (or arable farming in general) was quickly abandoned altogether for stock-raising on natural forage until agricultural technologies (namely irrigation, fossil fuel-based fertilizers, and machinery) revitalized arable cultivation, including sown grasses, in the twentieth century.¹⁴ But this dissertation shows how the impetus to extensive farming or commercial

¹³ Anderson, *Creatures of Empire*; Stoll, *Larding the Lean Earth*; Brian Donahue, *The Great Meadow: Farmers and the Land in Colonial Concord* (Yale University Press, 2007). All three of these works examine the critiques of American agriculture, but also show the ways in which “bad husbandry” was resisted to varying degrees.

¹⁴ Cameron Muir, *The Broken Promise of Agricultural Progress: An Environmental History* (Routledge, 2014); Beinart, *The Rise of Conservation in South Africa*; Edgars Dunsdorfs, *The*

pastoralism on native grasslands was mediated by Herculean, if ultimately unsuccessful, efforts to foster intensive mixed husbandry in the first half centuries of settlement in both colonies. The project of agrarian improvement trumped economic expedience and, in some cases, ecological receptivity in these early decades. The shift to a pastoral economy in both colonies was neither a foregone conclusion nor an abandonment of faith in the power of improvement in this period. In historical hind-sight, yes, intensive mixed husbandry was in many ways economically irrational in these landscapes, and attempting to imprint a carbon copy of English agricultural landscapes in the very different soils and climates of the Antipodes might seem now like a fool's errand. But in the late eighteenth and early nineteenth century, few people, least of all the men (and they were all men) who orchestrated settlement in these colonies, would have believed the task to be either impossible or impractical. At the end of the eighteenth century, British agriculture was revolutionizing, and agrarian improvement as an ideology was linked, more and more, to the political character of the nation (agrarian patriotism). At the exact same time, the country was losing its hold on its Atlantic empire and grasping on to new colonial ventures. This is cause enough to justify a re-examination of this dichotomy in the historiography of empire. The rift between metropolitan and colonial agriculture, between the order and restraint of the old country and the chaos and prodigality of the new world, is not so wide, the rules not so different, as has been supposed.

Australian Wheat-Growing Industry 1788 - 1948 (Melbourne: Melbourne Univ. Press, 1956); Geoffrey Bolton, *Spoils and Spoilers: A History of Australians Shaping Their Environment* (Sydney: Allen & Unwin, 1992); C. H. Feinstein, *An Economic History of South Africa: Conquest, Discrimination, and Development* (Cambridge: Cambridge University Press, 2005); Davidson, *European Farming in Australia*; Wilmot Godfrey James, *The Angry Divide: Social and Economic History of the Western Cape* (Cape Town: New Africa Books, 1989).

Here is why it is important for historians to question both the narrative of ecological imperialism and the dichotomy between metropolitan and colonial agriculture. Ghost acres, agricultural hinterlands, British Wests, even ecological imperialism: all these terms deny, intentionally or not, the limits of colonial lands. They imply that the rules of engagement with the soil or other natural resources (i.e. grass) in “new” worlds are fundamentally different from the rules of engagement with the soil and natural resources of the “old” world. They imply that the old world was a world of ecological constraints and the new world was a world of unlimited abundance. They imply that the task of making crops and animals grow in the new world was not complicated by social, economic, and political relationships to the extent it was in the old world. Pomeranz rightly argues that colonial ghost acres allowed Britain to transgress the ecological limits of its own island territory, but what of the ecological limits of the ghost acres?¹⁵ British colonialism, as one of his chapter headings denotes, did not “Abolish the Land Constraint”: it just relocated the geography of constraint, making it another land’s problem. Likewise Belich’s “British Wests” is a very useful model to a point. Like the American West, British Wests received the men, women, and children that the East could not provide for, and like the American West, British Wests often exhibited “outlaw” economic, social, and political behaviors, and sometimes needed to be rescued by the militaries and markets of the East.¹⁶ But the concept of a British West, like ghost acres, implies an invisibility of production, stripped of the ecological and political constraints that categorized the European nations that brought them into orbit. But ghost acres had their own ecological limits beyond just acres cleared versus acres available. Ghost acres and British Wests, particularly in this early period, often had to be cajoled

¹⁵ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000).

¹⁶ Belich, *Replenishing the Earth*.

on multiple levels into producing what Britain could not or supporting the populations that Britain could (or would) not. Knowing this, it is less easy to imagine plants quietly roving and colonizing of their own accord across vast territories.

Historians have too easily taken as a given the productive capacities of “other lands.” This work shows that this productivity was hard won, often elusive, and frequently met with failure. While Enlightenment-era mixed husbandry was not an unqualified failure, it did, in the end, fall extremely short of expectations. Figuring out why, at a time when agrarian improvement was viewed as so critical, is one of this dissertation’s primary tasks. Observing from afar the struggles of colonial farmers in these new colonies, Edward Gibbon Wakefield argued that settler colonies should not be considered new societies with new land and labor values (i.e. a different agrarian logic), but an extension of old ones.¹⁷ This strikes, I think, at the heart of the failure of mixed husbandry. The British government wanted to replicate its own revolutionary agriculture, to give colonial ventures the “leg up” of high husbandry. To do so, as I will show in the following chapters, they sent the best plants and animals along. They sent agricultural experts and natural historians. They sent farmers and agricultural laborers. They made policies intended to discourage extensive land use. But the project of agrarian improvement would undergo a sea-change in these new landscapes, not just because of indigenous resistance, wartime budget cuts, or the influence (agency, if you want) of foreign soils, climates, and native ecology, but because British colonizers could not, despite their efforts, transplant the economic, social, and political relationships of the rural British countryside to these new lands. To contemporary observers, the early experiences of arable farming revealed

¹⁷ Edward Gibbon Wakefield, *A Letter from Sydney: The Principal Town of Australasia* (J. Cross, 1829).

both the possibilities and pitfalls of colonial agrarian settlement and development in new colonial landscapes. To historians today, it demonstrates just how easily the course of ecological imperialism could be stymied and/or transformed by the political and economic untidiness of colonial societies and environments.

The portrayal of the eventual failure of this particular system of husbandry as the result of an unimpeachable divide between the geographies and demographics of metropolitan and colonial agriculture, or as the result of the irresistible pull of a pastoral economy, is out of sync with the pervasiveness of that system's associated biota even into the present. The sun may never set on the empire of the dandelion, but it did not set on the empire of clover either. These attempts at the end of the eighteenth century to deliberately remake entire landscapes in these remote colonies with the same fodder crops that fueled the agricultural revolution in Enlightenment Britain are important not just because they show us the political and scientific complexities of Crosby's ecological imperialism, but because they can help bridge the divide between the scholarship on the intellectual or political underpinnings of imperial science, the histories of landscapes and ecological communities, and the development of world economies and global eco-cultural networks.¹⁸ Historians of science have developed a robust literature on how scientific and technological knowledge was wielded in the service of empire, particularly when wielded by a powerful colonial state.¹⁹ Environmental historians have produced (and

¹⁸ See Beattie, Melillo, and O'Gorman, eds., *Eco-cultural Networks and the British Empire: New Views on Environmental History* (London: Bloomsbury, 2015); Edmund Burke III and Kenneth Pomeranz, *The Environment and World History* (Berkeley: University of California Press, 2009), particularly chapters 1, 2, 3, and 8; Belich, *Replenishing the Earth*, 277-81; Crosby, *Ecological Imperialism*, 303-8.

¹⁹ Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge: Harvard University Press, 2007); Londa Schiebinger and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia:

continue to produce) innovative scholarship on how landscapes react to agents of change, and how those agents are shaped by their work on the land.²⁰ Historians of science and political historians give us a view of the driving forces of colonial agricultural development; Environmental historians have shown us the results. Perhaps the best place for this scholarship to meet is on the farm. Between Crosby's rogue weeds and feral hogs and Drayton's breadfruit and cinchona, between independent biological processes and aggressive scientific interventions, there is the farm, that vital site where politics, ideology, science, and biological processes converge, where new limits are encountered, where transitions and adaptations occur. This work will constitute part of new agrarian history of colonialism that is grounded in the moments of encounter and transition—the moments when botanists leave and Marines arrive, when seedlings shrivel in the afternoon heat or wash away in the flood, when clear-cut political ideologies become blurred, when spades strike rock, when ships arrive from India with barrels of grain,

University of Pennsylvania Press, 2007); Drayton, *Nature's Government*; Brett M. M. Bennett and Joseph M. M. Hodge, *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800-1970* (New York: Palgrave Macmillan, 2011); Brett Bennett and Fred Kruger, *Forestry and Water Conservation in South Africa: History, Science and Policy* (Canberra: ANU Press, 2015); Lucile H. Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Garden* (New Haven: Yale University Press, 2002); Saul Dubow, *Science and Society in Southern Africa* (Manchester: Manchester University Press, 2000); Roy MacLeod, *Nature and Empire: Science and the Colonial Enterprise* (Chicago: University of Chicago Press, 2001); John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution* (Cambridge: Cambridge University Press, 1998); Jan Todd, *Colonial Technology: Science and the Transfer of Innovation to Australia* (New York: Cambridge University Press, 1995); James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998).

²⁰ Bolton, *Spoils and Spoilers*; Muir, *The Broken Promise of Agricultural Progress*; Beinart, Beinart, and Coates, *Environment and History*; Brooking and Pawson, *Seeds of Empire*; Tom Griffiths, *Ecology and Empire: Environmental History of Settler Societies* (Seattle: University of Washington Press, 1997); Eric Pawson, *Making a New Land: Environmental Histories of New Zealand* (Dunedin: Otago University Press, 2013); Stephen J. Pyne, *Vestal Fire: An Environmental History, Told through Fire, of Europe and Europe's Encounter with the World*, Reprint edition (Seattle: University of Washington Press, 2000).

when cowpats decompose a hundred miles from the nearest wheat field, when clover starts to creep.²¹

A Road Map

The dissertation is divided into five chapters arranged, more or less, in chronological order, though there is significant temporal overlap between each. In Chapter One, I focus primarily on the British Isles. In Chapters Three and Four, my New South Wales and Cape Colony cases are analyzed separately. In Chapters Two and Five, I bring them together for comparison. Chapter One, “Greener Grass,” lays out the agricultural and ideological foundations for the rest of the dissertation. In it, I make the case for why fodder is so critical to understanding agrarian change in Britain and to the orchestration of improvement in New South Wales and the Cape; explain how critiques of American agriculture shaped later colonial improvement projects; and explore how agrarian patriotism developed in Britain and became connected, often hesitantly, to the Empire. Chapter Two, “Fleets of Fodder,” outlines the ecological orchestration of mixed husbandry in New South Wales in 1788 and the Cape of Good Hope in 1800 during the first British occupation. This chapter also sets up the comparison between New South Wales and

²¹ This kind of history is already in good progress. Dolly Jørgensen, Finn Arne Jørgensen, and Sara B. Pritchard, *New Natures: Joining Environmental History with Science and Technology Studies* (Pittsburgh: University of Pittsburgh Press, 2013); Anya Zilberstein, “Planting Improvement : The Rhetoric and Practice of Scientific Agriculture in Northern British America, 1670-1820,” Dissertation, Massachusetts Institute of Technology, 2008; Anya Zilberstein, “Objects of Distant Exchange: The Northwest Coast, Early America, and the Global Imagination,” *The William and Mary Quarterly*, 2007; Fredrik Albritton Jonsson, *Enlightenment’s Frontier: The Scottish Highlands and the Origins of Environmentalism* (New Haven: Yale University Press, 2013); Muir, *The Broken Promise of Agricultural Progress*; Emily Pawley, “Accounting with the Fields: Chemistry and Value in Nutriments in American Agricultural Improvement, 1835-1860,” *Science as Culture* 19, no. 4 (December 2010): 461; Grace Karskens, “Floods and Flood-Mindedness in Early Colonial Australia,” *Environmental History* 21, no. 2 (April 1, 2016): 315–42, doi:10.1093/envhis/emv186; Angus R. McGillivray, “From Sods to Seed-Beds: Cultivating a Familiar Field at Port Jackson.,” *Journal of Australian Colonial History* 5, no. 2004 (2004): 1.

the Cape and shows why we should consider their development as part of the same agrarian project. I examine early assessments of the native ecology and agricultural potential of each colony, show the meticulous planning of the First Fleet to New South Wales and the outfitting of an informal agricultural department in the Cape, and hint at initial challenges to mixed husbandry in these colonies.

Chapter Three, “Floundering but not Foundering,” explores New South Wales’ “agricultural decades” between 1788 and 1810, as the initial agrarian vision for the colony (smallhold mixed farms) ran into a variety of environmental and political challenges. In this chapter I periodize different phases of early agricultural settlement in New South Wales, interrogate the nature of early colonial encounters with the environment, detail early critiques of colonial husbandry, evaluate early colonial attempts to enforce improvement through the authoritarian control of land and markets, and describe public and private agricultural experimentation. Chapter Four, “Spurning the Trekboer Cowboy,” examines how agricultural improvement was enlisted by the Colonial Office and a series of authoritarian governors in the Cape in attempt to reorder the colonial landscape, revive a stagnant colonial economy, and prevent trekboer sprawls into the interior. It details the rise and fall of William Duckitt’s agricultural department in the Cape, analyzes the “competing agrarianisms” that expedited its failure, and explores how British colonial governments learned from its failure and shifted their agrarian goals during the Napoleonic War between 1806 and 1814. The final chapter, “The Soil or the Station,” lays out how home and colonial governments facilitated mixed husbandry’s last stand in both colonies through land policy reform and emigration schemes before both transitioned, almost completely, to pastoral economies in the 1830s and 40s; examines two corresponding Parliamentary Commissions of Inquiry (headed by the same man, J.T. Bigge) in

the early 1820s, which assessed the progress (or non-progress) of arable farming and provided a benediction to commercial pastoralism; demonstrates how governments and private associations attempted to salvage improvement and apply it to pastoral operations; and investigates the utilization and spread of sown fodders in the 1820s, 1830s, and 1840s in both colonies as improvement was redirected from the soil to the station.

CHAPTER ONE

Greener Grass: Enlightenment's New Husbandry and Agrarian Visions of Empire

Whoever could make two ears of corn, or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and more essential service to his country, than the whole race of politicians put together. Jonathan Swift, *Gulliver's Travels*, 1726¹

I. Introduction

In the years between retiring as Commander-in-Chief of the Continental Army at the end of the Revolutionary War in 1783 and his reentry into politics at the Constitutional Convention in 1787, George Washington began a lively correspondence with the rising star of English agriculture, Arthur Young. Washington was concerned about the management of his 8000-acre plantation, Mount Vernon, which had suffered during his long absence during the war.

Washington had always had an eye for improvement, switching the operations of his Mount Vernon estate from soil-depleting tobacco to wheat in the late-1760s, and had split his plantation into five separate farms divided by pasturelands in order to intensively cultivate each one in a complex rotation system. In their correspondence, Washington and Young bemoaned the state of agriculture in North America, exchanged odes on the importance of agriculture to national wealth and security, and arranged a survey via a circular of improving farmers in the mid-Atlantic.²

Washington also used Young as his personal seedsmen. In the fall of 1786, in the first of many seed requests, Washington asked Young to send him, in the care of the London merchant

¹ Jonathan Swift, *Gulliver's Travels*, Revised edition (New York: Penguin Classics, 2003), 126.

² George Washington, *Letters from His Excellency General Washington, to Arthur Young, Esq. F.R.S.: Containing an Account of His Husbandry, with a Map of His Farm; His Opinions on Various Questions in Agriculture; and Many Particulars of the Rural Economy of the United States* (London: B. McMillan, 1801)

Wakelin Welch, 20 pounds each of the “best kind” of cabbage and turnips seeds, 18 bushels of sainfoin, 8 bushels of winter vetches, 4 bushels of field peas, 8 bushels of oats, 2 bushels of ryegrass, 50 pounds of hop trefoil, and any other grass seeds that Young deemed appropriate for his farm, especially those that might better withstand the hot Virginia summers.³ Washington was intent on eliminating his fallow land through the introduction of more fodder crops into his rotations. He wanted to set himself apart from the other farmers who cleared and cropped land continually until diminishing returns forced them to break up new land, leaving the old land to a long (sometimes indefinite) fallow, until “another piece is ruined in the same manner.” This kind of shifting cultivation and reliance on fallows was a sore spot for agricultural improvers, including Washington himself, who understood that the only way to move beyond this model was by sowing grasses and “connecting cattle [to] crops.”⁴ But this had been almost universally neglected in the United States. After five years of receiving Young’s *Annals of Agriculture*, whose contributors (including Young) commonly attributed the bad husbandry of Americans to moral failings, Washington expressed that it was somewhat unfair to hold American farmers to the same standards as British farmers.⁵ The neglect of mixed farming and soil husbandry could be contributed largely to the demographic and geographic conditions in which most farmers cultivated their lands. “An English farmer, Washington wrote, “must entertain a contemptible opinion of our husbandry, or a horrid idea of our lands, when he shall be informed that not more than eight or 10 bushels of wheat is the yield of an acre.” But this low yield was not, as claimed by “the gentlemen whose letters are sent to you [Young],” due to indolence or lack of practical

³ Ibid., 2.

⁴ Ibid., 12–13.

⁵ John C. Weaver, *Great Land Rush and the Making of the Modern World, 1650-1900* (McGill-Queen’s Press - MQUP, 2003), 84.

knowledge: “It may be ascribed, and principally too, to a cause...that the aim of the farmers in this country (if they can be called farmers) is, not to make the most they can from the land, which is, or has been, cheap, but the most of the labour, which is dear.”⁶ Washington admitted that this was a poor excuse for bad husbandry, but he observed that “it takes time to conquer bad habits, and hardly any thing short of necessity is able to accomplish it.”⁷

In these letters, Washington tries to explain to Young why the farms of Virginia, Pennsylvania, or New Jersey were so very different from the farms of Norfolk, Sussex, or Hertfordshire, and it is the same answer given by most historians to explain the dichotomy between intensive husbandry in Europe and extensive husbandry in the New Worlds: “where land is cheap and labour dear, men are fonder of cultivating much than cultivating well.”⁸ But at the end of the eighteenth century, this interpretation of the geographic conditions of agriculture was not as well-formed. It was less clear then that the advanced state of British agriculture at the end of the Enlightenment could not be transposed upon colonial societies. High Husbandry in Britain at the end of the eighteenth century, characterized by sophisticated crop rotations, fodder cultivation, extensive manuring of crop land, irrigation and/or drainage, selective breeding, had been the result of nearly a thousand years of adaptation and experimentation with a sharp acceleration between approximately 1700 and 1850 attributed to both Enlightenment-era

⁶ Washington, *Letters from His Excellency General Washington, to Arthur Young, Esq. F.R.S.*, 30–1.

⁷ *Ibid.*, 31.

⁸ Edward Gibbon Wakefield, *England and America: A Comparison of the Social and Political State of Both Nations* (R. Bentley, 1833), 51. This quote is attributed to Washington, but I cannot find this wording in any of the letters exchanged between Washington and Young, but there is an identical quote in Alexander von Humboldt, *Political Essay on the Kingdom of New Spain* (Longman, Hurst, Rees, Orme, and Brown; and H. Colburn., 1814), 430.

improvements and population pressures on the land.⁹ But many colonial planners and officials both at home and abroad at the end of the eighteenth century saw little reason for British colonies not to benefit immediately from the best agricultural practices in Britain, particularly for new colonial settlements.

In this chapter, I ask a series of questions that help us understand why agricultural improvement, particularly mixed husbandry, was such a potent and enduring part of imperial ideology and objectives in the late eighteenth and early nineteenth centuries. The following chapters examine how the attempt to transplant the practices and biota of Enlightenment-era mixed husbandry transformed the colonial landscapes (politically, economically, and ecologically), but in order to do that, this chapter gives an overview of the revolutionary changes to agrarian landscapes in Britain in the eighteenth and early nineteenth century and an analysis of how agrarian improvement was used to frame the progress of past and future colonial settlements. What was revolutionary about the Agricultural Revolution? Why are grass and other fodder crops so central to agrarian improvement? How did the obsession with agricultural improvement in the Enlightenment shape critiques of American husbandry? How did critiques of American husbandry shape the agrarian visions for the British Empire post-Independence? Who were the individual and institutional arbiters of agricultural improvement? How did they build a bridge between domestic agrarian patriotism and colonial agrarian development?

⁹ Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850* (Cambridge University Press, 1996), passim. See also E. A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010); E. A. Wrigley, *Continuity, Chance and Change: The Character of the Industrial Revolution in England* (Cambridge University Press, 1990), which both examine agricultural transformations in the same time period as part of Britain's "advanced organic economy."

I argue that the now well-established dichotomy between labor/capital-intensive husbandry in the Old World and land-extensive husbandry in New World colonies was not as well-established at the end of the eighteenth century as it may seem. The robustness of the critique of American agriculture—despite Washington’s attempt to provide an explanation—demonstrates the assumed universality of agrarian improvement, an assumption that shaped aspirations and expectations for Britain’s post-American Independence “redux” colonies. The practices that made agriculture revolutionary in this period became a foil to colonial agricultural practices. They were seen as readily transferable to any colony that boasted a temperate climate. In other words, Empire-minded “agrarian patriots,” as C. A. Bayly calls them, were reluctant to acknowledge the inherent demographic, environmental, or economic logic of land-extensive agriculture.¹⁰ As best practices were solidified in England and Scotland, and as institutions and publications formed to uphold this “New Husbandry,” American agriculture came under increasing scrutiny. New colonial settlements (or proposed settlements) offered the opportunity for agrarian patriots to transfer the New Husbandry, practices and plants, to these new landscapes.

The first section of this chapter provides a contextual framework for looking at the interplay between agricultural improvement and empire by examining the set of agricultural practices and physical processes that made up what E. A. Wrigley has called Agricultural Revolution’s “advanced organic economy” and the demographic consequences of the revolution.¹¹ The second section examines the intense “othering” of American husbandry in the

¹⁰ Christopher Alan Bayly, *Imperial Meridian: The British Empire and the World, 1780-1830* (Longman, 1989).

¹¹ Wrigley, *Continuity, Chance and Change*.

eighteenth century and how this shaped attitudes toward new settlement projects. The third section explores agrarian patriotism in its institutional and journalistic forms and the relationship of agrarian patriots and institutions to Empire. The final section looks at the career of Sir Joseph Banks, who, more so than any other agrarian patriot, merged the scientific improvement of agriculture to the development of empire. Taken together, I demonstrate how the pursuit of greener (i.e. healthier, more varied, more abundant) grass in Britain guided new colonial projects. I affirm Bayly's claim that agrarian improvement, not mercantilism or liberal political economy, was the dominant discourse of the period between 1780 and 1830, but I also move beyond just the ideological underpinnings of agrarian improvement to demonstrate the importance of the physical embodiment of improvement: fodder and feces.¹²

II. Growth and Grass: Agrarian Revolution(s) in Britain

Many of the things, intended by [the Supreme Being] to fertilise the earth, are little less than an offence and incumbrance to us... Thus the husbandman converts filth and dirt into wealth more easily and effectually than any chymist. And, indeed, who could imagine that a new-mown field of grass, or a plantation of strawberries, owed their fragrance and sweet taste to...sinks and gutters, and the very riddance of stables and pig-sties. Walter Harte, *Essays on Husbandry*, 1764¹³

Between 1700 and 1850, total crop output in England is estimated to have nearly tripled.¹⁴ Historical statisticians arrive at this (give or take a few tenths) based on many different

¹² Bayly, *Imperial Meridian*, 80–81; See Philip J. Stern and Carl Wennerlind, "Introduction" in *Mercantilism Reimagined: Political Economy in Early Modern Britain and Its Empire* (OUP USA, 2013), 3–7. Stern and Wennerlind argue that mercantilism cannot be boiled down to a distinct economic system, particularly in the eighteenth century. I use it as Bayly does to describe imperial relationships based on balances of trade, colonial dependence, and commercial preference.

¹³ Harte, 41

¹⁴ Overton, *Agricultural Revolution in England*, 130. For Scotland the rate of productivity increase was even more drastic, if somewhat delayed. Between 1750 and 1820, the output in corn and green crops in the lowlands doubled and that of slaughtered animals rose by sixfold. See

factors: yield per acre, a decrease in the proportion of fallow on cleared arable land, and an increase in the total amount of total cultivated land. Historians have spent nearly 150 years arguing about the timing, causation, character, and consequences of the Agricultural Revolution in England, but the rapid increase in overall agricultural productivity is indisputable.¹⁵ Between 1700 and 1800 alone, without accounting for any other factors, average wheat yield per acre alone almost doubled. Though this of course varied greatly from farm to farm and region to region, statistically a field of wheat that yielded 10 bushels per acre at in 1700 yielded 20 bushels per acre by 1800. At the beginning of this period approximately 30% of all cleared arable land in England was fallow, growing only weeds, but by 1800 this had fallen to around 15% of all arable land, meaning more acres were in cultivation.¹⁶ In addition to this, eight million acres of arable and meadow land were “reclaimed” from wasteland (mostly by drainage) between 1700 and 1800. So not only was the land twice as productive by the end of this period, there was approximately 38% more of it.¹⁷

This rapid growth in agricultural output was met with a just as rapid growth of population. There were individual years where agricultural productivity (including animal products) increased either at a higher or lower rate than population, but until the 1830s,

Thomas Martin Devine, *Clearance and Improvement: Land, Power and People in Scotland, 1700-1900* (Edinburgh: John Donald, 2006), 1–2.

¹⁵ Calculations of this increase have differed in the accounts of various historical statisticians have yielded somewhat different figures between a 2.5 and 3-fold increase. See Gregory Clark, “Labor Productivity and Farm Size in English Agriculture before Mechanization: A Note,” *Explorations in Economic History* 28, no. 2 (1991): 248–57; Robert C. Allen, “Tracking the Agricultural Revolution in England,” *The Economic History Review* 52, no. 2 (1999): 209–35; Overton, *Agricultural Revolution in England*; Wrigley, *Continuity, Chance and Change*.

¹⁶ Wrigley, *Energy and the English Industrial Revolution*, 29–30.

¹⁷ Overton, *Agricultural Revolution in England*, 76, 91–2.

productivity and population were more or less on the same curve.¹⁸ Not only did the productivity of the land support this growing population, but the increased productivity of labor allowed for the occupational restructuring of this population, making redundant (discussed in Ch. 5) or “releasing” large numbers of men, women, and children from agricultural labor and allowing them to be redirected to the growing industrial sector.¹⁹ After 1830, population did, in fact, begin to outstrip productivity in England, creating a “food deficit,” which was made up by an increased reliance on foreign imports, first from Ireland, America, and the Continent (namely Russia), then from more distant colonies, accelerated by the repeal of the Corn Laws in 1846.²⁰ Nevertheless, looking back at the eighteenth century, particularly in the second half, the agrarian landscapes of England (and Britain as whole) were clearly transforming.

Throughout the late nineteenth and twentieth centuries, historians have been grappling with the why, when, and how of the Agricultural Revolution. When did it start and end? What was revolutionary about it? What are the most important factors in the growth in agricultural productivity? Until the early twentieth century, the historiography of the Agricultural Revolution in Britain was dominated by whiggish “Great Men” histories. R.E. Prothero (Lord Ernle) and Arnold Toynbee’s late nineteenth century histories wed agrarian change directly to Enlightenment thought, particularly the political economy of Adam Smith. The rise of agrarian capitalism driven by eighteenth and nineteenth Parliamentary enclosures enabled the owners of great estates to implement the innovations developed by agricultural “Great Men” like Jethro

¹⁸ Ibid., 85.

¹⁹ Ibid., 82. Using Wrigley’s estimates, in 1600, 70% of the English population were engaged in agricultural labor; in 1700 it was 55% and in 1800 it was only 36%.

²⁰ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton University Press, 2009), 217–218.

Tull, Lord “Turnip” Townshend, William Marshall, Lord Kames, Sir John Sinclair, Arthur Young, Robert Bakewell, the Coke of Holkham, and the Collings Brothers.²¹ These men, as Overton writes, “are seen to have triumphed over a conservative mass of country bumpkins and single-handedly transformed English agriculture within a few years from a peasant subsistence into a thriving capitalist agricultural system capable of feeding the teeming millions in the new industrial cities.”²² In the early twentieth century, early Marxist historian R. H. Tawney pushed back against Prothero and Toynbee, alleging a much earlier revolution, pointing to radical change in the economic and social structures of the countryside in the sixteenth and seventeenth centuries.²³ It was not, however, until the mid-century that a new dominant narrative was affirmed. Social historians J.D. Chambers and G.E. Mingay reasserted Prothero and Toynbee’s revolutionary timeframe but put much emphasis on Parliamentary enclosure between 1760 and 1830 as the primary facilitator of the spread of mixed or convertible husbandry (the elimination of fallow), selective stock-breeding, improvements in irrigation and drainage, and mechanical innovations.²⁴

Chambers and Mingay’s framework remained dominant until the end of the twentieth century, but it did not go unchallenged. H. C. Darby and F. M. L. Thompson argued for a later

²¹ Rowland Edmund Prothero, Baron Ernle, *The Pioneers and Progress of English Farming* (London: Longmans, Green, 1888); Arnold Toynbee and Benjamin Jowett, *Lectures on the Industrial Revolution in England: Popular Addresses, Notes and Other Fragments* (London: Rivingtons, 1884).

²² Overton, *Agricultural Revolution in England*, 4.

²³ R. H. Tawney, *The Agrarian Problem in the Sixteenth Century* (London: Longmans, 1912). Tawney’s most important transformations were how peasant access to land declined due to non-parliamentary enclosure, the move from arable to sheep farming in several parts of the country, and the fall of the great monastic estates.

²⁴ J. D. Chambers and G. E. Mingay, *The Agricultural Revolution 1750-1800* (London: Batsford, 1966)

revolution, Darby pointing to wasteland reclamation and Thompson to imported fertilizers (oil-cake, guano, etc.)²⁵ Eric Kerridge, conversely, claimed that almost all relevant important changes been introduced before 1673, dismissing the importance of parliamentary enclosure, the elimination of the fallows with grass and turnip rotations, selective breeding, and mechanization and emphasizing instead seventeenth century up-and-down husbandry, which increased fertility by breaking the distinction between permanent grasslands and permanent tillage by rotating grass around the farm.²⁶ E. L. Jones countered this interpretation, claiming that early changes in agricultural techniques were “out of all proportion to the rather limited widening of the market” due to slow population growth. Until the late eighteenth century, Jones argues, the widespread adoption of mixed-husbandry paired with low population would have only led to serious over-production and falling prices.²⁷ More recently, Robert Allen, has argued that enclosure may have allowed eighteenth and nineteenth century landlords to increase their productivity by expanding their holdings and expelling labor, but that they did not actually cause great increases in grain output per acre. Grain yields had already doubled in the seventeenth century thanks to the

²⁵ H. C. Darby, "The Draining of the English Claylands," *Geographische Zeitschrift* 52, no. 3 (August 1964) Darby argued that without the expansion of arable land into previous wasteland, no amount of production increase would have been able to keep up with population growth; F. M. L. Thompson, *English Landed Society in the Nineteenth Century* (London: Routledge & Kegan Paul, 1963). Thompson asserts that England's real revolution was its “second agricultural revolution” based on nineteenth century imported feeds and fertilizers like oil-cake (residue from linseed, cottonseed, etc. oil production) and guano, which broke the closed circuit of agricultural systems.

²⁶ Eric Kerridge, *The Agricultural Revolution* (New York: A.M. Kelley, 1968), His justification for this claim is the fact that the agrarian system oversaw the doubling of the English population between 1550 and 1750.

²⁷ Quoted in Overton, 6. E. L. Jones, *Agriculture and the Industrial Revolution* (New York: Wiley, 1974), 16. Jones asserts that the productivity of the farm worker increased enough before 1750 to make industrial development affordable (releasing labor from agriculture). Yet, while the innovations may have been present in between 1660 and 1750, they did not become widespread and efficient until the period from 1780-1850.

innovations of yeoman farmers working longer hours, selecting seed, increasing legume crops and with it their livestock and manure.²⁸ Brian Fagan argues for a long and slow revolution comprised of local responses to chronic, climate-induced food insecurities throughout the “Little Ice Age” (1350-1850).²⁹

Mark Overton has undermined the entire concept of a single Agricultural Revolution, describing two related, but distinctive, transformations occurring more or less simultaneously over a long time period (1500-1850). The first was the ability of English agriculture “to increase output to unprecedented levels and sustain that output in the face of ever-increasing demand.” Second was a transformation of socio-political structures and institutions confirmed by the fact that in the sixteenth century, over 80 per cent of farmers were only producing for the needs of their household, whereas by 1850 the vast majority of farmers were “businessmen farming for the market.”³⁰ Overton nevertheless points to the period between 1750 and 1850 as the time in which growth in both agricultural productivity (land and labor) was the most pronounced.

I engage with these somewhat dusty, but still relevant, historiographical debates to show just how multifaceted agrarian transformations were in Britain at the time in which New South Wales and the Cape were being planned and/or developed, and to highlight the centrality of grass and other fodder crops were to this process. Though making my own contribution to the Agricultural Revolution debate is, for the most part, beyond the scope of this study, I suggest that the revolution was as much about the innovation and reorganization of cultivated grasslands as it

²⁸ Robert C. Allen, *Enclosure and the Yeoman: Agricultural Development of the South Midlands, 1450-1850* (Oxford: Clarendon Press, 1992)

²⁹ Brian Fagan, *The Little Ice Age: How Climate Made History 1300-1850* (New York: Basic Books, 2001), 101–4, 149–52.

³⁰ Overton, 10.

was about changes in agricultural mechanization, wasteland reclamation, or Parliamentary enclosure, and, as an aside, that we might do well, given the fragility of fossil-fuel based agriculture, to pay attention to early modern renewable agricultural systems. As Stephen Stoll has argued, at the heart of agrarian change is soil. Soil “formed the living tissue between economy and environment,” the space in which food production and the greater environment interacted.³¹ The “New Husbandry” being practiced and advocated in Britain at the end of the eighteenth century was, at its heart, about the capture and control of soil nutrients so that soils could support sustainable, or at least renewable, productivity.³² Grass is intricately linked to this soil husbandry. In the age before fossil fuel-based chemical fertilizers, soil fertility, regardless of the crop grown upon it, could only be sustained through organic inputs (manure and plant residues) or leguminous green cover (like clover, sainfoin, or field pulses) that fixed atmospheric nitrogen. Whether or not they do it well, all “plow-people,” as Stoll calls them, are caretakers of the soil.³³ In the long eighteenth century in Britain, this caretaking role became better understood and more important than ever before, and this role became increasingly linked to fodder.

While green fields of clover, rye grass, fescue, or meadow grass might seem to be as old as England itself, the physical pervasiveness of sown grasses in the British landscape was relatively new in the eighteenth century.³⁴ The history of sown fodder in Britain, as well as in the

³¹ Stoll, 13

³² Sustainability may seem very anachronistic, but as Paul Warde has argued, the term has deep historical antecedents without such a succinct term. See Warde, “The Environmental History of Pre-industrial Agriculture in Europe” in S. Sörlin and P. Warde, *Nature’s End: History and the Environment* (New York: Springer, 2009), 70–93; Paul Warde, “The Invention of Sustainability,” *Modern Intellectual History* 8, no. 01 (April 2011): 153–70.

³³ Stoll, 15

³⁴ Mauro Ambrosoli, *The Wild and the Sown: Botany and Agriculture in Western Europe, 1350-1850* (Cambridge University Press, 1997), 362–389.

rest of Europe, is tied to the history of the fallow. Fallow was defined simply as arable land left to its own devices. A fallow could be short (one season or year), long (a number of years), or in some cases indefinite. Fallow, on the surface, was of no direct productive or economic value, but for several thousand years before the Agricultural Revolution (~1600-1850, if we adhere to Thirsk or Overton's "long" model), the fallow was the primary way that fertility was restored to cultivated lands. This was the case regardless of the form of land tenure (e.g. common-field system or freehold).³⁵ After a grain crop (or series of crops) was taken from a field, that field was left to rest for a given amount of time. Weeds were allowed to grow, reproduce, die, and decompose, building up a nutritive hummus in the topsoil. Nitrogen, phosphorus, and potassium were restored to the soil over time through the hummus, rainfall, and atmospheric fixation in any leguminous plants (sweet peas, hemp-nettles, lupines, broom, and gorse) that happened to take root on the fallow.

Beginning as early as the fourth century in Europe, farmers began experimenting with ways to make the fallow productive, or to shorten its necessary duration. Early farmers certainly knew that fertility could be diminished or even exhausted, but it would take time for them to find ways of encouraging its return. At first this was as simple as grazing cattle, sheep, hogs, or poultry on the fallow, and letting their manure fertilize the soil in a two-field system (grain and fallow). By the ninth century, the two-field system became a three-field system (grain, oats and/or legumes, and fallow). Farmers began to accumulate more livestock--most of which were fed on natural pastures held in common, or from hay cut from meadows in winter—and would “dress” the fallow lands with manure they had collected in barns and pens, before breaking the

³⁵ Joan Thirsk, ed., *Agrarian History of England and Wales: 1640-1750* (Cambridge University Press, 1985), xix.

fallow up and sowing a new crop. By the sixteenth century, the fallow became even less fallow-like. It was often ploughed multiple times to incorporate the “green manure” (plant residue), systematically-grazed, and sometimes sown with supplemental legumes (peas, clover, etc.) and “cleaned” in the season before being put to grain with root vegetables like turnips, cabbages, and, in some areas, potatoes. By cultivating more fodder crops, farmers were able to support more livestock and became more adept at collecting and transferring manure to arable fields. By the end of the eighteenth century, many farmers had been able to eliminate the fallow in its entirety in the main grain-producing regions of England, lowland Scotland, and parts of Ireland.³⁶ The elimination of the fallow was part of what E.A. Wrigley calls the “advanced organic economy,” which, in addition to nearly tripling crop yields between 1700 and 1850, lay the foundation for industrialization.³⁷

³⁶ Fallows remained extensive on many commonly held lands, though there were exceptions to this. The most typical common field system in the 17th century involved a three course rotation (wheat, spring grain/pulse/oats, fallow) with common grazing on stubble and fallow and dedicated meadow. See Overton, 26-30.

³⁷ Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy, 1500-1850* (Cambridge: Cambridge University Press, 1996); E.A. Wrigley, *Continuity, Chance, and Change: The Character of the Industrial Revolution in England* (1984), 14-17; Marcel Mazoyer and Laurence Roudart, *A History of World Agriculture: From the Neolithic Age to the Current Crisis* (New York: Monthly Review Press, 2006); Mauro Ambrosoli, *The Wild and the Sown: Botany and Agriculture in Western Europe, 1350-1850* (Cambridge: Cambridge University Press, 1997); G. J. Leigh, *The World's Greatest Fix: A History of Nitrogen and Agriculture* (Oxford: Oxford University Press, 2004)

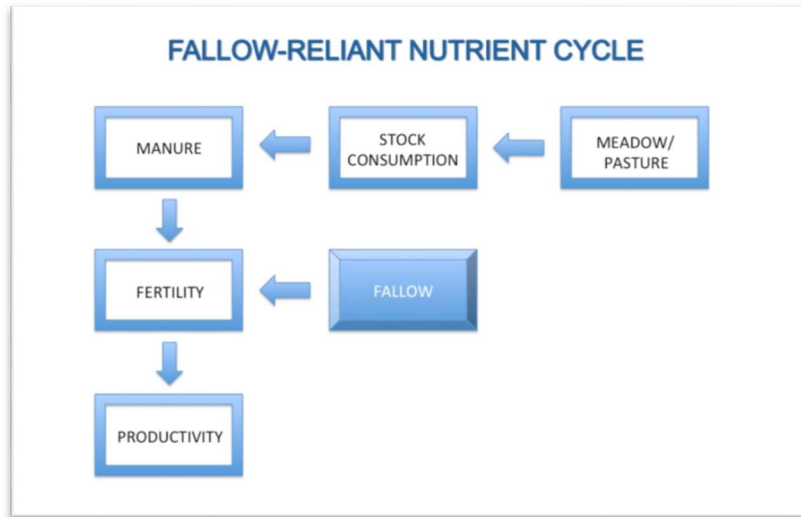


Figure 1: Fallow-Reliant Crop Nutrient Cycle.

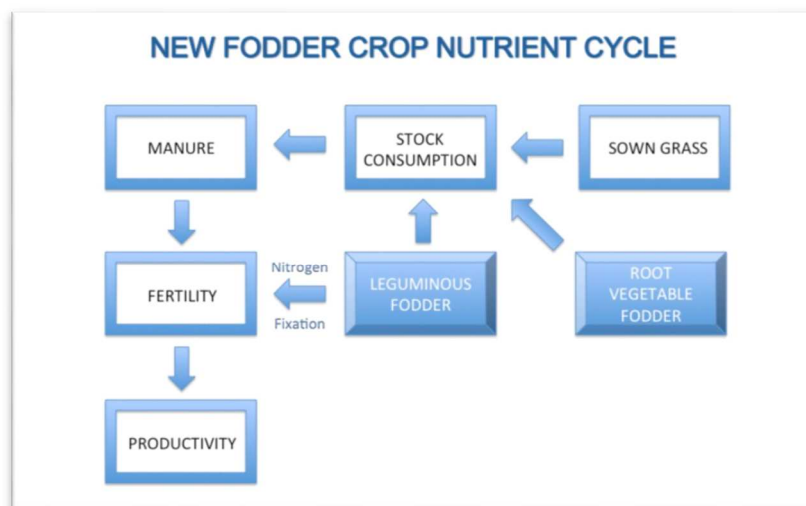


Figure 2: New Fodder Crop Nutrient Cycle

Both the reduction of the need for fallow and the gains in the productivity of agricultural land were made possible the wedding of stock production and arable farming, what has been called, in its various iterations, convertible, up-and-down, alternate, or ley husbandry. Mixed husbandry, the catch all term for this merger, was, in turn, made possible by fodder crops and sown grasses (as opposed to wild). (See Fig. 1 and 2) As a simplified example, imagine that

Farmer A has 30 acres of arable land in cultivation and is allowed to keep 5 cows on common pasturage and can cut up to 2 tons of hay from common hay meadows to feed them in the winter. With the manure from his cows that he is able to capture in his barn when the cows come home at night or when he allows them to graze the stubble or fallow, he can sustainably rotate three fields: one sown with grain in autumn to be harvested in the spring, one sown with grain or pulses in the spring to be harvested in the late summer or early autumn, and one left fallow. He has 20 acres yielding, let's say, 10 bushels an acre for a total of 200 bushels, that he can consume or sell at market, plus the produce of his 5 cows (dairy and meat). Farmer B down the road has the same amount of land, but he is able to produce 300 bushels of grain and has 15 cows. He has 30 acres in cultivation as well: one field in grain, another in a different grain or pulse, and one field in clover. The ten acres in clover support 10 additional cows, and because those cows are kept on his land, he is able to collect all their manure to put on his arable land (including the clover land). This increases the produce of his 20 acres of grain/pulse to 15 bushels an acre (for a total of 300). Plus, he has the additional produce of his livestock to sell at market, maybe even a few loads of clover hay to sell. Further down the road, Farmer C, again with the same amount of land, has 400 bushels of grain and 25 cows, because he has gone one step further and undersown his two grain/pulse fields with clover and ryegrass. When he harvests the grain crop, the clover is already starting to grow in over the stubble, clover that will support an additional 10 cows, and lead to another 5 bushel per acre increase in yield. Not only do no recyclable nutrients escape his farm, but the clover on all three fields fixes atmospheric nitrogen (bonus fertility) into its root systems, and that farmer now has the income from 25 cows.

The agronomy of these hypothetical farms would be far more complex in real life (proportions and rates of increase vary from crop to crop and soil to soil), but the theory remains the same. By using a sown fodder crop, especially a leguminous fodder crop, the fallow not only becomes productive in its own right, but it leads to the increased productivity of the other arable fields. Mixed husbandry did not simply rotate crops and put more stock at a farmer's disposal within a limited space, it "maintain[ed] the dynamic balance between production and decomposition that is one of the crucial control points in any ecosystem."³⁸ The health of arable soil and the produce of crops is directly tied to the number of stock the farmer can support on (or at least very close to) his arable land. The most complex form of mixed husbandry at the end of the eighteenth century was the Norfolk four course rotation, which added an additional element, root vegetable foddery, to the mix (grain, grain, clover, turnip). While the turnip plant did not fix nitrogen like clover, it made for excellent winter food for cattle and smothered weeds. In the early and mid-eighteenth century, the primary sown fodder crops in crop rotations in the grain-producing regions of Britain were white and red clover, ryegrass, and turnips. But farmers had also increased the use of what they called artificial grasses in laying down of temporary leys and permanent pasture (somewhat of a misnomer—permanent pasture was arable land sown in grass for five years or more). The increase of fodder led to the increase of stock, which led to the increase of available manure for arable fields. As William Marshall wrote in 1795: "No Dung—no Turneps—no Bullocks—no barley—no clover—nor...wheat."³⁹

By the 1760s, commercial mixed farming based on this increasingly complex marriage of stock and crop was being called the "New Husbandry." The term had been used sparingly as

³⁸ Stoll, 56

³⁹ Quoted in Overton, 1.

early as the 1750s by William Ellis, Thomas Hale, and (in translation) Henri-Louis Duhamel du Monceau, but was solidified in the writings of Walter Harte (1709-1774) and Arthur Young (1741-1820) in the 1760s and 1770s.⁴⁰ The New Husbandry included the use of innovative agricultural implements like Jethro Tull's seed drill and horse-hoe or the double and triple furrowed plough; interventions into the composition of soils through inputs of lime, marl, sand, or straw; diversification of crops and crop rotations; experimentation with non-dung fertilizers (gypsum, seaweed, salt, peat); and selective breeding programs to increase dairy and meat yields. But it was grounded in a more basic paradigm of fodder inputs and manure outputs. The "enthusiastic admirers of drilling, transplanting in rows, and hoe-ploughings" might get a number of astonishing crops without manure, Harte claimed, but without manure, these innovations "weaken[ed] the soil, and defraud[ed] the plants, merely through vanity and love of paradoxes."⁴¹

Supporting more cattle (meaning more manure) closer to the farm required sowing fodder crops (like clover and turnips) in rotations as well as sowing meadows and pastures to produce grass of greater quantity and quality. In the New Husbandry, the ideal place for livestock to deposit their manure was in the barnyard where it could be most easily collected, stored, and then transported to whichever field needed dressing. Mostly this was practiced with hay and root vegetables, but it could also be done with fresh cut grass or green cabbages, a practice known as "soiling." New Husbandry, according to Harte, required farmers to "turn [their] thoughts more

⁴⁰ Thomas Hale, *A Compleat Body of Husbandry* (London: T. Osborne, 1758); Henri Louis Duhamel du Monceau, *A Practical Treatise on Husbandry* (London: Winston and White, 1759); Walter Harte, *Essays on Husbandry* (Bath [U.K]: W. Frederick, 1764); Arthur Young, *Rural Oeconomy: Or, Essays on the Practical Parts of Husbandry* (London: T. Beckett, 1770).

⁴¹ Harte, *Essays on Husbandry*, 216-7

particularly to the cultivation and improvement of grasses, whether natural or artificial."⁴² No longer could pastures and meadows be left to their own devices. Grasslands needed to be cultivated and, more to the point, controlled just as cropland was, with "artificial grasses [raised] wherever the soil is capable of receiving them."⁴³ On one hand, this "neat husbandry" of grass was a key justification for the elimination of common pastures ("wastes" as Harte called them), which could not be cultivated if not "claimed" by enclosure, but it also, on a practical level, encouraged experimentation with a wide variety of sown grasses. Harte's own pet project was getting English farmers to cultivate lucerne (alfalfa) widely, both in rotations and meadows. Lucerne "an Universal Grower," like clover, was a highly nutritive leguminous grass, capable of being cut three or four times for hay before being turned into the soil as green manure. But he also experimented and wrote about a variety of other grasses including buckwheat, burnet, canary grass, fescue, guinea grass, knotgrass, ryegrass, phleum, and timothy.⁴⁴

Arthur Young's career took off at the end of Harte's life, but like his mentor, Young was "an admirer of what they call culture on the green side, I.e. grass-lands."⁴⁵ Young, like Harte, focused almost exclusively on lucerne and sainfoin, both leguminous, in early writings, but found that these plants, like clover, did very well in crop rotations, but did not answer as well as artificial grass for grazing or hay meadows.⁴⁶ It was later claimed by his admirers after his death in 1820 that he was "the first person who commenced the cultivation of artificial grasses," which while undoubtedly untrue, nevertheless shows how linked Young was to the encouragement of

⁴² Ibid., 61

⁴³ Ibid., 66

⁴⁴ Ibid., 225-9, 216

⁴⁵ Walter Harte to Arthur Young, 9 July 1768, BL, Add. MS 35126, f.47

⁴⁶ Young, *Rural Oeconomy*, 215-6; Christopher Baldwin to Young, 15 July 1768; Orbell Ray to Young, 24 July 1768; Thomas Tanner to Young [1769] BL, Add. MS 35126, f. 48, f. 50, f. 52.

artificial grasses.⁴⁷ Young was interested not just advocating the use of sown grasses and fodders, but began in the 1770s to a prodigious correspondence with improving farmers across the British Isles and on the Continent on improved techniques of grass cultivation and, more importantly, tailoring grasses and other fodders to particular types of soil. He leaned on this network, particularly in Europe, to supply him with samples of less commonly used grasses, many of which he planted in experimental garden on his Essex farm, Sampford Hall. In turn, he distributed seeds to other farmers, being particularly generous with his aristocratic correspondents, building up social capital that allowed him to move in circles he might not otherwise, which led to his election to the Royal Society in 1774, opened doors for him at the best publishing houses, and eventually secured an appointment as Secretary of the Board of Agriculture in 1793.⁴⁸ In 1784, he began using this network to compile his *Annals of Agriculture*, a 45 volume series with articles and correspondence on every topic of agriculture imaginable. The success of the *Annals* solidified Young's place as the prime agricultural consultant (largely unpaid) of Britain from the 1790s to the 1810s. It's hard to find an important late-eighteenth century political or intellectual figure in any way connected to agriculture, natural history, or political economy that did not, at some point, correspond with Young (e.g. Pitt, Banks, Davy, Malthus, King George III, Sir Walter Scott, Jeremy Bentham).

⁴⁷ John Ayrton Paris, "Biographical Memoir of A. Young," [c. 1820-1823], BL, Add. MS 34855, f. 15.

⁴⁸ See BL, Add. MS 35126, f. 94, f. 99, f. 113, f. 117, f. 127, f. 155, f. 203, f. 272; Henry Cecil (Lord Exeter) to Young, 9 February 1795, BL, Add. MS 35127, f. 349; George Wyndham (Lord Egremont), [1795], f. 351; "Letter of Introduction from Francis Russell (5th Duke of Bedford," [1800], BL Add. MS 35128, f. 174; Francis Seymour-Conway, 3 February 1802, f. 393; Young to John Russell (6th Duke of Bedford), [1802], f. 406;

Throughout the eighteenth century and into the nineteenth, agricultural improvers like Arthur Young, suggested new ways to incorporate sown grasses into agricultural regimes (e.g. mixing clover and rye grass, under-sowing clover or other legume with wheat or barley), and with determining the best rotations for particular soils. Arthur Young was particularly interested beginning in the 1770s and 1780s in diversifying fodder crops, and he leaned on personal networks of practical farmers, gentlemen agriculturists, botanists, and naturalists throughout Britain and across Europe to gain information about other sown fodders that might be brought into wider cultivation, or about legumes and cruciferous plants (cabbages, broccoli, and leafy greens) that might be successfully transferred from the garden plot to the field.⁴⁹ In the 1780s, white and red clover had begun to fail in many areas of Britain, and so Continental alternatives—sainfoin, lucerne (alfalfa), used throughout France, Italy, and Spain, and German trefoil (melilot) and rape—were advocated instead.⁵⁰

The development of the market for fodder seed in the eighteenth century, as Mauro Ambrosoli has shown, reflects the grass-focus of improved agriculture. Seed collection, particularly of pasture grasses, was a difficult and involved process. With grains, the produce is the seed. With grass, the produce is the meadow or the hay and, in the end, the manure, animal power, and animal products. The processing is done by the animals. But with fodder crops, seed harvesting was a separate process with many challenges. Harvesting seed, then and now, reduced the nutritional value of the fodder, and allowing leguminous grasses to flower and seed before

⁴⁹ Paolo Balsamo to Young, 27 April 1790, BL, Add. MS 35127, f. 26; Joseph Banks to Young, [1791], f. 80; Banks to Young, 21 March, 1791, f. 93; Francis Seymour-Conway (Lord Beauchamp), 7 February 1797, f. 395; Rev. St. John to Young, 29 January 1804, BL Add. MS 35129, f. 116;

⁵⁰ Ambrosoli, *The Wild and the Sown*, 373–5.

mowing them significantly reduced the fertility benefits of the root systems as those stores of nitrogen are expended in the energy-greedy process of producing the protein-rich seed. Grass seeds had to be harvested after a long dry spell, as grass seed is particularly susceptible to the depredations of moisture. Grass crops tended to have more weeds (or stray grain), which were difficult to identify and separate after threshing, and they were often sown in mixtures (e.g. ryegrass, clover, timothy, fescue, and canary), which made separating different individual species of grass impossible.⁵¹

There were a few domestic firms in the early eighteenth century (John Turner, Charles Minier, Stephen Switzer, William Crombie) that specialized in forage crop seed, but most farmers had to rely on personal contacts or expensive imports from the Continent, particularly Holland and France. By the mid-eighteenth century the area around Worcester and Exeter specialized in highly-lucrative seed production, but foreign imports of fodder seed grew throughout the century.⁵² The price of grass and other fodder crops reflected their value. In the 1780s Dutch clover, the most common fodder crop, fetched a little less than a shilling per pound (which was still very high when you consider an acre sown in clover needed anywhere between 10-12 pounds). Red clover cost around a shilling, sainfoin two and a half, lucerne three or more, and meadow foxtail a whopping six shillings per pound.⁵³ In addition to the expense, there was rarely a real guarantee of seed quality. Unscrupulous firms would often sell damaged or infested

⁵¹ *Ibid.*, 369–71.

⁵² *Ibid.*, 371, 376–7, 384–5. The potential profit of seed-making should not be underestimated. 10-12 pounds spread on a single acre yielded 180-240 pounds of seed (3-4 bushels) when carefully collected. It cost about 5-7 shillings per bushel to harvest and thresh, meaning 10 shillings invested could produce (when reduced for labor and the cost of seed) 150 shillings in profit, much more than the potential profit of hay, which for an acre of red clover would have been 30-40 shillings.

⁵³ Prices taken from “List of Seeds sent to New South Wales,” [1786] NA, T1/639, f. 253

seed, or pass one kind of seed off as another (e.g. selling regular Dutch clover as marl grass (perennial clover) at three times the price.)⁵⁴ By the end of the century, more nurserymen began stocking a much wider range of fodder crops so that farmers might begin to experiment with fodders beyond clover and ryegrass, even specializing in “in house” grass mixtures—allowing for grass regimes tailored to the particular soils of their farms. Nursery catalogues of London-based seed merchants usually had a section devoted exclusively to seeds for “agricultural improvement,” almost always fodder crops. Even as early as 1764, the nurseryman Gordon James’s improvement section offered eight different types of cabbage, eight different clovers, twelve pasture grasses, two kinds of lucerne, sainfoin, trefoil, vetch, and a variety of permanent pasture mixes. Catalogues that used to take up less than a page were now compiled in booklets with instructions and advice on sowing these new crops.⁵⁵

At the end of the eighteenth century in Britain, the cycling of nutrients through soil, plants and roots, and the digestive system of animals had become the purest manifestation of progress. While the word revolution rarely appears in the discourse of the late eighteenth and early nineteenth centuries, the Agricultural Revolution was very much a self-reflective revolution. Improvement was the key word used to encapsulate the agrarian changes taking place in the British countryside. On the farm, improvement encompassed crop rotation, fodder crop introduction, selective breeding, wasteland reclamation, fencing and hedging, liming, marling, drainage, and machinery innovation. In terms of institutions, improvement entailed consolidating lands (including Parliamentary enclosure), eroding common rights, turning peasant farmers into laborers, linking cultivation to capital, and combining to protect agricultural interests in the

⁵⁴ Ambrosoli, *The Wild and the Sown*, 371–2.

⁵⁵ *Ibid.*, 373–5, 377.

political sphere. Intellectually, improvement required the consumption of increasingly available agricultural intelligence, an appreciation for scientific agriculture, a patience for observation, and a willingness for practical experimentation. Proof of improvement took the form of high rents that could be charged for more productive farms. High rents also ensured the continuation of improvement as farmers were, as Sir Joseph Banks wrote “compel[led] them to draw out from the ground all that nature has lodged in it.”⁵⁶

Grass and grassland weave a common thread through all these segments that make up improvement. Grass was, as this section has shown, central to the physical changes on agrarian landscapes in Britain, but it was also central to the structural and institutional changes in the eighteenth and nineteenth centuries, and it was the subject of great consideration amongst the great agricultural minds of the day. But grass (and again, this is a shorthand for sown fodder crops at large) was also one of the most tangible elements of improvement and one of the most transferrable and potentially mobile elements. It is for this reason that neglect of grass (in a system of mixed husbandry) became one of the key points of critique of colonial agriculture in the late eighteenth century.

III. New World Prodigality: The Othering of American Agriculture

Agricultural improvers in Britain certainly had plenty of opportunities within the British Isles to compare good, enlightened practices with bad, unenlightened ones. Even at the end of the eighteenth century, around 15% of land in England, was unenclosed, and many enclosed

⁵⁶ Quoted in Richard Harry Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (Yale University Press, 2000), 98.

properties were not immune from criticism for not being truly improved.⁵⁷ Agrarian patriots targeted Anglo-Irish landlords in particular, both before and after union, for the largely unimproved state of Irish agriculture, a critique that endured and permeated popular culture well into the nineteenth century, thanks in large part to novelist Maria Hedgeworth's *Rackrent Castle* (1800) and *The Absentee* (1812), as well. But colonial American agriculture increasingly came under scrutiny in the second half of the eighteenth century.

In 1775, the anonymous author (initially attributed, probably wrongly, to Young) of *American Husbandry*, a two-volume account of the state of agriculture in Britain's American colonies established a damning, yet enduring, dichotomy between colonial and British agriculture. He was explicit in his aim to "draw up such an account of the profit of husbandry in England...in order to form the contrast to that of [the American colonies]." ⁵⁸ His unforgiving depiction of the primitive practices of American farmers and planters was juxtaposed with his laudatory descriptions of the most progressive forms of Enlightenment-era mixed husbandry in England in the 1770s. On one side was the large enclosed English midlands farm with two-thirds

⁵⁷ Gregory and Anthony Clark, "Common Rights in Land in England, 1475-1839," (2001), 33. <http://faculty.econ.ucdavis.edu/faculty/gclark/papers/commons.pdf>. Accessed July 23, 2016.

⁵⁸ Anonymous, *American Husbandry: Containing an Account of the Soil, Climate, Production and Agriculture, Of The British Colonies In North-America and the West-Indies; With Observations on the Advantages and Disadvantages of Settling in Them, Compared with Great Britain and Ireland*, vol. 1 (London: Bew, 1775), 201. The authorship of this widely-circulated work has been debated amongst agricultural historians for nearly a century. Credited to Arthur Young, John Mitchell, and, most recently, Richard Oswald, the identity of the writer may never be conclusively identified. See Rodney Loehr, "American Husbandry: A Commentary Apropos of the Carman Edition," *Agricultural History* 14:3 (1940): 104-109; Carl Woodward, "A Discussion of Arthur Young and American Agriculture," *Agricultural History* 43:1 (1969): 57-68; Edmund and Dorothy Smith Berkeley, *Dr. John Mitchell: The Man who made the Map of North America* (Chapel Hill: University of North Carolina Press, 1974), 224, 256-58; Robert Scott Davis, "Richard Oswald as "An American": How a Frontier South Carolina Plantation Identifies the Anonymous Author of American Husbandry and a Forgotten Founding Father of the United States," *Journal of Backcountry History* 8: 1 (2014)

of arable land sown in rotations of turnips, barley or oats, clover, and wheat, and the remaining third in sown pasturage for grazing and hay to support milk cows, oxen, market cattle, hogs, and sheep. In this hypothetical farm, when including the expenses of rent, seed, labor, stock, tithes, and interest on the capital, the farmer, if adhering to the principles of the “best husbandry in Britain” could turn a modest profit in the first year following his initial investment, more in subsequent years. On the other side were the farms and plantations on fertile lands from the frigid Canadian seaboard down to the West Indian tropics, granted or purchased at a (relative) pittance and cultivated with complete disregard for even the most rudimentary tenets of husbandry in the “Mother Country.”⁵⁹ There a farmer might cultivate his land in successive crops of wheat and maize for five years while his cattle and hogs grazed the woods and grasslands, propagating unchecked. When the diminishing fertility of depleted soils became severe enough to significantly impact returns after five or six years, the farmer would abandon those fields to a long fallow of five to seven years and clear another part of his farm or move, if so inclined, to virgin soils to the west (typically). The author was, however, only part of this sustained Enlightenment-era critique of husbandry in America. Walter Harte wrote eloquently and damningly about the failures of colonists to cultivate in a manner befitting the “true spirit of industrious cultivation” of Englishmen.⁶⁰ “Ever since the foundation of modern colonies,” he wrote, “the English and French (for it may be needless to mention the Portuguese and Spaniards) have chosen generally to adopt the old barbarous practice of culture from the natives. And why? Because it is more lazy, as well as more compendious.”⁶¹

⁵⁹ *American Husbandry*, vol. 1, 62-64

⁶⁰ Harte, *Essays on Husbandry*, 144

⁶¹ *Ibid.*, 145

For one early traveler, the Swedish naturalist Pehr Kalm, whose translated *Travels in North America* (1770) helped shaped other responses to American agriculture, the neglect of grass was the paramount difficulty across the colonies. Kalm, who admitted that the botanical study of grasses was especially "delightful," paid close attention to the use and cultivation of grass and other fodder crops by American farmers.⁶² What he found, predominantly, was sloppy husbandry and indifferent governments.⁶³ Livestock were permitted to graze and propagate freely on natural grasses. Not only did they overgraze and destroy these natural pastures, but the manure they produced remained where it fell, contributing nothing to the maintenance of arable soils.⁶⁴ Instead of relying on manure, American farmers were dependent on long fallows. Long fallows meant that weeds were able to firmly establish themselves on the land, and the reclamation of the fallow was both arduous (almost as much as clearing new land) and incomplete.⁶⁵ According to Kalm, most native grasses in New England and the Mid-Atlantic were annuals, needing to be reseeded every year. When livestock were allowed to consume these annual grasses before they had gone to seed, the plants could not reproduce effectively. Perennials, on the other hand, depend on vegetative reproduction (reproduction not from seed but

⁶² Pehr Kalm, *Travels into North America :containing Its Natural History, and a Circumstantial Account of Its Plantations and Agriculture in General, with the Civil, Ecclesiastical and Commercial State of the Country, the Manners of the Inhabitants, and Several Curious and Important Remarks on Various Subjects* (London: Eyres, 1770), 31.

⁶³ Fredrik Albritton Jonsson, "Climate Change and the Retreat of the Atlantic: The Cameralist Context of Pehr Kalm's Voyage to North America, 1748–51," *The William and Mary Quarterly* 72, no. 1 (January 1, 2015): 101, 110, 114–115. Kalm had similar things to say about his agricultural encounters in Norway.

⁶⁴ Fredrik Albritton Jonsson, *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism*, (New Haven: Yale University Press, 2013), 123; Albritton Jonsson, "Climate Change and the Retreat of the Atlantic, 114-5; Kalm, *Travels into North America*, vol. 1, 185.

⁶⁵ *Ibid.*, 185

from a shoot of the original plant), and can grow again even after being eaten down to the stub. So not only did American farmers not grow dedicated fodder crops (clover or turnips) and keep their stock contained, they could not even be bothered to manage the natural pastures upon which their stock relied. "Careful oeconomists," Kalm wrote, "have got seeds of perennial grasses from England, and other European states, and sowed it in their meadows, where they seem to thrive exceedingly well," but those careful "oeconomists" were shockingly few and far between in America.⁶⁶

Neglect of grass, as the author of *American Husbandry* attested, led to the neglect of manure. From New England down to Georgia, more than anything else, the countryside suffered from "the want of dung." With the exception of "a very few" New England farmers (more than a few if we look at Donahue's history of Concord) and, oddly enough, the Barbadian and Jamaican sugarcane planters, who "in raising dung...rank among the best farmers in the world, most of the dung produced in America remained in its original place of deposit, which, much more often than not, was well away from the farm."⁶⁷ Many of the author's critiques were followed by long and condescending passages of advice and admonitions. The country was well-provided with cattle and its climate suitable for the growth of fodders from grasses to root vegetables. The logic of fodder and manure was universal. If even a little effort was extended, he claimed,

They might raise such quantities of manure as would double the fertility of all their lands...A more general culture of the various sorts of clovers, would so increase the means of keeping cattle, and consequently raising more dung, which is in all parts of the

⁶⁶ Ibid., 345. Kalm was himself, in collaboration with Linnaeus and Sten Carl Bielke, a bioprospector of fodder grasses in hopes that they could be acclimatized in Sweden. See Albritton Jonsson, "Climate Change and the Retreat of the Atlantic," 103-6.

⁶⁷ *American Husbandry*, vol.1, 36-7, 79; *American Husbandry*, vol. 2, 119, 159.

world, *whatever may be the climate*, the only means of getting good arable crops...as all good farmers in England have well known these hundred years.⁶⁸

Providence had bestowed upon many American farmers and planters hundreds of millions of acres of rich soils, had very conveniently disposed of the great majority of the indigenous inhabitants living on those soils with poxes and fevers, and had blessed them, in most cases, with a wet and productive (if not always pleasant) climate. But the salubrity of the soil and climate—the fact that, according to the author, American farmers could with the very minimum effort produce yields that would make English farmers salivate—made Americans lazy and wasteful.⁶⁹ This critique had been levied earlier by the English naturalist Mark Catesby in his travels through the Carolinas in the 1730s, at once awed by the natural fertility of the soils in the Carolina and critical of husbandry practiced upon it. On newly cleared lands the “coat of prolific soil” made actual tillage unnecessary. Scratch the litter with a hoe enough “to raise the earth where the grain is drop’d” and a farmer could raise plentiful harvests “successively without respite.” But such husbandry did not last long: “So soon as the fertility of a field is exhausted by repeated crops, they take down the fence which inclosed it, and let it lie as useless.”⁷⁰

Staggering fertility and rapid exhaustion were the running themes in the accounts outside (and later inside) observers. This was especially true, as historians of early America Joyce Chaplin, Steven Stoll, and Virginia DeJohn Anderson have shown, in the case of the Carolinas,

⁶⁸ *American Husbandry*, vol. 1:79 emphasis mine.

⁶⁹ *Ibid.*, 24, 77, 101

⁷⁰ Mark Catesby, *Natural History of Carolina, Florida, and the Bahama Islands...Observations on the Air, Soil, and Water with Remarks Upon Agriculture, Grain, Pulse, Roots, &c*, vol. 2 (London: C. Marsh and T. Wilcox, 1754), xv

Virginia, and Maryland.⁷¹ Traveling critics (and many modern historians) saw poor management and soil exhaustion in the American South as a result of the indolence of its planters and farmers, indolence encouraged (and exacerbated) by natural fertility and a warm humid climate. Bad husbandry was seen as a symptom, too, of other social ills: slavery, opulence, sloppy government, etc. These critiques, as Chaplin indicates, were embedded in many ways into the genre of eighteenth century travel literature, which was dominated by three elements: “use of [social-scientific] categories, a concern to define national character, and a belief that climate was a major influence on culture.”⁷² Often outside European observers, coming from places where mobile agriculture was simply not possible, criticized American cultivators, a “land-breaking people,” as a whole for their disregard of the value (social and economic) of permanence.⁷³ Many early travelers failed to grasp, or discounted altogether, the logic of shifting cultivation and the common substitution of quality for quantity.⁷⁴

Agricultural prodigality was linked strongly to other kinds of prodigality. America was indeed “the best poor man’s country” in terms of initial agricultural productivity, but it was also, in terms of land tenure, stripped almost completely of the hierarchical social structure (or, at least those based on class) that shaped agrarian life in Britain.⁷⁵ For most outside observers, the American farmer was an independent yeoman farmer, a freeholder. Everything his labor

⁷¹ Joyce E. Chaplin, *An Anxious Pursuit: Agricultural Innovation and Modernity in the Lower South, 1730-1815* (UNC Press Books, 1996); Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (Macmillan, 2003); Virginia DeJohn. Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford: Oxford University Press, 2004).

⁷² Chaplin, *An Anxious Pursuit*, 71, 75, 78–91.

⁷³ Stoll, *Larding the Lean Earth*, 30.

⁷⁴ Anderson, *Creatures of Empire*, 109, 112–5.

⁷⁵ American colonies certainly developed hierarchies based on race.

produced, he owned. This was set in stark contrast with the British countryside driven by rent, obligations, and deference.⁷⁶ This was, of course, an oversimplification: Britain, for one, had its own yeoman farmers, and some American colonies did replicate Old World forms of land tenure. For example, Brian Donahue, in a regional study of colonial Concord, has argued against the assumptions that American settlers were all socially-incoherent soil miners, showing how adapted English-style common-field systems fostered conservative land use in New England, but he is unable to generalize from this case study.⁷⁷ Cole Harris, in a similar vein, has shown how long-lot seigneuries were established on the St. Lawrence to encourage social and economic cohesion and discouraged, for a time, expansion onto marginal lands, but he concludes that, in the end, neither the seigneuries nor the seigneurs themselves actually shaped agricultural or social development.⁷⁸ Nevertheless, as long as land remained cheap and plentiful, settlers from Europe had been able to obtain freehold land easily and cultivate it to their advantage very quickly. To many outsiders, the potentiality of quick (if not easy) economic and social independence was a source of excitement, wonder, and envy. It certainly sold passages across the Atlantic for much of the eighteenth and nineteenth centuries. But for others, particularly stakeholders in Old World agrarian societies and those in charge of governing the colonies, the American yeomanry was the source of great concern. As more people arrived on the coast of America, land quickly filled up, and European settlers pushed west. Post-Independence,

⁷⁶ Edwin C. Hagenstein, Brian Donahue, and Sara M. Gregg, eds., *American Georgics: Writings on Farming, Culture, and the Land* (New Haven: Yale University Press, 2012), 9–10.

⁷⁷ Brian Donahue, *The Great Meadow: Farmers and the Land in Colonial Concord* (New Haven: Yale University Press, 2007), passim.

⁷⁸ Cole Harris, *The Reluctant Land: Society, Space, and Environment in Canada before Confederation* (University of British Columbia Press, 2009), 72–9; Harris, *The Seigneurial System in Early Canada: A Geographical Study* (Montreal: McGill-Queen's University Press, 1984), passim.

Jeffersonian agrarianism would legitimize the policy of violently stripping Native Americans of their lands and making them readily available to white farmers, but the British government in the second half of the eighteenth century, particularly in the aftermath of the French and Indian War, had come to see the disadvantages of the unchecked sprawl west.⁷⁹

From the core seventeenth century settlements on the American eastern seaboard, several westward-moving frontiers had merged by the mid-eighteenth century to create an enormous and continually shifting agricultural frontier stretching from Maine to East Florida and pushing west to and then across the western Ohio River in the north and the Tennessee and Chattahoochee in the south. This expansion (among other things) had caused conflict with the French and Spanish, in addition to Indian nations whose territory was being threatened from both sides of the Appalachian Mountains, leading to a long and expensive war on multiple fronts. By 1760, Britain had spent £160 million on the war, which was twice its GDP, and the interest alone on the debt took up half the government's net income.⁸⁰ In addition to the new fiscal policies instituted to make the colonies pay for their own defense (which we know backfired), the British government attempted to exercise control over this expansion. Even though the Treaty of Paris in 1763 had ousted the French from the mainland and kept the Spanish west of the Mississippi, Britain drew up an official Proclamation Line that barred settlers from establishing themselves west of the Appalachians, reserving the land between that range and the Mississippi as Indian

⁷⁹ D. W. Meinig, *The Shaping of America: A Geographical Perspective on 500 Years of History, Volume 1: Atlantic America 1492-1800: 1st (First) Edition* (Yale University Press, 1988), 407–11, 417–426.

⁸⁰ John Brewer, *The Sinews of Power: War, Money, and the English State, 1688-1783* (Cambridge [M.A.]: Harvard University Press, 1990), 175–7; Stephen Hornsby and Michael Hermann (cartographer.), *British Atlantic, American Frontier: Spaces of Power in Early Modern British America* (Hanover [N.H.]: University Press of New England, 2005), 288.

Reserve. Wars with Indians might be somewhat cheaper than wars with European armies, but they were still undesirable. And as settlements moved west, they became more difficult to oversee and govern from the coastal seats of commerce and power.⁸¹

But the gate had shut on the horse's tail. As is often the case with redrawn boundaries, the new line was proclaimed only after it had already been transgressed. New colonists in areas where land was mostly already spoken for, and old colonists who had exhausted their old land by continual cropping, trickled into the Ohio River Valley from western Pennsylvania down to northern Alabama. As anyone who has ever seen the Appalachian Mountains could attest, it was a border impossible to police—more than 100 miles wide in most places, none of it insurmountable, even in the most dramatic Blue Ridge, by a sure-footed pack horse. The British government was able to withhold from settlers the legal title to the land, which put an end to speculation by Virginia land companies, but they were powerless to stop individual settlers and settler parties from moving beyond the mountains.⁸²

Many colonists believed that such expansion was an absolute necessity. An American-born geographer, botanist, and physician, John Mitchell, laid out in his *Present State of Great Britain and North America* (1767)—one part geography, the other part political economy—a detailed explanation for why American colonists needed those lands, and why Britain needed to give it to them. Put simply, Americans could not afford to pay the debts they contracted in the war or even to purchase their "necessaries" from Britain, because they had no money. They had no money because "their lands are worn out with staple commodities for Britain, and will no

⁸¹ Hornsby, *British Atlantic*, 223-32.

⁸² *Ibid.*, 229.

longer bear them."⁸³ If Britain wanted to make the colonies profitable, it would have to give the colonies the resources to do so. Mitchell claimed that soil exhaustion across the colonies had forced colonists to farm only for subsistence (grain) and not for commerce:

the colonies are excluded from all the fruitful parts of the continent, that will produce anything for the benefit of the nation, and are confined to lands, which produce little or nothing by what Great Britain does; and on which they can, therefore, only interfere with her, both in agriculture and manufactures...By that means we take the direct way, to force the colonies to become independent, whether they will or not.⁸⁴

According to Mitchell, the British government, in its "want of a due Knowledge of the Climate on which the interest of the nation in colonies depends" had ransomed this "most fruitful parts of the continent"--the Ohio River Valley, which Mitchell had explored and mapped in detail in the 1740s and 50s—for the sake of gaining the "barren deserts" of Florida and Canada.⁸⁵ He addressed fears of the solvency of the colonies, but also concerns that the colonies, by turning to grain production beyond what could be consumed locally, would begin competing with British agricultural producers and manufactures. This was a fear articulated several years later by Arthur Young who considered colonies that were replicas of the "mother country" to be "useless."⁸⁶

Outside critics (including the British government), on the other hand, saw little reason that a territory already three times the size of the British Isles and supporting only a fourth of its population should not be able to cultivate the land in such a way that prevented this kind of soil exhaustion. Inside critics, as Chaplin, Anderson, Stoll, and Donahue have shown, approached the

⁸³ John Mitchell, *The Present State of Great Britain and North America: With Regard to Agriculture, Population, Trade, and Manufactures, Impartially Considered* (London: T. Becket and P. A. de Hondt, 1767), iv.

⁸⁴ *Ibid.*, ix.

⁸⁵ *Ibid.*, ix, xii.

⁸⁶ Fredrik Albritton Jonsson, "Natural History and Improvement: The Case of Tobacco," in Philip J. Stern and Carl Wennerlind, *Mercantilism Reimagined: Political Economy in Early Modern Britain and Its Empire* (New York: Oxford University Press, 2013), 121.

problem in a more nuanced way, first by recognizing that in some regions, mainly New England and Eastern Pennsylvania, closely-settled mixed farming settlements dominated the landscape and modelled, even when using a common-field system, practices of improved British husbandry (fodder crop rotation, multiple ploughings/harrowings, careful manuring, drainage, sown meadow); and, second, by acknowledging the ever-present tension between economic opportunities presented by untapped land and the desire for permanence and social cohesion enabled by long-term yields of mixed husbandry.⁸⁷ Even the supposedly languid American South, cultivators, particularly the elite planter classes, were not opposed to or ignorant of the ideology and practices of improvement. They often tapped into networks of scientific exchange, such as the Royal Society and the Society of Arts, suppling information, as well as seeds and cuttings, to both officials and other men of science, many of whom were genuinely interested in helping American agriculturists innovate and improve. They also formed their own agricultural societies and associations for improvement just as British farmers did.⁸⁸

Early American agriculturists, both before and after the Revolution, many of them slave-owning, were concerned about unchecked expansion (and with it the number of slaves) into new territory caused by shifting cultivation and soil exhaustion. Such expansion threatened the economic security and political cohesion of the old states, and improved husbandry, it was hoped, might hold farmers in the east.⁸⁹ But the problem was not that agricultural elites (who

⁸⁷ Stoll, *Larding the Lean Earth*, 30–32, 20; Anderson, *Creatures of Empire*, 152–170; Brian Donahue, *The Great Meadow: Farmers and the Land in Colonial Concord* (Yale University Press, 2007), passim.

⁸⁸ Chaplin, *An Anxious Pursuit*, 136–7, 140, 144. As an example, Sir John Sinclair, who, as we shall see in the next section cooled significantly in the 1790s and 1800s in his support of colonial agriculture, was an enthusiastic correspondent with South Carolina planters (144).

⁸⁹ *Ibid.*, 132–3; Stoll, *Larding the Lean Earth*, 24.

often ran colonial and early Republican governments) did not recognize the material and social benefits of improved husbandry; it was that putting restrictions on economic opportunities in America was never politically acceptable.⁹⁰ Early American liberalism, whose adherents worshipped at the altar of self-interest, left little room for the ingrained conservatism of British-style improved husbandry. This agricultural conservatism stemmed from necessity and self-interest in Britain; in America necessity and self-interest sent settlers west. Stoll adeptly lays out the conundrum: “Could farmers learn to prosper by generating fertility in one place, even while knowing that numberless acres lay beyond the mountains? Even if waste followed the most avowed logic of self-interest, could it be rejected for another logic?”⁹¹ British (and most other European) farmers had not had to consider this question in centuries, which is one reason that Britons had such a hard time appreciating the problem.

In other words, Britain, unlike its colonies of settlement, could not afford to leave its fields fallow or let stock (and manure) roam too far from the farmhouse, so they could not understand the logic of land-extensive cultivation in American colonies. Yet, however strongly late eighteenth century politicians, naturalists, and political economists might have problematized shifting cultivation and soil mining in America (as well as other colonies, as we will see in the following chapters), they often, as Albritton Jonsson has shown, disagreed how to correct or prevent soil exhaustion or enforce (or not) better husbandry.⁹² This did not, however,

⁹⁰ Chaplin, *An Anxious Pursuit*, 132.

⁹¹ Stoll, *Larding the Lean Earth*, 31.

⁹² Albritton Jonsson, “Natural History and Improvement,” 129. Albritton Jonsson highlights, in particular, Adam Smith's "liberal critique of the phenomenon of soil exhaustion. While recognizing the poor management of soils described by Pehr Kalm and other naturalists, Smith looked not to government interventions into land management or markets, but to the high price of beef on an open market to encourage better husbandry. For a similar argument about

temper critiques of American agriculture, which endured well into the nineteenth century, even after 1783, when its agrarian prodigality ceased to be, at least officially, Britain's problem. The new United States would continue putting vast quantities of appropriated land into tillage on large-scale cash crop farms, soil would be continually mined of nutrients until diminishing returns forced a change of location, and vaguely domesticated animals and their nutrient-rich output would be allowed to rove over native grasslands. Improvement, as many historians have shown, and as the correspondence between Young and Washington at the start of this chapter demonstrates, was not a completely lost cause, but at the end of the eighteenth century, as Britain simultaneously licked the wounds acquired in the War of Independence and flourished under the its own Agricultural Revolution, it would see new possibilities in its other colonial possessions, including brand-new ones. As I show in the following chapters, the dichotomy between land-extensive, "wasteful" colonial agriculture and land-intensive, "Enlightened" domestic agriculture, formed by experiences and observations in colonial America, was fiercely challenged in the early development of new colonial holdings. Colonial planners in the late eighteenth and early nineteenth century developed an agrarian vision for their new colonies in New South Wales and the Cape of Good Hope that contrasted with the realities of American colonies, even though they would encounter, as we shall see in later chapters, very similar challenges.

agricultural stagnation and poor land management in the Cape see David Johnson, "British Models of Colonial Governance: Adam Smith and John Bruce on the Cape Colony," *The Eighteenth Century* 51, no. 1/2 (April 1, 2010): 103–27. Johnson shows how "wise patrician governance" via the EIC advocated by John Bruce competed with Smith's economic liberty in rectifying the economic stagnation. See also Fredrik Albritton Jonsson, "Rival Ecologies of Global Commerce: Adam Smith and the Natural Historians," *The American Historical Review* 115, no. 5 (December 1, 2010): 1342–63, which explores the "rival" solutions to struggling or environmentally damaging domestic and colonial practices.

IV. Agrarian Patriotism at Home and in the Empire

According to C.A. Bayly, in the late eighteenth and early nineteenth centuries agrarian improvement was the “national moral crusade” and “dominant faith of the elite” in Britain, and, also, “the dominant discourse” of the British Empire after the loss of the American colonies.⁹³ Agrarian patriotism was a self-conscious manifestation of agricultural improvement meant to reinforce the power of the landed class and the monarchy after such a defeat, or, as Linda Colley argues, to offer an alternate form of supremacy to an extensive empire.⁹⁴ The previous section explores how the march of agricultural improvement in Britain (and Europe) fashioned an analytical lens through which a very unflattering picture of North American agriculture was taken. But to appreciate how agrarian improvement was transposed onto the colonial settlements and imperial holdings in more proactive ways once the American colonies were lost, we must first explore the development of ideologies of agrarian improvement and how these ideologies were institutionalized in a domestic context. To understand the scheming and intervening of home and colonial governments in relation to early agricultural development in New South Wales and the Cape of Good Hope, we must understand how agricultural improvement became harnessed to the political apparatus of the State in the late eighteenth century.

Walter Harte remarked in 1764 how “undoubtedly needless” it was “to urge how just a title agriculture has to claim the encouragement and protection of the State.”⁹⁵ This sentiment was the essence of what Bayly has termed agrarian patriotism. Agrarian patriotism, as the name

⁹³ Bayly, *Imperial Meridian*, 78, 80–81.

⁹⁴ Linda Colley, *Britons: Forging the Nation, 1707-1837* (Yale University Press, 2005), 177–194.

⁹⁵ Harte, 2

implies, was the merging of agrarian activities and interests with national concerns. Agrarian patriotism “[brought] together great landowners, yeoman farmers and professional people in a moral community” who insisted that agriculture, not commerce or industry, was the foundation of Britain’s strength as a nation. And while, as this section will demonstrate, agrarian patriotism in Britain is closely associated with economic policies that protected the interests of the landed classes, it is a mistake to define agrarian patriotism so narrowly. Yes, agrarian patriotism created an alliance, for a time, between the state and agricultural producers through economic protections, but it also solidified the alliance between agrarian wealth and the natural sciences and between agricultural practices and agrarian ideology, which made it easier for colonial planners and officials, even those who were invested in the protection of British landed interests, to label agricultural improvement in colonies “patriotic.”

Agrarian Patriotism, in its institutional forms, revolved around three main activities: merging, in a more self-conscious way, the vocabulary of agricultural improvement with the vocabulary of patriotism; taking stock of the state of improvement in the country (and occasionally the colonies); and lobbying for economic and land policies that would encourage and reward improvement. The act of describing and advocating improvement in the second half of the eighteenth century largely took place in print. While members of the landowning classes throughout Britain often spent anywhere from three to six months in London for the “Season” between January and June (coinciding with the sitting of Parliament), for the majority of the year, they were scattered across the British Isles. This is even more true for many yeoman and tenant farmers. Provincial agricultural associations were common across Britain—Young listed at least 23 of them—and agricultural advice was regularly transmitted locally and through

individual networks of correspondence, but the steady rise of print culture in the eighteenth century enabled the mass transfer of agricultural knowledge to a diverse and dispersed body of British landowners and farmers, accessible to anyone who could read and who possessed a degree of disposable income.⁹⁶

Agricultural historian Mauro Ambrosoli insists that agrarian change cannot be divorced from changes in print consumption in Europe, and England in particular, in the period from 1650-1850. Ambrosoli has examined agricultural writings in exhaustive detail from early modern English translations of Virgil and Columella to Jethro Tull and Arthur Young to show how print culture influenced the adoption of new practices, and, more importantly to his work, fodder crops.⁹⁷ While, as Overton cautions, “the discussion of farming literature as a guide to farming skills is rather inconclusive,” it is, nevertheless, through print culture, that we see an important pedagogy of improvement that defined and redefined good and bad husbandry in the eighteenth century.⁹⁸ Dedicated agricultural writing has a long history in England, from the medieval period with Walter of Henley’s *Le Dite de Hosebondrie* (c.1280), to the early modern period with Thomas Tusser’s highly-amusing and instructive *Five Hundred Points of Good Husbandry* (1557) and Walter Blith’s illustrated *The English Improver Improved* (1649). But the eighteenth century was this genre’s heyday. The works of the naturalist Richard Bradley dominated the first few decades of the century with *New Improvements of Planting and Gardening* (1719), the three volume *General Treatise of Husbandry* (1721) and *Ten Practical Discourses Concerning Earth and Water, Fire and Air, as the Related to the Growth of Plants* (1727). Jethro Tull’s 1731 one

⁹⁶ Ambrosoli, *The Wild and the Sown*, 354; Overton, *Agricultural Revolution in England*, 130

⁹⁷ Ambrosoli, *The Wild and the Sown*, 262–336, 337–62.

⁹⁸ Overton, *Agricultural Revolution in England*, 130.

hit wonder, *Horse-Hoeing Husbandry*, was perhaps the most influential single work of the century, but his contemporary William Ellis was more prolific and more compressive. His eight volume *Modern Husbandman* (1750) synthesized and categorized improvements, and, as his title suggest, linked specific agricultural practices to modernity and others to “ignorance and sloth.”⁹⁹ But none could rival the output of Arthur Young from the early 1770s to the 1810s. Arthur Young, more than any other figure in the second half of the eighteenth century, informed the public, and not just the farming public, what practices constituted High Husbandry and what political positions best supported it.

In Young’s prodigious body of work, he addressed all three aims of agrarian patriotism (defining, surveying, and politicizing improvement). In the 1770s, he took long tours to survey the state of improvement across England and wrote easy-to-digest farming manuals. His four volume *Course of Experimental Agriculture* (1771) detailed five years of experiments in grain and fodder production on a variety of different soils. It included experiments on the management of artificial grasses, comparisons between “old” and “new” methods of cultivation, the management of natural pasture lands, and experiments in soiling cattle. Like Bacon, he argued that Pure experimentation without initial conjectures (“*hypotheses non fingo*”) “related with philosophical precision” was the only way that improving farmers could break free of the “prejudices” and resistance to change that characterized their profession.¹⁰⁰ His timely *Political*

⁹⁹ William Ellis, *The Modern Husbandman* (D. Browne, 1750), preface (unnumbered); G. E. Fussell, “The Farming Writers of Eighteenth-Century England,” *Agricultural History* 21, no. 1 (1947): 1–8.

¹⁰⁰ Arthur Young, *A Course of Experimental Agriculture: Containung an Exact Register of All the Business Transacted During Five Years on Near Three Hundred Acres of Various Soils... The Whole Stated in Near Two Thousand Original Experiments...* (London: J. Exshaw, 1771), i–ii, ix;

Essays Concerning the Present State of the British Empire (1772) and *Political Arithmetic: Containing Observations of the Present State of Great Britain and the Principles of Her Policy in the Encouragement of Agriculture* (1774) brought him to the political stage, which continued in the 1780s, as he toured and diagnosed Irish and French farming and politics. In 1785, he created a literary forum for agricultural intelligence and agrarian politics, much of it his own, through the 45 volume *Annals of Agriculture* (1785-1809). *The Annals* included articles on political economy, scientific discoveries, foreign travel, manufacturing techniques in addition to its many articles on improved husbandry. As an example, its ninth volume published in 1788 contained nearly 60 separate pieces, including essays on land drainage techniques, husbandry on the Isle of Wight, the abolition of slavery in the West Indies, comparisons of different preparations for barley, how to make brandy from carrots, on “the management of the poor,” the culture of guinea grass, “clandestine Export of Wool from Jersey,” “the courses of crops of England and Maryland compared,” and the practice of gleaning, as well as reprints of parliamentary acts and debates. One hundred pages of Sir Joseph Banks’ scathing remarks on the Wool Bill of 1788 was followed by a short article from a country parson on replacing common fallows with tares and buckwheat. The “Report of the Society for the Abolition of the Slave trade was followed by a report of a series experiments on oat hay.¹⁰¹

Like most books in the period, it is impossible to know the extent of readership for *The Annals of Agriculture*, but there is plenty of evidence to suggest that it was not only consumed widely in Britain, but travelled as well. George Washington, for one, received the entire set from

I. Bernard Cohen, *Revolution in Science* (Cambridge [M.A.]:Harvard University Press, 1985), 147–9; Overton, *Agricultural Revolution in England*, 129.

¹⁰¹ Arthur Young, *Annals of Agriculture and Other Useful Arts*, vol. 9 (Bury St. Edmond: J. Rackham, 1788).

Young and purchased an additional set for the Philadelphia Philosophical Society; the East India Company ordered six sets to be sent to their Bengal offices; and the Royal Agricultural Society of New South Wales had the later volumes in their library in Sydney.¹⁰² Its contributors hailed from across the globe, though mostly from the British Isles and the European continent, and even included the King of England, George III, writing as Ralph Robinson. It was said that the King “never travelled without a Volume of the Annals in his Carriage.”¹⁰³ In the Annals, Young created a meeting, carefully curated as it was, where scientific agriculture and rural economy met national (and imperial politics). In this way, Young’s *Annals* can be considered a proto-institution of agrarian patriotism. The advocacy and activity proclaimed and described in its pages continued in the advocacy and activity of the Board of Agriculture. The *Annals*, as Drayton suggests, was “an important medium for the Anglicization of Cameralist and Physiocratic thought” in the late eighteenth and early nineteenth century.¹⁰⁴

Young had been interested in putting together a nationwide agricultural survey conducted by “the most alert and clever farmers of [each] Neighborhood” since the beginning of his career in the late 1760s, when he dispatched a series of letters to several of the great improving landowners in England asking for their willingness to assist in such an undertaking.¹⁰⁵ He would continue to call for this kind of project during his first ten years editing the *Annals*, and in many ways, his collection of correspondence published in the annals constituted a disorganized

¹⁰² James Cobb to Young, 6 June 1814, BL, Add. MS 35132, f. 132; Young to Cobb, [1814], f. 136; “List of Books in the Society Library in 1869,” Royal Agricultural Society Archives [no identifier]

¹⁰³ John Ayrton Paris, “Biographical Memoir of A. Young,” [c. 1820-1823], BL, Add. MS 34855, f. 15.

¹⁰⁴ Drayton, *Nature’s Government*, 100.

¹⁰⁵ Charles Watson-Wentworth (Lord Rockingham) to Young, 29 June 1768, Christopher Baldwin to Young, 15 July 1768, Add. MS 35126, f. 45

agricultural survey of the county. At the same time, Henry Home (Lord Kames) a close associate of Sir John Sinclair's in Scotland, believed farming to be the "natural condition" of the gentlemen, suggested in his *Gentleman Farmer* (1776) that the formation of a body to study farming across should be a state project, not a private one. As Richard Drayton argues, this was a significant departure from the earlier British agrarian traditions, which, as in the sciences, encouraged private initiative and networking in husbandry.¹⁰⁶ Lord Kames died before this institution could be realized and Arthur Young, despite his impressive professional network, lacked the social standing and political cache needed to secure Parliamentary support. It was Sir John Sinclair, with the support of the Prime Minister William Pitt and King George III, who managed to convince Parliament to make a grant of £3000 for the establishment of the Board of Agriculture and Internal Improvement in 1793.¹⁰⁷

The Board's ordinary (executive) membership was awash in aristocratic titles with The Dukes of Grafton, Bedford, and Buccleugh; the Marquis of Bath; the Earls of Sheffield, Macclesfield, Winchelsea, Hopetoun, Egremont, Lonsdale, Moira, Carysfort, and Fitzwilliam joining a host of lesser Lords and public office holders, and a handful of commoners of the "parliamentary classes." Within a few years, the Board had, in addition to its 50 ordinary and ex-officio members, almost 300 elected members. With a few exceptions, their experience in agriculture had been as landlords, not as actual farmers. Arthur Young, who was undoubtedly the member with the most practical agricultural qualifications (though writing, as one historian

¹⁰⁶ Drayton, *Nature's Government*, 65.; Bayly, *Imperial Meridian*, 84-5. Lord Kames differed significantly from many other agrarian patriots, who saw the yeoman farmer, "vigorously competing on a free land market," as the conduit for improvement.

¹⁰⁷ Rosalind Mitchison, "The Old Board of Agriculture (1793-1822)," *The English Historical Review* 74, no. 290 (1959): 42-3.

notes, "was the paying side of his farming"), was elected unanimously to be the Board's secretary with a salary of £400 per annum.¹⁰⁸ Young did a great deal of the actual work involved in the Board, which he did efficiently and tirelessly, though not without harboring resentments, particularly towards the Board's President and founder, Sir John Sinclair, for taking Young's expertise for granted while fawning over his fellow titled landowners "who scarcely knew the right end of the plough" and for refusing to increase Young's salary while squandering the Board's budget on pet projects, resentments which only festered as time went on.¹⁰⁹

At the heart of the Board's mission, like that of the *Annals*, was the conviction that agriculture was the ultimate source of a nation's wealth and that scientific knowledge was power. Sinclair made the case for the Board by insisting that there should be a systematic review of the state of improvement (or non-improvement) of each country in England, Wales, Scotland, and Ireland, so that Government could assess and reform agrarian practices to guard against the kind of scarcity and social unrest that had led to such disastrous consequences on the Continent. So the majority of the Board's efforts and funding (in fact, they went into significant debt almost immediately) went to the compilation of 74 separate published surveys, the "General Views of Agriculture," between 1793 and 1795.¹¹⁰ All the reports followed the same basic format: a lengthy description on the "Geographical State and Circumstances" of the district in question; and explanation of the "Modes of Occupation," i.e. land tenure, in the district; mechanical

¹⁰⁸ Ernest Clarke, *History of the Board of Agriculture, 1793-1822* (London, 1898), 10, 12, <http://hdl.handle.net/2027/hvd.hw4b4i>.

¹⁰⁹ Arthur Young, *The Autobiography Of Arthur Young: With Selections From His Correspondence*, ed. Matilda Betham-Edwards (Kila, [M.T.] Kessinger Publishing, LLC, 2009), *passim.*; Clarke, *History of the Board*, 14-15.

¹¹⁰ View them all at the British Agricultural Society LIBRAL Repository, <http://www.bahs.org.uk/LIBRALall.html>. Accessed 18 July 2016. The bills for the initial publications ran to over £5000, see Clarke, *History of the Board of Agriculture.*, 15.

technologies in use; the state of enclosure or fencing; modes of cultivation, i.e. crop rotations; the state of natural meadows and pastures as well as artificial fodder; the extent of woodlands and “wastes”; examples of improvements in arable cultivation and livestock raising; the general “Rural Oeconomy”; and “Political Oeconomy as affecting Agriculture.” Each report, which typically ran up to 300 or 400 pages, was compiled by a different Board member, though some members did multiple reports.

Inevitably some of the “General Views” were much more thorough and thoughtful than others. Arthur Young’s reports on Suffolk, Essex, and Lincolnshire, William Pitt’s report on Staffordshire, Thomas Stone’s report on Bedfordshire, and Nathaniel Kent’s report on Norfolk, are notable for their rigor and political pointedness. For all the writers, however, it is clear that the responsibility for improvement lay in the hands of “gentlemen of landed property.” Individual farmers, large and small, were to be commended for their exertions and spirit of improvement, but, ultimately, in British society, the land owner was the only person able “to suggest or enforce improvements in the uses or prevent abuses in the management of land.” As Thomas Stone eloquently argued, the landlord had a specific job description:

Might a mere husbandman be called from the plough to amputate a limb, in the expectation of his having the skill of an experienced surgeon, or a seaman be directed to draw a marriage settlement with the technical accuracy and legal knowledge of an experienced conveyancer? Hence it is [to the landlord] that the dividing and inclosing mixed property, regulating the husbandry which out to be observed upon it; the granting leases with a view to enforce the application of the most approved methods which out to be adopted upon the different soils, and thereby securing the occupier in the enjoyment of the fruits of his skill, industry, and first expense...[should be] adopted.¹¹¹

¹¹¹ Thomas Stone, *General View of the Agriculture of the County of Bedford: With Observations on the Means of Improvement* (London: E. Hodson, 1794), 12.

Given that the majority of land in Britain was cultivated not by freeholders, but by leasehold and customary tenants, this was a wide call to action against the many titled aristocratic and chivalric landowners who had been content to collect fees and rents without bothering themselves with the actual use of the land.¹¹²

Once these surveys had been compiled and published, their next collective goal was to promote improvements through "scientific agriculture." To this end, the Board's core members met weekly or monthly depending on the season, at the Board's Piccadilly townhouse to read aloud select letters and essays on experiments, improvement projects, and rural economy. In 1797, they launched a "Communications to the Board" series where papers deemed particularly important or interesting were published for public consumption. The surviving minute books for the Board are, unsurprisingly, quite dry and non-descriptive, and mostly concern this process of assessing and filtering correspondence. But by examining which papers and letters were "to be returned with thanks" or "to be kept with thanks" or "thanks and request further attention to the subject," the Board's particular agricultural biases can be detected. Most anything involving sown grasses and experimental manures were kept, as were papers on the folding of livestock, the drainage of water meadows, and the improved breeding of livestock. Some of the more notable snubs: Thomas Jefferson on American wheat harvests, Sir Fred Eden on common grazing, a Mr. Wilson on fallow crops, a Mr. Smith on emigration.¹¹³

¹¹² Overton, *Agricultural Revolution in England*, 34, 167–9.

¹¹³ As examples see The Museum of English Rural Life, Reading, UK (henceforth MERL), Board of Agriculture Minutes, RASE B/I (Rough Minute Books), 1798: 13 Feb., 20 Feb., 6 Mar., 14 Mar., 27 Nov., 18 Dec. 1800: 21 Jan. Mr. Smith, in particular, was to be informed that the Board did not approve of such treatises (one assumes it was a pro-emigration paper).

In 1800, after the Board had climbed out of its "General View" debts, it began offering premiums for papers on scientific agriculture and rural economy and for practical agricultural experiments. Topics solicited included the "experimental culture of plants," enclosure, "soiling on green food," folding sheep, irrigation and drainage, "ploughing in green crops," chemical experiments, and "the weather." The inaugural grand prize of £200 (which, for reference, was half of Young's yearly salary), was solicited directly by "a committee of the House of Lords," to find "The best means of converting certain portions of Grassland into Tillage, without exhausting the Soil, and of returning the same to Grass, after a certain period, in an improved state, or at least without injury." They wanted to know the depth to which the farmer should break up the grassland, what crops were to be grown on the land (strongly hinting that fodder crops would be preferable) and detailed instructions on their management, the varieties and quantities of grass seeds to be sown when it was put to grass again, whether the seeds were provided by the landlord or the tenant, and an estimate of the appropriate increase in Rent for the farm after such an improvement.¹¹⁴ Francis Russell, the fifth Duke of Bedford, a grass enthusiast second only to Young, took charge of the project. Over 350 essays were sent to the Board, and it took over a year for them to be read and processed. The Duke was so animated by the success of the initiative, he even convinced the penny-pinching wartime Parliament to allow an additional £800 for additional awards to those essays that didn't make the top four.¹¹⁵

The precondition, of course, for this kind of experiment was the enclosing of natural grasslands. Sinclair's General Enclosure Bill, from the Board's early years, had been a chief

¹¹⁴ MERL, RASE B/ii, 31 Jan 1800. Additional prizes were to be given to runners up: £100 for 2nd then £60, £40, £20.

¹¹⁵ Clarke, *History of the Board of Agriculture*, 28-9.

political objective of agrarian patriots. Improvement of agriculture depended on the physical and political integrity of private property, and this dependency was fundamentally at odds with traditional tenurial systems of land use that still dominated some regions of Britain.¹¹⁶ Improved mixed husbandry drew sharp distinctions between enclosure and wastes, a distinction that rested more on control than productivity. In this way, waste is a misnomer. Wasteland was not unproductive. And, what is more, open-field farming, which depended upon these commons or wastes, was not, as J. M. Neeson has shown, incapable of improvement.¹¹⁷ But enclosures, unlike open “wastes” or even cultivated open fields, allowed farmers to circumscribe and dictate the terms of ecological interactions, to create a closed cycle of nutrients protected from outside variables. They might not actually be able to account for each and every cowpat, but they could try. With this in mind, the agrarian patriots that made up the Board had claimed from the start that the only way forward was the elimination of common land tenure and the reclamation of these grassy “wastelands” and poorly cultivated peasant farms. The former peasantry would become an agricultural workforce of wage laborers at the service of the landlord (or, more often, the landlord's tenants). Capital could be concentrated on large farms without hindrance, and when paired with “exertion” and a “spirit of improvement” would yield much greater profit for the farmer and higher rents for the landlord. And if any doubt remained in government or the public that enclosure should be whole-heartedly supported, the “General Views” from across the British Isles had confirmed, in exhausting detail, that the best management was to be found on enclosed estates and the worst on unenclosed estates. This political objective was not really at

¹¹⁶ Drayton, *Nature's Government*, 51; Overton, *Agricultural Revolution in England*, 158–65.

¹¹⁷ J. M. Neeson, *Commoners: Common Right, Enclosure and Social Change in England, 1700-1820* (Cambridge University Press, 1996), 15–17, 110–154.

odds with general opinions in government (the main objection concerned the commutation of tithes), as the correlation between enclosure and agricultural productivity was undeniable, and a series of poor harvests throughout the 1790s combined with the outbreak of war had caused widespread scarcity.¹¹⁸

The year 1800 also saw the ascendancy of a political objective rooted not in scientific agriculture or the spatial reorganization of land, but in political economy. Inspired, likely, by the publication of Malthus's 1798 *Essay on the Principle of Population*, premiums were also given in that year for papers on the condition of the poor, the means of preventing scarcity, theories of population, and opinions on the export and importation of grain.¹¹⁹ In the 1800s and 1810s, while still devoting energy to scientific improvement of agriculture, the Board, as an institution and its members individually, lobbied harder than ever for policies that would protect agrarian interests in England and Scotland in the face of rapid commercial expansion, population growth, and the rise of a nascent industrial sector. They had long clung to the Cameralist and Physiocratic principle that agriculture was the true source of a nation's wealth, but as industrialization and urbanization increased, they upheld it with much greater urgency. Within the Board, the ideology

¹¹⁸ See Rosalind Mitchison, "The Old Board of Agriculture (1793-1822)," *The English Historical Review* 74, no. 290 (1959): 47; George Lillie Craik and Charles MacFarlane, *The Pictorial History of England* (London: C. Knight, 1843), 767; Overton, *Agricultural Revolution in England*, 164–7.; The Board had very few reservations about the social impact of enclosure in wheat-growing regions and most sincerely believed that a steady wage and the life of a cottager would be entirely preferable to farming in the old system. The debate was more complex in areas more suited to pastoral industries in Northern England and especially the Scottish Highlands, where the Clearances (whereby landlords replaced their tenants (crofters) with livestock) or the prospect of clearances were the source of great anxiety, even before the worst of them had begun. See Albritton Jonsson, *Enlightenment's Frontier*; Eric Richards, *The Highland Clearances: People, Landlords and Rural Turmoil* (Edinburgh: Birlinn, 2002)

¹¹⁹ MERL, RASE B/2, 31 January 1800.

of improvement morphed over the course of the 1800s and 1810s to a firm protectionist stance.¹²⁰

In the late eighteenth century, agrarian patriots agitated, mostly unsuccessfully, against the old Corn Laws that restricted exports of grain (and sheep/wool) and permitted controlled imports. In these days they were keen to adopt Smithian economic principles in arguing for the relaxation of export restraints, but abandoned them quickly when it came to imports. Young argued vocally early on that while free trade was all well and good to curb the excess and corruption of the merchant class, Smith's liberal economic principles did not and should not apply to agriculture and "rural oeconomy."¹²¹ Agrarian patriots, as Drayton argues, were skeptical of unqualified economic liberty and "viewed tariffs as the heat which the Crown could turn up or down, as needed, to force the flowering of prosperity and political cohesion."¹²²

The scarcities of the 1790s had revealed the need for agricultural improvement and increased productivity, but by allowing the import of cheap grain from Europe and North America, the government was de-incentivizing improvement and diminishing the power of Britain. It was not the first time the agrarian patriot set had stressed national self-sufficiency in grain, particularly in response to wartime insecurities. Self-sufficiency in the grains that made up the better part of British diets was a matter of national security. In 1791, as war loomed again between Britain and France, Lord Sheffield (John Baker Holroyd) claimed that England was

¹²⁰ Anna Gambles, *Protection and Politics: Conservative Economic Discourse, 1815-1852* (Boydell & Brewer Ltd, 1999), 25–55; 147–175 See; Boyd Hilton, *Corn, Cash, Commerce: The Economics Policies of the Tory Governments 1815-1830* (Oxford University Press, 1977).

¹²¹ John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution* (Cambridge, UK: Cambridge University Press, 1998), 88.

¹²² Drayton, *Nature's Government*, 103.

quickly becoming wholly dependent on foreign countries for their daily subsistence. Sinclair put it even more plainly: "If we cannot supply ourselves with bread we are not an independent nation." Young trumped them both by warning that war or famine in Europe would "teach us by direct and absolute starvation that we are dependent on other nations for that which at a fair Price we should have grown for ourselves."¹²³ And indeed the position gained more political traction when a full-fledged war threatened grain trading routes from all directions at the end of the 1790s. In the 1800s, the Board's political objectives consolidated into one main target, a new Corn Law that would protect the price of domestic grain by establishing rigid controls on foreign grain imports. But in doing so, the Board (and agrarian patriotism writ large) had to define who was foreign and who was not.

Young, who would become the mouthpiece for agrarian patriotism and the landed interest (despite never breaking into the landowning class himself), expressed misgivings about the profit of colonial possessions early in his career. He expressed early on that Britain had done well to shed the American colonies. "Long before a single musket was fired in that ill-fated quarrel" Young had considered American colonies, with the exception of the sugar islands and, in some instances, tidewater coastal colonies, to be a threat to the wealth of the nation, not an asset.¹²⁴ This view was likely inherited from his mentor, Walter Harte, who wrote to Young in 1765 that if the government of his "beloved, but mistaken Country" ever turned its full attention to the improvement of husbandry on its own islands, there might not be a need for colonies at all ("and

¹²³ All quotes from Gascoigne, *Science in the Service of Empire*, 81-3; See also, "Hints Regarding the Corn Laws," April 1814, BL Add. MS 35697, f. 163: "a nation ought not to trust to its enemies, or those who may become so, for the means of its subsistence."

¹²⁴ Arthur Young, *Annals of Agriculture and other Useful Arts*, vol. 1 (Bury St. Edmund: J. Rackham, 1786), 13.

I may not be made mad with the visionary notions of colonies!")¹²⁵ Young not only concurred with a host of eighteenth century travelers that agriculture was practiced “on a very bad principle” in most of the American colonies, but he also failed to see it as a land of opportunity for Britons “seek[ing] in other climes that happiness which their own denies.”¹²⁶

Young had taken a great interest in Pehr Kalm's descriptions of American agriculture, and in particular his words on grass management (or lack thereof). He corresponded directly with Kalm's translator, Johann Reinhold Forster, a naturalist in his own right, about the depravity of American Husbandry and Young's ability to "superstruct these Observations of my Author [into] the best Instructions for the Improvement of you fellow Subjects beyond the Atlantic, who will be desirous to receive them, as benefactions."¹²⁷ But, aside from his in-depth correspondence with Washington, a series of exchanges with the Board of Trade on the culture of hemp, and a somewhat limited correspondence, through the *Annals*, with farmers, planters and merchants based in Canada, India, and the West Indies, his attention towards the American colonies was largely derisive, not instructive. He occasionally printed articles on colonial exploration and fielded questions from prospective emigrants on how to approach agriculture in new climes, and he did contemplate an American tour (including to the West Indies, which he believed should be retained and improved) in the early 1790s, but his Board of Agriculture responsibilities kept him from following through.¹²⁸

¹²⁵ Walter Harte to Arthur Young, 3 February 1765, BL, Add. MS 35126, f. 8

¹²⁶ Arthur Young, “On Emigrations to America for Practicing Agriculture With Advantage,” in *AA*, vol. 3, 169

¹²⁷ Johann Reinhold Forster to Young, 4 February 1771, BL Add. MS 35126, f. 88

¹²⁸ "Association for Promoting the Discovery of the Interior Parts of Africa," in *Annals of Agriculture and Other Useful Arts*, vol. 11 (1808), 15-6. ; "Queries Relating to New South Wales" in *Annals*, vol. 45 (1817), 437; [Gazel?] to Young, 20 October 1792, BL Add. MS

The Board itself had a deep ambivalence towards empire. It was never made clear in official papers and addresses whether "internal improvement" extended to colonial settlements, but an examination of their activities suggest that the answer was more often no than yes. This was particularly true after the Board took a decidedly protectionist stance in the early 1800s, fed by fears that imported grain and wool would depress the market price of these commodities in domestic Britain.¹²⁹ The biggest real threat to British producers was from the Continent and from United States, which one member, William Strickland, claimed was quickly on its way to becoming "the Granary of Europe."¹³⁰ This was the case even in places where colonial grain production was in such infancy or state of depression that it could not possibly seriously threaten domestic producers. For example, Sinclair once brought into a meeting a sample of Hertfordshire barley and a sample of barley sent to him from the Cape of Good Hope for the sole purpose of showing its inferiority.¹³¹ This was at a time when the Cape was nowhere near self-sufficiency in grain (of any kind), and, in fact, relied on grain imports from Bengal to feed its citizenry.¹³² Cape barley, in particular, used for malt and as regimental horse feed, was no threat at all to British producers.

The Board's relationship to the agriculture of India was even more complex. On one hand, improvement among British landholders was contrasted with the corruption and bad

35127, f. 202; Thomas Law to Young, 5 January 1793; f. 218; Sir Patrick Black to Young, [1793], f. 271; *Annals of Agriculture and Other Useful Arts*, vol. 1, 1784, 385–6n.

¹²⁹ William Pitt to Young, 8 February 1808, BL, Add. MS 35130, f. 14; Lord Sheffield to Young, 7 July 1811, BL, Add. MS 35131, f. 109; Sheffield to Young, 28 July 1811, f. 134; John Sinclair to Young, 7 October 1812, f. 398;

¹³⁰ Sir William Strickland, *Journal of a Tour in the United States of America, 1794-1795* (New-York Historical Society, 1971), 38.

¹³¹ MERL, RASE B/viii, 16 May 1817

¹³²See Ch. 2 and 4.

management of the Indian "nabob," and some members certainly believed that India, at least under the EIC, was far more trouble than it was worth. But on the other hand, many of its members had active financial interests in the EIC. In fact, beginning in 1803, under the control of Lord Sheffield, the Board began directing almost all its surplus revenue into East India Company bonds.¹³³ They also looked to India as a source of emergency grain supplies in the years of extreme scarcity between 1799 and 1801. Rice imports would, it was supposed, prevent famine without compromising the British wheat growers.¹³⁴ The Board received seeds from the EIC and debated which parts of the Empire they might be most profitably transplanted, though they generally left the detail's to Sir Joseph Banks.¹³⁵ Sinclair, despite his earlier complaints that bullion sunk into the East India Company (close to 24 million pounds) could have "rendered every acre in the Kingdom productive," later supported the extension of improvement to colonial holdings.¹³⁶ In his "Hints on the Agricultural Advantages to be Derived from our East India Possessions," Sinclair described initiatives within the Board to improve grain farming in India, mainly through the introduction of the potato as a locally-consumed staple, a departure from his former declarations that "internal improvements" should receive as much attention as "distant speculations, and indeed preference, when they come into competition."¹³⁷

¹³³ Mitchison, "The Old Board of Agriculture," 59; Ranajit Guha, *A Rule of Property for Bengal: An Essay on the Idea of Permanent Settlement* (Orient Blackswan, 1982), 20-59. Guha traces the Physiocratic roots of critiques of EIC management in India.

¹³⁴ Mitchison, "The Old Board of Agriculture," 45,57. They did not want an association between colonial grain and bread.

¹³⁵ John Gascoigne, *Joseph Banks and the English Enlightenment: Useful Knowledge and Polite Culture* (Cambridge University Press, 2003), 201.

¹³⁶ Quoted in Drayton, *Nature's Government*, 103. See also Guha, *A Rule of Property for Bengal*, 33-6 for discussion of India as a "wealth-drain".

¹³⁷ Gascoigne, *Joseph Banks and the English Enlightenment*, 202-3.

Yet still people assumed that the Board truly had its hands in the pie of empire. One man, George Alcock, wrote the Board a long letter in 1806 recommending himself as an agriculturist to the Cape of Good Hope, having been informed by a friend that the “Honorable Board was going to Establish a Coloney at the Cape.”¹³⁸ Several individuals applied directly to the Board of Agriculture requesting land grants in the West Indies to pursue experimental cultivation and were quickly redirected to the Board of Trade.¹³⁹ William Windham, the Secretary of State for the Colonies, even forwarded to the Board his notes on a proposed new British informal colony in the upper Midwest (Ohio, Indiana, Kentucky, and Illinois) “where wheat cultivation under an English regime could flourish” and be redirected via the Great Lakes to British North America for export.¹⁴⁰ This is a fascinating document not only because it shows just how out-of-touch the Colonial Secretary was with the progression of the United States, but because it indicates a critical misreading of the Board’s politics towards colonial agriculture. The Board might not have had a problem supporting colonial farmers attempting to cultivate flax or hemp or wine for export, but it was categorically (and vocally) opposed to the importation of foreign grain and would never have supported such a scheme.

The threat was not confined to just grain, however. As producers in New South Wales and the Cape began to feel out British markets for fine Merino wool, they reached out initially to the Board for support. For example, in 1807, very shortly after Sinclair had called for the Board to actively support improvement in Britain's colonial possessions in his 1806 address, William Duckitt, a British agriculturist at the Cape, wrote to Board with a report on Merino wool

¹³⁸ George Alcock to The Board of Agriculture, 6 April 1816, Add. MS 35133, f. 258

¹³⁹ Mitchison, 45

¹⁴⁰ “Notes by William Windham on the possibility of aligning with the Western United States for Commercial Gain,” [1806], BL, Add. MS 37885, f. 192.

production at the Cape, including several specimens from the best flocks in the colony. Duckitt had only asked for opinions on the quality of the fleece, but when the paper was read at the meeting, objections were raised, and the Board was urged (ostensibly by Sinclair) "to consider how far it is advisable for the interest of this Country to encourage the growth of the finer sorts of Wool in our distant settlements, which may have a tendency to check the Spirit of Improving those of our native growth."¹⁴¹ The answer was, of course, that it was not very advisable, a position that did not shift (and then reluctantly so) until the 1820s.

Even so, the Board of Agriculture, while stalwartly lobbying for the political and economic protection of agrarian interests at home, could not go so far as to discourage or turn a blind eye to the march of improvement in British colonies. The two were not, as Sinclair, argued, incompatible; one just had to tread lightly. Colonial production of tropical commodities was good. Experimentation with potential commercial crops like hemp, flax, or indigo was good. Improving the breed of cattle for local and maritime markets was good. The sowing of artificial grasses was good. Forming an Agricultural Society was good. Self-sufficiency in grain was good. Emigration was mostly bad. Commercial production of grain for an international market was bad, unless that international market did not include Great Britain. Colonial production of fine wool was bad. It is hard to pin down Board's approach to empire because it varied so greatly from member to member and because improvement, as a rhetorical tool, was so universally and unequivocally virtuous. This is why, despite its misgivings about the empire, particularly the temperate parts, individual Board members would play pivotal roles in the agricultural development of New South Wales and the Cape at the end of the century.

¹⁴¹ MERL, RASE B/vii, 24 February 1807.

V. Sir Joseph Banks and the Marriage of Improvement and Imperialism

It was Sir Joseph Banks who was able to build a bridge between agrarian patriotism and imperial expansion, and for the period between 1780s and the 1820s, he did so mostly on his own account. He was, as Drayton writes, “a broad-acred *philosophe*,” referring to the vastness of his estates, but he was also broad-acred in his approach to agricultural improvement, which he rarely kept within the bounds of the British Isles.¹⁴² Banks was a founding member of the Board of Agriculture and was, as such, an agrarian patriot in his own right. He was certainly an improving landlord. The income from his inherited estates in Lincolnshire, Kent, and Derbyshire, already impressive, more than tripled over the course of his adult life.¹⁴³ Like most of his fellow Board members, Banks rarely muddied his boots in “practical agriculture,” but unlike, for example, the Duke of Bedford, he never took particular delight in supervising the improvement of his estates.¹⁴⁴ His agrarian patriotism in terms of domestic agriculture was pragmatic. His scientific passion for the mobility of plants might have prompted him to unequivocally embrace the free exchange of goods throughout the known world, but the income and political power he derived from his estates, an income and power that enabled his scientific pursuits, was served best by the protection of domestic grain and wool production. But his scientific curiosity and his commitment to improvement were never as restricted as those of his colleagues on the Board.

¹⁴² Drayton, *Nature's Government*, 67.

¹⁴³ Gascoigne, *Joseph Banks and the English Enlightenment*, 8.

¹⁴⁴** At some point during my time at the British Library, I found a very revealing letter from Joseph Banks where he was complaining about the tedium of having to return to Lincolnshire to manage his estate, something along the lines of “Thank God I’m back in London after getting my boots muddy by playing the farmer,” but I just can’t find it again at the moment.

The utility of natural history was universal, and as such, the possibilities for the scientific management of land could (and should) extend to the Empire.

As a natural historian, Banks was a Linnaean. Not only was he a popularizer of Linnaeus's system of classification in Britain, he also adopted Linnaean principles of economic botany. Taxonomy, the systematic and comprehensive knowing and naming of all the elements of the natural world, was the first step in achieving mastery over that world. If a wild plant could be named, described, and contextualized (i.e. soil and climatic requirements), it had the potential to be utilized in a controlled environment (i.e. a field or greenhouse) for economic gain. Humankind had at its disposal "an infinite larder" in the natural world, if only they would take pains to understand its elements.¹⁴⁵ Linnaeus, with the assistance of his apostolic collectors, orchestrated a "gathering in of Creation" in the botanic garden at Uppsala, with the objective of bringing the agricultural bounty of an overseas empire to Sweden without actually having to bear the costs of maintaining such an empire. Plants from across the globe, even those hailing from subtropical climates, might, under the supervision of scientific experts be acclimatized to even the subarctic regions of Sweden.¹⁴⁶

Having studied the Linnaean system, Banks began his own journey in the gathering in of the natural world as a botanical collector/explorer in Newfoundland in 1766, which earned him a fellowship in the Royal Society. He and one of Linnaeus's apostles, Daniel Solander, joined Captain Cook's first voyage to the Pacific on the *Endeavour* between 1768 and 1771, followed

¹⁴⁵ Richard Harry Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (Yale University Press, 2000), 80.

¹⁴⁶ Drayton, *Nature's Government*, 4; Jonsson, *Enlightenment's Frontier*, 56–63; Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass.: Harvard University Press, 2007), 57.

by a journey to Iceland and the Orkney Islands in 1772. These voyages, particularly Cook's, made Banks a minor celebrity in Britain and secured his reception in elite scientific circles in Britain and Europe. He rose to prominence in the Royal Society, taking over its presidency in 1778. He was entrusted with the running of the King's botanical garden at Kew, which became both repository and depot for the plants of the world.¹⁴⁷ But unlike Linnaeus, and many of Linnaeus's British (particularly Scottish) followers, the transfer of plants from the globe to European gardens was not just to be the conduit for internal colonization or national autarky. As Albritton Jonsson writes, "Banks saw natural history as an imperial science...import substitution and crop transfers were tools of diversification overseas rather than the means toward domestic colonization."¹⁴⁸ For Banks, the subject of a kingdom that, for better or worse, did have an extensive (if often compromised) empire and a robust commercial tradition, plant transfers should not be conducted on a one-way street.

Indeed, Banks had devoted his attention to the improvement of the empire long before the Board of Agriculture was even formed. He hitched his scientific interests in botanical exchange and acclimatization to the apparatus of state (limited as it was) in the late 1770s after assuming the leadership of the Royal Society and Kew Gardens. As Drayton has shown, throughout the 1780s, 1790s, and 1800s, Banks connected Kew to improvement projects in England, Scotland, the West Indies, India, Africa, and Australasia, a legacy that would continue throughout the Victorian period under William and Joseph Hooker and William Thistleton-Dyer.¹⁴⁹ Banks was drawn to imperial projects where autocratic rule enabled policies to form and direct action to be

¹⁴⁷ Gascoigne, *Joseph Banks and the English Enlightenment*, 9–11.

¹⁴⁸ Albritton Jonsson, *Enlightenment's Frontier*, 63–6, 85.

¹⁴⁹ Drayton, *Nature's Government*, 80.

taken without the annoyance of Parliamentary debates and bureaucratic maneuvering. In addition to being regularly consulted by the Board of Trade and Plantations (before its abolishment in 1782) and the Board of Control, he corresponded directly with colonial governors in the West Indies and the Governors-General and Court of Directors of the EIC, on matters of agriculture, trade, and natural history.¹⁵⁰ He maintained correspondence in both the East and West Indies throughout the 1770s and 1780s with individual planters, officers, and company men, gathering intelligence on the management of land, and exchanging both plants and horticultural advice.¹⁵¹ In the 1780s, he came increasingly interested in the exchange of plants from the East Indies to the West Indies (and vice versa), so that the “productions of nature usefull [sic] for the support of mankind that are at present confined to one or the other” could be shared to offer “new resources against the dreadful effects of Hurricanes & droughts.”¹⁵² This culminated in the infamous breadfruit voyages of 1789—failed due to the Mutiny against Captain William Bligh—and 1791 organized to transplant more than a thousand live breadfruit plants from Tahiti to St. Helena, St. Vincent and Jamaica as a cheap, filling alternative to American grain to be used as, bluntly-stated, “slave fodder.”¹⁵³

Banks rose to power and prominence during early forms of what Bayly describes as “knowledge panics,” those moments when government officials, in the face of a real or perceived crisis (e.g. war, famine, economic depression, overcrowding), eagerly sought out the advice of

¹⁵⁰ Gascoigne, *Science in the Service of Empire*, 37–9, 61–2, 106, 113–9.

¹⁵¹ A few examples: Thomas Morton (EIC) to Sir Joseph Banks, 13 April 1785, BL, Add. MS 33978, f. 9; Joshua Steele to Banks, 20 June 1786, BL, Add. MS 33978, f. 70; James Anderson to Banks, 20 August 1787, BL, Add. MS 33978, f. 104.

¹⁵² Banks to Sir George Yonge, 15 May 1787 in Joseph Banks and Neil Chambers, *The Letters of Sir Joseph Banks: A Selection, 1768-1820* (World Scientific, 2000), 89–93.

¹⁵³ Drayton, *Nature's Government*, 112–5.

experts to guide decisions.¹⁵⁴ Throughout his career, the British government leaned on Banks (and Banks's emissaries) for guidance on colonial administration, agriculture, and exploration. Banks's most ambitious scheme in ecological exchange was his "seeding" of the First Fleet to New South Wales in 1788. This will be discussed in detail in the following chapter. The planning of New South Wales in the 1780s was a unique and multifaceted opportunity for Banks. First, New South Wales was an agricultural blank slate, and unlike the East or West Indies or Canada, it was temperate and calculated (by Banks at least) to support European agricultural produce. Second, it presented an opportunity to extract and develop new stores of naval timber (Norfolk Pine and perhaps others) and experiment with the cultivation of New Zealand flax. Third, having a British colony placed on the coast of a vast and largely uncharted continent gave Banks an incredible advantage in the ability to send out and support his bio-prospectors.

He was also involved, though to a much lesser degree, in the administration of the Cape of Good Hope in 1795, particularly in consulting with Secretary of War, Henry Dundas and the Governors, Lord Macartney and Sir George Yonge on the biological outfitting of William Duckitt's agricultural "department" in 1800. However, this was not Banks's first foray into colonial affairs in Africa. Ten years prior, he had launched the Association for Promoting the Discovery of the Interior Parks of Africa (African Association), sending botanical collectors and explorers down the Senegal and Gambia rivers to find and chart the course of the Niger River (with vague hopes of even finding a river route to southern Africa). Reaffirming West Africa's reputation as "the White Man's Grave," all but one of the explorers sent out by the African

¹⁵⁴ Ibid., 90; C. A. Bayly, "Knowing the Country: Empire and Information in India," *Modern Asian Studies* 27, no. 1 (1993): 38. Bayly's "knowledge panics" in nineteenth century British India often resulted in an overabundance of scientific experts and technocrats running roughshod over local actors.

Association under Banks's supervision died: two of dysentery, two of malaria, one of an accidental poisoning while trying to relieve his dysentery, and one murdered.¹⁵⁵

Banks's involvement in colonies, both old and new, put him at odds with many of his colleagues in the Board of Agriculture, who, on matters of empire typically ranged from indifferent to antagonistic. For Banks, writes Gascoigne, the patriotic ambitions of the Board of Agriculture, and the mission of improvement as a whole, should apply throughout the Empire: "Just as improvement was to be promoted in the Lincolnshire fens so, too, it was to be was to be promoted through any of the agencies of British rule which impinged on the wider world."¹⁵⁶ The Board frequently referred matters of imperial improvement to Banks instead of dealing with them as a group. Despite his theoretical willingness to direct the Board's attention to colonial holdings, Sinclair rarely showed anything close to Banks's enthusiasm for the matter, causing one East India Company botanist to pointedly ask if the Board (with Sinclair at the helm) "did not limit its patriotic views alone to the Economies of Britain?"¹⁵⁷ But Banks appreciated the parallels between the patriotic landlord's role in improving his estates by ordering, and the process of ordering, rationalizing, and utilizing colonial territory.

VI. Conclusion: The Limits of Enclosure

In closing, I want to expound on Drayton's argument that scientific agriculture and agrarian patriotism, or, more generally, natural history and political economy, were the

¹⁵⁵ Frank T. Kryza, *The Race for Timbuktu: In Search of Africa's City of Gold* (Harper Collins, 2006), 12–21.

¹⁵⁶ Gascoigne, *Joseph Banks and the English Enlightenment*, 203

¹⁵⁷ Quoted in Gascoigne, *Joseph Banks and the English Enlightenment*, 202-3. It should be noted that Sir John Sinclair was also a shareholder in this organization. See Drayton, 104

handmaidens of domestic and imperial governance throughout the long nineteenth century.¹⁵⁸ Certainly if we examine the activities of institutions like the Board of Agriculture (generally inward-oriented) and Sir Joseph Banks (generally outward-oriented), we can affirm this thesis. Agricultural improvement at the end of the eighteenth century was characterized by what Donald Worster calls the imperial tradition of ecology that gave legitimacy to man's dominion over nature, and made space for a postlapsarian paradise whereby the bounty of the earth could be called forth through reason, industry, and "active science."¹⁵⁹ The century ushered in a new grand alliance between the natural sciences (botany, chemistry, geology)—or, less anachronistically, natural history—and agrarian wealth.¹⁶⁰ Agricultural improvement was a top-down enterprise in which landed gentlemen invoked the spirit of science and patriotism to give legitimacy to their control of landscapes, resources, and people. In Drayton's view, this was doubly true when improvement became a project of empire. Agricultural improvement, influenced by political (patriotism) and religious (dominion) ideology and scientific knowledge, provided legitimacy to imperial exploitation. Scientific agriculture, through which even marginal lands could be made to produce commodities, stood, in Drayton's words, as a "token of the righteousness of property and empire."¹⁶¹ Improvement, once a local phenomenon, became nationalized and then imperialized as a new gauge for political authority and expansion. The rational use of nature (the "sacred theory of agriculture") "replaced piety as the foundation of

¹⁵⁸ Drayton, *Nature's Government*, xv–xvi, 85–89.

¹⁵⁹ Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge University Press, 1994), 5–6, 29–36.

¹⁶⁰ John V. Pickstone, *Ways of Knowing: A New History of Science, Technology, and Medicine* (University of Chicago Press, 2001), 7, 10–12.

¹⁶¹ Drayton, *Nature's Government*, 87.

imperial Providence; government became the demiurge and universal progress, measured by material abundance, its promised land,” absolving the harsher elements of colonial imposition.¹⁶²

Colonial conquest, particularly in colonies of settlement, is enclosure on a grand scale. Boundaries are imposed upon lands and people that contradict pre-existing (or non-existing) boundaries. In principle, previous occupants of the land are either ousted or incorporated into a new kind of managed space, the value of which is measured by its profitability. Enclosure in the name of improvement, defined by the careful ushering of nutrients from grass to gut to crop, was in many ways a test case about the probity of taking command of lands and resources that once “belonged” to (or at least was depended upon by) people who did not, in the eyes of improvers, use the land rationally or profitably. By the end of the eighteenth century, it was generally agreed upon by statesmen on a variety of political persuasions that, yes, improvement justified dispossession. And if improvement justified dispossession in the British Isles, it did so in colonial possessions as well. But dispossession is only the first part of the story. What happens when the colonizers take possession of lands under the assumption that they will turn waste into bounty, only to find that the people they placed on the lands failed to actually improve them?

Understanding natural history and scientific agriculture, identifying and advocating best agricultural practices, and knowing the right plants to send to a new land: those are important steps, but they do not by themselves make the grass grow. The groundwork of improving colonial landscapes, as the following chapters show, was much more complex. The agricultural practices and agrarian systems that truly revolutionized food production in much of Britain could not be neatly transposed (or, perhaps, imposed) on colonial landscapes and people without

¹⁶² Ibid., 89, 80.

significant recalibration. I argued in the introduction that ecological imperialism in the late eighteenth and early nineteenth century was not a wholly organic progress, that to divorce, as Crosby often does, the biological processes that helped spread European plants and animals across the globe from scientific and political orchestration is a mistake. But I also suggested that explaining ecological imperialism as a product of an aggressive scientific governance of nature goes too far in the opposite direction. This chapter has shown how improvement changed the landscape, population, economics, and politics of the British Isles, why fodder crops were so critical to agrarian change, and how colonial agriculture was (or was not) incorporated into the project of improvement. The following chapters will show just how messy the process of transferring improved mixed husbandry across the globe was.

CHAPTER TWO

Fleets of Fodder: The Ecological Orchestration of Agrarian Improvement in New South Wales and the Cape of Good Hope, 1780-1801

I. Introduction

In the past twenty years, research funded by a variety of Australian governmental agencies has investigated the invasion ecology of white clover in the sub-alpine regions of southeastern Australia. In these reports, the story of white clover's introduction to Australia adheres more-or-less to the same narrative. Eighteenth century introduction was "incidental:" early settlers "accidentally introduced" clover, with deliberate planting occurring only when the colony of New South Wales had decisively shifted to a pastoral economy in the 1830s. Across the Indian Ocean, a similar account prevails concerning an array of European grasses and fodder plants, including a variety of clovers, lucerne/alfalfa, sainfoin, and ryegrass in the scientific literature on the distribution of these naturalized exotic species. While few of these plants are labeled invasive in South Africa—the unsuitability of soil and climate in the coastal sites of introduction preventing them from roving over vast territories—the supposition remains that the introduction of species now widespread in many parts of the Western and Eastern Cape must have occurred only heedlessly and marginally before the end of the nineteenth century.¹

Alfred Crosby has taught us that ecological imperialism, the biological transfer of

¹ Rosemary Golding, "Ecological Risk Assessment of Transgenic Virus-Resistant White Clover" (Centre for Plant Biodiversity Research, 2003), <http://www.cpbr.gov.au/cpbr/summer-scholarship/2003-projects/golding-clover.html>; Office of the Gene Technology Regulator, *The Biology of Trifolium Repens L.* (Australian Department of Health and Ageing, 2008); L. A. Lane, J. F. Ayres, and J. V. Lovett, "A Review of the Introduction and Use of White Clover (*Trifolium Repens L.*) in Australia," *Australian Journal of Experimental Agriculture* 37, no. 7 (January 1997): 831–39; Sue Milton, "Grasses As Invasive Alien Plants in South Africa," *South African Journal of Science* 100, no. 1 (January 2004); G.C. De Kock, "Lucerne - King of Fodder Crops," Grootfontein Agricultural Research Institute, 2012, <http://gadi.agric.za/articles/Agric/lucerne.php>; CABI Invasive Species Compendium, "Lolium Perenne Datasheet," accessed July 20, 2015, <http://www.cabi.org/isc/datasheet/31166>.

European plants, animals, and pathogens, often went hand-in-hand with colonial settlement in temperate regions. It follows, therefore, that historians of colonial agriculture and environments should not forgo analysis of plant introductions until the advent of state-funded agricultural departments and experimental stations in the mid to late nineteenth century. Indeed, Crosby's ecological imperialism occurred largely outside of political and/or scientific oversight. Where Crosby's model is most appropriate—and where scholars have been most successful in its application—is in the American New Worlds of the sixteenth and seventeenth centuries, where this kind of haphazard biological expansion can be seen clearly.² Crosby's thesis has also been fundamental to the study of invasive species in environmental histories of former European colonies, though these works, particularly those on Britain's antipodean colonies do, in fact, tend to focus on late nineteenth and early twentieth century biological conquests as a result of organized, state-sponsored experimentation and intervention.³ But in both New South Wales,

² Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, 2nd ed. (Cambridge, 2004); Elinor G. K. Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (Cambridge, 1994); Thomas Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand* (Cambridge, 1999). William Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950* (Oxford, 2008).

³ Cameron Muir, *The Broken Promise of Agricultural Progress: An Environmental History* (Routledge, 2014); Libby Robin, *How a Continent Created a Nation* (UNSW Press, 2007); Jodi Frawley and Iain McCalman, *Rethinking Invasion Ecologies from the Environmental Humanities* (London: Routledge, 2014); Jodi Frawley and Heather Goodall, "Transforming Saltbush : Science, Mobility and Metaphor in the Remaking of Intercolonial Worlds," 2013; Brett Bennett and Fred Kruger, *Forestry and Water Conservation in South Africa: History, Science and Policy* (Canberra: Australia National University Press, 2015); Brett M. M. Bennett and Joseph M. M. Hodge, *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800-1970* (New York: Palgrave Macmillan, 2011); Joseph Morgan Hodge, *Triumph of the Expert: Agrarian Doctrines of Development and the Legacies of British Colonialism* (Columbus: Ohio University Press, 2007); Richard J. Hobbs, *Invasive Species in a Changing World* (Washington, D.C., Island Press, 2000); William Beinart, and Peter Coates, *Environment and History: The Taming of Nature in the USA and South Africa* (Routledge, 2002); William Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950*

established in 1788, and as part of the British takeover of The Cape of Good Hope in 1795, we have two colonies wherein ecological imperialism was neither apolitical nor unscientific: it was highly-orchestrated and vigorously supported, both in theory and, to greatly varying degrees, in practice. The politically (and historiographically) complex liminal ground between Britain's first and second empire is exactly where these two colonies set down their fragile roots, presenting an analytical and temporal challenge to scholarship on these colonial landscapes.⁴

Historians of science, particularly Grove, Drayton, Brockway, and Albritton Jonsson, have interrogated, at least in passing, the confluence of natural history and political ideology in these new antipodean colonies, and environmental historians have produced excellent historical scholarship on biological conquest and invasive species as a result of experimentation on the part of burgeoning colonial and post-colonial agricultural institutions.⁵ However, the kind of

(Oxford: Oxford University Press, 2008); William Beinart and L. E. Wotshela, *Prickly Pear: The Social History of a Plant in the Eastern Cape* (Johannesburg: Wits University Press, 2011); Eric Pawson, *Making a New Land: Environmental Histories of New Zealand* (Dunedin: Otago University Press, 2013); Tom Brooking and Eric Pawson, *Seeds of Empire: The Environmental Transformation of New Zealand* (London: I.B.Tauris, 2010).

⁴ See footnote 8.

⁵ Richard Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (New Haven, 2000); Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge, 1995); John Gascoigne, *Science in the Service of Empire: Joseph Banks, the British State and the Uses of Science in the Age of Revolution* (Cambridge, 1998); John Gascoigne, *The Enlightenment and the Origins of European Australia* (Cambridge, 2002). Lucile Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Garden* (New Haven, 2002); Fredrik Albritton Jonsson, *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism* (New Haven, 2013); Londa Schiebinger and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia, 2007). William Beinart and Karen Middleton, "Plant Transfers in Historical Perspective: A Review Article," *Environment and History* 10, no. 1 (February 2004): 3–29; William Beinart, and Peter Coates, *Environment and History: The Taming of Nature in the USA and South Africa* (London, 2002); Peter Coates, *American Perceptions of Immigrant and Invasive Species: Strangers on the Land* (Berkeley, 2007); Jodi Frawley and Iain McCalman, eds., *Rethinking Invasion Ecologies from the*

biological expansion found in early British settlement in both NSW and the Cape was neither a haphazard march of stowaway weeds and poorly-attended stock (though, undoubtedly, both of these were present) nor yet a product of organized scientific governance via economic botany, or, as has recently been posited, “eco-cultural networks.”⁶ C.A. Bayly recovered and re-animated the “curiously lacking in definition” years between 1780 and 1830 as more than just a threshold over which the Empire was carried into the Age of Liberalism, but the period still exists as a kind of “black box” for those historians interested in environmental transformations as a result of colonial development.

The majority of environmental histories of the British Empire, particularly those concerning settlements founded in the late-eighteenth century, leave the period between 1780 and 1820 or so to the historians of science, write it off as “survival mode” colonialism, or defer to Crosby’s model that is, as others have pointed out, geographically compelling (and revolutionary for histories of empire) but historically inadequate.⁷ So where do we look to bring this period out of the shadows? Bayly argued that between the failing health of mercantilism and the birth pangs of liberalism, it was agrarianism that became the “dominant discourse of the

Environmental Humanities (London, 2014); J. R. McNeill, *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York, 2001).

⁶ James Beattie, Edward Milillo, and Emily O’Gorman, “Rethinking the British Empire through Eco-Cultural Networks: Materialist-Cultural Environmental History, Relational Connections and Agency,” *Environment and History* 20, no. 2 (April 2014): 561-75.

⁷ Warwick Frost, “Alfred Crosby’s Ecological Imperialism Reconsidered: A Case of Study of European Settlement and Environmental Change on the Pacific Rim” in Dennis Flynn, Lionel Frost, A. J. Latham, eds., *Pacific Centuries: Pacific and Pacific Rim Economic History Since the 16th Century* (New York, 2002); Eric Pawson, “Plants, Mobilities, and Landscapes: Environmental Histories of Botanical Exchange,” *Geography Compass* 2, no. 5 (September 2008):1464-77; Peder Anker, *Imperial Ecology: Environmental Order in the British Empire, 1895-1945* (Cambridge, MA: 2009), 216-18.

second British Empire.”⁸ Similarly, between Crosby’s rogue weeds and feral hogs and Drayton’s breadfruit and cinchona, between independent biological processes and aggressive scientific interventions, there was the New Husbandry. The figurative and literal planting of these two colonies was an attempt at the wholesale transfer of an “Enlightened” agrarian system of mixed husbandry, itself relatively novel, as we saw in the previous chapter, in the British countryside, at a critical juncture at the disillusioned end of Britain’s first empire and the uncertain beginning of her second.⁹ Tensions between fledgling agrarian science in the Enlightenment, powerful ideologies of improvement, and competing, yet still amorphous, political economies based on natural history—what Fredrik Albritton Jonsson has dichotomized as a rivalry between Smithian liberal ecology that trusted in the market to guide improvement and a Linnaean Cameralist ecology that favored technocratic and political interventions into land use—characterized the agricultural orchestration of New South Wales, and, to a greater degree, the Cape.¹⁰ In this early stage and in these remote colonies, this perhaps manifested itself most clearly through competing settler agrarianisms, two settler ideals: one that favored the large landholder compelled to improve in response to big commercial stakes, the other a particularly Scottish model of progressive yeoman farmers, closely-settled on small freehold land with stable

⁸ C.A. Bayly, *Imperial Meridian: The British Empire and the World, 1780-1830* (London, 1989), 81, 125.

⁹ The clear demarcation between the first and second empire at 1783 with the loss of the American colonies has long been debated, given the amount of overlap between the two. Nevertheless, colonial interests did indeed “swing” (though not instantaneously), to the east. See David Armitage, *The Ideological Origins of the British Empire* (Cambridge: Cambridge University Press, 2000), 2-3; Peter Marshall, “The First British Empire,” and C.A. Bayly, “The Second British Empires in William Roger Louis et al., *The Oxford History of the British Empire: Historiography* (Oxford: Oxford University Press, 1999), 43–72. Peter Marshall, “The First and Second British Empires: A Question of Demarcation,” *History* 49 (1964), 13-23.

¹⁰ Fredrik Albritton Jonsson, “Rival Ecologies of Global Commerce: Adam Smith and the Natural Historians,” *The American Historical Review* 115, no. 5 (December 1, 2010): 1342–63; Albritton Jonsson, *Enlightenment’s Frontier*.

access to local and perhaps non-local markets.¹¹ It was the latter model, one wedded to new intensive husbandry practices coming out of the Enlightenment, that, at least initially, enjoyed political support in the initial phases of British settlement in both New South Wales and the Cape.

What is the primary indicator of this Enlightenment brand of “portmanteau biota” that sets it apart from earlier settlements? It was the same element that transformed the agrarian production in Britain in the eighteenth century: sown fodder. A wide array of grasses, pasture legumes, and other fodder plants were sent forth with Australia’s First Fleet in 1787 and with William Duckitt’s “Department of Agriculture” to the Cape of Good Hope in 1799. Seeds of clover, rye grass, lucerne, meadow fescue, sainfoin, timothy, assorted tares and vetches, and root vegetables, to name just a few, all purchased at government expense, filled the vessels to each new colony less than twelve years apart. Traveling grass, which I use as shorthand for a variety of fodder plants in the *poaceae* (true grass) and *fabaceae* (legume) families, not only links New South Wales and the Cape to the movers and shakers of the Agricultural Revolution in Enlightenment Britain, but also links the two colonies together in ways that have not yet been explored in this early period. These two colonies, though small and distant, became proving grounds for ideas about agrarian development and the “economy of nature” through mixed farming, which was itself intimately linked to political, economic, and social stability.¹² In these cases, a heavy-handed (and costly) interventionist approach was taken in the hopes that the transfer of agricultural best practice in Britain and its associated biota, namely fodder crops, would set the gears in motion in a machine that could then propel itself into the future.

¹¹ Bayly, *Imperial Meridian*, 156

¹² Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge, MA, 2001), 82-4; Donald Worster, *Nature’s Economy: A History of Ecological Ideas* (Cambridge, 1994), 50-6.

Brooking and Pawson, as discussed in the general introduction of this work, have spiritedly solicited scholarship that rectifies the “Silences of Grass,” particularly introduced grass, in the history of the British Empire. They examine the predominance of “worked-up grass” (wool, meat, dairy and hides) in imperial economies in the nineteenth and twentieth centuries, using New Zealand as a case study. Evidenced by intense political conflicts over land, stock, and labor between colonial governments and the European pastoralists of Australia, South Africa, and New Zealand throughout the long nineteenth century, grassland improvement—namely the replacement of natural forage, the bread and butter of squatter pastoralists, with the artificial forage advocated by proponents of permanent settlement—was anything but straightforward. But by the start of the twentieth century, in the case of New Zealand, introduced pasture grasses successfully “colonized” native grasslands (with the aid of enterprising farmers, seed merchants, and state agricultural departments) and became inextricably ascribed to the commodity chains of the British Empire.¹³ However, this view of grassland improvement, and the implication that land extensive pastoralism dependent on nature pasturage was inevitable in these settler colonies, overlooks two critical elements: 1) the use of sown fodder as an aid in maintaining and/or recovering soil, and 2) the original agrarian vision for New South Wales and the Cape.

In the 1780s and 1790s, when these two colonies were being planned, agrarian transformations in Britain had more to do with the introduction of a grass-centric system of mixed husbandry and the elimination of the long fallow (and eventually the short fallow) than

¹³ Tom Brooking and Eric Pawson, “Silences of Grass: Retrieving the Role of Pasture Plants in the Development of New Zealand and the British Empire,” *The Journal of Imperial and Commonwealth History* 35, no. 3 (September 2007): 417–35; John Weaver, *Great Land Rush and the Making of the Modern World, 1650-1900* (Montreal, 2003); James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Anglo-World, 1783-1939* (Oxford, 2011), 261-78; Brooking and Pawson, *Seeds of Empire: The Environmental Transformation of New Zealand* (Melbourne, 2010).

with agricultural mechanization, waste reclamation, or Parliamentary enclosure. In its most sophisticated articulation, the Norfolk four-course rotation, mixed husbandry was a closed nutritive system. In the place of fallow, farmers relied on manure inputs from stock fed with sown fodders and nitrogen-fixing rotations of clover (or similar legumes). The physical unification of stock-rearing and arable cultivation on a single site was made possible only by sown fodders and improved methods employed by farmers who would, as Steven Stoll eloquently writes, “usher nutrients through the seasons and weave them through plants, digestive systems, and soils.”¹⁴ Critiques of New World husbandry by mid-eighteenth century agricultural writers in Britain were not so much targeted at deficient implements, poor drainage, or common land tenure, but rather the way colonial farmers had been made indolent by the fertility of virgin soils and, in some cases, slave labor, leading to the degeneration of agriculture into medieval forms of cultivation that relied on long fallows (5-10 years, though often longer). Or worse, they put massive tracts of land to a staple or cash crop, mining the soil of its nutrients until such time as diminishing returns forced the farmer to abandon the land and move to new soils.¹⁵ This well-established tension, discussed in the previous chapter, between intensive husbandry in the British

¹⁴Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (New York, 2003), 5; Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850* (Cambridge, 1996); G. E. Mingay, *The Agricultural Revolution: Changes in Agriculture, 1650-1880* (Edinburgh, 1977); E. A. Wrigley, *Continuity, Chance and Change: The Character of the Industrial Revolution in England* (Cambridge, 1990).

¹⁵ Pehr Kalm, *Travels Into North America: Containing Its Natural History ... with the Civil, Ecclesiastical and Commercial State of the Country* (London, 1771). Anonymous, *American Husbandry*, Vol. 1, 31-33, 74-81, 171-78. Authorship of this expose on the ills of American Husbandry is still debated, but was quoted extensively by agricultural writers in Britain at the end of the eighteenth century. Arthur Young’s *Annals of Agriculture* had many harrowing stories of bad agricultural management throughout North America. See William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York, 2011), 168-70. Stoll, *Larding the Lean Earth*, 31-40; Fredrik Albritton Jonsson, “Climate Change and the Retreat of the Atlantic: The Cameralist Context of Pehr Kalm’s Voyage to North America, 1748–51,” *The William and Mary Quarterly* 72, no. 1 (January 2015), 114.

countryside and the extensive cultivation in Barbados, Massachusetts Bay, Upper Canada, or South Carolina would characterize the agrarian designs of new colonial settlements after the humiliating loss of the American colonies.¹⁶

This comparative study of the agricultural planning of New South Wales and the Cape of Good Hope reveals an altered narrative of ecological imperialism at the end of the eighteenth century, one characterized by a comprehensive and calculated attempt to transfer an innovative system of British husbandry, and its concomitant fodder crops. Despite significant differences in function, geography, and social character of New South Wales and the Cape, they were part of the same agrarian project. Scholarship on the First Fleet in Australia and its agricultural beginnings, and of early networks (largely woven by Sir Joseph Banks) of colonial science, does not fully interrogate the stimulus for this kind of agricultural intervention. Nor do they analyze the contents of the ships' holds. Here, I break down the census of seeds sent with the First Fleet, implicate them in the agrarian visions for the colony, and hint at their fate in this unfamiliar landscapes (to be addressed further in Chapter 3). For the Cape, such analysis has been neglected altogether, which I rectify by an excavation of William Duckitt's government-sponsored agrarian mission to the Cape. Rarely more than a footnote, it was a more sophisticated, though less successful, orchestration of ecological imperialism than its better-funded predecessor.¹⁷ This

¹⁶ See Joyce E. Chaplin, *An Anxious Pursuit: Agricultural Innovation and Modernity in the Lower South, 1730-1815* (Chapel Hill, 1996); Brian Donahue, *The Great Meadow: Farmers and the Land in Colonial Concord* (New Haven, 2007), 71-3. Stoll, *Larding the Lean Earth*.

¹⁷ The only dedicated studies of the first British occupation, Maurice Boucher and Nigel Penn, *Britain at the Cape, 1795 to 1803* (Johannesburg, 1992) is a synthesis of editorial text and documents/artwork, which draws extensively from Hermann Giliomee, *Die Kaap Tydens Die Eerste Britse Bewind, 1795-1803* (Cape Town, 1971). See also David Johnson, "British Models of Colonial Governance: Adam Smith and John Bruce on the Cape Colony," *The Eighteenth Century* 51 (April 2010): 103-27; Beinart, *The Rise of Conservation*, 47-53; Drayton, *Nature's Government*, 121; Clifton Crais, *White Supremacy and Black Resistance in Pre-Industrial South*

“second fleet,” particularly given the uninspiring reports from New South Wales throughout the 1790s, represented a second chance for Britain.

II. Divergence and Convergence in New South Wales and the Cape

It is not uncommon for the histories of Australia and South Africa, both Commonwealth states, to be considered comparatively. Both colonies embodied what Denoon calls “settler capitalism,” development based on pastoral and mineral production and rooted in colonial/postcolonial dependence.¹⁸ Even with discrete demographic conditions, both relied upon racial hierarchies that restricted the access of non-whites to land, resources, and political representation.¹⁹ They were linked by sailing routes. Nearly all Sydney and India-bound ships to and from England would anchor, repair, and resupply in Table Bay, “the tavern between two seas,” a halfway point on a six to seven month journey (four in the case of India).²⁰ Biological exchanges between the two colonies were frequent, with plants and animals traveling along scientific and agricultural networks between the Cape, the East Indies, Australasia, and China

Africa: The Making of the Colonial Order in the Eastern Cape, 1770-1865 (Cambridge, 1992), 87.

¹⁸ Donald Denoon, *Settler Capitalism: The Dynamics of Dependent Development in the Southern Hemisphere* (Oxford, 1983)

¹⁹ Clifton C. Crais, *White Supremacy and Black Resistance in Pre-Industrial South Africa: The Making of the Colonial Order in the Eastern Cape, 1770-1865* (Cambridge University Press, 1992); Colin Bundy, *The Rise and Fall of the South African Peasantry* (University of California Press, 1979); Timothy J. Keegan, *Colonial South Africa and the Origins of the Racial Order* (University of Virginia Press, 1996); John Connor, *Australian Frontier Wars, 1788-1838* (UNSW Press, 2002); Grace Karskens, *The Colony: A History of Early Sydney* (Allen & Unwin, 2010); Jeanette Hoorn, *Australian Pastoral: The Making of a White Landscape* (Fremantle Press, 2007).

²⁰ Joyce E. Chaplin, *Round About the Earth: Circumnavigation from Magellan to Orbit* (Simon and Schuster, 2013), 79.

since the early modern period.²¹ However, the two colonies have not often been thought of as being part of the same imperial project in the late eighteenth century either in terms of their political or economic conceptualization or realization.

There are, of course, significant dissimilarities in the origins of these settlements. The Cape was, geographically, Old World, not New World, nor was it considered “terra incognita” like Australia. Not only did it have, at the time of the British take-over in 1795, 150 years of a Dutch colonial presence in the form of the *Vereenigde oostindische compagnie* (VOC), but it had long been incorporated into global markets and maritime trading routes throughout the entire early modern period. Additionally, pastoral Khoikhoi were linked to trading networks on the Limpopo and Zambezi river systems as far as the kingdoms of Kongo and Zimbabwe, in addition to local trading networks with their immediate Sotho-Tswana, Xhosa, and Zulu agro-pastoral neighbors. Aboriginal Australia, on the other hand, had developed in nearly complete isolation from the Eurasian and African continents since the disappearance of the land bridge in what is now the Torres Strait between northern Australia and Papua New Guinea, and was uncharted until the seventeenth century and unexplored until the eighteenth.²² For European explorers and eventual colonizers, the aboriginal population was downplayed and then forced, often violently, off their coastal territories and decimated, as their American counterparts had been, by virgin soil

²¹ Virginia Dellino-Musgrave, *Maritime Archaeology and Social Relations: British Action in the Southern Hemisphere* (Springer Science & Business Media, 2006), 5–6; James Beattie, Edward Melillo, and Emily O’Gorman, *Eco-Cultural Networks and the British Empire: New Views on Environmental History* (Bloomsbury Publishing, 2014), 97, 157, 187–193; Nigel Worden, Elizabeth Van Heyningen, and Vivian Bickford-Smith, *Cape Town: The Making of a City* (New Africa Books, 2004), 35–84.

²² Joseph Ki-Zerbo, *Africa from the Twelfth to the Sixteenth Century* (Berkeley, 1997), 237; Tim Flannery highlights the irony (geologically-speaking) of this Old/New World labels in *The Future Eaters: An Ecological History of the Australasian Lands and People* (Chatswood, N.S.W., 1994).

epidemics. However, this difference has been overstated, as it is now estimated that between 60 and 80 percent of the entire Khoikhoi population in the western Cape perished from smallpox in the seventeenth century, meaning the Cape was a little less Old World (in Crosby's definition) than supposed.²³

New South Wales was a convict settlement, carefully planned at great expense as the culmination of ten years of inquiry and debate. The Cape, as it is most often depicted, was an accidental colony that fell into the hands of the reluctant British during the French Revolutionary Wars after the Dutch Republic fell to France, and was, therefore, not actually settled in any schematic way until the 1820s. Britain captured the Cape at the Battle of Muizenberg in 1795 upon the orders of Henry Dundas, the Secretary of State for War, after the Dutch Republic fell to the French and became its Batavian "sister republic," inciting fears that France would induce the Batavians to shut down British EIC access to the Cape. Unlike in the case of New South Wales, the British, it is claimed, had few long-term goals in the Cape and, in the words of one prominent historian, "regarded themselves as temporary custodians and had no intention of tampering with the status quo." However, as I will show in the following sections, that was far from the case. Not only was the period of the first occupation between 1795 and 1803, politically-speaking "the most colorful in South Africa's past," but the British government, mostly under the direction of Henry Dundas, Secretary of War, expended a great deal of time, energy, and resources into

²³ Leonard Guelke and Robert Shell, "Landscape of Conquest: Frontier Water Alienation and Khoikhoi Strategies of Survival, 1652-1780," *Journal of Southern African Studies* 18, no. 4 (December 1, 1992): 803–24. Alfred W. Crosby, *Ecological Imperialism*, 200–206.

articulating and acting upon a zealous, if inchoate and sometimes contradictory, vision for the colony's future.²⁴

Still, the political and economic roots of each of the colonies were distinct from one another. The Cape was geographically linked to the trading networks of the East India Company (EIC), and as such its planning was heavily influenced by those—not the least of which was Dundas—with Company interests. New South Wales, while certainly much closer to India than it was to England, was not regarded as being particularly useful to the EIC, though in its early years the settlement was often supplied with provisions purchased from Company traders in Calcutta.²⁵ Its primary purpose was as an outlet for British undesirables, without that the colony could sustain itself in foodstuffs, become a thriving market for British manufactured goods (as the thirteen American colonies had been), and, eventually, produce a valuable export commodity. The settler economy and political establishment in New South Wales had to be built from scratch, whereas the British government's task in the Cape was to reform and reenergize the markets, settlers, and offices inherited from the Dutch. Unlike in New South Wales, the British in the Cape were not only part of a racial minority, which was not unusual, but made up an only a miniscule proportion of the European minority for the first 25 years. While the British had some experience in “sharing” colonial territories (for example, with the French populations of Upper and Lower Canada, Nova Scotia, and the ceded islands of the Less Antilles), they had never maintained that political primacy over of non-British or Irish white population while remaining in the demographic minority, with the exception of Lower Canada/Quebec, a case that exemplifies the difficulties in doing so. Not only did they encounter frequent hostilities from

²⁴ Leonard Thompson, *A History of South Africa*, 3rd edition (New Haven, 2001), 54; Boucher and Penn, *Britain at the Cape*, 11.

²⁵ See Ch. 3.

Xhosa and later Zulu populations on the frontiers of settlement, but, until ameliorated somewhat by the arrival of over 5000 British settlers in 1820, governed a wary, sometimes openly antagonistic population of Dutch-speaking planters and graziers, particularly where questions of slavery were concerned.²⁶ Australia was a New World blank agricultural slate; southern Africa was an Old World that was not living up to its full potential and was in need of an agricultural intercession.

Another important socio-political divergence between the two colonies was, of course, slavery. The presence of slave labor in the Cape clearly effected agrarian development. Shortage of labor, along with capital, was seen as one of the primary roadblocks to colonial arable farming, however, even though slaves could be bought and kept in perpetuity to replace or, in most cases, supplement free labor, the extent of the advantage this gave Cape settlers (Dutch or British) over their New South Wales counterparts is less clear. The number of African (primarily from Mozambique and Madagascar) and Malay slaves, as well as the ration between free and unfree populations, kept in the Cape at the beginning of the nineteenth century was very small in comparison with the plantation colonies in the area or in the West Indies. In Mauritius, for example, the ratio between whites and slaves in 1806 was approximately 4:100; in the Cape in the same year, it was 48:100.²⁷ New South Wales, from its inception, was to be a slavery-free colony. While some historians have drawn direct parallels between slave labor and convict labor in colonial Australia, it is widely recognized now as an unfair comparison, not just socially and

²⁶ Keegan, *Origins of the Racial Order*, 1–6; Crais, *White Supremacy and Black Resistance*, 55–60; Philip McMichael, *Settlers and the Agrarian Question: Capitalism in Colonial Australia* (Cambridge, 2004), 148–9; John Hirst, *Freedom on the Fatal Shore: Australia's First Colony* (Melbourne, 2008), 74–5.

²⁷ “Truth and Justice Commission,” Vol. 1, para #; “Census Return for 1806,” CO 9, Western Cape Archives and Records Office (WCA), f. 10

politically, but also economically.²⁸ Among other differences, convicts were not chattel to be purchased and traded freely or treated as seen fit by an individual owner, convict labor was the property of government for a fixed term.²⁹ However, agriculturally, the contrast may have been less stark. Certainly debates about the virtues and pitfalls of encouraging large landholders with a reliance on unfree labor raged strong throughout the colonial period in both colonies.³⁰

Despite both being in purportedly temperate climate zones—Sydney and Cape Town have less than a tenth of a degree difference in longitude—they have fairly dissimilar soils and rainfall patterns. Both regions could be susceptible to cycles of drought and flooding and contained structurally and nutritionally unsuitable soils for grain cultivation in many parts of both initial settlements.³¹ Rain was more plentiful and spread out through all four seasons in the areas around Sydney, but it was prone to extreme heat in the summers. In the agricultural areas in the vicinity of Cape Town, the danger was a long dry season and extreme winds liable to snap delicate seedlings. Much of the lowland soils stretching between the Cape Peninsula and Port Elizabeth were a decent, if sandy, loam or alluvium, whereas Australian colonists had to travel farther up the Sydney Basin to find shale-derived clay and alluvial soils as opposed to the despondent sandstone soils around the harbor itself. However, in New South Wales, soils generally improved as settlers moved to the interior towards the Blue Mountains, whereas the opposite is true in the Cape where the landscape quickly gives way to the semi-arid Karoo. It is hard to judge which set of environmental conditions was least amenable to arable settlement, but

²⁸ McMichael, *Settlers and the Agrarian Question*, 148-149; Hirst, *Freedom on the Fatal Shore*, 74-75;

²⁹ Also, access to land grants, offspring freedom, tickets of leave, rights to petition and due process, indulgences, pardons, etc.).

³⁰ See Chapter 3 and 4

³¹ More on this in Chapter 3 and 4.

in the Cape British settlers and officials knew better from the experiences of their Dutch subjects what to expect from the environment, which was not the case in New South Wales.³²

Despite these differences, in the evaluation of agrarian development, the two are more similar than different. It is difficult to assess the trajectory of British husbandry in the Cape without reference to its immediate predecessor. While the comptroller of the New South Wales settlement, Home Secretary Lord Sydney (Thomas Townshend), was an English Whig, and, at least in theory, on the other side of the political fence from Dundas, the architect of the Cape occupation and a Scottish Tory, there were, nevertheless, significant figures in common to both endeavors: Banks, who acted in an advisory capacity, William Pitt, whose administration oversaw both colonial projects, King George III (“Farmer George”), an ardent supporter of agricultural improvement at home and abroad, and the long-suffering Evan Nepean, undersecretary first to Sydney, then to Dundas.

After the enduring sting of losing the thirteen American colonies, the chronic insecurity of the remaining Atlantic holdings in the Caribbean, uninspiring returns on resource investment in the Canadian colonies, and the political quagmire that plagued India in the build-up to the impeachment of Warren Hastings, New South Wales and the Cape perhaps represented, at least to their promoters, Britain’s best chance to recover, despite their distance and unproven (or disreputable) environments. The colonies would be self-sufficient in food staples, able to export surplus agricultural produce, eager to consume British luxury goods and manufactures at high prices, and able, some hoped, to act as a valve to relieve population pressures on the land in

³² Claire Fenby, Don Garden, Joelle Girgis, “Flood and Drought in New South Wales” in James Beattie, Emily O’Gorman, and Matthew Henry, eds., *Climate, Science, and Colonization: Histories from Australia and New Zealand* (New York, 2014), 42-45; Michiel Laker, “Soil Resources” in R. C. Fox and Kate Rowntree, eds., *The Geography of South Africa in a Changing World* (New York, 2000), 326-40.

Britain and Ireland.³³ Both colonies were also conceived when an Enlightenment ideology of improvement reigned not just in terms of agrarian reform in Britain, but also extended to the Empire as evidenced by numerous unforgiving texts on agricultural practice outside Britain and the work of Britain's class of agrarian patriots whose Cameralist principles on internal improvement, many times antithetical to colonial development, nonetheless filtered into colonization schemes.³⁴ Most importantly, at a time when war was continually draining state coffers, the colonies were supposed to pay for themselves. Yet both colonies encountered significant impediments to this planned arable development and would eventually transition to pastoral economies based almost entirely on the export of fine wools and meat (and eventually minerals), with grain production heavily subsidized by imports from elsewhere, usually India. Add to this the striking similarities between the planning and planting of the two colonies, and the settlements become less discrete.

³³ Alan Frost, *Dreams of a Pacific Empire: Sir George Young's Proposal for a Colonization of New South Wales (1784-5)*. (Sydney, 1980); Dundas papers, There was considerable debate about the wisdom of encouraging emigration. Certainly T.R. Malthus in *An Essay on the Principle of Population*, Second Edition (London, 1803) was skeptical of emigration providing "anything like an adequate remedy" (304) for perceived population pressures. See also R. N. Ghosh, "Malthus on Emigration and Colonization: Letters to Wilmot-Horton," *Economica* 30, no. 117 (February 1963): 45–62; Albritton Jonsson, *Enlightenment's Frontier*. This will be discussed in much greater detail in Chapter 5.

³⁴ Bayly, *Imperial Meridian*, 156-7; Joel Mokyr, *The Enlightened Economy: An Economic History of Britain, 1700-1850*, *The New Economic History of Britain* (New Haven, 2009), 171-97.

III. Planting the “Fatal” Shore:³⁵

In our Passage to Botany Bay We provided ourselves with every Article necessary for the forming [of] a civilized Colony, Livestock, consisting of Bulls, Cows, Horses Mares, Colts, Sheep, Hogs, Goats, Fowls and other living Creatures by Pairs. We likewise, procured a vast Number of Plants, Seeds & other Garden articles...in a Word, every Vegetable Production that the Cape afforded. Thus Equipped, each Ship like another Noah’s Ark, away we steered for Botany Bay. ~George Worgan, 1788 ³⁶

The historiography of the First Fleet is much more robust than its Cape counterpart in examining the journey of people, plants, and ideas from England to New South Wales in 1788. As Frost, Gascoigne, and Fletcher have shown, the colonization of Australia was not just about social excretion, but was a planned settlement saturated in the multifaceted Enlightenment doctrine of improvement of the self, society, and the material world, most recognizable in the minds of the propertied men who planned New South Wales through improved agriculture. While the vision of incorporating the fabled *Terra australis* or the more tangible New Holland into European empires had a long history stretching back to the fifteenth century, the conceptualization of Australia in the image of England was primarily the work of one man, Joseph Banks, in a relatively short period following his travels to the east coast of Australia with Captain Cook on the HMS Endeavor in 1770. ³⁷

³⁵ As I will show in Chapter 3, the shore was not as fatal and Hughes’ portrayal would suggest.

³⁶ George B. Worgan, *Journal of a First Fleet Surgeon* (Sydney, 1978), 1.

³⁷ Gascoigne, *Science in the Service of Empire*; Gascoigne, *Enlightenment Origins*; Alan Frost, *Sir Joseph Banks and the Transfer of Plants to and from the South Pacific, 1786-1798* (Melbourne, 1993); Alan Frost, *Botany Bay Mirages: Illusions of Australia’s Convict Beginnings* (Carlton, Vic, 1994); Frost, *Dreams of a Pacific Empire*; Cassandra Pybus, *Epic Journeys of Freedom: Runaway Slaves of the American Revolution and Their Global Quest for Liberty* (Boston, 2006); Flannery, *The Future Eaters*; Geoffrey Bolton, *Spoils and Spoilers: A History of Australians Shaping Their Environment* (Sydney, 1992); Brian H. Fletcher, *Landed Enterprise and Penal Society: A History of Farming and Grazing in New South Wales before 1821* (Sydney, 1976); Geoff Raby, *Making Rural Australia: An Economic History of Technical and Institutional*

After this voyage, Banks returned to England, established himself in the scientific community both in Britain and in Europe, and took over the management of a royal botanic garden at Kew, George III's pet project, from where he was able to direct dozens of botanical collectors throughout the globe. As president of the Royal Society from 1778 to 1819, Banks became the government's "de facto advisor on scientific and colonial affairs" just as the situation in the American colonies declined and transportation of convicts across the Atlantic ceased. By 1780, pursuant to the so-called "Bloody Code," there were over 200 crimes that carried mandatory death sentences, most of them crimes of property (anything over 12 pence being considered grand larceny), but judges were loathe to pass such harsh sentences, so would often commute those sentences to transportation; only after the rebellion of the 13 colonies, these prisoners languished in increasingly overcrowded prisons, and, after an Act of Parliament in 1776, floating hulk prisons on the Thames.³⁸

It was clear in 1779 that a new convict settlement was the only way forward, and Parliament brought in Banks to hear his opinions on establishing the colony at Botany Bay. Already he had an agricultural microcosm of Britain envisioned, stating that it would be imperative that the ships be furnished with cattle, sheep, hogs, and poultry as well as "seeds of all kinds of corn and pulse" and other fruits and vegetables.³⁹ However, Banks' suggestion was overshadowed by a plan for a settlement at "Yanimarew" (later called Lemaine) about 130 miles up the River Gambia, what is now Janjanbureh, slightly southeast of slave factory at Niani

Creativity, 1788-1860 (Oxford, 1996); Robert Hughes, *The Fatal Shore* (London, 1988); Libby Robin, *How a Continent Created a Nation* (Sydney, 2007).

³⁸ Gascoigne, *Enlightenment Origins*, 72; Sean O'Toole, *The History of Australian Corrections* (Sydney, 2006), 20.

³⁹ 19 GEO. III, 311

Maru.⁴⁰ This location was vouched for by the former Governor of Cape Coast Castle, John Roberts, and a prominent slave trader, Thomas Perkins, and the Evangelist physician (a correspondent of Oloudah Equiano), Thomas Wallace, all of whom attested to its proven fertility and “mild” mortality. Despite two dissenting voices—one attesting to a certain 50% mortality rate and the other warning, without a hint of irony, of vicious Africans who “consider White Men as their Property”—the Gambian settlement was preferred over that of Botany Bay.⁴¹ But when the issue was revived in full after Transportation Act of 1784, the Committee led by Lord Beauchamp (Francis Ingram-Seymour-Conway) in 1785 resuscitated the Botany Bay scheme at the urging of Banks, after the Lemaine settlement and another proposed settlement in Das Voltas Bay (at the modern day border between South Africa and Namibia) had fallen through. Based on two proposals attesting to the “many great advantages that may result to the Nation from a Settlement made on the coast of New South Wales,” one by the American loyalist James Matra and the other, more fleshed out, from Sir George Young, a former EIC marine and Fellow of the Royal Society, Banks lobbied continually for the Botany Bay settlement.⁴²

Young’s proposal abounded in language that was naively bombastic and patriotic at best and willfully misleading at worst. It claimed, in accordance with an old Aristotelian meteorological order based on longitudinal symmetry, New South Wales could produce any crop

⁴⁰ Ibid., 312. The proposed settlement at Lemaine was erroneously reported as being 400 miles inland by Gov. Roberts, perhaps to quell worries that the Committee had about the settlement’s interference with the slave trading in the region, but the location has not been corrected in the secondary literature either. See Cassandra Pybus, *Epic Journeys of Freedom: Runaway Slaves of the American Revolution and Their Global Quest for Liberty* (Boston: Beacon Press, 2006), 94; Robert Hughes, *The Fatal Shore* (London: Vintage Books, 1988), 64–5.. My thanks to Dr. Assan Sarr (Ohio University) for confirming this location.

⁴¹ Ibid., 313

⁴² “George Young’s Proposal,” October 1784, CO 201/1:52-53, reproduced in Frost, *Dreams of a Pacific Empire*, 30

that any other country between the 10th and 44th degrees could, including China, Japan, Italy, southern France, the Cape, and parts of North and South America. This was undoubtedly a case of outmoded science—more sophisticated meteorological models existed, though the great leap would occur later with Humboldt’s isothermal maps—wedded to convenient politics. This “territory so happily situated” would become both an agricultural cornucopia and a commercial emporium, “far superior to all others.” Without running the risk of “depopulate[ing] the Parent Country,” the colony would, as a bonus, become a receptacle for American loyalists. He ended with an invective aimed at those still licking their wounds from the war.

To what end are all the discoveries of our great forefathers, and lately, those of the wonderful Cook? Shall so wide, so noble a field for the exercise of enterprising spirits, be relinquished...? Shall we rest contented with the loss of America, and tamely circumscribe ourselves to our present discontented colonies?

This brand of climate boosterism, wedded as it was to notions of imperial cornucopias and new Edens, had been in existence since the late seventeenth century.⁴³

But Banks’s testimony, not Young’s proposal, was the highest form of boosterism for the proposed settlement and the most trusted, given his scientific cachet in Britain and the fact that he had actually been there. As a naturalist, he emphatically testified to the environmental suitability for English agriculture in Botany Bay, “sufficiently fertile to support a Considerable Number of Europeans who would cultivate it in the Ordinary Modes used in England.”⁴⁴ In truth, it was actually little more than a sandy swamp that no amount of improving could ever make

⁴³ Ibid., 32-33. See Fredrik Albritton Jonsson, “Natural History and Improvement” in Philip J. Stern and Carl Wennerlind eds., *Mercantilism Reimagined: Political Economy in Early Modern Britain and Its Empire* (New York, 2013), 128

⁴⁴ “Beauchamp Committee Testimony,” 10 May 1785 in Neil Chambers, ed., *The Indian and Pacific Correspondence of Sir Joseph Banks, 1768-1820: Volume II* (London, 2014), 93 (henceforth *IPCJB*).

suitable for grain cultivation.⁴⁵ In his defense, Banks did note that overly sandy soils with poor natural drainage were pervasive in the bay, but still assured the committee the location had plenty of fresh water from an as yet undiscovered river, plenty of forest for timber, an immense quantity of grass to support European cattle, and, in general, an environment “analogous to that of Europe.”⁴⁶ Satisfied, or at least sufficiently desperate, Lord Sydney set the wheels in motion to move forward with the plan in August of 1786.⁴⁷

⁴⁵ Phillip to Sydney, 15 May, 1788, in *The Historical Records of New South Wales, Volume I, Part 2* (Sydney, 1892-1901), 122 (henceforth *HRNSW*)

⁴⁶ *IPCJB*, 94

⁴⁷ Sydney to the Lords Commissioners, 18 August 1786, *HRNSW* I:2, 14-19.

Table 1: List of Seeds Sent with the First Fleet to New South Wales (Source: National Archives, T1/639)

LIST OF SEEDS SENT TO NEW SOUTH WALES ON THE FIRST FLEET †

Seed ‡	Sirius	Supply	Golden Grove	Borrowdale	Totals
Spring wheat (bu.)	16	16	--	--	32
Winter wheat (bu.)	8	8	16	--	32
Seed barley (bu.)	8	8	16	--	32
Dwarf marrow peas (bu.)	4	4	8	3	19
Field peas (bu.)	4	4	8	--	16
Fine colwort seed (rape) (lbs.)	26	26	40	20	112
Green curled savoy (Cabbage) (lbs)	26	26	40	20	112
Long orange carrot (lbs.)	26	26	40	--	92
Early York cabbage (lbs.)	26	26	40	20	112
Onion (lbs.)	26	18	40	26	110
Superfine red clover (lbs.)	26	26	40	20	112
White Dutch clover (lbs.)	26	26	40	20	112
Spina[ch] (bu.)	2	2	5	2	11
Speckled kidney bean (bu.)	1	1	6	4	12
Lucern[e] (lbs.)	5	5	--	--	10
St. Foin (sainfoin) (lbs.)	10	10	--	--	20
Parsnip (lbs.)	6	6	18	--	30
Asparagus (lbs.)	2	--	--	--	2
Red beet (lbs.)	1	--	--	--	1
White beet (lbs.)	1	--	--	--	1
Early cauliflower (lbs.)	1	--	--	--	1
Cellery (lbs.)	1	--	--	--	1
Celeriac (lbs.)	1	--	--	--	1
Prickly cucumber (lbs.)	1	--	--	--	1
Cabbage Lettuce (lbs.)	0.5	--	--	--	0.5
Green coss (lettuce) (lbs)	0.5	--	--	--	0.5
S[il]lesia coss (lettuce) (lbs.)	0.5	--	--	--	0.5
Cur[le]d parsley (lbs.)	10	--	--	--	10
Cheviot (lbs.)	1	--	--	--	1
Nasturtium (lbs.)	1	--	--	--	1
Sorrell (lbs.)	2	--	--	--	2
Green broccoli (bu.)	1	--	--	--	1
White broccoli (bu.)	0.5	--	--	--	0.5
Mustard (bu.)	1	--	--	--	1
Cress (bu.)	1	--	--	--	1
Seed oats (bu.)	1.5	--	25.5	8.5	35.5
Leek (bu.)	--	--	20	10	30
Rye (bu.)	--	--	16	--	16
Windsor beans (bu.)	--	--	7	4	11
Turnip (lbs.)	--	--	10.75	6	16.75
Radish (lbs.)	--	--	11	5	16
Horse beans (bu.)	--	--	8	8	16
Buckwheat (bu.)	--	--	8	--	8
Seed tares (bu.)	--	--	--	8	8
Balm (oz.)	2	--	--	--	2
Hyssop (oz.)	2	--	--	--	2
Savoury (oz.)	1	--	--	--	1
Basil (oz.)	2	--	--	--	2
Fennel (oz.)	4	--	--	--	4
Marjon (oz.)	1	--	--	--	1
Thyme (oz.)	2	--	--	--	2
Borage (oz.)	2	--	--	--	2
Hemp (lbs.)	10	--	--	--	10
Flax (lbs)	10	--	--	--	10
Rhubarb (oz.)	4	--	--	--	4
Tobacco (oz.)	2	--	--	--	2
Potato seed (jar)	1	--	--	--	1

† National Archives T1/639

‡ Fodder crops in bold.

In coordination with the Home Office, Navy Board, and his Kew seedsman, Hugh Ronalds, Banks compiled a list of plants and seeds that he deemed requisite to set up the settlement for success in a colony “similar to that of the South of France.”⁴⁸ It included young fruit trees, shrubs, and the more delicate herbs that could not be, he supposed, grown from seed in Botany Bay, but a much lengthier list, including exact amounts and prices, of seeds more likely to survive the journey. He split the seed order between the four supply ships, *Sirius* (the flagship), *Supply*, *Golden Grove*, and *Borrowdale*, given the real possibility of the loss of one or more ships on the journey. The *Sirius* was to arrive a month in advance of the rest of the fleet with Capt. Arthur Phillip—chosen by Sydney for his unsullied reputation in the Navy and his agricultural experience from his Hampshire farm (both attributes fairly unusual of a career officer)—directing a team of soldiers and convicts to clear land and plant its contents as quickly as possible, though in the end it arrived only a single day ahead of the rest.⁴⁹ The most valuable plants and seeds, including those designated “For Commerce,” were put in the *Sirius* under care of the surgeon, George Worgan. Banks intended Francis Masson, his collector at the Cape, to join the expedition to care for this precious cargo, as well as any plants or seeds procured at the Cape, but ill health (and disinclination) prevented him from doing so.⁵⁰

The seed lists for each vessel were largely similar. All but the *Borrowdale* contained seed for staple grains (spring and winter wheat, barley, and oats), but all four ships held a variety of commonly used fodders (See Table 1).⁵¹ This included a large amount of red and white clover,

⁴⁸ “Scheme of Plants,” Oct. 1786 in Frost, *Transfer of Plants*, 6.

⁴⁹ “Matra’s Proposal,” August 1783, *HRNSW* I:2; “George Young’s Plan,” January 1785, CO 201/1, f. 52; Phillip, “Memorandum” [n.d. 1786], CO 201/2:88-93

⁵⁰ Frost, *Arthur Phillip*, 159

⁵¹ Banks, “List of Seeds,” NA T1/639 ff. 253-5. The first page is missing from the file. In Frost, “Transfer of Plants,” many seed amounts from the original document have been transcribed in

the two most common varieties of fodder cabbage, rape, colwort, lucern, and sainfoin. It is impossible to say definitively that all such seed was intended for stock or pasture since many fodder plants (ex: peas, beans, cabbages, etc.) were also consumed by humans, and the numbers also do not reflect the anticipation of procuring large quantities of seed grain from the Cape of Good Hope on the journey. However, clearly Banks and Sydney, who controlled the purse strings, were taking the long view. It was not to be a roving settlement where grain was cultivated without rotation until the diminishing returns on one piece of land necessitated the clearing of another. The sheer amount of clover, the most tried and trusted of all the leguminous grasses, coming over in the First Fleet is an indicator of what kind of agricultural practices the planners anticipated in New South Wales. Even though Banks had assured the committee of plentiful natural forage, he made provision for a variety of artificial fodders, from the ubiquitous clover to more experimental and costly fodders like sainfoin and lucerne, associated more with Mediterranean climates.⁵²

Phillip was given strict orders to proceed without delay to the cultivation of the lands and to prioritize staple grain production and stock fodder.⁵³ A full account of what happened to this biological deployment of seeds and plants will be explored in greater detail in the following chapter, and has, in part, been chronicled elsewhere.⁵⁴ The orchestration of the colony's agrarian

bushels, when actually, the symbol (a pound sign with only one horizontal strikethrough, which can very easily be mistaken for a cursive abbreviation for ditto) is an apothecary symbol for lbs. This is why my chart differs from Frost's transcriptions. My thanks to Mark Overton, for assisting me in uncovering the discrepancy between the prices in relation to the amounts listed in the transcription, to Alan Frost for sending me copies of the original document, and to the anonymous Reddit users who I turned to in desperation to identify the symbol.

⁵² Ambrosoli, *The Wild and the Sown*, 223-38

⁵³ "Official Instructions," 24 April 1787, HRNSW II: 2, 87

⁵⁴ Frost, *Botany Bay Mirages*; Fletcher, *Landed Enterprise*; Raby, *Making Rural Australia*; Angus McGillivray, "From Sods to Seed-beds: Cultivating a Familiar Field at Port

future was thorough and meticulous, but its execution was fraught with environmental, political, and economic confrontations. Despite having been packed in camphor, mold and weevils destroyed many of the seeds sent out on the First Fleet's seven-month voyage. Those that survived were immediately planted, not in Botany Bay, but in Port Jackson (Sydney) and, shortly afterwards, at much more suitable lands at the mouth of the Parramatta River and at a satellite settlement on Norfolk Island. In the first two years, nearly all of the grain produced, and likely much of the pulse and clover was saved for seed, and convicts and soldiers alike subsisted on ship rations (mainly biscuit and salt pork) supplemented by fresh fish, wild game, and garden vegetables. But by the time Philip departed the colony in 1792 after a harrowing first three years, he reported to Dundas that he had 1000 acres sown on public account in addition to 400 acres sown by soldiers and free settlers. Additionally, he had established an experimental farm under the care of James Ruse, a Cornish convict with an agricultural background, to see how quickly one man could cultivate a 30-acre grant and become self-sufficient in both grain and stock.⁵⁵ This demonstrated the clear preference for closely settled smallholdings as opposed to massive land grants in the interior that would breed the "squatter menace" already discernible by the 1790s. Until 1822, there were no systematic accounts taken of specific crops being cultivated, so it is difficult to know the exact fate of those clover, sainfoin, lucerne, and other fodder seeds so

Jackson," *Journal of Australian Colonial History* 5 (2004): 1-29; Angus R. McGillivray, "Convict Settlers, Seamen's Greens, and Imperial Designs at Port Jackson: A Maritime Perspective of British Settler Agriculture," *Agricultural History* 78, no. 3 (July 2004): 261-88.

⁵⁵ Fletcher, *Landed Enterprise*, 28,43; various dispatches, HRNSW I:2, 349, 539, 592-3; "Report on the Soil," HRNSW 1:2, 599;

carefully selected by Banks; however, by the 1820s, there were thousands of acres in the still relatively small colony sown in grasses, clovers, field peas, and other fodders.⁵⁶

Banks continued throughout the next ten years to fight for the colony, even when it became clear that his initial assessments of the land had been so erroneous. Admitting in a letter to his friend Pierre Marie August Brousseau in 1789 that reports from Botany Bay had been so discouraging in terms of soil fertility and “comfortable Colonisation” that criminals were refusing their commuted death sentences, preferring to be hanged than to be transported, he nevertheless continued to support the settlement in word and deed for many years in hopes that government would be “made sensible of its real value.”⁵⁷ The chief issue was, in his view, lack of financial support for the project. “I am a bird of peace,” he wrote to Gov. John Hunter in 1797, “my business as an encourager of the transport of plants from one country to another is suspended during war,” though he continued to take the long view that in the end England might “revive in New South Wales when it has sunk in Europe.”⁵⁸

In response to both direct and indirect reports from both Phillip and his successors, Banks would send resupplies of plants and seeds from Kew’s accounts with trusted collectors, surgeons, and, later, Australia-bound governors King and Bligh, not just with those plants for which he had high commercial hopes, but also the best quality fodder seeds available from the Ronalds firm.⁵⁹ While the First Fleet had sailed primarily with leguminous grasses, in subsequent holds Banks followed up with many true grasses including ryegrass, timothy grass, and guinea grass, which

⁵⁶ *Returns of the Colony of NSW (Blue Books)*, 1823-1856, The Mitchell Library, Sydney (ML) 4/251-90.

⁵⁷ Banks to Brousseau, 1 May 1789 in Neil Chambers, ed., *Scientific Correspondence of Sir Joseph Banks, 1765-1820*, Volume III (London: Pickering & Chatto Ltd, 2007), 486 (henceforth SCJB); Banks to Hunter, 1 Feb 1799, *IPCJB* V, 36

⁵⁸ Banks to Hunter, 30 March 1797, *HRNSW* III, 202-3.

⁵⁹ Frost, *Transfer of Plants*, 23-36.

were increasingly important for the maintenance of stock and horses near Sydney as the colony grew, when plans for close settlement utilizing sown pasture had not yet been superseded by extensive pastoralism.⁶⁰ Banks would remain involved in the affairs of the colony until his death in 1820—his final legacy was establishing a botanic garden in 1816—but by then his interests in the colony had shifted from arable mixed husbandry to other experiments in economic botany and the development of merino stock.⁶¹

Phillip was replaced by a succession of governors who allowed (willingly or not) a powerful pastoral interest to take root and undermine arable development in the colony, which even the reforming Lachlan Macquarie could not dismantle during his administration between 1810 and 1822. Even while arable production was held up as the inoculation for what Edward Gibbon Wakefield would later call “the barbarising tendency toward dispersion,” most settlers, especially those who had come to the colony voluntarily, felt keenly the seductive pull of pastoralism.⁶² And twelve years later, many of the figures involved, either directly or indirectly, in the planning of the First Fleet and its arable development, however uninspiring, in its first decade, including Banks, Dundas, Yonge, Nepean, and Hawkesbury (Liverpool), would be part of a second fleet, not to Australia but to the Cape. And in a provocative form of historical *déjà vu*, so would the seeds.

⁶⁰ King to Banks, 16 October 1798, *IPCJB* V, 14.

⁶¹ Gascoigne, *Science in the Service of Empire*, 166-78; Harold Carter, ed., *The Sheep and Wool Correspondence of Sir Joseph Banks, 1781-1820* (London: British Museum, 1979).

⁶² Edward Gibbon Wakefield, *England and America: A Comparison of the Social and Political State of Both Nations, Volume II* (London: R. Bentley, 1833), 52.

IV. The Second Fleet

William Duckitt, a young man of modest means but impeccable, if unproven, agricultural pedigree, was sent to the Cape in 1800 on another veritable Ark of fodder crops, to initiate an intervention into Boer agriculture via a semi-official department. Duckitt was the youngest son of a prominent yeoman farmer and ploughwright of the same name. Credited with the invention of the double-furrow plow in the mid-1750s, the elder Duckitt (often spelled Duckett or Ducket) had large farm near Esher, Surrey directly across the river from the Hampton Court estate of the ultimate agrarian patriot, “Farmer” George III, who called on him often to talk agriculture. The Board of Agriculture (1793-1822) considered Duckitt’s farm to be one of the best cultivated in England, and it was often mentioned in Arthur Young’s influential *Annals of Agriculture*. Duckitt’s older brother managed the famed experiment farm at Woburn Abbey for Francis and John Russell, fifth and sixth Dukes of Bedford, respectively.⁶³ With his deep connections to the Board, his clerical experience in the Treasury, and his uninspiring financial prospects at home, Duckitt was ideally situated to undertake this agricultural venture. But Duckitt’s recruitment was a response to the culmination of several years of agrarian anxieties and debates and was anything but straightforward.

In between Britain’s planning and planting of New South Wales and the takeover of the Cape in 1795, Anglo-French relations had again deteriorated. After a ten-year respite from outright war between the signing of the treaty of Paris in 1763 and the re-declaration of war in 1793, Britain remained at war with France and her allies for more than 20 years. The new British establishment at the Cape, a strategic location vital to EIC interests, was created in response to

⁶³ Adèle Naudé, *Cape Album* (Cape Town: H. Timmins, 1979), 79; Edward Smith, *The Life of Sir Joseph Banks... With Some Notices of His Friends and Contemporaries* (London: J. Lane, 1911), 99–102.

the war, but had to compete with it for resources. The colony spent its first two years under impromptu military rule led by Colonel James Craig and Admiral George Elphinstone, and then the EIC's company agent, John Pringle (not to be confused with 1820 settler party leader of the same name). Craig was tasked with keeping the increasingly disgruntled Dutch Boers in the northeastern districts of the Cape from rebellion and preventing the colony from falling into either French control or directly into the eager hands of the EIC.⁶⁴ An official civil establishment was not put into place until Lord Macartney and Henry Dundas's nephew Francis Dundas were sworn in as Governor and Lieutenant Governor in May 1797. From the first reports sent to Henry Dundas after the takeover, it was held that Britain could only justify its rule over the Dutch and prevent the colony from becoming a heavy burden to the Treasury by improving it—code, perhaps, for imposing a new agrarian order. As one report claimed, a little improvement in infrastructure and agriculture would go a long way in both winning over the Dutch colonials and augmenting economic productivity.⁶⁵ Unlike in New South Wales, Dundas and those charged with administering the colony were not working with an agricultural blank slate in the Cape: they were working with what they saw as an increasingly disordered agrarian society: it was intervention rather than foundation-building and was, as such, more politically complex.

For most historians, the death knell of intensive arable cultivation in the Cape occurred in the late seventeenth century after the dedicated but ultimately futile attempt on the part of Jan van Riebeeck, first VOC commander, to transfer the best agricultural practices of the Dutch Low Countries (the regional vanguard of the Agricultural Revolution in Europe) to the Cape. Van

⁶⁴ Boucher and Penn, *British at the Cape*, 69.

⁶⁵ *Ibid.*, 70.

Reibeeck's evaluations of resources in the Cape of Good Hope anticipated intensive forms of agriculture, particularly that clover should take its rightful place beside wheat on freehold farms in the western Cape. However, none of this came to fruition, and at the end of Van Reibeeck's administration in 1662, the lands intended to support thousands of families became the overstocked native pasture grounds for only fifteen farms, and little was done afterwards to revive arable culture after his departure.⁶⁶ But this narrative fails to account for the attempted reawakening of arable farming in the first three decades of British rule at the Cape that began with the planning of Duckitt's department.

Historians have dissected critiques of Dutch agriculture in the Cape on the part of late-eighteenth century scientific travelers and representatives of governmental and commercial entities, but this scholarship rarely engages the responses to those critiques once the British did secure the colony.⁶⁷ The sending out of William Duckitt was a direct result of the critical assessments made at the end of the eighteenth century, though British settlers and officials were often misled by these appraisals and would attempt to implement particular ideas of responsible husbandry and close settlement onto landscapes and peoples resistant to such impositions. Wealthier Dutch colonists, some established in the Cape for several generations, practiced extensive, not intensive, agriculture, grazing rogue herds of sheep on vast native *velds* while

⁶⁶Leonard Guelke, "Freehold Farmers and Frontier Settlers," in Richard Elphick and Hermann Giliomee, eds., *The Shaping of South African Society, 1652–1840*. (Middletown, CT, 2014), 69–72; Simon Pooley, "Jan van Riebeeck as Pioneering Explorer and Conservator of Natural Resources at the Cape of Good Hope (1652–62)," *Environment and History* 15, no. 1 (February 1, 2009): 5; Grove, *Green Imperialism*, 133–144.

⁶⁷ Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (New York: Routledge, 1992), 38–40; Siegfried Huigen, *Knowledge and Colonialism: Eighteenth-Century Travellers in South Africa* (Leiden: BRILL, 2009). Huigen focuses exclusively on South Africa, unlike Pratt, highlighting the "eighteenth-century humanitarian discourse [on] natural law concerning the use of land" (146) that characterized tensions between intensive and extensive cultivation.

growing thin, unremarkable grain crops on large tracts of land left to a long fallow (or abandoned completely) every few years due to soil exhaustion. Even this practice was made possible only by the acquisition of slaves from Java, Malacca, Madagascar, and Mozambique. Poorer colonists tended to invest in small herds of Cape fat-tailed sheep to graze in the interior, supplemented by seasonal labor on larger estates.

In October of 1800, after a four-month journey from England to the Cape, Duckitt set off on a tour of all the agricultural lands within a 50-mile radius of Cape Town to survey the land, its current management, and its potential for improvement and to report back to his sponsor, Dundas. He was also, by leave of the new governor Sir George Yonge, to have his choice of government lands on which to begin his operations. Until his arrival at Klapmuts, 25 miles northeast of Cape Town, Duckitt had been underwhelmed by what he had encountered. Those government-held lands directly around Cape Town were either occupied, mostly by wealthy Dutch pastoralists with multi-year contracts to supply beef and mutton to the British Army and Navy, or wholly unsuitable for grain production. The prime agricultural lands around Stellenbosch, just east of the barren Cape Flats, were made up mostly of freehold lands held by Dutch farmers, so he had headed north, encouraged by the environs but appalled by the practices had seen on the road.⁶⁸

Dutch farmers in the area, even those with the aid of slave labor, deemphasized wheat production and instead raised successive crops of barley and oats with chronically lackluster yields, which for an enlightened disciple of mixed-husbandry was a scheme of cultivation fit only for Irish “bogtrotters” and Highland crofters forced to scratch their daily bread from rocky

⁶⁸ “Diary of William Duckitt” (henceforth DWD), entry on 13 October 1800, National Library of South Africa: Cape Town (NSLA), MSB. 152.

mountain slopes or swamps or for African farmers who supposedly lingered in a primitive state of development that made such “improvement” unattainable. For European farmers on seemingly sufficiently-watered, fertile soil in a well-established colony, such cultivation and consumption was, in Duckitt’s view, evidence of extreme degeneration.⁶⁹ He passed through hundreds of acres he deemed particularly well-suited for sown pasturage and hay production—a critical component of the new husbandry—but found that while some of this land had been put to grass and tares, the fields had been grossly neglected: infiltrated by wild oats and allowed either to burn, rot, or produce flower and pods, which not only wasted good fodder but also negated the benefits legumes brought to the nutritive quality of the soil.⁷⁰ When he happened upon a team of haymakers, he ascertained they cut on average 1.5 loads of hay per acre, which, being less than half of hay yields on poor lands in England, he deemed “a Most Infamous Management!”⁷¹ Yet, concerns about this kind of agrarian practice in the Cape, referring primarily to Dutch settlers, and, to a lesser degree, the pastoral Khoikhoi and the agro-pastoral Xhosa in the eastern frontiers of settlement, shaped the early days of the British occupation of the Cape long before his arrival.

The occupation required grain, fodder, and meat to be extracted from Dutch and African producers for the permanent garrisons and their mounts, EIC ships, other British (or other allied or neutral) ships bound for New South Wales or Asia, as well as enough wheat to feed the

⁶⁹ For relationships between cereal consumption and social conditions see E. P. Thompson, “The Moral Economy of the English Crowd in the Eighteenth Century,” *Past & Present*, no. 50 (February 1, 1971), 76–136; G. E. Mingay, *A Social History of the English Countryside* (London: Routledge, 1990), 247.

⁷⁰ It is entirely possible that what Duckitt was looking at was not, in fact, bad management of sown grasslands, but fields left intentionally to fallow, which would have been to Duckitt a systematic failure on the part of the farmer, not a technical mismanagement.

⁷¹ DWD, 13 October 1800. In England, a cart-load of hay (fother) was, give or take, a ton. Based on reports in various agricultural magazines from the period (c. 1800), hay yields generally ranged from 3-5 tons per acre.

residents of Cape Town. Yet for the first five years, the garrison relied on regular shipments of provisions from Calcutta. The VOC was, paradoxically, accused of hindering agricultural improvement by monopolizing and over-regulating the market—a Smithian critique—and for failing to directly intervene into agricultural stagnation.⁷² Still, it was unclear whether the British could do any better. The market alone was insufficient: A high enough price might entice farmers to bring their harvests into town, but adverse climate, soil exhaustion, and the hazards of distance meant that produce still couldn't meet demand. Nor could colonizers rely on Khoikhoi or Xhosa inhabitants to make up the deficits.⁷³

This was not a new problem. In 1787, Phillip had bemoaned the dismal state of affairs in the Cape to Lord Sydney. The First Fleet had counted on being able to purchase large amounts of seed grain as well as fresh provisions from the Cape, but when they arrived Phillip was severely restricted by Dutch officials due to successive bad harvests in the colony. Eventually he was able to make his purchases at triple their normal price, but he and his officers had not reported favorably on their time in the Cape.⁷⁴ Dundas, as Treasurer of the Navy and member of both the Board of Control (overseeing EIC operations) and the Board of Trade, was well aware of the problems in the Cape. Yonge, Dundas's partner in the creation of Duckitt's department, would have encountered those reports in his post as Secretary at War. But even before this, Dundas had

⁷² "Account of the Principal Productions of the Cape," [n.d.] 1795, in George McCall Theal, ed., *Records of the Cape Colony from February 1793 to 1831*, Volume I, (London: Government Printer, 1897-1901), 138. (Henceforth RCC)

⁷³ Leonard Guelke and Robert Shell, "Landscape of Conquest: Frontier Water Alienation and Khoikhoi Strategies of Survival, 1652-1780," *Journal of Southern African Studies* 18, no. 4 (December 1, 1992), 806-7. David Webster "The Political Economy of Food Production and Nutrition in Southern Africa in Historical Perspective," *The Journal of Modern African Studies* 24: 3 (Sept. 1986), 452.

⁷⁴ Frost, *Arthur Phillip*, 157.

already come to believe that the Cape, so critical to India, would always be undependable in Dutch hands.⁷⁵

When examining Dundas's correspondence, the narrative of a reluctant acquisition becomes even less tenable. Both before and after the takeover, his correspondents frequently advocated somehow extracting the Cape of Good Hope from the Dutch and transforming it into a colony that was more agriculturally productive and friendlier to EIC interests. For example, the evangelical chairman of the EIC, Charles Grant, wrote to him in 1796 that the agrarian sluggishness in the Cape was perfectly correctable if the "enlightened enterprize" of Britons could be implemented in its fields and pastures.⁷⁶ While Dundas, despite his own interests in the EIC, did not think the Cape should be given over directly to the EIC, as Grant suggested, he did not ignore his claim. The Dutch had "considered that settlement in no other light but as subservient to their Indian trade," and that had led to "grievous" management of the colony's resources. Production of grain, Dundas asserted, would only rise "in proportion to the encouragement given to it," and to that effect, only free commercial intercourse and good British management could counteract the "stagnation of all industry in the agriculture of this fertile country."⁷⁷ Here we see Dundas caught between his Smithian commercial ideology and his trust in technocratic interventions into husbandry. In Dundas, Albritton Jonsson's "rival ecologies" play out not in separate camps, but in a single figure.⁷⁸ But, this contradiction exists too in the

⁷⁵ Dundas, "Considerations of...Interests in India," [n.d] 1787, National Archives of Scotland (henceforth NAS), MS 1068, f. 20

⁷⁶ Grant, "Observations...Cape of Good Hope," [n.d. 1796], Brenthurst MS 136f in Boucher and Penn, 84-88

⁷⁷ Mornington to Dundas, 28 February, 1798 in Ingram, *Two Views of British India*, 41-2; Dundas, "Report to the Board of Trade," 12 April 1796, National Library of Scotland (NLS), MS 1070, f. 34;

⁷⁸ Jonsson, "Rival Ecologies," 1345

dominant yeoman agrarianism that Dundas supported, which was a mix of intervention (limiting size of landholdings to encourage intensive cultivation and prevent the concentration of political/economic power, keeping prices stable, and using government funds to incentivize improvement and support experts) and liberal tenets (free access to markets, free land market, fierce protection of private property, and veneration of economic individualism). Despite the inherent tensions between government-planned settlement reliant on natural expertise and liberal ecology of free trade, Dundas (and Yonge) introduced English seed and English husbandmen to the Cape to complement, not undermine, free commerce.

Dundas was heavily influenced by Lord John Macartney, famous for his laudation of the Empire “on which the sun never sets,” who advocated vehemently, along with his private secretary John Barrow, for a heavy-handed approach to Cape agriculture during his governorship in the colony from 1797-1799. During this time Barrow compiled several reports on the resources and inhabitants of the Cape for his employer, which were shared with Dundas at the War Office and eventually published for a general audience. These became principal references in assessing the agrarian potential of the colony when Macartney returned to England, and they give us a much clearer picture of why Duckitt was sent out to the Cape in the first place. Barrow continued in the colony, becoming the secretary of the first agricultural society formed by Yonge a few months before Duckitt’s arrival and remaining a loyal friend to him even when Duckitt had fallen out of favor with Yonge’s successor.⁷⁹

Barrow optimistically claimed land to be “uncommonly fertile.” He maintained that upon breaking up new land farmers could expect 15 to 20 bushels of wheat and 30 to 40 of

⁷⁹ Barrow to Barnard, 29 June 1800, Western Cape Archives and Records Office (WCA), BO 46, f.2

barley per bushel of seed sown, nearly the return expected in the wheat producing regions of England. According to Barrow's calculations based on statistics kept by the Burgher Senate, the average wheat yield for Dutch growers was 9 ½ bushels of wheat and 21 bushels of barley per bushel of seed sown.⁸⁰ Most of the land in the valleys between the Hottentots-Holland, Hawequas, and Matroosberg ranges, he wrote, were "covered with a deep and fertile soil, intersected by streamlets, well clothed with grass and small arboreous plants, well wooded in many parts with forest-trees, and supplied with frequent rains." Barrow had been encouraged especially by the verdure of native grasslands and abundant wheat harvests south of the Kouebokkeveld range, approximately 90 miles northeast of Cape Town. Further southeast, he noted a native grass species nearly identical to the ubiquitous sown rye grass of Britain, as well as "verdant carpet" of a native legume that could, he thought, stand in for European clover (generally *Trifolium repens* or *pratense*) and that grew wild throughout the entire valley and fed the fattest cows he had seen in the Cape.⁸¹ He can be forgiven his misleading enthusiasm—even today the lands in the Warmbokkeveld look surprisingly like Sussex or Kent (minus the mountains in the distance), but his assessment was not representative of the general climate or soil quality. For Barrow, the beauty and fertility of the Cape deserved "the spirit of commerce and adventurous industry" that only Britain's enterprising subjects could bring to it.⁸² "No part of the world has had its natural advantages so abused as the Cape of Good Hope," he wrote, indicating that with a little expertise and grasp of natural history, not only could the soil be made

⁸⁰ Boucher and Penn, *Britain at the Cape*, 113

⁸¹ John Barrow, *An Account of Travels Into the Interior of Southern Africa in the Years 1797 and 1798* (London: T. Cadell and W. Davies, 1801), 344, 3, 405, 25.

⁸² *Ibid.*, 1.

to welcome European biota, but also that the native bounty of the Cape could be unlocked, a task to which, in his view, neither the Dutch or Africans were suited.⁸³

Barrow wrote in the tradition of the Linnaean naturalists sent to the Cape in the 1770s, Carl von Thunberg and Anders Sparrman, who saw at least some Africans as having reached the maximum level of advancement possible by “barbaric” people and the Boers as having degenerated to lowest level of European civilization.⁸⁴ Thunberg gave a pass to the Xhosa population in the interior, for they cultivated the soil, sustaining themselves on a highly varied diet of millet, maize, beans, squashes, melons, milk, and cheese. Khoikhoi pastoralists, however, were a different matter: the “Hottentots” were distinguishable from “brute creation” to Thunberg only by their ability to “clack” at one another to communicate.⁸⁵ Sparrman infantilized both groups: the Xhosa farmers were too simple-minded and accustomed to mobility to participate in commercial agriculture, and the Khoikhoi were “as ignorant of agriculture as apes and monkeys—like them they are obliged to wander about over hills and dales after [food] in order to sustain a life.”⁸⁶ Barrow, however, tasked with reconciling the Xhosa farmers with the increasingly aggressive Boer pastoralists in the interior, highlighted an alarming erosion of African arable farming as a result of that unrestrained (by the VOC) aggression. Instead of residing in quiet agricultural villages, African chiefs “with their families, vassals, and cattle were overrunning the country.”⁸⁷ He observed that in several areas in the Graaf-Reinet region, Xhosa had been forced to flee their villages in the face of Boer encroachment, leaving their fields of

⁸³ Ibid., 231.

⁸⁴ Huigen, *Knowledge and Colonialism*, 149.

⁸⁵ Carl Peter Thunberg, *Travels at the Cape of Good Hope, 1772-1775, 1793 edition* (Cape Town, Van Riebeeck Society, 1986), 314

⁸⁶ Anders Sparrman, *A Voyage to the Cape of Good Hope... from the Year 1772, to 1776*, Volume I (London: J. Robinson, 1785), 201

⁸⁷ Barrow, 110

millet to the birds and their melons and squashes to rot in the ground.⁸⁸ Of course, none of these observers, including Barrow, had the shrewdness to realize that traditional Xhosa cropping rotations of grains, legumes, and vegetables were closer to a Norfolk four-course rotation than anything the Dutch had come up with. Shaped as they were by the Cameralist ideology of Linnaeus, they promoted an expertly managed environment and were suspicious of agrarian development left to its own devices, as evidenced by Dutch practices.

Indeed, the particular tenor of their responses to African agriculture was muted in comparison with their responses to the practices of Dutch planters who ostensibly should have known better. More than anything, their critiques emphasize a complete disregard for the conservation of nutrients. Sparrman noted that Dutch use of manure was “ill-preformed, or else entirely neglected,” with the result that any arable land or pasturage, even on good-quality, wet soils, could only be cultivated for a few years before it had to be abandoned.⁸⁹ Dismayed, he noted that though many Boers had more than enough land, labor, and draft oxen to cultivate the whole of it, they simply scratched what they needed to make their daily bread from their fields using a loaned plow, a practice that led, it was agreed by naturalists and officials alike, to an unthinkable indolence and chronic grain instability.⁹⁰ Disinterest and neglect of improvement led to moral degeneration and commercial antagonism of the worst kind, excusable in an African, but unpardonable in a European. These uncharitable responses are best summed up by another

⁸⁸ Barrow, 222. The Boer farmers in Graaf-Reinet were considered to have gone rogue, but little could be done about them due to the distance from any fort or garrison (Dutch or British).

⁸⁹ *Ibid.*, 67. For Sparrman, manure was the key to redeeming the land, “in order to keep them up in that degree of heart and strength which they have before, during a period of many ages, had time to acquire” (Sparrman, 251).

⁹⁰ *Ibid.*, Vol. II, 165

officer, Robert Percival, involved in the early occupation and who, like Barrow and Macartney, saw market incentive as insufficient on its own to encourage better management of lands:

There never existed a set of men [the Boers] so void of resources in overcoming difficulties. Even self-interest is not sufficient to stimulate them to action, and to overcome the indolence of their bodies and minds...[Lord Macartney] in [vain] used every argument to stimulate the planters to make the utmost of their grounds by the most effectual and easy process; and to prevail on them to adopt the modes and implements made use of by the English farmers and husbandry.⁹¹

Barrow listed Dutch agricultural sins in detail. Planters utilized huge single-furrow wooden plows that required eight horses or a dozen oxen to drag, and they broadcast their grain (instead of precision seeding) using a crude wooden harrow to cover the seeds. They never sowed clover or rye grass with their barley, nor did they weed unless they had slaves to spare on the task. Barrow declared that the Boer “bestows no kind of labor on the ground but that of throwing in the seed; the rest is left to chance and the effects of an excellent climate.” All these things were antithetical to Enlightenment husbandry and had potentially dire environmental and economic consequences. In the best lands around the Cape Peninsula the ground was nevertheless worn down quickly by successive crops, and even if it was allowed to lie fallow for many years, “it afford[ed] nothing that in England would be considered a crop” despite its potential to do so. However, Barrow also made sure to highlight examples of good mixed-husbandry when he found it as proof that it was not the soil that was the problem. Ever attentive to grass, Barrow described a farm outside Paarl (just north of where Duckitt would locate his farm) as a case in point, where the planter had put much of his arable land to a species of Indian lucerne, a native kidney bean, and what Barrow described as a drought-hardy dog’s tail grass from India, but was actually just African millet. All these crops were cut twice for feed, grazed

⁹¹ Robert Percival, *An Account of the Cape of Good Hope* (London: Baldwin, 1804), 228.

by cattle for several months, then plowed under in the winter.⁹² Imperializing the Cameralist notion of autarky, Barrow suggested that while clover and ryegrass were the gold standard fodder crops of good husbandry, self-sufficiency need not depend solely on European plants: experimentation with indigenous substitutes or plants brought in from other parts of the Empire might reap great rewards.

Barrow's narrative insinuated the corrigibility of both land and, to a lesser extent, farmer. But for the land to be redeemed it needed a redeemer. Other officers, including Donald Campbell, the son of a prominent Scottish laird, were persuaded that the Dutch would gladly welcome a permanent British settlement if the government could do something about the dismal state of agriculture in the colony. He strongly recommended that the British intervene in an official capacity to rectify grain and fodder shortages if it wanted the colony to become an asset rather than a burden. He particularly saw the advantage of getting Britons on the ground, writing:

A profitable field may be opened for the Emigration of the Agriculturist and the Mechanic, which will necessarily encourage Industry, and lead to improvement of Agriculture...[and] the surplus produce of all kinds of Grain, etc. of the Colony be increased, which will meet with a ready market.⁹³

This was echoed in other reports maintaining that potentially productive arable lands had been wasted, and natural pasturage was chronically overstocked by Cape sheep propagating unchecked.⁹⁴ It urged the War Department to take a firmer hand in the agricultural development of the colony.

Even Dundas's nephew, General Francis Dundas, who would later become Duckitt's adversary, lamented the extent of agricultural mismanagement in the colony and its effects on the

⁹² Barrow, *An Account*, 79, 338, 407

⁹³ "Account of the Principal Productions," 19 Sept 1795, *RCC I*, 139-40

⁹⁴ Blankett to Napean, 25 January 1795, *RCC I*, 24.

occupation. He wrote to his uncle in the spring of 1797 to warn him after another unsatisfactory harvest that the wolf was at the door: they might be starved out if a shipment of grain did not arrive soon. Additionally, the want of forage had forced the dismounting of all regiments, sending them out into the country in detachments to adequate pasturage.⁹⁵ Francis Dundas was a curious cross between an authoritarian military pragmatist and a Smithian liberal, and, unlike Macartney and Barrow, he saw direct intervention into agricultural practices as a fool's errand: let India supply the Cape with grain until self-interest motivated the Boers to mend their ways, either boosting local grain production or coming up with a more lucrative commodity to exchange for imported grain. However, in the end, his uncle was not convinced by this approach. After four years of occupation, it was clear to Henry Dundas that in order to support British interests, it must have British husbandry.

Duckitt's name first comes up in a letter from the George Yonge to William Huskisson, Dundas's undersecretary, in June of 1799. Despite having had a rocky career in the War Department and having spent the better part of the previous year at the Debtor's Sanctuary at Holyrood Palace, Dundas offered Yonge the governorship of the Cape, and Yonge immediately threw himself into preparation for his pet project, the formation of an agricultural department to encourage British husbandry at the Cape. Lord Somerville, then President of the Board of Agriculture, had recommended Duckitt to Yonge and Dundas as an ideal candidate and orchestrated a meeting in the spring of 1799 between Yonge and Duckitt, who was then a poorly-paid clerk in the Treasury Department with a farm in Buckinghamshire. After several satisfactory meetings, Somerville, Yonge, and Duckitt descended upon Dundas ten days later to propose the terms of Duckitt's engagement. For his services at the Cape, he was to be given a salary of £500

⁹⁵ F. Dundas to H. Dundas, 12 December, 13 April, 20 July, 1797, WCA, A 455, f.19, 16, 17.

per annum to be paid in advance, a £150 per annum pension to his wife, Mary, should he die while in service, and £30-50 per annum to the 12 husbandmen and mechanics coming with him. Additionally, Duckitt received assurance that he should be able to purchase, on Government account, all the seeds, implements, and stock needed to begin his operations and “further reward provided the wages of the country tolerates it,” a pronouncement that would cause much trouble in the coming years.⁹⁶ Yonge departed for the Cape a few weeks later, but it took another five months for Duckitt to get the final approval of his terms.

Duckitt called on Dundas at Wimbledon several times during November and December of 1799 to plan his operations and authorize purchases. To one of these meetings he brought Robert Gibbs, official seedsman to the Board of Agriculture and most of its members, “who explained the Propriety of taking out every kind of seed...the Exp[ense] of which Mr. R.G. conceived woud [sic] amt. to nearly £300.”⁹⁷ Duckitt went to Soho Square and met with Joseph Banks, who, as seen in the previous section, had experience in orchestrating a biological migration. Banks, still heavily invested in the agrarian future of New South Wales, doled out advice on care of plants and seeds on the journey and on how to select the best spot for a farm, and encouraged Duckitt to correspond regularly on his progress.⁹⁸

In the New Year, Duckitt focused his efforts on readying his implements, stock, and seed, though a wrench was thrown into the arrangements he had made for the transportation of his livestock. He had to leave behind the merinos he purchased from George III’s stock due to a

⁹⁶Yonge to Huskisson, 30 June 1799, RCC II, 440; Somerville to Dundas, 19 July 1799, WCA, A 455, f.30; “Memorandum... William Duckitt,” Dec. 10, 1799, WCA, BO 45, f. 25

⁹⁷ DWD, Dec. 9, 1799

⁹⁸ DWD, Dec. 14, 1799. No correspondence has surfaced to suggest that they did keep in contact.

recent prohibition on the export of sheep that even Dundas could not countermand.⁹⁹ Fortunately he was still able to transport the Devonshire bulls and cows selected by his brother John from the Duke of Bedford's prize stock, having understood Cape Black-horned cattle to be thin, fragile, and prone to disease. By the end of April of 1800, Dundas had advanced the enormous sum of £1928 on Duckitt's venture, with assurances that the funding of his operations would continue via Yonge upon his arrival in the Cape. This included £741 for a half year's wages and table expenses advanced to Duckitt and his party and the rest in agricultural implements and stock, plus an additional £882 in bills yet to be settled. This from the same government that had refused to send a single plough to New South Wales when it stood on the brink of starvation in the 1790s.¹⁰⁰

⁹⁹ DWD, Jan. 6 and March 19, 1800; Carter, *Wool Correspondence*, 96.

¹⁰⁰ "Sums advanced to William Duckitt" N.d. WCA BO 45, f.29

Table 2: List of Fodder Seeds Sent to the Cape of Good Hope, 1800 (Source: British Library, Add. MS 38763)

FODDER SEEDS ON BOARD THE HMS WELLESLEY, 1800¹

Grasses	Amt.	Legumes	Amt.	Other fodder	Amt.
Best native grass seed mixture	72 bsh.	Fine white Dutch clover	112 lbs.	White pound turnip	112 lbs.
New ryegrass	4 bsh.	Fine red clover	112 lbs.	Early stone turnip	20 lbs.
Canary grass	2 bsh.	Yellow clover	56 lbs.	Early Dutch turnip	56 lbs.
Cow grass	56 lbs.	New clover	1 lbs.	Norfolk turnip	28 lbs.
Black oats	4 bsh.	Lucerne	56 lbs.	Forage rape	2 bsh.
Essex oats	4 bsh.	Sainfoin	3 bsh.	Burnet	1 bsh.
Poland oats	4 bsh.	Thyme tares	6 bsh.	Mangel wurzel	14 lbs.
Rib grass	56 lbs.	Tares	4 bsh.	Early short top radish	9 gall.
Meadow foxtail grass	5 lbs.	Mazagan beans	8 bsh.	Buckwheat	4 bsh.
Meadow fescue	5 lbs.	Long pod beans	2 bsh.	Lentils	1/2 bsh.
Scurvy grass	sample	Best early superfine peas	2 bsh.	Chicory	30 lbs.
		Hotspur peas	2 bsh.	Sugar loaf cabbage	6 lbs.
		Prussian peas	2 bsh.	Superfine dwarf cabbage	3 lbs.
		Dwarf marrowfat peas	2 bsh.	Large Battersea cabbage	3 lbs.

¹ From "Bill for Plants Sent to Cape of Good Hope," Thomas Gibbs an Co., 3 April 1800, Add MS 38763, f. 1

As with the First Fleet to NSW, the *Wellesley* was a microcosm of an improved British farm (See Table 2). In addition to the Duke of Bedford's cattle and horses from Robert Bakewell's (another Board of Agriculture member) prize "Bakewell Blacks," he had hop plants, fruit trees, and £419 worth of seeds, three-fourths of which were grasses, legumes, and other fodder crops.¹⁰¹ The *Wellesley* contained more clover in her hold than the entire First Fleet, and, notably, true grasses played a more prominent role in the *Wellesley* than it did on its First Fleet counterpart, with eight different grass varieties and a tremendous 56 bushels of Gibbs's best

¹⁰¹ "Bill for Seeds," 3 April 1800. British Library (BL), Add MS 38763, f. 1

native grass mixture for sown pasture. The grass bias on the *Wellesley* was in part due to the continuing progress of agricultural science in Britain, which, under the influence of the Board of Agriculture and its secretary, Arthur Young, had become increasingly tied to the planting of artificial grasslands, and in part to the elite seedsman, Gibbs, who was known for his own grass and fodder experiments and, later, for supplying the seed for the famed grass experiments at the Duke of Bedford's Woburn Abbey.¹⁰²

Tellingly, Duckitt brought no wheat, barley, rye, or maize seeds on the *Wellesley*. The problem with grain production was not a problem of the quality or quantity of the seed: it was a problem, in Duckitt's view, like Kalm before him in America, born of letting cattle (and their manure) roam far away from the arable crops in overcrowded natural pastures instead of sowing rotations of artificial grasses and fodder crops after or with a grain crop. Although no farm records survive from any of Duckitt's properties, it was clear that he intended to sow a variety of such plants and distribute them to "such Enterprising Farmers" as he could find, for "what Folly that a Farmer should [sic] have want of grass in a country without Winter!"¹⁰³

In addition to his seeds and stock, he had over twelve tons of agricultural equipment on board, including multiple ploughs (double and single furrowed), harrows, wheels, carts, harnesses, iron ploughshares, coulter, and mould boards, a chaff engine, a seed drill, and various nuts and bolts, plus a blacksmith and a carpenter, both young men who had been apprenticed in his father's plough workshop in Sussex. He left England in May of 1800 fully-equipped, according to the commission, "for the purpose of procuring for the Settlement at the Cape of

¹⁰² "The Late Sir B.T. Brandreth Gibbs," *Journal of the Royal Agricultural Society of England* (London: Royal Agricultural Society of England, 1885), 618-9; George Sinclair, *Hortus Gramineus Woburnensis* (London: J. Ridgway, 1825), 138, 218, 252

¹⁰³ DWD, 1 October, 1800.

Good Hope the opportunity of improving the agriculture of that colony by the aid of his experience and information in husbandry.”¹⁰⁴ He also went, or so he thought, with the full approbation and support of the Home and War Offices.

This project was not without its skeptics. Rumor of Duckitt’s coming reached the Cape by May of 1800 shortly before he did. Francis Dundas claimed the real barrier to agricultural improvement (given a reasonably high grain price) was not ignorance of good husbandry, but access to labor, i.e. keeping the port open to slavers from Mozambique.¹⁰⁵ One of Dundas’s regular correspondents, Lady Anne Barnard, who had her finger on the pulse of Cape Town society and government, dismissed Duckitt’s impending emigration as just another overreach by the bombastic Yonge. With her typical acrid wit, Barnard was a cynic both of Yonge’s agricultural ambitions and Duckitt’s department, despite having bemoaned the state of agriculture to Dundas in years prior:

There is an English farmer come out or coming with all his plows & harrows & with all that ignorance of the climate & methods of the place which will if he is conceited throw him back [to England] in five years from want of experience.¹⁰⁶

Her view was that the Boers, for the most part, did the best they could in an inhospitable climate, which lacked consistency of rainfall, and terrain, which was far too rocky or sandy. It was a climate with which even Macartney before his departure had grown disillusioned: “Its brilliancy misled me at a distance, but has faded on approach.” Though Barnard met Duckitt in September of 1800 and found him “a plain manner’d good looking young farmer,” she maintained the political and environmental impropriety of his department. Duckitt was coming “to shew Africa

¹⁰⁴ “Sums advanced to William Duckitt” [n.d. 1800], WCA BO 45, f. 29; Dundas to Yonge, April. 24, 1800 WCA, BO 91, f. 65

¹⁰⁵ Dundas to Burgher Senate, 19 Feb 1799, *RCCII*, 364

¹⁰⁶ Margaret Lenta and Basil LeCordeur, eds., *The Cape Diaries of Lady Anne Barnard, 1799-1800: 1800* (Cape Town: Van Riebeeck Society, 1999), 150.

what good farming is...and how fertile all sorts of soils are to be made by skill,” and somehow to “convert sandy plains into fertile fields & set all the rocks a-sprouting with Corn.”¹⁰⁷ Barnard’s reaction to his coming would foreshadow the immense challenges, disappointments, and antagonism that would fall upon Duckitt’s department when Yonge was sacked in 1801 and replaced by Francis Dundas.

Yonge arranged for Duckitt and his party to occupy a large property in Simon’s Town called Garden House until he could settle upon a location for his experiment farm further inland. Yonge had also ordered ground to be prepared in the 45-acre government gardens (formerly the Company’s Gardens) so that Duckitt would have something to show for himself at harvest-time should be unable to find a new farm by the end of the planting season. Part of the land had already been planted with wheat and barley for the consumption of Government House. By the end of September, Duckitt and his men had planted a large vegetable garden (2-3 acres), a small orchard of fruit and nut trees, a patch of hops which had miraculously survived the journey (Banks had claimed it would not), and several acres each of grass, peas, and cabbages to feed his stock. He duplicated this on the farm at Garden House, along with ten acres of wheat.¹⁰⁸

After only a few weeks, the self-congratulatory Yonge was thrilled with Duckitt’s department and wrote to Dundas shortly after Duckitt’s return from his first tour to inform him that operations were proceeding as planned. “Every step he takes confirms his opinion of the general excellence of the soil of this colony,” he asserted, “and it is rather flattering to me that

¹⁰⁷Macartney to Dundas, 24 Oct 1797, WCA, A 455, f.23; Lenta and LeCordeur, *Cape Diaries*, 254.

¹⁰⁸Duckitt to Dundas, 9 Oct 1800, RCC, vol. III, 305. Alette Fleischer, “(Ex)changing Knowledge and Nature at the Cape of Good Hope, circa 1652-1700,” in Huigen et al, eds., *The Dutch Trading Companies as Knowledge Networks* (Leiden: BRILL, 2010), 243–65; DWD, Sept. 19 to Sept. 29, 1800.

his judgments and knowledge should thus confirm all my ideas.” In addition to the physical planting of the Government House lands, he reported that Duckitt had been admitted immediately as a member of Yonge’s new Agricultural Society (formed in May of 1800), whereby he was introduced to all the landowners in the vicinity of the Cape who cared enough about improvement (or socialization) to put down the 25 rix-dollar (RXD) subscription. Lady Anne Barnard wrote to Dundas that it was the first practical measure to improve the country that she had seen from Yonge, who “for once has reason to be pleased with himself,” instead of his normal “higgledy-piggledy.” Yonge, only months away from receiving his own marching orders due to accusations of gross financial mismanagement and abuse of power, declared Duckitt’s department a success before a single plant had flowered.

With the coming of William Duckitt, Yonge told Dundas, all the land “[lying] half barren, useless, and...apparently incapable of culture” in the 100 miles between Simon’s Town and Saldhana Bay would now be able to “produce any thing that human industry can affect.” It is unclear whether this enthusiastic over-exaggeration about the benefits of finally getting an agricultural department on the civil establishment was due more to Duckitt’s relentless self-promotion and pronouncements regarding the fertility of the soil or Yonge’s desperation to convince Dundas that his ship was not sinking.¹⁰⁹ But the intention was clear. Duckitt would lead by example and show the Dutch freeholders and the increasing numbers of *trekboers*, grazing Cape sheep and cattle on either massive 6000-acre semi-surveyed circular loan “farms” to the northwest and due east of the Cape Peninsula or on native velds deep in Xhosa country,

¹⁰⁹ Yonge to Dundas, Oct. 22, 1800, *RCC* III, 324, 333; Barnard to Dundas, June 1, 1800 in W. H. Wilkins, ed., *South Africa a Century Ago: Letters Written from the Cape of Good Hope (1791-1801)* (London: Smith, Elder, 1901), 304; Yonge to Dundas, Oct. 22, 1800, *RCC* III, 325; Boucher and Penn, *Britain at the Cape*, 227-33.

that they would be better off economically, socially, and morally, if they embraced intensive mixed-husbandry in the green, well-watered lowlands within easy distance of Cape Town, recalled their stock from the interior, and fed them instead on fields of English clovers, grasses, and root vegetables.

V. Conclusion

The implementation of mixed farming in the Cape was as riddled with political and environmental barriers as it was in New South Wales, as we will see in the following two chapters, but this should not diminish the remarkable nature of its initial orchestration. In North America, Crosby writes, pioneers crossed the Appalachian mountains and “found white clover and bluegrass [the introduced *poa pratensis*] waiting for them,” crediting the plants’ “aggressive natures” for this achievement.¹¹⁰ To similarly anthropomorphize these fodder crops: in New South Wales and the Cape, clover and grass were frog-marched at great cost and with great intentionality across the most forgiving parts of an unforgiving landscape. Clover and the other fodder crops packed into the holds of the *Sirius*, *Supply*, *Golden Grove*, and *Borrowdale* in 1787 and the *Wellesley* in 1800, encapsulated a vision for a new and improved settler empire grounded in Enlightenment thought and practice. Yet, despite the effort applied, beginning with these two meticulously outfitted cargoes, colonial agriculture in these colonies would often fall short of this initial vision.

Arable farming in both these colonies has been largely dismissed outright or dwarfed narratives of what Belich calls “export rescue:” the profitable pastoral turn in the mid-nineteenth century based on improved breeding programs, middle class demand for meat and fine wools, and revolutionized shipping technologies, or—perhaps more important to modern-day South

¹¹⁰ Crosby, *Ecological Imperialism*, 158

Africa—late-nineteenth century discoveries of gold and diamonds.¹¹¹ The attempts to transplant mixed husbandry and its associated biota to New South Wales and the Cape could easily be rendered irrelevant given what we know of the historical trajectories of these colonies. They didn't fill the production and consumption gaps left by the loss of the American colonies. They were never able to become wholly self-sufficient in grain. Despite Crosby's claim that Europeans were able to reattach the "seams of Pangaea," no agricultural technology has, as of yet, ever turned them, ecologically or aesthetically, into Little Englands. Even in the late nineteenth and twentieth century, there was, as Cameron Muir has recently described it, a "broken promise" in agricultural improvement.¹¹² But the "mixed" fate of mixed-husbandry in New South Wales and the Cape that began with those first fleets of fodder, as the next chapters will show, were not just ecologically hubristic interludes on an otherwise extensive pastoral trajectory. Mixed husbandry was not dead on arrival; nor was the grass.

¹¹¹ Belich, *Replenishing the Earth*, 88-9, 277-8; Christopher Otter, "Liberty and Ecology: Resources, Markets, and the British Contribution to the Global Environmental Crisis" in Steven Gunn and James Vernon, eds., *The Peculiarities of Liberal Modernity in Imperial Britain* (Berkeley: University of California Press, 2011); Rebecca Woods, "Breed, Culture, and Economy: The New Zealand Frozen Meat Trade, 1880-1914," *The Agricultural History Review* 60 (2012), 288-308.

¹¹² Cameron Muir, *The Broken Promise of Agricultural Progress* (London: Routledge, 2014).

CHAPTER THREE

Floundering but not Foundering: New South Wales' Agricultural Decades, 1788-1810

I. Introduction

A few short weeks after his arrival in England in May 1793 after an arduous six-month return voyage from New South Wales, Captain Arthur Phillip wrote to Charles Jenkinson, Lord Hawkesbury (later Liverpool), with a brief update on the state of the colony and a confirmation of the safe landing of several boxes of Australian seeds. Phillip, who had spent the previous five years as the first governor of the penal colony at New South Wales, had directed the seeds to Hawkesbury, President of the Board of Trade and Plantations, to be forwarded to Sir Joseph Banks and planted in the gardens at Kew. Phillip was confident that the seeds, accustomed as they were to warm, dry soils of New South Wales, would do fine at Kew where, he remarked, “seeds are sown in Pots and the Pots put into a Hot Bed...[where] most of them may be brought to bear our Winter in a sheltered situation” until such a time as they could be transplanted to “any good soil.”¹ Phillip took for granted the ease with which the native flora of New South Wales might be transplanted to English soil given the resources at Banks' disposal. But implicit in this communication is the assumption made in the mid-1780s by Banks and other planners that the soils of New South Wales could easily receive the agricultural bounty of Europe. In fact, the First Fleet would not have sailed to Botany Bay in 1787 had the Home Office, the Board of Trade, and the Admiralty not been assured of the capability of this new land to support the grains, grasses, vegetables, fruits, and livestock of England. Lord Hawkesbury himself contributed to the planning of the First Fleet—most of the early grain production in the colony centered around one of his several geological namesakes, the Hawkesbury River—and remained

¹ Arthur Phillip to Charles Jenkinson, Lord Hawkesbury (Liverpool), 27 June 1793, British Library (BL), Liverpool Papers, Add. MS 38229, f. 44.

concerned about its development, but Phillip had witnessed first-hand the tribulations of British agriculture in New South Wales.

Sir Joseph Banks and the Home Office’s “Grand Experiment,” the wholesale, orchestrated transfer of Enlightenment-era British husbandry—its biota and practices—to this supposed *terra nullis* had yielded very mixed results. After four years on the ground, Phillip’s colony, despite the ongoing false reports in Britain of starvation, misery, and vice, had 1,516 acres in active grain cultivation, not including gardens, by the time he departed.² Bearing in mind that an acre is roughly the size of an American football field, that this acre in New South Wales was more often than not densely covered in deep-rooted gum trees and spindly eucalypts, and that this acre had to be cleared, sown, tended, and harvested with rudimentary axes, spades, shovels, and knives, this was not an insubstantial accomplishment. Yet most of the grain growing in New South Wales in 1792 was not descended from the 180 bushels of top-quality seed grain handpicked by Banks’ London nurserymen.³ Nearly half of that seed had been unusable upon unloading at Sydney Cove due to exposure to moisture, rodents, and weevils on the seven-month voyage, and the other half had to be supplemented with seed from the Cape of Good Hope and Calcutta, which tended to perform better.⁴ In 1792, over half of the grain being grown in New South Wales was maize, that rude grain of the rogue American colonies, which had not been sent to New South Wales with the First Fleet at all. By 1792, it was abundantly clear to those who had spent any amount of time in New South Wales (and becoming clearer to those who had not)

² Phillip to Henry Dundas, 2 October 1792 in Alexander Britten and Charles Blagden, comp., *The Historical Records of New South Wales, 1762-1811*, Vol. 1, pt. 2 (Sydney: C. Potter, Government Printer, 1892), 645. Henceforth *HRNSW*.

³ See Ch. 2, #

⁴ Phillip to Sir Philip Stevens, 10 November 1787, *HRNSW* 1, pt. 2, 118-9; Phillip to Lord Sydney, 5 July 1788 and 9 July 1788, *HRNSW* 1, pt. 2, 143-146; Phillip to Evan Nepean, 9 July 1788; *HRNSW* 1, pt. 2, 152.

that there was an enormous difference between growing Australian bluebell, spider-flower, and kangaroo grass in nutritious soil in a clay pot at Kew and keeping a new colony in locally-grown grain and meat. The previous chapter examined the scientific, expert orchestration of Enlightenment mixed-husbandry in New South Wales (and the Cape); this chapter focuses on mixed-husbandry's dynamic, but often-improvised, performance in this new land during the first twenty years of settlement.

Most historical treatments of colonial New South Wales, particularly those that deal explicitly with the agrarian and/or environmental history of colonial Australia, tend to skip or skim over the period between these rocky early years of the First (and Second) Fleet in the late 1780s and early 1790s and the rise of the large-scale, export-based pastoral economy beginning in the 1830s. In these histories, agriculturally-speaking, very little of interest happened until the mid-1820s when New South Wales and Tasmania debuted on the world market with fine Merino wool—a market it would then dominate for the better part of two centuries—followed by the South Australian and Victorian wheat booms of the 1840s and 1850s.⁵ This bias in histories of

⁵ Tim F. Flannery, *The Birth of Sydney*, 1st American ed. (New York: Grove Press, 2000), 58–9, 61. D. W Meinig, *On the Margins of the Good Earth: The South Australian Wheat Frontier, 1869-1884*. (Chicago:Rand McNally, 1962); Lynnette J. Peel, *Rural Industry in the Port Phillip Region, 1835-80* (Carlton, Vic: Melbourne University Press, 1975); Michael Williams, *The Making of the South Australian Landscape: A Study in the Historical Geography of Australia*. (London; New York: Academic Press, 1974); B. R Davidson, *European Farming in Australia: An Economic History of Australian Farming* (Amsterdam; New York; New York: Elsevier Scientific Pub. Co. ; Distributors for the U.S. and Canada, Elsevier North-Holland, 1981); Geoffrey Bolton, *Spoils and Spoilers: A History of Australians Shaping Their Environment* (Allen & Unwin, 1992); Jan Todd, *Colonial Technology: Science and the Transfer of Innovation to Australia* (Cambridge; New York: Cambridge University Press, 1995); Geoff Raby, *Making Rural Australia: An Economic History of Technical and Institutional Creativity, 1788-1860* (Oxford University Press, 1996); Tim Bonyhady, *The Colonial Earth* (Carlton, Vic.: Miegunyah Press, 2000); Ian M Parsonson, *The Australian Ark a History of Domesticated Animals in Australia* (Collingwood, Vic.: CSIRO Pub., 2000), James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (OUP Oxford, 2011).

colonial agriculture towards capitalist production for global markets is understandable (and not unique to Australian historiography) given how rapidly the Australian economy came to and continues to rely, almost exclusively, on its exports—wool, minerals, wheat, beef/lamb, and now oil. But in overlooking or dismissing these first 30 years of agricultural settlement as insignificant because they made little contribution to Britain’s imperial economy, two important elements are missed: 1) Agricultural self-sufficiency in the late-eighteenth and early-nineteenth centuries was considered to be, ideologically and materially, of much greater importance to the health of this new colony, than the development of an export market. 2) The rise of pastoralism in New South Wales and the development of a South Australian wheat frontier in the second half of the nineteenth century were adaptations to the Australian landscape and political and demographic conditions of colonial Australia predicated on the agrarian experience of New South Wales’ first 30 or 40 years.

The ideological and political underpinnings of early farming in colonial New South Wales have not been neglected completely by intellectual historians and historians of science. Both John Gascoigne and Alan Frost have explored how the Enlightenment—and particularly the cult of agricultural improvement and the scientific reorganization of the natural world at the hands of Linnaeus and Banks—shaped the early settlement of New South Wales, but neither provide a satisfying follow-through that demonstrates just how these ideas (and those attempting to put them into practice) confronted the landscape itself. Richard Drayton, likewise, shows how Banks inserted his own imperial ambitions in economic botany into the development of New South Wales, sending his minions into the bush in the ruthless search for botanical glory.

Australian flora played a large role in the “gathering in of Creation” at Kew, but we do not get a clear picture of the on-the-ground “governance” of the Australian landscape itself.⁶

Environmental historians of Australia have investigated how imperial science was shaped by and, in turn, shaped the Australian landscape, exploring the on-the-ground environmental transformations that are so often left out of those aforementioned histories of science, but they have been conspicuously reserved about early colonial New South Wales. One reason for this is, of course, that there is very little hard (or even soft) data on environmental change or even agrarian change until well into the second half of the nineteenth century when newly-formed colonial and state institutions began to collect information and intervene into agrarian landscapes. Another reason, perhaps, is that colonial interactions with the Australian environment became significantly more destructive in the second half of the nineteenth century due to the eruption of domesticated ungulate populations in the across the southeast quarter of Australia in the 1840s and 1850s, the gold rushes of the 1850s and 1860s, and the imperious wheat frontiers in South Australia and Victoria in the 1860s and 1870s (which resulted in a series of “Dust Bowl” years between 1890 and 1945). As a result, environmental historians have been more interested in the development and consequences of agricultural technologies in marginal landscapes (biological controls, irrigation, invasive species, erosion) in this later period, or, alternatively, with an analysis of Australia’s deep geological history.⁷ None would contend that

⁶ Richard Harry Drayton, *Nature’s Government: Science, Imperial Britain, and the “Improvement” of the World* (Yale University Press, 2000), #.

⁷ Bolton, *Spoils and Spoilers*; Tim F. Flannery, *The Future Eaters: An Ecological History of the Australasian Lands and People* (Chatswood, N.S.W.: Reed, 1994); Todd, *Colonial Technology*; Raby, *Making Rural Australia*; Libby Robin and Tom Griffiths, eds., *Ecology and Empire: Environmental History of Settler Societies* (Seattle, Wash.: University of Washington Press, 1998); Tim Low, *Feral Future: The Untold Story of Australia’s Exotic Invaders* (University of Chicago Press, 1999); William J. Lines, *Taming the Great South Land: A History of the*

colonial environmental change did not begin until the millions of sheep began mowing down the grasslands beyond the Cumberland Plain, but very little has been written about these early environmental interactions before the 1820s. Two more recent and very notable exceptions to this are Grace Karskens's sweeping epic of colonial Sydney, *The Colony*, which has informed this work enormously, and the more focused work of Angus McGillivray, historian and fifth-generation Victorian mixed farmer, on First Fleet farming/gardening. Karskens refuses to divorce Sydney's unique urban geography from its rural-scape, and, in doing so, presents an equally suggestive history of early rural life on the Cumberland Plain, particularly those communities subject to the vagaries of the Hawkesbury and Nepean river systems.⁸ McGillivray unearths many of the early successes of arable farming the early years of settlement, particularly in early convict allotments and antiscorbutic gardens.⁹ This chapter builds upon this work,

Conquest of Nature in Australia (Athens, Ga: University of Georgia Press, 1999); Stephen J. Pyne, *Vestal Fire: An Environmental History, Told through Fire, of Europe and Europe's Encounter with the World*, Reprint edition (Seattle: University of Washington Press, 2000); Libby Robin, *How a Continent Created a Nation* (UNSW Press, 2007); James Beattie, Emily O'Gorman, and Matthew Henry, *Climate, Science, and Colonization: Histories from Australia and New Zealand* (Palgrave Macmillan, 2014); Bill Gammage, *The Biggest Estate on Earth: How Aborigines Made Australia*, Reprint edition (Crows Nest, N.S.W.: Allen & Unwin, 2013); Jodi Frawley and Iain McCalman, *Rethinking Invasion Ecologies from the Environmental Humanities* (Routledge, 2014); Jodi Frawley and Heather Goodall, "Transforming Saltbush : Science, Mobility and Metaphor in the Remaking of Intercolonial Worlds," 2013; Warwick Frost, "The Environmental Impacts of the Victorian Gold Rushes: Miners' Accounts during the First Five Years," *Australian Economic History Review* 53, no. 1 (March 2013): 72–90; Simon J. Fielke and Douglas K. Bardsley, "A Brief Political History of South Australian Agriculture," *Rural History* 26, no. 1 (April 2015): 101–25; Brett M. Bennett, *Plantations and Protected Areas: A Global History of Forest Management* (MIT Press, 2015).

⁸ Grace Karskens, *The Colony: A History of Early Sydney* (Allen & Unwin, 2010).

⁹ Angus R. McGillivray, "Convict Settlers, Seamen's Greens, and Imperial Designs at Port Jackson: A Maritime Perspective of British Settler Agriculture," *Agricultural History* 78, no. 3 (July 1, 2004): 261–88; Angus R. McGillivray, "From Sods to Seed-Beds: Cultivating a Familiar Field at Port Jackson.," *Journal of Australian Colonial History* 5, no. 2004 (2004): 1.

linking the sciences and ideologies of settlement to the social, economic, and political realities of colonial rural life.

Australian settlers did not spend their first 30 years in a survivalist agricultural holding pattern until a few men figured out that they could raise Merinos on kangaroo grass beyond the Blue Mountains. The rise of capitalist pastoralism in New South Wales was not, as is often portrayed, inevitable and inexorable. The First Fleet arrived in Botany Bay with a very different agrarian model in mind--improved mixed-husbandry--emboldened by their agricultural successes at home, troubled by agricultural failures in North America, and excited by the possibility of a colonial "blank slate." As I will explore in more detail in Chapter Five, as late as the 1820s and 1830s, the Colonial Office continued to send governors to the colony who still held up small-scale mixed-husbandry as the gold standard for agricultural development. Despite the frustrations and failures of farming as the first settlers (free and unfree) cleared and cultivated (or attempted to do so) the soils of the Cumberland Plain, and the lure of millions of acres of effectively (if not officially) free natural grasslands stretching to and eventually beyond the Blue Mountains, large-scale pastoralism was never pre-ordained in this particular landscape. Appreciating the initiation and course of Enlightenment-era mixed husbandry on the ground in New South Wales is essential to understanding what came after.

Throughout the period between 1788 and around 1820, the districts within and surrounding the Cumberland Plain—particularly those lands along the five main river systems (Parramatta, Hawkesbury/Nepean, Hunter, Shoalhaven, and Georges) in the Sydney region—became sites of conflict between two very different notions of agrarian progress competed for land, water, and political support: "improved" mixed husbandry and what would come to be

known as “settler capitalism,” namely commercial pastoralism.¹⁰ It was not, as some historians have maintained, that Australia was “born modern” and that small/medium-scale mixed farming belonged to a pre-modern age and commercial pastoralism to the modern. It is far too simplistic to see this as a struggle between subsistence/peasant and capitalist production. For one thing, as seen in Chapter One, mixed-husbandry in the Age of Improvement was absolutely oriented toward markets and long-term profitability; for another, large scale commercial production was often considered profligate (if not degenerate) by contemporaries.

In early colonial New South Wales, two agrarian modernities vied for geographic and political hegemony:

1) Enlightenment-era mixed husbandry, which had been the intended model of settlement in New South Wales, was to be supported by a closely settled farming population. Early land-granting policies presupposed a yeoman farming population made up of reformed convicts, non-commissioned officers, and free settlers. Tenancy, which was an important part of improved farming in England and Scotland, was, at least initially, discouraged. Officials were concerned about the pitfalls of widespread absenteeism and did not want to see the former convict-class, in particular, become detached from the reforming influence of wholesome agricultural labor.¹¹ These farmers would have a vested interest in their lands, and, as a result, tend the soil in a sustainable manner and invest in various improvements over time. They would be self-sufficient in grain and meat, provide reasonably-priced surplus grain and meat to government and local markets, and use the proceeds to purchase to buy British-supplied consumer goods. Proponents of this agrarianism argued that this kind of settlement would not only foster self-sufficiency

¹⁰ Donald Denoon, *Settler Capitalism: The Dynamics of Dependent Development in the Southern Hemisphere* (Clarendon Press, 1983).

¹¹ Grace Karskens, *The Colony: A History of Early Sydney* (Allen & Unwin, 2010), 137-142.

(important because of the insecurity caused by distance and war) in foodstuffs, but also a social order and economic dependency that would preclude any notions of independence.¹²

2) Large-scale, land-extensive commercial enterprise (settler capitalism), was the model of settlement preferred, unsurprisingly, by the better capitalized settlers—military officers, free settlers, moneyed former political prisoners, Sydney merchants looking to invest in real property. It would be supported by generous grants of land, a robust (but nominally free) labor force and open (again, at least nominally) local, colonial, and global markets. Any lack of self-sufficiency in grain and/or meat would be offset by the profits of the operations, which would be used to import foreign foodstuffs and British consumer goods. Such settlement would not only enable the colony to cease to be a financial burden to the mother country, but would actively contribute to her economy. As with any commercial monoculture, this model would require an agricultural “hinterland.” In this case, India and China, could be the grain hinterland of New South Wales, though it was feared that, as had happened in the American colonies, the grain hinterland of coastal commercial enterprises would move west, cause expensive frontier conflicts, and undermine colonial dependency.¹³

¹² See C.A. Bayly, *Imperial Meridian: The British Empire and the World, 1780-1830* (Longman, 1989), 31-32 for discussion of agrarian social orders and dependency, and Fredrik Albritton Jonsson, *Enlightenment's Frontier: The Scottish Highlands and the Origins of Environmentalism* (New Haven: Yale University Press, 2013), 3-4 for analysis of strategic national and colonial autarky during wartime.

¹³ See Part Three, “The Creation of an American Matrix” in D. W. Meinig, *The Shaping of America: A Geographical Perspective on 500 Years of History, Volume 1: Atlantic America 1492-1800: 1st Edition* (Yale University Press, 1988), 255-322; Gregory H. Nobles, *American Frontiers: Cultural Encounters and Continental Conquest*, First Edition edition (New York: Hill and Wang, 1998); Stephen Hornsby and Michael Hermann (cartographer), *British Atlantic, American Frontier: Spaces of Power in Early Modern British America* (Lebanon [NH]: University Press of New England, 2005); Margaret Ellen Newell, *From Dependency to Independence: Economic Revolution in Colonial New England*, 1 edition (Ithaca [NY]: Cornell University Press, 1998); James Belich, *Replenishing the Earth*.

These competing agrarian models utilized the land in very different ways and demanded very different land policies. While colonial settlement was shaped in a variety of ways by environmental and demographic considerations, it was these adversarial political ideologies of improvement, as well as competing economic interest within New South Wales society, that molded land use, rather than *just* environmental suitability. While there were significant environmental challenges, well-documented by historians, to arable farming in New South Wales (poor soil quality, cycles of drought and flood, extreme heat), mixed husbandry was never incompatible with—or at least unadaptable to—the landscape.¹⁴ There were, after all, significant environmental challenges to grazing, including drought, fire, toxicity of certain bush plants, snake and spider bites, hoof rot, etc.. The second model was undeveloped in the period covered in this chapter, but very important in the decades that followed.

Yet, despite a thorough orchestration of Enlightenment mixed-husbandry in New South Wales and a series of authoritarian governors who, to varying degrees, supported this model and defended it against active settler resistance, large-scale commercial pastoralism would become the dominant mode of land use in New South Wales by the 1840s. Yet, even as late as the 1820s and 1830s, the official agrarian focus of the colony had only begun to shift from the soil to the station. Despite the environmental and political complexities of mixed farming in New South Wales, the 1790s, 1800s, 1810s were decidedly agricultural decades, not a series of abject failures that paved the way for the foregone conclusion of pastoralism. They were ideologically

¹⁴See Tim Flannery, “The Fate of Empire in Low- and High-Energy Ecosystems,” in Robin and Griffiths, *Ecology and Empire*, 46–62; Karskens, *The Colony*, 114–6; Claire Fenby, Don Garden, and Joelle Gergis, “The usual weather in New South Wales is uncommonly bright and clear...equal to the finest summer day in England!: Flood and Drought in New South Wales, 1788-1815” in Beattie, O’Gorman, and Henry, eds., *Climate, Science, and Colonization: Histories from Australia and New Zealand* (New York: Springer, 2013).

and politically agricultural, with authoritarian governors, to varying degrees, orienting policies towards public and private arable production and resisting, again to varying degrees, both large-scale pastoralism and urban commerce. But they were also practically agricultural, with the vast majority of settlers, most of them convict or former convict, engaged in arable production in some capacity.¹⁵ In this chapter I look at these decades in their own right, examining how the original agrarian vision was implemented and challenged in these early years.

The sections of this chapter are arranged thematically, rather than strictly chronologically. The chapter begins by outlining a framework for periodizing agrarian development between the arrival of the First Fleet in 1788 and the sending out of Governor Lachlan Macquarie in 1810, highlighting the political and geographical trajectory of the colony and the challenges to mixed husbandry at various stages. The second section sketches out the geography and climate of New South Wales and examines early colonial encounters with the Australian landscape itself, both negative and positive, and how it shaped the progress of agriculture. The third examines how the continual public relations problems that colonial governments faced as the colony faltered and veered off its intended course shaped agricultural policies and attitudes both in Britain and in the colony. The fourth and fifth sections show how colonial governments took (or attempted to) control of land, convict/settler labor, and markets in the period before the arrival of Macquarie in 1810.

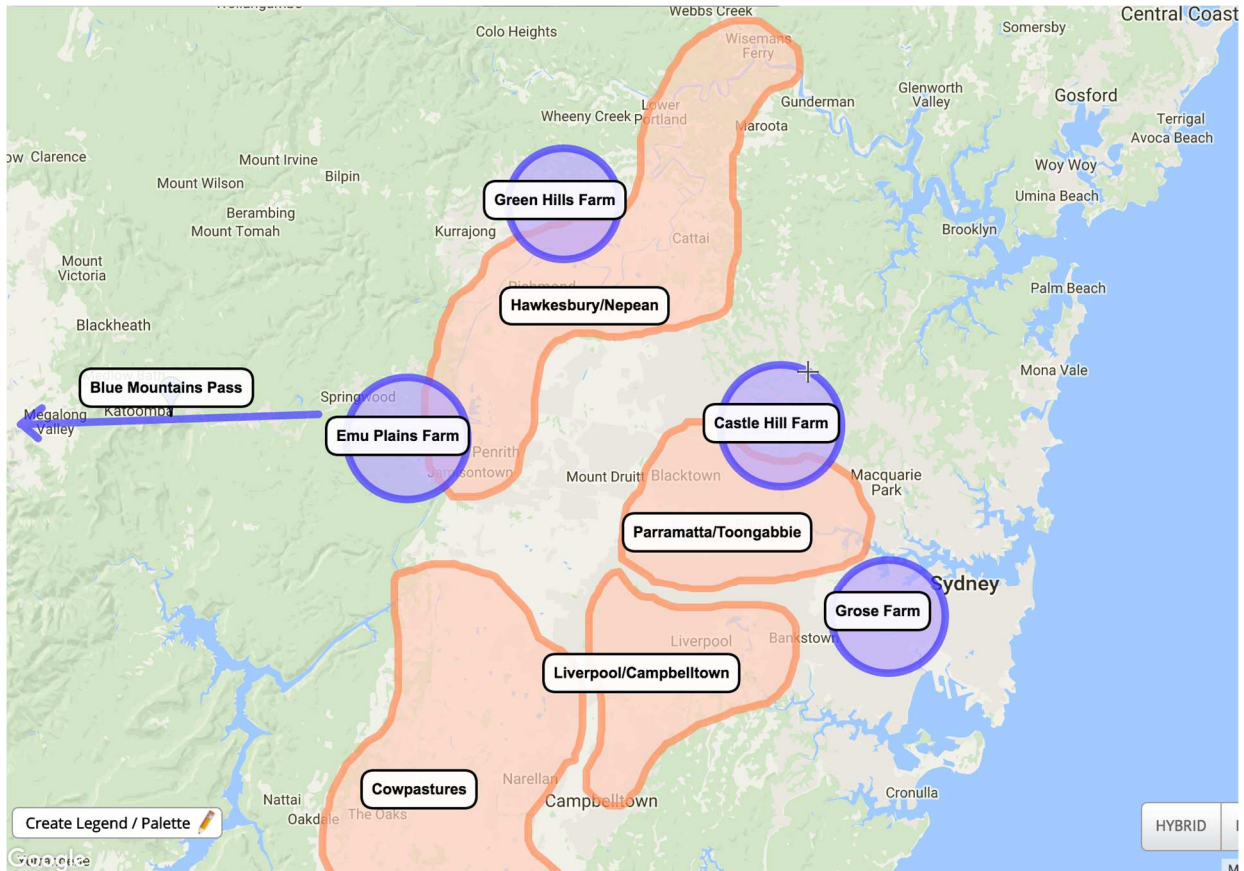
II. Periodization of Agricultural Settlement in New South Wales

The colony of Sidney at its first establishment may not inaptly be compared to a newborn infant hanging at its mother's breast. It deriv'd its whole nourishment from the vitals of its parent, and the exhaustion it occasioned was not unfelt... Its present state may be compar'd to that of a young lad beginning to attain some learning, but, between the

¹⁵ Brian H. Fletcher, *Landed Enterprise and Penal Society: A History of Farming and Grazing in New South Wales before 1821* (Sydney University Press, 1976), 3–5.

intervals of his schooling, gaining by his industry part of his necessary maintenance, and certain of soon becoming a blessing, instead of a burthen, to his family, if only a little attention is given to the direction of his talents. Sir Joseph Banks, 1806¹⁶

Figure 3: Primary agricultural settlements (orange) and government farms on the Cumberland Plain



The characterization of the first 20-30 years of settlement in New South Wales as chaotic, survival-oriented, and economically insignificant has recently come under question by economic historian Jakob Madsen, who claims that, far from being a physical and economic backwater, “it only took a few years of structural adjustment after European settlers arrived in Australia in 1788 before Australia’s per capita income among settlers reached that of the United Kingdom, which

¹⁶ Joseph Banks, “Some Remarks on the Present State of the Colony of Sidney,” 4 June 1806, HRNSW vol. 6, 86

was the country with the highest per capita income in the world at that time.”¹⁷ While it is refreshing to see this period not dismissed out of hand, it turns out that Madsen’s “few years of structural adjustment” was actually 62 years. Like other historians purporting to survey agricultural and economic development in Australia “since 1788,” for Madsen, the colony did not really come into being until it emerged on the global market and began adhering to patterns of Smithian growth through specialization and economies of scale, or, as historian James Belich suggests, before it was “rescued” by exports, namely wool.¹⁸

Sir Joseph Banks, writing in 1806, nearly 20 years after the First Fleet embarked and 20 years before the first wool boom, recognized that the colony had indeed moved beyond mere survival, “a newborn infant hanging at its mother’s breast,” and that the British government needed to pay greater attention to the direction of the colony, which, in his view, had been allowed far too much adolescent license.¹⁹ Banks’s paternalistic (maternalistic?) metaphor notwithstanding, I want to interrogate the progression of agrarian settlement as well. It bears repeating that officials and settlers in New South Wales did not sit around twiddling their thumbs at the brink of starvation until Britain began buying its merino wool. The period before 1820 has an agrarian history with its own plot separate from that of the eventual wool boom. I periodize

¹⁷ Jakob B. Madsen, “Australian Economic Growth and its Drivers since European Settlement,” in Simon P. Ville and G. A. Withers, *The Cambridge Economic History of Australia* (Cambridge: Cambridge University Press, 2014), 29.

¹⁸ Belich, *Replenishing the Earth*, 277–8. Belich does recognize that arable farming before 1830s has been underestimated. See also Noel Butlin, *Forming a Colonial Economy: Australia 1810–1850* (Cambridge: Cambridge University Press, 1995), 179–180. This interpretation of an export-driven growth as Smithian actually overlooks the first step of growth as it is presented in the *Wealth of Nations* the development of local and intra-national markets (and towns). Jonsson, *Enlightenment’s Frontier*, 133–4; Adam Smith, *The Wealth of Nations*, ed. Edwin Cannan, Later Printing edition (New York: Modern Library, 1994), 407–12 (“On the Natural Progress of Opulence”).

¹⁹ Banks, “Some Remarks...,” HRNSW vol. 6, 86

agrarian settlement in NSW between 1788 and 1822 into three main (and sometimes overlapping) intervals: survival, sprawl, and reform.

The survival stage between the landing in 1788 and the departure of Governor Phillip in late 1792 was characterized by the ultra-authoritarian control of land and labor, oriented almost exclusively toward food security, which was almost always at risk. The sprawl stage began, opportunistically, with the departure of Phillip, and was characterized by the relaxing of government control on land and labor, alongside the economic and political ascension of a group of current and former officers from New South Wales Corps, who were able to secure lands, stock, cheap labor, and market access often at the expense of government. For much of the time between 1793 and 1810, the local economy operated largely outside of government control (though not for lack of effort) and the geography of agrarian settlement—its people, plants, and stock—branched out well beyond the practicable control of a relatively small civil and military establishment. The last stage was characterized by large-scale agrarian reforms (or, more often, attempted reforms), first by King and Bligh, then the progressive Macquarie, who reinstated, more systematically, the authoritarian governance of lands and settlers that had prevailed in the earlier survival period--and in inefficient waves in the sprawl period—and the attempted reorientation of the colony towards the small-scale farmer in closely-settled communities.

The Home Office's plan to settle New South Wales as a convict colony, as seen in the previous chapter, included an agricultural regime of peasant-like convicts who would earn their keep and reform their morals by clearing, cultivating, and stocking small parcels of land for governments. Ideally, they would then be emancipated (having been redeemed by wholesome agricultural labor) and placed on another slightly larger parcel of land where they would become self-sufficient in foodstuffs (namely grain, meat, and dairy) and produce a surplus for local

(military and merchant) markets. This did not preclude the development of a commercial crop for foreign markets, — it was hoped that flax, tobacco, cotton, or hops might do well in the colony—but self-sufficiency in grain and meat, along with tight control over the convict population, was to be Phillip’s first priority. It was to be a convict colony, but it was also to be a thriving, yet dependent, agricultural colony, which might also eventually develop a flax, hemp, and/or timber industry, to render it of even greater service to Britain by shoring up its naval stores.²⁰ While the length of transportation for convicts was rarely more than 14 years (and many convicts had 7-year sentences that had been partially served already aboard prison hulks), it was not anticipated or, more to the point, desired that convicts should ever return to England. As a result, the long-term future of the colony, and not just the immediate need for a convict dumping ground, was taken into account in the planning stages. The urgency of the prison situation in England along with the initial expenses incurred in sending out the First Fleet, made the colony less of an experiment that could be halted and recalled if needed and more of a great gamble to the tune of £106,000 (the equivalent “economic cost” today, adjusted for inflation, is £1,034,000,000)—with over 1400 lives hanging in the balance—from which there could be no real return.²¹ The survival stage was an important one.

Alan Frost has quite rightly reprimanded those historians who decry the planning of the First Fleet as irresponsible and haphazard and has provided ample evidence to suggest the exact opposite; nevertheless, the environmental overconfidence manifested in the planning was

²⁰ See Glyndwr Williams “Exploration and Exploitation” in William Roger Louis, Elaine M. Low, and Peter James Marshall, *The Oxford History of the British Empire: The Eighteenth Century* (Oxford University Press, 1998), 566–7.

²¹ Alan Frost, *The First Fleet: The Real Story* (Sydney: Black Incorporated, 2011), 190. MeasuringWorth, <https://www.measuringworth.com/ukcompare/relativevalue.php>. Accessed 30 July 2016.

undeniably injurious to the settlement.²²²³ Owing to Banks's assurances regarding the "fertility and salubrity of climate" in New South Wales, the official plan of settlement and Phillip's instructions anticipate few difficulties in bringing this new land into almost immediate cultivation. In addition to the seeds sent aboard the HMS *Sirius*, *Supply*, *Borrowdale*, and *Golden Grove*, the Home Office authorized two years of provisions (exclusive of the 6-7 month journey), namely salt pork and beef, ship biscuit (hardtack), hard cheese, oats and peas. However, only one year was to be issued at the full allowance and the second year at half allowance, it being presumed that the livestock and grain raised in the first year would be "fully sufficient for their maintenance and support."²⁴ Phillip was ordered to "immediately upon your landing...proceed to the cultivation of the land," namely getting Banks's seeds into the ground, and was specifically told that he was not allowed to delay disembarkation "on the pretense of searching after a more eligible place than Botany Bay."²⁵ The Home Office anticipated far more difficulties in the preservation and increase of the relatively small supply of livestock being sent to the new colony than the production of grain. In fact, it was assumed that the settlement would, within a year, be so "amply supplied with vegetable productions" that there would be no need for any stock to be slaughtered for food.²⁶

²² Frost, *The First Fleet*, 2-14, 198-200, 213-14. See also

²³ Alan Frost, *Botany Bay Mirages: Illusions of Australia's Convict Beginnings* (Carlton, Vic.: Melbourne University Press, 1994); Alan Frost, *Sir Joseph Banks and the Transfer of Plants to and from the South Pacific, 1786-1798* (Melbourne: Colony Press, 1993); Alan Frost, *Botany Bay: The Real Story* (Sydney: Black Incorporated, 2012).

²⁴ Lord Sydney to the Lords Commissioners of the Treasury, 18 August 1786, HRNSW vol.1, pt. 2, 15, 17-18

²⁵ "Phillips Official Instructions," 24 April, 1787, HRNSW vol. 1, pt. 2, 87; Sydney to Phillip, 20 April 1787, HRNSW vol. 1, pt. 2, 83.

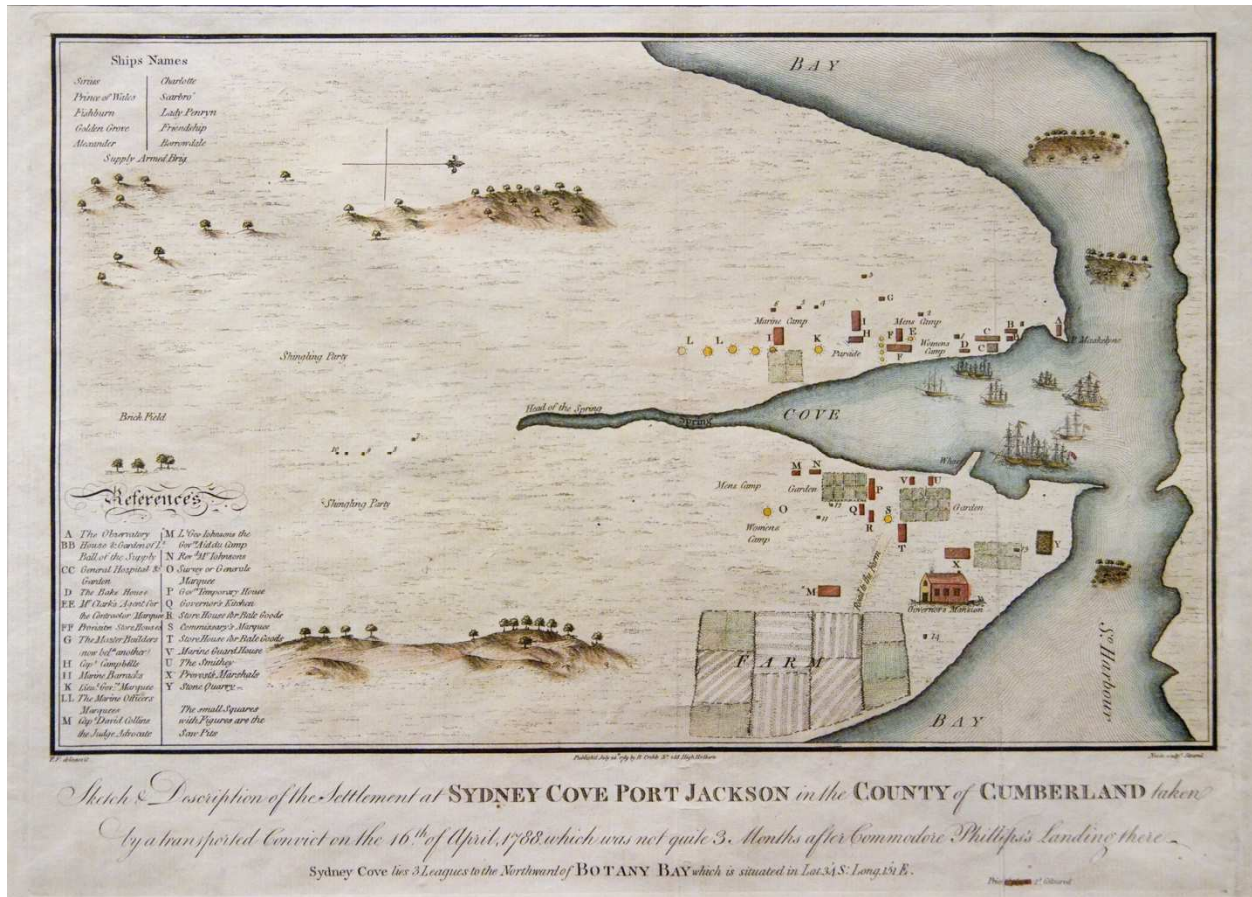
²⁶ *Ibid.*, 88.

Assuming the entire fleet landed without incident (which it did, for the most part), the Home Office and colonial administration could breathe easy after the first year. They were disappointed in this. Phillip had been less sanguine about the ease of agricultural establishment—his correspondence with the Home Office shows both a mistrust of Captain Cook and Banks’s accounts and even begged (unsuccessfully) to have a couple of ships sent out as scouts before the main transport—but was still unprepared for the shock of the sandy swampland of Botany Bay.²⁷ Knowing that his departure from his instructions would certainly be forgiven, Phillip almost immediately directed the ships to the bay to the north to Port Jackson, where somewhat better lands were found on the southern shore. He named the place Sydney Cove, and there he traded Botany Bay’s sand for Sydney’s rocks. “The soil between the rocks is good,” he wrote conciliatorily to the Home Secretary Lord Sydney, though he did beg permission to respectfully observe that the land was very different from what they had been led to expect. He nevertheless forged ahead in having land cleared at Farm Cove (now the site of the Sydney Botanic Garden and Domain), but even after three and a half months there, the “common industry” of the settlement was only able to clear and sow eight acres of land for wheat and barley, with an additional four acres sown by the officers to feed the livestock too valuable to be allowed to freely graze (the cattle, two bulls and four cows, had already strayed and been lost), and another three or four acres in gardens. (See Fig. 4) Even those crops, Phillip claimed, were very uncertain due to the unusually large numbers of ants and rodents, not to mention the untested nature of the soil itself. He made it clear to Lord Sydney that there was no way the settlement would be producing enough grain to feed itself after the first year. They were unlikely to have even enough

²⁷ “Arthur Phillip’s Views on the Conduct of the Expedition...” [1786], HRNSW vol. 1, pt. 2, 50.

grain in the first year to save for seed, ten acres being scarcely enough to feed the colony for a week.²⁸

Figure 4: Fowkes, Cribb, and Neele, “Sketch & Description of the Settlement at Sydney Cove...,” 1789 (Source: National Library of Australia)²⁹



Eight months in, the worst case had been realized: nearly all the English and Cape wheat and much of the non-grain seeds sent in the First Fleet failed in ground at Farm Cove. Phillip gave the soil itself the benefit of the doubt and instead blamed moisture and overheating on the passage or a suspected weevil infestation, but the result was the same: less than a year's

²⁸ Phillip to Sydney, 15 May 1788, HRNSW v.1, pt. 2, 122-23, 126-127; Phillip to Evan Nepean, 9 July 1788, HRNSW v.1, pt. 2, 152

²⁹For full detail see <http://nla.gov.au/nla.obj-230578175>

provision remained in storage, about sixteen acres of very young wheat stood in Farm Cove (sown with the seed from the first mostly failed crop), and there was now “not a bushel of seed in the settlement.” Phillip was forced to cut the rations drastically for both convicts and soldiers (and himself) and sent the *Sirius* to the Cape for as much flour and provisions as it could hold. The situation with the stock was no better. In addition to the stray two bulls and four cows (which would be found, along with 60 descendants, seven years later), all but one of the 70 fat-tailed sheep purchased at the Cape on government account had survived their new diet of “the rank grass under the trees” in the harbor.³⁰ Even the perpetually hopeful Phillip admitted in a more candid letter to Lord Sydney’s undersecretary Even Nepean that “at present no country can afford less support to the first settlers, or be more disadvantageously placed for receiving support from the Mother Country.”³¹

The following year was more promising. Even before the *Sirius* returned from the Cape, the precarious 16 acres of the second round of wheat had flourished and, more importantly, Phillip and his scouts had found and, subsequently, had cleared an area with a much more amenable soil (“as fine as any I have seen in England”) seven miles up the Parramatta River. Phillip would relocate almost all grain cultivation to Rose Hill (later Parramatta) by the end of 1789 and would have an additional 80 acres in wheat by the first harvest of 1790. In order to get land in cultivation, Phillip offered land grants to non-commissioned officers and privates, 100 acres and 50 acres respectively, hoping that private industry under these enlisted men might better serve the colony than large convict plantations and might actually entice them to stay in

³⁰ Phillip to Nepean, 28 September 1788, HRNSW 1:2, 183; Phillip to Sydney, 28 September 1788, HRNSW 1:2, 188, 191.

³¹ Ibid.

the colony permanently.³² In 1791, Phillip had managed, despite the death of his only trained agricultural superintendent at Rose Hill, Henry Dodd, to get 213 acres sown with wheat and maize (which did remarkably well in the soil). This was a critical advancement as the HMS Guardian, coming from England with stores, had struck an iceberg off the Cape and had never made it to the colony.

The slow but steady clearing and cultivation of land was insufficient, however, to deal with the series of setbacks experienced in 1791 and 1792, what Robert Hughes has called “the Starvation Years.”³³ Lieutenant Robert Ross, the quarrelsome and insubordinate thorn in Phillip’s side, lost its primary supply ship, intended to go out to the Cape, off the coast of Norfolk Island. Despite Phillip’s warnings about the precarious nature of the settlement, the Home Office sent out the infamous “Second Fleet” at the end of 1789, which arrived in early 1790. This fleet had been contracted out to slave-trading firm, Camden, Calvert and King, to save money. A full quarter of its 1006 convicts perished on the journey (compared to less than 3% of the First Fleet), and those who survived arrived in the colony in a half-naked, half-starved, diseased huddled mass were unfit to work.³⁴ The new Home Secretary, William Wyndam, Lord Grenville, in response to Phillip’s understandable ire, merely expressed his hope that things had improved and informed him that another 2000 more convicts were on their way.³⁵ He did, however, authorize the provisioning of the colony with grain, peas, biscuit, and cattle from Bengal, which kept the spectre of starvation at bay in 1792, after the arrival of the Third Fleet (nearly as disastrous as the Second) and drought and pest-induced failure of wheat crops in both

³² Phillip to Sydney, 16 November 1788, Grenville to Phillip, 20 June 1789, Phillip to Sydney, 12 February 1790, HRNSW 1:2, 211, 256, 296

³³ Robert Hughes, *The Fatal Shore* (London: Vintage Books, 1988), 106–9.

³⁴ *Ibid.*

³⁵ Grenville to Phillip, 11 Feb 1791, HRNSW 1:2, 460.

New South Wales and Norfolk Island.³⁶ At the end of 1792, Phillip reported to the new Home Secretary, Henry Dundas, that he had an impressive 1000 acres of ground in cultivation by Government at Rose Hill. Three fourths of it was planted in maize. The cultivation of maize, product of the Columbian exchange, was extremely rare in northern Europe, but common in much of the Mediterranean and Balkans in the eighteenth century as a famine crop. That settlers were successfully cultivating maize, with its close association with European famine and inferior American husbandry, did not indicate forthcoming prosperity, but, nevertheless, Phillip reported that he could begin to see the possibility of self-sufficiency. Even so, Phillip warned that it would still be foolish in the extreme to relax: “No dependence must be placed on a crop while it is in the ground.”³⁷ His caution was well-advised, as the wheat crop of 1793 was “parched and withered to almost nothing,” yielding a mere six bushels per acre at Rose Hill, when 20 bushels had been anticipated.³⁸

Before Phillip left the colony, leaving Lieutenant Governor Francis Grose in charge, he made preparations for another thousand acres to be cleared, so that, in consequence of a wet and cool summer of 1793/1794, the public and private farms of the colony, now reaching 2000 cultivated acres, “yielded in such abundance as to secure us from any other distress.”³⁹ However, even Grose, prone to foolhardy optimism, expressed himself “perfectly aware of the

³⁶ Andrew Waugh (East India Company) to the Home Office, 15 March 1791, HRNSW 1:2, 489; Phillip to Grenville 5 November 1791, HRNSW 1:2, 533; 539. Phillip had been warning the Home Office of the prospect of crop failure since the winter of 1790, but Sydney and Grenville paid more attention to the early successes (and boasting) of Lieutenants Francis Grose and Robert Ross on Norfolk Island. Gross and Ross had promised that Norfolk Island could soon send its excess grain to its parent settlement. Grenville suggested that they move the entire settlement to Norfolk Island. By the end of 1791, Norfolk Island was in worse condition than New South Wales.

³⁷ Phillip to Dundas, 2 October 1792, HRNSW 1:2, 645

³⁸ Grose to Dundas, 10 May 1793, HRNSW 2, 29

³⁹ Grose to Dundas, 29 April 1794, HRNSW 2, 207

consequences” of celebrating such a good harvest, but the bounty of 1794, supplemented by several shipments of Indian grain as security, marked the end of the young colony’s survival period, a period when these early farms, both public and private, were kept close together and under constant scrutiny. However, with the easing of fear came the relaxing of regulation.⁴⁰

New South Wales early sprawl period was not necessarily negative. Beginning in 1794, the colony saw a large expansion of private farming on the part of emancipated convicts and non-commissioned military men. When Grose ordered the colony’s surveyor Augustus Alt to give an account of all the lands in 1794, nearly 4700 had been cleared in total, with almost 3000 in active cultivation, divided more-or-less evenly between civil/military officers, emancipated convicts, and government.⁴¹ Particularly important to this expansion of cultivated land was the 600 acres cleared and sown on the Hawkesbury River on the part of a group of emancipated convicts. Phillip had recognized the extreme fertility of this region early on, but had been extremely hesitant to allow settlers to extend that far west (nearly 40 miles from Sydney, 30 from Parramatta) so far out of reach of government with the settlement on the coast still so precarious. But Grose saw no reason to prevent settlement there—indeed at least 15 settlers were already clearing land there when they requested the grants—particularly as the land at Sydney and Parramatta was already in the early 1790s showing signs of exhaustion.⁴² The first return of crops from the region were so good in the first year and a half on the Hawkesbury, that the newly-arrived Governor, John Hunter, actively cut back on production at the government farms

⁴⁰ See Grace Karskens, “The Early Colonial Presence, 1788-1822” in Alison Bashford and Macintyre, eds., *The Cambridge History of Australia, Volume One* (New York: Cambridge University Press, 2013), 96-7.

⁴¹ Augustus Atl to Grose, 26 April 1794, HRNSW 2, 210.

⁴² Phillip to Sydney, 13 February 1790, HRNSW 1:2, 304-306; Grose to Dundas, 29 April 1794, HRNSW 2, 210.

on tired soils at Rose Hill and “Old” Toongabbie, so as to encourage the industry of the private farmers. The soil at the first government farm in Sydney had, as early as 1791, been rendered practically useless from continuous cropping, the newly-arrived Elizabeth Macarthur observing that wheat and barley was harvested at less than threefold at Farm Cove.⁴³

Hunter actively promoted the idea of agricultural improvement on small-hold farms, and as the survival of the colony become much more assured after 1795, he eagerly continued the policy of granting small 30-50 acre properties to Emancipists and larger properties to former and current officers, marines, and corpsmen to entice them to remain in the colony as free settlers. He expanded the system of loaning of convicts to such settlers, particularly to the commissioned officers, who had been allowed large land grants. Original instructions had prohibited these career officers from private landholding, though they began lobbying Phillip to change this policy as soon as the fertile soils around Parramatta were discovered. Official permission from the Home Office did not come until 1793, but Lt. Gov. Grose had begun freely handing out 100-200 acre grants on the best lightly forested land around Parramatta to officers, himself included, as soon as Phillip’s ship was unmoored in 1792. Hunter continued this policy, but quickly realized that he no longer had much control over this new brand of settlers. The point of such liberality in granting lands and stock to settlers was to encourage sedentary mixed husbandry on these prime agricultural lands. Government would provide the land and labor for initial clearance in addition to small grant or loan of stock. Settlers would enclose and cultivate their lands and use the manure of the stock to keep the land in good heart. In reality, such generosity often had the opposite effect. Few of these officers cultivated their granted lands. Rather, they sent out

⁴³ Hunter to Duke of Portland, 25 October 1795, HRNSW 2, 327; Elizabeth Macarthur to Bridget Kingdon, 7 March 1791, Macarthur Papers, ML, A 2906 (CY 940). See also Karskens, *The Colony*, 117-119.

former convict managers to oversee their properties and the convicts assigned to them. While some had their lands planted with grain, most ranged sheep and cattle raised from government herds, which they sold back to government for provisions. When they needed more labor than the convicts provided them, they paid for more labor in the form of consumer goods, namely rum, procured from foreign ships they alone had access to being the only people in the colony with reliable access to sterling.⁴⁴ Trading made these officers (and many of their ex-convict assistants) rich in these early sprawl years, and they, in turn, built houses, opened shops, bought and bred cattle, sheep, and horses, and purchased the lands of failed farmers and ex-convicts who had no interest in becoming farmers in order to expand their properties, mostly for grazing. Hunter was impotent to curb the consolidation of land (and power) among these officers.

With the expansion of private farming, public farming came to standstill. Part of this was intentional; it was feared that public farming would discourage the industry of the private farmers, though it put government at the mercy of the very high market price of grain in the colony. Almost all the grain and meat produced in the colony was purchased by government for the consumption of the convicts and military garrison, and Hunter knew that to keep the price of settler-produced grain at a reasonable rate, he had to create less demand on his end, which meant getting the government farms up and running again. But the soils on the government farms at Parramatta and Toongabbie, which had been so critical in the survival period, had been completely decimated. “From its bad quality and exhausted state,” Hunter wrote to the new Home Secretary, William Cavendish-Bentinck, Duke of Portland in 1796, “[it is] not now capable of paying the expense of cultivation: it will scarcely return the seed expended upon it,

⁴⁴ Karskens, “Early Colonial Presence,” 105, 111

until it has been allowed to lay some time fallow.”⁴⁵ Hunter had no choice but to rely completely on private farmers, mostly those in the distant banks of the Hawkesbury, despite the ever-increasing price he was compelled to pay for grain. The agrarian sprawl had also become increasingly difficult to govern. Hunter asserted that between the expansion of the ex-convicts and the land-hungry officers “no one man, whatever might be his strength and activity, could attend the whole of this colony.”⁴⁶

A year into his term, Hunter began writing home with rising indignation that the officers, and a few in particular, were making it impossible to maintain order in the colony. They were buying land off of settlers and fellow soldiers at an alarming rate, pushing further inland with their stock leading to an escalation in the sporadic but violent clashes between whites and Darug and Eora groups on the Cumberland Plain.⁴⁷ Officer-controlled and outrageously expensive rum had become the de facto currency of the colony, received as payment for labor, stock, lands, produce, and other services. Many of the prosperous farms in Parramatta, Toongabbie, and the Hawkesbury in the hands of former convicts and Marines that had kept the colony in grain beginning in 1791, were so indebted to the officer-merchants of Sydney by the mid-decade that many went bankrupt. The cultivation clauses ordered by Henry Dundas in 1793 (discussed in greater detail in the final section) were largely ignored; rumors reached Hunter’s successor, Philip Gidley King, that former convicts sold their 30 acre grants for a gallon or two of rum.⁴⁸ Officially, if a grantee did not or could not cultivate granted lands, those lands were to be

⁴⁵ Hunter to Portland, 3 March 1796, HRNSW 3, 39.

⁴⁶ “New South Wales: Sketch of the Settlements by Governor Hunter,” 20 August 1796, HRNSW 3, 73.

⁴⁷ Hunter to Portland, 12 November 1796, HRNSW 3, 169-172

⁴⁸ Dundas to Grose, 30 June 1793, HRNSW 2, 49; “Report of Samuel Marsden and Assistant Surgeon Arndell,” [1798], HRNSW 3, 371-72

returned to the Crown and reassigned, but because they had been used as collateral for debts, instead of reverting to the Crown, it was passed into the hands of the creditors, usually officers. To complicate matters, Grose, as acting governor, and his second, Capt. William Paterson, had allowed lands to be granted to no less than 150 settlers of all descriptions with no surveying or any official record beyond a slip of paper signed by a variety of NSW Corps officers stating that “[Settler’s Name] has my permission to settle.”⁴⁹

Despite the largely uncontrolled expansion of settler lands and officer markets, wheat production continued to rise in the colony until around 1798 when it reached approximately 6000 acres, after which it began to decline and stagnated at around 4500 acres.⁵⁰ However, by this point, Hunter had lost all control of the officer class in Sydney and essentially volunteered himself for recall. He was replaced in 1800 by Philip Gidley King, who attempted to revitalize the private grain production. The price of grain had risen to such heights in 1800-1, that it was significantly cheaper to import Indian grain, but recourse to this resource was limited by the heightening of hostilities between France and England in the Indian Ocean between 1795 and 1803. King, an adherent (at least in principle) to Smithian political economy, thought that public farming would do nothing but hinder the progress of private agriculture in the colony, sought to secure self-sufficiency not by putting more land in cultivation on the account of government, but by putting tighter control on the “poisoned dealers” of Sydney.⁵¹ This included a variety of authoritarian market controls, which will be discussed later in the chapter, but was, at least to

⁴⁹ Hunter to Portland, 10 June, 1797, HRNSW 3, 217

⁵⁰ “Report on Livestock and Agriculture,” 20 August 1798, HRNSW 3, 452; “Account of Livestock...and Quantity of Ground Under Cultivation,” 15 August 1800, HRNSW 4, 118

⁵¹ King to Hunter, [July 1800], HRNSW 3, 169. It should be noted that Smithian growth in agricultural production and markets is predicated on the assumption of a stable, temperate climate.

some degree, successful in encouraging more grain production and bringing the price down a few shillings (10-12 per bushel down to 8-9). By 1802, King reported 8,000 acres in grain, and by the end of 1803, that number increased to nearly 11,500 acres. King also began that year to begin keeping tabs on acreage in fallow (4235) and pasture (108,837), the latter of which shows clearly the expansion of pastoralism on the Cumberland Plain.⁵² In 1804, the colony was at last self-sufficient in grain, though a series of severe flooding in 1806-1809 reversed this nearly as soon as it was achieved. Meanwhile, throughout King's administration, pastoral expansion continued as thousands of acres at the foothills of the Blue Mountains, as well as coastal lands to the north (inland of Broken Bay) and south of Port Jackson (Botany Bay and Port Hacking). With the exception of a handful of large sheep runs, including John Macarthur's original 5000-acre merino run in the Cowpastures, most of this pastoral land was used to provide meat (cattle and sheep) for the convicts, garrison, and other residents. At first, King encouraged the diversification of the economic life of the colony, as long as the trader menace could be contained. He supported early settler initiatives to improve their flocks (code for the transition from hairy Cape sheep to woolled sheep). However, by the end of his term, the separation of arable production and stock rearing had become much more pronounced in this period, a separation that had become increasingly problematic as arable lands in the more closely settled regions of the colony became exhausted.

It was this quick expansion and soil exhaustion paired with the precarious nature of the frequently flooded Hawkesbury/Nepean farms that heralded in the period of agrarian reform beginning (disastrously) with the arrival of the agrarian patriot William Bligh in 1806 and continuing under Macquarie in the 1810s and early 1820s. The following sections, as well as

⁵² "Account of Livestock and Ground in Cultivation," 7 August 1803, HRNSW 5, 205

chapter five, will consider this period of reform in greater detail, but it is important to note the timing of both the sprawl and reform periods here, as it signals a substantial shift in political strategy in New South Wales. The sprawl period occurred in large part due to neglect on the part of the home government in England during the French Revolutionary Wars (1792-1802). Hunter and King were given the same official instructions in 1795 and 1800 as Phillip had been given in 1787, even though the colony had grown and diversified significantly in the first five years. The Home Office sent William Bligh to New South Wales in 1806 as the French Revolutionary Wars morphed (after a brief recess) into the Napoleonic Wars. The liberality that had reigned in the colony, particularly in regards to markets and land, was to be replaced with an iron-fisted authoritarianism.

Bligh's agrarian reforms sought to reorient the colony to its intended beginnings as a colony of smallhold farmers. He held fast to the self-sufficient small farmer ideal—that every man should intensively cultivate his 40 acres and raise a responsible amount of contained stock to keep the soil healthy and productive. His reforms were championed by arable farmers on the Hawkesbury/Nepean, and reviled by everyone else. By taking the Home Office's authoritarian strategy to the extreme, he found himself ousted, relatively quickly, from power in the so-called "Rum Rebellion" by the New South Wales Corps, namely Major George Johnston, who was himself the puppet of the officer turned settler, John Macarthur. It took the British government nearly two years to replace him, and they did so with another authoritarian reformer, though one with more common sense and social grace than Bligh. By this time the Home Office had passed on most of the responsibility for the colony to the office of the Secretary of State for War and the Colonies, its secretary, Robert Jenkinson, Lord Liverpool (formerly Hawkesbury), a member of the Board of Agriculture, responded to Bligh's overthrow by sending along Lachlan Macquarie,

an agriculturally-minded Scottish army commander (the first non-Naval governor) to get the colony back on track—namely back on the track of a closely-settled, tightly-controlled self-sufficient agricultural colony—while Britain continued to dance with Napoleon.

III. Encountering Australia's Erratic Landscape

“Every day furnishes some new discovery or species of intelligence that raises our opinion of the land, ‘tho our Canaan flows not with milk and honey.” Daniel Southwell, 1788⁵³

“I do not scruple to pronounce that in the whole world there is not a worse country than what we have yet seen of this...so very barren and forbidding that it may with truth be said here nature is reversed.” Maj. Robert Ross, 1788⁵⁴

“Though the Description given by the Gentlemen who first visited this Port was truly luxuriant and wore the air of Exaggeration, Yet they had by no means done its Beauties and Conveniences Justice... The Whole (in a Word) exhibits a Variety of Romantic Views, all thrown together into sweet Confusion by the Careless Hand of Nature.” George Worgan, 1788⁵⁵

“Beauty I have heard from some of my unletter'd Country Men is but skin deep, I am sure the remark holds good in New South Wales where all the Beauty is literally on the surface.” Elizabeth Macarthur, 1791⁵⁶

The first recorded responses of members of the First Fleet were by no means uniform, but all expressed to varying degrees the sting of thwarted expectations. As discussed in the previous chapter, the First Fleet was sent to New South Wales with flawed intelligence. The proposals for establishing the settlement relied upon the written accounts of Captain Cook and Sir Joseph Banks from the voyage of the *Endeavor* in 1770, as well as Banks' direct testimony to the Beauchamp Committee in Parliament in 1785. By all accounts, Botany Bay soils were extremely fertile, the “artless” indigenous inhabitants relatively small in number and untroubled by

⁵³ Daniel Southwell to Jane Southwell [mother], 27 May 1788, Southwell Papers, 1787-1790, British Library, Add. MS 16383, f. 15

⁵⁴ Ross to Nepean, 16 November 1788, HRNSW 1:2, 212.

⁵⁵ George Worgan to Richard Worgan [brother], 18 June 1788, First Fleet Journals and Correspondence, Safe 1/114 (MAV/FM4/67), f. 5.

⁵⁶ E. Macarthur to Kingdon, 7 March 1791, ML, A 2906 (CY 940)

Europeans, and the climate perfectly suited to every production of Europe, Africa, America, and Asia in its corresponding northern and southern latitudinal zones.⁵⁷ This is certainly not what the first (and subsequent) wave of settlers found when they landed after six or seven months at sea. Still, as other historians have noted, the portrayal of the environment of New South Wales as uniformly hostile and of the relationship between settlers and the land as unvaryingly antagonistic is inaccurate.⁵⁸ As confounding as this landscape could be, early settlers and officials were often genuinely curious about this new natural (and human) world and keen to mold it to their (and the Empire's) advantage.⁵⁹ This section outlines the native ecology and climate of New South Wales, early interactions and assessment of the Sydney environs, and the failures, successes, and adaptations of early farmers in this new landscape.

Soil

When considering the suitability or cultivation in a given area, there are three primary concerns: the properties of the soil itself, native vegetation, and climate. There are two primary types of soil in the Sydney Basin: sandstone and shale. Sandstone, the most common and least amenable to farming, forms the soils of the coast in addition to the highlands and plateaus of the

⁵⁷ "Endeavor Journal of Sir Joseph Banks, 1768-1771," Text transcribed in 1962 from the manuscript held at ML, <http://gutenberg.net.au/ebooks05/0501141h.html>. Accessed 13 May 2016; "Beauchamp Report," 9 May 1785, Journal of the House of Commons, vol. 40 (1784-5), 954-9; "Beauchamp Committee Minutes," NA, HO 7/1; "James Matra's Proposal for Establishing a Settlement in New South Wales," [August 1783] in HRNSW 1:2, 1-2. See also Alan Frost, *Dreams of a Pacific Empire: Sir George Young's Proposal for a Colonization of New South Wales (1784-5)*. (Syd.: Resolution Press, 1980); Glyndwr Williams, *Terra Australis to Australia / Frost, Alan,; 1943-* (Melbourne: Oxford University Press in association with the Australian Academy of the Humanities, 1988).

⁵⁸ Emma Christopher and Hamish Maxwell-Stewart, "Convict Transportation in Global Context," in Cambridge History of Australia, 89; Bonyhady, *The Colonial Earth*, 3-4; David Greasley, "Industrializing Australia's Natural Capital," in *The Cambridge Economic History of Australia, 150-1*; Karskens, *The Colony*, 233-79.

⁵⁹ See Bashford and Macintyre, *The Cambridge History of Australia*, 1-3; Gascoigne, *Enlightenment Origins of European Australia, 49-51* for discussion on how the eighteenth century Enlightenment shaped settler responses to the Australian landscape.

Great Escarpment (of which the Blue Mountains are a part). However, the Cumberland Plain, which creates an almost crescent shape between the Sydney and the coastal sandstones in the east and the Great Escarpment to the west, and the Hunter Valley to the northwest of Sydney, contain shale soils, which are, generally speaking, better soils for farming, depending on the level of humus (decomposed organic material) in the topsoil, and the composition of the soil (silty, clayey, loam, etc.).

This does not mean that crops cannot grow on sandstone soils or that all shale soils are fertile. Settlers were able to grow decent crops, for example at Farm Cove in Sydney and in various locations along the Parramatta River. The lands around Parramatta, which had high agricultural productivity in the early colonial period, were a mix of both sandstone and shale. Some shale soils were extremely shallow and littered with spade-breaking rocks or so dense with clay that they did not drain or breathe. In general, shale or sandstone, Australian soils have low organic-matter content, low water storage capacity, and are deficient (certainly when compared to European and American soils) in plant nutrients, namely phosphorous, sulfur, and nitrogen.⁶⁰ Nevertheless, in colonial New South Wales, both farming and grazing, tended to neatly follow the path of shale. In fact, as Karskens points out, the sandstone country of the Sydney Basin has endured to this day largely in the state that the Aboriginal people of the region had maintained it, and now make up the areas of the four beloved national parks (Royal, Blue Mountains, Ku-Ring-Gai, and Sydney Harbour).⁶¹

Vegetation

While it is easy to accuse Joseph Banks of gross misrepresentation of the environmental suitability for settlement on the coast of New South Wales (and many first settlers did just that),

⁶⁰ Flannery, "Low- and High-Energy Ecosystems," 49

⁶¹ Karskens, *The Colony*, 20-21

it is also vital to recognize the ease with which one could be deceived by the native bounty of the area. Surgeon John Worgan may have accused Cook and Banks of exaggeration (or worse), but Elizabeth Macarthur recognized early on that this exaggeration was actually built in to the Australian environment. Seeing the land “where it is in its native state... flourishing even to luxuriance, producing fine shrubs, trees, and flowers,” she could “scarcely believe” the near impossibility of getting a wheat plant to grow in Sydney.⁶² She was right. The biodiversity of Sydney is naturally deceitful. Nor did this shock of deceit necessarily diminish with time or by moving inland. Thirteen years later, hundreds of kilometers south of Sydney, George Harris declared the country to be “the most deceptive I ever saw... truly most delightfully covered with beautiful trees, shrubs, and flowers, and most parts of it is no soil whatever.”⁶³

As Tim Flannery writes, the Sydney Basin’s sandstone regions are “an extreme kind of land environment,” as its verifiably poor soils support one of the most biologically diverse plant populations on the planet. Yet plants in this diverse array have, over billions of years, adjusted to the poverty of the soil. Some became carnivorous, feasting on insects instead of the earth, and the rest learned to grow small in a process called scleromorphy. Scleromorphy occurs when a plant does not have access to enough nutrition to support a large number of cells in its leaves. Scleromorphic plants, like eucalypts and acacias, have short, rigid, thin leaves and are incredibly hard, yet none of those plants are actually nutritious enough to support a great diversity of animal or human life. The classic example of this is the koala, which, feeding on nutrient-poor eucalyptus, must eat almost ceaselessly in order to stay alive. The original human inhabitants of

⁶² Macarthur to Kingdon, 7 March 1791, Macarthur Papers, ML, A 2906 (CY 940).

⁶³ George Harris to Henry Harris, 11 November 1803, BL, Add MS 45156, f. 6

these sandstone countries found their labors were much more richly rewarded on the sea than on the soil and lived accordingly.⁶⁴

Yet the native vegetation, low-energy as it was, was often incredibly difficult to clear. There were very few natural meadows or unbroken grasslands between the Blue Mountains and the coast. The Cumberland Plain was a wooded plain. Eucalypts, acacias, and turpentines were generally small, but had wide and deep root systems. Some of the best soils supported the most robust forest communities, namely blue gum and aptly-named ironbark.⁶⁵ Trees were felled by axes and the stumps burned as low as possible, but rarely removed altogether. Contrary to the longstanding historical myth that the British intentionally sent the First Fleet with no ploughs and that John Macarthur was the first to use one in the mid-1790s, twelve ploughs were sent in to the new colony but were rarely used due to the difficulty in removing stumps.⁶⁶ This also meant that the best grazing lands on the Cumberland Plain, lightly-treed lowlands with grasses between the trees, were also the easiest lands to cultivate, a fact that would cause tensions beginning in the 1800s as private stock began to increase very quickly.

Climate

The courses and consequences of momentous floods and droughts form the foundation of the Aboriginal creation stories called Dreamtime or The Dreaming. The cultural memory of the advance of the sea at the end of the Ice Age as polar ice sheets melted and turned river valleys into estuaries and semi-arid grasslands into swamps drives the storylines of The Dreaming.⁶⁷

⁶⁴ Tim F. Flannery, *The Birth of Sydney* (New York: Grove Press, 2000), 5-6; Flannery, "Low- and High-Energy Ecosystems," 51-3.

⁶⁵ Karskens, *The Colony*, 23-25

⁶⁶ Frost, *Transfer of Plants*, 43.

⁶⁷ See Helen F. McKay et al., *Gadi Mirrabooka: Australian Aboriginal Tales from the Dreaming* (Libraries Unlimited, 2001), 4-12 for an overview.

However, the Dreaming also informs the response to the continuing flows and cycles of water and dust and directs the management of the “natural” world (in Aboriginal Law, the concept of wilderness does not exist).⁶⁸ The Dreaming brought a measure of acceptance and even predictability to years of flooding and drought, which early European settlers lacked. Today we know that Australia, more so than any other continent, lies in the crosshairs of the El Nino-Southern Oscillation (ENSO), an inter-annual phenomenon caused by the interaction between changing ocean temperatures and surface-level atmospheric pressure in the Pacific Ocean stretching from the west coast of South America to the convergence of the Indian and Pacific Oceans on the northern coast of Australia and the East Indies. The El Nino phase of ENSO warms the normally frigid waters off Peru and delivers heavy rains to the west coast of South America, but it cools the coastal waters of Australia, decreasing evaporation and cloud formation and causing long droughts on the mainland. Bushfires rage, dry winds erode the soil, and the landscape, even in the wetter semi-tropics, shrinks in the sun. Afterwards, winds reverse and the waters warm again, bringing Australia into the grip of La Nina, characterized by heavy rains, which cannot be absorbed by the parched ground or contained in diminished riverbeds quickly enough, leading to widespread and often dramatic flooding. The ENSO is highly variable both in terms of duration and severity. It lasts anywhere between two and eight years, and makes establishing a normative climate for any region difficult.⁶⁹

As Karskens writes, it is only recently that scientists came to understand that “Australia’s climate is not its own,” but at the end of the eighteenth century, the bipolar character of the

⁶⁸ Gammage, *The Biggest Estate on Earth*, 2. Aboriginal Law does not distinguish between nature and culture in the way that western law does.

⁶⁹ Flannery, “Low- and High-Energy Ecosystems,” 49-50

climate seemed unique in its unpredictable bounty and dearth.⁷⁰ She continues: “It was precisely this mutability—things not ebbing as they appeared, or changing mercurially from season to season or over a few years—which confronted and confounded the wave of colonizers who came from the sea in 1788.”⁷¹ Many observers viewed both intense weather events and irregular climate patterns to Providence, sometimes vengeful and sometimes benevolent. For example, Lt. Ralph Clarke and surgeon Arthur Bowes Smyth, attributed the series of damaging late summer lightning storms shortly after landing at Port Jackson to an angry God, who, in his desire to punish the drunken debauchery in the convict and marine camps, sent down bolts of electricity in storms that “beggar[ed] every description,” killing five sheep and a pig.⁷² Richard Atkin’s, a former officer who had sailed to Sydney to evade creditors and was immediately appointed as a magistrate in Parramatta, fastidiously kept a diary, which chiefly chronicled daily weather and crime. Though not a particularly pious man in his daily life, he was prone to wax poetic about the nature of Providence, particularly in relation to weather and crops: “The Almighty has been bountiful to us in giving us such fine refreshing showers, which will secure to us a good crop,” he wrote in February 1794 after weeks of “Excessive Hott” weather. Ten months later he wrote:

Heavy rain [continues]...without intermission, to [sic] much rain will be highly detrimental to the corn as it will grow beyond its proper Strength, shoot up spindling and of course will not have power to throw out the Cobs, but God Almighty knows what is best for us.

⁷⁰ Linden Ashcroft, Joëlle Gergis, and David John Karoly, “A Historical Climate Dataset for Southeastern Australia, 1788–1859,” *Geoscience Data Journal* 1, no. 2 (November 1, 2014): 158–78, doi:10.1002/gdj3.19.

⁷¹ *Ibid.*, 31. See also Karskens, “Early Colonial Presence,” 101.

⁷² Journal of Ralph Clark, 31 January 1788, Journal of Arthur Bowes Smith, 2 February 1788, excerpted in Flannery, *The Birth of Sydney*, 58–9, 61.

But, then, he postulated that perhaps it was man, not God, that had caused such a drastic shift from hot, dry weather in his first three years in the colony and this constant barrage of rain.

“Every year before this we had hot weather,” he wrote, “but the Seasons have changed, perhaps in consequence of the Country opening so fast.”⁷³ In the early nineteenth century, members of the colonial elite, Barron Field, Rev. Robert Knopwood, and William Charles Wentworth all speculated that clearance had caused temperatures to drop, making grass more vulnerable:

The coldness of the climate keeps pace with the progress of agriculture. In the more contiguous and cultivated districts, the natural grass becomes every year more affected by the influence of the frost.⁷⁴

It was not unusual for Europeans in this period to attribute climate changes to human influence, sometimes for the better (i.e. amelioration) and sometimes for the worse (i.e. desiccation).

Deforestation and bush clearance were most often seen as contributing to rainfall decline, not, as Atkins suggested, drastic increases, but there were other theories that saw clearance as contributing to cooler temperatures and longer winters, as Wentworth claimed, or milder and more predictable.⁷⁵ And while, as Fabien Locher and Jean-Baptiste Fressoz have argued, historians must be wary of denying the environmental awareness (including to climate changes)

⁷³ “The New South Wales Journal of Richard Atkins,” 1792-94, entries on 7 February 1794, 12 January, 12 February 1795, Transcript from manuscript copy at Macquarie University School of Law, http://www.law.mq.edu.au/research/colonial_case_law/nsw/other_features/music_letters_poetry/atkins_introduction/. Accessed July 31, 2016.

⁷⁴ Quoted in Bonyhady, *The Colonial Earth*, 162–3.

⁷⁵ For similar analyses of early modern climate amelioration and desiccation, see Fredrik Albritton Jonsson, “Climate Change and the Retreat of the Atlantic: The Cameralist Context of Pehr Kalm’s Voyage to North America, 1748–51,” *The William and Mary Quarterly* 72, no. 1 (January 1, 2015): 99–100, 118–9, doi:10.5309/willmaryquar.72.1.0099; Fredrik Albritton Jonsson, *Enlightenment's Frontier*, 69-81. Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge University Press, 1995), passim; Diana K. Davis, *Resurrecting the Granary of Rome: Environmental History and French Colonial Expansion in North Africa* (Ohio University Press, 2007), 73–8.

of past societies, the variability and unpredictable nature of the ENSO cycle, made it difficult for contemporary observers to theorize exactly how settlers were causing either excessively wet years or excessively dry ones. In fact, it would continue to present a unique challenge to farmers, agricultural departments, and colonial scientists throughout the nineteenth and twentieth centuries.⁷⁶

Table 3: ENSO-influenced Flood and Drought Years, 1788-1815 (Source: Fenby and Gergis (2013), Ashcroft et al. (2014))

Drought Years	Severe Floods
1790-93 1797-98	January 1795 and August 1795 March 1799 March 1800 March 1801
1802-03	October 1805 March 1806 and October 1806 May 1809 and August 1809
1809-11 1813-15	

Cycles of flooding and drought years made the progress of agriculture inconstant. Drought could bring grain production to a grinding halt and ravage grazing lands that colonists relied upon for their stock. Floods could drown crops and wash away harvests and stock, but it could also deposit nitrogen and phosphorous-rich silt on fields, bringing about miraculous recovery harvests and lush pastures. Fortunately, the First Fleet arrived at the end of the La Nina stage of the Southern Oscillation, with cooler temperatures and frequent (but not overwhelming) rains. The failure of the first grain crops at Farm Cove in 1788 was not weather-related, and the first

⁷⁶ Fabien Locher and Jean-Baptiste Fressoz, “Modernity’s Frail Climate: A Climate History of Environmental Reflexivity,” *Critical Inquiry* 38, no. 3 (2012): 581, doi:10.1086/664552; Beattie, O’Gorman, and Henry, *Climate, Science, and Colonization*, 67, 122–3, 129–30, 159, 167.

grain crops at Parramatta were planted in a climate not all that different from what the colonist had been led to expect by Banks. However, the droughts of El Nino visited the Sydney Basin from 1790 to 1793, by the end of which grain sown in the colony was yielding less than a third of what was expected.⁷⁷ This was followed by the first floods on the Hawkesbury and Nepean Rivers in both the summer (January) and winter (August) in 1795, which wielded destruction in the first instance and yielded abundance in the second.⁷⁸ Collaborative research between climate scientists and historians in the past few years has enabled historians to begin to understand how ENSO influenced settlement (See Table 3).⁷⁹

Native ecology aside, the alienation and cultivation of the lands of New South Wales was, first and foremost, made possible by the dismissal of aboriginal sovereignty and land use. This disregard began long before the First Fleet landed. The First Fleet came to New South Wales armed not just with steel swords and muskets but with a faith in the ordained triumph of European civilization over supposed savagery, and a distinctly Lockean assurance that rights to property were only enabled by the mixing of land and labor through its cultivation and improvement.⁸⁰ The “litmus test,” as Karskens argues, for Cook upon his initial “annexation” of New South Wales was oversimplified, but had a profound impact on the colony’s future: Were the Eora people sedentary? Did they cultivate the land? Did they build permanent structures? Did

⁷⁷ Phillip to Grenville 5 November 1791, HRNSW 1:2, 533, 539; Grose to Dundas, 10 May 1793, HRNSW 2, 29

⁷⁸ Paterson to Dundas, 16 September 1795, HRNSW 2, 320.

⁷⁹ Compiled from Claire Fenby and Joëlle Gergis, “Rainfall Variations in South-Eastern Australia Part 1: Consolidating Evidence from Pre-Instrumental Documentary Sources, 1788–1860,” *International Journal of Climatology* 33, no. 14 (November 30, 2013): 2956–72, p. 2961; Linden Ashcroft, Joëlle Gergis, and David John Karoly, “A Historical Climate Dataset for Southeastern Australia, 1788–1859,” *Geoscience Data Journal* 1, no. 2 (November 1, 2014): 158–78; Fenby et al., “The Usual Weather,” #.

⁸⁰ Karkens, “The Early Colonial Presence,” 106. See also, John Weaver, *The Great Land Rush and the Making of the Modern World* (Montreal: McGill University Press, 2003), 12.

they have complex political hierarchies? The myriad ways in which the aboriginals encountered in New South Wales had “mixed their labor, their spiritual beliefs, social structures and laws, their arts and industries so thoroughly with the land” was almost completely invisible to the newcomers in 1770 and 1788. This invisibility would endure for most of Australia’s colonial and postcolonial history as settlers penetrated the continent.⁸¹ For colonists, the landscape was empty. The devastation of disease (namely smallpox) and both sanctioned and unsanctioned violence in the first 25 years of settlement, nearly made it so in reality.⁸²

Despite the initial shock of the state of Botany Bay and the difficulty of clearing and cultivating the only slightly better soils of Farm Cove in the first year of settlement, reactions to and interactions with the landscape were not, as indicated earlier, wholly antagonistic. Phillip, while admitting himself very much let down by the descriptions of early explorers, was largely optimistic about the promise of this new land.⁸³ A few short months after landing, he was comfortable enough with the progress of the settlement to arrange an exploration party to survey the lands (and people) of his new colony. While the coast had plenty of small streams emptying into the harbor and was covered with healthy vegetation, Phillip quickly came to understand that the measure for fertility used in England was not wholly appropriate in this new place. The conventional wisdom supposed that the presence of large trees was an indicator of highly fertile soils—this had been Banks’ assumption as well—but Phillip found that the large gum trees on the edges of the harbor grew, it seemed, into solid rock. What soils could be found between or on top of the rocks was often too sandy or gravelly to support European crops. In reality, following the path of least resistance (in terms of clearance) on those lands that did not “support” as many

⁸¹ Karskens, *The Colony*, 34-6.

⁸² See Karskens, *The Colony*, 386-446

⁸³ Phillip to Sydney, 10 July 1788, HRNSW 1:2, 179

trees led to better soils. Phillip found them (and a river) on the gentle hills of Parramatta and quickly changed his tune about the prospects of the colony. Aside from the “violent sorts of thunder and lightening,”—the likes of which no European had ever experienced before—and bouts of “unsettled” weather, the climate and soils were so good that the country would, “I make no doubt, when the woods are cleared away, be as healthy as any in the world.”⁸⁴

While the soils were useable, particularly as the colony moved inland, they did not live up to the expectations typical of “virgin” soils. The first settlers of New South Wales might have been much better prepared to cultivate the land with the produce of Britain than their seventeenth century counterparts in North America, but the soil, even when tilled for the first time, gave a much more modest return for labor. For all the critiques of American indolence owing to the extraordinary fertility of virgin soils, it was clear that the first farmers would have appreciated a similar initial natural capital. Frustrations abounded in the early years over the “extreme poverty” of the soil. Chief Surgeon John White called the soil ungrateful and the country hateful, “as only to merit execration and curses.” Elizabeth Macarthur vowed the soil to be “the most wretched and totally unfit” she had ever encountered (though her own experience was as the daughter of a prosperous yeoman farmer on the rich loams and clays of North Devon). Captain William Hill claimed that the supposed “maiden” soil needed manure (which it could not have without more cattle and the means of containing them) immediately upon turning it up.⁸⁵ This was echoed nearly exactly in another letter home: the soil could not be made profitable unless a system of mixed husbandry was implemented. “Unless cattle can be procured sufficient to manure it,” he

⁸⁴ Phillip to Sydney, 15 May 1788, HRNSW 1:2, 123-24; 133-4; Phillip to Sydney, 9 July 1788, HRNSW 1:2, 150, 154.

⁸⁵ *Public Advertiser* (London), 31 December 1790, 4; Elizabeth Macarthur to Bridget Kingdon, 7 March 1791, Macarthur Papers, ML, A 2906 (CY 940); Hill to Samuel Wathen, 26 July 1790, HRNSW 1:2, 369-70.

wrote, the “maiden land” had no future.⁸⁶ In addition to the lack of manure, the dearth of cattle also meant, as one critic pointed out, that the work that should have been carried out quickly by cattle “must be carried on by men,” which was as degrading as it was unproductive.⁸⁷ Major Robert Ross sent a series of despairing reports to friends and government ministers in the first two years of settlement detailing what he considered to be the abject unsuitability of “this vile country” to host European agriculture. He accused Phillip and his secretary Lt. David Collins (and anyone else who had anything good to say about the landscape of New South Wales) of self-interested fabrication. How was this land to somehow support the “Empire of the East” when it couldn’t even support a simple wheat seed?⁸⁸ For Ross, the challenge that the soil presented to settlers was insurmountable: “It will be cheaper to feed the convicts on turtle and venison at the London Tavern than be at the expense of sending them here.”⁸⁹

Phillip and his officers often struggled to find ways to talk about these unfamiliar lands, even those with potential, and often reverted to direct, and perhaps misleading, comparisons to English lands. He compared the sandy soils of the harbor to the light sandy loams and chalk soils of the Sussex and Kent coasts, and while those areas were not as agriculturally productive as Norfolk or Hertfordshire, the comparison painted too rosy a picture. And while he doubted that the first settlers of New South Wales could manage it, even the barren and swampy sand-scape of Botany Bay might be reclaimed by improving farmers just as the Fens of East Anglia and marshes of Essex had been drained and put to the plough in England. When Phillip sent a surveyor to inspect the farms of the first free and emancipated settlers near Prospect Hill in

⁸⁶ Anonymous, “A Letter from Sydney,” 15 May 1792, *The Bee* (Edinburgh)

⁸⁷ Anonymous, “Letter from Sydney,” reprinted in *Western Country Magazine* [1792], HRNSW 2, 808.

⁸⁸ Ross to Nepean, 16 November 1788, HRNSW 1:2, 212

⁸⁹ Ross to Nepean, 10 July, 1788, HRNSW 1:2, 176

response to complaints of sterile soils, the surveyor David Burton came back with glowing reports on the soil quality, claiming that he found nothing but loam (the perfect mixture of sand, silt, and clay) and stringing together a series of affirming adjectives (ex: “excellent fine rich clammy light loam”) and comparisons to European soil. Burton claimed, and Phillip agreed, that it was “ignorance of agriculture” and “slovenly” and “dilatatory” cultivation which rendered the land unproductive, not the soil. But it was unclear just what “middling sort” or “excellent” or “bad” meant in this new land.

Another officer tried very hard to rationalize the new landscape in the same way that an improving farmer would have in England: its rental potential. Declaring the land at Parramatta and Toongabbie “equal to such as would be let at 15 shillings an acre within three miles of Lew[e]s, in Sussex” or 19 shillings in High Wycombe, Buckinghamshire, he nevertheless admitted that the scarcity of water (he wrote in the first severe drought year), want of cattle to fertilize the land, the distance to market, and the unsuitability of ploughs meant that the land was scarcely worth cultivating.⁹⁰ Far from decrying the alien nature of the land, he saw its failed potential in the terminology of agrarian systems in the Old World.

Likewise, far from emphasizing the landscape’s strangeness, Phillip contended that all it needed was a small wave of settlers (convict or free) with practical farming experience. The land was exploitable, but not by those accustomed only to urban life or life on the sea. “If fifty farmers were sent out,” he wrote, “they would do more in one year...than a thousand convicts.”⁹¹ He particularly needed agricultural superintendents for the convicts, so that he was not limited in the cultivation of one main piece of land, but could set up farms in various locations. In 1789, he

⁹⁰ Anonymous, “A Letter from Sydney,” 15 May 1792, *The Bee* (Edinburgh)

⁹¹ Phillip to Nepean 9 July 1788, HRNSW 1:2, 153.

had only one such man, Henry Dodd, who was in precarious health (and died shortly thereafter). In response, the Home Office in collaboration with Banks sent out two gardeners from Kew, James Smith and George Austin as “proper persons to instruct the convicts in the manner of tilling the land and to superintend their labour.” While Smith was assigned briefly to supervise the convicts at Rose Hill so that Dodd could begin a farm at Toongabbie to the northwest, he lasted less than four months. Smith and Austin were instructed by Banks to make themselves useful to the government if possible, but they were plant collectors, first and foremost. They joined the ill-fated crew of the *Guardian* to resupply the colony with stock and provisions, but did not, it is presumed, survive the wreck.⁹²

Even though the government was slow to send out any free settlers or superintendents who might speed the progress of improvement in the colony, the inhabitants of New South Wales, convict and free alike, adapted fairly quickly to the new soils and climate. In addition to the successes of the government farms first at Rose Hill and then Toongabbie, individual settlers began to farm on their own account on the flat lowlands of Parramatta and, beginning in 1793, on the Hawkesbury. Some, like John Macarthur, who, as a high-ranking officer in the NSW Corps had more convict labor at his disposal than the average emancipist or marine, began quickly turning a profit from his cultivated lands. In 1794 the Macarthurs had 250 acres cleared with 100 of it sown in grain and grass for hay), had built and filled small granaries for the use of their large household. They sold the remainder in Sydney for over £400, most of which was invested in fencing, stock, and in buildings on the land. Elizabeth MacArthur had completely changed her tune about the deceit of the land. With the produce of Europe now growing on her

⁹² Grenville to Phillip, 24 August 1789, HRNSW 1:2, 261-2; Colin Michael Finney, *To Sail Beyond the Sunset: Natural History in Australia, 1699-1829* (Rigby, 1984), 52–3.

hand, the beauty of it was no longer just skin deep; in fact, far from being worn down by the initial challenges in New South Wales, Elizabeth Macarthur declared herself and her children in love with their new “home” where “the necessaries of life are abundant, and a fruitful soil affords us many luxuries.”⁹³ Thomas Devaney, another NSW Corps officer, who would never have been able to be “a farmer in [his] own right” in his native Scotland, wrote home in 1794, that he had with his 100-acre grant, been able to put 1000 bushels of grain in storage for his own family and laborers and sold an additional 1500 bushels to government at 5s per bushel.⁹⁴

Throughout the period from 1795 to 1810, the agricultural setbacks—droughts, fires, floods, caterpillar plagues—were often countered by discoveries and recoveries that advanced agriculture in the colony. The colony was beset with severe droughts in the El Nino years from 1797 to 1798, in which strong winds snapped already dry grain crops and brought fire to the grasslands settlers relied on to graze the increasing number of cattle, swine, and sheep in the colony. When the heavy rains returned in 1799 and 1800, the crops and local pastures were consumed by drought-weary hordes of caterpillars. This happened again, along with a wheat rust and corn moth infestation, after the drought broke in 1805-6.⁹⁵ The Hawkesbury and Nepean Rivers flooded in 1799, 1800, and 1801 and destroyed many crops, but the silts deposited on its banks made for abundant harvests in the following years. This was repeated in 1806-7 and 1809. The destruction of pasturage around Parramatta led farmers and stock raisers to locate better pastures on the outer reaches of the Cumberland Plain, and, eventually, beyond the Blue Mountains. While sown pastures were a rarity in the colony, settlers began to introduce clover

⁹³ E. Macarthur to [unknown], 1 September, 1795, HRNSW 2, 508.

⁹⁴ Thomas Devaney to a friend at Wycombe, 1 July, 1794, reprinted in *Saunders' News-Letter*, 21 August 1795, HRNSW 2, 814.

⁹⁵ King to Camden, 10 January 1806, HRNSW 6, 38; Hunter to Portland, 10 June 1796, HRNSW 3, 219; Hunter to Portland, 1 May 1799, 665-667

and other artificial grasses in small spots in hopes that they would spread so that when the caterpillars came for the Kangaroo grass, there would be something left for their stock.⁹⁶ As soils became exhausted in the three main settlements (Sydney, Hawkesbury, Parramatta), new, sometimes better, soils were found. In the search for a new location for a government farm in 1798 a large seam of coal was found on the Hunter River in the southern hills of the Cumberland Plain, coal that was sold in the Cape in exchange for more cattle and sheep.⁹⁷

Clearing these new and marginally nutritive soils armed with only spades, axes, and shovels, was backbreaking and largely thankless labor, most of it done by unwilling convict laborers as a part of their rehabilitation on government farms or on the farms of officers. Pastures, on the other hand, came ready-made in this new landscape. Early settlers rarely had hostile responses to the natural grasslands of the Cumberland Plain. They delighted in the discovery of “meadows” on the Cumberland plain, those areas where trees grew sparse and the grass grew thick, even comparing it to the grand parks and estates of England.⁹⁸ Such places were obviously an advantage to arable farming as they made for easier clearance and an improved humus of turned in grasses, but they were also places where stock could be fattened and free hay could be collected with minimal labor involved. Cattle did well on these grasslands. The six English cows and bull that managed to survive the journey were lost by an inattentive soldier in 1788 only to be found a few years later on the aptly-named Cowpastures on the southern plain having grown robust and healthy on native forage and multiplied to nearly 60.

⁹⁶ Hunter to Portland, 10 June 1796, HRNSW 3, 219; Hunter to Portland, 1 May 1799, 665-667; Captain Waterhouse to Macarthur, 12 March 1804, HRNSW 5, 358-9. Waterhouse suggests that this had become a common practice among farmers and particularly sheep graziers, as sheep tended to snub Kangaroo grass as well.

⁹⁷ Hunter to Portland, 10 January 1798, HRNSW 3, 347

⁹⁸ E. Macarthur to [unknown], 1 September, 1795, HRNSW 2, 509

Sheep, which had more sensitive constitutions, were more susceptible to bloat and disease from “rank” grass, but thrived and propagated quickly despite this. Ironically, the government stock intended to be distributed to settlers so that they could practice mixed husbandry on their lands was completely reliant on these native pastures. As cattle and sheep became more easily acquired (unlike in the early days), more and more settlers of all ranks were able to tap into this natural capital, which would, in time, drive many of them away from arable farming.

The Australia encountered in these early years was not a barren landscape. Its alien-ness was not insurmountable. When conditions were favorable and seeds were sown in good soils, European production, including sown grasses, flourished. The native grasslands supported hundreds, then thousands, then hundreds of thousands of domesticated animals. Yet soils were quickly depleted, sometimes immediately, and grain production was always somewhat precarious. This was due not to the intractable poverty of the soil or even extreme climatic variability, but to the inability of colonial farmers to merge stock production with arable cultivation despite the best efforts of its planners and early leaders to encourage it. Nutrient-rich feces deposited on the natural pastures of New South Wales contributed nothing to the farmers on the Cumberland Plain. While the Cumberland Plain had decent shale soils infinitely better suited to arable culture than the sandstone soils of the coast, they could not support agriculture indefinitely without long fallowing periods or manure inputs. Without the capture of those nutrients, agricultural settlement could never be “settled.” Farmers would always be at the expense of clearing new land, leaving little room or motivation for improvements. This disconnect between the ideal improvement of this new land based in the British practices and plants of mixed husbandry and the demographic and environmental realities on the ground in the

new colony frustrated the home government and would shape the way land, people, and markets were controlled in the first few decades of settlement.

IV. Harrowing Husbandry: New South Wales's Public Relations Problem

The political challenges to establishing and sustaining a settlement of improved mixed farms were just as consequential as soil quality, scarcity or overabundance of water, or climate. In theory, many of these challenges could be overcome by government intervention, but, in practice, imposing this particular agrarian order over the people of this new colony was much more difficult than getting English wheat to grow in the fickle soils and climate of New South Wales. This section outlines many of these political challenges, particularly those demographic and market forces that characterized the sprawl period prior to the reforming governments of Bligh and Macquarie, as well as how those challenges were communicated (or miscommunicated) to public officials in England.

Generally-speaking, the convict and former convict population of New South Wales was much less resistant to the implementation of the original agrarian vision for the colony. The coercive nature of their "migration" and their forced labor certainly makes the establishment of this colony different from, for instance, the settlement of British North America or the Eastern Cape. However, this did not necessarily make convicts bad settlers, nor did it make them more dependent on government after their emancipation. From the colony's inception, forced labor was never intended to be more than temporary. While planners advocated a tighter social control over the new society than they would have over free settlers, the end goal was to turn these convicts into productive farmers with personal stakes in the lands they occupied. On the whole, when compared to the early free and military settlers of the colony, ex-convicts made much

better farmers. Beginning in 1796, it was ex-convict farmers who were feeding the majority of the colony's inhabitants from their 30 to 50 acre farms on the Hawkesbury and Nepean Rivers.⁹⁹

Despite that, there was, certainly in the first few years of settlement, a general disinclination among many ex-convicts to farm if other opportunities were available. Work on the big government farms or clearing gangs may have given convicts important agricultural skills, but they were also sites of social interaction and predictability that many ex-convicts were loath to relinquish for the relatively lonely lives of farmers. The most successful convict farmers on the Hawkesbury settled those lands in large groups or parties, but because the river was the lifeline of agricultural production in that region, farms tended to spread out in a linear fashion, not around a town center.¹⁰⁰ Later, Macquarie would establish townships at several points in this riverine region, but in the beginning, concentrated farming communities were slow to materialize.¹⁰¹ Many ex-convicts preferred to sell their labor in the towns of Sydney and Parramatta rather than to toil on isolated farms with uncertain results. Some became agents for officers, some took work on passing ships and left the colony, some became bush rangers, some became merchants in their own right.¹⁰²

This disinclination to farm was not, however, unique to convicts. Despite proportionally greater indulgences of land, convict labor, and stock, most free men in the colony (with a few notable exceptions) opted out of becoming yeoman farmers or even landlords, preferring instead to use their privilege to build up commercial operations in the shabby new metropole or to invest

⁹⁹ Grace Karskens, "Floods and Flood-Mindedness in Early Colonial Australia," *Environmental History* 21, no. 2 (April 1, 2016): 315–18, doi:10.1093/envhis/emv186; Fletcher, *Landed Enterprise and Penal Society*, 53–82.

¹⁰⁰ Jan Barkley-Jack, *Hawkesbury Settlement Revealed: A New Look at Australia's Third Mainland Settlement, 1793-1802* (Rosenberg Publishing, 2009), 38–41, 58–62.

¹⁰¹ D. G. Bowd, *Macquarie Country: A History of the Hawkesbury* (D. G. Bowd, 1973), 41–42.

¹⁰² Karskens, *The Colony*, 2, 11.

almost exclusively in stock which could be used to supply lucrative government meat contracts. Sydney drew men and women from the farming life well before the pastoral opportunities in the interior did. By the time Phillip depart the colony in 1792, a commercial shantytown was well established in Sydney Cove. There a new merchant class made up of current and former NSW Corp officers and their convict and ex-convict agents had begun to thrive.¹⁰³ These individuals—sometimes licitly but more often illicitly—supplied the colony with imported goods: liquor (by far the most important), foodstuffs, hardwoods, whale oil, cloth, manufactures, weapons, etc.) at grossly inflated prices to a captive market of settlers who had no choice but to pay them. As a consequence, many emancipated convicts and free settlers on small grants found that the payoff for the backbreaking work of clearing and cultivating land—even good land—could not afford a high enough return to pay for those goods.¹⁰⁴

Another factor was the almost immediate and persistent resistance on the part of free settlers, marines, and corpsmen to the authoritarian control of land and markets. The officer cum merchant class had political and economic power well out of proportion to their numbers. As a volunteer regiment brought in in 1790 to replace Phillip's Marines, the New South Wales Corpsmen expected and demanded preferential treatment as a reward for their relocation. They did not want to be told how to spend their wages or use their lands. The officers lobbied hard in the beginning for the right to receive land grants, but very few wanted to actually be farmers. They wanted to be landlords. They wanted land agents and cheap laborers, servants for their homes, and rents to fund business ventures in the new port town. Beginning in the early 1790s, conflicts centered around market policy, namely the right to import goods for resale. In the next

¹⁰³ Ibid., 65–8; Janette Holcomb, *Early Merchant Families of Sydney: Speculation and Risk Management on the Fringes of Empire* (Anthem Press, 2014), 10–14.

¹⁰⁴ “Settlers Appeal to the Home Government,” 1 February 1800, HRNSW 4: 25-26

two decades, as free settlers, many of them current or former officers, began to acquire and consolidate grazing lands, these conflicts coalesced around land policy. Unlike the governors and officers in the civic establishment, the officers were rarely concerned with grain independence or social order.¹⁰⁵ The New South Wales Corps was persistently at odds with the civil administration, and corpsmen bombarded the preoccupied Home and Colonial Office with a constant stream of grievances against the governors and the licentiousness of the convicts (to which they actively contributed), causing a high rate of turnover in the colony's governorship.¹⁰⁶ They were, however, highly attuned to the desires and needs of the new colonial population, convict and free, and, when faced with the environmental and demographic conditions of the new colony, had a flexibility and adaptability that the colonial government often lacked. For example, they recognized early on that a convict or ex-convict laborer would work much harder for a pint of rum than a promissory note or sack of grain, and they saw the possibility for specialization in stock/wool well before government entertained the idea. This tension between the military and civil administration and between the free and unfree population was at the heart of challenges to agriculture.

Throughout the 1790s and 1800s, New South Wales had a serious public relations problem in England. The reports home about initial agricultural failures and the threat of starvation became imprinted on the minds of British public officials and the public at large, even when, by all current accounts in the early 1790s, agriculture was progressing steadily in the colony, particularly in the Parramatta and Hawkesbury River valleys. Throughout this early period, there was little to indicate to the British government or public that the colony was

¹⁰⁵ Raby, *Making Rural Australia*, 40–43. Karskens, “Early Colonial Period,” 96, 105;

¹⁰⁶ John Bradley Hirst, *Freedom on the Fatal Shore: Australia's First Colony* (Black Inc., 2008), 30–34, 77–94.

anything but a burden. They might have at least partially solved the problem of overcrowded hulk prisons, but had earned a new problem: an expensive, economically and socially unstable, overly-dependent colony seven months away. The distance was keenly felt by both the colonial and home governments. There was at least a year's lag between a government dispatch or settler/officer grievance letter and the receipt of any kind of response. With every dispassionate formal dispatch from the Governor to the Home Office, hundreds of very passionate private letters were sent home as well. They were reprinted in newspapers across the country. A public narrative of the colony's progress, particularly its agricultural non-progress, was created that compounded the Home Officer's frustration the constant barrage of Treasury bills. Leaving aside tales of moral degeneration and vice, these narratives revolved around dark themes: hunger, spiraling costs, and incompetent farming.

Hunger

While the fear of starvation (should the crop fail or the provisions from the Cape or Bengal not arrive) was certainly present in the first few years of the colony, there is no evidence that anyone under the direct care of government starved to death in New South Wales.¹⁰⁷ The established ration for the First Fleet regardless of station was set at around 1-1.5 pounds of meat (depending on whether salt or fresh), 6 oz. of butter, two pints of peas (more if the meat ration was reduced), and a pound of flour or bread/biscuit per day. Convicts and marines were also given allotments for vegetable gardens to supplement this diet (particularly for antiscorbutic greens and cabbages). Women received two thirds of this and children half. The full ration amounted to between 3900 and 4900 calories per day, which was much higher than the typical

¹⁰⁷ The great mortalities related to nutrition occurred not in the colony but on the privately contracted Second Fleet.

intake of the British working class at the time.¹⁰⁸ Between December 1789 and 1792, rations fluctuated between two-thirds and three-fourths in New South Wales. In January 1790, before the arrival of the disastrous Second Fleet (and provisions), Phillip cut rations down to two thirds, and due to the loss of the *Sirius*, the rations at Norfolk Island had to be cut in half in April, though they returned to two thirds in June. Continued drought and the arrival of the new convict convoys meant that the ration stayed reduced for another two years. Nearly a fourth of Second Fleet convicts died of malnutrition and disease on the journey and in the weeks following their arrival, but the reports of mass starvation in Sydney were extremely hyperbolic. Even on Norfolk Island when rations were cut in half, convicts were not expected to work more than a two or three hours a day and were able to supplement their diets significantly with the “Bird of Providence” or Mount Pitt bird, a large petrel quickly hunted to extinction.¹⁰⁹

Despite this, the colony became synonymous with hunger in the early 1790s. This was largely due to the steady barrage of complaints on the part of disgruntled military officers, indignant at being given the same ration as the convicts and at being denied, at least initially, the opportunity to possess land. Panicked letters were sent from reputable sources at key moments conveying the fear of abandonment and starvation. The Chief Surgeon wrote a furious missive as the colony waited desperately for supplies in April of 1790, warning that soon “the game will be up.” “What, in the name of Heaven, has the Ministry been about?” he asked, demanding that they withdraw the settlement (“at least such as are living”).¹¹⁰ Phillip himself warned the Home Office with increasing frustration, especially after the arrival the sick and half-starved Second

¹⁰⁸ Phillip to Sydney, 5 July 1788, HRNSW 1:2, 143; Meredith and Oxley, “The Convict Economy,” 109.

¹⁰⁹ Phillip to Sydney, 12 Feb 1790, 11 April 1790, 19 July 1790, HRNSW 1:2, 299, 326, 364; Phillip to Grenville, 20 June 1790, HRNSW 1:2, 352

¹¹⁰ *Public Advertiser* (London), 31 December 1790, 4

Fleet, of the every present threat of crop failure and shipwreck, the consequences of which would be deadly.¹¹¹ For every dispatch from Phillip, Grose, and Hunter describing luxuriant crops and abundant harvests, there was the “unwelcome intelligence” of crop failures due to flood, drought, fire, or caterpillar.¹¹² Regardless of the actual amount of grain in the public stores, the unpredictability of crops was a source of alarm and anxiety.

Sensational stories of starvation and misery flooded the newspapers of Britain and Ireland. This was particularly true after the initial reports (official and private) came through of the disastrous circumstances of the Second Fleet where hundreds did die of starvation in appalling conditions, yet descriptions of famine, starvation, and misery kept coming throughout the 1790s. On a regular basis, stories about men and women choosing death sentences over transportation cropped up in the press. A group of escapees found a voice in *The Dublin Chronicle*, where they reported that the soils only yielded half of what was sown, the stock were routinely killed by vicious natives, and convicts were allowed only 2 ounces each of salt beef and flour a day. The escapees “took the first opportunity of throwing themselves upon the mercy of the sea, rather than perish upon this inhospitable shore.”¹¹³ One female convict’s letter republished in the *Public Advertiser* claimed that in her short stay almost 1500 convicts (or about half the total convict population of NSW at the time), many of them women and children, had perished of starvation and disease.¹¹⁴ For two shillings, one could buy George Thompson’s *Account of the Miseries and Starvation at Botany Bay*.¹¹⁵ While such accounts might gratify law enforcement, magistrates and judges who hoped that transportation would be as effective as

¹¹¹ Phillip to Nepean, 10 July 1790, 355-6

¹¹² Grose to Dundas, 30 May 1793, HRNSW 2, 39.

¹¹³ “Escapees from Port Jackson,” 21 July 1792, *Dublin Chronicle*

¹¹⁴ “Letter from a Female Convict,” 14 June 1793, *Public Advertiser* (London)

¹¹⁵ *Morning Post* (London), 3 March 1794.

death in deterring crime, they raised serious doubts about the ability of settlers to support themselves on the land and the wisdom of government continuing to fund it. It certainly did little to aid in the recruitment of free settlers. Even one of the more successful free farmers in the mid-1790s, John Harris, had to field the public consensus, via his fretful mother, that New South Wales was, without exception, the Fatal Shore: “Delay no time to come off out of that Dreadful Place for I know it will prove Fatal to you!”¹¹⁶

Costs

Self-sufficiency in grain was a political ideal, but it was also an important part of the long-term economic plan for the colony. Home Office Undersecretary Evan Nepean had calculated the cost of transporting and maintaining a convict for the first two years in the colony at a little over £48 per convict, which was far greater than the £28 it took to keep a convict on a hulk. The yearly cost of maintaining the settlement was to be £19,000 per year for the first three years, and then drop to £7000 when provisioning was no longer needed, which put the per convict rate at closer to £23 per head. In reality, however, the expense of the colony in February of 1790 after a full three years had been £153,544, or £62 per convict, well over double what it would have cost to keep them on hulks.¹¹⁷ The majority of that expenditure had been on provisions. If the cost of transportation and maintenance of convicts was to be brought down to a sustainable level, the colony had to provide for its own grain and meat. The Home Office was under no illusion that the establishment of the colony would be cheap, but as costs soared and then remained high, cutting expenses became imperative. The colony had been planned and established at a time of peace, but its foundational years occurred during the course of a war the likes of which Britain had never seen before.

¹¹⁶ Ann Harris to John Harris, 7 June 1793, Harris Family Papers, ML, DOC 2452, f. 2

¹¹⁷ Frost, *The First Fleet*, 181-197

The new Home Secretary Lord Grenville had accepted in 1790 that the colony would need recourse to India, coming to an agreement with Lord Cornwallis, the Governor General of Bengal which would allow the EIC to supply flour, rice, pulse, ghee (butter), livestock and spirits to the colony. The price for grain per bushel was nearly double the 5 shillings offered to colonial producers, but significantly cheaper than sending grain from Britain (which, in any case, had little to spare). Intended as a one-time measure, provisions had to be purchased in Bengal and Batavia every year between 1791 and 1796 at the cost of £101,290, nearly what the initial startup cost for the colony had been.¹¹⁸ Why had the colony been unable to provide for itself? The Home Office, under Sydney, Grenville, and then Dundas figured it had done its part by paying the bill for transportation and agricultural provisions and implements, and by giving its governors strict instruction (and almost unlimited authority) to direct convicts and settlers to cultivation. In the 1790s, the focus began to shift to the nature of colonial husbandry itself.

Bad Husbandry

Despite the influence that critiques of American husbandry had in the planning of New South Wales, the new colony immediately became the subject of similar critiques. How could an agricultural colony spearheaded with such care and attention have such bad practices? How could the virgin soils yield so little and become exhausted so quickly? Why were there no fences? How could there be no artificial grass? How had the hundreds of pounds spent on fodder crops of every possible variety come to nothing? Many accounts, including those of officers who put in a few years and left, often used the impossible yardstick of British improvement—enclosure, crop rotation, scientific breeding, multiple ploughings and harrowings, etc.—to measure the farms and farmers of the colony, but colonial governors would have been happy to

¹¹⁸ Grenville to Cornwallis, 6 Sept 1790, HRNSW 2, 403; “Account shewing...Provisions,” 31 August 1796, HRNSW 3, 94

see even small steps towards this kind of improvement—the capture of manure, for instance, or the production of artificial hay. Nevertheless, the reputation of colonial husbandry in New South Wales as “bad” originated not just from outside observers keen to demonstrate the superiority of English farming, but through colonial leadership.

Phillip may have believed in the project of reorienting criminals to wholesome rural pursuits, but he also constantly remarked on the prevailing ignorance of the basic tenets of agriculture (improved or otherwise): how to break up the soil, how deep to sow different sorts of seed, how to recognize and eradicate weeds, etc. There were not enough agricultural superintendents to oversee operations or educate those convicts nearing emancipation so that they could take full advantage of their grants. On both government and private farms, convict clearing gangs could scarcely keep up with the rate of soil exhaustion. Phillip, and Hunter after him, constantly wrote home for government to send convicts and free men who had been brought up in agriculture, only to be doubly frustrated when the Home Office answered by sending plant collectors or poor free settlers with large families. These early free settlers, including several groups of Non-Conformists, had obtained passages and promises of land by simply claiming to know something of agriculture, but showed up in Sydney Cove having spent every last penny on the voyage and becoming just as dependent on government as the convicts.

The colony was, in the view of many at home, all potential and no follow through. A year after settlement, a Mr. Walter Raleigh (assumed to be a *nom de plume*), who had obviously never been to New South Wales, wrote to the Home Office under-secretary, Evan Nepean, offering his agricultural expertise (“the first effusions of a series of economical remarks of the subject”) to the faltering colony. He claimed that Britain’s new Empire of the South would be much superior to the lost western empire, that it had enjoyed the careful agricultural planning of Britain’s

premier scientific mind (Banks), and would be “in every respect successful” if only settlers would “ameliorate the soil” with green crops (legumes and turnips), and fence in and sow the whole of sandy Port Jackson in “clover, rye grass, lucerne, or any other European grass” until such a time as it had become suitable for grain crops.¹¹⁹ Would-be settlers and leaders of settler parties petitioned the government to be provided free passages and a variety of indulgences so that they could go out to New South Wales and show by example that improvement would be just as effective in the colony as it was in England. Occasionally such promises came from settlers with some experience in colonial farming, as it did with former West Indian planter, Charles White, or the escaped convict-turned-NSW Corpsman, Samuel Broome (alias John Butcher). In one of the more improbable stories of the settlement Broome had escaped the colony along with ten others in 1791 on a stolen cutter to Timor, and in 1793 enlisted with the NSW Corps under the name Butcher. Broome had the pluck to write directly to Henry Dundas, the new Home Secretary to criticize the “ignorant” cultivation of New South Wales and beg to be given special indulgences for “having been brought up in the thorough knowledge of all kinds of land, and capable of bringing indifferent lands to perfection...to make that land more fertile than it has ever appeared to be.”¹²⁰

Even when harvests were abundant and land rapidly being improved, the industry and practices of colonial farmers was still called in to question. Lt. David Collins, the colony’s first Colonial Secretary and Phillip’s devoted right hand man, returned to England in 1796 to pen the widely read two-part *Account of the English Colony of New South Wales*. In it he expressed his disapproval at the lack of a “spirit of improvement” among the successful Hawkesbury farmers,

¹¹⁹ W. Raleigh to Nepean, 23 May 1798, HRNSW 1:2, 233-4.

¹²⁰ John Butcher to Dundas, 23 January 1793, HRNSW 2, 4.

who expended very little energy, he thought, on their good soils, the bounty of which enabled them to drink, gamble, fornicate, and fight at their leisure. They had, he thought, squandered the opportunity for economic and moral advancement that Phillip had so liberally extended to them.¹²¹ George Caley, Banks's official collector in the colony, was a particularly vocal critic of Emancipist farmers in general. Writing in 1803 after some of the best harvests the region had seen in the ten years of its settlement, Caley declared that agriculture was conducted "upon a Bad Principle." Cattle increased quickly in the colony and, in theory, farmers could get grants of government stock, but none had built fences to contain them, which made the cattle useless for arable cultivation. None bothered to cultivate hay of any kind even though the cattle grew thin and sickly in winter or when nearby pastures became overgrazed. The colony was reliant on farmers who did little more than "break up the ground with a hoe and throw in the wheat." On the Hawkesbury farmers then harvested their weed-infested wheat and immediately sowed the stubble with maize, and wondered why their lands were, in years with no flooding, worn out.¹²² Soil exhaustion on private and public farms was inexplicable to outside observers given how well cattle, sheep, and swine did in the new colony.

By 1804, the colony had finally achieved self-sufficiency in grain, despite all the environmental and political challenges, but it could not maintain it for long. A large influx of new convicts, a bad drought, or a devastating flood could (and did) reverse this achievement at several points over the next ten years. Additionally, the lack of oversight of the economic and political affairs of Sydney in the 1790s began to have troubling repercussions for agricultural development. Having bored somewhat of the tales of misery and starvation by the end of the

¹²¹ Karskens, "The Early Colonial Presence," 97.

¹²² Caley to Banks, [May 1803], ML, Banks Correspondence, Series 18, f. 43

1790s, British officials and the British public began to hear more and more about the problem that, according to both Hunter, King, and, later, Bligh, impeded agricultural progress in the colony more than poor soils, drought, flood, or agricultural incompetence: the tyranny of the merchant class in the now bustling port of Sydney. The Parramatta and Hawkesbury/Nepean settlers, who had supplied most of the colony's grain since 1795, were going broke, and they wrote home to explain how and why. The exorbitant cost of imported consumer goods (particularly rum) and the subsequent high cost of laborers (who demanded payment in rum), paired with the fixed price of grain, meant that the cost of production often exceeded the return for their crops.¹²³ Those smallhold farmers that were supposed to have been the backbone of the new society were instead at the greatest economic disadvantage in it. Most of the bad press in Britain in the 1800s concerned the corruption and vice that the Rum Barons of Sydney had enabled, but the economic cost of the stagnation of colonial agriculture was foremost in the minds of public officials.

V. Land Policy, Experiments, and Markets: Authoritarian Agrarianism before Macquarie

Paradoxically, all of the bad press relating to the failed agrarian vision for the colony caused officials both in the colony and at home to work even harder orient the colony towards mixed farming. The previous sections outlined many of the environmental and political challenges to arable farming; this section examines the more or less continual efforts of every civil administration in New South Wales to make mixed husbandry work in the face of those challenges. Government, both in Britain and in the colony, saw abundant, high quality land as the precondition for the emergence of a self-sustaining, closely-settled, and orderly agrarian

¹²³ "Petition of the Settlers...County of Cumberland," 1 February 1800, HRNSW 4, 25-26

society in New South Wales. Wholesome and profitable country life could reform convicts who were seen to have “gone bad” in the urbanscapes of Britain (often, it was thought, because they had been pushed out of agricultural labor by the consolidation of lands and capital in rural Britain). Historians disagree about the long-term goals of the colony in relation to the rest of empire, but generally agree that the colony itself was intended to be settled closely on a small-hold, mixed farming model. While large government farms would be necessary at first, this was not to be a plantation economy where convicts and wage laborers made a few men rich. It was also not to be a settlement where individuals would, by necessity or desire, move steadily west from new farm to new farm. Both of these forms of settlement had caused major problems in North America. While colonial administrations differed significantly from one another about what political form mixed farming should take—convict peasantry with government as landlord (Phillip), improving tenant farmers (officers) with convict laborers with government as landlord (Grose), independent yeomanry (King, Bligh, and Macquarie)—it was sustainable settled farming, not commercial or itinerant enterprises, that promoted the proper forms of industry and sociability the British government wanted. This is evidenced by the great lengths to which the Home government went to put its best agricultural foot forward, biologically-speaking, with its Fleets of Fodder. And while it is true that New South Wales offered opportunities for land ownership that would have been impossible at home for many of its first settlers, convict and non-convict, the colonists themselves saw land *not* as a way of forming stable, morally-upright communities, but as a resource that would allow them to participate in urban markets.¹²⁴

¹²⁴ For discussion on the urbanization of Sydney see Lionel Frost, “Urbanization” in *Cambridge Economic History of Australia*, 234-5

This early period between 1788 and 1820 was characterized by a variety of authoritarian controls of people, land, and markets and authoritarian agricultural experiments aimed at bringing the colony closer to its ordained agrarian form. Here I focus on four elements of this authoritarian agrarianism: land policy, practices of improvement, experimentation, and market control. As Bayly argues, the early history of New South Wales provides an example of “imperial despotism in miniature.”¹²⁵ I examine how agrarian patriotism became wedded to this imperial despotism to shape and then reform agricultural settlement in the colony.

Land Policy

“Land was the lynchpin of the scheme” to create a subsistence agricultural colony that would turn felons into farmers.¹²⁶ Land policy initially revolved almost exclusively around emancipated male convicts, who, once free, would be entitled to 30 acres of land (more if they had a wife—ideally also convict—and children, start up seeds and tools, and two years of rations. Instructions specifically called for long lots, such as were found in British North America on the St. Lawrence, Hudson, and Ottawa Rivers and early French settlements on the Mississippi, to be plotted and townships established, which “experience” suggested was advantageous to the “civil concerns” of settlers (and government).¹²⁷ They would be freeholders, owing nothing but a nominal quitrent to the Crown. The land would support them, anchor them to the new colony, and bind them to a new society. These farmers would provide first for themselves and their households, then for local and/or government markets. With the profits from their surplus produce, they would invest in improvements in their properties and purchase consumer goods from Britain. While it was conceivable that the colony might at some point

¹²⁵ Bayly, 207

¹²⁶ Karskens, “The Early Colonial Presence,” 91

¹²⁷ Grenville to Phillip, 20 August 1789, *HRNSW* 1:2, 252.

diversify its produce and establish an export market, commercial spaces were not part of the original plan, and would, it was assumed, develop organically after agriculture was thriving and secure. At the beginning, shipping and trade was explicitly banned, and no instructions were given for urban development at all.¹²⁸

At the end of Phillip's administration, it was felt both within the Home Office and in the colony, that the time had come to start shifting away from government farming in order to get back on the track of the original plan of convict settlements of small, close farms. Initially, land grants were to be denied to all commissioned officers, but even when this officially changed grants were intentionally kept small. The prescribed long lots were often used on the Hawkesbury, Nepean, and, later, Hunter River settlements (see Fig. 3), but on the Parramatta, constellations of both uniform gridiron plots and more varied metes and bounds surveys existed side by side (see Fig. 4). In these areas, access to the river was less imperative as roads and public landings offered easier access to Sydney and the Parramatta township. At the end of the 1790s, few granted farms were larger than 100 acres, and most were 25, 30, and 50 acre plots (Fig. 5) Most of these grants were farmed individually, though it became fairly common to see joint-stock operations on outlying lands, like those settlers, mostly convict, on the Hawkesbury (Mulgrave Place), who could pool resources and labor on larger tracts of land.

¹²⁸ Ibid. This was largely due to the fear of convict escape and the EIC monopoly over trade in the region.

Figure 5: Augustus Alt's Plan of the First Farms on the Hawkesbury River, 1794 (Source: Historical Records of New South Wales, vol. 2)

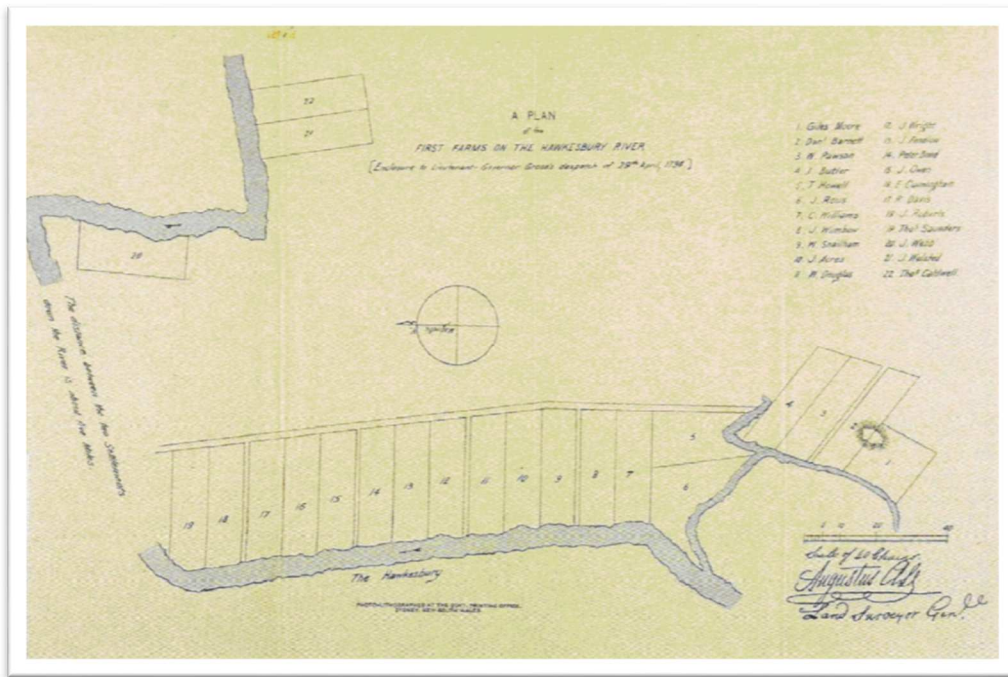


Figure 6: Enlargements of Charles Grimes's "Plan of the Settlements in New South Wales," 1796, (left) Lower Parramatta survey, (right) Rose Hill/Parramatta, Toongabbie, and Prospect Hill. (Source: Historical Records of New South Wales, vol. 3)

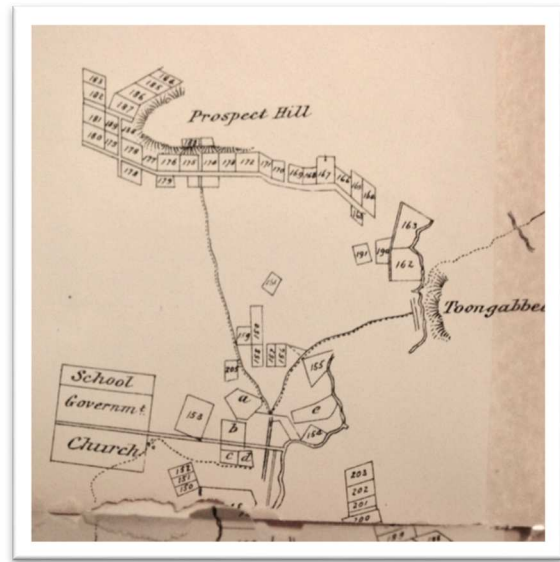
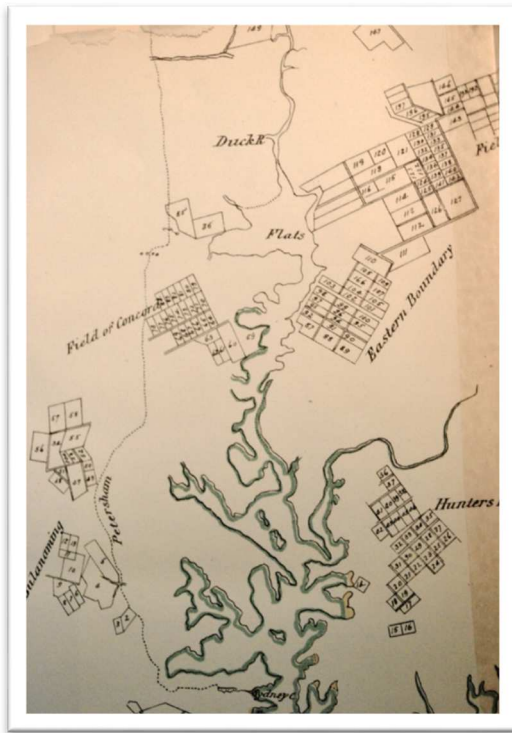


Figure 7: Grantees and Acreage Held, 1796 (Source: Historical Records of New South Wales, vol. 3)

While encouraging the shift from public farming to private farming, Home Secretary Dundas was well aware of the social pitfalls of this system. It was feared that without direct oversight, convicts would not use their lands properly and/or sell them immediately for a few gallons of rum or, worse, a passage back to England, and officers, particularly those of the NSW Corps who already had a reputation for unruliness and racketeering, would become absentee landlords. To prevent this, in 1792, Dundas ordered the first five-year cultivation and residential clauses to be added to all land grants to essentially force improvement on would-be settlers. These were not, of course, as detailed and imposing as the so-called improving leases of Dundas's native Scotland, but they were a source of dissatisfaction among the officer class, who thought that freehold grants should be, at least for them, completely free. Dundas, however,

defended these “restrictions” as the only way that the Crown could be assured that expense incurred in assisting in cultivation would result in securing “a real and bona fide settler,” and reminded the interim governor, Francis Grose, that land grants were indulgences *not* rights.¹²⁹ While officers were very frequently able to ignore these clauses with impunity, Hunter, upon taking up his command in 1795, reported that smallhold farming, particularly among convicts (and decidedly not among the handful of free settlers the Home Office had seen fit to burden the colony with), was going remarkably well despite environmental setbacks: “They are self interested in what is their own property,” he wrote, “and it certainly succeeds better with them than in the hands of Government.” In fact, if government farms—almost all of which were completely exhausted by 1795—were allowed to produce enough food for all the convicts sent out, private farming would come to a complete halt.¹³⁰

Before 1820, settlement was officially limited to the Cumberland Plain, not just because that it was on its riverine flats that the best shale soils could be found, but because extension beyond that was politically undesirable for a variety of reasons (supervision, distance to market, settler/aboriginal conflict). Ex-convicts and “ticket-of-leave” convicts participated in the first land rush of the colony, flocking to the Hawkesbury by the hundreds in the period between 1794 and 1806, joined here and there by free settlers and corpsmen. Hunter and King, like Phillip before them, took an active role in these settlements despite their distance from the primary settlements at Sydney and Parramatta. Both Hunter and King went out with surveyors to select locations for new farmers, including settlements on other less-proven riverlands on the Georges

¹²⁹ Dundas to Grose, 30 June 1793, HRNSW 2, 49

¹³⁰ Hunter to Portland, 25 October 1795, HRNSW 2, 327

and Hunter rivers.¹³¹ Nevertheless, settlers often pushed into new country and set up farms on more isolated stretches of these main rivers or on feeder streams, often waiting years before any government official ever set eyes on them. These settlers were particularly vulnerable to (and responsible for) Aboriginal attack, which escalated to war at several points, bushranging, and flash flooding (smaller creeks tended to rise more suddenly than the main river).¹³²

Officers and free settlers often preferred to be close to the urban center and often had the resources to put considerably more land to use, particularly as their stock numbers grew, than the limited acreage officially granted to them (usually not more than 100 acres). Yet until 1810, when Macquarie began making exceptions for stock farmers, if settlers wanted more land, they had to purchase it from grantees or lease the land from the government. This policy was a source of discontent among wealthier settlers wishing to expand their holdings, and they often wrote home to complain about it, but both the home and colonial governments insisted that it was necessary. Most of these leases were for 1000 or 2000 acres tracks of grasslands on the Cumberland Plain, land that was, in theory, suited just as well to arable farming as grazing land. Leasing the land instead of granting it essentially reserved it for small farms in the future.¹³³

Grant sizes for Emancipists and free settlers increased in the 1800s and 1810 to foster greater produce given the high price of labor and consumer goods, in addition to large grazing leases and tickets of occupation for those settlers (mostly officer and free) who had invested their capital in stock. Hunter, King, Bligh, and Macquarie actively supported, encouraged, and often subsidized small Emancipist farmers and free farming settlers with larger grants, and, to their

¹³¹ Karskens, *The Colony*, 121

¹³² See John Connor, *Australian Frontier Wars, 1788-1838* (UNSW Press, 2002), particularly Ch. 3 "The Hawkesbury-Nepean River, 1795-1816".

¹³³ See Weaver, 45-8.

political chagrin, mostly let stock-farmers fend for themselves. Many of the colony's wealthy pastoralists like John Macarthur, Gregory and John Blaxland, Samuel Marsden, and John Oxley acquired their sheep runs not via government grants, but by purchase or lease. The only person to have a grant for grazing was John Macarthur, who convinced the Colonial Secretary, Lord Camden, during return trip to England to force King to grant him 5000 acres (he originally wanted 10000) for the development of a merino sheep enterprise on the Cowpastures. This grant became the source of intense conflict between King and the home government (and one of the main reasons he resigned) and was the catalyst of Macarthur's sedition against Bligh a few years later.¹³⁴ To King (and Bligh), Macarthur was the human manifestation of every problem that plagued the colony and the very reason that policies that restricted these kinds of land grants were necessary. In ten years since his arrival with the NSW Corps on the Second Fleet, Macarthur had turned a £500 debt into a fortune of at least £20,000, mostly, as King pointed out, at government expense (lands, stock, convict labor). He had acquired most of his non-granted lands in debt transactions, sowed "discord and strife" wherever he walked, and was "indifferent" to any threat government could make against him. After being told in no uncertain terms that Macarthur was to be given the 5000 acre grant, King replied that they might as well make Macarthur governor as "one half of the colony already belongs to him, and it will not be long before he gets the other half."¹³⁵ The erosion of authoritarian land policies would spell disaster, he predicted, for the course of agricultural improvement in the colony.

¹³⁴ Harold Carter, ed., *The Sheep and Wool Correspondence of Sir Joseph Banks* (Sydney: Library Council of New South Wales, 1979), 541-3.

¹³⁵ Phillip Gidley King to John King, 8 November 1801, HRNSW 3, 611, 614. King had an ally in Banks on this matter. Banks had met with Macarthur and taken an immediate dislike to him. Plus, he did not want to compromise fine wool growers in England by encouraging colonial production. See Banks to Fawkener, [1803], HRNSW 4, 224.

Improved Husbandry

Improvements to the soil by the addition of sand, ash, lime, sod, etc., had, it was observed, done very little to prevent exhaustion in those place where it had been tried. Soil exhaustion was a nearly constant preoccupation for the government. On a tour of local farms in 1791-2, Watkin Tench echoed what countless others had said about agricultural progress: without a sufficient number of imported cattle and the means to contain their manure for “dressing the ground,” the soils of the colony could only be expected to support a small number of people. “Imperfect husbandry” was to be expected in settlers not brought up in agriculture, but without a rudimentary mixed husbandry system, New South Wales would never thrive.¹³⁶

Despite the inherently authoritarian nature of forced labor on public farms, agricultural improvement on government run farms was every bit as tricky as attempting to impose improvement on private farms. The government farms at Rose Hill and Toongabbie were cleared and cropped continuously for six or seven years until they barely yielded what was sown. Intended as a training ground for future farmers, Phillip instructed his superintendent, Henry Dodd, first at Farm Cove and then at Rose Hill, to assign each convict a few acres of land to till along with a garden allotment. Dodd required convicts to break up 16 rods (approximately 1/8 of an acre) per day before they were released to their own allotments (or free time), which resulted in very rough, shallow mould, not the finely tilled earth needed for broadcast seed. This practice was most often described derisively as “scratching.” It resulted in poor water retention in the soil and fewer seedlings surviving to maturity. The only manure government fields received was the ash from burned trees and scrub, a one-time occurrence, and the turning in of the stubble from the wheat or maize crop. In 1791, Phillip had four 20-acre fields fenced in at Rose Hill and sown

¹³⁶ Tench., 163.

with pasture grasses in preparation for the Cape cattle (which were lost on the Guardian), but those were soon cropped continuously with grain as well.¹³⁷ By 1795, both these government farms were abandoned. The small herds of Government cattle were sent out with convict shepherds to graze the kangaroo grasses further inland.¹³⁸ As the stock numbers in public and private hands increased, governors hoped that settlers would begin investing in stock to manure their fields, but it would not be until new government farms at New Toongabbie and Castle Hill were established in 1803-1804 that the government would begin to practice what it preached by keeping stock on or in close proximity to arable land.¹³⁹

When it came to former convicts, colonial governments often saw the lack of good husbandry as a moral failing, taking a much more hard-lined paternalistic approach to “encouragement.” Oversight was key to this. Phillip refused to settle the Hawkesbury region in 1791 and 1792 even though he knew it contained better soils because the settlement would be too far from practicable government control. They could not be trusted to remain industrious without the watchful eye of the administration.¹⁴⁰ Cultivation clauses were instituted into grants in the mid-1790s with ex-convicts in mind, even though officers and marines were much more likely to be absentee than settled ex-convicts. Officials and travelers surveying farms withheld much in the way of sympathy in their assessments of ex-convict farms, regardless of their comparability to free settler farms. Even Macquarie, known for his rejection of the idea of a convict stain, regularly chided ex-convict farmers during his many tours for their bad husbandry and lack of

¹³⁷ Watkin Tench, *A Complete Account of the Settlement at Port Jackson: In New South Wales, Including an Accurate Description of the Situation of the Colony; of the Natives; and of Its Natural Productions: Taken on the Spot* (London: G. Nicol, 1793).

¹³⁸ HRNSW 4, 654

¹³⁹ Karskens, *The Colony*, 89

¹⁴⁰ Phillip to Sydney, 13 February 1790, HRNSW 1:2, 304-6

improvements.¹⁴¹ Hunter, even while patiently explaining how and why agricultural progress among settlers was crippled by officer-controlled consumer goods markets, answered the direct petitions from 173 ex-convict farmers with diatribes on personal responsibility. Had settlers been “a bit more careful and attentive to the land in their possession and the stock they may have put upon it” or “indulged less in ruinous gratifications” or had they “more seriously considered the advantages of a good farm and the comforts which may be derived from a due attention to its improvement,” they would have been fine.¹⁴²

King was much more sympathetic to the plight of ex-convict farmers (partially a result of his disgust with the “mercenary schemers” of the NSW Corps) and recognized that improvements could not be made if settlers could not manage to make at least a small profit from their farms.¹⁴³ Under Grose and Hunter, cattle and sheep from the government stock had been granted or loaned frequently to “deserving” settlers (i.e. officers and free settlers), but not to ex-convicts. King was less discerning about the class of settler and thought it best to offer government cattle in exchange for grain from those who could demonstrate “industry.” In King’s view, ex-convicts were better suited to be farmers than the officers and free settlers currently in the colony, as they were used to hard work and were, on the whole, much more grateful and obliging to Government. Self-interest alone might drive the improvements by the “very few” officers who had done well in farming; but Emancipists needed extra incentives, namely cattle and access to convict labor, else they would be tempted to allow the agents of “rapacious”

¹⁴¹ “Journal of a Tour of Governor Macquarie’s First Inspection of the Colony,” Macquarie Papers, ML, A778

¹⁴² “Petition of Hawkesbury Settlers to Governor Hunter,” 1 Feb 1800, HRNSW 4, 29-30; “Governor Hunter’s Reply to the Hawkesbury Petitioners,” 8 February 1800, HRNSW 4, 31-2

¹⁴³ Hunter to Portland, 12 November 1796, HRNSW 3, 168

traders to “[relieve] them of all their labour had acquired” in one night’s drinking.¹⁴⁴ King spent a great deal of his time and energy with Emancipist farmers, distributing grass seed from his fodder experiments, sending out new batches of wheat seed after farmers reported particularly bad bouts of rust and smut, loaning out government bulls and rams for breeding.¹⁴⁵

Despite King’s conviction that Emancipists were capable of improving their lands, he ultimately fell back on the same proposed solution that Phillip had come to in the earliest days of settlement: improved farming needed improved farmers. In a long and fairly defensive missive shortly before his departure from the colony in 1806, King declared that what New South Wales desperately needed in order to make its agricultural pursuits any less profligate than the American colonies that agrarian patriots were so fond of criticizing, was an infusion of “good practical farmers.” It was a recognition that the soils of the colony were often “indifferent” and its climate harsh and unpredictable. Such conditions required persons skilled in bringing wastelands to life, who could come to the colony, settle amongst the other farmers, and demonstrate by example and experimentation how to improve the soil. None of the free settlers who had come to the colony as “pretended theorists” of agriculture had managed to produce anything that would “convince their neighbors of the superiority of their knowledge... if their own farms are to be considered as the criterion of their abilities.”¹⁴⁶ Well-meaning agrarian patriots in Britain could forward as many “hints” on agriculture as they wanted (and they did) and the colonial government could proclaim the benefits of improved mixed husbandry until the proverbial cows came home, but unless settlers could be shown those benefits on the ground, it would be mostly noise.

¹⁴⁴ “Report on the State of the Colony in 1801,” 31 December 1801, HRNSW 4, 654-5

¹⁴⁵ King to Hobart, 1 March 1804, HRNSW 5, 337

¹⁴⁶ King to Castlereagh, 12 August 1806, HRNSW 6, 146-147, 154-155

Experimentation

The first and most important government-funded agricultural experiment was the establishment of James Ruse's farm in Parramatta, and it was as much an experiment in household economy as it was in husbandry. The younger son of a Cornish tenant farmer, James Ruse was convicted in 1782 of stealing two silver watches. He was sentenced to seven years' transportation in lieu of hanging. His good behavior and affability, along with his agricultural background, endeared him to Phillip, who saw the opportunity to use Ruse as a test case for Emancipist yeomanry. He wanted to know exactly how long it would take a single man to "cultivate a sufficient quantity of ground to support himself." In 1790, Phillip sent a convict gang to clear an acre of land near Rose Hill, built Ruse a timber hut, and gave him tools and seeds, a hog and sow, a few chickens, and a promise that when he was able to support himself, he would have a grant of 30 acres.¹⁴⁷ By the end of 1791, Ruse had an acre and a half in spring wheat and half an acre in maize. Ruse did his own experimentation as well, staggering the planting of his wheat and maize and paying close attention to the outcome of the crops to get a better sense of the ideal time to plant in the antipodean seasons. Given the scarcity of cattle, he also experimented with green manure and composting. His yields were much higher than those taken from the government farms, and Ruse himself, having worked on them before being sent to his new plot, explained why that was:

Having burnt the fallen timber off the ground, I dug in the ashes and then hoed it up, never doing more than eight, or perhaps nine, rods in a day, by which means, it was not like the government-farm, just scratched over, but properly done [convicts were required to till 16 rods per day at Rose Hill]; then I clod-moulded it, and dug in the grass and weeds...I then let it lie as long as I could, exposed to the air and sun; and just before I sowed my seed, turned it all up afresh. When I shall have reaped my crop, I purpose to hoe it again, and harrow it fine, and then sow it with turnip-seed, which will mellow and prepare it for next

¹⁴⁷ Phillip to Nepean, 17 June 1790, HRNSW 1:2, 349

year. My straw, I mean to bury it in pits, and throw in with it every thing which I think will rot and turn to manure.¹⁴⁸

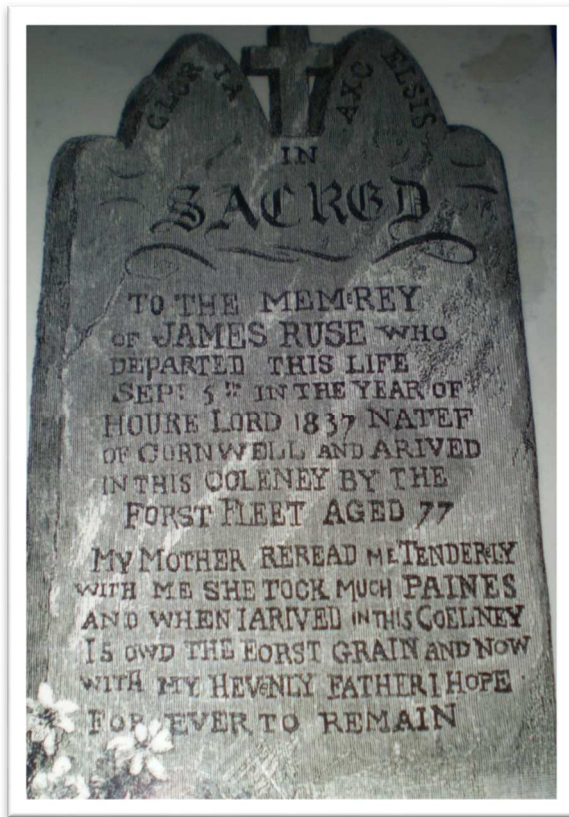
Encouraged by Ruse's progress, Phillip granted him his 30 additional acres (which Ruse named Experiment Farm) and settled several other convicts in the same area, as well as a few enlisted marines, with the standard "encouragement" of an 18-month ration, one to two acres cleared by convict gang, two hogs, six chickens, tools, and seed.¹⁴⁹ Home Secretary Dundas heartily approved this kind of experiment as it signaled a hopeful retreat from the government-run farms that, according to his received intelligence, were under-performing and did not foster a spirit of industry in the convicts working those lands.¹⁵⁰ Very little has been written about Ruse (because he left little archival trace), but he remains to this day a school history book hero as Australia's "first farmer." Australia's top-ranked state school, James Ruse Agricultural High, has its campus a few miles from the original site of Experiment Farm, a popular field-trip destination.

¹⁴⁸ Tench, *Account of the Settlement at Port Jackson*, 80-1.

¹⁴⁹ Phillip to Grenville, 5 November 1791, HRNSW 1:2, 539-40

¹⁵⁰ Dundas to Phillip, 10 January 1792, HRNSW 1:2, 585

Figure 8: Engraving of James Ruse's Headstone (Source: firstfleetfellowship.org.au)



During Hunter's administration, agrarian patriots at home (not just Banks) began taking an interest in the agricultural affairs in the colony. The Board of Agriculture had been receiving occasional copies of official dispatches on the state of the colony, as several of its members had posts in the Home and Colonial Office and the Board of Trade. But in 1797, the President of the Board, Sir John Sinclair asked more directly to be kept informed of the agricultural returns and results of experiments (like the Ruse experiments, flax and tobacco trials, cattle breeding, etc.). "It may possibly be in our power," he wrote, "to suggest some hints which may be of use to the progress of the colony."¹⁵¹ Their suggestions never veered far from the subject of grass. If the colony was to thrive agriculturally, it required manure, for which sown grass was needed. Even if

¹⁵¹ Sinclair to Portland, 20 May 1797, HRNSW 3, 209

it was to depend instead mostly on stock raising, it would still need grass because natural pasturage, as a matter of principal, would always be inferior to artificial, enclosed pasturage. Banks, also a member of the Board, felt, however, that after ten years of agricultural floundering, the future must surely lay in an export commodity, either from some undiscovered plant in the interior, or the transplant of another suitable commodity.¹⁵² The Board proceeded in the following years with assistance that reflected these conflicting impulses. They sent a shipment of seeds on at least two occasions of experimental fodders and potential cash crops, and Banks, for his part, sent out a continual stream of botanical explorers and horticultural experts.¹⁵³

Despite his hopes for the development of an exportable commodity, Banks forwarded another large shipment of agricultural seeds in 1798, most of them foreign and local fodder crops—Roxburgh Spring grass (India), carob (Mediterranean/N.Africa), St. Helena Spring grass (likely wiregrass or crabgrass), red and white clover, a variety of field peas and beans, trefoil, buckwheat, ryegrass, sainfoin, Danzig flax, lucerne, timothy grass, guinea grass, broom, and madder—in the care of the incoming governor, Phillip Gidley King.¹⁵⁴ There is no record of precisely what happened to these fodder seeds, or what had happened to the ones sent ten years earlier, other than that they were planted in government-owned grounds. The first recorded official experiments in fodder crops were ordered by Philip Gidley King in 1803, with at least four enclosed 40-acre tracts of artificial grasses—he mentions burnet, clover, ryegrass, and sainfoin trials specifically. It was also at this point that sown fodder crops, pastures, and fallow

¹⁵² Banks to John King, 15 May 1798, HRNSW 3, 382

¹⁵³ Minutes of the Board of Agriculture, 26 June 1798, 1 April 1802, 26 April 1803, Board of Agriculture Collection, RASE B/1, Museum of English Rural Life (Reading, UK).

¹⁵⁴ Banks to King, 16 October, 1798; King to Banks, 17 October 1798 in HRNSW 3, 496, 497.

lands began to be included (though not every year) in official agricultural returns sent home.¹⁵⁵ King wanted to bring the government stock back into the fold from their distant grazing grounds “to serve as an example to the settlers.”¹⁵⁶ King had been inundated with requests for convict gangs to clear new land due to soil exhaustion, so he was not only becoming more forceful in the advocacy of artificial grasses, but he was also trying to find more practical ways of enclosing land than fencing or hedging. For these grass trials he chose to enclose the pastures with double ditches to keep cattle and sheep in (or out).¹⁵⁷

By the end of his term, it was the progress, albeit slow, of grass that gave him the most hope for the future of the colony. Experiments with grass had not just been attended to by government. Many settlers, particularly those who had managed to accumulate stock on their farms, had “bestowed much attention” to the cultivation of red and white clover, ryegrass, and burnet. He reported that they had all done well, but that the ryegrass and clover (the bread and butter of fodder rotations in Britain) had spread quickly and abundantly. He observed with great interest that clover in particular often persevered when the native grasses dried up or were destroyed by fire. When farmers could not afford the time or labor to turn up the ground, they would often just dig holes in the ground and put a few white clover seeds in with the maize, which then “over runs the ground and destroys the native grasses and herbaceous plants.” As “unhusband-like” as this was, this practice was making the natural grasslands less natural and more British. Other grasses, like lucerne, had done extremely well in the colony in the few farms on which it was grown, yielding three or four cuttings a year. If they were lucky, stock fed on these grasses, even if they (or their manure) could not be folded onto arable fields, would deposit

¹⁵⁵ See, for example, “Ground in Cultivation”, August 1803, HRNSW 5, 205

¹⁵⁶ King to Hobart, 7 August 1803, HRNSW 5, 193.

¹⁵⁷ Ibid.

those seeds wherever they did go.¹⁵⁸ These experiments yielded tangible, if not wholly quantifiable, results.

It was also under King that a variety of export commodity crops were attempted on government account and on private farms (with seeds distributed from government), including silk, rice, opium, rhubarb, indigo, and olives.¹⁵⁹ King was also the first governor to envision a possible alternative to mixed husbandry among settlers. Given his opinion that “no country in the world” was better suited to horned cattle and sheep, would it be so bad if settlers were to specialize in meat production and leave the grain production to government?¹⁶⁰ It was perhaps more a thought experiment than anything else—it would not solve the problem of soil exhaustion—but it shows King’s weary recognition that the best practices of English husbandry might not be possible in this place.

Market Control

By 1798, a new problem caused a second look to be given to government farming. The price of grain had risen to what Governor Hunter and the Home Office considered to be unreasonable heights. Farmers could provide their households with grain, vegetables, meat, and dairy, but for everything else (alcohol, tobacco, cloth, shoes, soap, tea, sugar, etc.) they had to pay unbelievably high prices to Sydney merchants (most of them former and current NSW Corp officers). For example, sugar purchased from West or East Indian vessels cost a corpsman between 7 and 13 pence per pound was sold to settlers (convict and free) at between 3 and 5 shillings a pound (36-60 pence per pound). Sugar retailed at around 9 pence per pound in England at the time. Tea was purchased at between 5 to 10 shillings per pound and but could not

¹⁵⁸ King to Castlereagh, 12 August 1806, HRNSW 6, 158-9

¹⁵⁹ Alexander Riley to Hobart, 29 June 1803, HRNSW 5, 162; King to Hobart, 30 October 1802, HRNSW 4, 873

¹⁶⁰ King to Banks, 9 May 1803, HRNSW 5, 136.

be purchased for less than 40 shillings per pound in 1798. Tea retailed at around 6 shillings in England.¹⁶¹ The 6 or 7 shillings per bushel that farmers and farm laborers (wages paid in grain) got on private markets for their grain gave them almost no buying power. A group of former marine settlers at the Field of Mars wrote to Hunter: “The sober and honest settler, who ought to be considered as the chief support of the colony, is by such means often in want of these common necessities of life while an illiterate grog shop keeper [the agent of a current officer] is rolling in every luxury that the colony can afford.”¹⁶² Government depended on settler grain and had no choice but to pay high prices for it, often 10 or 12 shillings a bushel, to make it worth it for settlers to continue to grow grain. It became clear to Hunter and King after him that government was not subsidizing the farmers with these high prices: they were subsidizing Sydney’s merchant class.

Rev. Samuel Marsden conducted a survey of farms in the districts of Parramatta, Concord and Liberty Plains, and The Ponds in 1798 and found his parishioners living in stifling debt and poverty. Many had sold their lands, which now stood empty. “The poverty of the soil” or “lack of industry” were not the means of ruining the settler, for lands in these areas had been proven fertile and productive in former years. The free settlers of Concord and Liberty Plains, who, in theory, had free access to ships anchoring in Sydney Cove, could not, he claimed, raise a single pound between them to purchase those imported goods.¹⁶³ Shipboard merchants wanted cash for their goods, not grain, and the only colonists with reliable access to cash were officers. Though barred from setting up shop on their own accounts, officers sent hired agents to take their sterling

¹⁶¹ Hans-Joachim Voth and Jonathan Hersh, “Sweet Diversity: Colonial Goods and the Rise of European Living Standards after 1492,” *Journal of Economic History* 70 (2010), 495–495, ; “Petitions of the Settlers of the Field of Mars,” 19 February 1798, HRNSW 3, 367-8

¹⁶² *Ibid.*, 369

¹⁶³ “Report of the Reverend Samuel Marsden and Assistant Surgeon Arndell,” [1798], 371-2.

to purchase the cargoes of passing ships and resell them to settlers in exchange for massive amounts of grain, which the officers either consumed or (through agents) resold to government or town dwellers. Soon almost all farm laborers, who were needed at least part of the year to help clear, till, harvest, or mind stock, refused to work for grain, but insisted on being paid in rum, which they could consume or resell for food and other items. The Duke of Portland, seeing only the inordinately high price of grain that the administration was forced to buy, ordered Hunter to intervene in this problematic colonial market at both ends. He was to issue a proclamation banning the importation and resale of liquor and he was to reduce the price of grain and then start up the government farms again and “render government as far independent as possible of the farms of individuals.”¹⁶⁴

These market interventions failed to bring relief either to government or to farmers. Such market controls on the price of grain, as Hunter had warned, did not match the *oeconomy* of the farmer’s operations. He sent in a detailed survey of the expenses entailed in clearing, producing, and transporting to market 25 bushels (1 acre) of wheat in the Hawkesbury region (£13.5.9). At the reduced price of 10 shillings per bushel of wheat (the Home Office wanted to get it down to at least 8 shillings), farmers would get back £12.10.0., essentially working at a loss.¹⁶⁵ Another group of settlers appealed directly to Portland, trying to explain the economic realities of arable farming in the colony. The price of labor rose in proportion to the price of imported commodities, while the price of grain was fixed, leaving the farmer in dire straits.¹⁶⁶ Meanwhile the attempt to outlaw the rum trade came to nothing. In the end, Hunter was recalled and King, who had ten years’ experience in the colony and was thought to be less of a pushover than

¹⁶⁴ Hunter to Portland, 10 January 1798, HRNSW 3, 346-7.

¹⁶⁵ Hunter to Portland, 7 January 1800, HRNSW 4, 14-16.

¹⁶⁶ “Settlers Appeal to the Home Government,” 1 February 1800, HRNSW 4, 25-26

Hunter had been, was sent out. King arrived to implement a new market solution: the opening of a regulated government store for all kinds of consumer goods (tea, sugar, tobacco, clothing, cookware, casks, tools, leather goods, rope, oil and oil lamps, candles, soap, cutlery, bowls and platters). This had originally been Hunter's idea:

The public store as a means for controlling the high price of grain...would operate as an encouragement to industry. Without some form of price control on grain the settlers cannot live let alone provide for a family. The speculators and the monopolists all contrive to keep the settlers in a continual state of beggary and retard the progressive improvements of the colony.

There would be strict penalties for retailing goods purchased at the store, no credit given, and no more than a 100% markup from of wholesale.¹⁶⁷ King went a step further and began in 1801 to allow settlers to board and trade directly with shipboard merchants, though the ban on the importation of spirits only drove up the price of rum in the colony. It is difficult to know the real impact of the store's first year or the opening of trade access as it coincided with a devastating flood in March of 1801, which King, writing more candidly to Banks than he ever did to the Home Secretary, called "the death wound to every species of cultivation and improvement." Despite the new regulations, it was too late for many of the settlers. He claimed that of the 300 settlers of all descriptions, no less than 150 had signed away their grants in payment of debts to the "vultures" of Sydney.¹⁶⁸ His efforts were not unappreciated by the small farmers of New South Wales, however. In 1803, at the annual New Year's address from the Hawkesbury settlers,

¹⁶⁷ Gordon Beckett, *The Government Store Is Open for Business: A Review of the Commissariat in Colonial NSW 1788-1835* (Canberra: Trafford Publishing, 2012), 36–7; "Proposed Regulation for Government Store," 8 March 1799, HRNSW 3, 642.

¹⁶⁸ King to Banks, April 1801, HRNSW 4, 357-8

King was lauded for his “anti-monopoly stance...[and] the premiums in livestock awarded to encourage agriculture.”¹⁶⁹

For King, the only way forward was to put strict controls on the market for both grain and consumer goods, while at the same time bowing out of public production so as not to compete with settlers. Yet the home government disagreed on the second part of his plan, insisting that government production should continue. They did not want to continue to purchase provisions from India to feed convicts. If the settlers were not able to produce enough at the 8 shilling price, then government must make up the difference. In 1803, after the running of the colony had been passed on to the hybrid War and Colonial Office, its secretary, Lord Hobart, instructed King to reverse many of the market regulations. “Commerce carried on by individuals must be open and unrestrained,” he wrote, adding that the authority of government should only be interposed when it came to rum. Clearly, these interventions were authoritarian, but by no means consistent or uncontested.

VI. Bligh’s Second Mutiny: Reform and Revolt

By 1805, it had become clear to the Colonial Office that all the authoritarian controls on lands and markets and interventions into husbandry had not brought the colony closer to either agricultural self-sufficiency or political stability. As hostilities resumed with Napoleon in Europe and King requested to be relieved of his thankless duties in New South Wales, the government again turned to Banks. Banks put forward his longtime associate Captain William Bligh, “a man bred in the best tradition of Royalist authoritarianism,” for the job.¹⁷⁰ Bligh, like James Ruse, had grown up in hardscrabble farming community on the Bodmin Moors in Cornwall. Despite

¹⁶⁹ Quoted in Karskens, *The Colony*, 185.

¹⁷⁰ Bayly, 207

having made a career on the sea rather than the land, Bligh was an accomplished botanist and had been in charge of the two breadfruit voyages from Tahiti to the West Indies for The Board of Trade and Banks's Royal Society. The first of these voyages ended in the infamous mutiny on the HMS Bounty, but his reputation, largely due to Banks's advocacy, remained intact. The Colonial Secretary, Lord Camden, agreed to the appointment and to bestow upon him a considerably higher salary than previous governors had received.¹⁷¹ In contrast to King's adaptive authoritarian rule and his sensitivity to the both rural and urban realities in the colony, Bligh was to enter the colony with an intentional obliviousness to those realities. He was to follow the largely unchanged instructions for the colony, instructions that privileged farming and self-sufficiency above all else. Bligh's administration was the epitome of autocratic control of land, a focused attempt (though not the last) to reinstate the original agrarian vision in New South Wales. This concentration of authoritarian reform ended in Bligh's second Mutiny.

The Rum Rebellion was more about grain and land than it was rum. From the moment he landed, Bligh became the champion of small farmers on the Cumberland Plain and the adversary of the traders, officers, and graziers based closer to Government House. Bligh was steadfast in his belief in the virtue of small settlers, lauding the farmers on the riverine flats of the colony as "the industrious settler-farmers who feed us."¹⁷² However, he noted, the majority of those who made up the "us" were the vice-ridden urbandwellers and snake-like traders of Sydney. The supposed "great improvers" in the colony, Macarthur, the Blaxland brothers, Atkins, Marsden, and Riley (among others, had abandoned cultivation and instead held vast pastoral estates that they had collected from their bankrupt farming neighbors, only to continually hold government

¹⁷¹ Banks to Bligh, 19 April 1805 and Banks to Camden, 21 April 1805, HRNSW 5, 590-1

¹⁷² Quoted in Karskens, *The Colony*, 187

hostage with an unreasonably high price of mutton and beef.¹⁷³ Pastoralists and traders alike claimed that the colony was actually overstocked with grain. They argued that it was them, but the importation of Indian grain in years of supposed scarcity that ruined farmers, forced up the price of meat, and made paying labor in rum necessary.¹⁷⁴ But Bligh had arrived shortly after the widespread flooding of 1806, which had devastated the crops of the small farmers on the Hawkesbury/Nepean, Hunter, and Georges rivers. He knew that scarcity was no illusion. The colony had depended on the risks these farmers took year after year, and should, therefore, be given every assistance and indulgence. To make farming more profitable (and encourage improvements) trade would need to become less profitable.

Bligh took objections to the rum wage to the next level. It was unacceptable that a bottle of rum, which cost the trader a half crown (2 shillings and 6 pence) and which could be consumed in one sitting, cost the farmer 2-3 bushels of wheat (worth 20-30 shillings on the market), which was enough to keep a man in bread for three months. Yet farmers could not hire labor without having rum (or the equivalent amount of grain) to pay for it. Regulations on rum imports had obviously failed, so he attacked the trade at the point of transaction, issuing a proclamation that made it illegal to trade rum for either labor or grain. The punishment for a convict was 100 lashes and 12 months hard labor, and for a free settler three months imprisonment, revocation of all Crown indulgences, and a £20-50 fine.¹⁷⁵ The move bought him the instant loyalty of small settlers who were now relieved of having to come up with the rum wage, and instant backlash in Sydney.

¹⁷³ "Settlers Address to Governor Bligh," 22 September 1806, HRNSW 6, 191-92;

¹⁷⁴ Gregory Blaxland to Undersecretary Chapman, 15 October 1807 and John Blaxland to Chapman, 16 October 1807, HRNSW 6, 302, 312.

¹⁷⁵ "Government and General Order," 14 February 1807, HRNSW 6, 253.

While traders seethed, Bligh turned to colony's rural settlements with a slew of interventions and encouragement to agricultural improvement. He set up several new fodder crop experiments on the government farms at New Toongabbie and Castle Hill, then, as an example, fed the stock of government house on hay from May to September and distributed the manure on the grain and garden grounds there. He loaned out government ploughs and oxen to those small farmers who could demonstrate the eradication of stumps on their lands. He sent out convict gangs to exhausted private farms of Sydney and Parramatta to clear more land and ordered exhausted lands to be put to fallow. To aid in the recovery of these soils, he sent out government cattle and seed for artificial pasture, as well as convicts to enclose them by ditching.¹⁷⁶ He also strongly recommended that farmers scale back their operations, advising that the careful and judicious cultivation of ten acres would yield more than a slovenly cultivated fifteen and leave the farmer time to cultivate gardens, tend to dairy cattle, improve their homesteads, and secure their lands. To Emancipists in particular, he offered to sell stock at half the market price required of free settlers and officers.¹⁷⁷

He refused to renew large grazing leases on lands he thought better suited to farming and revoked leases from lessees who had not paid their rent or owed money to the government store for the provisioning of convict laborers. He threatened also to revoke leases from those settlers who, like Gregory Blaxland, who had not yet repaid government for the stock they had been loaned in the 1790s.¹⁷⁸ He refused to recognize "naked possession" land rights of Sydney's inhabitants, even pulling down structures on the government domain. He targeted the leasehold

¹⁷⁶ Bligh to William Windham, 31 October 1807, HRNSW 6, 349-51.

¹⁷⁷ *Ibid.*, 352.

¹⁷⁸ Blaxland to Henry Waterhouse, 23 October 1807, Waterhouse and Bass Family Papers, ML, MSS 6544 (CY3970), f. 236

properties of John Macarthur, George Johnston, Garnham Blaxcell, and Simeon Lord as interfering with public amenities, including Macarthur's 5000 acre Cowpastures run. To stamp out the power of Sydney traders and the NSW Corps, he attacked their lands.¹⁷⁹

All of these measures pleased the colony's small Emancipist and free settler farmers, but the Governor's house was in Sydney, and not Windsor, Richmond, Bankstown, or even Parramatta. Had Bligh been able to flee Sydney to the country districts, there might have been a drawn out civil war instead of a quick successful revolt. Despite his best efforts to escape his captors, Bligh was arrested by Macarthur's inside man, Capt. George Johnston, who immediately enacted martial law and set the Corps upon the settlers who might have come to his aid. Settler support for the rebellion, with some notable exceptions, tended to fall among the lines of property size and Corps affiliation. The Hawkesbury settlers and Bligh's administrative staff in particular bombarded the Colonial Office with pleas for Bligh's reinstatement, weaving a narrative of thwarted prosperity to combat the stories of deliverance from tyranny coming from the Corps. Bligh's provost marshal, William Gore, wrote one such petition, stating that before the rebellion, "the country [meaning agricultural districts] was advancing rapidly to prosperity and happiness in consequence of the salutary and fostering regulations of Governor Bligh, who had indisputably at heart the true and real interest of this colony and the people over whom he presided."¹⁸⁰ Gore refused to recognize the authority of the new military court and was sentenced to seven years' transportation to Newcastle (place of secondary punishment). The colony in 1808 had 2000 acres less in grain cultivation than in 1806, which settlers attributed directly to the overthrow of Bligh and the renewal of the officer monopoly of the rum trade. It would be, they

¹⁷⁹ Arthur Hawkey, *Bligh's Other Mutiny* (Angus and Robertson, 1975), 90–97; Karskens, *The Colony*, 11; Parsonson, *The Australian Ark a History of Domesticated Animals in Australia*, 34.

¹⁸⁰ Gore to Castlereagh, 26 April 1808, HRNSW 6, 602-3.

promised, “the total ruin of the colony...as planters will not be able to grow grain sufficient enough to support themselves and their families.” This particular petition was signed by 23 free settlers only. They noted in closing that the hundreds of Emancipist settlers could not sign the petition for fear of retaliation from “the system of terror that now reign[ed]” in the colony at the hands of the Corps.¹⁸¹

VII. Conclusion

The outlook for improved mixed husbandry looked very grim as Bligh languished under house arrest in Sydney and Macquarie prepared to set sail in the spring of 1809. This was not, as I have shown in this chapter, due to a lack of effort or vision, an insurmountable unsuitability of soil and climate, or the absence of practical measures to encourage good husbandry. And, even if it rarely took the form of mixed husbandry, colonial agricultural production, even in these early years, fed the colony. Vital statistics before 1820 are rudimentary, consisting of general musters of convicts, settlers, and military men, and occasionally an account of births and deaths in Governor dispatches. Population increased from 3466 in 1795 to 11,566 in 1810. Out of those, in this period 6,364 people arrived (free and convict) from Britain and Ireland, and 899 people left (most of them military men). Even without knowing the exact number of deaths or births, we can assume a net “natural increase” of 2,635 in these 15 years, despite never having higher than a 1:5 ratio of women to men in this period.¹⁸² It was rarely the “shore” that was fatal, but the sea voyage, particularly in the early 1790s. Officials in New South Wales and in London were often displeased in the 1790s and 1800s with having to resort to shipments of Indian grain in shortage

¹⁸¹ Free Settlers to Castlereagh, 4 November 1808, HRNSW 6, 804-5.

¹⁸² Gordon W. Beckett, *A Population History of Colonial New South Wales: The Economic Growth of a New Colony* (Trafford Publishing, 2013), 15–6, 29, 270–1; Deborah Oxley, *Convict Maids: The Forced Migration of Women to Australia* (Cambridge University Press, 1996), 253–4.

years, but the vast majority of the calories consumed by convicts, marines, and free settlers in this period were from grains, vegetables, and meat produced in the colony.

I began this chapter by outlining the competing agrarian models at play in New South Wales in the first 40 years of settlement. Yet this smallhold mixed farming model of agrarian settlement was difficult to establish or maintain even before it had a full-fledged rival model (commercial pastoralism) with which to compete. Before moving on in Chapter Five to this more advanced conflict in both New South Wales and the Cape, it is important to establish why this was the case. Farming and pastoralism began to directly clash over land, markets, and political power in the 1810s, 1820s, and 1830s, and small mixed farming, despite its powerful fan base in Britain, entered the fight on one leg. The First Fleet arrived in New South Wales prepared to replicate the agrarian landscapes of England on its shores. Nothing was to be left to chance. The experts had weighed in. Instructions were written and plants and animals packed. Improvement was to be imposed. The common trope in colonial Australian history is to point out that, indeed, the best laid plans of mice and men often go awry, particularly when there is a significant change of venue. But the agrarian plans for New South Wales did not undergo some great sea-change upon arrival on shores that were so very different from those described by Banks and Cook. They were supported and upheld even when they failed.

Nevertheless, there were several important impediments to the early success of mixed husbandry that are more complex than just the standard abundance of land and dearth of capital/labor paradigm. The first was a significant disconnect between the home and colonial governments when it came to adaptation. The Home (and later Colonial) Office lacked flexibility. Their primary agrarian objectives remained largely unchanged in this period: self-sufficiency in foodstuffs as quickly as possible, agricultural opportunities for convicts at the end

of their sentences, and orderly and tightly controlled settlement. They were largely unsympathetic to almost immediate formations of new social, political, and environmental relationships on the ground in the colony. It fell to the governors and civil administration to make the adjustments needed to meet those objectives. The presence of free men and women alongside unfree men and women meant that adjustments were rarely uncontested and depended on a fine balance between authoritarianism and individual liberty. Paternalistic oversight of the improvement of both people and land was so very often at odds with the desires of these British transplants (free and unfree) to make the most of the move.

Additionally, one of the key assumptions made by the planners of the settlement was that, in a new land, agriculture must necessarily proceed commerce. Subsistence was a necessary precondition for the development of a market. The perceived perversion of nature in New South Wales (antipodean seasons, songless birds, scentless flowers, trees growing out of rocks) was of less consequence than the backwards economic and spatial development of the colony. In New South Wales, the town thrived long before the country did. It took nearly 20 years for colonial farmers on the Cumberland Plain to produce enough grain and meat to feed the colony, and that achievement was short-lived. The town of Sydney, on the other hand, grew steadily with no assistance. While the government was occupied with clearing lands, coaxing European crops from them, and keeping precious cattle alive, fortunes were being made in Sydney by officers, free settlers, and their ex-convict associates.

Before 1810, the original colonial agrarian vision for New South Wales was confronted to interplay between the city and the country, between the farmer and the trade, between food and fortunes. Beginning in the 1810s, it faced a new element, herds, as those who had made their fortunes in the city sought to ground their wealth in the land.

CHAPTER FOUR

Spurning the *Trekboer* Cowboy: Negotiating Grain, Grass, and Granger in the Cape Colony, 1801-1814

I. Introduction

We accompanied him to a miserable hut close by, to purchase some sheep. His only food was mutton, without bread, or any kind of vegetables...Our visitor's place in the scale of civilization, would be nearly at the bottom, if even it should not be below zero: his mental powers appeared to have lowered themselves down to a level with those cattle which were the only concern of his thoughts. He seemed to possess a mere animal existence: he could eat meat, drink a dram, smoke a pipe, spit, and practice some other disgusting vulgarities...He seldom spoke, because he had nothing to say; while a lifeless eye betrayed the vacancy of his mind.

Their life, and that of the wild beasts, their fellow inhabitants of the land, were the same. Of both, the only care seemed to be that of feeding themselves, and of bringing up their young...They looked first wishfully at out pots which stood on the fire, and then submissively at us. Truly, these were the most destitute of beings, and the lowest in the scale of man... This sad resemblance, in outward shape, to those great, intellectual and elevated characters, whose genius and talents have made their names immortal among us, distressed me to melancholy; and while my eyes were fixed in painful observation on their vacant countenances, I asked myself, What is man?...Surely all the inhabitants of the globe never sprang from the same origin! William Burchell, 1811¹

Restricting the movement of colonized people, or, more particularly, the forced sedentarization of nomadic and semi-nomadic groups, was a trademark of imperialism throughout the nineteenth and twentieth centuries.² This was particularly true, as Donald

¹ William John Burchell, *Travels in the Interior of Southern Africa* (Longman, Hurst, Rees, Orme, and Brown, 1822), 220, 457.

² Kavita Philip, *Civilizing Natures: Race, Resources, and Modernity in Colonial South India* (Rutgers University Press, 2004), 22, 128–9; James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (Yale University Press, 1998), 186–220; Crawford Young, *The African Colonial State in Comparative Perspective* (Yale University Press, 1994), 100–102; Clifton C. Crais, *White Supremacy and Black Resistance in Pre-Industrial South Africa: The Making of the Colonial Order in the Eastern Cape, 1770-1865* (Cambridge University Press, 1992), 138–151; A. Dirk Moses, *Empire, Colony, Genocide: Conquest, Occupation, and Subaltern Resistance in World History* (Berghahn Books, 2008), 24, 97–113; Edmund Burke III, “The Transformation of the Middle Eastern Environment” Edmund Burke and Kenneth Pomeranz, *The Environment and World History* (University of California Press, 2009), 88–117; Joseph H. Bryan, *By Reason Or by Force: Territory, State Power and*

Denoon has shown, in colonies of settlement where direct access to land and resources was vital to the success of the colonizers.³ The shifting cultivators and semi-nomadic populations the British encountered across the globe often used the land and its resources in a way that was not comprehended (or, perhaps more often, willfully misunderstood). Common land usage and transhumance were incompatible with concepts of property rights and improvement, and those who lived upon the land in such a way were often more easily swept aside, legally and physically, by colonial states.⁴ Of course, agricultural sedentism—or economic and cultural assimilation—did not, in and of itself, protect indigenous peoples from losing their lands. One need only look, for instance, at the fortunes of the Cherokee in Southern Appalachia or the Maori in New Zealand, both sedentary agrarian societies that attempted to live more-or-less peaceably and interactively with European settler populations, for evidence of this.⁵ However, mobile societies were particularly vulnerable to loss of both land and sovereignty in British settler colonies in relation to their sedentary counterparts.⁶ This distinction has its roots in the late

Mapuche Land Rights in Southern Chile (University of California, Berkeley, 2001) 5–7; Scott, *Seeing like A State*, 1-2

³ Denoon, *Settler Capitalism*, 3–19, 24–27, 39–40, 64–5.

⁴ *Ibid.*, 33–5; Drayton, *Nature's Government*, 50–54.

⁵ Wilma A. Dunaway, *The First American Frontier: Transition to Capitalism in Southern Appalachia, 1700-1860* (University of North Carolina Press, 1996), 32–50, 108–12; Gregory D. Smithers, *The Cherokee Diaspora: An Indigenous History of Migration, Resettlement, and Identity* (Yale University Press, 2015), 30–31, 228–32, 259; Crosby, *Ecological Imperialism*, 228–236; James Belich, *Making Peoples: A History of the New Zealanders, from Polynesian Settlement to the End of the Nineteenth Century* (University of Hawaii Press, 2001), 492–4, 350–55; Saliha Belmessous, *Assimilation and Empire: Uniformity in French and British Colonies, 1541-1954* (OUP Oxford, 2013), 106–7, 110–114.

⁶ For example, semi-nomadic, hunter-gatherer Aborigines in Australia were ousted unceremoniously from their territories in New South Wales in the early colonial period, whereas in New Zealand, stripping sedentary agricultural Maoris of their lands took a long period of negotiation, treaties, and, eventually, a series of violent land wars, which were both expensive and hugely unpopular in Victorian Britain. Likewise, the pastoral Khoikhoi were quickly pushed

seventeenth and eighteenth centuries, when, thanks largely to John Locke, Providence and Dominion had to be qualified by Liberty and Rights.⁷ In other words, dispossessing mobile and/or non-agricultural population and replacing them with sedentary (and therefore more industrious) agricultural population was predicated on and justified by Enlightenment configurations of private property and the value of labor.

But what happens when the settlers encroaching upon indigenous lands were not themselves sedentary agriculturists? What happens when the problematic nomadic populations were white Europeans? How did the British confront nomadism or the threat of what Edward Gibbon Wakefield would call “the barbarising tendency of dispersion” when the offending population was not a colonial “other,” but the colonizers themselves? In both New South Wales, as we saw in the last chapter, and the Cape of Good Hope, British officials, by the beginning of the nineteenth century, on the ground and at home in the Colonial Office considered the nomadic tendencies on the part of European settlers (both new and, in the case of the Cape, established for generations) to be an extreme form of social degeneration. This focus on degeneration is

off their grazing lands in the Western Cape by the Dutch in seventeenth and eighteenth centuries, whereas the semi-sedentary agricultural Xhosa, Zulu, Ndebele, Sotho, and Tswana in the northeastern frontiers of white settlement in South Africa were in many cases actually protected (however ineffectually) in early years by the nascent British colonial state against encroachment from Dutch Boer pastoralists; though, in the end, as we shall see in Chapter Five, the British fought several frontier wars to secure access to African lands.

⁷ Drayton, *Nature's Government*, 89–90; Andries Johannes van der Walt, *Property in the Margins* (Bloomsbury Publishing, 2009), 35–7. While Locke's qualification of Dominion and dispossession, as Armitage has shown, was not always used to the detriment of indigenous populations, it was a foundational conceptualization about land use that was wielded frequently against colonized peoples, not just in America, but across the globe. See David Armitage, “John Locke: Theorist of Empire?” in Sankar Muthu, *Empire and Modern Political Thought* (Cambridge University Press, 2012), 84–111; Nagamitsu Miura, *John Locke and the Native Americans: Early English Liberalism and Its Colonial Reality* (Cambridge Scholars Publishing, 2013), 1–10.

exemplified by the above passages from William Burchell's *Travels*. The first refers to a Dutch *trekboer* and the other a "Hottentot," but it would be very difficult to determine which passage referred to whom out of context. Both are described as being at the bottom rung of the ladder of civilization, barely distinguishable from animals, lifeless and vacant. The "Hottentot" makes him question the theory of monogenesis, the *trekboer* makes him ponder stadialism and degeneration.⁸ In addition to the challenges that various forms of trekking presented to colonial governments in terms of political and economic control over its subjects, it was also antithetical to best practice in Britain in the age of agrarian improvement, which valued, above all else, intensive cultivation and long-term investment in the soil.⁹ In addition, the sedentary farmers (or planters) in the Cape were not producing enough grain to feed the colony and much of their lands were completely exhausted, left to long fallows. This sparked anxieties about the long-term viability of the land to support these colonial settlements. Reliance on natural forage in the Cape, as in New South Wales, was precarious on both an environmental and political level. The proposed solution, as we saw in the previous chapter, was the introduction of a wide range of sown fodder crops, along with the system of mixed husbandry in which these crops were best utilized. In the Cape, William Duckitt, was put in charge of this intervention.

⁸ This theme is explored in Chapter Two. It is beyond the scope of this chapter to go into detail about Enlightenment theories of social evolution or degeneration, but Burchell's observations are grounded in stadial models of human development, and give insight into the kinds of questions that would occupy natural philosophers and natural historians (Linnaeus, Buffon, Hume, Kant, Lamarck, Cuvier, and Hegel, etc.) throughout the late eighteenth and nineteenth centuries. See Chris Manias, *Race, Science, and the Nation: Reconstructing the Ancient Past in Britain, France and Germany* (Routledge, 2013), 17–21; Emmanuel Chukwudi Eze, ed., *Race and the Enlightenment: A Reader* (Cambridge, Mass: Wiley-Blackwell, 1997), 1–12; Brian Stanley, *Christian Missions and the Enlightenment* (Wm. B. Eerdmans Publishing, 2001), 108–9, 171–3.

⁹ See Chapters One and Two.

The story of William Duckitt’s agricultural “department,” is essentially one of disappointment and adaptation, much like the story of mixed-husbandry in the Cape. Remarkably, given the state of the cash-strapped and overextended War Office as the French Revolutionary Wars matured into Napoleonic Wars, Duckitt and his party of husbandmen were provided free passages and freight, salaries, and a *carte-blanche* to purchase on government account whatever implements, stock, plants, and seeds he deemed necessary to bring a singularly British brand of agricultural improvement to the supposedly hopeless Dutch burghers (freehold landowners) and *trekboers*.¹⁰ Echoing earlier accounts of scientific travelers to the Cape, British officials in the first years of the occupation in 1795 had reported that the Boers were agrarian philistines: incapable of feeding themselves, their slaves, and, more importantly, the new British garrisons and fleets. Those that held prime lands within easy traveling distance to Cape Town (often called the country districts) were increasingly investing not in arable cultivation but in stock farming, causing systematic overgrazing, inadequate grain supply, and chronic tensions between government and settlers over land.

But more problematically, Dutch colonists of modest and meager means pushed aggressively into the eastern districts and beyond. These *trekboers*, as they came to be known, were semi-nomadic pastoralists. *Trekboers* were difficult to govern, they agitated already precarious relations on the nebulous borderlands of the Khoikhoi then Xhosa frontiers. Additionally, because the interior velds offered economic opportunities for under-capitalized settlers that were closed to them in the immediate Cape environs, *trekboerism* pulled whites from potentially arable lands into the interior, preventing “ideal” forms of agrarian close settlement.

¹⁰ See Chapter 2.

They presented a major challenge to the new British colonial government, just as they had for the Dutch East India Company (VOC).¹¹ As the Governor Sir George Yonge wrote to Secretary of State Henry Dundas, “the Boers, though of Dutch extraction and holding in grants from the Dutch immense tracts of country, yet become almost independent and full as Savage as the natives.” They contributed almost nothing to the economic life of the colony, but rather pulled valuable resources from government, who then had to frequently step in to show them that they could not “exercise their cruel barbarities over the Hottentots with impunity.”¹² Moreover, when the velds became overgrazed or dried up, or when government interference became too burdensome, *trekboers* moved on to greener pastures out of practicable reach of even the most authoritarian of governments.

¹¹ Richard Elphick and Hermann Giliomee, *The Shaping of South African Society, 1652–1840*. (Middletown, CT: Wesleyan University Press, 2014), 19–95, 228–9, 424–5, 545–9.

¹² Sir George Yonge to Henry Dundas, 5 January 1801 in George McCall Theal, ed., *The Records of the Cape Colony, 1793-1831, vol. 3* (London: Government Printer, 1897-1901), 368, henceforth RCC.

Figure 9: Pastoral sprawl in the Western Cape, 1700-1800

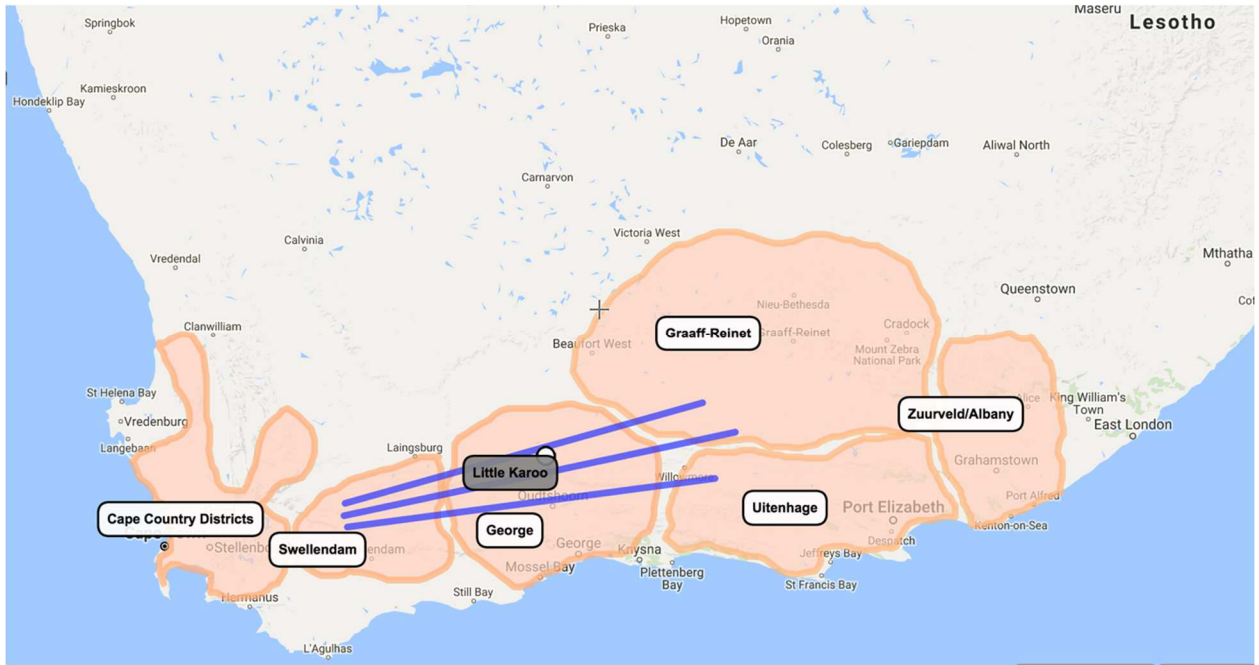


Figure 10: Official bounds of the Cape of Good Hope, 1809 (Source: John Pinkerton, "Southern Africa," 1809)



The agrarian problems the British encountered at the Cape were an example, as James Scott puts it, of chronic tensions between “hill peoples” and “valley kingdoms,” only the valley kingdom was problematic as well.¹³ Bad agricultural management in the (relatively) closely-settled farms of Cape Town’s country districts had led to the unchecked pastoral sprawl to the east. Scott focuses primarily on late nineteenth and twentieth century failures of imperialist (both formal and informal) interventions on the part of the state into the social order of those it governed, but his model, while not historically appropriate for earlier periods when the colonial state was largely absent or very limited, can help us to postulate why Enlightenment mixed husbandry failed to take hold in the Cape among its planter class or change patterns of transhumance among *trekboers*. Enlightenment-era agricultural improvement projects like this one certainly cannot be termed “high modernism,” which in Scott’s work is tied to technological innovation, advanced modern science, and a strong, centralized state, but improvement was, in this period, as Bayly and Drayton have shown, tied to authoritarian rule enabled by wartime necessity.¹⁴ Agricultural improvement was enlisted by the Colonial Office and its authoritarian governors in the process of re-ordering the landscape and rendering its colonial subjects (indigenes and settlers alike) “legible.” Scott writes that part of the failure of high modernist state interventions in the late nineteenth and twentieth centuries can be attributed to “Utopian plans driven by an authoritarian disregard for the values, desires, and objections of their subjects.”¹⁵ Likewise, agrarian improvement, touted by agrarian patriots in Britain as universally

¹³ James C. Scott, *Seeing Like a State: Why Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), 1-2

¹⁴ Bayly, *Imperial Meridian*, 89–91; Drayton, *Nature’s Government*, xv, 50–52, 59–60, 210–12, 253–4.

¹⁵ Scott, 7

ameliorating and constructive, was, as Bayly argues, harnessed to authoritarian colonial (and domestic) governance in this period, governance that often ignored or discounted the social and economic relationships of the governed.¹⁶ However, at the end of eighteenth century, the British state had not the power or organization of its twentieth century form (and was, in any case, very distracted by Napoleon), and so its intervention into colonial land use was, in the first instance, quite modest. The husbandry that Duckitt came to the Cape to advocate was to reform by illustration rather than direct interference. It can also be seen as a preparative measure: If Dutch colonists were to see high yielding intensive arable production on a British model in the Cape coupled with a high enough grain price to make arable cultivation more economically attractive than stock farming, they might be less resistant to a more aggressive restructuring of land tenure, markets, and settlement necessary to transform agro-economic conditions in the Cape.¹⁷

The failure of Duckitt's department, the failure of an unadulterated form of Enlightened mixed husbandry and the failure to curb *trekboer* stock ranging can be attributed to some of the same elements that caused failures of technological agriculture in the so-called Global South in Scott's paradigm. Chief among them were assumptions about the social and environmental receptiveness of British-style agricultural improvement that "failed to represent the space in which farmers plant crops" and the "complex, supple, negotiated objectives of real farmers and their communities."¹⁸ The New Husbandry that Duckitt was to impart on the European

¹⁶ Bayly, *Imperial Meridian*, passim.

¹⁷ This argument is similar to that made by Jean and John Comaroff in the second volume of *Of Revelation and Revolution: The Dialectics of Modernity on a South African Frontier* (Chicago: University of Chicago Press, 1997) wherein evangelical missionaries in the far north "softened-up," largely unintentionally, Tswana communities in the 1830s, 40s, and 50s, for the more aggressive disruptions and dispossessions to come in the second half of the century.

¹⁸ Scott, 119

inhabitants of the Cape was severely thwarted by an inability on the part of Duckitt and his backers to integrate local knowledge generated outside the paradigm of agrarian improvement. When the project of agrarian improvement was taken up again during the second British occupation, it was stronger and of greater utility to white agricultural producers because it did incorporate their particular knowledge and interests, and of greater detriment to African agropastoralists because the British colonial state, as Bundy, Crais, Keegan, and others have shown, made it a matter of policy to disregard the experience, structure, and interests of African communities.¹⁹ This is not to say that colonial governments did not still fiercely advance both sedentarization and agricultural improvement, but it began, in the period leading up to the mass migration of 5000 British settlers in 1820, to recalibrate the particular form of sedentarization and improvement to something more suitable to the landscape and the interests of its European subjects. The attempt at transferring the biological microcosm of this best version of British Husbandry was not just part of a utopian vision of turning a well-situated but fickle landscape into a Little England, but part of a more politically imperative project to spurn the *trekboer* “cowboy,” chronically unattached and dangerously independent.²⁰ This project was constantly in tension with the lay of the land and the experiences of those who lived upon it, which is why

¹⁹ Scott., 121; Colin Bundy, *The Rise and Fall of the South African Peasantry* (Los Angeles: University of California Press, 1979); Clifton Crais, *White Supremacy and Black Resistance in Pre-Industrial South Africa: The Making of the Colonial Order in the Eastern Cape, 1770-1865* (Cambridge: Cambridge University Press, 1992); Timothy Keegan, *Colonial South Africa and the Making of the Racial Order* (Charlottesville: University of Virginia Press, 1996)

²⁰ The anachronism is intentional here. Cowboy, as a term, did not really come into wide usage until the mid-nineteenth century, as a somewhat derogatory term for socially and politically problematic cattle rangers in the American West. But there is actually a great deal of symmetry between the way in which *trekboers* and cowboys were portrayed and problematized in the nineteenth century. See Paul F. Starrs, *Let the Cowboy Ride: Cattle Ranching in the American West* (JHU Press, 2000), 8–13.

Duckitt's department failed and why the British, often very reluctantly, had to adjust its expectations for what improvement looked like.

As explored in the last chapter, after the sting of losing the thirteen American colonies, the tenuous position of the remaining Atlantic holdings, and the largely uninspiring prospects of the costly ten-year-old colony in New South Wales, the British state was perhaps more willing to “throw good money after bad” to profitably cultivate a land of milk and honey (or grain and meat, rather) on such an important Indian trade route. On an Ark filled to the brim with seeds (mostly grasses, legumes, and other fodder crops) carefully selected by George Gibbs, seedsman to The Board of Agriculture, cattle from the prize stock of the Duke of Bedford, and the best agricultural implements that money could buy, Duckitt's department proceeded from Portsmouth endowed with an ecological hubris arguably unmatched in the history of European colonialism until that point. Duckitt's subsequent “fall” only a year after his arrival was precipitated not by the failure of his crops, but the withdrawal of his backers, Governor George Yonge, recalled in the Spring of 1801, and Secretary of War, Henry Dundas, who resigned alongside his Prime Minister William Pitt over Catholic emancipation shortly after. Duckitt was antagonized, primarily by Yonge's successor, Francis Dundas, and then set adrift, just as the colony itself was released back into the hands of the Batavian Republic for three years after the signing of the Treaty of Amiens. Duckitt was one of the few Britons to remain in the colony, so that when the British returned at the end of 1805, he was no longer green and mistrusted, but a valuable asset to an agricultural redux as British officials attempted to pick up where they had left off while avoiding some of their earlier missteps.

Duckitt may have come to the Cape in an Ark packed by the movers and shakers of agricultural improvement in England constituted to re-form the agrarian (and wild) landscapes and people of the Cape into the image of Britain. But when the waters receded, there was no Covenant for these new settlers and their plants and stock, only a yawning chasm between expectations and reality. Why was this Ark insufficient? Biological, economic, or political explanations, considered individually, unsatisfactorily explain the failure of Duckitt's department and, more generally, Enlightenment mixed-husbandry with its associated grains, grasses, legumes, and stock in this antipodean settlement. This chapter offers instead—to borrow an anthropological term—a political ecology of a failed agrarian project and its legacy on later improvement schemes in the temperate regions of southern Africa. As I will show, part of this failure can be ascribed to the erroneous and, in some cases, delusional presentation of the native ecology of the Cape as one that would assuredly “richly repay the labor of the good husbandman.”²¹ However, in this early period of colonial uncertainty, Duckitt's department was hindered less by environmental constraints than it was by political and economic barriers. Part of it was a problem of competing colonial ideologies or incoherent visions for the development of the colony, but part of it—perhaps the greater part—was a problem of political and economic timing. At the risk of presenting a history in the subjunctive, had Duckitt come to the Cape in 1806 or 1807 instead of 1800, his venture might not have failed. The political character of the

²¹ Carl Peter Thunberg, *Travels at the Cape of Good Hope, 1772-1775* (London: Richardson and Egerton, 1797), 314. Anders Sparrman, the authority on the natural history of the Cape, reiterated this: “The soil possesses such a degree of fecundity, that it is capable of being converted into the most fertile arable land or vineyards, sufficient to give food and other conveniences of life to a great number of inhabitants, who, united among themselves, might compose a very powerful republic, and be in a condition to extend their commerce and conquest over the whole Pacific Ocean (87).

Colonial Office when Britain recolonized the Cape after the three-year Batavian interlude was much friendlier to government-sponsored agrarian projects, even if the challenges of governing roving *trekboers*, appeasing disgruntled slave-holding free burghers, and moderating the violence that plagued the Xhosa frontier, had only increased in the interim. Advocates of agricultural improvement, still firmly behind the doctrine of mixed husbandry and close settlement in theory, were able to actually put the climate and soils of the Cape to the test on a larger scale in collaboration with Dutch burghers. The less-than-satisfactory return for their efforts provided a dose of reality (and perhaps humility) to improvers. Paradoxically, in the 1810s, British officials began to restrain their expectations of Cape agriculture while at the same time planning a new, distinctly British, agricultural Utopia in the Eastern Cape.

This chapter looks at agrarian development in the fifteen years of British settlement in the Cape after the arrival of William Duckitt in 1800. It examines how William Duckitt's experience and zeal was employed to respond to those earlier assessments and investigates how and why his agricultural acumen and enthusiasm was inadequate to enact the kind of agricultural improvements needed to combat what was seen as an unsustainable, unenlightened, and political undesirable use of the soil (or grass) throughout the former Dutch colony. Finally, it explores how Duckitt's project was resurrected and adapted in the hands of new agricultural institutions, which in turn paved the way for the *en mass* emigration of British settlers intended as arable farmers into the Eastern Cape in the 1820s. The disappointment of Duckitt's version of Enlightened mixed-husbandry in these early years of British occupancy in the Cape did not deter the conviction that the landscape was capable of improvement or that trekking could be prevented, but rather it initiated new experiments, methods, and organizations in the years that

followed. Duckitt's failure and, in the view of his critics, mismanagement of government funds and lands triggered the formation of a less ambitious but more realistic colonial Board of Agriculture in 1806 (revamped again in 1812) modeled on the British Board of Agriculture (1793-1822) to find ways to improve grain production, grassland cultivation, and livestock quality given the limits of the local environment and population. The difficulties facing the insertion and maintenance of intensive arable farming proved insurmountable, yielding, as in New South Wales, to a pastoral economy. However, this shift was neither a foregone conclusion nor an abandonment of hopes for an improved, sustainable agricultural colony.

II. The March of Pastoralism in Cape Historiography

As seen in the previous chapter, more attention has been paid to critiques of Dutch agriculture in the Cape on the part of late-eighteenth century observers both before and after the British takeover of the colony in 1795, but less consideration has been given to agrarian development once the British government did secure the colony, particularly in the period before the 1820 settlers arrived in the Cape.²² The agrarian historiography of the eighteenth and nineteenth century has tended to focus on the activities of the old Cape gentry, those free

²²Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation, Second Edition* (New York: Routledge, 2007) Pratt explores the "anti-conquest" travel narratives by European naturalists, which recast indigenous inhabitants in colonized countries as sympathetic, living in brutish harmony with the natural world, in comparison with the wasteful land practices of European settlers (particularly in the Americas). Siegfried Huigen, focusing exclusively on South Africa, builds on Pratt's analysis by highlighting the travel narratives of John Barrow who took stock of the colony in an official capacity for the British in the 1790s. Huigen argues that Barrow's critical description of the Dutch colonists and administration was a thinly veiled plea for the restoration of British colonial authority in the Cape, and reflected a particularly "eighteenth-century humanitarian discourse [on] natural law concerning the use of land." Huigen, *Knowledge and Colonialism: Eighteenth-Century Travellers in South Africa* (Leiden: Brill Publishers, 2009), 148

burghers who cultivated grain and grapes with a variety of unfree and coerced labor on freehold land and sent (often illegally) their stock east with Khoikhoi or slave shepherds.²³ Social and political histories of the Cape focus primarily on the tensions between the Cape gentry, the VOC and later British colonial state, and the *trekboers* on Khoikhoi then Xhosa frontiers. As the South African historian Pieter Van der Merwe first pointed out in 1930s, the Great Trek of the 1830s and 1840s was not so great when compared to the slow but constant and politically-fraught treks of the previous 200 years. Historians following this line of inquiry, have highlighted the early bifurcation of Cape society into a small but powerful slave-holding landed gentry centered around Cape Town, Rondebosch, and Stellenbosch, and an economically depressed and politically oppressed stock farming class of colonists who were *pushed* out of the western Cape by the unprofitability of small-scale arable cultivation and *pulled* into the interior by economic opportunities beyond the practical reach of the VOC and the cycle of debt peonage facilitated by the grain monopoly. In the mid-seventeenth century, the VOC under Simon van der Stel attempted to resist the rise of a new class of migrant graziers, but his successor, his son Willem Adriaan van der Stel began the eighteenth century trend of acceptance of the *trekboer* economy.²⁴ In the wake of pan-African decolonization movements, the white supremacist backlash in Rhodesia, and the intensification of apartheid in South Africa, historians of South Africa dug deep into the origins of racial order in South Africa, histories grounded in the analysis of labor, capital, and land, but not so much in actual agrarian practice.²⁵

²³ See Elphick and Giliomee, *The Shaping of South African Society, 1652-1820* (London: Longman, 1979);

²⁴ Van der Merwe, *The Migrant Farmer in the History of the Cape Colony, 1657-1842* () 4-37.

²⁵ Richard Harry Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (Yale University Press, 2000), 89–90.

This omission is in part addressed, particularly in terms of settler pastoralism in the second half of the nineteenth century and first half of the twentieth, by William Beinart, who demonstrates the rise of conservationist thinking in the mid to late-nineteenth century in connection with pastoral enterprises on the fragile native grasslands in the Western Cape. Although his narrative spans from 1770-1950, there is a significant gap between his analysis of early eighteenth-century scientific travelers to the Cape and the pastoral push into the interior in the 1830s where British settlers were subject to the same environmental constraints as their Dutch predecessors.”²⁶ Beinart portrays the historiography of the Cape as having privileged arable production, and while certainly slavery, other forms of coerced labor, the concentration of land and capital in the hands of elite planters and vintners around the Cape, and the constant battle throughout the seventeenth, eighteenth, and nineteenth centuries for grain stability, little work has been done to unpack arable and mixed production in the period before the more or less firm shift to a pastoral economy. Although Beinart highlights the disappointing agricultural settlement in the Eastern Cape in 1820s as a foil to the ensuing penetration of Britons and British stock into the interior, there is not a single reference to this early department nor of the later work of the Cape Board of Agriculture, taking for granted, it seems, that British settlers and officials were always more concerned with the destiny of woolled sheep than arable production. This chapter posits another mode of conservationist thinking in terms of the dogged attempts in the first twenty years of British settlement to bring the about the supposedly ecologically harmonious union of grain, grass, and stock in the Cape.²⁷

²⁶ Beinart, 54

²⁷ The use of “ecologically” here is not, as it might seem, an anachronistic reference to the discipline of ecology, which did not rise to prominence until the 20th century, but rather a

III. Duckitt's Honeymoon: Planting the Ark in Cape Town and Paarl, 1800-1801

At the end of the eighteenth century, as we saw in Chapter One, improvement was not a vague term for Duckitt or those who offered him institutional and financial encouragement. It implied a particular set of agrarian practices that, taken as a whole, characterized Enlightenment agriculture in Britain in the eighteenth century. Specifically, an improved farm would be a mixed farm, where the raising of stock was paired with arable farming, and where stock was fed via sown fodder crops (grasses, legumes, and root vegetables) in rotation with grains and kept in an enclosed property where stock output (i.e. manure) could be returned to the soil to replenish nutrients lost in the cultivation of grain. Aside from the obvious benefits of this kind of intensive farming in terms of productivity (output per acre) and soil sustainability, this kind of improvement would, it was hoped, encourage the permanent, secure settlement purportedly needed to hold a colonial society together, politically, socially, and economically.

There were certainly contemporary skeptics of the project. Lady Anne Barnard, for one, already saw the problems of attempting to impose the agrarian “rules” of England to the Cape. Upon first hearing of Yonge’s scheme, she wrote: “There is an English farmer come out or coming with all his plows & harrows & with all that ignorance of the climate & methods of the place which will if he is conceited throw him back [to England] in five years from want of

reference to the now well-entrenched assertion that ecological thinking has been present in a variety of genres and disciplines since Antiquity. See Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge University Press, 1994), Frank Egerton, *Roots of Ecology: Antiquity to Haeckel* (Berkeley: University of California Press, 2012), Clarence Glacken, *Traces of the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967).

experience.”²⁸ Indeed, the climate, people, and land resisted Duckitt’s efforts nearly from the beginning. But she underestimated Duckitt’s own resiliency. Duckitt’s own cockeyed optimism about the agrarian prospects in the Cape for the British government were necessarily tied to the hopes he had for his own family and the families of the other husbandmen he had persuaded to leave England. It was perhaps this optimism and sense of responsibility that enabled him to survive several bleak years in the Cape.

This agrarian idealist did not allow himself to accept that the Cape environment was unsuitable for intensive arable cultivation. His personal diary shows a genuine failure to understand the absence of farming in the Peninsula itself given the abundant water that Table Mountain collected and distributed into the surrounding valleys. He saw material opulence on lands with “sure tokens of fertile soil,” but not agriculture: “We passed many very pretty country seats, but no appearance of farming anywhere.”²⁹ This was particularly incomprehensible given the availability of slaves. Like his backer, Henry Dundas, who had declined to climb aboard the abolitionist platform of his Prime Minister and good friend William Pitt, Duckitt expressed no moral qualms about the institution of slavery. In his first weeks, he rendezvoused with Yonge and William Blake, a British slave merchant, while on his tour in Wynberg to discuss a shipment of “young fresh slaves...to employ solely in husbandry” in his agricultural department.³⁰ Before his departure, Lord Macartney had been requested to look into the feasibility of eradicating

²⁸ *The Cape Diaries of Lady Anne Barnard, 1799-1800*, Margaret Lenta and Basil Le Corderur, eds. (Cape Town: Van Riebeeck Society, 1999), 150

²⁹ *Ibid.*, Entry from 4 October 1800. He remarked on the large Rondebosch property of Major General Dundas, the current Lt. Governor, “a fine rich looking Fox Earth...[which] wants a great deal of manual Labor to clear,” evidently not considering the Major General’s preoccupation with cleaning up the political messes of an increasingly reckless Yonge a valid excuse for neglecting his property.

³⁰ Yonge to H. Dundas, 22 Oct 1800, RCC, vol. III, 324

slavery in the Colony, but he quickly decided that doing so would cause the complete collapse of agriculture and inevitably incite an uprising of the Dutch against the British occupying force.³¹ Duckitt could not have failed to notice the dearth of free labor in the colony, particularly Dutch labor. As Crais points out, from a very early period in the Dutch Cape, manual labor was associated with slavery even amongst poor Dutch colonists, which was one reason for the absence of yeoman arable farmers in the Dutch Cape. For social reasons more than economic, arable farming required a “patriarchal organization of slaves,” which meant that if a white settler lacked the means to purchase and maintain slaves, he would need to find his livelihood elsewhere.³² While some Boers of more modest means turned to coerced Khoikhoi and, later, Xhosa labor through the capture and “apprenticeship” of *inboekselings* (youths and young adults under the age of twenty-five indentured to white planters and stock farmers), many simply invested what little they had in stock and headed east with their families and possession to good grazing land. Increasingly in the eighteenth century, the agrarian paradigm at the Cape was not “go big or go home,” but to go big or get moving. This was, perhaps, Duckitt’s first concession to the Cape political environment; improvement might have to incorporate the institution of slavery. He was, however, unwilling to concede that there was something unsuitable to mixed

³¹The Burgher Senate to Gen. Dundas, March 1799, RCC, vol. II, 372. “In order dutifully to accomplish this your Excellency’s desire, we have the honor to state that as we are not fortunate enough in this colony to be able to do without slaves, more especially as agriculture here is infinitely more difficult...it is therefore indispensably necessary to prevent agriculture from going to decay that a sufficient number of slaves should annually be imported.” Also see “In support of the continued importation of slaves into South Africa (1797)” in William Worger et al, *Africa and the West: A Documentary History from the Slave Trade to Conquest, 1441-1905* (Oxford University Press, 2010), 83

³² Crais, 33-36

husbandry about the land itself. Bookmarking the problem of labor, here was a problem of knowing how to use the land to the best advantage.

Before heading out for a tour of the agricultural lands to the east of the Peninsula, Duckitt penned his first report to Henry Dundas, pronouncing that his seeds--noting his grass seeds in particular ("for grass is much wanted in this colony")--and plants had mostly survived the journey, and detailing his fodder crop experiments at Government House.³³ He, like agricultural critics before him in the Cape and elsewhere, saw waste everywhere. He repeated what travelers and officials had been complaining of for years: there was no "artificial food" for cattle, the sheep were useless for anything other than slaughtering for salt provisions and were more goat than sheep (i.e. hairy), milk production was abysmal for want of protein-rich fodder, and wheat and barley were usually of poor quality and insufficient to meet demand. Yet he claimed that "wherever the plough or spade is introduced, however imperfectly, it brings forth a wonderful produce," which, he assured Dundas, was exactly what he planned to do.³⁴ He continued to Stellenbosch, which was in the best state of cultivation that he had seen, though there was little available land not occupied by wealthy Dutch planters relying exclusively upon slave labor for the production of grain and grapes. Even much of this freehold land was unsurveyed and ill-defined. Like the government loan farms, these were large circular plots where only a small fraction of ground was actually cultivated, and only that until poor returns required another piece of land to be broken up. It was here and on the road to Paarl, where freehold gave way to leasehold farms, that he encountered supposedly perfect lands in terms of soil quality, terrain, and water in a most-imperfect state of management. Despite the government land at Klapmuts being

³³ William Duckitt to Henry Dundas, Oct. 9, 1800, RCC, vol. III, 305

³⁴ Ibid.

“shockingly out of order” and “in a ruinous condition,” he left assured that it was “altogether capable of Wonderful Improvement and the most desireable [sic] place I have seen to begin the Agricultural Pursuits, being within reach of Cape Town and nearly central between Stellenboch and Pearl [sic].”³⁵

He tried unsuccessfully to convince Yonge to evict the current tenant of Klapmuts on the grounds that the poor management of the lands should nullify the lease, having noted that the farm “wears the appearance of a Tennent [sic] robbing the Landlord to the utmost extent.”³⁶ In Britain he might have been right. Increasingly by the end of the eighteenth century, many agricultural leases, especially in Scotland, had begun to include stipulations concerning land use and practice. These were often called “improving leases,” and were generally issued for longer terms to encourage investment in improvements.³⁷ However, at the Cape, leases were, for the most part, annually renewed beginning in late March after the harvest with no conditions attached. Yonge was eventually recalled for overstepping his authority, but even he understood the potential fall-out from evicting the tenant of Klapmuts before his lease was up the following March.

Duckitt had convinced Yonge as well that the problem in the Cape was not ill land but ill practice. “Every step he takes confirms his opinion of the general excellence of the soil of this colony,” Yonge asserted, “and it is rather flattering to me that his judgments and knowledge

³⁵ Entry on Oct. 13, 1800, The Diary of William Duckitt, (MSSB 152, NLSA)

³⁶ Ibid.

³⁷ *Reports of Scotch Appeals and Writs of Error...House of Lords* (London, T & T Clark, 18066), 560. In a lease typical of the period, a tenant and his heirs were obliged “to farm, labour, and manure the [land] according to the rules of good husbandry established and practiced in the country, and not to scourge or deteriorate the same by undue cropping,” followed by very specific rules about rotations, seed quality, manuring, etc. See also Ian Whyte, *Scotland Before the Industrial Revolution* (New York: Routledge, 2014), 148-9

should thus confirm all my ideas.”³⁸ There was nothing, Yonge claimed, to prevent the Cape from transforming into an antipodean England.

Duckitt and his farmers declare there is not a spot in the wholesale, as far as they have seen, be it ever so bad in appearance, that is not *better* than what Duckitt’s [English] farm was when he began upon it, or rather his father did, and that the same care and management as his father used would be full as successful, if not more so here as they are [in England]. I have no doubt of the truth of this.³⁹

Duckitt’s fodder crops at Government House, by early January, were surviving a particularly dry summer, and he expected to have a decent grain harvest at his own Garden House. While he waited for his crops to come in and further convince local farmers of the superiority of British methods—he had already convinced many of the superiority of his English ploughs by doing with four oxen what typically took eight or ten—he relied on his oratory skills. He spoke at meetings of the Agricultural Society on challenges to improvement, of which the natural environment was, in his view, not one. In fact, according to Duckitt, the good climate and soils of the Cape had actually retarded development by being too forgiving of poor management.⁴⁰ Rather, he thought that more environmental adversity might have ushered the diffident Dutch farmers into the Enlightenment if for nothing else than to avoid starvation. In addition to the near universal neglect of sown grasses, there was no such thing as a crop rotation that he could find. Borrowing a phrase increasingly used in the eighteenth century to describe colonial agriculture, he lamented that “*robbing the soil* is the general practice.”⁴¹ Dutch farmers, on the whole, had shown no evidence of cultivating with an eye to nutrient recycling. Yet, after several months in the Agricultural Society, he did not think, as many early observers did, that Dutch farmers were

³⁸ Yonge to H. Dundas, Oct. 22, 1800, RCC, vol. III, 324

³⁹ Ibid., 326

⁴⁰ Ibid., 390. “Nature has hitherto done everything.”

⁴¹ Ibid. emphasis mine.

irredeemable or indolent. On his frequent visits to farms around the Cape, Duckitt had been pleasantly surprised to find considerable enthusiasm for his project and for improvement in general: “[They] do not want of willingness only instruction.”⁴² Though, it is doubtful whether that was actually the case. Dutch farmers might have had theoretical willingness, but they were unable or unwilling to make the kind of financial investment in improvement that Duckitt was recommending. Duckitt’s improvements were, after all, funded by government.

Duckitt and Yonge had discussed at length how such management could be discouraged, not just by example, but by government policy. Though he was champing at the bit to oust the tenant of Klapmuts, it seemed clear to him, as it had to agrarian reformers in Britain in the seventeenth and eighteenth centuries, that a short or uncertain lease discouraged investment in improvements. The Boers were, in the eyes of the British government, already predisposed to roam, a tendency antithetical to civilized society and agricultural efficiency; they didn’t need further encouragement. Little could be done about the lease terms on private lands, but Duckitt considered it folly that government still let its lands annually.⁴³ It was far better, he asserted--and Yonge concurred--to grant long leases of smaller properties. In a very long dispatch to Henry Dundas, which likely crossed paths with Yonge’s official recall order somewhere in the North Atlantic, Yonge suggested that government grants and leases should be small, as improvement “made greater progress on smaller tracts than larger,” and should be officially surveyed in rectangular plots as opposed to the VOC’s circular farms.⁴⁴ He also advised that leases should

⁴² Ibid.

⁴³ Ibid.

⁴⁴ VOC properties outside of Cape Town were measured very imprecisely. A farm was defined by radial length from a set point (a homestead or watering hole, or *fontein*) measured temporally

contain in them legally binding obligations to cultivate (i.e. no properties exclusively grazed) and should have tenures of 14 or 21 years, renewable every seven years thereafter. In truth, before the British came, the VOC had tried enacting a variety of laws in the previous century that would force arable production upon hopeful graziers, barring access to grazing land to those who did not also hold arable land near Cape Town, but such laws had been largely ignored.⁴⁵

Duckitt hoped that increasing access to arable land and providing security of tenure would incentivize improvement, but would also serve as encouragement for British farmers to come out to try their luck on the land.⁴⁶ He saw no reason that large farms should not be able to support both grain and stock, except for the fact that the Dutch relied exclusively on natural fodder (the velds) instead of sowing fodder on their own land. Quickly, however, he would realize that Dutch farmers were disinclined to sow grass because it was much cheaper to send stock to graze in the interior with a handful of shepherds than to plough up the land. Cape Free Burghers broke up land with crude wooden ploughs that required large teams of oxen (sometimes as many as eight) and drivers to move through the soil. The harrow, needed particularly for broadcast seed (like grass), was no better, being little more than a heavy wooden triangle with seven or eight wooden pegs to scratch the soil. The majority of farmers had no harrow at all and would simply have the oxen team drag a large sweet thorn acacia tree (*Vachellia karroo*) through the fields.⁴⁷ The high cost of this labor (paired with the low price of

(i.e. an hour's walk) not physically. Not only were such bounds extremely difficult to enforce, they left pockets of unclaimed land.

⁴⁵ Crais, 38

⁴⁶ Yonge to Dundas, Jan. 5, 1801, RCC, vol. III, 386

⁴⁷ Theal, RCC V, 66

grain) already made wheat cultivation unprofitable on a small scale, so convincing stock farmers to sow grasses would not be an easy task.

The anticipated meagre grain harvest of 1801 in the northern and western districts adjacent to Cape Town had created extreme fears of scarcity. The price of wheat shot up from 3-4 rix-dollars (15-20 shillings) per bushel to nearly 9 rxd (45 shillings), which was good for grain producers, but distressed Cape Town residents and devastated the budget of the occupation with the tripling of the cost of feeding armed forces.⁴⁸ Yonge issued an emergency proclamation outlining a slew of new regulations that was nearly identical to the former VOC monopoly so reviled by the British (and many of the Dutch) upon taking over the colony. The VOC had required all grain not consumed at home to be sold to them at whatever price the company was willing to pay. Producers were fortunate to receive 10 rxd per muid (approximately 3.3 rxd per bushel) from the VOC, often far less, and most remained chronically in debt to the Company.⁴⁹

Under Yonge's proclamation, the VOC monopoly was essentially replicated by the newly-formed Grain Commission. Farmers within 50 miles of Cape Town were prohibited from selling grain to anyone but the Grain Commission at a fixed price of 5 rxd per bushel (much higher than what the VOC had ever offered in the 1780s and 90s, but almost half the price acquired in 1799 and 1800). Additionally, they were required to bring up all the grain in storage from previous years to the Commission. Farmers in the outlying districts were not allowed to sell their wheat for more than 4 rxd per bushel, a regulation intended to discourage extra-governmental grain markets and encourage farmers to make the trek to the government granaries in order to obtain the higher price. This was largely unenforceable given that the landdrosts

⁴⁸ Yonge to Dundas, Feb. 18, 1801, RCC, vol. III, 426.

⁴⁹ Guelke, #

(bailiffs) of the districts were Dutch planters who resented the new regulations as much as the farmers they administered, as were the regulations on home consumption of grain.⁵⁰ Due to plentiful rains in December of 1800 immediately after the proclamation had been issued, the 1801 harvest had been good after all, but the regulations remained in place. In the last half of 1801, the Agricultural Society, a mix of wealthy Dutch free burghers and British officers and officials, began to fracture over the implementation of Yonge's program. Even Duckitt warned that such measures could only serve to further de-incentivize improvement in the Districts and certainly would not encourage British agriculturists to come to the Cape.⁵¹ From the point of view of the British colonial state, the Grain Commission served two important purposes: first, it kept the cost of the occupation from skyrocketing to unsustainable levels, and second, it allowed the British administration to take stock of its subjects and territory in a more systematic way. The Grain Commission provided the foundation for a more comprehensive assessment of the state of arable farming, and, at least in theory, would collaborate with Duckitt's department.

Meanwhile, Duckitt's own crops that season had been promising. Yonge claimed that Duckitt's rich grasses and tares had made the stock on the Government House farm uncommonly fat and the horses especially robust.⁵² He was able to take over Klapmuts Farm in February with most of his original party in addition to a farm he had leased on his own account in Simon's Town. One of his party, John Hess, had been sent out to the Eastern frontier to run a government farm for the new British garrison at Fort Frederick (Port Elizabeth) in Algoa Bay.⁵³ Duckitt had been allotted twelve government-owned slaves for the farm at Klapmuts, plus extra slaves and

⁵⁰ Proclamation by Sir George Yonge, Dec. 4th, 1800

⁵¹ Minutes....Agriculture, Feb. 28, 1800 (BO 46, WCA, f. 42)

⁵² Ibid.

⁵³ Yonge to H. Dundas, Jan. 5, 1801, RCC, vol. III, 380

convicts when available, and he had quickly been able to put nearly twenty acres of land in clover, ten in rye grass, ten in vetch, ten in oats, and fifteen in winter barley.⁵⁴ He had not, as was claimed by the officer Robert Percival, turned the desert into Eden using the “same means” as the Boers.⁵⁵ In fact, by April of 1801 41,786 rxd (~£8000) had been spent on Duckitt’s operations--most of it on slaves, cattle, and timber--since his arrival, in addition to what he had carried in on the Ark. Nevertheless, the relative success of Duckitt’s first seven years in the Cape was grossly overshadowed by the struggles that plagued Duckitt from the summer of 1801 to the spring of 1803.

IV. The Downfall of Sir George Yonge and William Duckitt’s Department of Agriculture, 1801-1803

The honeymoon period of Sir George Yonge’s governorship had come to an end at approximately the same time as Duckitt arrived at the Cape, and Duckitt’s ended when Yonge departed. The seeds of Duckitt’s troubles had been planted several months earlier, though. Simply put, Duckitt had made the wrong friends. Yonge had promised him the kind of comprehensive support he never had the ability to provide, creating unattainable expectations that led to Duckitt making unsuitable, feather-ruffling requests for lands, money, and power. Duckitt had put his trust in Henry Dundas, who abandoned Duckitt’s department as soon as he himself began to fall out of favor, leaving him to his kinsman, General Francis Dundas, who regarded Duckitt only as Yonge’s accomplice in financial excess. And, perhaps most damaging of all, Duckitt was taken under the wing of Jacob van Reenen, the wealthiest free burgher in the

⁵⁴ Duckitt to Dundas, March. 1, 1801, A455, WCA, f. 19

⁵⁵ Percival, 229

Cape, who used Duckitt to regain access to the lucrative meat contracts that had been taken from him when the British took over the colony in 1795. It was not, as is sometimes written in the few biographical entries I have found, a failure of Duckitt's first harvest that led to the demise of his department. First of all, Duckitt hadn't arrived at the Cape in time to superintend the preparation and planting of wheat at Government House, and the wheat he had sown at Garden House, through no fault of his own, had been put in too late, and he lost many seedlings to the cold, making that first crop unremarkable, but not a complete failure. Secondly, as mentioned earlier, on both farms his fodder, hops, and vegetable yields had been impressive, in no small part due to his generous allotment of slaves and purchases of manure.⁵⁶ It also was not outright resistance from the Boers. Percival had indignantly claimed that Duckitt had passed "a very unpleasant time" amongst the Dutch, who had shunned him from their society and "missed no opportunity of annoying him in every way they could without subjecting themselves to the law or cognizance of the English governor."⁵⁷ In truth, there had been no particular animosity between the Dutch farmers and Duckitt, aside from their reticence to take on the expense of his methods (i.e. extensive manuring, introduction of new rotations, or sowing pasture instead of turning cattle loose on the *velds*) and, later, the effrontery of his land grant requests. But by and large, it was the British, not the Dutch, who stood in the way of Duckitt's department.

In the original document outlining the conditions of his emigration, he had been promised "further reward" for his services should the British government hold the colony.⁵⁸ He was explicitly told by Yonge and Henry Dundas before his departure that this would be a land grant

⁵⁶ Entry for Oct. 3, 1800, The Diary of William Duckitt, MSSB 152, NLSA

⁵⁷ Percival, 229

⁵⁸ "Memorandum on the conditions...", (BO 45, WCA, f. 25)

of “at least” one thousand acres, not in the interior, but near Cape Town.⁵⁹ Yonge assured him that Duckitt need only request these lands with the Governor’s sponsorship, and that the Burgher Senate, the body which oversaw land grants, leases, and transfers, would be all too happy to honor the request. Duckitt’s petition reflects both the extent of his expectations and his unfamiliarity with land distribution at the Cape. The Cape, because of its prior colonial history, was quite different from New South Wales or North America in terms of land granting. A free settler to New South Wales in 1800 could reasonably expect to be granted 500 acres or more in freehold with modest quit-rents (effectively a land tax), as could a settler in Upper Canada. In the United States, smaller grants of 100 to 200 acres were given for a pittance in recently “ceded” Indian lands in many southern and mid-Atlantic states at this time.⁶⁰ This was not the case in the Cape where the Dutch had already granted the majority of land in a fifty or sixty mile radius of Cape Town in the late seventeenth and early eighteenth centuries.⁶¹

Duckitt’s petition, written only five months after his arrival, emphasized the immediate commencement of his operations and stated that “having stepped forward in the service of Government in a very important branch of the Public Service, [he is] humbly hoping he is thereby become entitled to some reward, of which he was assured when he left England.”⁶² He

⁵⁹ William Duckitt to Yonge, Feb. 20, 1801 (BO 91, WCA, f. 73)

⁶⁰ See Donald Meinig, *The Shaping of America: Atlantic America, 1492-1800* (New Haven: Yale University Press, 1986) particularly Chapter 16 “Expansionism, American-Style,” where he examines shifting land grant policies leading up to and following the 1796 Public Lands Act. Indian lands, particularly Cherokee, Choctaw, and Creek lands in western Virginia, North Carolina, South Carolina, and Kentucky, were more often distributed by grant rather than by sales. Even after the Public Lands Act, a 640-acre tract of land would be granted at \$2 an acre on credit (5% down), or approximately £300, which was less capital than the British Government required potential grantees to have in NSW or British North America (usually £500).

⁶¹ See Clifton Crais, *White Supremacy and Black Resistance*, 30-32

⁶² “Petition of William Duckitt, Agriculturist,” Jan. 31, 1801 (BO 91, WCA, f. 67)

first requested that he be granted the farm at Garden House, along with “the step of land” extending to Cape Point, twelve miles, as the crow flies, from Simon’s Town—in other words, half of the Cape Peninsula.⁶³ He also asked for six other properties on lands that “[had] never yet been of any service or yielded any profit to Government”: Kirstenbosch, Baas Harman’s Kraal, Orange Grove, Jackal Valley, Harder Valley, and Paarden Eiland. Exact measurements for those properties were never taken, but it was likely close to 10,000 acres, and far from being “wastes” as Duckitt claimed, these were extremely good lands. These large properties had been reserved by the VOC for the pasturing of horses and breeding stock, and were used by the British government for the same purposes. Andrew Barnard reluctantly forwarded the petition to the Burgher Senate after trying to convince the Governor of the impropriety of the request, though his reservations come through in the formal letter as well.⁶⁴

Lady Anne Barnard’s entertaining reactions to such boldness again foreshadowed the responses of the Burgher Senate and other members of the colonial elite in Cape Town. She had shrewdly observed that while Yonge had promised that Duckitt would show the Dutch farmers how to improve wastelands and bring them into productive cultivation (“setting all the rocks asprouting with corn”), in reality Duckitt had insisted upon being placed only on well-watered lands with rich soils and easy access to the Cape Town market. This was not a case of reclaiming land from the wild, but rather a reassignment of good land to a new hand. “For him to raise good corn on them,” she wrote, “was only what the possessors had been doing for the last 100 years!”

⁶³ The lands he requested in this area are now part of Cape Peninsula National Park, and it is unclear if any of it was ever in arable cultivation.

⁶⁴ Andrew Barnard to the Burgher Senate, Mar. 24, 1801 (BO 45, WCA, f. 1), emphasis in original. On Yonge’s request Barnard instructed the Senate to send the normal surveying team to the areas in question and “then and thereto examine whether they *may* be granted without any prejudice to government, to the public, or to the adjacent places.”

She declared Duckitt had no interest in “improving bad land till all the good [land] he could [sic] beg or borrow was first put to tillage & indeed made his property.”⁶⁵

He had modestly asked from Sir George (when living at the Government House) a grant forever of all the Government farms—not of one—two—or three—but the whole, to him & his Heirs forever—King Ducat [Duckitt], the crown to descend to the young princes, etc.

According to Barnard, her husband “had stared and pulled his eye brow up the back of his head” in astonishment at the request. Even Yonge had realized, despite having told Duckitt to ask for what lands he would, that “it was rather too much.”⁶⁶

Yonge endorsed the petition, but was, as he might have expected, prevented from granting it by the Burgher Senate on the grounds that the lands were “most solemnly mortgaged to the paper currency circulating in the colony” (though this turned out not to be the case). While they were happy to see the land being cultivated by an enterprising man like Duckitt for the betterment of agriculture in the colony, they nevertheless could not give those government lands as legal property.⁶⁷ Yonge, who had already been informally notified that he would soon be receiving his marching orders, threw caution to the wind yet again and demanded that his orders be executed without delay anyway, to which the Senate “respectfully” refused.⁶⁸ When he persisted, Gen. Dundas, who was poised to become the Acting Governor the moment Yonge’s

⁶⁵ Barnard, 253

⁶⁶ *Ibid.*, 254. In her diary, Barnard had taken to calling Duckitt “King Ducat” due to his supposed relationship with George III: “He mentioned this Mr. Ducat as being a particular favourite of his Majesty, their farms or Kingdoms as I understand being contiguous & Mr Ducat consulted by the King on all occasions, not only on grazing but on pigs poultry Bullocks & all sorts of live stock—patronized too he told Mr B by Mr Dundas in the warmest manner—in short the “man whom the King delighteth to Honor” could not have too much done for him.” (254)

⁶⁷ Burgher Senate to Yonge, [n.d., likely Mar. 27, 1801], BO 45, WCA, f. 3 In fact, Jacob van Reenen had been trying to obtain grants of those very government farms himself for years and had been rejected on the same grounds.

⁶⁸ Burgher Senate to Yonge, [n.d., likely Apr. 4-5, 1801], BO 45, WCA, f. 4

recall was received, threatened to place him under house arrest if he continued to strong arm the Senate.

By the time of this altercation in April of 1801, Duckitt was already in possession of five different government properties: his personal farm at Garden House in Simon's Town and Klapmuts for his experimental farm (at government expense), in addition to three new properties approximately seventy miles north of Cape Town at Groote Post, Drie Papen Fontein, and Smalle Pad on loan to him for the fulfillment of his new government meat contract. Around the same time as Duckitt's initial grant request, Yonge issued a public notice soliciting persons to take over the contract to supply meat to the military garrisons. Previously, the Commissary General had negotiated these meat contracts with three to four Dutch graziers, but while the Burgher Senate had set the price of beef and mutton at 2 ½ pounds of meat per skelling for the Cape residents, the prices negotiated for the Army contracts was never more than 1 ¾ pounds per skelling. Yonge thought these were absurd terms and that government should be served at the same price as the inhabitants, despite being told by the new Commissary General, John Pringle, and the Fiscal, Rijnveld, that the price was higher for the government because the risk was higher due to the extent of production and the vulnerability of cattle in the drought-prone *Zuurveld* in the unsettled regions on the "Caffre Frontier."⁶⁹

But this excuse for such a high price fed directly into the colonial government's anxieties about the frontier. The Cape burghers who wanted to fulfill the contracts were not using their own permanent farms. They were sending their stock out into the eastern frontier with herders, or, more often, just buying the stock directly from *trekboers* who would drive their herds to

⁶⁹ "Report of the Commissioners appointed to investigate certain Charges against Sir George Yonge," RCC, vol. IV, 232

Graff-Reinet, herds and *trekboers* who then demanded to be protected by the government. So Yonge refused to renew the existing contracts to anyone offering less than 2 ½ pounds, even refusing an offer for 2 ¼ pounds per skelling. He lied to the Senate and claimed he only received one offer, and that was from William Duckitt.⁷⁰ Duckitt himself claimed that, while he had not expected an opportunity to prove his mettle so soon after his arrival, it was nevertheless his duty to step forward to prevent the imposition of the “appearance of a monopoly” among wealthy Dutch stock producers who had, it was thought, made a pact to not offer more than 1 ½ pounds in order to force Government’s hand.⁷¹ When the Fiscal, Rijnveld, heard that the new contractor had agreed to the 2 ½ pound rate, he had little choice but to give Yonge his blessing to enter into the contract with Duckitt. Certainly Yonge saw this as an answered prayer and proof of Dundas’s “wise measure” of sending out Duckitt, whose “opportune arrival” had proved of infinite advantage to the Government by which “a mischievous and powerful combination has been broken.”⁷² He dismissed the initial costs of the department and Duckitt’s new contract, claiming that whatever costs occasioned by Duckitt’s operations would be offset by the 100,000 RXD to be saved in a single year by purchasing meat at the lower price and the promise that Duckitt could “secure the government abundant and certain supplies of all the produce this fertile land can yield” without resorting to the frontier.⁷³

Duckitt was loaned additional government lands approximately 60 miles north of Cape Town in order to fulfill his contract. But to the great chagrin of both Pringle and Rijnveld, Yonge had actually entered into a contingent contract with Duckitt, wherein the price for meat

⁷⁰ Yonge to H. Dundas, Jan. 5, 1801, RCC, vol. III, 381

⁷¹ Duckitt to Huskisson, Jan. 6, 1801, RCC, vol. III, 396.

⁷² Yonge to H. Dundas, Jan. 5, 1801, RCC, vol. III, 380

⁷³ *Ibid.*, 385

would be set at the 2 ½ rate for a year, but would be allowed to fluctuate afterwards depending on the expense of production. Both Pringle and Rijnveld wrote directly to Henry Dundas on the offensiveness of the contract, “intimately convinced that Mr. Duckitt, who had so recently come to this country, alike ignorant of its language, manners and resources, could, of other hands, be the mere cover for future plots for raising the price of meat.”⁷⁴ The “other hands” involved in the deal were Jacob and Sebastiaan van Reenen, “two men of doubtful character... and of known disaffection to the British Government and its interests.” Indeed, Duckitt had subcontracted out the entire contract in a “loose verbal promise” to the Van Reenens, who, instead of supplying him with the meat, illegally sold it out of their private butchery at a much higher price.⁷⁵ Duckitt was seen, rightfully so, as the puppet of the Van Reenens, who had used him to gain access to prime government grazing lands. As long as Yonge was in office, he was able to protect Duckitt, but when he was recalled in April of 1801, Duckitt was left to manage the fallout of the bad deal on his own at the expense, ironically, of his arable productions, which were going quite well. While Duckitt remained committed to the idea of mixed husbandry, it had taken him no time at all to figure out that the money lay elsewhere. After all, it was never his intent to fulfill the Government meat contract in a way that wed tillage and stock-raising. He knew he would need to rely on several unenclosed 6000-acre loan “farms” as the Dutch graziers had always done.

When Yonge was officially recalled on April 6, 1801, the ascension of Gen. Francis Dundas, who had made his animosity towards Yonge and Duckitt abundantly clear, put Duckitt in a panic. Yonge had left Duckitt with a long letter of introduction to his projected successor, Lord Glenbervie, which explicitly placed Duckitt within the formal civil establishment and

⁷⁴ “Report of the Commissioners...Yonge,” RCC, vol. IV, 224

⁷⁵ *Ibid.*, 225

instructed Lord Glenbervie that Henry Dundas had promised Duckitt a land grant of 1000 acres within 20 miles of Cape Town. He absolved Duckitt of any blame, informing the new governor that “in the outset of [Duckitt’s] business, he has met with those sort of difficulties which always occur on such occasions from the prejudice, envy and nature of mankind, which nothing but his own Zeal and my protection have enabled him to counter.”⁷⁶ But Lord Glenbervie, an old man in failing health, never made it to the Cape. Gen. Dundas lost no time in essentially recalling Duckitt, or at least recalling the resources of his department. Most of his slaves were reassigned, as well as most of his grazing lands, without which he could not hope to fulfill the contract. Duckitt knew he was lost without Yonge and made an impassioned plea for Henry Dundas’s intervention. He claimed that the Acting Governor was actively trying to sabotage the course of improvement in the colony, which, for him, amounted to abject negligence of his duty to the king—he didn’t say treason. He warned that should he be “robbed of the Strengths Sir George [Yonge] furnished” him, he could not possibly fulfill his own duty to the king. He assured Dundas that the heavy expenses for his department were at an end, and that in a few years, the colony would be “over-burthen’d with Corn.”⁷⁷

But Gen. Dundas, who considered the whole project of agrarian intervention to be a waste of resources and would rather have seen the Cape dependent on Indian grain paid for by a robust stock industry, claimed that there was no official record of Duckitt’s being sent out on government account apart from a brief letter detailing the pension to be paid to his wife.⁷⁸

⁷⁶ Yonge to Glenbervie, 24 April 1801, f. 19, CO 1, WCA

⁷⁷ Duckitt to H. Dundas, 26 April 1801, RCC, vol. IV, 476-7

⁷⁸ While it is highly unlikely that Gen. Dundas, as Lt. Governor and (honorary) vice president of the Agricultural Society, was unaware of the exact terms of Duckitt’s employment and

Duckitt wrote requesting that Henry Dundas should send his nephew confirmation of the terms of his employment, not knowing that Gen. Dundas had already requested that information three months earlier and that a letter from William Huskisson, presumably upon Henry Dundas's orders, was en route that said "Sir George Yonge and Mr. Duckitt have very much misunderstood the situation in which the latter is placed at the Cape of Good Hope."⁷⁹

According to Huskisson, Duckitt should never have been given anything beyond his £500 salary and the supplies he carried with him at government expense, and that anything beyond that amount given for his department was to be accounted for and considered government property.⁸⁰

It is unclear whether this letter represented a betrayal of Duckitt, plainly a departure from what he had been led to believe upon leaving England, or if the response even came from Dundas at all. Huskisson specifically stated that the orders came from Henry Dundas, but Dundas had announced his resignation from the War Department a month before the date of the letter. In a letter dated only two days after the resignation, the new Secretary of War Lord Hobart requested that dispatches should henceforth be sent to him.⁸¹ Ultimately, due to the three to four-month time lapse in communications between London and Cape Town, it might not have mattered for Duckitt who had authorized the order: it had already become evident that he would

operations, he refused to acknowledge the validity of the department until such time as absolute proof could be furnished.

⁷⁹ Huskisson to Gen. Dundas, Mar. 16, 1801, RCC, vol. III, 422

⁸⁰ Ibid, 443

⁸¹ Hobart to Gen. Dundas, 18 March 1801. Supposedly Dundas (along with Pitt) had both resigned over confrontation with George III on Catholic relief, but it was rumored that Dundas was apprehensive of enquiries of his financial management of the department. See R. Thorne, ed., "Dundas, Henry (1742-1811)," *The History of Parliament: The House of Commons 1790-1820* (London: Boydell and Brewer, 1986),

<<http://www.historyofparliamentonline.org/volume/1790-1820/member/dundas-henry-1742-1811>>

not be able to fulfill the quotas stipulated in his meat contract, that he would not be given an open purse for his experiment farm, and that Gen. Dundas was emphatically not Sir George Yonge.

In June of 1801, General Dundas informed Duckitt that he should directly request permission for any purchases made on government account no matter how small. Duckitt was dismayed at the request. “Surely,” he asked Gen. Dundas, “Your Honor does not mean I should [sic] dispatch a Man and Horse, and to trouble Your Honor for every Trifling Job...when the delay of obtaining an answer probably may cause the expense to be enlarged?”⁸² He declared such instructions would be the demise of his department, but he nevertheless complied only to find that Gen. Dundas summarily denied every request. Hoping to enclose a large portion of the farm at Klapmuts to enable him to capture manure for his crops, Duckitt’s first real request of Gen. Dundas was for timber to erect fences. Duckitt was told that he was free to have timber harvested from the government forests at the standard price, but that the expense must be borne himself, stating that until Duckitt submitted a return for the large sums advanced to him since coming to the colony, no requests for additional funds would be honored.⁸³ This reply was repeated no less than three times to various requests before Duckitt eventually got the message.⁸⁴ He tried to explain to Gen. Dundas that he could not possibly hope to make an official return for his properties, since, aside from his grasses (hard to quantify) and spring barley, he had not possessed the farms through a full autumn harvest yet, but Dundas remained firm. No funds

⁸² Duckitt to Dundas, 18 June 1801, f. 82, BO 91, WCA

⁸³ Draft reply Dundas to Duckitt, 27 June 1801, f. 42, BO 45, WCA

⁸⁴ On 4 August 1801, he again asked for timber, on 19 September he asked for 500 new ewes, 300 wethers, and 50 oxen, and on Oct 8 he asked for a new batch of slaves. After the last request, Dundas summoned Duckitt to Cape Town to, presumably, give him an in-person dressing down. f. 96, BO 91, WCA.

would be forthcoming until he saw an official return and schedule of repayment or until direct instructions to the contrary arrived from the Secretary of War.⁸⁵ Duckitt tried to insert himself into Dundas's good graces several times. In July he sent his best plough and ploughman to the Government House to prepare the ground for Dundas's spring planting as a personal favor and to "excite the curiosity of the public," as well as a package of sainfoin seeds for the government horse paddocks.⁸⁶

His overtures, however, were overshadowed by the collapse of his meat contract. The Van Reenens had failed to make good on their promise to supply Duckitt with the stock he needed to, in turn, supply the army garrisons. Gen. Dundas, all too aware that an army without fresh meat was an army prone to unrest, was livid. Duckitt was allowed to resign the contract at great personal expense, but was stripped of all his occupied lands with the exception of Klapmuts and his family's farm in Simon's Town and placed under arrest for more than a week while a full inquiry into his conduct was held in Cape Town. As he wrote while "still unfortunately the prisoner," he was now at a loss of what to do with the government stock under his care, which could not be supported on Klapmuts alone, lamenting that he could not hold himself responsible for the success of the department given such constraints.⁸⁷

Duckitt grew increasingly bitter in the following year, blaming Gen. Dundas for undermining all his best efforts. "I am confident," he wrote, "had General Dundas been

⁸⁵ Duckitt to Barnard, 2 July 1801, f.90, BO 91, WCA. In this letter there is the assumption that Gen. Dundas hasn't the slightest idea how agriculture works: "It is impossible a return can be made until after the harvest, and also for improvements to be made without an expense, but surely no private individual would refuse this."

⁸⁶ Duckitt to Dundas, 20 July 1801, f. 47, BO 45, WCA

⁸⁷ Duckitt to Barnard, 3 December 1801, f. 54, BO 45, WCA

acquainted with the nature of farming I should have met with a different treatment.”⁸⁸ When Dundas sequestered the adjacent grazing lands from his farm at Klapmuts, Duckitt tried to explain that, in accordance with the principles of Enlightenment mixed husbandry, “the Profits from Farming must be united, partly from Tillage, and partly from grazing...for the [arable] Land which will maintain Stock the longest, must be the Best.”⁸⁹ He held back little of his upset, remarking that he had advanced his own capital for over twelve months to cultivate farms for the government, an unreasonable state of affairs according to the rules of English agrarian society: “What Gentleman woud [sic] suffer his Steward to do that, much less ought Government!”⁹⁰ Gen. Dundas, in response, stopped communicating with Duckitt altogether on the needs of his department, scribbling (or having Barnard do so) on the reverse side of incoming letters that they needed “no reply as Mr Duckitt has already in repeated and express terms been informed that His Honor the Gov. will not for the present allow any further expenses to be incurred by the Agricultural Department.”⁹¹ Several months later, Dundas would demand back rent in the amount of 2663 Rxd for all government lands “loaned” to Duckitt by Yonge, though in the end it was reduced down to 700 Rxd.⁹² Even his most impassioned, perhaps impudent, entreaties were unheeded:

Your Honor may be assur'd nothing will be wanting on my part if properly supported, of which I was assured when *I abandon'd my Friends and Expectations in England*, I hope and trust your honor will consider that a Farm in a State of Nature without Proper Buildings cannot be put in order *without strength and expense*, any Practical Farmer can inform Your Honor, a Farm cannot make a Return Like A Trade, It must require Time. I

⁸⁸ Duckitt to Barnard, 15 March 1802, f. 60, BO 45, WCA

⁸⁹ Duckitt to Gen. Dundas, 11 November 1801, f. 103, BO 91, WCA

⁹⁰ Ibid.

⁹¹ Draft Reply, Duckitt to Barnard, 16 April 1802, f. 69, BO 45, WCA

⁹² “Bill for William Duckitt to Government for the Rent of Lands,” 20 August 1802, f. 74, BO 45, WCA

flatter myself Your Honor is well aware that there never was such Encouragement given for Improvements as at this Moment, *and this Colony calls aloud for it!*⁹³

The accusation, not actually invalid, was that Gen. Dundas had performed a cost-benefit analysis of Duckitt's operations that failed to recognize the complexities of husbandry. It is difficult to distinguish completely Duckitt's instinct for self-preservation from his commitment to the particular agrarian vision of the colony, but, as much as it might seem that Duckitt was at this time a lone agent, he was actually carrying the torch for those, including Henry Dundas, who advocated a strong intervention into the Dutch agrarian economy. The typical story told about the first British occupation is that they had no long-term vision for the colony, desiring only to maintain the peace and provide a secure refreshing station for EIC ships on their way to India, but this, as we saw earlier, was far from the case. For Francis Dundas, however, there was no utopic agrarian future for the Cape. He clearly anticipated the return of the colony to the Dutch, he saw no opportunity there for potential British emigrants, and he viewed the Cape as an informal satellite of India under temporary British custody for no other reason than to keep it from the French. He had the mind of a merchant, not a farmer. Why waste money attempting to develop self-sufficiency in grain when grain could be easily obtained from India and paid for by the profits of stock-rearing or wine-making? It was a more or less perfect model of regional specialization and comparative advantage.⁹⁴

V. The Batavian Interlude:

Ironically, given that Duckitt's whole department had been created in response to disdain for Dutch agricultural practices, relief came in the form of the Batavians. It took several months

⁹³ Duckitt to Gen. Dundas, 18 June 1802, f. 81, BO 91, WCA. Emphasis in original.

⁹⁴ Maurice Boucher and Nigel Penn, *Britain at the Cape, 1795 to 1803* (Brenthurst, 1992), 78–80.

for the conditions of the Treaty of Amiens, signed on March 27, 1802, to reach the Cape. The treaty's third article returned the settlement to the new Batavian Republic in January of 1803. Gen. Dundas cooperated with Duckitt for the first time in the quick disposal of stock and produce from government properties to prevent them from being confiscated by the Batavians at the start of the New Year. The British establishment quickly dissolved and dispersed in 1803, but Duckitt and a handful of other British settlers, mostly former military men, remained in the colony. He passed a much easier time under the two and a half years of Batavian rule than he had under British rule. He pitched a new project to the Batavians. Of all the things he brought with him to the Cape, his grasses and his ploughs had sparked the most attention from Dutch farmers. By the end of 1802, his farm in Simon's Town had been mostly engaged with hay production with only enough wheat and vegetables to support his household. But, separate from his government accounts, he had been manufacturing ploughs for Dutch planters there as well. If full-scale mixed husbandry couldn't be made to work in the Cape, grass might be salvageable, and at a great profit to Duckitt.

His pitch to the new Batavian governor Jan Willem Janssens emphasized the benefits of having good grass for stock to graze in the vicinity of Cape Town, instead of in the interior. The future lay, he said, in sown grasses.

By this Management...I may safely say in that event, this Colony need not depend on the cultivation of the Interior. The Land being thus cultivated [by better ploughs], Good Grasses may be introduced for the purpose of feeding or making Hay, which would be *the Means of changing the Face of the Whole Country.*⁹⁵

⁹⁵ William Duckitt, "Proposal to the Batavian Government on the Improvement of Agriculture," n.d. [1803], f. 18, CO 1, WCA.

Despite the weight of his failed department, and a failed colony, Duckitt managed to see a way forward even in the face of a very uncertain future. Better ploughs were the key to better grass. Better grass was the key to better grain. In 1803, Duckitt received permission from Janssens to sell his ploughs to Dutch farmers in Cape Town. Duckitt proposed a wager of 1000 rix dollars (the market price of his ploughs) that his ploughs could outperform any other in the Cape, and offered to custom-make ploughs based on personalized assessments of the soil quality on individual farms.⁹⁶ He did not, however, receive any form of financial support (which he had solicited as an investment) on the part of the Batavian administration or the Agricultural Society, a slight that caused Duckitt to resign from the Board.⁹⁷ Though certainly, Duckitt had been successful in convincing well-capitalized free burghers like the Van Reenans to use his implements, he had not yet convinced Dutch farmers of the inherent worth of the entire system of husbandry that he advocated. For most Dutch farmers, agrarian practices were always secondary to the element that was wholly beyond their control: rainfall. If abundant rains fell, then the land only had to be “scratched” to yield robust, plentiful grain. If the rains did not fall, even the most improved methods could not force a good harvest.⁹⁸

The Dutch had not been unaware of the agrarian unrest or attempts at improvement enacted by the British occupation, however. Indeed, Janssens tried to replicate Duckitt’s department under a new superintendent, a younger son of a Dutch nobleman, the Baron von Hogendorf. Little is known about this department, other than the fact that Hogendorf took over the management of several government loan farms once possessed by Duckitt, and that Janssens

⁹⁶ Ibid.

⁹⁷ “Mr Duckett’s Remarks to the Board of Agriculture” n.d [1803] WCA, CO 1, f. 18

⁹⁸ Theal, 87

requested assurances in the Articles of Capitulation in 1805 that Hogendorf receive “all the rights and privileges as, from the public records, it shall appear the Batavian government mean to have given him.”⁹⁹ Yet improvement under the Batavians looked very different from Duckitt’s. The Agricultural Society disbanded in 1804 and re-formed with many of the same members under a Batavian commission on the “improved breeding of cattle,” it having become clear to the Boers that the future lay in stock breeding, not arable farming.¹⁰⁰

In the meantime, *trekboers* and their stock advanced further and further into Xhosa territory in the northeast, leading to major cycles of violence on the frontier. Boers pushed into Xhosa grasslands and arable lands, and Xhosa, in return, raided Boer stock, especially cattle, which then gave Boers a rationale to kill and/or capture Xhosa in retaliation.¹⁰¹ The primary zones of these conflicts were on the well-watered prime lands on the banks of the Boesmansrivier (Bushman’s River) near present-day Kenton-on-Sea in the Eastern Cape and those lands around the Great Fish River that stretched from the coast near present-day Port Alfred to Cradock. The territory between these two rivers, known as the Zuurveld, was largely controlled by an agro-pastoralist Xhosa group ruled by Chief Ndlambe, who would be, along with the prophet Makhanda, a thorn in the side of Dutch and British governments well into the 1820s. Ndlambe refused to cede territory to encroaching *trekboers* (or, more often, their stock) and considered those Xhosa who extended peace offerings to the Dutch to be his enemies. The Batavian administration capitalized on old territorial disputes between Ndlambe’s people and rival Ngqika, Chungwa, and Jalusa clans, but this was insufficient to check Ndlambe’s power,

⁹⁹ “Copy of Articles of Capitulation proposed by Lieut. Gen. Janssens duly authorized by Maj. Gen. Sir David Baird,” [n.d.] RCC 5, 299

¹⁰⁰ Earl Caledon to William Windham, 7 June 1807, RCC 6, 150.

¹⁰¹ Nigel Penn, *The Forgotten Frontier*, 17-21; Crais, 122

particularly when Batavian soldiers were recalled from the eastern frontier in 1804-05 to arm the garrisons near around Cape Town when hostilities resumed in Europe.¹⁰²

To add to the Batavian government's troubles, the London Missionary Society had set up a thriving and meddlesome mission in Bethelsdorp in the Uitenhage District in 1801. Francis Dundas had been uncertain about the prospect of allowing missionaries to insert themselves into colonial politics, but after a rebellion of Khoikhoi and Xhosa laborers in Graff-Reinet (which was itself rebelling against British rule) in 1799, Dundas approved an allocation of land to the London Missionary Society in hopes that they could keep Khoikhoi rebels from joining forces with the Xhosa. In addition to washing as many Khoikhoi as possible in the Blood of the Lamb, they stood in stark opposition to the Boer pastoralists who depended on Khoikhoi labor. Under the administration of its head Missionary, Jan van der Kemp, Bethelsdorp became a refuge for young Khoikhoi *inboekselings* or contract laborers running from their masters' stock farms.¹⁰³ Boers attempted to oust the mission and even to assassinate van der Kemp, enlisting the support of the new Batavian government in 1803 and 1804, but the Bethelsdorp mission operated on its own terms, refusing to cooperate with government order to "release" Khoikhoi men. The Batavian government accused them of sowing seeds of rebellion, and they, in turn, accused the government of endorsing the barbarism of Boer pastoralists in Uitenhage and Graff-Reinet and roving *trekboers* on the Zuurveld and on the Orange river.¹⁰⁴

¹⁰² Keith Smith, *The Wedding Feast War: The Final Tragedy of the Xhosa People* (London, 2012), 30-33

¹⁰³ Legassick and Ross, "Slave Economy to Settler Capitalism," 259

¹⁰⁴ Ibid., 260-2; Elizabeth Elbourne, *Blood Ground: Colonialism, Missions, and the Contest for Christianity in the Cape Colony and Britain, 1799-1853* (McGill-Queen's Press - MQUP, 2002), 148-50.

By the time the British retook the colony in 1806, they had inherited a full-fledged frontier war (“scenes of blood and devastation”) spurred by a largely unchecked *trekboer* advance. This *trekboer* population was not just more aggressive, but it also grew in response to the consolidation of land and power among the free burghers in the Western Cape, which had increasingly closed out economic opportunities for poor whites. Boer raids on Xhosa villages by informal militias based in Graaf-Reinet and the newly-formed *drost* of Uitenhage (near present-day Port Elizabeth) increased. The Batavian government under Janssens and De Mist had certainly put forth a much greater effort to reach a peace between Boers and Khoikhoi in the north and Xhosa in the east, but they were unprepared to completely relinquish the Zuurveld, which, due to overstocking in the west, had become the prime grazing lands for much of the Cape’s cattle upon which the economy depended.¹⁰⁵

VI. The British Back in the Saddle, 1806-1814

The Batavians surrendered the Cape to the British in January of 1806 following the renewal of open war with Napoleon and his allies in 1805. The British yet again inherited a colony in the throes of a dire grain shortage and an ongoing frontier conflict. Duckitt, who largely fades from view in the archival record between 1802 and 1806, re-emerges within a few months of the Cape’s return to the British under the acting governorship of Sir David Baird, offering again the cure for social, economic, and moral ills in the Colony—mixed husbandry. He masterfully re-worked the history of his time in the Cape to portray himself as not just an underdog, but an unheeded prophet: “I may venture to say had my advice been followed on my

¹⁰⁵ Legassick and Ross, “Slave Economy to Settler Capitalism,” 256-9; Elphick and Giliomee, *The Shaping of South African Society, 1652–1840.*, 325–54; Beinart, *The Rise of Conservation in South Africa*, 69–72.

arrival, Magazines would at this critical moment have been wanting to contain the grain. I feel exceedingly [unreadable] seeing a country in a state of want when it ought to be flowing with Milk and Honey.” Yet, despite the rumors that Baird was “determined to Encourage Agriculture,” Duckitt was again barking up the wrong tree.¹⁰⁶ Duckitt would need to wait until the arrival of the permanent governor, Du Pre Alexander, Earl of Caledon, to have a sympathetic ear for his own projects.

Baird did, however, reinstitute the Batavian’s Board of Agriculture under the guise of a new Agricultural Commission to manage the funds and resources recently capitulated. It was not an insignificant amount. Since Yonge started the first Agricultural Society, it had accumulated 55,719 rix dollars in cash and “moveable” property, including 20 slaves, 20 horses, 148 head of European cattle, and 1206 merino sheep kept on government properties throughout the colony.¹⁰⁷ Under the Batavians, operations of the Agricultural Board had consolidated onto three main properties, the adjacent Groote Post and Groene Kloof (north of Cape Town) and the Roggeveld (northeast of Stellenbosch), and Baird saw no reason to move its operations. However, as Duckitt had pointed out, these properties were little more than government-funded sheep stations and were doing little to advance arable farming in the colony, and Baird’s successor, Lord Caledon, would certainly take this into consideration. Under new leadership, the new Agricultural Commission had produced an abundant harvest of grain and grass by the end of 1807 at Groote Post. Nearly 17,000 bushels of wheat, 24,000 of barley, 15,000 of oats, and 220 tons of hay had been sent to market. Considering the grain alone, this was almost equal to the

¹⁰⁶ Duckitt to Baird, 21 March 1806, WCA, CO 1, f. 18

¹⁰⁷ “Statement of the Funds Granted by the Batavian ... Commission Appointed for Improving the Breed of Cattle and Agriculture,” 13 May 1806, WCA, CO 1, f.5a

total amount of grain brought to the official granaries in the previous year by independent farmers.¹⁰⁸

Despite the success of the Commission's arable production, there was still a deep rift between its members, divided fairly neatly along British/Dutch lines, on where to focus the commission's energies. The small minority of British members (who were, aside from Duckitt, part of the Civil or Military Establishment) that supported an even-handed arable/pastoral approach were overwhelmed by the Dutch members who wished to see the Cape become a producer of fine merino wools. The "improvement" the Boers wanted was not that of Enlightened mixed husbandry, but an improvement of the size and quality of their sheep. The Dutch president of the Commission, Rijneveld, who was somewhat sympathetic with the four members "particularly charged" on the point of arable development, agreed that the "improvement of this part of agriculture may well be said to be an object of the greatest importance in this colony," but admitted that his countrymen were "very far backwards." The only solution he could see was either the cheap production of English ploughs in the Cape (a smaller price than Duckitt was accustomed to charging) or to lean into the production of fine wools.

Caledon ordered that a full demographic and agricultural census be taken of the colony in 1808. It revealed both the state of land possession, the social make-up of the Cape and surrounding districts, and the extent to which the overwhelming majority of land and subjects were still unknowable and uncontrollable. Within, give or take, a 100-mile radius of Cape Town

¹⁰⁸ "State of the Cattle and Produce at the Groote Post" 29 Dec. 1807, WCA, CO 5, f. 6; "Account of Grain Received and Issued out of Government Grain Magazines," 1 Nov. 1806, WCA, CO 1, f. 24

there were an extraordinarily small number of freehold or permanent quitrent estates, 228 in all, for a total of 17,078 morgens (approximately 40,000 acres). While these were not the 50-100 acre farms of the British yeomanry, the average was just over 175 acres per farm, which is much closer to the ideal “close settlement” than one would expect.¹⁰⁹ But this number is actually quite deceptive. It did not include the nearly 450,000 acres of the massive 6000-acre government loan “farms” in the country districts, rented out on a year-to-year basis and used almost exclusively as “uncultivated pasturage” for sheep and cattle. It also did not include the incalculable frontier acreage in the loose possession of *trekboer* squatters, estimated very conservatively as being triple or even quadruple the size of the colony’s surveyed (however loosely) lands.¹¹⁰

A little over 3000 acres were sown in fodder grasses and legumes, less than 1% of all surveyed pasturage. Compared to the near absence of sown pasturage when the British had arrived in 1795, Duckitt is perhaps to be commended for his advocacy of sown grasses, but it was still miniscule even when compared to the much smaller colony at New South Wales. Yet, compared to the acreage in grain crops, a mere 12,000 acres total, the fodder acres become less miniscule. Fodder crops counted for nearly a quarter of all arable cultivation (grain, garden vegetable, vineyard).¹¹¹ While sown fodders in most agricultural lands in England at the time would have taken up a half or more of total cultivation, a quarter was actually not too shabby. This meant, moving forward, that the problem was less about the practices of farmers, but about the increasing gulf between an Enlightened agrarianism that oriented all stock-raising to serve

¹⁰⁹ “Census Return for 1808” 23 Feb. 1808, WCA, CO 9, f. 10

¹¹⁰ *Ibid.*, See also Weaver, 145

¹¹¹ *Ibid.*

arable soils and the more economically, if not politically, practical agrarianism of long-range pastoralism.

Native grasslands increasingly became an object of dispute not just between *trekboers* and Khoikhoi and Xhosa pastoralists, but between free burghers, *trekboers*, and the Agricultural Commission, which further incentivized government to press the cause of sown grasses with greater urgency. Petitions and complaints flooded the Colonial Secretary's office regarding grazing boundaries, particularly when they concerned government properties (which accounted for the majority of land in the Western Cape). Suddenly the 6000-acre government loan farms that had never needed hard and fast boundaries had become overstocked. Stock raisers patrolled the approximate borders of their lands and became more meticulous about marking their sheep and cattle. The governor often had to intervene directly into land disputes as they often involved district landdrosts as complainants or objects of complaint.¹¹² Landdrosts were accused of taking bribes to turn a blind eye to trespass, or they would let their own stock graze on the property of others. There were several instances of shepherds (mostly Khoikhoi "apprentices" or slaves) accused of grazing cattle on a neighboring farm's grassland being captured, beaten, and sent back to their masters as warning.¹¹³ The Board of Agriculture was often directly involved in these disputes as well. Despite advocating close settlement and arable development, its operations were funded in large part through the rearing of stock on the vast Groene Kloof property. The Board utilized sown grasses on its Groote Post farm for its dairy and breeding stock, but the majority of its enormous cattle and sheep herds grazed on a massive, unenclosed

¹¹² Nigel Penn, *The Forgotten Frontier: Colonist and Khoisan on the Cape's Northern Frontier in the 18th Century* (Ohio University Press, 2005), 267–79.

¹¹³ Francis Dashwood to Sir John Francis Cradock, 21 Oct. 1812, WCA, CO 3891, f. 668

loan farm like all the other Dutch graziers within a 100-mile radius of Cape Town. Its stock trespassed onto neighboring farms with great frequency. Most government loaned stock farms had a designated “resting place” where graziers and even *trekboers* in the interior could stop with their herds for the night on their way to the Cape Town markets. Sebastiaan van Reenen, the lessee of the Konterberg property on the southern border of the Board’s Groene Kloof pasturage, accused the overseers of Groene Kloof stock of using his land as fattening grounds for market, deliberately taking up to a week to cross his land (6000 acres or approximately 10 square miles), when it should have taken less than a day.¹¹⁴

By the end of Caledon’s tenure in the Cape in 1811, the state of agriculture and the land conflicts both in the country districts surrounding the Cape Peninsula and in the ungovernable eastern interior had changed very little since 1806. The Agricultural Board was little more than a corporate version of an opulent free burgher. Despite its mission to “convince [Boers] by ocular demonstration of the advantages to be derived from improved husbandry,” it had, on the whole, failed to answer. From his post as Colonial Secretary, Colonel William Wilberforce Bird, who would ten years later compose a comprehensive indictment of Cape agriculture, observed that while the Agricultural Board had been put in possession of nearly 50 square miles of “excellent well watered land in the most advantageous situation in the colony” in 1806, the land remained little more than a sheep station with a larger-than-average garden. The fault, he argued, was not the land or lack of enthusiasm on the part of “true” husbandmen, perhaps a nod to Duckitt and his men, most of whom had stayed on in the Cape as farmers or mechanics. The trouble was still Boer “prejudice,” both within and outside the Board. It was nearly impossible, he claimed, to

¹¹⁴ Sebastiaan van Renen to Lord Caledon, 22 June 1808, WCA, CO 3870, f. 34

“convince the agriculturist how much his interest would be benefited by keeping his stock entirely on his own ground, by sheltering it there, and raising the necessary quantity of food for its consumption” when agrarian mobility was still the order of the day. The population of Cape Town and its surrounding districts was continually “bursting thro’ its lines and spreading itself wherever it can find a place to settle upon” with complete disregard for territorial borders or social order.¹¹⁵

Another observer, Lt. Colonel James Collins, in response to the suggestion that government should set up additional districts (*drostdies*) to provide “the maintenance of order and the improvement of the colony” as *trekboers* continued east, bemoaned the necessity of not only “rescuing” Africans from the “miseries of barbarism,” but having to do so with the Dutch Boers as well. According to him, there were not enough honorable Boers to be found for the post of landdrost in new districts in a country “almost totally destitute of public spirit.”¹¹⁶ Collins’ suggested remedy, given that the Agricultural Board was fairly impotent to change the settlement patterns and farming practices of the *trekboers*, was to require all farmers in remote districts to send “a portion of their children” to British-run agricultural schools whereby “the rising generation would all be Englishmen.”¹¹⁷ If the rational adult could not be made to see the prudence of British husbandry, perhaps his children could be reshaped into Britons.

Yet the dichotomy between Enlightened British husbandry and degenerative Boer semi-nomadism is perhaps an oversimplification. Certainly not all advocates of close (or at least fixed) settlement and mixed husbandry were British. One of the chief agrarian reformers throughout

¹¹⁵ Secretary William Wilberforce Bird to John Truter, 21 Dec. 1810, RCC VII, 467

¹¹⁶ Lt. Col. James Collins to Lord Caledon, 6 Aug 1809, RCC VII, 98

¹¹⁷ *Ibid.*

this period was Johannes Andries Truter, the Fiscal of the Burgher Senate in charge of land distribution, surveying, and revenue, and the first South African-born man to receive a knighthood. Truter, as a young man, had worked closely with Sir John Barrow during his tenure at the Cape in the 1790s, often traveling with him as his assistant on surveying trips. Barrow married his sister, Anna Maria, in 1799. Truter aligned himself with Barrow, Duckitt, Bird, Caledon, and, later, John Francis Cradock, often to the chagrin of his own countrymen. When Caledon revisited the idea of prohibiting the occupation of loan farms to lessees who did not also maintain productive arable lands in the Cape districts, Truter claimed that such a measure was far too little. He argued passionately that he could not see “any sufficient grounds to be able to affirm that there exists in this colony a right of pasturage which government ought to respect.”¹¹⁸ It was only by breaking up the commons, stripping Boers of the “right” to squat on unsurveyed land in the interior, that the barriers standing in the way of agricultural improvement could be removed. No amount of modeling, cajoling, or incentivizing could match this kind of forced sedentarization.

At the heart of Truter’s proposed new colonial order was, as it had been for Barrow and Duckitt, grass. The creation of artificial pasturage would diminish or eliminate the need for what he called “waste pasturage” in the interior, but Boers would not willingly put their lands to sown grasses. They would need to be forced. The promotion of artificial pasture could be achieved only by strict regulations on grazing. Easy access to natural pasturage was injurious to agricultural improvement and social development.¹¹⁹ Nor was it enough to assess and then regulate the proportion of arable land to native pasturage as the VOC under Van Riebeeck and

¹¹⁸ J.A. Truter to Col. Bird, 28 June, 1811, RCC VIII, 102

¹¹⁹ *Ibid.*, 104

Van der Stel had once tried to do. There was no point, Truter argued, in continuing in a farcical version of mixed husbandry where arable land and pasture were separated often by hundreds of miles.¹²⁰ What was the use of cowpats left to wash away on the Highveld?

Of course, revoking all access to grassland beyond the limits of surveyed free and leasehold properties would have spelled the end of British rule in the Cape. Not only were the *trekboers* wholly dependent on those pastures, but the majority of free burghers in the Cape districts illegally grazed stock under the supervision of poor white Boers in the interior as well.¹²¹ Lord Caledon and his more aggressively agrarian successor, Sir John Cradock, knew that Truter's advice could never be followed, but Cradock in particular was adept at framing his attempts to curb *trekboerism* as part of the liberal protection of private property. His attempted solution was to break up the loan farm system, which "might have been suitable to the early state of this colony," but was inappropriate for agricultural improvement, in favor of secure title on perpetual quit-rent. Sedentarization would come with security of land tenure. With security of land tenure, "all improvements of the soil and all increase of fertility should indisputably belong to the landholder as his own...as well as his heirs."¹²² This was not the case, however. The granting of perpetual leases only solidified the division of Cape society between wealthy slave-dependent farmers and stock grazers in the West and semi-nomadic *trekboers* in the East and laid the groundwork for a much more systematic and calculated dispossession and subjugation of Khoikhoi and Xhosa populations throughout the Cape in the next four decades.¹²³

¹²⁰ Ibid., 103

¹²¹ Freund, "The Cape Under Transitional Governments," in Elphick and Giliomee, 213-34

¹²² "Proclamation by Sir John Francis Cradock," 6 Aug. 1813, RCC IX, 240

¹²³ See Keegan, 14-19

Conclusion: A Political Ecology of Failure

Failure can rarely be attributed to one source. In the case of Duckitt's department, so many elements worked against his scheme, perhaps it should come as no little surprise that it barely lifted off the ground before it came crashing back down again. First, Duckitt made crucial missteps: social and political faux pas, careless financial risks, and damaging associations. He was manipulated by an established Dutch gentry, most of whom, contrary to many earlier reports, were generally doing alright for themselves. He was maligned by Yonge's replacement, Francis Dundas, a pragmatic and parsimonious military commander who didn't see the point of funding agricultural improvements when soil mining and native *velds* supplied nearly enough grain and meat to feed the colony, and when the costs of importing Indian grain could be transferred easily to consumers in times of scarcity. But, ultimately, Duckitt was not able to convince his fellow settlers, Dutch or English, or his superiors, once Yonge had left the picture, of the indispensability of either himself or his methods at a moment of political transition.

Secondly, the British state was devoid of a coherent vision for the colony (not that such a thing is ever completely possible) in these early years of occupation. In a time of intense warfare and political uncertainty, the kind of long-term planning inherent to intensive agricultural development was a challenging concept. It was also unclear in this early period where the Cape fit in to the Empire as a whole. Would it be drawn more comprehensively into the East India Company's political and economic orbit? Would it become an African version of the American colonies—and, if so, would it be a Massachusetts or a South Carolina? Or would it just be a liability, another albatross around the neck of an already overstretched military? And, perhaps most importantly, an overdrawn British government simply could not afford to (or would not)

invest in the kind of wide-scale agricultural improvements they would have liked—genuinely, I think—to have seen in the Cape. Leaving the project up to one young, eager, and very well-connected (agriculturally, at least) man was a low-cost alternative to a much more expensive and interventionist approach—the kind of agrarian projects seen in the late-nineteenth and early-twentieth centuries on the part of actual (and not just nominal) Departments of Agriculture in southern Africa and elsewhere. But in 1800, even the modest price of William Duckitt was too costly, financially and politically.

Finally, there was in Cape a failure of scientific expertise, or, rather, the expertise brought over from Britain was insufficient to really understand, much less tame, these new landscapes. As seen in the previous chapter, scientific explorers such as Banks, Sparrman, and Barrow misread the landscape at the Cape, mistakenly assuming that a soil capable of producing such a rich and stunning botanical kingdom could easily receive and nourish the “portmanteau biota” of British settlers. Paired with the hubristic patriotism that convinced British colonial observers and planners that all the Cape needed was a distribution of a few good British farmers throughout the colony among the hopelessly indolent Boers and Africans—“the light that shineth in the darkness” if you will—Duckitt’s project was always in danger of falling short of expectations.

Failed projects like this one often get lost in historical narratives. They can be dwarfed by successes that follow failure: for example, the profitable pastoral turn in the mid-nineteenth century based on improved breeding programs and grassland conservation, or—perhaps more important to modern-day South Africa—late-nineteenth century discoveries of gold and diamonds. Alternatively, they can be incorporated without much analysis into narratives of more wholesale failures, i.e. losing the Cape (albeit briefly) to the Dutch in 1803. This dissertation

resists the whiggish impulse to render these early attempts to transplant mixed husbandry and its associated biota to NSW and the Cape irrelevant given what we know of the historical trajectories of these colonies. Cape burghers did not, no matter how active in various agricultural societies or boards, become improving planters. The colony was never able to become self-sufficient in grain. Improved farms in in Western Cape did little to entice pastoralists from the Eastern Cape.

Ecological imperialism in the case of the Cape, was historically contingent on a variety of different factors, which is why Enlightenment mixed-husbandry, particularly its sown grasses, was given a much more promising second chance in the 1810s and 1820s than it had in the previous two decades. Britain had survived its long and expensive encounter with Napoleon, and between 1809 and 1826 sent out to the Cape a series of agriculture-friendly governors: Du Pre Alexander (Lord Caledon), John Cradock, and Lord Charles Somerset. In the meantime, Duckitt had quietly made a small fortune and a name for himself in the Cape as a manufacturer of English ploughs, meaning that he could join in on new government-sponsored agricultural projects with less personal risk or responsibility. British officials and the few settlers who remained had become more familiar with their environments (though no less antagonistic towards its African and Boer inhabitants), meaning agrarian improvement, while somewhat less ambitious, could be better adapted to the soils and climate of the Cape. With the abolition of slavery looming, there was more incentive to find alternative modes of cultivation. Duckitt's failed Department of Agriculture should not be confined to a footnote in colonial histories of South Africa or environmental histories of Empire. His department was a classroom for the various societies, commissions, and departments that took on, to varying degrees, his mission in

the years that followed. To its contemporary observers, it demonstrated both the possibilities and pitfalls of agrarian settlement and development in new colonial landscapes. To historians today, it demonstrates how easily the course ecological imperialism could be stymied and transformed by the political and economic untidiness of colonial societies.

The small successes in agricultural improvements ushered in by British governments and, more often, by individuals, during the first 20 years of British colonization at the Cape, was completely impotent to curb *trekboer* advances on the frontier. Arguably, the British, despite the efforts of Duckitt, Yonge, Caledon, Truter, and Cradock, had no more spurned the *trekboer* cowboy agrarianism on Cape frontiers than had the VOC in the seventeenth and eighteenth centuries. While the 1810s saw the adaptation of improvement to stock farming, it remained unsatisfactory. It is for this reason that the British, beginning around 1816, began to consider a more radical approach, mass migration, as opposed to targeted agricultural interventions. This is considered at length in the next chapter. Cradock and his predecessor, Charles Somerset, as well as the emigration-friendly new Secretary of State for the Colonies, Earl Bathurst, reckoned that if they could not contain the *trekboers*, they could compete with them. The orchestrated ecological imperialism of William Duckitt's department had not been enough to reshape the landscape and people of the Cape. Instead of 72 bushels of the finest mix of English meadow grasses, they sent 5000 British men, women, and children to the frontier.

CHAPTER FIVE

The Soil or the Station? Colonial Agrarian Transformations and the March of Improvement, 1810-1840

I. Introduction

“There is no Eden in Nature; all is from the industry of man. We must do what all nations have done before us—collect from every quarter what is adapted to our soil and climate. We must new cloth our adopted county; we must hew down the useless gum trees, and plant the more useful fruit trees of Europe; and, in lieu of the present then herbage, give to our meadows the rich pasture of Britain.” Agricultural Society of New South Wales, 1822¹

John Thomas Bigge, the straight-laced royal commissioner who so famously dethroned the "Father of Australia" Governor Lachlan Macquarie in 1822, had scarcely spent half a year in England before he was commissioned by Parliament to sort out another purportedly disordered British colony, the Cape of Good Hope. Despite the many demographic, political, and environmental differences between the two colonies, the colonization of New South Wales and the Cape were part of the same post-American Independence project to develop agriculturally-robust, self-sustaining colonies that would provide a host of benefits to the mother country without becoming an economic or political burden. Both colonies received, at an official level, the care and attention of Britain's premier scientific mind, Sir Joseph Banks, as well as other agrarian patriots who hoped to see the colonies benefit from the best agricultural practices (and seeds) of Britain. Colonial planners and administrators in both colonies advocated intensive mixed husbandry over the land-extensive, wasteful, and politically-problematic husbandry that had, they claimed, spoiled much of North America and the Dutch-controlled Cape. To this end, as discussed in the previous chapters, Britain sent out "Fleets of Fodder" to New South Wales in addition to a variety of experts to oversee their agrarian beginnings or, in the case of the Cape,

¹ “Prospectus of the Agricultural Society of New South Wales,” 5 July 1822, Royal Agricultural Society Heritage Centre (RASHC), [Olympic Park, NSW], Agricultural Society of NSW Papers, Doc. 8, f. 4

reforms. Colonial administrators and officials at home, using a variety of stick and carrot methods (namely land policy reforms and emigration schemes) supported this vision in the early decades of British settlement/control of these colonies. Yet, the ground conditions (figurative and literal) in both colonies proved largely inconducive to this kind of improved British husbandry, and most free settlers in both colonies had turned away from the soil and instead sunk their labor and capital (however small) into stock raising on natural grasslands. It comes, perhaps, as little surprise that both colonies were re-assessed in the early 1820s by the same man, J.T. Bigge, a man who would come to the conclusion that mixed-husbandry, admirable as it was, would necessarily give way, if importation restrictions were lifted, to a pastoral economy based on fine wool. And indeed, both colonies had, by the mid-1830s, transitioned from arable farming to commercial pastoralism.²

This chapter concerns the years leading up to this pastoral turn in both New South Wales and the Cape, years characterized by a variety of last-ditch efforts to revive and support mixed farmers, official reassessments of the political and environmental suitability for the biota and practices of mixed husbandry, coordinated emigration of tens of thousands of British and Irish settler, and by attempts to impose order on settler appropriation of natural grasslands. Historians of colonial New South Wales and the Cape Colony have often portrayed early agrarian settlement as a rather straightforward march towards commercial pastoralism after the initial failure to replicate an unadapted version of British husbandry.³ While not denying that by the late

² John Ritchie, *Punishment and Profit;: The Reports of Commissioner John Bigge on the Colonies of New South Wales and Van Diemen's Land, 1822-1823; Their Origins, Nature and Significance* (Melbourne: Heinemann, 1970).

³ John Gascoigne, *The Enlightenment and the Origins of European Australia* (Cambridge, UK: Cambridge University Press, 2002); William Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950* (OUP Oxford, 2008); Geoffrey Bolton,

1820s and early 1830s both colonies were ripe for the wool boom precipitated by the opening of the British market, I resist the notion that it was either inexorable or a complete departure from the project of agrarian improvement.

This inexorability of commercial pastoralism in colonial histories has formed around the analysis of Bigge's commissions in both colonies. In histories of New South Wales, the Bigge reports are often interpreted as the official indictment of small-scale Emancipist-driven mixed husbandry and as a bastion for commercial, Exclusive-driven pastoralism.⁴ But far from settling the issue, I contend that the commission and reports affirmed the unresolved (and unlikely to be quickly resolved) agrarian tensions in the colony. The Bigge Commission may have been established at the insistence of Exclusives (most of them pastoralists) to reign in an overreaching, overspending (and farmer-friendly) government, but the documents used in compiling the reports demonstrate what I argue is a genuine appraisal of the successes, failures, and futures of Enlightenment mixed husbandry and of the potential benefits and pitfalls of land-extensive commercial stock raising. Much less has been written about Bigge's second commission in the Cape, likely because there was a 5-6 year lag between the commission and the publication of the

Spoils and Spoilers: A History of Australians Shaping Their Environment (Allen & Unwin, 1992); B. R Davidson, *European Farming in Australia: An Economic History of Australian Farming* (Amsterdam; New York; New York: Elsevier Scientific Pub. Co. ; Distributors for the U.S. and Canada, Elsevier North-Holland, 1981); Thomas Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand*, 1st edition (Cambridge, U.K. ; New York, NY, USA: Cambridge University Press, 1999); Jeanette Hoorn, *Australian Pastoral: The Making of a White Landscape* (Fremantle Press, 2007).
⁴ Ian M Parsonson, *The Australian Ark a History of Domesticated Animals in Australia* (Collingwood, Vic.: CSIRO Pub., 2000), 34–6; Michael Pearson and Jane Lennon, *Pastoral Australia: Fortunes, Failures and Hard Yakka : A Historical Overview 1788-1967* (Csiro Publishing, 2010), 3–15; Ritchie, *Punishment and Profit*, 43–5.

reports.⁵ However, Bigge and Colebrooke's Cape commission is interesting because it was less of a passive enquiry into the state of the colony than an active intervention. Bigge and Colebrooke were given powers normally afforded exclusively to governors. Well before the four official reports were printed up in Parliament, Governors Lord Charles Somerset and his successor Richard Bourke were implementing the reforms ordered by the commissioners during their year in the colony.

The reforms that followed the commissions in both colonies indicated a retreat from small-scale grain production. If closely settled, self-sufficient mixed farms were not feasible in the Eastern Cape, then large, permanent, British stock farms (as opposed to the largely transient grazing of the *trekboers*) might suffice. In New South Wales, Bigge set great store in the improving capacity of gentlemen (i.e. moneyed or respectable) settlers, colonial counterparts to the improving landlords at home. But he failed to fully comprehend the extent to which the majority of that class of settler, those men with the financial resources to invest in improvement and command the labor needed for intensive farming, had almost all directed their entire capital and energy to straightforward stock accumulation with no desire to also improve their arable operations. When Bigge put his stamp of approval on commercial pastoralism in both colonies, it is doubtful that he saw this action as a repudiation of intensive arable production, but rather as a way for colonists to accumulate capital that they could then reinvest in the land.

⁵ Zoe Laidlaw, *Colonial Connections, 1815-45: Patronage, the Information Revolution and Colonial Government* (Oxford University Press, 2005), 28–31; Clifton C. Crais, *White Supremacy and Black Resistance in Pre-Industrial South Africa: The Making of the Colonial Order in the Eastern Cape, 1770-1865* (Cambridge University Press, 1992), 105–10; Timothy J. Keegan, *Colonial South Africa and the Origins of the Racial Order* (University of Virginia Press, 1996), 96–7.

I examine mixed husbandry's "last stand" in these colonies in the 1810s, 1820s, and 1830s, which manifested in three main vectors: land reform, emigration schemes, and official and voluntary agricultural societies. Colonial governments attempted to establish land granting and land use policies in New South Wales and the Cape to encourage arable cultivation and discourage frontier sprawl. When it became apparent that convicts in New South Wales and coerced or slave labor in the Cape were ill-suited to the task of agricultural improvement, emigration schemes were implemented (after much debate) to bring free labor into the colonies to cultivate the soil. While these measures failed to revive mixed husbandry or to stem the tide of commercial pastoralism, they provided a rhetorical and practical continuity between improvement as a project of arable cultivation and a project of pastoral improvement, a continuity that centered on fodder. While natural grass provided the foundation of pastoral economies in both New South Wales and the Cape, artificial grasses were increasingly incorporated into pastoral improvement schemes at the hands of individual graziers and agricultural improvement societies and were often utilized (and, as a consequence, spread) on pastoral stations more than they had ever been on early arable farms, defying, to a certain degree, the logic of mixed husbandry.

This was largely due, in both colonies, to concerns about overgrazing, the supposed inferiority of natural grasses to introduced grasses, and the insecurity of long-range stock on colonial frontiers. As agrarian operations became larger and more spread out, even when they became more "modern," the more unstable the environment became. In Britain (with the exception of Ireland), in the seventeenth and eighteenth centuries, the transition from local subsistence farming in the hands of peasant smallholders to modern agrarian production on

larger enclosed farms did not usually cause widespread environmental degradation or instability.⁶ The consolidation of lands under agrarian capitalists allowed for improvements (drainage, crop experimentation, advanced manuring, fencing, breeding, etc.) not practical for peasant producers who often lived hand to mouth. Economies of scale on large landholdings maximized production and profits, but because both short and long-term profitability of capitalist production on such a small landmass was dependent on the extremely careful husbandry of the soil, landowners were necessarily conservationists. Increased stock production and the introduction of new sown fodder crops meant that the soils of many parts of Britain were more fertile than they had ever been before.⁷

⁶ Clearly, the shift towards a market economy in Britain was often disastrous for peasant farmers and agricultural laborers as traditional forms of land tenure, employment, and communal rights were eroded. See J. M. Neeson, *Commoners: Common Right, Enclosure and Social Change in England, 1700-1820* (Cambridge University Press, 1996), passim; Vittoria Di Palma, *Wasteland: A History* (Yale University Press, 2014), 42–82; Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge University Press, 1994), 3–25.

⁷ Here I am not talking about environmental degradation in terms of the destruction of pure wilderness. Certainly improvements resulting in the intensive cultivation of much of England, Scotland, and Ireland left very little in the way of wilderness. But High Husbandry, as it came to be known, with its careful recycling and augmenting of soil nutrients through leguminous fodders and extensive manuring, ensured the retention of fertility and long-term productivity. And, in Britain, this kind of husbandry was closely associated (if not directly correlated) to larger, enclosed capitalist operations. See Donald Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge University Press, 1994), 3–56; Donald Worster, *The Wealth of Nature: Environmental History and the Ecological Imagination* (Oxford University Press, 1994), 57–60; Mark Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850* (Cambridge University Press, 1996); Paul Warde, "The Environmental History of Pre-Industrial Agriculture in Europe," in S. Sörlin and P. Warde, *Nature's End: History and the Environment* (Springer, 2009), 79–84; Bolton, *Spoils and Spoilers*, 12–14. Many historians of British agriculture have noted that this kind of environmental benignity of improved agricultural ecosystems was not universal, particularly in areas marginal to arable production. See Ian Gordon Simmons, *The Moorlands of England and Wales: An Environmental History 8000 BC to AD 2000* (Edinburgh University Press, 2003), 96–103; T. Christopher Smout, *Nature Contested: Environmental History in Scotland and Northern England since 1600* (Edinburgh University Press, 2000), 116–7, 124–32; Fredrik Albritton Jonsson, *Enlightenment's Frontier:*

Yet commercial production was perceived to have had the opposite effect in British colonies. As seen in the first chapter, profitability of regionally-specialized commercial farming in Virginia or South Carolina or the West Indies was based on extensive, extractive, unsustainable land use, not to mention the exploitation of slave labor. Though there was some contemporary resistance to this claim, in England bigger was often better for both profitability and the productive quality of the soil.⁸ In America, bigger was better for profitability, but much worse for the environment. As we have seen, this dichotomy has not just been imposed upon the past by historians; it was remarked upon by many late-eighteenth century observers as well.⁹ In both New South Wales and the Cape, there was a supposition on the part of colonial planners and officials that large landholdings discouraged careful and conservative cultivation. Relatively small landholdings (50-100 acres) with security of tenure would, it was postulated, force farmers to improve their properties rather than “mine” them as the Americans or Dutch planters did, adhering to Young’s dictum that the “spirited management” of a small farm was of immeasurably greater value than the lax management of a giant one. Additionally, keeping

The Scottish Highlands and the Origins of Environmentalism, (New Haven: Yale University Press, 2013), 206–30.

⁸ I exclude Scotland and Ireland from this statement as capitalist expansion and land consolidation in these regions resulted in both real and perceived threats to the local ecology. See Albritton Jonsson, *Enlightenment’s Frontier*, passim, and T. Christopher Smout, *Exploring Environmental History: Selected Essays* (Edinburgh University Press, 2009), passim, but particularly “Modern Agriculture and the Decline of British Biodiversity,” 183-198 .

⁹ Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge University Press, 1995); David Watts, *The West Indies: Patterns of Development, Culture and Environmental Change Since 1492* (Cambridge University Press, 1990), 400–10; Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (Macmillan, 2003), 31–40; Jonsson, *Enlightenment’s Frontier*, 122–5.

settlements close and expansion slow would encourage social cohesion and avoid ongoing frontier conflicts.¹⁰

But by the 1820s, the real tension was not between plantation-style, extensive arable farming and intensive smallhold farming; it was between arable farming and stock raising, which had never been satisfactorily unified in either colony. And in addition to the social and political problems caused by expansive landholdings, there was the problem of pastoral transience. Pastoralists were not soil miners; they were grass miners. Either they had to be in possession of massive (and often ill-defined) tracts of land, or they had to be able to move on to new land when their herds needed new grass. In both colonies, borders, however arbitrary, between settler land and indigenous land were, as a result, fluid, contentious, and nearly impossible to police. As new pastoral economies of scale began to reap significant financial rewards in the 1830s, the colonial governments of both New South Wales and the Cape had to confront yet another difficulty: overgrazing. This was not a new problem altogether. Britain had its own robust pastoral industries in regions too hilly for cropping, which were often at risk of overgrazing. However, in Britain, as with arable lands, consolidation of pastoral lands under capitalist producers often stimulated conservative improvements—breeding programs designed to maximize the flesh, wool, and/or milk from an animal relative to its energy footprint or the cultivation of artificial grasses with superior nutrition profiles or that were more resistant to trampling or close cropping.¹¹ In New South Wales and the Cape, lack of capital and labor often made mobility the

¹⁰ “Additional Instructions to Arthur Phillip,” 20 August 1789, HRNSW 1:2, 256, 257; Hunter to Portland, 25 October 1795, HRNSW 2, 327; Hunter to Portland, 28 April 1796, 10 June 1796 HRNSW 2: 73, 219; Bligh to Windham, 31 October 1807, HRNSW 6: 351-2; Duckitt to Somerset, 22 November 1814, NA, CO 414/11, f. 18.

¹¹ Robert Trow-Smith, *A History of British Livestock Husbandry, 1700-1900* (Routledge, 2013) passim;

default for pastoralists, rather than improvement. To curb this necessary mobility, landholdings had to increase and the grasslands held within had to be improved. Artificial grass became increasingly important in this process, more so than it had been in earlier arable development.

Bringing New South Wales and the Cape together again in my analysis, I begin this chapter by examining the escalating tensions in the 1810s and early 1820s between competing agrarianisms—small-hold mixed husbandry and commercial pastoralism—looking at the variety of ways in which the former was reinforced by colonial officials and the home government. In New South Wales, this period fell during the governorship of Lachlan Macquarie, the colony's last true autocrat, who attempted to impose the original agrarian vision of the colony while at the same time recognizing its social, economic, and environmental realities. It was a balancing act that ultimately backfired in Macquarie's political career, but would profoundly shape the history of Australia, and particularly the emigration schemes that formed after his tenure. In the Cape, mixed-husbandry's "last stand" was later (~1817-1824), more contracted, and involved both a geographical relocation of agricultural operations from the Western to Eastern Cape and a massive state-sponsored emigration scheme. By the late 1810s, in both colonies, colonial and home governments began to reframe colonial agricultural problems (grain insecurity, settler sprawl, etc.) as a labor problem, and hoped that forcing a demographic shift in the colonies would aid agricultural development. This chapter then explores the period of agricultural reassessment heralded by Bigge's Commission of Enquiry into New South Wales (1819-1821) following Macquarie's administration and Bigge and Colebrooke's second Commission of Enquiry into the state of the Cape following the failure of the Albany settlement scheme in 1823-24 to show. In the final section, I look at how the project of improvement began to shift as both colonies began to rely more and more on stock-rearing divorced from arable production.

II. The Macquarie and Anti-Macquarie Decade: Farming and “The Lazy Object of Rearing Cattle,” 1810-1820

Lachlan Macquarie was sent to New South Wales in 1809 to rein in a colony that had “gone rogue” due, in part, to Napoleonic War-induced neglect. The hybrid War and Colonial office sent Macquarie to New South Wales to kick the civil and military establishment and the convict population back in line, to advance self-sufficiency in foodstuffs (which had been on the sharp decline in the two years between Bligh’s arrest and his arrival), and to do so with as little expense as possible.¹² He was the colony’s last authoritarian governor and considered himself a social reformer. As an Enlightened despot, he made great strides in the first two directives, though he failed to do so “on the cheap,” as he was constantly reminded by the Colonial Office from the very beginning of his time in the colony.¹³

Macquarie was deployed to impose order on what was seen in Britain as a deeply disordered society. Macquarie is known best to posterity as being the great equalizer of Australian society, removing barriers to convict and Emancipist social and economic progress, and advancing public works in Sydney and outlying townships (at great expense). This is one reason he was almost universally hated by his elite contemporaries in New South Wales. His land policies, which clearly favored small Emancipist farmers over free pastoralists, were at the heart of the crisis of 1819/1820. Like Bligh before him, Macquarie was a proponent of close agrarian settlement. Well before Edward Gibbon Wakefield and Robert Gouger put “concentration” on a pedestal as the ideal form of settlement, Macquarie advocated concentrated

¹² Castlereagh to Macquarie, 14 May 1809, HRNSW 6, 145

¹³ Liverpool to Macquarie, 4 May 1812 in Anthony Hewison, *The Macquarie Decade: Documents Illustrating the History of New South Wales, 1810-1821*, (North Melbourne, Vic: Cassell Australia, 1972), 35. Henceforth *MD*.

agricultural settlement as the most appropriate way to encourage intensive cultivation and improvement, to foster social cohesion, and to ensure dependable market access. He did not want to block the emerging (and lucrative) pastoral economy outright; in fact, he had high hopes for the growth of a proper Merino industry. But he did strongly prioritize the arable development of the riverine lowlands around Sydney, as well as satellite agricultural settlements in Windsor, Richmond, Campbelltown, Wilberforce, and Liverpool, over commercial pastoralism. Indeed, he was always more concerned with producing a class of modestly accommodated, grain-producing yeoman farmers (mostly from Emancipists), than providing elite pastoralists with a coerced, government-subsidized labor force.

The colony was a penal colony, first and foremost, and Macquarie believed it should be a socially progressive one. As Grace Karskens argues, Macquarie was “the last governor to believe that convicts and their descendants were the rightful inheritors of the colony.”¹⁴ Upon first arriving, he affirmed that New South Wales gave fallen men and women a chance for “a new Line of Conduct.” Upon emancipation, “when United with Rectitude and long-tried good Conduct,” men and women should be welcomed back into society “all retrospect of former bad Conduct.”¹⁵ The best society for them to reenter was a tightly-knit agrarian society, rather than one of urban vice or pastoral isolation. Experience, Macquarie claimed, had convinced him that the best agricultural settlers were emancipated convicts and former indentured laborers. It followed that the best lands on the Cumberland Plain should be reserved for these types of settlers, not commercial pastoralists: “The Grant of Land, which is bestowed on *One Gentlemen*

¹⁴ Noel George Butlin, *Forming a Colonial Economy: Australia 1810-1850* (Cambridge University Press, 1994), 26–7.

¹⁵ Macquarie to Bathurst, 20 April 1812, MD, 83.

Settler from England, would be sufficient for Six Families of the former description who cultivate the Ground in Gratitude and Thankfulness for the Favors bestowed upon them.”¹⁶

In Macquarie’s view, the colonial government reaped no real benefit from these capitalist settlers, who had, in almost all cases become, “the most discontented, unreasonable, and troublesome persons in the whole country.” In rant about two such individuals, John and Gregory Blaxland, he levied the charge of outright fraud:

Coming hither, as they did, in the *Professed Character of Agriculturists* it would have been most naturally expected that they should have applied their personal and great acquired means of Husbandry to the cultivation of Grain on a proportionately enlarged Scale, whereby the quantity required by Government would have been the more easily supplied, the general Price in the Market reduced, and the risk of Scarcity materially guarded against.

The Blaxland brothers were supposed to have come into the colony as improvement-oriented, capitalist farmers. They were the sons of a prosperous yeoman farmer in Kent and knew better than any other free settlers the ins and outs of agricultural improvement. The land they were granted was intended to reduce the overhead of their operations, to free up their considerable capital to be directed towards the cultivation of those lands. This had not been the case:

Instead of contributing thus to the general Welfare of the Country, and setting a good example of an improved style of Farming and Agriculture, they have turned their whole attention to the lazy Object of rearing Cattle... within the same period they have not put into the Stores one single bushel of Grain of any kind whatever. With the services of 120 men from Government, and the command of a still more unlimited extent of soil than ever that number of men could cultivate, the Messrs Blaxland have continued a burthen on the Government, restless and dissatisfied notwithstanding all they have derived from its liberality.¹⁷

He singled out a handful of Exclusives by name who were a particular danger to the progress of the colony, including John Macarthur, Rev. Samuel Marsden, Dr. John Townson, Nicolas Bayly,

¹⁶ Macquarie to Liverpool, 1812, MD, 89. Emphasis in original.

¹⁷ Macquarie to Bathurst, 17 November 1812, MD, 86-87. First emphasis in original. Second emphasis mine. See Victor Hyde, *Gregory Blaxland* (Oxford University Press, 1958), 5–12.

Dr. James Throsbey, John Horesley, Sir John Jamieson (later the president of the Agricultural Society), David Allan, John Oxley, and William and Thomas Moore, labeling them with a range of descriptors from “discontented and intriguing” to “seditious and vindictive.”¹⁸ The antagonization of this powerful, well-connected, wealthy group of men would come back to haunt him when almost all of them gave extensive evidence to Bigge in 1820.

In addition to redirecting the labor force coveted by the commercial pastoralists to his own government works projects (roads, buildings, parks, etc.), Macquarie gave clear preference to Emancipist farmers when granting new (or old) lands in hopes that the ill-managed government farms could be eliminated. One of the ways he did this was by standardizing and imposing additional usufruct regulations on land grants. De-commissioned marines were given between 50 and 200 acres, depending on rank and family size, emancipated convicts were allowed 30 acres, plus an additional 20 if they took a wife “on the books,” but until his arrival, most of those granted lands had been resold to private buyers, often the Exclusives, who added them to their pastoral portfolios. Macquarie instituted new regulations and enforced old cultivation clauses into land grants, directing that a certain portion of the land must be cleared and cultivated continually for five years before it could be sold, otherwise the land would be returned to the Crown and reassigned. The Surveyor-General, John Oxley, testified in 1819 that settlers complied with these cultivation clauses only when “it suits the convenience of the grantee,” but it was fairly successful, nevertheless, in that the increased private production made government farms redundant for a time.¹⁹ In another unpopular move, Macquarie also started

¹⁸ “Secret & Confidential List of Names of Discontented and Seditious Persons in New South Wales,” 1 December 1817, Governor’s Despatches, ML A1191, f. 679

¹⁹ “Evidence of John Oxley,” 17 November 1819, Appendix to Commissioner Bigge’s Report, NA, CO 2014/142, f. 5

making older grantholders pay their quitrents once their ten-year grace period was up. Quitrents were nominal (one shilling per 50 acres), but for a settler with 5000 acres (or more) who had failed to cough up for a number of years, the sum could be very significant. Additionally, in 1814, the quitrent for new settlers was raised to one shilling per acre for free settlers.²⁰

Conflict also ensued over the new lands beyond the Blue Mountains. Macquarie had given his blessing to several parties to explore and survey the lands radiating west from the Blue Mountains, the first led in 1813 by Gregory Blaxland, surveyor William Lawson, and the native-born William Charles Wentworth (son of the “white collar” convict D’Arcy Wentworth). Pastoralists, like Blaxland, argued that the land was suited only to stock raising, given the natural luxuriance of the grasslands on the gentle hills and plains of the Central Tablelands beyond the range, but Macquarie saw agricultural potential in the river basin flats west of the mountains (the main two of which he named after himself, the Lachlan and Macquarie) in the area now known as the Murray-Darling Basin. He had a road built (the start of the Great Western Highway) to make it more accessible. On his first tour to this new territory, he noted the “excellent” soil of the river flats on the newly-named Macquarie Plains: “beautiful, rich tracts of rich, fertile land without hardly a tree to be seen for miles” that “afford[ed] beautiful situations for farms.” On the Mitchell Plains he noted more “land being very fit for small farms, both on account of its richness of soil on the low grounds for cultivation, and the hills in the rear thereof being excellent for grazing.” The Bathurst Plains, closest to the mountain pass, he wrote, formed “one of the finest landscape I ever saw in any country I have yet visited. The soil is uncommonly good and fertile, fit for every purpose of cultivation.” His plan was to set up a township in Bathurst where he could settle a large number of Emancipist settlers, anticipating that the Bathurst region

²⁰ Bathurst to Macquarie, 7 October 1814, HRA 8, 135-6

would become a gateway to other agricultural settlements in the west. In the end, he was partly right. Close agricultural settlement was implemented in the area around the Bathurst township, not as a gateway to other riverine settlements, but as a gateway to the millions of acres of pasture..²¹

From the start, the Bathurst region was highly coveted by pastoralists, who had eyes only for the grass. Macquarie reluctantly granted some of these lands to individual pastoralists and, less reluctantly, to settlers like Alexander Riley, who spoke the language of agricultural improvement and, perhaps more importantly, could provide proof that they had successfully cultivated the land on their smaller grants on the Cumberland Plain.²² However, in 1818 and 1819 he also sent out a large group of agricultural settlers to Bathurst, mostly native born young men, guaranteeing the purchase of their produce for two years.²³ Macquarie both enabled and discouraged westward expansion, a paradox indicative of the more general balancing act required of all colonial governments: to encourage agrarian development while simultaneously exercising control over the population's movement. It was the same confrontation that had beleaguered (and would continue to beleaguer) colonial and republican governments in North America.²⁴ In a compromise, Macquarie often granted Tickets of Occupation to pastoralists, essentially reserving the riverine land beyond the Blue Mountains for arable cultivation for such

²¹Lachlan Macquarie "A Tour to the New Discovered Country in April 1815," ML, Macquarie Papers, A779. See also Noel George Butlin, *Forming a Colonial Economy: Australia 1810-1850* (Cambridge University Press, 1994), 153–4, 180–85.

²² Alexander Riley to Macquarie, 8 November 1817, ML, Riley Papers, A109 (CY Reel 738), f. 5. Perhaps most impressively, Riley had enclosed and fenced 1100 acres of his Land on the Nepean.

²³ "Evidence of John Oxley," 17 November 1819, Appendix to Commissioner Bigge's Report, NA, CO 201/142, f. 5

²⁴ See Chapter 1, sec. III Stoll, *Larding the Lean Earth*, 87–93; Stephen Hornsby and Michael Hermann (cartographer.), *British Atlantic, American Frontier: Spaces of Power in Early Modern British America* (UPNE, 2005), 223–32, 288.

a time when he had the resources to develop proper agricultural settlements. Sentries were posted along the western road to prevent unauthorized access to the Bathurst Plains.²⁵ Macquarie viewed these newly acquired lands as an opportunity to make up for the chaotic, dispersed settlements on the Cumberland Plain by implementing a strict township model of settlement, where small farms would be clustered around a town with its own church, school, law enforcement, and its own branch of the commissary. These townships would make Sydney (and its vices) less necessary to the livelihoods of these settlers, while preventing social isolation. These lands also might help Macquarie adhere to the part of his instructions from the Colonial Office he had not yet been able to achieve: to “adopt...measures for preventing the recurrence of famine occasioned by the inundations of the Hawkesbury.”²⁶ The Hawkesbury/Nepean settlers had carried the grain production of the colony for over 20 years, but were chronically vulnerable to the ravages of flood. Early reports from explorers suggested that this was not as big a problem in the Blue Mountains (not actually the case). Yet his agricultural vision for region did little to stem the tide of stock and stock-raisers flowing into the new territory in the 1820s.

Macquarie’s reforms and his authoritarian “improvement” of the colony and, more to the point, of Crown Lands, were met with consistent and vitriolic resistance by the Exclusives of New South Wales, those men, a mix of former marines and free settlers, who controlled hundreds of thousands of acres of native grasslands, much of it occupied illegally. Macquarie had brokered an uneasy peace between the Civil and Military Establishment only to find his administration at war, figuratively, with the pastoral elites over the distribution and taxation of lands. Commissioner Bigge has been portrayed as the official voice of colonial discontent with

²⁵ Lisa Ford and David Roberts, “Expansion, 1828-1850,” in Bashford and McIntyre, *Cambridge History of Australia*, vol. 2, 122.

²⁶ Castlereagh to Macquarie, 14 May 1809, HRNSW 6, 146

Macquarie's administration, but the actual discontents had very loud voices of their own. It was Macquarie's land policies wrapped up in moral outrage at a semi-egalitarian nature (between former convicts and free men) of colonial society that the Exclusive wrote home about. Paired with these grievances was the massive influx of post-Napoleonic War convicts in 1816 and 1817 (many of them former soldiers) which overwhelmed the local grain supply, forcing Macquarie to again rely on government farms to fill the public granaries. Additionally, the harvests of 1814, 1815, 1817, 1818 had been devastated by plagues of droughts, floods, and caterpillars, sometimes all at once. For example, in a good year, 1811, there had been over 140,000 bushels of grain (wheat and maize) brought in. In bad years, 1814 and 1815, there were 16,000 and 14,000, respectively. In 1816, there was a recovery, with over 98,000 bushels.²⁷ Having this new enlarged population reliant on government stores, often filled, due to erratic harvests, with imported Indian wheat and rice, was extremely expensive. And this expense was even more irksome to the Colonial Office than the constant complaints of the Exclusives.²⁸ Macquarie's sympathy for the plight of small grain farmers in the face of such environmental adversity did not extend to those Exclusives who, while making most of their income on stock, also raised a surplus of grain. Unlike the small farmers, who brought their grain to market quickly lest it be carried away by floods or destroyed by fire and readily accepted 6 or 7 shillings for it, wealthier landowners stored their grain on their farms, withholding it until shortages forced the price up to 11 or 12 shillings, and occasionally as high as 15 shillings. Even though grain could be had at 8 or 9 shillings from Bengal, it was often, Macquarie claimed, infested with weevils and too damp

²⁷ Agricultural returns are only partially available for these years. For returns in 1809-1811, 1814-16, 1820-23 see HRA 1:7 (282, 423, 639); 1:8 (144, 189, 601); 1:9 (140, 240, 342) 1:10 (287, 535, 675).

²⁸ Macquarie to Bathurst, 3 January 1814, *MD*, 51. Emphasis in original.

to be stored. “Instead of Manifesting a due Sense of Gratitude for the repeated Favors and Indulgencies they have received from Government,” Macquarie complained, “they seem determined to take every advantage...withhold their Tenders to as late a Period as possible, to give them an Opportunity of exacting the most exorbitant Price...knowing that it must be submitted to from the Necessities of the Times.”²⁹ He took out his outrage at this problem during the difficult agricultural years between 1814 and 1818 by suing Exclusives for their debts to government (mostly for stock) and by threatening to recall grazing leases.

Macquarie’s liberality with Emancipists and his support of small-hold farming earned him the devotion the majority of colonists in New South Wales, except for the ones he really needed. While Macquarie spent time, energy, and public funds attempting to shape a colony that offered real opportunities for former convicts and their children, the Exclusives, unswerving in their belief in the “convict stain,” wrote home to inform the government and the public that Macquarie officially sanctioned the rampant licentiousness and debauchery throughout the colony and allowed former convicts the same social standing as free settlers.³⁰ The home government, which was not nearly as concerned about the reform of convicts as they were about their cheap and permanent disposal, worried that transportation had ceased to create the “salutary terror” needed to actually deter crime. Macquarie’s other projects (public buildings, township development, roads, harbors, etc.) had improved the lives of convicts and settlers alike, but came

²⁹ Macquarie to Bathurst, 28 April 1814, HRA 1:9, 144-5; “Government Order” 5 February 1814, MD 53-4.

³⁰ The “convict stain” is an enduring trope in Australian culture and historiography to describe the stigma of being a former convict or descended from a former convict. Like a stain, criminality was thought to have stuck in the “blood” through generations, even long after transportation ended. The convict stain disqualified a person from ever becoming wholly respectable. John Bradley Hirst, *Freedom on the Fatal Shore: Australia’s First Colony* (Black Inc., 2008), 202–3; Babette Smith, *Australia’s Birthstain: The Startling Legacy of the Convict Era* (Sydney: Allen and Unwin, 2008), 590.

at a price. Between 1806 and 1809, average bills drawn from the Treasure amounted to £29,415; by 1821 it was £166,315.³¹ Earl Bathurst ordered Commissioner Bigge to the colony not just to rein in Macquarie's spendthrift administration, but to also get an "unbiased" assessment of the colony's agrarian future, a future that would be shaped by increasing free emigration and the rise of the international wool market.³²

III. One Land's Trash is Another Land's Treasure? Emigration Experimentation in New South Wales and the Cape, 1816-1830

To understand how the governments attempted, like Macquarie, to support arable development in the Cape, we must switch gears in the narrative to examine emigration experiments. The Cape did not have the equivalent of a Macquarie either in the 1810s or the 1820s. Governors Sir John Cradock and Lord Charles Somerset, for a variety of reasons discussed in Chapter 4, did not attempt to shape agrarian development in the Cape to the extent that Macquarie did in New South Wales. Rather than intervening directly, the British government, in coordination with Somerset, attempted instead to orchestrate a demographic shift in the colony to aid the progress of agriculture. However, New South Wales, slightly later, attempted a similar (and more successful) emigration experiment, which is why I am addressing them both in turn in this section rather than adhere to a strict chronological symmetry. To understand the tug-of-war in the 1820s and 1830s between pastoralists and governments (the topic of the following section), tensions that were assessed and then heightened by Bigge's Commission of Inquiry in both colonies, we have to first understand the causes and

³¹ Gordon Beckett, *The Colonial Economy of NSW: A Retrospective between 1788 and 1835* (Trafford Publishing, 2012), 181–2.

³² Bathurst to Bigge, 6 January 1819, HRA 10, 7

consequences of these demographic shifts. We must, for the time being, leave Macquarie's administration on the brink of a downfall.

Many of the agricultural disappointments of early settlements in New South Wales and the Cape were attributed to a deficiency of agricultural settlers. It was of little use to send the plants, animals, and implements of improved British husbandry to these new colonies without willing and able hands to cultivate the new soils. In the Cape, the Dutch Boers had been declared, on the whole, completely useless, and the more opulent Cape Burghers thrived only by the work of their slaves and the value of the stock they sent out into the interior with Khoikhoi shepherds. In New South Wales, convicts and most military men had been found wanting (rightly or wrongly) as husbandmen. The colonial leadership in both colonies recognized the need for an influx of a population who would, with some encouragement, willingly invest their energy and, ideally, capital into these new, often challenging lands. The voluntary (at least nominally) migration of English, Irish, and Scottish men, women, and children to both New South Wales and the Cape would profoundly shape agrarian development in these colonies.

Yet emigration in the early nineteenth century was a politically fraught topic. Supporters of emigration saw it as a safety valve, an evil necessitated by the downsizing of agricultural labor (peasant or wage) and home manufacturing in the face of enclosure and industrialization, as well as the post-Napoleonic war redundancy of over 300,000 soldiers. Since 1800, the price of grain and other foodstuffs had skyrocketed and remained high due to the implementation of new Corn Laws in 1815, new taxes had been introduced and steadily increased, and population pressures mounted throughout the British Isles.³³ Economic hardships across the British Isles drove

³³ Butlin, *Forming a Colonial Economy*, 26–7; Emma Griffin, *A Short History of the British Industrial Revolution* (Palgrave Macmillan, 2010), 65–7; Martin J. Daunton, *Progress and*

increasingly assertive reform movements that threatened to morph into revolution, something the conservative government was keen to avoid.³⁴ Even though Thomas Malthus warned his readers in the 1803 edition of his *Essay on the Principles of Population* that emigration would be "but a very weak palliative" for the economic, social, and political unrest stemming from these population pressures, emigration nevertheless became the most attractive alternative to political or economic reform, though not without debate.³⁵ As Bashford and Chaplin have recently argued, the end of the Napoleonic Wars brought with it a fresh (and perhaps more desperate) evaluation of Malthus's work, particularly his views on emigrations: "Over the years in which Malthus revised his population treatise, 1817-1826, population, pauperism, and colonialism were a constant triad in the republic of letters that made up political economy."³⁶

Opponents of emigration schemes at home argued that emigration was expensive (as was the maintenance of settler colonies like New South Wales and Sierra Leone, which had not, as of yet, paid for themselves); would strip Britain of the brain, muscle, and brawn of its population to the advantage of its colonies or, more likely, its enemies (i.e. the United States); was a smoke-screen thrown up to avoid addressing deep social and political dysfunction; or, as Malthus first argued, would only provide temporary relief. Paradoxically, colonial officials in Canada, New South Wales, and the Cape frequently wrote home complaining that emigration was transferring

Poverty: An Economic and Social History of Britain, 1700-1850 (Oxford University Press, 1995), 432–5.

³⁴ Eric J. Evans, *Britain Before the Reform Act: Politics and Society 1815-1832* (Routledge, 2014), *passim*.

³⁵ Thomas Robert Malthus, *An Essay on the Principle of Population: Or, a View of Its Past and Present Effects on Human Happiness* (Johnson, 1803), 387; M. D. Nash, *Bailie's Party of 1820 Settlers: A Collective Experience in Emigration* (A.A. Balkema, 1982), 1–2; Marjory Harper, "British Migration and the Peopling of the Empire," in Andrew Porter, *The Oxford History of the British Empire: Volume III: The Nineteenth Century* (OUP Oxford, 2001), 75–8.

³⁶ Alison Bashford and Joyce E. Chaplin, *The New Worlds of Thomas Robert Malthus: Rereading the "Principle of Population"* (Princeton University Press, 2016), 207.

the social and economic evils of Britain to the colonies, which had enough problems to be getting on with. According to them, the Colonial Office, by allowing these new lands to be populated by paupers, criminals, and political malcontents, most of them with no practical experience as farmers, was actively maiming agrarian development. In the case of convicts in New South Wales, this is a clearly unfair accusation, given the extent to which convicts and former convicts carried grain production beginning in the mid-1790s.³⁷ But, on the whole, both concerns were legitimate. As indentured servitude declined in North America in the late 1790s and early 1800s, the socioeconomic status of British and Irish emigrants began to shift. Skilled workers, farmers, professionals, younger sons of the British gentry began to see economic opportunities in the colonies (or former colonies) that were not available to them at home, which meant that the home country was indeed losing productive citizens, including those of a “middling sort.” At the very least, emigrants needed to procure sufficient funds from savings or family assistance to buy a passage to (and victuals for) their destinations. The majority of them headed to the United States where work was easy to find and wages high and land cheap. Many emigrants wishing to remain British subjects went to Canada, encouraged by the promise of land grants, but the difficulties of farming in a boreal climate sent many south of the border.³⁸

Early on in New South Wales and the Cape administrators began to see emigration as a solution to a whole host of problems that had hampered agricultural progress in both colonies (deficiency of labor and/or capital, lack of agricultural know-how, transhumance, moral

³⁷ This charge is somewhat unfair given the extent to which grain production in New South Wales was carried by convicts and former convicts.

³⁸ James Horn, “British Diaspora, 1670-1815” in William Roger Louis, Elaine M. Low, and Peter James Marshall, *The Oxford History of the British Empire: The Eighteenth Century* (Oxford University Press, 1998), 30–34; 42–45; James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (OUP Oxford, 2011), 122–130.

depravity, racial/ethnic conflict, etc.). In the Cape, the government-sponsored emigration scheme that brought 5000 settlers to the Eastern Cape in 1819/1820 was an active attempt to restructure land use and labor dynamics in the colony and, in turn, increase agricultural productivity. And even though it was largely unsuccessful in that objective (and created additional problems), a similar logic was used in advocating similar schemes in New South Wales. In both cases, however, the influx of white settlers into these colonies is critical to understanding the tensions between pastoralists and colonial governments in the decades that followed.

1. Cape Colony

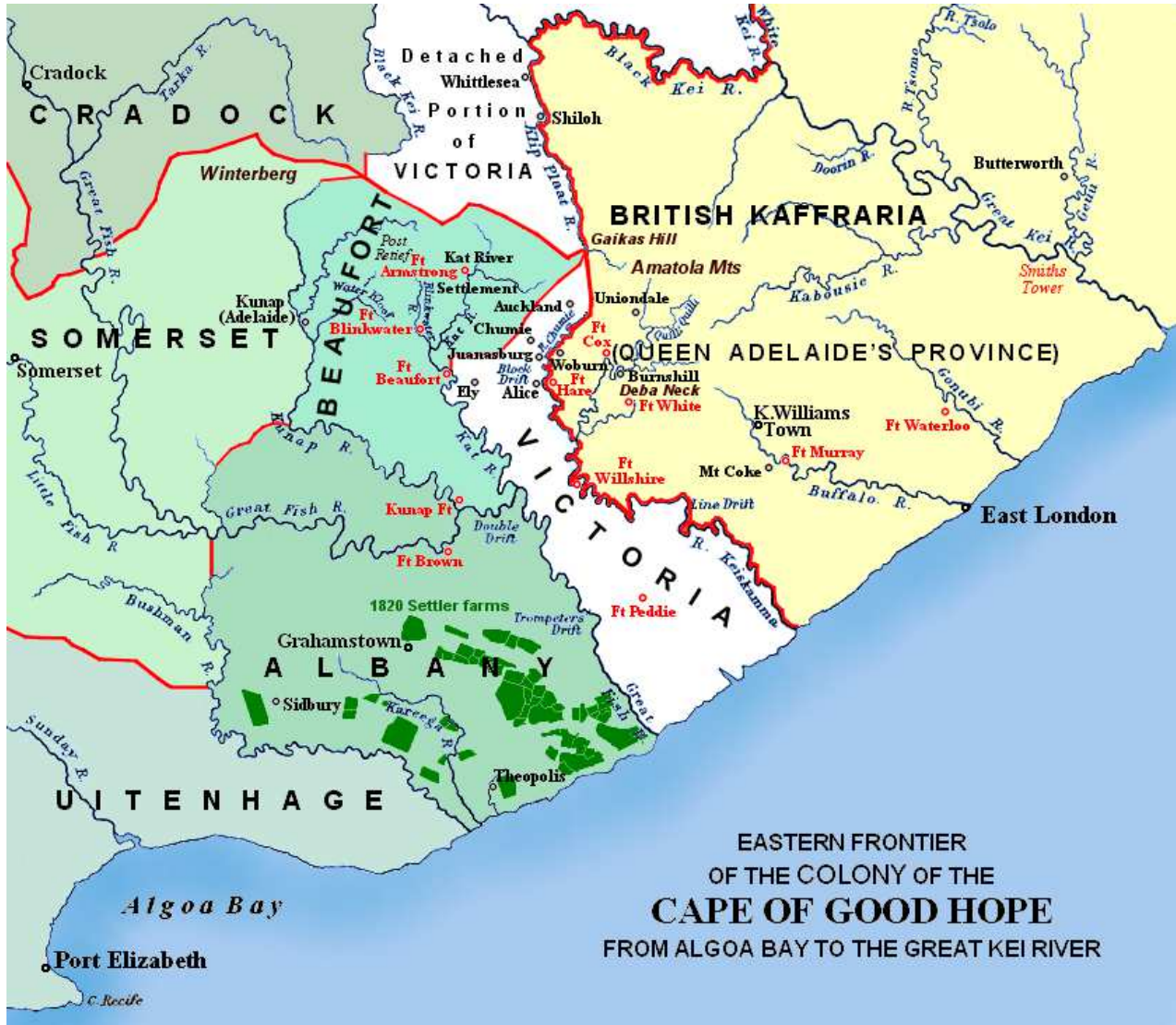
Given its uncertain political status during the Napoleonic Wars, the Cape had never been a popular destination for prospective emigrants. Aside from William Duckitt's settler party, who had all done very well in the colony, fewer than 100 British settlers had come to the Cape between 1800 and 1817, when the British government began to consider a large emigration scheme. The Cape Board of Agriculture had persistently advocated the sending out of more husbandmen (or "practical farmers") and related tradesmen (ploughwrights, blacksmiths, carpenters, cheesemakers, butchers and tanners) since its formation in 1812, but had little success.³⁹ By 1814, several important political changes in the colony gave new life to the possibility wide scale emigration from the British Isles. First, in 1814, the end of war brought the assurance that the Cape was going to be, as Duckitt put it, "permanently British," a security it was hoped would stimulate "an influx of the most useful populations," useful primarily in producing grain.⁴⁰ Secondly, by the time the Albany settlers embarked, British regiments (reliant

³⁹ John Dashwood to John Francis Cradock, [1812], NA, CO 414/11, f. 2

⁴⁰ Duckitt to Lord Charles Somerset, 22 November 1814, NA, CO 414/11, f. 18

on Khoikhoi soldiers and Boer militias) had waged two bloody wars with the Xhosa on the Eastern Cape frontier, officially opening up a new area for settlement (or resettlement). Understanding how and why this land became “available” is important to understanding why the British government wanted to populate the area with a different sort of settler.

Figure 11: Eastern Cape Frontier, c. 1835 (Source: Wikimedia Commons)



Dutch trekboers had been leading their flocks and families onto the Zuurveld, the fertile and well-watered grasslands stretching between the Sunday River in the west (empties into

Algoa Bay/Port Elizabeth) and the Keiskamma River in the east, since the late eighteenth century. Xhosa clans resisted this encroachment upon the lands they depended on for their stock and crops, mostly by helping themselves to trekboer stock, which often led to violent retaliation and counter-attacks. At the beginning of the 1810s, cattle raiding intensified not just in the Zuurveld but also in surrounding districts. In Uitenhage, on the Western border of the Zuurveld, over 2000 head of cattle were stolen in 1810. While paramount Xhosa chiefs, Chungwa and Ndlambe, attempted to curb cattle raiding to keep the peace with the colonists, they were unsuccessful in keeping the minor chiefs in check. Boer pastoralists demanded (as they had been demanding for over twenty years) that the Xhosa be expelled from the Zuurveld. In 1811, the new governor Sir John Cradock decided to give them their way, and sent out Captain John Graham to push back all Xhosa east of the Great Fish River using whatever means necessary to “impress on the minds of these savages a proper degree of terror and respect.”⁴¹

In 1811, Chungwa was killed and his people expelled from the northern stretches of the Zuurveld, and Ndlambe and his people were soon after forced to retreat behind the Great Fish River. To ensure that they did not return, Graham ordered that every village and field be burned to the ground, and that any men remaining be killed. In March of 1812, 20,000 Xhosa had been driven from the Zuurveld, and a puppet chief, Ngqika, Ndlambe’s nephew, was installed in his place. Lord Charles Somerset struck an impossible bargain with Ngqika: in exchange for exclusive trading rights and military support against Ngqika’s numerous rivals, Ngqika would confiscate and return all stolen property and cattle, capture and return all runaway slaves and Khoikhoi, and put to death any of his people who stole from or molested a colonist. But in the

⁴¹ Cradock to Liverpool, 8 March 1812, RCC 8, 355. Ben Maclellan, *A Proper Degree of Terror: John Graham and the Cape’s Eastern Frontier* (Ravan Press, 1986), 78, 98–103; Keegan, *Colonial South Africa and the Origins of the Racial Order*, 129–131.

midst of a severe drought which gripped the Eastern Cape in 1816 and 1817, Ngqika was powerless to stop cattle theft or the return of Xhosa to the Zuurveld. They needed the grass.⁴²

In 1818, Ndlambe joined forces with a missionary-educated premillennialist warrior prophet Makhanda Nxele who was able to rally almost all Xhosa groups in the Eastern Cape against Ngqika and the British forces to drive the Europeans out of the Zuurveld. With Nxele, who promised to turn the bullets of the colonists to water, Xhosa leaders were confident they could liberate themselves and their lands. But they were defeated quickly and brutally at the Fish River, and in retaliation, Somerset ordered the Xhosa to be driven a further 30 miles east to the Keiskamma River and for the whole strip of land between the Fish and the Keiskamma to become neutral territory between what he hoped would be a new British settlement in the Zuurveld and the land east of the Keiskamma, to be known as British Kaffraria.⁴³ The Xhosa, like the Khoikhoi in the west, had been stripped of the lands most crucial to their survival, and it was this dispossession that allowed colonial officials to envision emigration on a large scale. Trekboers, Somerset claimed, could not be allowed to return to the Zuurveld. They had a track record of being unable (or unwilling) to contain their stock within colonial territories, which caused endless cycles of violence. The Zuurveld needed sedentary agricultural settlers, settlers accustomed to the sanctity of a property line: British settlers.⁴⁴

Finally, several policy changes had exacerbated a severe labor shortage in the colony, which led to a significant rise in the cost of labor and a slowing down of cultivation in preference

⁴² Nash, *Bailie's Party of 1820 Settlers*, 171–2;; Giliomee, “The Eastern Frontiers, 1770–1812” in Richard Elphick and Hermann Giliomee, *The Shaping of South African Society, 1652–1840*. (Wesleyan University Press, 2014), 446–9.

⁴³ J.B. Peires, “The British and the Cape, 1814–1834” in Elphick and Giliomee, *The Shaping of South African Society, 1652–1840.*, 481–3; Nash, *Bailie's Party of 1820 Settlers*, 200–218; Keegan, *Colonial South Africa and the Origins of the Racial Order*, 130–32.

⁴⁴ Somerset to Bathurst, 23 June 1817, 8 July 1817, RCC 11: 357–9, 360–61.

for the less labor-intensive stock raising. In 1807, the slave trade had been abolished in all British colonies. This meant that the slave population so critical to grain and vine cultivation in the Western Cape could no longer be augmented with new slaves from Madagascar and Mozambique. Additionally, a series of "Amelioration Laws" were introduced beginning in 1806 that made owning slaves more expensive (e.g. requiring higher standards of shelter, clothing, and food, reducing hours slaves could be made to work, and outlawing the sale of children) and made it easier for slaves to buy their freedom regardless of the willingness of the owner.⁴⁵ To placate the affronted colonists, the colonial government codified the coercion of Khoikhoi labor with the Caledon Code of 1809 in order that "individuals of the Hottentot nation should find an encouragement for preferring entering the service of the inhabitants [European] to leading an indolent life." This code essentially made any Khoikhoi not in the employ (and residing on the land) of a European colonist a "vagrant."⁴⁶ This only further entrenched the racial division of labor in the colony, making free agricultural labor almost exclusively non-white, despite the large population of poor whites in the Cape. Most poor whites preferred to eke out a precarious living as trekboers on marginal frontier lands than to degrade themselves by working on farms, even when doing so was potentially more lucrative.⁴⁷ Agricultural elites in the Cape put increasing pressure on the British government to address the agricultural labor shortage in the colony. If the Cape, especially those newly opened lands in the east, was to be cultivated and become self-sufficient in grain, instead of just being grazed by trekboers, it needed free agricultural laborers.

⁴⁵ James Armstrong and Nigel Worden, "The Slaves" in Elphick and Giliomee, *The Shaping of South African Society, 1652–1840.*, 145–63.

⁴⁶ RCC 7, 211-6

⁴⁷ Keegan, *Colonial Order*, 57, 65; Crais, *White Supremacy*, 92-4. See also, Ch. 4.

An informal trial run of the British settlement of the Zuurveld was initiated by Captain John Graham, the man responsible for Xhosa expulsion. Graham thought that Scottish Highlanders would make ideal settlers in this frontier buffer zone. On a trip home after his “sweep” of the Zuurveld in the 1811-12 Frontier War, he met with several Highland lairds to gauge interest in a possible assisted emigration scheme. Among them was a non-Highlander Benjamin Moodie, the eldest son of the ninth Laird of Melsetter whose Orkney estate was at least £23,000 in debt.⁴⁸ Following Graham’s advice, Moodie proposed an emigration scheme to the Colonial Office. He would fund the emigration of a large party of “apprentices” picked from the “agricultural classes” of Scotland in exchange for a “loan” for passages and a large land grant in the Cape. He wrote that “the Agricultural Classes are the only part of our population fit for colonization, and of them the Scotch Highlanders, from being the least useful in this country and the most inured to hardship, are the fittest.”⁴⁹ While Bathurst could not provide passage assistance or promise a land grant outright, Moodie was given permission to take his party out at his own risk. Despite the “strong and deep dislike [in Scotland] to persons who induce the lower classes to leave their native country...by those who imagine that their rents are affected by emigration,” Moodie forged ahead with his scheme, targeting in particular those families on the Highland estates of the Marquis of Stafford (George Granville Leveson-Gower, later the Duke of Sutherland) “who were ejected to make room for sheep farms and were every day embarking for

⁴⁸ “Memorial of Benjamin Moodie,” [1820] NA, CO 414/11, f. 79

⁴⁹ John M. MacKenzie and Nigel R. Dalziel, *The Scots in South Africa: Ethnicity, Identity, Gender and Race, 1772-1914* (Oxford University Press, 2013), 41.

the United States.”⁵⁰ Within a few weeks, 1500 people had applied to be a part of his scheme, only a small proportion of them Highlanders.⁵¹

Having received at first only a lukewarm reception from Bathurst, Moodie contacted his countryman Alexander Macleay, an official on the Board of Transport, as well as the Secretary of the Linnaean Society and Fellow of the Royal Society, to intervene on his behalf. Macleay, who was a proponent of Scottish emigration from Britain, having witnessed firsthand the extent of highland clearances in his native Ross-shire, believed that Scottish farmers could transform the “wastes” of both the Cape and New South Wales. In fact, he would in a few years make a new life for himself in New South Wales, becoming one of the wealthiest and most influential landholders in that colony.⁵² Macleay met with the Colonial Under-Secretary Henry Goulburn on Moodie’s behalf, but was not able to procure any more than the “standard encouragement” given to potential settlers. So he selected from the 1500 applicants around 150 men (some with families, but most single) and went into partnership with an Irish merchant already established at the Cape, Hamilton Ross, who agreed to provide passages, freight, and victuals to Moodie’s settlers in exchange for a share in the profits of their settlement.⁵³

Moodie’s settlers signed apprenticeship contracts that were similar to indentured labor contracts, giving him the exclusive right to direct their labor until twice the cost of transporting them had been recouped. For most this was between £50 and £70.⁵⁴ For some this meant working directly on Moodie’s large Swellendam farm (the Zuurveld was caught up in another war at the

⁵⁰ “Memorial of Benjamin Moodie,” [1820] NA, CO 414/11, f. 79

⁵¹ MacKenzie and Dalziel, *The Scots in South Africa*, 42.

⁵² See Derelie Cherry, *Alexander Macleay: From Scotland to Sydney* (Melbourne: Paradise Publishers, 2012).

⁵³ MacKenzie and Dalziel, *The Scots in South Africa*, 42.

⁵⁴ *Ibid.*, 43.

time of his arrival), for others, particularly those who had been farmers before, this meant being placed upon smaller farms, a kind of quasi-tenancy, in the district, and for others, particularly the tradesmen, it meant being hired out to other settlers.⁵⁵ While many of Moodie's settlers honored their contracts and then went on to amass fortunes from £500 to £2000, most of them, reneged on their contracts within a year of arriving. Moodie quickly found out that indentures (white indentures, at least) could be broken with impunity in the Cape. Both Burghers and Boers in the Cape looked down upon Moodie's settlement as a "white slavery" scheme and readily assisted those who abandoned their contracts. Col. William Bird, the Colonial Secretary, who had been an early supporter of the scheme, attempted to assist Moodie, but was foiled by John Truter, the Chief Judge, who was determined to liberate the new settlers rather than support the man who had made their settlement possible.⁵⁶ The alleged deference and piety of lower-class Scots quickly vanished and Moodie would never directly recoup his expenses for their scheme, though he did not stop trying until the mid-1830s.

Despite the failure of Moodie's scheme in 1817, the British Government would replicate parts of it on a much larger and more expensive scale in 1819/20. The official sanction by Parliament led to relative orderliness in the recruitment, financing, and transport of the 5000 British emigrants to the Cape in 1820, but the actual settlement, like Moodie's (and Duckitt's before that), was both chaotic and disappointing. For nearly 20 years, the British government had actively resisted the use of public funds to assist emigration. The "encouragements" given to prospective settlers to New South Wales, Canada, and the Cape, were restricted to those which

⁵⁵Memorial of Benjamin Moodie, 7 November 1820, WCA, CO 3919/409

⁵⁶ MacKenzie and Dalziel, *The Scots in South Africa*, 44–47.

brought very little direct cost to either the home or colonial government.⁵⁷ Crown lands offered to settlers in New South Wales cost little more than the paper that the “treaties” legalizing dispossession of Aboriginal Lands and the salary of the person sent out to survey it. Other encouragements included a year on public rations, and the labor of convicts who were already being maintained in the colony regardless. In the Cape, the cost to the government of providing land and labor was steeper (maintaining frontier military garrisons, policing the coercion of Khoikhoi labor, waging land wars against the Xhosa, etc.) which led to even less direct encouragement of British settlers.

So why the about-face in 1819? The scheme was politically strategic, constructed to address four main problems both in Britain and the Cape. First, as discussed earlier, was the desire to alleviate social pressures (population, industrialization, post-war depression) in Britain which were threatening to boil over into revolutionary activity. The second was to make the white population of the colony decidedly more British in the face of an expanding (both geographically and demographically) Boer population. The third was to create a prosperous and orderly buffer of exclusively British settlers to the Zuurveld to combat Boer-Xhosa conflicts in the area. The fourth was to bring in agricultural capital, knowledge, and free (as opposed to slave or Khoikhoi) labor to the supposedly more amenable climate and soil of the Eastern Cape to establish a steady and secure grain supply for the increasingly hungry Western Cape (Cape Town in particular). The settlement in the Eastern Cape was going to replicate both the agricultural practices of Britain and its agrarian relations. Having perhaps grown wary of the dangers of an independent colonial yeomanry, first in America and then, to a lesser degree in New South

⁵⁷ A. Murdoch, *British Emigration, 1603-1914* (Palgrave Macmillan UK, 2004), 36, 43, 57-65, 85-97 .

Wales where Emancipist farmers proved resistant to paternal oversight and keen to assert their political rights, a new strategy was taken in this scheme. Yes, the new settlement would be made up of closely-settled, mixed farms, small enough for fences to surround the grain and grass, but it would also be a settlement disciplined by social and economic hierarchies.

In July of 1819, Lord Liverpool's Chancellor of the Exchequer, Nicholas Vansittart, proposed a grant of £50,000 to assist emigrants to the Cape as an "experiment on a small scale" to see how "far it might be possible to employ the surplus population of this country in one of our colonies."⁵⁸ Having failed to learn (or having forgotten) the dangers of climate boosterism from the experience of New South Wales, the proposal relied on assurances that the Eastern Cape had a "mildness of climate and fertility of the soil" that would ensure a "rapid and abundant return" of the "productions both of temperate and warm climates—to the olive, the mulberry, the wine, as well as most sorts of culmiferous [grasses and grains] and leguminous plants."⁵⁹ Potential settlers would be required to put down a deposit (£10 for a single man to a family of four, with a further £2-5 for each additional child depending on age) to be "repaid" to them in rations, implements, seed, and stock in first year until the harvesting of a grain crop. The exact details of the scheme would be hashed out in the Colonial Office over the next few months, but even in a skeletal form the scheme provoked both strong approbation and disapprobation in Parliament and the British press. Scottish MP Joseph Hume, a Radical approved of the scheme but wished it to be aimed primarily at abled-bodied paupers regardless of their consent, and thought that instead of the Treasury footing the bill, parishes should instead contribute whatever monies spent to support such persons for a year or two to the emigration. While this suggestion

⁵⁸ Note how Vansittart incorporates Malthus's terminology "surplus," normally reserved for talking about agricultural produce, used for population.

⁵⁹ July 1st, 1819, Hansard, Geo. III, 59, v. 40 (1st series).

was later explored in depth by Wilmot-Horton, in the end there were only a few parish-sponsored settler parties sent to the Cape. English MP Matthew Wood vehemently opposed the scheme as there were, in his view, already more than enough wastelands in the British Isles that might be “cultivated to advantage” by these surplus laborers.⁶⁰ This was another reiteration of earlier debates on emigration centered in the Scottish Highlands, where, with the aid of natural history, internal colonization and intensive cultivation of wasteland might provide a viable alternative to overseas settlements.⁶¹ But this viewpoint had become less appealing given the extent of social unrest in Britain in 1819, and the measure passed.

In the same month as the Parliamentary decision, the naturalist William Burchell testified before the Select Committee on the Poor Laws that the Cape was, environmentally-speaking, more suited to European agriculture than North America, particularly Canada. The land was “quite open to receive the plough on the first landing of the emigrant make good returns of wheat in six to seven months. Burchell was, however, skeptical of the plan to bring in English laborers to the Cape to address the labor shortages in the colony, as it was improbable that English emigrants would “feel very comfortable in serving Dutch farmers by the side of Hottentots or slaves” and would “soon acquire those notions of superiority, which every white man does on being in a country where slavery is admitted.” He also warned that the wage expectations were way off. Dutch farmers were used to paying only 30-50 rix dollars per contract year (approximately 51 shillings or £2 11s) whereas the committee had been informed that white settlers could not feed, clothe, or house themselves without having at least that amount *per*

⁶⁰ Ibid.

⁶¹ Albritton Jonsson, *Enlightenment's Frontier*, 2–3, 263. Internal colonization schemes would see a revival in the early Victorian period.

month.⁶² The same month in the *Quarterly Review*, John Barrow, who should have known better, described the Cape as “a land which may literally be said to flow with milk and honey.”⁶³

After the measure passed, the new question was “What kind of settler do we need?” The initial answer was threefold: settlers should be acquainted with agriculture or another useful trade, not be completely indigent, and should apply in parties of no less than ten able-bodied men over the age of 18. Settler parties were to be led by a person possessed of a sufficient amount of capital to advance £10 deposit on behalf of each “labourer” he took out. These “Proprietors,” in order to minimize personal risk would handpick men of humility and good moral character to join him in his colonial operations. Party proprietors were to be settled on 100 acres for every person he brought out, to be granted in his name alone after three years provided the land was being occupied and cultivated. Deposits were to be repaid in thirds: first upon landing in the form of “necessaries” to the proprietor who would be in charge of distributing them to the other members of his settler party, the second three months later, again in the form of supplies, after the arrival of parties to their locations, and the third in supplies or cash after six months. All land, all money, and all supplies were to be controlled by the party proprietor. Proprietors were required to show proof that all members of their party had consented to emigrate, but there were no regulations on the individual contracts drawn up between proprietors and their settlers parties. Some proprietors paid the deposits for his settlers in full and stipulated a certain number of years of service (usually three) in exchange for a parcel of land from the main grant. Some proprietors

⁶² “Report from the Committee on the Poor Laws” 1819, House of Commons Sessional Papers 529, II.249, pg. 38. The average wage of a male agricultural day laborer in England was 2s 10d per day. See Gregory Clark, “Average Earnings and Retail Prices, UK, 1209-2010,” Measuring Worth, <https://www.measuringworth.com/datasets/ukearnncpi/earnstudynew.pdf>. Accessed June 22, 2016.

⁶³ Quoted in Keegan, *Colonial South Africa and the Origins of the Racial Order*, 63.

offered up the full 100 acres to their settlers, but most offered considerably less in order to keep larger properties for themselves. Some proprietors preferred not to deed over land in fee simple at all, but rather promised long tenancies with right of inheritance, so that they could dictate the terms of land use. This type of hierarchy was considered preferable by Bathurst, who was ultimately in charge of selecting parties, and he was more amenable to parties adhering to contracts of this nature. This was the only kind of party that Lord Charles Somerset and his successor, Sir Rufane Donkin, had approved of. The Cape did not need a handful of individual settlers on isolated farms on the frontier. It needed orderly, hierarchical agricultural communities who could prosper and protect themselves through mutual assistance.⁶⁴

However, very few of the applications sent to the Colonial Office came from true proprietors. A handful of capitalist proprietors did apply, and a limited number of parish-sponsored pauper parties were admitted to the scheme, but most prospective emigrants fell somewhere in between. The Colonial office was inundated with applications of individuals who had enough money to pay their individual deposits, but could not possibly afford to pay the deposits of ten others. They were uniformly denied and the revised government circular sent out at the beginning of August made it crystal clear that no individual settlers or settler families would be permitted to go to the Cape. More than 90,000 applications in total came to the Colonial Office in 1819. Most party leaders were only nominal proprietors. Groups of prospective settlers met across the country to create joint-stock settler parties, electing “proprietors” and drawing up legal contracts to protect their investments. Proprietors were put in charge of the deposit money, but were contractually obligated to sign over all 100 acres of

⁶⁴ Nash, *Bailie’s Party of 1820 Settlers*, 48–54; Harold Edward Hockly, *The Story of the British Settlers of 1820 in South Africa* (Juta, 1948), 31–3.

granted land to each member and forbidden from exercising any control over other party members. These joint stock companies under a nominal director might not have defied the letter of the emigration directive, but they certainly flouted the spirit of it. However, the Colonial Office was under severe time constraints and needed to choose and send out the emigrants in time to break up and plant their new farms by the early Spring (September). In the end, of the 66 parties sent out in December 1819/January 1820, only 12 were true proprietary parties, and 2 were pauper parties.⁶⁵

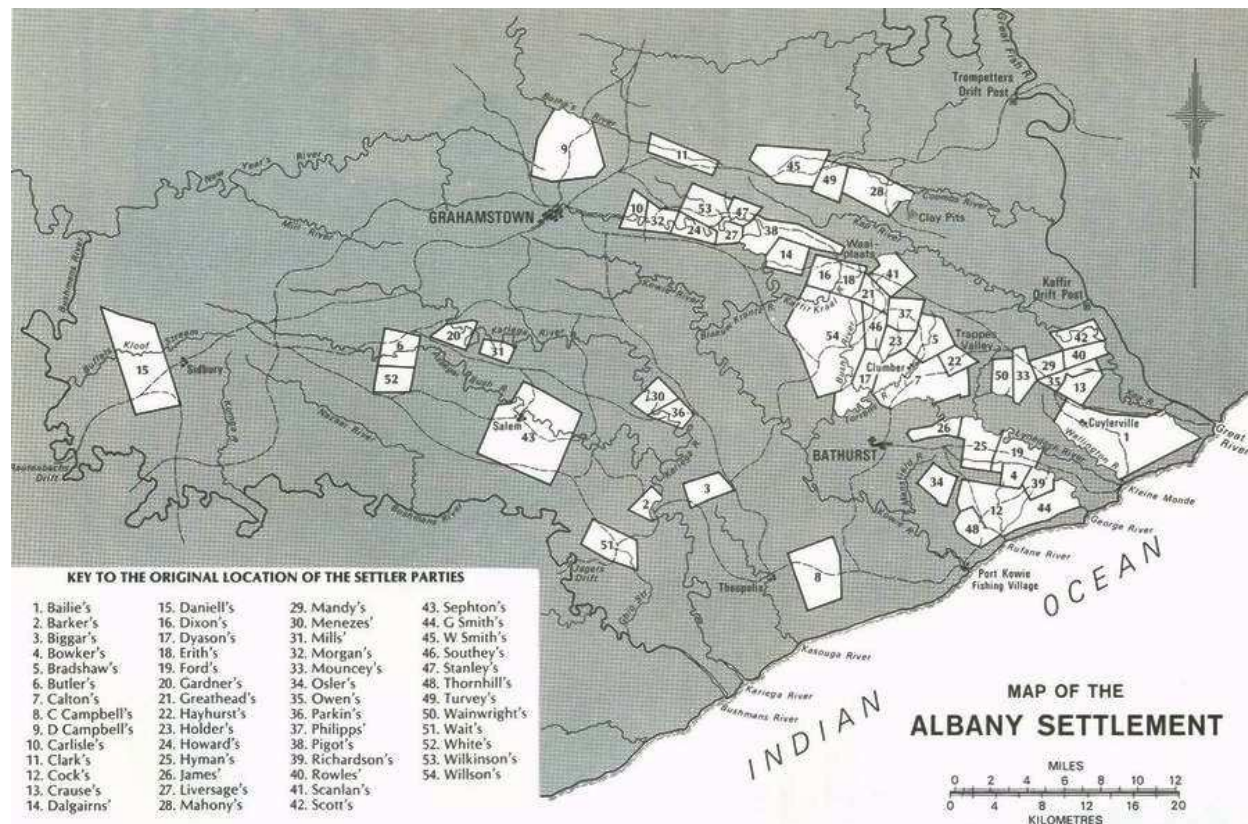
The Eastern Cape might not become a settlement of well-capitalized gentleman arable farmers overseeing communities of agricultural laborers, as both Bathurst and Somerset had initially desired, but officials still held out hope that these British emigrants would nevertheless form a productive new agricultural sector in the east. One hundred acres should be more than sufficient to keep a family fed and comfortable while still providing surplus to the Western Cape, and this belt of British farmers would keep the Xhosa behind the Keiskamma River and serve as an example to the trekboers. Hopes were incredibly high both at home and in the Cape for what the settlers could accomplish in the Eastern Cape. Over 4000 men, women, and children in 66 official parties in 25 vessels left England in December 1819, and a further 1000 would depart in the months that followed. They were from all over the British Isles, and nearly half likely from urban centers: 1689 from Middlesex (including much of what is now Greater London), 611 from London proper, 409 from Cork, and 200 from Edinburgh.⁶⁶ The most common self-reported professions for men was laborer (176), farmer (161), carpenter (87), husbandman (76), gardener

⁶⁵ Keegan, *Colonial South Africa and the Origins of the Racial Order*, 64.

⁶⁶ E. Morse Jones and 1820 Settlers National Monument Committee, *Roll of the British Settlers in South Africa* (A. A. Balkema, 1971). It is difficult to assess the exact urban/country makeup of settlers from these areas since much of Greater London, Edinburgh, etc. were still rural in the 1810s.

(42), agriculturist (30), along with another 50-odd tradesmen and professionals, and several vague occupations (ex: gentleman and countryman).

Figure 12: Map of the Albany Settlement, 1820 ⁶⁷



Sir Rufane Donkin, who personally supervised the process of locating and settling the settlers from Algoa Bay, had not anticipated the sheer numbers involved but still expressed confidence that the scheme would “ultimately succeed” and the “agricultural and commercial advantages” abound in no time.⁶⁸ But before agricultural operations could even be established, joint-stock settler parties were already fragmenting over disputes about the distribution of rations, implements, and land, and many laborers abandoned their proprietors the moment they received their first rations for work in Grahamstown, Graaf Reinet, and Uitenhage. Nevertheless,

⁶⁷ Posted uncredited on a family history blog.

⁶⁸ Donkin to Bathurst, 24 April 1820, NA, CO 48/49 f.72

tens of thousands of acres across the Zuurveld were broken up and planted with wheat in September 1820, wheat that appeared to be flourishing until farmers began to notice a reddish brown mildew on the stalks of their otherwise healthy-looking plants. In January 1821, just as the grain began to form, the plants wilted and died. The blight was universal in the Eastern Cape and affected some wheat crops in the western districts as well. Not only did it devastate the settlers, but it caused a severe shortage of wheat in the colony as a whole, meaning that the cost of those rations (charged at the prime rate) skyrocketed.⁶⁹ In response to petitions of distress, Donkin issued a one-time shipment of Indian rice to be given free to all settler families on their assigned locations, to tide them over to the next harvest. While this kept many from starvation, it did little to prevent the continued breakup of settler parties of all descriptions.

In the second year, the blight returned again in full force. The settler deposits had been completely used up, and heads of parties were forced to draw increasingly expensive rations on credit. To add insult to injury, Somerset had returned in 1821, adamant that the settlers should remain financially responsible for their maintenance, likely still angry that the British government had saddled him with such a ragtag group of settlers. He instructed the Albany landdrost, Major Jones, to ban all public gatherings of settlers and to deny all requests for aid. In addition to the blight, floods in late 1821 destroyed gardens, dwellings, and stock, and Xhosa raiding parties lifted hundreds of cows from the Fish River settlements. Petitions piled up in the landdrost's office and letters were sent home detailing settler distress and government inaction. In March of 1822, settlers finally went over Somerset's head, appealing directly to Bathurst. Their petition was signed by 170 settlers from both proprietary party heads and remaining members of joint-stock parties. Astoundingly, given the extent of environmental calamity in the

⁶⁹ Donkin to Bathurst, 5 June 1821, NA, CO 48/54, f. 220

colony, the settlers made “no complaint of the natural disadvantages” of the colony, but rather of “artificial disadvantages” installed by an inept government:

Placed in a remote corner of the British dominions, with their whole interests and prospects committed to the unlimited controul [sic] of one individual, and possessing no security that their situation is thoroughly understood or properly represented, they have been debarred all means of expressing their collective sentiments upon matters of the utmost importance to their common interests... The colonial government, situated at the opposite extremity of the colony (where every particular, whether of soil and climate or the constitution, pursuits and interests of society is totally different) possesses no adequate means of ascertaining their actual wants.⁷⁰

Theirs’ was not a criticism of excessive government, as those with liberal leanings might have suggested, but of an under-active government, one that would not adjust to on-the-ground environmental and economic realities.⁷¹

Proprietary leaders had been repaid very poorly for their investment in agricultural improvements. Their aspirations to become a powerful class of landed gentry in the Eastern Cape were thwarted by the quick absconding of the men they had brought out with them. As with Moodie, there was very little legal recourse available to proprietors whose indentured laborers broke their contracts. Proprietors were forced to pay high wages as well as providing rations for the first few years in order to keep men from simply leaving to find work in the colonial towns. The capital they had brought out was often quickly exhausted, and in many cases, these proprietors ended up much worse off financially than the men they had paid to bring over. These settlers felt they should be compensated for the losses they sustained while attempting to do this agricultural service to the colony. They wanted larger land grants so that they could pursue large-

⁷⁰ Petition of the Settlers of South Africa, 10 March 1822, CO 48/61, f. 401.

⁷¹ Smith is at his most adamant in arguing that natural disadvantages (soil, climate, etc.) are less injurious than excessive government when addressing the issue of famine: “Famine has never arisen from any other cause but the violence of government attempting, by improper means, to remedy the inconveniences of a dearth.” (26) Adam Smith, *An Inquiry Into the Nature and Causes of the Wealth of Nations* (J.M. Dent & Sons, Limited, 1921), 25–7.

scale stock operations and stricter control on labor. Sir Rufane Donkin, the acting governor, who had overseen the settlement in its first year, tended to agree. If the goal was to raise a pseudo-aristocratic class of improving gentlemen farmers to model good husbandry and exercise control over a laboring class, then government should assist them in whatever way possible.

Somerset, on the other hand, turned quickly on the very men (capitalist proprietors) who he had hoped would carry the original scheme. Somerset characterized the party leaders, who had followed the letter of the law and invested their fortunes in the venture, as trouble-making radicals. Instead of reinforcing those settler capitalists—Miles Bowker, Christopher Thornhill, John Sephton, Thomas Phillips, Duncan Campbell, and George Pigot, in particular—in replicating the patronage and privileges of the British countryside, a project he had initially supported, he declared that it would be extremely inappropriate “to make Dukes of Bedford of the Heads of Parties.”⁷² The heads of proprietor parties accused Somerset of not understanding that they were altogether different than the nominal heads of parties who had so quickly abandoned their settlements due to infighting and incompetence. Eventually, the home government would side with the settlers, but in the interim years between 1821 and 1824, when the Commissioners finally arrived in the district, settlers were left high and dry.

It was a voluntary society, not government, who came to the aid of the ruined Albany settlers. The Society for the Relief of Distressed Settlers was established in 1822 by sympathetic Cape Town colonists, funded by locals and members of the British public at home. It was generally agreed that the British government had placed these settlers in an impossible situation due to lax governance and poor planning, a situation exacerbated by its refusal to adapt to the

⁷² Alan Lester, *Imperial Networks: Creating Identities in Nineteenth-Century South Africa and Britain* (Routledge, 2005), 51–3; Keegan, *Colonial South Africa and the Origins of the Racial Order*, 64.

current state of the settlement (i.e. forgiving ration debts and granting additional lands to remaining settlers). The Society brought Malthus into the debate, admitting that while injudicious charity might “perpetuate the evils we wish to cure,” but that even “that great champion of rigid economy” would not object to these settlers (particularly the proprietors) receiving aid. Quoting Malthus directly, they claimed that settlers “industry, prudence and virtue” had not only failed to reap “just reward” but were the objects of “unmerited calamities” and, therefore, “genuine objects of charity.”⁷³ They denied Somerset’s charges of settler Radicalism or the abandonment of cultivation.

They cannot command the clouds of Heaven to rain upon their fields; they cannot raise the water from the deep ravines to which it is confined to irrigate their gardens: they cannot arrest Omnipotence and stop the progress of that blight, which, through successive years, has destroyed the promise of the harvest.

They singled out John Barrow, who had promised settlers “Land literally overflowing with milk and honey” as a perpetrator of outright chicanery: “[This country] was described in all the glowing tints of eastern imagery...was held out to the poor Settlers as the second Land of Promise.” A few humble settlers might have found a better life in the Cape, but those “respectable” settlers with good “connexions” and full purses in England declined into paupery in the Cape. Women of high birth and good manners had been reduced to rags. Accomplished young ladies who spoke French and played the pianoforte were forced to feed and milk cows and clean stables. Men, who had sacrificed “every last shilling to improve his land and serve his country, had “never reaped one handful of produce.”⁷⁴ It was the plight of these fallen families that struck a chord in donors. Most of the societies funds went to those who had come to the

⁷³ “Report of the Committee of the Society for the Relief of Distressed Settlers,” 17 Sept 1823, NA, CO48/67.

⁷⁴ Ibid.

Cape with small fortunes in pursuit of agrarian improvement. Public outrage at Somerset's refusal to assist the remaining Albany settlers as their capital dried up, their debts mounted, and their crops failed for a third year running, was one of the main motivations for sending out of Commissioners Bigge and Colebrooke in 1823.

In the end, the 1820s settler scheme had not only failed to do anything that it had been intended to do in terms of grain production and sedentarization, it had actually made things worse in the colony. Instead of English settlers becoming an agricultural (and cultural) beacon to the Boers, most of the English settlers had "gone Boer" themselves. Instead of producing a peaceful and prosperous buffer zone between colonists and the Xhosa, it created endemic violence and led to the systematic and binding dispossession of non-Whites that would prevail throughout the next century. That being said, a handful of British settlers, mostly party leaders, managed to create substantial agrarian livelihoods for themselves and their children on the Zuurveld. It was largely through their efforts that the Cape Colony became a major wool producer in the 1830s and 1840s and that the grasslands of the Eastern Cape were Europeanized.

2. New South Wales

In 1792, the Home Office began sending small parties of settlers to New South Wales on convict transports. Would-be settlers who claimed to be "agriculturists" could receive free passages, victualling, and the promise of a land grant and a year's rations. These free settlers, often with very large and young families, began to arrive in 1793 and were granted lands north of Parramatta, in Liberty Plains and Concord. After five years, however, all but a few families had given up their claims due to insolvency, and many had been forced to again rely on government

rations.⁷⁵ According to Sir Joseph Banks's agent, George Caley, writing in 1803, a small but steady stream of these kinds of settlers had arrived in the colony in the ten years since the Home Office began this program. He wrote, disapprovingly, that government had not only deluded these settlers on what to expect from the soils of the colony, but that the settlers had deluded government in equal measure; their claims to have "have any knowledge of agriculture" were almost uniformly false.⁷⁶

Governors and other colonial officials wrote home to little avail, begging the government to exercise more caution in the selection of settlers. Assistant Surgeon John Thompson wrote home in 1804 that government had been "immeasurably deceived" by these settlers. Of the 150 families sent from Britain during his time in the colony, he knew only a handful that had managed to farm their land with any success, and that, of those, he could not "draw the smallest discrimination" between their farms and those of convicts. He warned the Colonial Office under-secretary in charge of screening settler applications to be on his guard against "improper characters" who recommended themselves to the Colonial office as settlers:

Among the persons who have been sent, some have been people of very suspicious characters and have only narrowly escaped being sent out ag't their inclinations [i.e. as convicts]; others, low mechanics who have failed in business, with long families, and who, had they remained in England, would have become burdensome to their parishes; others, men of dissolute and drunken idle habit, whose friends were glad to get rid of them by recommending them as settlers.

After enjoying the indulgences granted by the Government to settlers, these types, Thompson claimed, became a burden (and sometimes an "Evil" menace) to the colony's prosperity.⁷⁷

⁷⁵ See Ch. 3.

⁷⁶ Caley, "A Short Account....New South Wales" (look up citation in Ch. 3)

⁷⁷ Thompson to Under-Secretary Cooke, 28 June 1804, HRNSW 5, 389

In the 1810s, the Colonial Office did become more discerning at the urging of Macquarie who “strongly but respectfully recommend[ed]” that no more indigent settlers, whose “Sole Dependence [is] place on what is termed here “their Indulgences.”⁷⁸ Taking over as Colonial Secretary in 1812, Earl Bathurst stopped the practice of offering free passages and required settlers to show that they had at least £500 worth of capital (some of which could be non-liquid in the form of agricultural implements). Settlers would be given land in proportion to the capital they possessed: 100 acres for 100 pounds. In the early days, all potential settlers really needed was an intelligible application and a single character reference attesting to the settler’s command of the required capital. Many settlers came to New South Wales possessing less than a third of that amount. By 1819, Bathurst had tightened restrictions. Advertisements informed potential emigrants that at least two individuals, one of whom should ideally be a local clergyman, must submit letters attesting to “the extent of [the applicant’s] capital investment.” The Colonial Office advertised for men of industry with “a knowledge of Agriculture,” but they did not want poor farmers. “The command of Capital,” Bathurst claimed, was the “essential qualification of every Agricultural Settler in New South Wales.”⁷⁹ It would not be until the mid-1820s that the government would begin to entertain the idea of pauper emigration.

It was Bathurst’s Under-Secretary, Sir Robert Wilmot-Horton, who had the biggest hand in shaping emigration policy to New South Wales and elsewhere in the Empire, in addition to revamping the entire Colonial Office. Throughout the 1820s, Wilmot-Horton advocated a more liberal emigration policy in the name of political economy. He encouraged both publically assisted emigration schemes and private emigration, and played a large role in the removal of

⁷⁸ R. N. Ghosh, “Malthus on Emigration and Colonization: Letters to Wilmot-Horton,” *Economica*, New Series, 30, no. 117 (February 1, 1963): 45–62, doi:10.2307/2601711.

⁷⁹ Bathurst to Brisbane, 1 January 1825, HRA 11, 440.

emigration restrictions in 1824. A long and lively correspondence with Malthus, whose early ambivalence on the subject of emigration is well-documented, did not dampen his enthusiasm for pauper emigration. In his view, emigration would kill two very important birds with one stone. Agricultural development in New South Wales, Canada, and the Cape had been retarded by a deficiency of labor needed to bring these challenging landscapes into cultivation. He differed from many of his colleagues both in Britain and in the colonies who insisted that agrarian problems had been caused by widespread lack of agricultural expertise on the part of practical farmers. Not just any warm body would do. For Wilmot-Horton, the problem was caused by a simple mathematical disproportionality between land and population. Meanwhile, throughout Britain, able-bodied men sat idle and dependent on various forms of poor relief, relief that was putting unbearable pressures on rate-payers. In Ireland, which was experiencing a much more drastic expansion of population and which had no official form of poor relief, hundreds of thousands of people headed to English cities to find work, compounding the problem. The solution was straightforward for Wilmot-Horton: send Britain's redundant population to those colonies where able bodies were desperately needed. He did not have the scrupulosity about American agrarian prodigality that his predecessors had. Where men like Arthur Young saw waste and poor management, Wilmot-Horton saw colonial abundance and prosperity. When the lands on the coast of North America filled up and work became scarce, American colonials were allowed to move West, providing economic opportunities to redundant eastern populations and relieving the East Coast of the burden such persons created. He saw no reason why "this splendid creation...might not be paralleled in our own colonial possessions."⁸⁰

⁸⁰ Quoted in Belich, *Replenishing the Earth*, 210. See also *British Immigration Policy, 1815-1830: "Shovelling Out Paupers."* (Oxford: Clarendon Press, 1970).

Paradoxically, while the first large scale assisted emigration scheme foundered in the Cape Colony (planned before Wilmot-Horton's time in the Colonial Office), proving how naïve it was to assume that an influx of able bodies would fix all of a colony's agricultural problems (see next subsection), Wilmot Horton was outlining a new pauper emigration scheme to Upper Canada. He argued that the initial investment in the form of loans to individual parishes to fund passages, implements, and a year's provisions, would quickly be recouped by the savings created for parishes.⁸¹ Yet, perhaps heeding Malthus's warning that emigration was no easy activity for emigrants themselves, Wilmot-Horton, unlike the planners of earlier settlements (including Sir Joseph Banks with the First Fleet), attempted to avert the charge of misguided optimism by collecting extensive and detailed evidence of the actual costs, in terms of labor, time, and resources, of bringing "wastes" into productive cultivation.⁸²

These were not just theoretical calculations, but rather the result of years of working directly (if remotely) with colonists in Canada, New South Wales, and the Cape. Wilmot-Horton had estimates drawn up for the preparatory work that would need to be undertaken by convicts at government expense to lay the foundation for pauper emigration to New South Wales. To prepare 5000 30-acre farms (fenced in with a three-rail fence, six acres cleared, a 300 square foot house erected) in a year, 5,500 convict laborers would be needed in addition to supplies, at the cost of £95,210. Assuming that the cost of keeping feeding and clothing these convicts (~£80,000) was an expense expected to be borne by Government in any case, regardless of their assignments, that left a fairly moderate cost of around £3 per farm to be added to the much larger

⁸¹ R. N. Ghosh, "Malthus on Emigration and Colonization: Letters to Wilmot-Horton," *Economica*, New Series, 30, no. 117 (February 1, 1963): 45–62, doi:10.2307/2601711.

⁸² Malthus, *An Essay on the Principle of Population*, 379, 387; Bashford and Chaplin, *The New Worlds of Thomas Robert Malthus*, 211–14.

expense of sending a settlers family of five out and providing them rations for a year (£146).⁸³ Breaking with previous free settler and Emancipist inducements, these pauper emigrants were not to be granted land in fee simple. They were to farm these lands on perpetual leases. After the third year on their farms, they would be required to pay the government a rent of £10, money to be used, in combination with the £10 paid per family of five by their home parishes (or private subscription fund in the case of Ireland) for 14 years, to repay the cost of their initial passage and maintenance.⁸⁴ Financial calculations were drawn up for not just the first three years, but for 25 years. No one could have accused Wilmot-Horton of not doing his homework. The reports he penned for Parliament were filled with ambitious and overly-optimistic claims about how “tracts of unappropriated land of the most fertile quality” in these colonies were “capable of receiving and subsisting any proportion of the redundant population of this country.”⁸⁵ However, Wilmot-Horton took pains, particularly in the case of New South Wales, to garner information (and support) from men in the colony on what agricultural expectations could be reasonable. Yet the conclusions he reached based on his correspondence and testimonies to the Select Committee on Emigration were rather out of sync with the conclusions reached by John Thomas Bigge’s Commission only a few years earlier in 1822/23. This report had highlighted the difficulties of arable culture and argued that pastoral enterprises were more appropriate to local conditions; yet Wilmot-Horton’s line of questioning to those giving evidence on New South Wales indicate that arable farming was to be the primary undertaking of would-be emigrants.

⁸³ *First Report of the Select Committee on Emigration in 1826 with a Brief Analysis of the Evidence and Appendix* (London: J. Murray, 1827), 239

⁸⁴ *Ibid.*, 248; Bashford and Chaplin, *The New World of Thomas Malthus*, 215

⁸⁵ *Ibid.*, 3

The former Lieutenant Governor of Van Diemen's Land, William Sorrell, when asked if emigrants with no capital whatsoever could succeed in either New South Wales or Van Diemen's Land, replied that it would be no different than the settling of emancipated convicts who had generally done fairly well, though he did warn the Committee that success depended upon the settlers "fitness for the undertaking" and the extent to which they had been "bred to agricultural occupations."⁸⁶ Part of the suggested "deal" for emigrants to New South Wales—a significant departure from the assistance given to Emancipist settlers—was building a house, fencing in the proposed 30-acre allotment, and clearing at least ten acres. This kind of enclosure was a rarity in New South Wales even on productive private farms and would have certainly given these new settlers a much better chance at succeeding as mixed farmers, but its practicability was questioned by those consulted. Another former colonist, Edward Eager (a "white collar" Emancipist who had argued passionately for the compatibility of free and convict settlement in his testimony to Bigge), testified that while almost all the capital in New South Wales had been applied to grazing instead of cultivation, there was no "natural obstacle" to arable farming. Given that colonial governments had almost every year been forced to import grain from India to cover the deficit, Eager claimed that new agricultural settlers would be a welcome addition. When surplus exceeded the local demand, farmers could turn to other crops: flax, hemp, and tobacco, commodities that were not heavily restricted like grain.⁸⁷ Yet his claims that there were vast tracts of land "naturally so rich and productive," as to yield abundant grain crops successively for at least 15 years and in some cases 30, match neither the official dispatches sent to the Colonial Office nor the findings of Bigge's Commission, which had only found evidence of that kind of

⁸⁶ Ibid., 105

⁸⁷ Ibid., 97-98; 109-10

longevity on the land directly adjacent the Hawkesbury and Nepean Rivers, which flooded on a regular basis.

Whether due to the thwarted expectations of similar kinds of environmental boosterism over the previous half century or to the astronomical cost of Wilmot-Horton's emigration schemes, Parliament declined even to hear debates on the matter when presented with his emigration bill in 1830, which would have included a pauper emigration scheme for New South Wales.⁸⁸ Even so, the good press circulating in the mid to late- 1820s about the capability of New South Wales and Van Diemen's Land to support agricultural settlers led to an upsurge in free "unassisted" emigration to the colony. Annual free emigration to New South Wales nearly doubled between 1820 and 1825, and again between 1825 and 1828. 1205 individuals emigrated to Australia in 1828, 1313 in 1829, and 2670 in 1830, before official assisted emigration or bounty schemes commenced.⁸⁹ It is, however, somewhat of a misnomer to suggest that these new settlers were completely unassisted. Free passages were often granted to the spouses and children of convicts, passages were paid via indenture contracts, and many settlers (free and Emancipist) who had prospered in the colony sent funds home to extended family, creating the kind of chain emigration that had long been prevalent in North America.⁹⁰ New free settlers (male settlers, at least) were also entitled to land grants, convict labor, stock loans, and, in some cases, rations.⁹¹

The second (and ultimately successful) emigration scheme began with act of chicanery on the part of man serving a jail sentence for the abduction of a 15-year-old heiress. Edward Gibbon

⁸⁸ Bashford and Chaplin, *The New Worlds of Thomas Robert Malthus*, 230–1.

⁸⁹ Butlin, *Forming a Colonial Economy*, 22.

⁹⁰ For example: James Atkinson to Bathurst, 16 October 1819, NA, CO 201/95, f. 2; Maria Baxter to Bathurst, [1820], NA CO 201/95, f. 72; Thomas Brown to Bathurst, 15 March 1820, NA, CO 201/95, f.2/

⁹¹ Butlin, *Forming a Colonial Economy*, 20-2

Wakefield, the quixotic son of a well-respected gentlemen farmer and philanthropist, penned his famous *Letter from Sydney*, an anonymous treatise on emigration from the point of view of a gentleman capitalist settler in New South Wales, in 1829. Wakefield had never set foot in that colony, a fact his editor, Robert Gouger, another emigration enthusiast, knew well. He had obviously read a great deal about the colony, but did not have the “some years of close observation” that he had claimed. The *Letter from Sydney* was at best a well-informed fictional account put forth to propose a new kind of assisted emigration scheme. It was certainly informed by Wilmot-Horton’s reports, but departed significantly. Wakefield’s narrator had purchased 20,000 acres for a “trifling” £4000 (2s per acre), but “as my estate cost me next to nothing, so it is worth next to nothing.”⁹² The extremely high wages in the colony prevented the hire of the labor needed to cultivate it, or even to look after herds, and he could not sell it, as purchasers “grumbled” at the price when grants could be acquired for sixpence an acre (the cost of surveying).

The narrator’s initial plan was to become a great landlord upon a fine country seat who oversaw the operations of improving tenant farmers. But there were no tenants to be had in New South Wales, for “every man who has capital to cultivate a farm can obtain one of his own for nothing.”⁹³ His own (fictional) faithful servant who had “sworn that he would go the wide world over with me” abandoned him immediately for a grant of land near Hunter’s River:

He is now one of the most consequential persons in the Colony, has grown enormously fat, feeds upon greasy dainties, drinks oceans of bottled porter and port wine, damns the Governor, and swears by all his gods, Jupiter, Jingo, and Old Harry, that this Colony must soon be Independent.⁹⁴

⁹² Edward Gibbon Wakefield, *A Letter From Sydney, the Principal Town of Australasia Togetehr with the Outline of a System of Colonization* (London: Joseph Cross, 1829), 3-4

⁹³ *Ibid.*, 9

⁹⁴ *Ibid.*, 10

This was a slightly veiled critique of the notion that Wilmot-Horton's paupers would repay their government benefactors the incredible expense of their emigration and initial settlement with gratitude, loyalty, or humility. Convict laborers were equally problematic as they had no vested interest in the quality of their labor unless threatened with flogging ("the most economical mode of correcting our slaves"), which an Englishman should condemn on moral grounds. He sent to England for shepherds, ploughmen, mechanics, and laborers, who promptly, like his old servant, abandoned him for masters in Sydney and Parramatta, who could pay double or triple his promised wages. Small wonder, he fumed, that all free settlers (and most Emancipist settlers) did nothing but raise sheep in the "wilderness."⁹⁵ New South Wales, like North America in the mid-eighteenth century, was bound to turn its back on the Mother Country. As Wakefield put it several years later (under his own name) this "barbarising tendency of dispersion" fostered by the easy access to land and the out-of-control labor market would be the death of agrarian improvement and would likely be the cause of a severance with Britain.⁹⁶

The answer for the labor shortage was not to "send to England for five thousand starving peasants" [a direct critique of Wilmot-Horton's plan], which he claimed had been tried over and over again without success. No man, indentured or not, would ever do a day's work for three shillings, when the man on the farm next door was getting six (or nine) shillings for the same work. And even if that man was to labor at the lower rate, it would be only a matter of a year or so before he could afford to buy his own land. Nor was the answer to send to England for more capitalists, like himself, which would only make the shortages worse. Capital would be wasted.

⁹⁵ Ibid., 11-21

⁹⁶ Edward Gibbon Wakefield, *England and America: A Comparison of the Social and Political State of Both Nations* (R. Bentley, 1833).

He did not deny that capitalists could amass fortunes in wool owing to the “extraordinary production which this affords” and “the high prices for a commodity which cost them very little,” but warned that the boom would be followed just as surely by a bust when production outgrew demand, a well-founded prediction, as the historian James Belich has shown.⁹⁷

Wakefield maintained there was no environmental reason that Australia should not be able to support a dense agricultural population, particularly in the recently discovered areas in Port Phillip (Melbourne) and South Australia (near Adelaide).⁹⁸ Dismissing the political economy of Smith, who saw the cheapness of colonial wastelands as a boon to population and wealth, and Ricardo, whose theory of rent had failed to “explain the nature of rent in new countries,” Wakefield declared that the only way forward was to put artificial checks on access to land.⁹⁹

The crux of Wakefield’s argument was a thought experiment. If the fertile lands of Australasia and South Africa were to be magically transported and attached to the coast of England, would the government consider it desirable to be populated exclusively by paupers and criminals? Would all the land be freely granted? Would the price of an acre be 2 shillings in the new land while land was being sold at £10-20/acre in the old parts of the country? Would laborers in the new land be able to demand twice or thrice the wages as those in the old land? The answer was clearly no.¹⁰⁰ How could British colonists be expected to cultivate the lands of Australia and South Africa in a manner that did justice to the agricultural progress of the Mother Country if the rules of agrarian society were so vastly different in those new colonies? He appealed directly to a conservative, anti-democratic, anti-republican stance. Colonies must

⁹⁷ Wakefield, Letter from Sydney, 81. Belich, *Replenishing the Earth*, # (“The Golden Fleece”).

⁹⁸ *Ibid.*, 120-1

⁹⁹ *Ibid.*, 149-50; 169

¹⁰⁰ *Ibid.*, 181. See also Bashford and Chaplin, *New Worlds of Malthus*, 225-6

replicate agrarian social hierarchies to maintain social order and assure agricultural progress. Since this could not be based upon hereditary titles, it would have to be based on cash.

His plan for emigration, which would be refined over the next few years and implemented on a large scale by government shortly thereafter, rested on the principle that lands should never be free, and that all settlers, even paupers, should, to use an anachronistic idiom, have some skin in the game. All Crown Land should be sold at public auction at a minimum price. Upon all previously granted lands, a tax upon rent (or quitrent) should be levied. These taxes and sales would provide cash for an Emigration Fund, which would be used to provide free passage to “British Labourers,” namely young couples. Instead of planting paupers on plots of free land, “isolated from capital, intelligence and prudence,” and feeding and clothing them at government expense, settlers of this class should arrive in the colony with a healthy sense of desperation. An agent would meet the settler upon disembarking, give him only enough food to last until he was matched with a “capitalist,” who would hire him at the going rate (which would, it was supposed, fall once the scarcity of labor had been alleviated). With the increase in the price of renting or purchasing land, a prudent and ambitious laborer would need to work for five or ten years before he could save enough money to cultivate (or graze) land on his own account. That settler, having used hard-earned cash in the purchase or rent of a farm and stock, would have much greater incentive to improve it. Additionally, the cost of land would put the purchase of large grazing farms out of reach for most settlers, meaning that most would opt for smaller, more densely concentrated farms with ready access to markets and civil institutions (churches,

schools, meeting halls), where soils would be cultivated intensely as they were in British country villages.¹⁰¹

Gouger and the newly-free Wakefield formed the National Colonization Society to refine their proposal. Despite the critiques levied against his original pauper emigration schemes and the failure of his emigration bill to gain traction in Parliament, Wilmot-Horton took a leading role in this new society. In the end, the new emigration policy created in the lead up to the Poor Law Amendment Act of 1834, reflected both Wilmot-Horton and Wakefield and Gouger's schemes. Government, through the Poor Law Commission, was to provide emigration subsidies for parishes and poor law unions wishing to put forward emigrants for Australia, South Africa, or Canada, to be paid for by revenue from colonial land taxes and land sales.¹⁰² In New South Wales in 1831, the so-called Ripon Regulations were put into effect, replacing land grants with sale at public auction at 5 shillings per acre minimum (raised to 12s in 1839 and £1 in 1843). In the same year, the British government undertook its first official assisted emigration scheme to New South Wales and Van Diemen's Land, with one goal being to redress the severe gender imbalance in Australia. In 1832-33, a total of 2503 women, 475 men and 904 children (under 14) arrived in New South Wales, with an additional 1186 women, 286 men, and 569 children in Van Diemen's Land.¹⁰³ In 1836, a free colony was established in South Australia (Wakefield's pet project). It was a joint public-private venture with the South Australian Company fronting the

¹⁰¹ Ibid. passim.

¹⁰² S. H. Roberts, *History of Australian Land Settlement* (Routledge, 2013), 83–99.

¹⁰³ James Jupp, *The Australian People: An Encyclopedia of the Nation, Its People and Their Origins* (Cambridge University Press, 2001), 29.

initial costs and the Colonial Office's South Australian Colonization Commission supervising assisted emigration and the disposal of land.¹⁰⁴

The government continued to assist emigrating British laborers under two distinct schemes, the governmental system and the bounty system, where individual established colonists (or joint-stock companies or ship merchants) would sponsor emigrants, pay their passages in exchange for employment (or arranging employment), and be reimbursed by the colonial government. While these emigration schemes yielded positive results in terms of increasing the availability of agricultural labor, slightly reducing the price of labor, and augmenting grain production, particularly in the new colony of South Australia, it did little to stem the tide of commercial pastoralism in New South Wales during the wool boom of the 1830s. And the increase in the cost of Crown Land most certainly led to the widespread phenomenon of pastoral squatting, which would cause its own political problems.

IV. Official Pastoral Benediction: Reassessing the Agrarian Development in New South Wales and the Cape, 1819-1846

New South Wales

Commercial pastoralism in New South Wales was not, at least in the beginning, export driven. In 1819, when Bigge arrived in the colony, exports made up only 2 percent of GDP. Between 1815 and 1820, the value of wool exports trailed behind timber, skins, and whale oil.¹⁰⁵ As discussed in Ch.3, the main impetuses for pastoral expansion were government meat contracts (mutton, beef, and pork) and meat markets in the rapidly growing urban center. However, in the 1810s, this began to change. Beginning with John Macarthur, the first to raise

¹⁰⁴ Andro Linklater, *Owning the Earth: The Transforming History of Land Ownership* (A&C Black, 2014), 239–42.

¹⁰⁵ *Ibid.*, 152

Merino sheep on a large scale, and the Rev. Samuel Marsden—who was always more concerned about his wool flocks than his spiritual ones—many of the early free settlers began to transition their herds from meat production to wool production, despite hefty import duties in Britain designed to protect domestic fine wool producers. Many new capitalist settlers, inspired by early reports of success by the Macarthurs, began accumulating Merino flocks as soon as they landed. Still, commercial pastoralism was only encouraged sparingly by the colonial government in the colony's first 30 years. This would change significantly on the recommendations of Commissioner Bigge in the 1820s, but the shift to a pastoral economy was far from clear cut.

Most historians have examined the conflict between the Macquarie administration and the Bigge Commission as a political conflict between the free, sort-of-free (Emancipist) and unfree settlers, but even within these categories, a distinct question was arising in all three, grass or grain?¹⁰⁶ While the rate of pastoral pursuits was higher among free settlers than Emancipists (perhaps because cultivation clauses in grants were more often enforced in this group), it was clear that the pull of the pastoral economy was keenly felt across the social spectrum. Macquarie, as we have seen, clearly gave preference to small Emancipist and free farmers over large commercial grazers, but he was never directly antagonistic to the development of pastoral industries, particularly fine wools. He had serious misgivings about the integrity of many of the colony's early wool producers, but did not necessarily deem the pastoral industry among free settlers to be wholly incompatible with his agrarian vision for the convict colony.

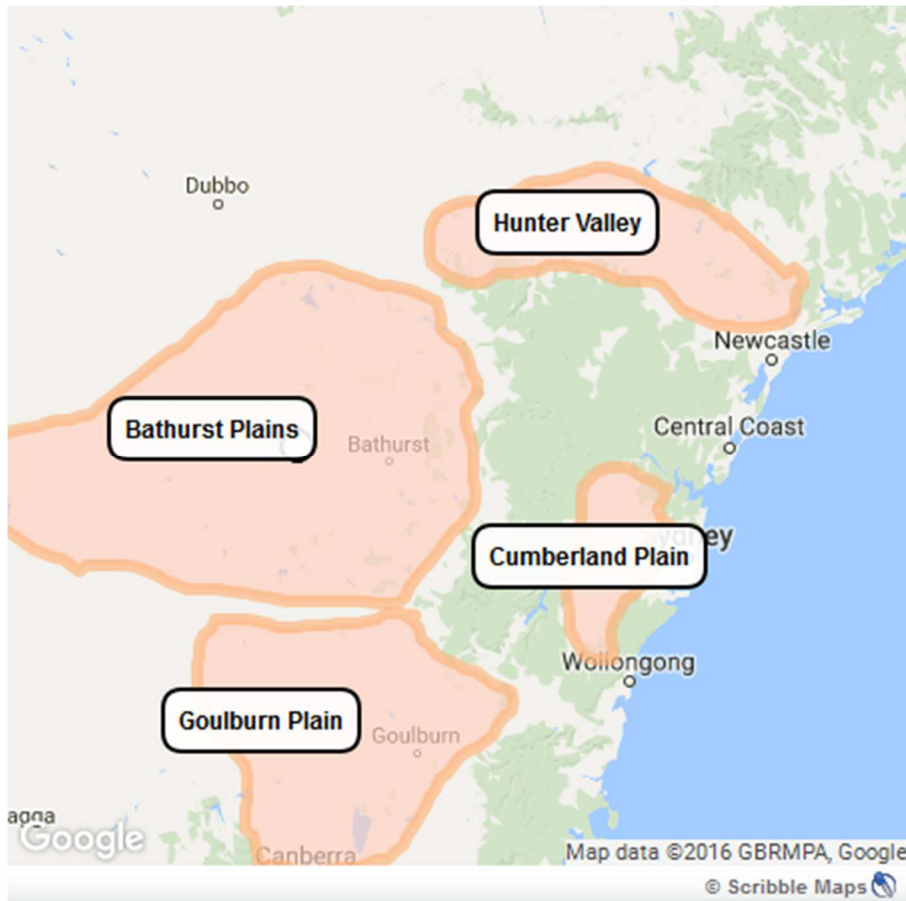
In this regard, Commissioner Bigge was a much more neutral inquisitor than he has been portrayed, even though, in the end, he did come down strongly in favor of the colony's grazing

¹⁰⁶ Manning Clark, *History of Australia* (Melbourne University Publish, 1993), 77–80; Hirst, *Freedom on the Fatal Shore*, 133–36.

interests. The vitriol that characterized their personal and professional relationship—Bigge had, after all, come essentially to tell Macquarie he was doing a bad job—and Bigge’s very obvious social bias towards the well-dressed, well-spoken gentlemen settlers in the colony should not be allowed to overshadow a very meticulous and sincere attempt to grapple with a very sticky agrarian conundrum. The often overlooked second report, *The State of Agriculture and Trade in New South Wales*, has been seen by other historians as a seal of approval for the seemingly inexorable rise of pastoral settler capitalism.¹⁰⁷ But a closer look at the materials used to compile this particular report—especially the transcripts of the oral interviews conducted by Bigge himself—reveals not just what Macquarie called a “Damnable Commission” hell-bent on taking down a governor, but an authentic, if biased, evaluation of the progress of arable farming and of the potential and risks of extensive pastoralism.

¹⁰⁷ Alastair Davidson, *The Invisible State: The Formation of the Australian State* (Cambridge University Press, 2002), 65–7, 77–8; Gascoigne, *The Enlightenment and the Origins of European Australia*, 71–82; Edward Shann, *An Economic History of Australia* (Cambridge University Press, 2016), 79–86, 97; Ritchie, *Punishment and Profit*; passim.

Figure 13: Areas considered suitable for arable cultivation at the time of the Bigge Commission (1820)¹⁰⁸



Bigge had come expecting a barren wasteland, and instead he found areas of startling productivity, as well as fertile lands that were, in his assessment, being turned into wastes by the neglect of the most basic form of conservation, the replenishing of spent nutrients to the soil through stock. He also noted that within those areas that “afford good pasturage” and had been used exclusively for that purpose there were innumerable locations that were fit for cultivation as well. According to his assessment, nearly 390,000 acres were held (and about a third cleared),

¹⁰⁸ Agricultural Settlements had been concentrated almost exclusively on the Cumberland Plain, but with the opening of a passage through the Blue Mountains, new lands were explored, surveyed, and grazed during Macquarie’s administration.

but only 55,000 or so were being actively cultivated, which struck him as odd.¹⁰⁹ As Bigge gathered evidence for his commission, frequently asked his interviewees to respond to the state of arable farming, even if he knew them to be graziers. Had they cultivated the soil? What was the average return? What were the labor requirements? What was the system of management? How was exhaustion prevented? What improvements had been made? Why did cultivation fail? How did convicts fare as agricultural laborers? Did Emancipists make good yeoman farmers?

He spoke and corresponded extensively with surveyors about the suitability of lands for cultivation or grazing. In one of his first interviews—one that gives us a glimpse into Bigge's own agrarian expectations—Bigge asked the Surveyor General, John Oxley, to give him an estimation of how long the practice of granting small farms on the Cumberland Plain could continue given the increasing number of new Emancipist and free settlers. Oxley replied that almost all the “good land” east of the Nepean River had been already granted, though much land previously cultivated had been abandoned by the original farmers and had become grazing land. Land suitable for arable cultivation remained on the southern reaches of the plain in the area known as Cowpastures, but this was almost exclusively used as grazing grounds for government stock. The arable parts of the Cumberland Plain were, he claimed, nearly filled. Bigge expressed his concern that “this scarcity of land within a reasonable distance of a market” might “render it impossible for the Governor to place any settler of respectability [free] and means” coming from England on the land. For Bigge, agricultural success depended not just upon the quality of land, but on access to markets. His line of questioning suggests an initial incredulity of the appeal of distant settlement, even pastoral settlement. Knowing that Macquarie had hoped the Bathurst

¹⁰⁹ John Thomas Bigge, *Report of the Commissioner of Inquiry on the State of Agriculture and Trade in the Colony of New South Wales*. (London: Government Printer, 1823), 10..

district could be settled with farmers, Bigge asked Oxley specifically about this region's suitability for settlement. Oxley, who certainly had a conflict of interest as he was himself a grazier, replied: "Certainly not for small settlers, but for large grazing farms they are extremely well-adapted." Yet Bigge pressed this question at length. Could a well-capitalized farmer successfully put this land in tillage? Was there a possibility for water carriage in the area? What was the exact nature of the soil? With enough pushing, Oxley reluctantly admitted that, actually, the Bathurst Plains, particularly along its streams and rivers, contained decent (if gravelly) alluvial loam, which "by a proper course of cultivation" would "produce any crop."¹¹⁰

When asked why so much land on the Cumberland Plain was still in waste, Oxley claimed that "as long as the quantity of produce is regulated solely by the wants of government," no incentive existed to bring new lands into cultivation or restore exhausted lands. When asked to recount instances of "successful industry in the class of small settlers," Oxley declared that as soon as farmers made a profit from their lands, they ran back to Sydney to retail merchandise and liquor, claiming that Emancipists "prefer a licentious and unsettled life to the attention requisite for the proper cultivation of their lands." This caught Bigge's attention, eliciting a series of leading questions (almost all of which were answered in the negative) about the methods of cultivation at the hands of these Emancipists. The line of questioning reveals Bigge's social bias, but also the agricultural standards to which he held the colony's cultivators: "Do they cultivate with a hoe or a plough? Have they any means of raising manure?...Then do they exhaust their lands by perpetual cropping?...What proportion of the fifty acres is generally cultivated?...[What] would the average produce of a continued cultivation of these lands without manure be?...Is the

¹¹⁰ "Evidence of John Oxley," 17 November 1819, Appendix to Commissioner Bigge's Report, NA, CO 201/142 pt. 1, f. 1

Colony more indebted to climate than to soil?" Bigge requested a breakdown of the precise expense of cultivating a farm of 50 acres as well as what return might reasonably be expected over the course of three years without the assistance of manure. Oxley did so and argued, further, that it would take only six years for the land in cultivation to become completely exhausted.

But if he is enabled to manure his farm, either by possessing a little stock himself, or by the flocks of others being folded over it, his lands will not be considerably deteriorated, as such dressing will last not less than three Years, still presuming the land to be constantly cropped with wheat and maize, on alternate and different portions annually. This course of proceeding, bad as it is, supposed the Settler to understand something of farming and desirous to make the most of his Land...[but] such attention to their interests is rarely found among that class [Emancipists].¹¹¹

From other pastoralist Exclusives, John and Gregory Blaxland, John Macarthur, Thomas Moore, Alexander Berry, and others, Bigge received similar dismal views of agricultural progress at the hands of small farmers.¹¹²

Bigge was certainly interested in the development and progress of arable farming, but he did not feel it necessary to spend much of his time with settlers who actually supported themselves by farming, as most of these people were former convicts. He interviewed only two Emancipists, James Meehan, a leader in the Irish Rebellion of 1798 who had never actually been treated like a convict, and George Best, one of the most successful Emancipist farmers on the Hawkesbury, and the "Overseer and seedsman" for the New Toongabbie Government Farm. His interview was nearly as long as Oxley's and in it Bigge questioned him not only on the running of the large government farm, but on the minute details of running a small farm on the

¹¹¹ Ibid.

¹¹² "Evidence of Alexander Berry," 1 February 1820, Appendix to Commissioner Bigge's Report, NA, CO 201/142 pt. 1, f. 5; "Evidence of Thomas Moore," 2 February 1820, f.6 "Evidence of John Reed," 22 June 1820, f. 7; "Evidence of John Blaxland," 18 August 1820, f. 8; Gregory Blaxland to Bigge, 5 March 1820, f. 55; John Macarthur to Bigge, 4 February 1820, Appendix to Commissioner Bigge's Report, NA, CO 201/142 pt. 2, f. 12 (see also enclosure Macarthur to Bigge, 2 December 1819).

Hawkesbury: Did he manure the land? [yes, when he had access to “commons”] How many bushels per acre did he reap? [15-20 for wheat, 20-40 for maize] How often did blight or smut effect the wheat crop? [Sometimes] How was the grain stored? [under a lean-to] Was it susceptible to weevils and fly moths? [only when damp] How much did the grain weigh per bushel? [56 lbs.] What cropping system did he use? [wheat, maize, fallow, sometimes turnips and barley] Why did he keep his stock on a separate farm? [because the commons adjoining his farm were granted] Did he cultivate turnips? [in wet years] While Bigge might have dismissed Best as an anomaly, from his answers it was hard to find fault with what he had made the agricultural opportunities presented to him, or even his “respectability.” Best pointed out at the end of his interview that he had been married for 23 years and had nine children, “all born in wedlock” and educated at the local missionary school or at schools in Sydney. His eldest two had married and been granted their own lands to farm.¹¹³ Still, it is unlikely Best’s success story could counteract all the negative descriptions of Emancipist farmers by the Exclusives.

In addition to his oral interviews, Bigge gathered a variety of other kinds of evidence for his assessment of colonial agriculture including musters of land and stock; breakdowns on the expenses of cultivating a 50-acre farm on “average lands;” a table of the proportions of cultivated and uncultivated land on a grant to meet the criteria of cultivation causes (e.g. 10 acres out of a 30-acre grant, 12 for 40, 15 for 50, etc.); reports on the government farms and government stock; abstracts of grants made by governors for the past ten years; township plans; an almanac of planting and harvesting times; sample grants and grazing permits; samples of refused land grants (including a few women); and a collection of complaints and grievances from

¹¹³ “Evidence of George Best,” 4 September 1819, Appendix to Commissioner Bigge’s Report, NA, CO 201/142, pt. 1, f. 9

various parties.¹¹⁴ He also included an impassioned petition by Sir Joseph Banks' protégé, Allan Cunningham, regarding Macquarie's proposed establishment of botanic garden to "tend to the promotion of Husbandry in this Country." In Cunningham's view, improvement needed to be orchestrated by the botanical experts.

It is abundantly obvious to every practical Agriculturist [that] its establishment would (under a judicious Direction) prove of great Colonial Importance, since thro' [this] medium alone, Farmer's generally could be put in possession of the plants or grasses in [Estimation?] among British Agriculturists and Graziers.

He was particularly adamant about the need for artificial grasses in the colony. "The experiences of 30 Years," namely the "alarming uncertainty of Season in respect to Drought or Humidity," had proved not just the fragility of grain crops, but also the fragility of natural grasslands upon which the colony was increasingly reliant. Cunningham supposed that useful exotic species (beyond clover and ryegrass) could be tested at the garden and then distributed to farmers and graziers at cost, and that the garden's botanists might transplant and study grasses from the far reaches of the colony to help colonists better understand "the Intrinsic Worth of our Indigenous Graminea [sic]."¹¹⁵ This was one of the only times that Bigge sanctioned one of Macquarie's attempts to extend the civil establishment.¹¹⁶

The report, which was forwarded to Bathurst along with all the oral and written evidence, was dispassionate and faithful to the testimonies collected. Bigge stressed that soil exhaustion, except on the Hawkesbury and Nepean Rivers (which boasted "inexhaustible fertility") was a fact of life on most of the Cumberland Plain. The expense required to "renew its

¹¹⁴ See Appendix to Commissioner Bigge's Report, NA, CO 201/142, pt. 2, fs. 1, 3, 7, 8, 13, 16, 17, 24, 28, 31, 33, 42, 43, 45, 47, 50, 61.

¹¹⁵ Allan Cunningham to Bigge, "General Hints on the Formation of a Botanic Garden in New South Wales," [1820], Appendix to Commissioner Bigge's Reports, CO 201/124 pt. 2, f. 20

¹¹⁶ Geoff Raby, *Making Rural Australia: An Economic History of Technical and Institutional Creativity, 1788-1860* (Oxford University Press, 1996), 142.

productive powers” was beyond the means of most settlers, especially small Emancipist farmers, who, with a few exceptions, “appeared to me to be in a very abject state of poverty.”¹¹⁷ Bigge asserted that the system of cultivation pursued in the colony was “of a very simple kind.” The only rotation practiced was the rotation of wheat and maize, which exacerbated, not alleviated, exhaustion, though Bigge admitted that the “want of manure would have alone impeded such a course of husbandry” in any case. The only real answer, according to Bigge, was the use of artificial grasses. It is through the discussion of this issue that we see more plainly Bigge’s view on improvement:

The attention of the **higher classes** of the settlers has been lately directed to the production of manure, and of artificial food for cattle. White clover has for some time been scattered in different parts of the colony...but it is only within the last two years, and upon a very few estates of the more opulent settlers, that any attempts have been made to introduce the cultivation of the artificial grasses. Lucerne, saintfoin [sic] and burnet are found to succeed in the alluvial lands; and ryegrass and meadow fescue are considered as the best species for resisting the heat of summer, even on the clay land... The more **opulent settlers** have begun to fence their estates with strong railing made of the stringy and ironbark tree.¹¹⁸

Clearly, Bigge expected that mixed husbandry should remain an integral part of the agrarian future of the colony and that it should be encouraged. However, in his view, improvement should come to the colony in the hands of the Exclusives, or the “higher classes.” He singled out by name the men whose estates most exemplified improved British husbandry, and all but one, William Redfern, a surgeon transported for his participation in the Nore Mutiny in 1797, were wealthy Exclusives. Bigge seems to suggest that improvement could only really come from the top, from men of respectability and capital, just as it had in England and Scotland. These were the only men capable of cultivating with an eye to the future. The problem, of course, was that

¹¹⁷ Bigge, *Report of the Commissioner of Inquiry on the State of Agriculture and Trade in the Colony of New South Wales.*, 11. Emphasis mine.

¹¹⁸ *Ibid.*, 13–14.

these types of settlers who had the resources to cultivate in this Enlightened mode had nearly all decided to direct most of their attention and resources to stock accumulation. There was much greater profit in grazing cattle or Merino herds over ridiculously cheap or free land covered in natural pasture than in growing crops. Yet Bigge failed to see this contradiction, and, despite his misgivings about the long-term health of the native grasslands, saw no reason to prevent the expansion of pastoral operations in the colony. The initial successes of the Exclusives had already “prove[d] the value of this branch of rural industry.”¹¹⁹ Fine wools could very well be the cash crop that the government had been waiting for. With fine wool, might the colony be able to actively contribute to the imperial economy instead of draining its resources? Might the income derived from the profits of fine wool provide the means for colonists to purchase British manufactures and Indian grain?¹²⁰ The only obstacles to fine wool were the difficulties and expenses of transporting wool from the interior grasslands to Sydney and the high duty on imported wool. Bigge had argued strongly against proposals to keep or increase these duties in his first general report in 1822. In early 1823, Parliament, to the chagrin of British wool growers, reduced the duty to a penny per pound on all Australian wool. As Bigge wrote his second report on agriculture and trade, only the issue of internal transportation remained.¹²¹

In the end, Bigge could not see the feasibility of a colony of small mixed farms, admirable as that system might be in theory, due to the “effects of an uncertain climate” and deficient soils, the expense and scarcity of labor, the limited nature of the market, and the “careless and improvident habits of a large proportion of the settlers.”¹²² The colony’s grain

¹¹⁹ Ibid., 16.

¹²⁰ Ibid., 18.

¹²¹ Ibid., 17.

¹²² Ibid., 19-20; 24.

supply was entirely too dependent on the Hawkesbury and Nepean river systems. The drastically uneven harvests of the two decades had proven that the River giveth, and the River taketh away. The colony could not depend on nature (i.e. the flood-borne fertility restoration) to supply the colony with grain. It needed intensive husbandry, husbandry that required more capital and labor than was affordable in the colony's infant state. As populations grew (and with it demand for grain) and wealth accumulated, improved mixed husbandry might well make a resurgence, but Bigge suggested that it would be unwise to continue to force it when another industry was so ripe for progress. But the commission itself exemplified the struggle between the modes of agrarian settlement, demonstrating that, even in 1822, the rise of a pastoral economy based on fine wool production was not written in the stars (or in the land). Environmental and economic rationality never truly overrode the ideology of agricultural improvement completely.

Bigge had been persuaded (mostly by graziers) that the future of the colony lay not with small-hold farming by former convicts (or even free settlers), but on large grazing farms. But it was not a conclusion he arrived at lightly or with unbridled confidence. However, the governors who came to the colony in the wake of the Commission, emboldened by the reduction of wool tariffs (which Bigge had secured), took his conclusion as a benediction for a large-scale restructuring of land and power in the colony. While Macquarie had attempted to concentrate settlement of yeoman farmers in hopes that improvement could be nurtured from the bottom of the social ladder, his countryman Thomas Brisbane believed that improvement came from the top and was motivated by profit. His vision involved spreading settlement out, consolidating lands and capital into fewer hands, and encouraging growth by generous grants of lands, stock, and convict labor. It having been decided in the wake of the Bigge Reports that the concentration of convicts on government farms or in the Sydney Barracks, or even on farms in more dense

agricultural settlements on the Hawkesbury or in Parramatta, was a detriment to moral reform, convicts were instead sent out to the far reaches of the colony as part of the revamped assignment system—“from vice-ridden town to virtuous countryside.”¹²³

Macquarie’s land policies had checked pastoral expansion in the 1810s. In 1821, around 94% of the colony’s population and 97% of its cultivated land remained within a 50-mile radius of Sydney.¹²⁴ The policies of Governors Brisbane and Darling reversed this trend, and with it came new problems. Convict distribution became heavily weighted in preference of large scale frontier pastoralists over small farmers. Between 1822 and 1825, over a thousand convicts were sent to the Bathurst region under the supervision of pastoralists, but instead of breeding docility and industriousness, it often bred discontent. Convicts absconded with regularity, often taking their masters’ stock with them. Sometimes convicts joined with local aboriginals, namely the Wiradjuri, to harass the interloping free settlers. As pastoral operations ramped up after the opening of the wool market in 1823, the pastoral frontier pushed out in a steady stream north, west, and south. Brisbane had continued the policy of giving new pastoral settlers tickets of occupation rather than outright grants, partly because the government could not survey land quickly enough to keep up with the demand for it, and partly because the partition of such vast quantities of land was a fool’s errand: sheep ignored boundaries, as did their shepherds.

These measures both asserted and defined the political and economic dominance of pastoral elites, but it got out of hand quickly. Colonial governors had sanctioned land-extensive commercial pastoralism, but they did not have efficient means to control it. Brisbane granted over 100,000 acres of land near Bathurst and 200 tickets of occupation on unsurveyed lands,

¹²³ Ford and Roberts, “Expansion,” 123

¹²⁴ *Ibid.*, 122

largely to settlers who already had smaller grants on the Cumberland Plain.¹²⁵ By the late 1820s and early 1830s, these new territories were becoming crowded. Between 1820 and 1828, the sheep population in the colony rose from 99,000 to 800,000. By 1831, it had reached 3,100,000.¹²⁶ Often, when a pastoralist’s official sheep run became congested, instead of scaling back or improving with artificial grasses, he found it more practicable to find “unoccupied” natural pastures in a new area, quickly extending beyond the borders defined by government. In 1828, the Select Committee on the British Wool Trade, formed in response to the steep rise in demand (and price) for fine, manufactured woolens, officially endorsed Australian fleece over European imports, leading to even greater production in New South Wales (Table 4).¹²⁷

Table 4: Wool Production in New South Wales, 1822-1842 (Source: Returns of the Colony of New South Wales [Blue Books])¹²⁸

Year	Amount (in lbs.)
1822	172,880
1823	198,240
1824	275,360
1825	411,600
1826	552,960
1827	407,116
1828	552,960
1829	1,005,333
1830	899,750
1831	1,401,284
1832	1,545,156

¹²⁵ Ibid., 126

¹²⁶ Greasley, “Industrializing Australia’s Natural Capital,” 154

¹²⁷ W. R. Brock, *Britain and the Dominions* (Cambridge University Press, 2011), 192–4. The British supply of fine wool (as opposed to coarse wool), despite the efforts of agrarian patriots to secure it, were inadequate to meet demand of British manufacturers. Mechanical improvements in spinning and weaving made mass production possible, and manufactured woolens had a large domestic and international market.

¹²⁸ Returns of the Colony of New South Wales (Blue Books), ML, CY 4/251-4/272. These numbers only include New South Wales (and from 1836 Port Phillip/Victoria), not Van Diemen’s Land (Tasmania), South Australia, or Western Australia.

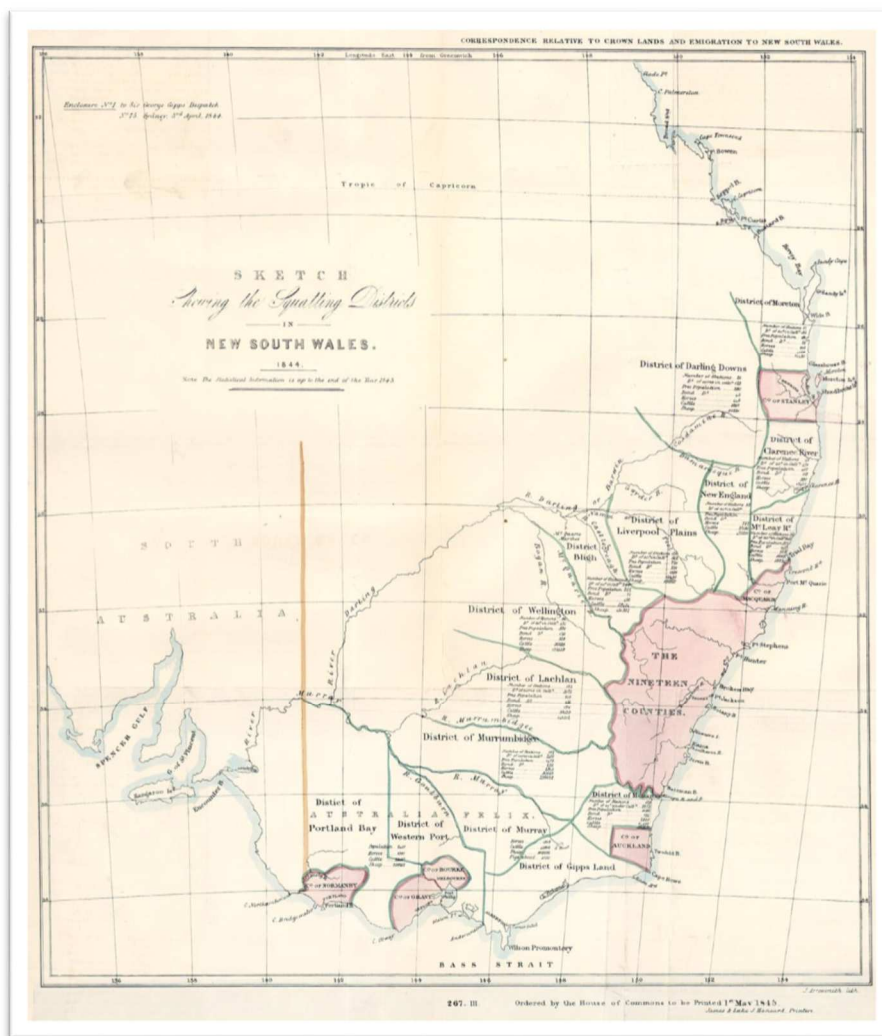
1833	1,734,203
1834	2,246,933
1835	3,983,927
1836	3,693,241
1837	4,273,715
1838	5,428,993
1839	6,597,951
1840	7,668,960
1841	8,589,368
1842	15,147,273

Governor Ralph Darling, in an attempt to regulate frontier expansion, instituted the Limits of Location in 1826 and revised them in 1829, creating 19 counties (See Fig. 6) where settlement was officially permitted; however, these lines were universally disregarded (See Fig. 7). The Limits of Location created a new category of settler: the squatter. In the early days, squatting was seen as somewhat disreputable, socially and well as politically. Lower-class settlers, free and Emancipist, illegally ran cattle and sheep for meat in the interior to fund the purchase of merino flocks. But when government ceased to grant or sell land outside of the nineteen counties and reduced the number of tickets of occupation issued, the more well-heeled settlers, including those who already had successful operations within the Limits of Location, followed suit.

Figure 14: New South Wales Limits of Location, 1832 (Source: John Arrowsmith, 1838)



Figure 15: "Sketch Showing the Squatting Districts in New South Wales," 1844 (Source: House of Commons, 1845)



Parliament passed the Crown Lands Encroachment Act of 1833 in response to a series of frontier conflicts between pastoral settlers and aboriginals on the borders of the Bathurst, Hunter, and Liverpool Plains districts, which stripped unauthorized occupiers of all legal title to the land through adverse or naked possession or any other device of common law.¹²⁹ This had little or no impact on squatting, however. Colonial governments were wholly unable to police its peripheral

¹²⁹ Ford and Roberts, "Expansion," 129-31

settlements and had little incentive to do so given the wild economic success of Australian wool in British markets. More authoritarian measures, even if they could be passed through the newly-formed (and extremely pastoral-friendly) colonial legislature, would have backfired politically and economically. The Wakefield-inspired Ripon Regulations of 1831 were hoped to entice settlers, new and old, to concentrated, civilized agricultural settlements, but in reality, they only led to more new settlers heading immediately to the frontiers as squatters. By 1836, at the height of the wool boom, government, realizing it could not discourage squatting either by carrot or stick, decided to at least gain revenue from it. In 1836, Gov. Richard Bourke introduced the Crown Land Unauthorized Occupation Act, which created a licensing system that permitted squatters to run as many animals as they wanted on any extent of land for an annual fee of £10. Squatters specified the general boundaries of their stations and were even able to sell or transfer the land. A similar act in 1839 gave squatters the right of preemption, enabling them to sue anyone but the government for trespass on their stations. While the government retained the right to use or sell the land at any time, this did not prevent squatters from building homes and other structures on the land or making permanent improvements.¹³⁰ Even before the devastating crash of the colonial economy in the early 1840s (part of a global crisis), the government had recognized how dependent colonial prosperity was on semi-legal pastoralism and made continual concessions to squatters in the 1830s and early 1840s.

Cape Colony

The shift to commercial pastoralism was much more complete in the Cape than in New South Wales, and it occurred earlier. Australia was by far the largest participant in the wool boom of the 1830s (and afterward), but colonial Cape pastoralism had both greater diversity and

¹³⁰ Ford and Roberts, "Expansion," 131-133; Roberts, *History of Australian Land Settlement*, 187-93.

greater bifurcation, with the large-scale Merino industry being dominated, at least initially, largely by British settlers and supported by international markets, and the mobile meat industry being carried further and further afield by trekboers and supported by regional markets. After the failure of the Albany Settlement, settlers and government in the Cape began, more and more, to see grain production as a lost cause, even at the hands of British settlers. As early as 1823, most settler parties in the East who had survived (at least partially) and remained on their locations had made it clear to government that they were turning to sheep, particularly woolled sheep. Miles Bowker, whose family had fared better than most as farmers in Albany, mostly because they diversified their produce quickly (orchards, wine, meat) and had imported a rust-resistant strain of Bengal wheat, had decided, nevertheless, that there was much more security in stock. He blamed agricultural problems on the “antiseptic disposition of every new soil to foreign vegetation” and declared that if settlers were not to be ruined, they must take advantage of what Providence had supplied in abundance: grass.¹³¹ In this view, he was not alone.

One of the prime objectives for the Albany settlement was that British husbandmen would show the trekboers in the east and the Cape Burghers in the west that mixed husbandry on small, permanent farms could be productive and profitable; that living in agricultural communities was preferable to living on giant isolated pastoral stations or moving every few years to new pastures; that free labor was more noble and profitable than unfree or coerced labor. And yet, almost from the beginning, it was not the Boers who coveted the English settlers’ farms; it was English settlers coveting the farms of the Boers. The English settlement may have been intended to be a beacon of agrarian improvement in an unimproved wilderness, but the

¹³¹ Miles Bowker to Standish Haley, 24 February 1824, NA, CO 48/67; Commissioners to Bathurst, 25 September 1823, RCC 16, 305-6

settlers themselves, even those who claimed to have “an improving spirit,” wanted, first and foremost, to possess land and use it to make money. Yet their “respect and gratitude for the liberal assistance” of the British government, turned quickly to resentment as they realized how small the amount of land they were permitted to cultivate was in comparison with their Boer counterparts. Unlike government officials, at home and in the colony, most settlers, particularly after the first failed harvest, were unconvinced of the economic, social, or environmental superiority of arable cultivation to pastoral pursuits. In their view, British settlers were made lame in the new settlement by the government stipulations that “preclude[ed] the majority of the settlers from pursuing the mode of farming usual in this country [by] directing their attention exclusively to agriculture.”¹³² By the “mode of farming usual in this country,” they meant raising livestock. British settlers were supposed to be content with 100 acres per man when government considered it “necessary to the subsistence of the native [Boer] farmer to grant him 4000 acres.”¹³³ Not only were these lands plagued by blights, droughts, and floods, but government had also failed to make provisions for settlers to access markets. Most of their farms were two or three days over rough track away from the nearest commissariat in Grahamstown. Produce could be sent down the Great Fish or Bushman Rivers, but the shallow estuaries at the mouths of these rivers were wholly unsuitable for ports.

In contrast, settlers wrote home that the Boer pastoralists in the surrounding areas were uniformly rich, despite, as Miles Bowker put it, “having not the Industry of the English.”¹³⁴ On their 4000 acre leasehold farms, these Boers had sometimes as many as 10,000 sheep and 600 head of cattle, which could be transported to markets in Uitenhage, Graaf Reinet, or even Cape

¹³² “Petition of the Settlers of South Africa,” 10 March 1822, NA, CO 48/61, f. 401

¹³³ Ibid. “Grant” is a misnomer. These 4000 acres were leased.

¹³⁴ Bowker to Haley, 24 February 1824, NA, CO 48/67, f. 409

Town overland. It is unsurprising, then, that Miles Bowker, who had brought with him from Wiltshire not only eight sons (no daughters) under the age of 19, but also 30 merino ewes and three rams, quickly purchased an additional 4000 acres and small herds of Cape sheep and black cattle with which he could make a surer income instead of waiting for agricultural returns.¹³⁵ Likewise, Peter Tait, who emigrated with a party from Scotland, decided after the first round of blight to relocate to the west in the George district where he leased and then purchased a large farm and raised South Downs sheep for mutton and Merinos for wool. He raised a great deal of wheat as well, which found ready markets in both Cape Town and Grahamstown, but the sheep funded his operations.¹³⁶ George Pigot, another party proprietor, claimed that combination of the blight, the refusal of government to allow gentlemen farmers like himself to purchase slaves, and the crushing debt he had incurred on account of laborers who had long since vanished, he and his fellow settlers would have

no other prospect than follow the Dutch Boer's system (which has been so much abused) of grazing farms; for I am fully convinced by experience we can never grow grain to any extent and even if the climate would permit it the present high price of wages would effectually prevent us.¹³⁷

Pigot himself, by 1823, had directed the entirety of his capital and labor to sheep for mutton and wool, which he was persuaded “may be grown to any extent.”¹³⁸

In the same year, another settler, David Francis, penned an entire treatise, which he forwarded to Wilmot-Horton, titled “Remarks on the New Settlement in the Zuurveld: The Nature of the Soil, its Local Situation, with the disadvantages and observations why it is not

¹³⁵ Ibid.

¹³⁶ Peter Tait to Goulburn, 17 November 1824, NA, CO 48/67 f. 321; Tait to Bathurst, 27 December 1824, CO 48/67, f. 325

¹³⁷ George Pigot to Bathurst, 20 June 1823, NA, CO 48/61 f.410

¹³⁸ Ibid.

calculated for European Agriculturists.” As the title suggests, Francis enumerated a myriad of reasons that arable farming should be abandoned in favor of pastoralism. The Zuurveld was not “capable of receiving that state of cultivation which the English farmer is so eminent for in his own country,” and the attempt to force it would, in a short amount of time, render the English farmer “equally indolent with the Dutch Boer.”¹³⁹ Government had sent out too many urban laborers, mechanics, and half-pay officers, and not enough true agriculturists, who vainly thought “if I sow I shall reap.” Francis maintained that grain could never be grown on the Zuurveld beyond enough for a family, as a farmer could not depend on more than one in every four succeeding. He blamed not just the common occurrence of rust, but also an overabundance of saltpetre (potassium nitrate, though he may have just meant that it had very high salinity) in the overly sandy soils, insufficient rains followed by too much rain, the violent winds that sometimes swept the region, and plagues of locust and wireworms.¹⁴⁰ The small ruined settler, he argued, should be allowed to leave Albany for better soils while the remaining proprietors, who had still enough capital to augment their flocks and herds, should be left to become commercial graziers on a land that, despite its fine appearance, was only good for that purpose.¹⁴¹

This conclusion was also reached by the Commissioners of Enquiry. Whereas Bigge had been somewhat hesitant to give his wholehearted blessing to commercial pastoralism at the expense of arable farming at New South Wales, he made it clear to Bathurst that stock farming was the only way to salvage the Albany settlement. Bathurst had instructed Bigge and Colebrook to investigate the new settlement and “the probability of their success and advancement.”¹⁴²

¹³⁹ “Remarks on the New Settlement...” [forwarded 7 June 1823], RCC 16, 54

¹⁴⁰ *Ibid.*, 56-7

¹⁴¹ *Ibid.*, 59-60

¹⁴² Bathurst to Commissioners of Enquiry, 25 June 1823, RCC 16, 95

Letters from Albany settlers were received by the Commissioners as soon as they landed, and there was very little in them to suggest that any grain was being successfully cultivated in the east. Even among the most industrious who had cultivated extensive and flourishing gardens (and were, therefore, not going hungry) and went to the expense of buying and carting manure from Grahamstown to their farms, had not managed to harvest a single bushel of grain.¹⁴³ George Pigot, Thomas Phillips, and Duncan Campbell, all proprietors who had given up grain cultivation for stock raising by the end of 1823, wrote to the Commissioners begging that they make haste in travelling out to the colony to see just how dire the situation was, and how critical it was to grant additional lands to the remaining settlers.¹⁴⁴ Bigge and Colebrooke left the inspection of the Albany district to the very end of their stay in the Cape in hopes that the crop of 1823 would have brought relief to the settlement. Yet by the end of the year they confessed to Bathurst that this was a mistaken strategy as reports indicated “the increase rather than the diminution of their sufferings” owing to yet another failure of the crops and a series of floods which had devastated stock and gardens as well.¹⁴⁵

Unlike in New South Wales, Bigge never made an official report on the state of agriculture, or even a report specific to the British settlers. Instead, Bigge and Colebrooke were essentially given powers to make policy decisions on the spot in Albany. During their time in Albany in early 1824, they essentially took on the functions of Governor and Landdrost, including the granting of additional lands to the remaining settlers, forgiving ration debts mortgaged to the land grants, and authorizing stock loans. They also set about restoring the right of free movement to Albany settlers who had since 1821 been required to get permission from

¹⁴³ David Francis to the Commissioners, 28 June 1823, RCC 16, 155

¹⁴⁴ Pigot, Phillips, and Campbell to the Commissioners, 5 August 1823, RCC 16, 178

¹⁴⁵ Commissioners to Bathurst, 6 December 1823, RCC 16, 452

the Landdrost to leave their locations for any reason. They were sympathetic to men like Thomas Pringle who argued that in leaving his native land for this new one, he had been forced to “resign the best rights and privileges of a free man.”¹⁴⁶ The curtailment of many fundamental rights had “afflicted” the British colonists, and made movement, trade, and labor difficult. The settlers had been a political tool in 1819 and had been harnessed by the colonial government into an agrarian system (small-hold arable farming) that simply did not work in the Eastern Cape. The Commission decided in 1824 that it made little economic or political sense to thwart commercial pastoralism.¹⁴⁷

Aware that the project of salvaging the Albany settlement would take years, Bigge and Colebrooke appointed a separate Commissioner of Albany, William Hayward, to see that a number of new policies were adhered to. Nothing could be done about the dissolution of the original parties, regardless of the reason, or the abandonment of the original farms. The new Commissioner’s job was to determine which settlers, “by their persevering exertions” since arrival, had honest claim to assistance. For nominal heads of joint-stock parties who had been saddled with the debts of the entire dissolved parties this entailed debt reduction, and for any settlers (proprietors or otherwise) who wished to stay in Albany, additional lands and stock loans were also give. Hayward was also to consider the re-granting of lands to origin settlers who had been forced to abandon lands due to penury after a few years but who wanted to resume their labors on “more favourable” (i.e. bigger) grants.¹⁴⁸ Yet, despite giving their blessing to large-

¹⁴⁶ Thomas Pringle to Commissioners, [May 1824], RCC 17, 322

¹⁴⁷ See Dorothy E. Rivett-Carnac, *Thus Came the English in 1820*. (Howard Timmins, 1961), 77–8.

¹⁴⁸ “Instructions for the Commissioner Appointed...Emigrant Settlers in the Albany District,” 21 May 1824, RCC 17, 343

scale commercial pastoralism, Bigge and Colebrooke included a policy that assumed that mixed husbandry would still be an active principle on the Zuurveld:

If the uncultivated pasture lands of the district should be generally estimated to bear in the proportion of one head of cattle to every ten acres throughout the year, the extension of each location may be regulated by the number of resident Settlers upon it, and by the proportion of Cattle that each Individual may require to keep for manuring the arable land he brings into cultivation.¹⁴⁹

The new Commissioner/Landdrost followed up on this directive, though slightly relaxed, to allow 10 heads of cattle and 10 sheep per 100 acres, or 50 sheep per 100 acres in the absence of cattle, and that for each 100 acres, at least 5 acres be brought into tillage.¹⁵⁰ These regulations did very little to merge stock production with arable land and were, of course, almost universally disregarded (and would have been impossible to enforce), but it reveals the lingering sentiment that, even though they were shifting to pastoralism, British settlers could distinguish themselves from the trekboers through permanence and restrained and calculated land use. A Cape Town resident, George Thompson, travelling to Albany in 1827 noted with satisfaction that British stock farms were markedly different from those of the Boers in neighboring districts: “The hedges and ditches, and wattled fences, presented home-looking pictures of neatness and industry, very different from the rude and slovenly premises of the back-country boers.”¹⁵¹

V. **The March of Grass: Grassland Degradation, Improvement, and the Use of Artificial Fodder, 1820s-1840s**

Large scale commercial pastoralism—or settler capitalism, more generally—commoditizes nature in a more expansive way than subsistence or small-scale farming, or even

¹⁴⁹ Ibid., 349

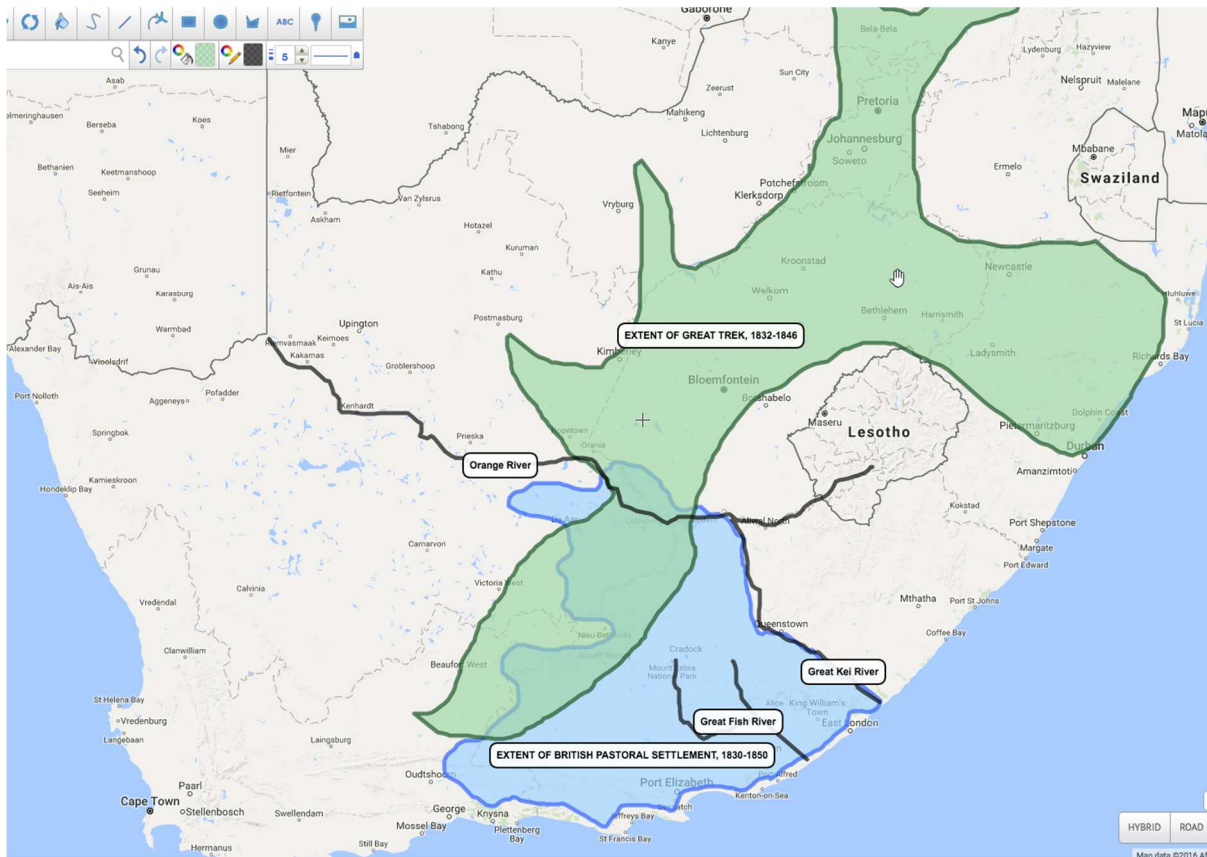
¹⁵⁰ A. E. Makin, *The 1820 Settlers of Salem*, 1st edition (Wynberg, SA: Juta, 1971), 129–30.; William Hayward to Somerset, 20 September 1824, RCC 18, 362

¹⁵¹ George Thompson, *Travels and Adventures in Southern Africa* (H. Colburn, 1827), 21; See also Beinart, *The Rise of Conservation in South Africa*, 47–8.

European agrarian capitalism. Settlers with limited capital to invest directly in the comparatively poor soils of the Cumberland Plain or the Zuurveld, were able to scale up and specialize by relying instead on the natural capital of these regions: grass. Yet even when governments had acquiesced (willingly or not) to this kind of agrarianism with its new notions of value, settlers did not cease to encounter environmental and economic challenges in their operations. It turns out there was more than one way for land to become exhausted. The notion of improvement did not lose its meaning once the plough had been set aside.

In the 1820s, colonial markets for both meat, hides, tallow, and wool were healthy if not capacious. Stock-raisers in both New South Wales and the Cape made profits from their herds. Early British pastoralists with substantial landholdings and reliable access market towns made small fortunes. Some graziers who had transitioned to Merino sheep had produced enough wool to make the high tariffs for fine wool imports into Britain worth it, but this was very limited in the 1820s. Pasture exhaustion in both colonies had been a problem, particularly in the districts around Sydney and Cape Town, but not in outlying or frontier districts, with the exception grasses of the overland routes used to drive stock to markets. But this changed in the late 1820s when preferential import duties on colonial were instituted in Britain.

Figure 16: Approximate extent of British and Boer settlement, 1830s-1840s



When the British took stock of the Cape in 1806 after the brief Batavian occupation, there were less than 1400 woolled sheep in the colony held by a handful of farmers and the Cape Agricultural Society. The Society had focused their efforts in the Western Cape, with mixed results, in introducing Merino rams into the herds of prominent Dutch landowners in hopes that the increased value of the sheep would entice them to keep them closer to home and not send them into the interior with Khoikhoi or trekboers. But it was the Albany settlers, having for the most part given up on arable farming, who pioneered the Merino industry. The expense of keeping the large government Merino flock at Groote Post paid off in the mid-1820s, when

nearly a hundred settlers in the Eastern Cape purchased sheep from this flock.¹⁵² By the start of the 1830s, these flocks had taken over the entire Albany, Uitenhage, and George districts, and were quickly spilling over north to the highveld territories south of the Orange River grazed by trekboers and east into Xhosa territory behind the Keiskamma River.¹⁵³ (See Fig. #) British pastoralists with their flocks of Merinos were given preference over trekboers with their fat-tailed Cape sheep and were granted lands and grazing rights in areas depended on by trekboers. In historical analyses of the Great Trek (1835-46), the narrative of Voortrekkers fleeing British Cape Liberalism (abolition of slavery, the crack down on trekboer violence against Africans on frontiers, Anglicization of Cape institutions, codification of legal equality between whites and free non-whites) overshadows this British incursion of commercial pastoralism.¹⁵⁴ But by the end of the 1830s, predominantly British flocks had taken over, legally and illegally, the grasslands south of the Orange River, so many Boer pastoralists were forced to move beyond the Orange to find food for their stock. In the east, the expansion of merino flocks into what had been reserved by the British government for the Xhosa (British Kaffraria) led to the sixth Xhosa Frontier War (also known as Hintsá's War) in 1835. British Kaffraria became Queen Adelaide's Territory,

¹⁵² Abstract of Stock Sales, Groote Post Farm, 1824-1826, WCA, GPF 1., f. 5, 7, 8.

¹⁵³ William Beinart, and Peter Coates, *Environment and History: The Taming of Nature in the USA and South Africa* (Routledge, 2002), 56–7; Keegan, *Colonial South Africa and the Origins of the Racial Order*, 71–3.

¹⁵⁴ Norman Etherington, *The Great Treks: The Transformation of Southern Africa 1815-1854* (Routledge, 2014), 59–67; Nigel Worden, *The Making of Modern South Africa: Conquest, Apartheid, Democracy* (John Wiley & Sons, 2012), 16, 77–9; Martin Legassick and Robert Ross, “From Slave Economy to Settler Capitalism” in Carolyn Hamilton, Bernard K. Mbenga, and Robert Ross, eds., *The Cambridge History of South Africa*, 1 edition (Cambridge ; New York: Cambridge University Press, 2009), 286–9.

open, officially, for British business in 1836. Ten years later, the Merino population had reached over 4 million.¹⁵⁵

But the Merino booms in both colonies had not just challenged colonial governance. They challenged the environments they depended on as well. Close cropping of grasses by sheep, in particular, along with the packing down of soil by hordes of sheep, suppressed seedling regeneration. For example, in New South Wales, the more nutritive Kangaroo grass diminished and were replaced by hardier, but less palatable grasses, like wiregrass or speargrass. Highly disturbed grassland communities were also susceptible to invasion by introduced plants. While the invasion on the part of nutritive English pasture grasses like clover, rye grass, meadow grass, fescue, or couch grass was highly desirable, unpalatable and harmful plants like Scotch thistle, white horehound, and blackberry nightshade were not. In both New South Wales and the Cape, exotic weeds thrived particularly on river or stream frontage where the ground was most heavily trampled and along which graziers would transport massive herds of sheep from one location to another (overlanding).¹⁵⁶ Weeds, in other words, had a great deal of assistance in “colonizing,” as Crosby frames it, the native velds. In the Cape, these issues were compounded by the seasonality of native grasses. The sour grasses of the Zuurveld became brittle and sparse in the dry months of August and September, and settlers had to relocate their herds to wetter areas around rivers or other water sources (fountains) or to much smaller patches of sweet grass, which were often in contested frontier territories.¹⁵⁷

These seasonal changes in pastures, short-lived as they were, also put increasing pressure on the land. In the late 1820s and 1830s, as trekking and grazing intensified, concerns with

¹⁵⁵ Beinart, *The Rise of Conservation in South Africa*, 53.

¹⁵⁶ Bolton, *Spoils and Spoilers*, 85

¹⁵⁷ Beinart, *The Rise of Conservation in South Africa*, 77–8.

overgrazing and desiccation (the idea that overgrazing was making the land drier) intensified as well. One observer traveling in the Eastern Cape, John Howison, claimed that South Africa, unlike other colonies he had visited, seemed to be “a worn-out and emaciated country...like an animal body in which the circulation has ceased from disease or exhaustion.”¹⁵⁸ British settlers in the East claimed that land that had boasted “luxuriant” pastures in 1818 or 1820, had, by 1830 become dry and barren. Grasslands that had once come up to the necks of cattle were reduced to short, dry stubble and shrubs, fit only for sheep and goats.¹⁵⁹ Part of this was due to a multi-year drought from 1833 to 1835 and again from 1837-38, which certainly contributed to the Great Trek, but also severely affected those pastoralists, most of them British, who bought or leased land in parts of the Cape formerly grazed by the Boers (i.e. Graaff Reinet and Somerset). Speaking of the formerly green Somerset East, one observer wrote: “At such seasons the eye looks in vain for a blade of grass—nothing presents itself but an intermingled desert, which affords no kind of sustenance either for men or beast.”¹⁶⁰

The 1830s wool boom had given legitimacy to land-extensive commercial pastoralism, but it did not diminish the ideological power of improvement. Improvement could solve economic or environmental problems, but it was also a vector of civilization, morality, and order. And as colonial pastoralists encroached rapidly into frontier lands in the 1830s, improvement, at least rhetorically, was a justification of the appropriation of land and resources from indigenous populations (or additionally, in the case of South Africa, “inferior” Europeans). Improvement was supposed to distinguish chaotic indigenous landscapes from rationally organized colonial

¹⁵⁸ Quoted in *ibid.*, 78.

¹⁵⁹ *Ibid.*, 79–81.

¹⁶⁰ Graham’s *Town Journal*, 3 July 1834, pg. 2

landscapes.¹⁶¹ While early British (and Boer) settlers in the Eastern Cape attempted to manage their pastures with fire, the way Xhosan and Khoikhoi pastoralists did, this was frowned upon by the British government and quickly outlawed. The same happened in the interior of New South Wales. Fire was uncivilized.

In New South Wales, Bigge had, in his report, outlined the improvidence of relying solely on the colony's natural grasses. Between 1817 and 1820, a combination of "the continued and increased depasturage of cattle" and "the ravages of a caterpillar" had led to a colony-wide fodder shortage. He firmly believed in the superiority of European plants over native ones, which "have not the verdure or succulence of the English grasses," and encouraged the continued introduction of artificial grasses on stock farms.¹⁶² After Bigge departed New South Wales, a group of prominent graziers gathered Parramatta in July 1822 to lay out the prospectus and regulations for the new Agricultural Society of New South Wales. Its function and organization were modeled on the British Board of Agriculture and its members mimicked the Board's agrarian patriotism as well, declaring that there was absolutely nothing more important to the colony's future than the careful and serious pursuit of agricultural improvement. Their motto was a bastardization of Cicero: *Nihil est agriculturá melius, nihil uberius, nihil ducius, nihil homine, nihil libero dignius* ([No occupation] is better than agriculture, none more profitable, none more delightful, none more becoming to the dignity of a free man).¹⁶³ The prospectus is written both as an admonition for the failures of mixed husbandry and as an assurance that commercial

¹⁶¹ See Richard Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (Yale University Press, 2000) which highlights the nefarious underbelly of improvement in British colonies. Crais, *White Supremacy and Black Resistance in Pre-Industrial South Africa*, 132–4; Beinart, *The Rise of Conservation in South Africa*, 50.

¹⁶² Bigge, *Report of the Commissioner of Inquiry on the State of Agriculture and Trade in the Colony of New South Wales.*, 14.

¹⁶³ Cicero, *De Officiis*, Book I, sec. 42.

pastoralism, at least in the hands of its members, would not be un-Enlightened. It opens with a note of chagrin:

Agriculture and Grazing, in a soil and climate so peculiar as those of New South Wales, present so many features of novelty and difficulty, that it must appear surprising that a Colony of Englishmen have been settled five and thirty years in the country, without associating themselves for the purposes of communicating their mutual experience, and benefiting by their reciprocal advice; still more, for the purpose of effecting, by means of subscription fund, improvement in the breed of animals, and experiments in the growth of produce, which are beyond the reach of an individual purse.¹⁶⁴

The opening is an admission of several realities: first, that agriculture (arable) and grazing were now conceived as two different (though not mutually exclusive) enterprises; second, that colonists had fully recognized that the land could not just receive the practices and biota of England without significant recalibration in consideration of the unique and inadequately understood local environment; and third, that the future of improvement lay in stock and, perhaps, in experimental cash crops.

They blamed the lag in creating such an institution on local politics—a jab, most likely, at Macquarie who had given more credence to the activity of the small wheat farmers on the riverine areas of the Cumberland Plain, than the pursuits of its “Principle Landholders”—and the “slowness and scantiness” of free emigration to the colony. Even before Wilmot-Horton or Wakefield’s schemes, more and more free settlers, many of them with significant capital (or, as the Society named them “of respectability”), had begun to flow into the colony along with a new Governor, Sir Thomas Brisbane, who had been instructed to acquiesce to all reasonable demands made by these Exclusives.¹⁶⁵ All 35 officers and members of the Societies “General Committee” as well as all 102 of its subscribers (£5/annum) had come to New South Wales as free men. This

¹⁶⁴ “Prospectus, List of Subscribers, and Rules and Regulations of the Agricultural Society of New South Wales,” 5 July 1822, RASHC, Agricultural Society Collection, Doc. 8, f. 1

¹⁶⁵ *Ibid.*

exclusivity, while not written into its bylaws, was certainly intentional. The convict stain was not welcome in the pursuit of improvement, regardless of whether or not Emancipists or their children could afford the price of subscription.

The Society's *raison d'être* was made clear:

The greater part of the land on this side of the Nepean has been [exhausted], the arable cropped out by bad husbandry, and the pasture consumed by surcharge of cattle; so that scientific farming and artificial grasses have become absolutely necessary for the continued supply of the victualling markets of our towns.¹⁶⁶

Scientific farming and artificial grasses could have just as easily applied to the amelioration of grain cultivation, but that is not where the Society's attention was. It was feared that there would soon be a slow-down of transportation, which meant for the Exclusives, a smaller market for their produce: meat, skins, wool, grain, etc. The feared reduction of transportation (which did not actually happen) would force the free colonists to rely on their own resources. To do this, they needed to first figure out how to make the most "the land we have cleared," and then locate new markets for their produce. This included improving fleeces, introducing new horse and dairy cow breeds, exploring new exports, distilling beer and spirits, experimenting with tobacco, New Zealand flax, indigo and tannin collection, and determining the worth of native timber. It also included the widespread use of artificial grasses, insufficient in its current scale.¹⁶⁷

"It is nothing to the prosperity of a Colony," they claimed, "that one or two individuals possess highly improved cattle or sheep, or can shew a well-tilled field or a meadow of English grasses." Not recognizing the hypocrisy of the Society's exclusivity, they argued that the Colony could only be said to flourish when "the spirit of agricultural improvement shall be implanted in the breast of all." By improving agriculture, they were bringing "all the civil blessings we enjoy

¹⁶⁶ Ibid. Surcharge here is used with its older meaning of "excessive load."

¹⁶⁷ Ibid., f. 3

to this rude, uncultivated wilderness.” It was hoped that this society would capture the attention and approbation of the British Board of Agriculture at home, inducing the “Noble Patrons of Agriculture” to send sheep and cattle from private stocks to the society, as well as pasture plants from across the globe that might be “congenial to our climate.”¹⁶⁸ Fifteen years earlier, the Board’s President, John Sinclair, had attested to the Board’s eagerness to “improve this foreign settlement,” but it was naïve to assume that there would be any support for the development of a foreign (even if colonial) fine wool industry to compete with British producers. And in any case, the Board of Agriculture disbanded just as the Agricultural Society of New South Wales formed, caused by a combination of agitations both within and without the institution: public animosity towards its protectionist views, charges of mismanagement of public funds, the agrarian slump of the early 1820s, the death of Arthur Young, dwindling attendance, and a failed transition from oligarchic public institution to voluntary society.¹⁶⁹ The Society had more success in tapping into the resources of the London Horticultural Society and Caledonian Horticultural Society, which sent shipments of seeds and plants in the care of their collectors, stepping into fill the hole left by the death of Sir Joseph Banks and the decline of Kew.¹⁷⁰

Few records remain of the early activities of this Society aside from a handful of presidential addresses and administrative documents, announcements of agricultural premiums, newspaper clippings, and scattered medals and awards given to the winners, but subscriber lists suggest that the Society continued to gain members (and funds) throughout the 1820s and 1830s.

¹⁶⁸ *Ibid.*, f. 9

¹⁶⁹ Sir John Sinclair, “Address to the Board of Agriculture,” 22 April 1806, BL, B. 293 (4); Rosalind Mitchison, “The Old Board of Agriculture (1793-1822),” *The English Historical Review* 74, no. 290 (1959): 65–68.

¹⁷⁰ “First Anniversary Address,” 3 July 1823, RASHC, Agricultural Society Collection, 630.203 Agr

In what does remain, the call for increased usage of artificial grass is a constant, particularly following the declaration by the Society's president, Sir John Jamison, that "Our Mother Country has now completely weaned us, both as agriculturists and graziers" and that the future of the colony lay in the exportation of fine wool ("Nothing else will keep us in prosperity").¹⁷¹ It was relatively straightforward for the Society to offer a premium for the best sample of fleece, a prize for the best sheep or cow, a bounty for killing a dingo, but less so to encourage the sowing of artificial grasses.¹⁷² Yet the need was clear. In the first half of the 1820s, drought and unusually cold winters, particularly in the newly established districts west of the Blue Mountains had left graziers in dire straits. Unfortunately most of the common artificial grasses and legumes used in England, while certainly cold-hardy, were not drought hardy, but that did not stop the Society from advocating their introduction and use on sheep runs and in dedicated sown pasturage for winter hay and for use in particularly bad drought years.¹⁷³

In 1824, the Agricultural Society imported a large shipment of grass seeds from Britain to be distributed to its members. In bad drought years, the society claimed "the only remedy is the adoption of artificial grasses," but they recognized that it was not as simple as planting clover and ryegrass. "There is always a selection to be made," they wrote, "according to the Capability and variety of the soil" and the needs of the stock to be pastured upon it:

It is observed by the greatest botanist of the day (James Edward Smith [founder of the Linnaean Society]), 'That although much is to be expected from Scientific agriculturists, yet Nature so absolutely in general accommodates each grass to its own soil and station,

¹⁷¹ *Ibid.*, f. 3

¹⁷² Sydney Gazette, 20 December 1822 (pg. 1); 13 February 1823 (pg.1); 26 June 1823 (pg. 1); 5 October 1833 (pg. 2);

¹⁷³ "Fourth Anniversary Address" [1826], RASHC, Agricultural Society Collection, 630.203 Agr; "Report of the Agricultural and Horticultural Society of New South Wales," [1828] Agricultural Society Collection, H63

and nothing is more difficult than to overcome their habits, insomuch that few grasses can be generally cultivated at pleasure.¹⁷⁴

They published a serial guide to artificial grass cultivation in the *Sydney Gazette*, highlighting, in addition to red and white clover, trefoil, lucerne, and burnet, already used in the colony, those grasses recently imported by the society: sweet vernal grass (*Anthoxanthum odoratum*), sheep's fescue (*Festuca ovine*), meadow foxtail (*Alopecurus pratensis*), tall or false oat grass (*Arrhenatherum elatius*), crested dog's-tail (*Cynosurus cristatus*), cocksfoot (*Dactylis glomerata*), narrow-leaf meadow grass (*Poa angustifolia*).¹⁷⁵

Not only did they describe how to best care for, cultivate, and use these grasses, they included a table of the typical produce per acre (in lbs.) and the nutritive value of 64 “drachmt [sic]” of grass, a apothocaries’ measurement of 60 grains or 1/8th of an ounce. This value was determined after dried grass was boiled in hot water to separate the soluble parts from the solid matter, which was then strained, evaporated, and weighed. The article’s contents were poached primarily from George Sinclair’s *Hortus Gramineus Woburnensis* (1816), a groundbreaking work on the produce and nutritive qualities of grasses and other fodder crops based on decades of experimentation at the Duke of Bedford’s Woburn Abbey. Sinclair, a gardener by profession, collaborated directly with the chemist and president of the Royal Society Sir Humphry Davy, who used the opportunity to advance his work in the new field of agricultural chemistry, which involved the chemical analysis of soils, vegetable substances, and dung.¹⁷⁶ Sinclair himself had hoped that his experiments, which had not only been conducted with hundreds of different

¹⁷⁴ *The Sydney Gazette and General Advertiser*, 14 October 1824, pg. 2e

¹⁷⁵ *Sydney Gazette*, 30 September 1824, pg. 3; 14 October 1824, pg. 2e; 10 November 1824, pg. 3

¹⁷⁶ For more on the collaboration between Davy, Bedford, and Sinclair see Jan Golinski, *The Experimental Self: Humphry Davy and the Making of a Man of Science* (University of Chicago Press, 2016), 133–5.

plants, but upon hundreds of different kinds of “agricultural earths,” would be useful to farmers “not of Britain only, but of all the countries within the temperate zones of the world.”¹⁷⁷

Even before the Society’s big grass push, the more common agricultural grasses, particularly clover, ryegrass, meadow fescue, and common meadow grass (poa), had been in use in the colony. Artificial grass seed was extremely valuable in Sydney, especially new, unadulterated seed brought over from England--so valuable that it was sometimes subject to theft.¹⁷⁸ Since most artificial grass seed had been dispersed with native grasses, it was very difficult to separate, for example, ryegrass seed from other sorts for sale.¹⁷⁹ When merchants received shipments of pure grass seed, they headlined advertisements.¹⁸⁰ When a property for sale included dedicated clover or other artificial grass paddocks, this was highlighted in sales advertisements.¹⁸¹ Governor Darling’s Colonial Secretary, Alexander MacLeay, even set up government contracts for farmers willing to supply the government farm at Emu Plains 1200 pounds of white clover annually.¹⁸² Sown grass even featured in the Romantic pastoral poetry of the colony (“Flocks of Merino breed/herds deep in clover feed,/Whilst the proud Arab steed,/hounds o’er the sea/ For thee distant climes supply,/robes of the richest dye.”).¹⁸³

¹⁷⁷ George Sinclair, *Hortus Gramineus Woburnensis, Or, An Account of the Results of Experiments on the Produce and Nutritive Qualities of Different Grasses and Other Plants Used as the Food of the More Valuable Domestic Animals: Instituted by John, Duke of Bedford...* (J. Ridgway, 1825), vii.

¹⁷⁸ *Sydney Gazette*, 7 November 1812; Brisbane to Bathurst, 23 May 1825, HRA 11, 609

¹⁷⁹ “Dr. Anderson’s Remarks Upon the Dairy,” *Sydney Gazette*, 28 June 1817, pg. 4

¹⁸⁰ For ex., *Sydney Gazette*, 13 August 1814; 16 September 1815; 30 December 1815; 19 August 1820; 3 June 1826.

¹⁸¹ *Sydney Gazette*, 11 November 1820.

¹⁸² “Government Notice,” 9 February, 1826, published in *Sydney Gazette*, 11 Feb 1826.

¹⁸³ Mr. M from Baldoorra, “Imitation of the 16th Ode, 2nd Book of Horace,” in *Sydney Gazette*, 2 April 1829.

Official statistics complement these accounts. The use of sown grasses grew significantly throughout the period between 1822 and 1842, not just in the areas closest to Sydney where the demand for hay was the greatest—hay fetched a price of £9-11 per ton in Sydney between 1822 and 1842, which was 2-4 times the price in London (£3-6 in the same period)—but across the colony. There is little uniformity in the official returns of agricultural land in cultivation when it comes to sown grasses. Sown or Artificial Grasses as a category made its first appearance in the Governors' agricultural reports in 1805, with 90 acres of sown grasses known to be in cultivation. In 1806, 181 acres were reported.¹⁸⁴ No further statistics on sown grasses were reported until 1825, surprising given Bigge's focus on artificial grasses in the second report. Beginning in 1822, official "Returns of the Colony," known as the Blue Books, were compiled. The majority of this return consisted of the civil, ecclesiastical, and military expenditures and colonial revenue, but each also included a statistical appendix, including imports and exports, population, land grant and sales records, criminal proceedings, and agricultural statistics. These agricultural statistics were often incomplete, particularly in the 1820s, and do not include the lands of squatters, but they still offer a general picture of the expansion of sown fodders. Categories of crops in these returns include: wheat, maize, barley, oats, millet, potatoes, tobacco, orchard, garden, and sown grasses.

¹⁸⁴ "Comparative Statement of the Annual Progress in Cultivation..." 15 August 1805, HRSNW 5, 680; "Abstract of Acres in Grain," August 1806, HRNSW 6, 133.

Table 5: Acreage of Sown Grasses Reported in Colonial Musters, 1825-1842¹⁸⁵

Year	Acres Sown Grasses	Total Arable Acres	Percentage of Arable Land in Sown Grass
1825	765	45,514	1.6
1826	--	--	
1827	--	--	
1828	--	--	
1829	1,224	70,695	1.7
1830	--	--	
1831	--	--	
1832	1,561	46,116	3.4
1833	1,877	54,355	3.5
1834	2,453	47,057	5.2
1835	5,596	54,312	10.2
1836	8,802	77,514	11.4
1837	9,844	94,950	10.4
1838	9,939	91,912	10.8
1839	--	--	
1840	12,774	122,864	10.4
1841	--	--	
1842	15,257	110,249	13.8

In the space of 18 years, the colony had gone from under a thousand acres sown in artificial grass to over fifteen thousand (a tenfold increase compared to the two and a quarter-fold increase in total acres in cultivation). The counties of Camden and Cumberland (nearest to Sydney) typically accounted for at least half of the total. The Campbelltown district (in the county of Cumberland) specialized in sown grasses, reaching a whopping 3,027 in 1835 and 5,054 in 1836, accounting for nearly three-fourths of the total. Sown grasses were slow on the uptake in the districts beyond the Blue Mountains, which were used, almost without exception, for grazing—only eight acres in Argyle County in 1825 and only two acres in the Bathurst and Roxburgh Counties in 1832—but

¹⁸⁵ There is a high probability of some human error in this graph. Several original returns were in bad condition, and the Xerox copies no better. The manuscript numbers were rarely tallied, and so each return for each crop for each individual mustering station had to be added to get the totals. No returns were given in blank years on the chart.

by the late-1830s, as wool production peaked and the price began to fall sharply, even the remote grazing districts were producing significant amounts of artificial grass: 500 acres in Goulburn, 450 on the Liverpool Plains, 360 in Bathurst. By then, there was not a single district listed in the Blue Books that did not have at least some grass in cultivation. These numbers only include acreage dedicated to artificial grass and do not account for the artificial grasses that infiltrated native pasturage where seeds were introduced either intentionally by graziers or spread on the bodies and manure of stock, in bird droppings, or by wind or flood.

In the Cape, the Blue Books compiled beginning in 1821 included no agricultural statistics. The first time it did so was in 1828, but no statistics were given regarding sown grasses, despite being nearly identical in every other way to the New South Wales Blue Books. This does not mean that the farmers and graziers in the Cape did not sow artificial grasses. In the 1820s and 1830s, the Cape was more spread out and more populated than New South Wales, which made the collection of agricultural statistics more difficult. The Agricultural Society that had been so active in the 1810s in the Western Cape did not have much influence in the distant Eastern Cape. It was not until 1830 that the farmers and pastoralists of the Eastern Cape formed an Agricultural Society of their own, which failed almost immediately. “Our Farmers in general,” one critic wrote, “seem sunk into a state of lamentable apathy.” The writer attributed the failure of this first society to an ambiguity of aims. The original prospectus had emphasized grain production too much. Would-be members “very rationally” argued that any plan to increase grain production when already the price of grain, due to Indian imports, was so low as to hardly be worth growing. The object of the new society, which got on its feet in 1834, was not “to increase production beyond the wants of the community, but to point out the ruinous tendency of

such a proceeding, and to turn the stream of industry into a more lucrative channel.”¹⁸⁶ The Eastern district, it was argued, needed “men of Science” to explore ways to improve exhausted soil, experiment with “valuable exotics found under the same latitude,” to figure out “the best means of improving the natural resources of the colony,” and, particularly, improving grasslands and developing water delivery systems in dry seasons.¹⁸⁷ In this, the society’s founding members looked not to the Western Cape’s societies, which they considered little more than social clubs, but to the New South Wales, Van Diemen’s Land and, later, South Australia and Western Australia societies. Why, when the district of Albany alone had three million acres of pasturage, had its pastoralists been unable to command a proportional share of the profits of the British wool boom?¹⁸⁸ While in New South Wales, artificial grass was clearly regarded as one of the main ways to improve pastoral enterprises, regardless of the extent to which this recommendation was put into practice, this was emphasized much less in the Cape. Improvement activities were almost exclusively focused on breeding programs.

Yet artificial grass use (or suggested use) was not completely absent from the historical records. There was a robust trade in clover seed in the Western Cape by the 1820s and 1830s, not just for the feeding of local horses and oxen in the winter months, but for use in arable farming. Undersowing clover with wheat and maize or, more often, under vines in the country districts around Cape Town, including Stellenbosch, Franschhoek, and Simon’s Town. Indicative of its value, clover “for Wine and Corn farmers” often appears in advertisements for estate sales in the

¹⁸⁶ Graham’s Town Journal, 6 December 1832, pg. 2; 16 January 1834, pg. 1;

¹⁸⁷ Ibid.

¹⁸⁸ Graham’s Town Journal, 22 May 1834, pg. 2; 6 April 1837, pg. 2

Western Cape, as well as shipping news.¹⁸⁹ The colonial government frequently advertised for local contractors for hay for its cavalry and public stock in amounts up to 500,000, specifically requesting that it be unadulterated by canary grass (known to make horses sick) or other weeds.¹⁹⁰ In the Eastern Cape, *The Graham's Town Journal* often published tips for artificial grass cultivation from non-British or Dutch sources, namely the Mediterranean. In 1838, one writer begged the attention of "British Agriculturists" in the Cape to the cultivation couch grass, which was said to be very popular in the drier regions of southern Italy. Another argued that, for the Merino industry, pastoralists should be looking to Spain for tips on how to improve their pastures, rather than Britain.¹⁹¹ Additionally, wholesale grass seed advertisements in Graham's Town begin showing up in the newspapers in the early 1840s. Presumably, before this time, seeds had to be ordered from Cape Town. A new local market suggest that the usage of these grasses, most often timothy, white clover, lucerne, and Italian ryegrass, was becoming more common in the Eastern Cape.¹⁹² But the spread of European grasses in the Cape was never as orchestrated or self-conscious as it had been in Australia. Interventions into the actual ecological composition of Eastern Cape grasslands were limited until the late nineteenth and early twentieth centuries, when colonial governments and pastoralists, with the aid of new irrigation

¹⁸⁹ For example, Cape Town Gazette, 6 April 1822, pg. 2; 7 November 1827, pg. 2; 18 August 1831, pg. 3.

¹⁹⁰ Cape Town Gazette, 28 October 1825, pg. 1; 12 September 1846, pg. 1; Given that European canary grass was often used to feed horses in Britain without ill effect, it is likely that canary grass here refers to a native plant with similar qualities.

¹⁹¹ "Couch Grass: A Hint to Farmers," 1 November 1838, *The Graham's Town Journal*, pg. 3; 23 October 1839, pg. 4.

¹⁹² *The Graham's Town Journal*, 8 November 1842, pg. 4; 24 December 1840, pg. 3; 28 July 1842, pg. 1; 4 August 1842, pg. 4.; 12 September 1846, pg. 1;

technologies and agricultural machines, made up for their earlier neglect, often with disastrous consequences for the environment and indigenous communities in the Eastern Cape and Natal.¹⁹³

Conclusion

No soil is so barren, no climate so forbidding, as to not present facilities more or less favourable for the absorption of capital and the extension of industry. Wherever the tide of improvement is at its height, and a reflux ensues, it is to the impolicy of the government, and not to the sterility of the country, that this retrogradation is to be attributed. Prosperity and happiness belong to no climate, they are indigenous to no soil: they have been known to fly the allurements of the fertile vale, and to nest on the top of the barren mountain...they have been the faithful companions of freedom in all her wanderings and persecutions; they have never graced the triumphs of injustice and oppression. ~William Charles Wentworth, 1819¹⁹⁴

Malthus was right not only in his assertion that emigration would only be a temporary palliative for domestic problems, but also in warning against the mythology of boundless colonial abundance, a colonial abundance in which William Charles Wentworth, a native-born Australian, had great faith. In the short term, the new colonies did not run up against the kind of straightforward demographic pressures experienced in Europe, but they were besieged by a whole host of other ecological, political, and economic pressures that prevented the easy transfer of British agriculture at the hands of its excess population. There were significant demographic and environmental challenges to mixed husbandry in both New South Wales and the Cape: poor soils, small and dispersed populations, erratic climate, dearth and overabundance of water, high cost of agricultural labor, poor access to markets, etc. But there were significant demographic and environmental challenges to commercial pastoralism as well. As pastoralism expanded, these new worlds that had seemed so empty at first--so empty that it was very difficult to convince settlers to concentrate themselves and cultivate intensively—became quite full.

¹⁹³ See Beinart, *The Rise of Conservation, passim*, but particularly 155-189.

¹⁹⁴ William Charles Wentworth, *A Statistical, Historical, and Political Description of The Colony of New South Wales* (London: G. and W.B. Whittaker, 1819), 324

Frontiers, in particular, became crowded with new settlers and, more to the point, their stock. Conflicts intensified over grazing lands. As the profitability of stock raising grew, natural grasslands were put under extreme pressure.

The 1820s and 1830s saw the rise of two somewhat contradictory, but often simultaneous, impulses. The first was to flood these colonies with new settlers as a boon to agricultural progress, the idea being that the excess population of Britain, which was a full world, demographically and agriculturally-speaking, could help these new empty worlds become more productive. Yet, while colonial governments and settlers were recruiting an agricultural workforce and actively soliciting capitalist speculation, they were also raising the alarm about the pressures on the land, first in the exhaustion of arable lands in areas of more concentrated settlement, and then in the exhaustion of natural grasslands to which so many failed or disinterested farmers had fled. Despite the early attempts on the part of home and colonial governments to preempt agrarian improvement by the orchestration of mixed husbandry based on sown fodders in these under-utilized colonial landscapes, it was not until population pressures (stock population if not human population) had degraded these landscapes that colonists ramped up their efforts in improvement via sown grasses, breeding programs, enclosing, and crop experimentation.

Wentworth eloquently argued in his 1819 booster pamphlet (thinly disguised as a descriptive and statistical account of New South Wales), that no land, however poor, was beyond the reach of improvement. Agricultural improvement was not the exclusive privilege of arable farming, but could just as equally be brought to bear on pastoral enterprises. And while it is true that political and social factors certainly hampered early attempts to replicate the agrarian landscapes of Britain in these colonies, the native ecology of both colonies forced adaptations.

Wentworth, as a native-born Australian, recognized that agrarian improvement—undiminished, as Bayly argues, in its ideological authority—would not look the same in the colonies as it had in Norfolk or the Lothians. After a turbulent and uncertain period in the 1820s and 1830s, improvement had, in many ways, flown the allurements of the vale and landed, if not upon “the barren mountain,” on the fragile grasslands.

CONCLUSION

Fodder Futures

Joseph Henry Maiden, the consulting botanist of the Australian Department of Agriculture and Director of the Sydney Botanic Garden, wrote a eulogy of sorts in 1898 to the rapidly disappearing native grasses of New South Wales. "As far as our knowledge extends at present," he wrote, "there are about 3,200 species of grasses, of which 196, comprised in 56 genera, are indigenous."¹ In the name of improvement, not delight, Maiden called for farmers and pastoralists to be mindful of the conservation of indigenous grasses. For over a century, the improvement of grasslands in New South Wales had only really meant one thing: sowing artificial grasses, most (but not all) of them European. For over a century, Australian farmers and pastoralists had been told by improvers, both in the colony and out, that their economic dependence on native grasslands was, agriculturally-speaking, sinful. For over a century, this conviction that native grasslands were inherently inferior to sown grasslands had propelled, very slowly at first, the course of ecological imperialism. For over a century, clover and cock's-foot, false-oat and false-broom, crested dog's tail and meadow foxtail had been broadcast, often with great difficulty, over swards of kangaroo and wallaby, windmill and weeping, black spear and barbed wire grass. And now, Maiden was trying to convince his readers that improvement could also take the form of native grasses; that introduced grasses might actually be inappropriate to the soil and climate; that they should identify native species, keep the animals away from them

¹ J. H. Maiden, New South Wales Ministry of Mines and Agriculture, *A Manual of the Grasses of New South Wales* (Sydney : W.A. Gullick, 1898), iii.

so they could flower and seed, collect the seed, and then attempt to cultivate them in dedicated paddocks.²

Across the Indian Ocean, two years earlier, Robert Wallace, who would go on to become Professor of Agriculture and Rural Economy at the University of Edinburgh, published a thorough report on the state of agriculture in the Cape Colony that similarly suggested that the widespread introduction of British grasses might not actually have been very prudent or useful. Wallace had been employed as a consultant by the newly-formed Department of Lands, Mines, and Agriculture, and had spent nearly two years traversing the fields and pasturelands of the Cape Colony. Many introduced grasses were absolute nuisances: couch grass was "a troublesome weed in cultivated land....[especially] in the lucerne camps"; fiorin grass (creeping bent grass), prolific in Ireland and a favorite of the Board of Agriculture in the 1790s, was commonly attacked by ergot (a fungus that causes gangrene in livestock); Italian and perennial ryegrass, timothy, and red clover were prolific in highland areas in the Eastern Cape and Natal, but they became "hard and unattractive to animals" at the slightest touch of drought.³ European forage crops did well on farms where they could be fertilized, weeded, and irrigated, particularly the drought-hardy lucerne, but the European grasses that had established themselves on the velds of the Cape were, on the whole, disappointing.⁴ Unlike Maiden, however, Wallace did not call for the improvement or conservation of native grasses. He found no dissatisfaction with the most bountiful native grass, the Retz or rooi-grass, but found many other native grasses, many of them with "vigorous" seeds that caused injury to the skin or became matted in wool, to be highly

² Ibid., iii–v, 1–3.

³ Robert Wallace, *Farming Industries of Cape Colony* (London : P. S. King and son, 1896), 100–102, 104–105.

⁴ Ibid., 108–13.

objectionable. His recommendation was that farmers and pastoralists should encourage the spread of more appropriate exotics from other parts of the globe with similar ecological and climatic conditions: Australia, the western United States, and India.⁵

Over a century later, in both Australia and South Africa, environmental agencies and conservationist groups continually support the plight of native grasses and grassland communities in their fight to resist introduced invasive pasture plants.⁶ Advocacy for native grasslands and the demonization of European pasture plants, both at the end of the nineteenth century and here at the beginning of the twenty-first, would surely have baffled late eighteenth and early nineteenth century farmers in New South Wales and the Cape and many of their improving supporters in Britain: So powerful was the desire to replicate the agricultural ecology of England through mixed husbandry, so dominating was the impetus to improve, so certain were colonial planners that putting clover, wheat, ryegrass, an axe, and a spade into the hands of a colonist or colonial subject could bring forth abundance. One hundred and two hundred years later, the spread of these grasses in these countries raises a big question mark (or exclamation point) by scientists and conservationists. The coalition of agro-ecological hubris and misreadings of native landscapes led to a great deal of disappointment and frustration in the early days of settlement in New South Wales and the Cape. If we were to time travel and ask any colonial

⁵ Ibid., 103–4.

⁶ Toni McLeish, Rainer Rehwinkel, and Lorraine Oliver, *Conservation Management Networks for Grassy Ecosystems in New South Wales* (Collingwood, Vic.: CSIRO Publishing, 2013), 113–23; William Mark Adams and Martin Mulligan, *Decolonizing Nature: Strategies for Conservation in a Post-Colonial Era* (Earthscan, 2003), 220–263; Paddy Woodworth, *Our Once and Future Planet: Restoring the World in a Climate Change Century* (Chicago: University of Chicago Press, 2013), 49–68; V.R. Clark et al., “Rich Sister, Poor Cousin: Plant Diversity and Endemism in the Great Winterberg–Amatholes (Great Escarpment, Eastern Cape, South Africa),” *South African Journal of Botany* 92 (May 1, 2014): 159–74; Nola Parry and Jocelyn McClean Jones, *Native Grasses for Australian Gardens* (Sydney: Reed New Holland, 2007).

farmer or pastoralist in either colony if they thought it inevitable that clover, couchgrass, or cock'sfoot would colonize the landscape, they would likely laugh in our faces. Improved, intensive, grass-based mixed husbandry had failed, for the most part, in both colonies. So why did the biota endure when then the husbandry did not?

We left off the story of mixed husbandry in Australia and the Cape in the 1830s, when the station had, in more ways than one, superseded the soil. Sown grasses would not, it seemed, be continuing their imperial march via mixed farms, but rather through sheep runs. And even so, the aggregate quantity of introduced grass in such vast territories of natural grassland, could scarcely have amounted to more than a drop in a bucket. So what caused such a change in three quarters of a century? One answer is, as Crosby attests, independent biological processes: the volunteer. A volunteer—such a wonderfully anthropomorphic term—is a plant that germinates, grows, and flowers without the deliberate planting by a human. Early sowers of grass and other fodders were counting on these volunteers. Seeds, particularly true grass seeds, which are often extremely light, have many ways of traveling, some more sophisticated than others. They can travel by wind, water, insect, bird, and other herbivores. They travel in fur, feathers, and wool. While most do not have the fluffy “wings” of the pervasive dandelion, many have barbs and hairs that certainly help them either cling or take flight. Volunteer seed dispersion is helped along by dry, windy climates, the kind often found on the native grasslands throughout Australia and the Cape. Legumes like clover, sainfoin, and lucerne tend to have much larger and heavier

seeds that do not travel as far as true grasses, but their seeds are usually more likely to survive.⁷ European plants had ways of colonizing territory without human intervention.

But while it is clear that introduced fodder crops (and many other plants and animals) spread in many cases without the direct aid of humans, there were also historical events and trends throughout the nineteenth and twentieth centuries that had the potential to both impede and stimulate deliberate usage of sown fodders. These events and trends also tend to explain corresponding (if not correlated) ebbs and flows in arable farming during this period. First, emigration to Australia and South Africa throughout the nineteenth century put more Europeans on the ground over more territory. Even if most new arrivals headed for sheep stations or mines or cities, opportunities for the extension of fodder plant introductions increased. By 1850, 140,000 Europeans (mostly British or Irish) had emigrated to Australia, and 30,000 to the Cape. We can safely say that the majority of these emigrants came to explore agricultural/pastoral pursuits. From 1851 to 1888, a further 1,710,000 emigrants headed to Australia and 130,000 to the Cape, drawn by both land and new industries.⁸

In both the Cape and Australia, the wool industry had slowed down significantly in the depression of the 1840s. South Australia, which was settled systematically, had become a booming wheat belt, providing wheat to the much of the rest of the colony and, following the repeal of the Corn Laws in 1846 to Britain. When wool production in New South Wales and Van Diemen's Land was becoming somewhat less alluring, South Australia and southern Victoria

⁷ B.E. Giles, "The Effects of Variation in Seed Size on Growth and Reproduction in the Wild Barley *Hordeum Vulgare* Ssp. *Spontaneum*," *Heredity* 64, no. 2 (April 1990): 239–50.

⁸ Michael George Mulhall, *The Dictionary of Statistics* (London: G. Routledge, 1903), 246–9.

(around Melbourne) were ploughed up and put to grains and grass.⁹ For several decades, mixed husbandry thrived in these areas. When gold fields were discovered in Victoria in 1851, many abandoned their wheat fields for the diggings, but many remained. Australia's total population tripled from around 430,000 in 1851 to 1.7 million in 1871, and that new population required bread and meat.¹⁰ Free grain markets, refrigeration technologies, and development of other agricultural industries (wine, fruit, sugarcane), encouraged arable farming, which often enlisted the support of fodder crops (e.g. sowing clover or lucerne on vineyards). Arable productions never surpassed wool or mineral productions, but Australian farming was extended, not contracted, in the nineteenth century.¹¹

In South Africa, the Kimberly Diamond Rush in 1867 and the Witwatersrand Gold Rush in 1886 drew old settlers, Boer and British, into the Orange Free State and the Transvaal, in addition to new European settlers. This "Mineral Revolution" encouraged the British government to reclaim both territories from the Boer Republics. From the Orange Free State, Griqualand West (with Kimberley as its capital) was annexed to the Cape Colony, and the attempt to take over the Transvaal (and with it the Witwatersrand) led to the second Anglo-Boer War.¹² Like in Australia, the gold and diamond rushes in South Africa drew new and old colonists from fields

⁹ D. W Meinig, *On the Margins of the Good Earth; the South Australian Wheat Frontier, 1869-1884*. (Chicago: Published for the Association of American Geographers by Rand McNally, 1962), 13–7, 45–6.

¹⁰ Mulhall, *The Dictionary of Statistics*, 246.

¹¹ Meinig, *On the Margins of the Good Earth*, passim; B. R Davidson, *European Farming in Australia: An Economic History of Australian Farming* (New York: Elsevier Scientific Pub. Co, 1981), 35–62; Geoff Raby, *Making Rural Australia: An Economic History of Technical and Institutional Creativity, 1788-1860* (Oxford University Press, 1996), 182–199.

¹² Stanley Trapido, "Imperialism, Settler Identities, and Colonial Capitalism: The Hundred-Year Origins of the 1899 South African War," in Robert Ross, Anne Kelk Mager, and Bill Nasson, *The Cambridge History of South Africa*, Cambridge History of South Africa (Cambridge: Cambridge University Press, 2011), 66–101, <http://pi.lib.uchicago.edu/1001/cat/bib/10513738>.

and pastures to diggings, but, as Colin Bundy has explored in great detail, it was African agricultural producers, not British or Boer colonists, who rose to the occasion to put grain, meat, and vegetables into the bellies of the hundreds of thousands of colonists and African laborers in mining areas.¹³ It was not until the late 1880s and 1890s that a white agricultural sector, supported by newly-formed state agencies, irrigation technologies, and fertilizer sources, stepped up to meet the agricultural demands of the mineral industry, and they did so by enlisting the power of the colonial state to kick the feet out from under African producers (or, more precisely, stripping them of their lands and resources).¹⁴ Further research would be required to know the extent (if any) European fodder crops were used by African farmers in this period, but William Beinart has shown how white farmers and pastoralists embraced, often with state assistance, scientific agriculture, including the introduction and use of new fodder crops and systematic introduction of exotic grass species on the veld, as they expanded commercial operations across the Cape Colony.¹⁵

In the twentieth century, farmers, supported by state-sponsored scientific experts (like Maiden and Wallace), state departments of agriculture, and agricultural colleges, began to expand agricultural and pastoral production and experiment with new crops and fodders. In the late nineteenth and early twentieth centuries, we see a full-fledged version of Drayton's government of nature or Scott's high-modernist agriculture, whereby scientific experts embedded in state apparatus transformed landscapes, often obliterating traditional land uses.

¹³ Colin Bundy, *The Rise and Fall of the South African Peasantry* (University of California Press, 1979), 65–108.

¹⁴ *Ibid.*, 109–196.

¹⁵ William Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770–1950* (Oxford: Oxford University Press, 2008), 250, 260–3, 269, 312–5.

Water technologies (damming, surface and drip irrigation, eventual sprinkler irrigation) made commercial grain, grass, and fruit farming more viable in the Eastern Cape and Natal in areas prone to both drought and flooding, and enabled the spread of arable farming from the wet, coastal regions of South Australia, Victoria, and New South Wales to the interior. However, the use of grass in crop rotations or for feeding cattle for manure, was all but abandoned (not that it had ever been extensive) in both colonies with the entrance of new fertilizer substitutes (guano and eventually chemical fertilizers) and, in the second half of the century factory farming where grain was often preferred to grass as a feed. As in many other parts of the world in the twentieth century, market technologies (refrigeration, preservatives, fossil fueled transportation) also made local production of foodstuffs less necessary. Imports of foodstuffs from across the globe became more common in both countries. They remain critical to Australian and South African diets today. And, lastly, we cannot fail to appreciate the relationships between wealth, whiteness, and the well-kept lawn in the twentieth century, which has seen the spread of not just European lawn and ornamental grasses, but grasses from all over the world, in suburban lawns.¹⁶ Australia has a thriving turf-grass industry, and South Africa has a robust local industry around Durban, though both countries, with droughts increasingly common, are now seeing lawn grasses replaced with synthetic grasses.¹⁷

¹⁶ Peter Timms, *Australia's Quarter Acre: The Story of the Ordinary Suburban Garden* (Miegunyah Press, 2006); Christopher C. Sellers, *Crabgrass Crucible: Suburban Nature and the Rise of Environmentalism in Twentieth-Century America* (Univ of North Carolina Press, 2012).

¹⁷ John Haydu, David Aldous, and Loretta Satterthwaite, "Economic Analysis of the Australian Turfgrass Industry," Food and Resources Economics Department, Agricultural Experiment Stations and Cooperative Extension Service, University of Melbourne (March 2008). <http://hortbusiness.ifas.ufl.edu/pubs/Aust-turf-grass.pdf> David Aldous, *International Turf Management* (New York: Routledge, 2014), 10–12.

This dissertation has shown that there was nothing inevitable about ecological imperialism, particularly when it comes to its grassier elements. The transfer of pasture grasses and fodder crops to these colonies was part of a politically and ideologically-charged attempt to replicate improved British husbandry—at once progressive and conservative, productive and picturesque—in these new auspicious-yet-alien territories. The project of agrarian improvement, carefully outfitted for the journey, had to be, often reluctantly and often informally, recalibrated to the environmental, economic, social, and political realities of colonial rule. Enlightenment-era mixed husbandry, on the whole, failed to thrive in these new landscape. Neither authoritarian administrations nor botanical gardens could, in the end, turn the settler gaze from ready-made pastures on the horizon or the allures and comforts of the city for the only marginally-profitable toil of tillage. But, nevertheless, the fodder seed, the material embodiment of mixed husbandry, had a very real future in these antipodean lands.

Yet many questions still remain to be asked and answered, both to better understand agrarian development and environmental change in New South Wales and the Cape and to understand how the story of mixed husbandry and grass in these colonies fits in to the history of the Empire as a whole. I can divide these questions mostly into two categories: geographical and methodological. What happens if we look at other settler colonies in the same period? Sierra Leone? Upper Canada? New Zealand? What does the trajectory of agrarian development and ecological imperialism look like in a subarctic, glaciated landscape? A tropical savanna? A highly-varied temperate zone? How does indigenous resistance to and/or collaboration with the introduction and use of European plants shape environmental change? What role does race play in agrarian improvement projects? How does the relationship between agrarian improvement and

conservation differ in pastoral versus agricultural settlements? How does distance effect colonial agrarian development? To what extent were ecological networks formed between colonies? In terms of methodology, as I expand on this dissertation I want to explore how to better identify, interpret, and utilize research in the environmental sciences (and perhaps even learn to conduct my own research) to compile a different kind of historical archive to enable me to ask more precise questions about ecological changes in colonial landscapes in the eighteenth and nineteenth century. This project calls out for a union of natural and social science in the recreation of historical landscapes so that quantitative data on changes in vegetation might be joined with qualitative evidence. Knowing that landscapes are palimpsests, with layer upon layer of human/environment interactions recorded and eroded, leaving traces of the former, is one thing: knowing how to read it is much more challenging. Can the methods of paleoecology, which are most often used on very long time scales, be used on much shorter (and more recent) time scales (i.e. Can palynological data be used to analyze vegetation change over the last 250 years, rather than the last 250,000 or 2.5 million years)? What paleo-environmental indicators might help me determine when and how quickly introduced fodder crops spread in Australia, the Cape, or any other former colony? How might I use GIS to tell the story of agrarian and environmental change in colonial settlements? Asking and answering these kinds of questions will require collaboration and the development of new skills. O brave new world!

My goal is to produce a hybrid eco-agrarian history of Britain's settler empire that looks at colonial settlement both at the level of clover and cowpats and at the level of Crown land and Corn Laws—a history that considers the political, economic, and intellectual frameworks of settlement in equal measure with its climatic, geological, and biological frameworks. I want to

further explore the tension between the dismal science of limits and thresholds and the progressive science of abundance and potentiality that characterized colonial agricultural development, tensions that endure today in debates on climate change, food security, conservation, and environmental justice. All flesh is grass, after all.

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The National Archives (Kew)

Royal Botanic Garden Library and Archives (Kew)

The British Museum of Natural History (London)

The Museum of English Rural Life (Reading)

The National Archives of Scotland (Edinburgh)

The National Library of Scotland (Edinburgh)

Bodleian Library of Commonwealth and African Studies at Rhodes House, now relocated to the Weston Library (Oxford)

Australia

The Mitchell Library/State Library of New South Wales (Sydney)
The State Records Office of New South Wales (Kingswood)
Sydney Botanic Gardens and Domain Archives (Sydney)
The Royal Agricultural Society of New South Wales (Olympic Park)

South Africa

National Library of South Africa (Cape Town)
Western Cape Archives and Records Office (Cape Town)

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