Science Advances

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Supplementary Materials for

A widely diverged locus involved in locomotor adaptation in *Heliconius* butterflies

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Supplementary Results

The phylogenetic discordance in *H. erato* subspecies

We constructed a genome-wide phylogeny by aligning 105.2 Mb of SNP data to the *H. melpomene* reference genome (23) and this genome-wide phylogeny yielded a different topology for the *H. erato* subspecies compared to the tree topology reported in previous studies. *H. e. lativitta* was grouped with *H. e. erato* according to our results, whereas it belonged to the *phyllis-emma-favorinus* clade according to a phylogeny using SNP data avoiding chromosomes that contain any genetic divergence peaks (24). The topological discordance could be explained by an insufficient resolution in either the mapping of *H. erato* samples to the *H. melpomenere* genome or the avoidance of regions of genetic divergence. To avoid additional missing data and biased sampling, we aligned the *H. erato* samples to the *H. erato* reference genome (24) for downstream analyses and constructed a maximum likelihood phylogeny using 70.6 Mb of SNP data (Fig. S1), which suggested different tree topology in which *H. e. emma* was grouped with *H. e. lativitta* instead of with *H. e. favorinus*, likely because we sampled the *H. e. lativitta* population from the *H. himara* contact zone instead of the *H. e. favorinus* contact zone. To test this hypothesis, we added samples from both *H. e. emma* populations and showed that all the *H. e. emma* samples grouped with *H. e. lativitta* in the genome-wide phylogeny but grouped with *H. e. favorinus* and *H. e. lativitta* respectively after the removal of divergent regions according to Van Belleghem et al. (2017) (24) (Fig. S1). In summary, the patterns of phylogenetic incongruence suggests genome-wide admixture in *H. erato* subspecies, likely due to frequent hybridization of incipient species during adaptive radiation.

Genetic differentiation and gene expression at the *L* locus in *H. himera* and *H. erato* subspecies

H. himera, *H. e. lativitta* and *H. e. petiverana* are all considered incipient species in the *H. erato* clade. Previous studies showed the gene flow between *H. e. lativitta* and *H. himera* in three geographic locations as well as indirect gene flow between them and *H. e. petiverana* (59). Aiming to investigate the evolution of the *L* locus in these species, we first examined their patterns of gene expression during wing development, which resulted in two major clusters for most samples, with *H. e. lativitta* and *H. himera* grouped together (Fig. S12A). We focused on these clearly clustered samples and characterized gene expression for the *L* locus. We discovered similar patterns of expression for *Col4α1* and *Vkg* in *H. himera* and *H. e. lativitta* (Fig. S12B). These results are consistent with the clusters of *H. himera* and *H. e. lativitta* in the gene trees, suggesting little genetic differentiation between two parapatric populations at the *L* locus (Fig. S12C). Instead, *Col4α1* and *Vkg* were relatively up-regulated during wing development in the allopatric population, *H. e. petiverana* (Fig. S12B). Our results supported a correlation of expression and genetic differentiation of *Col4α1* and *Vkg* at the *L* locus, indicating a potential role of *L* in local adaptation of incipient species in the *H. erato* clade.

<u>Significantly different flight abilities between non-knockdown and knockdown flies</u>

We performed tissue-specific knockdown (KD) for four orthologous genes within the *L* locus, *Col4α1*, *Vkg*, *Oseg4* and *na*, in locomotion-associated organs of *D. melanogaster*. The knockdown of all the four genes yielded similar phenotypes such as an altered structure of scutellum and a stretched out or curly wing morphology (Fig. 6A to Fig. 6O', Fig. S13). We also performed flight ability tests for these KD flies and observed that KD flies were only able to crawl in response to the dropping stimulus, while non-KD individuals reacted with either flying or crawling (Fisher's exact test $P < 0.001$) (Fig. 6P, Fig. 6Q and Table S6). Compared to non-KD individuals, KD flies exhibited significantly longer movement latency ($\chi2(4) = 34.41$, $P < 0.001$, Table S6) and a slower ascent speed ($F_{4,75} = 5.16$, $P < 0.001$, Fig. 6Q).
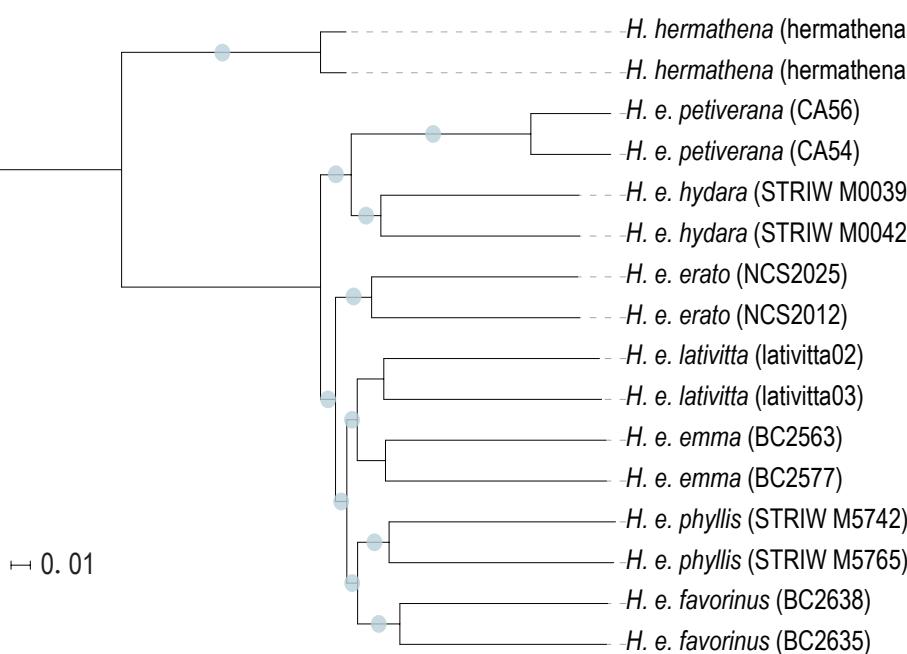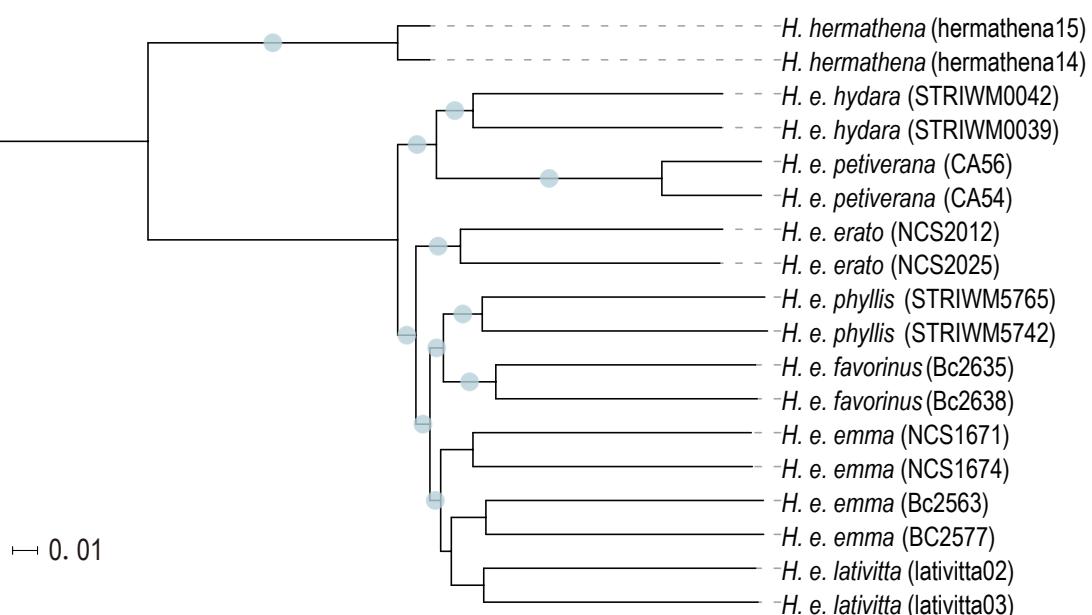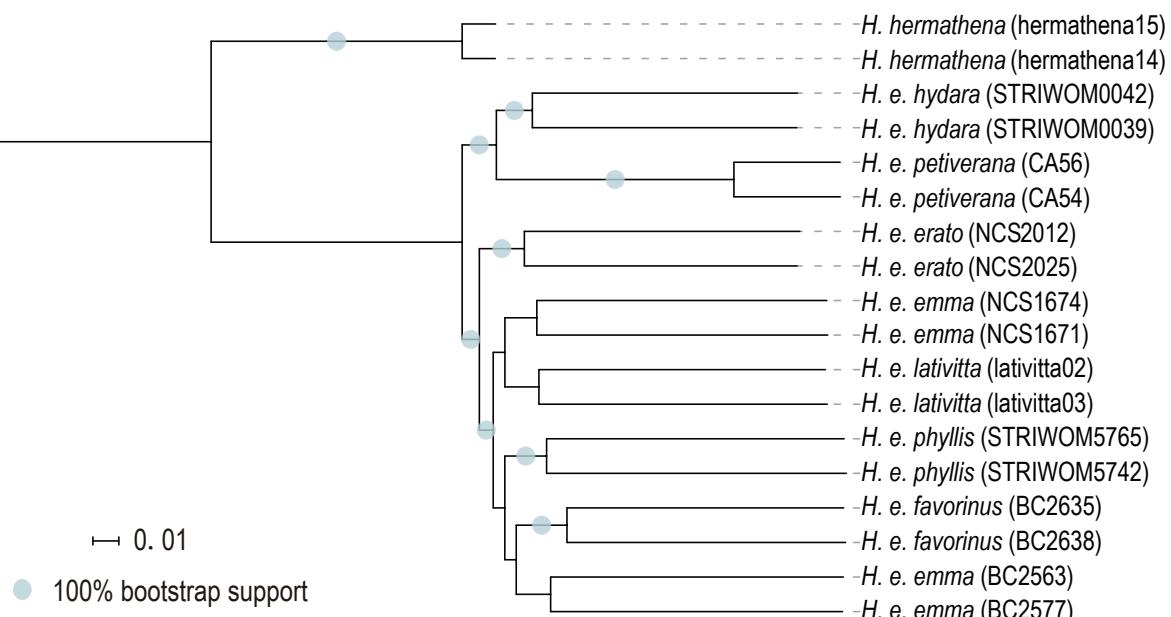
Fig. S1 Genome-wide phylogeny of *H. erato* butterflies.
Maximum likelihood phylogenetic trees were constructed based on genome-wide SNP data
with *H. erato* samples aligned to the *H. erato* reference genome (A). With the inclusion of
additional *H. e. emma* samples, two maximum likelihood phylogenetic trees were constructed
based on whole-genome SNP data (B) or SNP data avoiding chromosomes 1-3, 10, 15, and
18-19 when containing any genetic divergent peaks (C). The scale bar represents the
percentage of substitutes per site.
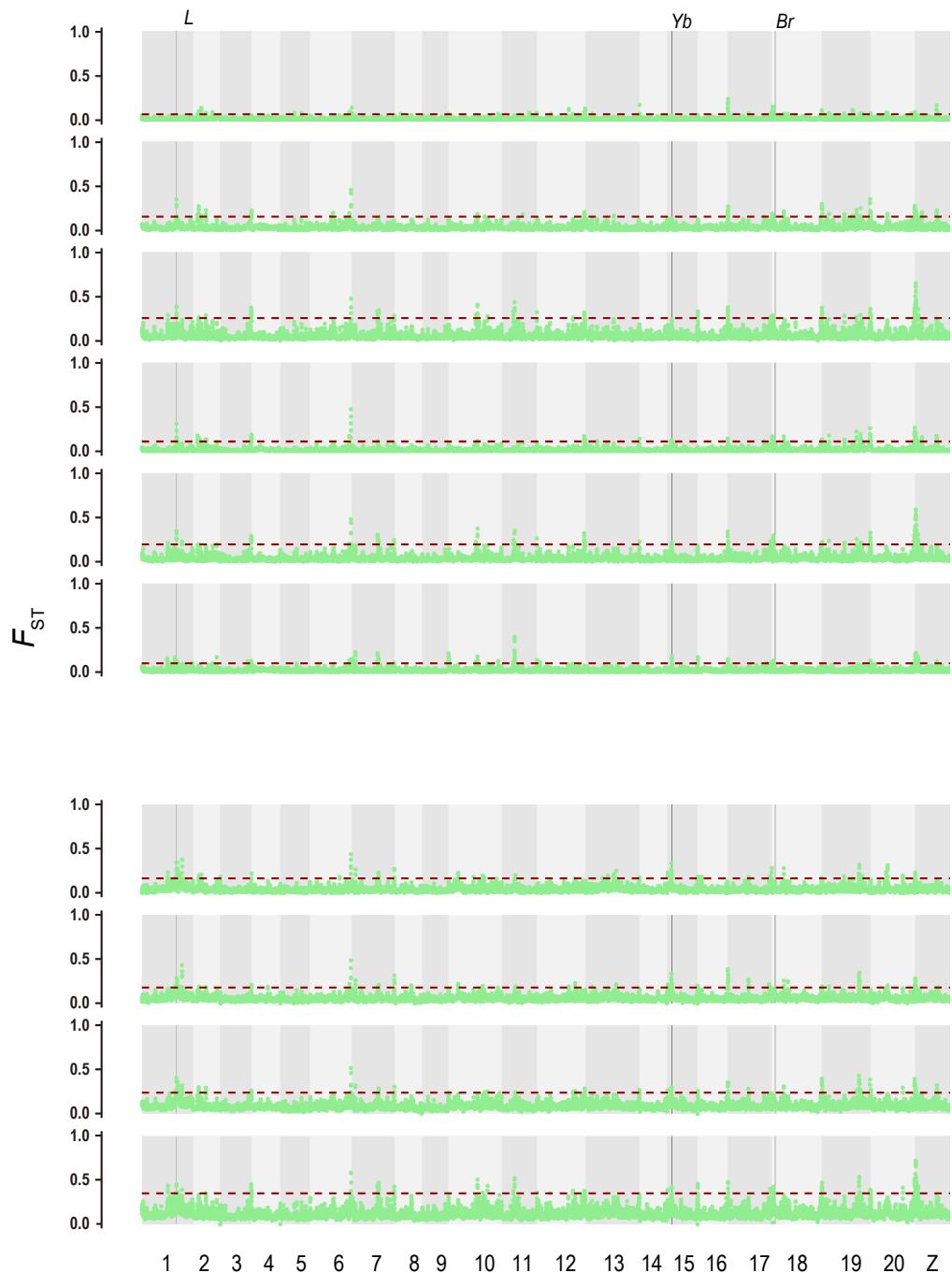
Fig. S2. Pairwise F_{ST} values across the genome between *H. cydno* races and incipient species *H. pachinus*

Pairwise F_{ST} values were calculated across the genome in 50 kb sliding windows with a step size of 20 kb, between parapatric races of *H. cydno* and between incipient species *H. pachinus* and *H. cydno*. The red dashed lines represent the top 1% threshold across the genome. The *L* locus and other wing patterning loci are labeled with gray bars.

A

t. thelxinoe : t. timareta   t. florencia : t. timareta

30   2   36

5

19   13

19

t. florencia : t. thelxinoe
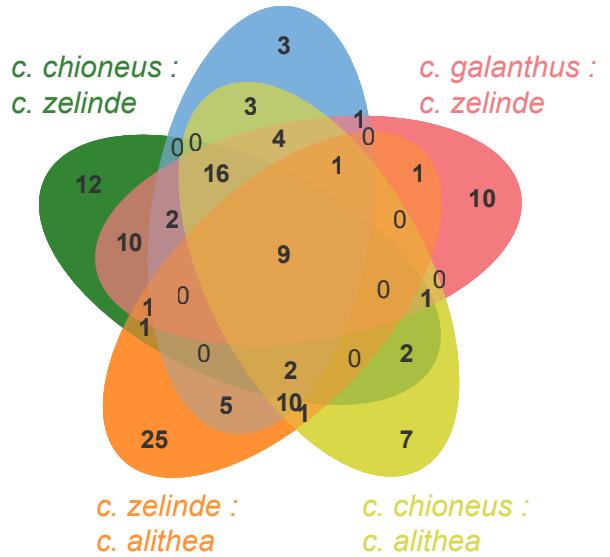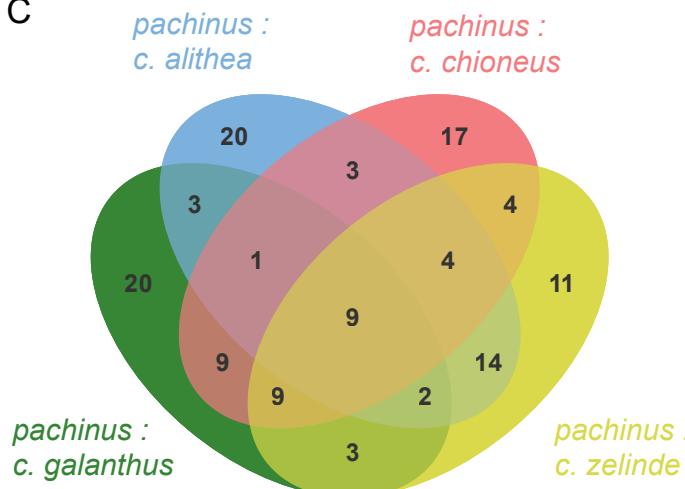
Hmel201001o:11650001-11700000
Hmel215003o:1400001-1450000
Hmel210001o:3300001-3350000
Hmel219001o:2450001-2500000
Hmel200043o:1-50000

B

c. galanthus : c. alithea

c. chioneus :   c. galanthus :
c. zelinde   c. zelinde

3
3
0 0   4   1 0
12   16   1   1   10
10   2   1   0
1   9   0   1 0
1   0   0   1
0   2   0   2
5   10   1   7
25

c. zelinde :   c. chioneus :
c. alithea   c. alithea

Hmel201001o:11600001-11650000
Hmel221001o:50001-100000
Hmel221001o:200001-250000
Hmel221001o:300001-350000
Hmel221001o:250001-300000
Hmel201001o:11650001-11700000
Hmel217001o:1-50000
Hmel221001o:400001-450000
Hmel203003o:10300001-10350000

C

pachinus :   pachinus :
c. alithea   c. chioneus

20   3   17
3   4
1   4
20   9   11
9   14
9   2
3

pachinus :   pachinus :
c. galanthus   c. zelinde

Hmel206001o:13750001-13800000
Hmel201001o:11600001-11650000
Hmel201001o:13450001-13500000
Hmel219001o:12600001-12650000
Hmel221001o:50001-100000
Hmel207001o:14250001-14300000
Hmel201001o:12000001-12050000
Hmel219001o:12450001-12500000
Hmel220003o:14450001-14500000

Fig. S3. Venn diagram of overlapping outlier windows
Venn diagrams show the top 1% F_{ST} outliers shared by *H. timareta* races(A), *H. cydno* races(B), and *H. pachinus* and *H. cydno* (C). The outlier windows that stood out in all comparisons in each panel are listed below, and the focal regions on chromosome one are labeled in red.
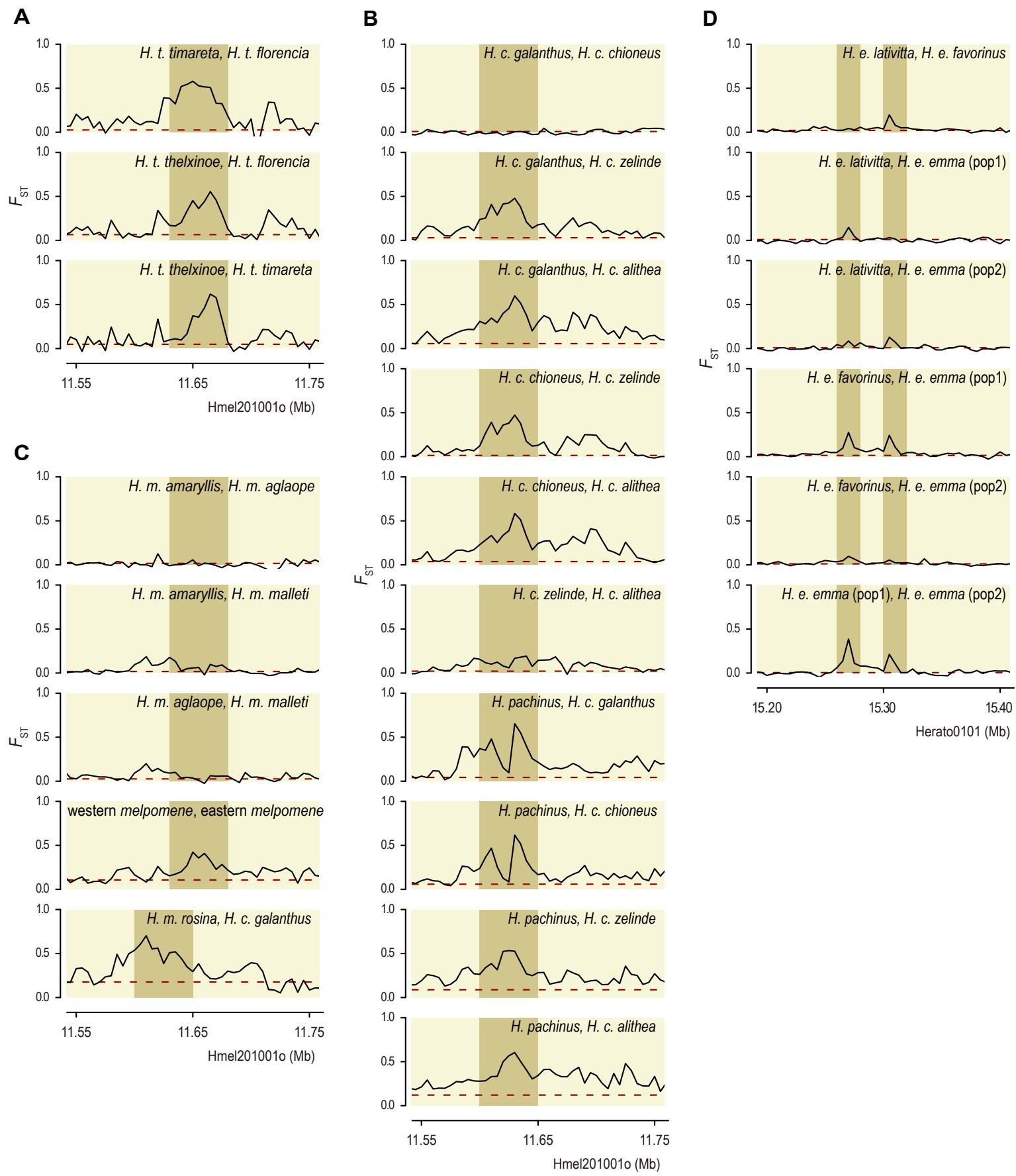
Fig. S4. Fine-scale F_{ST} estimates along the L locus.
Pairwise F_{ST} values were calculated for the L locus (labeled in dark yellow) and adjacent regions in 5 kb fixed windows between subspecies of *H. timareta* (A), *H. cydno* and *H. pachinus* (B), *H. melpomene* (C) and *H. erato* (D) and between the eastern and western populations of *H. melpomene*. The red dashed lines represent the genome-wide mean F_{ST} values.
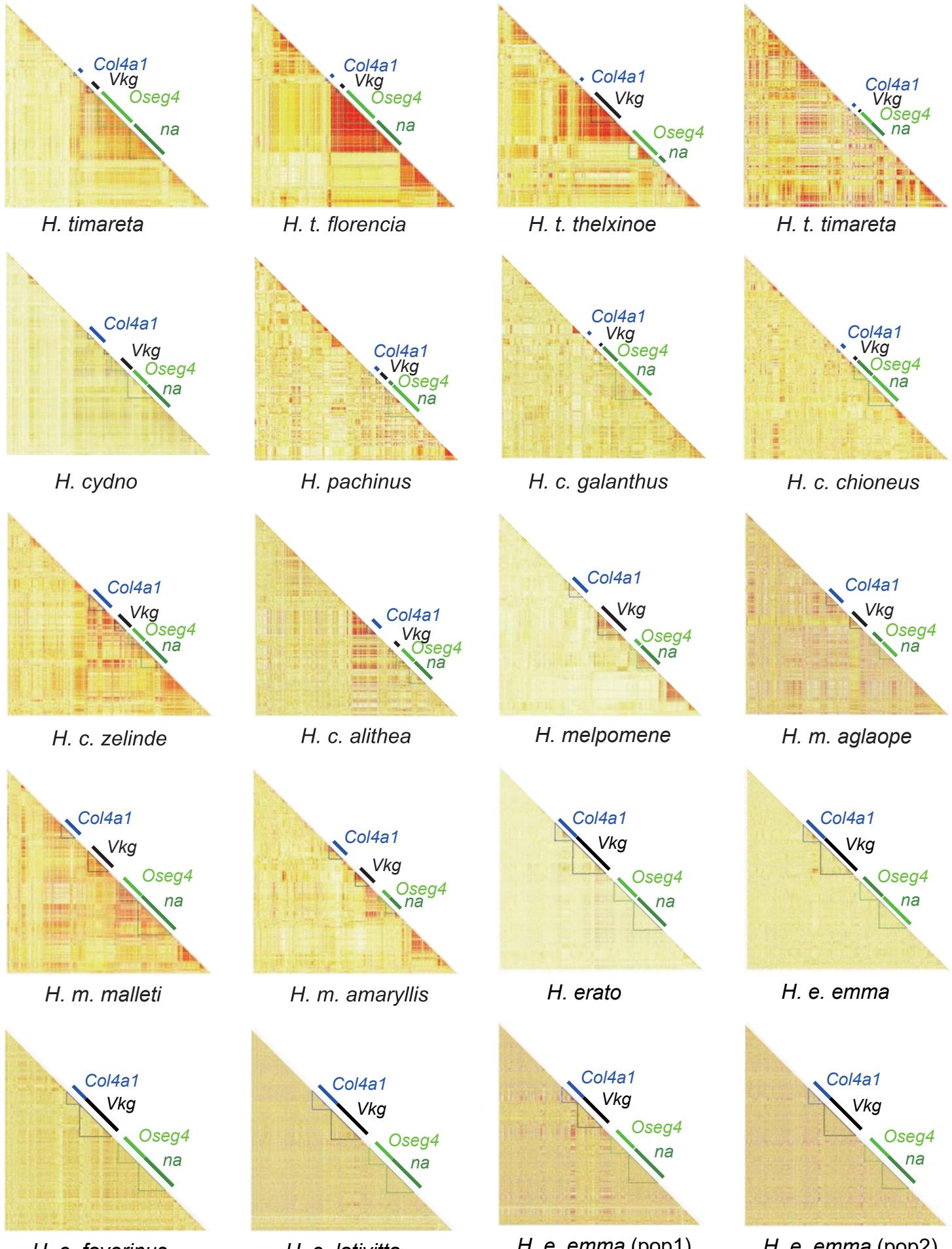
Fig. S5. Local pattern of linkage disequilibrium surrounding the *L* locus in *H. timareta*, *H. cydno* and *H. pachinus*, *H. melpomene* and *H. erato*.

Pairwise linkage disequilibrium, measured as r^2, was estimated among biallelic SNPs along the *L* locus and its adjacent regions for all the samples in each subspecies/species. The physical locations of four genes within the *L* locus are indicated by bold triangles in different colors.
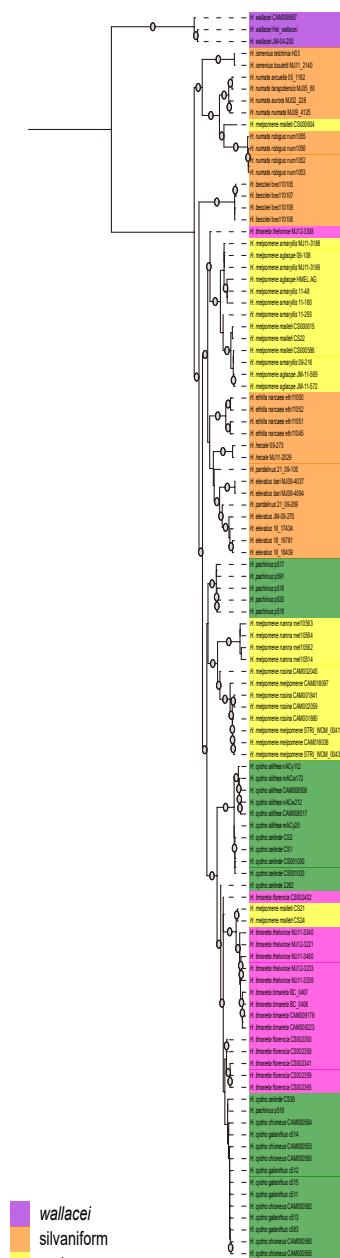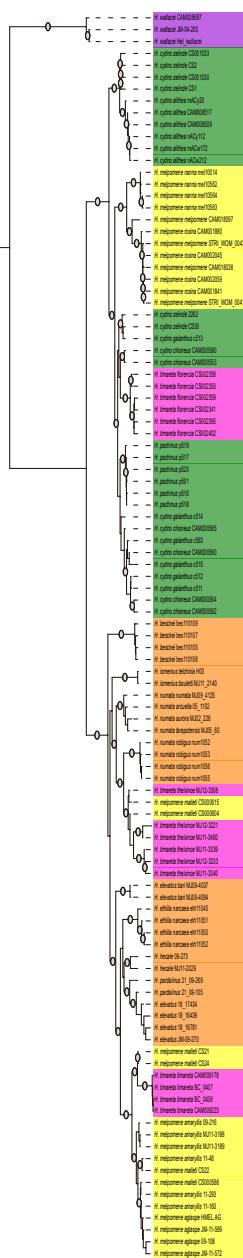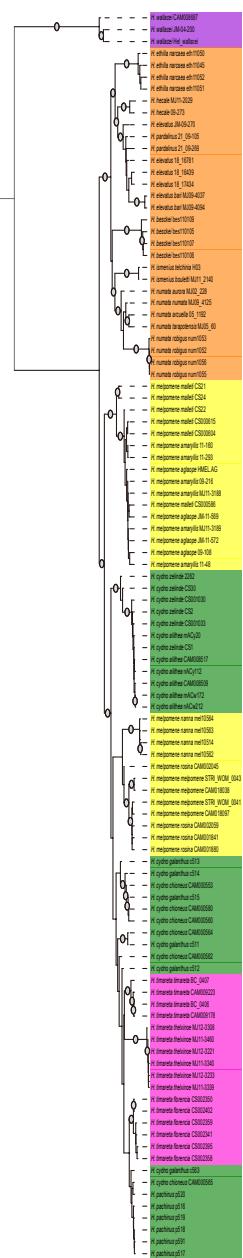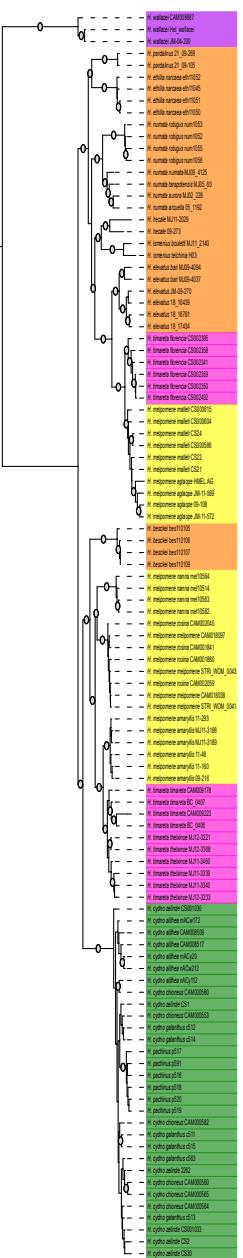
Fig. S6. Phylogenies for the intervals along the *L* and *B/D* loci.
Maximum-likelihood trees were constructed for the 20 kb windows ranging from 11.63
Mb to 11.65 Mb (A), from 11.65 Mb to 11.67 Mb (B) and from 11.67 Mb to 11.69 Mb
(C) on the scaffold Hmel201001o on chromosome 1 (the *L* locus) and from 0.78 Mb to
0.83 Mb on Hmel218003o on chromosome 18 (the *B/D* locus) (D) for *H. timareta*, *H.
cydno* and *H. pachinus*, and *H. melpomene*. The races of *H. timareta* and *H. melpomene*
are clustered on the phylogeny of the *B/D* locus according to the wing color pattern, such
as the postman or dennis-rayed pattern (D).
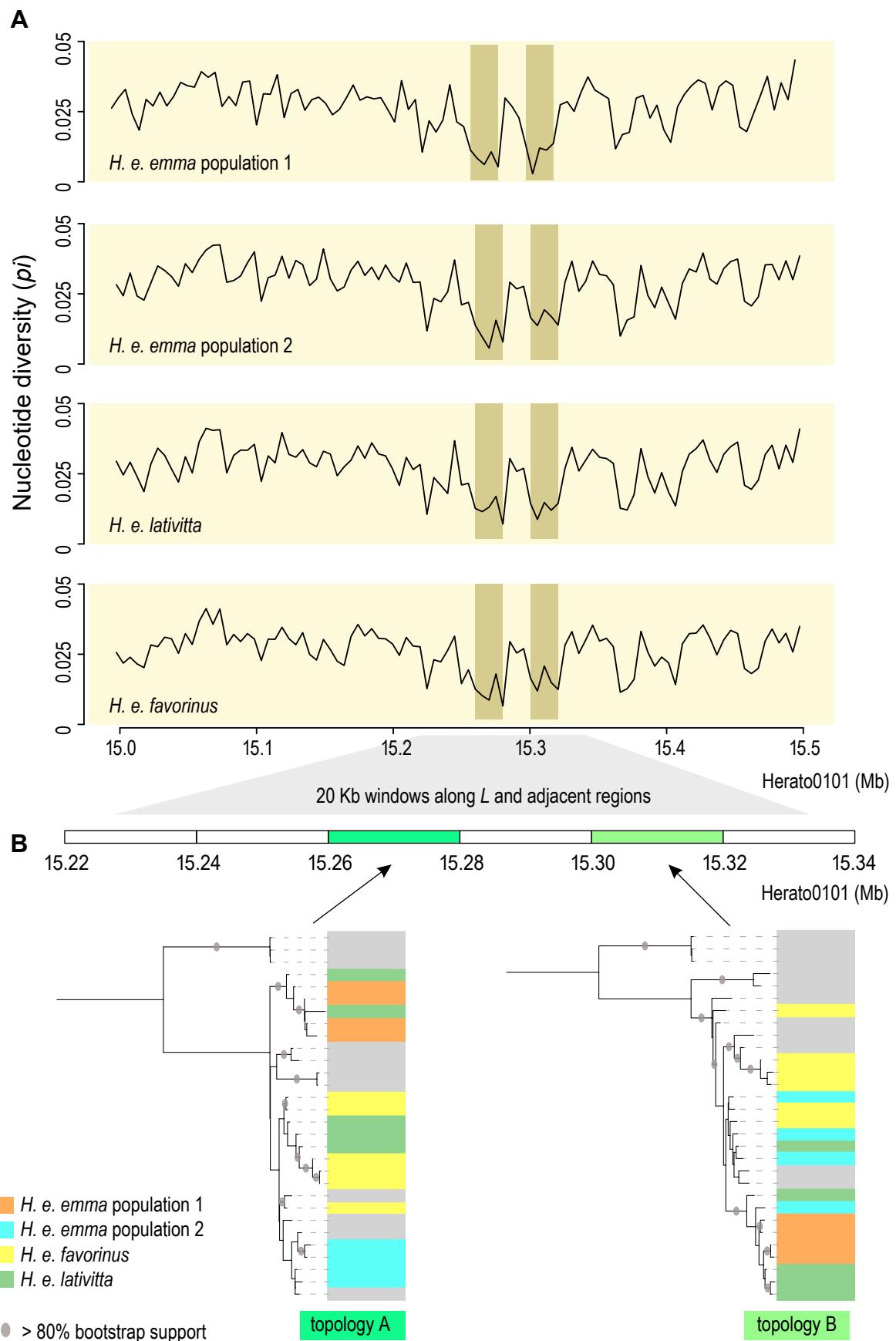
Fig. S7. Genetic diversity and phylogenetic trees along the _L_ locus in _H. erato_.
Values of nucleotide diversity (π) were calculated along the _L_ locus for the subspecies of _H. erato_ (A). The maximum likelihood phylogenetic trees were constructed for every 20 kb window along the _L_ locus and adjacent regions (B).
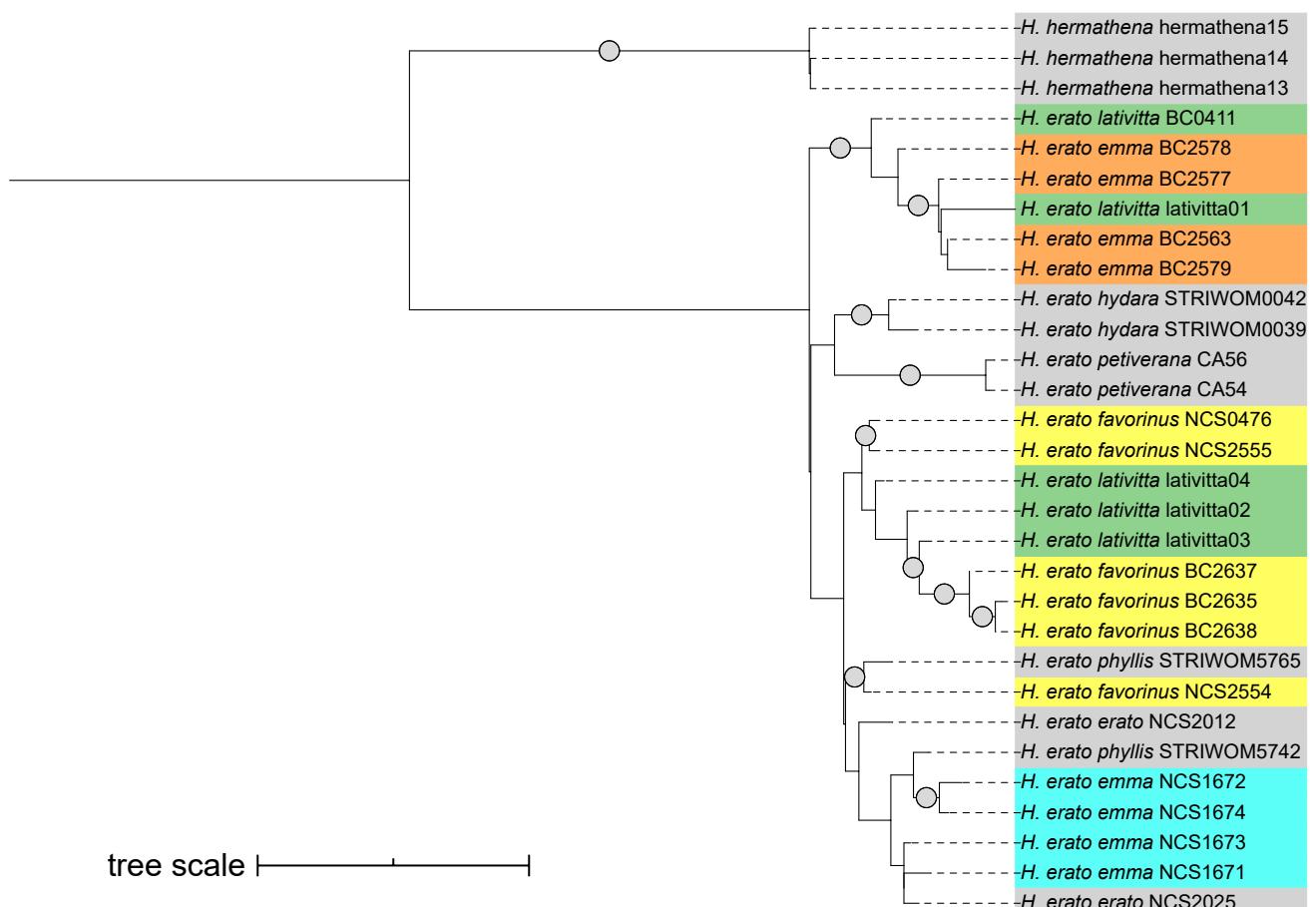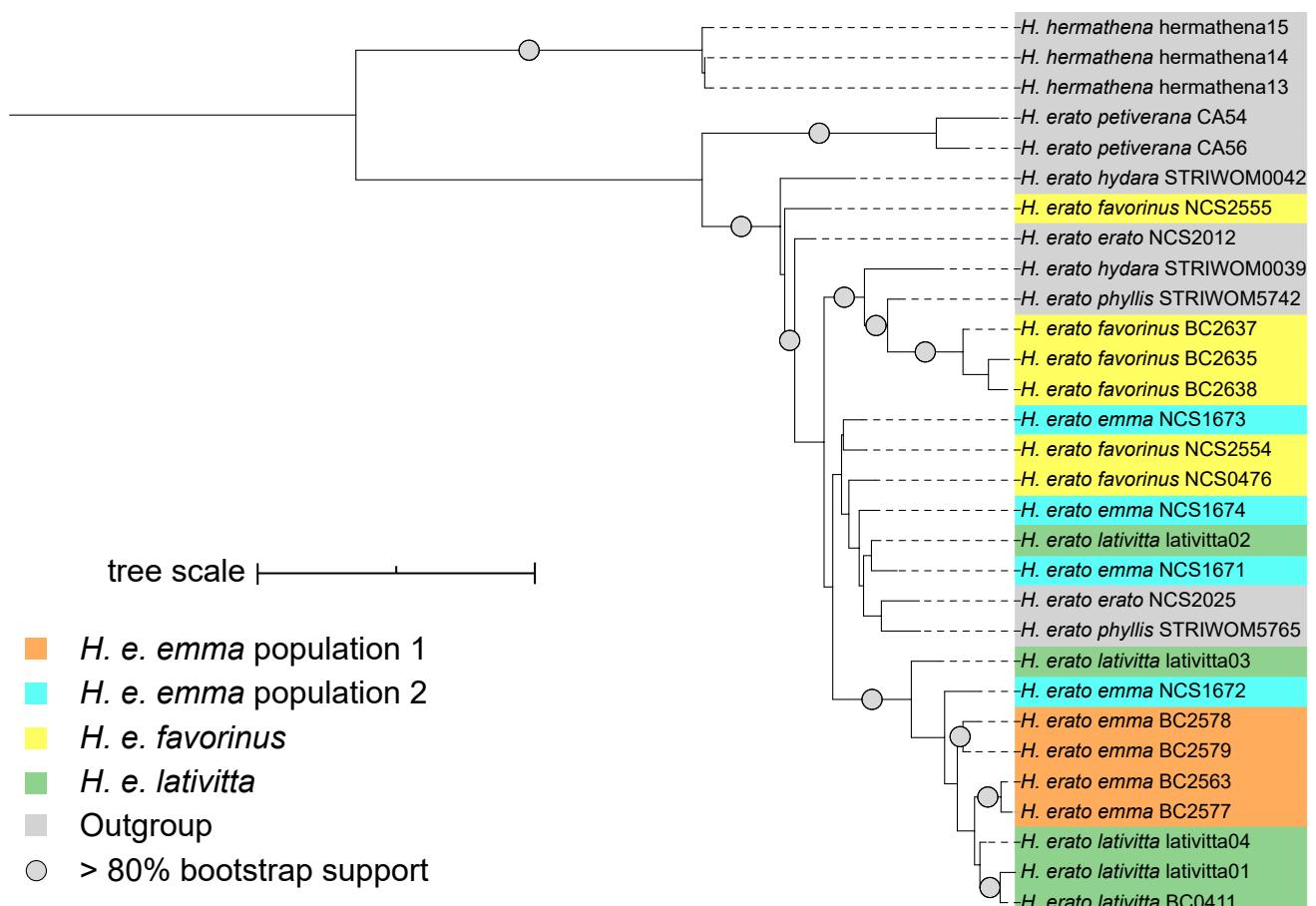
Fig. S8. Phylogenies for two intervals along the *L* locus.
Two maximum-likelihood trees were constructed for two 20 kb windows ranging from
15.26 Mb to 15.28 Mb (A) and 15.30 Mb to 15.32 Mb (B) on the scaffold Herato0101 on
chromosome one for the subspecies of *H. erato*.
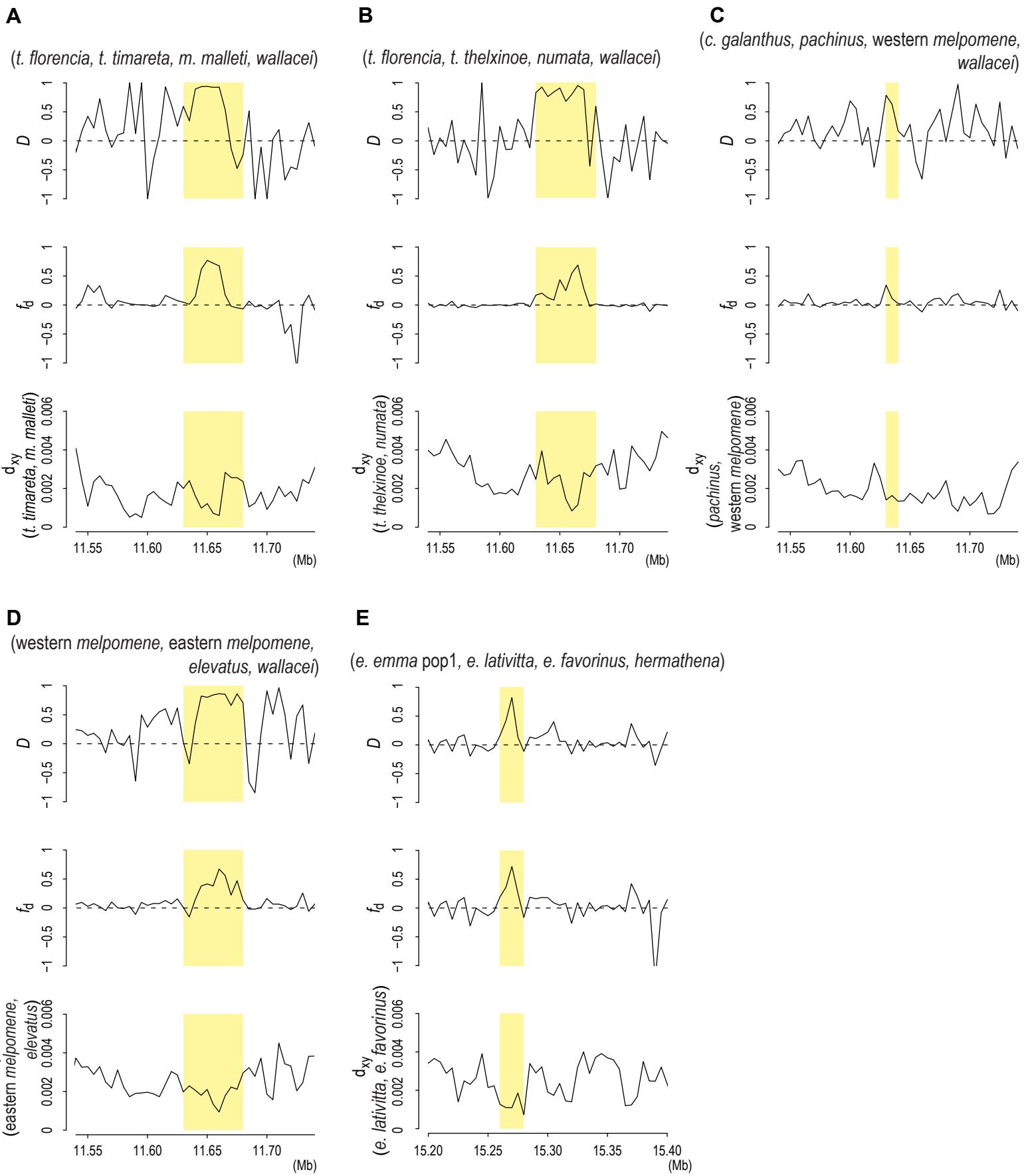
Fig. S9. Signatures of introgression between subspecies in *H. timareta*, *H. melpomene*, *H. erato* and other species.

We calculated Patterson's *D*-statistic, f_d and d_{xy} to characterize signatures of introgression between *H. t. timareta* and *H. m. malleti* (A), between *H. t. thelxinoe* and *H. numata* (B), between western *H. melpomene* and *H. pachinus* (C), between eastern *H. melpomene* and *H. elevatus* (D), and between *H. e. lativitta* and *H. e. favorinus* (E). The peaks of biased allele sharing (*D* and f_d) and valleys of absolute divergence (d_{xy}) indicate putative introgression regions and are highlighted in yellow.
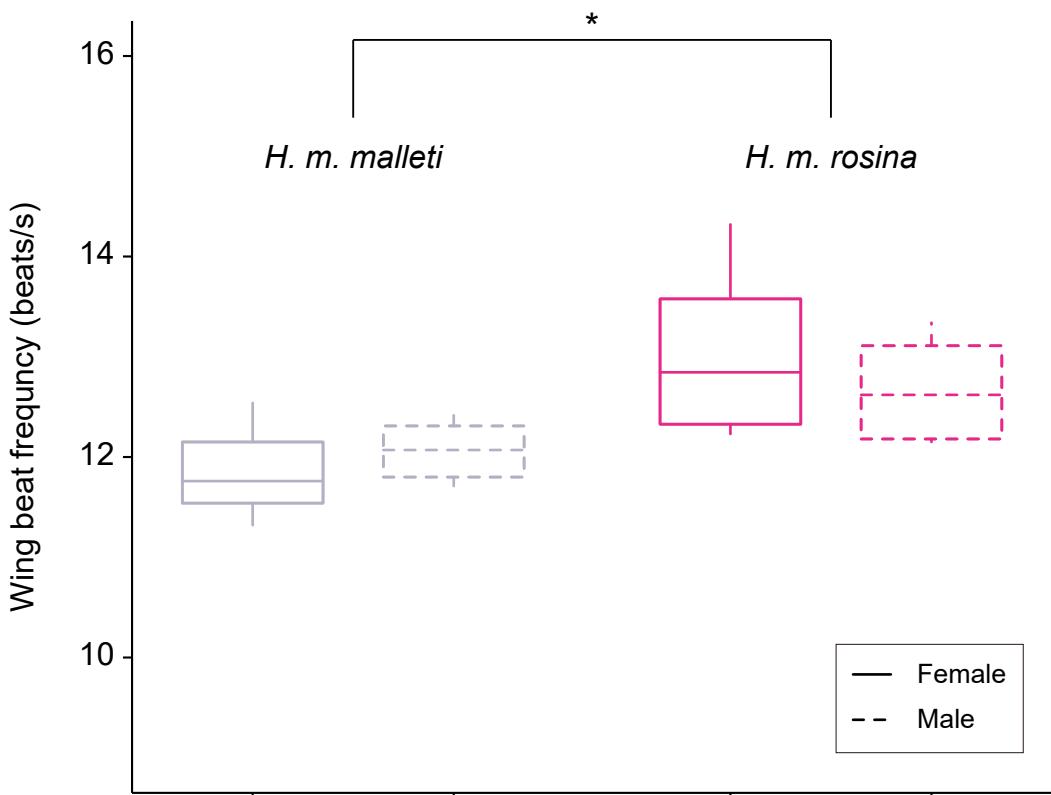
Fig. S10. Effect of races and sex on WBF.
Boxplot showing the wing beat frequency (WBF) in *H. m. malleti* (female: n=3, male = 5) and *H. m. rosina* (female: n=4, male = 5). * indicates $P < 0.05$. A two-way ANOVA was performed to examine the effect of races and sex on WBF ($F_{2,14} = 4.003$, $P = 0.042$). *H. m. malleti* (WBF = 11.99±0.15) beat significantly slower than in *H. m. rosina* (WBF = 12.84±0.73) ($P = 0.015$), but there was no difference between sex ($P = 0.711$).
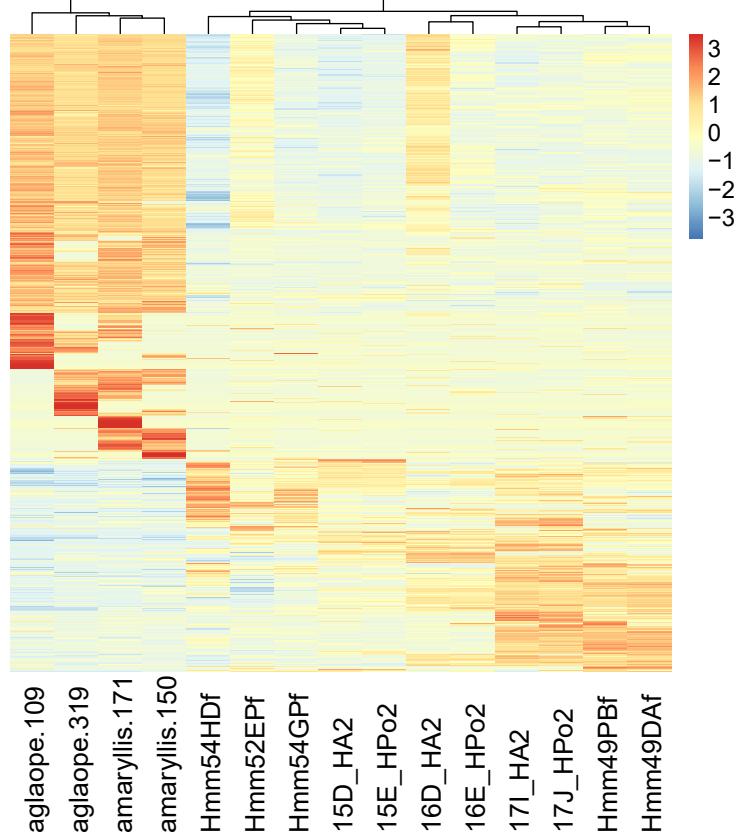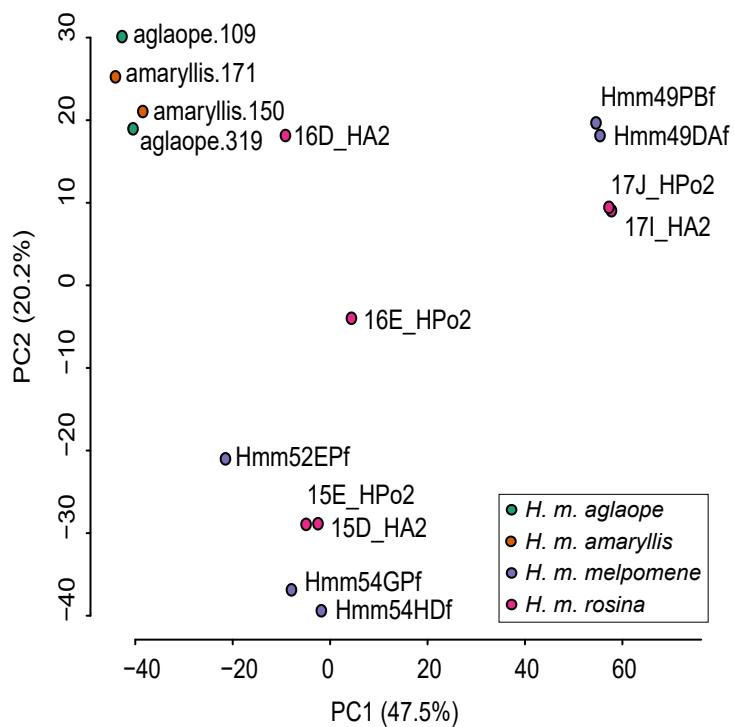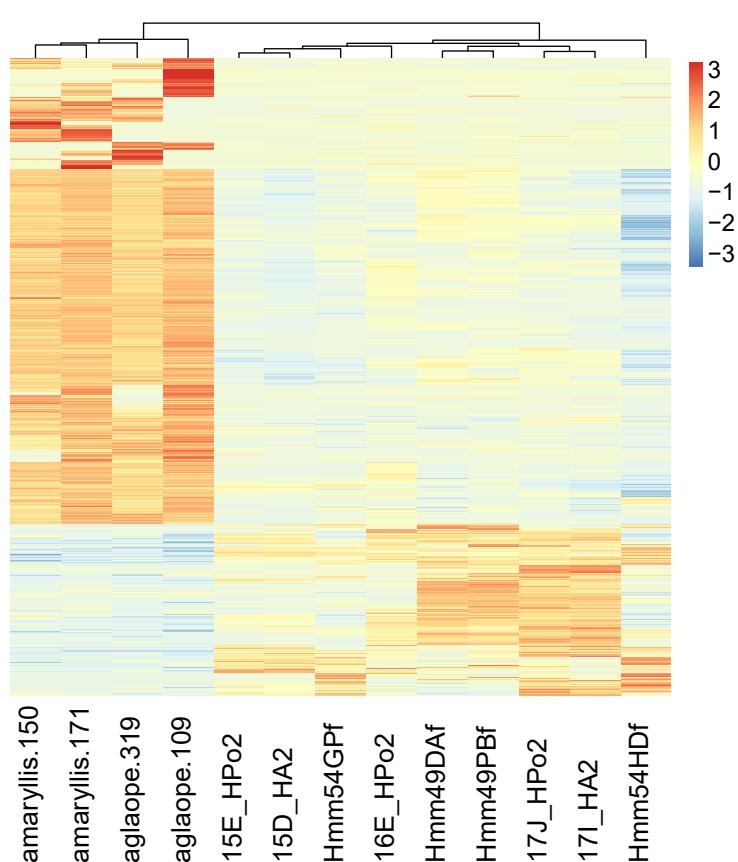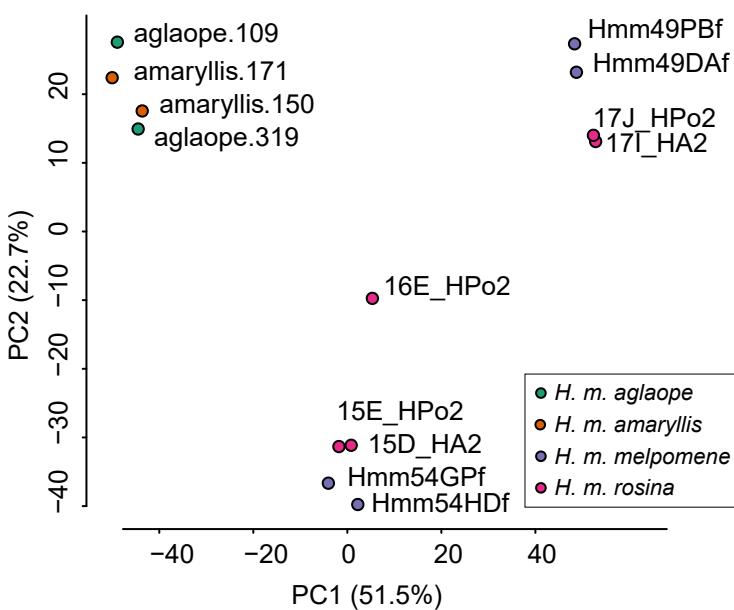
Fig. S11. Gene expression patterns in eastern and western *H. melpomene* races.
(A) The principal component analysis and sample correlation matrix heatmap show that individual samples from eastern and western *H. melpomene* races form clusters separately except a few outlier samples such as Hmm52EPf and 16D_HA2. (B) The principal component analysis and sample correlation matrix heatmap show different clusters and patterns of gene expression between eastern and western *H. melpomene* races with Hmm52EPf and 16D_HA2 removed.
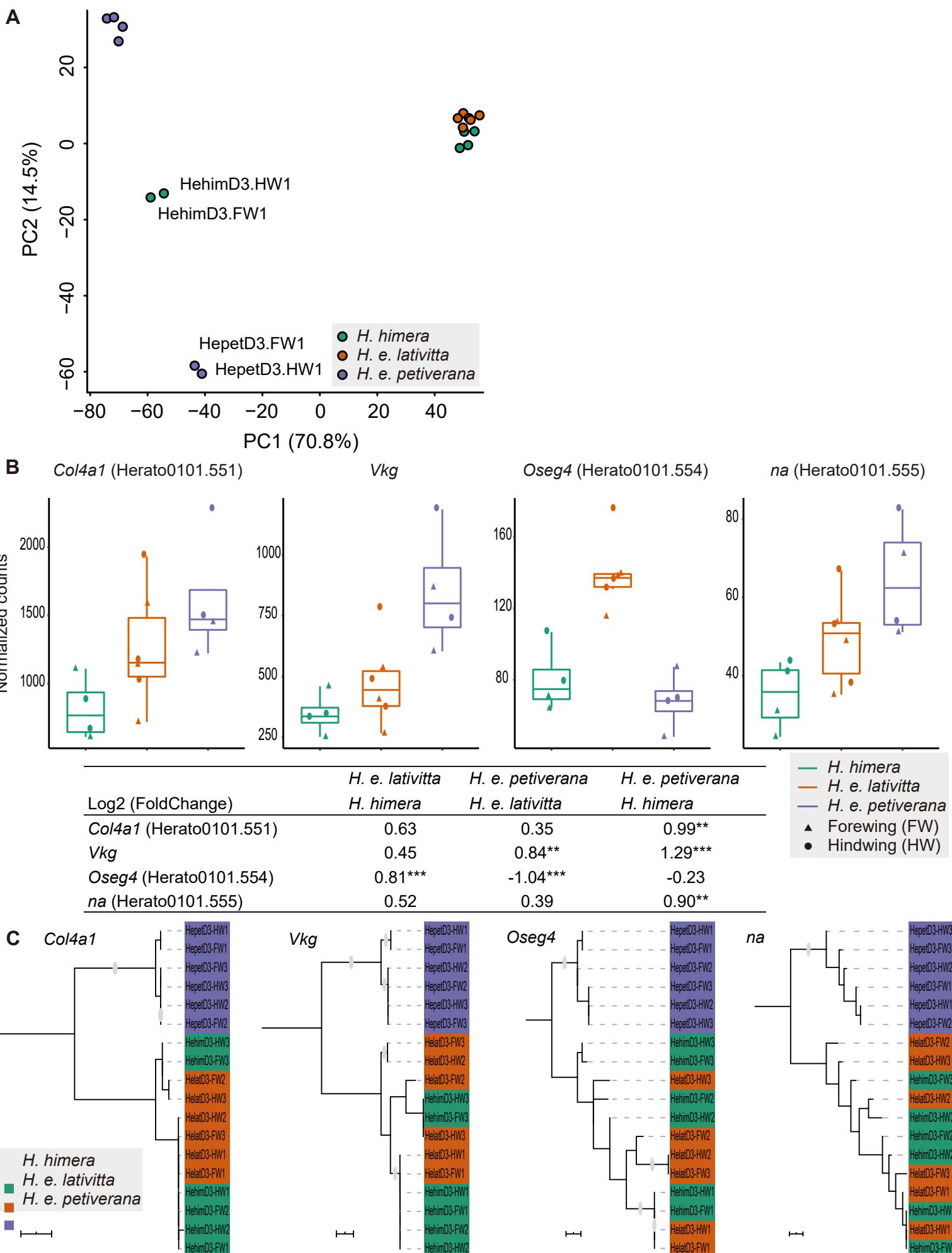
Fig. S12. Gene expression patterns and phylogenies in *H. himera*, *H. e. lativitta* and *H. e. petiverana*.
(A) The principal component analysis shows that parapatric *H. himera* and *H. e. lativitta* have similar expression patterns. The two individuals not clustered with other replicates were excluded from the subsequent analyses. (B) Gene expression of the *L* locus in *H. erato*. There is no significant expression difference at *L* between *H. himera* and *H. e. lativitta*, except *Oseg4*. The box plot summarizes the DESeq2's median of ratios for each gene. Triangles indicate samples from forewing and circles for hindwing. ** and *** indicate adjusted $P < 0.01$ and $P < 0.001$ in differential expression analyses, respectively. (C) Maximum-likelihood trees were constructed for the four genes. Circles on the branch indicate greater than 80% bootstrap support.
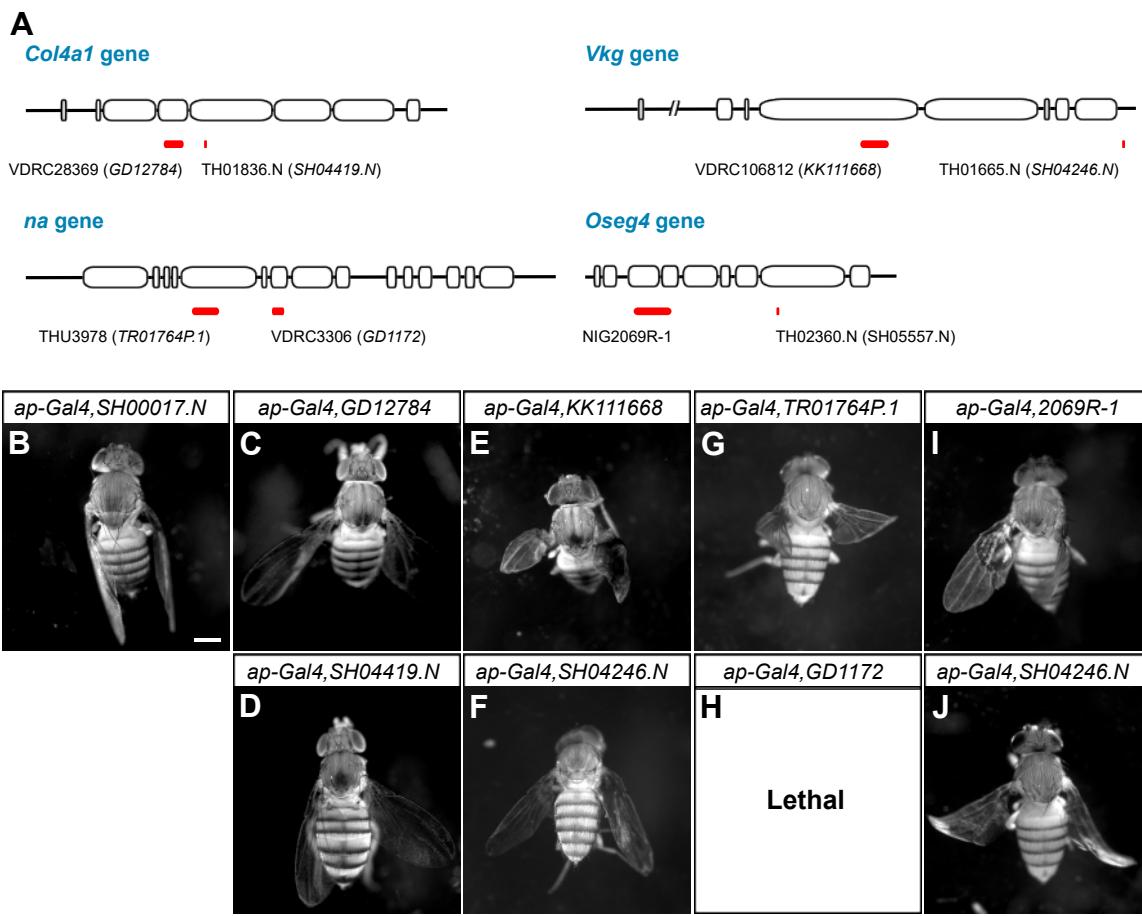
Fig. S13. Knockdown of *Drosophila* orthologous genes at the *L* locus using RNAi targeting distinct genomic regions of individual genes caused similar defects of locomotion.
(A) RNAi constructs targeting distinct regions in the individual *Drosophila* orthologous genes in the *L* locus are shown in red. The black lines indicate the full transcripts, and the boxes indicate the exons. (B) The expression of *w RNAi* by *ap*-Gal4 does not produce any defects in the adult scutellum and wing blade. (C-J) Knocking down the genes using different RNAi constructs alters the structure of the scutellum and results in stretched out or curly wings.
Scale bar, 500 μm.

A

B

C

Oseg4
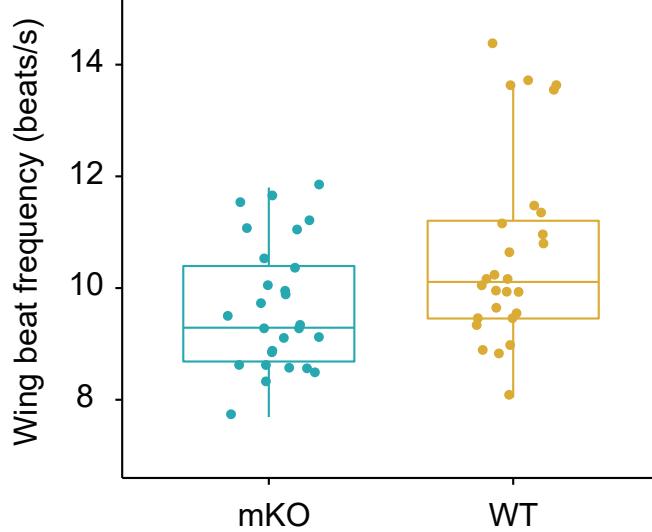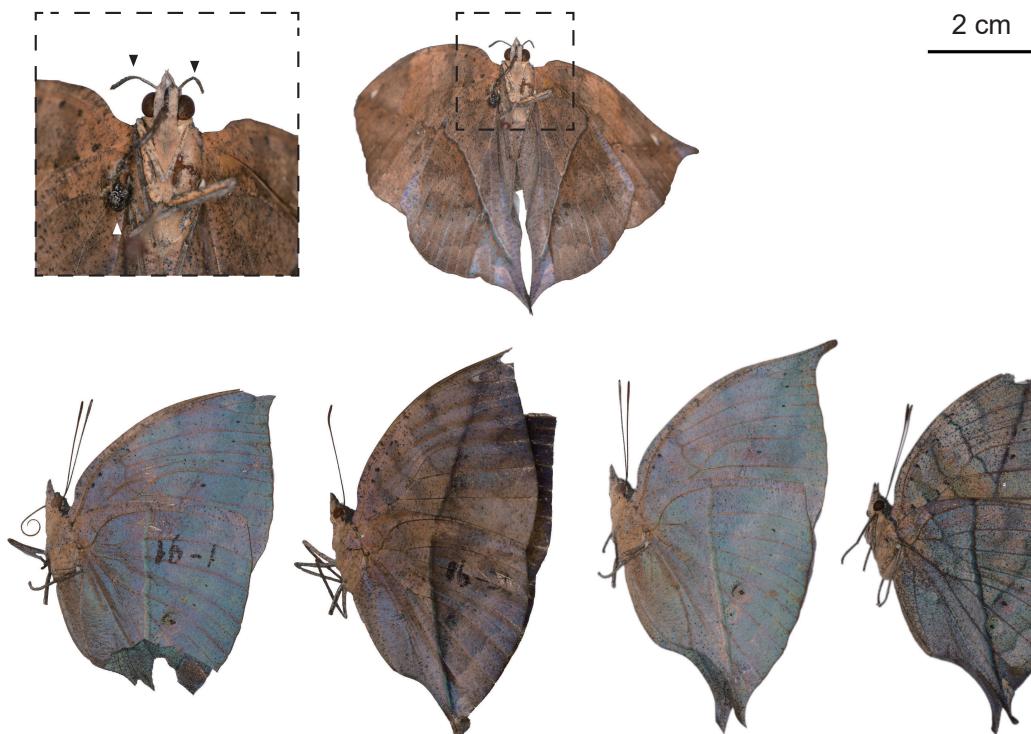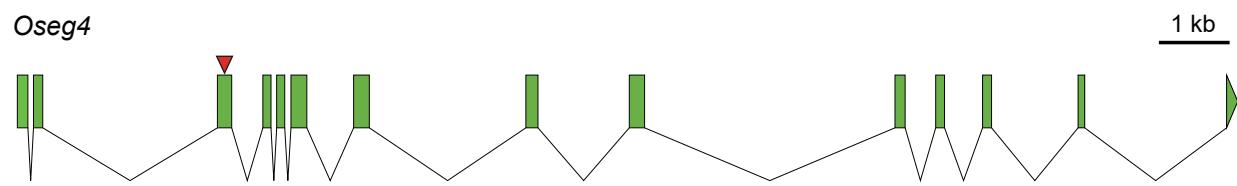
Exon 3

```
         WT  CAAACCCGACCATAAGTACGCCTTCTACGGCGACACTCTAGCGTTCGTC
  deletion 1  CAAACCCGACCATAAGTACGCC--CTACGGCGACACTCTAGCGTTCGTC
  deletion 2  CAAACCCGACCATAAGTACGC---CTACGGCGACACTCTAGCGTTCGTC
  deletion 3  CAAACCCGACCATAAGTACGC---------CGACACTCTAGCGTTCGTC
```

Fig. S14. Effects of *Oseg4* somatic mutagenesis in *Kallima inachus*.
(A) Boxplots show the wing beat frequencies (WBF) of *Oseg4* mosaic knockouts (mKOs) and
wild-types (WT). Genotypes do not significantly affect WBF between mKOs and WTs ($\chi 2$ (1) =
2.46, P = 0.117), given that WTs do not beat significantly faster than mKOs (1.32 ± 0.88, P =
0.163). (B) Body morphologies of *Oseg4* mKOs with one of them showing shorter antennae and
an abnormal proboscis. (C) The gene structure of *Oseg4* in *K. inachus* is shown and the sgRNA
target site is indicated by the red arrow. The sequences of selected alleles with *Oseg4* disruption
are presented with the sgRNA target highlighted in red and PAM sequence highlighted in blue.

Table S1. Results of genome-wide F_{ST} and F_{ST} estimates for the L locus and two color pattern loci.

Genome-wide F_{ST}	
Comparison	**Genome-wide F_{ST}**
t. florencia, t. timareta	0.0257 ± 0.0004
t. thelxinoe, t. timareta	0.0487 ± 0.0005
t. florencia, t. thelxinoe	0.0653 ± 0.0005
pachinus, c. galanthus	0.0427 ± 0.0004
pachinus, c. chioneus	0.0588 ± 0.0004
pachinus, c. zelinde	0.0880 ± 0.0006
pachinus, c. alithea	0.1209 ± 0.0008
c. galanthus, c. chioneus	0.0079 ± 0.0002
c. galanthus, c. zelinde	0.0297 ± 0.0004
c. galanthus, c. alithea	0.0565 ± 0.0007
c. chioneus, c. zelinde	0.0146 ± 0.0003
c. chioneus, c. alithea	0.0375 ± 0.0005
c. zelinde, c. alithea	0.0213 ± 0.0003
m. aglaope, m. amaryllis	0.0171 ± 0.0004
m. malleti, m. amaryllis	0.0172 ± 0.0003
m. aglaope, m. malleti	0.0259 ± 0.0004
eastern *melpomene*, western *melpomene*	0.1064 ± 0.0007
m. rosina, c. galanthus	0.1760 ± 0.0014
e. lativitta, e. favorinus	0.0208 ± 0.0002
e. emma (population 1), *e. lativitta*	0.0097 ± 0.0001
e. emma (population 2), *e. lativitta*	0.0090 ± 0.0001
e. emma (population 1), *e. favorinus*	0.0149 ± 0.0002
e. emma (population 2), *e. favorinus*	0.0114 ± 0.0002
e. emma (population 1), *e. emma* (population 2)	0.0046 ± 0.0001

F_{ST} estimates for the L locus and two color pattern loci					
Species	**Comparison**	**Length (kb)**	**Locus**	**Chr (bp)**	**Scaf (bp)**	**F_{ST}**
H. timareta	*florencia* : *timareta*	50	*L*	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.4539 ± 0.0280***
		50	*B/D*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.4359 ± 0.0434***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1013 ± 0.0109***
	timareta : *thelxinoe*	50	*L*	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.3365 ± 0.0438***

		50	*B/D*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.1176 ± 0.0147***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.2348 ± 0.0171***
		50	*L*	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.3481 ± 0.0305***
	florencia : *thelxinoe*	50	*B/D*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.4993 ± 0.0403***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.2207 ± 0.0127***
H. cydno and *H. pachinus*		50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3721 ± 0.0376***
	pachinus : *c. galanthus*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.1348 ± 0.0215***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.2079 ± 0.0178***
		50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3421 ± 0.0377***
	pachinus : *c. chioneus*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.1010 ± 0.0142***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.2191 ± 0.0161***
		50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3842 ± 0.0242***
	pachinus : *c. zelinde*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.1324 ± 0.0151***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1880 ± 0.0100***

	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.4125 ± 0.0288***
pachinus : *c. alithea*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.2139 ± 0.0272***
	100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.3181 ± 0.0272***
	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.0046 ± 0.0015
c. galanthus : *c. chioneus*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.0315 ± 0.0095
	100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.0324 ± 0.0039***
	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3268 ± 0.0261***
c. galanthus : *c. zelinde*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.0478 ± 0.0076*
	100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1075 ± 0.0091***
	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3787 ± 0.0363***
c. galanthus : *c. alithea*	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.1054 ± 0.0202***
	100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1862 ± 0.0156***
c. chioneus : *c. zelinde*	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3047 ± 0.0275***
	50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.0431 ± 0.0091***

		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1093 ± 0.0097***
	c. chioneus : *c. alithea*	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.3488 ± 0.0337***
		50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.0962 ± 0.0176***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1827 ± 0.0159***
	c. zelinde : *c. alithea*	50	*L*	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.1280 ± 0.0124***
		50	*Br*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.0692 ± 0.0128***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.0772 ± 0.0108***
H. melpomene	*aglaope* : *amaryllis*	50	*L*	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.0327 ± 0.0078***
		50	*B/D*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	05255 ± 0.0377***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.2731 ± 0.0220***
	malleti : *amaryllis*	50	*L*	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.0742 ± 0.0110***
		50	*B/D*	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.4899 ± 0.0336***
		100	*Yb*	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.2168 ± 0.0165***
	aglaope : *malleti*	50	*L*	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.0532 ± 0.0063***
		50	*B/D*	Chr18:	Hmel218003o:780001-830000	0.0939 ± 0.0123***

			1133175-1183175		
		100	Yb	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.0463 ± 0.0063
		50	L	Chr1: 11630001-11680000	Hmel201001o:11630001-11680000	0.2820 ± 0.0220***
	western : eastern	50	B/D	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.2235 ± 0.0135***
		100	Yb	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.1354 ± 0.0060***
		50	L	Chr1: 11600001-11650000	Hmel201001o:11600001-11650000	0.5209 ± 0.0247***
	m. rosina : c. galanthus	50	B/D	Chr18: 1133175-1183175	Hmel218003o:780001-830000	0.4111 ± 0.0262***
		100	Yb	Chr15: 1507747-1607747	Hmel215003o:1440001-1540000	0.3355 ± 0.0162***
		20	L	Chr1: 15260001-15280000	Herato0101:15260001-15280000	0.0298 ± 0.0045
	lativitta : favorinus	20	L	Chr1: 15300001-15320000	Herato0101:15300001-15320000	0.1164 ± 0.0260***
		50	R/D	Chr18: 1340001-1390000	Herato1801:1340001-1390000	0.3711 ± 0.0316***
H. erato		100	Cr	Chr15: 2394234-2494234	Herato1505:2050001-2150000	0.2653 ± 0.0166***
		20	L	Chr1: 15260001-15280000	Herato0101:15260001-15280000	0.0791 ± 0.0220***
	emma (pop1) : lativitta	20	L	Chr1: 15300001-15320000	Herato0101:15300001-15320000	0.0243 ± 0.0064
		50	R/D	Chr18: 1340001-1390000	Herato1801:1340001-1390000	0.0381 ± 0.0137*

	100	*Cr*	Chr15: 2394234-2494234	Herato1505:2050001-2150000	0.0800 ± 0.0119***
	20	*L*	Chr1: 15260001-15280000	Herato0101:15260001-15280000	0.0609 ± 0.0132***
emma (pop2) : *lativitta*	20	*L*	Chr1: 15300001-15320000	Herato0101:15300001-15320000	0.0688 ± 0.0219***
	50	*R/D*	Chr18: 1340001-1390000	Herato1801:1340001-1390000	0.0229 ± 0.0052
	100	*Cr*	Chr15: 2394234-2494234	Herato1505:2050001-2150000	0.0891 ± 0.0123***
	20	*L*	Chr1: 15260001-15280000	Herato0101:15260001-15280000	0.1522 ± 0.0347***
emma (pop1) : *favorinus*	20	*L*	Chr1: 15300001-15320000	Herato0101:15300001-15320000	0.1363 ± 0.0346***
	50	*R/D*	Chr18: 1340001-1390000	Herato1801:1340001-1390000	0.3784 ± 0.0359***
	100	*Cr*	Chr15: 2394234-2494234	Herato1505:2050001-2150000	0.2576 ± 0.0174***
	20	*L*	Chr1: 15260001-15280000	Herato0101:15260001-15280000	0.0791 ± 0.0153***
emma (pop2) : *favorinus*	20	*L*	Chr1: 15300001-15320000	Herato0101:15300001-15320000	0.0416 ± 0.0073***
	50	*R/D*	Chr18: 1340001-1390000	Herato1801:1340001-1390000	0.3635 ± 0.0356***
	100	*Cr*	Chr15: 2394234-2494234	Herato1505:2050001-2150000	0.2808 ± 0.0190***
emma (pop1) :	20	*L*	Chr1: 15260001-15280000	Herato0101:15260001-15280000	0.2162 ± 0.0499***
emma (pop2)	20	*L*	Chr1:	Herato0101:15300001-15320000	0.1108 ± 0.0312***

		15300001- 15320000		
50	*R/D*	Chr18: 1340001- 1390000	Herato1801:1340001- 1390000	0.0134 ± 0.0028
100	*Cr*	Chr15: 2394234- 2494234	Herato1505:2050001- 2150000	0.0219 ± 0.0043***

***, ** and * indicate a significantly higher F_{ST} value relative to genome-wide mean F_{ST} with $P < 0.001$, $P < 0.01$ and $P < 0.05$, separately.

Table S2. Top 1% of outlier loci yielded from pairwise F_{ST} estimates between *H. timareta*, *H. cydno* and *H. pachinus*, *H. melpomene* and *H. erato* subspecies.

Comparison in *H. timareta*	Chr (bp)	Scaf (bp)	F_{ST}
	Chr10:3300001-3350000	Hmel210001o:3300001-3350000	0.3931 [a]
	Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.3870 [a,b]
	Chr18:1153175-1203174	Hmel218003o:800001-850000	0.3455 [c]
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.3328 [b]
	Chr6:7700001-7750000	Hmel206001o:7700001-7750000	0.3192
	Chr18:15453175-15503174	Hmel218003o:15100001-15150000	0.2826
	Chr18:16653175-16703174	Hmel218003o:16300001-16350000	0.2607
	Chr10:9150001-9200000	Hmel210001o:9150001-9200000	0.2472
	NA	Hmel200221o:1-50000	0.2372
	Chr12:3900001-3950000	Hmel212001o:3900001-3950000	0.2222
	Chr18:1053175-1103174	Hmel218003o:700001-750000	0.2189 [c]
	NA	Hmel200271o:1-50000	0.2094
	Chr18:16703175-16753174	Hmel218003o:16350001-16400000	0.2074
	Chr12:4300001-4350000	Hmel212001o:4300001-4350000	0.2028
	Chr2:2250001-2300000	Hmel202001o:2250001-2300000	0.1852
	Chr11:11700001-11750000	Hmel211001o:11700001-11750000	0.1848
	Chr19:11550001-11600000	Hmel219001o:11550001-11600000	0.1818
	Chr20:6173271-6223270	Hmel220003o:5900001-5950000	0.1772
	Chr18:1103175-1153174	Hmel218003o:750001-800000	0.1747 [c]
	Chr16:5496331-5546330	Hmel216002o:5450001-5500000	0.1740
	Chr19:2450001-2500000	Hmel219001o:2450001-2500000	0.1740 [a]
	Chr2:6550001-6600000	Hmel202001o:6550001-6600000	0.1740
	Chr1:10300001-10350000	Hmel201001o:10300001-10350000	0.1642
	Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.1599
	Chr16:4196331-4246330	Hmel216002o:4150001-4200000	0.1599
	Chr2:6500001-6550000	Hmel202001o:6500001-6550000	0.1578
	Chr7:4150001-4200000	Hmel207001o:4150001-4200000	0.1560
florencia : timareta	Chr2:2200001-2250000	Hmel202001o:2200001-2250000	0.1537
	Chr19:12500001-12550000	Hmel219001o:12500001-12550000	0.1514
	Chr19:6450001-6500000	Hmel219001o:6450001-6500000	0.1510
	Chr2:2950001-3000000	Hmel202001o:2950001-3000000	0.1500
	Chr19:3250001-3300000	Hmel219001o:3250001-3300000	0.1479
	Chr1:11800001-11850000	Hmel201001o:11800001-11850000	0.1472
	Chr12:13850001-13900000	Hmel212001o:13850001-13900000	0.1465
	Chr18:15503175-15553174	Hmel218003o:15150001-15200000	0.1460
	Chr2:5500001-5550000	Hmel202001o:5500001-5550000	0.1452
	Chr19:8750001-8800000	Hmel219001o:8750001-8800000	0.1451
	Chr12:4500001-4550000	Hmel212001o:4500001-4550000	0.1438
	NA	Hmel200050o:1-50000	0.1421
	Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.1419 [a,d]
	Chr16:4946331-4996330	Hmel216002o:4900001-4950000	0.1393
	Chr21:7300001-7350000	Hmel221001o:7300001-7350000	0.1378
	Chr15:717747-767746	Hmel215003o:650001-700000	0.1348
	Chr6:13000001-13050000	Hmel206001o:13000001-13050000	0.1303
	Chr13:4800001-4850000	Hmel213001o:4800001-4850000	0.1300
	NA	Hmel200172o:1-50000	0.1285
	Chr6:11800001-11850000	Hmel206001o:11800001-11850000	0.1283
	Chr19:11600001-11650000	Hmel219001o:11600001-11650000	0.1277
	NA	Hmel200071o:1-50000	0.1268
	NA	Hmel200097o:1-50000	0.1256

	Chr2:7900001-7950000	Hmel202001o:7900001-7950000	0.1247
	NA	Hmel200043o:1-50000	0.1244 [a]
	Chr6:12950001-13000000	Hmel206001o:12950001-13000000	0.1241
	Chr7:3700001-3750000	Hmel207001o:3700001-3750000	0.1237
	Chr12:4250001-4300000	Hmel212001o:4250001-4300000	0.1234
	Chr6:13100001-13150000	Hmel206001o:13100001-13150000	0.1229
	Chr8:9050001-9100000	Hmel208001o:9050001-9100000	0.4736
	Chr20:14573271-14623270	Hmel220003o:14300001-14350000	0.3625
	Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.3381 [a,b]
	Chr2:2000001-2050000	Hmel202001o:2000001-2050000	0.2947
	Chr15:1717747-1767746	Hmel215003o:1650001-1700000	0.2946
	Chr20:14523271-14573270	Hmel220003o:14250001-14300000	0.2827
	Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.2615 [a,d]
	Chr13:10350001-10400000	Hmel213001o:10350001-10400000	0.2493
	NA	Hmel200243o:1-50000	0.2405
	Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.2378 [d]
	NA	Hmel200075o:1-50000	0.2333
	Chr12:5200001-5250000	Hmel212001o:5200001-5250000	0.2321
	Chr10:3300001-3350000	Hmel210001o:3300001-3350000	0.2170 [a]
	NA	Hmel200009o:1-50000	0.2146
	Chr15:1617747-1667746	Hmel215003o:1550001-1600000	0.2098
	Chr15:117747-167746	Hmel215003o:50001-100000	0.2065
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.2041
	Chr1:13750001-13800000	Hmel201001o:13750001-13800000	0.2011
	Chr7:13800001-13850000	Hmel207001o:13800001-13850000	0.1998
	Chr3:6054591-6104590	Hmel203003o:6000001-6050000	0.1996
	Chr21:6100001-6150000	Hmel221001o:6100001-6150000	0.1982
	Chr13:10300001-10350000	Hmel213001o:10300001-10350000	0.1918
	Chr19:2450001-2500000	Hmel219001o:2450001-2500000	0.1906 [a]
	Chr20:5273271-5323270	Hmel220003o:5000001-5050000	0.1905
	Chr17:14750001-14800000	Hmel217001o:14750001-14800000	0.1893
	Chr6:8450001-8500000	Hmel206001o:8450001-8500000	0.1884
	Chr12:500001-550000	Hmel212001o:500001-550000	0.1880
thelxinoe :	Chr15:6117747-6167746	Hmel215003o:6050001-6100000	0.1864
timareta	NA	Hmel200220o:1-50000	0.1861
	Chr2:7900001-7950000	Hmel202001o:7900001-7950000	0.1843
	Chr7:3150001-3200000	Hmel207001o:3150001-3200000	0.1839
	Chr11:10350001-10400000	Hmel211001o:10350001-10400000	0.1837
	Chr15:1517747-1567746	Hmel215003o:1450001-1500000	0.1829 [d]
	Chr6:11650001-11700000	Hmel206001o:11650001-11700000	0.1823
	Chr8:8950001-9000000	Hmel208001o:8950001-9000000	0.1822
	Chr1:12150001-12200000	Hmel201001o:12150001-12200000	0.1820
	NA	Hmel200097o:1-50000	0.1807
	NA	Hmel200200o:1-50000	0.1805
	Chr6:6250001-6300000	Hmel206001o:6250001-6300000	0.1805
	Chr15:1167747-1217746	Hmel215003o:1100001-1150000	0.1801
	NA	Hmel200262o:50001-100000	0.1781
	Chr6:13500001-13550000	Hmel206001o:13500001-13550000	0.1778
	Chr20:9873271-9923270	Hmel220003o:9600001-9650000	0.1731
	NA	Hmel200043o:1-50000	0.1723 [a]
	Chr16:346331-396330	Hmel216002o:300001-350000	0.1702
	Chr19:12200001-12250000	Hmel219001o:12200001-12250000	0.1693
	Chr20:5823271-5873270	Hmel220003o:5550001-5600000	0.1681
	Chr15:13230-63229	Hmel215002o:1-50000	0.1662

Chr1:9350001-9400000	Hmel201001o:9350001-9400000	0.1651
Chr6:13950001-14000000	Hmel206001o:13950001-14000000	0.1648
Chr12:5250001-5300000	Hmel212001o:5250001-5300000	0.1648
Chr21:7200001-7250000	Hmel221001o:7200001-7250000	0.1636
Chr7:4300001-4350000	Hmel207001o:4300001-4350000	0.1607
Chr17:13050001-13100000	Hmel217001o:13050001-13100000	0.1601
NA	Hmel200106o:1-50000	0.1599
Chr20:10073271-10123270	Hmel220003o:9800001-9850000	0.1597
Chr8:9050001-9100000	Hmel208001o:9050001-9100000	0.4557
NA	Hmel200257o:1-50000	0.4306
Chr18:1153175-1203174	Hmel218003o:800001-850000	0.3813 [c]
Chr20:14573271-14623270	Hmel220003o:14300001-14350000	0.3468
Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.3444 [a,b]
Chr16:4946331-4996330	Hmel216002o:4900001-4950000	0.3017
NA	Hmel200200o:1-50000	0.2963
Chr18:1103175-1153174	Hmel218003o:750001-800000	0.2805 [c]
Chr21:7300001-7350000	Hmel221001o:7300001-7350000	0.2785
Chr8:8950001-9000000	Hmel208001o:8950001-9000000	0.2748
NA	Hmel200043o:1-50000	0.2717 [a]
Chr20:14523271-14573270	Hmel220003o:14250001-14300000	0.2714
Chr18:16653175-16703174	Hmel218003o:16300001-16350000	0.2691
Chr10:9150001-9200000	Hmel210001o:9150001-9200000	0.2672
Chr2:2250001-2300000	Hmel202001o:2250001-2300000	0.2650
Chr2:2000001-2050000	Hmel202001o:2000001-2050000	0.2611
NA	Hmel200159o:1-50000	0.2587
Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.2575 [a,d]
Chr10:3300001-3350000	Hmel210001o:3300001-3350000	0.2567 [a]
Chr6:7700001-7750000	Hmel206001o:7700001-7750000	0.2517
Chr1:12150001-12200000	Hmel201001o:12150001-12200000	0.2492
Chr15:1717747-1767746	Hmel215003o:1650001-1700000	0.2457
Chr12:4300001-4350000	Hmel212001o:4300001-4350000	0.2449
Chr21:2750001-2800000	Hmel221001o:2750001-2800000	0.2410
Chr9:4200001-4250000	Hmel209001o:4200001-4250000	0.2387
Chr3:6054591-6104590	Hmel203003o:6000001-6050000	0.2368
Chr19:8750001-8800000	Hmel219001o:8750001-8800000	0.2367
florencia :	NA	Hmel200243o:1-50000	0.2339
thelxinoe	Chr17:11600001-11650000	Hmel217001o:11600001-11650000	0.2320
Chr18:1053175-1103174	Hmel218003o:700001-750000	0.2308 [c]
Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.2260
Chr9:4000001-4050000	Hmel209001o:4000001-4050000	0.2258
Chr7:3150001-3200000	Hmel207001o:3150001-3200000	0.2258
Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.2249 [d]
Chr19:13200001-13250000	Hmel219001o:13200001-13250000	0.2248
Chr2:4350001-4400000	Hmel202001o:4350001-4400000	0.2229
Chr17:13050001-13100000	Hmel217001o:13050001-13100000	0.2211
Chr19:11650001-11700000	Hmel219001o:11650001-11700000	0.2208
Chr7:9150001-9200000	Hmel207001o:9150001-9200000	0.2180
NA	Hmel200075o:1-50000	0.2173
Chr13:10300001-10350000	Hmel213001o:10300001-10350000	0.2164
Chr17:12950001-13000000	Hmel217001o:12950001-13000000	0.2148
Chr12:3850001-3900000	Hmel212001o:3850001-3900000	0.2117
Chr12:3900001-3950000	Hmel212001o:3900001-3950000	0.2067
Chr15:1517747-1567746	Hmel215003o:1450001-1500000	0.2054 [d]
Chr13:10350001-10400000	Hmel213001o:10350001-10400000	0.2054

	Chr (bp)	Scaf (bp)	F_{ST}
	Chr20:10073271-10123270	Hmel220003o:9800001-9850000	0.2052
	Chr13:9450001-9500000	Hmel213001o:9450001-9500000	0.2030
	Chr1:17100001-17150000	Hmel201001o:17100001-17150000	0.2023
	Chr19:2450001-2500000	Hmel219001o:2450001-2500000	0.2007 [a]
	Chr12:950001-1000000	Hmel212001o:950001-1000000	0.1992
	Chr10:3350001-3400000	Hmel210001o:3350001-3400000	0.1991
	NA	Hmel200009o:1-50000	0.1980
	Chr8:2100001-2150000	Hmel208001o:2100001-2150000	0.1961
	Chr16:4896331-4946330	Hmel216002o:4850001-4900000	0.1951
	Chr2:1400001-1450000	Hmel202001o:1400001-1450000	0.1948

Comparison in *H. cydno* and *H. pachinus*	Chr (bp)	Scaf (bp)	F_{ST}
	Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.3830
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.3460 [b]
	Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.3338 [d]
	Chr1:11850001-11900000	Hmel201001o:11850001-11900000	0.3307
	Chr1:13450001-13500000	Hmel201001o:13450001-13500000	0.3198
	Chr19:12600001-12650000	Hmel219001o:12600001-12650000	0.3179
	Chr20:5673271-5723270	Hmel220003o:5400001-5450000	0.3121
	Chr6:13700001-13750000	Hmel206001o:13700001-13750000	0.3013
	Chr1:13500001-13550000	Hmel201001o:13500001-13550000	0.3007
	Chr21:50001-100000	Hmel221001o:50001-100000	0.2545
	Chr7:14250001-14300000	Hmel207001o:14250001-14300000	0.2527
	Chr1:12000001-12050000	Hmel201001o:12000001-12050000	0.2520
	Chr13:10300001-10350000	Hmel213001o:10300001-10350000	0.2493
	Chr15:217747-267746	Hmel215003o:150001-200000	0.2319
	Chr1:11900001-11950000	Hmel201001o:11900001-11950000	0.2319
	Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.2297
	Chr10:3300001-3350000	Hmel210001o:3300001-3350000	0.2270
	Chr4:1-50000	Hmel204001o:1-50000	0.2175
	Chr20:5623271-5673270	Hmel220003o:5350001-5400000	0.2150
	Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.2124 [d]
	Chr18:4053175-4103174	Hmel218003o:3700001-3750000	0.2122
	Chr13:9450001-9500000	Hmel213001o:9450001-9500000	0.2121
	Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.2093
	Chr20:5173271-5223270	Hmel220003o:4900001-4950000	0.2081
	Chr7:1200001-1250000	Hmel207001o:1200001-1250000	0.2077
	Chr19:12450001-12500000	Hmel219001o:12450001-12500000	0.2065
	NA	Hmel200216o:1-50000	0.2016
pachinus : *c. galanthus*	Chr1:12050001-12100000	Hmel201001o:12050001-12100000	0.2000
	Chr20:10773271-10823270	Hmel220003o:10500001-10550000	0.1970
	NA	Hmel200005o:1-50000	0.1955
	Chr15:1617747-1667746	Hmel215003o:1550001-1600000	0.1947
	Chr13:7500001-7550000	Hmel213001o:7500001-7550000	0.1933
	Chr1:12500001-12550000	Hmel201001o:12500001-12550000	0.1926
	Chr1:11750001-11800000	Hmel201001o:11750001-11800000	0.1899
	Chr17:14300001-14350000	Hmel217001o:14300001-14350000	0.1886
	Chr15:1317747-1367746	Hmel215003o:1250001-1300000	0.1865
	Chr1:8700001-8750000	Hmel201001o:8700001-8750000	0.1843
	Chr1:12550001-12600000	Hmel201001o:12550001-12600000	0.1839
	Chr7:9000001-9050000	Hmel207001o:9000001-9050000	0.1831
	NA	Hmel200200o:1-50000	0.1812
	Chr17:7000001-7050000	Hmel217001o:7000001-7050000	0.1804

Chr2:1850001-1900000	Hmel202001o:1850001-1900000	0.1797
Chr13:18050001-18100000	Hmel213001o:18050001-18100000	0.1792
Chr1:11700001-11750000	Hmel201001o:11700001-11750000	0.1772
Chr19:13550001-13600000	Hmel219001o:13550001-13600000	0.1768
Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.1751
Chr6:9950001-10000000	Hmel206001o:9950001-10000000	0.1734
Chr20:5323271-5373270	Hmel220003o:5050001-5100000	0.1729
Chr20:5573271-5623270	Hmel220003o:5300001-5350000	0.1723
Chr21:12500001-12550000	Hmel221001o:12500001-12550000	0.1681
Chr19:12500001-12550000	Hmel219001o:12500001-12550000	0.1667
Chr16:1396331-1446330	Hmel216002o:1350001-1400000	0.1661
Chr10:11500001-11550000	Hmel210001o:11500001-11550000	0.1659
Chr15:1517747-1567746	Hmel215003o:1450001-1500000	0.1657 [d]
NA	Hmel200043o:1-50000	0.1652
Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.1649
Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.4202
Chr1:13450001-13500000	Hmel201001o:13450001-13500000	0.3849
Chr19:12600001-12650000	Hmel219001o:12600001-12650000	0.3430
Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.3356 [d]
Chr17:50001-100000	Hmel217001o:50001-100000	0.3212
Chr1:13500001-13550000	Hmel201001o:13500001-13550000	0.3176
Chr19:12450001-12500000	Hmel219001o:12450001-12500000	0.3149
Chr17:150001-200000	Hmel217001o:150001-200000	0.2996
Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.2889 [b]
Chr7:14250001-14300000	Hmel207001o:14250001-14300000	0.2884
Chr6:13700001-13750000	Hmel206001o:13700001-13750000	0.2855
Chr21:50001-100000	Hmel221001o:50001-100000	0.2823
Chr12:12850001-12900000	Hmel212001o:12850001-12900000	0.2618
Chr19:12700001-12750000	Hmel219001o:12700001-12750000	0.2610
Chr1:11850001-11900000	Hmel201001o:11850001-11900000	0.2511
Chr17:7000001-7050000	Hmel217001o:7000001-7050000	0.2465
NA	Hmel200216o:1-50000	0.2298
NA	Hmel200159o:1-50000	0.2298
Chr17:1-50000	Hmel217001o:1-50000	0.2297
Chr21:1-50000	Hmel221001o:1-50000	0.2215
Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.2188 [d]
Chr10:3300001-3350000	Hmel210001o:3300001-3350000	0.2161
Chr17:13900001-13950000	Hmel217001o:13900001-13950000	0.2155
Chr18:5403175-5453174	Hmel218003o:5050001-5100000	0.2149
Chr13:10300001-10350000	Hmel213001o:10300001-10350000	0.2138
NA	Hmel200230o:1-50000	0.2126
Chr7:1200001-1250000	Hmel207001o:1200001-1250000	0.2115
pachinus : c. chioneus Chr4:1-50000	Hmel204001o:1-50000	0.2098
Chr17:6950001-7000000	Hmel217001o:6950001-7000000	0.2088
Chr15:217747-267746	Hmel215003o:150001-200000	0.2052
Chr19:12500001-12550000	Hmel219001o:12500001-12550000	0.2039
Chr20:5673271-5723270	Hmel220003o:5400001-5450000	0.2001
Chr18:4053175-4103174	Hmel218003o:3700001-3750000	0.1978
Chr21:200001-250000	Hmel221001o:200001-250000	0.1932
Chr15:1517747-1567746	Hmel215003o:1450001-1500000	0.1930 [d]
Chr21:7250001-7300000	Hmel221001o:7250001-7300000	0.1922
Chr12:10700001-10750000	Hmel212001o:10700001-10750000	0.1906
Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.1905
Chr15:1317747-1367746	Hmel215003o:1250001-1300000	0.1900
Chr20:5473271-5523270	Hmel220003o:5200001-5250000	0.1897

NA	Hmel200005o:1-50000	0.1892
Chr13:2200001-2250000	Hmel213001o:2200001-2250000	0.1879
Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.1875
Chr21:100001-150000	Hmel221001o:100001-150000	0.1872
Chr17:100001-150000	Hmel217001o:100001-150000	0.1869
Chr1:12000001-12050000	Hmel201001o:12000001-12050000	0.1864
Chr6:13250001-13300000	Hmel206001o:13250001-13300000	0.1858
Chr16:46331-96330	Hmel216002o:1-50000	0.1856
Chr1:12600001-12650000	Hmel201001o:12600001-12650000	0.1846
Chr21:7800001-7850000	Hmel221001o:7800001-7850000	0.1811
Chr10:3250001-3300000	Hmel210001o:3250001-3300000	0.1808
Chr8:5600001-5650000	Hmel208001o:5600001-5650000	0.1807
Chr7:8950001-9000000	Hmel207001o:8950001-9000000	0.1806
Chr18:6003175-6053174	Hmel218003o:5650001-5700000	0.1790
Chr4:5450001-5500000	Hmel204001o:5450001-5500000	0.1785
Chr8:5700001-5750000	Hmel208001o:5700001-5750000	0.1783
Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.5465
NA	Hmel200159o:1-50000	0.4754
Chr19:12450001-12500000	Hmel219001o:12450001-12500000	0.4305
Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.4084 [b]
Chr19:12600001-12650000	Hmel219001o:12600001-12650000	0.3865
Chr19:50001-100000	Hmel219001o:50001-100000	0.3841
Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.3756
Chr1:12000001-12050000	Hmel201001o:12000001-12050000	0.3642
Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.3501
Chr19:1-50000	Hmel219001o:1-50000	0.3498
Chr1:13450001-13500000	Hmel201001o:13450001-13500000	0.3295
Chr19:100001-150000	Hmel219001o:100001-150000	0.3235
Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.3143
Chr21:50001-100000	Hmel221001o:50001-100000	0.3117
Chr17:50001-100000	Hmel217001o:50001-100000	0.3051
Chr17:150001-200000	Hmel217001o:150001-200000	0.3042
Chr7:1200001-1250000	Hmel207001o:1200001-1250000	0.3004
Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.2994 [d]
Chr2:1850001-1900000	Hmel202001o:1850001-1900000	0.2980
Chr20:10773271-10823270	Hmel220003o:10500001-10550000	0.2960
Chr15:1317747-1367746	Hmel215003o:1250001-1300000	0.2940
Chr18:4053175-4103174	Hmel218003o:3700001-3750000	0.2938
Chr1:11850001-11900000	Hmel201001o:11850001-11900000	0.2896
Chr2:4250001-4300000	Hmel202001o:4250001-4300000	0.2857
Chr17:7000001-7050000	Hmel217001o:7000001-7050000	0.2803
Chr7:14250001-14300000	Hmel207001o:14250001-14300000	0.2801
Chr12:12850001-12900000	Hmel212001o:12850001-12900000	0.2798
pachinus : c. zelinde Chr21:200001-250000	Hmel221001o:200001-250000	0.2678
Chr19:12500001-12550000	Hmel219001o:12500001-12550000	0.2670
Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.2668
Chr19:16150001-16200000	Hmel219001o:16150001-16200000	0.2621
Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.2610
Chr21:300001-350000	Hmel221001o:300001-350000	0.2585
Chr1:12500001-12550000	Hmel201001o:12500001-12550000	0.2577
Chr21:7300001-7350000	Hmel221001o:7300001-7350000	0.2525
Chr10:13200001-13250000	Hmel210001o:13200001-13250000	0.2522
Chr21:250001-300000	Hmel221001o:250001-300000	0.2517
Chr17:200001-250000	Hmel217001o:200001-250000	0.2515
Chr21:400001-450000	Hmel221001o:400001-450000	0.2503
Chr19:12700001-12750000	Hmel219001o:12700001-12750000	0.2502

NA	Hmel200009o:1-50000	0.2490
Chr7:8950001-9000000	Hmel207001o:8950001-9000000	0.2489
NA	Hmel200049o:1-50000	0.2481
Chr21:7350001-7400000	Hmel221001o:7350001-7400000	0.2475
Chr21:450001-500000	Hmel221001o:450001-500000	0.2455
Chr2:1900001-1950000	Hmel202001o:1900001-1950000	0.2453
Chr10:17150001-17200000	Hmel210001o:17150001-17200000	0.2450
Chr6:13700001-13750000	Hmel206001o:13700001-13750000	0.2446
NA	Hmel200230o:1-50000	0.2446
Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.2434
Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.2433
Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.2429
Chr19:16200001-16250000	Hmel219001o:16200001-16250000	0.2411
Chr19:11650001-11700000	Hmel219001o:11650001-11700000	0.2407
Chr1:12450001-12500000	Hmel201001o:12450001-12500000	0.2404
Chr13:18050001-18100000	Hmel213001o:18050001-18100000	0.2389

	Chr21:200001-250000	Hmel221001o:200001-250000	0.6781
	Chr21:300001-350000	Hmel221001o:300001-350000	0.6607
	Chr21:250001-300000	Hmel221001o:250001-300000	0.6604
	Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.6293
	Chr21:50001-100000	Hmel221001o:50001-100000	0.5360
	Chr19:12600001-12650000	Hmel219001o:12600001-12650000	0.5354
	Chr21:400001-450000	Hmel221001o:400001-450000	0.5290
	Chr11:4300001-4350000	Hmel211001o:4300001-4350000	0.5225
	Chr10:9800001-9850000	Hmel210001o:9800001-9850000	0.5066
	Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.4966
	Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.4938
	NA	Hmel200159o:1-50000	0.4897
	Chr19:12450001-12500000	Hmel219001o:12450001-12500000	0.4891
	Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.4840
	Chr7:9000001-9050000	Hmel207001o:9000001-9050000	0.4689
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.4663
	NA	Hmel200005o:1-50000	0.4613
	Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.4534
	Chr19:50001-100000	Hmel219001o:50001-100000	0.4522
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.4510
	Chr17:150001-200000	Hmel217001o:150001-200000	0.4500
	Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.4444
	Chr10:13200001-13250000	Hmel210001o:13200001-13250000	0.4344
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.4337 [b]
	Chr1:8750001-8800000	Hmel201001o:8750001-8800000	0.4284
	Chr21:450001-500000	Hmel221001o:450001-500000	0.4262
	Chr16:96331-146330	Hmel216002o:50001-100000	0.4186
pachinus : c. alithea	Chr20:10773271-10823270	Hmel220003o:10500001-10550000	0.4143
	Chr7:8600001-8650000	Hmel207001o:8600001-8650000	0.4142
	Chr7:8700001-8750000	Hmel207001o:8700001-8750000	0.4137
	Chr7:14250001-14300000	Hmel207001o:14250001-14300000	0.4136
	Chr21:350001-400000	Hmel221001o:350001-400000	0.4130
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.4121
	Chr17:50001-100000	Hmel217001o:50001-100000	0.4102
	Chr3:10404591-10454590	Hmel203003o:10350001-10400000	0.4094
	Chr17:14300001-14350000	Hmel217001o:14300001-14350000	0.4031
	Chr7:14150001-14200000	Hmel207001o:14150001-14200000	0.4006
	Chr15:1617747-1667746	Hmel215003o:1550001-1600000	0.4004
	Chr19:1-50000	Hmel219001o:1-50000	0.3992
	Chr19:100001-150000	Hmel219001o:100001-150000	0.3968

Chr12:15850001-15900000	Hmel212001o:15850001-15900000	0.3959
Chr18:553175-603174	Hmel218003o:200001-250000	0.3927
Chr7:8650001-8700000	Hmel207001o:8650001-8700000	0.3876
Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.3822
Chr21:1050001-1100000	Hmel221001o:1050001-1100000	0.3811
Chr1:13450001-13500000	Hmel201001o:13450001-13500000	0.3770
Chr21:13100001-13150000	Hmel221001o:13100001-13150000	0.3743
Chr19:16297407-16347406	Hmel219002o:50001-100000	0.3740
Chr21:100001-150000	Hmel221001o:100001-150000	0.3685
Chr21:1-50000	Hmel221001o:1-50000	0.3666
Chr1:12000001-12050000	Hmel201001o:12000001-12050000	0.3653
Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.3621 [b]
Chr17:200001-250000	Hmel217001o:200001-250000	0.3572
Chr19:16247407-16297406	Hmel219002o:1-50000	0.3562
Chr17:1-50000	Hmel217001o:1-50000	0.3504
Chr12:4400001-4450000	Hmel212001o:4400001-4450000	0.3499
NA	Hmel200159o:1-50000	0.2396
Chr17:150001-200000	Hmel217001o:150001-200000	0.2218
Chr17:50001-100000	Hmel217001o:50001-100000	0.1685
NA	Hmel200066o:1-50000	0.1599
Chr18:348029-398028	Hmel218002o:300001-350000	0.1452
NA	Hmel200055o:1-50000	0.1350
Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.1307
Chr17:100001-150000	Hmel217001o:100001-150000	0.1281
Chr17:1-50000	Hmel217001o:1-50000	0.1196
Chr12:10700001-10750000	Hmel212001o:10700001-10750000	0.1193
Chr21:7250001-7300000	Hmel221001o:7250001-7300000	0.1128
Chr21:7200001-7250000	Hmel221001o:7200001-7250000	0.1115
Chr6:14050001-14100000	Hmel206001o:14050001-14100000	0.1041
Chr2:1850001-1900000	Hmel202001o:1850001-1900000	0.1025
Chr12:16200001-16250000	Hmel212001o:16200001-16250000	0.1011
NA	Hmel200054o:1-50000	0.0966
Chr11:11750001-11800000	Hmel211001o:11750001-11800000	0.0928
Chr19:10400001-10450000	Hmel219001o:10400001-10450000	0.0897
Chr5:4650001-4700000	Hmel205001o:4650001-4700000	0.0874
Chr17:200001-250000	Hmel217001o:200001-250000	0.0837
NA	Hmel200220o:1-50000	0.0789
Chr20:5173271-5223270	Hmel220003o:4900001-4950000	0.0781
NA	Hmel200017o:1-50000	0.0781
Chr19:100001-150000	Hmel219001o:100001-150000	0.0769
Chr19:16297407-16347406	Hmel219002o:50001-100000	0.0764
NA	Hmel200205o:1-50000	0.0751
Chr19:13550001-13600000	Hmel219001o:13550001-13600000	0.0719
c. galanthus : c. chioneus NA	Hmel200230o:1-50000	0.0698
Chr18:16753175-16803174	Hmel218003o:16400001-16450000	0.0690
NA	Hmel200091o:1-50000	0.0688
Chr2:4250001-4300000	Hmel202001o:4250001-4300000	0.0676
NA	Hmel200065o:1-50000	0.0670
Chr21:7800001-7850000	Hmel221001o:7800001-7850000	0.0666
NA	Hmel200108o:1-50000	0.0666
Chr13:18100001-18150000	Hmel213001o:18100001-18150000	0.0664
Chr5:7050001-7100000	Hmel205001o:7050001-7100000	0.0663
Chr20:13623271-13673270	Hmel220003o:13350001-13400000	0.0652
Chr6:13250001-13300000	Hmel206001o:13250001-13300000	0.0650
Chr2:4300001-4350000	Hmel202001o:4300001-4350000	0.0645
Chr13:2200001-2250000	Hmel213001o:2200001-2250000	0.0643

	NA	Hmel200012o:1-50000	0.0633
	NA	Hmel200016o:1-50000	0.0630
	Chr19:7450001-7500000	Hmel219001o:7450001-7500000	0.0626
	NA	Hmel200214o:1-50000	0.0626
	Chr9:8700001-8750000	Hmel209001o:8700001-8750000	0.0626
	Chr18:4053175-4103174	Hmel218003o:3700001-3750000	0.0625
	Chr10:16700001-16750000	Hmel210001o:16700001-16750000	0.0623
	Chr17:7000001-7050000	Hmel217001o:7000001-7050000	0.0617
	Chr18:5153175-5203174	Hmel218003o:4800001-4850000	0.0616
	Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.0615
	Chr2:1950001-2000000	Hmel202001o:1950001-2000000	0.0613
	Chr2:6550001-6600000	Hmel202001o:6550001-6600000	0.0603
	Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.0602
	NA	Hmel200215o:1-50000	0.0601
	Chr6:14000001-14050000	Hmel206001o:14000001-14050000	0.0599
	Chr21:4150001-4200000	Hmel221001o:4150001-4200000	0.0584
	Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.4691
	NA	Hmel200159o:1-50000	0.4627
	NA	Hmel200281o:1-50000	0.3503
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.3467 [b]
	Chr2:1850001-1900000	Hmel202001o:1850001-1900000	0.2763
	Chr19:50001-100000	Hmel219001o:50001-100000	0.2697
	Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.2676
	Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.2613
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.2600
	Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.2570
	Chr19:100001-150000	Hmel219001o:100001-150000	0.2544
	Chr17:150001-200000	Hmel217001o:150001-200000	0.2540
	Chr19:1-50000	Hmel219001o:1-50000	0.2441
	Chr19:16150001-16200000	Hmel219001o:16150001-16200000	0.2278
	Chr2:4250001-4300000	Hmel202001o:4250001-4300000	0.2265
	Chr19:16200001-16250000	Hmel219001o:16200001-16250000	0.2167
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.2150
	Chr18:4053175-4103174	Hmel218003o:3700001-3750000	0.2106
	Chr3:10504591-10554590	Hmel203003o:10450001-10500000	0.2056
	Chr19:11650001-11700000	Hmel219001o:11650001-11700000	0.2008
	Chr21:7200001-7250000	Hmel221001o:7200001-7250000	0.1997
	Chr21:50001-100000	Hmel221001o:50001-100000	0.1991
	Chr21:7350001-7400000	Hmel221001o:7350001-7400000	0.1980
	Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.1974
	Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.1968
	Chr12:15850001-15900000	Hmel212001o:15850001-15900000	0.1951
	Chr17:50001-100000	Hmel217001o:50001-100000	0.1914
c. galanthus : c. zelinde	Chr21:400001-450000	Hmel221001o:400001-450000	0.1886
	Chr18:148029-198028	Hmel218002o:100001-150000	0.1836
	Chr21:300001-350000	Hmel221001o:300001-350000	0.1826
	Chr6:13200001-13250000	Hmel206001o:13200001-13250000	0.1816
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.1794
	Chr21:200001-250000	Hmel221001o:200001-250000	0.1773
	Chr11:7000001-7050000	Hmel211001o:7000001-7050000	0.1772
	Chr21:250001-300000	Hmel221001o:250001-300000	0.1740
	Chr3:10454591-10504590	Hmel203003o:10400001-10450000	0.1721
	Chr2:1400001-1450000	Hmel202001o:1400001-1450000	0.1710
	Chr18:298029-348028	Hmel218002o:250001-300000	0.1700
	Chr2:1900001-1950000	Hmel202001o:1900001-1950000	0.1700
	NA	Hmel200244o:1-50000	0.1698

Chr21:450001-500000	Hmel221001o:450001-500000	0.1665
Chr3:10404591-10454590	Hmel203003o:10350001-10400000	0.1651
Chr17:1-50000	Hmel217001o:1-50000	0.1645
Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.1619
Chr13:9450001-9500000	Hmel213001o:9450001-9500000	0.1611
Chr21:7300001-7350000	Hmel221001o:7300001-7350000	0.1593
Chr21:7250001-7300000	Hmel221001o:7250001-7300000	0.1592
Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.1584 [b]
Chr19:12450001-12500000	Hmel219001o:12450001-12500000	0.1548
Chr6:7100001-7150000	Hmel206001o:7100001-7150000	0.1534
Chr19:16247407-16297406	Hmel219002o:1-50000	0.1526
Chr19:13000001-13050000	Hmel219001o:13000001-13050000	0.1521
Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.1520
Chr17:200001-250000	Hmel217001o:200001-250000	0.1516
Chr20:5573271-5623270	Hmel220003o:5300001-5350000	0.1497
Chr21:13100001-13150000	Hmel221001o:13100001-13150000	0.1494
Chr21:200001-250000	Hmel221001o:200001-250000	0.6084
Chr21:250001-300000	Hmel221001o:250001-300000	0.5750
Chr21:300001-350000	Hmel221001o:300001-350000	0.5525
Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.5068
Chr21:50001-100000	Hmel221001o:50001-100000	0.4995
Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.4751
NA	Hmel200159o:1-50000	0.4704
Chr11:4300001-4350000	Hmel211001o:4300001-4350000	0.4350
Chr21:400001-450000	Hmel221001o:400001-450000	0.4295
Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.4214
Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.4211
Chr10:9800001-9850000	Hmel210001o:9800001-9850000	0.4047
Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.3886 [b]
Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.3814
Chr17:150001-200000	Hmel217001o:150001-200000	0.3683
Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.3678
NA	Hmel200005o:1-50000	0.3666
Chr21:13100001-13150000	Hmel221001o:13100001-13150000	0.3545
Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.3486
Chr21:350001-400000	Hmel221001o:350001-400000	0.3460
Chr7:9000001-9050000	Hmel207001o:9000001-9050000	0.3414
Chr12:15850001-15900000	Hmel212001o:15850001-15900000	0.3413
Chr19:50001-100000	Hmel219001o:50001-100000	0.3400
Chr3:10404591-10454590	Hmel203003o:10350001-10400000	0.3333
Chr19:16297407-16347406	Hmel219002o:50001-100000	0.3306
Chr16:96331-146330	Hmel216002o:50001-100000	0.3250
Chr19:100001-150000	Hmel219001o:100001-150000	0.3246
c. galanthus : c. alithea	Chr7:8650001-8700000	Hmel207001o:8650001-8700000	0.3190
Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.3186
Chr17:50001-100000	Hmel217001o:50001-100000	0.3181
Chr21:450001-500000	Hmel221001o:450001-500000	0.3170
Chr19:16247407-16297406	Hmel219002o:1-50000	0.3142
Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.3109
Chr3:10504591-10554590	Hmel203003o:10450001-10500000	0.3090
Chr21:1050001-1100000	Hmel221001o:1050001-1100000	0.3074
Chr17:1-50000	Hmel217001o:1-50000	0.3022
Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.2980
Chr3:10454591-10504590	Hmel203003o:10400001-10450000	0.2899
Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.2894
Chr11:3900001-3950000	Hmel211001o:3900001-3950000	0.2891

Note: The row label "*c. galanthus : c. alithea*" appears in the leftmost column aligned with the Chr7:8650001-8700000 row.

Chr21:1-50000	Hmel221001o:1-50000	0.2883
Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.2873 [b]
Chr7:8600001-8650000	Hmel207001o:8600001-8650000	0.2865
Chr19:1-50000	Hmel219001o:1-50000	0.2858
Chr18:148029-198028	Hmel218002o:100001-150000	0.2822
Chr21:1100001-1150000	Hmel221001o:1100001-1150000	0.2780
Chr10:9250001-9300000	Hmel210001o:9250001-9300000	0.2757
Chr10:13200001-13250000	Hmel210001o:13200001-13250000	0.2749
Chr21:100001-150000	Hmel221001o:100001-150000	0.2725
Chr2:1850001-1900000	Hmel202001o:1850001-1900000	0.2722
Chr18:553175-603174	Hmel218003o:200001-250000	0.2700
Chr16:46331-96330	Hmel216002o:1-50000	0.2684
Chr21:13350001-13400000	Hmel221001o:13350001-13400000	0.2684
Chr7:14150001-14200000	Hmel207001o:14150001-14200000	0.2671
Chr10:9750001-9800000	Hmel210001o:9750001-9800000	0.2579
NA	Hmel200275o:1-50000	0.2529
Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.4573
Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.3094 [a,b]
Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.2622
Chr12:15850001-15900000	Hmel212001o:15850001-15900000	0.1895
Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.1879
Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.1859
Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.1849
Chr21:50001-100000	Hmel221001o:50001-100000	0.1790 [a]
Chr19:11650001-11700000	Hmel219001o:11650001-11700000	0.1771
Chr21:200001-250000	Hmel221001o:200001-250000	0.1739 [a]
Chr2:1400001-1450000	Hmel202001o:1400001-1450000	0.1739
Chr21:300001-350000	Hmel221001o:300001-350000	0.1662 [a]
Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.1658
Chr18:148029-198028	Hmel218002o:100001-150000	0.1644
Chr21:7200001-7250000	Hmel221001o:7200001-7250000	0.1602
Chr3:10454591-10504590	Hmel203003o:10400001-10450000	0.1597
Chr6:13200001-13250000	Hmel206001o:13200001-13250000	0.1586
Chr3:10504591-10554590	Hmel203003o:10450001-10500000	0.1552
Chr19:16150001-16200000	Hmel219001o:16150001-16200000	0.1524
Chr6:13700001-13750000	Hmel206001o:13700001-13750000	0.1500
Chr21:7250001-7300000	Hmel221001o:7250001-7300000	0.1466
Chr21:250001-300000	Hmel221001o:250001-300000	0.1449 [a]
Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.1437 [a,b]
Chr2:1850001-1900000	Hmel202001o:1850001-1900000	0.1421
Chr19:16247407-16297406	Hmel219002o:1-50000	0.1420
Chr19:16200001-16250000	Hmel219001o:16200001-16250000	0.1399
Chr17:1-50000	Hmel217001o:1-50000	0.1398 [a]
NA	Hmel200196o:1-50000	0.1393
Chr19:16100001-16150000	Hmel219001o:16100001-16150000	0.1259
Chr19:1-50000	Hmel219001o:1-50000	0.1248
Chr21:400001-450000	Hmel221001o:400001-450000	0.1248 [a]
Chr18:4053175-4103174	Hmel218003o:3700001-3750000	0.1242
Chr21:7350001-7400000	Hmel221001o:7350001-7400000	0.1240
Chr3:10404591-10454590	Hmel203003o:10350001-10400000	0.1239
Chr19:50001-100000	Hmel219001o:50001-100000	0.1205
Chr2:4350001-4400000	Hmel202001o:4350001-4400000	0.1201
Chr19:13300001-13350000	Hmel219001o:13300001-13350000	0.1197
Chr2:4250001-4300000	Hmel202001o:4250001-4300000	0.1190

c. chioneus : c. zelinde

	Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.1189 [d]
	Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.1189 [d]
	Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.1188
	Chr19:13000001-13050000	Hmel219001o:13000001-13050000	0.1170
	Chr19:100001-150000	Hmel219001o:100001-150000	0.1164
	Chr6:13250001-13300000	Hmel206001o:13250001-13300000	0.1160
	Chr10:9800001-9850000	Hmel210001o:9800001-9850000	0.1157 [a]
	Chr18:98029-148028	Hmel218002o:50001-100000	0.1129
	Chr2:1900001-1950000	Hmel202001o:1900001-1950000	0.1127
	Chr21:350001-400000	Hmel221001o:350001-400000	0.1118 [a]
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.1102
	NA	Hmel200050o:1-50000	0.1094
	Chr21:2350001-2400000	Hmel221001o:2350001-2400000	0.1089
	Chr21:2300001-2350000	Hmel221001o:2300001-2350000	0.1084
	Chr19:7600001-7650000	Hmel219001o:7600001-7650000	0.1082
	Chr12:16200001-16250000	Hmel212001o:16200001-16250000	0.1082
	Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.1080 [a]
	Chr20:14423271-14473270	Hmel220003o:14150001-14200000	0.1071
	Chr21:200001-250000	Hmel221001o:200001-250000	0.5729 [a]
	Chr21:300001-350000	Hmel221001o:300001-350000	0.5124 [a]
	Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.4934
	Chr21:250001-300000	Hmel221001o:250001-300000	0.4795 [a]
	Chr21:50001-100000	Hmel221001o:50001-100000	0.4705 [a]
	Chr10:9800001-9850000	Hmel210001o:9800001-9850000	0.3738 [a]
	Chr21:400001-450000	Hmel221001o:400001-450000	0.3537 [a]
	Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.3532
	Chr11:4300001-4350000	Hmel211001o:4300001-4350000	0.3492
	Chr12:15850001-15900000	Hmel212001o:15850001-15900000	0.3442
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.3427 [a,b]
	Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.3337
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.3276
	NA	Hmel200005o:1-50000	0.3201
	Chr19:16297407-16347406	Hmel219002o:50001-100000	0.3144
	Chr17:1-50000	Hmel217001o:1-50000	0.3039 [a]
	Chr21:350001-400000	Hmel221001o:350001-400000	0.2992 [a]
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.2927
	Chr7:8600001-8650000	Hmel207001o:8600001-8650000	0.2861
	Chr7:8650001-8700000	Hmel207001o:8650001-8700000	0.2820
	Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.2784
	Chr3:10454591-10504590	Hmel203003o:10400001-10450000	0.2750
	Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.2715
	Chr21:1-50000	Hmel221001o:1-50000	0.2714
	Chr19:16247407-16297406	Hmel219002o:1-50000	0.2711
	Chr21:1050001-1100000	Hmel221001o:1050001-1100000	0.2659
c. chioneus : c. alithea	Chr21:13100001-13150000	Hmel221001o:13100001-13150000	0.2646
	Chr3:10404591-10454590	Hmel203003o:10350001-10400000	0.2597
	Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.2558 [a,b]
	Chr17:50001-100000	Hmel217001o:50001-100000	0.2529
	Chr18:553175-603174	Hmel218003o:200001-250000	0.2503
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.2495
	Chr21:100001-150000	Hmel221001o:100001-150000	0.2491
	Chr3:10504591-10554590	Hmel203003o:10450001-10500000	0.2433
	Chr7:8700001-8750000	Hmel207001o:8700001-8750000	0.2346

Chr10:9250001-9300000	Hmel210001o:9250001-9300000	0.2324
Chr18:148029-198028	Hmel218002o:100001-150000	0.2313
Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.2292 [a]
Chr3:10304591-10354590	Hmel203003o:10250001-10300000	0.2245
Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.2233
Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.2229
Chr7:14150001-14200000	Hmel207001o:14150001-14200000	0.2197
Chr21:150001-200000	Hmel221001o:150001-200000	0.2131
Chr21:450001-500000	Hmel221001o:450001-500000	0.2099
Chr17:14250001-14300000	Hmel217001o:14250001-14300000	0.2096
Chr18:98029-148028	Hmel218002o:50001-100000	0.2062
Chr19:50001-100000	Hmel219001o:50001-100000	0.2059
Chr7:9000001-9050000	Hmel207001o:9000001-9050000	0.2057
Chr19:11650001-11700000	Hmel219001o:11650001-11700000	0.2056
Chr17:150001-200000	Hmel217001o:150001-200000	0.2048
Chr20:14423271-14473270	Hmel220003o:14150001-14200000	0.2042
Chr19:100001-150000	Hmel219001o:100001-150000	0.2002
Chr20:14623271-14673270	Hmel220003o:14350001-14400000	0.1994
Chr6:13800001-13850000	Hmel206001o:13800001-13850000	0.1977
Chr19:13550001-13600000	Hmel219001o:13550001-13600000	0.1963
Chr21:1000001-1050000	Hmel221001o:1000001-1050000	0.1939
Chr11:4300001-4350000	Hmel211001o:4300001-4350000	0.3973
Chr21:200001-250000	Hmel221001o:200001-250000	0.2144 [a]
Chr7:8600001-8650000	Hmel207001o:8600001-8650000	0.2137
Chr21:50001-100000	Hmel221001o:50001-100000	0.2050 [a]
Chr21:250001-300000	Hmel221001o:250001-300000	0.2049 [a]
Chr21:300001-350000	Hmel221001o:300001-350000	0.1982 [a]
Chr7:1200001-1250000	Hmel207001o:1200001-1250000	0.1880
Chr11:4250001-4300000	Hmel211001o:4250001-4300000	0.1876
Chr16:96331-146330	Hmel216002o:50001-100000	0.1863
Chr11:4350001-4400000	Hmel211001o:4350001-4400000	0.1857
Chr15:1617747-1667746	Hmel215003o:1550001-1600000	0.1726
Chr10:9800001-9850000	Hmel210001o:9800001-9850000	0.1715 [a]
Chr1:11050001-11100000	Hmel201001o:11050001-11100000	0.1627
Chr21:1050001-1100000	Hmel221001o:1050001-1100000	0.1490
Chr10:100001-150000	Hmel210001o:100001-150000	0.1488
Chr21:400001-450000	Hmel221001o:400001-450000	0.1396 [a]
Chr19:16297407-16347406	Hmel219002o:50001-100000	0.1371
Chr10:150001-200000	Hmel210001o:150001-200000	0.1365
Chr18:553175-603174	Hmel218003o:200001-250000	0.1284
Chr1:8550001-8600000	Hmel201001o:8550001-8600000	0.1281
Chr21:1100001-1150000	Hmel221001o:1100001-1150000	0.1268
Chr10:250001-300000	Hmel210001o:250001-300000	0.1255
Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.1224
Chr21:1-50000	Hmel221001o:1-50000	0.1186
Chr6:13200001-13250000	Hmel206001o:13200001-13250000	0.1179
Chr10:9750001-9800000	Hmel210001o:9750001-9800000	0.1168
Chr21:13050001-13100000	Hmel221001o:13050001-13100000	0.1150
c. zelinde : c.	Chr10:9250001-9300000	Hmel210001o:9250001-9300000	0.1147
alithea	Chr1:11900001-11950000	Hmel201001o:11900001-11950000	0.1146
	Chr16:46331-96330	Hmel216002o:1-50000	0.1141
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.1140 [a,b]
	Chr17:50001-100000	Hmel217001o:50001-100000	0.1136 [a]
	Chr7:9000001-9050000	Hmel207001o:9000001-9050000	0.1125

	Chr (bp)	Scaf (bp)	F_{ST}
	Chr10:16700001-16750000	Hmel210001o:16700001-16750000	0.1124
	Chr3:9204591-9254590	Hmel203003o:9150001-9200000	0.1091
	Chr21:350001-400000	Hmel221001o:350001-400000	0.1088 [a]
	Chr1:11650001-11700000	Hmel201001o:11650001-11700000	0.1086 [a,b]
	Chr7:250001-300000	Hmel207001o:250001-300000	0.1082
	Chr11:4400001-4450000	Hmel211001o:4400001-4450000	0.1076
	Chr7:200001-250000	Hmel207001o:200001-250000	0.1068
	Chr17:1-50000	Hmel217001o:1-50000	0.1066 [a]
	Chr6:13700001-13750000	Hmel206001o:13700001-13750000	0.1064
	Chr2:7950001-8000000	Hmel202001o:7950001-8000000	0.1059
	Chr21:150001-200000	Hmel221001o:150001-200000	0.1051
	Chr15:10167747-10217746	Hmel215003o:10100001-10150000	0.1031
	Chr12:1-50000	Hmel212001o:1-50000	0.1026
	Chr7:8850001-8900000	Hmel207001o:8850001-8900000	0.1026
	Chr12:12050001-12100000	Hmel212001o:12050001-12100000	0.1025
	Chr1:16900001-16950000	Hmel201001o:16900001-16950000	0.1024
	Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.1010
	NA	Hmel200209o:1-50000	0.1008
	Chr6:13650001-13700000	Hmel206001o:13650001-13700000	0.1007
	Chr21:7300001-7350000	Hmel221001o:7300001-7350000	0.1000
	Chr11:3900001-3950000	Hmel211001o:3900001-3950000	0.1000
	Chr20:100001-150000	Hmel220001o:100001-150000	0.0986
	Chr7:8650001-8700000	Hmel207001o:8650001-8700000	0.0982

Comparison in *H. melpomene*	Chr (bp)	Scaf (bp)	F_{ST}
	Chr18:1153175-1203174	Hmel218003o:800001-850000	0.4156 [c]
	Chr18:348029-398028	Hmel218002o:300001-350000	0.3156
	Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.3049 [d]
	NA	Hmel200252o:1-50000	0.3038
	Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.3012 [d]
	Chr18:1053175-1103174	Hmel218003o:700001-750000	0.3000 [c]
	Chr18:1103175-1153174	Hmel218003o:750001-800000	0.2959 [c]
	NA	Hmel200056o:1-50000	0.2937
	Chr15:1617747-1667746	Hmel215003o:1550001-1600000	0.2786
	Chr15:1817747-1867746	Hmel215003o:1750001-1800000	0.2699
	Chr8:9050001-9100000	Hmel208001o:9050001-9100000	0.2648
	Chr15:1767747-1817746	Hmel215003o:1700001-1750000	0.2351
	Chr18:1303175-1353174	Hmel218003o:950001-1000000	0.2340
	Chr15:1117747-1167746	Hmel215003o:1050001-1100000	0.2151
	Chr18:1203175-1253174	Hmel218003o:850001-900000	0.2103
	Chr6:13000001-13050000	Hmel206001o:13000001-13050000	0.2079
	Chr15:1167747-1217746	Hmel215003o:1100001-1150000	0.2069
	Chr15:1867747-1917746	Hmel215003o:1800001-1850000	0.1943
	Chr15:1517747-1567746	Hmel215003o:1450001-1500000	0.1919 [d]
	Chr18:2953175-3003174	Hmel218003o:2600001-2650000	0.1903
	Chr18:3003175-3053174	Hmel218003o:2650001-2700000	0.1873
	Chr18:1-50000	Hmel218001o:1-50000	0.1835
	Chr6:13150001-13200000	Hmel206001o:13150001-13200000	0.1812
	Chr18:1353175-1403174	Hmel218003o:1000001-1050000	0.1754
	Chr15:1667747-1717746	Hmel215003o:1600001-1650000	0.1753
	Chr15:1717747-1767746	Hmel215003o:1650001-1700000	0.1728
aglaope :	Chr18:753175-803174	Hmel218003o:400001-450000	0.1623
amaryllis	Chr18:5703175-5753174	Hmel218003o:5350001-5400000	0.1564
	Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.1545

Chr18:98029-148028	Hmel218002o:50001-100000	0.1530
Chr18:903175-953174	Hmel218003o:550001-600000	0.1519
Chr7:14300001-14350000	Hmel207001o:14300001-14350000	0.1500
Chr18:1253175-1303174	Hmel218003o:900001-950000	0.1498
Chr13:7100001-7150000	Hmel213001o:7100001-7150000	0.1467 [a]
Chr15:1417747-1467746	Hmel215003o:1350001-1400000	0.1445
Chr18:48029-98028	Hmel218002o:1-50000	0.1410
Chr15:2267747-2317746	Hmel215003o:2200001-2250000	0.1390
Chr15:1217747-1267746	Hmel215003o:1150001-1200000	0.1327
Chr18:2903175-2953174	Hmel218003o:2550001-2600000	0.1313
Chr18:1403175-1453174	Hmel218003o:1050001-1100000	0.1309
Chr18:1003175-1053174	Hmel218003o:650001-700000	0.1307
Chr20:9923271-9973270	Hmel220003o:9650001-9700000	0.1289
Chr6:14000001-14050000	Hmel206001o:14000001-14050000	0.1238
NA	Hmel200036o:1-50000	0.1237
Chr13:10350001-10400000	Hmel213001o:10350001-10400000	0.1230
Chr12:16200001-16250000	Hmel212001o:16200001-16250000	0.1189
Chr18:3103175-3153174	Hmel218003o:2750001-2800000	0.1179
Chr2:3850001-3900000	Hmel202001o:3850001-3900000	0.1163
Chr18:953175-1003174	Hmel218003o:600001-650000	0.1161
Chr10:50001-100000	Hmel210001o:50001-100000	0.1118
Chr19:50001-100000	Hmel219001o:50001-100000	0.1111
Chr15:2017747-2067746	Hmel215003o:1950001-2000000	0.1093
Chr18:1453175-1503174	Hmel218003o:1100001-1150000	0.1073
Chr18:3153175-3203174	Hmel218003o:2800001-2850000	0.1072
Chr2:4350001-4400000	Hmel202001o:4350001-4400000	0.1072
Chr18:1553175-1603174	Hmel218003o:1200001-1250000	0.1060

	NA	Hmel200257o:1-50000	0.4693
	Chr18:1153175-1203174	Hmel218003o:800001-850000	0.4200 [c]
	Chr18:1053175-1103174	Hmel218003o:700001-750000	0.2961 [c]
	Chr15:1567747-1617746	Hmel215003o:1500001-1550000	0.2957 [d]
	Chr15:1467747-1517746	Hmel215003o:1400001-1450000	0.2927 [d]
	Chr18:1103175-1153174	Hmel218003o:750001-800000	0.2876 [c]
	Chr18:1203175-1253174	Hmel218003o:850001-900000	0.2705
	Chr6:13000001-13050000	Hmel206001o:13000001-13050000	0.2630
	Chr15:1617747-1667746	Hmel215003o:1550001-1600000	0.2618
	NA	Hmel200075o:1-50000	0.2574
	Chr10:250001-300000	Hmel210001o:250001-300000	0.2548
	NA	Hmel200084o:1-50000	0.2389
	Chr1:1-50000	Hmel201001o:1-50000	0.2312
	Chr15:1167747-1217746	Hmel215003o:1100001-1150000	0.2237
	Chr15:1817747-1867746	Hmel215003o:1750001-1800000	0.2189
	Chr13:7100001-7150000	Hmel213001o:7100001-7150000	0.2130 [a]
	Chr15:1717747-1767746	Hmel215003o:1650001-1700000	0.2055
	Chr18:753175-803174	Hmel218003o:400001-450000	0.2049
	Chr18:1303175-1353174	Hmel218003o:950001-1000000	0.1933
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.1874
	Chr19:12600001-12650000	Hmel219001o:12600001-12650000	0.1862
	Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.1822
	Chr15:1417747-1467746	Hmel215003o:1350001-1400000	0.1810
	NA	Hmel200050o:1-50000	0.1690
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.1684
	Chr18:3003175-3053174	Hmel218003o:2650001-2700000	0.1622
malleti :	Chr15:1517747-1567746	Hmel215003o:1450001-1500000	0.1607 [d]

amaryllis	Chr15:1767747-1817746	Hmel215003o:1700001-1750000	0.1583
	Chr15:1117747-1167746	Hmel215003o:1050001-1100000	0.1554
	Chr1:11900001-11950000	Hmel201001o:11900001-11950000	0.1553
	Chr17:7000001-7050000	Hmel217001o:7000001-7050000	0.1537
	Chr13:7400001-7450000	Hmel213001o:7400001-7450000	0.1534
	Chr18:2953175-3003174	Hmel218003o:2600001-2650000	0.1534
	NA	Hmel200252o:1-50000	0.1534
	Chr18:5703175-5753174	Hmel218003o:5350001-5400000	0.1532
	Chr13:10300001-10350000	Hmel213001o:10300001-10350000	0.1494
	Chr18:1003175-1053174	Hmel218003o:650001-700000	0.1490
	Chr18:15453175-15503174	Hmel218003o:15100001-15150000	0.1460
	Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.1419
	Chr18:1353175-1403174	Hmel218003o:1000001-1050000	0.1417
	Chr6:13050001-13100000	Hmel206001o:13050001-13100000	0.1399
	Chr18:703175-753174	Hmel218003o:350001-400000	0.1385
	NA	Hmel200041o:1-50000	0.1371
	NA	Hmel200092o:1-50000	0.1345
	Chr15:1867747-1917746	Hmel215003o:1800001-1850000	0.1317
	Chr15:1667747-1717746	Hmel215003o:1600001-1650000	0.1297
	Chr21:7200001-7250000	Hmel221001o:7200001-7250000	0.1278
	Chr18:1253175-1303174	Hmel218003o:900001-950000	0.1260
	Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.1249
	Chr6:12950001-13000000	Hmel206001o:12950001-13000000	0.1238
	Chr15:2217747-2267746	Hmel215003o:2150001-2200000	0.1238
	Chr18:803175-853174	Hmel218003o:450001-500000	0.1233
	Chr18:403175-453174	Hmel218003o:50001-100000	0.1220
	Chr4:9640742-9690741	Hmel204003o:1-50000	0.1210
	Chr18:653175-703174	Hmel218003o:300001-350000	0.1179
	Chr18:903175-953174	Hmel218003o:550001-600000	0.1163
	NA	Hmel200056o:1-50000	0.4028
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.2829
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.2774
	Chr1:1-50000	Hmel201001o:1-50000	0.2681
	Chr21:7350001-7400000	Hmel221001o:7350001-7400000	0.2438
	Chr21:7200001-7250000	Hmel221001o:7200001-7250000	0.2347
	Chr18:348029-398028	Hmel218002o:300001-350000	0.2328
	Chr2:2700001-2750000	Hmel202001o:2700001-2750000	0.2258
	Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.2132
	Chr15:1167747-1217746	Hmel215003o:1100001-1150000	0.2067
	Chr19:50001-100000	Hmel219001o:50001-100000	0.2006
	Chr21:7250001-7300000	Hmel221001o:7250001-7300000	0.1919
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.1879
	Chr6:13750001-13800000	Hmel206001o:13750001-13800000	0.1745
	Chr17:7000001-7050000	Hmel217001o:7000001-7050000	0.1737
	Chr6:13150001-13200000	Hmel206001o:13150001-13200000	0.1733
	Chr13:7400001-7450000	Hmel213001o:7400001-7450000	0.1724
	Chr19:100001-150000	Hmel219001o:100001-150000	0.1705
	Chr1:11900001-11950000	Hmel201001o:11900001-11950000	0.1690
	Chr21:7300001-7350000	Hmel221001o:7300001-7350000	0.1666
	Chr20:11623271-11673270	Hmel220003o:11350001-11400000	0.1553
	Chr6:13050001-13100000	Hmel206001o:13050001-13100000	0.1550
	Chr21:13350001-13400000	Hmel221001o:13350001-13400000	0.1539
	Chr19:200001-250000	Hmel219001o:200001-250000	0.1462
	Chr13:7100001-7150000	Hmel213001o:7100001-7150000	0.1440 [a]
	Chr2:4350001-4400000	Hmel202001o:4350001-4400000	0.1415
	Chr11:11450001-11500000	Hmel211001o:11450001-11500000	0.1412

aglaope : malleti	Chr13:7150001-7200000	Hmel213001o:7150001-7200000	0.1385
	Chr18:15453175-15503174	Hmel218003o:15100001-15150000	0.1380
	Chr4:9640742-9690741	Hmel204003o:1-50000	0.1376
	NA	Hmel200036o:1-50000	0.1366
	Chr10:17950001-18000000	Hmel210001o:17950001-18000000	0.1361
	Chr17:1-50000	Hmel217001o:1-50000	0.1360
	Chr12:14100001-14150000	Hmel212001o:14100001-14150000	0.1343
	Chr19:1-50000	Hmel219001o:1-50000	0.1329
	Chr10:17850001-17900000	Hmel210001o:17850001-17900000	0.1310
	Chr15:1367747-1417746	Hmel215003o:1300001-1350000	0.1305
	Chr19:12600001-12650000	Hmel219001o:12600001-12650000	0.1302
	Chr21:13100001-13150000	Hmel221001o:13100001-13150000	0.1299
	Chr13:7050001-7100000	Hmel213001o:7050001-7100000	0.1297
	Chr15:1117747-1167746	Hmel215003o:1050001-1100000	0.1297
	Chr19:150001-200000	Hmel219001o:150001-200000	0.1296
	Chr21:7500001-7550000	Hmel221001o:7500001-7550000	0.1294
	Chr10:250001-300000	Hmel210001o:250001-300000	0.1282
	Chr10:17900001-17950000	Hmel210001o:17900001-17950000	0.1251
	Chr18:403175-453174	Hmel218003o:50001-100000	0.1212
	Chr20:1-50000	Hmel220001o:1-50000	0.1208
	Chr12:16200001-16250000	Hmel212001o:16200001-16250000	0.1192
	Chr19:16050001-16100000	Hmel219001o:16050001-16100000	0.1181
	Chr18:16453175-16503174	Hmel218003o:16100001-16150000	0.1161
	Chr20:14823271-14873270	Hmel220003o:14550001-14600000	0.1159
	Chr6:14000001-14050000	Hmel206001o:14000001-14050000	0.1150
	NA	Hmel200032o:1-50000	0.1144
	Chr5:4650001-4700000	Hmel205001o:4650001-4700000	0.1139
	NA	Hmel200281o:1-50000	0.1125
	Chr12:14950001-15000000	Hmel212001o:14950001-15000000	0.1103
	NA	Hmel200046o:1-50000	0.4792
	Chr3:22002-72001	Hmel203002o:1-50000	0.4716
	Chr19:16297407-16347406	Hmel219002o:50001-100000	0.4471
	NA	Hmel200058o:1-50000	0.4286
	Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.4117
	Chr19:1-50000	Hmel219001o:1-50000	0.4090
	Chr18:248029-298028	Hmel218002o:200001-250000	0.4052
	NA	Hmel200280o:1-50000	0.4036
	NA	Hmel200151o:1-50000	0.4011
	Chr19:16247407-16297406	Hmel219002o:1-50000	0.3958
	Chr20:14673271-14723270	Hmel220003o:14400001-14450000	0.3946
	Chr19:16150001-16200000	Hmel219001o:16150001-16200000	0.3921
	Chr18:298029-348028	Hmel218002o:250001-300000	0.3825
	Chr21:50001-100000	Hmel221001o:50001-100000	0.3803
	Chr3:10354591-10404590	Hmel203003o:10300001-10350000	0.3774
	Chr20:14858935-14908934	Hmel220004o:1-50000	0.3732
	Chr10:16750001-16800000	Hmel210001o:16750001-16800000	0.3706
	Chr21:1-50000	Hmel221001o:1-50000	0.3694
	Chr20:14423271-14473270	Hmel220003o:14150001-14200000	0.3679
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.3653
	Chr13:7100001-7150000	Hmel213001o:7100001-7150000	0.3610 [a]
	NA	Hmel200006o:1-50000	0.3573
	Chr20:14473271-14523270	Hmel220003o:14200001-14250000	0.3571
	Chr3:10404591-10454590	Hmel203003o:10350001-10400000	0.3536
	Chr15:10217747-10267746	Hmel215003o:10150001-10200000	0.3533
	Chr6:14050001-14100000	Hmel206001o:14050001-14100000	0.3495
eastern	Chr18:98029-148028	Hmel218002o:50001-100000	0.3477

	Chr (bp)	Scaf (bp)	F_{ST}
eastern melpomene : western *melpomene*	Chr10:16700001-16750000	Hmel210001o:16700001-16750000	0.3450
	NA	Hmel200213o:1-50000	0.3432
	Chr1:8550001-8600000	Hmel201001o:8550001-8600000	0.3400
	Chr19:50001-100000	Hmel219001o:50001-100000	0.3389
	Chr20:14723271-14773270	Hmel220003o:14450001-14500000	0.3383
	Chr20:14573271-14623270	Hmel220003o:14300001-14350000	0.3375
	Chr13:17650001-17700000	Hmel213001o:17650001-17700000	0.3325
	Chr19:16200001-16250000	Hmel219001o:16200001-16250000	0.3313
	Chr15:10167747-10217746	Hmel215003o:10100001-10150000	0.3308
	Chr6:50001-100000	Hmel206001o:50001-100000	0.3308
	Chr20:14623271-14673270	Hmel220003o:14350001-14400000	0.3303
	Chr3:10504591-10554590	Hmel203003o:10450001-10500000	0.3278
	Chr10:17900001-17950000	Hmel210001o:17900001-17950000	0.3270
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.3269
	Chr6:12100001-12150000	Hmel206001o:12100001-12150000	0.3267
	Chr18:48029-98028	Hmel218002o:1-50000	0.3257
	Chr10:1-50000	Hmel210001o:1-50000	0.3240
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.3214
	Chr1:12100001-12150000	Hmel201001o:12100001-12150000	0.3211
	Chr21:200001-250000	Hmel221001o:200001-250000	0.3211
	Chr21:100001-150000	Hmel221001o:100001-150000	0.3203
	NA	Hmel200272o:1-50000	0.3203
	Chr7:8900001-8950000	Hmel207001o:8900001-8950000	0.3187
	Chr6:12050001-12100000	Hmel206001o:12050001-12100000	0.3162
	NA	Hmel200055o:1-50000	0.3155
	Chr19:100001-150000	Hmel219001o:100001-150000	0.3154
	Chr21:13350001-13400000	Hmel221001o:13350001-13400000	0.3149
	Chr12:12850001-12900000	Hmel212001o:12850001-12900000	0.3147
	Chr15:1817747-1867746	Hmel215003o:1750001-1800000	0.3137
	Chr1:17100001-17150000	Hmel201001o:17100001-17150000	0.3127
Comparison between *H. m. rosina* and *H. c. galanthus*	**Chr (bp)**	**Scaf (bp)**	F_{ST}
	Chr12:15950001-16000000	Hmel212001o:15950001-16000000	0.7400
	Chr19:16247407-16297406	Hmel219002o:1-50000	0.7048
	Chr21:13150001-13200000	Hmel221001o:13150001-13200000	0.6717
	Chr19:16297407-16347406	Hmel219002o:50001-100000	0.6658
	Chr21:13200001-13250000	Hmel221001o:13200001-13250000	0.6650
	Chr13:1-50000	Hmel213001o:1-50000	0.6594
	Chr11:4450001-4500000	Hmel211001o:4450001-4500000	0.6537
	Chr16:46331-96330	Hmel216002o:1-50000	0.6511
	Chr18:148029-198028	Hmel218002o:100001-150000	0.6377
	Chr16:1-50000	Hmel216001o:1-50000	0.6289
	Chr18:453175-503174	Hmel218003o:100001-150000	0.6110
	Chr20:14423271-14473270	Hmel220003o:14150001-14200000	0.6012
	Chr19:16150001-16200000	Hmel219001o:16150001-16200000	0.5973
	Chr19:16347407-16397406	Hmel219002o:100001-150000	0.5953
	Chr13:17850001-17900000	Hmel213001o:17850001-17900000	0.5922
	Chr18:298029-348028	Hmel218002o:250001-300000	0.5892
	Chr20:5673271-5723270	Hmel220003o:5400001-5450000	0.5891
	NA	Hmel200268o:1-50000	0.5887
	Chr7:8950001-9000000	Hmel207001o:8950001-9000000	0.5859
	Chr1:8550001-8600000	Hmel201001o:8550001-8600000	0.5817
	Chr11:4500001-4550000	Hmel211001o:4500001-4550000	0.5794
	Chr18:248029-298028	Hmel218002o:200001-250000	0.5727

	Chr (bp)	Scaf (bp)	F_{ST}
	Chr10:12050001-12100000	Hmel210001o:12050001-12100000	0.5722
	Chr21:13300001-13350000	Hmel221001o:13300001-13350000	0.5721
	Chr21:13250001-13300000	Hmel221001o:13250001-13300000	0.5717
	Chr15:13230-63229	Hmel215002o:1-50000	0.5706
	NA	Hmel200050o:1-50000	0.5698
m. rosina: c. galanthus	Chr19:16200001-16250000	Hmel219001o:16200001-16250000	0.5689
	Chr1:2100001-2150000	Hmel201001o:2100001-2150000	0.5625
	Chr20:5523271-5573270	Hmel220003o:5250001-5300000	0.5622
	Chr3:1-50000	Hmel203001o:1-50000	0.5568
	Chr17:150001-200000	Hmel217001o:150001-200000	0.5524
	Chr11:4350001-4400000	Hmel211001o:4350001-4400000	0.5484
	Chr20:14773271-14823270	Hmel220003o:14500001-14550000	0.5481
	Chr20:5473271-5523270	Hmel220003o:5200001-5250000	0.5480
	Chr13:50001-100000	Hmel213001o:50001-100000	0.5479
	Chr17:200001-250000	Hmel217001o:200001-250000	0.5406
	Chr20:9873271-9923270	Hmel220003o:9600001-9650000	0.5333
	Chr21:13100001-13150000	Hmel221001o:13100001-13150000	0.5317
	Chr18:198029-248028	Hmel218002o:150001-200000	0.5316
	Chr16:96331-146330	Hmel216002o:50001-100000	0.5309
	Chr7:14250001-14300000	Hmel207001o:14250001-14300000	0.5302
	Chr16:9996331-10046330	Hmel216002o:9950001-10000000	0.5300
	Chr14:9125061-9175060	Hmel214004o:8850001-8900000	0.5277
	Chr3:22002-72001	Hmel203002o:1-50000	0.5260
	Chr7:100001-150000	Hmel207001o:100001-150000	0.5250
	Chr8:9300001-9350000	Hmel208001o:9300001-9350000	0.5240
	Chr13:2050001-2100000	Hmel213001o:2050001-2100000	0.5203
	Chr11:4400001-4450000	Hmel211001o:4400001-4450000	0.5196
	Chr5:50001-100000	Hmel205001o:50001-100000	0.5167
	Chr15:10167747-10217746	Hmel215003o:10100001-10150000	0.5129
	Chr15:10117747-10167746	Hmel215003o:10050001-10100000	0.5120
	Chr14:9136634-9186633	Hmel214005o:1-50000	0.5118
	Chr19:16100001-16150000	Hmel219001o:16100001-16150000	0.5109
	Chr6:1-50000	Hmel206001o:1-50000	0.5055
	Chr1:11600001-11650000	Hmel201001o:11600001-11650000	0.5051 [b]

Comparison in *H. erato*	Chr (bp)	Scaf (bp)	F_{ST}
	Chr18:1360001-1380000	Herato1801:1360001-1380000	0.4456
	Chr10:11788703-11808702	Herato1003:5500001-5520000	0.4204
	Chr18:1400001-1420000	Herato1801:1400001-1420000	0.4169
	Chr18:1240001-1260000	Herato1801:1240001-1260000	0.3999
	Chr18:1380001-1400000	Herato1801:1380001-1400000	0.3927
	Chr18:1260001-1280000	Herato1801:1260001-1280000	0.3488
	Chr15:2444234-2464233	Herato1505:2100001-2120000	0.3315
	Chr15:2424234-2444233	Herato1505:2080001-2100000	0.3228
	Chr16:13027114-13047113	Herato1605:2720001-2740000	0.3214
	Chr12:1551730-1571729	Herato1202:900001-920000	0.3026
	Chr18:14418509-14438508	Herato1805:8360001-8380000	0.2998
	Chr10:4700001-4720000	Herato1001:4700001-4720000	0.2966
	Chr14:11675327-11695326	Herato1411:4660001-4680000	0.2915
	Chr18:1280001-1300000	Herato1801:1280001-1300000	0.2889
	Chr10:10048703-10068702	Herato1003:3760001-3780000	0.2711
	Chr2:10234372-10254371	Herato0215:360001-380000	0.2665
	Chr15:2064234-2084233	Herato1505:1720001-1740000	0.2620
	Chr2:2722589-2742588	Herato0206:440001-460000	0.2618
	Chr17:12989643-13009642	Herato1703:1400001-1420000	0.2603
	Chr15:4358125-4378124	Herato1506:100001-120000	0.2535

Chr15:2464234-2484233	Herato1505:2120001-2140000	0.2529
Chr18:1340001-1360000	Herato1801:1340001-1360000	0.2462
Chr10:4680001-4700000	Herato1001:4680001-4700000	0.2422
Chr2:10134372-10154371	Herato0215:260001-280000	0.2388
Chr17:13009643-13029642	Herato1703:1420001-1440000	0.2383
Chr12:1531730-1551729	Herato1202:880001-900000	0.2347
Chr15:4258125-4278124	Herato1506:1-20000	0.2332
Chr18:5548499-5568498	Herato1803:360001-380000	0.2315
Chr18:1420001-1440000	Herato1801:1420001-1440000	0.2304
Chr1:600001-620000	Herato0101:600001-620000	0.2261
Chr1:14160001-14180000	Herato0101:14160001-14180000	0.2259
Chr17:19640279-19660278	Herato1708:2200001-2220000	0.2215 [c]
Chr17:18380279-18400278	Herato1708:940001-960000	0.2203
Chr1:14200001-14220000	Herato0101:14200001-14220000	0.2195
Chr18:1320001-1340000	Herato1801:1320001-1340000	0.2146
Chr13:13020001-13040000	Herato1301:13020001-13040000	0.2143 [c]
Chr15:1944234-1964233	Herato1505:1600001-1620000	0.2116
Chr15:2024234-2044233	Herato1505:1680001-1700000	0.2081 [d]
Chr18:14398509-14418508	Herato1805:8340001-8360000	0.2051 [d]
Chr12:991730-1011729	Herato1202:340001-360000	0.2034
Chr1:14220001-14240000	Herato0101:14220001-14240000	0.2032
Chr10:4620001-4640000	Herato1001:4620001-4640000	0.2014
Chr2:10254372-10274371	Herato0215:380001-400000	0.1994
Chr2:6622801-6642800	Herato0211:1220001-1240000	0.1991
Chr1:5860001-5880000	Herato0101:5860001-5880000	0.1990
Chr13:14360001-14380000	Herato1301:14360001-14380000	0.1981
Chr7:12600001-12620000	Herato0701:12600001-12620000	0.1980
Chr12:21051730-21071729	Herato1202:20400001-20420000	0.1971
Chr21:10120001-10140000	Herato2101:10120001-10140000	0.1946
Chr21:9380001-9400000	Herato2101:9380001-9400000	0.1945
Chr1:5820001-5840000	Herato0101:5820001-5840000	0.1918
Chr17:19600279-19620278	Herato1708:2160001-2180000	0.1916 [d]
Chr15:4278125-4298124	Herato1506:20001-40000	0.1916 [c]
Chr15:2524234-2544233	Herato1505:2180001-2200000	0.1913
Chr15:2404234-2424233	Herato1505:2060001-2080000	0.1904
Chr15:4244234-4264233	Herato1505:3900001-3920000	0.1900
Chr2:4230328-4250327	Herato0209:220001-240000	0.1900
Chr15:2004234-2024233	Herato1505:1660001-1680000	0.1898
Chr15:2644234-2664233	Herato1505:2300001-2320000	0.1897
Chr17:19620279-19640278	Herato1708:2180001-2200000	0.1885
Chr2:4330328-4350327	Herato0209:320001-340000	0.1881
Chr17:13029643-13049642	Herato1703:1440001-1460000	0.1881
Chr1:14140001-14160000	Herato0101:14140001-14160000	0.1857
Chr15:2264234-2284233	Herato1505:1920001-1940000	0.1855
Chr17:13049643-13069642	Herato1703:1460001-1480000	0.1853
Chr2:4270328-4290327	Herato0209:260001-280000	0.1852
Chr10:11768703-11788702	Herato1003:5480001-5500000	0.1832
Chr15:2304234-2324233	Herato1505:1960001-1980000	0.1829
Chr10:7308703-7328702	Herato1003:1020001-1040000	0.1803
Chr10:10088703-10108702	Herato1003:3800001-3820000	0.1789
Chr15:1984234-2004233	Herato1505:1640001-1660000	0.1776
Chr2:6462801-6482800	Herato0211:1060001-1080000	0.1772
Chr15:2324234-2344233	Herato1505:1980001-2000000	0.1771
Chr15:4418125-4438124	Herato1506:160001-180000	0.1766
Chr17:18340279-18360278	Herato1708:900001-920000	0.1762

Chr15:2384234-2404233	Herato1505:2040001-2060000	0.1743
Chr19:10311858-10331857	Herato1904:6080001-6100000	0.1737
Chr19:19385737-19405736	Herato1910:2140001-2160000	0.1737
Chr12:1371730-1391729	Herato1202:720001-740000	0.1728
Chr19:10531858-10551857	Herato1904:6300001-6320000	0.1710
Chr1:5840001-5860000	Herato0101:5840001-5860000	0.1699
Chr18:1100001-1120000	Herato1801:1100001-1120000	0.1693
Chr15:1964234-1984233	Herato1505:1620001-1640000	0.1691
Chr2:4310328-4330327	Herato0209:300001-320000	0.1684
Chr21:9500001-9520000	Herato2101:9500001-9520000	0.1680
Chr10:4660001-4680000	Herato1001:4660001-4680000	0.1671 [d]
Chr10:10068703-10088702	Herato1003:3780001-3800000	0.1667
Chr14:13075327-13095326	Herato1411:6060001-6080000	0.1664
Chr2:2702589-2722588	Herato0206:420001-440000	0.1655
Chr2:12194372-12214371	Herato0215:2320001-2340000	0.1654
Chr17:18360279-18380278	Herato1708:920001-940000	0.1648
Chr2:6442801-6462800	Herato0211:1040001-1060000	0.1646 [a]
Chr2:4290328-4310327	Herato0209:280001-300000	0.1639
Chr18:1300001-1320000	Herato1801:1300001-1320000	0.1636
Chr14:4067649-4087648	Herato1408:3560001-3580000	0.1630
Chr15:4338125-4358124	Herato1506:80001-100000	0.1624
Chr2:4130328-4150327	Herato0209:120001-140000	0.1621
Chr1:14240001-14260000	Herato0101:14240001-14260000	0.1618
Chr19:5951858-5971857	Herato1904:1720001-1740000	0.1615
Chr15:2044234-2064233	Herato1505:1700001-1720000	0.1614
Chr18:14438509-14458508	Herato1805:8380001-8400000	0.1613
Chr1:12340001-12360000	Herato0101:12340001-12360000	0.1610
Chr21:9540001-9560000	Herato2101:9540001-9560000	0.1609
Chr18:160001-180000	Herato1801:160001-180000	0.1605
Chr13:13000001-13020000	Herato1301:13000001-13020000	0.1597
Chr1:15640001-15660000	Herato0101:15640001-15660000	0.1596
Chr2:6482801-6502800	Herato0211:1080001-1100000	0.1595 [d]
Chr10:6139355-6159354	Herato1002:20001-40000	0.1591
Chr18:1040001-1060000	Herato1801:1040001-1060000	0.1587
Chr18:1220001-1240000	Herato1801:1220001-1240000	0.1580
Chr17:720001-740000	Herato1701:720001-740000	0.1580
Chr18:1160001-1180000	Herato1801:1160001-1180000	0.1570
Chr15:2624234-2644233	Herato1505:2280001-2300000	0.1569
Chr15:4224234-4244233	Herato1505:3880001-3900000	0.1568
Chr3:12893055-12913054	Herato0310:6940001-6960000	0.1566
Chr2:4210328-4230327	Herato0209:200001-220000	0.1555
Chr10:11808703-11828702	Herato1003:5520001-5540000	0.1554
Chr15:2584234-2604233	Herato1505:2240001-2260000	0.1552
Chr2:3002589-3022588	Herato0206:720001-740000	0.1545
Chr2:4190328-4210327	Herato0209:180001-200000	0.1523
Chr1:14180001-14200000	Herato0101:14180001-14200000	0.1514
Chr18:5568499-5588498	Herato1803:380001-400000	0.1509
Chr14:13395327-13415326	Herato1411:6380001-6400000	0.1507
Chr12:7051730-7071729	Herato1202:6400001-6420000	0.1506
Chr21:9360001-9380000	Herato2101:9360001-9380000	0.1505
Chr15:2504234-2524233	Herato1505:2160001-2180000	0.1497
Chr19:14392110-14412109	Herato1907:1-20000	0.1490
Chr2:4170328-4190327	Herato0209:160001-180000	0.1486
Chr8:5160001-5180000	Herato0801:5160001-5180000	0.1484
Chr2:2762589-2782588	Herato0206:480001-500000	0.1482

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Chr3:13093055-13113054	Herato0310:7140001-7160000	0.1479
Chr2:10154372-10174371	Herato0215:280001-300000	0.1473
Chr15:4378125-4398124	Herato1506:120001-140000	0.1473
Chr17:19580279-19600278	Herato1708:2140001-2160000	0.1473
Chr13:14340001-14360000	Herato1301:14340001-14360000	0.1471
Chr18:4100001-4120000	Herato1801:4100001-4120000	0.1458
Chr2:4150328-4170327	Herato0209:140001-160000	0.1446
Chr19:13282690-13302689	Herato1906:340001-360000	0.1445
Chr19:13102690-13122689	Herato1906:160001-180000	0.1434
Chr13:5420001-5440000	Herato1301:5420001-5440000	0.1426
Chr19:16182653-16202652	Herato1908:1720001-1740000	0.1423
Chr2:10174372-10194371	Herato0215:300001-320000	0.1421
Chr3:13013055-13033054	Herato0310:7060001-7080000	0.1418
Chr18:700001-720000	Herato1801:700001-720000	0.1418
Chr10:11908703-11928702	Herato1003:5620001-5640000	0.1415
Chr2:3182589-3202588	Herato0206:900001-920000	0.1413
Chr15:15157220-15177219	Herato1507:10720001-10740000	0.1408
Chr8:6560001-6580000	Herato0801:6560001-6580000	0.1407
Chr13:13260001-13280000	Herato1301:13260001-13280000	0.1405
Chr19:10291858-10311857	Herato1904:6060001-6080000	0.1402
Chr1:16480001-16500000	Herato0101:16480001-16500000	0.1400 [a]
Chr17:12969643-12989642	Herato1703:1380001-1400000	0.1395
Chr12:21071730-21091729	Herato1202:20420001-20440000	0.1394
Chr10:5880001-5900000	Herato1001:5880001-5900000	0.1391
Chr2:6702801-6722800	Herato0211:1300001-1320000	0.1386
Chr18:7178509-7198508	Herato1805:1120001-1140000	0.1386 [a]
Chr18:12378509-12398508	Herato1805:6320001-6340000	0.1385
Chr17:700001-720000	Herato1701:700001-720000	0.1384
Chr10:10028703-10048702	Herato1003:3740001-3760000	0.1380
Chr15:2084234-2104233	Herato1505:1740001-1760000	0.1379
Chr2:2922589-2942588	Herato0206:640001-660000	0.1373
Chr10:6219355-6239354	Herato1002:100001-120000	0.1371
Chr10:12768703-12788702	Herato1003:6480001-6500000	0.1371
Chr2:4110328-4130327	Herato0209:100001-120000	0.1370
Chr2:2882589-2902588	Herato0206:600001-620000	0.1365
Chr19:10391858-10411857	Herato1904:6160001-6180000	0.1362
Chr13:14700001-14720000	Herato1301:14700001-14720000	0.1362
Chr13:9180001-9200000	Herato1301:9180001-9200000	0.1362 [a]
Chr1:14080001-14100000	Herato0101:14080001-14100000	0.1357
Chr10:6020001-6040000	Herato1001:6020001-6040000	0.1350
Chr3:13033055-13053054	Herato0310:7080001-7100000	0.1350
Chr6:8385253-8405252	Herato0606:3560001-3580000	0.1346
Chr15:4398125-4418124	Herato1506:140001-160000	0.1341
Chr17:13089643-13109642	Herato1703:1500001-1520000	0.1340
Chr2:4350328-4370327	Herato0209:340001-360000	0.1337
Chr10:6199355-6219354	Herato1002:80001-100000	0.1335
Chr10:5860001-5880000	Herato1001:5860001-5880000	0.1331
Chr1:8280001-8300000	Herato0101:8280001-8300000	0.1331
Chr15:2484234-2504233	Herato1505:2140001-2160000	0.1326
Chr2:4610328-4630327	Herato0209:600001-620000	0.1323
Chr15:1924234-1944233	Herato1505:1580001-1600000	0.1322
Chr14:13375327-13395326	Herato1411:6360001-6380000	0.1319
Chr18:440001-460000	Herato1801:440001-460000	0.1318
Chr18:1560001-1580000	Herato1801:1560001-1580000	0.1313
Chr4:7825981-7845980	Herato0411:1820001-1840000	0.1300

Chr1:14280001-14300000	Herato0101:14280001-14300000	0.1297
Chr21:9520001-9540000	Herato2101:9520001-9540000	0.1289
Chr1:21860001-21880000	Herato0101:21860001-21880000	0.1284
Chr12:1511730-1531729	Herato1202:860001-880000	0.1282
Chr2:6762801-6782800	Herato0211:1360001-1380000	0.1282
Chr17:19680279-19700278	Herato1708:2240001-2260000	0.1282
Chr16:13027114-13047113	Herato1605:2720001-2740000	0.2453
Chr17:19640279-19660278	Herato1708:2200001-2220000	0.2411
Chr17:19620279-19640278	Herato1708:2180001-2200000	0.2109
Chr2:4190328-4210327	Herato0209:180001-200000	0.2083
Chr21:10200001-10220000	Herato2101:10200001-10220000	0.1939
Chr17:17032063-17052062	Herato1705:2760001-2780000	0.1927
Chr21:10120001-10140000	Herato2101:10120001-10140000	0.1832
Chr17:19600279-19620278	Herato1708:2160001-2180000	0.1823
Chr12:991730-1011729	Herato1202:340001-360000	0.1746
Chr14:4067649-4087648	Herato1408:3560001-3580000	0.1542
Chr15:2424234-2444233	Herato1505:2080001-2100000	0.1488
Chr2:4330328-4350327	Herato0209:320001-340000	0.1376
Chr21:10140001-10160000	Herato2101:10140001-10160000	0.1320
Chr18:5628499-5648498	Herato1803:440001-460000	0.1306
Chr21:10180001-10200000	Herato2101:10180001-10200000	0.1301
Chr6:17877932-17897931	Herato0607:1-20000	0.1298
Chr10:4640001-4660000	Herato1001:4640001-4660000	0.1225
Chr17:19680279-19700278	Herato1708:2240001-2260000	0.1198
Chr2:1061392-1081391	Herato0204:460001-480000	0.1196 [d]
Chr2:2762589-2782588	Herato0206:480001-500000	0.1179
Chr5:13920631-13940630	Herato0511:60001-80000	0.1169
Chr21:9540001-9560000	Herato2101:9540001-9560000	0.1169
Chr6:17745253-17765252	Herato0606:12920001-12940000	0.1162
Chr13:13000001-13020000	Herato1301:13000001-13020000	0.1109
Chr21:10220001-10240000	Herato2101:10220001-10240000	0.1093
Chr2:6462801-6482800	Herato0211:1060001-1080000	0.1085
Chr2:6482801-6502800	Herato0211:1080001-1100000	0.1083
Chr4:2785150-2805149	Herato0402:100001-120000	0.1077
Chr13:8580001-8600000	Herato1301:8580001-8600000	0.1072
Chr17:19980279-20000278	Herato1708:2540001-2560000	0.1060
Chr19:10511858-10531857	Herato1904:6280001-6300000	0.1041
Chr2:4670328-4690327	Herato0209:660001-680000	0.1040
Chr2:4230328-4250327	Herato0209:220001-240000	0.0998
Chr6:17145253-17165252	Herato0606:12320001-12340000	0.0992
Chr14:4047649-4067648	Herato1408:3540001-3560000	0.0958 [a]
Chr2:2802589-2822588	Herato0206:520001-540000	0.0948
Chr15:2644234-2664233	Herato1505:2300001-2320000	0.0940
Chr18:1280001-1300000	Herato1801:1280001-1300000	0.0930
Chr18:7218509-7238508	Herato1805:1160001-1180000	0.0915
Chr10:7368703-7388702	Herato1003:1080001-1100000	0.0906
Chr13:13260001-13280000	Herato1301:13260001-13280000	0.0900
Chr17:18360279-18380278	Herato1708:920001-940000	0.0893 [d]
Chr15:9277220-9297219	Herato1507:4840001-4860000	0.0890 [a]
Chr18:6658509-6678508	Herato1805:600001-620000	0.0879
Chr13:13180001-13200000	Herato1301:13180001-13200000	0.0878
Chr21:2380001-2400000	Herato2101:2380001-2400000	0.0876
Chr7:180001-200000	Herato0701:180001-200000	0.0866
Chr2:2702589-2722588	Herato0206:420001-440000	0.0865
Chr10:23896785-23916784	Herato1007:5620001-5640000	0.0855

Chr19:10531858-10551857	Herato1904:6300001-6320000	0.0842
Chr2:881392-901391	Herato0204:280001-300000	0.0840
Chr15:4338125-4358124	Herato1506:80001-100000	0.0833
Chr18:20001-40000	Herato1801:20001-40000	0.0833
Chr13:9880001-9900000	Herato1301:9880001-9900000	0.0833
Chr17:19580279-19600278	Herato1708:2140001-2160000	0.0832
Chr17:18380279-18400278	Herato1708:940001-960000	0.0831
Chr15:4358125-4378124	Herato1506:100001-120000	0.0829
Chr10:5880001-5900000	Herato1001:5880001-5900000	0.0823
Chr2:1761392-1781391	Herato0204:1160001-1180000	0.0823
Chr21:9360001-9380000	Herato2101:9360001-9380000	0.0818
Chr17:19460279-19480278	Herato1708:2020001-2040000	0.0809
Chr17:19480279-19500278	Herato1708:2040001-2060000	0.0803
Chr20:17220001-17240000	Herato2001:17220001-17240000	0.0803
Chr10:7348703-7368702	Herato1003:1060001-1080000	0.0801
Chr15:232040-252039	Herato1503:1-20000	0.0800
Chr2:6422801-6442800	Herato0211:1020001-1040000	0.0795
Chr20:7320001-7340000	Herato2001:7320001-7340000	0.0791
Chr6:17934275-17954274	Herato0608:20001-40000	0.0779
Chr10:22276785-22296784	Herato1007:4000001-4020000	0.0778
Chr17:660001-680000	Herato1701:660001-680000	0.0770
Chr2:761392-781391	Herato0204:160001-180000	0.0767
Chr2:6442801-6462800	Herato0211:1040001-1060000	0.0762
Chr15:215496-235495	Herato1502:140001-160000	0.0760
Chr18:16399306-16419305	Herato1806:20001-40000	0.0759
Chr3:5000001-5020000	Herato0301:5000001-5020000	0.0758
Chr15:2504234-2524233	Herato1505:2160001-2180000	0.0758
Chr18:5388499-5408498	Herato1803:200001-220000	0.0756
Chr2:2922589-2942588	Herato0206:640001-660000	0.0749
Chr10:7408703-7428702	Herato1003:1120001-1140000	0.0747
Chr2:1041392-1061391	Herato0204:440001-460000	0.0746
Chrmt:1-20000	Herato_mt:1-20000	0.0746
Chr20:16300001-16320000	Herato2001:16300001-16320000	0.0739
Chr17:18820279-18840278	Herato1708:1380001-1400000	0.0735
Chr2:4210328-4230327	Herato0209:200001-220000	0.0735
Chr17:11468079-11488078	Herato1702:1-20000	0.0731
Chr15:4258125-4278124	Herato1506:1-20000	0.0730
Chr17:19540279-19560278	Herato1708:2100001-2120000	0.0730
Chr10:10048703-10068702	Herato1003:3760001-3780000	0.0725
Chr19:22485737-22505736	Herato1910:5240001-5260000	0.0722
Chr6:17914275-17934274	Herato0608:1-20000	0.0720
Chr9:12570465-12590464	Herato0902:1-20000	0.0720 [a]
Chr2:2722589-2742588	Herato0206:440001-460000	0.0719
Chr2:841392-861391	Herato0204:240001-260000	0.0717
Chr19:22545737-22565736	Herato1910:5300001-5320000	0.0715
Chr17:18880279-18900278	Herato1708:1440001-1460000	0.0709
Chr18:7258509-7278508	Herato1805:1200001-1220000	0.0706
Chr14:13135327-13155326	Herato1411:6120001-6140000	0.0703
Chr21:9580001-9600000	Herato2101:9580001-9600000	0.0702
Chr14:4287649-4307648	Herato1408:3780001-3800000	0.0701
Chr17:19000279-19020278	Herato1708:1560001-1580000	0.0701
Chr13:15460001-15480000	Herato1301:15460001-15480000	0.0699
Chr10:600001-620000	Herato1001:600001-620000	0.0696
Chr21:11560001-11580000	Herato2101:11560001-11580000	0.0695
Chr17:20313647-20333646	Herato1715:1-20000	0.0694
Chr17:7840001-7860000	Herato1701:7840001-7860000	0.0694

emma
(population 1) :
lativitta

Chr2:6802801-6822800	Herato0211:1400001-1420000	0.0694
Chr21:10100001-10120000	Herato2101:10100001-10120000	0.0691
Chr14:4127649-4147648	Herato1408:3620001-3640000	0.0690
Chr6:140001-160000	Herato0601:140001-160000	0.0684
Chr17:11588079-11608078	Herato1702:120001-140000	0.0677
Chr17:7160001-7180000	Herato1701:7160001-7180000	0.0677
Chr21:10280001-10300000	Herato2101:10280001-10300000	0.0671
Chr1:10340001-10360000	Herato0101:10340001-10360000	0.0670
Chr15:6557220-6577219	Herato1507:2120001-2140000	0.0668
Chr2:1741392-1761391	Herato0204:1140001-1160000	0.0666
Chr2:1101392-1121391	Herato0204:500001-520000	0.0665
Chr20:6620001-6640000	Herato2001:6620001-6640000	0.0665
Chr21:10160001-10180000	Herato2101:10160001-10180000	0.0664
Chr2:4150328-4170327	Herato0209:140001-160000	0.0660
Chr1:14120001-14140000	Herato0101:14120001-14140000	0.0656
Chr18:14418509-14438508	Herato1805:8360001-8380000	0.0651
Chr2:781392-801391	Herato0204:180001-200000	0.0649
Chr9:6420001-6440000	Herato0901:6420001-6440000	0.0649
Chr15:2444234-2464233	Herato1505:2100001-2120000	0.0649
Chr2:10134372-10154371	Herato0215:260001-280000	0.0649
Chr6:1900001-1920000	Herato0601:1900001-1920000	0.0648
Chr6:15865253-15885252	Herato0606:11040001-11060000	0.0648
Chr10:5920001-5940000	Herato1001:5920001-5940000	0.0646
Chr21:9440001-9460000	Herato2101:9440001-9460000	0.0645
Chr17:2400001-2420000	Herato1701:2400001-2420000	0.0643
Chr10:8068703-8088702	Herato1003:1780001-1800000	0.0643
Chr18:9038509-9058508	Herato1805:2980001-3000000	0.0642
Chr9:2720001-2740000	Herato0901:2720001-2740000	0.0641
Chr19:6211858-6231857	Herato1904:1980001-2000000	0.0635
Chr17:19440279-19460278	Herato1708:2000001-2020000	0.0633
Chr18:5348499-5368498	Herato1803:160001-180000	0.0631
Chr3:820001-840000	Herato0301:820001-840000	0.0631
Chr17:18920279-18940278	Herato1708:1480001-1500000	0.0628
Chr15:4278125-4298124	Herato1506:20001-40000	0.0628
Chr10:10488703-10508702	Herato1003:4200001-4220000	0.0627
Chr2:941392-961391	Herato0204:340001-360000	0.0626
Chr6:1880001-1900000	Herato0601:1880001-1900000	0.0626
Chr18:4220001-4240000	Herato1801:4220001-4240000	0.0625
Chr12:16231730-16251729	Herato1202:15580001-15600000	0.0624
Chr15:4418125-4438124	Herato1506:160001-180000	0.0623
Chr2:1721392-1741391	Herato0204:1120001-1140000	0.0623
Chr6:8945253-8965252	Herato0606:4120001-4140000	0.0623
Chr15:16065066-16085065	Herato1514:40001-60000	0.0622
Chr17:19140279-19160278	Herato1708:1700001-1720000	0.0620
Chr6:18144614-18164613	Herato0609:180001-200000	0.0618 [a]
Chr17:19900279-19920278	Herato1708:2460001-2480000	0.0618
Chr3:80001-100000	Herato0301:80001-100000	0.0617
Chr20:18080001-18100000	Herato2001:18080001-18100000	0.0617
Chr18:9318509-9338508	Herato1805:3260001-3280000	0.0616
Chr8:4140001-4160000	Herato0801:4140001-4160000	0.0616 [d]
Chr20:13880001-13900000	Herato2001:13880001-13900000	0.0616
Chr8:4160001-4180000	Herato0801:4160001-4180000	0.0615
Chr2:4170328-4190327	Herato0209:160001-180000	0.0613
Chr10:5900001-5920000	Herato1001:5900001-5920000	0.0612
Chr19:22465737-22485736	Herato1910:5220001-5240000	0.0612
Chr17:19520279-19540278	Herato1708:2080001-2100000	0.0611

Chr7:1240001-1260000	Herato0701:1240001-1260000	0.0611
Chr2:1081392-1101391	Herato0204:480001-500000	0.0609
Chr6:10805253-10825252	Herato0606:5980001-6000000	0.0607
Chr20:13720001-13740000	Herato2001:13720001-13740000	0.0604
Chr1:14100001-14120000	Herato0101:14100001-14120000	0.0603
Chr17:19040279-19060278	Herato1708:1600001-1620000	0.0603
Chr20:17700001-17720000	Herato2001:17700001-17720000	0.0602
Chr2:4310328-4330327	Herato0209:300001-320000	0.0601
Chr13:1960001-1980000	Herato1301:1960001-1980000	0.0601
Chr15:364234-384233	Herato1505:20001-40000	0.0601
Chr13:1820001-1840000	Herato1301:1820001-1840000	0.0600
Chr20:12320001-12340000	Herato2001:12320001-12340000	0.0600
Chr1:5860001-5880000	Herato0101:5860001-5880000	0.0599
Chr2:961392-981391	Herato0204:360001-380000	0.0599
Chr2:1561392-1581391	Herato0204:960001-980000	0.0597
Chr18:6638509-6658508	Herato1805:580001-600000	0.0594
Chr2:11854372-11874371	Herato0215:1980001-2000000	0.0594
Chr10:23916785-23936784	Herato1007:5640001-5660000	0.0594
Chr13:13020001-13040000	Herato1301:13020001-13040000	0.0593
Chr17:19420279-19440278	Herato1708:1980001-2000000	0.0593
Chr20:12820001-12840000	Herato2001:12820001-12840000	0.0593
Chr19:10291858-10311857	Herato1904:6060001-6080000	0.0592
Chr2:6502801-6522800	Herato0211:1100001-1120000	0.0591
Chr17:18340279-18360278	Herato1708:900001-920000	0.0589
Chr13:10500001-10520000	Herato1301:10500001-10520000	0.0587
Chr2:1701392-1721391	Herato0204:1100001-1120000	0.0586
Chr2:13494372-13514371	Herato0215:3620001-3640000	0.0586
Chr21:10640001-10660000	Herato2101:10640001-10660000	0.0583
Chr10:7888703-7908702	Herato1003:1600001-1620000	0.0582
Chr13:15320001-15340000	Herato1301:15320001-15340000	0.0580
Chr16:13027114-13047113	Herato1605:2720001-2740000	0.2935
Chr2:2722589-2742588	Herato0206:440001-460000	0.2654
Chr2:4230328-4250327	Herato0209:220001-240000	0.2373
Chr2:4210328-4230327	Herato0209:200001-220000	0.2006
Chr2:4370328-4390327	Herato0209:360001-380000	0.1944
Chr2:2702589-2722588	Herato0206:420001-440000	0.1926
Chr17:18380279-18400278	Herato1708:940001-960000	0.1888
Chr17:11588079-11608078	Herato1702:120001-140000	0.1804
Chr21:10120001-10140000	Herato2101:10120001-10140000	0.1791
Chr2:4190328-4210327	Herato0209:180001-200000	0.1723
Chr21:10200001-10220000	Herato2101:10200001-10220000	0.1709
Chr2:3434279-3454278	Herato0208:20001-40000	0.1674
Chr13:13260001-13280000	Herato1301:13260001-13280000	0.1647
Chr2:4330328-4350327	Herato0209:320001-340000	0.1620
Chr19:13282690-13302689	Herato1906:340001-360000	0.1602
Chr2:7982801-8002800	Herato0211:2580001-2600000	0.1584
Chr2:4310328-4330327	Herato0209:300001-320000	0.1583
Chr2:6622801-6642800	Herato0211:1220001-1240000	0.1574
Chr2:4350328-4370327	Herato0209:340001-360000	0.1564
Chr2:5722801-5742800	Herato0211:320001-340000	0.1521
Chr2:7402801-7422800	Herato0211:2000001-2020000	0.1517
Chr21:9360001-9380000	Herato2101:9360001-9380000	0.1509
Chr2:4110328-4130327	Herato0209:100001-120000	0.1500
Chr9:12643718-12663717	Herato0903:20001-40000	0.1497
Chr15:2424234-2444233	Herato1505:2080001-2100000	0.1465
Chr21:9540001-9560000	Herato2101:9540001-9560000	0.1463

Chr2:2982589-3002588	Herato0206:700001-720000	0.1450
Chr2:3002589-3022588	Herato0206:720001-740000	0.1431
Chr2:1701392-1721391	Herato0204:1100001-1120000	0.1419
Chr14:4067649-4087648	Herato1408:3560001-3580000	0.1415
Chr2:8578934-8598933	Herato0212:60001-80000	0.1407
Chr17:18340279-18360278	Herato1708:900001-920000	0.1388
Chr2:10014372-10034371	Herato0215:140001-160000	0.1374
Chr21:10140001-10160000	Herato2101:10140001-10160000	0.1319
Chr2:4430328-4450327	Herato0209:420001-440000	0.1297
Chr2:7882801-7902800	Herato0211:2480001-2500000	0.1293
Chr17:18360279-18380278	Herato1708:920001-940000	0.1291
Chr9:12610465-12630464	Herato0902:40001-60000	0.1286
Chr2:8842396-8862395	Herato0214:60001-80000	0.1284
Chr2:2762589-2782588	Herato0206:480001-500000	0.1282
Chr15:4358125-4378124	Herato1506:100001-120000	0.1246 [a]
Chr2:5922801-5942800	Herato0211:520001-540000	0.1241
Chr2:5170328-5190327	Herato0209:1160001-1180000	0.1237
Chr19:5951858-5971857	Herato1904:1720001-1740000	0.1236
Chr13:15440001-15460000	Herato1301:15440001-15460000	0.1229 [a]
Chr2:5982801-6002800	Herato0211:580001-600000	0.1225
Chr2:4390328-4410327	Herato0209:380001-400000	0.1216
Chr2:9342396-9362395	Herato0214:560001-580000	0.1215
Chr2:8822396-8842395	Herato0214:40001-60000	0.1214
Chr21:9340001-9360000	Herato2101:9340001-9360000	0.1211
Chr2:7722801-7742800	Herato0211:2320001-2340000	0.1211
Chr21:10180001-10200000	Herato2101:10180001-10200000	0.1202
Chr21:9440001-9460000	Herato2101:9440001-9460000	0.1196 [a]
Chr2:7182801-7202800	Herato0211:1780001-1800000	0.1189
Chr17:19640279-19660278	Herato1708:2200001-2220000	0.1178
Chr2:6202801-6222800	Herato0211:800001-820000	0.1163 [d]
Chr12:991730-1011729	Herato1202:340001-360000	0.1159
Chr2:7602801-7622800	Herato0211:2200001-2220000	0.1156
Chr17:13009643-13029642	Herato1703:1420001-1440000	0.1153
Chr2:6222801-6242800	Herato0211:820001-840000	0.1150
Chr2:6322801-6342800	Herato0211:920001-940000	0.1146
Chr2:8082801-8102800	Herato0211:2680001-2700000	0.1145
Chr2:8022801-8042800	Herato0211:2620001-2640000	0.1144
Chr2:4570328-4590327	Herato0209:560001-580000	0.1142
Chr2:10134372-10154371	Herato0215:260001-280000	0.1139
Chr2:4610328-4630327	Herato0209:600001-620000	0.1135
Chr2:4670328-4690327	Herato0209:660001-680000	0.1134
Chr2:7222801-7242800	Herato0211:1820001-1840000	0.1129
Chr2:6422801-6442800	Herato0211:1020001-1040000	0.1128
Chr2:7082801-7102800	Herato0211:1680001-1700000	0.1119
Chr2:7642801-7662800	Herato0211:2240001-2260000	0.1118
Chr2:7622801-7642800	Herato0211:2220001-2240000	0.1113
Chr2:7282801-7302800	Herato0211:1880001-1900000	0.1109
Chr2:8802396-8822395	Herato0214:20001-40000	0.1108
Chr2:4550328-4570327	Herato0209:540001-560000	0.1101
Chr2:7362801-7382800	Herato0211:1960001-1980000	0.1097
Chr2:4650328-4670327	Herato0209:640001-660000	0.1097
Chr2:4770328-4790327	Herato0209:760001-780000	0.1085
Chr6:17877932-17897931	Herato0607:1-20000	0.1079
Chr2:9302396-9322395	Herato0214:520001-540000	0.1075
Chr2:7162801-7182800	Herato0211:1760001-1780000	0.1069

	Chr2:8002801-8022800	Herato0211:2600001-2620000	0.1067
	Chr2:7562801-7582800	Herato0211:2160001-2180000	0.1062
	Chr2:6942801-6962800	Herato0211:1540001-1560000	0.1060
	Chr17:19620279-19640278	Herato1708:2180001-2200000	0.1059
	Chr2:9682396-9702395	Herato0214:900001-920000	0.1055
	Chr2:7202801-7222800	Herato0211:1800001-1820000	0.1053
	Chr2:9242396-9262395	Herato0214:460001-480000	0.1053
	Chr2:7502801-7522800	Herato0211:2100001-2120000	0.1050
	Chr2:5962801-5982800	Herato0211:560001-580000	0.1049
	Chr2:7142801-7162800	Herato0211:1740001-1760000	0.1047
	Chr2:7262801-7282800	Herato0211:1860001-1880000	0.1042
	Chr19:13102690-13122689	Herato1906:160001-180000	0.1040
	Chr14:11675327-11695326	Herato1411:4660001-4680000	0.1038
emma	Chr2:3954279-3974278	Herato0208:540001-560000	0.1038
(population 2) :	Chr2:4710328-4730327	Herato0209:700001-720000	0.1037
lativitta	Chr2:5742801-5762800	Herato0211:340001-360000	0.1032
	Chr19:22485737-22505736	Herato1910:5240001-5260000	0.1030
	Chr2:2882589-2902588	Herato0206:600001-620000	0.1030
	Chr2:5902801-5922800	Herato0211:500001-520000	0.1027
	Chr17:11440001-11460000	Herato1701:11440001-11460000	0.1023
	Chr15:4338125-4358124	Herato1506:80001-100000	0.1019
	Chr2:7382801-7402800	Herato0211:1980001-2000000	0.1017
	Chr15:2444234-2464233	Herato1505:2100001-2120000	0.1016
	Chr2:7342801-7362800	Herato0211:1940001-1960000	0.1014
	Chr2:4910328-4930327	Herato0209:900001-920000	0.1010
	Chr13:13020001-13040000	Herato1301:13020001-13040000	0.1010
	Chr2:6802801-6822800	Herato0211:1400001-1420000	0.1009
	Chr2:7682801-7702800	Herato0211:2280001-2300000	0.1007
	Chr2:4530328-4550327	Herato0209:520001-540000	0.1001
	Chr2:7062801-7082800	Herato0211:1660001-1680000	0.0998
	Chr2:4590328-4610327	Herato0209:580001-600000	0.0997
	Chr2:6762801-6782800	Herato0211:1360001-1380000	0.0995
	Chr2:3414279-3434278	Herato0208:1-20000	0.0992
	Chr18:5628499-5648498	Herato1803:440001-460000	0.0992
	Chr17:720001-740000	Herato1701:720001-740000	0.0990
	Chr2:8382801-8402800	Herato0211:2980001-3000000	0.0988
	Chr2:4070328-4090327	Herato0209:60001-80000	0.0983
	Chr2:3454279-3474278	Herato0208:40001-60000	0.0976
	Chr17:12989643-13009642	Herato1703:1400001-1420000	0.0973
	Chr2:4890328-4910327	Herato0209:880001-900000	0.0972
	Chr2:6282801-6302800	Herato0211:880001-900000	0.0968
	Chr2:8042801-8062800	Herato0211:2640001-2660000	0.0968
	Chr13:13000001-13020000	Herato1301:13000001-13020000	0.0963
	Chr2:5822801-5842800	Herato0211:420001-440000	0.0959
	Chr2:8598934-8618933	Herato0212:80001-100000	0.0957
	Chr2:5782801-5802800	Herato0211:380001-400000	0.0957
	Chr21:17400001-17420000	Herato2101:17400001-17420000	0.0957
	Chr2:6842801-6862800	Herato0211:1440001-1460000	0.0956
	Chr2:8558934-8578933	Herato0212:40001-60000	0.0956
	Chr2:6922801-6942800	Herato0211:1520001-1540000	0.0955
	Chr2:4270328-4290327	Herato0209:260001-280000	0.0954
	Chr2:7662801-7682800	Herato0211:2260001-2280000	0.0951
	Chr2:8202801-8222800	Herato0211:2800001-2820000	0.0946
	Chr2:7442801-7462800	Herato0211:2040001-2060000	0.0945 [d]
	Chr2:6242801-6262800	Herato0211:840001-860000	0.0945
	Chr2:4130328-4150327	Herato0209:120001-140000	0.0944

Chr21:10100001-10120000	Herato2101:10100001-10120000	0.0944
Chr2:5194992-5214991	Herato0210:20001-40000	0.0942
Chr2:7002801-7022800	Herato0211:1600001-1620000	0.0942
Chr14:8675327-8695326	Herato1411:1660001-1680000	0.0937
Chr17:11420001-11440000	Herato1701:11420001-11440000	0.0937
Chr20:15200001-15220000	Herato2001:15200001-15220000	0.0935
Chr2:9782396-9802395	Herato0214:1000001-1020000	0.0933
Chr2:7122801-7142800	Herato0211:1720001-1740000	0.0929
Chr2:7582801-7602800	Herato0211:2180001-2200000	0.0928
Chr2:4790328-4810327	Herato0209:780001-800000	0.0927
Chr12:20951730-20971729	Herato1202:20300001-20320000	0.0922
Chr2:6702801-6722800	Herato0211:1300001-1320000	0.0922
Chr2:7702801-7722800	Herato0211:2300001-2320000	0.0921
Chr2:3754279-3774278	Herato0208:340001-360000	0.0921
Chr2:9894372-9914371	Herato0215:20001-40000	0.0919
Chr2:4090328-4110327	Herato0209:80001-100000	0.0918
Chr2:9502396-9522395	Herato0214:720001-740000	0.0916
Chr2:7042801-7062800	Herato0211:1640001-1660000	0.0915
Chr2:4290328-4310327	Herato0209:280001-300000	0.0911
Chr2:7482801-7502800	Herato0211:2080001-2100000	0.0908
Chr2:6742801-6762800	Herato0211:1340001-1360000	0.0904
Chr2:6182801-6202800	Herato0211:780001-800000	0.0903
Chr21:2380001-2400000	Herato2101:2380001-2400000	0.0902
Chr2:9202396-9222395	Herato0214:420001-440000	0.0902
Chr2:4250328-4270327	Herato0209:240001-260000	0.0899
Chr2:4150328-4170327	Herato0209:140001-160000	0.0896
Chr2:9662396-9682395	Herato0214:880001-900000	0.0886
Chr19:10531858-10551857	Herato1904:6300001-6320000	0.0885
Chr10:7308703-7328702	Herato1003:1020001-1040000	0.0884
Chr2:5802801-5822800	Herato0211:400001-420000	0.0883
Chr5:13506491-13526490	Herato0508:2660001-2680000	0.0881
Chr21:9500001-9520000	Herato2101:9500001-9520000	0.0877
Chr2:4170328-4190327	Herato0209:160001-180000	0.0876
Chr2:9182396-9202395	Herato0214:400001-420000	0.0875
Chr2:5582801-5602800	Herato0211:180001-200000	0.0875
Chr2:4410328-4430327	Herato0209:400001-420000	0.0874
Chr2:5702801-5722800	Herato0211:300001-320000	0.0873
Chr2:8538934-8558933	Herato0212:20001-40000	0.0872
Chr15:3464234-3484233	Herato1505:3120001-3140000	0.0869
Chr2:7842801-7862800	Herato0211:2440001-2460000	0.0869
Chr2:7462801-7482800	Herato0211:2060001-2080000	0.0868
Chr2:3834279-3854278	Herato0208:420001-440000	0.0866
Chr2:7802801-7822800	Herato0211:2400001-2420000	0.0864
Chr2:8062801-8082800	Herato0211:2660001-2680000	0.0861
Chr21:10220001-10240000	Herato2101:10220001-10240000	0.0861
Chr2:6862801-6882800	Herato0211:1460001-1480000	0.0854
Chr19:14452110-14472109	Herato1907:60001-80000	0.0853
Chr2:9362396-9382395	Herato0214:580001-600000	0.0851
Chr2:7782801-7802800	Herato0211:2380001-2400000	0.0850
Chr2:6502801-6522800	Herato0211:1100001-1120000	0.0849
Chr2:7022801-7042800	Herato0211:1620001-1640000	0.0849
Chr2:7522801-7542800	Herato0211:2120001-2140000	0.0847
Chr1:600001-620000	Herato0101:600001-620000	0.0846
Chr2:3694279-3714278	Herato0208:280001-300000	0.0845
Chr18:1360001-1380000	Herato1801:1360001-1380000	0.4511
Chr18:1380001-1400000	Herato1801:1380001-1400000	0.4183

Chr18:1240001-1260000	Herato1801:1240001-1260000	0.4130 [a]
Chr18:1400001-1420000	Herato1801:1400001-1420000	0.4041
Chr18:1260001-1280000	Herato1801:1260001-1280000	0.3684
Chr10:4700001-4720000	Herato1001:4700001-4720000	0.3516
Chr12:1551730-1571729	Herato1202:900001-920000	0.3336
Chr10:11788703-11808702	Herato1003:5500001-5520000	0.3332
Chr15:2424234-2444233	Herato1505:2080001-2100000	0.3163
Chr15:2444234-2464233	Herato1505:2100001-2120000	0.3153
Chr14:11675327-11695326	Herato1411:4660001-4680000	0.2725
Chr18:1280001-1300000	Herato1801:1280001-1300000	0.2698
Chr2:10254372-10274371	Herato0215:380001-400000	0.2600
Chr19:10311858-10331857	Herato1904:6080001-6100000	0.2547
Chr15:4418125-4438124	Herato1506:160001-180000	0.2541
Chr17:12989643-13009642	Herato1703:1400001-1420000	0.2494
Chr10:4680001-4700000	Herato1001:4680001-4700000	0.2482
Chr2:3002589-3022588	Herato0206:720001-740000	0.2471
Chr7:12600001-12620000	Herato0701:12600001-12620000	0.2443
Chr10:4620001-4640000	Herato1001:4620001-4640000	0.2442
Chr2:2722589-2742588	Herato0206:440001-460000	0.2441
Chr2:4190328-4210327	Herato0209:180001-200000	0.2440
Chr18:14418509-14438508	Herato1805:8360001-8380000	0.2429
Chr1:14200001-14220000	Herato0101:14200001-14220000	0.2429
Chr18:1320001-1340000	Herato1801:1320001-1340000	0.2413
Chr15:2464234-2484233	Herato1505:2120001-2140000	0.2389
Chr12:1531730-1551729	Herato1202:880001-900000	0.2357
Chr10:10048703-10068702	Herato1003:3760001-3780000	0.2357
Chr18:1420001-1440000	Herato1801:1420001-1440000	0.2338
Chr2:10234372-10254371	Herato0215:360001-380000	0.2304
Chr18:1340001-1360000	Herato1801:1340001-1360000	0.2283
Chr2:6442801-6462800	Herato0211:1040001-1060000	0.2249 [c]
Chr1:14220001-14240000	Herato0101:14220001-14240000	0.2232 [c]
Chr15:2004234-2024233	Herato1505:1660001-1680000	0.2222
Chr18:5548499-5568498	Herato1803:360001-380000	0.2212
Chr12:21051730-21071729	Herato1202:20400001-20420000	0.2188
Chr15:2404234-2424233	Herato1505:2060001-2080000	0.2174
Chr15:2024234-2044233	Herato1505:1680001-1700000	0.2173
Chr17:13009643-13029642	Herato1703:1420001-1440000	0.2156
Chr1:12340001-12360000	Herato0101:12340001-12360000	0.2135 [d]
Chr2:10134372-10154371	Herato0215:260001-280000	0.2087 [d]
Chr15:2304234-2324233	Herato1505:1960001-1980000	0.2086
Chr18:7178509-7198508	Herato1805:1120001-1140000	0.2061
Chr10:6219355-6239354	Herato1002:100001-120000	0.2057
Chr21:9540001-9560000	Herato2101:9540001-9560000	0.2022
Chr18:180001-200000	Herato1801:180001-200000	0.1979
Chr15:2064234-2084233	Herato1505:1720001-1740000	0.1978
Chr10:5880001-5900000	Herato1001:5880001-5900000	0.1971
Chr15:1944234-1964233	Herato1505:1600001-1620000	0.1931
Chr10:10068703-10088702	Herato1003:3780001-3800000	0.1923
Chr17:13049643-13069642	Herato1703:1460001-1480000	0.1903
Chr15:1984234-2004233	Herato1505:1640001-1660000	0.1898
Chr10:10088703-10108702	Herato1003:3800001-3820000	0.1895 [a]
Chr13:14360001-14380000	Herato1301:14360001-14380000	0.1883
Chr1:14240001-14260000	Herato0101:14240001-14260000	0.1872 [a]
Chr12:1371730-1391729	Herato1202:720001-740000	0.1853
Chr10:4640001-4660000	Herato1001:4640001-4660000	0.1843 [d]

	Chr2:3082589-3102588	Herato0206:800001-820000	0.1840
	Chr2:6522801-6542800	Herato0211:1120001-1140000	0.1825
	Chr1:240001-260000	Herato0101:240001-260000	0.1791
	Chr15:2524234-2544233	Herato1505:2180001-2200000	0.1784
	Chr18:5628499-5648498	Herato1803:440001-460000	0.1779 [c]
	Chr1:14160001-14180000	Herato0101:14160001-14180000	0.1777
	Chr10:11768703-11788702	Herato1003:5480001-5500000	0.1761
	Chr19:10531858-10551857	Herato1904:6300001-6320000	0.1735
	Chr1:600001-620000	Herato0101:600001-620000	0.1729
	Chr2:4610328-4630327	Herato0209:600001-620000	0.1727
	Chr2:4230328-4250327	Herato0209:220001-240000	0.1708 [d]
	Chr15:2384234-2404233	Herato1505:2040001-2060000	0.1707
	Chr3:12893055-12913054	Herato0310:6940001-6960000	0.1698
	Chr14:13075327-13095326	Herato1411:6060001-6080000	0.1688
	Chr2:12194372-12214371	Herato0215:2320001-2340000	0.1688
	Chr18:1100001-1120000	Herato1801:1100001-1120000	0.1684
	Chr15:4358125-4378124	Herato1506:100001-120000	0.1684
	Chr18:1220001-1240000	Herato1801:1220001-1240000	0.1682
	Chr1:14280001-14300000	Herato0101:14280001-14300000	0.1681
	Chr1:5820001-5840000	Herato0101:5820001-5840000	0.1679
	Chr17:12969643-12989642	Herato1703:1380001-1400000	0.1662
	Chr6:16745253-16765252	Herato0606:11920001-11940000	0.1661
	Chr15:2644234-2664233	Herato1505:2300001-2320000	0.1655
	Chr10:9988703-10008702	Herato1003:3700001-3720000	0.1635
	Chr12:21071730-21091729	Herato1202:20420001-20440000	0.1632
	Chr10:23896785-23916784	Herato1007:5620001-5640000	0.1630
	Chr15:2324234-2344233	Herato1505:1980001-2000000	0.1628
	Chr18:700001-720000	Herato1801:700001-720000	0.1628
	Chr19:19385737-19405736	Herato1910:2140001-2160000	0.1623
	Chr1:8280001-8300000	Herato0101:8280001-8300000	0.1608
	Chr13:13020001-13040000	Herato1301:13020001-13040000	0.1608
	Chr10:6139355-6159354	Herato1002:20001-40000	0.1606
	Chr18:1440001-1460000	Herato1801:1440001-1460000	0.1604
	Chr10:220001-240000	Herato1001:220001-240000	0.1602
	Chr19:10511858-10531857	Herato1904:6280001-6300000	0.1599
	Chr18:160001-180000	Herato1801:160001-180000	0.1595
emma	Chr18:14398509-14418508	Herato1805:8340001-8360000	0.1585
(population 1) :	Chr15:4244234-4264233	Herato1505:3900001-3920000	0.1585
favorinus	Chr15:2264234-2284233	Herato1505:1920001-1940000	0.1575
	Chr15:4338125-4358124	Herato1506:80001-100000	0.1569
	Chr10:7288703-7308702	Herato1003:1000001-1020000	0.1565
	Chr18:12378509-12398508	Herato1805:6320001-6340000	0.1563
	Chr15:2784234-2804233	Herato1505:2440001-2460000	0.1558 [d]
	Chr10:6199355-6219354	Herato1002:80001-100000	0.1558
	Chr2:4330328-4350327	Herato0209:320001-340000	0.1557
	Chr1:5840001-5860000	Herato0101:5840001-5860000	0.1555
	Chr15:4258125-4278124	Herato1506:1-20000	0.1550
	Chr1:12380001-12400000	Herato0101:12380001-12400000	0.1535
	Chr1:14180001-14200000	Herato0101:14180001-14200000	0.1533
	Chr21:9360001-9380000	Herato2101:9360001-9380000	0.1523
	Chr10:10228703-10248702	Herato1003:3940001-3960000	0.1513
	Chr2:4150328-4170327	Herato0209:140001-160000	0.1508
	Chr10:10028703-10048702	Herato1003:3740001-3760000	0.1506
	Chr2:2982589-3002588	Herato0206:700001-720000	0.1504
	Chr10:5900001-5920000	Herato1001:5900001-5920000	0.1487

Chr15:1964234-1984233	Herato1505:1620001-1640000	0.1475
Chr21:9520001-9540000	Herato2101:9520001-9540000	0.1474
Chr1:12360001-12380000	Herato0101:12360001-12380000	0.1457
Chr2:1861392-1881391	Herato0204:1260001-1280000	0.1454
Chr21:9480001-9500000	Herato2101:9480001-9500000	0.1439
Chr12:7051730-7071729	Herato1202:6400001-6420000	0.1431
Chr2:4170328-4190327	Herato0209:160001-180000	0.1429
Chr10:7308703-7328702	Herato1003:1020001-1040000	0.1425
Chr15:2624234-2644233	Herato1505:2280001-2300000	0.1419
Chr17:13069643-13089642	Herato1703:1480001-1500000	0.1411
Chr10:5980001-6000000	Herato1001:5980001-6000000	0.1407
Chr18:1040001-1060000	Herato1801:1040001-1060000	0.1405
Chr1:5880001-5900000	Herato0101:5880001-5900000	0.1403
Chr1:14340001-14360000	Herato0101:14340001-14360000	0.1400
Chr7:19060001-19080000	Herato0701:19060001-19080000	0.1394
Chr19:10291858-10311857	Herato1904:6060001-6080000	0.1388
Chr15:4278125-4298124	Herato1506:20001-40000	0.1386
Chr17:700001-720000	Herato1701:700001-720000	0.1380
Chr19:10391858-10411857	Herato1904:6160001-6180000	0.1375
Chr17:11468079-11488078	Herato1702:1-20000	0.1372
Chr2:2702589-2722588	Herato0206:420001-440000	0.1367 [a]
Chr1:5860001-5880000	Herato0101:5860001-5880000	0.1367
Chr18:14438509-14458508	Herato1805:8380001-8400000	0.1354
Chr15:1924234-1944233	Herato1505:1580001-1600000	0.1353
Chr18:440001-460000	Herato1801:440001-460000	0.1352
Chr13:13180001-13200000	Herato1301:13180001-13200000	0.1346 [a]
Chr5:13920631-13940630	Herato0511:60001-80000	0.1342
Chr18:1160001-1180000	Herato1801:1160001-1180000	0.1342 [a]
Chr2:1061392-1081391	Herato0204:460001-480000	0.1341
Chr10:4760001-4780000	Herato1001:4760001-4780000	0.1340
Chr21:9420001-9440000	Herato2101:9420001-9440000	0.1339
Chr15:2044234-2064233	Herato1505:1700001-1720000	0.1337
Chr2:6462801-6482800	Herato0211:1060001-1080000	0.1336
Chr18:5668499-5688498	Herato1803:480001-500000	0.1334
Chr2:6622801-6642800	Herato0211:1220001-1240000	0.1333
Chr15:1904234-1924233	Herato1505:1560001-1580000	0.1331
Chr10:11808703-11828702	Herato1003:5520001-5540000	0.1330
Chr6:18324614-18344613	Herato0609:360001-380000	0.1329
Chr18:1300001-1320000	Herato1801:1300001-1320000	0.1320
Chr15:2504234-2524233	Herato1505:2160001-2180000	0.1318
Chr10:10108703-10128702	Herato1003:3820001-3840000	0.1317
Chr10:10008703-10028702	Herato1003:3720001-3740000	0.1313
Chr2:6542801-6562800	Herato0211:1140001-1160000	0.1312
Chr17:19220279-19240278	Herato1708:1780001-1800000	0.1304
Chr1:14140001-14160000	Herato0101:14140001-14160000	0.1289
Chr10:12768703-12788702	Herato1003:6480001-6500000	0.1289
Chr15:4224234-4244233	Herato1505:3880001-3900000	0.1286
Chr12:1511730-1531729	Herato1202:860001-880000	0.1286
Chr19:10191858-10211857	Herato1904:5960001-5980000	0.1278
Chr17:13029643-13049642	Herato1703:1440001-1460000	0.1272
Chr10:11908703-11928702	Herato1003:5620001-5640000	0.1271
Chr13:13000001-13020000	Herato1301:13000001-13020000	0.1268
Chr13:14340001-14360000	Herato1301:14340001-14360000	0.1267
Chr2:4290328-4310327	Herato0209:280001-300000	0.1265
Chr1:21860001-21880000	Herato0101:21860001-21880000	0.1265

Chr15:4398125-4418124	Herato1506:140001-160000	0.1256
Chr18:1580001-1600000	Herato1801:1580001-1600000	0.1249
Chr12:18611730-18631729	Herato1202:17960001-17980000	0.1248
Chr18:580001-600000	Herato1801:580001-600000	0.1240
Chr2:4590328-4610327	Herato0209:580001-600000	0.1234
Chr2:2882589-2902588	Herato0206:600001-620000	0.1232
Chr17:5760001-5780000	Herato1701:5760001-5780000	0.1230
Chr17:13089643-13109642	Herato1703:1500001-1520000	0.1225
Chr6:17745253-17765252	Herato0606:12920001-12940000	0.1224
Chr14:11655327-11675326	Herato1411:4640001-4660000	0.1223
Chr1:14320001-14340000	Herato0101:14320001-14340000	0.1221
Chr19:16182653-16202652	Herato1908:1720001-1740000	0.1221
Chr3:13093055-13113054	Herato0310:7140001-7160000	0.1220
Chr10:23756785-23776784	Herato1007:5480001-5500000	0.1217
Chr18:200001-220000	Herato1801:200001-220000	0.1215
Chr15:2564234-2584233	Herato1505:2220001-2240000	0.1210
Chr2:4350328-4370327	Herato0209:340001-360000	0.1210
Chr7:12620001-12640000	Herato0701:12620001-12640000	0.1207
Chr19:10371858-10391857	Herato1904:6140001-6160000	0.1202
Chr10:5940001-5960000	Herato1001:5940001-5960000	0.1200
Chr15:4378125-4398124	Herato1506:120001-140000	0.1195
Chr2:3914279-3934278	Herato0208:500001-520000	0.1192
Chr7:19040001-19060000	Herato0701:19040001-19060000	0.1191
Chr15:2544234-2564233	Herato1505:2200001-2220000	0.1186
Chr18:1360001-1380000	Herato1801:1360001-1380000	0.4507
Chr18:1240001-1260000	Herato1801:1240001-1260000	0.4214
Chr18:1400001-1420000	Herato1801:1400001-1420000	0.4199
Chr18:1380001-1400000	Herato1801:1380001-1400000	0.4037
Chr18:1260001-1280000	Herato1801:1260001-1280000	0.3732
Chr15:2444234-2464233	Herato1505:2100001-2120000	0.3514
Chr2:6482801-6502800	Herato0211:1080001-1100000	0.3445
Chr15:2424234-2444233	Herato1505:2080001-2100000	0.3332
Chr10:11788703-11808702	Herato1003:5500001-5520000	0.3238
Chr12:1551730-1571729	Herato1202:900001-920000	0.2928
Chr2:10254372-10274371	Herato0215:380001-400000	0.2828
Chr10:4700001-4720000	Herato1001:4700001-4720000	0.2792
Chr19:10311858-10331857	Herato1904:6080001-6100000	0.2614
Chr18:1280001-1300000	Herato1801:1280001-1300000	0.2593
Chr15:2464234-2484233	Herato1505:2120001-2140000	0.2593
Chr2:4230328-4250327	Herato0209:220001-240000	0.2466
Chr14:11675327-11695326	Herato1411:4660001-4680000	0.2456
Chr2:10234372-10254371	Herato0215:360001-380000	0.2439
Chr2:10134372-10154371	Herato0215:260001-280000	0.2426
Chr12:1531730-1551729	Herato1202:880001-900000	0.2319
Chr18:5548499-5568498	Herato1803:360001-380000	0.2292
Chr18:1340001-1360000	Herato1801:1340001-1360000	0.2252
Chr18:1420001-1440000	Herato1801:1420001-1440000	0.2251
Chr2:6462801-6482800	Herato0211:1060001-1080000	0.2250
Chr18:1320001-1340000	Herato1801:1320001-1340000	0.2184
Chr15:2264234-2284233	Herato1505:1920001-1940000	0.2171
Chr15:2404234-2424233	Herato1505:2060001-2080000	0.2136
Chr2:4590328-4610327	Herato0209:580001-600000	0.2092
Chr10:4680001-4700000	Herato1001:4680001-4700000	0.2026
Chr18:5628499-5648498	Herato1803:440001-460000	0.1932
Chr1:8280001-8300000	Herato0101:8280001-8300000	0.1926
Chr2:4790328-4810327	Herato0209:780001-800000	0.1907 [c]

Chr18:7178509-7198508	Herato1805:1120001-1140000	0.1820
Chr14:13075327-13095326	Herato1411:6060001-6080000	0.1812
Chr17:12989643-13009642	Herato1703:1400001-1420000	0.1793 [c]
Chr2:4370328-4390327	Herato0209:360001-380000	0.1791
Chr2:6342801-6362800	Herato0211:940001-960000	0.1766 [d]
Chr2:4390328-4410327	Herato0209:380001-400000	0.1761
Chr10:23896785-23916784	Herato1007:5620001-5640000	0.1760 [d]
Chr10:4620001-4640000	Herato1001:4620001-4640000	0.1744
Chr18:1220001-1240000	Herato1801:1220001-1240000	0.1744
Chr2:4330328-4350327	Herato0209:320001-340000	0.1734
Chr15:2384234-2404233	Herato1505:2040001-2060000	0.1716
Chr2:5722801-5742800	Herato0211:320001-340000	0.1716
Chr17:13049643-13069642	Herato1703:1460001-1480000	0.1713
Chr2:4190328-4210327	Herato0209:180001-200000	0.1710 [d]
Chr10:6139355-6159354	Herato1002:20001-40000	0.1700
Chr2:6702801-6722800	Herato0211:1300001-1320000	0.1690
Chr15:4358125-4378124	Herato1506:100001-120000	0.1668
Chr2:3434279-3454278	Herato0208:20001-40000	0.1642
Chr18:1300001-1320000	Herato1801:1300001-1320000	0.1638
Chr2:4550328-4570327	Herato0209:540001-560000	0.1630
Chr18:14418509-14438508	Herato1805:8360001-8380000	0.1626 [c]
Chr12:1511730-1531729	Herato1202:860001-880000	0.1610
Chr2:6442801-6462800	Herato0211:1040001-1060000	0.1600
Chr2:4210328-4230327	Herato0209:200001-220000	0.1589
Chr10:4660001-4680000	Herato1001:4660001-4680000	0.1565
Chr2:4610328-4630327	Herato0209:600001-620000	0.1556 [d]
Chr18:5568499-5588498	Herato1803:380001-400000	0.1551
Chr12:1371730-1391729	Herato1202:720001-740000	0.1546
Chr15:4418125-4438124	Herato1506:160001-180000	0.1543
Chr10:10048703-10068702	Herato1003:3760001-3780000	0.1535
Chr15:2324234-2344233	Herato1505:1980001-2000000	0.1515
Chr19:10391858-10411857	Herato1904:6160001-6180000	0.1496
Chr18:1100001-1120000	Herato1801:1100001-1120000	0.1493
Chr2:6682801-6702800	Herato0211:1280001-1300000	0.1492
Chr2:4670328-4690327	Herato0209:660001-680000	0.1478
Chr2:4110328-4130327	Herato0209:100001-120000	0.1475
Chr15:2524234-2544233	Herato1505:2180001-2200000	0.1475
Chr2:6742801-6762800	Herato0211:1340001-1360000	0.1472
Chr6:18324614-18344613	Herato0609:360001-380000	0.1459
Chr1:8300001-8320000	Herato0101:8300001-8320000	0.1457
Chr19:14392110-14412109	Herato1907:1-20000	0.1452 [a]
Chr10:720001-740000	Herato1001:720001-740000	0.1450 [d]
Chr10:11768703-11788702	Herato1003:5480001-5500000	0.1450
Chr2:7982801-8002800	Herato0211:2580001-2600000	0.1436
Chr15:4244234-4264233	Herato1505:3900001-3920000	0.1435 [a]
Chr15:2784234-2804233	Herato1505:2440001-2460000	0.1432
Chr2:6362801-6382800	Herato0211:960001-980000	0.1430
Chr18:14398509-14418508	Herato1805:8340001-8360000	0.1430
Chr1:12340001-12360000	Herato0101:12340001-12360000	0.1413
Chr19:16182653-16202652	Herato1908:1720001-1740000	0.1411
Chr19:10191858-10211857	Herato1904:5960001-5980000	0.1407
Chr18:1440001-1460000	Herato1801:1440001-1460000	0.1407
Chr18:15058509-15078508	Herato1805:9000001-9020000	0.1405
Chr1:14240001-14260000	Herato0101:14240001-14260000	0.1405

	Chr18:700001-720000	Herato1801:700001-720000	0.1390
	Chr1:14220001-14240000	Herato0101:14220001-14240000	0.1386
	Chr12:7051730-7071729	Herato1202:6400001-6420000	0.1373
	Chr2:9342396-9362395	Herato0214:560001-580000	0.1368
	Chr10:3780001-3800000	Herato1001:3780001-3800000	0.1368
	Chr2:4570328-4590327	Herato0209:560001-580000	0.1365
	Chr18:1040001-1060000	Herato1801:1040001-1060000	0.1359
emma	Chr15:4338125-4358124	Herato1506:80001-100000	0.1353
(population 2) :	Chr2:7182801-7202800	Herato0211:1780001-1800000	0.1349
favorinus	Chr12:21051730-21071729	Herato1202:20400001-20420000	0.1348
	Chr10:7288703-7308702	Herato1003:1000001-1020000	0.1348
	Chr10:6288703-6308702	Herato1003:1-20000	0.1347
	Chr2:6842801-6862800	Herato0211:1440001-1460000	0.1347
	Chr14:8675327-8695326	Herato1411:1660001-1680000	0.1343
	Chr10:700001-720000	Herato1001:700001-720000	0.1340
	Chr6:16745253-16765252	Herato0606:11920001-11940000	0.1336
	Chr2:4530328-4550327	Herato0209:520001-540000	0.1334
	Chr18:1600001-1620000	Herato1801:1600001-1620000	0.1326
	Chr2:4150328-4170327	Herato0209:140001-160000	0.1322
	Chr2:8598934-8618933	Herato0212:80001-100000	0.1319
	Chr17:12969643-12989642	Herato1703:1380001-1400000	0.1318
	Chr2:4650328-4670327	Herato0209:640001-660000	0.1312
	Chr2:4430328-4450327	Herato0209:420001-440000	0.1310
	Chr2:7282801-7302800	Herato0211:1880001-1900000	0.1308
	Chr2:4770328-4790327	Herato0209:760001-780000	0.1304
	Chr2:6202801-6222800	Herato0211:800001-820000	0.1301
	Chr2:5742801-5762800	Herato0211:340001-360000	0.1299
	Chr2:7222801-7242800	Herato0211:1820001-1840000	0.1296
	Chr2:6282801-6302800	Herato0211:880001-900000	0.1294
	Chr15:4204234-4224233	Herato1505:3860001-3880000	0.1294
	Chr2:6522801-6542800	Herato0211:1120001-1140000	0.1294
	Chr18:19221529-19241528	Herato1807:2820001-2840000	0.1291
	Chr3:12893055-12913054	Herato0310:6940001-6960000	0.1284
	Chr10:6219355-6239354	Herato1002:100001-120000	0.1284
	Chr2:7402801-7422800	Herato0211:2000001-2020000	0.1284
	Chr2:6382801-6402800	Herato0211:980001-1000000	0.1282
	Chr15:4378125-4398124	Herato1506:120001-140000	0.1279
	Chr10:11808703-11828702	Herato1003:5520001-5540000	0.1273
	Chr12:6971730-6991729	Herato1202:6320001-6340000	0.1271
	Chr10:7308703-7328702	Herato1003:1020001-1040000	0.1269
	Chr18:1560001-1580000	Herato1801:1560001-1580000	0.1259
	Chr18:1160001-1180000	Herato1801:1160001-1180000	0.1257
	Chr2:3454279-3474278	Herato0208:40001-60000	0.1252
	Chr2:6862801-6882800	Herato0211:1460001-1480000	0.1247
	Chr18:580001-600000	Herato1801:580001-600000	0.1243
	Chr1:14200001-14220000	Herato0101:14200001-14220000	0.1242
	Chr2:4130328-4150327	Herato0209:120001-140000	0.1242
	Chr15:2304234-2324233	Herato1505:1960001-1980000	0.1235
	Chr2:7882801-7902800	Herato0211:2480001-2500000	0.1234
	Chr17:20390419-20410418	Herato1716:40001-60000	0.1231 [a]
	Chr2:10114372-10134371	Herato0215:240001-260000	0.1229
	Chr2:8902396-8922395	Herato0214:120001-140000	0.1225
	Chr1:14160001-14180000	Herato0101:14160001-14180000	0.1224
	Chr20:15100001-15120000	Herato2001:15100001-15120000	0.1221
	Chr2:7142801-7162800	Herato0211:1740001-1760000	0.1217
	Chr2:5902801-5922800	Herato0211:500001-520000	0.1216

Chr2:6502801-6522800	Herato0211:1100001-1120000	0.1215
Chr2:4890328-4910327	Herato0209:880001-900000	0.1211
Chr15:4224234-4244233	Herato1505:3880001-3900000	0.1211
Chr10:4760001-4780000	Herato1001:4760001-4780000	0.1209
Chr19:10291858-10311857	Herato1904:6060001-6080000	0.1207
Chr1:240001-260000	Herato0101:240001-260000	0.1205
Chr2:6222801-6242800	Herato0211:820001-840000	0.1199
Chr2:6122801-6142800	Herato0211:720001-740000	0.1191
Chr2:6942801-6962800	Herato0211:1540001-1560000	0.1187
Chr18:5668499-5688498	Herato1803:480001-500000	0.1186
Chr1:5840001-5860000	Herato0101:5840001-5860000	0.1182
Chr18:1580001-1600000	Herato1801:1580001-1600000	0.1179
Chr2:9782396-9802395	Herato0214:1000001-1020000	0.1179
Chr18:5408499-5428498	Herato1803:220001-240000	0.1178
Chr2:7062801-7082800	Herato0211:1660001-1680000	0.1174
Chr2:7162801-7182800	Herato0211:1760001-1780000	0.1172
Chr18:1460001-1480000	Herato1801:1460001-1480000	0.1170
Chr18:5608499-5628498	Herato1803:420001-440000	0.1164
Chr19:20125737-20145736	Herato1910:2880001-2900000	0.1164
Chr10:23756785-23776784	Herato1007:5480001-5500000	0.1164
Chr14:8635327-8655326	Herato1411:1620001-1640000	0.1162
Chr2:7262801-7282800	Herato0211:1860001-1880000	0.1162
Chr2:5702801-5722800	Herato0211:300001-320000	0.1162
Chr2:4270328-4290327	Herato0209:260001-280000	0.1156
Chr2:4690328-4710327	Herato0209:680001-700000	0.1149
Chr18:1500001-1520000	Herato1801:1500001-1520000	0.1147
Chr10:5960001-5980000	Herato1001:5960001-5980000	0.1141
Chr2:4350328-4370327	Herato0209:340001-360000	0.1138
Chr2:3694279-3714278	Herato0208:280001-300000	0.1136
Chr2:4810328-4830327	Herato0209:800001-820000	0.1134
Chr2:6542801-6562800	Herato0211:1140001-1160000	0.1134
Chr18:21801529-21821528	Herato1807:5400001-5420000	0.1133
Chr18:160001-180000	Herato1801:160001-180000	0.1133
Chr2:7082801-7102800	Herato0211:1680001-1700000	0.1131
Chr2:5842801-5862800	Herato0211:440001-460000	0.1130
Chr12:21071730-21091729	Herato1202:20420001-20440000	0.1129
Chr15:2644234-2664233	Herato1505:2300001-2320000	0.1126
Chr15:2584234-2604233	Herato1505:2240001-2260000	0.1123
Chr2:4310328-4330327	Herato0209:300001-320000	0.1123
Chr2:1861392-1881391	Herato0204:1260001-1280000	0.1122
Chr19:10371858-10391857	Herato1904:6140001-6160000	0.1121
Chr2:8842396-8862395	Herato0214:60001-80000	0.1119
Chr2:8202801-8222800	Herato0211:2800001-2820000	0.1116
Chr2:5962801-5982800	Herato0211:560001-580000	0.1114
Chr21:9360001-9380000	Herato2101:9360001-9380000	0.1109
Chr2:6402801-6422800	Herato0211:1000001-1020000	0.1108
Chr14:8615327-8635326	Herato1411:1600001-1620000	0.1106
Chr2:5882801-5902800	Herato0211:480001-500000	0.1106
Chr6:8385253-8405252	Herato0606:3560001-3580000	0.1101
Chr2:6482801-6502800	Herato0211:1080001-1100000	0.2888
Chr2:2722589-2742588	Herato0206:440001-460000	0.2617
Chr2:6442801-6462800	Herato0211:1040001-1060000	0.2590
Chr2:3002589-3022588	Herato0206:720001-740000	0.2300
Chr2:4190328-4210327	Herato0209:180001-200000	0.2135
Chr2:6462801-6482800	Herato0211:1060001-1080000	0.2048
Chr2:2982589-3002588	Herato0206:700001-720000	0.1980

Chr21:9540001-9560000	Herato2101:9540001-9560000	0.1939
Chr2:4670328-4690327	Herato0209:660001-680000	0.1770
Chr21:9360001-9380000	Herato2101:9360001-9380000	0.1688
Chr5:13920631-13940630	Herato0511:60001-80000	0.1625
Chr2:3082589-3102588	Herato0206:800001-820000	0.1559
Chr17:20390419-20410418	Herato1716:40001-60000	0.1541
Chr2:4330328-4350327	Herato0209:320001-340000	0.1485
Chr1:15260001-15280000	Herato0101:15260001-15280000	0.1454
Chr2:2702589-2722588	Herato0206:420001-440000	0.1353
Chr17:12969643-12989642	Herato1703:1380001-1400000	0.1298
Chr19:13282690-13302689	Herato1906:340001-360000	0.1264
Chr17:12949643-12969642	Herato1703:1360001-1380000	0.1253
Chr10:4640001-4660000	Herato1001:4640001-4660000	0.1195
Chr21:9340001-9360000	Herato2101:9340001-9360000	0.1171
Chr2:3434279-3454278	Herato0208:20001-40000	0.1144
Chr17:13009643-13029642	Herato1703:1420001-1440000	0.1142
Chr2:3398817-3418816	Herato0207:1-20000	0.1110
Chr2:4350328-4370327	Herato0209:340001-360000	0.1036
Chr1:12340001-12360000	Herato0101:12340001-12360000	0.1027
Chrmt:1-20000	Herato_mt:1-20000	0.1012 [a]
Chr1:5880001-5900000	Herato0101:5880001-5900000	0.1011
Chr21:9440001-9460000	Herato2101:9440001-9460000	0.1009
Chr1:12360001-12380000	Herato0101:12360001-12380000	0.1000
Chr2:8578934-8598933	Herato0212:60001-80000	0.0980
Chr2:6962801-6982800	Herato0211:1560001-1580000	0.0975
Chr2:7982801-8002800	Herato0211:2580001-2600000	0.0965
Chr2:4650328-4670327	Herato0209:640001-660000	0.0960
Chr2:3914279-3934278	Herato0208:500001-520000	0.0953
Chr2:8558934-8578933	Herato0212:40001-60000	0.0931 [a]
Chr2:4150328-4170327	Herato0209:140001-160000	0.0930
Chr2:3382589-3402588	Herato0206:1100001-1120000	0.0921
Chr15:9277220-9297219	Herato1507:4840001-4860000	0.0921
Chr21:9420001-9440000	Herato2101:9420001-9440000	0.0909
Chr21:10480001-10500000	Herato2101:10480001-10500000	0.0903 [a]
Chr2:3022589-3042588	Herato0206:740001-760000	0.0902
Chr2:6942801-6962800	Herato0211:1540001-1560000	0.0900
Chr15:2304234-2324233	Herato1505:1960001-1980000	0.0896
Chr21:9480001-9500000	Herato2101:9480001-9500000	0.0886 [a]
Chr10:600001-620000	Herato1001:600001-620000	0.0878 [b]
Chr2:3474279-3494278	Herato0208:60001-80000	0.0877
Chr6:19244614-19264613	Herato0609:1280001-1300000	0.0855
Chr20:15200001-15220000	Herato2001:15200001-15220000	0.0849
Chr2:7402801-7422800	Herato0211:2000001-2020000	0.0844
Chr3:13013055-13033054	Herato0310:7060001-7080000	0.0834
Chr21:10520001-10540000	Herato2101:10520001-10540000	0.0815
Chr2:5170328-5190327	Herato0209:1160001-1180000	0.0807
Chr2:3454279-3474278	Herato0208:40001-60000	0.0799
Chr17:20313647-20333646	Herato1715:1-20000	0.0799
Chr17:700001-720000	Herato1701:700001-720000	0.0796
Chr17:20370419-20390418	Herato1716:20001-40000	0.0795
Chr2:5802801-5822800	Herato0211:400001-420000	0.0786
Chr2:5722801-5742800	Herato0211:320001-340000	0.0784
Chr2:6182801-6202800	Herato0211:780001-800000	0.0783
Chr2:7162801-7182800	Herato0211:1760001-1780000	0.0775
Chr2:4830328-4850327	Herato0209:820001-840000	0.0761

	Chr2:3414279-3434278	Herato0208:1-20000	0.0754
	Chr2:3062589-3082588	Herato0206:780001-800000	0.0752
	Chr17:20030451-20050450	Herato1711:20001-40000	0.0745
	Chr2:6502801-6522800	Herato0211:1100001-1120000	0.0742
	Chr21:9520001-9540000	Herato2101:9520001-9540000	0.0742
	Chr2:4370328-4390327	Herato0209:360001-380000	0.0741 [a]
	Chr15:6557220-6577219	Herato1507:2120001-2140000	0.0739
	Chr2:2882589-2902588	Herato0206:600001-620000	0.0739
	Chr2:4430328-4450327	Herato0209:420001-440000	0.0737
	Chr21:9560001-9580000	Herato2101:9560001-9580000	0.0733
	Chr2:6542801-6562800	Herato0211:1140001-1160000	0.0731
	Chr1:15300001-15320000	Herato0101:15300001-15320000	0.0728
	Chr21:10440001-10460000	Herato2101:10440001-10460000	0.0722
	Chr17:17032063-17052062	Herato1705:2760001-2780000	0.0720
	Chr10:5880001-5900000	Herato1001:5880001-5900000	0.0720
	Chr21:10460001-10480000	Herato2101:10460001-10480000	0.0718
	Chr16:7821756-7841755	Herato1603:1620001-1640000	0.0717
	Chr2:4770328-4790327	Herato0209:760001-780000	0.0716
	Chr16:7841756-7861755	Herato1603:1640001-1660000	0.0716
	Chr18:100001-120000	Herato1801:100001-120000	0.0715
	Chr2:7262801-7282800	Herato0211:1860001-1880000	0.0712
	Chr2:3494279-3514278	Herato0208:80001-100000	0.0709
	Chr13:13180001-13200000	Herato1301:13180001-13200000	0.0703
	Chr2:6242801-6262800	Herato0211:840001-860000	0.0703
	Chr6:3140001-3160000	Herato0601:3140001-3160000	0.0700
	Chr3:15373055-15393054	Herato0310:9420001-9440000	0.0698
	Chr2:6742801-6762800	Herato0211:1340001-1360000	0.0697
	Chr17:18820279-18840278	Herato1708:1380001-1400000	0.0696
	Chr10:8088703-8108702	Herato1003:1800001-1820000	0.0693
	Chr10:240001-260000	Herato1001:240001-260000	0.0688
	Chr2:3362589-3382588	Herato0206:1080001-1100000	0.0687
emma	Chr2:4790328-4810327	Herato0209:780001-800000	0.0687
(population 1) :	Chr17:20266427-20286426	Herato1714:1-20000	0.0682
emma	Chr1:15280001-15300000	Herato0101:15280001-15300000	0.0677
(population 2)	Chr2:4870328-4890327	Herato0209:860001-880000	0.0676
	Chr13:23760001-23780000	Herato1301:23760001-23780000	0.0673
	Chr21:9460001-9480000	Herato2101:9460001-9480000	0.0671
	Chr2:7282801-7302800	Herato0211:1880001-1900000	0.0670
	Chr2:7182801-7202800	Herato0211:1780001-1800000	0.0667
	Chr2:4310328-4330327	Herato0209:300001-320000	0.0666
	Chr2:5130328-5150327	Herato0209:1120001-1140000	0.0661
	Chr17:11468079-11488078	Herato1702:1-20000	0.0659
	Chr2:6382801-6402800	Herato0211:980001-1000000	0.0659 [b]
	Chr2:3514279-3534278	Herato0208:100001-120000	0.0659
	Chr1:12440001-12460000	Herato0101:12440001-12460000	0.0658
	Chr2:4450328-4470327	Herato0209:440001-460000	0.0658
	Chr3:2920001-2940000	Herato0301:2920001-2940000	0.0658
	Chr21:10540001-10560000	Herato2101:10540001-10560000	0.0657
	Chr4:2785150-2805149	Herato0402:100001-120000	0.0657
	Chr2:5542801-5562800	Herato0211:140001-160000	0.0654
	Chr17:12989643-13009642	Herato1703:1400001-1420000	0.0650
	Chr21:7000001-7020000	Herato2101:7000001-7020000	0.0645
	Chr2:7202801-7222800	Herato0211:1800001-1820000	0.0642
	Chr2:6702801-6722800	Herato0211:1300001-1320000	0.0640
	Chr15:6577220-6597219	Herato1507:2140001-2160000	0.0640
	Chr2:4390328-4410327	Herato0209:380001-400000	0.0636

Chr21:10400001-10420000	Herato2101:10400001-10420000	0.0635
Chr17:12349643-12369642	Herato1703:760001-780000	0.0632
Chr21:2600001-2620000	Herato2101:2600001-2620000	0.0632
Chr19:10371858-10391857	Herato1904:6140001-6160000	0.0630
Chr2:4810328-4830327	Herato0209:800001-820000	0.0628
Chr15:2764234-2784233	Herato1505:2420001-2440000	0.0626
Chr6:10805253-10825252	Herato0606:5980001-6000000	0.0626
Chr2:8022801-8042800	Herato0211:2620001-2640000	0.0625
Chr2:8002801-8022800	Herato0211:2600001-2620000	0.0621 [b]
Chr7:1240001-1260000	Herato0701:1240001-1260000	0.0620
Chr2:8802396-8822395	Herato0214:20001-40000	0.0612
Chr2:7882801-7902800	Herato0211:2480001-2500000	0.0612
Chr2:6222801-6242800	Herato0211:820001-840000	0.0609
Chr19:14432110-14452109	Herato1907:40001-60000	0.0609
Chr2:6602801-6622800	Herato0211:1200001-1220000	0.0607
Chr9:12520001-12540000	Herato0901:12520001-12540000	0.0606
Chr2:4890328-4910327	Herato0209:880001-900000	0.0605
Chr8:1340001-1360000	Herato0801:1340001-1360000	0.0604
Chr20:15100001-15120000	Herato2001:15100001-15120000	0.0600
Chr1:15580001-15600000	Herato0101:15580001-15600000	0.0599
Chr2:4710328-4730327	Herato0209:700001-720000	0.0594
Chr17:19980279-20000278	Herato1708:2540001-2560000	0.0593
Chr21:10580001-10600000	Herato2101:10580001-10600000	0.0592
Chr10:9988703-10008702	Herato1003:3700001-3720000	0.0591
Chr3:3140001-3160000	Herato0301:3140001-3160000	0.0590
Chr1:14200001-14220000	Herato0101:14200001-14220000	0.0587
Chr2:8518934-8538933	Herato0212:1-20000	0.0586
Chr2:4530328-4550327	Herato0209:520001-540000	0.0585
Chr6:17745253-17765252	Herato0606:12920001-12940000	0.0580
Chr2:6622801-6642800	Herato0211:1220001-1240000	0.0579
Chr17:12909643-12929642	Herato1703:1320001-1340000	0.0575
Chr6:15905253-15925252	Herato0606:11080001-11100000	0.0573
Chr2:8382801-8402800	Herato0211:2980001-3000000	0.0571
Chr2:4110328-4130327	Herato0209:100001-120000	0.0569
Chr2:2762589-2782588	Herato0206:480001-500000	0.0568
Chr9:12570465-12590464	Herato0902:1-20000	0.0568
Chr17:660001-680000	Herato1701:660001-680000	0.0565
Chr17:12929643-12949642	Herato1703:1340001-1360000	0.0565
Chr13:1460001-1480000	Herato1301:1460001-1480000	0.0563
Chr2:10014372-10034371	Herato0215:140001-160000	0.0563
Chr2:9782396-9802395	Herato0214:1000001-1020000	0.0563
Chr10:7748703-7768702	Herato1003:1460001-1480000	0.0560
Chr13:800001-820000	Herato1301:800001-820000	0.0559
Chr21:10420001-10440000	Herato2101:10420001-10440000	0.0557
Chr2:7062801-7082800	Herato0211:1660001-1680000	0.0555
Chr18:9338509-9358508	Herato1805:3280001-3300000	0.0552
Chr2:5354992-5374991	Herato0210:180001-200000	0.0552
Chr2:5742801-5762800	Herato0211:340001-360000	0.0550
Chr13:1380001-1400000	Herato1301:1380001-1400000	0.0548
Chr19:8011858-8031857	Herato1904:3780001-3800000	0.0546
Chr2:5314992-5334991	Herato0210:140001-160000	0.0546
Chr10:7808703-7828702	Herato1003:1520001-1540000	0.0546
Chr13:14340001-14360000	Herato1301:14340001-14360000	0.0545
Chr18:9498509-9518508	Herato1805:3440001-3460000	0.0544
Chr19:17345737-17365736	Herato1910:100001-120000	0.0543
Chr2:5110328-5130327	Herato0209:1100001-1120000	0.0542

Chr15:250314-270313	Herato1504:1-20000	0.0540
Chr6:19164614-19184613	Herato0609:1200001-1220000	0.0539
Chr17:18940279-18960278	Herato1708:1500001-1520000	0.0536
Chr6:18104614-18124613	Herato0609:140001-160000	0.0535
Chr17:19300279-19320278	Herato1708:1860001-1880000	0.0535
Chr2:3734279-3754278	Herato0208:320001-340000	0.0533
Chr15:364234-384233	Herato1505:20001-40000	0.0532
Chr8:1580001-1600000	Herato0801:1580001-1600000	0.0530
Chr2:5862801-5882800	Herato0211:460001-480000	0.0528
Chr21:10680001-10700000	Herato2101:10680001-10700000	0.0526
Chr2:5194992-5214991	Herato0210:20001-40000	0.0525
Chr16:7901756-7921755	Herato1603:1700001-1720000	0.0525
Chr15:2024234-2044233	Herato1505:1680001-1700000	0.0525
Chr10:7728703-7748702	Herato1003:1440001-1460000	0.0524
Chr8:1540001-1560000	Herato0801:1540001-1560000	0.0521
Chr2:3574279-3594278	Herato0208:160001-180000	0.0521
Chr2:7922801-7942800	Herato0211:2520001-2540000	0.0521

[a] Top 1% outlier region yielded from all the *H. timareta*, *H. cydno* and *H. pachinus*, *H. melpomene* or *H. erato* comparisons.

[b] *L* locus

[c] *B*/*r* locus in *H. timareta* and *H. cydno* and *H. pachinus*, *B*/*D* locus in *H. melpomene* or *R*/*D* locus in *H. erato*

[d] *Yb* locus in *H. timareta*, *H. cydno* and *H. pachinus* and *H. melpomene* or *Cr* locus in *H. erato*

Table S3. Annotations, collinearity and synteny of genes at the *L* locus.

Gene Annotations				
H. melpomene		*H. erato*		Annotation
Location	Gene	Location	Gene	
Chr1:11607932-11621346	HMEL030288	Chr1:15256794-15280624	Herato0101.551	Collagen alpha-1(IV) chain/*Col4a1*
Chr1:11630200-11640119	HMEL002288	Chr1:15301881-15313910	Manual annotation*	Collagen alpha-2(IV) chain/*Vkg*
Chr1:11642259-11643228	HMEL002289	Chr1:15317815-15319782	Herato0101.552	PITH domain-containing protein 1/CG6153
Chr1:11644025-11645202	HMEL002290	Chr1:15320676-15322759	Herato0101.553	SelT-like protein/CG3887
Chr1:11646616-11660749	HMEL002291	Chr1:15323747-15337799	Herato0101.554	WD repeat-containing protein 35/*Oseg4*
Chr1:11661703-11681975	HMEL002293	Chr1:15338348-15360028	Herato0101.555	Sodium leak channel non-selective protein/Narrow abdomen

* Manual annotation was performed by blasting against *H. melpomene* homologous genes.

Collinearity and synteny of genes at the *L* locus					
	Col4a1	*Vkg*	*PITHD1*	*SelT*	*Oseg4*	*na*
Heliconius melpomene (Lepidoptera)	HMEL030288 (Chr1:11607932-11621346)	HMEL002288 (Chr1:11630200-11640119)	HMEL002289 (Chr1:11642259-11643228)	HMEL002290 (Chr1:11644025-11645202)	HMEL002291 (Chr1:11646616-11660749)	HMEL002293 (Chr1:11661703-11681975)
Heliconius erato (Lepidoptera)	Herato0101.551 (Chr1:15256794-15280624)	(Chr1:15283596-15313910)	Herato0101.552 (Chr1:15317815-15319782)	Herato0101.553 (Chr1:15320676-15322759)	Herato0101.554 (Chr1:15323747-15337799)	Herato0101.555 (Chr1:15338348-15360028)
Danaus plexippus (Lepidoptera)	DPOGS206535 (DPSCF300190: 195251-204248)	DPOGS206549 (DPSCF300190 : 217412-225660)	DPOGS206534 (DPSCF300190: 230940-232312)	DPOGS206550 (DPSCF300190 : 233696-234658)	DPOGS206553 (DPSCF300190: 235379-247967)	DPOGS206551 (DPSCF300190: 248533-259976)
Papilio xuthus (Lepidoptera)	KPI93818.1 (KQ459601.1:2995454-3006607)	KPI93819.1 (KQ459601.1:3014303-3027611)	KPI93820.1 (KQ459601.1:3028733-3030320)	KPI93821.1 (KQ459601.1:3031144-3032598)	KPI93822.1 (KQ459601.1:3033374-3043865)	KPI93823.1 (KQ459601.1:3044526-3057660)
Bombyx mori (Lepidoptera)	KWMTBOMO01975 (Chr4:8963242-8977601)	KWMTBOMO01973 (Chr4:8933721-8963141)	KWMTBOMO01972 (Chr4:8923862-8928277)	KWMTBOMO01971 (Chr4:8919689-8921621)	KWMTBOMO01969, KWMTBOMO01970 (Chr4:8892712-8915989)	KWMTBOMO01968 (Chr4:8861664-8889291)

Drosophila melanogaster (Diptera)	CG4145 (Chr2L:5029609-5037279)	CG16858 (Chr2L:5012144-5028191)	CG6153 (Chr2L:12692993-12693939)	CG3887 (Chr2L:5010922-5012127)	CG2069 (Chr3L:1730993-1735767)	CG1517 (ChrX:14266367-14277416)
Tribolium castaneum (Coleoptera)	TC033129 (LG5:9088176-9090399)	TC014326 (LG5:9097641-9116754)	TC013194 (LG5:12524900-12525778)	TC013470 (LG5:9116779-9117849)	TC004637 (LGX:4251347-4256463)	TC001338 (LG2:14768365-14775139)
Apis mellifera (Hymenoptera)	LOC408552 (LG16:6976010-6992150)	LOC408551 (LG16:6992891-7033121)	LOC727612 (LG12:8656051-8657620)	LOC550992 (LG1:25087375-25088764)	LOC411338 (LG9:7687128-7690995)	LOC413947 (LG12:3259966-3279636)
Apolygus lucorum (Hemiptera)	KAE9423214.1 (WIXP01000298.1:4453-84262)	KAE9440684.1 (LG2:8376185-8474623)	KAE9429934.1 (LG10:22966001-22993398)	KAE9440903.1 (LG2:17748517-17776510)	KAE9441369.1 (LG2:36252415-36269145)	KAE9433275.1 (LG7:2087445-2247637)
Locusta migratoria (Orthoptera)	LOCMI04186 (lmi5:128493576-128613391)	LOCMI08289 (lmi5:129471521-129682950)	LOCMI14581 (scaffold160:2959071-3000653)	NA	LOCMI16798 (lmi1:371338456-3715422080)	LOCMI08299 (lmi1:185041962-185180428)

Table S4. Nucleotide diversity (π) for the *L* locus and two color pattern loci.

Species	Length (kb)	Locus	Chr (bp)	Scaf (bp)	Diversity (π)
H. t. timareta	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0019 ± 0.0002***
	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0127 ± 0.0013***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0159 ± 0.001
H. t. florencia	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0081 ± 0.0011***
	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0071 ± 0.0009***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0209 ± 0.001
H. t. thelxinoe	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0108 ± 0.0012***
	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0076 ± 0.0008***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0161 ± 0.001**
H. pachinus	50	*L*	Chr1:11600000-11650000	Hmel201001o:11600000-11650000	0.0028 ± 0.0002***
	50	*Br*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0043 ± 0.0006***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0083 ± 0.0008***
H. c. galanthus	50	*L*	Chr1:11600000-11650000	Hmel201001o:11600000-11650000	0.0035 ± 0.0007***
	50	*Br*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0076 ± 0.0008***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0134 ± 0.0012***
H. c. chioneus	50	*L*	Chr1:11600000-11650000	Hmel201001o:11600000-11650000	0.0047 ± 0.0009***
	50	*Br*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0079 ± 0.0009***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0149 ± 0.0012***
H. c. zelinde	50	*L*	Chr1:11600000-11650000	Hmel201001o:11600000-11650000	0.0081 ± 0.0008***
	50	*Br*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0092 ± 0.0009***

	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0182 ± 0.0015***
	50	*L*	Chr1:11600000-11650000	Hmel201001o:11600000-11650000	0.0043 ± 0.0007***
H. c. alithea	50	*Br*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0065 ± 0.0008***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0094 ± 0.0011***
	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0071 ± 0.001***
H. m. amaryllis	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0064 ± 0.0006***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0106 ± 0.0008***
	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0058 ± 0.0007***
H. m. aglaope	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0049 ± 0.0008***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0148± 0.0009
	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0161 ± 0.0013***
H. m. malleti	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0075 ± 0.0008***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0185 ± 0.0009***
	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0070± 0.0003***
H. m. rosina	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0066 ± 0.0006***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0146± 0.0010***
	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0051± 0.0006***
H. m. melpomene	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0072 ± 0.0006***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0198± 0.0012
	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0107± 0.0010***
eastern *melpomene*	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0158 ± 0.0008***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0206± 0.0009

western *melpomene*	50	*L*	Chr1:11630001-11680000	Hmel201001o:11630001-11680000	0.0059 ± 0.0004***
	50	*B/D*	Chr18:1133175-1183175	Hmel218003o:780001-830000	0.0067 ± 0.0006***
	100	*Yb*	Chr15:1507747-1607747	Hmel215003o:1440001-1540000	0.0184± 0.0010**
H. e. emma (pop1)	20	*L*	Chr1:15260001-15280000	Herato0101:15260001-15280000	0.0087 ± 0.0012***
	20	*L*	Chr1:15300001-15320000	Herato0101:15300001-15320000	0.0093 ± 0.0024***
	50	*R/D*	Chr18:1340001-1390000	Herato1801:1340001-1390000	0.0183 ± 0.0022***
	100	*Cr*	Chr15:2394234-2494234	Herato1505:2050001-2150000	0.0238 ± 0.0019***
H. e. emma (pop2)	20	*L*	Chr1:15260001-15280000	Herato0101:15260001-15280000	0.0098 ± 0.0017***
	20	*L*	Chr1:15300001-15320000	Herato0101:15300001-15320000	0.0164 ± 0.0018***
	50	*R/D*	Chr18:1340001-1390000	Herato1801:1340001-1390000	0.0183 ± 0.0024***
	100	*Cr*	Chr15:2394234-2494234	Herato1505:2050001-2150000	0.0221 ± 0.0019***
H. e. favorinus	20	*L*	Chr1:15260001-15280000	Herato0101:15260001-15280000	0.0108 ± 0.0018***
	20	*L*	Chr1:15300001-15320000	Herato0101:15300001-15320000	0.0155 ± 0.0018***
	50	*R/D*	Chr18:1340001-1390000	Herato1801:1340001-1390000	0.0169 ± 0.002***
	100	*Cr*	Chr15:2394234-2494234	Herato1505:2050001-2150000	0.0166 ± 0.0012***
H. e. lativitta	20	*L*	Chr1:15260001-15280000	Herato0101:15260001-15280000	0.0124 ± 0.0013***
	20	*L*	Chr1:15300001-15320000	Herato0101:15300001-15320000	0.0112 ± 0.0017***
	50	*R/D*	Chr18:1340001-1390000	Herato1801:1340001-1390000	0.0176 ± 0.0018***
	100	*Cr*	Chr15:2394234-2494234	Herato1505:2050001-2150000	0.0269 ± 0.0016***

***, ** and * indicate a significantly smaller π value relative to genome-wide mean value with $P < 0.001$, $P < 0.01$ and $P < 0.05$, separately.

Table S5. Results of *D*-statistics, *f*ₐ-statstics and dₓᵧ for the examination of gene flow at the *L* locus.

Tree topology for D and f_d	D mean	f_d mean
(t. florencia, t. timareta, m. malleti, wallacei)	0.3415 ± 0.1309**	0.2843 ± 0.0796***
(t. florencia, t. timareta, m. aglaope, wallacei)	0.5190 ±0.0935***	0.3712 ± 0.0843***
(t. florencia, t. timareta, m. amaryllis, wallacei)	0.5009 ± 0.0951***	0.3407 ± 0.0845***
(t. florencia, t. timareta, m. melpomene, wallacei)	-0.1339 ± 0.1047	-0.1032 ± 0.0450*
(t. florencia, t. timareta, m. rosina, wallacei)	-0.2106 ± 0.1065*	-0.0985 ± 0.0462*
(t. florencia, t. timareta, c. chioneus, wallacei)	-0.3089±0.1085**	-0.5059±0.3170
(t. florencia, t. timareta, c. alithea, wallacei)	-0.1748±0.1213	-0.1054±0.0435*
(t. florencia, t. timareta, c. zelinde, wallacei)	-0.2587±0.1181*	-0.1566±0.0673*
(t. thelxinoe, t. timareta, m. malleti, wallacei)	0.0526 ± 0.0875	0.1643 ± 0.0892
(t. thelxinoe, t. timareta, m. aglaope, wallacei)	0.2385 ± 0.1362	0.2644 ± 0.0757***
(t. thelxinoe, t. timareta, m. amaryllis, wallacei)	0.1731 ± 0.1432	0.2365 ± 0.0771**
(t. thelxinoe, t. timareta, m. melpomene, wallacei)	0.3814 ± 0.1023***	0.1499 ± 0.0374***
(t. thelxinoe, t. timareta, m. rosina, wallacei)	0.4054 ± 0.1064***	0.1533 ± 0.0367***
(t. thelxinoe, t. timareta, c. chioneus, wallacei)	0.5218 ± 0.1050***	0.3501 ± 0.0697***
(t. thelxinoe, t. timareta, c. alithea, wallacei)	0.4580 ± 0.1002***	0.1626 ± 0.0370***
(t. thelxinoe, t. timareta, c. zelinde, wallacei)	0.4670 ± 0.1080***	0.2048 ± 0.0487***
(c. chioneus, t. timareta, m. malleti, wallacei)	0.4384 ± 0.1182***	0.2849 ± 0.0806***
(c. chioneus, t. timareta, m. aglaope, wallacei)	0.4986 ± 0.1049***	0.3531 ± 0.0879***
(c. chioneus, t. timareta, m. amaryllis, wallacei)	0.4790 ± 0.1038***	0.3487 ± 0.0898***
(c. chioneus, t. timareta, m. melpomene, wallacei)	-0.1609 ± 0.1151	-0.1525 ± 0.0624*
(c. chioneus, t. timareta, m. rosina, wallacei)	-0.2609 ± 0.1071*	-0.1705 ± 0.0655**
(c. alithea, t. timareta, m. malleti, wallacei)	0.5997 ± 0.0816***	0.3310 ± 0.0703***
(c. alithea, t. timareta, m. aglaope, wallacei)	0.4204 ± 0.1130***	0.3518 ± 0.0903***
(c. alithea, t. timareta, m. amaryllis, wallacei)	0.4120 ± 0.1080***	0.3568 ± 0.0869***
(c. alithea, t. timareta, m. melpomene, wallacei)	-0.1467 ± 0.1034	-0.0841 ± 0.0498
(c. alithea, t. timareta, m. rosina, wallacei)	-0.3339 ± 0.1192**	-0.1237 ± 0.0543*
(t. florencia, t. thelxinoe, m. malleti, wallacei)	0.3711 ± 0.0663***	0.1924 ± 0.0932*
(t. florencia, t. thelxinoe, m. aglaope, wallacei)	0.3529 ± 0.0980***	0.0896 ± 0.0754
(t. florencia, t. thelxinoe, m. amaryllis, wallacei)	0.3798 ± 0.0882***	0.1577 ± 0.0648*
(t. florencia, t. thelxinoe, m. melpomene, wallacei)	-0.5991 ± 0.0839***	-0.0765 ± 0.3293
(t. florencia, t. thelxinoe, m. rosina, wallacei)	-0.6672 ± 0.0710***	-0.0961 ± 0.3286
(t. florencia, t. thelxinoe, c. chioneus, wallacei)	-0.7977 ± 0.0449***	-1.3376 ± 0.5319*
(t. florencia, t. thelxinoe, c. alithea, wallacei)	-0.6886 ± 0.0560***	-0.4230 ± 0.1252***
(t. florencia, t. thelxinoe, c. zelinde, wallacei)	-0.7720 ± 0.0450***	-0.5848 ± 0.1922**
(t. florencia, t. thelxinoe, numata, wallacei)	0.4661 ± 0.0949***	0.2404 ± 0.0492***
(t. florencia, t. thelxinoe, elevatus, wallacei)	0.1540 ± 0.1117	-0.1316 ± 0.1968
(t. florencia, t. thelxinoe, ethilla, wallacei)	0.1851 ± 0.1223	0.0679 ± 0.0427
(t. florencia, t. thelxinoe, beskei, wallacei)	0.1521 ± 0.1157	0.0332 ± 0.0385
(t. timareta, t. thelxinoe, m. malleti, wallacei)	-0.0534 ± 0.0900	2.6589 ± 2.3392
(t. timareta, t. thelxinoe, m. aglaope, wallacei)	-0.2301 ± 0.1435	-1.5909 ± 0.7420*
(t. timareta, t. thelxinoe, m. amaryllis, wallacei)	-0.1771 ± 0.1394	-0.0260 ± 1.0752

(t. timareta, t. thelxinoe, m. melpomene, wallacei)	-0.3769 ± 0.1044***	-0.4613 ± 0.3847
(t. timareta, t. thelxinoe, m. rosina, wallacei)	-0.3942 ± 0.1068***	-0.3719 ± 0.3848
(t. timareta, t. thelxinoe, c. chioneus, wallacei)	-0.5145 ± 0.1070***	-0.8315 ± 0.3841*
(t. timareta, t. thelxinoe, c. alithea, wallacei)	-0.4570 ± 0.0953***	-0.7875 ± 0.5298
(t. timareta, t. thelxinoe, c. zelinde, wallacei)	-0.4676 ± 0.1080***	-0.5252 ± 0.2590*
(t. timareta, t. thelxinoe, numata, wallacei)	0.3308 ± 0.1041**	-0.0639 ± 0.2621
(t. timareta, t. thelxinoe, elevatus, wallacei)	-0.3149 ± 0.1174**	0.8858 ± 0.7319
(t. timareta, t. thelxinoe, ethilla, wallacei)	-0.2964 ± 0.1306*	-0.4998 ± 0.2104*
(t. timareta, t. thelxinoe, beskei, wallacei)	-0.0444 ± 0.1147	-0.0271 ± 0.0380
(c. chioneus, t. thelxinoe, m. malleti, wallacei)	0.4908 ± 0.0794***	0.3283 ± 0.0725***
(c. chioneus, t. thelxinoe, m. aglaope, wallacei)	0.4877 ± 0.1033***	0.0997 ± 0.1128
(c. chioneus, t. thelxinoe, m. amaryllis, wallacei)	0.5049 ± 0.0933***	0.2115 ± 0.0616***
(c. chioneus, t. thelxinoe, m. melpomene, wallacei)	-0.5686 ± 0.1001***	-0.4469 ± 0.1047***
(c. chioneus, t. thelxinoe, m. rosina, wallacei)	-0.6517 ± 0.0775***	-0.4889 ± 0.1071***
(c. chioneus, t. thelxinoe, numata, wallacei)	0.5280 ± 0.0992***	0.2503 ± 0.0503***
(c. chioneus, t. thelxinoe, elevatus, wallacei)	0.2211 ± 0.1172	0.0275 ± 0.0683
(c. chioneus, t. thelxinoe, ethilla, wallacei)	0.2452 ± 0.1222*	0.0967 ± 0.0437*
(c. chioneus, t. thelxinoe, beskei, wallacei)	0.1779 ± 0.1112	0.0419 ± 0.0353
(m. malleti, t. thelxinoe, numata, wallacei)	0.2261 ± 0.0818**	0.1172 ± 0.0520*
(m. malleti, t. thelxinoe, elevatus, wallacei)	-0.2141 ± 0.0583***	-0.1347 ± 0.0329***
(m. malleti, t. thelxinoe, ethilla, wallacei)	-0.1833 ± 0.0557***	-0.1214 ± 0.0322***
(m. malleti, t. thelxinoe, beskei, wallacei)	0.0482 ± 0.0706	0.0080 ± 0.0221
(m. amaryllis, t. thelxinoe, numata, wallacei)	0.3868 ± 0.0782***	0.1456 ± 0.0626*
(m. amaryllis, t. thelxinoe, elevatus, wallacei)	-0.4828 ± 0.0581***	-0.1161 ± 0.8216
(m. amaryllis, t. thelxinoe, ethilla, wallacei)	-0.4789 ± 0.0608***	-0.5927 ± 0.2362*
(m. amaryllis, t. thelxinoe, beskei, wallacei)	-0.0759 ± 0.0852	-0.0682 ± 0.0325*
(c. galanthus, pachinus, m. melpomene, wallacei)	0.5611 ± 0.1760**	0.2028 ± 0.0623**
(c. galanthus, pachinus, m. rosina, wallacei)	0.4859 ± 0.2253*	0.1976 ± 0.0658**
(c. galanthus, pachinus, western melpomene, wallacei)	0.5414 ± 0.2210*	0.2115 ± 0.0628***
(c. galanthus, pachinus, m. malleti, wallacei)	-0.1808 ± 0.1896	-0.1465 ± 0.1277
(c. galanthus, pachinus, m. aglaope, wallacei)	0.5107 ± 0.1926**	0.2799 ± 0.1051**
(c. galanthus, pachinus, m. amaryllis, wallacei)	0.5285 ± 0.2343*	0.3600 ± 0.1005***
(c. chioneus, pachinus, m. melpomene, wallacei)	0.6260 ± 0.1163***	0.2020 ± 0.0627**
(c. chioneus, pachinus, m. rosina, wallacei)	0.4839 ± 0.2272*	0.1992 ± 0.0650**
(c. chioneus, pachinus, western melpomene, wallacei)	0.5188 ± 0.2287*	0.2149 ± 0.0633***
(c. chioneus, pachinus, m. malleti, wallacei)	-0.0658 ± 0.1091	-0.1218 ± 0.1267
(c. chioneus, pachinus, m. aglaope, wallacei)	0.6054 ± 0.1445***	0.2947 ± 0.0922**
(c. chioneus, pachinus, m. amaryllis, wallacei)	0.6887 ± 0.1236***	0.3826 ± 0.0898***
(m. amaryllis, m. aglaope, elevatus, wallacei)	0.1290 ± 0.0487**	0.0637 ± 0.0369
(m. amaryllis, m. malleti, elevatus, wallacei)	-0.5078 ± 0.0569***	0.3518 ± 0.7142
(m. aglaope, m. malleti, elevatus, wallacei)	-0.5455 ± 0.0570***	-0.8291 ± 0.5491
(m. melpomene, m. malleti, elevatus, wallacei)	0.2971 ± 0.1171*	0.244 ± 0.0748**

(*m. melpomene, m. aglaope, elevatus, wallacei*)	0.5146 ± 0.0945***	0.3430 ± 0.0674***
(*m. melpomene, m. amaryllis, elevatus, wallacei*)	0.4532 ± 0.1036***	0.3185 ± 0.0686***
(*m. rosina, m. malleti, elevatus, wallacei*)	0.3207 ± 0.1169**	0.2382 ± 0.0757**
(*m. rosina, m. aglaope, elevatus, wallacei*)	0.5407 ± 0.0881***	0.3321 ± 0.0632***
(*m. rosina, m. amaryllis, elevatus, wallacei*)	0.4851 ± 0.0898***	0.2686 ± 0.0870**
(western *melpomene*, eastern *melpomene, elevatus, wallacei*)	0.3606 ± 0.1080***	0.2719 ± 0.0765***
(western *melpomene*, eastern *melpomene, ethilla, wallacei*)	0.3288 ± 0.1217***	0.1737 ± 0.0844*
(western *melpomene*, eastern *melpomene, n. robigus, wallacei*)	0.3709 ± 0.0934***	0.1321 ± 0.0317***
(western *melpomene*, eastern *melpomene, beskei, wallacei*)	0.1502 ± 0.1107	0.0802 ± 0.0373*
(*e. emma* population1, *e. lativitta, e. favorinus, hermathena*)	0.4069 ± 0.1025***	0.2700 ± 0.1228*
(*e. emma* population2, *e. lativitta, e. favorinus, hermathena*)	0.0276 ± 0.0874	-1.1049 ± 1.1265
(*e. emma, e. lativitta, e. favorinus, hermathena*)	0.2273 ± 0.0616***	0.2300 ± 0.0789**

Results of d_{xy}		
	the *L* locus	Genome-wide
d_{xy} (*t. timareta, m. malleti*)	0.0174 ± 0.0019***	0.0282 ± 0.0001
d_{xy} (*t. timareta, m. aglaope*)	0.0157 ± 0.0023***	0.0263 ± 0.0001
d_{xy} (*t. timareta, m. amaryllis*)	0.0164 ± 0.0023***	0.0283 ± 0.0001
d_{xy} (*t. timareta, m. melpomene*)	0.0262 ± 0.0025***	0.0302 ± 0.0001
d_{xy} (*t. timareta, m. rosina*)	0.0256 ± 0.0026***	0.0301 ± 0.0001
d_{xy} (*t. timareta, c. chioneus*)	0.0198 ± 0.0031***	0.0303 ± 0.0002
d_{xy} (*t. timareta, c. alithea*)	0.0240 ± 0.0024***	0.0292 ± 0.0001
d_{xy} (*t. timareta, c. zelinde*)	0.0232 ± 0.0027***	0.0303 ± 0.0002
d_{xy} (*t. thelxinoe, m. malleti*)	0.0203 ± 0.0014***	0.0282 ± 0.0001
d_{xy} (*t. thelxinoe, m. aglaope*)	0.0212 ± 0.0017***	0.0263 ± 0.0001
d_{xy} (*t. thelxinoe, m. amaryllis*)	0.0217 ± 0.0016***	0.0281 ± 0.0001
d_{xy} (*t. thelxinoe, m. melpomene*)	0.0316 ± 0.0022	0.0304 ± 0.0001
d_{xy} (*t. thelxinoe, m. rosina*)	0.0310 ± 0.0022	0.0302 ± 0.0001
d_{xy} (*t. thelxinoe, c. chioneus*)	0.0274 ± 0.0027***	0.0307 ± 0.0002
d_{xy} (*t. thelxinoe, c. alithea*)	0.0291 ± 0.0023	0.0296 ± 0.0001
d_{xy} (*t. thelxinoe, c. zelinde*)	0.0288 ± 0.0022**	0.0307 ± 0.0002
d_{xy} (*t. thelxinoe, numata*)	0.0229 ± 0.0022***	0.0422 ± 0.0002
d_{xy} (*t. thelxinoe, elevatus*)	0.0238 ± 0.0013***	0.0339 ± 0.0001
d_{xy} (*t. thelxinoe, ethilla*)	0.0241 ± 0.0015***	0.0418 ± 0.0002
d_{xy} (*t. thelxinoe, besckei*)	0.0267 ± 0.0014***	0.0355 ± 0.0001
d_{xy} (*pachinus, m. melpomene*)	0.0144 ± 0.0019***	0.0294 ± 0.0001
d_{xy} (*pachinus, m. rosina*)	0.0151 ± 0.0014***	0.0289 ± 0.0001

d_{xy} (*pachinus*, western *melpomene*)	0.0147 ± 0.0016***	0.0292 ± 0.0001
d_{xy} (*pachinus*, *m. malleti*)	0.0221 ± 0.0023***	0.0338 ± 0.0001
d_{xy} (*pachinus*, *m. aglaope*)	0.0143 ± 0.0014***	0.0314 ± 0.0001
d_{xy} (*pachinus*, *m. amaryllis*)	0.0132 ± 0.0016***	0.0343 ± 0.0001
d_{xy} (*m. aglaope*, *elevatus*)	0.0174 ± 0.0009***	0.0313 ± 0.0001
d_{xy} (*m. malleti*, *elevatus*)	0.0211 ± 0.0011***	0.0332 ± 0.0001
d_{xy} (*m. amaryllis*, *elevatus*)	0.0179 ± 0.0009***	0.0332 ± 0.0001
d_{xy} (*m. rosina*, *elevatus*)	0.0287 ± 0.0018***	0.0325 ± 0.0001
d_{xy} (*m. melpomene*, *elevatus*)	0.0290 ± 0.0018***	0.0327 ± 0.0001
d_{xy} (eastern *melpomene*, *elevatus*)	0.0190 ± 0.0010***	0.0328 ± 0.0001
d_{xy} (western *melpomene*, *elevatus*)	0.0289 ± 0.0018***	0.0327 ± 0.0001
d_{xy} (*e. lativitta, e. favorinus*)	0.0126 ± 0.0015***	0.0359 ± 0.0001

D mean and f_d mean denote the arithmetic means of *D* and f_d with standard errors of the *L* locus. In the results of *D*-statistics and f_d-statstics, * indicates p<0.05, ** indicates p<0.01, and *** indicates p<0.001. In the results of d_{xy}, *, ** and *** indicate a significantly lower d_{xy} value relative to genome-wide mean d_{xy} with $P < 0.05$, $P < 0.01$ and $P < 0.001$, separately.

Table S6. Results for the behavioral response in flight ability test.

Strain	Sample size	Movement type (count)		Ascent speed (mm/s)	Move latency (s)
		Fly	Crawl		
w RNAi	16	6	10	100.57 ± 43.20	0.29 ± 0.06
Col4a1 RNAi	16	0	16	5.41 ± 0.83	$0.47 \pm 0.02^*$
Vkg RNAi	16	0	16	$1.85 \pm 0.64^{***}$	$1.07 \pm 0.23^{***}$
na RNAi	16	0	16	$4.66 \pm 1.22^*$	$0.50 \pm 0.04^*$
Oseg4 RNAi	16	0	16	$3.36 \pm 0.92^{**}$	$0.88 \pm 0.21^{***}$

***, ** and * indicates a significant difference compared with *w* RNAi strain with $p < 0.001$, $p < 0.01$ and $p < 0.05$, separately.

Table S7. Sample information and sequencing statistics.

		Aligned to *H. melopmene* v2.5				
Sample	**Taxon**	**Data Source**	**Location**	**Reads (Gb)**	**Genotype Calls (Qual>50)**	**Mean Depth (Qual>50)**
bes110109		PRJNA308754	Brazil	5.7	51069941	12.9353
bes110105	*H. besckei*	PRJNA308754	Brazil	5.1	51184094	11.5613
bes110106		PRJNA308754	Brazil	5.1	50164656	11.7616
bes110107		PRJNA308754	Brazil	8.5	53508064	18.8554
mACw172		PRJNA308754	Ecuador	4.5	97468594	10.6895
mACy20		PRJNA308754	Ecuador	3.8	98247538	9.6691
nACy112	*H. cydno. alithea*	PRJNA308754	Ecuador	4.8	98259970	11.2864
nACw212		PRJNA308754	Ecuador	4.4	96452471	9.5522
CAM008509		PRJEB8011	Ecuador	6.0	68495536	11.6701
CAM008517		PRJEB8011	Ecuador	6.0	94259055	13.9116
CAM000580		PRJEB11772	Panama	8.0	100414290	21.4432
CAM000582		PRJEB11772	Panama	8.7	100472305	23.4645
CAM000553	*H. cydno chioneus*	PRJEB1749	Panama	11.4	100213471	30.687
CAM000560		PRJEB1749	Panama	11.1	100179695	30.2728
CAM000564		PRJEB1749	Panama	12.3	100342149	35.0625
CAM000565		PRJEB1749	Panama	15	100600231	41.6184
c511		PRJNA226620	Costa Rica	5.3	99247340	11.887
c512		PRJNA226620	Costa Rica	5.3	99493933	12.3414
c513	*H. cydno galanthus*	PRJNA226620	Costa Rica	5.3	99434936	12.6638
c514		PRJNA226620	Costa Rica	5.3	99297133	12.4575
c515		PRJNA226620	Costa Rica	5.3	99224219	12.1223
c563		PRJNA226620	Costa Rica	5	98448975	10.2569
CS1		PRJEB21091	Colombia	11.6	100612057	30.1990
CS2		PRJEB21091	Colombia	10.8	100621101	18.9426
CS30	*H. cydno zelinde*	PRJEB21091	Colombia	13.5	100770242	35.9631
2262		PRJEB21091	Colombia	6.0	99920599	14.7714
CS001030		PRJEB11772	Colombia	9.6	100101449	25.3036
CS001033		PRJEB11772	Colombia	10.1	100319784	26.5942
MJ09-4037	*H. elevatus bari*	PRJEB8011	French Guiana	12.3	99269966	27.5776
MJ09-4094		PRJEB8011	French Guiana	13.3	99163787	28.4873
JM-09-270		PRJEB8011	Peru	13.2	78002190	20.3233
Hel_18_16781	*H. elevatus*	PRJNA471310	Ecuador	13.1	79845841	24.8251
Hel_18_17434		PRJNA471310	Ecuador	9.8	77257784	18.5318
Hel_18_16439		PRJNA471310	Ecuador	9.4	76640287	18.1132
BC2577	*H. erato emma*	PRJNA324415	Peru	11.5	59006328	11.9289
NCS2025	*H. erato erato*	PRJNA324415	French Guiana	12.8	56877713	15.6075
BC2638	*H. erato favorinus*	PRJNA324415	Peru	12.7	59399393	12.7844
STRIWOM0039	*H. erato hydara*	PRJNA324415	Panama	10.7	56423426	16.2264
lativitta02	*H. erato lativitta*	PRJNA324415	Ecuador	14.0	57743103	17.6083

CA54	*H. erato petiverana*	PRJNA324415	Mexico	15.5	60330557	24.0672
STRIWOM5765	*H. erato phyllis*	PRJNA324415	Bolivia	12.9	60167425	17.9151
eth11045		PRJNA308754	Brazil	7.4	95512386	19.1599
eth11050	*H. ethilla narcaea*	PRJNA308754	Brazil	4.9	94554350	12.8163
eth11051		PRJNA308754	Brazil	5.0	94660391	12.8780
eth11052		PRJNA308754	Brazil	7.4	95287340	19.3765
09-273	*H. hecale felix*	PRJEB8011	Peru	16.3	98214237	32.4991
MJ11-2029	*H. hecale*	PRJNA471310	Panama	9.8	97687042	24.0874
hermathena14	*H. hermathena*	PRJNA324415	Brazil	17.1	57519039	17.3792
I_tel_H03	*H. ismenius*	PRJNA471310	Panama	6.6	93757570	16.3084
I_bou_MJ11_2140		PRJNA471310	Panama	7.4	94183472	18.8914
JM-11-572		PRJEB1749	Peru	12.9	90679591	20.6445
09-108	*H. melpomene aglaope*	PRJEB1749	Peru	14.2	89814222	20.1704
JM-11-569		PRJEB1749	Peru	15.3	91388175	24.6651
HMEL.AG		PRJNA73595	Peru	9.7	82550054	23.4071
MJ11-3188		PRJEB11772	Peru	9.2	100435459	22.8140
MJ11-3189		PRJEB11772	Peru	10.2	100661706	25.1498
11-48	*H. melpomene*	PRJEB1749	Peru	18.9	101466308	43.0980
11-160	*amaryllis*	PRJEB1749	Peru	15.0	101227819	33.6324
09-216		PRJEB1749	Peru	11.2	101180352	25.8962
11-293		PRJEB1749	Peru	18.4	101323679	40.9542
CS21		PRJEB11772	Colombia	11.6	101768576	30.0598
CS22		PRJEB11772	Colombia	10.4	101549785	27.1884
CS24	*H. melpomene malleti*	PRJEB11772	Colombia	8.8	101458626	23.4429
CS000586		PRJEB11772	Colombia	8.7	100511291	21.0418
CS000604		PRJEB11772	Colombia	10.3	101555406	22.4873
CS000615		PRJEB11772	Colombia	7.6	100977658	20.0997
CAM018038		PRJEB1749	Panama	20.5	102283532	50.7477
CAM018097	*H. melpomene*	PRJEB1749	Panama	5.0	98795093	12.9049
STRI_WOM_0041	*melpomene*	PRJEB8011	Panama	10.4	102279030	26.5996
STRI_WOM_0043		PRJEB8011	Panama	12.9	102475219	31.6843
mel10514		PRJNA308754	Brazil	5.4	79471901	13.1474
mel10562	*H. melpomene nanna*	PRJNA308754	Brazil	5.4	79762381	13.5977
mel10563		PRJNA308754	Brazil	7.2	79621199	17.5279
mel10564		PRJNA308754	Brazil	5.9	79438545	14.2988
CAM001841		PRJEB11772	Panama	9.5	102137960	26.0958
CAM001880	*H. melpomene rosina*	PRJEB11772	Panama	10.5	102184207	28.9851
CAM002045		PRJEB11772	Panama	7.6	102312778	21.9980
CAM002059		PRJEB11772	Panama	8.7	102319946	24.9620
N_arc_05_1192	*H. numata arcuella*	PRJEB12740	Peru	29.6	99420296	44.4145
N_aur_MJ02_228	*H. numata aurora*	PRJEB12740	Peru	25.6	96543348	34.8674
N_num_MJ09_4125	*H. numata numata*	PRJEB12740	French Guiana	8.2	98383388	20.7034
num1052	*H. numata robigus*	PRJNA308754	Brazil	6.3	94368666	15.4117
num1055		PRJNA308754	Brazil	4.8	94143512	12.0268

Sample	Taxon	Data Source	Location	Reads (Gb)	Genotype Calls (Qual>50)	Mean Depth(Qual>50)
num1053		PRJNA308754	Brazil	7.9	95100415	19.1804
num1056		PRJNA308754	Brazil	4.7	94051021	11.7579
N_tar_MJ05_60	*H. numata tarapotensis*	PRJEB12740	Peru	22.9	95845388	34.6339
p516		PRJNA226620	Costa Rica	5.5	98962400	13.4019
p517		PRJNA226620	Costa Rica	5.5	99039559	13.6995
p518	*H. pachinus*	PRJNA226620	Costa Rica	5.5	99037697	13.7709
p519		PRJNA226620	Costa Rica	5.5	98878146	13.5016
p520		PRJNA226620	Costa Rica	4.9	97960816	10.1382
p591		PRJNA226620	Costa Rica	5	97907409	10.2174
Hel_21_09-269	*H. pardalinus*	PRJNA471310	Peru	12.0	99793674	28.5672
Hel_21_09-105		PRJNA471310	Peru	12.0	99786739	29.9377
CS002341		PRJEB11772	Colombia	10.4	100118346	25.9227
CS002350		PRJEB11772	Colombia	8.7	100462096	23.0558
CS002358	*H. timareta florencia*	PRJEB11772	Colombia	9.3	100986042	23.5402
CS002359		PRJEB11772	Colombia	8.2	100404307	21.6401
CS002395		PRJEB11772	Colombia	9.2	100116553	12.9641
CS002402		PRJEB11772	Colombia	8.8	100049268	12.2439
MJ12-3221		PRJEB11772	Peru	10.0	100879765	22.4076
MJ12-3233		PRJEB11772	Peru	8.7	100396266	23.3449
MJ12-3308	*H. timareta thelxinoe*	PRJEB11772	Peru	8.4	100315925	22.8370
MJ11-3339		PRJEB11772	Peru	9.5	99901760	23.7697
MJ11-3340		PRJEB11772	Peru	8.3	99842030	20.8964
MJ11-3460		PRJEB11772	Peru	13.7	100024331	33.3763
CAM009178	*H. timareta timareta*	PRJEB8011	Ecuador	12.2	96590185	24.3504
BC_0407		PRJEB8011	Ecuador	13.0	100729511	29.9129
CAM009223	*H. timareta timareta*	PRJEB8011	Ecuador	9.9	96929241	22.2181
BC_0406	*f.contigua*	PRJEB8011	Ecuador	11.2	100856903	25.6775
CAM008687		PRJEB11772	Peru	5.6	57087723	7.7045
JM-04-200	*H. wallacei*	PRJEB8011	Peru	12.3	63874651	14.3906
Hel_wallacei		PRJNA308754	Peru	11.6	64302493	15.9901

Aligned to *H. erato demophoon* v1

Sample	Taxon	Data Source	Location	Reads (Gb)	Genotype Calls (Qual>50)	Mean Depth(Qual>50)
BC2579		PRJNA324415	Peru	11.2	90754647	17.1341
BC2578	*H. erato emma (H.*	PRJNA324415	Peru	11.6	90913881	19.0642
BC2577	*himera* contact zone)	PRJNA324415	Peru	11.5	90823156	19.2495
BC2563		PRJNA324415	Peru	12.3	90693640	19.6834
NCS1674		PRJNA324415	Peru	12.1	90309399	21.0499
NCS1672	*H. erato emma (H.*	PRJNA324415	Peru	12.2	90119141	19.9792
NCS1673	*erato favorinus* contact	PRJNA324415	Peru	13.2	90411822	22.8150
NCS1671	zone)	PRJNA324415	Peru	13.5	90425421	22.4768
NCS2012	*H. erato erato*	PRJNA324415	French Guiana	14.7	89735159	21.0112

NCS2025		PRJNA324415	French Guiana	12.8	89481816	18.9626
BC2638		PRJNA324415	Peru	12.7	90666874	21.0782
BC2637	*H. erato favorinus (H. himera* contact zone)	PRJNA324415	Peru	11.3	90605743	18.4270
BC2635		PRJNA324415	Peru	11.7	90447656	18.9462
NCS0476	*H. erato favorinus (H. erato emma* contact zone)	PRJNA324415	Peru	12.0	90243425	20.7283
NCS2554		PRJNA324415	Peru	10.3	89471328	17.9160
NCS2555		PRJNA324415	Peru	13.2	89569243	22.6387
STRIWOM0042	*H. erato hydara*	PRJNA324415	Panama	11.2	90037337	18.0791
STRIWOM0039		PRJNA324415	Panama	10.7	90306086	20.0210
lativitta04		PRJNA324415	Ecuador	16.8	89910729	23.4406
lativitta03		PRJNA324415	Ecuador	16.0	90282297	27.3003
lativitta02	*H. erato lativitta*	PRJNA324415	Ecuador	14.0	89784271	22.0490
BC0411		PRJNA324415	Ecuador	16.4	90492152	26.9691
lativitta01		PRJNA324415	Ecuador	11.0	87960775	17.7305
CA54	*H. erato petiverana*	PRJNA324415	Mexico	15.5	87697148	32.0860
CA56		PRJNA324415	Mexico	13.9	87611643	28.9679
STRIWOM5742	*H. erato phyllis*	PRJNA324415	Bolivia	13.3	90885994	24.6477
STRIWOM5765		PRJNA324415	Bolivia	12.9	90722900	25.1419
hermathena13		PRJNA324415	Brazil	14.3	81856396	19.5469
hermathena14	*H. hermathena*	PRJNA324415	Brazil	17.1	82396877	23.2632
hermathena15		PRJNA324415	Brazil	20.7	82596488	27.9388

RNA seq data aligned to *H. melopmene* v2.5							
Sample	**Taxon**	**Tissue**	**Stage**	**Data Source**	**Location**	**Uniquely mapped reads (M)**	**Uniquely mapped ratio**
M9A						7.92	95.55%
M10A						7.92	94.79%
M41A			Mated female			7.34	95.37%
M43A						8.27	95.78%
M44A						7.29	95.48%
M21A						7.93	95.64%
M22A						11.88	95.53%
M23A		Antennae	Unmated female			7.20	95.35%
M25A	*H. m. rosina*			PRJNA577441	Panama	10.09	95.08%
M26A						6.68	95.61%
M19A						7.51	95.84%
M20A						7.21	94.76%
M32A			Male			5.23	95.73%
M35A						7.25	95.52%
M37A						7.15	95.93%
M9P		Proboscis	Mated female			5.91	95.23%
M10P						6.83	94.78%

Sample	Tissue	Status	Project	Value	Percent
M41P				5.76	94.54%
M43P				8.11	95.50%
M44P				9.51	95.13%
M21P				7.49	94.59%
M22P				8.49	95.15%
M23P		Unmated female		10.58	94.89%
M25P				10.58	94.71%
M26P				6.53	93.61%
M19P				8.65	93.74%
M20P				7.64	94.52%
M32P		Male		5.81	95.39%
M35P				7.82	95.00%
M37P				7.74	95.20%
M9L				9.03	96.49%
M10L				6.91	96.53%
M41L		Mated female		11.08	96.26%
M43L				8.18	96.36%
M44L				6.08	96.45%
M21L				11.42	96.10%
M22L				10.87	96.55%
M23L	Legs	Unmated female		8.00	96.55%
M25L				9.41	96.50%
M26L				6.48	96.45%
M19L				8.36	96.59%
M20L				7.74	96.50%
M32L		Male		10.15	96.72%
M35L				12.39	96.45%
M37L				9.93	96.80%
rosina.185				2.18	79.51%
rosina.208		Male		2.58	69.84%
rosina.622	Abdomen			1.67	72.34%
rosina.183			PRJEB2745	2.57	53.76%
rosina.209		Female		2.87	80.93%
rosina.338				5.21	78.85%
13F_FP1				8.14	83.49%
13G_FM1				12.01	85.03%
13H_FD1				8.13	84.40%
14A_FP1				11.33	80.17%
14B_FM1	Wing disc	Forewing (day1)		9.55	81.85%
14C_FD1			PRJNA552081	8.66	79.39%
14F_FP1				9.17	80.67%
14G_FM1				9.56	81.46%
14H_FD1				9.66	83.08%
13I_HA1		Hindwing (day1)		8.72	81.13%

Sample	Taxon	Tissue	Stage	Data Source	Location	Uniquely mapped reads (M)	Uniquely mapped ratio
13J_HPo1						9.61	82.97%
14D_HA1						8.02	79.09%
14E_HPo1						11.80	82.18%
24D_HA1						7.82	61.97%
14J_HPo1						10.64	80.26%
15A_FP2						8.73	80.46%
15B_FM2						8.47	81.53%
15C_FD2						9.10	80.91%
16A_FP2						11.60	82.54%
16B_FM2			Forewing (day2)			10.76	82.25%
16H_FD2						12.35	82.81%
17F_FP2						9.00	85.98%
17G_FM2						9.97	86.47%
17H_FD2						11.97	86.22%
15D_HA2						8.04	80.54%
15E_HPo2						10.84	83.26%
16D_HA2			Hindwing (day2)			10.66	87.64%
16E_HPo2						10.00	81.82%
17I_HA2						12.15	85.76%
17J_HPo2						12.05	85.63%
Hmm54GPf						10.03	82.60%
Hmm54HDf						22.63	81.76%
Hmm52EPf	*H. m. melpomene*	Wing disc	Hindwing (day2)		Panama	22.20	85.81%
Hmm49PBf						19.53	77.42%
Hmm49DAf						18.85	82.88%
aglaope.319	*H. m. aglaope*	Wing disc	Hindwing (48hrs post-pupation)			2.60	75.05%
aglaope.109				PRJEB2745		1.09	44.82%
amaryllis.171	*H. m. amaryllis*	Wing disc	Hindwing (48hrs post-pupation)			4.28	78.66%
amaryllis.150						2.85	78.31%

RNA seq data aligned to *H. erato demophoon* v1

Sample	Taxon	Tissue	Stage	Data Source	Location	Uniquely mapped reads (M)	Uniquely mapped ratio
HehimD3-FW1						12.03	79.48%
HehimD3-FW2			Forewing (day3)			11.06	78.09%
HehimD3-FW3						13.73	78.74%
HehimD3-HW1	*H. himera*	Wing disc			Ecuador	9.65	78.21%
HehimD3-HW2			Hindwing (day3)			26.22	80.73%
HehimD3-HW3				PRJNA435610		12.66	80.73%
HelatD3-FW1						13.74	80.77%
HelatD3-FW2			Forewing (day3)			8.16	78.98%
HelatD3-FW3	*H. e. lativitta*	Wing disc			Ecuador	7.31	75.94%
HelatD3-HW1			Hindwing (day3)			9.58	80.89%
HelatD3-HW2						7.08	81.27%

HelatD3-HW3				8.69	77.93%
HepetD3-FW1				8.07	73.39%
HepetD3-FW2		Forewing (day3)		13.25	79.49%
HepetD3-FW3			Costa	10.69	80.65%
HepetD3-HW1	*H. e. petiverana*	Wing disc	Rica	9.88	69.93%
HepetD3-HW2		Hindwing (day3)		12.81	79.67%
HepetD3-HW3				11.99	81.57%