Supplementary File 4: DGE analysis show *cortex* and *dome/wash* are consistently differentially expressed between colour pattern races and pupal wing sections.
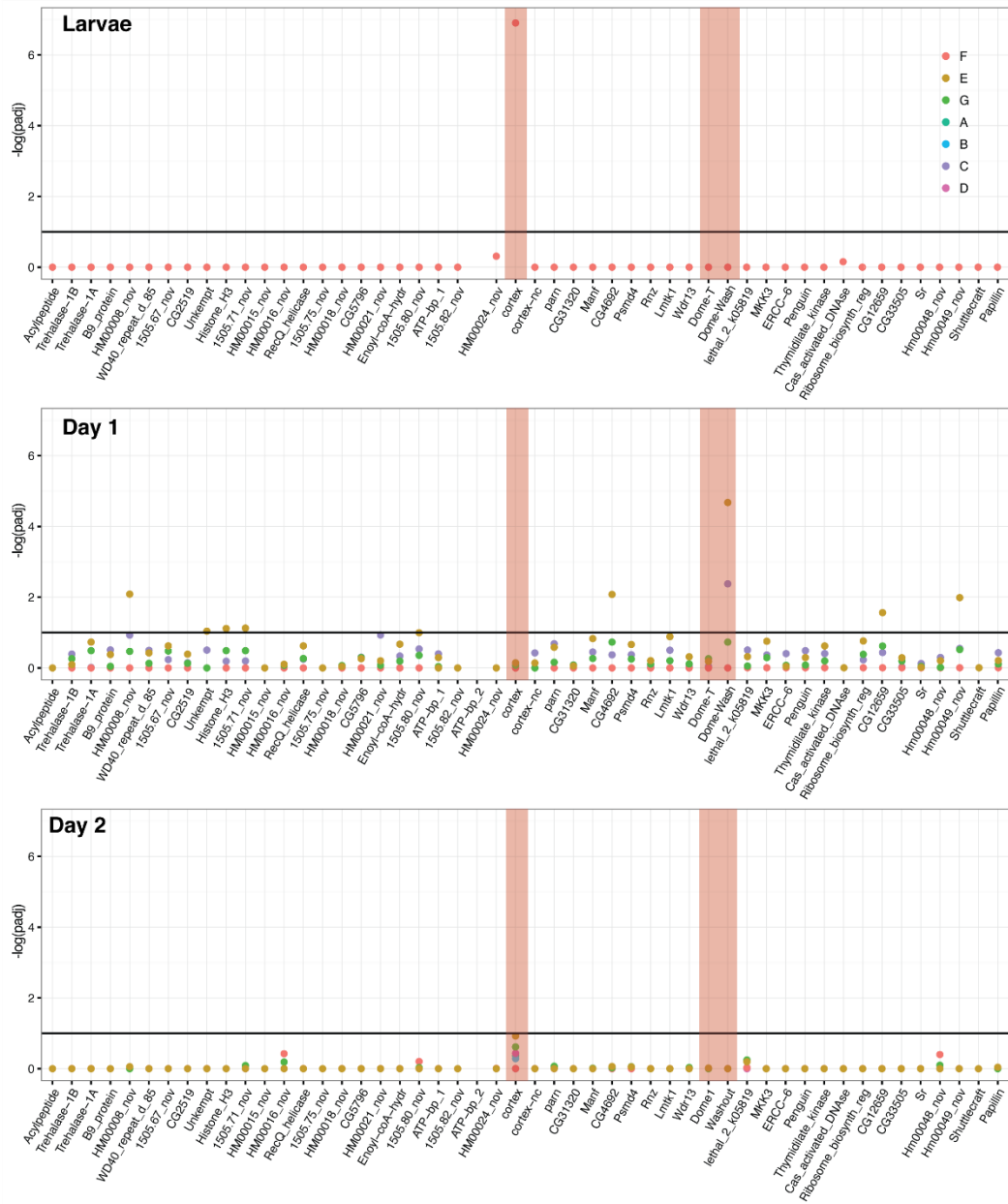

Figure S4.1: Differential expression across the *cortex* locus in *H. erato,* shown as the negative log of the adjusted p value (-log(*padj*)). Top: larvae, middle: day 1 pupae, bottom, day 2 pupae. See below table for gene IDs and homology with *H. melpomene.* The red shading highlights the genes *cortex, dome-T* and *Dome-Wash.* The horizontal line indicates the cutoff for significance, at *padj*=0.1. Colours are used for each of the contrasts, depicted in Figure 3. In this analysis, genes were differentially expressed in contrast E and C (depictions of these contrasts are provided). E gives genes differentially regulated in black posterior compartment, and C gives genes differentially regulated in yellow anterior compartment.
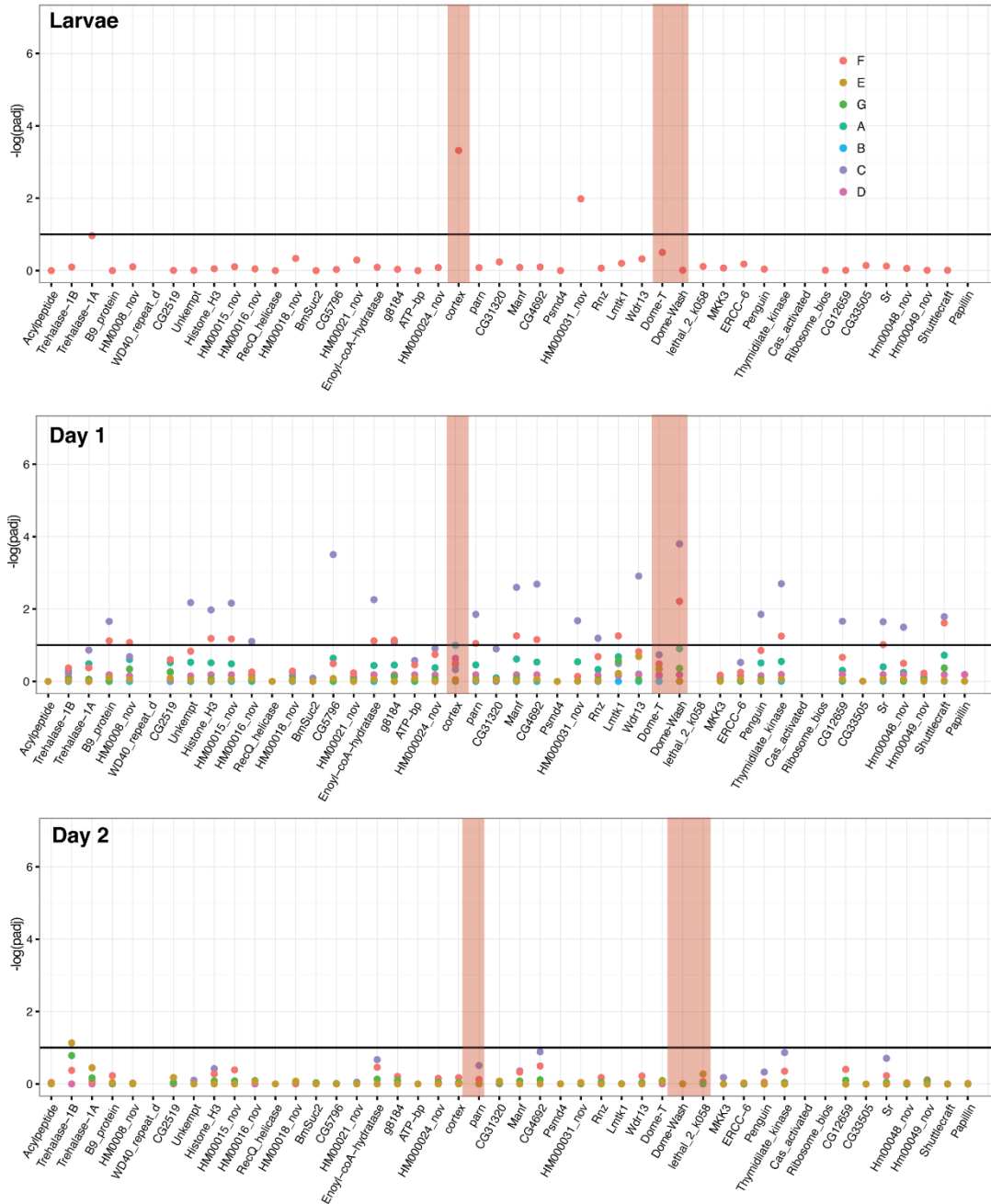
Figure S4.2. Differential expression across the *cortex* locus in *H. melpomene,* shown as the negative log of the adjusted p value (-log(*padj*)). Top: larvae, middle: day 1 pupae, bottom, day 2 pupae. See below table for gene IDs and homology with *H. erato.* Red bars highlight the genes *cortex, Dome-T* and *Dome-Wash*. The horizontal line indicates the cutoff for significance, at *padj*=0.1. Colours are used for each of the contrasts, depicted in Figure S4.3. In this analysis, genes were differentially expressed in contrast E, C and F (depictions of these contrasts are provided). F is the difference between races, E gives genes differentially regulated in black posterior compartment, and C gives genes differentially regulated in yellow anterior compartment (these contrasts are depicted in cartoon form).
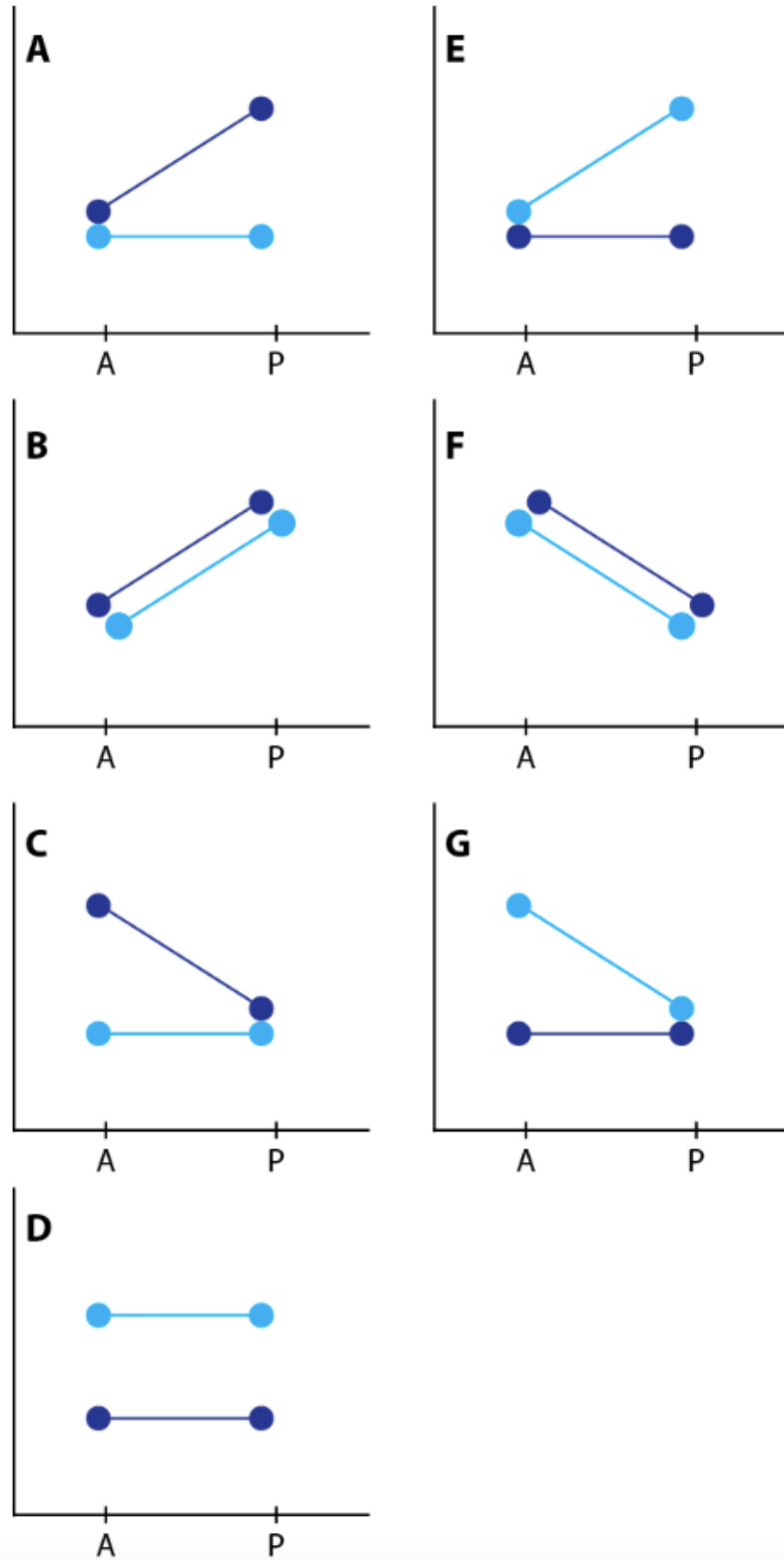
Figure S4.3: Depiction of contrasts. Dark blue represents the yellow races, *H. m. rosina* and *H. e. demophoon* from Panama. Light blue represents the black races, *H. m. melpomene* and *H. e. hydara* from Colombia.

Table S4.1: Gene IDs in the *H. melpomene* Yb locus and their corresponding IDs in the *H. erato* genome.

Hera1 Gene ID	gene name / description	Hmel2 Gene ID
evm.model.Herato1505.61	Acylpeptide	HMEL000003
evm.model.Herato1505.62	Trehalase-1B	HMEL000004
evm.model.Herato1505.63	Trehalase-1A	HMEL000006
evm.model.Herato1505.64	B9_protein	HMEL000007
evm.model.Herato1505.65	HM0008_nov	HMEL000008
evm.model.Herato1505.66	WD40_repeat_d_85	HMEL000010
evm.model.Herato1505.67		
evm.model.Herato1505.68	CG2519	HMEL000012
evm.model.Herato1505.69	Unkempt	HMEL000013
evm.model.Herato1505.70	Histone_H3	HMEL000014
evm.model.Herato1505.71		
evm.model.Herato1505.72	HM00015_nov	HMEL000015
evm.model.Herato1505.73	HM00016_nov	HMEL000016
evm.model.Herato1505.74	RecQ_helicase	HMEL000017
evm.model.Herato1505.75		
evm.model.Herato1505.76	HM00018_nov	HMEL000018
(1505.35!)	BmSuc2	HMEL000019
evm.model.Herato1505.77	CG5796	HMEL000020
evm.model.Herato1505.78	HM00021_nov	HMEL000021
evm.model.Herato1505.79	Enoyl-coA-hydratase	HMEL000022
evm.model.Herato1505.80		
evm.model.Herato1505.81	ATP-bp	HMEL002023
evm.model.Herato1505.82		
evm.model.Herato1505.83	HMEL002023	
evm.model.Herato1505.84	HM00024_nov	HM00024_nov
		g8186
evm.model.Herato1505.85	Cortex	HMEL000025
evm.model.Herato1505.86	parn	HMEL000026
evm.model.Herato1505.87	CG31320	HMEL000027
evm.model.Herato1505.88	Manf	HMEL000028
evm.model.Herato1505.89	CG4692	HMEL000029
evm.model.Herato1505.90	Psmd4	HMEL000030
	HM000031_nov	HMEL000031
evm.model.Herato1505.91	Rnz	HMEL000032
evm.model.Herato1505.92	Lmtk1	HMEL000033
evm.model.Herato1505.93	Wdr13	g8202
evm.model.Herato1505.94	Dome1	HMEL013472
evm.model.Herato1505.95	Washout	HMEL000036
evm.model.Herato1505.96	Dome2	HMEL000037
evm.model.Herato1505.97	lethal_2_k05819	g8206
evm.model.Herato1505.98	MKK3	HMEL000039

evm.model.Herato1505.99	ERCC-6	HMEL000040
evm.model.Herato1505.100	Penguin	HMEL000041
evm.model.Herato1505.101	Thymidilate_kinase	HMEL000042
evm.model.Herato1505.102	Cas_activated_DNAse	HMEL000043
evm.model.Herato1505.103	Ribosome_biosynth_r	HMEL000044
evm.model.Herato1505.104	CG12659	HMEL000045
evm.model.Herato1505.105	CG33505	HMEL000046
evm.model.Herato1505.106	Sr	HMEL000047
evm.model.Herato1505.107	Hm00048_nov	HMEL000048
evm.model.Herato1505.108	Hm00049_nov	HMEL000049
evm.model.Herato1505.109		HMEL000050
	Papillin	HMEL000051
evm.model.Herato1505.110	HM000052_nov	HMEL000052