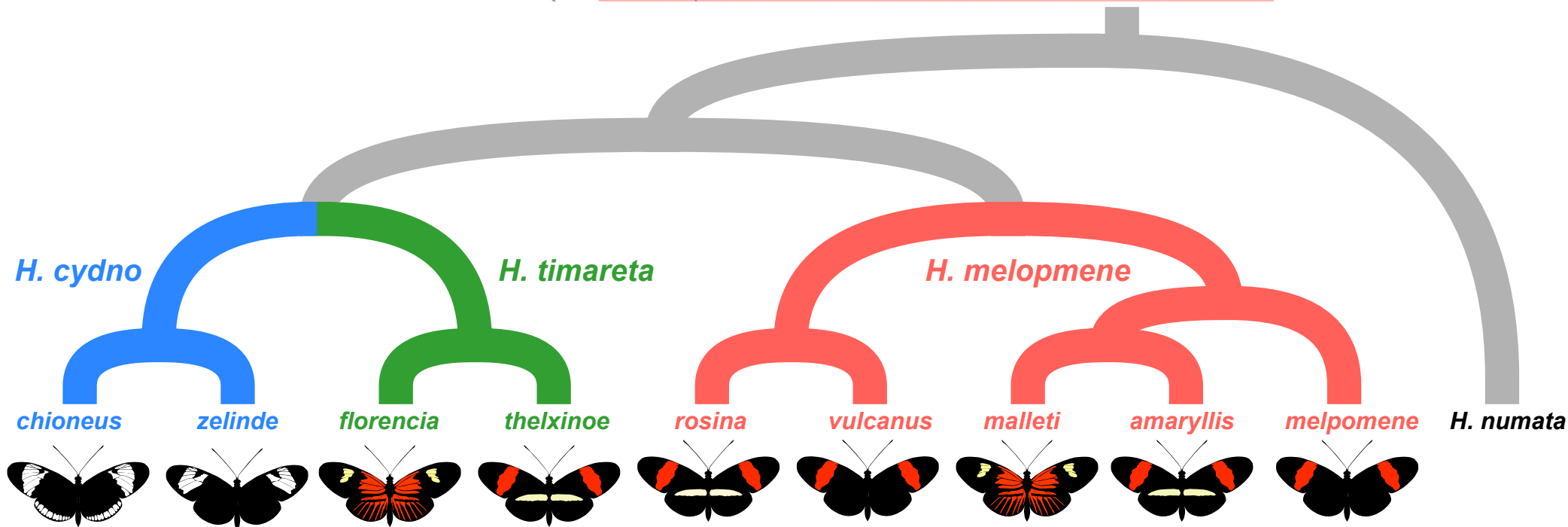
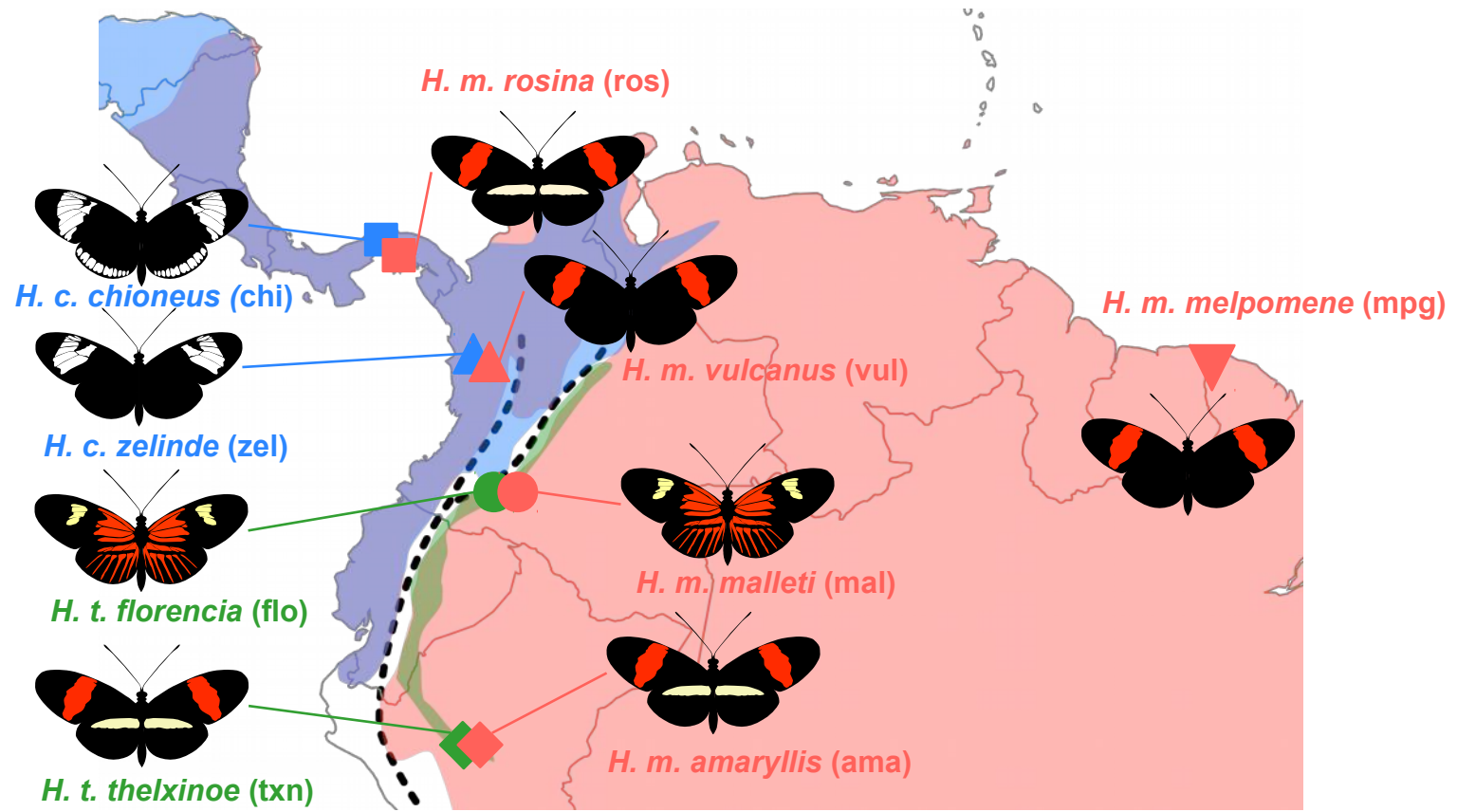
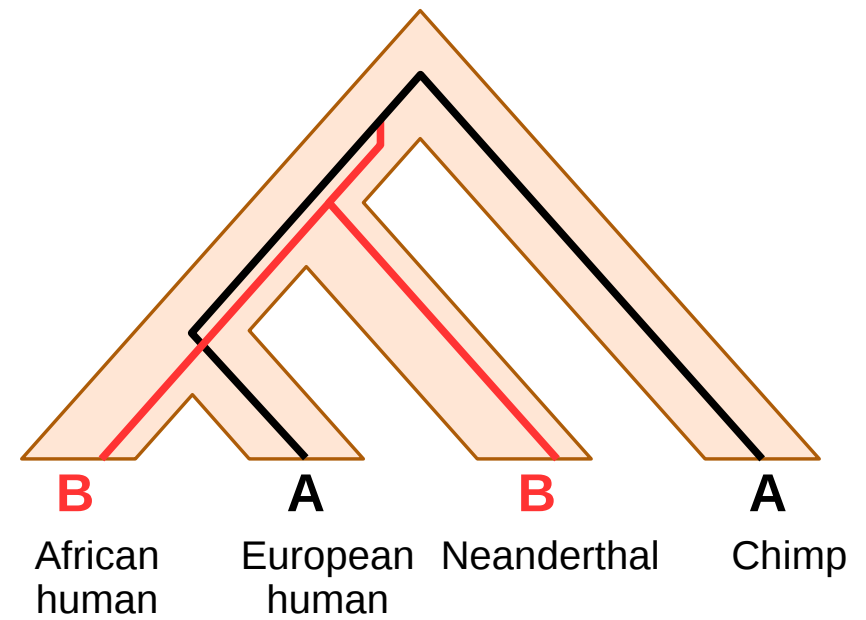
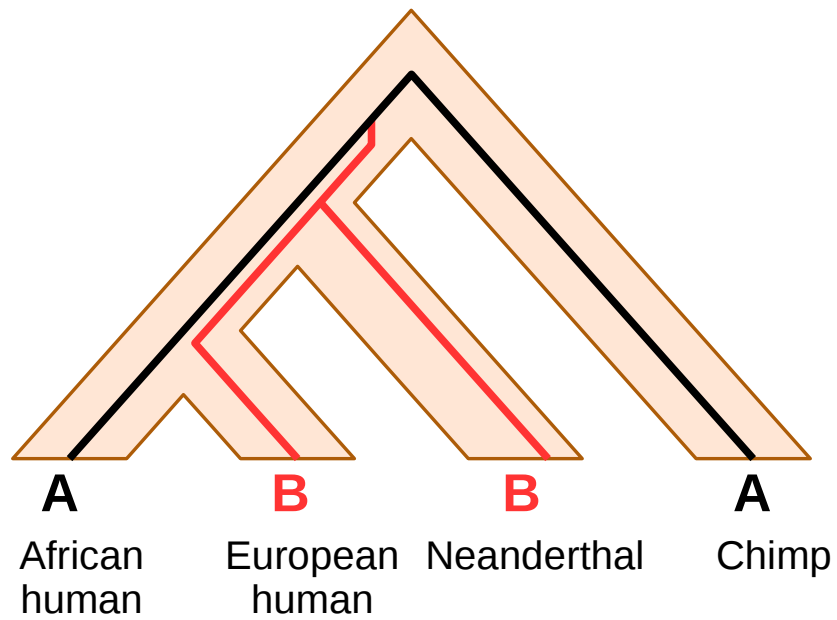
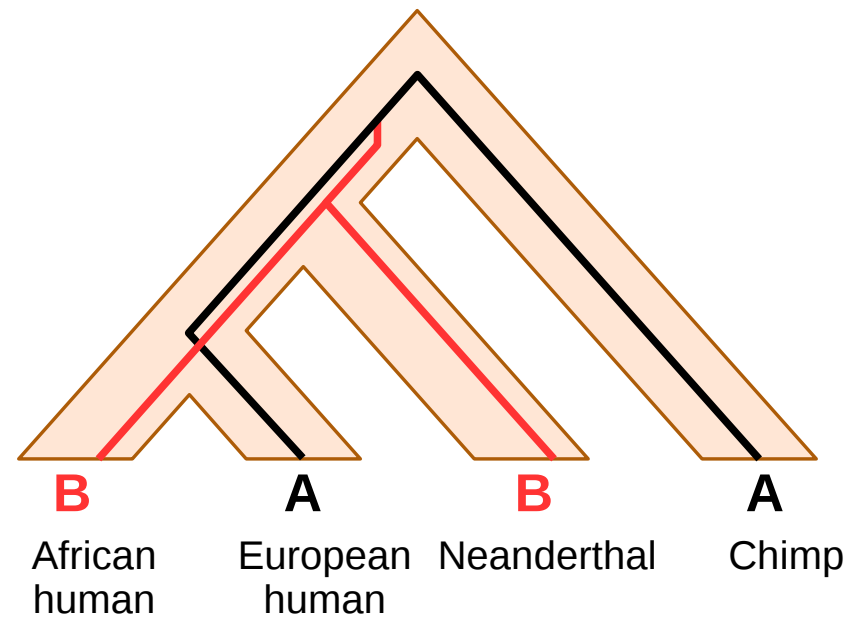
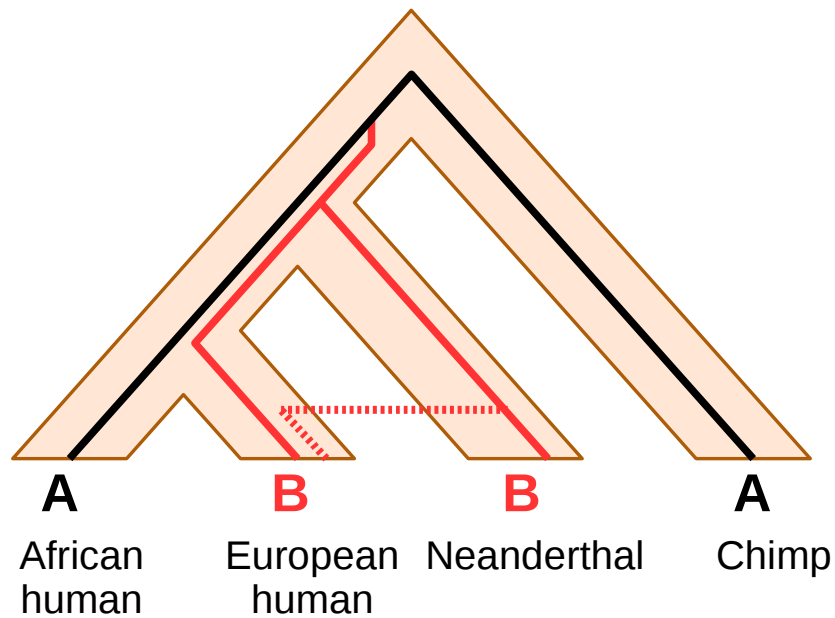






EXPECTED:
50% ABBA
50% BABA

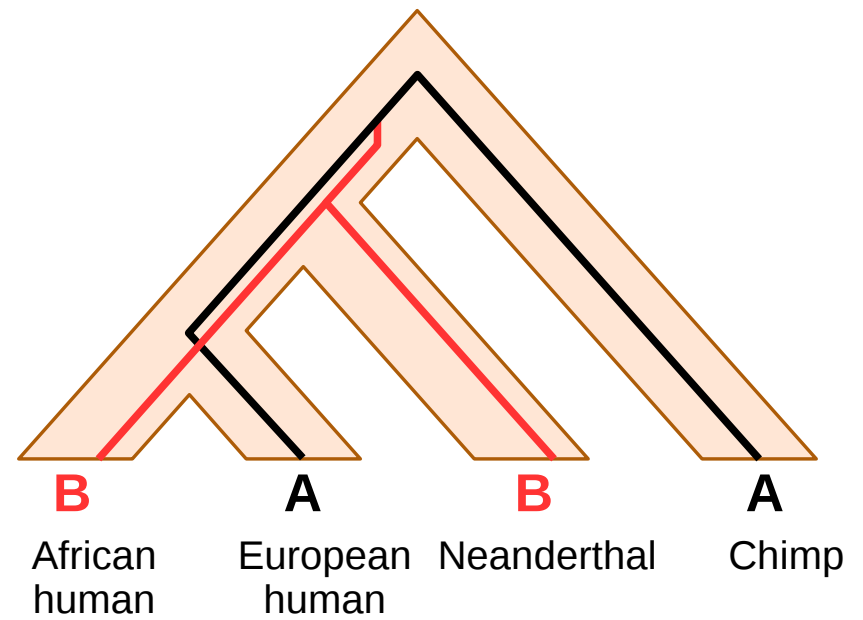
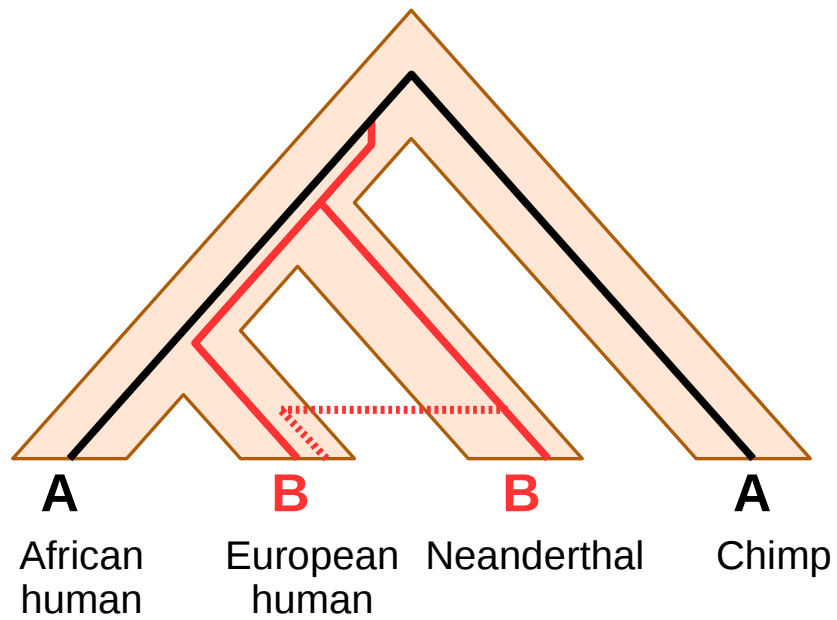
OBSERVED:
103612 ABBA
94029 BABA



EXPECTED:
50% ABBA
50% BABA

OBSERVED:
103612 ABBA
94029 BABA

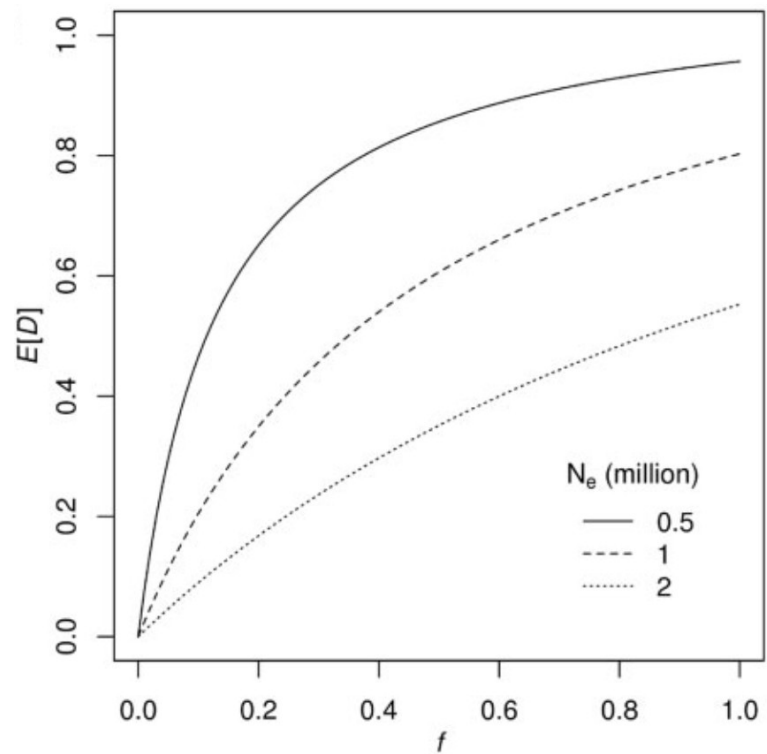
$$D(P_1, P_2, P_3, O) = \frac{\sum C_{ABBA}(i) - C_{BABA}(i)}{\sum C_{ABBA}(i) + C_{BABA}(i)}$$

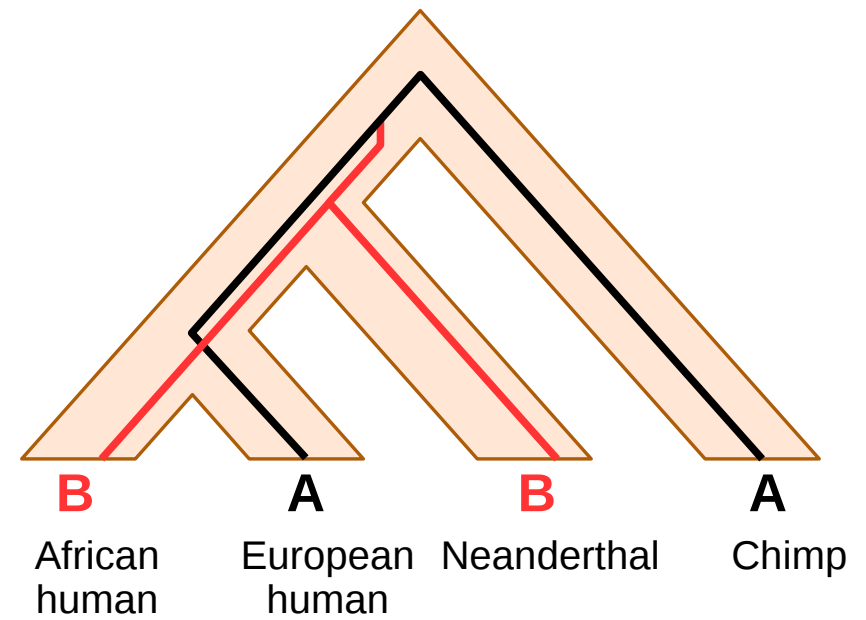
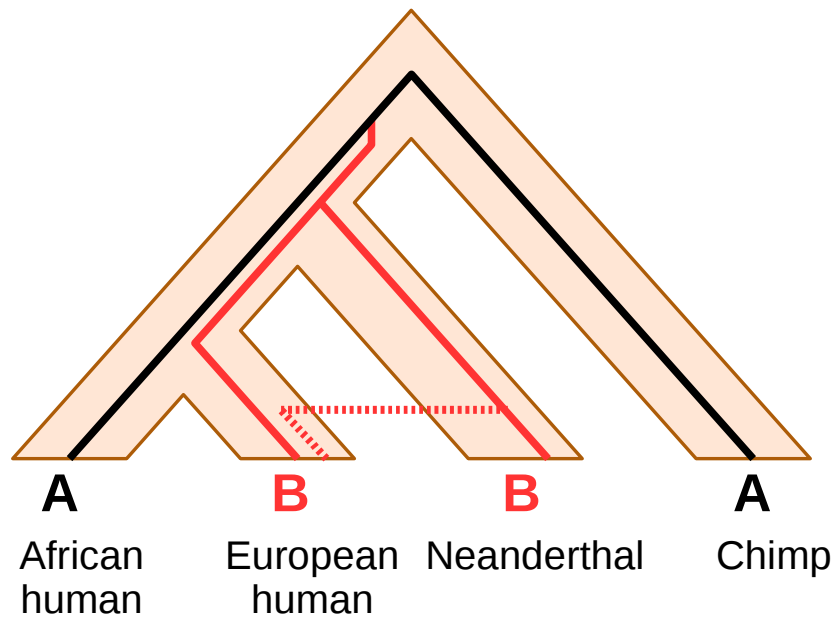


$$D(P_1, P_2, P_3, O) = \frac{\sum C_{ABBA}(i) - C_{BABA}(i)}{\sum C_{ABBA}(i) + C_{BABA}(i)}$$

$$C_{ABBA}(i) = (1 - \hat{p}_{i1})\hat{p}_{i2}\hat{p}_{i3}(1 - \hat{p}_{i4})$$

$$C_{BABA}(i) = \hat{p}_{i1}(1 - \hat{p}_{i2})\hat{p}_{i3}(1 - \hat{p}_{i4})$$



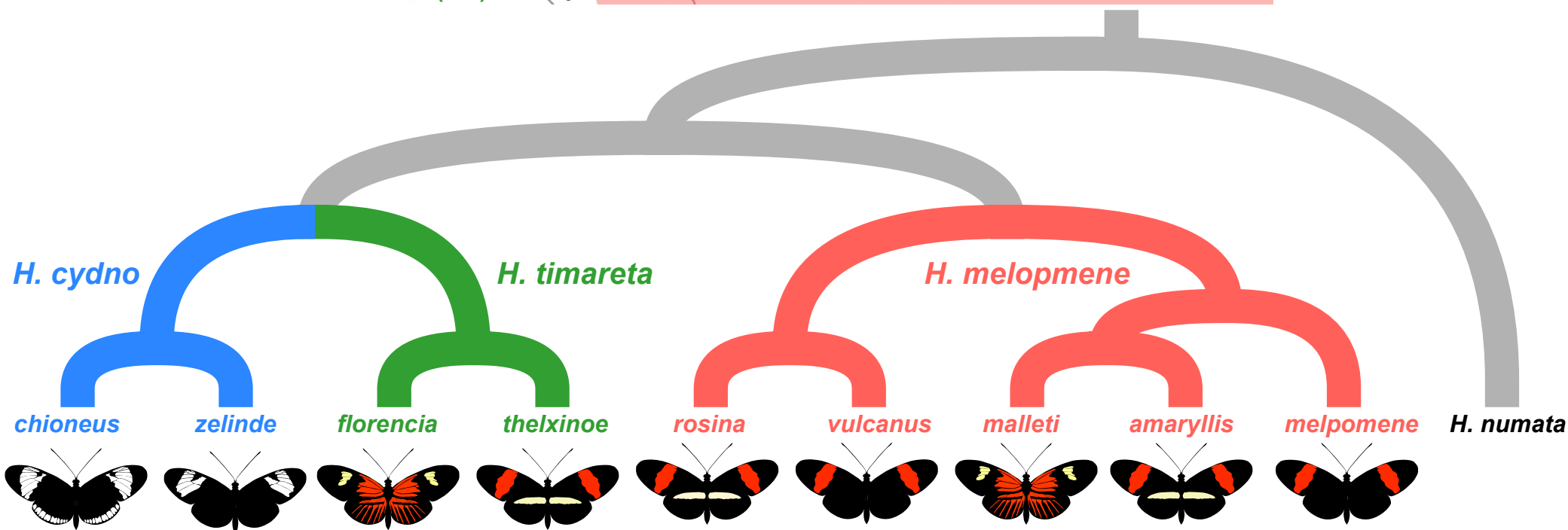


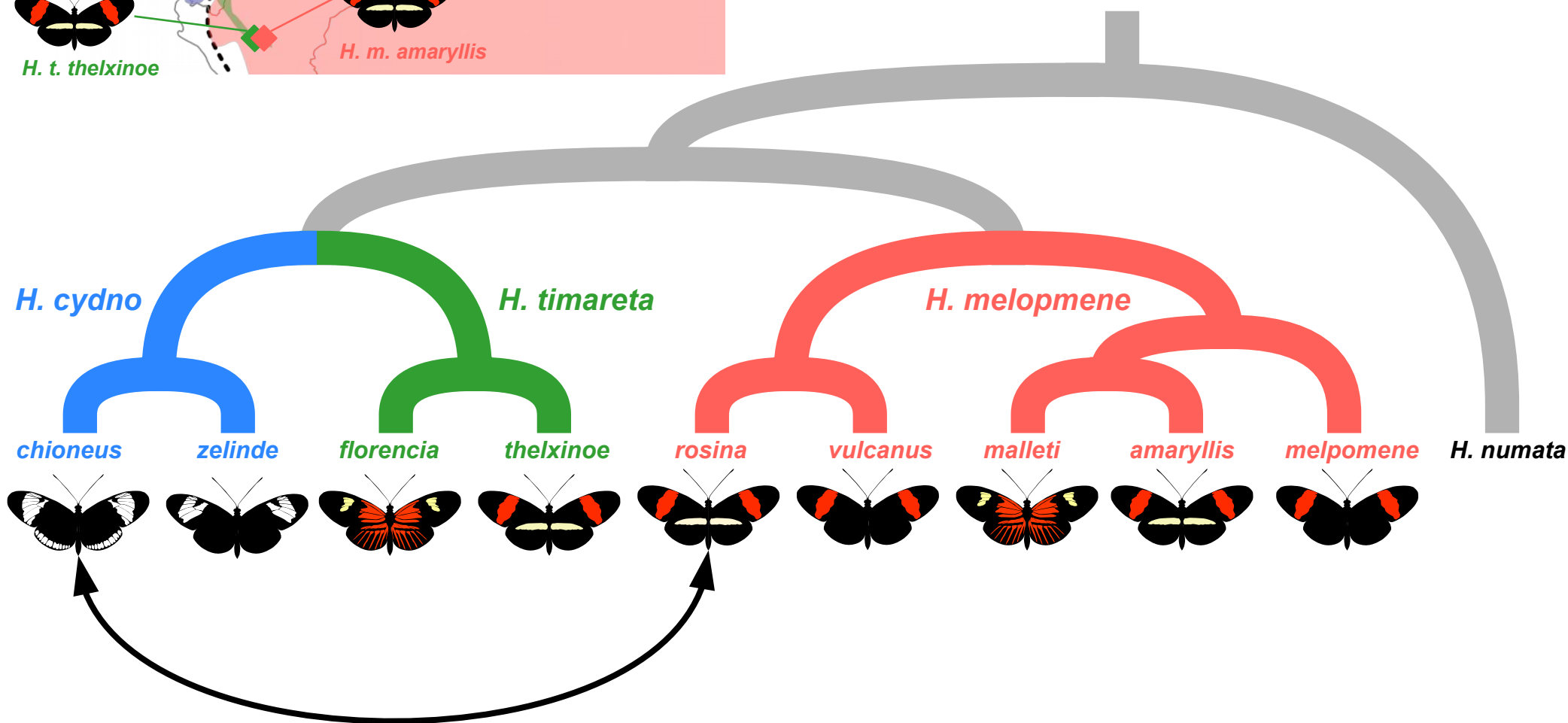
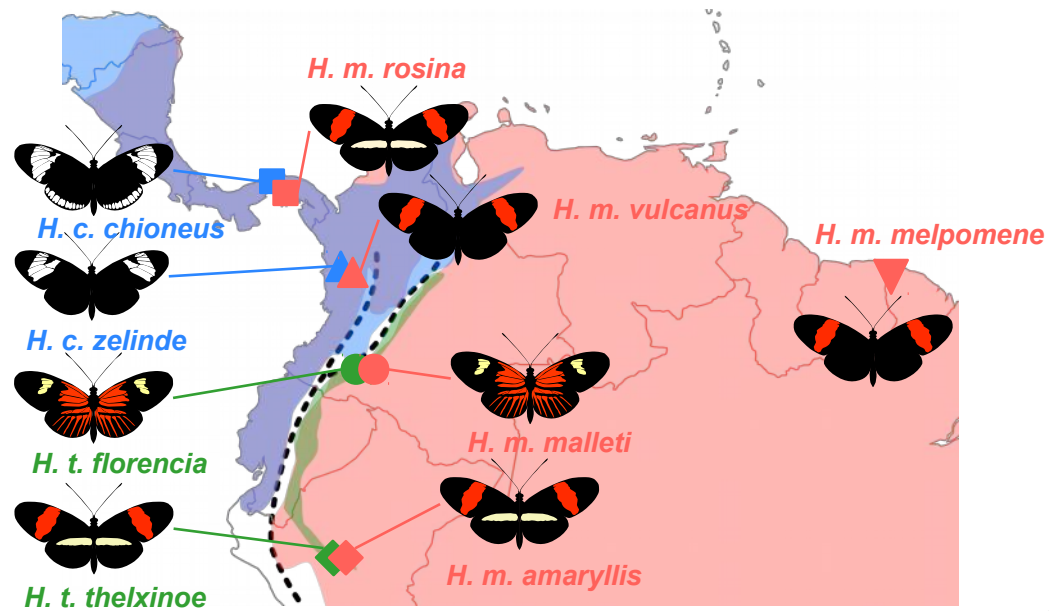
$$D(P_1, P_2, P_3, O) = \frac{\sum C_{ABBA}(i) - C_{BABA}(i)}{\sum C_{ABBA}(i) + C_{BABA}(i)}$$

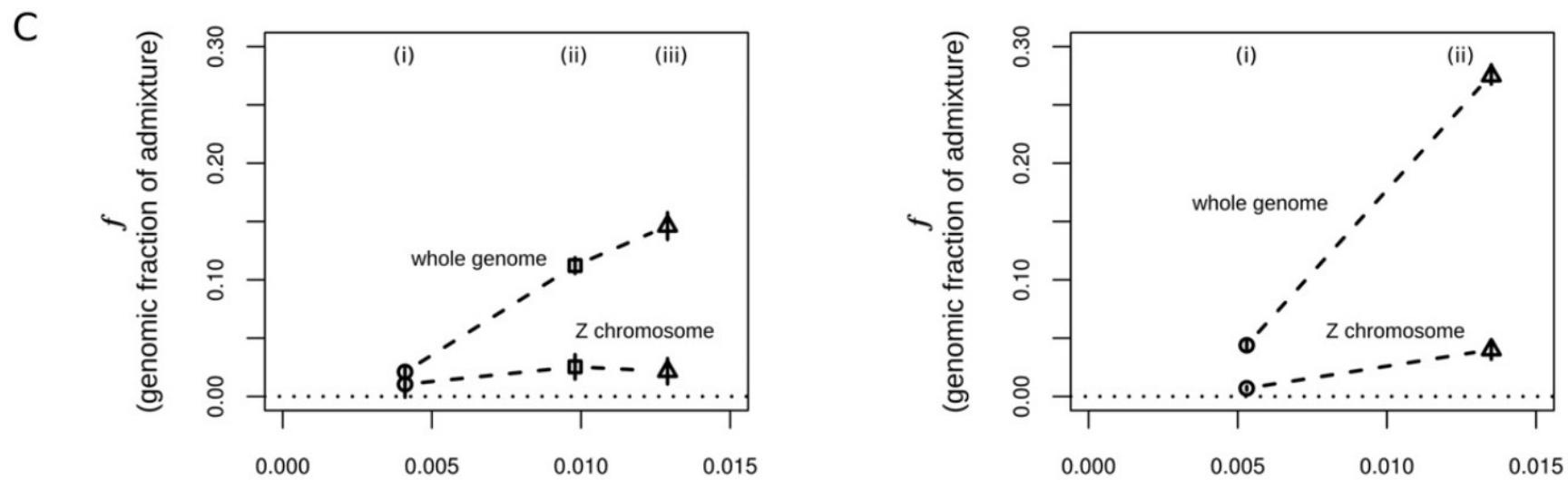
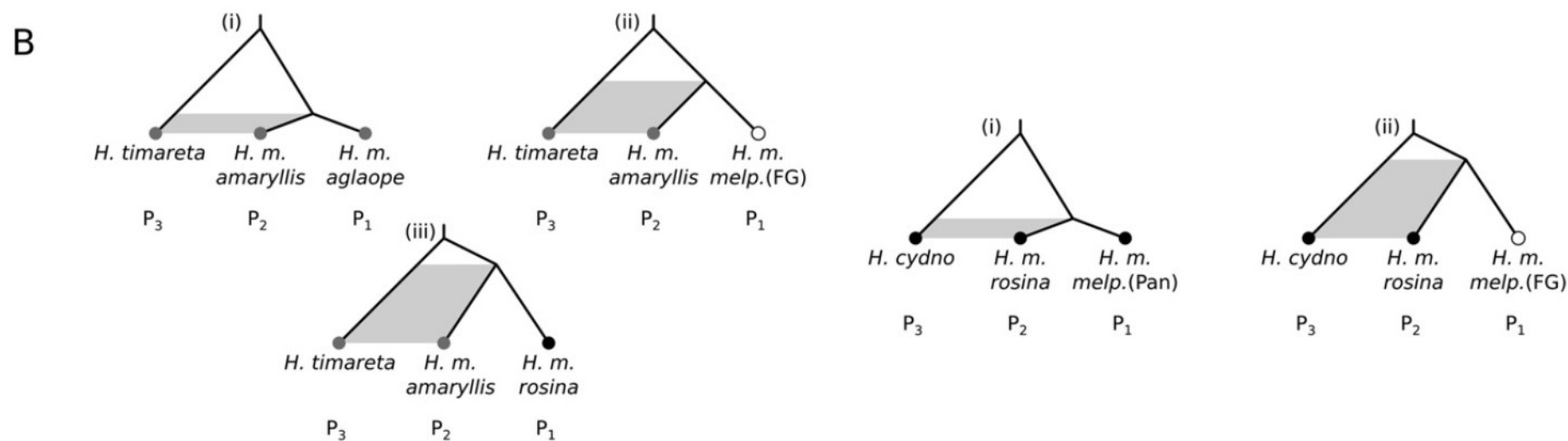
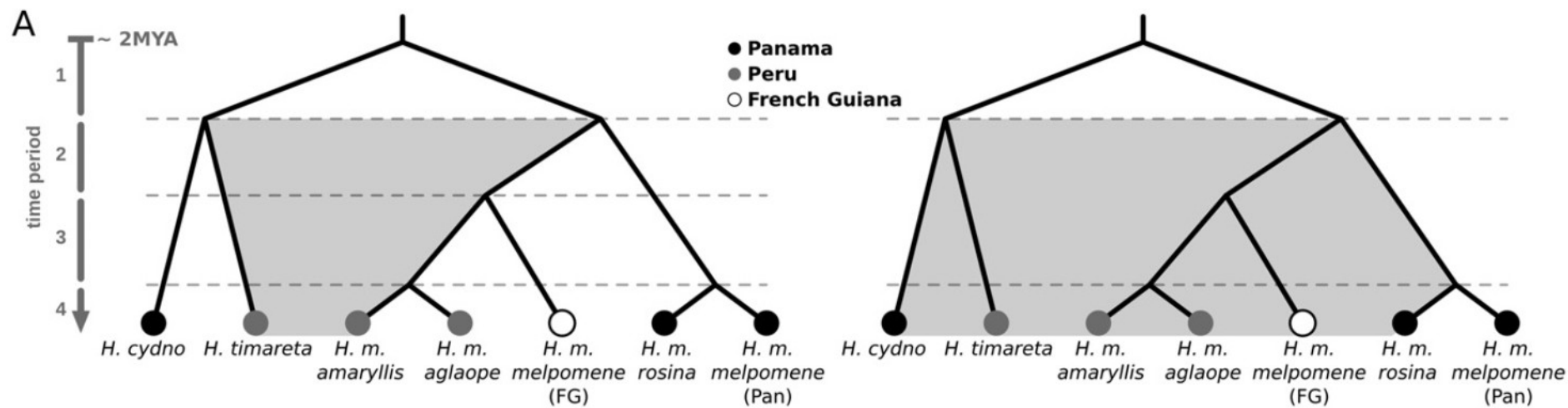
$$\hat{f}_G = \frac{S(P_1, P_2, P_3, O)}{S(P_1, P_{3a}, P_{3b}, O)}$$

$$C_{ABBA}(i) = (1 - \hat{p}_{i1})\hat{p}_{i2}\hat{p}_{i3}(1 - \hat{p}_{i4})$$

$$C_{BABA}(i) = \hat{p}_{i1}(1 - \hat{p}_{i2})\hat{p}_{i3}(1 - \hat{p}_{i4})$$



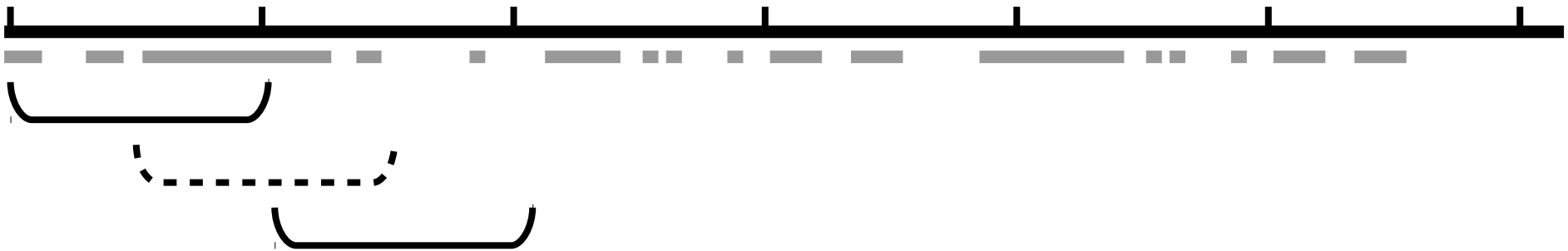




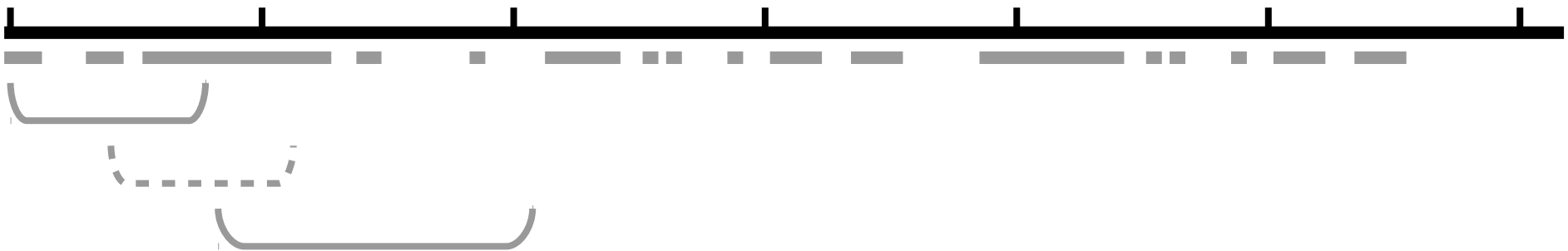
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chr1	2544	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	3546	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	4560	A/A	A/A	A/A	A/A	A/A	A/A	A/A	N/N
chr1	5576	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	6596	A/A	A/T	A/A	A/A	A/A	A/T	A/A	A/A
chr1	7604	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A
chr1	9632	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A
chr1	11367	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	12376	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	13387	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	14398	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	16291	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	17296	G/G	G/G	G/G	G/G	G/G	G/G	N/N	N/N
chr1	18296	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	19828	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	20830	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	21846	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	22847	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	24365	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	25366	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	26394	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	27400	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	28702	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	29711	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	30717	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	31720	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A
chr1	32728	A/A	A/A	A/A	A/A	A/A	A/A	A/A	N/N
chr1	33735	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	34735	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	35765	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	36766	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	37768	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	38776	G/G	G/G	G/G	G/G	G/G	G/G	G/G	G/G
chr1	39783	C/C	C/C	C/C	C/C	C/C	C/C	C/C	C/C
chr1	40789	T/T	T/T	T/T	T/T	T/T	T/T	T/T	T/T
chr1	41789	A/A	A/A	A/G	A/A	A/A	A/G	A/A	A/A

ros.CAM1841	ros
ros.CAM1880	ros
ros.CAM2045	ros
ros.CAM2059	ros
ros.CAM2519	ros
ros.CAM2552	ros
ros.CJ2071	ros
ros.CJ531	ros
ros.CJ533	ros
ros.CJ546	ros
vul.CS10	vul
vul.CS3603	vul
vul.CS3605	vul
vul.CS3606	vul
vul.CS3612	vul
vul.CS3614	vul
vul.CS3615	vul
vul.CS3617	vul
vul.CS3618	vul
vul.CS3621	vul
mal.CS1002	mal
mal.CS1011	mal
mal.CS1815	mal
mal.CS21	mal
mal.CS22	mal
mal.CS24	mal
mal.CS586	mal
mal.CS594	mal
mal.CS604	mal
mal.CS615	mal
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ama.JM216	ama
ama.JM293	ama
ama.JM48	ama
ama.MJ11-3188	ama
ama.MJ11-3189	ama
ama.MJ11-3202	ama
ama.MJ12-3217	ama
ama.MJ12-3258	ama
ama.MJ12-3301	ama
melG.CAM1349	mpg
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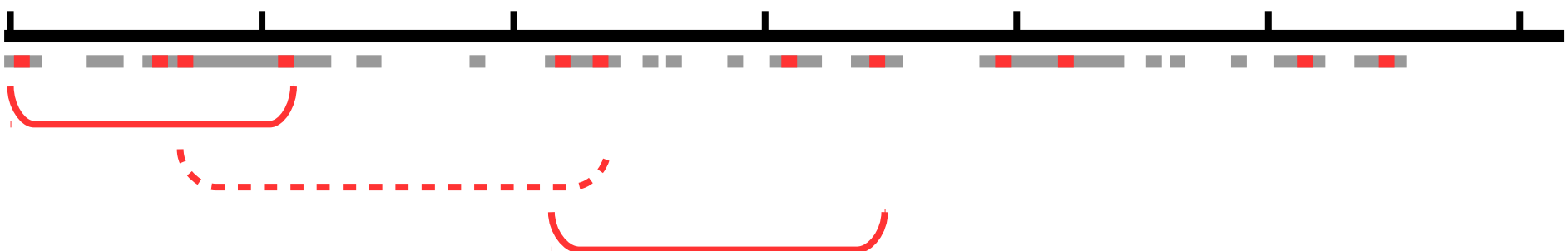
“**coordinate**” windows based on the coordinates of the **reference**

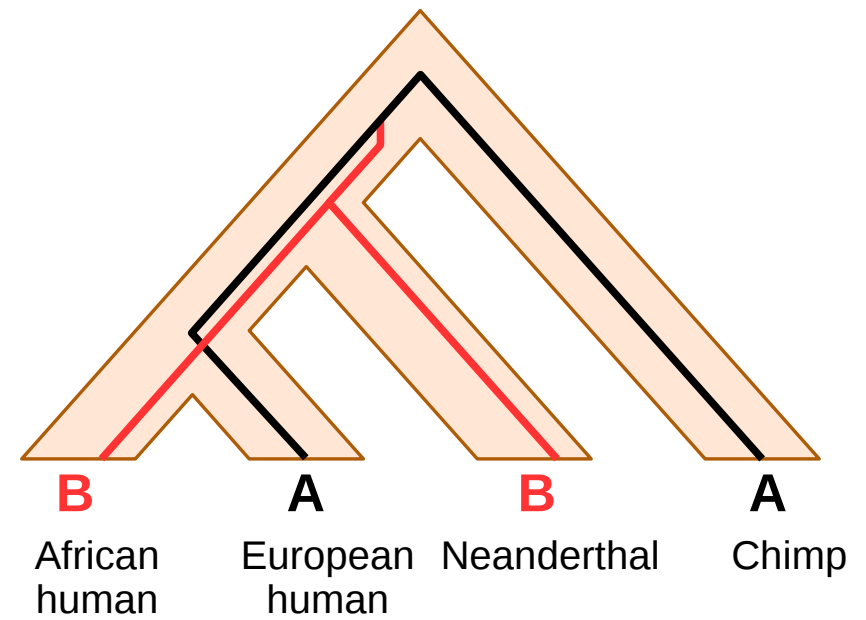
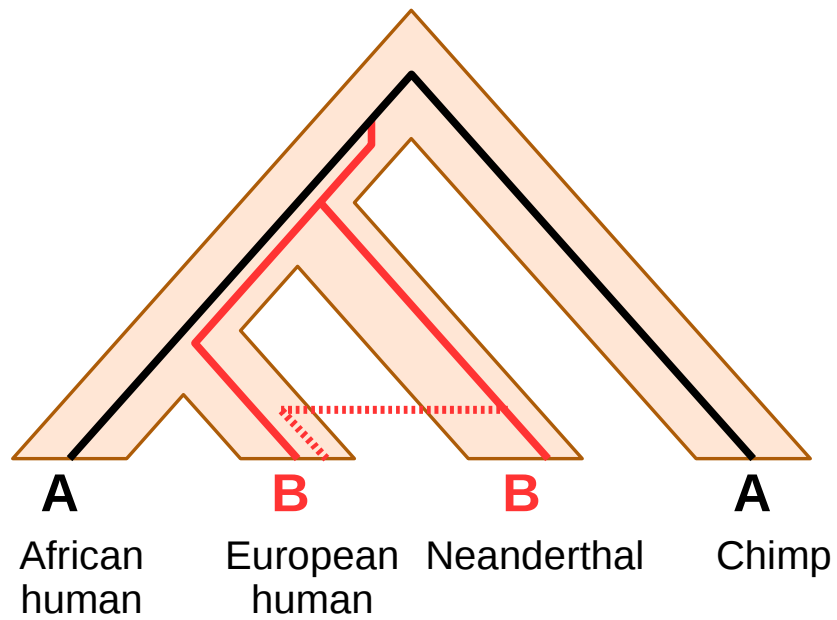


“**sites**” windows use a fixed number of **sites present** in the input file



“**SNP**” windows require a fixed number of **variable sites**





$$D(P_1, P_2, P_3, O) = \frac{\sum C_{ABBA}(i) - C_{BABA}(i)}{\sum C_{ABBA}(i) + C_{BABA}(i)}$$

$$\hat{f}_G = \frac{S(P_1, P_2, P_3, O)}{S(P_1, P_{3a}, P_{3b}, O)}$$

$$C_{ABBA}(i) = (1 - \hat{p}_{i1})\hat{p}_{i2}\hat{p}_{i3}(1 - \hat{p}_{i4})$$

$$C_{BABA}(i) = \hat{p}_{i1}(1 - \hat{p}_{i2})\hat{p}_{i3}(1 - \hat{p}_{i4})$$

$$\hat{f}_d = \frac{S(P_1, P_2, P_3, O)}{S(P_1, P_D, P_D, O)}$$