Figure S1. Violin plots for the distribution of total choices made by A) females and B) males in the experiments. The white circle represents the median and the black rectangle depicts the interquartile range. C) Spectral reflectance curves of *C. pomona* male (n=2) and female (n=2) wings. Reflectance was measured from eight different spots from each butterfly and averaged. Females showed two distinct patterns of reflectance – UV-reflecting white in the ventral region of the forewing and yellow reflectance in other regions. On the other hand males did not show any difference in reflectance across the wing regions sampled.

SUPPLEMENTARY TABLE 1

Pair-wise comparisons	Females		Males	
	First choice Chi-square tests	Total choices Chi-square tests	First choice Chi-square tests	Total choices Chi-square tests
Blue *vs* Green	$\chi^2 = 0$, df = 1, p=1	$\chi^2 = 0.72$, df = 1, p=0.39	**$\chi^2 = 21.33$, df = 1, p<0.001**	**$\chi^2 = 8.65$, df = 1, p=0.003**
Blue *vs* Yellow	**$\chi^2 = 46.41$, df = 1, p<0.001**	**$\chi^2 = 32.01$, df = 1, p<0.001**	$\chi^2 = 0.21$, df = 1, p=0.65	$\chi^2 = 0.68$, df = 1, p=0.512
Blue *vs* Red	$\chi^2 = 3.24$, df = 1, p=0.7	$\chi^2 = 0.14$, df = 1, p=0.71	**$\chi^2 = 10.28$, df = 1, p=0.001**	**$\chi^2 = 19.56$, df = 1, p<0.001**
Green *vs* Yellow	**$\chi^2 = 46.41$, df = 1, p<0.001**	**$\chi^2 = 39.5$, df = 1, p<0.001**	**$\chi^2 = 17.81$, df = 1, p<0.001**	**$\chi^2 = 13.52$, df = 1, p<0.001**
Green *vs* Red	$\chi^2 = 3.24$, df = 1, p=0.7	$\chi^2 = 1.5$, df = 1, p=0.22	$\chi^2 = 2.66$, df = 1, p=0.11	$\chi^2 = 2.9$, df = 1, p=0.08
Yellow *vs* Red	**$\chi^2 = 29.76$, df = 1, p<0.001**	**$\chi^2 = 28.6$, df = 1, p<0.001**	**$\chi^2 = 7.69$, df = 1, p=0.005**	**$\chi^2 = 25.92$, df = 1, p<0.001**

Table S1: Pair-wise comparisons between colours in females (n=24) and males (n=25) (Experiment 1). Chi-square tests were done with Bonferroni correction to compare first choices and total visits. Corrected p=0.

SUPPLEMENTARY TABLE 2

Pair-wise comparisons	Females		Males	
	First choice Chi-square tests	Total choices Chi-square tests	First choice Chi-square tests	Total choices Chi-square tests
Blue *vs* Green	**χ^2 = 72, df = 1, *p*<0.001**	**χ^2 = 62.8, df = 1, *p*<0.001**	**χ^2 = 31.25, df = 1, *p*<0.001**	**χ^2 = 41.02, df = 1, *p*<0.001**
Blue *vs* Yellow	**χ^2 = 19.36, df = 1, *p*<0.001**	**χ^2 = 35.8, df = 1, *p*<0.001**	**χ^2 = 31.25, df = 1, *p*<0.001**	**χ^2 = 41.02, df = 1, *p*<0.001**
Blue *vs* Red	**χ^2 = 72, df = 1, *p*<0.001**	**χ^2 = 60.2, df = 1, *p*<0.001**	**χ^2 = 51.42, df = 1, *p*<0.001**	**χ^2 = 51.54, df = 1, *p*<0.001**
Green *vs* Yellow	**χ^2 = 28, df = 1, *p*<0.001**	**χ^2 = 8.04, df = 1, *p*=0.004**	χ^2 = 0, df = 1, *p*=1	χ^2 = 0, df = 1, *p*=1
Green *vs* Red	χ^2 = 0, df = 1, *p*=1	χ^2 = 0.111, df = 1, *p*=0.74	χ^2 = 5, df = 1, *p*=0.02	χ^2 = 1.31, df = 1, *p*=0.25
Yellow *vs* Red	**χ^2 = 28, df = 1, *p*<0.001**	**χ^2 = 6.54, df = 1, *p*<0.01**	χ^2 = 5, df = 1, *p*=0.02	χ^2 = 1.31, df = 1, *p*=0.25

Table S2: Pair-wise comparisons between colours in females (n=18) and males (n=20) (Experiment 3-Blue training). Chi-square tests were done with Bonferroni correction to compare done to compare first choices and total visits. Corrected p=0.008. Significant results are in bold font.

SUPPLEMENTARY TABLE 3

Pair-wise comparisons	Females		Males	
	First choice Chi-square tests	Total choices Chi-square tests	First choice Chi-square tests	Total choices Chi-square tests
Blue *vs* Green	**$\chi^2 = 46.53$, df = 1, $p<0.001$**	**$\chi^2 = 30.42$, df = 1, $p<0.001$**	**$\chi^2 = 37.37$, df = 1, $p<0.001$**	**$\chi^2 = 34.72$, df = 1, $p<0.001$**
Blue *vs* Yellow	**$\chi^2 = 17.85$, df = 1, $p<0.001$**	**$\chi^2 = 35.28$, df = 1, $p<0.001$**	$\chi^2 = 1.38$, df = 1, $p=0.239$	$\chi^2 = 1.69$, df = 1, $p=0.193$
Blue *vs* Red	$\chi^2 = 0$, df = 1, $p=1$	$\chi^2 = 1.92$, df = 1, $p=0.166$	**$\chi^2 = 16$, df = 1, $p<0.001$**	$\chi^2 = 0$, df = 1, $p=1$
Green *vs* Yellow	**$\chi^2 = 10$, df = 1, $p=0.001$**	$\chi^2 = 0.28$, df = 1, $p=0.596$	**$\chi^2 = 48.76$, df = 1, $p<0.001$**	**$\chi^2 = 23.4$, df = 1, $p<0.001$**
Green *vs* Red	**$\chi^2 = 46.53$, df = 1, $p<0.001$**	**$\chi^2 = 20.48$, df = 1, $p<0.001$**	**$\chi^2 = 74$, df = 1, $p<0.001$**	**$\chi^2 = 34.72$, df = 1, $p<0.001$**
Yellow *vs* Red	**$\chi^2 = 17.85$, df = 1, $p<0.001$**	**$\chi^2 = 24.89$, df = 1, $p<0.01$**	**$\chi^2 = 10$, df = 1, $p=0.001$**	$\chi^2 = 1.69$, df = 1, $p=0.193$

Table S3: Pair-wise comparisons between colours in females (n=20) and males (n=19) (Experiment 3 – Green training). Chi-square tests were done with Bonferroni correction to compare done to compare first choices and total visits. Corrected p=0.008. Significant results are in bold font.

SUPPLEMENTARY TABLE 4

Pair-wise comparisons	Females	
	First choice Chi-square tests	Total choices Chi-square tests
Blue *vs* Green	**$\chi^2 = 76$, df = 1, $p<0.001$**	**$\chi^2 = 65.22$, df = 1, $p<0.001$**
Blue *vs* Yellow	**$\chi^2 = 12$, df = 1, $p<0.001$**	**$\chi^2 = 10.89$, df = 1, $p<0.001$**
Blue *vs* Red	**$\chi^2 = 12$, df = 1, $p<0.001$**	$\chi^2 = 6.23$, df = 1, $p=0.112$
Green *vs* Yellow	**$\chi^2 = 46.54$, df = 1, $p<0.001$**	**$\chi^2 = 34.77$, df = 1, $p<0.001$**
Green *vs* Red	**$\chi^2 = 46.54$, df = 1, $p<0.001$**	**$\chi^2 = 43.9$, df = 1, $p<0.001$**
Yellow *vs* Red	$\chi^2 = 0$, df = 1, $p=1$	$\chi^2 = 0.926$, df = 1, $p=0.336$

Table S4: Pair-wise comparisons between colours in females (n=17) (Experiment 4). Chi-square tests were done with Bonferroni correction to compare done to compare first choices and total visits. Corrected p=0.008. Significant results are in bold font.

SUPPLEMENTARY TABLE 5

Pair-wise comparisons	Females		Males	
	First choice Chi-square tests	Total choices Chi-square tests	First choice Chi-square tests	Total choices Chi-square tests
Blue *vs* Green	**χ^2 = 24, df = 1, *p*<0.001**	χ^2 = 2.79, df = 1, *p*=0.094	**χ^2 = 30.26, df = 1, *p*<0.001**	χ^2 = 23.83, df = 1, *p*<0.001
Blue *vs* Yellow	**χ^2 = 59, df = 1, *p*<0.001**	**χ^2 = 35.71, df = 1, *p*<0.001**	χ^2 = 0, df = 1, *p*=1	χ^2 = 0.133, df = 1, *p*=0.715
Blue *vs* Red	**χ^2 = 18, df = 1, *p*<0.001**	χ^2 = 0.04, df = 1, *p*=0.827	χ^2 = 0, df = 1, *p*=1	χ^2 = 0.31, df = 1, *p*=0.577
Green *vs* Yellow	**χ^2 = 14.79, df = 1, *p*=0.001**	**χ^2 = 21.27, df = 1, *p*<0.001**	**χ^2 = 30.26, df = 1, *p*<0.001**	χ^2 = 26.89, df = 1, *p*<0.001
Green *vs* Red	χ^2 = 0.85, df = 1, *p*=0.855	χ^2 = 2.13, df = 1, *p*=0.144	**χ^2 = 30.26, df = 1, *p*<0.001**	χ^2 = 28.52, df = 1, *p*<0.001
Yellow *vs* Red	**χ^2 = 21.83, df = 1, *p*<0.001**	**χ^2 = 33.81, df = 1, *p*<0.01**	χ^2 = 0, df = 1, *p*=1	χ^2 = 0.037, df = 1, *p*=0.847

Table S5: Pair-wise comparisons between colours in females (n=17) and males (n=15) (Experiment 5). Chi-square tests were done with Bonferroni correction to compare done to compare first choices and total visits. Corrected p=0.008. Significant results are in bold font.