Supplementary Table 1. Data for individual females tested in insectary host preference tests. Data are the number of eggs laid on *Passiflora menispermifolia* and *P. vitifolia* during the course of the trial.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a) *Heliconius cydno* | | | | | | | |
| Individual |  |  |  |  |  | *P. menispermifolia* | *P. vitifolia* |
| 109 |  |  |  |  |  | 5 | 13 |
| 110 |  |  |  |  |  | 1 | 32 |
| 163 |  |  |  |  |  | 13 | 10 |
| 167 |  |  |  |  |  | 14 | 16 |
| 168a |  |  |  |  |  | 11 | 3 |
| c84 |  |  |  |  |  | 13 | 13 |
| c94 |  |  |  |  |  | 7 | 11 |
| 1183 |  |  |  |  |  | 9 | 3 |
| 1084 |  |  |  |  |  | 1 | 17 |
| c70 |  |  |  |  |  | 20 | 17 |
| c72 |  |  |  |  |  | 25 | 24 |
| c71 |  |  |  |  |  | 8 | 7 |
| c99 |  |  |  |  |  | 8 | 3 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| b) *Heliconius melpomene* | | | | | | | | |
| Individual |  |  |  |  |  | | *P. menispermifolia* | *P. vitifolia* |
| 15 |  |  |  |  |  | | 26 | 0 |
| 16 |  |  |  |  |  | | 37 | 0 |
| 17 |  |  |  |  |  | | 18 | 0 |
| 31 |  |  |  |  |  | | 16 | 0 |
| 32 |  |  |  |  |  | | 5 | 0 |
| 33 |  |  |  |  |  | | 33 | 0 |
| 34 |  |  |  |  |  | | 25 | 0 |
| 35 |  |  |  |  |  | | 9 | 0 |
| 40 |  |  |  |  |  | | 19 | 0 |
| 49 |  |  |  |  |  | | 20 | 0 |
| 50 |  |  |  |  |  | | 19 | 0 |
| 51 |  |  |  |  |  | | 2 | 0 |
| 52 |  |  |  |  |  | | 36 | 0 |
| 53 |  |  |  |  |  | | 25 | 0 |
| 56 |  |  |  |  |  | | 23 | 0 |
| 57 |  |  |  |  |  | | 11 | 0 |
| 58 |  |  |  |  |  | | 12 | 0 |
| 59 |  |  |  |  |  | | 8 | 0 |
| 90 |  |  |  |  |  | | 17 | 0 |
| 92 |  |  |  |  |  | | 25 | 0 |
| 93 |  |  |  |  |  | | 13 | 0 |
| 111 |  |  |  |  |  | | 5 | 0 |
|  | | | | | |  | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| c) First generation hybrids | | | | | | | | |
| Individual |  |  |  |  |  | | *P. menispermifolia* | *P. vitifolia* |
| 4 |  |  |  |  |  | | 16 | 3 |
| 5 |  |  |  |  |  | | 28 | 2 |
| 7 |  |  |  |  |  | | 0 | 0 |
| 10 |  |  |  |  |  | | 19 | 0 |
| 11 |  |  |  |  |  | | 23 | 11 |
| 20 |  |  |  |  |  | | 19 | 15 |
| 21 |  |  |  |  |  | | 0 | 0 |
| 116 |  |  |  |  |  | | 50 | 0 |
| 126 |  |  |  |  |  | | 9 | 0 |
| 132 |  |  |  |  |  | | 13 | 0 |
| 134 |  |  |  |  |  | | 3 | 0 |
| 155 |  |  |  |  |  | | 2 | 0 |
| 205 |  |  |  |  |  | | 0 | 0 |
| 206 |  |  |  |  |  | | 3 | 0 |
| 210 |  |  |  |  |  | | 3 | 0 |
| 215 |  |  |  |  |  | | 0 | 0 |
| 220 |  |  |  |  |  | | 0 | 0 |
| 229 |  |  |  |  |  | | 0 | 0 |
| 232 |  |  |  |  |  | | 0 | 0 |
| a |  |  |  |  |  | | 26 | 0 |
|  | | | | | |  | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| d) Backcross to *H. melpomene* | | | | | | | |
| Individual |  |  |  |  |  | *P. menispermifolia* | *P. vitifolia* |
| 88 |  |  |  |  |  | 29 | 0 |
| 119a |  |  |  |  |  | 52 | 0 |
| 124 |  |  |  |  |  | 19 | 0 |
| 125 |  |  |  |  |  | 21 | 0 |
| 136 |  |  |  |  |  | 18 | 0 |
| 168 |  |  |  |  |  | 16 | 0 |
| 175 |  |  |  |  |  | 24 | 0 |
| 183 |  |  |  |  |  | 10 | 0 |
| 228 |  |  |  |  |  | 49 | 0 |
| 236 |  |  |  |  |  | 18 | 0 |
| 240 |  |  |  |  |  | 31 | 0 |
| 248 |  |  |  |  |  | 20 | 0 |
| 251 |  |  |  |  |  | 20 | 0 |
| 283 |  |  |  |  |  | 19 | 0 |
| 290 |  |  |  |  |  | 0 | 0 |
| 291 |  |  |  |  |  | 0 | 0 |
| 300 |  |  |  |  |  | 31 | 0 |
| 349 |  |  |  |  |  | 22 | 0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| e) Backcross to *H. cydno* (including brood and colour pattern genotypes) | | | | | | | |
| Individual | Brood |  | *B*  locus | *Yb* locus | *Ac* locus | *P. menispermifolia* | *P. vitifolia* |
| 253 | C10 |  | *bb* | *YbYb* | *Acac* | 0 | 0 |
| 254 | C10 |  | *bb* | NA | *acac* | 0 | 0 |
| 255 | C10 |  | *Bb* | *YbYb* | *Acac* | 0 | 0 |
| 263 | C10 |  | *bb* | *YbYb* | *Acac* | 0 | 0 |
| 267 | C8 |  | *Bb* | *Ybyb* | *acac* | 22 | 7 |
| 275 | C8 |  | *Bb* | *YbYb* | *acac* | 18 | 11 |
| 286 | C10 |  | *bb* | *YbYb* | *Acac* | 18 | 6 |
| 287 | C8 |  | *bb* | *Ybyb* | *acac* | 24 | 5 |
| 293 | C8 |  | *bb* | NA | *Acac* | 0 | 0 |
| 296 | C11 |  | *bb* | *Ybyb* | *Acac* | 0 | 0 |
| 305 | C8 |  | *Bb* | *YbYb* | *Acac* | 0 | 0 |
| 307 | C14 |  | *Bb* | *Ybyb* | *acac* | 5 | 5 |
| 312 | C8 |  | *bb* | *YbYb* | *Acac* | 0 | 0 |
| 314 | C11 |  | *bb* | *YbYb* | *Acac* | 17 | 0 |
| 320 | C8 |  | *bb* | *YbYb* | *Acac* | 14 | 0 |
| 321 | C8 |  | *Bb* | *Ybyb* | *acac* | 8 | 2 |
| 323 | C14 |  | *Bb* | *YbYb* | *acac* | 22 | 13 |
| 326 | C8 |  | *bb* | *Ybyb* | *Acac* | 0 | 0 |
| 326a | C8 |  | *Bb* | *Ybyb* | *acac* | 25 | 14 |
| 330 | C8 |  | *Bb* | *YbYb* | *Acac* | 0 | 0 |
| 374 | C18 |  | *bb* | *Ybyb* | *Acac* | 5 | 4 |
| 375 | C18 |  | *Bb* | *Ybyb* | *acac* | 23 | 15 |
| 376 | C18 |  | *bb* | *Ybyb* | *acac* | 0 | 0 |
| 378 | C8 |  | *bb* | *Ybyb* | *Acac* | 0 | 0 |
| 382 | C8 |  | *bb* | *YbYb* | *acac* | 24 | 9 |
| 383 | C8 |  | *bb* | *YbYb* | *acac* | 0 | 0 |
| 393 | C18 |  | *Bb* | *YbYb* | *acac* | 0 | 0 |
| 397 | C10 |  | *bb* | *Ybyb* | *acac* | 30 | 4 |
| 411 | C10 |  | *Bb* | *YbYb* | *acac* | 0 | 0 |
| 423 | C10 |  | *Bb* | *YbYb* | *Acac* | 23 | 0 |
| 427 | C18 |  | *bb* | *Ybyb* | *Acac* | 0 | 0 |
| 430 | C18 |  | *bb* | *YbYb* | *Acac* | 0 | 0 |
| 444 | C18 |  | *bb* | NA | *Acac* | 0 | 0 |
| 454 | C18 |  | *bb* | *Ybyb* | *acac* | 0 | 0 |
| 465 | C18 |  | *bb* | *Ybyb* | *acac* | 21 | 0 |
| 456 | C18 |  | *bb* | *YbYb* | *Acac* | 0 | 0 |
| 471 | C10 |  | *bb* | *YbYb* | *acac* | 0 | 0 |
| 481 | C18 |  | *Bb* | *YbYb* | *Acac* | 0 | 0 |
| 484 | C18 |  | *Bb* | *Ybyb* | *Acac* | 27 | 0 |
| 487 | C21 |  | *Bb* | *YbYb* | *acac* | 9 | 1 |
| 542 | C24 |  | *Bb* | *Ybyb* | *acac* | 21 | 0 |
| 2012\_166 | E2 |  | *Bb* | *YbYb* | *acac* | 0 | 0 |
| 2012\_182 | E4 |  | *bb* | *Ybyb* | *Acac* | 0 | 0 |
| 2012\_201 | E5 |  | *Bb* | *YbYb* | *Acac* | 0 | 0 |
| 2013\_596 | H5 |  | *bb* | *YbYb* | *Acac* | 30 | 9 |
| 2013\_607 | H5 |  | *Bb* | *YbYb* | *Acac* | 5 | 2 |