

ELECTRONIC APPENDIX

This is the Electronic Appendix to the article

A candidate locus for variation in dispersal rate in a butterfly metapopulation

by

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Electronic appendices are refereed with the text; however, no attempt is made to impose a uniform editorial style on the electronic appendices.



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3 ***Supporting Fig. S1: Map of the populations sampled***

4 New populations (empty circles) and old populations (filled circles) were
5 similarly scattered across the archipelago.

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7 ***Supporting text S2: Respirometry methods***

8 Excurrent air from the respirometer passed through a 3 ml column containing
9 magnesium perchlorate to remove water vapour, a flow meter, and a CO₂ gas
10 analyzer (LiCor 6251; the pump and flow meter were part of a Sable Systems
11 FOXBOX instrument). Output signals from the flow meter, CO₂ analyzer, and a
12 thermistor (Sable Systems SS-TC1) measuring air temperature inside the jar were
13 digitized and recorded at a 1Hz sampling frequency (Sable Systems UI2 interface

1 and DATACAN software) on a Macintosh G4 Powerbook computer running Virtual
2 PC 6.0 (Connectix).

3 For these measurements, butterflies were removed from the outdoor cage in the
4 morning (8.00 – 10.00 h), transported to the laboratory in individual cages and kept
5 outdoors in the shade (ca. 20°C). Approximately 30 min prior to each respirometry
6 test, the butterfly was brought indoors to adjust to a warmer temperature (ca. 26°C),
7 then placed gently in the respirometry jar. Flight was initially inhibited by covering
8 the jar with a black cloth until a stable baseline was established for the resting rate of
9 CO₂ emission. The cloth was then removed and the jar was placed under a UV light
10 source and shaken gently to stimulate flight.

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