

Appendix B

Supplementary Materials

B.1 Density affects dispersal

B.2 Chamber geometry affects dispersal

B.3 Numbers of drosophilid flies emerging from different breeding sites

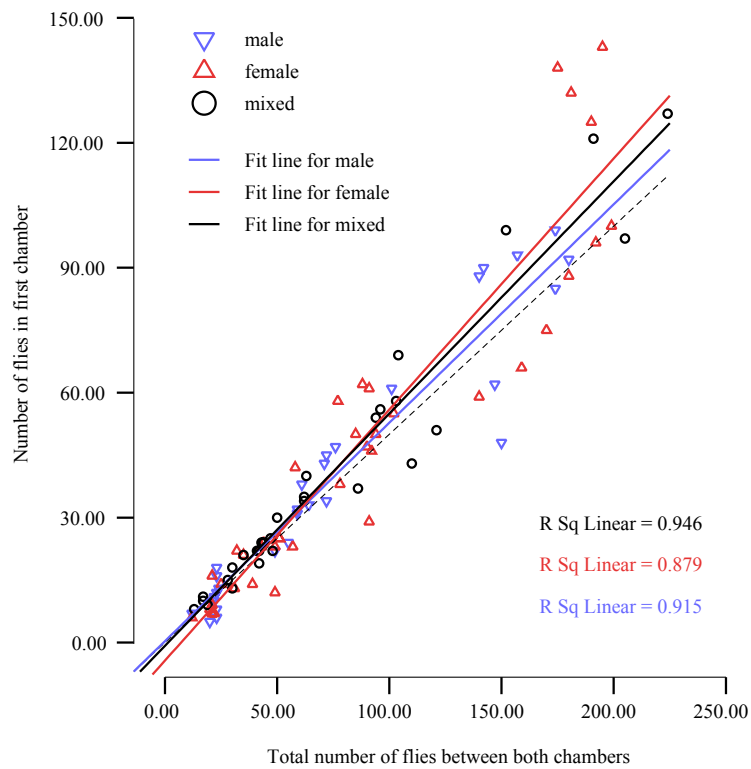


Figure B.1: Dispersal movement of flies scales with group density. Groups of flies consisting of <10 individuals to 250 individuals dispersed comparably between two connected chambers of the type described within this dissertation, which were empty of food or water, irrespective of whether groups of flies were comprised of a single gender or were mixed gender. Comparable effects of density were observed for larger groups, and if observed over a longer period of time when food was present in both chambers.

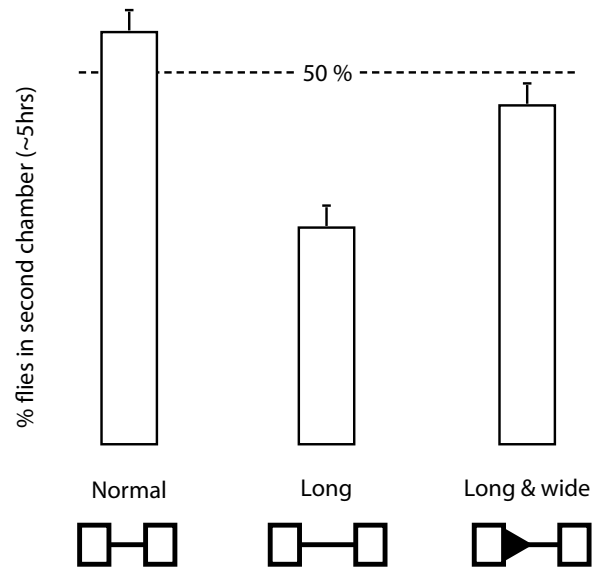


Figure B.2: Arena geometry affects the dispersal of flies between two connected chambers. After 5 hours, flies from a group introduced to the first of two connected chambers were equally distributed between the chambers (Normal). The number of flies moving into the second chamber was less if the channel connecting the chambers was lengthened (Long). The original equal distribution could be restored if the opening to the channel connecting the chambers was widened (Long and Wide). The chambers used for these experiments were the same as those described within this dissertation apart from the changes mentioned.

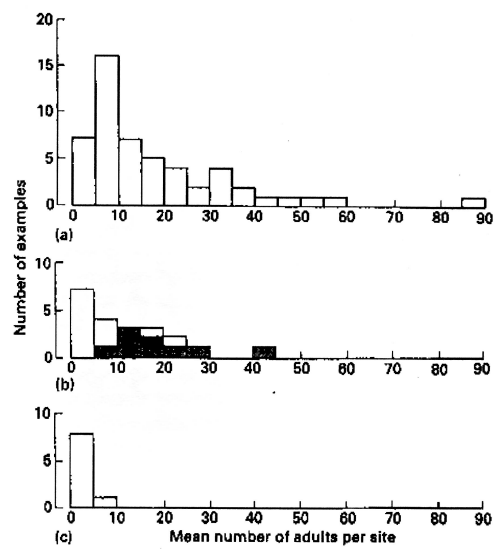


Figure B.3: Frequency histogram of mean numbers of drosophilid flies emerging from different breeding sites. (A) Fungi, (B) fruit, and (C) flowers (After (Shorrocks and Rosewell, 1986)).