

Bibliography

- Alyokhin, A. V. and Ferro, D. N. (1999). Reproduction and dispersal of summer-generation colorado potato beetle (coleoptera: Chrysomelidae). *Environmental Entomology*, 28(3):425–430.
- Arevad, K. (1963). Measurement of locomotor activity. *Ann. Rep. Government Pest Infestation Laboratory*, pages 52–53.
- Armes, N. J. and Cooter, R. J. (1991). Effects of age and mated status on flight potential of *Helicoverpa armigera* (lepidoptera: Noctuidae). *Physiological Entomology*, 16:131–144.
- Atkinson, W. (1979). A comparison of the reproductive strategies of domestic species of *Drosophila*. *Journal of Animal Ecology*, 48:53–64.
- Atkinson, W. and Shorrocks, B. (1977). Breeding site specificity in the domestic species of *Drosophila*. *Oecologia*, 29:223–232.
- Averill, A. and Prokopy, R. (1993). Foraging of *Rhagoletis pomonella* flies in relation to interactive food and fruit resources. *Entomol. Exp. Appl.*, 66:179–184.
- Barton Browne, L. (1993). Physiologically induced changes in resource-oriented behavior. *Annual Review of Entomology*, 38:1–25.
- Barton Browne, L. and Evans, D. (1960). Locomotor activity of the blowfly as a function of feeding and starvation. *J. Insect Physiol.*, 4:27–37.

- Belgacem, Y. H. and Martin, J.-R. (2002). Neuroendocrine control of a sexually dimorphic behavior by a few neurons of the pars intercerebralis in *Drosophila*. *Proc Natl Acad Sci U S A*, 99:15154–15158.
- Belgacem, Y. H. and Martin, J.-R. (2005). Disruption of insulin pathways alters trehalose level and abolishes sexual dimorphism in locomotor activity in *Drosophila*. *Journal of Neurobiology*, pages 19–32.
- Belgacem, Y. H. and Martin, J.-R. (2007). Hmger in the corpus allatum controls sexual dimorphism of locomotor activity and body size via the insulin pathway in *Drosophila*. *PLoS ONE*, 2(1):e187.
- Bell, W. J. (1985). Sources of information controlling motor patterns in arthropod local search orientation. *J. Insect Physiol.*, 31(11):837–847.
- Bell, W. J. (1990). Searching behavior patterns in insects. *Annual Review of Entomology*, 35:447–467.
- Bell, W. J. and Tortorici, C. (1987). Genetic and non-genetic control of search duration in adults of two morphs of *Drosophila melanogaster*. *J. Insect Physiol.*, 33(1):51–54.
- Bell, W. J., Tortorici, C., Roggero, R. J., Kipp, L. R., and Tobin, T. R. (1985). Sucrose-stimulated searching behaviour of *Drosophila melanogaster* in a uniform habitat: modulation by period of deprivation. *Animal Behavior*, 33:436–448.
- Bellamy, D. E. and Byrne, D. N. (2001). Effects of gender and mating status on self-directed dispersal by the whitefly parasitoid *Eretmocerus eremicus*. *Ecological Entomology*, 26:571–577.
- Benzer, S. (1967). Behavioral mutants of *Drosophila* isolated by countercurrent distribution. *Proceedings of the National Academy of Sciences*, 58:1119–1121.

- Benzer, S. (1973). Genetic dissection of behavior. *Scientific American*, 229:24–37.
- Brady, J. and Gibson, G. (1983). Activity patterns in pregnant tsetse flies, *Glossina morsitans*. *Physiological Entomology*, 8:359–369.
- Branson, K., Robie, A. A., Bender, J., Perona, P., and Dickinson, M. H. (2009). High-throughput ethomics in large groups of *Drosophila*. *Nat Methods*, 6:451–7.
- Budick, S. A. and Dickinson, M. H. (2006). Free-flight responses of *Drosophila melanogaster* to attractive odors. *J Exp Biol*, 209:3001–17.
- Budick, S. A., Reiser, M. B., and Dickinson, M. H. (2007). The role of visual and mechanosensory cues in structuring forward flight in *Drosophila melanogaster*. *J Exp Biol*, 210:4092–103.
- Bülthoff, H., Götz, K., and Herre, M. (1982). Recurrent inversion of visual orientation in the walking fly, *Drosophila melanogaster*. *Journal of Comp. Physiol.*, 148:471–481.
- Burla, H., Cunha, A. D., Cavalcanti, A., Dobzhansky, T., and Pavan, C. (1950). Population density and dispersal rates in brazilian *Drosophila willistoni*. *Ecology*, 31:393–404.
- Burnet, B., Burnet, L., Connolly, K., and Williamson, N. (1988). A genetic analysis of locomotor activity in *Drosophila melanogaster*. *Heredity*, 61:111–119.
- Callaway, E. M. (2005). A molecular and genetic arsenal for systems neuroscience. *Trends Neurosci*, 28:196–201.
- Carpenter, F. W. (1906). The reactions of the pomace fly (*Drosophila ampelophila* loew) to light, gravity, and mechanical stimulation. *Contributions from the Zoological laboratory of the museum of comparative zoology at Harvard College*, 162:157–171.
- Carvalho, G. B., Kapahi, P., Anderson, D. J., and Benzer, S. (2006). Allocrine modulation of feeding behavior by the sex peptide of *Drosophila*. *Curr Biol*, 16:692–6.

- Chapman, T., Bangham, J., Vinti, G., Seifried, B., Lung, O., Wolfner, M. F., Smith, H. K., and Partridge, L. (2003). The sex peptide of *Drosophila melanogaster*: Female post-mating responses analyzed by using rna interference. *Proc. Natl. Acad. Sci.*, 100:9923–9928.
- Chiang, H. and Hodson, A. (1950). An analytical study of population growth in *Drosophila melanogaster*. *Ecol. Monographs*, 20:175–206.
- Cohen, H. and Voet, H. (2002). Effect of physiological state of young *Ceratitis capitata* females, on resource foraging behavior. *Entomologia Experimentalis et Applicata*, 104:345–451.
- Cole, B. J. (1995). Fractal time in animal behaviour: the movement activity of *Drosophila*. *Animal Behavior*, 50:1317–1324.
- Cole, W. H. (1922). Note on the relation between the photic stimulus and the rate of locomotion in *Drosophila*. *Science*, 55:678–679.
- Connolly, K. (1966a). Locomotor activity in *Drosophila* as a function of food deprivation. *Nature*, 209:224.
- Connolly, K. (1966b). Locomotor activity in *Drosophila*. ii. selection for active and inactive strains. *Animal Behavior*, 14:444–449.
- Connolly, K. (1967). Locomotor activity in *Drosophila*. iii, a distinction between activity and reactivity. *Animal Behavior*, 15:149–152.
- Cormen, T. H., Leiserson, C. E., Rivest, R. L., and Stein, C. (2001). *Introduction to Algorithms*. The MIT Press, 2nd edition.
- Cornelius, M. L., Nergel, L., Daun, J. J., and Messing, R. H. (2000). Responses of female oriental fruit flies (diptera: Tephritidae) to protein and host fruit odors in field cage and open field tests. *Environmental Entomology*, 29(1):14–19.

- Coyne, J. A., Boussy, I. A., Prout, T., Bryant, S. H., Jones, J., and Moore, J. A. (1982). Long-distance migration of *Drosophila*. *American Naturalist*, 119:589–595.
- Coyne, J. A., Bryant, S. H., and Turelli, M. (1987). Long-distance migration of *Drosophila*. 2. presence in desolated sites and dispersal near a desert oasis. *The American Naturalist*, 129(6):847–861.
- Coyne, J. A. and Milstead, B. (1987). Long-distance migration of *Drosophila*. 3. dispersal of *D. melanogaster* alleles from a maryland orchard. *The American Naturalist*, 130(1):70–82.
- Crumpacker, D. and Williams, J. (1973). Density, dispersion, and population structure in *Drosophila pseudoobscura*. *Ecol. Monographs*, 43:499–538.
- DAM (2005). *Drosophila Activity Monitoring System*. TriKinetics, Inc., Waltham, MA USA.
- Dankert, H., Wang, L., Hoopfer, E. D., Anderson, D. J., and Perona, P. (2009). Automated monitoring and analysis of social behavior in *Drosophila*. *Nat Methods*, 6:297–303.
- David, J., Allemand, R., Capy, P., Chakir, M., and Gibert, P. (2004). Comparative life histories and ecophysiology of *Drosophila melanogaster* and *D. simulans*. *Genetica*, 120:151–163.
- del Solar, E. (1970). Choice of oviposition sites by *D. pseudoobscura* females among areas with different numbers of eggs. *Drosoph. Inf. Serv.*, 45:132.
- Demir, E. and Dickson, B. J. (2005). fruitless splicing specifies male courtship behavior in *Drosophila*. *Cell*, 121:785–94.
- Dethier, V. (1957). Communication by insects: physiology of dancing. *Science*, 125(3243):331–336.
- Dethier, V. (1964). Microscopic brains. *Science*, 143:1138–1145.
- Dethier, V. (1976). *The Hungry Fly*. Harvard University Press, Cambridge, Mass.

- Dierick, H. A. and Greenspan, R. J. (2006). Molecular analysis of flies selected for aggressive behavior. *Nat Genet*, 38:1023–31.
- Dingemanse, N. J. and Réale, D. (2005). Natural selection and animal personality. *Behaviour*, 142:1165–1190.
- Dingle, H. (1966). Some factors affecting flight activity in individual milkweed bugs (*oncopeltus*). *Journal of Experimental Biology*, 44:335–343.
- Dobzhansky, T. (1973). Active dispersal and passive transport in *Drosophila*. *Evolution*, 27(556-575).
- Dobzhansky, T. and Powell, J. (1974). Rates of dispersal of *Drosophila pseudoobscura* and its relatives. *Proceedings of the Royal Society London B.*, 187:281–298.
- Dobzhansky, T., R.S., F. M., Levene, H., and Spassky, B. (1972). Effects of selection and migration on geotactic and phototactic behaviour of *Drosophila*. iii. *Proceedings of the Royal Society B.*, 180:21–41.
- Dobzhansky, T. and Wright, S. (1943). Genetics of natural populations. x. dispersion rates in *Drosophila pseudoobscura*. *Genetics*, 28:304–340.
- Dobzhansky, T. and Wright, S. (1947). Genetics of natural populations. xv. rate of diffusion of a mutant gene through a population of *Drosophila pseudoobscura*. *Genetics*, 32:303–324.
- Dow, M. A. and von Schilcher, F. (1975). Aggression and mating success in *Drosophila melanogaster*. *Nature*, 254(5500):511–2. Dow, M A von Schilcher, F England Nature Nature. 1975 Apr 10;254(5500):511-2.
- Dubinín, N. and Tiniakov, G. (1946). Inversion gradients and natural selection in ecological races of *Drosophila funebris*. *Genetics*, 31:537–545.

- Dyson-Hudson, V. (1956). The daily activity rhythm of *Drosophila subobscura* and *D. obscura*. *Ecology*, 37(3):562–576.
- Elens, A. (1958). Le rôle de l'hétérosis dans la compétition entre ebony et son allèle normal. *Experientia*, 14:274–278.
- Elens, A. and Wattiaux, J. (1964). Direct observation of sexual isolation. *Drosoph. Inf. Serv.*, 39:118–119.
- Ewing, A. W. (1960). Body size and courtship behaviour in *Drosophila melanogaster*. *Animal Behavior*, 9:93–99.
- Ewing, A. W. (1963). Attempts to select for spontaneous activity in *Drosophila melanogaster*. *Animal Behavior*, 11(2-3):369–378.
- Ewing, A. W. (1967). Genetics and activity in *Drosophila melanogaster*. *Experientia*, 23(5):330–332.
- Feder, M. (1994). Natural potential body temperatures of non-adult *Drosophila melanogaster* in relation to heat-shock protein expression. *Physiologist*, 37:A88.
- Feder, M. (1996). *Ecological and evolutionary physiology of stress proteins and the stress response: the Drosophila melanogaster model: a context for molecular studies of the thermal phenotype*, volume Animals and Temperature. Cambridge University Press, Cambridge.
- Feder, M. (1997). Necrotic fruit: a novel model system for thermal ecologist. *Journal of Thermal Biology*, 22(1):1–9.
- Ferveur, J.-F. (2005). Cuticular hydrocarbons: their evolution and roles in *Drosophila* communication. *Behavior Genetics*, 35:279–295.
- Fogleman, J. (1978). A thermal gradient bar for the study of *Drosophila*. *Drosoph. Inf. Serv.*, 53:212–213.

- Fogleman, J. (1979). Oviposition site preference for substrate temperature in *Drosophila melanogaster*. *Behavior Genetics*, 9:407–412.
- Fromm, J. E. and Bell, W. J. (1987). Search orientation of *Musca domestica* in patches of sucrose drops. *Physiological Entomology*, 12:297–307.
- Frye, M. A., Tarsitano, M., and Dickinson, M. H. (2003). Odor localization requires visual feedback during free flight in *Drosophila melanogaster*. *Journal of Experimental Biology*, 206:843–855.
- Fukushi, T. (1983). The role of learning on the finding of food in the searching behaviour of the housefly, *Musca domestica* (diptera: Muscidae). *Entomologia Generalis*, 8(4):241–250.
- Gatti, S., Ferveur, J. F., and Martin, J. R. (2000). Genetic identification of neurons controlling a sexually dimorphic behaviour. *Curr Biol*, 10:667–670.
- Gordon, C. (1935). An experiment on a released population of *Drosophila melanogaster*. *The American Naturalist*, 64:381.
- Götz, K. and Wenking, H. (1973). Visual control of locomotion in the walking fruitfly *Drosophila*. *Comp. Physiol.*, 85:235–266.
- Green, G. (1964a). The control of spontaneous locomotor activity in *Phormia regina* meigen – i. locomotor activity patterns of intact flies. *J. Insect Physiol.*, 10:711–726.
- Green, G. (1964b). The control of spontaneous locomotor activity in *Phormia regina* meigen – ii. experiments to determine the mechanism involved. *J. Insect Physiology*, 10:727–752.
- Green, G. W. (1962). Flight and dispersal of the european pine shoot moth, *Rhyacionia buoliana* (schiff.) i. factors affecting flight, and the flight potential of females. *The Canadian Entomologist*, 94:282–299.

- Greenberg, B. (1959). House fly nutrition. *Journal of cellular and comparative physiology*, 53(2):169–177.
- Gressitt, J., Coatsworth, J., and Yohimoto, C. (1962). Air-borne insects trapped on "monsoon expedition". *Pacific Insects*, 4(2):319–323.
- Grossfield, J. (1978). Non-sexual behavior of *Drosophila*. In Ashburner, M. and Wright, T., editors, *The Genetics and Biology of Drosophila*, volume 2b, pages 67–74. Academic Press, London.
- Grover, D., Tower, J., and Tavar, S. (2008). O fly, where art thou? *J R Soc Interface*, 5:1181–1191.
- Harris, M. and Miller, J. (1984). Foliar form influences ovipositional behaviour of the onion fly. *Physiological Entomology*, 9:145–155.
- Harris, M. O. and Miller, J. R. (1983). Color stimuli and oviposition behavior of the onion fly, *Delia antiqua* (meigen) (diptera: Anthomyiidae). *Annals of the Entomological Society of America*, 76:766–771.
- Hassell, M. and Southwood, T. (1978). Foraging strategies of insects. *Ann. Rev. Ecol. Syst.*, 9:75–98.
- Heed, W. (1973). Ecology and dispersal in hawaiian *Drosophila*. *Abstr. Proc. 13th Int. Congr. Genet. Genetics*, 74:S113.
- Heinrich, B. (1993). *The Hot-Blooded Insects: textitStrategies and Mechanism of Thermoregulation*. Harvard Univ. Press, Cambridge, MA.
- Helfrich-Förster, C. (2000). Differential control of morning and evening components in the activity rhythm of *Drosophila melanogaster*—sex-specific differences suggest a different quality of activity. *Journal of Biological Rhythms*, 15:135–154.

- Higa, I. and Fuyama, Y. (1993). Genetics of food preference in *Drosophila sechellia*. *Genetica*, 88:129–136.
- Hirsch, H. V. and Tompkins, L. (1994). The flexible fly: experience-dependent development of complex behaviors in *Drosophila melanogaster*. *Journal of Experimental Biology*, 195:1–18.
- Hirsch, J. (1963). Behavior genetics and individuality understood. *Science*, 142:1436–1442.
- Hocking, B. (1953). The intrinsic range and speed of flight of insects. *Roy. Entomol. Soc. Trans.*, 104:223–345.
- Hoffmann, A. A. and Turelli, M. (1985). Distribution of *Drosophila melanogaster* on alternative resources: effects of experience and starvation. *The American Naturalist*, 126(5):662–679.
- Hotta, Y. and Benzer, S. (1976). Courtship in *Drosophila* mosaics: sex-specific foci for sequential action patterns. *Proc Natl Acad Sci U S A*, 73:4154–8.
- Howard, R. H. and Blomquist, G. J. (2005). Ecological, behavioral, and biochemical aspects of insect hydrocarbons. *Annu. Rev. Entomol.*, 50:371–393.
- Hoyer, S. C., Eckart, A., Herrel, A., Zars, T., Fischer, S. A., Hardie, S. L., and Heisenberg, M. (2008). Octopamine in male aggression of *Drosophila*. *Curr Biol*, 18:159–67.
- Iliadi, K. G., Iliadi, N. N., Rashkovetsky, E. L., Girin, S. V., Nevo, E., and Korol, A. B. (2002). Sexual differences for emigration behavior in natural populations of *Drosophila melanogaster*. *Behavior Genetics*, 32:173–180.
- Ishikawa, Y., Ikeshoji, T., and Matsumoto, Y. (1978). A propylthio moiety essential to the oviposition attractant and stimulant of the onion fly, *Hylemya antiqua* meigen. *Appl. Ent. Zool.*, 13:115–122.

- Iwanaga-Sawabe, K. and Kanda, T. (1990). Studies on the effective attractants of anopheline mosquitoes i. blood-feeding, mating and flight activity of female *Anopheles balabacensis* (diptera: Culicidae). *Appl. Ent. Zool.*, 25(2):231–238.
- Jaenike, J. (1982). Environmental modification of oviposition behavior in *Drosophila*. *The American Naturalist*, 119:784–802.
- Jaenike, J. (1985). Genetic and environmental determinants of food preference in *Drosophila tripunctata*. *Evolution*, 39(2):362–369.
- Jander, R. (1975). Ecological aspects of spatial orientation. *Annual Review of Ecology and Systematics*, 6:171–188.
- Jang, E., McInnis, D., Kurashima, R., and Carvalho, L. (1999). Behavioural switch of female mediterranean fruit fly, *Ceratits capitata*: mating and oviposition activity in outdoor field cages in hawaii. *Agricultural and Forest Entomology*, 1(3):179–184.
- Jang, E., McInnis, D., Lance, D., and Carvalho, L. (1998). Mating-induced changes in olfactory-mediated behavior of laboratory-reared normal, sterile, and wild female mediterranean fruit flies (diptera: Tephritidae) mated to conspecific males. *Annals of the Entomological Society of America*, 91(1):139–144.
- Johnson, C. (1969). *Migration and dispersal of insects by flight*. Methuen & Co.
- Johnston, J. (1982). Genetic variation for anemotaxis (wind-directed movement) in laboratory and wild-caught populations of *Drosophila*. *Behavior Genetics*, 12:281–293.
- Johnston, J. and Heed, W. (1976). Dispersal of desert-adapted *Drosophila*: the saguaro-breeding *D. nigrospiracula*. *The American Naturalist*, 110(974):629–651.
- Joiner, M. and Griffith, L. (1999). Mapping of the anatomical circuit of cam kinase-dependent courtship conditioning in *Drosophila*. *Learning & Memory*, 6:177–192.

- Jones, J., Coyne, J. A., and Partridge, L. (1987). Estimation of the thermal niche of *Drosophila melanogaster* using a temperature-sensitive mutation. *The American Naturalist*, 130:83–90.
- Jones, M. D. R. (1981). The programming of circadian flight-activity in relation to mating and the gonotrophic cycle in the mosquito, *Aedes aegypti*. *Physiological Entomology*, 6:307–313.
- Jones, M. D. R. and Gubbins, S. J. (1978). Changes in the circadian flight activity of the mosquito *Anopheles gambiae* in relation to insemination, feeding and oviposition. *Physiological Entomology*, 3:213–220.
- Katsov, A. Y. and Clandinin, T. R. (2008). Motion processing streams in *Drosophila* are behaviorally specialized. *Neuron*, 59:322–35.
- Kellogg, F., Frizel, D., and Wright, R. (1962). The olfactory guidance of flying insects. iv. *Drosophila*. *The Canadian Entomologist*, 94:884–888.
- Kennedy, J. (1978). The concepts of olfactory "arrestment" and "attraction". *Physiological Entomology*, 3:91–98.
- King, B. (1993). Flight activity in the parasitoid wasp *Nasonia vitripennis* (hymenoptera: Pteromalidae). *Journal of Insect Behavior*, 6(3):313–321.
- King, B. H., Grimm, K. M., and Reno, H. E. (2000). Effects of mating on female locomotor activity in the parasitoid wasp *Nasonia vitripennis* (hymenoptera: Pteromalidae). *Environmental Entomology*, 29(5):927–933.
- Knoppien, P., van der Pres, J. N. C., and van Delden, W. (2000). Quantification of locomotion and the effect of food deprivation on locomotor activity in *Drosophila*. *Journal of Insect Behavior*, 13(1):27–43.
- Koch, R. (1967). Tagesperiodik der aktivitat und der orientierung nach wald und feld von *Drosophila subobscura* und *Drosophila obscura*. *Z. Vergl. Physiol.*, 54:353–394.

- Koch, R. and Burla, H. (1962). Dispersal rates in *Drosophila subobscura* and *Drosophila obscura* in relation to factors of environment, sex, and age. *Drosophila Information Service*, 36:83–84.
- Kyriacou, C. P. and Hall, J. C. (1980). Circadian rhythm mutations in *Drosophila melanogaster* affect short-term fluctuations in the male's courtship song. *Proc Natl Acad Sci U S A*, 77:6729–33.
- Landolt, P. and Heath, R. (1988). Effects of age, mating, and time of day on behavioral responses of female papaya fruit fly, *Toxotrypana curvicauda* gerstaecker (diptera: Tephritidae), to synthetic sex pheromone. *Environmental Entomology*, 17(1):47–51.
- Lefranc, A., Jeune, B., Thomas-Orillard, M., and Danchin, E. (2001). Non-independence of individuals in a population of *Drosophila melanogaster*: effects on spatial distribution and dispersal. *Comptes Rendus de Academie des Sciences Serie III-Sciences de la Vie-Life Sciences*, 324:219–227.
- Lewis, E. (1960). A standard new food medium. *Drosoph. Inf. Serv.*, 34:117–118.
- Luo, L., Callaway, E. M., and Svoboda, K. (2008). Genetic dissection of neural circuits. *Neuron*, 57(5):634–60. Luo, Liqun Callaway, Edward M Svoboda, Karel R01 EY010742-16/EY/NEI NIH HHS/United States R01 MH063912-08/MH/NIMH NIH HHS/United States Howard Hughes Medical Institute/United States Research Support, Non-U.S. Gov't Review United States Neuron Neuron. 2008 Mar 13;57(5):634-60.
- Manning, A. (1960). The effects of artificial selection for mating speed in *Drosophila melanogaster*. *Animal Behavior*, 9:82–92.
- Martin, J.-R. (2003). Locomotor activity: a complex behavioural trait to unravel. *Behavioural Processes*, 64:145–160.

- Martin, J. R. (2004). A portrait of locomotor behaviour in *Drosophila* determined by a video-tracking paradigm. *Behavioural Processes*, 67:207–219.
- Martin, J. R., Ernst, R., and Heisenberg, M. (1999). Temporal pattern of locomotor activity in *Drosophila melanogaster*. *Journal of Comparative Physiology a-Sensory Neural and Behavioral Physiology*, 184:73–84.
- Mayor, K. L., Aracena, J. M., and Bell, W. J. (1987). Search duration of *Drosophila melanogaster* on homogeneous sucrose patches: relative effects of starvation period, sucrose concentration and patch size. *J. Ethol.*, 5:67–74.
- McCoy, C. (1962). Population ecology of the common species of *Drosophila* in Indiana. *J. Econ. Entom.*, 55:978–985.
- McDonald, J. and Parsons, P. (1973). Dispersal activities of the sibling species *Drosophila melanogaster* and *Drosophila simulans*. *Behavior Genetics*, 3:293–301.
- McGuire, T. R. T. T. (1986). Food-search behavior and its relation to the central excitatory state in the genetic analysis of the blow fly *Phormia regina*. *Journal of Comparative Psychology*, 100(1):52–58.
- McInnis, D., Shaffer, H., and Mettler, L. (1982). Field dispersal and population sizes of native *Drosophila* from north Carolina. *The American Naturalist*, 119:319–330.
- McKenzie, J. (1974). The distribution of vineyard populations of *Drosophila melanogaster* and *Drosophila simulans* during vintage and non-vintage periods. *Oecologia*, 15:1–16.
- McKenzie, J. and McKechnie, S. (1979). A comparative study of resource utilization in natural populations of *Drosophila melanogaster* and *D. simulans*. *Oecologia*, 40:299–309.
- Mikasa, K. (1990). Genetic study on emigration behavior of *Drosophila melanogaster* in a natural population. *Jpn. J. Genet.*, 65:299–307.

- Mikasa, K. (1992). Quantitative genetic study on sexual difference in emigration behavior of *Drosophila melanogaster* in a natural population. *Jpn. J. Genet.*, 67:463–472.
- Mikasa, K. (1998). Intraspecific variation in the effects of mating on emigration activity and fecundity in a natural population of *Drosophila melanogaster*. *Genes Genet. Syst.*, 73:263–269.
- Mikasa, K. and Narise, T. (1979). The relation between dispersive behavior and temperature in *Drosophila melanogaster*. i. dispersal patterns. *Japanese Journal of Genetics*, 54(4):217–228.
- Mikasa, K. and Narise, T. (1980). The relation between dispersive behavior and temperature in *Drosophila melanogaster*. ii. sex difference. *Research Notes, DIS* 55:111–112.
- Mikasa, K. and Narise, T. (1983a). Interactive effects of temperature and geography on emigration behavior of *Drosophila melanogaster*: climatic and island factors. *Behavior Genetics*, 13:29–41.
- Mikasa, K. and Narise, T. (1983b). Interactive effects of temperature and geography on emigration behavior of *Drosophila melanogaster*. ii. further studies on geographical differences. *Japanese Journal of Genetics*, 58:487–496.
- Mikasa, K. and Narise, T. (1986). Genetic variation of temperature-influenced emigration behavior of *Drosophila melanogaster* in a natural population. *Japanese Journal of Genetics*, 61:233–240.
- Moore, J. A. (1952). Competition between *Drosophila melanogaster* and *Drosophila simulans*. i. population cage experiments. *Evolution*, 6:407–420.
- Moreteau, B., R'Kha, S., and David, J. (1994). Genetics of a nonoptimal behavior: oviposition preference of *Drosophila mauritiana* for a toxic resource. *Behavioral Genetics*, 24:434–411.

- Mourier, H. (1964). Circling food-searching behaviour of the house fly (*Musca Domestrica* L.). *Videnskabelige meddelelser fra Dansk Naturhistorisk forening i Kjobenhavn*, 127:181–195.
- Murdie, G. and Hassell, M. (1973). Food distribution, searching success and predator-prey models. In Bartlett, M. and Hiorns, R., editors, *The Mathematical Theory of the Dynamics of Biological Populations*, pages 87–101. Academic Press, New York.
- Murphey, R. M. (1967). Instrumental conitioning of the fruit fly, *Drosophila melanogaster*. *Animal Behavior*, 15:153–161.
- Nagle, K. J. and Bell, W. J. (1987). Genetic control of the search tactic of *Drosophila melanogaster*: an ethometric analysis of rover/sitter traits in adult flies. *Behavior Genetics*, 17(4):385–407.
- Narise, S. and Mikasa, K. (1984). The effect of another population on emigration behavior of a population. *Jpn. J. Genet.*, 59:51–59.
- Narise, S. and Narise, T. (1991a). Chemical communication of emigration behavior of *Drosophila melanogaster*. ii. identification of chemical substances. *Jpn. J. Genet.*, 66:411–420.
- Narise, S. and Narise, T. (1991b). Chemical communication of emigration behavior of *Drosophila melanogaster*. ii identification of chemical substances. *Jpn. J. Genet.*, 66:411–420.
- Narise, T. (1962). Studies on competition in plants and animals. x. genetics variability of migratory activity in natural populations of *Drosophila melanogaster*. *Japanese Journal of Genetics*, 37:451–461.
- Narise, T. (1966). The mode of migration of *Drosophila ananassae* under competitive condition. *University of Texas Publ.*, 6615:121–130.

- Narise, T. (1967). The relation between migratory activity and competitive ability in *Drosophila melanogaster*. *Nat. Inst. Genet., Japan, Annual Report*, 17:87–88.
- Narise, T. (1968). Migration and competition in *Drosophila* i. competition between wild and vestigial strains of *Drosophila melanogaster* in a cage and migration-tube population. *Evolution*, 22:301–306.
- Narise, T. (1969). Migration and competition in *Drosophila* ii. effect of genetic background on migratory behavior of *Drosophila melanogaster*. *Japanese Journal of Genetics*, 44(5):297–302.
- Narise, T. (1974). Relation between dispersive behavior and fitness. *Japanese Journal of Genetics*, 49(3):131–138.
- Navarro, J. and Solar, E. d. (1975). Pattern of spatial distribution in *Drosophila melanogaster*. *Behavior Genetics*, 5(1):9–16.
- Nelson, M. (1971). Classical conditioning in the blowfly *Phormia regina*: associative and excitatory factors. *J. Comp. Physiol. Psychol.*, 77:353–368.
- Nelson, M. C. (1977). The blowfly's dance: role in the regulation of food intake. *J. Insect Physiol.*, 23:603–611.
- Nunney, L. (1990). *Drosophila* on oranges: colonization, competition, and coexistence. *Ecology*, 71:1904–1915.
- Nunney, L. (1996). The colonization of oranges by the cosmopolitan *Drosophila*. *Oecologia*, 108:552–561.
- Open Schooling, N. I. o. (2009). Building your own insects cages.

- Osborne, K. A., Robichon, A., Burgess, E., Butland, S., Shaw, R., Coulthard, A., Pereira, H., Greenspan, R., and Sokolowski, M. (1997). Natural behavior polymorphism due to a cgm-p-dependent protein kinase of *Drosophila*. *Science*, 277:834–836.
- Parsons, P. (1978). Boundary conditions for *Drosophila* resource utilization in temperate regions, especially at low temperatures. *The American Naturalist*, 112:1063–1074.
- Pereira, H. S. and Sokolowski, M. B. (1993). Mutations in the larval foraging gene affect adult locomotory behavior after feeding in *Drosophila melanogaster*. *Proc. Natl. Acad. Sci.*, 90:5044–5046.
- Pompanon, F., Fouillet, P., and Bouletreau, M. (1999). Physiological and genetic factors as sources of variation in locomotion and activity rhythm in a parasitoid wasp (*Trichogramma brassicae*). *Physiological Entomology*, 24:346–357.
- Powell, J. R., Dobzhansky, T., Hook, J. E., and Wistrand, H. E. (1976). Genetics of natural populations. xliii. further studies of rates of dispersal of *Drosophila pseudoobscura* and its relatives. *Genetics*, 82(493-506).
- Prokopy, R. J., Averill, A. L., Cooley, S. S., and Roitberg, C. A. (1982). Associative learning in egg-laying site selection by apple maggot flies. *Science*, 218:76–77.
- Prokopy, R. J. and Boller, E. F. (1971). Stimuli eliciting oviposition of european cherry fruit flies, *Rhagoletis cerasi* (diptera: Tephritidae), into inanimate objects. *Entomol. Exp. Appl.*, 14:1–14.
- Prokopy, R. J., Drew, R. A., Sabine, B. N., Lloyd, A. C., and Hamacek, E. (1991). Effect of physiological and experiential state of *Bactrocera tryoni* flies on intra-tree foraging behavior for food (bacteria) and host fruit. *Oecologia*, 87:394–400.

- Ramazani, R. B., Krishnan, H. R., Bergeson, S. E., and Atkinson, N. S. (2007). Computer automated movement detection for the analysis of behavior. *J Neurosci Methods*, 162:171–9.
- Richardson, R. (1974). Effects of dispersal, habitat selection and competition on a speciation pattern of *Drosophila* endemic to hawaii. In White, M., editor, *Genetic mechanisms of speciation in insects*, pages 140–164. Australia and New Zealand Book, Sydney.
- Richardson, R. and Johnston, J. (1975). Behavioral components of dispersal in *Drosophila mimica*. *Oecologia*, 20:287–299.
- Richmond, R. C. and Gerking, J. L. (1979). Oviposition site preference in *Drosophila*. *Behavioral Genetics*, 9:233–241.
- Richter, C. P. (1922). A behavioristic study of the activity of the rat. *Comp. Psychol. Monog.*, 1(2):1–55.
- Robacker, D. C. (1991). Specific hunger in *Anastrepha ludens* (diptera: Tephritidae): effects on attractiveness of proteinaceous and fruit-derived lures. *Environmental Entomology*, 20(6):1680–1686.
- Roberts, S. K. d. F. (1956). "clock" controlled activity rhythms in the fruit fly. *Science*, 124:172.
- Rockwell, R. (1979). Emigration response behavior. ii. the responses of *Drosophila busckii* (diptera: Drosophilidae). *Pan-Pacific Entomologist*, 55:117–126.
- Rockwell, R., Grossfield, J., and Levine, L. (1978). Emigration response behavior: I. effects of height and light on the oregon-r and norp-a strains of *Drosophila melanogaster*. *Egyptian Journal of Genetic Cytology*, 7:123–136.
- Rockwell, R., Grossfield, J., and Levine, L. (1983). Chromosomal and behavioral studies of mexican *Drosophila*. i. vagility characteristics of three population so of *D. pseudoobscura*. *Behavioral Genetics*, 13(2):197–204.

- Rockwell, R. and Levine, L. (1986). Emigration response behavior: iii. genetic variability in a natural population of *Drosophila busckii*. *Behavior Genetics*, 16(5):543–551.
- Rowcliffe, C. and Finlayson, L. H. (1982). Active and resting behaviour of virgin and pregnant females of *Glossina morsitans morsitans* westwood (diptera: Glossinidae) in the laboratory. *Bulletin of Entomological Research*, 72:271–288.
- Rowland, M. (1989). Changes in the circadian flight activity of the mosquito *Anopheles stephensi* associated with insemination, blood-feeding, oviposition and nocturnal light intensity. *Physiological Entomology*, 14:77–84.
- Sakai, K.-I., Narise, T., Hiraizumi, Y., and Iyama, S.-Y. (1958). Studies on competition in plants and animals. ix. experimental studies on migration in *Drosophila melanogaster*. *Evolution*, 12:93–101.
- Sappington, T. W. and Showers, W. B. (1992). Reproductive maturity, mating status, and long-duration flight behavior of *Agrotis ipsilon* (lepidoptera: Noctuidae) and the conceptual misuse of the oogenesis–flight syndrome by entomologists. *Environmental Entomology*, 21(4):677–688.
- Sayeed, O. and Benzer, S. (1996). Behavioral genetics of thermosensation and hygrosensation in *Drosophila*. *Proc Natl Acad Sci U S A*, 93:6079–6084.
- Schnebel, E. M. and Grossfield, J. (1986). Oviposition temperature range in four *Drosophila* species triads from different ecological backgrounds. *American Midland Naturalist*, 116:25–35.
- Shaver, S., Varnam, C., Hilliker, A., and Sokolowski, M. (1998). The foraging gene affects adult but not larval olfactory-related behavior in *Drosophila melanogaster*. *Behavioural Brain Research*, 95:23–29.

- Shorrocks, B. and Rosewell, J. (1986). Guild size in drosophilids: a simulation model. *Journal of Animal Ecology*, 55:527–541.
- Sih, A., Bell, A., and Johnson, J. (2004a). Behavioral syndromes: an ecological and evolutionary overview. *Trends Ecol. Evol.*, 19:372–378.
- Sih, A., Bell, A., Johnson, J., and Ziemba, R. (2004b). Behavioural syndromes: an integrative overview. *Q. Rev. Biol.*, 79:241–277.
- Sokolowski, M. B. (1980). Foraging strategies of *Drosophila melanogaster*: a chromosomal analysis. *Behavior Genetics*, 10:291–302.
- Srivastava, T. and Singh, B. (1996). Rhythmicity in oviposition pattern in light and darkness in four indian species of *Drosophila*. *Biol Res*, 29:355–360.
- Srivastava, T. and Singh, B. (1997). Effect of different chemicals on oviposition patterns in four indian species of *Drosophila*. *Rev. Brasil. Biol.*, 57:571–577.
- Srivastava, T. and Singh, B. (1998). Effect of temperature on oviposition in four species of the *melanogaster* group of *Drosophila*. *Rev. Brasil. Biol.*, 58:492–495.
- Srivastava, T. and Singh, B. (2001). Choice of oviposition site between surface of the medium and paper in four indian species of *Drosophila*. *Indian Journal of Experimental Biology*, 00:383–386.
- Städler, E. and Buser, H. (1982). Oviposition stimulants for the carrot fly in the surface wax of carrot leaves. *Proc. 5th int. Symp. Insect-Plant Relationships (Wageningen)*, page 403.
- Stamps, J., Buechner, M., Alexander, K., Davis, J., and Zuniga, N. (2005). Genotypic differences in space use and movement patterns in *Drosophila melanogaster*. *Animal Behaviour*, 70:609–618. Part 3 966QM Times Cited:1 Cited References Count:40.

- Stewart, S. D. and Gaylor, M. J. (1994). Effects of age, sex, and reproductive status on flight by the tarnished plant bug (heteroptera: Miridae). *Environmental Entomology*, 23(1):80–84.
- Stinner, R. E., Barfield, C. S., Stimac, J. L., and Dohse, L. (1983). Dispersal and movement of insect pests. *Ann. Rev. Entomol.*, 28:319–335.
- Straw, A. and Dickinson, M. (2009). Motmot, an open-source toolkit for realtime video acquisition and analysis. *Source Code for Biology and Medicine*, 4.
- Suiter, K. A. and Gould, F. (1992). Effects of mating status and age on dispersal behavior in the twospotted spider mite, *Tetranychus urticae* in response to fenvalerate-treated leaf surfaces. *Entomol. Exp. Appl.*, 62:1–8.
- Takada, H. (1959). Migration of some *Drosophila* in population tubes. *Drosophila Information Service*, 33(167).
- Takamura, T. (1984). Behavior genetics of choice of oviposition sites in *Drosophila melanogaster*. iv. differentiation of oviposition force in the *melanogaster* species sub-group. *Jpn. J. Genet.*, 59:71–81.
- Tantawy, A., Mourad, A., and Abou-Youssef, A. (1975). Studies on natural populations of *Drosophila*. xvi. migration in *Drosophila melanogaster* in relation to genotype, temperature and population density. *Egyptian Journal of Genetics and Cytology*, 4:263–276.
- Taylor, C. E., Powell, J. R., Kekic, V., Andjelkovic, M., and Burla, H. (1984). Dispersal rate of species of the *Drosophila obscura* group: implications for population structure. *Evolution*, 38(6):1397–1401.
- Throckmorton, L. (1975). The phylogeny, ecology, and geography of *Drosophila*. In King, R., editor, *Handbook of Genetics*, volume 3, pages 421–469. Plenum Press, New York.

- Timofeeff-Ressovsky, W. and Timofeeff-Ressovsky, E. (1940). Populationsgenetische versuche an *Drosophila*. *Zeitschrift fur inductive Abstammungs und Vererbungslehre*, 79:29–49.
- Tinette, S., Zhang, L., and Robichon, A. (2004). Cooperation between *Drosophila* flies in searching behavior. *Genes, Brain and Behavior*, 3:39–50.
- Toda, M. (1974). A preliminary study of microdistribution and dispersal in drosophilid populations. *J. Fac. Sci. Hokkaido Univ. Serv. VI, Zool.*, 19(3):641–656.
- Tortorici, C. and Bell, W. J. (1988). Search orientation in adult *Drosophila melanogaster*: response of rovers and sitters to resource dispersion in a food patch. *Journal of Insect Behavior*, 1:209–223.
- Tortorici, C., Brody, A., and Bell, J. W. (1986). Influence of spatial patterning of resources on search orientation of adult *Drosophila melanogaster*. *Animal Behavior*, 34:1568–1570.
- Turelli, M. and Hoffmann, A. A. (1988). Effects of starvation and experience on the response of *Drosophila* to alternative resources. *Oecologia*, 77:497–505.
- Valente, D., Golani, I., and Mitra, P. (2007). Analysis of the trajectory of *Drosophila melanogaster* in a circular open field arena. *PLoS ONE*, 2:e1083.
- Vernon, R., Pierce, JR., H., Borden, J., and Oehlschlager, A. (1978). Host selection by *Hylemya antiqua*: identification of oviposition stimulants based on proposed active thioalkane moieties. *Entomological Society of America*, 7:728–731.
- Wallace, B. (1970). Observation on the microdispersion of *Drosophila melanogaster*. In Hecht, M. K. and Steere, W., editors, *Essays in Evolution and Genetics in honor of Theodosius Dobzhansky*, pages 381–399. Appleton-Century-Crofts, New York.
- White, J., Tobin, T. R., and Bell, W. J. (1984). Local search in the housefly *Musca domestica* after feeding on sucrose. *J. Insect Physiol.*, 30(6):477–487.

- Wigglesworth, V. (1949). The utilization of reserve substances in *Drosophila* during flight. *Journal of Experimental Biology*, 26:150–163.
- Wogaman, D. J. and Seiger, M. B. (1983). Light intensity as a factor in the choice of an oviposition site by *Drosophila pseudoobscura* and *Drosophila persimilis*. *Can. J. Genet. Cytol.*, 25:370–377.
- Wolf, F. W., Rodan, A. R., Tsai, L. T., and Heberlein, U. (2002). High-resolution analysis of ethanol-induced locomotor stimulation in *Drosophila*. *J Neurosci*, 22:11035–44.
- Yang, C. H., Belawat, P., Hafen, E., Jan, L. Y., and Jan, Y. N. (2008). *Drosophila* egg-laying site selection as a system to study simple decision-making processes. *Science*, 319(5870):1679–83.
- Yerington, A. and Warner, R. (1961). Flight distances of *Drosophila* determined with radioactive phosphorus. *J. Econ. Entom.*, 54:425–428.
- Zhang, F., Aravanis, A. M., Adamantidis, A., de Lecea, L., and Deisseroth, K. (2007). Circuit-breakers: optical technologies for probing neural signals and systems. *Nat Rev Neurosci*, 8:577–81.