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Measuring Microevolution in an Experimental Population of *Drosophila*

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Developing students' understanding of microevolution is an essential step to a wider discussion of the origin and divergence of species. In an effort to breathe life into the topics of microevolution and the Hardy-Weinberg model, I asked students to set up, maintain, and observe fruit fly populations consisting of different body color mutants. Within a single term, students measured clear changes in allele frequencies in their population cage. As they collected population data, students performed shorter experiments that illustrated which of the Hardy-Weinberg assumptions had been violated in their population cage. Students rated the quality of male mating dances, observed nonrandom female mate choice, and assessed the relative fitness of the body color mutants in competition experiments. This poster describes the lab project, presents sample student data, and discusses potential problems with this approach.

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