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*How Changes in Temperature Affect D. Melanogaster's Reproduction, Survival and Life Cycle*

Climate change has taken major toll on the environment. Seasons are arriving earlier, trees are flowering sooner, and many animals are slowly becoming extinct. Will climate change cause *Drosophila Melanogaster*, one of our main pollinators, to undergo severe changes in their life cycle, reproduction rate, and/or survival rate? To test this, I conducted an experiment with 60 flies (30 of each gender) in a 22°C and in a 17°C environment. I made observations regarding behavior, life cycle changes, and their ability to reproduce for 9 days. I counted the flies and pupa population in each vial (10 vials, 6 flies in each), and in each environment. My results displayed that in the warmer, 22°C environment, the average population of flies was 71.8, but the average population of flies in the cooler, 17°C environment was only 5.4. At the room temperature environment, 64.5 was the average population of the pupa, but the average in the cooler environment was 1.2. The fly and pupa population had a significant reduction in the cooler temperature. These severe changes in population were caused by the slow chemical reactions that occur in a cold-blooded animal, when the surrounding temperature is lowered. It can be predicted that areas that will experience an overall cooling trend will lose most of their vital insects. This is inevitable, unless a mutation is formed in *Drosophila Melanogaster* and other insects, causing their chemical reactions to fasten when put in changing environments.