CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY

Name(s)
Laura M. Zablit

Project Number
J1535

Project Title
Hot Ladybugs

Abstract

Objectives/Goals
This experiment's goal is to determine the positive and/or negative effects of heat on ladybugs' speed, strength, flight, and activity.

Methods/Materials
1,200 ladybugs were tested in 6 groups 200. Each group was placed in a terrarium with a reptile heater placed at a fixed height above the tank to radiate a certain temperature, either 70°F, 80°F, 90°F, 100°F, 110°F, or the control group, which was placed separate from the other tanks, temperature the same as the room#s. Ladybugs were under these conditions for 4 days in Trial 1 and 8 days in Trial 2.

Results
In the end, the highest average ladybug activity was in the 80°F, the highest average ladybug speed was in the 110°F tank, the highest average ladybug strength was in the control tank, the 70°F tank, and the 80°F tank all tied, and the highest average ladybug flight was in the 110°F tank. The lowest average ladybug activity was in the control tank and the 100°F tanks. The lowest average ladybug speed was in the 70° tank. The lowest average ladybug strength was in the 110°F tank. The lowest average ladybug flight was in the control tank, 70°F tank, 80°F tank, and 90°F tank.

Conclusions/Discussion
In higher temperatures, the ladybugs moved faster and flew more often. In higher temperatures ladybugs also grew weaker; they fell off the sides and ceilings of the tanks more often. Ladybug activity was the highest at 80°F, and the colder the temperature, the less ladybugs move. It is clear that although heat speeds the chemical reactions that give the ladybugs energy (as they are cold-blooded) and causes the ladybugs to move faster and fly more, although the adhesion is then lessened.

Summary Statement
This project was conducted to observe how higher temperatures affect ladybugs, because with the forecasted temperature rise, it is important to take care of ladybugs because their existence is fundamental to ours.

Help Received
Father payed for supplies. Mother helped with transportation and handling heat lamps.