CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)
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Project Number
36537

Project Title
The Effects of Disc Golf on Plethodontidae Salamanders

Abstract

Objectives/Goals
My project studied the effects of disc golf on plethodontid salamanders. My hypothesis was that, because of the constant passage of players, salamanders would be less likely to find a fitting habitat in the disc golf area of the forest.

Methods/Materials
I surveyed for salamanders by searching for a half hour in a section of the disc golf course and another half hour searching within a non-golf section of the Arcata Community Forest. At each section, I would turn over cover objects with a width larger than 8 centimeters and record the species and number of salamanders. I measured the width and length of each object and recorded results in a waterproof data notebook, while recording my position with a GPS. I repeated this process in both golf and non-golf areas a total of six times each.

Results
I found salamanders under 22.8% of logs I looked under in the golf area, which was about the same as in the non-golf area at 20.8%. Salamanders preferred larger objects; the average area of objects with salamanders underneath was 2,241 cm^2 while the area of objects without salamanders was 1,374 cm^2.

Conclusions/Discussion
My hypothesis was incorrect, the number of salamanders in the non-golf and golf areas was about the same. My study showed that a healthy salamander habitat can be a variety of things, but I also learned that as long as there is large pieces of wood on the ground, a salamander should be able to find suitable cover.

Summary Statement
I found that the impacts disc golf did not have a large effect on plethodontid salamanders in a redwood forest.

Help Received
My parents drove me to the forest and helped record data while I did surveys. My dad showed me how to make graphs and helped edit my information before it went on my board.