CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)

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Project Number

J1202

Project Title

Cat vs. Cat: Prevalence of Intestinal Parasites in Shelter and Domestic Cats

Abstract

Objectives/Goals

This experiment was conducted to determine which type of cat, cats in shelters or indoor house cats, have a greater prevalence of Toxacara Cati (Roundworms), Ancylostoma (Hookworms), and Dipylidium Caninum (Tapeworms). This is vital because these intestinal parasites are zoonotic, or transmittable to humans. I want people to be aware of these dangers and take better care of their cats. I hypothesized that shelter cats would have a greater prevalence of the three parasites than the indoor house cats.

Methods/Materials

20 fecal samples, 10 from shelter cats and 10 from indoor house cats, were collected. A swab was used to check the feces for any tapeworm segments. In order to check for roundworms and hookworms, the fecal flotation method using a sodium nitrate solution was conducted under the supervision of Cal Poly's Veterinary Lab. The sodium nitrate solution is denser than the parasite ova, so if the fecal sample had any parasites ova, it would rise to the surface where a cover slip was placed. Then this cover slip was transferred to the microscope slide and viewed for any hookworm and roundworm eggs.

Results

10% of shelter cats were infected by roundworms. Also, 10% of shelter cats were infested by hookworms. However, none of the shelter cats were infected by tapeworms. Surprisingly, 20% of domestic cats were infested by roundworms. Moreover, no indoor cats were infected by hookworms and tapeworms. A total of 2 cats were infested from each of the two sources.

Conclusions/Discussion

Overall, I saw a 20% prevalence in shelter cats and a 20% prevalence in domestic cats as well. My hypothesis stated that based on fecal exams of shelter and domestic cats, shelter cats would have a greater prevalence of roundworms, hookworms, and tapeworms. The results showed that my hypothesis was incorrect. I was surprised by this because I thought that domestic cats would be better cared for.

Summary Statement

Comparing the prevalence of intestinal parasites in shelter and domestic cats.

Help Received

I used Cal Poly's lab equipment under the supervision of Professor Michele Rash.