

Reducing fear in future pest managers through hands on experiences

AT A GLANCE

Idaho youth had changes in perception about insects and spiders following our trainings which will lead to more responsible pest management in the future.

The Situation

A commonly brought up issue at local advisory committees is the fact that farmers and other pest managers over-rely on pesticides as a form of control for insects. Part of the problem is an overwhelming negative feeling towards insects and spiders by the public. According to the National Pesticide Information Center only 1-3% of known species are ever considered pests. To address this problem, we developed a program where youth and adults were given the opportunity to interact with live arthropods and learn about the benefits they provide to humans.

Our Response

To develop a hands-on program, we first started by researching a variety of exotic insects that could be easily raised and used at educational events. Then we applied for and received an Idaho Community Grant to help cover costs for specimens, supplies, staffing and travel. For some species special USDA-Aphis Plant Protection and Quarantine (PPQ) permits were required. Most specimens were purchased either online from specialty breeders or from exotic pet stores. Once purchased, cages and habitats were set up. Arthropods were fed and maintained by university staff and volunteers. Staff were trained on handling protocols and taught



A youth at a 4-H event handling a giant African millipede. This is just one of the many live organisms we took to other events.

the life cycle of each species. Some of the more popular species that were easy to raise in the chart below.

Common Name	Species Name
Giant Prickly Stick Insect	<i>Extatosoma tiaratum</i>
Giant African Millipede	<i>Archispirostreptus gigas</i>
Blue Feigning Death Beetle	<i>Asbolus verrucosus</i>
Pink Toe Tarantula	<i>Avicularia avicularia</i>
Giant Vinegaroon	<i>Mastigoproctus giganteus</i>
Wide Horn Hissing Roach	<i>Gromphadorhina oblongonota</i>
Dairy Cow Isopods	<i>Porcellio laevis</i>

Once the specimens were purchased and settled into their habitats, they were used in a variety of educational venues including in school events, after school events, science nights, UI Extension classes, county fair booths, a botanical garden event and more. At events, educators modeled handling behavior and talked about different live specimens. Then youth were given the opportunity to touch or hold specimens if desired. Typical trainings lasted for approximately 30 minutes. Youth were kept in small groups and given very specific instructions to reduce the chance of causing harm to specimens or youth. Spiders were very closely monitored and strict guidelines were used for their handling.

Program Outcomes

From September 2021 to August 2022, we taught 8,107 youth and taught 1,977 adults who were also in attendance at trainings. At two events 439 youth were surveyed about changes in their interest and perceptions of bugs.

- 86% of youth indicated they felt more comfortable being around bugs than they did before the training.

- 83% indicated they had a greater interest in learning about bugs following the trainings.

As youth start to feel less afraid of insects and spiders it is likely they will be more hesitant to kill insects and spiders without first asking more questions. This is reaffirmed by the increase of interest in learning about insects and spiders. A key part of Integrated Pest Management (IPM) is learning more about suspected pests and whether they are harmful or not. This all starts with a change in perception towards insects and spiders which our program was able to do by helping youth feel more comfortable around arthropods which are mostly beneficial to humans or benign.

Cooperators and Co-Sponsors

This work would not have been possible without the assistance of University of Idaho employee Ethan Ficek and local volunteer Hunter Halverson from Rupert who worked hard to care for insects, spiders and other arthropods.

FOR MORE INFORMATION

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