Activity: Using Pit Fall Traps to Collect Terrestrial Invertebrates and Possible Urban Forest Invasive Species

Objectives:

1) To allow students to collect terrestrial invertebrates using a home made pit fall-style trap.
2) To understand there are many more invertebrates than we thought.
3) To reinforce the concept of invasive species while performing a field study to collect specimens.
4) To classify invertebrates.

Background Information:

A terrestrial invertebrate is defined as such because it is found on land and it doesn’t have a backbone. Common examples of terrestrial invertebrates are insects, arachnids (spiders, scorpions, ticks & mites), gastropods (snails), centipedes, millipedes, isopods (pill and sow bugs), worms, etc. Most of these organisms are commonly found in Wisconsin, and some may even be considered invasive. Remember an invasive species must meet two criteria: it’s nonnative to the ecosystem under consideration and its introduction is likely to cause economic harm, environment harm or harm to human health.

Materials:

- Scissors
- Plastic cups
- Glue guns
- Tape
- Paper or plastic plates
- Water
- Drop of soap per trap
- Antifreeze (optional)
- Small flower shovel

Procedure:

1) Students will construct pit fall traps in class using materials provided. (They can redesign them at home if needed)
2) Each group, consisting of two or three students will place three pit fall traps at locations of their choice in Collip Worden Park. Make sure to label traps, including names, date, and don’t tamper signs.
3) Students will return the sampling site the next day during class to remove traps and collect organisms.
4) In class, students will classify organisms into broad categories using data table.
5) Students will try to determine if any invertebrates collected are considered to be invasive.
Make a prediction: What do you think you will find and what organisms will be the most common?
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Collection Sites: A    B   C  

Ants    _____    ______  ______ 
Spiders   _____    ______  ______ 
Worms    _____    ______  ______ 
Centipedes    _____    ______  ______ 
Beetles    _____    ______  ______ 
Isopods (pill bugs)    _____    ______  ______ 
Millipedes    _____    ______  ______ 
Snails    _____    ______  ______ 
Slugs    _____    ______  ______ 
Earwigs    _____    ______  ______ 
Others  (Please list)    _____    ______  ______ 
Total:    _____    ______  ______

Activity Questions:

1) Which type of invertebrate was most numerous or common at all collection Sites?
   Why do you think so?

2) If you had only collected during the day, how might your results differ?

3) Were there any surprises you encountered in this activity?

4) Which of the organisms you collected would be considered an invasive species?

5) If you were going to do this activity again, what might you change about it?