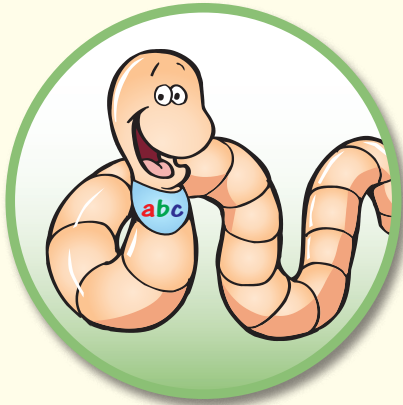


## WANT TO DO MORE?

What could be done to improve the water quality of this body of water? Look at where the water drains from after a rain (watershed), then ends up in the lake.

Look at insect larvae samples from another body of water. Is the water quality better or worse? Is the watershed more or less healthy?



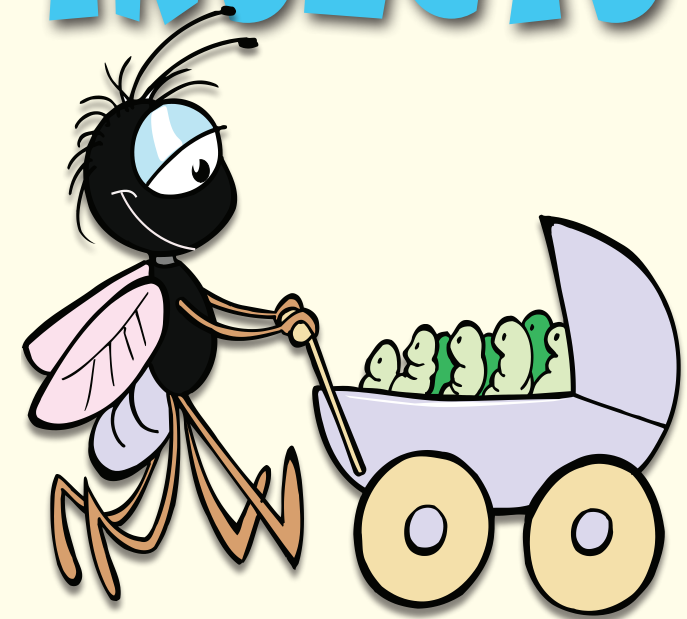
8300 Wells Lake Road  
Fort Smith, AR 72916

(479) 452-3993

[www.rivervalleynaturecenter.com](http://www.rivervalleynaturecenter.com)

[www.agfc.com](http://www.agfc.com)

# INFANT INSECTS



## WHAT IS MY MISSION?

See metamorphosis in action: go on a hunt for infant insects that look very different from their adult parents. Surprisingly, many species live at the water's edge, so get a net. Happy hunting!

## EXPEDITION TOOLS

- Nets
- ID guides
- Viewing boxes

(Note: more insects will be found in warmer weather when the water is not too high.)

## LET'S GET STARTED

- Most insect larvae "(macroinvertebrates)" is visible to the naked eye, and help maintain the quality of the water by eating bacteria and dead, decaying plants and animals.
- The insect larvae you find in the water can tell you about the health of the water's ecosystem.
- Get your net and sweep around the water's edge, down through the decaying leaves. Scoop up some of the debris and look very closely for wigglers — they may be very tiny. Put your insects in one of the viewing bowls with clear water.
- How many you find depends on technique, temperature, time of year, water height, and location. And of course, water quality!
- Identify the specimens and check them off list. Describe the water quality based on what you found.
- Release insects. Clean and return tools.

## WHAT DID YOU SEE?

Check off the insects you found and add up your points. Most commonly found macroinvertebrates:

**1 point: Tolerant** (Need less oxygen — can breathe air from surface. Can tolerate some pollution)

- Aquatic worm
- Mosquito larvae
- Non-biting midge
- Water boatman

**3 points: Somewhat Sensitive**

- Crayfish
- Damselfly
- Dragonfly
- Water strider
- Whirligig beetle

**5 points: Sensitive**

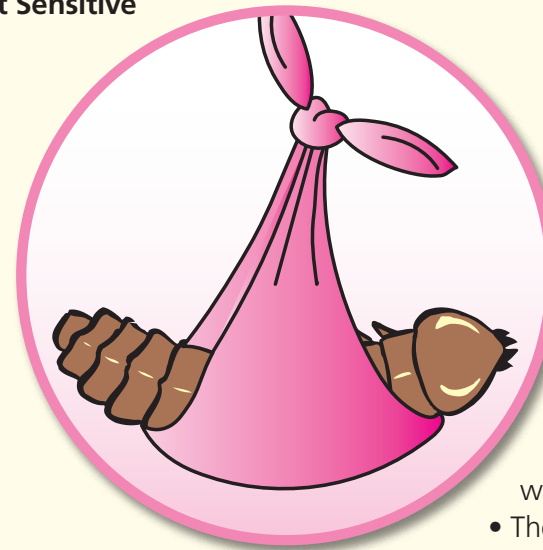
- (need more oxygen, no pollutants)
- Caddisfly
  - Dobsonfly
  - Mayfly
  - Stonefly
  - Water penny

**Total Score:** \_\_\_\_\_

**How would you rate the water quality here?**

\_\_\_\_\_

\_\_\_\_\_



Sensitive species need better water quality (more dissolved oxygen, less pollution, and the right level of algae and pH). Bodies of water with good water quality score 17 points or above when you have good collection conditions.

Why are insects good indicators of water quality?

- They are sensitive to changes in the ecosystem (water and local watershed).
- Some live in the same spot for over a year.
- They cannot easily escape changes in water quality.
- They are easily collected and studied.