

2010 STONEFLY EXOSKELETON COUNT

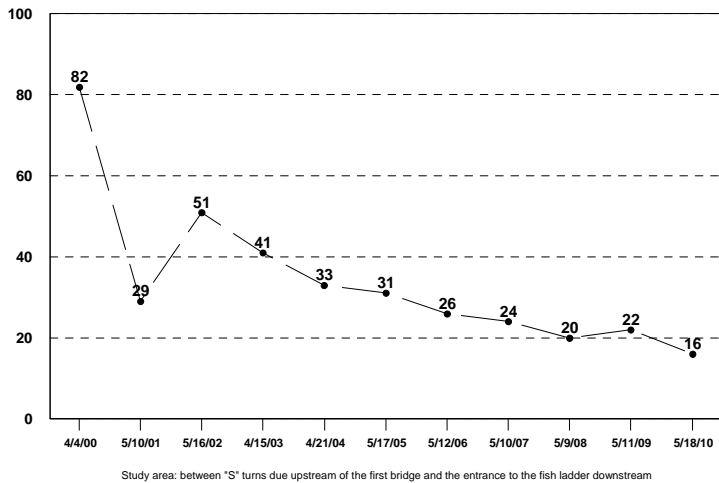
FAUNTLEROY CREEK

Fifth-grade students and their kindergarten reading buddies from Arbor Heights Elementary School conducted the annual stonefly exoskeleton count on May 18. The survey was slightly later than the mid-April to mid-May window established for this study.

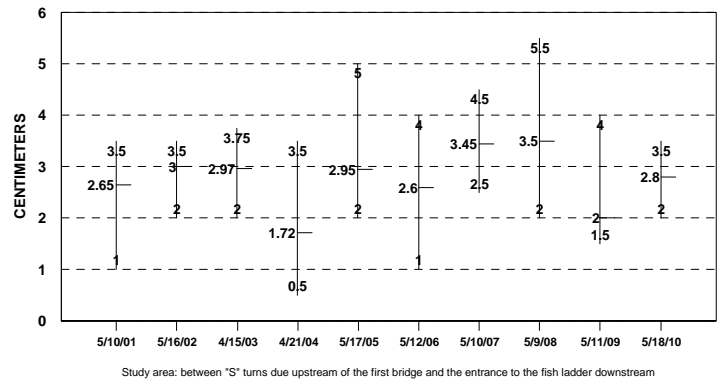
Research teams followed established protocol by counting all exoskeletons they could find on trees, bushes, bridges, and fences in the study area. The measuring team measured the torsos (no antenna or tails) of 5 specimens and calculated the average. Located in the lower creek, the study area is normally nourished by spawner carcasses.

FINDINGS

NUMBER OF STONEFLY EXOSKELETONS
FAUNTLEROY CREEK



LENGTH OF STONEFLY EXOSKELETONS
TORSO RANGE AND AVERAGE
FAUNTLEROY CREEK



The total number of exoskeletons (16) was down from last year, continuing a downward trend since 2002. Maximum torso length was down from the last five years but the average (based on a small sample) was comparable to prior years.

In 2007, we had 89 spawners in the lower creek, providing many carcasses when our stoneflies would have been recently hatched nymphs. In 2008, we had only two spawners in the lower creek and thus almost no new supply of nutrients. Last fall, we had 18 spawners, boosting the food supply for our stonefly nymphs as they neared maturity.

OBSERVATIONS

The highest number (11) of exoskeletons was on trees, principally the horse chestnut tree at the downstream end of the study area. Students spotted one exoskeleton on a fence near the creek. Also, students reported seeing several live larva that had not yet shed their exoskeletons.

Factors that may have contributed to this year's findings include

- the continuing pattern of long, cool springs that may have affected the number of stoneflies that hatched and/or their timing for leaving the creek for the winged phase of their lifecycle.
- the relatively late date of this year's count.
- a lack of teacher continuity, which may have contributed to this year's students not being as rigorous as prior groups in following protocol.