

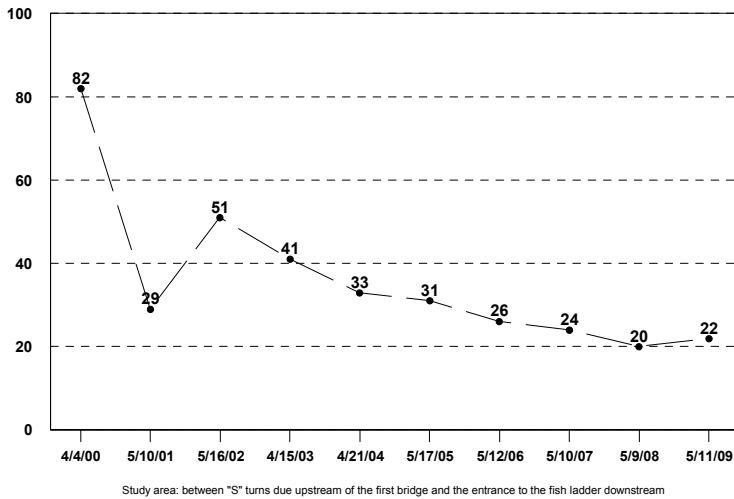
# 2009 STONEFLY EXOSKELETON COUNT FAUNTLEROY CREEK

Fifth-grade students and their kindergarten reading buddies from Arbor Heights Elementary School conducted the annual stonefly exoskeleton count on May 11. The survey was during the mid-April to mid-May window established for this study.

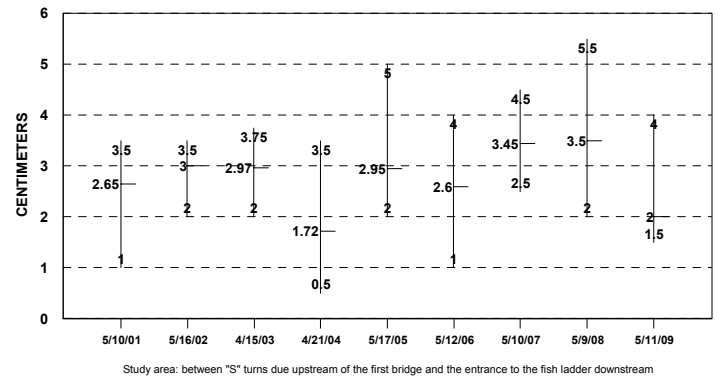
Research teams followed established protocol by counting all exoskeletons they could find on trees, bushes, bridges, and fences in the study area. The measuring team measured the torsos (no antenna or tails) of 10 specimens and calculated the average. Located in the lower creek, the study area is normally nourished by spawner carcasses and includes the channel segment where Seattle Public Utilities does macroinvertebrate sampling in the fall.

## FINDINGS

**NUMBER OF STONEFLY EXOSKELETONS  
FAUNTLEROY CREEK**



**LENGTH OF STONEFLY EXOSKELETONS  
TORSO RANGE AND AVERAGE  
FAUNTLEROY CREEK**



The total number of exoskeletons (22) was slightly more than last year but, overall, the trend line has been downward since 2002. Torso length was down from the last two years, and the average was the shortest recorded since 2004.

In 2006, we had no spawners - and thus no carcasses - in the lower creek, when our stoneflies would have been recently hatched nymphs. In 2007, we had 89 spawners in the lower creek and their carcasses would have greatly boosted the supply of nutrients available to our stoneflies as growing nymphs. Last year, we had only two spawners - scant food for our stonefly nymphs as they neared maturity.

## OBSERVATIONS

All four bridges were again the most popular locations for exoskeletons (13). The next-highest number (6) was on the horse chestnut tree at the downstream end of the study area; we found none on other trees near the creek. We spotted three exoskeletons on the split-rail fence in the middle of the study area.

Together with our teachers, we suggest several factors that may have contributed to this year's findings:

- The pattern of long, cool springs 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 smallish size of this year's exoskeletons may have resulted from an inadequate food supply during the nymphs' major growth period, either not enough nutrients or too many nymphs for the supply.