

FAUNTLEROY CREEK MACROINVERTEBRATE RE-ESTABLISHMENT STUDY

Gatewood Elementary School, Team 5, 2007-08

Fourth-grade students Emma Atkinson, Elizabeth Van Flandern, and Ainsley Montemayor presented the following report to the Fauntleroy Watershed Council on May 8, 2008.

DATA COLLECTION

Working in teams, 20 fourth- and fifth-grade students from Gatewood Elementary School performed data collection surveys on private property at the mouth of Fauntleroy Creek with the assistance of Judy Pickens from the watershed and Trisha Montemayor from the school. Goals of the project were teaching students the elements of a healthy watershed, demonstrating scientific data collection processes, and contributing data to help evaluate the general health of the creek.

In this area of the creek, most of the channel had been rebuilt in summer 2007. Therefore, the students were surveying the difference between an undisturbed area in the upper part of the reach and a lower area in the new channel. Informal scientific protocol was followed to gather macroinvertebrates (using a Surber sampler), count, and identify them (using illustrations). Students also observed the condition of the creek and recorded water temperature and depth.

Different teams of students performed data collection surveys approximately once a month for four months, beginning in late fall and ending in early spring.

FINDINGS

MACRO SPECIES	UNDISTURBED SITE				REBUILT SITE			
	12/07	1/08	2/08	4/08	12/07	1/08	2/08	4/08
Stonefly larva	2	1	1	1	2	0	1	5
Mayfly larva	0	10	22	0	8	15	10	20
Caddisfly larva	0	0	2	4	1	0	0	2*
Blackfly larva	1	0	0	0	0	5	2	0
Cranefly larva	0	0	0	2	0	0	0	3
Watersnipe fly larva	0	0	0	0	0	1	0	0
Biting midge larva	0	0	0	0	0	0	1	0
Worms	1	0	0	6	2	0	1	1
Riffle beetle	0	0	0	0	0	0	2	0
TOTAL INDIVIDUALS	5	11	25	13	13	20	17	31

WATER

Temperature	49F	43F	50F	48F	49F	43F	40F	48F
Depth	6"	5"	6"	4"	6"	5"	6"	3.75"

*Casings

- In general, the macroinvertebrate count increased during the study period.
- Rocks in the undisturbed channel were larger than the gravel/sandy bottom in the rebuilt channel.
- The early surveys were performed after heavy rain, when the water was very muddy and unclear.
- In April, too many mayfly larva were present in the rebuilt site to get an accurate count.

OBSERVATIONS

We found this lower reach of the creek teeming with life, especially compared with macro counts done annually by Arbor Heights Elementary students in the upper creek. Most of the macroinvertebrates were ones that live only in good-quality water, specifically mayfly, stonefly, and caddisfly species. Therefore, our conclusion is that juvenile salmon will find an abundance of macroinvertebrates to eat in this reach of the creek and that the water is of good quality. We further concluded that moving the channel has had no negative effect on macroinvertebrates; they appear to have re-established themselves quickly.