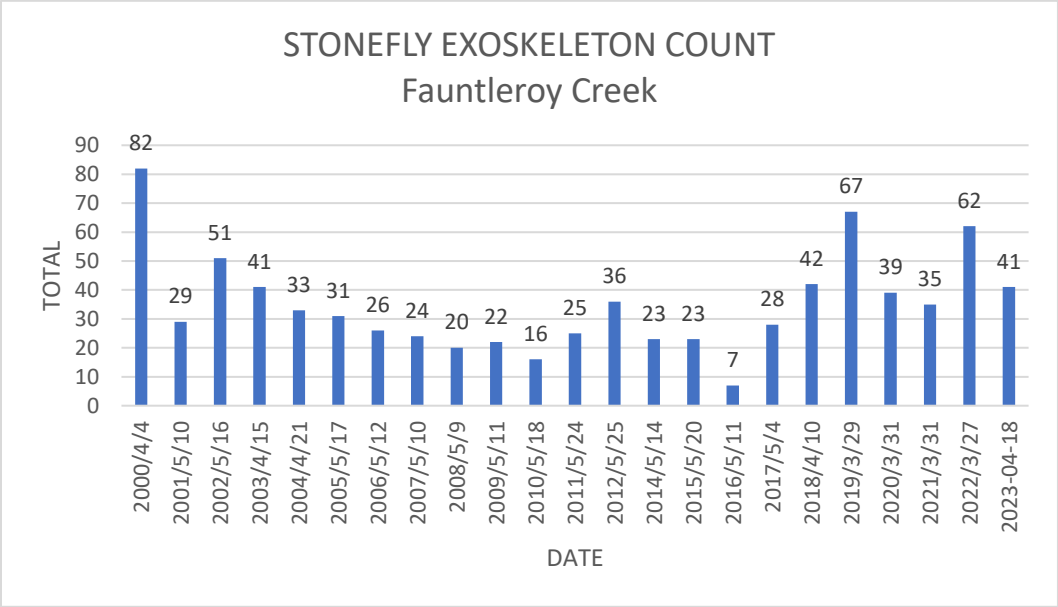
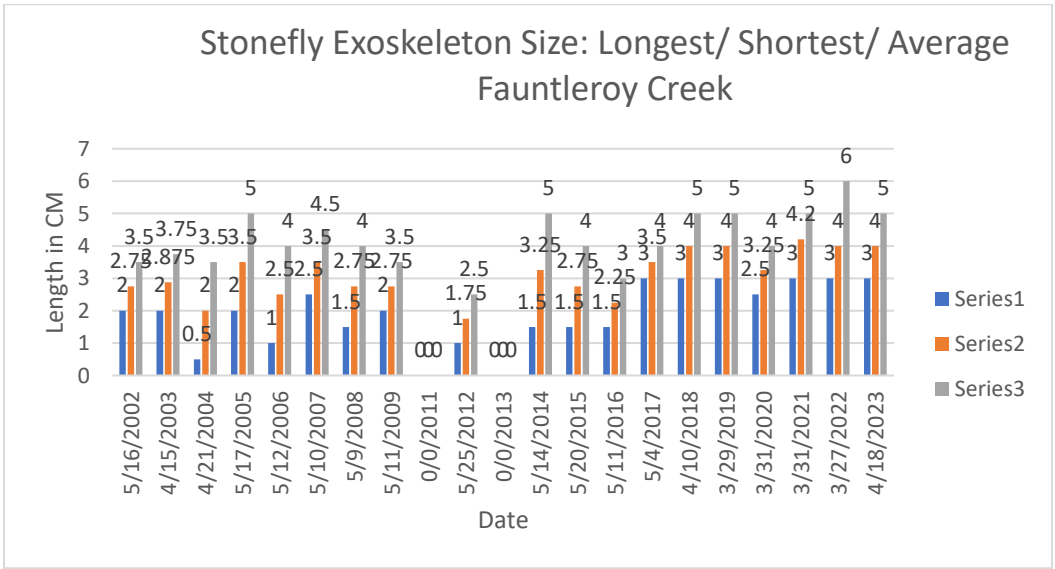
2023 STONEFLY EXOSKELETON COUNT

FAUNTLEROY CREEK

Twenty three fourth-grade students from Louisa Boren K-8 STEM arrived by school bus on April 18 and walked to the Pickens/Sweetland home next to lower Fauntleroy Creek. Timing of the count was about two weeks later than recent years. Volunteer Shannon Ninburg led the session, with teacher Alex Lee and parent chaperones assisting. Dennis Hinton helped students find exoskeletons and showed them how the smolt trap worked. Tom Trulin took photos and video.

After an introduction to stonefly behavior and the molting process, the students counted off into four groups, with each taking a worksheet down to the study area. One group counted exoskeletons on bridges, one group counted them on trees, and one group counted them on fences, bushes, and the ground. The fourth group measured 10 exoskeleton torsos to determine longest, shortest, and average length. Once all groups were finished, Shannon added their new numbers to last year's charts, and all discussed exoskeleton locations, size, and other aspects of interest. Students were a very engaged group and contributed interesting observations and theories. A bonus was that students were able to see newly hatched fry in the creek from last fall's exceptional spawning season.





FINDINGS

The total count was 41 - 26 on trees, 15 on bridges, and 0 on fences/bushes/ground. The shortest torso of the 10 counted was 3 cm and the longest was 5 cm, for an average of 4 cm.

RELEVANT INFORMATION

The weather was cloudy, breezy, and cool, with a high of 46 degrees and no rain during the activity. Stonefly nymphs in the lower creek would have benefitted from carcasses nutrients of the 254 spawners that came in the previous fall.

OBSERVATIONS

Most exos found on trees and bridges were at the downstream end of the study area. All of those found on trees were on the large horse chestnut tree, accounting for more than half of those found. Students speculated that perhaps the smooth bark was appealing to stoneflies, noting that no stoneflies were found on the rough, mossy bark of other tree species. They also talked about how most of the exos on the chestnut were on the east side of the trunk, which received a lot of morning sun. They noted that this observation conflicted with where they were finding most of the exos on bridges, though, which were generally under the bridge or in places not exposed to much sun. Timing this year may also have been a factor, as some exos may have been knocked off by rain or wind during previous weeks.

RECOMMENDATIONS

- Find a new way to group students as the fence/ground/bush group rarely finds many exoskeletons.
- Equip each group with a flashlight so they can more easily look for exos in dark places.