

Stonefly Search – 2010

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This is the second year I've taken part in Stonefly Day, organized by the Huron River Watershed Council. And, as last year, it promised to be a very cold day out along the creeks and river. The January thaw had been warmer and longer this year than last, so snow was largely gone from the roads and creek banks, at least compared with last year. But winter temperatures had returned, as they usually do by the end of January, and overnight temperatures were close to zero. There had been a dusting of powdery snow since the thaw but not much accumulation.

The turnout this year was somewhat less than last year, and parking was easy to find at the New Center Building. Still, there were about two dozen teams of four or five, and the room was full of volunteers when I arrived at about 10:15 AM. I found my team under the big number "24" taped to the wall and met Dan Thiry (who would be the collector), Gwynne Fisher, Wes Daining, and Bruce Strachan. I also saw some familiar faces, including that of Michael Benham, who had guided me along the old channels of Millers Creek through the meadow north of the Ruthven kame – a tall, glacially deposited ridge – this past summer. I spoke briefly with him to bring him up to date on the flooding issues caused by Millers Creek creating a new channel along the west side of the kame.

As before, the group split in two at about 10:30 AM, with team leaders and collectors meeting with Paul Steen and the remainder meeting with Joan Martin to learn some of the basics of looking for stonefly larvae. As the meetings concluded, our team got back together, reviewed the contents of our bucket, and determined an equipment manager (Bruce). We decided to go to Davis Creek at Doane Road first and to take two cars.

We stowed the D-net, waders, bucket, and sign in the back of my Focus station wagon, along with a couple of packs with personal items. On the way up U.S. 23 to Exit 55, I learned that Bruce is a fly fisherman and that Dan is a birder, one whose postings on the local birders' email list I had read. Wes and Gwynne were driving close behind. After taking Silver Lake Road to Silverside Drive around Green Oak Lake and passing Moose Ridge Golf Course on Doane Road, we arrived at Davis Creek together at about 11:35 AM.

The first order of business was to post the sign, which Bruce did while Dan was changing into his waders. We checked the map and an aerial photograph of the area for where we should sample. Instead of walking on the golf course, which was above the bank of the stream valley, we made our way north through the woods west of the creek. Wes, who had collected macroinvertebrates here in the summer, climbed the bank to get his bearings. He pointed out the area where his team had worked and then made his way down to join us.

The area we were in was crossed by a couple of seeps flowing down to the creek, but the cold temperatures made the footing quite solid, as contrasted with the soft mud Wes had remembered from the summer. Several ash trees were down near the creek, and poison ivy vines were still in evidence along their trunks.

Dan entered the creek, obtained the required water sample, and gathered a leaf pack sample. He dumped it into the tray Gwynne was holding and held the net upside down in the tray while



Gwynne used a wash bottle to rinse the debris from the bottom of the net. Bruce and Wes (above) began examining the tray for stone flies while Dan worked the stream (below).



Wes and Bruce were finding stoneflies quite easily. After the first tray, Bruce counted 8 in the sample jar (below).



All three continued looking (below), attempting to collect more than one type of stonefly.



Leaf packs were easy to find. We found caddisfly larvae and other small larvae, which we returned to the stream. Dan caught a small fish, a darter, in the net and released it.

With multiple stonefly samples, we wrapped up our collecting at Davis Creek and left for Walker Creek. We headed west to Rushton Road, which we took south about 3 miles to 8 Mile Road. Davis Creek had been easy to find because it was clearly labeled with a sign and because we knew to expect it just east of the golf course. Walker Creek was a little more difficult. We knew that there were at least two creek crossings in the section of 8 Mile Road east of Rushton and that the second one, closest to Dixboro Road, was what we wanted. When we got to the second crossing, we continued on to Dixboro Road to be sure that there wasn't another crossing.

Davis Creek had been relatively clean in the sense that we hadn't seen much litter. (Bruce had picked up a recently discarded McDonald's bag and wrapper there.) In contrast, the section of 8 Mile Road crossing Walker Creek had a number of discarded beer cans, pop bottles, and coffee cups along the shoulder and down the bank. And in the creek itself, just north of the culvert, was a child's plastic basketball hoop and stand. Dan walked down to see if he could remove it (below), but it was frozen in place.



As the picture above suggests, there was considerable debris (trees, in addition to the basketball set) and ice in the stream north of the road. South of the road, the stream was more open and accessible, and we did our sampling there, starting at about 12:25 PM. In retrospect, the stream was quite uniform south of the road, with only gentle bends and water filling the space between the shallow banks. There seemed to be no riffles, and the bed was mostly gravel, with some areas of grass near the banks.

After Dan took a water sample, he filled the wash bottle and handed to Gwynne (below).



Wes and Bruce began finding larvae (below) – in fact, a large number of them – hiding in the grassy debris. Unfortunately, they all seemed to be mayfly larvae.



Soon all three – Bruce, Gwynne, and Wes – were poring over separate trays, trying to find stoneflies among the mayflies (below). In the picture, the culvert under 8 Mile Road can be seen in the top left corner.



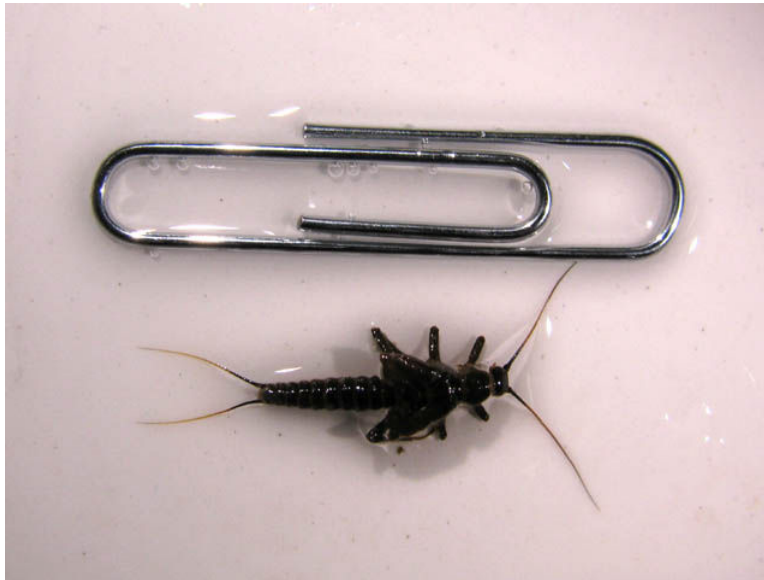
Despite collecting multiple samples, it wasn't clear to us that we had been able to include any stoneflies.

We returned to the New Center Building, washed off the waders and trays. Upstairs we handed in our data sheets, evaluation sheets, water samples, and stonefly sample jars. We distributed items from our bucket back into the appropriate storage containers.

It was a bit surprising to me that we found so many stoneflies in Davis Creek, next to the golf course, where one might think that pollutants, such as insecticides and fertilizers, would be an issue. On the other hand, Davis Creek seemed to have more of the bends, pools, and riffles that one would expect of a natural stream, as well as more leaf packs, compared with Walker Creek, with its more uniform depth of 4 to 6 inches in the section we sampled.

Appendix

After finishing a description of our experiences on Stonefly Day last year, I thought it would be useful to include a few photographs of stonefly larvae. With the help of Paul Steen and Joan Martin of the Huron River Watershed Council, I took several macro photographs of stoneflies that had been previously collected and preserved in alcohol. I've also included them in this year's report, as well. Below are three pictures that include an ordinary paper clip to provide a sense of scale. (Note that the same paper clip, approximately 1¼" long, appears in all three photographs.) The liquid present is alcohol.



Winter Stonefly Larva [Family Taeniopterygidae, Genus Taeniopteryx]
The larva has six legs, two tails, and two prominent antennae, characteristic of all stoneflies. Note the triangular wing pads on this specimen partially covering the third pair of legs.



Small Winter Stonefly Larva [Family Capniidae]
This specimen is lying partially on one side.



Giant Stonefly Larva [Family Pteronarcidae, Genus Pteronarcys]
This specimen had curled in storage. Note the two claws on each leg,
characteristic of all stoneflies.