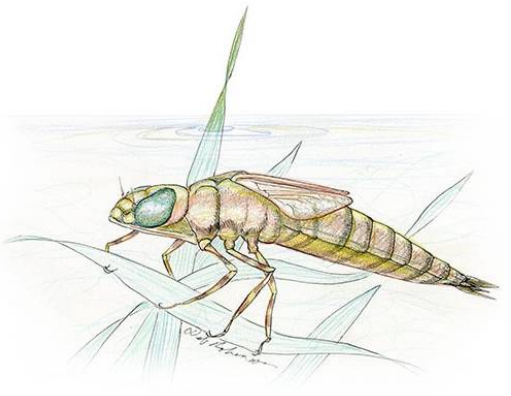
Como Woodland advisors and volunteers branch out to help with a Macroinvertebrate Study of Como Lake - October 2007



It was a glorious morning. Reflections of the clear blue sky and the golden leaves of the surrounding trees played across the shimmering surface of Como Lake. A mature bald eagle glided low over the lake just above the treetops. Bees hummed while they visited the purple asters and goldenrod near Duck Point. Yes, it was a perfect early autumn day

I was with Joan McKearnan, Environmental Science Professor from Anoka Ramsey Community College, and Meghan Manhatton, from St. Paul Park and Recreation Department Environmental Services. Joan and Meghan were standing in their hip waders just offshore among the cattails. They were sweeping dip nets through the placid water. The contents of the dip nets would be the final samples being gathered for the Como Lake Macroinvertebrate Study – a study funded by the Capitol Region Watershed District.

Over the past five months Dr. McKearnan, EcoParnters staff and interns, and volunteers have been collecting monthly water samples from five locations along Como Lake's shore. The subjects of the study has been the aquatic insects, worms, leeches, mollusks, and other invertebrates that live at least part of their life cycle in the waters of Como Lake.

Macroinvertebrates occupy the middle of the lake's food chain, and they are an important source of food for the fish. The abundance or absence of certain species of macroinvertebrates can be an indicator of water quality. But simple curiosity was my reason for volunteering that morning. It was my chance to view the weird and seldom-seen fauna found just below the water's surface.

Meghan and Joan emptied the contents of their dip nets into a tray for sorting. We sifted through the waterweeds to dislodge the invertebrates. Most of these tiny creatures will need months of closer examination with a dissecting microscope by Joan (and other experts) to identify them by species. However, even I could identify at least the broad families of which some of the macroinvertebrates belonged. The fascinating members of the order Odonata, dragonflies and damselflies, were in every sample I saw.

It's hard to believe that the immature stage of dragonflies and damselflies are totally aquatic. Dragonfly nymphs have rectal tracheal gills to absorb oxygen from the water – they breathe through their rear-ends. The dragonfly nymphs can expel water out quickly, which propels them forward with great velocity. Combine that speed with their labium (a lower lip that functions

like a hinged claw) and you have a fearsome predator. So wired for aggression, they even continue to hunt while in the specimen tray.

I saw water boatmen, backswimmers, and diving beetles carrying air bubbles with them so they could breath underwater. Caddis fly larvae that build protective tubes of pebbles were also found. Tiny chironomids and snails by the thousands – more creatures than I can list, all turned up in the dip net samples taken from Como Lake.

One of the largest and most interesting invertebrates was encountered in two sampling locations on the last morning of data collection. Water scorpions (Ranatra sp.) are nearly an inch and a half long, and they resemble walking stick insects. They get their name from the rear appendage that looks like a stinger but is really a breathing snorkel.

Water scorpions are predatory insects. They hang motionless with their breathing tubes above the surface of the water. With front legs held out like a preying mantis they wait for their victims or they stalk their prey. Yet, these predators looked helpless out of the water. However, I later learned that water scorpions are capable of inflicting a painful stabbing bite when handled roughly. I'm glad I treated them with respect.

Joan, Meghan, and I did our collecting and sorting near the lakeside walking path, and many passers-by asked us what we were doing. I told one lady, "We're catching interesting bugs!" She replied with a hint of disdain, "Oh, my 10-year-old son would enjoy that." If getting excited over the wild diversity of aquatic macroinvertebrates found in Como Lake makes me a little immature, then I hope I never grow up.

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Illustration by Deb Robinson