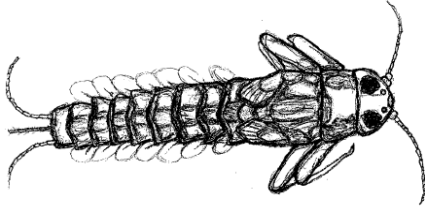


# INSECTS OF THE SAUSAL CREEK WATERSHED

Friends of Sausal Creek Bioassessment Team and Holy Names University

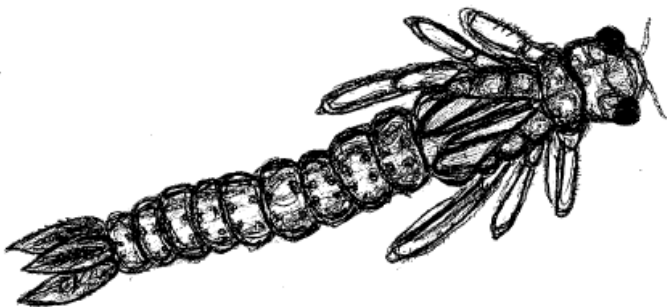
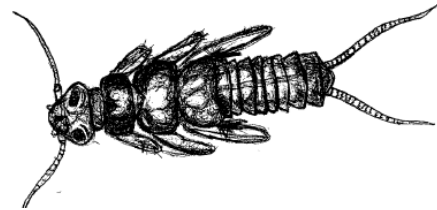
Drawings of Sausal Creek insects by Isamar Quiroz

These five orders of immature insects are residents of Sausal Creek. To find them, pick a section of the creek with shaded, running water, find a loose rock and turn it over. Be prepared to look fast! Some of these insects are prey for other organisms, and they move fast to stay alive. Tolerance values measure resistance to various pollutants on a scale of 1-10. High values (7-10) are tolerant of pollution, low values are not.

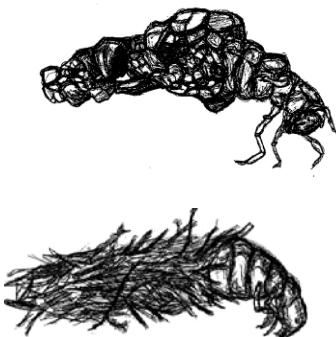


**Small Minnow Mayfly** (nymph) Order Ephemeroptera, Family Baetidae  
 Small (3-12 mm), brown, torpedo-shaped, fast crawler, usually with prominent wingpads, abdominal gills, and three long cerci (tails).  
 This mayfly nymph is ubiquitous in all sections of Sausal Creek, usually under rocks in glide and riffle areas. Usually multiple generations per year, there can be representatives of several generations in a sample.  
 Functional feeding group: collector/ gatherer  
 Tolerance value: 4 (moderately intolerant)

**Little Brown Stonefly** (nymph) Order Plecoptera, Family Nemouridae  
 Small (4-9 mm), with three distinct body segments: head, thorax and abdomen.  
 Flip over to see the gills jutting out between head and thorax.  
 Prefers cool, clean water, found in sections of the creek under heavy canopy cover. It crawls on leaves or woody debris, or under rocks.  
 Functional feeding group: shredder (shreds fallen tree leaves, allowing the leaves to be broken down by bacteria and fungi). Tolerance value: 2 (intolerant)



**Pond Damselfly** (nymph or naiad)  
 Order Odonata, Suborder Zygoptera, Family Coenagrionidae  
 Large (13-25 mm), fast, big eyes, three leaf-like gills at end of abdomen. Flip specimen over to observe plate-like labium.  
 This very active predator is found in quiet waters or stream edges, sometimes in riffles. Adult is a predator as well.  
 Functional feeding group: predator  
 Tolerance value: 9 (very tolerant)



**Case-maker Caddisfly** (larva)  
 Order Trichoptera, many families

(Usually 10-15 mm) A sclerotized head is characteristic of the caddisfly larva. It makes its home of pebbles or plant material, is usually found attached to rocks in areas of moderate flow.

Functional feeding group varies with family and, occasionally, with instar (age of the larva)  
 Tolerance value: 3-4 or higher (somewhat intolerant)



**True fly** (larva)  
 Order Diptera, many families

Great diversity in this group, but if you find something that looks like a worm but has a head, or stumpy legs, it is a dipteran larva. Size from 2mm to 4 inches, depending on family. Found mostly in slower-moving or pooled regions of the creek.

Functional feeding group and tolerance value dependent on family.