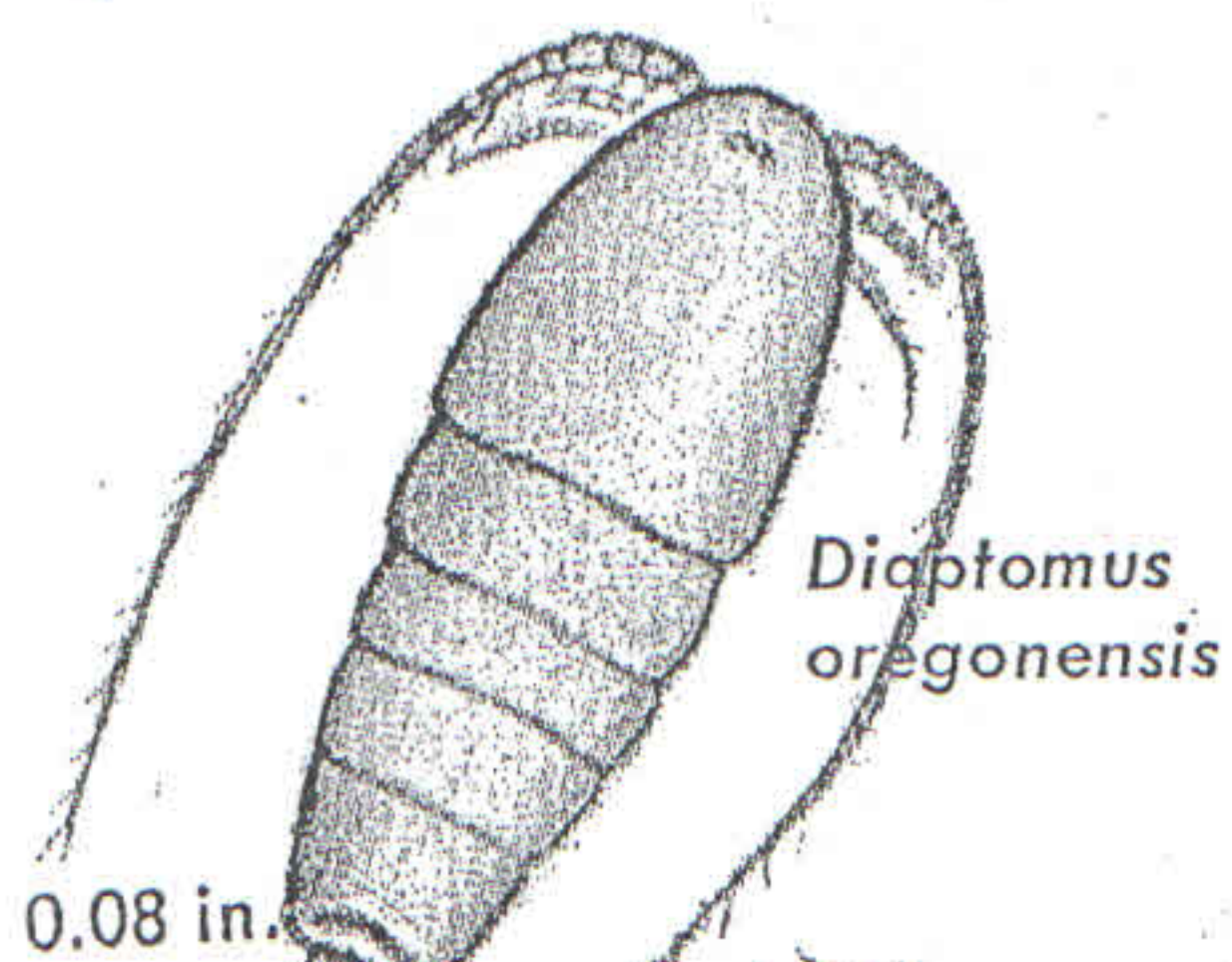


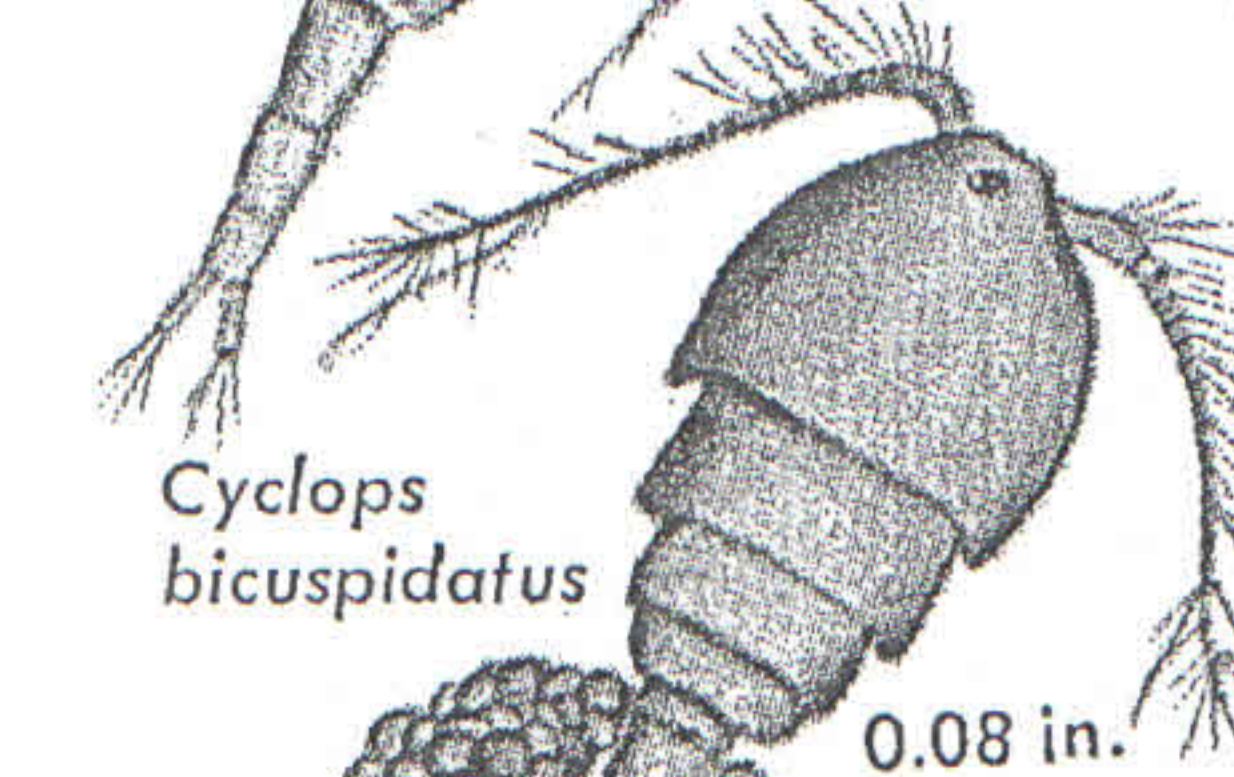
# INDICATOR SPECIES of CLEAN WATER

**COPEPODS** (Copepoda) are small crustaceans (about 0.1 inch long) found everywhere in shallow waters and in open-water plankton of ponds and lakes. Some cling to vegetation and are found even in damp debris above the waterline. A few kinds, such as *Argulus*, are parasitic on fishes and other aquatic animals but seldom cause much harm. During the breeding season, one or two egg sacs develop on each female. The young pass through five or six nauplius stages before maturity. Copepods feed on algae, bacteria, and organic debris. They are food themselves for larger animals, though not as important as food for fishes as are water fleas (p. 88). There are three groups of free-living copepods.

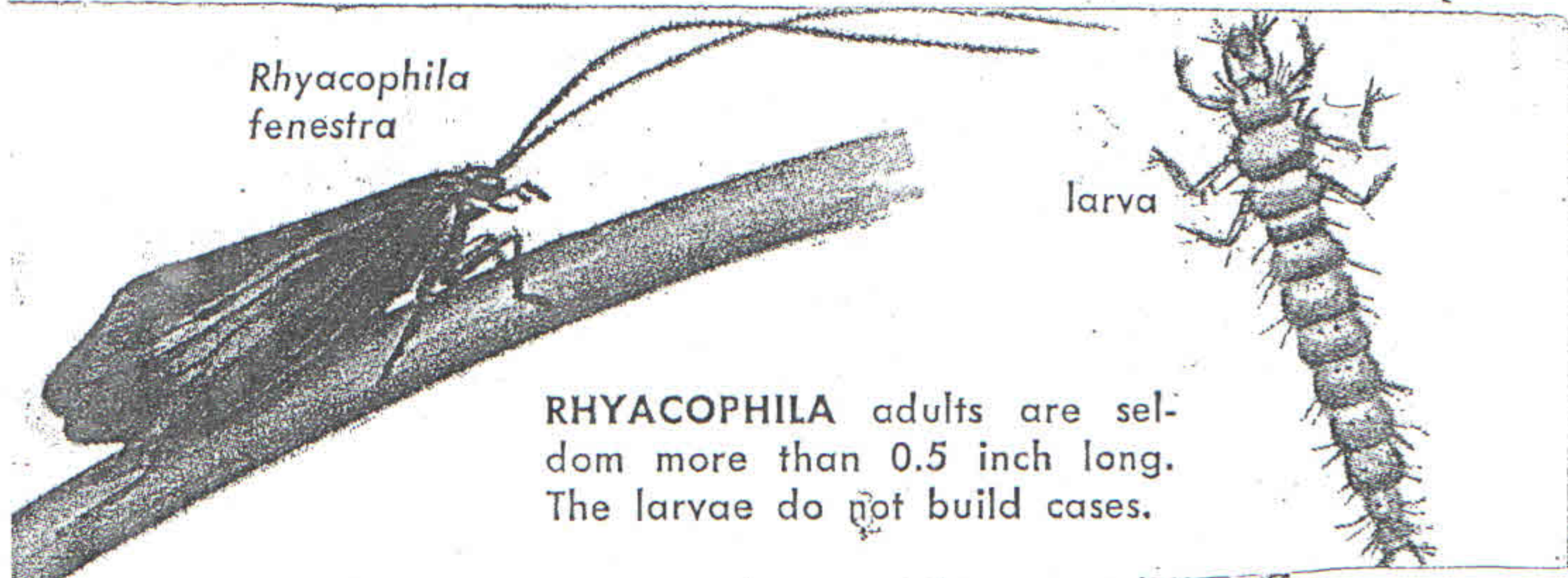
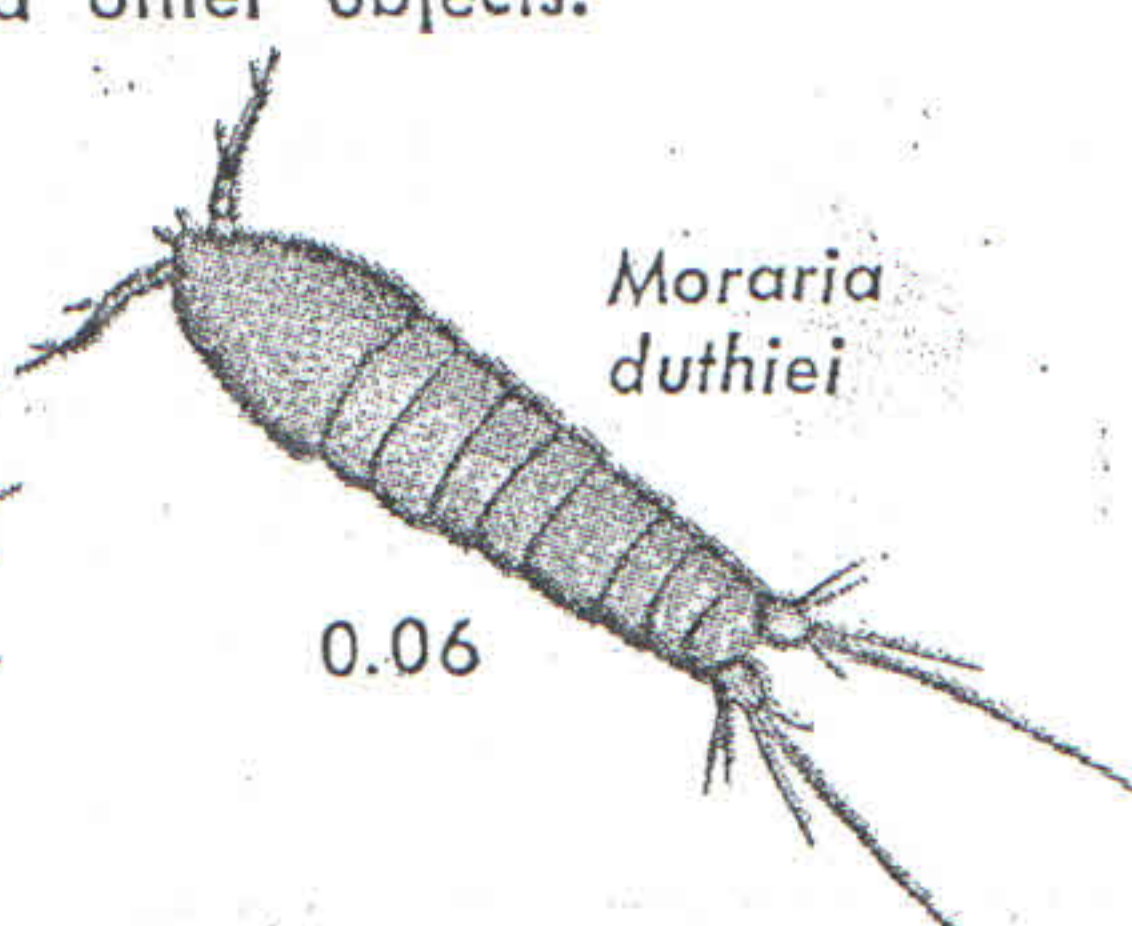
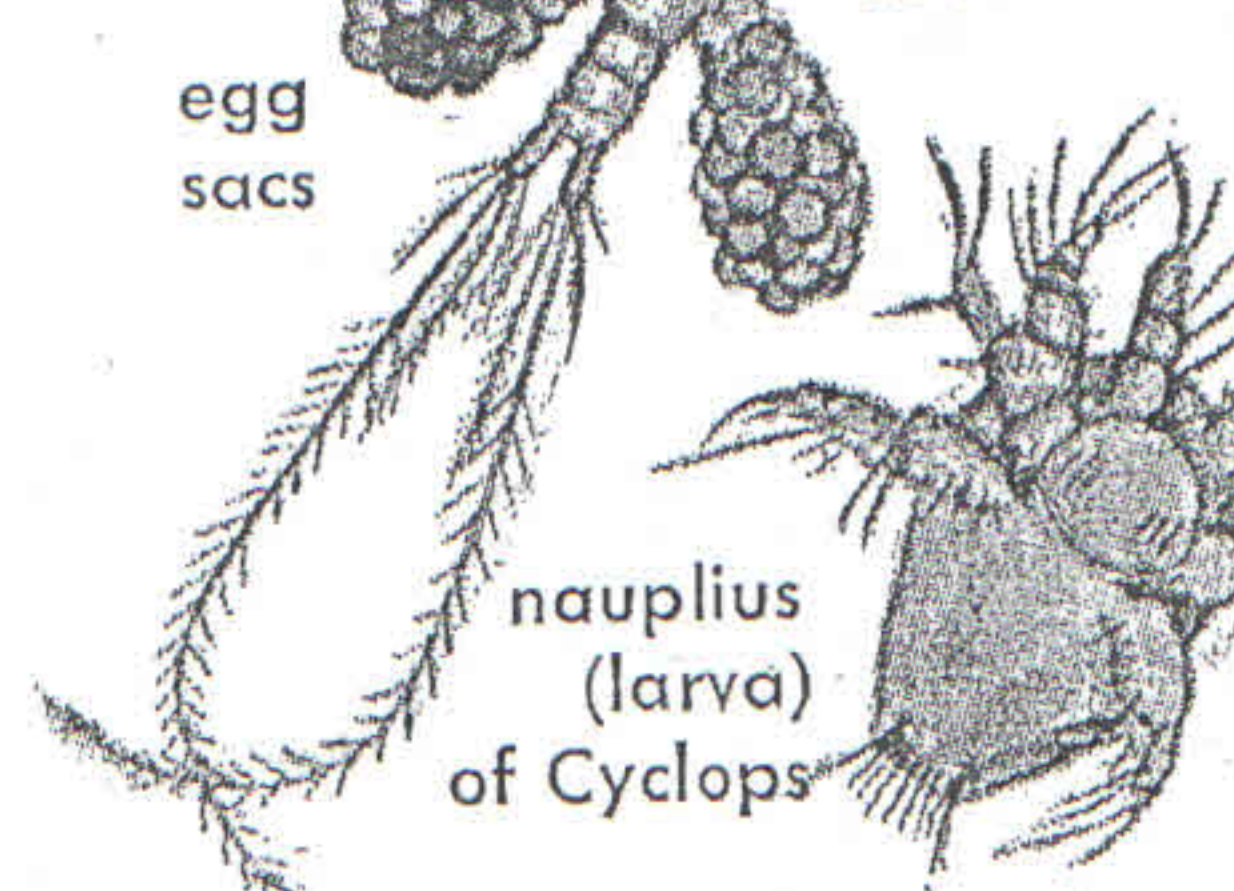


**CALANOID COPEPODS** have antennae nearly as long as their body. *Diaptomus* and others live in plankton and feed on filtered organic matter from water.

**CYCLOPOID COPEPODS** have antennae about as long as the broad "trunk region" of body. *Cyclops* and others live in open water. They seize and bite their small prey.

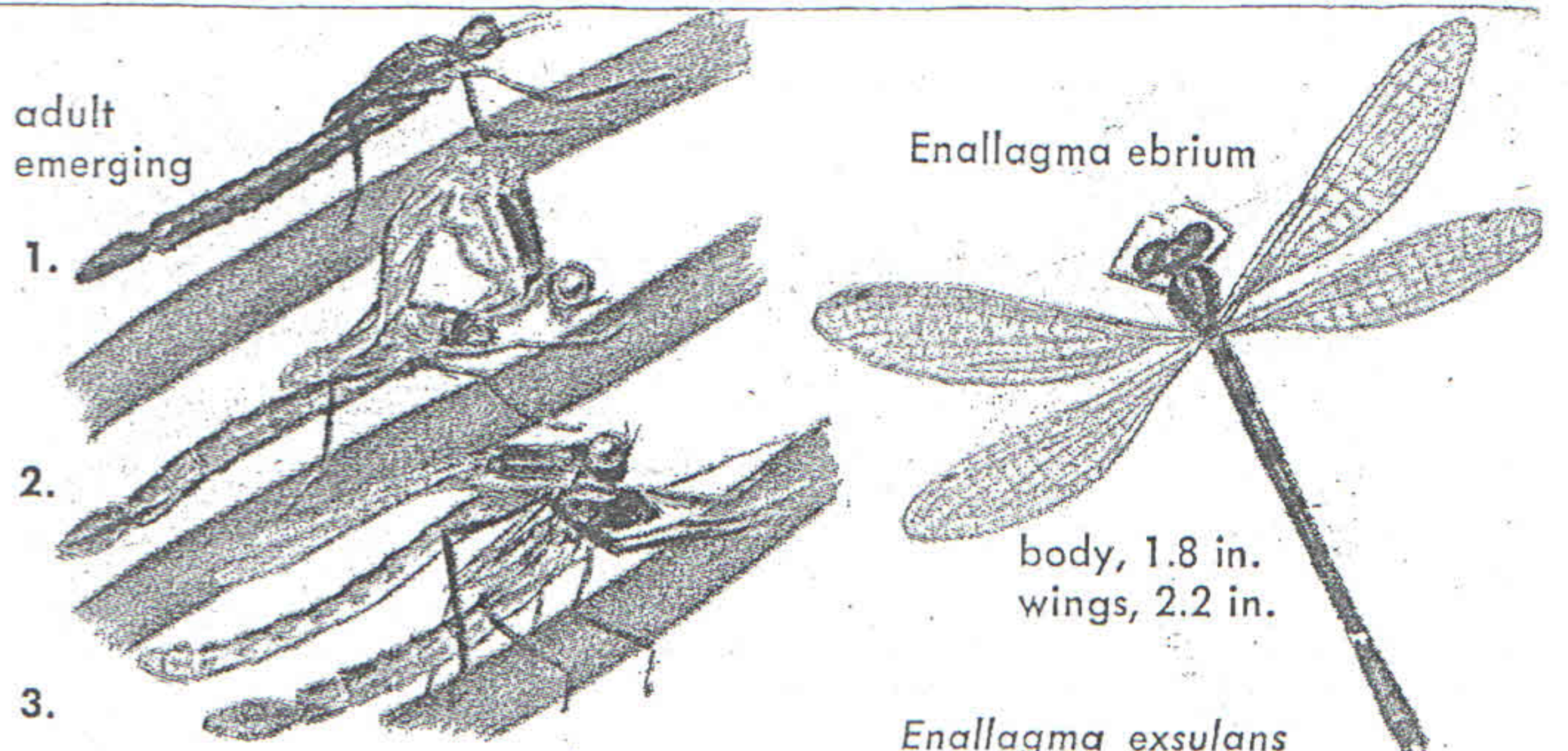


**HARPACTICOID COPEPODS**, with short antennae, live in silt and plant debris. *Moraria* (below) and others feed by scraping algae and detritus from rocks and other objects.



**RHYACOPHILA** adults are seldom more than 0.5 inch long. The larvae do not build cases.

## CADDISFLIES (Trichoptera)



**COMMON BLUET** is a slender, widely distributed damselfly. The nymphs live in pond vegetation. There are many other species in the genus *Enallagma*. All the nymphs look much alike but have less sharply pointed gills than do Forktails (*Ischnura*). Both are common in N.A. Nymphs may be seen climbing about on plants or debris in search of prey. Nymphs of other damselflies hide in mud or sand and wait for prey to come near.

