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common name	Copepods
scientific name	many different vernal pool species, most without names
phylum	Arthropoda
subphylum	Crustacea
class	Copepoda
habitat	vernal pools, lakes, ponds, oceans
size	up to 3 mm long
description	There are many different species of Copepods. Few of the species in vernal pools have been named. You are most likely to spot the bright red <i>Diaptomus</i> and at least one green copepod species in Sacramento's vernal pools. Copepods have four or six legs, a short tail, and long antennae.

fun facts The cysts of Copepods can survive on the bottom of a vernal pool for a long time. When scientists found Copepod cysts that were 300 years old, they put them in water and watched them hatch!

life cycle Copepods can reproduce in two ways: male and female Copepods can mate or female Copepods can produce cysts without the help of a male. The female carries the cysts in sacs near the base of her abdomen. When she lays her cysts, they fall to the bottom of the vernal pool. Some of the cysts will hatch right away and the young Copepods will grow quickly. The first stage of a Copepod's life is spent as a larva. The larva looks very different from the adult Copepod. When the larva is fully grown, it will metamorphose into the adult form.

There may be time for several generations to reproduce before the vernal pool dries up. The other cysts can wait in the bottom of the pool for many years before hatching. When the pool dries up, the cysts remain buried in the hot, dry bottom waiting for the return of winter rains.

ecology

Some copepods eat detritus, Bacteria, and Algae. Others, like the red *Diaptomas*, are predators that eat tiny Water Fleas, Seed Shrimp and other species of Copepods. In vernal pools, copepods are eaten by Vernal Pool Tadpole Shrimp, Flatworms, Aquatic Beetle larvae and other [aquatic insect larvae](#), [wading birds](#), Mallards and other ducks that filter them out of the water with their bills.

investigate

When you visit a vernal pool, watch how the Copepods move through the water. What part of their bodies do they use to swim? How do their jerky movements help them to avoid predators?

Copepods are important in many food chains

Many Copepods live in freshwater habitats such as lakes, ponds, and vernal pools. But most of the 7500 species of Copepods in the world live in saltwater, which covers 75% of the Earth's surface. Wherever they live, Copepods are an important link in the food web. Many larger animals, like whales and fish, eat saltwater Copepods. Some whales, like the humpback whale, feed almost entirely on Copepods.