

## Vernal Pool Fairy Shrimp (*Brachinecta lynchi*)

Status -- Federal: Threatened; California: None

## Vernal Pool Tadpole Shrimp (*Lepidurus packardii*)

Status -- Federal: Endangered; California: None

Photos: Brent Helm



Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp and tadpole shrimp are two species of Crustaceans found in California's vernal pools. These unique, seasonal aquatic habitats form when winter rains fill shallow depressions. Lined with impervious clay, the pools persist for several months, then gradually evaporate during spring.

Vernal pool shrimp are generally 1 - 1.5 inches long. Fairy shrimp are usually translucent, while tadpole shrimp are a light to dark brown. As dictated by their ephemeral habitat, fairy shrimp have short life spans.



Vernal Pool Tadpole Shrimp

California Department of Pesticide Regulation  
Endangered Species Program  
<https://www.cdpr.ca.gov>



## Fairy Shrimp



Map from *Fairy Shrimps of California's Pools, Puddles and Playas* by D. Belk & C. H. Ericksen, used with permission.

The vernal pool fairy shrimp has a life span from December to early May (if water temperature stays below 75 F).

The vernal pool tadpole shrimp is more temperature-tolerant, and has a life span from December until the vernal pools dry up.

**Food** Vernal pool fairy shrimp are filter and suspension feeders. Their diet mainly consists of unicellular algae, bacteria, and ciliates. They may also scrape algae, diatoms and protists from the surface of rocks, sticks and plant stems.

Vernal pool tadpole shrimp are predators.

They feed on other invertebrates in the pools and amphibian eggs. They may also eat some vegetation.

**Reproduction** Shrimp eggs are laid by the adults each winter season. However, eggs may lie dormant in the soil for up to ten years before hatching. Genetic diversity is important for the survival of any species. One pool's shrimp population may have genes another pool's population lacks. This diversity may mean that the first population survives a disease or other threat, which kills the population that doesn't have the needed gene. The genes of different shrimp populations can be mixed when eggs are moved from one pool to another via wind, water, or in the stomachs of migrating birds. Small, isolated populations of shrimp are more likely to go extinct because they lack the genetic diversity to withstand threats.

**Distribution** The vernal pool fairy shrimp is found scattered throughout the Central Valley from Shasta County to Tulare County, along the Coast Range from Solano County to San Luis Obispo and Santa Barbara Counties, and in southern California in Riverside and San Diego Counties. The vernal pool tadpole shrimp is found in the Central Valley from Shasta County to Merced County.