

Amphibians of Sonoma County

By Jenny Blaker (with information provided by David Cook)
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Frogs, toads, and salamanders are amphibians, cold-blooded animals with a moist, permeable skin. Some are well camouflaged and blend into the forest floor, while others have brilliant coloring. These animals are secretive and rarely seen, but there are likely a few in your backyard.

Although these animals are shy and usually harmless, some contain enough poison to kill a human many times over. Amphibians lay soft eggs, often in water, which hatch into larvae or tadpoles, which then metamorphose into the adult creature which usually lives on land. Some amphibians breed in still ponds in the winter, others in cool flowing streams after winter rains.

Sonoma County has a high diversity of amphibians with three species of native frog, one toad, and 10 species of salamanders. They occur in every habitat in the county except tidelands, including in low-lying vernal pools, in moist woodlands and redwood forests and by streams.

The choruses of breeding Pacific treefrogs are a familiar sound. These frogs have little sticky pads on their feet that enable them to climb, and they can change color, probably depending on the surrounding temperature and humidity.

The much larger bullfrog was introduced from the Eastern United States. Slender or arboreal salamanders may appear in leaf litter or under logs and other moist, sheltered places in local backyards. Hikers in damp forests may have seen the dramatic bright orange belly of the rough-skinned newt.

The California tiger salamander emerges only on dark, wet, rainy nights in January or February to breed in vernal pools and it lives out the hot, dry summers underground in rodent burrows. This black with yellow spotted salamander is second only in size to the California giant salamander. The red-bellied newt occurs only on the north coast. The California red-legged frog and California tiger salamander are so rare that they are in danger of extinction.

On a worldwide scale, amphibians are having a hard time. Their populations are declining at a faster rate than that of mammals or birds, with about 32 percent of existing species threatened with extinction. In the USA there are 262 species of amphibians, including 168 species of salamander, of which 21 percent are threatened.

For nine out of every 10 amphibians threatened by extinction, habitat loss is a major factor. Agricultural conversion and urban development are the primary cause of habitat loss. Exotic introduced species, such as the bullfrog, are a danger.

Pollution is an issue, as well. Amphibians have a permeable skin through which they take in oxygen from their surroundings, so they are sensitive to pollutants such as pesticides. In some areas of the world, particularly Asia, commercial exploitation for food and for the trade in pets is also a threat.

David Cook is a Senior Wildlife Biologist with Sonoma County Water Agency. His expertise includes fish, amphibian and reptile ecology and endangered species. He is a Board Member of the Sonoma County Fish and Game Commission and a former President of the San Francisco Bay Area Chapter of the Wildlife Society. His ongoing research projects include the coexistence of the threatened California red-legged frog and non-native bullfrog, and metapopulation dynamics of the endangered California tiger salamander.

David Cook will give an illustrated presentation on the Amphibians of Sonoma County Monday, Dec. 4 at 7 p.m. at the Stony Point Room, Cotati Community Center, E. School St., Cotati.

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