

Amphibians

By Kathy Hill

California is home to 51 native species of amphibians (CDFG and CIWTG 2002). The amphibians include frogs, toads, and salamanders.



California tiger salamander
(*Ambystoma tigrinum californiense*)
Photo: Gerald and Buff Corsi,
California Academy of Sciences

Frogs and toads have a complex life cycle, which includes two fully aquatic stages and a terrestrial or partially aquatic stage. The fully aquatic stages are the egg and the tadpole (or pollywog) stages. Tadpoles obtain their oxygen and food from the water, and depend on cryptic coloration or toxic skin secretions to avoid predators. Their food usually consists of algae, which grows on rocks or other structures in their aquatic environment, but some tadpoles are also carnivorous.

After several weeks or months, a tadpole undergoes a transformation by absorbing its tail, growing legs, and changing mouthparts. The new body form allows it to take advantage of terrestrial food resources, obtain oxygen from the air, and move upland to another area. This transformation is adaptive, especially in seasonal wetlands, which dry up in the summer or fall.



Many frogs and toads use sounds to attract mates and to defend territories. The loud chirping of male Pacific chorus frogs (*Pseudacris regilla*) is a well-known springtime evening sound.
Photo © Rodney Temples

Amphibians favor wet places, and species diversity is highest in those parts of California where precipitation is high, as in the Klamath/North Coast Region.

Amphibians have moist, absorbent skin. Some frogs and salamanders that live in very moist areas do not have lungs; they breathe through their skin. However, amphibians range throughout California, including the drier grasslands and deserts. Those few amphibians that live in the deserts of California still need moisture. Some live near permanent desert springs, like the red-spotted toad (*Bufo punctatus*), but the spadefoot toads are able to live in places that dry up completely each year. They use their “spade” feet to dig into the drying mud and then their skin secretes a layer of mucous that keeps their bodies moist throughout the dry months.



Western spadefoot toad (*Spea hammondi*)
Photo © Bill Basom

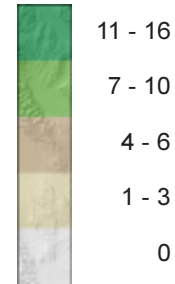
Klamath/North Coast Region

The Klamath/North Coast Region in California's northwestern corner is famous for its rocky coastline, salmon fishing, and lush mountain forests of spectacular ancient coast redwood (*Sequoia sempervirens*) and Douglas-fir (*Pseudotsuga menziesii*). It has the wettest climate in the state, with rainfall distribution varying widely from an average annual 38 inches at Fort Bragg to 120 or more inches east of Crescent City. The coastal climate is cool, moist, and often foggy, with rainy winters at lower elevations and snow in the higher mountains. Inland, the climate is drier, with low rainfall in the winter and hot, dry summers. Dominant plants include coast redwood, Douglas-fir, ponderosa pine (*Pinus ponderosa*), tanoak (*Lithocarpus densiflorus*), incense cedar (*Calocedrus decurrens*), and chaparral species.

Marc Hoshovsky

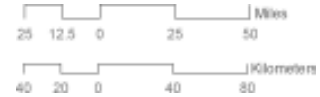
Amphibian Richness

Number of Native Amphibian Species



Source:
California Wildlife Habitat Relationships System
California Department of Fish and Game and
California Interagency Wildlife Task Group (2002)

Note:
See page 5 for information about the richness maps.



Amphibian Rarity Hotspots

Rarity-Weighted Richness Index



Source:
California Natural Diversity Database
California Department of Fish and Game
(2003a)

Note:
See atlas.dfg.ca.gov and page 7 for
information about the rarity hotspot maps.

The Sierra Region is home to several special status frogs and toads. A number of salamanders with very restricted distributions also occur there.

