Salamander



Salamanders are a group of [amphibians](https://en.wikipedia.org/wiki/Amphibian) typically characterized by a [lizard](https://en.wikipedia.org/wiki/Lizard)-like appearance, with slender bodies, blunt snouts, short limbs projecting at right angles to the body, and the presence of a tail in both larvae and adults. All present-day salamander families are grouped together under the order Urodela. Salamander diversity is most abundant in the [Northern Hemisphere](https://en.wikipedia.org/wiki/Northern_Hemisphere) and most species are found in the [Holarctic](https://en.wikipedia.org/wiki/Holarctic) [ecozone](https://en.wikipedia.org/wiki/Ecozone), with some species present in the [Neotropical](https://en.wikipedia.org/wiki/Neotropical) zone.

Salamanders rarely have more than four toes on their front legs and five on their rear legs, but some species have fewer digits and others lack hind limbs. Their permeable skin usually makes them reliant on habitats in or near water or other cool, damp places. Some salamander species are fully aquatic throughout their lives, some take to the water intermittently, and others are entirely terrestrial as adults. They are capable of [regenerating](https://en.wikipedia.org/wiki/Regeneration_(biology)) lost limbs, as well as other damaged parts of their bodies. Researchers hope to reverse engineer the remarkable regenerative processes for potential human medical applications, such as brain and spinal cord injury treatment or preventing harmful scarring during heart surgery recovery.[[2]](https://en.wikipedia.org/wiki/Salamander#cite_note-2) Members of the [family](https://en.wikipedia.org/wiki/Family_(biology)) [Salamandridae](https://en.wikipedia.org/wiki/Salamandridae) are mostly known as [newts](https://en.wikipedia.org/wiki/Newt) and lack the [costal grooves](https://en.wikipedia.org/wiki/Costal_groove) along the sides of their bodies typical of other groups. The skin of some species contains the powerful poison [tetrodotoxin](https://en.wikipedia.org/wiki/Tetrodotoxin); these salamanders tend to be slow-moving and have bright [warning coloration](https://en.wikipedia.org/wiki/Aposematism) to advertise their toxicity. Salamanders typically lay eggs in water and have aquatic larvae, but great variation occurs in their [lifecycles](https://en.wikipedia.org/wiki/Biological_life_cycle). Some species in harsh environments reproduce while still in the larval state.

The skin may be drab or brightly colored, exhibiting various patterns of stripes, bars, spots, blotches, or dots. Male newts become dramatically colored during the breeding season. Cave species dwelling in darkness lack pigmentation and have a translucent pink or pearlescent appearance.[[3]](https://en.wikipedia.org/wiki/Salamander#cite_note-EoR_pp.60–68-3)

Salamanders range in size from the [minute salamanders](https://en.wikipedia.org/wiki/Thorius), with a total length of 2.7 cm (1.1 in), including the tail, to the [Chinese giant salamander](https://en.wikipedia.org/wiki/Chinese_giant_salamander) which reaches 1.8 m (5.9 ft) and weighs up to The [Chinese giant salamander](https://en.wikipedia.org/wiki/Chinese_giant_salamander), at 1.8 m (6 ft) the largest amphibian in the world, is [critically endangered](https://en.wikipedia.org/wiki/Critically_Endangered), as it is collected for food and for use in [traditional Chinese medicine](https://en.wikipedia.org/wiki/Traditional_Chinese_medicine). An environmental education programme is being undertaken to encourage sustainable management of wild populations in the [Qinling Mountains](https://en.wikipedia.org/wiki/Qin_Mountains" \o "Qin Mountains) and captive breeding programmes have been set up.[[60]](https://en.wikipedia.org/wiki/Salamander#cite_note-60) The [hellbender](https://en.wikipedia.org/wiki/Hellbender) is another large, long-lived species with dwindling numbers and fewer juveniles reaching maturity than previously.[[61]](https://en.wikipedia.org/wiki/Salamander#cite_note-61) Another alarming finding is the increase in abnormalities in up to 90% of the hellbender population in the [Spring River](https://en.wikipedia.org/wiki/Spring_River_(Arkansas)) watershed in Arkansas.[[62]](https://en.wikipedia.org/wiki/Salamander#cite_note-62) Habitat loss, silting of streams, pollution and disease have all been implicated in the decline and a captive breeding programme at [Saint Louis Zoo](https://en.wikipedia.org/wiki/Saint_Louis_Zoo) has been successfully established.[[63]](https://en.wikipedia.org/wiki/Salamander#cite_note-63) Of the 20 species of minute salamanders (*Thorius* spp.) in Mexico, half are believed to have become extinct and most of the others are critically endangered. Specific reasons for the decline may include climate change, chytridiomycosis, or volcanic activity, but the main threat is habitat destruction as logging, agricultural activities, and human settlement reduce their often tiny, fragmented ranges. Survey work is being undertaken to assess the status of these salamanders, and to better understand the factors involved in their population declines, with a view to taking action.[[64]](https://en.wikipedia.org/wiki/Salamander#cite_note-64) 65 kg (143 lb). Most, however, are between 10 and 20 cm (3.9 and 7.9 in) in length.[[4]](https://en.wikipedia.org/wiki/Salamander#cite_note-stebbins3-4)