Salamander

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Salamander Latest News

Researchers discovered that wandering salamanders can rapidly fill, trap, and drain the blood in their toe tips to optimise attachment, detachment and general locomotion through their arboreal environment.

About Salamander

- It is an **amphibian** with a slender body and a long tail.
- **Features of Salamander**
  - **Size:** Their size varies with different species, ranging from 2.5 cm to 20 cm. The largest salamander in the world is the Chinese Giant Salamander, which can grow up to a length of 5 feet.
  - Most salamanders **look like** a **cross between a lizard and a frog**. They have moist, smooth skin, like frogs, and long tails, like lizards.
- **Habitat of Salamander:** They live in or **near water or find shelter** on moist ground and are typically found in brooks, creeks, ponds, and other moist locations, such as under rocks.

- **Distribution of Salamander:** They are mainly found in **North America, Europe, Asia**, the northern parts of South America, and North Africa.
- **Regeneration of Salamander:** They are **capable of regenerating lost limbs** within a few weeks, including tails and toes, allowing them to survive attacks from predators.
- They are nocturnal **and cold-blooded** species and their temperature changes with their habitat.
- Some salamander species **can be poisonous**, and some even have teeth.

Highlights of the research

- The researchers uncovered that wandering salamanders can finely **control and regulate blood flow** to each side of their toe tips.
- This allows them to **adjust pressure asymmetrically**, improving grip on irregular surfaces like tree bark.
- The blood rushing in before “toe off” appears to help salamanders detach rather than attach. By slightly inflating the toe tip, the salamanders reduce the surface area in contact with the surface they are on, minimising the energy required to let go.
- **Significance:** Insights into salamander toe mechanics could ultimately inform the **development of adhesives, prosthetics, and even robotic appendages.**

Salamander FAQs

Q1: What is another name for a salamander?

Ans: Olm, axolotl, spring lizard, water dog, mud puppy, hellbender, triton, and Congo eel.

Q2: Why are salamanders special?

Ans: Salamanders control pests by eating insects like mosquitos and by becoming food for larger animals. Their moist, permeable skin makes salamanders vulnerable to drought and toxic substances.

Q3: What is the ecological role of the salamander?

Ans: They regulate food webs and contribute to ecosystem resilience-resistance (= stability).

Source: TH
