

**AXOLOTL**  
**MEXICO'S**  
**AMPHIBIAN**  
**WITH UNIQUE**  
**REGENERATING**  
**ABILITIES**



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**M**EXICAN axolotl scientifically known as *Ambystoma mexicanum* are soft-skinned amphibians. Belonging to the family Ambystomatidae, these adorable salamanders have gained popularity among scientists because of their extraordinary capability of regenerating their body parts such as legs, tails, arms, feet and even some parts of their brain and heart.

They are found in the freshwater of Lake Xochimilco and Lake Chalco in the Valley of Mexico City. Their size ranges between 20 cm and 30 cm. Locally called “water monsters”, they have lidless eyes, wide heads and have an appearance of a perpetual smile. Males are identified by their swollen cloacas lined with papillae, whereas females are identified with their wider bodies full of eggs. They are at the top of the food chain because of their carnivorous diet which includes fishes, mollusks, insects, worms, etc. According to the University of Liverpool’s *The Animal Ageing and Longevity Database*, in captivity, the salamanders have a life span of 5 to 6 years, but some have a life span of up to 17 years also.

To live on land, some species of axolotl lose their tadpole-like tails and gills from their head and convert themselves into earth-walking salamanders. Whereas to live underwater, axolotls will keep the tail they developed as a larva.

Scientists have also discovered that axolotl has an enormous genome of 32 billion base pairs long DNA; this signifies that each cell of axolotl contains 10 times more DNA compared to human beings. Therefore, axolotls are known to be attractive model organisms among scientists and studies on their genome are being carried out to unravel the reasons behind their regenerating abilities.

According to the International Union for Conservation of Nature and Natural Resources (IUCN), wild axolotls are listed as critically endangered, with a declining population of around 50 to 1000 adult individuals and as an endangered species by the IUCN’s CITES treaty. Due to urbanisation, increasing water pollution, introduction of invasive species such as perch and tilapia, wild axolotls are on the verge of extinction.

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