



The Mythical Mexican Axolotl

Edgar Anaya*

Few animals are as representative of Mexico's fauna as the strange and mythical batrachian, the axolotl, and the "X" in its name shows just how Mexican it is.

An ambassador for our country, it has been famous worldwide for a very long time and has always left a polemic in its wake: Is it interesting and attractive, or ugly and repulsive? Simply remarkable. Its black hue, aerodynamic shape and the curious feather-like gills on its neck make its appearance unique.

Throughout Mexico's history, it has been a source of nourishment, a medication and even a laboratory animal for experiments. Early in this century, it was an eccentric pet in the aquariums of wealthy Mexico City families.

Masters of Mexican painting like Diego Rivera and José María Velasco immortalized it in their art. Rivera included this

curious animal in his murals, such as the one in Mexico City's National Palace, which depicts a panorama of the Aztec city of Tenochtitlan, where the axolotl was among the most frequently sold products in the marketplaces of the time. It also figures prominently in Rivera's mural *Water, the Source of Life*, painted in Chapultepec Forest in Mexico City.

José María Velasco went even further: he made what were probably the first descriptive sketches of the axolotl, done for a scientific association he belonged to.

THE MONSTER OF THE WATERS

This batrachian's very name, from the Nahuatl, the language of the Aztecs, takes us immediately back to the pre-Hispanic world where the axolotl was not only important; it was fundamental.

The name has been translated in different ways: "water game", "water dog", "master of the waters" among others. But the most commonly accepted translation is "monster of the waters." The Aztecs believed that the axolotl was the transfiguration of the famous god Quetzalcóatl's twin, Xólotl, who, to avoid being sacri-

ficed by men, threw himself into the water to metamorphose into an aquatic animal.

It is said that when the Aztecs came to the Valley of Mexico, after several attempts at settling on the banks of the great lake system that then existed there, they were finally forced to settle on the water, on islands. According to the chronicles, they suffered great hardships as they began to gather the building materials they needed, exchanging them for products they collected in the lagoon, among them the axolotl. No one could have imagined that we would owe the founding of Mexico City, even if only figuratively and partially, to the axolotl.

A nutritious, easy to obtain, tasty food, a delicacy for powerful and commoner alike, it became indispensable in the diet of the inhabitants of the Mexico basin, based on aquatic agricultural products.

When the Spaniards arrived in the sixteenth century, they also took note of the axolotl. Missionary Friar Bernardino de Sahagún said of it, "There are some little animals in the water called axolotl. They have feet and hands like lizards, a tail and body like an eel; they have a very wide mouth and barbs on the neck. They are very good eating, food for lords."¹

* Contributor to several tourism and cultural publications; author of the Reader's Digest book *Maravillas Naturales de México*, (Natural Marvels of Mexico) (Mexico City: 1997).

Opposite page: *Axolotl*, taken from Elvia Esparza's original dossier *Species in Extinction in the Valley of Mexico*, Introduction by José Sarukhán (Mexico City: UNAM, 1989).
Photo: Arturo Píera.

Myths and fantasies have surrounded it always. Francisco Hernández, the celebrated Spanish naturalist from colonial times wrote that the axolotl "is shaped like a catfish and gets its period every month like a woman; it is healthy eating, although it provokes lechery."²

Recent discoveries about the axolotl are more astonishing than these stories, causing surprise even among scientists.

ALWAYS YOUTHFUL

At the beginning of the nineteenth century, German naturalist Friedrich Alexander von Humboldt forwarded a shipment of axolotl to Europe where they were studied scientifically for the first time in the mid-nineteenth century. In 1863, 34 axolotl were sent to the Museum of Natural History in Paris during the French occupation of Mexico. France's Auguste Dumeril, a disciple of the famous french naturalist Georges Cuvier, began research into neoteny, the achievement of sexual maturity during the larval stage, one of the curious characteristics of the Valley of Mexico axolotl, the most interesting of all the species in the country.

While the salamander and the triturus, relatives of the axolotl, change their appearance completely at one point in their life cycle (this transformation is called metamorphosis and is well known in frogs), the axolotl reaches sexual maturity without losing the traits of its youth. For example, it never loses the gills of its infant stage. Only with experimental hormonal treatments does the Valley of Mexico axolotl go through the characteristic transformation that other amphibians do.

Even more surprising is that it is able to regenerate its brain cells. For that reason, the axolotl is greatly sought after by institutions which do research into the human brain.

Despite its appearance —unpleasant to many— the axolotl is completely harmless. It reaches 25 cm in length, and its characteristic gills lengthen or shorten according to the amount of oxygen in its watery habitat. When small, it feeds mainly on plankton, the microorganisms in the water. Later in its life cycle, it eats water fleas, small crustaceans, worms and insect larva. It always lives in the water, but many mysteries about its behavior, reproduction and classification are still to be unraveled.

Of all the species of axolotl in the lakes of Mexico's central high plateau, in states like Michoacán, Puebla and the state of Mexico, the most interesting is the *Ambystoma mexicanum*, the one described in this article, originally native to the Valley of Mexico, and which today survives only in the canals of Xochimilco's famous floating gardens.


TAMALES AND AXOLOTL SYRUP

From the pre-Hispanic period until today, the axolotl has been a source of food for Mexico's waterfront communities.

One of the most popular ways of preparing it is in tamales. A traditional recipe from the Xochimilco market says to first cut off the gills and gut, wash and salt the axolotl. After adding dried chili peppers and fresh tomatoes, they are wrapped two at a time in corn husks and steamed. These "tamales" are still prepared this way, but are rarer and rarer, just like the axolotl itself.

The axolotl is attributed with curative and recuperative powers for both children and the ill, although up to now no scientific evidence has come to light validating these beliefs. The famous axolotl syrup for respiratory ailments is an old, traditional medicine still sold on the streets of Mexico.

These supposed curative powers, its utilization in lab work, its sale for food in markets and as pets in aquariums, and particularly the drying up and pollution of the country's last great central lakes have brought the Valley of Mexico axolotl to the brink of extinction. Since 1950 it has bred only in the canals of Xochimilco in southern Mexico City, and even there only a few are to be found. Other species that have been introduced into the canals have harmed it: the carp devours its young and eggs and the tiger axolotl degenerates it with inter-breeding.

Some institutions have made isolated efforts to rescue it, but the problems it faces become graver and graver every day, while most inhabitants of Mexico City are completely unaware of the wonders contained in this species exclusive to this habitat. The city that the axolotl saw born and develop in all its splendor is now ousting it, even if symbolically, but that eviction will make it disappear from the entire world. Logic dictates that its future should be no different from other species which have already disappeared forever from the Valley of Mexico. 

NOTES

¹Bernardino de Sahagún, *Historia general de las cosas de la Nueva España* (Mexico City: Editorial Porrúa, 1992), p. 647.

²Francisco Hernández, *Historia Natural de Nueva España*, Colección Obras Completas (Mexico City: UNAM, 1959).