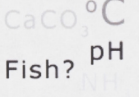




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 Back to the Intro	 Housing axolotls in captivity	 Food choices for axolotls	 Water chemistry, temperature, companions?...	 Tips for Breeding and Rearing	 Plus: Colour Genetics & Health	 Further Reading

Talk Axolotls at the Axolotl Forum!
Can't find something? Search the Site.

Have a Question? Try Frequently Asked Questions!
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Introduction

Welcome! This web site is devoted to the Axolotl (pronounced Ax-oh-lot-ul), scientific name *Ambystoma mexicanum*. The site describes the Axolotl's background, biology, and care in captivity. You will also find information about the [Tiger Salamander](#), *Ambystoma tigrinum* and *Ambystoma mavortium* spp., because these animals are closely related.

Australians and New Zealanders frequently refer to the Axolotl as the Mexican Walking Fish, though the Axolotl is not a fish but an amphibian, a salamander, part of the order Caudata/Urodela. Because it's a salamander, it's part of one of the three branches of class Amphibia, which also includes the frogs and toads (the Anurans), and the mainly eel-like order, Gymnophiona, which are also known as the Caecilians. Have a look at the [Biology Page](#) for a short guide to the Axolotl's body and characteristics. One common misconception is that axolotls and other salamanders are lizards or reptiles - in actual fact, amphibians are a completely separate group of animals, as are mammals, like ourselves.

This page is a brief introduction for those new to the Axolotl and salamanders. If you require specific information, you can search this site and [Caudata.org](#) using the search facility at the top right of this section. I hope that you find the site useful, but most of all I hope you enjoy what you read and find here. If you're looking for information about metamorphosed axolotls, [click here](#).

Your Search Key Words
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Axolotls of various colours occur in captivity, including grey, shades of brown, leucistic (white with black eyes), golden albino, white albino, as well as other varieties, such as the melanoid (a near-black animal). The normally coloured axolotl, the "wild type", can be near-black like the one in the group photo to the left, chocolate brown like the one in the site's logo, or even creamy in colour, and anywhere in between. There are even "piebald" axolotls in various colours, and a variety that is piebald in more than one colour, known as the "harlequin". You can learn more about how colour comes about and how it is passed on by taking a look at the [Genetics Page](#).

The name "Axolotl" comes from the Aztec language, "Nahuatl". One of the most popular translations of the name connects the Axolotl to the god of deformations and death, Xolotl, while the most commonly accepted translation is "water-dog" (from "atl" for water, and "xolotl", which can also mean dog).

Prior to the growth of Mexico city in the basin of Mexico, the Axolotl was

native to both Lake Xochimilco, and Lake Chalco. Of these two high altitude freshwater lakes, only the remnants of Xochimilco as canals can be seen today. The Axolotl is now on the [CITES endangered species list](#). There have been recent efforts to breed and release the animal, in order to re-establish its numbers. Fortunately, due to the importance of the Axolotl in scientific research, it is unheard of for them to be taken from the wild because of the huge numbers bred in captivity each year.

Despite its endangered status, the use of the Axolotl as a laboratory animal should ensure the species' survival, if only in captivity. It has long been known that the Axolotl is a worthy study due to its amazing healing/regeneration abilities. Normal wound-healing in animals occurs through the growth of scar tissue, and this also means that most animals won't re-grow a lost limb. However the axolotl is fully capable of complete limb re-growth. The animal has the added scientific attraction of having especially large embryos, making it easier to deal with under laboratory conditions. Its embryo is also very robust, and can be spliced and combined with different parts of other axolotl embryos with a high degree of success.



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The Axolotl is a fascinating creature for a number of reasons, including its grotesque appearance, its ability to regenerate, and primarily the fact that it exhibits the phenomenon known as neoteny. Ordinarily, amphibians undergo metamorphosis from egg to larva (the tadpole in frogs is a larva), and finally to adult form. The Axolotl, along with a number of other amphibians, remains in its larval form throughout its life. This means that it retains its gills and fins, and it doesn't develop the protruding eyes, eyelids and characteristics of other adult salamanders. It grows much larger than a normal larval salamander, and it reaches sexual maturity in this larval stage. Another term to describe this state is "perennibranchiate". The animal is completely aquatic, and although it does possess rudimentary lungs, it breathes primarily through its gills and to a lesser extent, its skin.

It is generally accepted that neoteny is a "backward" step in evolution, because the Axolotl is descended from what were once terrestrial salamanders, like the closely related species, the [Tiger Salamander](#), *Ambystoma tigrinum* and *Ambystoma mavortium* spp. (in fact, one likely theory suggests that the Axolotl is in fact a Tiger salamander off-shoot, as it can interbreed with that species with some success). Through some quirk of nature, a neotenus form developed and, probably due to environmental conditions, prospered. Neoteny is sometimes found in other amphibians, but tends to be caused by low levels of iodine (an essential element for animals to make thyroxine hormones, necessary for growth and development), or random genetic mutation. Research has also shown that very low temperatures can also suppress the production of these hormones, also inducing neoteny.

In the Axolotl, neoteny is now totally genetic ([click for more information on the Axolotl's genetics](#)). When treated with hormones, the axolotl will usually begin to metamorphose, but in very rare cases it will metamorphose spontaneously, such as the metamorphosed wild type axolotl pictured here. The metamorphosed wild type axolotl bears a close resemblance to the Mexican subspecies of the [Tiger Salamander](#), *Ambystoma velasci*.[†]



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GOD III. Representations of God III generally combine avian characteristics with such features of God I as flame eyebrows and paw-wings.

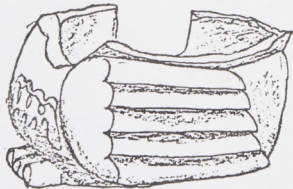
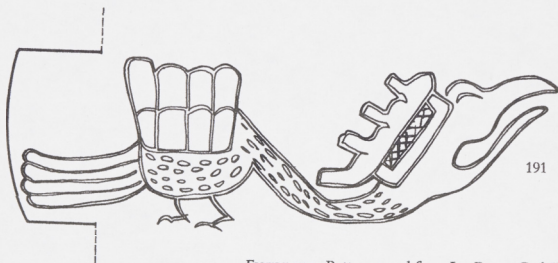
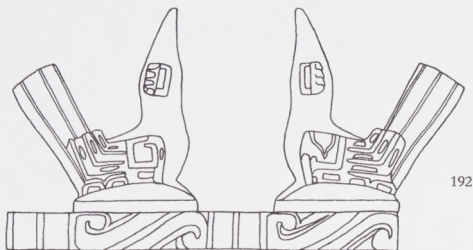


FIGURE 191. Pottery vessel from Las Bocas. God III is a bird monster with spotted skin, conventionalized wing, tail feathers, and talons. At the end of the long thin neck is the head of the deity, large and massive, with Type A flame eyebrows, crosshatched Type B eye, and a toothless beak. Susan Weeks. Motifs: 1C, 5A, 6B, 16, 41, 42, 49, 51, 182C.

FIGURE 192. Pottery duck from Las Bocas. This fine piece shows the union of avian form with attributes of God I, which is characteristic of God III. The general form of a duck with upturned beak and long tail feathers is impressed with the flame eyebrows and paw-wings of God I. The monster sits on a pedestal decorated with opposed volutes. Note that the two sides of the figure are not identical: both the type of flame eyebrow and the design in the paw-wing's palm vary. Redrawn from Coe 1965a, Fig. 61. (Coe 1965a, Fig. 61.) Motifs: 1C, 5B, 6B, 16, 36, 37, 49, 149, 182C.

FIGURE 193. Monument 9 from San Lorenzo. The damaged sculpture represents a hollow duck with wings and three-digit talons. A duck with flapping wings is incised on one side of the monument. Note the spotted dripping-water motifs. Michael D. Coe. (Stirling 1955, Pls. 17b and 18.) Motifs: 1C, 41, 42, 117, 146, 182A.

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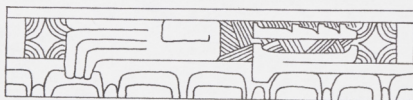


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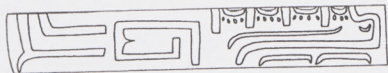
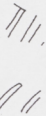
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