

Terrestrial Axolotl Care Sheet (*Ambystoma mexicanum*)

Brent Mundy
IU Axolotl Colony
Bloomington, IN 47405

Metamorphosis

Transforming from an aquatic salamander to a terrestrial salamander is very stressful for the axolotl. Once it is noticed that an axolotl is metamorphosing it should be removed from its regular habitat and placed in a covered one gallon container. The container should be large enough for the animal to fit comfortably. A few rocks should be placed in the container for the animal. Add just enough water to the container so that the axolotl's back is covered.

Over the course of a few days, the animal will molt and shed quite a large amount of skin, which will look like black sheets. The skin should be removed on a daily basis. During metamorphosis the axolotl will absorb its dorsal fin, grow eye-lids, absorb its gills, lose its slime coat, and begin breathing air. As the animal progressively becomes more terrestrial, the amount of water that is in the container can be reduced.

After the animal switches over, a period of adjustment will occur. Limbs that were once used for swimming must now learn to walk on land. At first the axolotl will spend most of its time in the water, but as it learns to use its legs, travel on land will become more common. It is not uncommon for a newly metamorphosed axolotl to go off of food for some time. This fast may last for up to two months.

Habitat (Vivaria)

A wide variety of habitats can be created for the terrestrial axolotl. The only steadfast requirements are that the animal has access to water, so that it can totally submerge itself if it so desires, and a dry land area. A very basic design could consist of a 10 gallon aquarium and a large water bowl for the axolotl. Obviously more sophisticated setups can also be created. Below is the outline of an advanced setup:

A large sturdy aquarium will need to be divided in a 30% water, 70% land split; a piece of glass or Plexiglas can be glued using aquarium silicone cement in the tank in order to

make a shore. Slant the partition to make a slope that the axolotl can climb to leave the water. Fill the water portion with an inch of aquarium gravel (Note: gravel should be large enough that the animal cannot ingest it. Put two inches of coarse sand or washed aquarium gravel in the bottom of the land portion of the tank for drainage. On top put sterile potting soil or peat moss. The soil should be loose so that the axolotl can burrow if it chooses. Furnish pieces of bark, rocks, or clay pot shards to make hiding places for the axolotl. You can plant small plants in the soil if you like, but they should be large enough so that the axolotl will not destroy them.

You will need a fitted lid for the tank. The lid will keep live food inside the tank. The lid is also a useful place on which subdued lighting can be placed.

Temperature

Salamanders need a relatively cool environment. The terrestrial axolotl should be kept between 70-75 °F. (15-24 °C.). If possible provide a temperature gradient so the axolotl can thermoregulate by moving back and forth between warmer and cooler areas. This is easily accomplished by designating one side of the tank as the warm side, usually the dry side. A slight gradient of only a few degrees is needed, which can be created using lights.

Lighting

Light is necessary for the regulation of the axolotl's seasonal clock. Do not rely on sunlight, which could raise the temperature of the habitat too much. Use a broad-spectrum light connected to an appliance timer. If you plan to try breeding the axolotl, you may wish to increase and decrease the number of hours of light based on the changing photoperiod of the axolotl's native environment near Mexico City.

If possible, the light should be subdued and indirect. A hiding place should be provided for the animal so that it is able get out of direct light if it wants.

Ventilation

Ventilation is important to prevent the atmosphere inside the tank from becoming foul

and to reduce the growth of organisms in the water and soil. Drafts, however, should be avoided. This can be accomplished by using a screen cover over the tank.

Water Filtration

To keep the water clean, either filter it or do a complete water change every other day. Choose a filter appropriate to the volume of water in the tank.

Food

Larger prey items should be dusted with a vitamin powder that is available for herptiles (found in pet stores). Worms, small spiders, pillbugs, beetles, earthworms, small millipedes, aphids, small moths and other night-flying insects are suitable for more terrestrial axolotls. In winter, crickets, mealworms, white worms, and tubifex worms can be purchased. Mealworms should be fed only as a supplement as their hard outer covering is difficult to digest. Tubifex worms can be fed in a shallow dish with a little water in it.

Feed daily only as much as the axolotls can eat. Leftovers can be left in the tank if they are still alive, but hold off feeding more until they are gone. A wide variety of food will insure a more balanced diet. For the most part, terrestrial axolotls need live food, because they rely on movement to detect their prey. You may be able to train them to eat raw beef or dead prey. Crickets, earthworms, mealworms and the like can be grown at home or purchased, if collecting prey is a problem.

Handling

Handling should be kept at a minimum. If you need to handle an axolotl, be sure your hands are cleaned and free of soap residues.

Wet your hands first, then scoop up and cage the axolotl in your two hands without squeezing it. Use gloves (wet them first) or a net if you prefer. Be sure to wash your hands thoroughly when you are done handling the axolotl, since amphibians can carry Salmonella and other diseases.

Mixing Species

A note on keeping different species together in one tank: many species cannot tolerate the toxins produced by other species. Putting them together may result in the deaths of one or more species. The Axolotl Colony has been successful in housing terrestrial axolotls and tiger salamanders of similar size together.

References

- Bjorn, Byron. 1988. *Salamanders and Newts: A Complete Introduction*. TFH Publications, Neptune City, New Jersey.
- Obst, Fritz Jurgen, et. al. 1988. *The Completely Illustrated Atlas of Reptiles and Amphibians*. TFH Publications, Neptune City, New Jersey.
- Kaplan, Melissa. *Salamanders and newts*. World Wide Web Site: "<http://www.sonic.net/~melissk/sallies.html>".
- Mattison, Chris. 1992. *Keeping and Breeding Amphibians*. Sterling Publishing Inc., New York
- Zimmermann, Elke. 1983. *Reptiles and Amphibians: Breeding Terrarium Animals (Care, Behavior, Reproduction)*. TFH Publications, Neptune City, New Jersey.
- Breen, John. 1974. *Encyclopedia of Reptiles and Amphibians*. TFH Publications, Neptune City, New Jersey.
- Scott, Peter. 1981. *Axolotls*. TFH Publications, Neptune City, New Jersey.