

## THE AXOLOTL COLONY AT ARIZONA STATE UNIVERSITY

J. T. Justus\*

Justus and Cullum (1971) reported a method of housing aquatic animals, including axolotls, in a stainless steel holding facility. The holding tank was manufactured from 302 stainless steel, 16 and 20 gauge, with a number 4 finish, suitable for fresh water. The unit consisted of 2 tanks, one above the other, measuring 7'8" in length, 20" in width and 5½" deep. Each tank housed 14 cages, making 28 cages per unit. Each cage was equipped with a metal slide for waterproof identification labels. The tanks were set one above the other and were supported by 1"-square stainless steel legs with adjustable feet for leveling. A spillway at the end of each tank allowed solid wastes to flow from the tanks through a filter, keeping the water free from fecal material.

The water from the spillways entered a common duct and passed through a disposable dacron filter and then through a charcoal filter. Following filtration the water was sterilized by passing under two 36" germicidal lamps. The water depth at this point was reduced to 1/16". The water then entered into a tank and was recirculated by a centrifugal pump.

Water was distributed to the tanks through a 5' stainless steel tube, ½" in diameter, located in the center of the tanks. The tube is closed at one end and perforated with 1/16" holes every 6 inches. The rate of water circulation is 250 gallons per hour.

Every two days, water was added to the tank. This water was taken from the city water supply since the amount of chlorine added to the existing volume of water in the tank did not damage the animals.

During the time the axolotls were kept in the tank, the animals were free from diseases. We did, however, observe that when males and females were kept in individual cages in the same tank, then removed to aquaria for mating, there was a decrease in successful matings.

We moved the axolotl colony to new quarters and could not move the tanks into our assigned space. The holding tank is now being used successfully to house bullfrogs.

Animals are now housed in squat globe fish bowls or plastic shoe boxes in a constant environment room. The temperature is maintained at 18C and the photoperiod is 12 on, 12 off.

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We have recently experienced a disease in some of our animals similar to that reported by the Indiana Axolotl Facility. Interestingly, we did not have a disease problem until this past summer when several animals were imported from Indiana. The nature of this disease is not well defined, but appears to involve the liver, spleen and the blood vascular system. Effected animals were treated by the usual methods, namely, furacin, gentamycin and terramycin. These drugs seemed to be ineffective, however, some of the animals did recover from the disease when they were placed into full strength Holtfreter's solution. The disease seems to have now disappeared from the colony.

See: Justus, J. T. and L. Cullum (1971) Lab. Animal Sci. 21: 110-111.