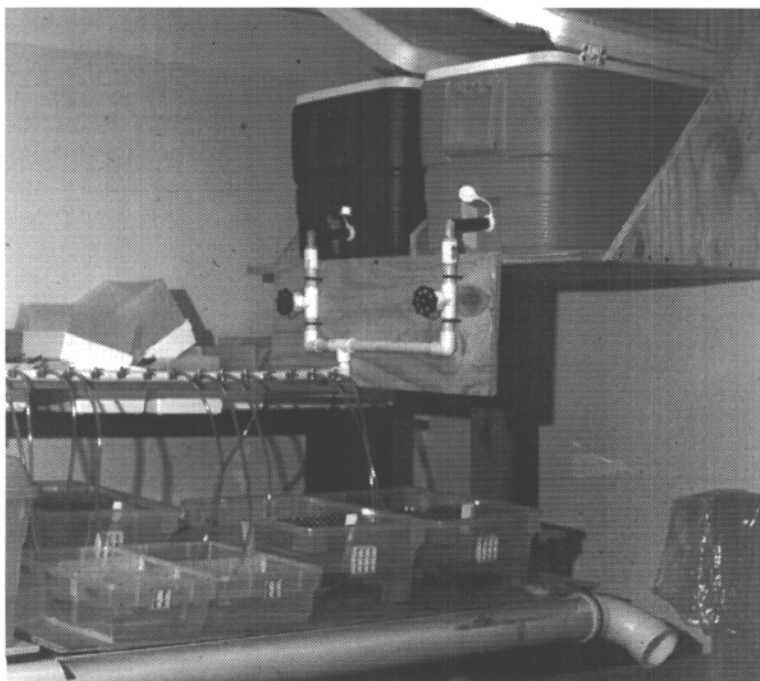


Inexpensive and Low Maintenance Facility for Housing Axolotls

M. Moody and G. Thibaudeau
Biological Sciences
Mississippi State University
MsState, MS 39762

In order to maintain axolotls in the laboratory we have constructed an inexpensive easily maintained system from plastic containers, PVC pipe, rubber tubing, and picnic coolers. Stagnant water and all waste materials are removed by siphoning, and then tanks are flushed with aged tap water. This procedure is performed following feedings every 2-3 days and provides for an efficient low-maintenance method of caring for axolotls. Labeled photographs of the system are included, and a more complete description follows:

Large axolotl tanks: The larger axolotls are kept in clear plastic rectangular containers (22 x 36 x 14 cm) partitioned in half by 8-mm-diameter plastic mesh glued in place with clear silicon sealant. Two adult axolotls are housed in each container. A drain hole was cut and a protective grating was inserted in the front of each container. This drain maintains a constant water depth of about 5.5 cm and the grating prevents axolotls from escaping into the drainage pipe.



Small axolotl tanks: The smaller axolotls are kept in clear plastic rectangular containers (16x30x8 cm) partitioned in half or thirds by 1 mm diameter plastic mesh glued in place with clear silicon sealant. Two to six axolotls (depending on their size) are housed in each container. A drain hole was cut and a protective grating covered by a 2 mm diameter mesh was inserted in the front of each container. This drain maintains a constant water depth of about 4 cm and the mesh size of the grating prevents axolotls from escaping into the drainage pipe.

Water replacement system: Two large Igloo coolers which hold 40 liters of water each are mounted on a sturdy shelf approximately two feet above the axolotl tank water level. Half-inch PVC pipe connects each of the coolers' drain holes to a valve before converging into a single 0.5" PVC pipe with a series of 3/32" ID adjustable aquarium valves. Clear aquarium tubing (two per tank) supply each axolotl tank with fresh water at a rate of about 4 ml/s when one cooler valve is fully open. The tanks rest on a Plexiglas-covered plywood bench tilted slightly forward. Excess runoff water is collected in a trough cut from large PVC pipe at the front of the bench and is carried to a drain which eventually empties into a sink.

Additional information: We currently maintain 6 adult axolotls (15-19 cm long) in 3 large axolotl tanks and 6 juvenile axolotls (4-10 cm long) in 2 small axolotl tanks; however, the system is easily expanded to accommodate additional axolotl tanks. The Plexiglas covered bench on which the axolotl tanks rest measures 42" wide x 38" deep and resides on top of a lab bench 46.5" above the floor. The shelf on which the water storage tanks rest measures 38" wide x 26" deep and is located 24" from the ceiling. The entire system occupies a space 66" wide x 38" deep x 52" high, not including the sink located conveniently adjacent to the system. The sink serves as both a source of water for refilling the water storage tanks and a drain for flushed or excess runoff water.

Care of the axolotls: The axolotls are maintained at room temperature in ambient room lighting conditions. They are fed 4-5 pieces of frozen beef or pork liver that is slightly thawed (as it is easier to cut when semi-fro-

zen) and cut with a razor blade. The adult axolotls are fed pieces approximately 10 x 10 x 5 mm in size. After feeding the axolotls, their tanks are siphoned to clean out waste material and then flushed with fresh water from the water storage tanks. The water used to refill and flush the axolotl tanks is untreated tap water which has been allowed to age for three days in the water storage tanks (uncovered) in order to remove the chlorine. After cleaning the axolotl tanks, the water storage tanks are refilled using a rubber garden hose attached to the spigot of the nearby sink. The entire feeding/cleaning/refilling procedure takes approximately 45 minutes and is repeated every three days.

