

News from the Axolotl Colony

Susan Duhon
IU Axolotl Colony

It has been a busy year for the Axolotl Colony. Much has happened and much has been accomplished.

New Grant. The Axolotl Colony National Science Foundation grant was renewed last spring for four years. The NSF also set two requirements: 1) Establish an Advisory Committee to advise the Axolotl Colony and Indiana University as to policies, procedures, and services, and 2) Develop and implement a cost recovery system—essentially a system of user fees for colony material.

The Advisory Committee, chaired by David Stocum, met on June 5, 1996. Other members are Glenn Northcutt, Malcolm Steinberg, and Roy Tassava. George, Sandi, and I appreciate immensely the time these busy scientists have made for the Axolotl Colony.

The main order of business at this year's meeting was to devise a rate schedule for the 1996-97 season. We think that the system, which was implemented on October 1, is fair and reasonable. It does not, of course, cover all of the costs of breeding, raising, maintaining, and shipping the axolotls, but defrays a portion of them. The price list is on page 3 of this newsletter. If you have any comments or suggestions for improving this system, we would certainly like to hear from you.

We also have devised a registration form in order to regularize our record keeping and to help us collect the information we need in order to keep track of our orders, invoicing, and shipments. Most labs should need to send in this form only once. The form is reproduced on pages 4-5 of this newsletter. If you prefer, registration can also be submitted electronically through our web site (see below).

Web Site. The Axolotl Colony now has a web site up and running. The URL is

<http://www.indiana.edu/~axolotl/>

Currently the web site has lots of news about the Axolotl Colony and the services provided. It also has information about axolotl husbandry, mutant genes, and the Axolotl Newsletter, including Tables of Contents of back issues. From the site you can follow

links to other sites dealing with amphibians and developmental biology. For the future we plan pages dealing with staging, including drawings, natural habitat and history, and the history of axolotls in research.

We welcome any thoughts you may have on additional topics you would like to see, good related sites to link to, and corrections and comments on the material already up.

Health. The disease problem that plagued us in the summer and fall of 1995 has fortunately abated. Although we see an occasional animal exhibiting the syndrome, the occurrences are isolated and have little impact on the colony. Unfortunately, we still do not have a clue as to its cause.

The *infectious bleeding syndrome* is characterized by anorexia, edema, especially about the limbs and jaw, subcutaneous bleeding, especially near the hands and feet, bleeding from the gills, and internal hemorrhage. The gills often have a peculiar "spotty" appearance caused by little clots of blood on the gill filaments. The syndrome is often difficult to detect in dark-colored axolotls until the animal is discovered in a bowl full of blood. In the Axolotl Colony, the syndrome began among adults, spread through the adult population, then into the juvenile axolotls. Eventually all but the very youngest larvae were affected. We sent several animals out for diagnostic work, but no pathogen, either bacterial or viral, could be identified as the cause. Animals in the colony were treated with amikacin, Baytril (enrofloxacin), and doxycycline, but none of these antibiotics seemed to affect the course of the disease or prevent the death of treated animals. Some adults were not affected and some apparently recovered on their own. White axolotls were the most vulnerable, perhaps because of a greater propensity to hemorrhage. Juvenile axolotls generally did not recover, so we lost virtually an entire generation of axolotls.

The best way to fight this disease is to remove affected animals from the colony and pay particular attention to good husbandry practices, especially water quality. Baytril or amikacin can be used if secondary bacterial complications are suspected. Doxycycline, if administered, is best not given by injection or in the water, but may be delivered orally by injecting it into earthworms which are then fed to the axolotls.