



10-1-1982

Animal Profile: Unusual Amphibians

Resources

The following is an update on resources available in the Veterinary Hospital of the University of Pennsylvania (VHUP).

Cases are seen on an appointment basis only. Most clinical sections see cases between 9:00 A.M. and Noon.

The appointment desk may be called between 9:00 A.M. and 4:30 P.M. (215-898-4680).

The emergency room is open 24 hours/day, seven days/week (215-898-4685).

Clinic Days:

Behavior: Scheduled by department only—215-898-4525

Cardiology: Wednesday, Thursday, Friday

Dermatology and Clinical Immunology: Tuesday thru Friday

Exotics: Tuesday and Wednesday evening

Medicine: Monday thru Friday

Neurology: Wednesday (other days by special arrangement with referring veterinarian)

Oncology: Monday

Ophthalmology: Monday and Thursday

Orthopedics: Wednesday and Friday (This section accepts appointments only after the referring veterinarian has called to explain the case).

Medical Genetics/Pediatrics and Reproduction: Monday and Tuesday

Soft Tissue Surgery: Monday thru Thursday

Wildlife Service offers veterinary care for unowned animals such as pigeons, hawks, owls, squirrels, rabbits, and groundhogs found abandoned and injured.

Call 215-898-4680 during regular hours (Monday thru Friday 9:00 a.m.-4:30 p.m.)

At other times, call 215-898-4685

For additional information, call Dr. Josephine Deubler—215-898-8862 or Mr. Barry Stupine—215-898-4161

Dean Janq-nag Lee visits the School of Veterinary Medicine



On July 15, 1982 the Dean of the College of Veterinary Medicine, Seoul National University (Suwon, Republic of Korea) visited our School. Pictured here are Dean Janq-nag Lee (center), Dr. Yon K. Oh, former president of the Korean Veterinary Society (left), and Dr. Hung Min Chi, a Philadelphia practitioner (right).

Unusual Amphibians

Some of the Philadelphia Zoo's more interesting, yet little-known animals are the Poison Dart Frogs. In general, amphibians are not greatly emphasized in most zoos. Their environmental requirements, stringent, yet varied, make their display more difficult. The Philadelphia Zoo, however, is able to provide amphibians with their proper environmental conditions. The Reptile House is equipped with air conditioning so that the Lake Titicaca Frog is comfortable at a temperature range between 60°F and 72°F. Yet the Poison Dart Frogs, housed in the same building, are kept in a temperature range between 72°F and 80°F.

There are three genera of Poison Dart Frogs: *Colostethus*, which are not toxic; *Dendrobates*, which are mildly toxic; and *Phyllobates*, which are the most toxic. Ranging in size from one inch to two and a half inches, the frogs are found throughout South America, Central America, and in parts of North America. An alkaloid is present in the skin secretions of the frogs. The name "Poison Dart" derives from a dying use of these toxic secretions by the Indians of South America for their weapons. In fact, the frogs are more commonly known as Poison Arrow Frogs. However, since the Indians used the toxin only on their darts, this name is incorrect. Currently, there is a movement, led by Charles W. Meyers of the American Museum of Natural History, to establish the frogs' name as the Poison Dart Frogs.

Like most poisonous species, the frogs are brightly colored. Red, yellow, blue, gold, and black distinguish the Poison Dart Frogs from their common green relatives. Their

coloration serves two purposes: it camouflages them in their lush environment, yet it also advertises their toxicity when necessary.

Another distinction of the Poison Dart Frogs is their breeding pattern. The female's only part in the process is depositing clumps of eggs under dry leaves. The male, after fertilizing the eggs, also guards them. The eggs usually hatch in twelve days. The male then carries the tadpoles, sometimes almost a hundred of them, on his back to a body of water. These areas include ditches, roadside puddles, or bromeliads, plants that collect water in their centers. Tadpoles are deposited in individual sites because they will eat anything, even brothers and sisters! Within sixty to eighty days the tadpoles mature into frogs and within a year they too are ready to breed.

The Philadelphia Zoo presently possesses two types of Poison Dart Frogs: *Dendrobates auratus* and *Dendrobates tinctorius*. They are commonly referred to as Green and blacks and Tie-dyes. The Green and blacks arrived in 1979 from Hawaii and gave birth for the first time last year. Amphibian births in zoos are difficult and therefore rare; so, the birth was quite a happy event for the Zoo. The Green and blacks are now on exhibit in the Reptile House. The Tie-dyes arrived at the Zoo from Florida in 1982 and are currently under the observation of John Groves, the Reptile Curator. Groves expects the Tie-dyes to reproduce in early 1983.

New Poison Dart Frogs are expected at the Zoo shortly. These frogs are the *Phyllobates terribilis*, more commonly known as the Golden Poison Dart Frogs. Presently these frogs are found in the U.S. only at the American Museum of Natural History. However, this year they will be loaned to the Philadelphia Zoo and the Bronx Zoo. The Golden frogs are almost 200 times more toxic than the other Poison Dart Frogs. Their poison has no known antidote. The Zoo hopes to breed them and eventually place them on exhibit with their other amphibians.



Photo courtesy of Zoo One Magazine and Mike Juniac, Asterisk, Inc.