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Animal Profile: Endangered Cats

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Dr. Eckroade explained that a variety of conventional tests used to detect the amount of antibodies in the blood can be performed on ELISA not only in less time, but with considerably less expense.

While Dr. Eckroade hopes to implement ELISA over the next year, he noted that there are still some chicken antigen cross reactions occurring that have yet to be worked out. All the other mechanics are in order.

The ELISA technology, secured through competitive grants, is a cooperative project with Penn State's Dr. Richard Wilson.

Affiliated with the University of Pennsylvania since 1976, Dr. Eckroade has increased his staff from one technician to three, a caretaker and a secretary, all of whom recently moved into the new, larger headquarters on Byrd Road.

Working closely with Dr. Eckroade in the laboratory and on field problems is Dr. Linda Silverman, one of the first female poultry diagnosticians in the country. Other staffers include: Nancy Fitzkee, head technician, Pam Tully, technician, Betsy Frey, research associate, Ruth Hollodick, secretary, and David Hoffman, animal caretaker.

Originally from Virginia, Dr. Eckroade did his undergraduate work at Virginia Polytechnic Institute. He earned a master's degree and a Ph.D. degree from the University of Wisconsin and received his D.V.M. from the University of Georgia. Expressing an early interest in a small animal practice, he later had a mixed practice in North Carolina. Then he took a position in a poultry laboratory, and in his own words, "loved it."

Penn's poultry expert, Dr. Eckroade received the Lindback Award for teaching poultry diseases and was recently appointed adjunct associate professor of veterinary science at Pennsylvania State University.

But there's a lot more to the amiable, long-sideburned Bob Eckroade than "just us chickens," as the expression goes. A licensed pilot with an apparent sense of adventure, he enthusiastically described the white water rafting trip down the Colorado River he and colleagues from the New Bolton Center recently took.

On an isolated fifty-two-acre farm in Rising Sun, Maryland, he and his wife, Carlene, a research chemist for W. F. Gore and Associates, raise a few horses, chickens, and some cattle. Two sons, Bob, Jr., and Bill, and a daughter, Sherri, complete the Eckroade family.

Back on the subject of chickens, he joked, "I've often been accused of having an unnatural attraction to chickens." On a more serious note, he added, "When producers' profit margin goes down because hens stop laying eggs, you're the person they turn to for help. We can't do it all, but if we can learn to solve one person's problem, that will also help others."

Endangered Cats

At most zoos cats are the star attraction and the Philadelphia Zoo is no exception. Their family of Siberian tigers draws a crowd regularly.

Throughout the world there are seven subspecies of tigers. Of the seven the Caspian and the Bali are gone. Five remain: the Bengal, the Chinese, the Javan, the Siberian, and the Sumatran. The Bengal, with four to five thousand in the wild, is the most numerous species. Only 200 Siberian tigers live in their natural habitat. Zoos possess close to one thousand.

Panthera tigris altaica (Siberian tiger) is found in the Amur River region near the Soviet Far East and Northern China. The area consists of mixed deciduous forests and open, rocky, mountainous terrain. Siberians are solitary hunters that depend greatly on their hearing. Often they detect their prey at a distance of over 500 meters. Wild boar and red deer are their preferred meal.

The largest of the felines, Siberians usually measure six and a half feet in length and have a three-foot tail. Their average weight is 350 pounds. The record weight for a Siberian is 645 pounds. During winter they develop a layer of fat as insulation that enables them to tolerate low temperatures.

The Siberian family at the Philadelphia Zoo has an interesting history. Kundar, the male, arrived as a cub from the Leipzig Zoo, where captive breeding has been extremely successful. He weighs over 600 pounds and is about thirteen years old. Tigers live about twelve to thirteen years in the wild. In captivity their life spans nearly double.

Kundar is no stranger to the University. A couple of years ago students from the School of Dental Medicine performed root canal surgery on Kundar and capped a few of his teeth as well!

Zeya, Kundar's mate, arrived from the Milwaukee County Zoological Gardens. On July 4, 1980, she gave birth to three female cubs. They were named Martha, Abigail, and Dolly in honor of the first three presidents' wives. The girls live in separate cages near their parents. The Zoo also owns two Siberians currently at the Utica Zoo in New York.

Because of their grand size, beautiful color, and striping, Siberians are very popular in zoos. Their popularity has caused zoos to overbreed the species. Today there are more captive tigers than there are spaces available. Many zoos have stopped breeding and use a tiger version of birth control pills to prevent pregnancy.

Yet since captive tigers often live twice their normal life span, breeding may not occur until later than usual and a whole generation may be lost. The result is an unusual age distribution of cats. Also, most of the captive Siberians are descended from a relatively small gene pool resulting in a lack of genetic diversity in the animals.

The Species Survival Plan (SSP) is a controversial North American plan that provides strict guidelines for genetic purity in captive animals. This past September the International Union of Directors of Zoological Gardens met in Rotterdam. The Union asked Dr. Ulysses Seal, chairman of the Captive Breeding Specialists Group, to expand the North American plan for international use.

If the SSP is adopted internationally, the structure of zoos will change dramatically. No longer will individual zookeepers make decisions concerning the breeding of animals. They will have to consult international guidelines.

The Philadelphia Zoo would be concerned mainly with the Operation Siberian Tiger phase of the SSP. Controversy over this plan seems imminent. To create the space needed for a large genetic diversity in captive tigers that corresponds to the genetic diversity found in wild tigers, many existing Siberians would have to be euthanatized. In fact, some tigers today are so inbred that they too would not be kept.

Public reaction to the euthanatization of animals is expected to be highly critical. Recently the Detroit Zoo tried to euthanatize one of their old Siberians whose medical history was extremely poor. There was a tremendous public uproar.

If the Philadelphia Zoo subscribes to Operation Siberian Tiger, Bill Donaldson, a zoo spokesman, believes a public education campaign of the SSP will be imperative. Zoos must aid the preservation of animals and their genetic purity. According to Donaldson, the public needs to understand that without the SSP the captive Siberians of the future will be substantially different from their ancestors in the wild.