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ASU's teaching biology lab incorporates sophisticated technologies, approaches

BY ALDEMARO ROMERO
SPECIAL TO THE SUN

JONESBORO — Beginning this fall semester, Arkansas State University students who want to learn more about mammals will have one of the most complete and sophisticated teaching labs in the country at their disposal.

With renovations and the addition of teaching material, ASU's Department of Biological Sciences will be providing exciting hands-on experiences to students who want to learn more about the natural world. One of those teaching labs will specialize in mammals, from kangaroos to apes.

Currently, ASU offers two courses in this area; one is Mammalogy, taught by Dr. Thomas Risch, associate professor, in which students learn about the different species of mammals. There are 8,000 species of mammals in the world, and although students get a general knowledge of all the major groups, special emphasis is placed on the mammals of Arkansas. The lab contains numerous specimens of the most representative species of mammals from The Natural State.

The lecture and lab of this course are taught in the fall semester of every other year, and will be offered this coming fall semester.

Among the exciting things students will be doing in this course will be trapping of flying squirrels, bats, pocket gophers, bears and wild hogs.

The other lab course that will be taught in this teaching lab will be marine mammals. This course, taught by the author of this article, covers the 120 species of marine mammals from around the world: they include



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Adrian Fertha, a biology senior and McNair Scholar, examines the skeleton of a pygmy sperm whale in the new mammal teaching lab at ASU.

whales, dolphins, seals, sea lions, the sea otter and the polar bear.

This lab now contains casts and skeletons of 60 species of marine mammals; that is half of all the species of the world. One of the most prominent casts in the collection is a full skeleton of a pygmy sperm whale.

In this lab students will learn to identify all the different species by looking at their skulls. They will play a computer game that uses pictures of the animals along with multiple choice questions to help them learn. They will also access a large library of pictures of these animals in the wild, so they can find out about their actual appearance in nature.

But names and external appearances are not the only things students will learn. As it is well known, marine mammals are notorious for their vocal abilities. Students will be exposed to the

different sounds each species produces, so they can distinguish species by their sounds. This is a useful tool for those students who go to the ocean and use underwater microphones to listen to the actual sounds produced by these animals.

Finally, the most exciting experience the students will have will be the dissection of a marine mammal to study the internal anatomy. ASU has a special permit from the National Oceanographic and Atmospheric Administration that allows us to receive the carcasses of marine mammals that have been stranded on beaches in the United States.

ASU has already received several elephant seals that were found dead on the coast of California and, most recently, a common porpoise that was found on a beach in Massachusetts. We have been asked to perform a necropsy in order to deter-

mine the cause of its death.

Students taking this course in the spring semester of 2007 will be taught the techniques of carrying out a necropsy of this animal using CSI-like techniques. They will investigate the condition of different organs and tissues as well as take samples of fluids to see if any pollutants may be the cause of the death.

Once the necropsy is complete, the skeleton of the porpoise will be cleaned, mounted, and exhibited.

These new laboratory approaches are making ASU one of the leading universities in the country for innovative teaching methods.

For questions, please contact the Department of Biological Sciences by e-mail at biology@astate.edu.

Dr. Romero is chairman and professor in the Department of Biological Sciences at Arkansas State University.