Easter Island
Continued from page 1

taken the Master of Preventive Veterinary Medicine (MPVM) training here, he was well-prepared to investigate this serious problem of horses and cattle.”

In February 1999 the school sponsored Arzt’s second, fact-gathering visit to Easter Island, where he examined affected animals and conducted necropsies. He interviewed ranchers and collected dozens of plants growing in pastures and along island roads where animals roam in search of forage.

He discovered that two species of Crotalaria were poisoning the livestock. The plant—one United States variety is known by its common name, “rattlebox” or “rattlepod”—was introduced to Easter Island about 20 years ago as a groundcover to reduce erosion of volcanic soils. Unfortunately, seeds and leaves of the plant contain a toxin (pyrrolizidine alkaloid) that causes serious liver damage—and death.

Animals that feed on Crotalaria are suffering and dying—an estimated 20 percent of privately owned horses have died of the syndrome since 1984.

Jonathan Arzt sees the complex problem as a classic lesson in ecology.

Animals that feed on Crotalaria are suffering and dying—an estimated 20 percent of privately owned horses have died of the syndrome since 1984.

And, instead of preventing erosion, the plants actually contribute to the problem by attracting hungry animals, which damage ecologically fragile areas around the Moai. Roughly 4,000 horses and 5-6,000 beef cattle, as they seek scarce food and water, are disturbing some of the island’s major archeological sites, which have great economic importance—they draw international tourists who are responsible for up to half the island’s income.

The Solution is Tangible

“Money, time and effort are needed,” Dr. Arzt says of the problem he has encountered, “but the solution is tangible.” He plans to continue to work toward the solution in a several step effort.

Initially, he hopes to provide a fresh water supply for livestock. Several abandoned wells could be tapped if pumps were installed, which he estimates would cost $5,000–$7,000. With a reliable source of water in key locations, livestock would be less likely to trample archeological sites.

Importing supplemental feed would give animals an alternative source of nourishment, reduce browsing and decrease exposure to poisonous plants. Dr. Arzt also would like to initiate a Crotalaria management program.

Each of these efforts will require organization and funding, he acknowledges. His biggest challenge may be in convincing ranchers to change the long-standing cultural tradition of allowing animals to roam freely around the island. Still, he believes enough concern exists among ranchers and tourism representatives to open a discussion about how restricting livestock to certain areas can protect animals from toxic exposures, safeguard people who rely on cattle for meat and milk, and preserve the delicate cultural sites so important to international scholars and the tourist economy.

Dr. Arzt is laying the groundwork for his future project as he fine-tunes his clinical skills at The Animal Medical Center in New York City. He says, “There are many international relief organizations devoted to helping people. With the resources and abilities we have, we should take responsibility for animal health and welfare.” When his internship ends in June, 2000, he will take up his task and return to Easter Island to work on behalf of its animals.

“I stumbled onto this situation while on vacation,” Dr. Arzt explains, “but I’ve always been interested in international travel and developing regions, especially in how animals play a role in these communities. Now I want to pursue an opportunity to combine some of my interests and help eliminate animal suffering.”

By Lynn Narlesky

In a new interactive, Web-based exercise featuring some of Jonathan Arzt’s experiences, veterinary students will soon be able to simulate a visit to Easter Island and diagnose a hypothetical case much like the one Dr. Arzt has discovered among the island’s livestock.

Thanks to a higher education challenge grant from the USDA, Patricia Conrad, professor of pathology, microbiology, and immunology, and David Hird, director of the Office of International Programs, are incorporating Dr. Arzt’s original “screenplay” into a multi-part instructional package highlighting food animal health and international veterinary medicine. The school’s Computer Assisted Learning Facility is contributing design expertise to the project, which includes video images and other interactive features.