

Vets' expertise in endoscopic surgery benefits unique conservation project in the Galapagos Islands

February 7 2011, by Helen Fosgate

(PhysOrg.com) -- A team of scientists, including several from the University of Georgia College of Veterinary Medicine, used their expertise in endoscopic surgery to benefit a unique conservation project in the Galapagos Islands. Using minimally-invasive “keyhole” surgery, the vets sterilized 39 giant tortoises so that conservationists could restore this important—and long missing—herbivore to Pinta, a small island in the Galapagos chain.

Their work, led by a team that included UGA veterinary researchers Stephen Divers and Emi Knafo, veterinary student Jason Norman, Atlanta Zoo veterinarian Sam Rivera, Houston Zoo veterinarian Joe Flanagan and several others, was published in the January issue of *Veterinary Record*.

The paper, highlighted on the issue’s cover—and inside in an editorial by Flanagan—outlines procedures for sterilizing both male and female giant tortoises. The tortoises were crossbred as part of a captive breeding program before genetic typing was available. Ecologists now understand that tortoises from each island evolved unique DNA and characteristics. So, while they could fill a valuable ecological role by mowing down overgrown vegetation, crossbred tortoises were sterilized to prevent them from colonizing on Pinta.

Not only had giant tortoises kept vegetation in check on Pinta Island, but

they also dispersed seeds, created clearings for sun-loving plants and benefitted other wildlife by flattening paths that helped other animals navigate the island's thick underbrush. After goats were eradicated from Pinta Island in 2003, the native vegetation rebounded with a vengeance.

The vets used endoscopic techniques, in which surgeons work through a small incision or keyhole, using a long, rigid endoscope with a camera and light attached. They watch as they work via monitor screen.

Endoscopic surgery is generally less traumatic than traditional methods, allowing for smaller incisions, quicker recovery and fewer side effects. In this case, it meant vets didn't have to cut into the tortoises' massive shells.

UGA is a world leader in endoscopic surgery procedures in exotic animals, including birds, reptiles and fish.

“We were thrilled to be asked to help in this effort,” said Divers, a teacher, researcher and internationally-recognized expert in endoscopic surgery in birds and reptiles. “We thought it an especially fitting way to celebrate the 150th anniversary of [publication of] Charles Darwin's *The Origin of Species*—and the 50th anniversary of the Charles Darwin Research Station.”

Galapagos wildlife has been exploited by whalers, pirates and other island interlopers for more than 500 years. Giant tortoises were thought to be extinct on Pinta Island—until a single male, “Lonesome George,” was discovered there in 1971. Wildlife officials took George to the Charles Darwin Research Station for safe keeping—and in hopes of one day locating a female with Pinta DNA that might mate with him and repopulate the island. A worldwide search has yet to find a match for George.

Wildlife biologists released the sterilized tortoises on Pinta Island in May

of last year. James Gibbs, head of Project Pinta, was quoted in the January 21 issue of New Scientist magazine, saying that once released, the tortoises were “quick off the mark, and immediately began eating the herbaceous plants.” He said their trampling has also had dramatic effects on overgrown vegetation.

Scientists will revisit the tortoises in May to assess their health and benefits to the island ecosystem.

Provided by University of Georgia

Citation: Vets' expertise in endoscopic surgery benefits unique conservation project in the Galapagos Islands (2011, February 7) retrieved 26 June 2024 from <https://phys.org/news/2011-02-vets-expertise-endoscopic-surgery-benefits.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.