

A New Initiative in Wildlife Conservation: The Borderlands Research Institute for Natural Resource Management.

article and photos by Louis A. Harveson

Editor's Note: This is the first of an every-other-month column from The Borderlands Research Institute for Natural Resource Management at Sul Ross State University. Future articles will include research updates and wildlife-related topics relevant to the Chihuahuan Desert Borderlands (a.k.a. the Trans-Pecos) of Texas.

When most of us think of deserts, we picture wind-blown sand dunes, scant vegetation, and exuberant heat. But for Texans, images of deserts include watching a herd of pronghorn meander along a fence line, chasing a fleet-footed covey of scaled quail, discovering mountain lion tracks in a creek bed, spotting the majestic bighorn sheep along a mountain ridge, enjoying a feeding frenzy of hummingbirds off a back porch, discovering a new stand of ponderosa pine, or witnessing thunderstorms billow above the desert mountains. Whichever vision comes to mind, one thing is certain—there is no place quite like the Trans-Pecos.

Biodiversity in the Desert?

Nestled in the northeastern portion of the Chihuahuan Desert Biotic Province, the Trans-Pecos region is speckled with mountain ranges that erupt from the desert floor—"sky islands" surrounded by "desert seas." These drastic changes in elevation play an important role in the diversity of habitats, plants, and wildlife that occur in the west Texas desert. In fact, only the Lower Rio Grande Valley ranks higher than the Trans-Pecos in state biodiversity. The Trans-Pecos region boasts more than 500 species of birds, more than 100 species of reptiles and amphibians, and more than 75 species of mammals. The towering mountain ranges of west Texas also contribute to levels of endemism where plants or animals occur exclusively in an area. The combination of biodiversity coupled with endemism in the Chihuahuan Desert makes conservation of the region especially important.

Pressures and Problems

The Trans-Pecos, like other regions of Texas, is experiencing unprecedented pressures on its natural resources. Population growth, habitat fragmentation, and invasive species coupled with frequent droughts make conservation and management of the natural resources especially challenging. As the least populated region in Texas, the Trans-Pecos is also one of the least understood regions of the state. Relatively few studies have been conducted on the unique flora and fauna of the region. This lack of information ultimately handicaps landowners and land managers of west Texas who are trying to manage their wildlife and rangeland resources.

Enter the Borderlands Research Institute

Understanding the need for information and the value of natu-



The Trans-Pecos provides some of the most picturesque views in the state, and boasts an abundance and diversity of habitat, wildlife, and plant life.

ral resource conservation, Sul Ross State University created the Borderlands Research Institute for Natural Resource Management in spring 2007. The goal of the Borderlands Research Institute is to provide land managers with the most current scientific information on the management of area natural resources. To meet this goal, the institute plans and conducts research investigations on various aspects of the natural world and provides the results to the land managers so that they may better manage the resources they are entrusted with. The institute is a natural expansion of a long-lasting partnership between private landowners of west Texas; the Range and Wildlife Program at Sul Ross State University; and cooperating state, federal, and non-government organizations.

John Dudley, long-time TWA supporter and Regent of Texas State University System, which includes Sul Ross, said "I first learned about the Borderlands Research Institute last summer at the 2007 TWA Convention. I was very impressed with this initiative and am excited about the leadership role Sul Ross is taking in providing west Texas landowners with needed information on wildlife and range management issues. This effort is not only important to the Trans-Pecos but to the state."

A Case Study

Conservation in Texas starts and ends with landowners. One of the best examples of this is the Apache Mountains Mule Deer Project. Three years ago, Sul Ross State University was approached by a group of landowners, managers, and hunters interested in understanding the behavior and movements of trophy class mule deer (more than four years old). Our research team

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Four quail species converge in the Trans-Pecos: Montezuma quail, northern bobwhite, Gambel's quail and scaled quail. All can be found in distinct Trans-Pecos habitats.

(including Misty Sumner, TWA Director) formulated the objectives, methods, and budget necessary to address the questions at hand. What makes this project unique is that not only were the questions driven by landowners, but so was the funding. The Apache Mountains Mule Deer project is almost entirely funded from private donors who are interested in better understanding the life history of mule deer in west Texas.

Leading the charge was the owner of Apache Mountains Ranch and TWA member, Dan Allen Hughes, Jr., who helped raise over \$100,000 for the project. Although the study is still in progress, it has already redefined our knowledge of mule deer movements, where range sizes averaged over 15,000 acres among the first cohort of trophy class bucks.

Building a Team

One of the first tasks to launching the Borderlands Research Institute was assembling a team of peers and end-users to serve as the advisory board. The team is composed of civic leaders, businessmen and women, ranchers, and managers who share a passion toward conservation of the Chihuahuan Desert Borderlands.

Elliott G. Hayne, Chairman of the Advisory Board and TWA Director said, "I was amazed at the enthusiasm and energy at our first board meeting. I have no doubt that this team of landowners and land managers will be able to positively influence conservation across west Texas and beyond." In addition to Hayne, advisory board members include Valer Austin (Dallas), Armando Garcia (Monterrey, Mexico), Alberto Garza (Monterrey, Mexico), Robie Golden (Alpine), Dan Allen Hughes, Jr. (Beeville), Bonnie McKinney (Del Rio), Homer Mills (Alpine), John Poindexter (Houston), Hiram Sibley (Alpine), and Allen Smith (Austin).

Spreading the Word

Outreach (putting information in the end-users' hands) is a major part of the institute's mission. Future outreach activities include landowner workshops, research and management bulletins, and newsletters/magazine articles. Two workshops have already been scheduled for

summer 2008. The first is targeted at small landowners in the urban-rural interface of west Texas and is designed to address some of the growing concerns of managing wildlife and rangeland resources on small parcels of land (habitat fragmentation, brush encroachment, etc.). The second workshop addresses broader wildlife issues of the Trans-Pecos, including sessions dedicated to general wildlife management, contemporary mule deer management issues, and a field tour.

The institute is also in its final stages of printing and mailing 10,000 copies of a research bulletin: *Research Highlights*,

1997-2007. The *Research Highlights* (sponsored in part by TWA and TWAf) is a 10-year overview of the research and management projects conducted by the Range and Wildlife Program at Sul Ross State University. Projects vary widely from mule deer management strategies to denning chronology of black bears to rangeland restoration techniques.

For details on the Borderlands Research Institute for Natural Resource Management or to be included on our mailing list, call (432) 837-8488 or e-mail Dr. Louis Harveson (harveson@sulross.edu) or go to www.sulross.edu/brinrm.



A big game extravaganza: where else in Texas can you find desert mule deer, desert bighorn sheep, pronghorn, javelina, elk, Carmen Mountain white-tailed deer, black bear, and mountain lion?

Trans-Pecos Wildlife Conference 2008

Mark your calendars for the Trans-Pecos Wildlife Conference 2008. The Borderlands Research Institute for Natural Resource Management is partnering with TWA and TPWD to host the conference at Sul Ross State University, Alpine, Texas, August 14-15, 2008. Conference seminars include a keynote address by TPWD Executive Director, Carter Smith, with subsequent talks on scaled quail, feral hogs, elk, and ending with a half-day of presentations focusing on mule deer management in west Texas. Additionally, on Friday, August 15, we have scheduled a half-day field trip and demonstrations to the historic Catto-Gage Ranch to highlight some of their range and wildlife management practices. Also on tap for day two: see wildlife-livestock interactions up-close with comparative anatomy necropsies (dissections) of a heifer vs. a cow elk, an aoudad vs. a mule deer, a rumen content analysis, and local plant tour.

Texas Wildlife Association, Natural Resources Conservation Service, Texas Parks and Wildlife Department, Texas AgriLife Extension Service, Borderlands Research Institute personnel, and private landowners and veterinarians will be on hand to assist with field tours and necropsies, discuss wildlife inventory and monitoring procedures, discuss the how-to's of marketing wildlife, and field questions from attendees.