

Desert Tracks

"Helping conserve the natural resources of the Chihuahuan Desert Borderlands through research, education, & outreach."



RESEARCH IN ACTION:

BRI Research Accelerates Desert Bighorn Restoration

Thomas S. Janke, Carlos Gonzalez-Gonzalez, Joshua Cross, Louis A. Harveson, and Froylan Hernandez (TPWD)

Partnering with the Texas Parks and Wildlife Department, the Borderlands Research Institute has been at the forefront of desert bighorn sheep research in Texas. Since 2010, 231 bighorn (79 rams and 152 ewes) have been fitted with either GPS or VHF radio collars. Data collected from these collars helps us analyze movements, range sizes, and habitats utilized by bighorn. The collars also allow us to locate and monitor the bighorn in their everyday activities and determine causes of mortality.

From our data and field observations at 3 study sites (Big Bend Ranch State Park, BBRSP; Santiago mountains; and Sierra Vieja mountains), we have learned many valuable lessons. Over the last 4 years, we have recovered more than 100 collars and produced nearly 200,000 GPS points for analysis. The greatest recorded distance ventured from a release site was by an ewe that traveled more than 40 miles. We have also had bighorn from the Santiago mountains (translocation site) return to Elephant Mountain WMA (capture site), and then go back to the translocation site. International movements have likewise been documented from our BBRSP study. Nearly 40% of the BBRSP collared bighorns were documented crossing into Mexico. Collectively, the translocated bighorns at BBRSP used over 1.25 million acres of habitat.

We have also investigated more than 50 bighorn mortalities. Although the causes of



Desert bighorn sheep were once completely extirpated from the region, but now because of restoration efforts, they can be found in several west Texas mountain ranges.

death have been typical (disease, predation, falls, drowning, toxic plants), we believe the amount of mortalities were higher than usual because of drought-like conditions. Most notably, we documented that bighorn mortalities decreased once measurable rains returned to the area.

One of the greatest lessons affirmed from our recent endeavors in bighorn restoration and conservation is the necessity for cooperation on all levels: public, private, and international. Recent bighorn translocations have helped unite numerous individuals, landowners, organizations, agencies, states, and even countries for one of the most noble causes—Conservation. Without collaborative conservation, the desert bighorn sheep restoration program would not be where it is today.

Spring 2015

Volume 8, Issue 1

Editors: Patricia Moody Harveson
and Catherine Dennison

Photographer: Bill Broyles

Inside this issue:

| | |
|------------------------------|---|
| Research in Action | 1 |
| From the Director | 2 |
| Sul Ross Postbac Grant | 2 |
| Donor Spotlight | 3 |
| BRI at Texas Chapter of TWS | 3 |
| Changing Land Use Conference | 4 |

BRI Researchers:

Dr. Louis A. Harveson, Dan Allen Hughes, Jr., Endowed Director and Professor of Wildlife Management
• *Specialization:* Big Game Ecology & Management

Dr. Patricia Moody Harveson, Associate Professor of Conservation Biology
• *Specialization:* Population Ecology & Spatial and Systems Analysis

Dr. Robert J. Kinucan, Professor of Range Management
• *Specialization:* Disturbance Ecology & Plant Biology

Dr. Ryan S. Luna, Assistant Professor of Wildlife Management
• *Specialization:* Upland Gamebird Ecology & Management

Dr. Ryan O'Shaughnessy, Research Scientist
• *Specialization:* Pronghorn Ecology & Restoration

Dr. Bonnie J. Warnock, Clint Josey Endowed Chair and Professor of Sustainable Ranch Management
• *Specialization:* Rangeland Ecology & Sustainable Ranch Management



Our efforts to return pronghorn herds to their former glory has focused on active restoration and habitat improvement. With our conservation partners, the BRI was successful in renewing the Pronghorn EQIP program. The Pronghorn EQIP is a cost-share program administered by NRCS to help improve pronghorn habitat.

Borderlands Research Institute Advisory Board

Elliott G. Hayne, Chair
San Antonio, TX

Valer Austin
Pearce, AZ

J.P. Bryan
Houston, TX

Charles Davidson
San Antonio, TX

Dan Allen Hughes, Jr.
Beeville, TX

Parker Johnson
Houston, TX

Bobby McKnight
Fort Davis, TX

Richard Nunley
Sabinal, TX

John B. Poindexter
Houston, TX

Robert J. Potts
Marfa, TX

Ruthie Bowman Russell
San Antonio, TX

Allen W. Smith
Austin, TX

Kelly R. Thompson
Fort Worth, TX

From the Director—More Good News for Pronghorn!

Landowners and pronghorn across the Trans-Pecos are happy.

Not only have rangelands received timely winter rains, but a substantial habitat improvement program for pronghorn was recently approved for renewal.

According to a recent announcement by the Natural Resources Conservation Service (NRCS) in Alpine, funding will be extended for another 4 years under the Environmental Quality Incentives Program (EQIP) Pronghorn Priority Area.

Approximately \$2 million will be disseminated over 4 years to help landowners cost-share habitat improvement for pronghorn in the Trans-Pecos region. Habitat improvements will include:

- ◆ Installation of pronghorn-friendly fences;

- ◆ Brush management strategies;

- ◆ Grazing deferment; and

- ◆ Water improvements.

The effort to renew the Pronghorn EQIP Program was championed by a partnership consisting of the Borderlands Research Institute (BRI), Texas Parks and Wildlife Department, NRCS, and landowners of the Trans-Pecos Pronghorn Working Group.

The funding will help landowners improve habitat not only for pronghorn, but for many other wildlife species.

To find out more about the Pronghorn EQIP program, please contact your local NRCS office.

—Louis A. Harveson

Sul Ross Awarded \$2.87 Million Post-Bac Grant

In September Sul Ross State University was awarded a five-year \$2.87 million grant for promoting Post-Baccalaureate programs for Hispanic students. The grant project seeks to increase the attainment of graduate degrees by Hispanic and low-income students. Through the first component, Sul Ross will expand and enhance graduate educational offerings in high-demand fields including Natural Resource Management.

Some of the proposed grant activities which will benefit the BRI's Natural Resource Management graduate students include:

- ◆ Development of online courses and distance learning;

- ◆ Updating research and laboratory equipment and learning spaces, including building an outdoor lab for Natural Resource Management classes;

- ◆ Expanding graduate support services via a Graduate Student Portal, writing assistance, thesis support, training in responsible conduct of research, and other program-specific training; and

- ◆ Providing graduate student fellowships and other financial assistance.

For more information visit:
www.sulross.edu/page/3287/expanding-graduate-horizons

Donor Spotlight: Texas Quail Coalition Chapters

The vehicle fleet at Borderlands Research Institute is growing! Quail coalitions from across Texas teamed up with Park Cities Quail to make donations for the procurement of a new Chevrolet pickup for the Desert Quail Program at the BRI.

Quail Coalition chapters that assisted Park Cities Quail with the purchase were: Cross Timbers Quail Coalition, San Antonio Quail Coalition, and South Texas Quail Coalition.

The new quail research truck has already been put to use on four different quail projects across the Trans-Pecos. Ongoing research that will be aided by this new quail truck includes obtaining baseline data on

quail ecology (diets, movements, nest success, recruitment, and survival) and investigating population responses to various management practices (prescribed fire, brush management, supplemental feeding, and water improvements). The addition of this truck will help get researchers in the field to identify factors that have caused quail populations to decline over the past few decades.

In 2009, quail enthusiasts across the state came together to create the Texas Quail Coalition. To date, 13 chapters have formed across the state and have raised over \$5 million to help quail research, education, and habitat improvement.



Dr. Ryan Luna (l) stands with leadership of the Park Cities Quail Coalition, including (l-r) Lance Charriere, Jay Stine, Dick McCallum, Matt Perry-Miller, and Robert Powers. The Parks Cities Quail Coalition and other chapters of the Texas Quail Coalition donated funds to purchase a new vehicle for the Desert Quail Program of the BRI.

BRI Attends Wildlife Meeting in Corpus Christi

In February, BRI staff and students attended the 51st Annual Texas Chapter of The Wildlife Society Meeting in Corpus Christi. This annual gathering provides opportunities for us to share the most recent findings from BRI research projects, meet with other researchers, and learn about projects across the state and beyond. This year the BRI and Sul Ross were very well represented as students participated in workshops and competitions, and presented papers and posters on research findings.

A total of 39 people from Sul Ross attended the conference, including 13 undergraduate students, 21 graduate students, and 5 faculty and staff members.

On Friday night, the BRI hosted the second annual Sul Ross Alumni mixer, sponsored by Big Bend Brewing Company. The mixer was attended by over 60 people including Sul

Ross students and staff, alumni, and friends. A great time was had by all.

Students participated in the Plant ID, and Quizbowl competitions which provide an opportunity for them to test their knowledge and skills in Natural Resource Management. Additionally, several students participated in the annual photography competition.

Professional presentations were made by 7 of our graduate students and research scientists in topics ranging from habits of translocated pronghorn and bighorn sheep, weather effects on scaled quail, small mammal response to fire, and invertebrate and seed bank potential in desert wetlands. Three graduate students and two undergraduate students also presented posters on their research findings. For a full listing of all posters and presentations, visit the news section of our website at: bri.sulross.edu/news.html.

Over 90% of our funding comes through private donations!

Please consider making a tax-deductible donation to the Borderlands Research Institute.



Members of the Sul Ross quiz bowl team compete at the Texas Chapter of The Wildlife Society's annual meeting in Corpus Christi, Texas.



Sul Ross State University
P.O. Box C-21
Alpine, TX 79832
432.837.8225
<http://bri.sulross.edu>

Address Service Requested
272003-120473-40

Non-Profit Org.
U.S. Postage
PAID
Alpine, Texas
Permit No. 2



MEMBER THE TEXAS STATE UNIVERSITY SYSTEM™

Printed on recycled paper.

*Texas State University System
Board of Regents*

Dr. Jaime R. Garza, Chair
San Antonio, TX

Ms. Rossanna Salazar, Vice Chair
Austin, TX

Mr. Charlie Amato
San Antonio, TX

Mr. Kevin J. Lilly
Houston, TX

Mr. Ron Mitchell
Horseshoe Bay, TX

Mr. David Montagne
Orange, TX

Mr. Vernon Reaser III
Bellaire, TX

Mr. William F. Scott
Nederland, TX

Ms. Donna N. Williams
Arlington, TX

Mrs. Anna Sandoval, Student
Alpine, TX

Dr. Brian McCall, Chancellor
Austin, TX

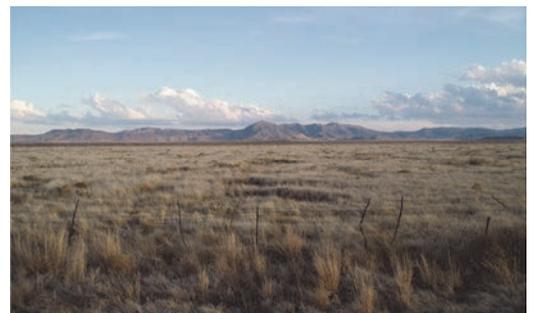
Save The Date: Conference on Changing Land Use

In response to the rapidly changing land uses in the Trans-Pecos region and the continuing trend of rural land loss and fragmentation in Texas, the Borderlands Research Institute has partnered with the Texas Agricultural Land Trust (TALT) and Texas A&M AgriLife Extension Service to host “Going, Going, Gone: *Changing Land Use in the Trans-Pecos and its Impact on Ranching and Wildlife*”.

This free conference will be held on Thursday, April 30th from 10am to 2pm in the Espino Conference Center at Sul Ross State University. The public is invited to learn how to protect family lands and retain their character. Topics will include a Keynote Address by David Langford, Updated Data from the Texas Land Trends Study, the Impact of

Changing Land use on Wildlife and Water, the Future of Ranching in the Trans-Pecos (ranchers panel discussion), and Conservation Tools for Private Lands.

Visit www.txaglandtrust.org to view the full agenda and registration details.



This seminar will help landowners understand the land trends that affect them and how to protect, conserve, and pass on their working agricultural lands to future generations.