

Desert Tracks

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



RESEARCH IN ACTION:

Black Bear Activity Patterns In Big Bend National Park

Skyler Stevens, Cameron Goebel, Patricia Moody Harveson, and Raymond Skiles (BBNP)

When most people think of visiting Big Bend National Park in the Chihuahuan Desert of Texas, the wildlife they picture is probably more along the lines of rattlesnakes than black bears, and thirty years ago, they would have been right. When the park was first established in 1944, black bears had been mostly extirpated from the region. Fortunately, since the 1980s black bears have been slowly recolonizing the Big Bend as they naturally migrate north from source populations in Mexico.

Learning about black bears has become a priority of the Borderlands Research Institute. To gain a better understanding of their activity and behavior, we are using remote motion-activated cameras. Within the park, black bears are mostly located in the Chisos Mountains, so cameras were placed in a 450-km² grid covering these mountains and the surrounding foothills.

To better understand when bears enter and emerge from winter hibernation, as well as their daily activity patterns for each season, we established 58 cameras in areas likely to photograph wildlife, such as washes, game trails, or saddles along ridgelines.

Bears begin to enter their winter dens in December, and by January most bears are hibernating. Emergence begins in April and by the end of May bears have fully emerged. Actual dates of den entrance and emergence vary and are affected by temperature.



By using remote cameras to study black bears and other wildlife, BRI researchers are able to learn about their activity patterns and behaviors.

Daily activity was determined by looking for the time period during which the most pictures of bears were taken. The 3 seasons we used for analysis of activity were Cool (November – February), Warm-Dry (March – June) and Warm-Wet (July – October). We found that in every season but the cool season there was a similar activity trend, with peaks of activity in the morning (7:00am – 9:00am) and evening (7:00pm – 9:00pm). The warm-wet season, however, had a wider range of peak activity during the morning and evening times, and an increase in activity during non-peak times. Even during their most active times black bears were extremely elusive.

Park visitors who see black bears in west Texas should consider it a rare treat!

Summer 2015

Volume 8, Issue 2

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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



Leaving a legacy for conservation comes in many shapes and sizes. First and foremost, all of us should take time to develop an estate plan which may include a will, revocable trust, or equivalent. An estate plan helps identify who will pay your expenses and how your assets are distributed.

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From the Director—Leaving a Legacy for Conservation

Gift and estate planning is never an easy decision to make. But in today's financial world, many options are available to not only meet the financial needs of your family, but also to meet your philanthropic goals.

Priorities for planned giving should certainly start with your family. But many times your family has preceded you or your family does not require additional help from your estate.

Including the Borderlands Research Institute in your will or estate plan is a wonderful way to ensure your legacy continues to help our conservation efforts.

There are a variety of planned giving options that you may want to consider including:

- ◆ Designating the Borderlands Research

Institute in your life insurance policies,

- ◆ Providing a gift of an income stream with your investment portfolio,
- ◆ Including the BRI in your will or living trust, or
- ◆ Gifting of retirement benefits.

We would be honored if you would consider the Borderlands Research Institute in your will or trust.

Please consult your financial advisors or contact us directly at 432.837.8225 or the SRSU Development Office at 432.837.8892 on how we might facilitate your planned giving to the Borderlands Research Institute.

—Louis A. Harveson

Gonzalez Awarded Scholarship for Study of Bighorn

In April, a contingent of graduate students with the Borderlands Research Institute (BRI), along with their advisor and BRI director Dr. Louis Harveson, attended the 2015 Desert Bighorn Council Meeting in Borrego Springs, California.

Graduate students Thomas Janke, Josh Cross, and Carlos Gonzalez-Gonzalez each made a presentation of their thesis research. Janke presented "International Cooperation Vital to Bighorn Restoration"; Cross discussed "Movements of Desert Bighorns Translocated to the Santiago Mountains"; and Gonzalez presented "Survival Assessment of Desert Bighorn Translocations in Texas".

Each year, the council awards the prestigious Hansen-Welles Memorial Scholarship to provide funding for desert bighorn research projects. This year's recipient was Carlos Gonzalez-Gonzalez to support his research on west Texas desert bighorn sheep.



The \$8,500 Hansen-Welles Scholarship award will support Gonzalez's (left) dissertation research project "Spatial, Temporal, and Demographic Characteristics of Desert Bighorn Sheep Populations in Texas".

Donor Spotlight: Potts and Sibley Foundation

Since 2000 the Potts and Sibley Foundation has donated over \$500,000 to Sul Ross State University providing support for scholarships, endowments, and program development.

The Borderlands Research Institute has been one of the beneficiaries of the Potts and Sibley Foundation when they estab-

lished the D.J. Sibley, Jr., Graduate Fellowship at SRSU to support research endeavors in natural resource sciences.

Earlier this year, the Potts and Sibley Foundation reaffirmed their commitment to the Borderlands Research Institute when they donated an additional \$100,000 for program development.



Three species of horned lizards occur in the Big Bend: Texas horned (above), roundtail horned, and mountain short-horned lizard.

BRI Cohosts Desert Quail Management Workshop

The Borderlands Research Institute along with Texas Parks and Wildlife, Texas AgriLife Extension, and Texas Wildlife Association teamed up to host the Desert Quail Management Workshop held June 19th-20th.

Presenting at the workshop were noted quail biologists from across the state including representatives from Borderlands Research Institute, Texas Parks and Wildlife, Rolling Plains Quail Research Ranch, El Carmen Land and Conservation Co. LLC, Texas A&M University—Kingsville, and Texas A&M AgriLife Extension Service. The conference hosted about 45 attendees with diverse

backgrounds including landowners, researchers, agency personnel, and students.

The workshop consisted of presentations on scaled quail, Gambel's quail, and Montezuma quail. There was also a field component where attendees visited Elephant Mountain Wildlife Management Area to view ongoing habitat management activities geared toward reducing encroachment of woody plants and increasing forbs and grasses utilized by various wildlife species including quail. Post workshop responses from attendees were very positive and many left with a greater knowledge of quail ecology and management in the Trans-Pecos.

Over 90% of our funding comes through private donations!

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

SALE Sponsors Scholarship for Ron Jankowiak

Our friends at the San Antonio Livestock Exposition, Inc., (SALE) recently announced their intent to continue supporting the SALE graduate scholarship program with the Borderlands Research Institute. To date, SALE has sponsored 8 different graduate students with BRI through the very successful program! One of the current recipients of

the SALE scholarship is Ron Jankowiak. Ron is from Chappell Hill, Texas who received his B.S. in Range and Wildlife Management from Texas A&M University-Kingsville. Ron is working within BRI's Desert Quail Program where his research focuses on the comparative ecology of scaled and Gambel's quail in the Trans-Pecos ecoregion of Texas.



Through the support of a San Antonio Livestock Exposition Scholarship, Ron Jankowiak is studying the ecology of quail in west Texas.



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Consider Enrolling in BRI's Stewardship Program

The BRI Stewardship Program provides an annual stream of funding that enables us to better help landowners and managers to advance wildlife science and to educate future conservation leaders. Enrollment is available at the *Friend* level, by making a donation of \$1,000 or more, or at the *Patron* level, by donating \$5,000 or more to the BRI Stewardship Program.

At the *Patron* level, in addition to providing revenues for critical projects and operations, you will also have the opportunity to direct up to \$1,000 of your annual contribution to a research program of your choice. By donating at either level you will receive benefits such as a metal gate sign, special VIP invitations to BRI events, and acknowledgment in our annual report.

If you're a current member of our Stewardship Program, we encourage you to renew your commitment today. If you're not yet enrolled, but are interested in becoming a member, please see the enclosed envelope, or contact us at bri@sulross.edu or 432.837.8488 for more information.



Donations made through BRI's Stewardship Program expand our ability to conduct research, educate students, and share management information with land managers.