

# Desert Tracks

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



## RESEARCH IN ACTION:

### *Monitoring Scaled Quail Productivity through Drought*

Richard Temple, Carlos Gonzalez-Gonzalez, Jack Turney, and Louis A. Harveson

No species is more wide-spread and more beloved in the Trans-Pecos than scaled quail. They are one of the most ecologically and economically important species to the Chihuahuan Desert Borderlands. Unfortunately, their geographic range and population trends are declining.

Scaled quail densities typically vary from year-to-year, partly in response to rainfall. This irruptive behavior is known as the "boom-bust" phenomenon. Wet years produce more quail (boom) and dry years tend to produce fewer quail (bust). However, this long-term downward trend cannot be explained by variations in rainfall alone.

To better understand scaled quail population dynamics the Borderlands Research Institute (BRI) initiated a series of studies on 3 distinct ranches in the Trans-Pecos. Each 5-year study will gather baseline data on scaled quail ecology (diets, movements, nest success, recruitment, and survival), and are also designed to evaluate quail response to specific management strategies (water, feed, brush control, prescribed fire, grazing).

Although our data is preliminary, we have documented some interesting observations regarding productivity of scaled quail populations on the study sites. We have captured and banded over 2,500 scaled quail during the last 2 years. The drought of 2011 certainly had an impact on scaled quail populations. On one ranch we recorded total reproductive failure where we



*Scaled quail have the ability to lay, incubate, & hatch multiple clutches. However the extent to which scaled quail capitalize on this reproductive strategy is unknown.*

caught over 300 quail in the fall of 2011 with no juveniles being recorded. One year later on the same ranch, we captured over 1,100 quail and 77% of the quail were juveniles.

Quail populations have the ability to lay, incubate, and hatch multiple clutches. Although it is unclear at what level this phenomenon occurs in scaled quail, we did document multiple cases of double clutches on each of our study sites in 2012.

While scaled quail have the remarkable ability to maximize productivity through multiple clutches, it may take several years of average to above-average rainfall for them to fully recover from the drought of 2011.

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## *BRI Researchers:*

### **Dr. Louis A. Harveson**

- Dan Allen Hughes, Jr., Endowed Director and Professor of Wildlife Management
- *Specialization:* Big Game and Upland Gamebird Ecology and Management

### **Dr. Patricia Moody Harveson**

- Associate Professor of Conservation Biology
- *Specialization:* Population Ecology and Spatial and Systems Analysis

### **Dr. Robert J. Kinucan**

- Professor of Range Management
- *Specialization:* Disturbance Ecology and Population Plant Biology

### **Dr. Bonnie J. Warnock**

- Associate Professor of Range Management
- *Specialization:* Restoration Ecology and Rangeland Hydrology



For 5 years the Borderlands Research Institute has relied on the generosity of our readership to further our mission of "helping conserve the natural resources of the Chihuahuan Desert through research, education, & outreach."

## *From the Director—"Major Milestones for 2012"*

**W**ith a new year upon us, one can't help but reflect on the past year's accomplishments of the Borderlands Research Institute:

- Received our first endowed position through the generosity of Peggy and Dan Allen Hughes, Jr.
- Established 5 new graduate fellowships
- Established test plots at Sierra la Rana for the Trans-Pecos Native Plant Materials Initiative
- Hosted *Trans-Pecos Wildlife Conference*
- Hosted *Taking Care of the Trans-Pecos* with Former First Lady Laura Bush
- Increased our outreach capacity via website, Facebook, and research reports

- Launched 12 new research projects on a host of topics (bighorn sheep restoration, pronghorn nutrition, mountain lion predation, forb management)

- Graduated and placed dozens of students in the conservation field

- Expanded our support staff to better serve our constituents

None of these initiatives or projects could have occurred without your help. Each project relies on grants, gifts, and the generosity of our readership.

Thank you for all you are doing for conservation in the Chihuahuan Desert Borderlands!

We look forward to working with you in 2013,

—*Louis A. Harveson*

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## *New Faces at Borderlands Research Institute for 2013!*

**P**lease join us in welcoming our new staff to the Borderlands Research Institute (BRI).

**Chris Pipes** joined the BRI this past fall as Research Associate and Lecturer. Chris is no stranger to west Texas and was recently employed by the Nature Conservancy as the Steward of the Davis Mountains Preserve. Chris has a B.S. in Biology and a Master's from SRSU in Range and Wildlife Management.

**Rose Enos**, also a recent graduate of SRSU, has been hired as the Administrative Coordinator for the BRI. Rose will likely be the "voice on the other side of the line" when you contact the BRI via phone. Rose will also be helping ensure that all BRI operations are efficient and professional.

Lastly, we are pleased to welcome **Britt Peterson** to the BRI family. Britt grew up in Maine, but her travels have taken her to all corners of the globe. Britt started her work in South Africa in 2000 for a small, family owned and operated safari company. As Britt's passion grew, her path in Africa took her from the tourism industry to wildlife capture, relocation, and monitoring assignments. She qualified and registered nationally as a certified Field Guide, working with communities on business development projects and as a consultant for various conservation organizations. Britt holds degrees in Ecotourism Management and Business and is serving as the new Development Coordinator for the BRI.

## *Donor Spotlight: TransPecos Banks*

**T**ransPecos Banks is excited to be a Corporate Sponsor of the Borderlands Research Institute. Chartered in 1924 in Pecos, the bank has expanded across the Trans-Pecos region with two full service branches in Alpine and Marathon and subsequently opened a loan production office and corporate office in San Antonio.

TransPecos Banks' attention to providing friendly and high quality services to each customer sets them apart from the rest. Their innovative business solutions, unique

deposit products, and high-touch lending services have resulted in significant economic development.

With its strong West Texas roots, TransPecos Banks and its employees are proud to help sponsor various outreach activities of the BRI to further our mission.

For more information about Corporate Sponsorships, please contact us at 432.837.8488.

*Please consider making a tax-deductible donation to the Borderlands Research Institute to support our research, outreach, and educational programs.*

## *Bill Broyles, Big Bend, Bighorn Sheep, & the BRI*

**B**ill Broyles discovered the Big Bend later in his life. After 40 years in north and central Texas, Bill stumbled upon the Big Bend during a photography workshop in the 1990s. He immediately fell in love with the Big Bend and moved here in 1994.

His second career started as a volunteer for Texas Parks and Wildlife Department (TPWD) at Big Bend Ranch State Park (BBRSP), but he was quickly hired as a park interpreter. After 15 years with TPWD, Bill

retired (again) to spend more time traveling and photographing the Big Bend.

Still residing in the Big Bend, Bill has started his third career as a volunteer for TPWD, the Tierra Grande Chapter of Texas Master Naturalists, and more recently with the Borderlands Research Institute.

Bill currently serves as a volunteer technician for the BRI on the desert bighorn sheep project, where he helps monitor translocated bighorn sheep at BBRSP.



© Bill Broyles

*Bill Broyles captured this picture of desert bighorn sheep during his volunteer monitoring at Big Bend Ranch State Park.*

## *Potts and Sibley Foundation Establishes Fellowship*

**T**he Potts and Sibley Foundation recently established the D.J. Sibley, Jr. Graduate Fellowship at SRSU. The fellowship will provide funding to eligible master's level students enrolled in Range and Wildlife Management through the Borderlands Research Institute or students in Geology through the Rio Grande Research Center.

The Fellowship award was announced in late 2012 by Hiram Sibley, Chairman of the Potts and Sibley Foundation and former Advisory Board member of the Borderlands Research Institute.

The Potts and Sibley Foundation has been a longstanding friend and supporter of Sul Ross State University.



*Don't forget to look for the Borderlands Research Institute for Natural Resource Management on Facebook!*



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## *Dr. Bonnie Warnock Receives Sul Ross Teaching Award*

**D**r. Bonnie Warnock recently received the 2012 SRSU Teaching Award. Warnock received her B.S. and M.S. in Range Management from SRSU.

Warnock joined the Sul Ross faculty as an instructor in 2001 and became an assistant professor in 2003 when she received her Ph.D. from Texas A&M.

Warnock also ranches with her husband, Seth, near Marathon. Her family has been active in ranching near Marathon and Sanderson since the 1890s, and she brings her practical experience into the classroom.

At Sul Ross, she teaches undergraduate classes in soils, range ecology, fire ecology, watershed management, habitat management, range inventory, and plant identifica-

tion. Warnock also teaches graduate classes in restoration ecology and field biology.

In addition to her teaching duties, Warnock leads an active research program with the BRI focusing on rangeland restoration.



*Dr. Bonnie Warnock (center) is presented with the 2012 Outstanding Teaching award from Drs. Ricardo Maestas (SRSU President, left) and Rob Kinucan (right).*