

Desert Tracks

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



RESEARCH IN ACTION:

The Role of Rainfall in Scaled Quail Reproductive Success

Ernesto Garcia-Ortega and Ryan S. Luna

Scaled quail, or blue quail, are an upland game bird considered one of the most ecologically and economically important wildlife species in the Trans-Pecos. Their distribution encompasses roughly the western half of Texas, covering the western portions of the Rolling Plains, Edwards Plateau, and South Texas Plains ecoregions. Populations of scaled quail have been in decline since the 1960s.

Reproductive output is believed to be one of the most important factors driving scaled quail population size. With this in mind, we collected data on scaled quail reproductive success in order to predict changes in population dynamics. A total of 60 nests (25 in 2014, 35 in 2015) was found. The average clutch size was 11.7 eggs per nest. The average hatching success across both years was 43.0%. Hatching success was greater in 2015 (wet year) at 53.7% than in 2014 (average year) at 32.4%.

Locations of nest sites also changed with increased rainfall. In 2015 grass and forb abundance was higher across the landscape compared to 2014. During 2014, prickly pear was the nest cover of choice for 32% of the nest sites found. Tobosa accounted for 24% and tasajillo 12%. The remaining 32% of 2014 nests were distributed in a variety of brush species. With above average rainfall in 2015, 74% of the nests were located in grasses, including tobosa grass, Lehmann



Land managers can help to increase quail populations by creating habitat which will respond quickly to precipitation events and support increased hatching success. (Photo by Carlos Gonzalez)

lovegrass, white tridens, sand dropseed, plains bristle grass, and others.

These figures indicate how crucial the timing of precipitation is to scaled quail. Early rains give a jump start to the nesting period, but if rains come late, or not at all, scaled quail play catch-up, which results in low recruitment for that year. Rainfall is particularly important during the nesting season because it triggers the emergence of insects, which are the main source of protein for chicks during the first 6 weeks of their life.

Although it would be nice to be able to control precipitation events each year to help bolster populations, we must rely on creating good habitat that will respond quickly to rainfall and provide nesting cover that will facilitate high nest success and potential recruitment into the population.

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• Population Ecology & Spatial and Systems Analysis

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• Rangeland Ecology & Sustainable Ranch Management

Dr. Whitney Gann, Research Scientist
• Pronghorn Ecology & Restoration



From the Director—“Dedicated to Land Stewardship”

The Borderlands Research Institute is dedicated to the stewardship of our natural resources. We believe that all segments of society share the responsibility of stewardship.

An important part of our mission at the BRI is providing the best information available so that landowners, ranch managers, wildlife biologists, outdoor enthusiasts, hunters, school teachers, and any student of nature can be the best stewards that they can be.

To that end, the BRI recently partnered with our colleagues at the Texas Parks and Wildlife Department and authored a book that we hope promotes land stewardship. Our

friends at Texas A&M University Press recently released “*Woody Plants of the Big Bend and Trans-Pecos: A Field Guide to Common Browse for Wildlife*,” and we cannot be more pleased with the product.

We hope you find “*Woody Plants*” to be a valuable resource for identifying key forage species, helping you better understand species-habitat relationships, and we also hope the book inspires life-long learning about the Chihuahuan Desert Ecosystem.

Proceeds from book sales will benefit the outreach efforts of the BRI. So, please order your book today!

—Louis A. Harveson

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“Woody Plants” Book Now Available for Purchase

The new book “*Woody Plants of the Big Bend and Trans-Pecos: A Field Guide to Common Browse for Wildlife*” is now available on Amazon.com or at your local bookstore. The book provides descriptions of 87 woody plants of the region that are essential to wildlife. The field guide also contains over 250 color photographs including detailed pictures of leaves, flowers, fruit, and stems that make each plant unique.

The book “*Woody Plants*” is the result of a collaborative effort by range specialists and wildlife biologists from the Borderlands Research Institute and Texas Parks and Wildlife Department.

The book is designed to help identify the key forage plants for wildlife, particularly mule deer, pronghorn, javelina, elk, and desert bighorn sheep.

In addition to quality photographs and descriptions, the authors provide information on the browse quality, habitat associations, and management practices to enhance each plant.

West Texas landowners and biologists are hailing “*Woody Plants*” for filling a gap in Texas plant books and successfully combining information on the flora and fauna of the region in a practical and easy to understand format.

The book is a versatile and reliable resource for landowners, ranch managers, hunters, hikers, outdoor enthusiasts, and students with an interest in the plants and animals of Texas.

For more information about *Woody Plants* please email us at bri@sulross.edu.

Justin Yarborough Joins Borderlands Advisory Board

The Borderlands Research Institute is proud to announce the addition of Justin Yarborough to our Advisory Board.

Mr. Yarborough is a native of Alpine, Texas, who now resides in Austin, along with his wife, Ashley. He is President of the Alpine-based Big Bend Brewing Co., and he serves as a Captain in the United States Marine Corps Reserves.

Mr. Yarborough received his law degree from St. Mary's School of Law and his bachelor's degree from Texas Tech University, where he

walked-on to the football team. Prior to his current position with Big Bend Brewing Co. he held various positions in both the public and private sectors with Morgan Stanley, Texas House of Representatives, the United States Marine Corps, and most recently he served as a director at Kayne Anderson Capital.

Mr. Yarborough's family has also been in the ranching business for decades near Big Bend National Park, and his knowledge of the area will serve him well on the BRI Advisory Board.



Justin Yarborough, a native of Alpine and resident of Austin, is the newest addition to the BRI Advisory Board.

Dr. Whitney Gann Joins BRI Research Team

Please welcome the newest member of our research team, Dr. Whitney Gann! Dr. Gann is a post-doctoral research scientist, whose work with BRI will focus on the effective management and restoration of pronghorn to the Trans-Pecos region of west Texas.

Dr. Gann comes to BRI with extensive experience in wildlife research. She received her Bachelor's Degree from Texas A&M University, her Master's Degree from West Texas A&M University, and her PhD in Wildlife Sci-

ence from Texas A&M University-Kingsville. Her PhD research focused on the effects of nutritional enhancement and deer density on vegetation dynamics in the thornscrub of south Texas.

Since joining BRI in January, she quickly became involved with all aspects of BRI's ongoing pronghorn research, including participating in a translocation effort which brought 112 pronghorn from the Texas Panhandle to the Marfa Plateau to help boost populations.

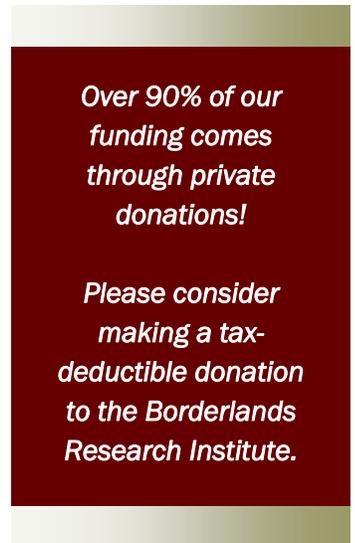
BRI Faculty Honored as Educator of the Year

Congratulations to Dr. Patricia Moody Harveson! Dr. Moody Harveson was recently awarded the 2016 Educator of the Year Award by the Texas Chapter of The Wildlife Society at their 52nd annual meeting in San Antonio.

Dr. Moody Harveson is an Associate Professor in Natural Resource Management and a

Research Scientist with the BRI. She has served as the coordinator and advisor of the Conservation Biology Program at Sul Ross State University for over 7 years.

The Educator of the Year Award "recognizes individuals for excellence in developing and disseminating natural resource information to students, landowners, and others."



Over 90% of our funding comes through private donations!

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



Dr. Patricia Moody Harveson accepts the 2016 Educator of the Year Award from Dr. Roel Lopez, President of the TCTWS.



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Save the Date: Trans-Pecos Wildlife Conference 2016

Mark your calendars for the 2016 Trans-Pecos Wildlife Conference. BRI is collaborating with Texas Parks and Wildlife Department, Texas Wildlife Association, Texas AgriLife, and the Natural Resource Conservation Service to host the conference at Sul Ross State University on August 3-5, 2016 in Alpine, Texas.

The Trans-Pecos Wildlife Conference is held every 3-4 years and offers a variety of seminars. Tentative sessions include big game management, wildlife-habitat relationships, upland and migratory bird management, and non-game management.

We are also developing a field day that will help demonstrate many of the principles discussed during the seminars. Topics may include comparative anatomy of game spe-

cies, plant identification, and watershed management.

In addition to the 1.5-day program set for Thursday-Friday, we are working with the Texas Deer Study Group to offer an extended session focused on Mule Deer Management (tentatively set for Wednesday night).

Details on the conference program, registration details, and hotel information will be forthcoming. Please continue to check our website and facebook page for updates.

