

DESERT TRACKS

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CONSERVING THE LAST FRONTIER

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Editor: Julie Rumbelow

Ecology of Two Desert Quail Species

Ron Jankowiak and Ryan S. Luna (BRI), Photos by Bill Broyles



A scaled quail nest constructed primarily of Tobosa grass.

ap­peal, quail are a key indicator species for the overall health of rangelands. However, their populations have been wan­ing over the last several decades. Basic life history in­vestiga­tions, such as on nesting and reproductive ecology, are lacking.

To better understand these two species, we performed a study from 2014 to 2015 to explore the survival and nesting ecology of sympatric female scaled and Gambel’s quail. We used walk-in funnel traps to capture the quail, and we radio-collared and monitored 72 individuals over the two-year period.

We observed a 66% and 53% survival rate for female scaled and Gambel’s, respectively. Twelve known mortalities were attributed to avian and mammalian predation. We also compared nesting ecology of the two species by evaluating

Hiking along riparian areas in West Texas you might hear the distinctive sound of flushing quail; but what species of quail is it? Both scaled and Gambel’s quail are an integral component of the Chihuahuan Desert landscape—ecologically, economically, and culturally. Apart from their aesthetic

72 nest sites. For scaled quail, we documented an average clutch size of 11 eggs per nest, 89% hatchability, 51% nesting success, and five successful double clutches. For Gambel’s quail, we recorded an average clutch size of 12 eggs per nest, 73% hatchability, 52% nesting success, and one successful double clutch.

Both species utilized a wide range of vegetation types for nest sites. Greater heterogeneity in nesting materials was observed compared to previous studies, and this increased diversity is likely a direct correlation with the ample precipitation received during the study period. Of the 72 nests, 49 nests (68%) featured a grass component, 22 of which were successful hatches. Increased availability of nesting cover, such as bunch grasses, likely contributed to nesting success.



Left: An alert female scaled quail. Right: A female Gambel’s quail perched atop a dead littleleaf sumac.



Far West Texas is known for its dark skies and ecological diversity. Respect Big Bend Coalition aims to guide responsible energy development to preserve what makes this area unique.

From the Director – Preparing for Wind, Solar, and O&G

The Greater Big Bend Region is world-renowned for its expansive landscapes, ranching heritage, dark skies, wildlife diversity, and iconic communities. Currently the region is experiencing unprecedented pressures, as it has been discovered as prime real estate for energy development.

BRI recently joined the Respect Big Bend Coalition, which is composed of land managers, conservationists, energy leaders, and community members. The coalition is not an anti-energy effort, but rather an effort to help foster thoughtful energy development that minimizes impacts to the fragile environment, communities, and culture of the Big Bend Region.

Respect Big Bend Coalition was organized and is supported financially by the Cynthia and George Mitchell Foundation—a Texas foundation that seeks innovative, sustainable solutions for human and environmental problems. Other coalition partners include Bureau of Economic Geology, Texas Agricultural Land Trust, Nicholas Institute for Environmental Policy Solutions, The Nature Conservancy, and others.

As part of this effort, BRI will host a series of landowner workshops and seminars over the next two to three years. For additional information go to respectbigbend.org.

—Louis A. Harveson

Billy Tarrant Joins BRI to Support Respect Big Bend Coalition

BRI is strengthening its commitment to stakeholder relations with a new stewardship services program that will support the recently announced Respect Big Bend Coalition. Veteran West Texas conservation biologist Billy Tarrant, a former Regional Director for the Wildlife Division of the Texas Parks and Wildlife Department (TPWD) will lead the effort.

to future generations,” said Tarrant. “After a fulfilling career with TPWD, it is an incredible opportunity to be given the chance to work with good friends and colleagues on this landmark effort. I have always taken pride in working with diverse partners along a common conservation thread, and this initiative falls directly in line with the professional values I hold dear.”

As Associate Director of Stewardship Services, Tarrant will develop and implement outreach activities including landowner workshops, stakeholder meetings, and research symposia. His primary responsibilities will focus on coordinating the engagement activities associated with the Respect Big Bend Coalition. He will also expand current stewardship services offered by BRI to help landowners manage their properties.

“I am gratified that the next phase of my career will keep me in West Texas working on a critical conservation effort that will shape how we leave the landscape we love



Billy Tarrant, Borderlands Research Institute Associate Director of Stewardship Services.

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Conservation Biology Chair Endowed by Davidson Charitable Foundation

Thanks to a \$1 million gift, the Borderlands Research Institute has endowed a Conservation Biology chair at Sul Ross State University. Dr. Patricia Moody Harveson has been appointed to the James A. "Buddy" Davidson Charitable Foundation Endowed Chair in Conservation Biology. The endowed chair serves as program leader, spokesperson, and chief strategist for the Conservation Biology Program at BRI.

"We're pleased to provide this gift that will support wildlife research at the Borderlands Research Institute," said Elaine Greenhaw, Secretary/Director of the James A. "Buddy" Davidson Charitable Foundation. "Throughout his life, Buddy Davidson supported wildlife,



James A. "Buddy" Davidson, the namesake of the new Endowed Chair in Conservation Biology at BRI and Sul Ross State University.

education and the environment, and this is a fitting tribute to the memory of his generous spirit."

Dr. Patricia Moody Harveson is a Research Scientist with Borderlands Research Institute and a Professor in the Department of Natural Resource Management at Sul Ross State University. She earned a Bachelor of Science in Biology from Tarleton State University and her Master of Science in Range and Wildlife Management from Texas A&M University. She earned her PhD in Wildlife and Fisheries Sciences from Texas A&M University where she was a Doctoral Fellow in the Hispanic Leadership Program in Agriculture and Natural Resources.

John B. Poindexter Endowed Fellowship Benefits Quail Research at BRI

The Borderlands Research Institute is pleased to announce the John B. Poindexter Endowed Fellowship in Quail Research. The \$400,000 endowment honors John Poindexter, a founding advisory board member for BRI, who has long been a champion for West Texas. The endowment was kicked off a few years ago by Poindexter's friends, who chipped in more than \$250,000 on his behalf.

The Poindexter endowment will support a graduate student who will focus their thesis research on quail ecology. Sustained funding from the endowed fellowship will also allow BRI to leverage additional funds for quail research from various conservation partners.

"The Borderlands Research Institute has established a reputation for groundbreaking research that has furthered our knowledge of wildlife in the Chihuahuan Desert," said Poindexter. "I'm grateful for the generosity of the many folks who have contributed to this fund that will help ensure the future of the critical work BRI is doing in West Texas."



The John B. Poindexter Endowed Fellowship in Quail Research will provide funding for graduate students studying quail at Sul Ross State University. Current and potential research includes studies on nesting ecology, population distribution, eyeworm infestations, and diet shifts associated with supplemental feed.

◆ If you would like to contribute to the fellowship in honor of John Poindexter, please contact us at bri@sulross.edu or send us a check with Poindexter Quail Fellowship in the memo. Our students appreciate your support! ◆



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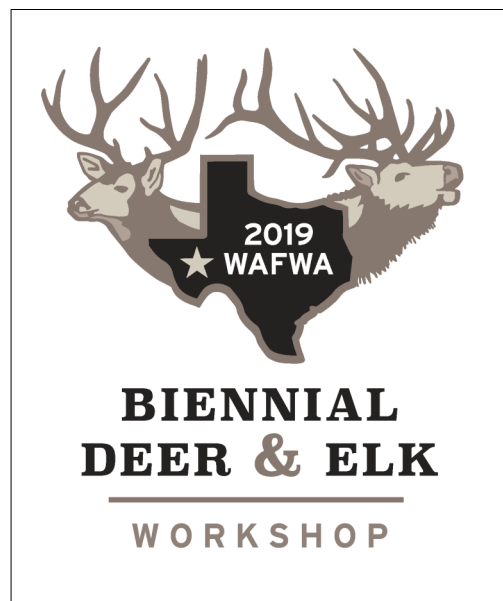
Deer and Elk Workshop Coming to Marfa: May 28-31

The 13th Biennial Western Association of Fish and Wildlife Agencies (WAFWA) Deer and Elk Workshop will be held May 28-31, 2019, at Hotel Saint George in Marfa, Texas.

The workshop will include a plenary session on the challenges and opportunities of managing deer and elk on private land; sessions on deer and elk research and management; a poster session; and several networking opportunities at evening socials and potential management-specific breakout sessions.

This event is hosted by Texas Parks and Wildlife Department, Western Association of Fish and Wildlife Agencies, and Borderlands Research Institute at Sul Ross State University.

Although the workshop is wildlife agency-focused, land managers and landowners are welcome to attend. For more information, visit wafwa.org/workshops/deer_and_elk_workshop.



The Borderlands Research Institute is a proud partner in this year's workshop. Participants will discuss deer and elk management across the western United States in a variety of sessions.