



Desert Tracks

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

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Editor: Patricia Moody Harveson

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BRI RESEARCHERS

Dr. Louis A. Harveson

- Professor of Wildlife Management
- *Specialization:* Big Game and Upland Gamebird Ecology and Management

Dr. Patricia Moody Harveson

- Assistant 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

RESEARCH IN ACTION:

Site Fidelity of Translocated Mule Deer in Mexico

by Jose de la Luz Martinez Garcia and Louis A. Harveson

Wildlife managers employ a variety of techniques to control, maintain, or maximize population numbers, depending on the specific situation. Translocation is the process of transporting and releasing wildlife to areas where their populations have diminished or been extirpated. One of the prerequisites of translocation is the ability of the animals to remain at the release site (site fidelity). We initiated a study to evaluate the success of translocating desert mule deer to historical habitats in northern Mexico. Our objective was to evaluate hard-release and soft-release techniques. Hard-release involves immediate release of animals whereas, soft-release involves an acclimation period in a holding pen.

Working with Texas and Mexico landowners and state and federal agencies, we translocated 128 mule deer to Rancho Guadalupe in northern Coahuila, Mexico. In spring 2007, 55 mule deer were translocated using the hard-release technique. In spring 2008, 73 deer were transported to the study site and held in a 40-acre pen for 12 weeks before release. Forty does were monitored in 2007 and 17 in 2008. Deer were located four times per week to determine movements and survival. We defined fidelity as deer that stayed within an 8-miles radius from the release site.

Deer released via soft-release tended to travel in groups as opposed to individually. This behavior may have influenced their ability to survive. Twenty of the mule deer



Graduate students Poncho Ortega (left) and Jose Martinez transport a mule deer doe to the processing station where they will affix a radio transmitter and prepare her for transport.

released via hard-release died within the first year, as opposed to 1 that died using the soft-release technique. The primary cause of death was mountain lion predation. Home ranges for soft-release deer were smaller (7,200 acres) than hard-release deer (8,600 acres). Similarly, soft-release deer were more loyal to their release site (75%) compared to hard-release deer (60%).

We recommend that future restoration of desert mule deer employ the soft-release technique. Although additional expenses are incurred using the soft-release (pen construction and feeding), deer formed larger groups, had higher survival, did not travel as far, and demonstrated higher levels of site fidelity.

Undergraduates Chosen for McNair Fellowships

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Three undergraduate students in the Natural Resource Management program were recently chosen to participate in the McNair Research Program at SRSU. The McNair program is designed to help students obtain the academic skills needed to pursue a doctoral degree. Selected students are mentored by SRSU faculty members and conduct independent research in their field of study. Chosen students attend a Summer Research Institute and share their research findings with the university community.

The McNair program provides room and board, tuition and fees for summer, research and travel expenses, and \$2,000 to participating McNair Scholars. The Natural Resource Management students chosen for McNair Fellowships include Dauna Hodnett



Undergraduates (l-r) Madeleine Cantu, Mark Tyson, and Dauna Hodnett will be mentored by BRI scientists and will conduct research projects in range, wildlife, and conservation biology topics in the Chihuabuan Desert.

(Odessa), Mark Tyson (Bryan), and Madeleine Cantu (Deer Park).

Research projects will begin in summer 2009. Dauna Hodnett, a junior conservation biology student, will be mentored by Dr. Patricia Moody Harveson on “Trans-Pecos hummingbird monitoring project.” Mark Tyson, a junior wildlife

management student, will be conducting the study “An evaluation of mule deer population estimation techniques” under the supervision of Dr. Louis Harveson. Working with Dr. Bonnie Warnock, senior wildlife management student Madeleine Cantu will be investigating “Wildlife use of three man-made water tanks.”

Range and Wildlife Management Programs Broaden

The range and wildlife management program at SRSU has a long-standing tradition focusing on the ecology and management of game species and their interactions with livestock and rangelands. However, in this fast-changing world we need better information

regarding the complex processes of habitat change, urban expansion, and decline of wildlife populations. To address those needs, SRSU hired Dr. Patricia Moody Harveson as Assistant Professor of Conservation Biology. Patricia brings expertise to the Borderlands Re-

search Institute in population ecology, nongame management, and the use of modern technologies like Geographic Information Systems, statistics, and population modeling. Patricia also serves as editor/coordinator of BRI publications and website.



Dr. Patricia Moody Harveson, Assistant Professor of Conservation Biology, recently joined SRSU and the Borderlands Research Institute.

Donor Spotlight: Mr. and Mrs. G. Hughes Abell

Hughes and Betsy Abell through the Buena Vista Foundation recently donated \$113,000 to the Borderlands Research Institute. Understanding the need for effective habitat management practices

that would benefit mule deer and other desert wildlife, Mr. and Mrs. G. Hughes Abell have sponsored the four year research project titled "Effects of Spike 20P on habitat use and movements of mule

deer and other wildlife in Trans-Pecos, Texas."

The Abells are owners of Llano Partners, Ltd. and own ranches in the Hill Country, West Texas, and New Mexico.

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

Governor Appoints Hughes to TPWD Commission

Dan Allen Hughes, Jr., BRI Advisory Board Member and west Texas landowner, was recently appointed by Governor Rick Perry to the Texas Parks and Wildlife Department (TPWD) Commission for a term to expire February 1, 2015. Hughes is an active sportsman and has been a long-time advocate for wildlife in Texas.

Hughes also serves as advi-

sor of the Texas A&M University College of Geosciences Advisory Council, is a member of the All American Wildcatters, Order of the Alamo, and Texas Cavaliers.

Hughes is president of Dan A. Hughes Company, LP. Dan Allen and his wife, Peggy, reside in San Antonio. They have three children: D.A. is 23 and a senior at the University of Ari-

zona, Will is 21 and attending Texas Christian University, and Elizabeth is 17 and a senior at Alamo Heights High School in San Antonio.

The Hughes have been the primary supporters of the "Apache Mountains Mule Deer Project" that is investigating movements and antler development in mule deer bucks (see Desert Tracks Volume 1, Issue 2).



Dan Allen Hughes, Jr., (center) was recently appointed to the TPWD Commission and will provide a strong voice for west Texas wildlife. Pictured above (l-r) are D.A., Peggy, Dan Allen, Elizabeth, and Will Hughes at the Apache Ranch in Culberson County, Texas.

Wildlife and Conservation Clubs Win Awards

The SRSU Range and Wildlife Club took top honors in the Professional Development Award at the Annual Meeting of the Texas Chapter of The Wildlife Society. The Professional Development Award is sponsored by the Texas Wildlife Association (TWA) and is awarded to the student organization that dem-

onstrates commitment to the wildlife profession by participating in field days and programs, internships, and outreach activities for youth. In addition to winning the award the R&W Club was awarded a check for \$2,000.

The Society for Conservation Biology (SCB) Club

also won an award for Outstanding Student Organization for 2008-2009 from SRSU. The SCB Club is advised by Dr. Patricia Moody Harveson and is only in their second year. The SCB Club sponsored and coordinated Earth Day 2009 this past April which was attended by over 200 community members.



Twenty-three SRSU R&W Club members recently traveled to Lubbock, Texas and received the TWA Professional Development Award.

*Borderlands Research Institute
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Trans-Pecos Prescribed Burning Association Update

The Trans-Pecos Prescribed Burn Association (TPPBA) was recently created to serve the Big Bend Region of Texas and is open to anyone interested in prescribed fire and fire management.

Goals of TPPBA are to provide: 1) training in fire behavior and prescribed fire application, 2) a community of landowners and individuals that can safely apply prescribed fire to rangelands, 3) a mechanism for certification as a certified prescribed burn manager and decreased liability for landowners, and

4) a means to effectively communicate with county officials how to safely manage fire.

The recent large scale wildfires of this past Spring have emphasized the need for proper fuel management in the Trans-Pecos. The TPPBA was formed to address this issue on private lands in the region.

The TPPBA is composed of 20 landowners and managers from the Big Bend. TPPBA recently hosted a training session June 2-5, 2009 in Marathon which

was attended by 16 members. To find out more, go to our website: <http://www.sulross.edu/brinrm>.



Officers for the TPPBA are (l-r): Stewart Schmidt and Homer Mills (Board Members), Walter Klein (Vice-President), Ed Holland (Secretary/Treasurer), and Brent Charlesworth (President).