

# COYOTE DIETS ON THE ROLLING PLAINS QUAIL RESEARCH RANCH, TEXAS

Mark A. Tyson<sup>1</sup>

Department of Natural Resources Management, Texas Tech University, Lubbock, TX 79409, USA

Dale Rollins

Texas AgriLife Research, Texas A&M University System, San Angelo, TX 76903, USA

Warren B. Ballard<sup>2</sup>

Department of Natural Resources Management, Texas Tech University, Lubbock, TX 79409, USA

Philip S. Gipson

Department of Natural Resources Management, Texas Tech University, Lubbock, TX 79409, USA

Lloyd LaCoste

Rolling Plains Quail Research Ranch, Roby, TX 79543, USA

## ABSTRACT

Predation is a major cause of mortality and nest failure for the northern bobwhite (*Colinus virginianus*) across its range. Coyotes (*Canis latrans*) are a potential predator of bobwhites and typically the most common mesocarnivore on bobwhite range in Texas. Few data exist regarding the importance of bobwhites in the coyote's diet in the Rolling Plains of Texas. We describe the seasonal and annual diets of coyotes on the Rolling Plains Quail Research Ranch (RPQRR), Fisher County, Texas. The RPQRR encompasses 1,902 ha of rolling terrain consisting of ridges and mesquite (*Prosopis glandulosa*) dominated rangeland; other common shrubs include netleaf hackberry (*Celtis laevigata*), littleleaf sumac (*Rhus microphylla*), lotebush (*Ziziphus obtusifolia*), wolfberry (*Lycium berlandieri*), chittam (*Bumelia lanuginosa*), catclaws (*Acacia* spp., *Mimosa* spp.), and agarito (*Mahonia trifoliolata*). Prickly pear (*Opuntia* spp.) is abundant on most sites. The study area received 58 and 64 cm of rainfall, respectively during 2009 and 2010, below the 30-year average of 76 cm for Fisher County, Texas. We collected, and examined 720 coyote scats from December 2008 to December 2010. Each scat was prepared for analysis by placing it inside a nylon mesh bag and washing it for 2 cycles in an automatic washing machine. We analyzed scat contents macroscopically and any guard hairs were analyzed microscopically to identify prey to genus. We also collected estimates of abundance for a range of potential food sources including bobwhites, small mammals, and insects. Preliminary analyses suggest coyotes were minor predators of quail and their diets mainly consisted of seasonally-available mast (e.g., tunas of prickly pear) and rodents. Variation in timing and amount of rainfall during our study allowed us to document how coyotes adjusted their diets to the resulting fluctuations in food availability (especially mast).

**Citation:** Tyson, M. A., D. Rollins, W. B. Ballard, P. S. Gipson, and L. LaCoste. 2012. Coyote diets on the Rolling Plains Quail Research Ranch. Proceedings of the National Quail Symposium 7:274.

**Key words:** *Colinus virginianus*, coyote diets, northern bobwhite, Texas

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<sup>1</sup> E-mail: Mark.Tyson@ttu.edu

<sup>2</sup> Deceased.