Spatial Analysis of Predator Abundance and Northern Bobwhite Nest Success in Southern Texas

Ian C. Trewella  
Texas A&M University

Chad J. Parent  
Texas A&M University

Fidel Hernandez  
Texas A&M University

Fred C. Bryant  
Texas A&M University

Follow this and additional works at: https://trace.tennessee.edu/nqsp

Recommended Citation

Available at: https://trace.tennessee.edu/nqsp/vol7/iss1/104

This article is brought to you freely and openly by Volunteer, Open-access, Library-hosted Journals (VOL Journals), published in partnership with The University of Tennessee (UT) University Libraries. This article has been accepted for inclusion in National Quail Symposium Proceedings by an authorized editor. For more information, please visit https://trace.tennessee.edu/nqsp.
SPATIAL ANALYSIS OF PREDATOR ABUNDANCE AND NORTHERN BOBWHITE NEST SUCCESS IN SOUTHERN TEXAS

Ian C. Trewella
Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, MSC 218, 700 University Boulevard, Kingsville, TX 78363, USA

Chad J. Parent
Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, MSC 218, 700 University Boulevard, Kingsville, TX 78363, USA

Fidel Hernández
Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, MSC 218, 700 University Boulevard, Kingsville, TX 78363, USA

Fred C. Bryant
Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, MSC 218, 700 University Boulevard, Kingsville, TX 78363, USA

ABSTRACT

Northern bobwhites (Colinus virginianus) have low nest success across their geographic range, and predation is the primary cause of failure. We evaluated the influence of relative abundance of predators on northern bobwhite nest success. We used data from a long-term radiotelemetry study conducted on 3 sites (800 ha each) in Brooks County, Texas during 2000–2007. We located bobwhite nests (n = 456) using radiotelemetry and estimated Mayfield nest success each year. We also estimated relative abundance of nest predators using scent stations (400 × 400 m grid/site) during the nesting season (May–Aug). We developed a gradient map of predator relative abundance and correlated this variable with location-specific bobwhite nest success. Mayfield nest success during the incubation period (23 days) varied between 0.43 and 0.60 during the study. Scent-station visitation rates (% stations visited/night) ranged from 0 to 67%.


Key words: Colinus virginianus, nest success, northern bobwhites, predation, south Texas

1 E-mail: ictrewel@gmail.com