

2012

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

Trewella, Ian C.; Parent, Chad J.; Hernandez, Fidel; and Bryant, Fred C. (2012) "Spatial Analysis of Predator Abundance and Northern Bobwhite Nest Success in Southern Texas," *National Quail Symposium Proceedings*: Vol. 7 , Article 104.

<https://doi.org/10.7290/nqsp07ckjj>

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. Trewella¹

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%.

Citation: Trewella, I. C., C. J. Parent, F. Hernández, and F. C. Bryant. 2012. Spatial analysis of predator abundance and northern bobwhite nest success in southern Texas. *Proceedings of the National Quail Symposium* 7:271.

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

¹ E-mail: ictrewel@gmail.com