



2017

Distance Sampling to Assess Post-Grazing Northern Bobwhite Recovery in South Texas

Rachel A. Smith

Texas A&M University, Kingsville

Leonard A. Brennan

Texas A&M University, Kingsville

Fidel Hernández

Texas A&M University, Kingsville

Humberto L. Perotto-Baldivieso

Texas A&M University, Kingsville

Follow this and additional works at: <http://trace.tennessee.edu/nqsp>



Part of the [Natural Resources and Conservation Commons](#)

Recommended Citation

Smith, Rachel A.; Brennan, Leonard A.; Hernández, Fidel; and Perotto-Baldivieso, Humberto L. (2017) "Distance Sampling to Assess Post-Grazing Northern Bobwhite Recovery in South Texas," *National Quail Symposium Proceedings*: Vol. 8 , Article 72.

Available at: <http://trace.tennessee.edu/nqsp/vol8/iss1/72>

This Bobwhite Population Estimation is brought to you for free and open access by Trace: Tennessee Research and Creative Exchange. It has been accepted for inclusion in National Quail Symposium Proceedings by an authorized editor of Trace: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

DISTANCE SAMPLING TO ASSESS POST-GRAZING NORTHERN BOBWHITE RECOVERY IN SOUTH TEXAS

Rachel A. Smith¹

Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Howe Agricultural Bldg. #205, Kingsville, TX, 78363, USA

Leonard A. Brennan

Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Howe Agricultural Bldg. #205, Kingsville, TX, 78363, USA

Fidel Hernández

Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Howe Agricultural Bldg. #205, Kingsville, TX, 78363, USA

Humberto L. Perotto-Baldivieso

Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Howe Agricultural Bldg. #205, Kingsville, TX, 78363, USA

ABSTRACT

Northern bobwhite (*Colinus virginianus*) require habitat structure with substantial grass cover for nesting, predator avoidance, and thermal refuge. During the past 2 decades, many land managers have reduced or completely eliminated livestock across South Texas rangelands with the goal of improving bobwhite habitat. How bobwhites respond to post-grazing habitat recovery is unknown. Our objective is to investigate how bobwhites respond to the vegetative changes following removal of grazing. Our study is being conducted on a private ranch in Jim Hogg County, Texas and involves 3 different areas of post-grazing habitat recovery: a 1,246 ha area rested from grazing for 15 years; a 1,133 ha area rested 3 years from high grazing (7 ha/AU); and a 1,254 ha area rested 3 years from moderate grazing (14 ha/AU). Distance sampling surveys will be conducted on the 3 areas during December 2015 and 2016. Transects will be placed 400 m apart spanning all 3 study. Data collected during these surveys will be used to estimate bobwhite density on the 3 study areas and will be compared between sites and years. We hypothesize that the 15 years post-grazing area will have higher and more evenly distributed bobwhite density than the 3 years post-grazing at high intensity or medium intensity area.

Citation: Smith, R. A., L. A. Brennan, F. Hernández and H. L. Perotto-Baldivieso. 2017. Distance sampling to assess post-grazing northern bobwhite recovery in South Texas. National Quail Symposium Proceedings 8:263.

Key words: *Colinus virginianus*, distance sampling, northern bobwhite, post-grazing recovery, south Texas

¹E-mail: rachelasmith14@gmail.com Telephone: 979-739-0557

© 2017 [Smith, Brennan, Hernández and Perotto-Baldivieso] and licensed under CC BY-NC 4.0.