

# Detectability of Rio Grande Wild Turkeys in South Texas

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*Abstract:* Detection estimates of Rio Grande wild turkey (*Meleagris gallopavo intermedia*, RGWT) are lacking and little research has focused on the development and evaluation of survey techniques for estimating RGWT populations. The objective of this study was to compare RGWT detection rates using aerial (Cessna 152) and roadside surveys in different vegetation communities in south Texas. Decoy flocks were randomly set 0–100 m from roads prior to surveys. Detection rate was estimated as ( $n$  decoys observed/ $n$  decoys available)  $\times$  100. Surveys were conducted in February and March 2007 and in November and December 2007. Mean detection rates for roadside surveys differed numerically among heavy brush 39.9% (95% CI; LCL = 32.1; UCL = 47.9), mixed brush 52% (LCL = 39.7; UCL = 64.3), and open range 64% (LCL = 51.3; UCL = 77.2). Aerial survey detection rates were similar for heavy brush 29.9% (LCL = 14.4; UCL = 43.9), mixed brush 35% (LCL = 16.1; UCL = 54.3), and open range 52% (LCL = 34.7; UCL = 68.6). Mean detection rates between aerial and roadside surveys were similar numerically within vegetation communities. For the second season, roadside surveys differed from the first season results only for heavy brush 12.6% (95% CI; LCL = 7.39; UCL = 17.9), mixed brush 34.47% (LCL = 27.36; UCL = 41.57), and open range 45.93% (LCL = 38.19; UCL = 53.67). Aerial survey detection rates were similar for heavy brush 23% (LCL = 17.07; UCL = 29.03), mixed brush 36.7% (LCL = 28.9; UCL = 44.43), and open range showed a significant difference ( $P > 0.05$ ) over heavy brush 45.93% (LCL = 38.19; UCL = 53.67). Results of this study will allow managers and researchers to adjust detection rates to create more reliable estimates for RGWT populations across south Texas.

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