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SUMMER SURVIVAL OF TRANSLOCATED NORTHERN BOBWHITE IN THE NEW JERSEY PINE BARRENS: PRELIMINARY RESULTS

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ABSTRACT

Northern bobwhite (*Colinus virginianus*) have declined precipitously since the 1960s, largely due to habitat deterioration and changes in land use; some of the highest declines have been observed in the Mid-Atlantic States. In other regions, attempts to augment bobwhite populations have been relatively successful using translocation. As part of a long-term restocking program, focal areas for translocation in the mid-Atlantic region were identified by biologists at a National Bobwhite Conservation Initiative (NBCI) workshop. The objective of this project is to evaluate translocation to restore bobwhite populations in the New Jersey Pine Barrens, a focal area designated with a high ranking for potential bobwhite recovery. The study site, Pine Island Cranberry Co., is the largest privately owned land tract (>6,000 hectares) in New Jersey, with a mix of shortleaf pine (*Pinus echinata*), pitch pine (*P. rigida*), scrub oak (*Quercus ilicifolia*), and early successional forbes and grasses. For three consecutive years (2015–2017) prior to breeding season, we are translocating eighty radio-collared bobwhite (40 male, 40 female) from wild populations in southwest Georgia. These individuals are radio-located 3–5 times per week, year round. We are collecting microhabitat measurements (e.g., groundcover, understory, and canopy closure) and monitoring nests to characterize habitat use, nest site selection, and nest fate. Survival is estimated using staggered-entry Kaplan-Meier analyses and a Cox proportional hazard model in R to determine covariates of daily mortality. Six of 14 nests were successful in summer 2015 (66 known hatches), and 0 of 12 nests were successful in summer 2016. Snake depredation was the cause of 41.7% of failed nests in 2016. Preliminary analyses produce a five-month adult survival rate of 0.455 (SE = 0.138) for summer 2015 and 0.270 (SE = 0.0516) for 2016. Our planned third summer (2017) of data collection will increase our understanding of these disparate survival estimates.

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Key words: *Colinus virginianus*, northern bobwhite, translocation, radio-telemetry, nesting, survival, habitat use, habitat management

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