

IMPROVING QUAIL MANAGEMENT THROUGH STATISTICAL MODELLING

Erynn M. Call

Department of Fisheries and Wildlife Sciences–Missouri Cooperative Fish and Wildlife Research Unit, 303G ABNR Bldg., University of Missouri-Columbia, Columbia, MO 65211, USA

Ronald D. Drobney

Department of Fisheries and Wildlife Sciences–Missouri Cooperative Fish and Wildlife Research Unit, 302 ABNR Bldg., University of Missouri-Columbia, Columbia, MO 65211, USA

Thomas V. Dailey

Missouri Department of Conservation, 1110 South College Avenue, Columbia, MO 65201, USA

ABSTRACT

Northern bobwhite (*Colinus virginianus*) populations have been declining since the 1960s. Anthropogenic influences, particularly farming, are suspected to be 1 of the most significant contributors to loss of landscape diversity and thus the present scarcity of bobwhites. Because of habitat degradation on private lands, management on public areas is critical to sustain populations. To understand the efficacy of management efforts, information relating survival and nest success to habitat characteristics within intensively managed areas is needed. Within Missouri, management is currently based upon data collected from poor habitat on private agricultural land in northeast Missouri. Population dynamics within agricultural habitat are not necessarily relevant to intensively managed areas. Our research was conducted on 3 conservation areas that focus on bobwhite management. This poster will present population data that will eventually be incorporated into a model identifying factors that affect bobwhite reproduction and survival. Data were derived from radiomarked birds that were located 6 days/week to document survival. We monitored incubating birds until nest termination to determine nest success. The probability of surviving to the end of the first field season (1 May–30 Sep 2000) was 0.021 (SE = 0.08, $n = 95$). At the end of the first field season, 6 birds survived, 55 died, 12 slipped the radio collar, and 22 were censored due to disappearance of the radio signal (unknown fate). Overall nest survival during the 22-day incubation period was 54.8%. Results of this research will provide managers insight into the effects of habitat manipulations on bobwhite populations.

Citation: Call, E. M., R. D. Drobney, and T. V. Dailey. Improving quail management through statistical modelling. Page 218 in S. J. DeMaso, W. P. Kuvlesky, Jr., F. Hernández, and M. E. Berger, eds. Quail V: Proceedings of the Fifth National Quail Symposium, Texas Parks and Wildlife Department, Austin, TX.