

Dahlgren, D.K., T.A. Messmer, E.T. Thacker and M.R. Guttery. 2010. Evaluation of Brood Detection Techniques: Recommendations for Estimating Greater Sage-Grouse Productivity. *Western North American Naturalist* 70:233-237.

Abstract: Obtaining timely and accurate assessment of sage-grouse (*Centrocercus* spp.) chick survival and recruitment is an important component of species management and conservation. We compared the effectiveness of walking, spotlight, and pointing-dog surveys to detect radio-marked and unmarked chicks within broods of radio-marked hens in Utah. Walking surveys detected 72% of marked chicks, while spotlight and pointing-dog counts in number of marked and unmarked chicks detected ($P = .057$). Spotlight counts were slightly more time efficient than pointing-dog surveys. However, spotlight surveys were nocturnal searches and perceived to be more technically arduous than diurnal pointing-dog surveys. Pointing-dog surveys may offer greater utility in terms of area searched per unit effort and an increased ability to detect unmarked hens and broods.