



Michigan Department of Natural Resources Wildlife Division

Ruffed Grouse Drumming Survey Preliminary Results^a

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^aThe results will be final when the annual ruffed grouse status report is published.

Introduction

Like many wildlife species, ruffed grouse breed in the spring. Males create a well-known springtime drumming sound by rapidly beating their wings while standing on a stationary object. They start slowly and it sounds like loud thumps at first, but as the wings build up speed it sounds like a drum or a 2-cycle engine starting. The sounds are created by the compression of air between the birds' bodies and their wings.

The Wildlife Division takes advantage of this spring ritual by conducting roadside routes to count the number of drums heard. Routes were established in locations of known grouse populations. Each route has ten listening stops that are consistent from year to year. The number of ruffed grouse drums heard during a fixed time interval (four minutes) is recorded at each stop. Data are summarized as the number of grouse heard per survey route.

Preliminary Grouse Drumming Results for 2009

Due to personnel limitations, the ruffed grouse drumming survey was not conducted statewide in 2009. However, 42 drumming routes were run in the Upper Peninsula. In 2008, 50 drumming routes were run in the Upper Peninsula. A paired t-test was performed using data from the 42 routes run in both years. There was no difference ($P=0.6$) in the average number of drums heard per route between 2008 (18.9) and 2009 (18). Because routes were not conducted in Ontonagon and Gogebic counties in 2009, results do not represent those counties.

Ruffed grouse populations have exhibited ten-year cycles in abundance over much of Canada, Alaska, and the Great Lakes states of Wisconsin, Minnesota, and Michigan (Rusch et al. 1999). Many factors affect grouse populations including changes in habitat and food availability. It is unclear why the population cycles occur, but many theories have been proposed (Rusch 1989). The population in Michigan is expected to peak in 2010 (Figure 1).

Literature Cited

Rusch, D.H. 1989. The grouse cycle. Pages 210-226 in S. Atwater and J. Schnell editors. Ruffed Grouse. Stackpole Books. Harrisburg, Pennsylvania, USA.

Rusch, D.H., J.R. Cary, and L.B. Keith. 1999. Pattern and process in ruffed grouse cycles. Midwest Fish and Wildlife Conference. 61:238.

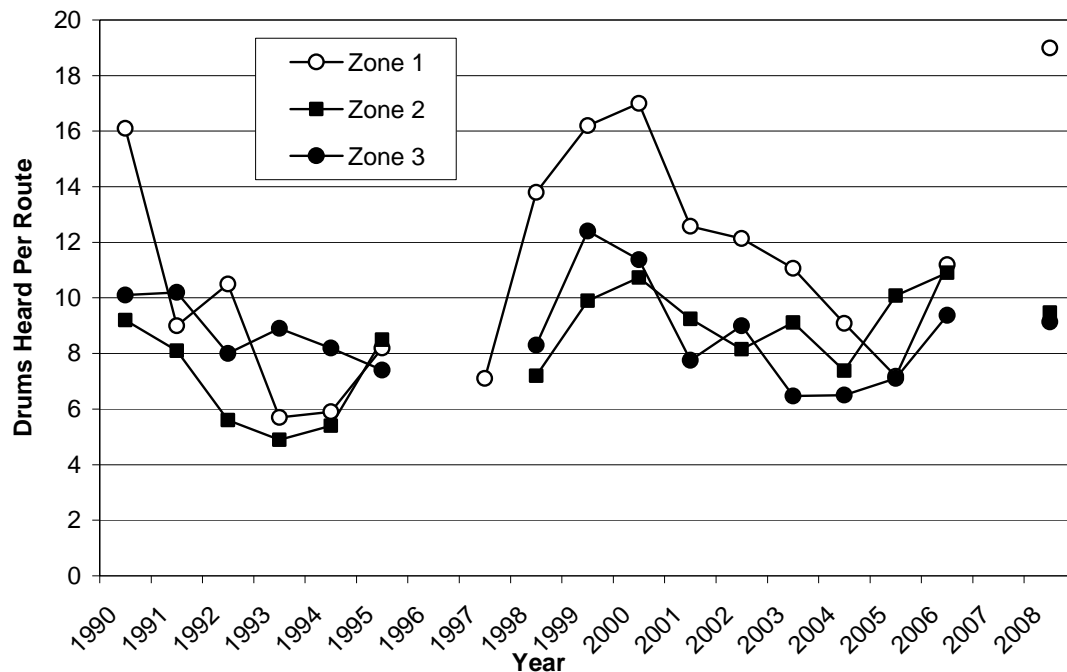


Figure 3. Ruffed grouse breeding population index (drums per route) in Michigan, 1990-2008. Drumming surveys were not conducted statewide in 1996, 2007, and 2009, and were conducted only in Zone 1 in 1997.