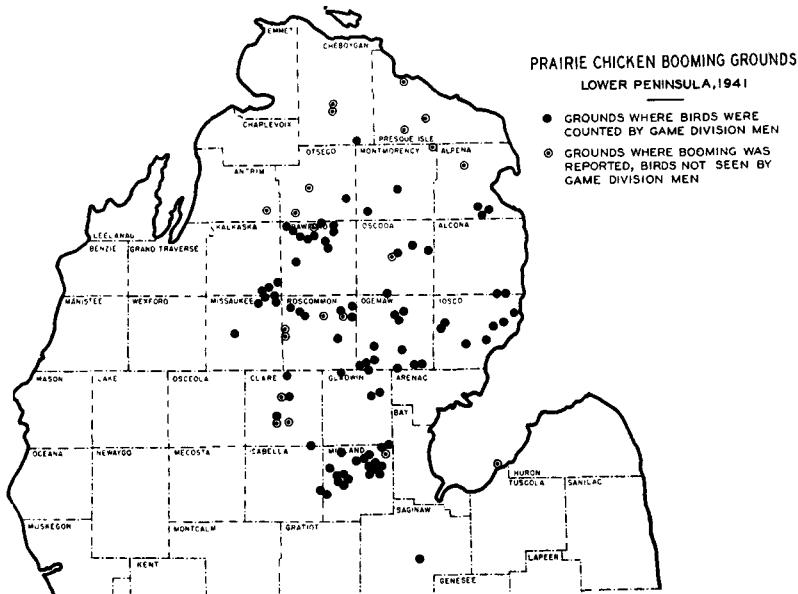


A PRAIRIE CHICKEN BOOMING GROUNDS SURVEY IN CENTRAL MICHIGAN

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THE Greater Prairie Chicken (*Tympanuchus cupido americanus*), an important game species in northern Michigan, attracts scientific and popular attention because of its picturesque and colorful courtship display. This display, commonly known as "booming," from the sound produced at the climax of the performance, is useful to field men attempting to determine numbers of birds on an area, since it renders the birds conspicuous and easy to approach.

When male Prairie Chickens are actively booming, the investigator may drive through suitable country stopping every half mile or so to listen for the sound, which under extremely favorable conditions has been heard four miles away. Direction of the sound from successive listening posts, together with varying intensity, guides the observer to the booming ground. In northern Michigan, at least, the grounds can



frequently be reached by car, since suitable clearings are usually associated with roads or trails. In effect, the car serves as a movable blind to which the cocks, intent on their display, are largely indifferent. From the car an accurate count can often be made of the birds on the site.

Actively displaying birds are males; some males, however, may be

quiet, and therefore indistinguishable for the time from females. Since inactive birds are easily overlooked, total counts should be made by flushing the chickens from the booming grounds. When a booming ground must be approached on foot from a distance, less accurate counts are to be expected, as the birds often flush before the investigator obtains a good view of them.

In 1938, field men of the Game Division, Michigan Department of Conservation, made a survey of Prairie Chicken booming grounds in the northern part of the state. In no sense complete, it nevertheless promised well for the method. A similar survey was carried on in 1940, and a much more complete effort was made, with increased personnel, in 1941. Distribution of the booming grounds found in the Lower Peninsula by this latter survey is shown on the accompanying map. I believe that the map represents the main breeding range of the species in the Lower Peninsula. The western limits, however, are not yet clearly defined as the strip from western Isabella County to Grand Traverse County and northeastward to Emmet County needs more detailed study. Certain "holes" in the map represent areas that merit more attention.

These "holes" were to have been filled in in 1942, but travel curtailments restricted the work to a partial check of the 1941 observations. Since the 1941 data are the most complete available, they may be summarized briefly:

Birds were counted by Game Division men on 85 booming grounds; 21 additional sites shown on the map were reported by other observers or were approximately located by the sound of booming, but were not actually visited. A total of 472 males, 57 females was reported from the 85 grounds, but sexes were not always distinguished accurately. Totals represent maximum counts, since 40 booming grounds were visited more than once. While five was the most commonly reported number of cocks present on a single site, two of the grounds had only one present and nine only two. These single birds were observed only once each and possibly were not on established grounds; all but three of the instances of two birds on a site represented two or more observations. The maximum number of males on a booming ground was 31.

Of the 85 sites visited, 32 were on a knoll or hill, the remaining 53 on level ground, of which 11 were low and wet. Seventy-one of the grounds were within a mile or less of cultivated fields, 53 within $\frac{1}{4}$ mile, and 25 on cultivated land. The sites were generally open, mostly covered with sparse grass or other herbs; only 24 of the grounds showed woody growth other than sweet fern. Such woody growth consisted chiefly of scattered shrubs or small trees typical of the surrounding country.

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