

## THE NESTING OF HOWARD'S GROUSE

WITH ONE ILLUSTRATION

By J. R. PEMBERTON

THE WRITER pleads guilty to a charge of being slightly elated in announcing that on May 21, 1928, he took a set of five eggs of Howard's Grouse, the southernmost geographic race of *Dendragapus obscurus* and which has been given the name *howardi* by Dickey and van Rossem (CONDOR, xxv, 1923, p. 168). These birds inhabit the crests of some of the higher mountains from the southern extremities of the Sierra Nevada through the Tehachapi Range to Mount Pinos in southern Kern County, California. Mount Pinos is the southernmost recorded station. This high peak reaches an altitude of 8826 feet and is beautifully wooded with several species of pines and the silver fir. The grouse live only on the higher portions of the mountain and I believe have not been observed below 7800 feet, which is the elevation of the old sawmill. In a sense their range coincides with



Fig. 94. NEST AND EGGS OF HOWARD'S GROUSE.

the areas where the silver fir reaches its best development. It is not known whether eggs of this race have been collected in other parts of the bird's range, but it seems certain that this set is the first to be taken on Mount Pinos.

The upper part of Mount Pinos consists of a rather gently rolling table land. The automobile road ends at an altitude of 7800 feet, and in a walk of two miles the summit, 8826 feet, is reached. The mountain is really a broad ridge with an exceedingly steep north slope which falls 3800 feet in a distance of three miles to San Emigdio Creek. This creek runs in an east and west valley paralleling the longer diameter of Mount Pinos.

Egg collectors in southern California have been unable to figure the date on which eggs should be looked for. Most of us have been searching during the last

week in May or in early June. The birds at this time have been heard hooting quite commonly on the flatter upper part of the mountain, and searching has been conducted there. On June 6, 1927, O. W. Howard, for whom the bird is named, found a grouse chick only a few days old at an altitude of 8400 feet on this upper flat part of the mountain, and at that time many birds were heard hooting in that locality. This find enabled us to place the best date for eggs at about May 10. This year, Dudley DeGroot and the writer spent May 21 looking for eggs, being unable to make the trip earlier.

The interesting discovery was made that at that time no birds could be located on the higher part of the mountain, while well down on the cliff-like north slope many hooters could be heard. We believed that the hooters were near the sitting females, so we spent our time clambering about on this steep slope. Many tons of rocks were rolled down but no birds could be flushed. Finally, as I was about ready to give it up and about 200 feet below the rim of the steep slope at about the 8200 foot level, I flushed a female at a distance of about 50 feet and immediately saw the eggs. The bird left with a great whirr, lit on the lowest branch of a large pine about 100 feet distant, clucked a few times as she walked to the end of the limb, and then flew noiselessly downhill. The location was near a point where a hooter had been circling all day and although he moved his location many times it was now evident that he had been in sight of the sitting female all the time.

The nest was in clear open ground and without the slightest cover for the eggs. A depression less than an inch in depth seemed to have been scratched out of the dry sandy soil and lined rudely with bits of pine bark, a few needles and vegetable trash. Many feathers lay loosely with the eggs. It was a poor excuse for a built nest and was, rather, a simple resting place for the eggs.

The five eggs were nearly ready to hatch and the embryos had feathers an inch long. They resemble miniature turkey eggs but with larger spots. The ground color is light buff while the spots are auburn, using Ridgway's *Color Standards and Nomenclature*. The more prominent spots are 2 and 3 millimeters in diameter and one egg has two spots 8 and 10 millimeters in diameter. The measurements are 49 x 36, 49 x 37, 50 x 36, 51 x 36, 51 x 37; the average is 50 x 36.5. Grinnell, Bryant and Storer in *Game Birds of California* give the average size of 12 eggs of the nearest relative of this bird, the Sierra Grouse, as 51.6 x 35.5.

I believe the following generalizations can be made. Howard's Grouse nest on Mount Pinos during the first week of May, and full sets will be found before the 15th. The nests are fairly well down on the steep north slope and placed in entirely open ground in sunny spots well covered from the distance by observation trees. Nests ought to be found by search near where hooters are active. In early May the snow banks will eliminate all unlikely ground. As soon as the young are able to walk they are led to the flatter upper slopes of the mountain where there is good cover and more food. It is obviously unsafe to attempt a statement concerning the number of birds which live on Mount Pinos, but one can say that there are not many and I believe that the number is less than one hundred.

*Beverly Hills, California, September 10, 1928.*