

gallinaceous appearance, some seventeen inches long and of stout build. The extraordinary "drumming" noise made by the male bird to call the female is familiar to everyone who frequents the woods in the spring. To produce this remarkable sound the bird stands on some slight elevation, such as a log or a stone, and strikes the air strongly with his outstretched wings. The first four or five strokes, occurring at intervals of about half a second, sound like blows on a rather dull bass drum, but they rapidly get faster and faster until the sound becomes continuous like the roll of a snare drum. The whole performance lasts, perhaps, ten seconds, and is repeated every few minutes for some time.

In the northern part of its range this bird has another peculiar habit, that of tunnelling into a snowdrift for protection against the intense cold. In order to begin its tunnel it sometimes walks around, deliberately burrowing here and there into the snow with its head until it finds a suitable place, but its general procedure is to dive from an elevated branch or directly off the wing into the drift, the momentum of its plunge being sufficient to drive it some little way into the soft snow, and thus enable it to start its tunnels conveniently. Then, at a depth of three or four inches under the surface, it scratches out a horizontal or slightly descending passage about two feet long, the end of which it enlarges into a roughly spherical chamber eight or ten inches in diameter, the removed snow completely blocking up the entrance tunnel. Here the bird, apparently preferring hunger to cold, may spend several days if the weather is severe. Except for one mark where the tunnel begins, the surface of the snow is quite undisturbed, and no one would ever suspect that a live warm bird was concealed in the drift. To leave its burrow, the bird simply bursts out through the overlying layer of snow, springing into immediate flight.

One day last January, when the thermometer stood 10° below zero F., I stopped a moment while snowshoeing through the woods to examine a curious isolated mark on the snow. At that instant a "partridge" burst out just at the toes of my snowshoes, and with a great whirr of wings disappeared among the spruces. The mark I had noticed was the entrance to the tunnel, and from its appearance the bird had evidently been three or four days in its burrow, and would doubtless have remained there longer if my approach had not frightened it out. Dry, soft snow is, of course, an excellent non-conductor of heat, and even in the very coldest weather, the ruffed grouse is no doubt quite comfortable in its immaculate chamber.—CHARLES MACNAMARA, in *Knowledge*, Aug., 1912.