

THE DRUMMING OF THE RUFFED GROUSE.

BY LYNDS JONES.

Appropos of the revived discussion in regard to the manner in which the male Ruffed Grouse produces the well known drumming sounds, I wish to contribute some personal experiences with this bird in my old home woods in central Iowa. Unfortunately, this part of Northern Ohio, Lorain County, has seen about the last of this interesting and disappearing grouse.

The old home grove was divided into two tracts by an intermittent stream with its grassy bottom. The small eastern portion covered but three hills, the much larger western portion covered eight hills, all of which radiated from a neck of the highland scarcely one hundred yards wide, yet the semi-circumference of these eight hills, as they faced Sugar Creek to the north and west, was fully a mile and a half. The west part of the woods always boasted two breeding pairs of Ruffed Grouse, both of which occupied the central hills for drumming. Their drumming places varied from year to year, but were never near the bottoms of the ravines. Nor did I find them upon the hill-tops, rather a little to one side of the top, generally to the right, as one faces the creek.

The woods was wholly deciduous, hardwoods predominating. In about 1850 the large timber had been almost intirely cut off, but here and there old logs, the remains of trees sometimes five feet in diameter, lay rotting. Here and there one of the original giants stood, overtopping the second growth for nearly half its height. A few large boulders lay exposed on the hill-tops. Huge stumps were numerous, most of them well rotted. In most places the second growth was thick, with the hazel bushes and berry vines making a dense thicket, except where the wild plum and crab-apple thickets occurred.

In this woods the grouse could be heard drumming at almost any time of day, from March well toward November, though after May the drumming was far less frequent, and sometimes practically ceased during July and August.

As a boy I often stole near the drumming grouse, but was

too much afraid of the big noise to venture closer than to feel the impact of the air as the bird drummed. His choice of a drumming place in the midst of a thicket made it impossible to see him until within less than twenty feet. But with ripening years fear of the noise and of the bird which could produce such a noise, lessened, until curiosity to see the bird in the act of drumming entirely overcame fear.

The method which I found successful in most cases was as follows: The particular drumming place was noted when a bird began a series of drummings, and a start toward it was made boldly, but as the place was approached caution became necessary. While still some hundred yards away I made no move forward until the bird began to drum, then rushed forward with as little noise as possible as long as drumming continued, stopping abruptly behind some cover when the long roll ceased, to await the next performance. When within a short distance of the performer, no advance was made until the beginning of the long roll. In this way it was usually possible to approach within ten feet of the bird, provided some tree or stump furnished a good cover to leeward, where his movements could be observed closely and continuously. By this means I have seen the bird performing on logs, on stumps, at the base of large trees, on stones, and on the ground. I have seen them from behind, from the front, and from the side, at distances of ten feet and less during the whole drumming performance. I have even captured the bird just as he was finishing the long roll, by rushing upon him during the later part of the roll.

One may be hardly certain just what the bird does while drumming, but some things he evidently does not do, and some inferences may be confidently stated. In the first place, he clearly does not strike the side of the log or stone upon which he may be perched, or the tree or ground, with his wings. If he did the wing strokes would certainly leave some marks. The logs chosen are usually more or less covered with moss, and the parts of the log where the birds perform are not worn, but on the contrary, the moss at this place is not disturbed. It has been stated that the sound is produced by the wings striking the sides of the body. Unless my eyes always deceived me this is not what the birds which I watched did, but the wings

were carried well in front of the body when the blow was delivered, the bird assuming a perpendicular position while drumming. Such a strong downward stroke would seem likely to drive the bird into the air. I have tried to produce the sound by striking a wing against a surface like a log or stone, and failed to produce more than a faint echo. Striking the wing against feathers upon a bird's body produced no better results. Some have argued that the wings striking together would produce the effect. I am not prepared to say that the wings do not touch; possibly they do, but feathers striking together could hardly produce the strong concussion which the drumming is accompanied by. When one is within twenty feet of the performing bird the concussion is sufficient to force the clothing against one's body as the discharge of a cannon does. This concussion must be accounted for by the advocates of the theory that the bird produces the sound by expelling air from the lungs at the instant of the wing stroke. Does not the concussion of the air forced out from between the wings by the great force of the stroke produce the boom?