

## THE DANCE OF THE PRAIRIE CHICKEN

BY JOHN S. MAIN

We awoke at five o'clock, dressed hurriedly and started out at once for the blind. The sky was cloudy, the wind fresh and chilling. Keeping to the main road for a short distance, we presently turned off and followed a lane, flushing a pair of Hungarian Partridges by the wayside. At the end of the lane, we left the car and headed north, our path lined by a row of venerable willows. Open country stretched before us as far as the eye could see, and also toward the east, where the land lay low and flat to the river, a mile away.\*

From a distance we could hear the mellow whistle of an Upland Plover, and from overhead the winnowing of a snipe. A pair of Short-eared Owls were sweeping the fields with their singularly rapid wing-beats, while from lagoons toward the river we could see ducks rising—Mallards, Teal, Baldpates, Pintails, and Shovellers. It was easy to understand why this was once a favorite resort of the Indian tribes, and of the mysterious people who built the pre-historic village of Aztalan, a few miles down the river.

As soon as we emerged on the prairie we could make out with our glasses the blind, and near it some cocks, whose booming we had been hearing, but so wet was the intervening ground from recent rains that much wading was required before we could reach the relatively dry area surrounding our observation post. Long before we arrived the birds had flown off, so that it was a matter of awaiting their return, sitting on a bench in the blind and watching through loop-holes left for the purpose. We could hear booms in the distance and were fearful lest our birds had chosen some other spot, but before long they began coming back, one at a time, stalking warily through the grass, pausing every few steps to look around and size things up. They kept on coming, however, until finally they were again in front of the blind, the nearest scarcely twenty feet away. When all were accounted for, there proved to be eleven of them, all cocks—this, according to our host, being the number that has commonly been present during the month or more since his observations began.

The so-called booming ground comprised a space some twenty-five yards in diameter and differed from the surrounding marsh only in the absence of the tall, dried stems of the prairie-dock, with which the latter was sparsely covered, and in the fact that the shorter and thicker

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\*The date was April 24, 1936; the place, Favill's Grove, near Lake Mills, Wisconsin; the host, Mr. Arthur Hawkins.

blue-joint had been well flattened down. Beneath this grass the ground was quite soft, differing in this respect from the locations usually chosen for these assemblies.

As each cock appeared on the scene he at once began his exhibition. He lowered his head, puffed out his feathers, and raised his tail to show its white under-coverts, the wings being held down, stiff and straight, so as to scrape the ground. He distended the hidden sacs on the sides of his neck until they were the size and color of oranges. He stamped the ground like a maddened bull. He made sudden rushes at a real or imaginary opponent. He gave sudden, upward leaps, often making complete revolutions in mid-air. When not otherwise engaged, he contented himself with walking slowly about with all the dignity of a turkey gobbler. There were two cocks off by themselves at either end of the line, out on the wings of the stage, and it was interesting to observe that they went through the same rôles as the others, each with complete absorption in his own performance. One of these took first prize as a high jumper, clearing the bar at a good four feet. During all this time every one of the cocks was giving vent to a varied assortment of booms, toots, calls, and cackles, which, combined with similar outbursts from all the others, produced an indescribable medley of sound.

Encounters were frequent. Every now and then one cock made a rush at another, whereupon the two stood face to face, each apparently trying to stare the other out of countenance. In this, one would eventually succeed and his opponent would turn and move slowly off, crestfallen. Often one or both would assume a crouching attitude, as though each thought to gain an advantage in this manner, like opposing tacklers in a line of scrimmage. On only a few occasions did they actually come to blows, at which times they flew at each other and came together with a resounding clash of wings. In the other cases it seemed largely a game of bluff. In fact, it was, at any time, difficult to tell whether the combatants were in earnest or were merely play-acting.

On two or three occasions a cock from outside, possibly the same one each time, tried to join the party, but each time was promptly attacked and driven off by the others. Who was he? Was he a former member of the inner circle who had been expelled for some cause, or was he an outsider seeking admission? If the latter, we can but wonder how and when the roll was completed and the doors closed to new arrivals.

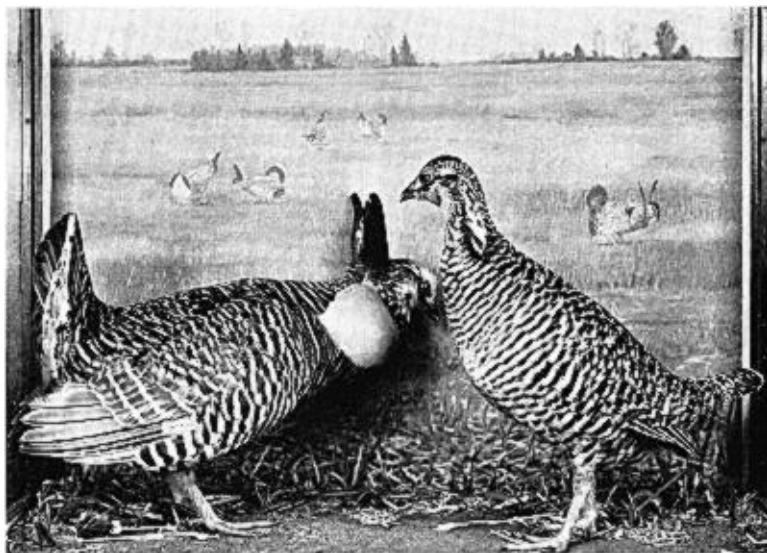


FIG. 5. Mounted specimens of the Greater Prairie Chicken.  
From the Milwaukee Public Museum.

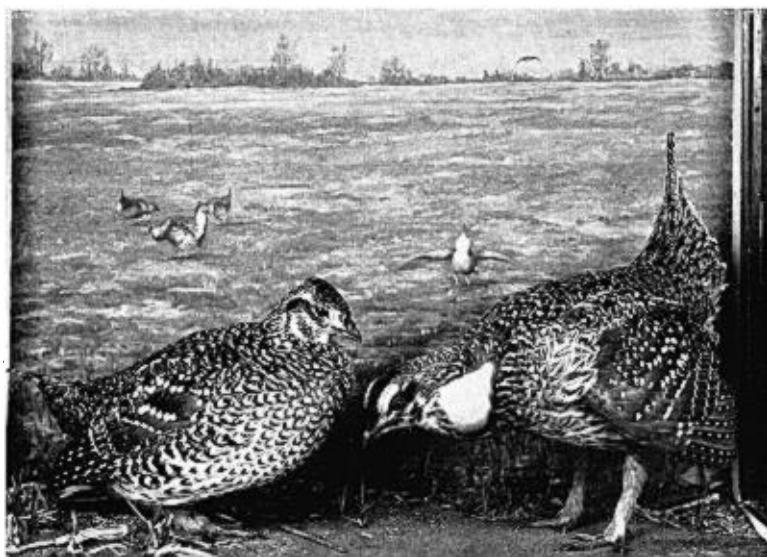


FIG. 6. Mounted specimens of the Sharp-tailed Grouse.  
From the Milwaukee Public Museum.

After we had watched for some fifteen minutes, we saw that a hen had arrived, and had become the center of interest for several of the cocks. These cocks did not show any inclination to fight, being apparently content with showing off. Their efforts were not noticeably different from what they had been or from those of the other cocks, who went on just as before, each intent on his own affairs and wholly unmindful of the lady's presence. She, meanwhile, seemed equally indifferent to the attentions of her suitors. She remained motionless most of the time and apparently took no notice of them whatever. Experience may have taught her that this is by no means an ineffective way of attracting admirers, but at any rate none of the males was given preference and no mating took place.

An interesting question arises as to the presence of this hen. Our host states that out of a dozen mornings spent in the blind this spring, he saw hens on the booming grounds only twice—one at the time mentioned above, and two at a later date. This is in accord with the testimony of other observers, many of whom have never seen a hen present, while few appear to have seen more than one at a time, and these usually at long intervals. What does this mean? Why was the hen there? Was it for the purpose of mating? Being unsuccessful this time, would she come again? Had she been successful might she have come again? Is a single mating sufficient to fertilize a clutch of eggs? Does mating usually take place on or off the booming ground?

Intriguing as these questions may be, it is the behavior of the cocks themselves that excites our curiosity most; and this brings us to inquire the meaning of the whole performance. It should be, one would suppose, a fascinating employment for an ornithologist. Though many observers have described the scene, not one has yet offered an interpretation that is wholly satisfactory, nor has any one made any serious attempt in that direction. It has usually been thought sufficient to define it as a courtship ceremony attended by nuptial displays and more or less fighting between rival males—a description which could be applied just as well to the courtings of countless other species, from bluebirds to penguins. Another authority has stated that these exhibitions are merely an outlet for the surplus physical energy incident to the mating season, but he does not explain why such single-handed performances as the drumming of the Ruffed Grouse or the thrilling head-dives of the male Marsh Hawk do not come in the same category. We would all probably agree that the mating instinct is the actuating force behind our little drama, but the question as to why it expresses itself in this singular form is still unanswered.

Let us take the fighting, for example. Many of the older writers such as Audubon, Nuttall, and Brewer believed that this was the primary purpose of the gathering. According to Audubon's lively description, the males "to the number of a score or so, before the first glimpse of day lightens the horizon, fly swiftly and singly from their grassy beds, to challenge and to fight the various rivals led by the same impulse to the arena." ("Birds of America", Vol. V, p. 96). Modern observers, however, generally agree that the fighting plays a less important rôle and this opinion was well borne out in our own case by the fact that no encounters took place until the cocks had been for some time on the field. Accounts also differ as to the character of the fighting. The battles are sometimes described as extremely fierce, with much shedding of blood and feathers, but in our case, at least, such fights as took place were hardly worthy of the name. They were very brief affrays and though some spirit was shown there was never the least sign of injury or exhaustion. Again, most observers have assumed that these battles are analogous to those commonly indulged in by rival males contending for a female—battles in which one or the other is decisively whipped and thereby eliminated for all time as a contender. In the case of the prairie cocks, however, there is an important difference in that there are usually no females present. Moreover, this analogy fails to account for the fact that the same combatants return each morning throughout the mating season, and re-enact the same scenes as though nothing had happened.

Finally, there is the rest of the performance, the displays, the dancing, and acrobatics. We saw, as already stated, but one hen, and while it is possible that there were others concealed in the grass near by, it was doubtful if such was the case. If, therefore, we should assume that the whole show is staged for the benefit of the hens, we must be ready to believe that the actors would continue day after day, and week after week, playing to empty seats. Moreover, even though the cocks thought that members of the other sex were looking on, we would still be in the dark as to what they were trying to accomplish. We can not believe that any one of them had in sight any particular lady-love whom he was seeking to captivate. Was he, then, going through his act on the mere chance that some susceptible female might be enticed from her hiding place? If so, he should have borne in mind that she would be equally exposed to the solicitations of his rivals. Or was he hoping so to charm his imaginary admirer that when he had finished his act and left the stage he could make an easy conquest? Or are all these antics, as they are called—the puffing out

of feathers, the stamping, leaping, and rushing, and the threatening attitudes—are they only meant to intimidate the other cocks and thus better his prospect of victory over them? Similar instances are innumerable; for example, a cat raising its back, a bristling dog, a gorilla pounding its chest, the hunting cry of a tiger.

It may be that we shall never find a satisfactory answer to the questions here raised, but if we are to attain any measure of success we should not overlook the really distinguishing feature of the performance, which lies in there being not one but several participants. It is a *communal* affair, and if we are to explain the conduct of the individuals we must first ask ourselves why they come together. Whether there is any end, important to the welfare of the species, which is better served by them if acting as a group than if acting singly. One thing we know, that there is a contagion in numbers whereby emotions are greatly aroused, well shown in the actions of a mob, or in the war dances of the Indians. It is also known that the physical forces respond to the increase in emotional ardor, so that feats of strength are performed which could never be done without the emotion. So, in the case of our prairie cocks, we must assume that their passions and vigor are, at such times, inordinately heightened, and it does not seem difficult to believe that some relation may exist between this condition and the all-important mating.

Edmund Selous, in his notable book entitled "Bird Watching", makes the suggestion that actions which were at first performed for a definite purpose may in time become only a ceremony. To quote his words: "In this case we should have a pure antic or display, the reason for it being unobvious and its origin a mystery." If anything is needed to corroborate this theory we need only cite the yearly flights of Golden Plovers by land and sea, which can only be explained as a habit that has outlived its original purpose and the environment under which it was formed. To say that the dance of the Prairie Chicken may be a similar case of survival, though of less ancient origin, may be unwarranted; but it would seem, at least, that some student of ecology might well make an effort to determine whether it serves any useful end; or whether it is only a ceremony, an empty ritual whose meaning lies hidden somewhere in the past history of the species.

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