

to the station very frequently, always together, but the male usually leading the way. They must have made twelve to fifteen visits, or even more. Since the 5th they have settled down to the more usual six or eight visits a day or less. They seem entirely satisfied with each other's companionship, and there is no reason to suppose, barring the death of one of them, that they will not continue mated indefinitely, corroborating our permanent-mating theory for this species.

It has happened, also, that several times during the past year or two—at least three cases come to mind—we have observed, away from our stations, a pair of Nuthatches (that is, one male and one female) travelling about together. In one instance they were feeding on the ground beside a wooded highway. Our banded Nuthatches are not at all averse to descending to the ground at times in the search for food or water. One day when the supply of sunflower seeds had fallen very low and the search for them was more desperate than usual, the female Nuthatch was observed to pick up leaves and toss them aside, lest they might be hiding something of value. Their amusing little way of hitching along on the ground, with their short legs is characteristic.

RUFFED GROUSE NO. 332430 OF THE STONE BIRD SANCTUARY

BY LESTER W. SMITH

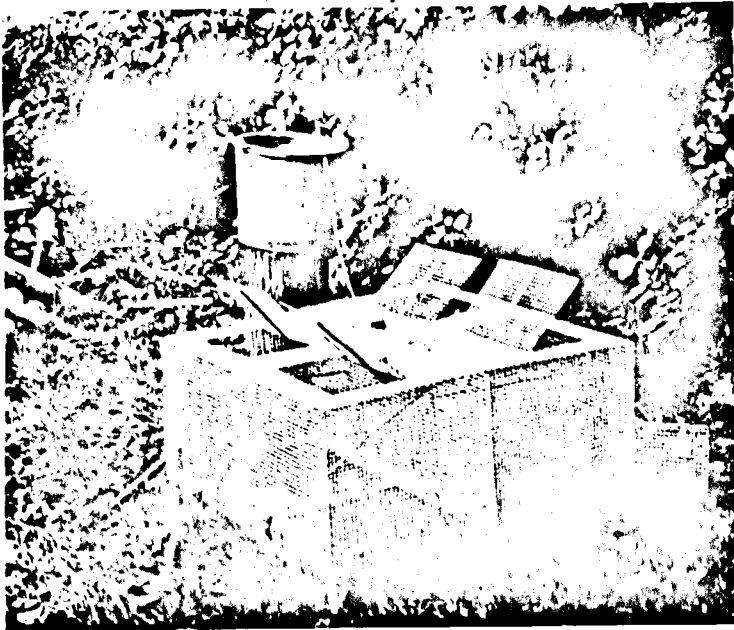
DURING November, 1925, occasional reports came to me of a Grouse that walked about quite close to observers and made no effort to fly away, but would walk or run off a short distance when approached. It was seen at various times and places, and I tried to locate it but without success. Finally a neighbor who had been given the privilege of cutting the dead chestnut trees in the Sanctuary told of having seen the bird almost daily. It would come to him and walk about quite near him after he had been chopping a short time. This gave me a clue on how to attract the bird. On November 20th, hearing the sound of his axe, I asked him if he had seen the bird. He answered, "Not to-day, but yesterday I had to push her out of my way so that I could swing the axe." After this I began scouting about in the brush in widening circles, and after a few minutes spied the Grouse walking slowly, with head held low, apparently inspecting me. At first

Madam Partridge showed fear or caution, and circled about at a distance of say ten feet. There was no snow on the ground and she could not be hungry, as she would now and then help herself to a partridge berry or cinquefoil leaf, and occasionally choose a few buds for food. Gradually she came nearer, finally coming to my hand, from which she took several sunflower seeds, but only to reject them. At any quick movement she would retreat a short distance, but she gradually edged up to my extended hand again. Opening several of the sunflower seeds, I placed the meats on my finger-tips and again held out my hand. After a few minutes of tempting and calling she seemed to become convinced that I was harmless, so on she came and ate the offering rapidly, and afterwards she ate hemp and cracked corn. Her capacity for food seemed remarkable.

I revisited the bird in company with Mr. Arthur Clark, who followed her about with a movie camera, and additional movies of the Grouse were taken during the winter.

The bird showed a strange reluctance to fly, and it was not until several days had passed that I proved that she could do so. Afterwards when alone with the bird, she would fly readily to my arm or even my gun-barrel. Yet there were exceptional days when she refused to fly, and when my hand was raised, after calling her to me, she would refuse to fly or even look upward, but would step on my shoe and peck viciously at my trouser-leg. A slight motion of either foot or hand would start her into action like that of a fighting cock. With wings spread and fluttering, she would strike with her beak, even to draw blood from my hand. This offensive attitude increased during the winter, and often, when I was showing her to visitors, she would turn back into the woods and leave us. I could by extending my hand near her and then running with short steps, induce her to chase me back to the open spaces or trail. Thus on several occasions the Grouse was teased back within range of the camera.

Fortunately this bird kept to a certain section of the Sanctuary woodlands of about fifty acres, through which extended a cleared trail or bridle-path. Only on rare occasions would she be found near this trail, but she could with patience be called there by chopping or pounding on a log, a stump, or a living tree. On rainy days she failed to appear. On bright days, after feeding for a while from my hand, she would wander off, occasionally picking a berry or bud, finally settling down under some sheltering pine or cedar, and loosen up her feathers and rest. Later in the winter a disposition to shift



*Upper Figure: Feeding Scratch Feed to a Wild Ruffed Grouse.
Lower Figure: A Four-Compartment Drip Warbler Trap.*

to more distant sections of the Sanctuary seemed to possess the bird, and there would be days and even weeks that she was missing. Several times I felt sure that something had happened to her.

As it was important to band the bird, I made a daily search for her, and finally March 8th she was given band No. 332439. I found the bird at one of the feeding-stations, where a laborer was at work, and the thought came to me that here was a chance to secure some help and possibly to lessen the blame or resentment by attaching some one else to the job. So as the bird busied herself with the seeds in my hand, I clasped her firmly, and, calling the workman, asked him to hold the bird while I prepared and applied the band, and this plan was carried out.

When released she fled a distance of about one hundred and fifty feet into the brush, and refused to be called back, nor was she seen until three days later, when she showed up at the same spot. No amount of tempting could bring her to me, and I believed I had lost her confidence forever. These appearances at odd dates continued, and ten feet was as near as she would trust me until March 20th, when she again ate from my hand. During this period of fear she would fly away a short distance if closely followed, something she could not be persuaded to do before the banding. Formerly, when a Crow or a Jay gave calls that might signify danger, the Grouse would raise her crest and show signs of alertness and readiness to fly if real danger threatened. Only once before had she flown away, when a truck entered the Campus and two men bearing a large wooden box approached her unknowingly.

Again over three weeks passed without a sight of the bird, or until April 14th, when she was located in a new section of pine woods, and soon became as tame and pugnacious as before banding. She would follow me for long distances through the woods, and thus I led her back to the section where she was first discovered, hoping that there she would select a mate and raise a brood. It was difficult to get away from her, for she would have followed me way to Boston, I believe. Only by quick dodging or hiding when the bird had been led into thick cover could I steal away.

In early May she was rarely seen, but two male Grouse were drumming in this piece of woods, and I had hopes that courtship had commenced. Though I searched these woods repeatedly, my banded Grouse could not be found. It was, however, seen by a visitor on May 15th. Three female Grouse were seen with broods during the summer, but among

the thick foliage no leg-band was visible, and all behaved in the manner natural to this species. I have hopes, when family cares are over, that Grouse No. 332439, on hearing the sound of my axe on a dead tree, or my hurrying foot-beats on the woodland trail, will again have a desire for human companionship, or better yet, to influence her family likewise to show themselves, and have their pictures taken.

Babson Park, Wellesley, Mass.

THE BEARING OF A KNOWLEDGE OF NEST-SPACING AMONG BIRDS ON THE WORK OF THE BIRD- BANDER

BY CHARLES L. WHITTLE

It has not been explicitly defined just what is meant by the "return" of a bird to the place of its birth for nesting purposes, nor is it easy to do so. We speak, for example, of the failure of young birds, meaning in this case the young of the previous year, to return to their place of birth. How close to the place they were born must the young birds nest the following year to constitute such a return? Must they be found nesting in the same old box in which they were born, in the same old apple tree, barn, yard, or immediate neighborhood, to comply with the prevalent view or views of the meaning of the word?

Some of the bird-banders use the word "return" in quite a different sense, meaning a bird which reappears at the banding-station where it was banded after an absence during which it migrated to and from its summering or wintering area. Even here there is a certain looseness of expression since banding-stations vary greatly in size from large ones of ten thousand square feet or more in area down to only three hundred square feet, such as my own in Cohasset, Massachusetts.

In the following discussion only the first-mentioned use of the word will be considered, the purpose, and a very pressing one at the present juncture, being to call attention to the need of securing answers to the following questions: What is the average nest-spacing distance that each species of birds tolerates, and what bearing does this nest-spacing