

Having now distributed her eggs reasonably well between two nests, she proceeded to incubate both. Feeling inquisitive as to how well she could succeed, we left the eggs exactly as she put them. Maybe we should have had still more interesting results if we had placed three eggs in each nest. Although it is practically certain that a "split personality" of this sort is a lethal behavioral mutation, since otherwise species would be known that regularly operate with a plurality of nests, the weather was warm, the box was snug, and we thought she might have a chance. Some days one clutch would be warm, sometimes the other. It seems certain however that the four eggs got more attention than the two.

The first egg hatched on July 4 in the four-egg nest. Two more, in the same nest, hatched on the following day, and the fourth egg hatched on July 6. As soon as one young hatched, the bird ignored the two-egg nest and the eggs were cold. On July 6 we took them out and broke them open. They appeared to have been incubated effectively for two or three days.

It thus appears that a double menage of this type is likely to reduce the output of offspring by one-third or one-half.

When the eggs hatched, the young were necessarily for some days in the nest where the eggs had been, but by July 17 we sometimes found all the young in the other nest, or two in each nest. This continued until July 21 when all four young left the box.

The photograph shows the two nests well lined with feathers. A few hours after the young left not a single feather was left in either nest. We believe they began to disappear before the young left but kept no careful account. What happened to them is not clear.—F. W. PRESTON, *Preston Laboratories, Inc., Box 149, Butler, Pennsylvania, July 6, 1957.*

Cedar Waxwings and Fox Sparrows feed upon Multiflora Rose.—Multiflora rose (*Rosa multiflora*) is generally considered something of a "starvation food" by some workers who have observed and made use of it in plantings. Johnson (1951. *Jour. Wildl. Mgmt.*, 15(2): 221-222), and Spiegel and Reynolds (1954. *Trans. Nineteenth N. Amer. Wildl. Conf.*: 153-155) demonstrated, however, that the hips are nutritious to pheasants. Rosene (1950. *Jour. Wildl. Mgmt.*, 14(3): 315-319) noted that the seeds were carried by water and by birds. At the Patuxent Research Refuge, Prince Georges County, Maryland, casual observations suggest that when there is a crop of hips, Mockingbirds (*Mimus polyglottos*) subsist almost entirely on multiflora rose throughout the winter.

Most of the rose plantings at the Refuge are mature enough to bear a large crop of fruits and there was an abundant supply of these hips during the winter of 1955-56. On February 1, the first flock of Cedar Waxwings (*Bombycilla cedrorum*) for the winter was noted on the Conservation Farm and a perceptible build-up in numbers occurred as the month wore on. On February 23, Leonard Llewellyn made a count of 1,325 birds as they settled on a two-wire power line that extends across the farm. This was a record concentration for the Refuge. Most of the waxwings did not remain after that date, the subsequent counts ranging between approximately 150 and 400, and the last record being about 180 on March 2.

To get an indication of the amount of seed dispersed in places where the birds were frequently seen perching, a piece of burlap sacking, measuring 12¼ square feet was left under a small tree for 6½ hours. At the end of that time there were 16 regurgitations containing 100 seeds or nutlets on the burlap.

A check of tall-fescue sod under 7 large trees which covered 2½ acres as a loose stand and which were used as perches by the birds, showed that large amounts of seed had been deposited, and had worked down into the grass. A randomly selected square-foot of ground close to one of the rose fences was sampled under a large willow oak (*Quercus*

phellos), the crown of which covers about $\frac{1}{20}$ of an acre. Fifty-two nutlets were counted in the square foot.

Fox Sparrows (*Passerella iliaca*) are observed in fair numbers along woodland margins bordering the fields, but on March 17, 1956, there was a noticeable increase of them. Two days later, they were widespread on the farm and particularly noticeable in the rose hedges. From 5 to 10 of these large sparrows fed daily under the above-mentioned willow oak, suggesting they might be taking advantage of the seeds dispersed by the waxwings. Seven Fox Sparrows and one Song Sparrow (*Melospiza melodia*) were collected from this area and their gizzards were examined by A. C. Martin. Six of the Fox Sparrows contained from 60 to 100 per cent multiflora rose seeds and the other about 5 per cent. About 5 per cent of the contents of the Song Sparrow included rose seeds.—FREDERICK C. SCHMID, *U.S. Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife, Laurel, Maryland, February 15, 1957.*

Nesting of the Black-backed Three-toed Woodpecker in Michigan.—On May 31, 1957, I found a nest of the Black-backed Three-toed Woodpecker (*Picoides arcticus*) in north-central Michigan. During the next few weeks, the nest was visited by a number of people, and I have drawn bits of information from several of them to prepare as complete an account as possible on this little-known species. This was the first nest reported for the Lower Peninsula of Michigan and the third for the state. Two nests were found in the Upper Peninsula in 1941 (Blain, 1941. *Jack-pine Warbler*, 21:72-74) and in 1949 (Bourdo and Hesterburg, *ibid.*, 29:78-81).

The nest was located in Oscoda County less than a mile west of Mack Lake (Sec. 5, T26N, R3E). It was situated in a clearing caused by a fire that had swept through the jack pine (*Pinus banksiana*) forest here on April 2, 1946. This fire had burned about 6000 acres but had left many "islands" of living pines and a few standing dead pines. The ground cover was sparse and the openings were unevenly covered by a new growth of jack pines, the largest of which were a little more than head high. On the same day in 1946, five fires had swept this county, destroying a total of nearly 20,000 acres of forest.

On the day of this discovery, Lawrence H. Walkinshaw and I were in the area looking for Kirtland's Warblers, (*Dendroica kirtlandii*), and it may be more than a coincidence that Norman Wood collected a Black-backed Three-toed Woodpecker in this same region on the trip when he found the first nest of the Kirtland's Warbler in 1903. It may be that the fires which produce Kirtland's Warbler habitat also produce conditions favorable to this woodpecker.

The nest cavity was situated $3\frac{1}{2}$ feet from the ground in a dead jack pine. The tree was $6\frac{1}{2}$ inches in diameter at nest height and was broken off 14 feet above the ground. The entrance was almost circular, $1\frac{3}{4}$ inches in diameter. Walter Nickell probed the cavity with a twig and found it to extend downward 13 inches below the entrance. For at least a quarter of a mile in all directions the trunks of trees were conspicuously marked where slabs of bark had been removed by the feeding activities of this pair. Most of the feeding took place on dead trees, some standing and some lying on the ground.

The woodpeckers were not wary; they approached the nest readily with people standing 10 feet away. The female gave a low-pitched "chuck" occasionally and the male gave calls somewhat like those of the Yellow-shafted Flicker (*Colaptes auratus*). But the birds usually remained at middle or low heights in the forest and were not conspicuous.

At the time the nest was found, and again the following morning, June 1, the female was flushed from the cavity and the male was not seen. We believed the female to be incubating but were unable to see the nest contents with flashlight and mirror. On June 2,