

## FROM FIELD AND STUDY

**Determinate Laying by House Sparrows.**—In Larchmont, Baltimore County, Maryland, in 1960, an experiment was conducted on removal of eggs from a nest of the House Sparrow (*Passer domesticus*). As eggs were laid, they were taken, leaving always a single nest-egg. This procedure failed to cause continuous laying. Addition of eggs in a second nest on the first laying day failed to inhibit laying. The first bird laid clutches of 5 and 4 separated by a four-day interval in April and May and then deserted; the second bird laid either 4 or 5 eggs in May. In Baltimore City, in earlier years, House Sparrows using my boxes laid two clutches of 5 in April, and one in May and one in June, each of 4 eggs. My experiments, therefore, resulted only in normal, determinate laying. In a review of this subject, Davis (Condor, 1955, 57:82-83) found suggestions in the literature of indeterminate laying by this species when eggs were removed, but he said addition of eggs had never been tried. Barrows (The English Sparrow in North America, 1889:161) gives reports of indeterminate laying when eggs were removed. My experiments suggest that the "indeterminate" laying thus reported may really have been determinate laying of two or more clutches with intervals between.

The following are the details of events at the nest boxes. In the removal test the male was a color-banded bird and was identified during both laying periods. The female was unmarked. The first egg was laid on April 27. Beginning on April 28 I removed one egg each day, always leaving the latest laid. An egg was laid daily through May 1. I could not watch this box until May 1; at 10:10 a.m., E.S.T., there was copulation, then the female incubated steadily. Brief watching on May 2 and 3 showed almost no incubation being done. I could not watch on May 4 or 5. I do not know whether the female ever spent the night in this box. Laying was resumed May 6, and beginning that day I removed one egg daily as before. An egg was laid each day through May 9. The female did a little incubating on May 7 and 8, and she did much on May 9. But from May 10 on I never again saw the female at the box except on May 11 when copulation was noted and the female attacked a Starling (*Sturnus vulgaris*) there. The male also was seldom in evidence, although he defended the box occasionally through May 13. However, on May 13 a Starling broke the final egg; I replaced it, but the box was abandoned. The last egg of each clutch here was much lighter in color than the others, as is commonly true in the House Sparrow.

At the box where eggs were added, the adults were unmarked. The first egg was laid on May 13; I found it at 7:41 a.m., marked it, and immediately added 4 of the marked eggs I had taken from my other box. At 8:05 a.m. the male looked into the box and the female entered, so both birds learned of the 5 eggs with great promptness. On the next three days my wife inspected the box and found the following: 6 eggs on May 14 at 7:27 p.m.; 6 on May 15 at 10:57 a.m., and 4 on May 16 at 10:12 a.m. On May 17 at 9 a.m. I found there were 5 eggs—this female's first one, one of those I had added, and three unmarked ones. On this evening the female for the first time roosted in the box. At two House Sparrow nests which I observed in earlier years, the females began sleeping in the box only when, or after, their clutches were complete. Presumably three of my week-old eggs were thrown out of this test nest, and either one of this female's own eggs also was thrown out or else she skipped a day in her laying. However, she laid either 4 or 5 eggs, one of which was a light-colored one and this one was the last to hatch.—HERVEY BRACKBILL, Baltimore, Maryland, June 29, 1960.

**Quail Nesting inside Woodrat Houses in Baja California.**—In the summer of 1957 ectoparasites were collected from the houses of woodrats (*Neotoma lepida*) at localities scattered the length of Baja California. On two occasions in the Cape region, south of La Paz, quail nests were found in the internal cavities of the woodrat houses. The first such association was discovered 5 miles north of Todos Santos on July 14, 1957, at an elevation of 800 feet. When this house was opened, a bird ran rapidly from the brushpile-like structure and into the surrounding vegetation. Six eggs were present in the nest; these eggs were collected and subsequently identified by Mr. W. C. Hanna of Colton, California, as those of the California Quail (*Lophortyx californicus achrusterus*). No woodrat was seen in this nest but the nest did have all appearances of having been recently active. The kissing-bugs, *Triatoma rubida rubida* and *Triatoma peninsularis*, were present in this nest; these bugs are obligate ectoparasites and rats of the genus *Neotoma* are their usual hosts.

A second similar association was found 9 miles northeast of Santiago on July 17, 1957. The quail