

*Kansas Ornithological Society*

**BULLETIN**

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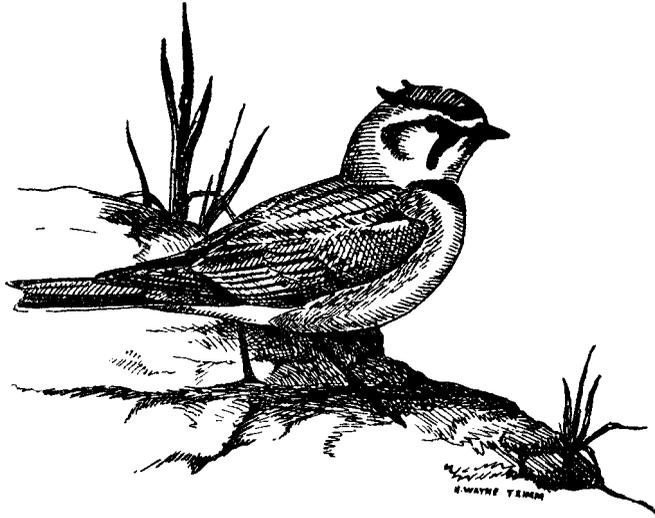
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## A Word from the President

This year membership in the KOS is again near the two hundred mark. The number could be well beyond this figure if those who have lapsed membership could be persuaded by members of their acquaintance to reinstate themselves. We urge the cooperation of each member in this matter. To aid you an effort will be made to circulate a current membership list to all the members.

About half our present members are living in several of the larger cities and towns with numbers of other members in the immediate neighborhood. In most of these places local bird clubs are active. Many members of the KOS, however, reside at places in the state where they cannot benefit by such associations.

The association of ornithologists on a state-wide basis, which is the aim of the Society, has its difficulties, but also its distinct rewards in greater knowledge, inspiration, and pleasant friendships. As regards meetings, distance is bound to be a hindrance for many, no matter where these are held. But our personal experience has been that, where the distance travelled is great, the benefits of attendance are correspondingly large. This should be especially true for those with few local contacts with fellow-ornithologists.

Eugene W. Dehner, O.S.B., President.

## Observations of the Nesting of Starlings

BY ROGER O. OLMSTEAD

For four years, 1951-1954, activities of Starlings, *Sturnus vulgaris* Linn., within a nesting box were observed in a barn loft in Douglas County, Kansas. Birds entered the box through a hole in the north wall of the barn. To facilitate observations, the back of the box consisted of a removable glass partition and a cardboard blind with an eyeslit.

Sex of adult birds during the breeding season was determined by the color of the lower mandible, which is pale pink in females, and bluish-gray in males (Hicks, 1934). Other external characteristics of value were the more metallic and attenuated hackle feathers of males, and the greater persistency of spangles in females (Kessel, 1951).

### Autumnal Selection of Nesting Site

In October and November selection of the box as a nest site was indicated by accumulations of white, downy, poultry feathers in the box which was not used as a roosting site. The functional survival value of autumnal sexual behavior was indicated by Morley (1943) for a group of British birds.

### Nest Building and Courtship

Nest-building started February 24, 1951; March 6, 1953; it was first noted on March 13, 1954. Building continued for 37 days in 1951, excluding periods of inclement weather. The female may continue to carry materials to the nest during egg-laying.

"Bill-pointing" displays were used by both sexes when meeting within the cavity. On only one occasion, March 1, 1951, 8:05 a.m., the male entered the observation box and appeared to be waiting for the sex partner. After the female entered the cavity, both birds remained motionless, bills fully-opened and held toward the zenith. The male then departed. At other times the male assumed a squatting position with spread wings when the female landed on the outside ledge. After the female entered the box, both birds would hold closed bills at an angle slightly above their heads.

The male would enter the box with great commotion whenever finding the female molding the nest. At such times bill-pointing seemed more prolonged, once for four or five minutes. The crown feathers of both birds would be slowly raised and lowered while the wings were slightly spread. The female would timidly peck at the male who would then depart. The female would then resume molding the nest.

Copulation did not occur in the observation box. The data at hand are limited largely to random notes on one pair in April, 1951. Single acts occurred on several different branches of a walnut tree located thirty feet from the nesting site. The female would approach the displaying sex-partner with short fights or at times would fly directly to him from the nest. Immediately prior to coition the male would squat and on one occasion the female preened his neck feathers. After copulating, the male

always sailed through a broad arc, landing in a second walnut tree. The mating period lasted 29 days. Copulation was noted twenty-three days prior to egg-laying; on two occasions it occurred less than ninety minutes before an egg was laid. The final copulation occurred three days after the three-egg set was completed.

### **Egg Laying**

The dates upon which eggs were known to have been laid were: April 23, June 6, and June 18, 1951; April 21 and May 6, 1952; April 7, 1953; between April 5-12 inclusive, and May 28, 1954.

Eggs were laid between 8:30 a.m. and 9:30 a.m. The females became highly nervous during egg-laying periods, and slight sounds would bring them to keen alertness. They would pick and drop straws, hop into and withdraw from the entrance, leave the box to preen on a nearby cable, but quickly return to mold the nest, etc.

Infrequently the male would alight on the outside ledge, but never entered the box when the female was preparing to lay. The female would stay on the nest for longer periods following the laying of each successive egg.

The size of the clutch varied from two to seven eggs. The clutches laid in June were smaller than those laid in April.

### **Incubation and Brooding of Young**

Incubation was observed to begin with the laying of the next to the last egg, and it was continued for twelve to thirteen days. Both sexes incubate, but the females were more attentive and incubated at night. Marples (1936) stated that the male begins to take a share in incubation about two days after the last egg is laid.

Brooding started with the hatching of the first egg and continued for about three days with both sexes participating. Allard (1929) found the female brooding at night but never the male. When being relieved of duties at the nest, the male would display, singing softly with slight movements of the wings or giving a high-pitched "squeal" when passing the sex-partner.

### **Feeding of Neonates**

Feeding of newly-hatched young was observed for two hours on May 8, 1951, 8:45 to 10:45 a.m. Each adult made six trips to the nest. A one-inch caterpillar was eaten by the male after the nestlings failed to respond. He fed only one nestling per trip.

The females carried to the nestlings a bill full of small spiders; slimy green substance of a caterpillar; a daddy-long-legs, and a worm. Of the six trips the female made to the nest, she fed all of the nestlings on each of five visits. On two trips she fed two nestlings and on three trips only one nestling was fed.

### **Ectoparasites, Sanitation and Development of Young**

The nest was kept clean and free of fecal sacs for some time after the young were hatched. Concurrently with the appearance of large numbers of the mite, *Bdellonyssus sylviarum* C. and F., the adults discontinued entering the box. The nestlings were then fed from the ledge outside the nest opening, and the nests became filthy with excrement. Allard (op.cit.) noted, "a marked change in the manner of feeding, the very gentle pro-offerings of the first few days giving place to more hurried and less solicitous jabs down the throats of the nestlings after 6-7 days of age." On May 15, 1951, this change was very apparent when a first brood of nestlings was 8 days old.

Irritations caused by mites seemed to provoke initial efforts of preening by nestlings. The following notes indicate behavior of the young while in the nest. At eight days of age the bend of the wing was preened and the eyes were open; at nine days, head-shaking occurred and the young would gape when the box was jarred; at ten days, head scratching was observed and the young exhibited fear reactions. At sixteen days of age the brilliant yellow lining of the mouth tured to light red. At this age, the bills were steel-blue with yellow edges.

Nestlings strengthen their wings before leaving the nest by clinging Flicker-fashion to the entrance, while beating their wings. Soon one foot is released from the entrance and stretched back to the rim of the nest. At this stage a nestling, standing erect on the rim of the nest, could barely reach the entrance of the cavity with the tip of the bill. An adult, approaching the nest on a feeding visit, would force any nestling from the entrance back into the nest, but usually fed this same nestling.

Nestlings of one brood took wing when twenty-two days old on May 30, 1951. Other broods were observed to fledge in the third and fourth weeks of May.

## Second Broods

The starling regularly attempts to rear a second brood in a season (Kessel, 1953). After the fledging of the first brood, the parent birds renovate the old nest by carrying soiled materials from the box. These materials are dropped with a shaking movement of the head, then the bill is carefully wiped.

The dates upon which eggs were known to be laid for second nests were: June 6 (set disappeared on June 15), and June 18, 1951; June 6, 1952; and May 29, 1954. A total of 12 eggs were laid in second or late nests. Of the twelve eggs laid only three hatched. The resulting three nestlings died in the nest.

This complete failure to produce fledglings in late nests can be attributed to two factors: (1) extreme heat in the barn loft and (2) increase in the mite population. The latter factor appeared to be the most important factor contributing to the abandonment of the nest by adults.

## Literature Cited

- Allard, H.A. 1929. The starling's family life and behaviors. Jour. Wash. Acad. Sciences, 30:34-46.
- Hicks, L.E. 1934. Individual and sexual variations in the European Starling. Bird-Banding, 5:103-118.
- Kessel, B. 1951. Criteria for sexing European Starlings (*Sturnus vulgaris*). Bird-Banding, 22:16-23.
- Kessel, B. 1953. Second broods in the European Starling in North America. Auk, 70:479-483.
- Marples, George. 1936. Behavior of starlings at nesting site. British Birds, (1)30:14-21.
- Morley, A. 1943. Sexual behavior in British birds from October to January. Ibis, 85:132-158.
- 8916 W. Pendleton, Brentwood 17, Mo., Sept. 5, 1954.

# State Bird Notes

**Pine Siskins Nest in Concordia, Kansas.** At the May, 1954 meeting of the Society, at Hays, the writer reported Pine Siskins to be nesting in Concordia. This pair of birds successfully fledged three or four young and all left the vicinity in May. Long reported Siskins nestling near Onaga in Pottawatomie county, not far from Concordia, but the record is unusual for this area.—John M. Porter, Concordia, Kansas, September 11, 1954.

## NEWS

### Garden City Area

Ben King visited Marvin Schilling three days in mid-August. Birding in the vicinity of Garden City and southwest to Elkhart the following birds of special interest were seen: 17 kinds of shorebirds including the Northern Phalarope, Lesser Prairie Chicken, Ladder-backed Woodpecker, White-necked Raven, Lark Bunting, Cassin's and Brewer's Sparrows, Ferruginous Roughleg Hawk, Prairie Falcon, Say's Phoebe, Magpies, Mississippi Kites, Burrowing Owl, Rock Wren, Black-headed Grosbeak, and Bullock's Oriole.

### Halstead Area

Bluebirds feeding young were found along the Little Arkansas River on April 25, 1954. This is not a new record, but nesting records are not common. Bell's Vireo was first heard May 16. Two nests of this vireo were located, one of them parasitized, one other pair and singers in four other localities were located. None were seen last year. Wood Peewees were heard and seen in three localities along streams. This is a new summer record for the writer in the area. Three young Burrowing Owls remained in the vicinity of their burrow as late as August 3, 1954.—Edna L. Ruth, Halstead, Kansas, August 30, 1954.

### Lawrence Area

On August 28, 9:30 a.m. we saw a Glossy Ibis east of Lawrence. With Dick Frederickson, and using a 20X scope we studied it thoroughly and could see no white on it, which would seem to indicate that it was an Eastern Glossy Ibis, but it could be an immature White-faced Glossy Ibis. Several Buff-breasted Sandpipers and Avocets were seen in the same field.—Bert S. Chewning, Lawrence, Kansas, September 1, 1954.