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BREEDING OF THE BROWN THRASHER IN KANSAS

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Notebooks of the late Dr. John M. Porter containing his field observations on birds of the Concordia area, Kansas, are on file at the Museum of Natural History of the University of Kansas. For the years 1930 to 1936 these notebooks contain 72 records of breeding and 51 records of clutch-size in the Brown Thrasher (*Toxostoma rufum*). The present report is based on that sample; it is intended that it illustrate some kinds of information that can be derived from breeding records similar to those presently being compiled by members of the Kansas Ornithological Society who are participating in the Kansas Breeding Bird Survey (see *Bull. Kan. Orn. Soc.*, 1958, 9:6).

Each of the breeding records used here has been so adjusted as to yield the date of completion of the clutch. In order to establish that date, an appropriate number of days was added or subtracted from the date of occurrence of each record, depending on whether the event observed was one prior to or following the presumed completion of the clutch and in accord with the number of days usually spent by thrashers in incubation and brooding. This treatment tends to remove meaningless variation from the sample of records.

Brown Thrashers ordinarily arrive in northern Kansas in the third week of April—from the 11th to 28th of April at Concordia, Cloud County. Shortly after arrival breeding is initiated; nests containing eggs have been found in the first week in May, and the earliest date for a completed clutch is May 3.

TABLE 1
Some Characteristics of Breeding by Brown Thrashers in Northern Kansas

Time	Clutches completed Number	Clutch-size: Per cent	Mean, range, No. of records
May 1-10	8	11.1	3.20 (2-5, 5)
May 11-20	27	37.4	3.84 (2-5, 19)
May 21-31	8	11.1	3.33 (2-5, 6)
June 1-10	12	16.4	3.37 (2-5, 8)
June 11-20	9	13.3	3.28 (2-5, 7)
June 21-30	7	9.4	3.16 (2-4, 6)
July 1-10	1	1.3	—
May 1-July 10	72	100.0	3.49 (2-5, 51)

Table 1 shows how the breeding effort of the Brown Thrasher at Concordia is distributed in time. Column 1 lists the inclusive dates, column 2 lists the number and per cent of clutches found in each time period, and column 3 treats of clutch-sizes for each time period. It is evident that the period of egg-laying in thrashers at Concordia occurs from May 1 to July 10. The peak of the season comes in the central ten days in May. That peak is *not* followed by an appreciable peak about a month later; this indicates that thrashers in northern Kansas lay predominately one clutch. There is, however, a small peak in the first third of June, probably representing renesting (following destruction of first nests) of birds that originally laid during the major period of nesting in mid-May; indeed, all nestings subsequent to May are probably first or

second replacement nestings. This kind of pattern appears regularly in single-brooded birds (Pitelka and Johnston, MS).

Seasonal variation in clutch-size (Table 1) follows the pattern that is characteristic of birds breeding in north-temperate localities (see, for example, Lack, 1947, "The significance of clutch-size," *Ibis*, 89:302-352). That is to say, earliest nests have fewer eggs, nests at the peak of the season have more eggs, and later nests have fewer eggs, than that number of eggs representing the average annual clutch-size. Such variation seems to be related to a correlated variation in the quality and quantity of food resources. Annual variation in clutch-size is listed in Table 2 for the years 1932 to 1935. This kind of variation can be understood only if the population dynamics of the group is followed intensively for a number of years.

TABLE 2
Annual Variation in Clutch-size of Brown Thrashers
in Northern Kansas, 1932-1935

Year	Clutch-size: Mean, range, No. of records
1932	3.63 (2-5, 11)
1933	3.00 (2-4, 12)
1934	3.57 (2-5, 7)
1935	3.14 (2-4, 7)

Ten records of breeding by Brown Thrashers obtained by members of the K.O.S. in 1958 indicate that the thrasher places its nests about 3.5 feet above the ground in shrubby vegetation (hedgerows, second-growth deciduous woodland, modified urban parkland) usually of relatively thick canopy-cover adjoining open areas but occasionally of open or broken canopy-cover.

Breeding by thrashers in other parts of the state may parallel what we now know of it in north-central Kansas or may depart significantly from the picture presented here. In either instance (when the data are available) we stand to win a new tool in attempting to understand this exceedingly complex aspect of bird life.—*Museum of Natural History, Lawrence, Kansas, September 17, 1958.*

Additional Nesting Records for the State of Kansas.—The following observations, made in the spring and summer of 1958, add to our knowledge of breeding birds of Kansas.

Anas platyrhynchos. Mallard. The breeding distribution of the Mallard in Kansas is poorly known although the species probably nests throughout the State in suitable habitat. The following notes will help to document the breeding range of this bird in Kansas.

April 27, 1958—A female was flushed from a nest containing 13 eggs at the Little Salt Marsh, 15 miles north and 5 miles east of Stafford, Stafford County, Kansas by Richard F. Johnston.

June 14, 1958—A female with 12 young, approximately three-quarters grown, was seen at the locality mentioned above.

June 24, 1958—A female with seven young was observed at a salt marsh 8½ miles south, ¾ mile west, Oxford, Sumner County, Kansas. The female quickly swam to shore with the young; the latter hid in the grass and the adult then flew off 100 yards and gave alarm notes or distress notes. The young were flushed from their hiding places and were able to fly short distances. One of the young, a male?, was saved as a specimen (KU36188).

Anas acuta. Pintail. The Pintail seems to be the most common duck in summer at the Little Salt Marsh in Stafford County. On June 14, 1958, a female with eight young was seen. The young were about half grown. On the same date, a female was flushed from a nest along side a road. The nest contained three eggs that appeared to be in advanced stages of incubation. It was obvious by the action of other females in the marsh that they had either young or nests nearby.

Piranga olivacea. Scarlet Tanager. On May 4, 1958, Laurence Binford and I observed a female gathering and carrying pieces of vine to an elm tree in which she was constructing a nest 2½ miles south of Lone Star, Douglas County, Kansas. The

male was perched in the top of a nearby tree singing. The nest appeared to be in the early stages of construction. The vegetation of the area consisted mainly of hickory, oak and elm. Several birds of this species were observed throughout May in this area. I did not return after the end of May to see if they remained to nest. This species nests sporadically in northeastern Kansas; nests have been found in Doniphan, Douglas, Leavenworth and Linn counties.

Passerina amoena. Lazuli Bunting. On July 18, 1958, I flushed a female of this species from her nest 8½ miles north of Elkhart, Morton County, Kansas, along the Cimarron River. The nest was suspended in a clump of clover, *Melilotus alba*, approximately one meter high and contained one egg. The vegetation of the area consisted mainly of Cottonwood, *Populus deltoides*, White Sweet Clover, *Melilotus alba*, and Tamarix, *Tamarix gallica*. After the female flushed, the male (KU36219, testes 6 × 8 mm), which had been singing in a nearby tree, joined the female in harassing me. There were other singing males along the river but only this one nest was found. It has been thought for many years that this species nested in extreme Western Kansas, yet to my knowledge this is the first nesting record of this species in Kansas.—Max Thompson, *Museum of Natural History, University of Kansas, Lawrence, Kansas, September 17, 1958*.

Second Specimen of Short-billed Dowitcher from Kansas.—On May 31, 1958, I collected a lone male *Limnodromus griseus* 8½ miles south and ¾ mile west, Oxford, Sumner County, Kansas (KU36196). The specimen is molting; winter plumage is being replaced by summer plumage; the scapulars are partly grown. The measurements (wing [chord] 145 mm, tarsus 36 mm, culmen 56 mm) indicate that the male belongs to the inland subspecies *hendersoni*. Such individuals normally migrate through the Mississippi Valley and along the Atlantic coast, chiefly south of Chesapeake Bay (A.O.U. "Check-list of North American Birds," 5th edition, 1957: 201) to the breeding grounds in Canada. The first specimen from the State was saved by R. L. Montell on May 14, 1946, three miles northeast Lawrence, Douglas County (KU29403). This species probably is more common than specimen records alone indicate, but it is exceedingly difficult to distinguish in the field from the Long-billed Dowitcher, *Limnodromus scolopaceus*.—Max Thompson, *Museum of Natural History, Lawrence, Kansas, September 17, 1958*.

LETTER TO THE SOCIETY

Dr. J. Walker Butin
315 S. Terrace Dr.

Wichita, Kansas

Dear Dr. Butin:

It is with much regret that I pass on to you the presidency of the Kansas Ornithological Society. I am moving out of the state the first of October and so will not be able to be present at the fall field trip.

I am moving to Burwell, Nebraska, and will be working for the Nebraska Game, Forestation and Parks Commission, on management and research of their prairie grouse (sharp-tail grouse and prairie chicken).

I am sure you already know what a fine group of people make up the society and you will enjoy working with them as much as I have.

My best to you for the remainder of this year.

Sincerely yours,
Marvin D. Schwilling

NOTES AND NEWS

Following are the minutes of the K.O.S. fall meeting, held at Lake Shawnee, Topeka, October 19, 1958.

Meeting called to order by President Butin at 2:25 p.m. Thanks of the group were extended to the Topeka Audubon Club for their hospitality.

President Butin—

1. Called for volunteer Bulletin material from members.
2. Stressed the need for more sustaining members.

3. Called for nominations to fill the interim term of the vice-president's office left open by the resignation of Marvin Schwilling.

Gier nominated A. Dean Cole, Jr.

Nelson nominated Orville O. Rice.

Ogilvie moved, and it was seconded, that nominations cease. M.C.

A secret ballot elected Rice as vice-president.

The president appointed a membership committee composed of: Rice—Chairman, Cole, Andrews.

Philip Ogilvie, agent for Nature Conservancy, reported on the types of areas in Kansas that are planned for conserving as natural areas.

H. T. Gier reported on the fine chances for establishment of a National Grasslands Park in the Kansas bluestem country. Three sites are being considered, each of approximately 20,000 continuous acres in area.

Secretary Beals read a report from Treasurer Dingus. Money on hand—\$224.83.

A tentative invitation from Ogilvie for the spring meeting, to be held May 2-3, 1959 at Lawrence, was accepted.

Ted Andrews extended an invitation to the group for the 1959 fall field trip to be held at Emporia on Sunday, October 11, 1959.

It was moved and seconded that this invitation be accepted. M.C.

The list of birds seen at this fall meeting as compiled by Ogilvie—78 species.

There were 62 persons attending, six of which were from Nebraska.

Meeting was adjourned.—E. K. Beals, Sec'y.

A board of directors meeting was held immediately following the business meeting of the fall field trip. Attending were Butin, Carson, Kelley and Beals, which number constitutes a quorum.

The meeting was chaired by Butin.

Beals moved and Kelley seconded the appointment of L. B. Carson as resident agent. M.C.

Carson reported that he planned to complete incorporation papers for the society.

Beals asked that a meeting of the directors be held in the early spring to plan for the spring meeting program. The secretary will notify.

Meeting adjourned.—E. K. Beals, Sec'y.

No material suitable for publication in the December issue of the *Bulletin* is now on hand. Manuscript promptly sent to us will be given consideration for immediate publication in this last issue of 1958.

In preparing Christmas Bird Counts for publication in the March issue, 1959, refer to the counts published in the Bulletin in 1957 and 1958. Especially note discussion in each case of errors of form and omission that we need to correct to make this year's published account more complete and meaningful.—JWH.

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