

Sabine's Gull in North Dakota.—On 1 November 1966, I collected an immature female Sabine's Gull (*Xema sabini*) at Lake Ashtabula, 10 miles north of Valley City, Barnes County, North Dakota. I first noticed it when it flew from a rocky shore about seven feet away from me. The water of the reservoir, which is approximately 20 miles long and one half mile wide, was quite cold with ice along the shores. The gull's stomach contained several diving beetles of the family Dytiscidae as identified by Dean K. McBride of North Dakota State University Entomology Department. The bird (NDSU No. 2103) has been deposited at the North Dakota State University vertebrate museum. This is believed to be the first record for the Sabine's Gull in North Dakota, although according to Peterson (A field guide to western birds, 1961) it occurs rarely as a transient through the Great Plains.—ROGER L. KROODSMA, *Zoology Department, North Dakota State University, Fargo, North Dakota, 16 September 1967.*

Comments on Reproduction of the Common Grackle in central Illinois.—During a cool spring (on 8, 10, and 19 May 1966) in central Illinois (Lake of the Woods Park, Mahomet), 52 nests of the Common Grackle (*Quiscalus quiscula*) were found and observed. They were situated from approximately three to 20 feet above the ground, in small evergreens (mostly spruce), tall white pines, and dense rose hedges. Some of the data obtained on reproduction are presented in Table 1. They may be compared with those of other large samples reported for Kansas (Johnston, *Univ. Kansas Publ., Mus. Nat. Hist.*, 12:575-655, 1964), Wisconsin (Peterson and Young, *Auk*, 67:466-476, 1950), and Ontario (Snyder, *Canadian Field-Naturalist*, 51:37-39, 1937). Climatological and other ecological information are presented elsewhere (Long, *Trans. Illinois Acad. Sci.*, 61:139-145, 1968).

Of 34 nests found on 8 May, 12 contained broods (indicating April breeding), and 22 contained incubated eggs (six of these nests also contained hatchlings). All clutches had hatched (excepting the sterile eggs) before 19 May. On 10 May, broods had left seven of 47 nests. On 19 May, other broods had left, including 10 of 24 fledged broods checked. All of the nestlings were well fledged.

Clutch size averaged 4.21 (2-5; N, 23; mode 5) for 10 May (clutches with hatchlings were included in this sample). It is noteworthy that the frequency distributions are skewed to the left (Table 1).

"Predation" by small boys (see Peterson and Young, *op. cit.*) was not observed, but probably is at least of occasional importance, especially in warmer weather. Sub-freezing temperatures at night evidently caused some mortality. On 10 May, one dead fledgling was found in a brood. A downy bird of a different nest was found dead on the ground. On 19 May, two dead fledglings were found in dense spruce needles next to an empty nest. Still another was found dead dangling by a strand of nylon fishing line incorporated in the nest structure.

Peterson and Young (*op. cit.*) included deserted eggs with those actually sterile (infertile). Admittedly, it is difficult to distinguish between nonincubated and sterile eggs, but as a rule of practicality eggs in fledged broods may be considered sterile. Only a single sterile egg was found in each of two of 24 fledged broods. In this study four deserted clutches were found, two on 8 May (2, 4 eggs), one on 10 May (4 eggs), and another on 19 May (3 eggs). Three nests were found overturned with eggs spilled out. One new, empty nest (re-nesting?) was seen 19 May.

It is interesting that concentrations of breeding grackles were not to be found in nearby cemeteries and other parks, even though their vegetation appeared similar

TABLE I
DATA ON REPRODUCTION OF THE COMMON GRACKLE (May, 1966) IN CENTRAL ILLINOIS.
On 8 May, 16 nests contained incubated eggs, but some clutches were incomplete.

	Class frequencies of clutch or brood size					Totals	Date May
	1	2	3	4	5		
Number of clutches	0	0	3	6	7	16	10
	0	0	0	0	0	0*	19
Number of nests with eggs and hatchlings	0	1	0	3	2	6	8
	0	1	1	1	4	7	10
	0	0	0	0	0	0*	19
Number of broods	0	1	1	2	8	12	8
	1	0	2	9	7	19**	10
	0	2	3	6	3	14**	19

* No clutches were seen; all fertile eggs hatched, or were occasionally deserted.

** Some fledged birds had left some of these nests.

to that at Lake of the Woods. Nests of two Mourning Doves, three Robins, a Brown Thrasher, and a House Sparrow were also observed at Lake of the Woods.—CHARLES A. LONG AND CLAUDINE F. LONG, *Department of Biology, Wisconsin State University, Stevens Point 54481, 3 November 1967.*

Allopreening invitation display of a Brown-headed Cowbird to Cardinals under natural conditions.—On 18 June 1966, I observed a behavioral interaction, which I interpreted as an allopreening invitation display, between a female Brown-headed Cowbird (*Molothrus ater*) and a pair of Cardinals (*Richmondia cardinalis*). In 68 hours observation of 10 widely separated pairs of Cardinals in Weakley County, Tennessee, between 29 April and 19 June, this was the only such observation.

I had observed the pair of Cardinals almost continuously since 04:42 CST. At 08:05 they were actively foraging together in a freshly plowed field near a low, narrow hedgerow when, suddenly, a female cowbird flew rapidly towards them and landed on the ground in front of the female Cardinal. The cowbird walked directly towards the Cardinal until their bills were about 5 cm apart. The Cardinal remained motionless for 138 seconds, and the cowbird for almost as long. The cowbird then opened its eyes, which had been closed for more than one minute, and assumed a hunch-backed attitude with bill pointing forwards at a 45° angle to the ground and feathers of the nape slightly ruffled. Maintaining this posture, she repeatedly approached the Cardinal; each time, the foraging Cardinal hopped away. The female Cardinal was approached about 30 times while foraging on the ground or perching in the hedgerow. The male Cardinal was approached once; he immediately took flight. After 5½ minutes, the cowbird flew away, leaving the Cardinals still foraging.

The cowbird was apparently adult. Neither of the Cardinals approached the cowbird, acted aggressively towards her, or made any attempt to preen her when approached.

Similar behavior of cowbirds in an aviary has been described by Selander and La Rue (*Auk*, 78:473-504, 1961). They suggest that under natural conditions such behavior results in reduced hostile tendencies of individual birds that are potential hosts for the cowbird. Harrison (*Behaviour*, 24:161-209, 1965) elaborates on other possible