

THE IRREGULAR OCCURRENCES OF THE DICKCISSEL IN ALBERTA, MANITOBA AND SASKATCHEWAN

by **Spencer G. Sealy**, Museum of Zoology, University of Michigan,
Ann Arbor, Michigan.

The Dickcissel (*Spiza americana*) has long interested ornithologists particularly because of its extreme irregularity of appearance and marked fluctuations in numbers. Gross (1968:159) stated that "The dickcissel is very erratic in its distribution. Its numbers, even in the centre of its nesting range, may fluctuate greatly from year to year. A locality may have an abundance of dickcissels, only to have them practically disappear after a few years." Dickcissel distribution in Wisconsin varies considerably from one summer to the next, so that observers there speak of a certain year as a "high" or "low" one for these birds (Taber, 1947: 39).

Available information indicates that Dickcissels also occur and breed at irregular intervals in Manitoba and Saskatchewan; there is only one record of occurrence in Alberta but no evidence of its breeding there exists.

Summary of Dickcissel Records

The records of occurrence of the Dickcissel in Saskatchewan and Alberta and Manitoba are summarized in Tables 1 and 2, respectively, and are plotted on a map in Figure 1. The earliest record of this species in Saskatchewan is a male taken from a group of three pairs on June 20, 1923, at Old Wives Lake. It is probable that these pairs were breeding there that year. Dickcissels were not seen in that area again until 1933 when H. McCrae saw and heard one individual; it was apparently not ascertained whether it was breeding there that year.

From Table 1 it is evident that the years 1933 and 1934 were "high" years for Dickcissels in Saskatchewan. It was in these two years that this species was recorded breeding for the first time near Regina. The sight and breed-

ing records at Regina during these two years have been detailed by Belcher (1961:65) and summarized in Table 1. Other Saskatchewan records of the Dickcissel in 1933 and 1934 were obtained at Gainsborough, Imperial, Kedleston, and Nokomis. The breeding "colony" near Regina was not present in 1935 nor has there been one reported for that or any other area in the province up to the present date; subsequent to 1934, only sporadic observations of this species have been made in Saskatchewan.

In Manitoba, the first Dickcissel was collected near Portage la Prairie by G. E. Atkinson on June 14, 1897. According to Criddle (1921:135), Atkinson felt that this bird "was a straggler from the south, though the date at which it was taken would indicate that it was breeding in the neighborhood." The species was next observed about 1907 near Oak Lake by H. M. Laing, who showed P. A. Taverner an "easily recognizable photograph taken at the time of the bird in life" (Taverner, 1927:226). It was not until 1921, however, that nesting birds were encountered in Manitoba; a large colony was discovered in the Whitewater Lake - Boissevain area by Hoyes Lloyd and Taverner. Several specimens were collected there (Table 2). At Melita, N. Criddle and P. N. Vroom observed two males singing along the edge of a meadow; no nests were found but "from the fact that there were two or more males singing there," Criddle (1921:135) thought that it was safe to "conclude that the species breeds in the vicinity."

Only one record of this species has been obtained from Alberta; a singing male was collected near Walsh on June 14, 1940, by E. T. Jones. As we will see later, this male was probably seeking

suitable nesting habitat or was even on its breeding territory.

Discussion

The Dickcissel may be considered an "irruptive" species throughout much of its range. Udvardy (1969) describes "irruptions" as irregular wanderings; the species appears in areas in which it usually does not occur and propagate. It may or may not breed there, or it may return to its place of origin, depending upon the conditions it encounters. Nevertheless, an irruption may lead to the establishment of a population nucleus, where the species, the Dickcissel in this case, utilizes habitats where living conditions are temporarily favorable, but, for one reason or another, regularly become adverse.

The biology of the Dickcissel has been intensively studied by Zimmerman (1965; 1966a; 1966b; 1970;

others). This author's 1970 paper is particularly pertinent to the present discussion. Zimmerman states that "Although present in all communities of the succession in the tall grass prairie, the dickcissel reaches its highest densities in intermediate seral stages. Since its optimum habitat has therefore a spotty geographic distribution and undergoes relatively rapid change from year to year, the species must be opportunistic in its relationship to the environment. Territorial males exhibit 'Ortstreue', but can modify this behaviour as the habitat changes since they depend on the structure of the vegetation as the proximate factor involved in habitat selection. Furthermore, since the height and density of the vegetation also appear to be the ultimate factors affecting reproductive success, the problem of choosing the optimum habitat is less complex. The density-dependent effect



Figure 1. Approximate location (solid dots) of Dickcissel records in Alberta, Saskatchewan, and Manitoba. The solid line delimits the northern boundary of the Forest and Grassland region; the dashed line delimits the northernmost extension of the Grasslands.

Table 1. Saskatchewan records of the Dickcissel

Date	Number	Locality	Observer(s)
1923, June 20	1 male specimen	Old Wives Lake*	H. McCrae (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1923, June 20	3 pairs seen	Old Wives Lake*	H. McCrae (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1933, July 4	Nest and eggs collected	Regina	F. Bradshaw (1934)
1933, July	3 pairs breeding	Regina	F. Bradshaw (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1933, August 1	1 "fledgling" collected	Regina	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1933, August	1 seen	Gainsborough	J. T. S. Reynolds (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1933, August	1 seen and heard	Old Wives Lake*	H. McCrae (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1934, June 14	1 pair seen	Regina	H. Boyd and J. H. Taylor (Belcher, 1961)
1934, July 4	1 breeding male collected	Nokomis	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1934, July 4	2 pairs seen	Nokomis	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1934, July	"seen"	Imperial	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1934, July	"seen"	Kedleston	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1934, July 11	1 male collected	Regina	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1934, July 11	"at least 12 pairs seen in trees of the Regina Golf Course"	Regina	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1939, June	2 seen	Regina	F. G. Bard (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1940, June 16 to July 2	1 seen	Eastend	F. Mowat (Belcher, 1961)
1940, September 1	1 seen	Eastend	L. B. Potter (1943)
1942, September 4	1 seen	Melville	L. B. Potter (F. W. Lahrman, <i>pers. corres.</i> , 1970)
1953, summer	1 nest located	Swift Current	L. T. McKim (Houston, 1949)
1962, September 4	Flock of 15 to 20 individuals seen	Condie	A. Ward (1953)
1964, June 13	1 seen	Oxbow	D. Gilroy (1962)

* Lake Johnstone at the time of McCrae's observations.

Date	Number	Locality	Observer (s)
1940, June 24	1 "singing" male	ALBERTA Walsh	E. T. Jones (R. Lister, <i>pers. corre.</i> , 1970)
1897, June 14 "about 1907"	1 specimen	MANITOBA Portage la Prairie	G. E. Atkinson (Criddle, 1921)
1921, June 21	"observed the species" 1 male specimen	Oak Lake Whitewater Lake	H. M. Laing (Taverner, 1927) P. A. Taverner (W. E. Godfrey, <i>pers. corre.</i> , 1970)
1921, June 24	2 adult males seen	Melita	N. Criddle and P. N. Vroom (Criddle, 1921)
1921, June 29	"quite a colony"	Whitewater Lake	Hoyes Lloyd and P. A. Taverner (Taverner, 1927)
1921, June 30	1 male specimen	Whitewater Lake	P. A. Taverner (W. E. Godfrey, <i>pers. corre.</i> , 1970)
1921, June 30	1 female specimen	Boissevain	P. A. Taverner (W. E. Godfrey, <i>pers. corre.</i> , 1970)
1921, June 30	1 male specimen	Boissevain	P. A. Taverner (W. E. Godfrey, <i>pers. corre.</i> , 1970)

of territoriality in this species insures the use of the most suitable habitat, forcing additional males into less acceptable vegetation or to seek out other areas by 'distant flight' behaviour. This latter response enables the species to discover areas that are becoming more suitable through succession. Since females are not territorial and establish polygynous pair bonds with males, they are allowed free choice to utilize the best habitat for nesting wherever it might be."

It is thus necessary to examine successional changes in the grassland in order to understand fully the population fluctuations and invasions shown by Dickcissels. In seeking an explanation for the invasions into the Regina area in 1933 and 1934, Belcher (1961: 65) stated that "The drought of the early 1930's apparently played a role in the northward extension of the Dickcissel." She referred to Taber's study (1947) in Wisconsin which also showed that during the drought of the early 1930's strong northern Dickcissel colonies were established in counties where they were not present before or after these years. Emlen and Wiens (1965) felt that it was possible that the 1964 Dickcissel invasion in Wisconsin was triggered, at least in part, by the extremely dry climatic conditions in Illinois and Wisconsin during the spring months. These authors (*op. cit.*: 55), thought that "If dryness does play a role in Dickcissel range fluctuations, however, its effects must be quite variable, for Dickcissels remained scarce in the southern part of the state during the dry years in the early 1950's, and were common in 1940 and 1950, both fairly wet years." I examined rainfall records for the Regina area for the years in which Dickcissels were observed in southern Saskatchewan but failed to detect a correlation of the kind that might have been expected. I conclude, therefore, that it is the successional stage of the grass in the central portions of the species' range that, as Zimmerman pointed out, provide the proximate factor involved in habitat selection.

Acknowledgments

I should like to thank Dr. John L. Zimmerman of Kansas State University, Manhattan, for providing reprints of his papers on Dickcissel biology. Mr. W. Earl Godfrey provided the Dickcissel records from Manitoba in the National Museum of Canada; Mr. Fred W. Lahrman provided the Dickcissel records contained in the Saskatchewan Museum of Natural History; and Mr. Robert Lister gave me the details of the Alberta specimen. I also thank Mr. L. S. Meeres, Officer-in-Charge of the Regina Weather Office, for sending me a summary of Regina rainfall records.

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BROWN-HEADED COWBIRD PARASITIZES BALTIMORE ORIOLE

by **Robert W. Nero**, 546 Coventry Road, Winnipeg

According to Herbert Friedmann, who has recently published a comprehensive summary of records of parasitism in cowbirds, there are only 13 known cases of parasitism of the Baltimore Oriole; in his words, this species is "parasitized very infrequently" (Host relations of the parasitic cowbirds. U.S. Natl. Mus. Bull. 233:132-133). The present observation is apparently the first case for Manitoba, as well as my second record for this species (*Passenger Pigeon*, 11:132, 1949).

Several orioles were kept coming to a feeder in our yard in May, 1970, attracted by almost daily provision of sections of fresh oranges. Late in the month a pair began building a nest on to a small portion of woven nest material where orioles had started to build in the previous year. The nest

which they completed was 11 feet above the ground and fastened to the ends of branches in an aspen poplar. It was of typical shape and was constructed almost entirely of the usual silvery-gray, fine, natural plant fibres.

Sometime in June it became apparent that the nest had been deserted. When examined on July 4, two entire Brown-headed Cowbird eggs comprised the sole contents. Neither egg showed signs of development. Evidently, the nest had been parasitized prior to egg-laying by the oriole, and possibly this was the cause of nest desertion. Although cowbirds were seen on many days in our yard, none had been seen near the nest. Orioles had been seen at or near the nest site for much of the observation period and were still in the neighborhood in July.