

THE KNOT AS A MIGRANT IN SOUTHERN MANITOBA¹

by **Martin K. McNicholl**, Zoology Dept., University of Manitoba, Winnipeg

Godfrey (1966) summarizes the status of the Knot (*Calidris canutus*) in Manitoba, by calling it an uncommon transient in interior Manitoba and a common transient on the west coasts of James and Hudson Bays. Because of its regular occurrence in spring migration along the west coast of Hudson Bay in northeastern Manitoba, the Knot is included on the latest check-list of Manitoba birds (Nero and Hosford, 1967) as a "regular species", that is, "believed to occur every year in some part of the province during one or more of the seasons." As indicated by Godfrey's statements, however, it is considered to be uncommon or rare in the southern part of the province.

I was therefore surprised on May 30, 1967 to see a flock of 12 Knots, plus three individual Knots, among a group of shorebirds, including 200 Black-bellied Plover (*Squatarola squatarola*), 10 American Golden Plover (*Pluvialis dominica*), 15 Ruddy Turnstone (*Arenaria interpres*), two Dunlin (*Erolia alpestris*), and three Sanderling (*Crocethia alba*), which were feeding on "borrow pits" (mud pits created by construction activity) at the University of Manitoba Field Station at Delta, Manitoba. The following characteristics of the 15 Knots were observed through 8 x 42 binoculars: "chunky; larger than turnstones, smaller than Black-bellied Plovers, and closer in size to Golden Plovers; orange-red breast; no ventral spots or streaks; short straight bill, about equal in length with head; in flight, some white on wings and rump, but not extensive". These features agree with the characteristics given for the Knot by Peterson (1947). The birds were again seen later that afternoon by Dr. Roger

M. Evans and the writer, but were not seen subsequently.

Although Godfrey refers to the Knot as uncommon in interior Manitoba, and the A.O.U. committee (1957) says the spring flight passes "rarely through the interior" (p. 193), earlier writers are not in agreement as to its status in southern Manitoba. Seton (1886, p. 151) calls it a "common migrant along Red River", presumably on the authority of W. L. Hine of Winnipeg and/or C. W. Nash of Portage la Prairie. However, in the second installment of the same paper (1886, p. 329), he quotes R. H. Hunter as saying, "I have never seen the Knot along Red River, but have seen large flocks of the species west of Brandon." Cooke (1910) says "the species is unrecorded in the whole interior of Canada west of Hudson Bay", but Macoun and Macoun (1909) call it "a tolerably common migrant in Manitoba but rare farther west." Taverner (1943) records it as "migrating throughout the prairie interior." Possible reasons for these conflicting statements are discussed below.

More recent observations of this species in southern Manitoba are shown in Table 1, and the locations of these observations are plotted in Figure 1.

For an uncommon species, the relatively large number of flocks compared to individual birds among these records is striking. Hunter's observations west of Brandon were of "large flocks"; Cartwright's Whitewater Lake observation is recorded in the plural ("Knots were observed") in such a way as to imply a flock or flocks; Gibson's observation at Lockport was of 21 birds; Mossop, Press, and Wallace saw a total of 12 at the Shoal Lakes; and Dr. Evans and I saw 15 at Delta. Only Mossop's ob-

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Table 1. Recent observations of the Knot in southern Manitoba.

Date	Number	Location	Observer (s)	Reference Source
July 17, 1966	1	Oak Lake	David Braddell	Mossop, 1966
June 2, 1968	1	Oak Lake	David R. M. Hatch	D. R. M. Hatch, pers. comm., 1966
Last week of May, 1925	More than 1	Whitewater Lake	B. W. Cartwright	Lawrence, 1925
June 2, 1951	1 possible	Whitewater Lake	H. G. Duncan	H. G. Duncan, pers. comm. to R. W. Nero, 1968
May 27, 1934	not given	Brandon	C. L. S. Allward	Lawrence, 1934 a
May 24, 1930	not given	Delta	C. L. Broley	Lawrence, 1930
May 30, 1967	15	Delta	R. M. Evans M. K. McNicholl	this paper
May 20, 1967	5 7	West Shoal Lake East Shoal Lake	Harold Mossop, Peter M. Press, Lorne Wallace	Mossop, 1967 and pers. comm., 1968
May 25, 1947	21	Lockport Slough	Orland P. Gibson	Lawrence, 1947
June 3, 1934	1	Whittle's Point, Lake Winnipeg (actually somewhat north of)	H. Mossop	Lawrence, 1934 b H. Mossop, pers. comm., 1968

servation at Whittle's Point, Duncan's sighting at Whitewater Lake, and the Oak Lake observations of Braddell and of Hatch were definitely of single birds, although Broley's Delta observation and Allward's Brandon observation may have been of single birds also. Thus a high proportion of the southern Manitoba Knot observation is of flocks. This relatively high frequency of flocks may explain the earlier reports of its being common in migration in southern Manitoba or across the prairie, as writers with little information on this species might assess reports of large flocks as being indicative of general abundance, an impression which might also be given to observers of such flocks in the field.

The relatively high frequency of flocks need not be surprising. Aaron M. Bagg (1967) has shown how a combination of weather factors may have caused two great flights of the Lapwing (*Vanellus vanellus*) from Europe to North America. Similar factors could presumably cause the much smaller displacement of small flocks of birds within North America. Such displacement of entire flocks might be particularly expected in the Knot, which is known to be highly gregarious. George H. Mackay is quoted by Bent (1927) as calling them "very gregarious", and Bent himself says

they are "generally grouped in compact bunches and all moving along together; they are less likely to scatter over their feeding grounds than other waders."

The source of the Knots observed in Manitoba and the general pattern of Knot migration in western Canada cannot be determined in detail with our present knowledge. Records from this and adjacent areas, however, provide some clues.

The main migratory route of the Knot is along the eastern coast of North America (Bent, 1927; A.O.U., 1957), but it is a "tolerably common migrant throughout the Mississippi Valley east of the ninety-eighth meridian" (Cooke, 1910). At the Ontario Lakehead, the Knot has been recorded at least twice—once by Dr. A. E. Allin on May 25, 1955, and once by C. Garton on May 20, 1956 (H. Mossop, pers. comm.). Williams (1926) called it a "rare migrant" in the Red River Valley of North Dakota, but noted two fall records. In Saskatchewan, Mitchell (1924) recorded it as a hypothetical but probable spring migrant on the basis of one seen at Lake Johnstone (= Old Wives Lake) on May 13, and three on May 20, 1923. The species was substantiated for that province when Mitchell collected three of five seen at Imperial Beach, Last Mountain Lake on May

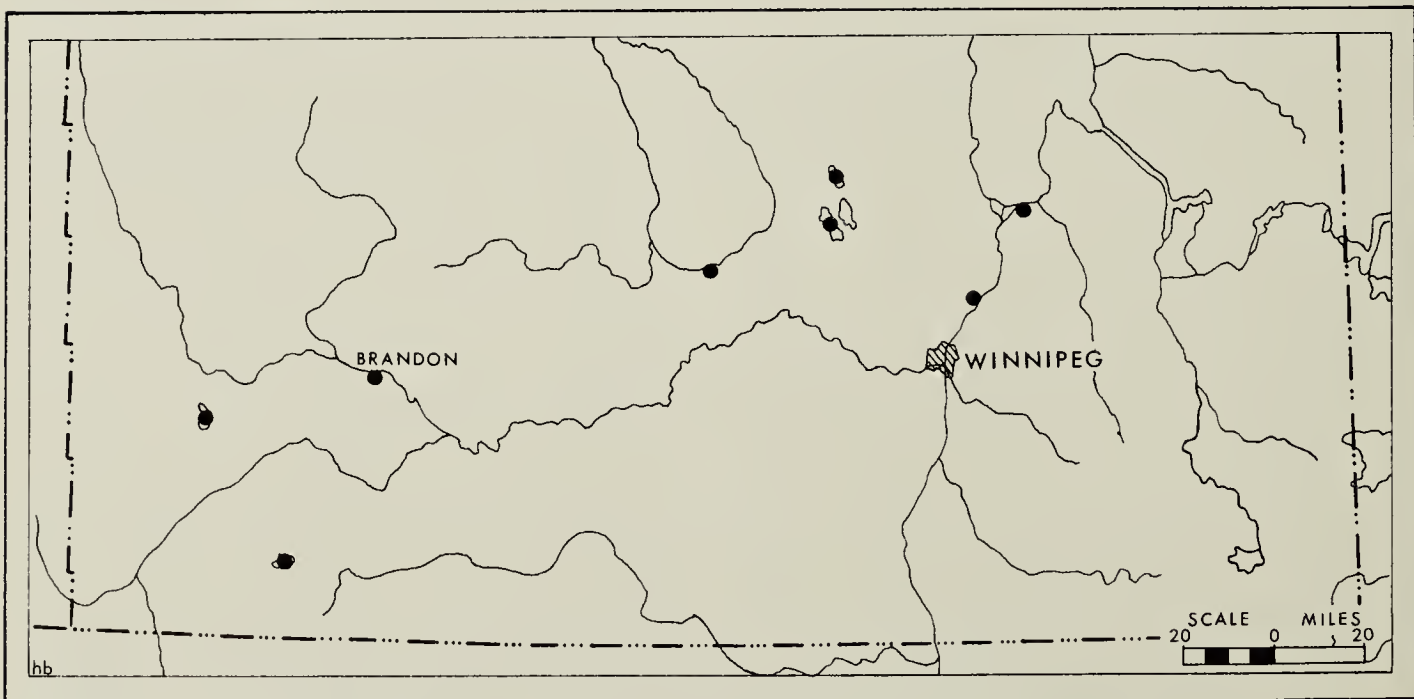


Fig. 1. Locations of Knot observations in southern Manitoba.

Table 2. Knot records from southern Saskatchewan

Date	Number	Location	Reference Source
May 13, 1923	1	Lake Johnstone (= Old Wives Lake)	Mitchell, 1924
May 20, 1923			
May 24, 1931	1	Old Wives Lake	Knight, 1967
May 27, 1924	5 (3 collected)	Imperial Beach, Last Mountain Lake	Mitchell, 1925 Potter, 1943
May 24-25, 1932	2 (collected)	Imperial Beach, Last Mountain Lake	Todd, 1947
May 25, 1964	2	south end of Last Mountain Lake (formerly Valeport)	Margaret Belcher, pers. comm., 1969
May 20, 1934	2	Regina	Belcher, 1961
May 1957	1		
May 28, 1958	3		
May 29-30, 1958	4 (plus 1 on 29th)		
May 22, 1966	2	Regina	M. Belcher, pers. comm., 1969
May 19-21, 1967	1		
September 24, 1967	1	Regina	Hatch, 1968a
May 19, 1968	100	LaFleche	Hatch, 1968b
May 22, 1963	4	Rutherford's Slough, Moose Jaw	Knight, 1967
June 6, 1967	5	Morse	M. Belcher, pers. comm., 1969
June 9, 1967	16		
May 21, 1959	1	Qu'Appelle Valley (Fort San)	Storer, 1959 Mossop, 1959
May 23, 1943	about 12	Melville	McKim, 1943
May 20, 1962	1	Rice Lake, Saskatoon	Gollop, Roy, and Folker, 1963
May 20, 1965	12	Porter Lake, Saskatoon	Gollop, Slimmon, and Folker, 1966
May 13, 1966	6	Saskatoon	Gollop, 1967
May 14, 1966	4		
May 21, 1967	5	Saskatoon	Gollop, 1968
May 25, 1968	3	Saskatoon	Roy, 1968
May 18, 1964	1	Coteau Lake	Roy, 1968

27, 1924 (Mitchell, 1925; Potter, 1943). Since that time there have been several other records from southern Saskatchewan as summarized in Table 2. In northwestern Saskatchewan the species is given as hypothetical for Lake Athabasca on the basis of one on August 20, 1920 and three on August 21, 1920 "seen, but not definitely identified" by Francis Harper at Fair Point, Lake Athabasca (Nero, 1963). This record was recently considered to be more definite by Harper (pers. comm. to R. W. Nero, September 17, 1963) on the basis of having heard the call which he recorded as "wahquoit". In the same correspondence Harper reports

collecting a Knot on August 29, 1920, 10 miles N.N.E. of Sand Point, Alberta (on Lake Athabasca). W. Rowan regarded the Knot as a regular migrant in Alberta largely on the basis of about 200 seen on May 21, 1924 and over 150 on May 23, 1924 (Bent, *op. cit.*), and Salt and Wilk (1966) regard it as a scarce but regular migrant in Alberta during both spring and fall migrations. R. S. Palmer (*in* Stouder, 1967, pp. 239-240) records the interior flight east of the Rockies as "Alberta mainly."

Two features are noteworthy about these records. One is that all Manitoba records, with the possible exception of Braddell's Oak Lake obser-



Fig. 2. Locations of Knot observations in Saskatchewan and Alberta.

vation, and all of Saskatchewan's records except the Lake Athabasca records and one of the 1967 Regina records are of spring migrants, whereas in Alberta they are considered regular in both spring and fall. The other feature is that there is a considerable gap in locations of observations on the prairie (as shown in figure 2). Locations given for records in Alberta by Salt and Wilk (*op. cit.*) are in the western part of the province (Beaverhill Lake, Bittern Lake, Calgary area). On the other hand, the rest of the records are from Manitoba or east and central Saskatchewan, with no records from eastern Alberta or western Saskatchewan (except Lake Athabasca far to the north). Furthermore, in Alberta they are regular at Beaverhill and Bittern lakes where they occur "sometimes in large flocks" (Salt and Wilk, *op. cit.*), whereas they do not appear to be regular in southern Manitoba or Saskatchewan, and never have been noted in flocks of the size recorded for Alberta. These factors indicate that there may be two different pathways involved, one passing through western or central Alberta, the other east of Manitoba, and occasionally through eastern Saskatchewan and Manitoba.

In examining the distribution of these records it is interesting to note the differences in water availability in different portions of the prairie provinces. In Manitoba, south and west of the Precambrian Shield lies the broad, shallow Glacial Lake Agassiz Basin, of which Hochbaum (1967, p. 197) says, "Few regions of North America are so richly endowed with standing waters." Thus the region has plenty of water available most of the time. However, many of the water bodies in this area "are very shallow and disappear in very dry seasons" (Davis *et al.*, 1926, p. 8). Since there has been essentially no change in topography since the latest glaciation (Davies *et al. op. cit.*, pp. 149-160), this area has had plenty of water available for migrant waders for centuries, but this availability

varies from one year to another and is more reliable in spring than in fall. Similarly, southeastern and south central Saskatchewan is largely an area of "very flat plains on ancient lake bottoms" (Fraser, *et al.* 1935), and thus with plenty of water available but susceptible to wet-drought periods. Southwestern Saskatchewan and southeastern Alberta, on the other hand, are largely made up of arid areas and areas of higher elevation with deeper lakes lacking enough shorelines and/or mudflats to be suitable for shorebirds (Fraser *et al.*, 1935; Williams and Dyer, 1930). Farther west in Alberta there are lakes, such as Beaverhill Lake where the greatest number of Knots in Alberta have been observed, which are "large and shallow waters" (Bird and Bird, 1967) and thus have water and shoreline available to migrant waders in both spring and fall.

Cooke (1910), noting the absence of migrating Knots in the interior of Canada, suggests that the birds in the interior (Mississippi Valley) flight must veer away from the ninety-eighth meridian and "fly north and a little east to Hudson Bay." As it would take only enough weather disturbance to keep them going north or deflect them slightly to the west to bring them to Manitoba or Saskatchewan, it seems most probable that our birds come from the Mississippi Valley flight. Since there is only a small Knot migration along coastal British Columbia, and there are no records for interior B.C. (Godfrey, *op. cit.*), it seems likely that the Alberta birds may represent a smaller contingent of the Mississippi Valley flight that veers west somewhat south of us, and proceeds along the eastern edge of the mountains, using this route to a lesser extent in the fall also. That this is possible is further borne out by the fact that although the main flight is farther east in the fall, there are several fall records from interior states (Bent, 1927).

Both the A.O.U. Check-list (1957) and Godfrey (1966) note that the fall migration is farther east than that

of the spring. These conclusions appear to agree with the Manitoba-Saskatchewan records, where the interior (Mississippi Valley) route appears to be used only in the spring. The Alberta birds, in contrast, stage regular flights in both seasons, although the fall flight appears to be smaller (Salt and Wilk, *op. cit.*). These records suggest, therefore, that the tendency for Knots to avoid the interior route in the fall applies primarily to the more eastern portion, including the Manitoba and eastern Saskatchewan birds, but to a lesser extent, if at all, to birds passing through Alberta. As noted above, this may be related to water availability.

Certainly our knowledge of the migratory pathways used by the Knot is at present scanty, and more information is needed before we can accurately map its "normal" and abnormal course. For the present, the status of the Knot in Manitoba appears to be: regular spring transient along Hudson Bay, and casual spring migrant in the south.

Acknowledgments

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FURTHER RECORDS OF THE VARIED THRUSH AT ROSETOWN, SASKATCHEWAN

by **Wayne Renaud**, Rosetown

In the September 1968 *Blue Jay* (26:122-3) I reported seeing a Varied Thrush (*Ixoreus naevius*) at Rosetown on October 9 and 10, 1967. Since then, we have had two records for this area which I should like to report.

On May 6, 1968 a Varied Thrush was positively identified at Valley Centre (18 miles north and seven miles east of Rosetown) by Mrs. H. Renaud when it came within yards of the picture window.

On September 22, 1968 another individual was sighted and photographed at the same location. Because it was evidently suffering from a wing injury it was unusually tame. It was observed from about 4:00 to 4:30 p.m. when it remained in the same group of trees; then it flew off and was not seen again until 6:00 p.m. when it was sighted in the neighbour's trees. It was apparently becoming very weak because it was flushed from the ground twice and only flew a few yards before alighting once more. Attempts to capture it proved fruitless.

On the morning of September 23 it was caught by a cat, but the wings, tail and parts of the back and breast were salvaged, and I sent these to the

Editor of the *Blue Jay*, establishing positively the occurrence of the bird in the Rosetown area.

These sightings indicate that the Varied Thrush may not be as rare in Saskatchewan as once thought.

[Editor's Note: It is also of interest that the Varied Thrush reappeared in Regina in the fall of 1968. A single bird of this species was seen at the McKay's bird bath on Angus Street, near the Legislative Buildings, on October 9, 1968. It was observed on that date by Mr. and Mrs. J. F. McKay, who showed it the following day to Dr. George Ledingham and myself. A second observation of a Varied Thrush in a different location was made on November 9 by Ken Johnson at 1522 Athol Street, who called Frank Brazier to confirm his identification. Then on November 14, a Varied Thrush appeared on the east side of the city, on Winnipeg Street, where it was first reported by Mrs. Dorothy Tegart. It was seen again in the backyard on a number of occasions up to November 28, by Mrs. Tegart and myself. It was never established whether it was the same individual that was observed in the three different locations.—Margaret Belcher.]