

bird obligingly perched on a fence about 10 miles east of Regina which checked out in every detail with the description of a Blue-winged Warbler but this record likewise was never published.

Spring stragglers are to be expected; for many reasons birds get lost on the spring migration and turn up in the oddest places. But our fall bird was most unusual in that it defies logical explanation—no storm pushed it north, no flocks of migrants were flying north which it might have accompanied. In view of the distance it no doubt travelled (perhaps as much as 600 miles) and the condition of the stomach contents, one could reasonably guess it had flown steadily northward for many hours, probably

overnight since warblers normally migrate at night, and at about 25 mph.

There is one hypothesis which might account for its presence in Regina; it may have become disoriented. Ron Huber states elsewhere in his letter: "Our weather here has been rather strange, warm and cold spells alternating." At Regina we experienced a long open fall caused by a series of low-pressure systems coming from the west, and as these commonly bring much cloudiness far into the interior, our bird could have conceivably started south one night, run into heavy cloud which obscured the stars and ultimately arrived in Regina rather than Central America.

THE 1965 FALL WARBLER MIGRATION AT REGINA

by **Margaret Belcher, Alvin Binnie and Betty Binnie**, Regina

In the Regina area, observers of the 1965 fall migration were struck by the unusual abundance of transient warblers, the number of species represented, and the late dates of departure for some of these.

Ordinarily at Regina, located in the middle of treeless plains, we do not see many warblers. The resident species are limited to the Yellow Warbler and the Yellowthroat, with a single extralimital breeding record of the Myrtle Warbler obtained in the summer of 1965 (Brazier, 1965). During the spring and fall migration there are sometimes conspicuous "waves" of warblers, but in other years the migration season may pass without producing any large numbers. Of the migrants, the Myrtle Warblers are, of course, the most abundant, and they are ordinarily the first to arrive in spring and the last to leave in the fall. On the other hand, species like the Audubon's Warbler, Black-throated Green, Blackburnian, Chestnut-sided, Bay-breasted, Connecticut, Mourning, and Canada Warbler, have been considered rare or very rare

transients, irregular or occasional in their occurrence (Belcher, 1961). This is in spite of the fact that some of these are known to breed farther north in the province—and may even be abundant in their breeding range.

In some cases, the explanation for the scarcity of sight records of the migrant warblers appears to be that the migration passes over Regina without birds stopping here for food and shelter. This is borne out by the counts made in recent years of birds killed at the TV towers. During the first reported fall TV tower kills (Nero, 1961) we were struck by the number of Bay-breasted Warblers (3), which constituted nine per cent of the total count of warblers recovered at the CKCK-TV tower on September 3, 1961. Two species of warblers considered "rare" or "very rare" were also present — Mourning Warbler (1) and Connecticut Warbler (1); and a MacGillivray's Warbler provided the first substantiated record of that species for the Regina area. Again on September 10, 1961, two Bay-breasted Warblers were recovered at the CKCK

tower. During the 1962 fall migration, five Bay-breasted and three Connecticut warblers were recovered at the CKCK-TV tower on September 7 (Lahrman, 1962), and in the fall of 1964, although there were only two Bay-breasted Warblers recovered at the Regina TV towers, on September 4, a striking number of Mourning and Canada Warblers were among the casualties — 17 Mourning Warblers at CKCK and one at CHRE on August 21, 14 at CKCK and five at CHRE on September 4; eight Canada Warblers at CKCK and one at CHRE on August 21, three at CKCK on September 4 (Lahrman, 1965). The number of these species that are considered rare that are recovered regularly at Regina TV towers should prepare us for the occasional occurrence of rather numerous sight records of such species, when some peculiar combination of circumstances "grounds" the warblers that ordinarily fly over us without stopping in Regina.

Some fall migrations are of course much more spectacular than others. In 1961, for example, we considered the fall migrants, especially warblers and nuthatches, unusually abundant. The fall of 1965 appears to have been an even more exciting season for bird-watchers. In Regina, in addition to the warblers, there appeared in unusual numbers Yellow-bellied Sapsuckers, Red-breasted Nuthatches, Hermit Thrushes and Fox Sparrows. Most of our records come from two locations which offer shelter to migrants stopping for rest and food, the city itself with the trees and shrubbery of the Legislative Grounds and of established residential areas, and the well-treed grounds of the Provincial Correctional Institution, three miles east of the city. Observations by Al and Betty Binnie at PCI, and by Margaret Belcher and many other observers in the city, form the basis of the sight observations included in this report, while checks at the TV towers were made by Fred W. Lahrman of the Saskatchewan Museum of Natural History and by Al Binnie. Binnie visited the CHRE-TV

tower on August 27 and 31, and on September 17, 19 and 26; Lahrman checked the taller CKCK-TV tower (670') two miles to the south, on August 27, 28, 29 and 31, on September 3, 9, 11, 12, 16, 17, 19, 22, 25 and 30, and on October 1, 2. Lahrman also checked the CHRE tower on September 30 and October 2, and A. Swanston of the Museum staff, visited the CHRE tower on August 31, collecting 35 birds in addition to those found there by Binnie on that date.

The last week of August, 1965 in Regina was cloudy, cool and windy, beginning with rain on the 25th after a hot, dry period. The cloudy, cool weather on the night of August 26-27, with a light sprinkling of rain and a northeast wind, produced the first tower kills of the fall migration, and continuing wet weather (with 1.15 inches of rain falling between August 25 and 31) contributed to a record number of casualties on the night of August 30-31.

At the CHRE-TV tower Binnie collected 10 birds of seven species on the afternoon of August 27 (Table 1) and Fred Lahrman collected 55 birds of 13 species at the CKCK-TV tower (Table 2). Lahrman had visited the CKCK tower the evening before (10:30-11:30 p.m.) recognizing that weather conditions were likely to cause a collision mortality. He describes the visit in his notes: "On arrival I could hear a continuous chirping of warblers and caught an occasional glimpse of one as it darted over the building among the guy wires. One warbler (a waterthrush) was found dead on the pavement. Towards 11:30, just before I left, the number of migrating birds had apparently increased as they were then continuously in sight, and often up to seven could be seen at once. They appeared to be ghostly white in colour silhouetted against the black sky, being lighted up from underneath by the lights on the parking lot. They were obviously confused by the lights of the tower, as they would dart past, only to stop suddenly and dart back in the other direction. Some would

TABLE 1
Warblers recovered at CHRE-TV
tower, Regina, fall 1965

Species	Aug. 27	Aug. 31	Sept. 17	Sept. 30	Total
Black-and-white	13	...	...	...	13
Tennessee	49	...	...	2	51
Yellow	1	14	...	...	15
Magnolia	...	4	...	...	4
Myrtle	...	...	...	2	2
Chestnut-sided	1	...	...	...	1
Blackpoll	...	9	...	...	9
Palm	...	1	...	...	1
Ovenbird	1	11	...	...	12
Northern					
Waterthrush	...	23	1	...	24
Mourning	1	1	...	...	2
Yellow-throat	...	...	1	...	1
Wilson's	...	12	...	...	12
Canada	2	1	...	...	3
Total	6	138	2	4	150

flutter moth-like alone around the structure, others fluttered against the brick wall on the south side of the building which was lighted up by the parking lot flood lights. Some of the birds were flying just high enough to clear the building and others were much higher and could just barely be seen. No doubt some were up beyond the range of the lights."

The night of August 30-31 was heavily overcast with a light drizzle and a strong northwest wind. The result was the largest tower kill ever recorded for Regina—172 birds at CHRE and 227 at CKCK. In addition to dead birds collected at the towers (Tables 1, 2), Al Binnie and his daughter Carole took home three injured birds—a Magnolia Warbler, a Northern Waterthrush and a Tennessee Warbler, sheltered them overnight and released them the following morning. They also saw some less seriously injured birds which they were unable to catch, one of these being a female American Redstart.

The month of September was wet, very cool and windy. On September 17, cold rain turned to snow, driven by a strong northwest wind. However, none of the checks made at the towers during September showed the high mortality figures of August 26-27, or especially of August 30-31.

Eighteen species of warblers were recovered at the TV towers in Regina in the 1965 fall migration, compared with 13 species in 1964, 12 species in 1962, and 15 species in 1961, a year in which, as noted above, we considered the migration unusually good. In the TV tower collisions the species suffering the greatest number of casualties in 1965 were the Black-and-white, Tennessee, Yellow, Blackpoll, Ovenbird, Northern Waterthrush and Wilson's. What is striking here is the lack of correlation between numbers recovered in TV kills and numbers observed normally during the migration; for example, the Myrtle Warbler, always considered to be much the most abundant of the migrant warblers, is represented by only 10 TV tower recoveries in 1965, and not a single Orange-crowned Warbler was picked up in all these visits to the towers! On the other hand, the Ovenbird, which is seen regularly but never in numbers (I recall being surprised to find at least three in a small area in the Legislative Grounds on August 31 this year—M.B.), accounted for 37 of the warbler casualties. The large number of Ovenbirds killed is no longer a surprise, however, since there were 55 casualties of this species in the fall of 1964, 13 in 1962, 17 in 1961. The TV casualties of the night of August 27 included one individual each of two species not otherwise recorded this fall—the Blackburnian and the Chestnut-sided. Three Connecticut Warblers were recovered at the TV towers, whereas only one was reported at Regina as a sight observation (September 8); 12 Mourning Warblers were recovered, against two sight observations (August 26, 27). The Canada Warbler, not reported every year in Regina, seemed more abundant—one

was observed on August 26 in the Legislative Grounds (G. F. Ledingham), and the Binnies reported the species on August 27, September 10 and 11, at PCI; but note that 12 Canada Warblers were recovered at the towers on August 27 and 31 (12 Canada Warblers were also picked up at the towers in the fall of 1964)!

Turning from the record TV tower kills, we find another indication of the variety of species of warblers in the 1965 fall migration at Regina in the recorded sight observations. Of the 28 species listed as occurring in the province in the *Field check-list of Saskatchewan birds* (Houston, Bard and Nero, 1959) 23 species were recorded by observers reporting to the *Aububon Field Notes* regional compiler. If we add the Blackburnian and Chestnut-sided warblers recovered at the towers, to make a count of 25, the

only Saskatchewan species missed in the 1965 fall migration were the Black-throated Blue, the MacGillivray's and the Yellow-breasted Chat. In addition, a new species was added for Regina and Saskatchewan by Frank Brazier's discovery of a dead Blue-winged Warbler on a Regina street on November 9 (reported in this issue of the *Blue Jay*).

We do not have figures to establish the abundance of the 1965 fall warblers in comparison with previous years, but all observers were generally in agreement with Doug Gilroy that these were "rather exceptional migration movements." One of the striking examples was the Palm Warbler: Doug Gilroy reported a "huge concentration at his farm on September 12, and mentioned a new wave of Palm Warblers and Myrtles on September 19, while Ruth Tempel saw

TABLE 2
Warblers recovered at CKCK-TV tower, Regina, fall 1965

Species	Aug. 27	Aug. 28	Aug. 29	Aug. 31	Sept. 3	Sept. 9	Sept. 12	Sept. 16	Sept. 17	Sept. 19	Sept. 22	Sept. 25	Sept. 30	Oct. 2	Total
Black-and-white	3	.....	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Tennessee	3	.....	1	76	2	2	.....	.....	2	.....	.....	1	3	1	91
Yellow	18	.....	.....	14	3	.....	.....	.....	.....	.....	.....	1	.....	.....	36
Magnolia .....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Myrtle .....	.....	.....	.....	1	.....	.....	.....	.....	1	1	1	2	1	1	8
Blackburnian....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Bay-breasted .	1	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Blackpoll .....	.....	.....	.....	11	.....	1	.....	.....	1	.....	.....	4	1	.....	18
Palm .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	3
Ovenbird .....	.....	.....	.....	20	2	.....	.....	1	1	.....	1	.....	.....	.....	25
Northern															
Waterthrush	5	1	.....	13	1	.....	.....	2	.....	.....	.....	.....	.....	.....	22
Connecticut	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Mourning	1	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Wilson's	8	1	1	19	1	.....	1	.....	.....	.....	.....	.....	.....	.....	31
Canada	3	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
American															
Redstart	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total	46	4	2	188	9	3	1	3	5	1	2	10	5	2	281

about 250 feeding along a roadside just west of Regina, in company with a similar number of Myrtles. We think it also worthy of note that Bay-breasted Warblers were reported frequently and by different observers from August 27 to October 1. This, and the TV kills of recent years, would suggest a revision of the status of this warbler described as a "very rare, irregular transient" in the Regina area (Belcher, 1961), but we cannot take this as a pattern until balanced by further years' observations. Mrs. Ann Gammell, who banded Bay-breasted Warblers this year at Kenmare, North Dakota, in approximately the same period (September 2 to October 3) reports to the *Audubon Field Notes* compiler that she has noted "an increase in this species the past two falls." Similarly, the Cape May Warbler, for which we have the unusual number of three sight records this fall, has been reported more commonly than usual in the province—a

Cape May seen September 24 at Fort San by Manley Callin was considered of "special interest"; one seen September 28 by Mrs. Hubbard at Grenfell was her first observation of this warbler at the farm; and the Cape May was considered "more common than usual in fall migration", noted to September 25, in Saskatoon.

The warbler migration elsewhere in the province, as at Regina, was generally considered exceptional. Mrs. Hubbard at Grenfell wrote that "the unusual and nice part about it was to be able to walk out in your own backyard (around the dugouts) and be able to identify five or six species of warblers all at one crack—not to mention the one of two that 'got away'", and her "big day" was September 19 when it was sunnier and warmer after the snow of the previous two days. At Moose Jaw, according to Mrs. F. B. Taylor's report, the migration brought unusually large numbers of Black-and-white Warblers, Northern

TABLE 3

Arrival and departure dates for Regina fall warbler migration, 1965.

Species	First Seen	Peaks	Last Seen
Black-and-white	Aug. 24	Aug. 26, 28, 31	Sept. 25
Blue-winged	Nov. 9		
Tennessee	Aug. 24	Aug. 26, 31	Oct. 4
Orange-crowned	Aug. 31	Sept. 29	Oct. 9
Nashville	Aug. 27		Sept. 28
Parula	Oct. 21		Oct. 24
Yellow	Aug. 24		Sept. 23
Magnolia	Aug. 31		Oct. 1
Cape May	Sept. 23		Oct. 21
Myrtle	Aug. 27	Aug. 27, 29, Sept. 21, 23, 24	Oct. 31
Audubon's	Sept. 24		Sept. 29
Black-throated green	Aug. 31		
Bay-breasted	Aug. 27		Oct. 1
Blackpoll	Aug. 29	Sept. 24	Oct. 9
Pine	Sept. 12		Sept. 24
Palm	Aug. 31	Sept. 12, 19, 23, 24	Oct. 26
Ovenbird	Aug. 24		Sept. 30
Northern Waterthrush	Aug. 24		Oct. 1
Connecticut	Sept. 8		
Mourning	Aug. 26		
Yellowthroat	Sept. 10	Sept. 29	Sept. 29
Wilson's	Aug. 22	Aug. 26, 28	Oct. 1
Canada	Aug. 26		Sept. 11
American Redstart	Aug. 24	Aug. 28, Sept. 25	Oct. 8

Waterthrushes and American Redstarts, and some rare species such as Magnolia, Bay-breasted, Black-throated Blue, and Canada Warblers. Warblers were reported as unusually common in Saskatoon this fall, and Dr. Stuart Houston had a very successful season of banding (see article in this issue). However, at Fort Qu'Appelle, Manley Callin found only Myrtle Warblers as abundant as usual, with other species fewer in number.

The abundance of warblers and the variety of species represented in the 1965 fall migration makes it seem worthwhile to show arrival and departure dates, with indications of peaks where possible (see Table 3). It will be seen in this table that almost all the common migrants had arrived in the area by the end of August, and it will also be noted that a surprisingly large number of species did not leave until October. These late dates are curiously interesting, especially since they represent some of the most striking observations — the Parula Warbler seen by the Binnies from October 21 to 24, the Cape May Warbler seen by Belcher October 21

(previously on September 23 by R. W. Nero, and on October 3 by the Binnies), and of course the Blue-winger Warbler found dead on November 9. The last record we have for the season is that of an unidentified warbler, described as being greenish in colour, with a gray head and white eye-ring, glimpsed briefly by Greg Bobbitt on November 13.

In making this survey, the authors wish especially to acknowledge the work done by Fred Lahrman, who visited the CKCK-TV tower regularly throughout the fall migration and made his notes available for this report.

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MIST NETTING AT SASKATOON, AUTUMN 1965

by **C. Stuart Houston** and **Mary Houston**, Saskatoon

Mist netting of birds has long been an art in Japan, but it was first popularized on this continent by Oliver L. Austin, Jr., who served with the American troops during the occupation of Japan immediately following the war. Silk or nylon nets, 30 to 60 feet in length and five or six feet high, are strung between poles. The nets are virtually invisible so that birds readily fly into them and pocket themselves unharmed. A special permit is required to operate mist nets.

On five weekends in August and September, 1965, 10 to 12 nets were put in place on Saturday evening and attended from dawn to dusk on Sunday, at 15- to 20-minute intervals. An

excellent sampling of the migration was thus obtained, for example, no less than 17 species of warblers and four species of vireos were banded, for a total of 190 individuals. With the bird in the hand, one can identify with certainty many species that would be difficult or impossible to identify in the field. Weights and measurements were obtained of all individuals. Members of the Saskatoon Natural History Society who assisted included Jim Slimmon (see photo), J. B. Gollop, Glen A. Fox, Sandy Macaulay, John Black, Cliff Matthews, Bill Richards, Jonathan Gerrard, Bob Ipema and Stan Houston.