BIRD-BANDING

A JOURNAL OF ORNITHOLOGICAL INVESTIGATION

VOL. XXXIX OCTOBER, 1968 NO. 4

A SUMMARY OF THE EXTRALIMITAL RECORDS OF THE VARIED THRUSH, 1848 TO 1966

By ALLAN R. KEITH

For some time, evidence has been accumulating that the Varied Thrush (*Ixoreus naevius*) is of more frequent occurrence outside its normal range as defined in the AOU Checklist (1957 edition) than was previously supposed. The primary purposes of this paper are to provide (a) a summary of the data on all extralimital records for which there are convincing details, (b) a source of all concrete evidence for such occurrences when it exists, including its type and location, and (c) a discussion of the geography and history of extralimital records in this species.

The principal method used in collecting information for this paper was a search of the literature. Once citations in the literature were located, the great majority of them were explored further by writing the observers in an attempt to obtain as much additional information and corroboration as possible on the bird or birds seen. In the case of a bird that was collected, photographed or banded, additional particulars on the location of specimens, photographs, etc. were obtained when they were available. It may be that several bona fide records were overlooked in the literature or not located through correspondence which should have been included in this paper. Several reports that were found were left out for lack of convincing details. Only the author may be held responsible for an omission in either category.

Table 1 presents the data accumulated by the technique described above. It lists in chronological order by arrival date 132 occurrences of at least 142 individual Varied Thrushes that would be considered extralimital, or "accidental", given the range for the species as it is defined in the most recent edition of the AOU Checklist (1957). In Table 1, the attempt has been made to obtain the most precise information possible on four subjects: dates of occurrence, age, sex, and observers. Dates of occurrence may not agree in all cases with information given in all of the references cited. In each case where such a discrepancy exists, it is because new information apparently not available to earlier workers was uncovered. Where age and sex information was available from collected specimens examined by competent authorities, this data appears without parentheses in the proper columns. Where age and sex could only be inferred from photographs or verbal descriptions, this information had to be considered

TABLE 1. EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
1.	February or March 1848	Somewhere in New Jersey	Sp.	N/A	Male	S. Cabot
2.	? December 1851	Hoboken, New Jersey	Sp.	N/A	N/A	G. N. Lawrence
3.	18 December 1864	Ipswich, Massachusetts	Sp.	N/A	Male	C. J. Maynard, J. M. Bethune
4.	Fall of 1874	Islip, New York	Sp.	N/A	N/A	G. N. Lawrence
5.	4 March 1886	Guadalupe Island, Baja California, Mexico	Sp.	Adult	Female	W. E. Bryant
6.	21 December 1889	Port Jefferson, New York	Sp.	Adult	Male	A. H. Helme
7.	28 August 1890	Manicouagan, Quebec	Sp.	N/A.	N/A	A. K. Fisher
8.	17 October 1891	Garden City, Kansas	Sp.	N/A	N/A	H. W. Menke
9.	19 November 1905	Miller Place, New York	Sp.	N/A	N/A	A. H. Helme
10.	5 December 1909	Boulder, Colorado	SR	(Adult)	(Male)	N. deW. Betts
11.	1 December 1916	Near Truth or Consequences, New Mexico (a)	SR	N/A	N/A	G. Willet
12.	15 and 18 April 1923	Omaha, Nebraska	SR	N/A	N/A	W. Marsh
13.	11 September 1923	Castor, Alberta (b)	Sp.	Adult	Male	T. E. Randall
14.	5 September 1926	Yellowstone National Park, Wyoming	SR	(Immature)	N/A	M. P. Skinner
15.	28 November 1928	Ossining, New York	SR	N/A	N/A	Miss M. Sheridan
16.	26 April 1929	Blue Island, Illinois	SR	N/A	(Male)	Bartel
17.	4 and 6 November 1935	Cove, Texas	SR	N/A	(Male)	A. McKay, D. McKay
18.	18 December 1935	North Platte, Nebraska (c)	Sp.	Adult	Male	H. E. Weakly, M. H. Swenk, H. C. Oberholser
19.	24, 26, and 27 November, 6 December 1936	Port Richmond, New York	P	N/A	(Male)	Mrs. J. H. Boesch, W. T. Davis, W. M. Davis, G. B. Wilmott, *et al.*
20.	26 November 1936 to 20 March 1937	Clementon, New Jersey	SR	N/A	(Male)	M. L. Parrish, E. S. Griscom
21.	15 to 27 March 1939	Monhegan Island, Maine	SR	N/A	(Male)	Mrs. J. Townsend, Miss E. Bore, *et al.*

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
22.	About 21 March to 27 March 1939	Monhegan Island, Maine	SR	N/A	(Female)	Mrs. J. Townsend, Miss E. Bore, *et al.*
23.	7 February to 14 April 1941	Duluth, Minnesota	SR	(Immature)	N/A	O. Lakala, Mrs. W. Wernowsky, Mrs. W. S. Telford, *et al.*
24.	26 November 1941	Grand Marais, Minnesota	Sp.	Adult	Female	W. P. Abbott
25.	13 May 1942	Point Barrow, Alaska	Sp.	Adult	Female	C. D. Brower
26.	"All winter" to 15 March 1944	Crosby, Minnesota (d) (bb)	SR	N/A	N/A	Mrs. M. W. Griswold
27.	26 October 1944	Madison, Wisconsin (e)	SR	N/A	N/A	Mrs. H. R. English
28.	12 to 28 February 1946	Janesville, Wisconsin (f)	P	N/A	(Male)	W. J. Allan, *et al.*
29.	22 December 1946 to 1 January 1947	Salt Lake City, Utah (g)	SR	N/A	N/A	W. Bader, E. Jones, J. M. Heiser, C. W. Lockerbie, C. R. Tanner, J. Weidner
30.	13 May 1947	Salt Lake City, Utah (g)	SR	N/A	N/A	B. Webb
31.	"Last week" of September 1948	Logan, Utah (bb)	SR	N/A	N/A	H. J. Egoscue
32.	5 November 1948	Nobleboro, Maine	SR	N/A	N/A	H. Beston
33.	Early December 1948 to 21 April 1949 (h)	Osceola, Wisconsin	SR	N/A	(Male)	Mrs. O. T. Simmons, *et al.*
34.	2 January 1949	Amherst, Massachusetts	SR	N/A	(Female or Juvenile)	Mrs. G. E. Taylor
35.	27 September 1949	Burnham, Saskatchewan	B	(Adult)	(Male)	A. Ward
36.	At least 16 December to 30 December 1950	Evanston, Illinois	SR	N/A	(Female)	R. L. Maunette, R. Zusi, Mrs. P. Klopsteg, Mrs. G. Silitt, *et al.*
37.	11 April 1951	Fort Collins, Colorado	SR	N/A	(Male)	R. Fair
38.	24 January through February 1952	Manitowoc, Wisconsin	P	N/A	(Female)	M. Pickett, D. R. Crehore, L. Marsh, *et al.*
39.	26 May 1953 and for about a week before	Pitt Point, Alaska (i)	SR	N/A	N/A	C. H. Fiscus

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
40.	"All fall" and from 8 December 1953 to 23 January 1954	Encampment Forest and Two Harbors, Minnesota (j)	SR	(Adult)	(Male)	P. B. Hofslund, J. K. Bronoel, M. Penner, O. Lakala, *et al.*
41.	30 September 1955	Winnipeg, Manitoba (bb)	SR	(Adult)	(Male)	H. V. Hosford
42.	26 December 1955	River Forest, Illinois	SR	N/A	N/A	A. C. Montague, P. Pearson
43.	25 January and 5 February 1956	Tuscon, Arizona	Sp.	Adult	Female	A. R. Phillips, W. E. Lanyon, V. M. Morton, G. Emerson
44.	12 to 17 February and 18 to 23 March 1956	El Paso, Texas	P	N/A	(Male)	Miss M. B. Keefer, D. T. Johnson, *et al.*
45.	1 and 2 December 1956	Cedar Creek Forest, Minnesota	SR	N/A	N/A	Mrs. A. D. Corniea
46.	15 December 1956 to 30 March 1957	Rock Island, Illinois	SR	N/A	(Male)	P. C. Peterson, Jr., A. L. Baily, E. Fauks, R. Trial, R. Greer, *et al.*
47.	19 December 1956 to 30 March 1957	Decatur, Illinois	P	(Adult)	(Male)	L. C. Binford, C. T. Nearing, R. Sandburg, A. Macomber, R. Fox, *et al.*
48.	31 December 1956 to 21 January 1957	South Orrington, Maine	P	N/A	(Male)	Mrs. P. E. Hanneman, C. M. Packard, *et al.*
49.	15 January to 6 March 1957	Fort Morgan, Colorado	SR	N/A	N/A	Mrs. E. McCutcheon, E. Hellstern, H. Rollin
50.	10 to 26 January 1958	Rapid City, South Dakota	SR	N/A	(Male)	Mrs. A. L. Hyde, Mr. & Mrs. G. O'Neal, Mrs. S. Owen
51.	18 January to 22 March 1958	New Hampton, New Hampshire	P	(Adult)	(Male)	F. O. Lathrop, H. Rice, R. W. Marsh, R. W. Smart, V. Hebert, *et al.*
52.	25 January 1958 and for several days thereafter	National City, Michigan	SR	N/A	N/A	R. Howard, C. Gallant, L. Besancon
53.	22 March 1958	Tuscon, Aricona	Sp.	Adult	Male	A. R. Phillips, R. W. Dickerman
54.	9 September 1958	Regina, Saskatchewan	SR	(Immature)	N/A	M. Belcher
55.	9 December 1958 and for a few days before	Watertown, New York	Sp.	(Immature)	Female	J. B. Belknap, T. S. Montague

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
56.	28 February 1959	Hopkinton, New Hampshire	SR	(Adult)	(Male)	Mr. & Mrs. F. deL. Cunningham
57.	19 December 1959 to 25 March 1960	Stanley, New Brunswick	Sp.	N/A	Male	N. R. Brown, R. S. Forman, E. Hickey
58.	About 12 February to 24 March 1960	Ridgefield, Connecticut	SR	(Adult)	(Male)	C. Swigart, R. Ryan, H. Ryan, N. Boyajian, P. Buckley, P. Post, *et al.*
59.	23 to 25 September 1960	Dugway, Utah (bb)	SR (k)	N/A	(Male)	H. J. Egoscue, J. B. Bushman
60.	18 October 1960	Brighton, Utah (l) (bb)	SR	N/A	N/A	E. Robinson
61.	3 November 1960 to 20 April 1961	Greenland, New Hampshire	SR	(Adult)	(Female)	D. J. Abbott, R. P. Emery, R. W. Smart, A. R. Keith, V. Hebert, D. Finch, *et al.*
62.	12 December 1960 to 23 March 1961	Newtown, Connecticut	P	N/A	(Female)	H. H. Saunders, G. Tudor, *et al.*
63.	13 December 1960 (m)	Littleton, New Hampshire	SR	(Adult)	(Male)	H. C. McDade
64.	24 December 1960 to 24 January 1961 (m)	New Hampton, New Hampshire	P	(Adult)	(Male)	R. Emmons, R. W. Smart, V. Hebert, J. P. Merrill, *et al.*
65.	26 February and 5 March 1961	Denver, Colorado	SR	N/A	N/A	D. Spencer, D. M. Thatcher
66.	5 May 1961	Allenspark, Colorado	SR	N/A	N/A	Mrs. L. Martin
67.	13 May 1961	Golden, Colorado (n)	SR	N/A	N/A	G. Shier
68.	30 September 1961	Regina, Saskatchewan	SR	N/A	(Male)	E. Cheeseman
69.	22 November 1961 to mid-February 1962	Chippewa Falls, Wisconsin	P	(Adult)	(Male)	C. A. Kemper, H. Paine
70.	About 1 December 1961 to 18 March 1962	Littleton, New Hampshire (o)	P	(Immature)	(Male)	H. C. McDade, R. Bradley, R. W. Smart, V. Hebert, Mrs. Kelly, *et al.*
71.	About 1 December 1961 to 18 March 1962	Littleton, New Hampshire (o)	P	N/A	(Female)	H. C. McDade, R. Bradley, R. W. Smart, V. Hebert, Mrs. Kelly, *et al.*
72.	2 to 31 December 1961	Knowlton, Quebec	SR	N/A	N/A	M. R. Blunt

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
73.	10 December 1961 to 3 March 1962	Boulder, Colorado	B	(Adult) (p)	(Female) (p)	A. Collister, E. R. Kalmbach, H. S. Allesbrook, D. Carter, *et al.*
74.	Early December 1961 to early March 1962	Littleton, New Hampshire (o)	SR	N/A	N/A	H. C. McDade, Mrs. Kelly
75.	1 January to 4 April 1962	Denver, Colorado	SR	N/A	N/A	A. H. Carhart *fide* R. J. Niedrach
76.	1 February to 17 March 1962	Derry, New Hampshire	SR (q)	(Adult)	(Male)	Mrs. H. Reynolds, Mrs. Swanson, *et al.*
77.	22 May 1962	Regina, Saskatchewan	SR	N/A	(Male)	H. Tempel
78.	31 May 1962	Mt. Washburn, Yellowstone National Park, Wyoming	SR	N/A	N/A	M. Belcher, M. Rever
79.	15 September 1962	Dugway, Utah (bb)	SR	N/A	(Male)	H. Egoscue
80.	18 December 1962	Libertyville, Illinois	SR	N/A	(Male)	E. Greaves
81.	24 December 1962 (r)	Littleton Common, Massachusetts	SR	N/A	N/A	W. A. Harrington
82.	27 December 1962	Blacksburg, Virginia	SR	N/A	N/A	R. V. Deitrich, R. S. Deitrich
83	Last week of December 1962 to 18 March 1963	Norland, Ontario	P	N/A	N/A	E. E. Valentine, D. C. Sadler
84.	1 to 26 January 1963	Tarrytown, New York	SR	N/A	(Male)	L. C. Brown
85.	4 February 1963 (r)	Hubbardston, Massachusetts	SR	N/A	(Female or Juvenile)	Mrs. S. Salminen
86.	5 February to 25 March 1963 (r)	Hubbardston, Massachusetts	SR	(Adult)	(Male)	Mrs. S. Salminen, S. A. Eliot, Jr., D. H. Crompton, P. Heywood, E. Robinson, *et al.*
87.	28 February to 15 March 1963 (r)	Hamilton, Massachusetts	SR	(Immature) (s)	(Male) (s)	F. Winthrop, M. Argue, *et al.*
88.	13 October 1963	South Harwich, Massachusetts	SR	(Adult)	(Male)	L. Mayo
89.	12 November 1963 to mid-March 1964	Grantsburg, Wisconsin	SR	N/A	N/A	N. Stone, H. Northrum, C. Strong
90.	15 to 29 December 1963	Crystal Lake, Illinois	SR	N/A	(Male)	Mr. & Mrs. Rudnicki, C. Schaffer

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
91.	19 December 1963 to 17 January 1964 (u)	Bellport, New York	P	(Immature)	(Male)	C. Williams, G. Raynor, D. Puleston, L. Morgan, *et al.*
92.	25 December 1963 to 7 January 1964	Maple, Ontario	Sp.	Adult	Female	R. Tasker, D. H. Baldwin, J. L. Baillie, R. D. Douglas-Crampton, *et al.*
93.	5 to 20 January 1964	Wapping, Connecticut	SR	N/A	(Male)	J. Neilson, *et al.*
94.	4 February to 1 March 1964	Amarillo, Texas	SR	(Adult)	(Male)	Mrs. I. D. Acord, Mrs. G. Fox, *et al.*
95.	2 to 21 March 1964	Spearfish, South Dakota (t)	SR	(Adult)	N/A	R. Devries, L. Humbert (t)
96.	17 April 1964 (u)	Orient, New York	SR	N/A	(Male)	R. Latham
97.	24 May 1964	Near Wolseley, Saskatchewan	SR	N/A	(Male)	D. Hayward
98.	Late October 1964 to late March 1965	Washington Island, Wisconsin (v) (bb)	SR	N/A	(Male)	T. Jessen
99.	24 October 1964	Regina, Saskatchewan	SR	N/A	(Female or Juvenile)	M. Belcher, L. Murray, C. MacDonald, C. Boissonnault
100.	30 October 1964	Roseville, Minnesota (w)	SR	N/A	N/A	Mrs. C. W. Nichols, Mrs. R. N. Reierson
101.	First week of November 1964	Minneapolis, Minnesota (w)	SR	N/A	N/A	Mr. & Mrs. F. Worley
102.	Late November 1964 to 16 March 1965	Oshkosh, Wisconsin	P	N/A	(Male)	Mrs. J. Clark, O. Gromme, R. Buckstaff, N. James, G. Braun, *et al.*
103.	1 December 1964 to last week of February 1965	Grinnell, Iowa (x)	P	N/A	(Female or Juvenile)	Miss M. Stewart, C. R. Kaufman, R. Norton, R. George, *et al.*
104.	23 December 1964 to last week of February 1965	Riverton, Connecticut	SR	N/A	N/A	B. Kittredge, G. Mersereau, H. Vogelsonger
105.	27 December 1964	Davenport, Iowa	SR	N/A	N/A	Mrs. C. C. Hazard, E. Sprague
106.	23 January to 30 March 1965	Rondeau, Ontario	SR	N/A	(Male)	Mrs. V. Russell, R. D. Ussher, J. P. Kleiman, S. Postupalsky, *et al.*

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
107.	13 February to 14 March 1965	Galveston, Texas	P	N/A	(Female or Juvenile)	E. N. McHenry, T. B. Feltner, W. Pettit, J. B. Strickling, Mrs. W. S. Harwell
108.	14 February to 21 March 1965	Liberty, New York	SR	N/A	(Male)	K. Niven, J. Kerner
109.	26 September 1965	Atikokan, Ontario	SR	N/A	(Male)	S. Peruniak, Mrs. S. Hancock
110.	28 September 1965	Dugway, Utah (bb)	SR	N/A	N/A	H. J. Egoscue
111.	12 and 13 October 1965	Regina, Saskatchewan	SR	N/A	(Female or Juvenile)	F. H. Brazier, R. Nero, M. Belcher, J. W. Gerrard, *et al.*
112.	23 and 24 October 1965	Regina, Saskatchewan	SR	N/A	(Male)	M. Belcher, F. H. Brazier, *et al.*
113.	27 October to at least 20 November 1965	Patagonia, Arizona	SR	N/A	(Male)	Mrs. D. Jones, W. A. Meteers, M. Paulsens
114.	About 1 November to 28 November 1965	Brandon, Manitoba	Sp.	Adult	(Male)	M. E. Bristow, J. Lane, B. Peters, W. Miller
115.	22 to 25 November 1965	Cushing, Minnesota	SR	N/A	(Male)	Mr. & Mrs. E. Isaksen
116.	27 November 1965 to 4 February 1966	Moorestown, New Jersey	SR	N/A	(Male)	A. T. Blomquist, J. Woodford, S. Hardy, J. Merritt, *et al.*
117.	5 December at least to 18 December 1965	Morris, Minnesota (y)	P	N/A	(Female or Juvenile)	E. Strubbe, L. Smith, R. Grant, S. S. Flaherty
118.	Early December 1965 to late March 1966	Marysville, New Brunswick	P	(Adult)	(Male)	D. K. Parr, W. A. Squires, D. Christie, M. Majka, *et al.*
119.	20 December 1965 to 1 January 1966	Concord, New Hampshire	SR	(Adult)	(Male)	S. Whitney, R. W. Smart, V. Hebert, D. Finch, L. Phinney, K. Dyment, *et al.*
120.	Last week of December 1965 to 2 April 1966	Kennebunk, Maine (z)	P	(Adult)	(Male)	Mrs. H. A. Lerner, Mrs. G. Butler, Mrs. P. Hussey, Mrs. Higgins, Mrs. Reeves, *et al.*
121.	About 25 December 1965 to 23 March 1966	Altoona, Wisconsin	P	N/A	(Female)	C. H. Blom, C. A. Kemper

TABLE 1. (Continued) EXTRALIMITAL RECORDS OF THE VARIED THRUSH

	Date(s)	Location	Type of Record	Age	Sex	Observer(s)
122.	31 December 1965 to 20 January 1966	Ashton, Maryland	P	(Adult)	(Male)	C. W. Bostick, C. S. Robbins, B. C. Getchell, B. J. Diamond, A. D. Braeuniger, N. A. McLeod, *et al.*
123.	1 to 17 January 1966	Mendota Heights, Minnesota (y)	P	(Adult)	(Female)	Mrs. F. P. Bradford, M. Goldberg, and many others.
124.	About 3 January to 21 March 1966	Richmond, Maine	P	(Adult)	(Male)	Mrs. F. C. Groves
125.	11 January to 1 February 1966	Redgranite, Wisconsin	SR	N/A	(Male)	Mr. & Mrs. W. Hanneman
126.	20 January to 17 March 1966	West Sand Lake, New York	P	(Adult)	(Male)	P. P. Wickham, J. Wilson, D. J. Tucker, *et al.*
127.	25 January to 4 February 1966	North Hampton New Hampshire (aa)	SR	N/A	N/A	R. Rathbone, R. W. Smart, L. Phinney, *et al.*
128.	30 January to mid-March 1966	Bedford Hills, New York	P	(Adult)	(Male)	Mrs. E. K. Merrill, S. L. Pierson
129.	31 January to 10 February 1966	Johnston, Rhode Island	P	N/A	(Male)	Mrs. S. Engdahl, S. Dana, D. L. Kraus, C. Wood, W. Dean, *et al.*
130.	26 February to 1 March 1966	Holderness, New Hampshire	SR	(Adult)	(Male)	A. Spencer, V. Hebert, L. Emmons, *et al.*
131.	16 March to 10 April 1966	St. Thomas, Ontario	SR	N/A	(Female)	M. Field, L. Aukland, F. Cook, F. Helleiner, *et al.*
132.	24 May 1966	Grand Lakes, Minnesota	SR	N/A	N/A	N. M. Hiemenz

NOTES TO TABLE 1

N/A = information not available.

(a) Previous references to this record in the literature have cited the location as the "Rio Grande Bird Reserve" which is no longer in existence, having been absorbed by the Elephant Butte Dam and Reservoir area. Thus it seems appropriate to use a more modern location to describe where the bird was seen. This record is not mentioned in Hubbard (1965) because no specimen was taken, and was unaccountably omitted from Ligon (1961).

(b) This record might not be considered extralimital and probably would not have been included in this Table had it not been for the western race *I. n. naevius*, since Castor is less than 200 miles from areas where the species can be considered a casual visitant.

(c) A total of at least four birds were present at this location near the time of this record. One individual was seen 15 December 1935. Three were present in the 16 to 27 December period, apparently not including the individual listed in Table 1. One bird thought to be a female was seen 4 January 1936.

(d) A letter describing the circumstances surrounding the observation of this bird is on file at the Minnesota Museum of Natural History in Minneapolis, *fide* Ronald L. Huber.

(e) This appears to be the first definite record for Wisconsin. An earlier record attributed to Dr. Philo R. Hoy and supposedly collected by him at Racine prior to his death in 1892 now appears to be apocryphal, and the reference to it in the AOU Checklist (1957) should be removed. Some question has been raised about the validity of this record as early as the turn of the century by Kumlien and Hollister (1903) who wrote:

"We are under the impression that Hoy recorded a single specimen of the species as captured by himself at Racine but are at present unable to find the reference and have no personal knowledge of the capture."

Subsequently, Schorger's revision (1951) of Kumlien and Hollister's *Birds of Wisconsin* made no mention of Hoy's record, and Rev. Samuel D. Robbins informs the author (pers. comm.) that Wisconsin's first definite record for this species dates from 1944 to the best of his knowledge.

(f) Anderson (1946) mentions a possible record from Sauk County, Wisconsin, which appears to be an erroneous reference to this record. Janesville is located in Rock County; note the similarity of sound of the two county names.

(g) It appears possible that these two records are duplicate observations of the same individual bird, and it is assumed here that this is the case.

(h) Mrs. Simmons left her home for two weeks on 21 April 1949. While the bird may have remained beyond that date, it had gone by the time she returned.

(i) Pitt Point is located at the eastern entrance to Smith Bay, east of Point Barrow. Fiscus (1953) and Gabrielson and Lincoln (1959) both mention that "several" birds were present during the period mentioned. For the purposes of statistical treatment discussed elsewhere in this paper, the number present is assumed to be three.

(j) Two town names are given because the site where the bird was seen most often was right near the boundary between the two and it was actually sighted within the borders of both.

(k) An attempt to collect this bird failed.

(l) This record refers to a group of 12 birds. Information regarding this record was provided through the kindness of Dr. William H. Behle of the University of Utah.

(m) Same as note (g).

(n) This record is for two birds seen. It seems entirely possible that either or both of these individuals were the same as the birds listed as records # 65 and # 66 above. For the purposes of statistical treatment discussed elsewhere in this paper, it is assumed that records # 65, # 66, and # 67 refer to no more than two individual birds.

(o) These three birds were all seen together only on one or two occasions by Dr. McDade and Mrs. Kelly. Two of the three were often seen together, and the third seemed to stay by itself most of the time. Due to the difficulty of telling the third bird from the other two, because of its predilection for appearing at dusk, the dates of occurrence for record # 74 are necessarily general.

(p) Age and sex information given is the opinion of the bander, Allegra Collister.

(q) Color movies of this bird were taken in March 1962. Unfortunately, they did not come out so no photographic evidence has survived.

(r) It seems very likely that these four records (# 81, # 85, # 86, and # 87) represent duplicate sightings of some of the same individual birds in one or more cases. There is a good chance that # 81 and either # 85 or # 86 represent duplicate sightings since the locations are only 30 miles apart. And the site where # 87 was observed is only 35 miles from where # 85 and # 86 were seen. Assuming that the dates given for all four records are accurate and complete, they can be accounted for by as few as two birds or as many as four. For the purposes of the statistical analysis given elsewhere in this paper, it has been assumed that three birds were responsible for the four records listed.

(s) Age and sex information given is the opinion of Mrs. Arthur Argue.

(t) One reference cited gives the location of sighting as "Spearfish Canyon" and the observer as Cecil P. Haight. Mr. Haight kindly provided the information given in the Table regarding the location and observers.

(u) Same as note (g).

(v) The information for this record was provided through the kindness of Rev. Samuel D. Robbins of Roberts, Wisconsin.

(w) Same as note (g) as the locations are only eight miles apart.

(x) This appears to be the first definite record for Iowa despite the fact that Baird, Brewer and Ridgway (1874) refer to an earlier record for that state. However, Coues (1878) points out that the addition of this species to the Iowa state list was done by J. A. Allen only on the grounds that it had been known to occur further east.

(y) Same as note (g).

(z) Several references cited give the location of this record as "Kennebunkport" because Mrs. Lerner's mail address is in the latter town, though the bird was actually seen in Kennebunk.

(aa) Besides the bird for which dates of occurrence are given, a second bird was present at this location on 25 January 1966. Before the eyes of several observers, it was killed by a cat and carried off. Only a few feathers remained as evidence which were examined by Mr. Robert Rathbone, but in his opinion they were not definitive of a Varied Thrush's plumage, so they were not preserved. Later that day, Mr. Rathbone observed the first bird in good health.

(bb) This record not previously published.

highly questionable and thus is surrounded by parentheses. Such data would not have been included at all but for the fact that there is so little definite information available and the thought that even this questionable material might provide a clue to a broad trend or a point of departure for later workers when looked at in the large. It is only to be lamented that the great majority of authors cited apparently did not make an attempt to determine the sex of the birds they reported on, even though there is a fairly clear sexual dimorphism between breeding plumaged adults.

The third column of Table 1 indicates whether or not the record in question is supported by a specimen (Sp.), photograph (P), or banding data (B), or is merely a sight record (SR). In the event there is, or was, some concrete evidence of the record in existence, the reader is referred to an exhibit prepared by the author containing all the available facts about this evidence which has been deposited at the American Museum of Natural History in New York. By the way of comment here on this exhibit, it should be mentioned that increasing use has been made of photographs in recent years as a means of making a permanent record of a bird's occurrence. This exhibit gives the location and specimen number of all 12 extralimital specimens now extant and all the known facts about the 7 that are not. There are two extralimital banding records for which the band number and name of the bander are given. But the balance of the 48 records covered by this exhibit are of birds that were photographed. Five of the 27 were photographed in black-and-white while 22 were filmed in color; 5 of these 22 were photographed with movies and the rest in still pictures. The dates on which the pictures were taken, the name of the photographer and the current location of the pictures are all given where available. The author has had the opportunity to examine two of the specimens and photographs of 20 separate birds listed in Table 1.

Also, one of the objects of the current study was to provide a reasonably complete cross-reference to the citations in the literature for individual records. Since the full bibliography runs over 200 titles and their publication here would be prohibitive, a cross-reference sheet and the full bibliography have also been filed for reference at the American Museum of Natural History. Titles mentioned directly in the text here appear in the partial bibliography at its end.

DISCUSSION

One must begin by assuming that all the sight records listed in Table 1 are valid observations of this species even if they are not supported by other evidence. As mentioned above, every effort has been made to insure that this is so. This species, in almost any plumage, is very different in appearance from any other thrush found in the area where it has occurred as an accidental visitor. In fact, there are very few species for which it could be mistaken by any observer with reasonable field experience, es-

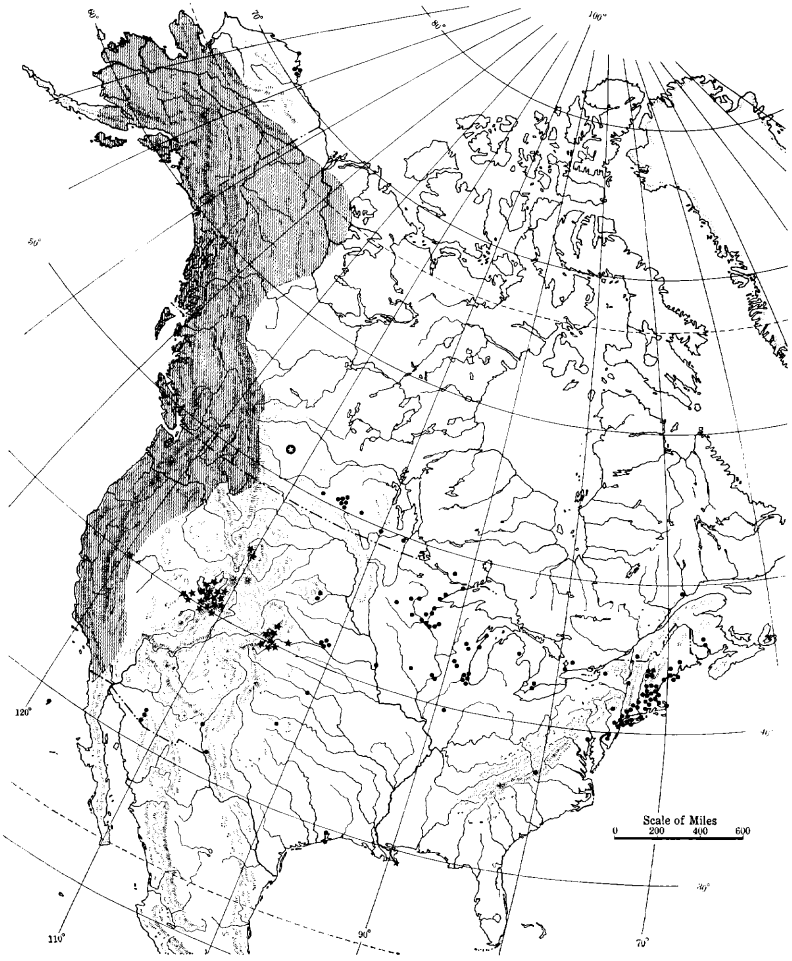


Figure 1. Locations where Varied Thrushes have been found in extralimital territory. Records considered casual here appear as stars, extralimital records as dots. Normal wintering and breeding range and area of casual occurrence as per AOU Checklist (1957) are shaded.

pecially now that well-illustrated popular field guides are so widely available. The possibility that some of the records listed are erroneous can never be completely removed, but even if one or two are shown to be incorrect by later workers, it seems unlikely that the major conclusions arrived at here will have to be altered significantly. In the literature, there is only one instance of a collected bird thought to be a Varied Thrush being misidentified.

It proved to be an immature Rusty Blackbird (*Euphagus carolinus*) as reported upon by Henderson (1920 and 1925), but this error was made in an era when adequate comparative material was not available at some museums and when field observers did not have most of the aids to visual identification so readily obtainable today.

Redefinition of Casual Range

Therefore, assuming that the information in Table 1 is correct, there are several ways in which it can be analyzed. One of the first is to plot each record on a map, which has been done in Figure 1. Here, one symbol appears for one bird at a given location at a given time. This process overstates the actual number of Varied Thrushes that wandered outside their normal and casual range because a single bird might be responsible for two or more symbols by appearing at different places at different times, as the footnotes to Table 1 indicate. The area described in the 1957 AOU Checklist as both races' combined breeding and wintering range and area of casual occurrence is indicated by the shaded area on the map (see Figure 1). Thus, any record falling outside this area should represent an extralimital record. Clearly, however, this cannot be the case. There are too many records for the area made up by the states of Utah, Colorado, and Wyoming for the species to be safely considered accidental there, especially since one of the Utah records is for a flock of twelve birds (record #60). Also, it is easy to conjecture how the birds arrive in these states. Further north, the species nests in the Rocky Mountains, and it is not surprising that some individuals should follow the leading line of this mountain chain south in their fall migration instead of keeping to the more western line of the Cascades and Sierra Nevada as most of the population does. This supposition is supported by the fact that the great majority of sightings of the species in Utah and Colorado, and both of those for Wyoming, were in mountain or foothill country. The only exceptions are the sightings at Dugway, Utah, near the eastern side of the Great Basin (records #59, #79, and #110). Also, if this hypothesis is correct, it is a little surprising that the Varied Thrush has not been noted more frequently in central and western Wyoming than it has so far. Of the two records in hand, the first (record #14) occurred at a time of year when the species would be expected to be migrating southward, and the second (record #78) perhaps represents a lingering bird that spent the winter in that area or a bird on its way north again in the spring from a wintering area further south. It may even have been one of the birds that appeared in Colorado earlier that year (records # 73 or #75). It seems likely that more Wyoming records may be forthcoming if the number of field observers increases there or if more work is done in the proper habitat during the fall migration season.

Currently, in the states of Utah and Colorado and the adjacent state of Nevada to the west, the status of the Varied Thrush is

thought to be as follows. Bailey and Niedrach (1965) feel it to be a casual visitor. Dr. William H. Behle (pers. comm.) considers it to be a ". . . rare winter visitant . . ." in Utah since no specimen has been taken. Gale Monson (pers. comm.) considers the species ". . . irregular in western Nevada and almost casual anywhere in the southern one-fourth . . ." of that state. His opinion is supported by several other authors such as Alcorn (1941 and 1946), Cottam (1954), Henshaw (1880), and Linsdale (1936). Thus, it seems safe to conclude that the Varied Thrush can now be considered a casual visitant to all of these three states, at least as far east as the eastern edge of the Rockies in Colorado. It is also probably safe to suspect that the bird is of casual status in the mountainous central and western portions of Wyoming as is assumed here, though this hypothesis requires further substantiation. In any event, this conclusion adds a large area to the casual range of the species as defined in the 1957 AOU Checklist. In recognition of this conclusion, the symbols on Figure 1 representing records from Utah, Colorado and Wyoming are stars instead of dots, to indicate that they are probably casual records and not extralimital ones. At this point, then, it is possible to erect a new definition for the casual range of the Varied Thrush. This range would remain unchanged as it now stands in Canada and Alaska, but south of Canada would have its eastern limit at the eastern edge of the Rocky Mountains as far south as northeastern New Mexico and from there westward along a line approximately connecting Wheeler Peak, New Mexico, and the southern end of Havasu Lake on the Arizona-California border and from there southwestward to extreme northwestern Baja California. Any record falling a significant distance outside of this area to the south or east, for example 150 to 200 miles, would then be considered an extralimital occurrence. This is the treatment that will be followed in the balance of this paper.

Hypothetical Routes of Extralimital Wanderers

If Varied Thrushes arrive in Wyoming, Utah, and Colorado for the reasons and by the means suggested above, then this hypothesis provides a conceptual model for explaining how and why the species occurs as an extralimital wanderer in several other states. For example, a bird following the line of the Rockies south through Wyoming to western Colorado or Utah and then continuing on further south could easily find itself in Tucson (records #43 and #53) or Patagonia (record #113), Arizona, at Truth or Consequences, New Mexico (record #11), or El Paso (record #44) in west Texas. There is also the possibility that these records in Arizona, New Mexico, and west Texas could have been made by birds that came eastward from the species' normal wintering grounds in southern California. But this seems less likely as it requires the bird to make a distinct change of direction away from its normal line of north-south migratory movement once it has reached southern California. Such a path would also require that

the bird cross the well-known migration path of the southern Colorado River at nearly a right angle. It seems unlikely that a Varied Thrush would do this rather than fall in with a group of other migrants following the north-south line of the River in this area. However, the possibility cannot be ignored that birds appearing in these locations may have followed the foothills of the Sierra Nevada south on the western side of the Great Basin and then passed north of Death Valley to the general vicinity of Lake Mead. Once there, they could have followed the southwestern edge of the Mogollon Mesa into central Arizona and found their way by any of several routes to the places where they were observed. Note that, with the exception of the birds at Tucson, the places where these five birds were observed are located along major river courses.

Further north, there appears to be a pattern providing a clue to the appearance of relatively large numbers of extralimital wanderers of this species in the area just west of the Great Lakes and further east. There are eight records for southern or southeastern Saskatchewan (record #35, #97, #54, #68, #77, #99, #111, and #112), the last six of which as listed here are for Regina. A bird leaving the breeding grounds in the Rockies of northwestern Alberta and following an east-southeasterly direction would pass through Regina or some other part of southern Saskatchewan. If the bird continued further on this same line, it would pass through southern Manitoba (records #41 and #114) and would end up in southwestern Ontario at a place such as Atikokan (record #109) or at Grand Marais (record #24), Duluth (record #23), or Two Harbors (record #40) in northern Minnesota. The dates on which Varied Thrushes have appeared in southern Saskatchewan, southern Manitoba, Atikokan, Grand Marais, Duluth, and Two Harbors support the pattern of movement suggested above. With the exception of only three records (#23, #77, and #97) of the 14 mentioned here, all the birds were first seen in the months of September, October and November, the early part of the season in which extralimital records generally occur. Two of the three exceptions were noted in May, probably representing birds that had wintered in the areas where they were found and went undiscovered until this time or birds trying to return to their normal breeding grounds from further south or east.

A further continuation of this same line across Saskatchewan and Manitoba would bring a bird just north of Lake Superior and Lake Huron to eastern Ontario, southwestern Quebec, northern New York, central and northern New Hampshire and Maine. There are several records that fall along this general line that suggest that it may be roughly the route used by Varied Thrushes in reaching eastern Canada and New England. Such records are those at Norland, Ontario (record #83), Watertown, New York (record #55), Knowlton, Quebec (record #72), Littleton, New Hampshire (records #63, #70, #71, and #74), and the six occurrences in Maine. At this point, it is worth noting that this general line might lead a wandering Varied Thrush eastward along

or parallel to the Ottowa River valley south of the Laurentians in southern Quebec. Once reaching the St. Lawrence River valley, the bird might take one of several possible directions. If it followed along the north shore of the St. Lawrence River it could end up at a place such as Manicouagan, Quebec (record #7). If it followed the Lake Champlain drainage south and then continued south along the Hudson River valley, it could end up at places like West Sand Lake (record #126), Tarrytown (record #84), Bedford Hills (record # 128), Liberty (record #108), or Ossining (record #15), New York. Proceeding just a bit further south from these locations, it would come to western Long Island, New York (records #4, #6, #9, and #91), Staten Island, New York (record # 19), Hoboken, New Jersey (record #2), and even places further south in New Jersey such as Clementon (record #20) and Moorestown (record #116). If the bird proceeded nearly due east when reaching the St. Lawrence River valley from the northwest, it could cross the Appalachians and eventually reach a point near the Maine coast (records #32, #48, #120, and #124) or one of the offshore islands (records #21 and #22). If, instead of crossing the Appalachians directly, it followed the general line of these mountains northeast, it could end up in New Brunswick (records #57 and #118).

While it has been suggested above that the sightings of extralimital Varied Thrushes seem to coincide to some extent with the location of river valeys in the discussion of some of the southwestern and New York State records, there is also a similar correlation with quite a few records from New England. For example, the location of the largest number of records in New Hampshire is at Littleton (records #63, #70, #71, and #74) located only three miles from the Connecticut River and on a tributary of it. Birds following the Connecticut River valley south could easily occur at Amherst, Massachusetts (record #34), and Wapping, Connecticut (record #93). Or, Varied Thrushes finding themselves in the White Mountains of northern New Hampshire and moving southward from there could enter the Merrimack River watershed. Following the valley of this river, or its tributaries, would bring birds to New Hampton (records #51 and #64), Hopkinton (record #56), Derry (record #76), Holderness (record #130) and Concord (record #119), New Hampshire. A bird following the north-south line of this valley slightly past the point where the Merrimack itself turns east could also appear at a place such as Littleton Common (record #81) in Massachusetts. Such an explanation for the appearance of Varied Thrushes in these locations is lent plausibility by the knowledge that both the Merrimack and Connecticut Rivers are major migration "highways" for migrating birds of many species in both the spring and fall. Though the birds that appeared at Hubbardston, Massachusetts (records #85 and #86), and Riverton, Connecticut (record #104), did not occur along major river valleys, the latter location is situated on a tributary of the Connecticut River at some distance from the main valley of that river. The other New Hampshire, Massa-

chusetts, and Connecticut sightings (records ⁂3, ⁂58, ⁂61, ⁂87, ⁂88, and ⁂127) and the Rhode Island (record ⁂129) are all from the coastal plain. No attempt will be made here to suggest how these birds reached the places where they appeared. Extralimital wanderers such as this species might move in nearly any direction along the coastal plain once reaching the boundary of the continent where there are no familiar terrain features such as mountain ranges or river valleys to guide them in a set direction. Such factors as weather and food supply are probably more important determinants of the direction of movement chosen once the coastal plain has been reached.

While the pattern outlined so far provides a model for explaining how Varied Thrushes may reach many parts of the northeastern United States and Canada, birds have occurred in many other parts of the United States for which no explanatory hypothesis has been provided. A bird leaving the Rockies in northwestern Alberta and moving across the Canadian prairie provinces in a slightly more southeasterly direction than hypothesized so far, or swerving slightly southward from the line that would take it north of the Great Lakes, would end up in central or southern Minnesota, Wisconsin, central and eastern Iowa, or northern and central Illinois. A sharp change of direction is not required for this to happen, and this may be the explanation for the occurrence of twenty-six records in this area. These records are the eight not already mentioned for Minnesota (records ⁂26, ⁂45, ⁂100, ⁂101, ⁂115, ⁂117, ⁂123, and ⁂132), nine in Wisconsin (records ⁂27, ⁂28, ⁂33, ⁂38, ⁂69, ⁂89, ⁂98, ⁂102, and ⁂125), two in Iowa (records ⁂103 and ⁂105), and seven in Illinois (records ⁂16, ⁂36, ⁂42, ⁂46, ⁂47, ⁂80, and ⁂90). Nineteen of these 26 records were first noted in October, November or December, relatively early in the winter, on average, as might have been expected. The median arrival date for these nineteen records is 1 December. Such a route would carry some birds across parts of North Dakota, and there are no records for the Varied Thrush yet in that state, but this situation is possibly due to the paucity of observers in this large area. It is worth noting that 11 of these 26 records occurred along river courses. Examples are Crosby (record ⁂26), Roseville (record ⁂100), Minneapolis (record ⁂101), Cushing (record ⁂115), Morris (record ⁂117), and Mendota Heights (record ⁂123) in Minnesota; Janesville (record ⁂28), Osceola (record ⁂33), Chippewa Falls (record ⁂69) and Grantsburg (record ⁂89) in Wisconsin; Davenport, Iowa (record ⁂105); and Rock Island, Illinois (record ⁂46). Another nine of the records from this area have occurred along the western shore of Lakes Superior and Michigan, suggesting that the birds may be temporarily or finally stopped in their eastward movement by these large bodies of water. Such records are those at Duluth (record ⁂23), Two Harbors (record ⁂40), and Grand Marais (record ⁂24), Minnesota; Manitowoc (record ⁂38) and Washington Island (record ⁂98), Wisconsin; and Evanston (record ⁂36), Libertyville

(record #80), Blue Island (record #16), and River Forest (record #42) in Illinois. Five of the seven records for Illinois are concentrated around the metropolitan Chicago area. It seems likely that the reason for this is that wandering Varied Thrushes coming in from the northwest reach the shore of Lake Michigan and not wanting to attempt crossing the Lake, work southward along the west shore until they reach the Chicago area. Once there, the relatively higher density of field observers increases the chances that the bird will be sighted.

One other group of records for which a model needs to be constructed to explain their presence is that in the midwestern United States from South Dakota to Texas. Beginning in the north, it is not too difficult to hypothesize how the two South Dakota records for the Black Hills (records #50 and #95) came about. Birds following the Rocky Mountain chain as far south as the northern end of the Absaroka Mountains might then easily move southeast to the Bighorn Mountains and then continue the same direction across to the Black Hills which are a topographical extension of this range. South of the Black Hills, the rivers in the midwestern United States run generally in a southeasterly direction. These rivers are part of the Mississippi River system or, further south, flow directly into the Gulf of Mexico. Thus, a bird leaving the Rockies almost anywhere northwest of where it was later found might have followed a river valley directly to that location or at least to the general vicinity. This could be the case in all of the extralimital records in the midwest. Specifically, the birds that appeared at North Platte, Nebraska (record #18), may have followed the North Platte River east from central Wyoming. The bird that appeared at Omaha, Nebraska (record #12) may have followed the Platte River from the west or the Missouri River from the northwest. The bird that came to Garden City, Kansas (record #8), may well have followed the Arkansas River southeast from central Colorado. The bird at Amarillo, Texas (record #94), very possibly followed the Canadian River from the mountains in northeast New Mexico. Finally, the Red and Trinity Rivers provide a possible pathway from further northwest for the birds that reached Cove (record #17) and Galveston (record #107), Texas. While it is possible that the latter two birds came south along the Mississippi River flyway and then moved southwest along the coastal plain to Cove and Galveston, there are two points that argue against this theory. The first is that, to date, there are no records at all for Varied Thrushes on this flyway south of Decatur, Illinois (record #47). The states of Missouri, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana are missing from the roster of states where this species has occurred so far, though it seems likely that someday the species may be found in at least some of them. The second point is that a wandering Varied Thrush would have to make a sharp change of direction westward in its direction of movement to reach the Gulf Coast of Texas at Cove and Galveston after following the Mississippi River as far south

as northern or central Louisiana. While not impossible, such a supposition seems less likely than the assumption that the birds came more directly overland to the Gulf Coast following river valleys that would lead a wandering bird directly there.

Another area where several extralimital records of the Varied Thrush have been established is southern Ontario (records #92, #106 and #131). The route the birds followed to reach this area could be any of several, but two possibilities seem the most promising. Birds passing north of the Great Lakes might follow the general line of the east shore of Lake Huron south to this area, or birds finding themselves in central eastern Minnesota or northern Wisconsin might fly southeast across the fifty-mile width of central Lake Michigan and arrive by that route. That some birds may have arrived by the latter route is suggested by the appearance of birds at Washington Island, Wisconsin (record #98), and National City, Michigan (record #52), which lie on a direct line to this area. Interestingly enough, the above record for National City is the only one known to the author for Michigan.

If the reasoning behind the routes suggested above to explain the appearance of extralimital Varied Thrushes in such states as Minnesota, Wisconsin, Iowa, Illinois, Michigan, and New York and the southern part of Ontario is roughly accurate, then the same sort of reasoning can be used to explain the lack of records in such states as Indiana, Ohio, and Pennsylvania. It seems unlikely that birds following the Mississippi River south would turn abruptly away from this established migration path in a direction that would take them to Ohio, particularly if they followed the Mississippi River as far south as its junction with the Ohio River. While a bird following the west shore of Lake Michigan south to the metropolitan Chicago area might be expected to continue into northwestern Indiana, none is known to have done so yet. Also, if a bird crossed the lower peninsula of Michigan by the route suggested above and then continued across to the west shore of Lake Huron, in order to get to northern Ohio it would have to turn sharply southward or fly across Lake Erie. While it is possible that a Varied Thrush might do either of these things in the future, none is known to have yet. In order for a bird to reach western New York or Pennsylvania without flying across Lake Erie or Lake Ontario, it would have to pass through the narrow neck of land between the two Lakes, if the assumption that the birds reach southern Ontario from the north is correct. As far as is known, none has ever done this as indicated by the lack of records in the recent works by Poole (1964) and by Beardslee and Mitchell (1965).

The two southeastern-most extralimital records of this species could perhaps be used as arguments that a Varied Thrush could have crossed Lake Erie southward from southern Ontario or could have come southeast through western New York. These are the records at Blacksburg, Virginia (record #82), and Ashton, Maryland (record #122), the unique occurrences in these two states. So, in fact, could the records from southern New Jersey (records

⁂20 and ⁂116). However, it seems equally, if not a bit more likely, that the Blacksburg bird followed a southeasterly continuation of the route that may well have brought it into northern Illinois from further northwest instead of coming directly south through Ohio or southwest from western New York. Also, while it is possible that the Maryland and southern New Jersey birds came south through western New York and across Pennsylvania, there is a much greater volume of evidence which suggests that these birds followed a route north of the Great Lakes into northern New York, Vermont or New Hampshire, followed one of the major river systems south to the coastal plain, and then continued south along the coastal plain to southern New Jersey and to Maryland, perhaps in company with other species of migrating birds using the Atlantic coastal flyway.

At this point in the discussion of individual records, there are very few still to consider, and each of them is a somewhat specialized case. The two sightings here considered extralimital for Alaska, at Point Barrow (record ⁂25) and at Pitt Point (record ⁂39), are included because this species would have to be so far out of its normal habitat in order to reach the tundra zone on the shore of the Arctic Ocean. As both dates are in May, it is probable that these records merely represent examples of "overshooting" on migration, an event that may be more frequent than anyone has yet had the opportunity to prove due to the understandable lack of observers regularly along this coast. The bird collected at Guadalupe Island off Baja California (record ⁂5) probably represents an example of migration "overshoot" as well, but in the other direction. Perhaps this bird was blown offshore by a storm and just kept going until it came to the first land it saw. Unfortunately, neither this specimen nor the next one to be mentioned are still extant. Thus neither's race can be determined or verified. The final case is the bird collected at Castor, Alberta (record ⁂13). This specimen has apparently been lost after having been identified as a member of the race *naevius* by the late Dr. William Rowan. The record is included in this paper as an extralimital one only on the basis of this identification and is marked by a star inside a black circle on Figure 1.

To summarize what has been discussed so far, it has been suggested that the major portions of four states (Nevada, Utah, Wyoming and Colorado) be added to the area where this species is now considered a casual visitant. This is suggested on the grounds that the number of records in Utah, Wyoming, and Colorado (17), which probably involved at least 26 individual birds, is too great to permit continuation of the assumption that the species is only an accidental visitor there. This argument is also supported by the opinions of leading workers in these states.

The next portion of the discussion concerned itself with providing a conceptual model for explaining how wandering Varied Thrushes may have reached most of the other locations where they have been found which are clearly extralimital. The major suggestion is that Varied Thrushes reach the eastern seaboard of the

United States and Canada by passing north of the Great Lakes. There are no records for the central or northern parts of Saskatchewan, Manitoba, or Ontario, which would buttress this hypothesis if there were. But the sparse population in general and the even smaller density of field observers suggests that if the birds do follow such a route they would be likely to go unnoticed. Thus, while it has been suggested above that birds appearing in New Brunswick and southern Quebec may have followed the Saint Lawrence River system or the line of the Appalachians to reach these points, it is perhaps a bit more likely that they reached there from northwest Canada along a route running just south of James Bay. At the moment, such a pattern of movement can only be speculated upon, but the possibility should not be disregarded merely for the current lack of records.

Ecological Considerations

One factor that supports this suspicion is the pattern of vegetation that exists in northwestern Canada. Comparison of a map showing the vegetation of North America west of an arbitrary line between Banks Island in the Arctic Ocean and Brownsville, Texas, and the range map of this species given in Figure 1 will show a close correlation between the areas of coniferous forest and most of the Varied Thrush's breeding and wintering range. It is also worth noting here that coniferous forest is also found in most of the species' casual range, including nearly all the parts of Utah, Wyoming and Colorado where it has been found. The coniferous forest ends in central Alberta, central Saskatchewan, and southern Manitoba where the temperate grasslands begin. But by passing north of these grasslands, it would be possible for a wandering Varied Thrush to travel all the way to northern Minnesota without leaving relatively familiar habitat. In fact, it would be possible for a bird to go north of the Great Lakes as far east as southcentral Quebec before leaving the coniferous forest and entering an area of predominantly temperate deciduous forest.

If this pattern of vegetation has any bearing on the routes taken by wandering Varied Thrushes, as seems likely, it has some provocative further implications for several of the records mentioned above. First, it means that the birds appearing at Regina, Saskatchewan, and at Brandon and Winnipeg, Manitoba, came from the north out of the coniferous forest and not directly from the northwest across the open prairie. Secondly, it explains the lack of records in North Dakota, since Varied Thrushes would be passing north and east of that state, on their way to Minnesota or further east, by remaining in the coniferous forest.

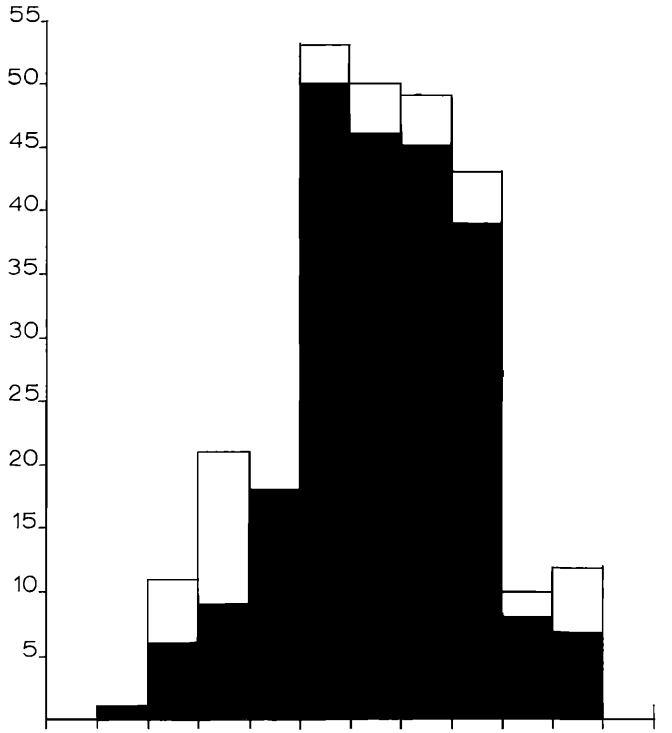
Another conclusion that can be drawn from the discussion of routes hypothesized above is that the available data indicate that the Varied Thrush tends to follow mountain systems in migration west of the Great Central Plains but seems to occur along river systems when found east of there. A difference in habits such as this may seem confusing at first but becomes less so on further

consideration. In the southern part of the species' breeding range, it nests in habitat found only in the mountains at that latitude. Further north, this sort of coniferous forest habitat is found nearer sea level and along river courses. But as the bird migrates south in the fall, it should not be surprising that individuals of this species tend to remain in familiar habitat, thus in the mountains in the western United States. This probability tends to support further the hypothesis that Varied Thrushes appearing in Wyoming, Colorado and Utah should follow the Rockies south to this latitude and agrees with the observations that have been made.

But when a Varied Thrush leaves familiar habitat, once reaching the midwestern or eastern United States and Canada, it becomes more difficult to hypothesize what terrain features might guide such a wandering bird. It has been suggested above that there is a high correlation between extralimital occurrences of this species and river courses, just as an empirical observation. That such a correlation should exist could be due to the fact that settlements containing field observers also tend to be located along river courses. But while this may explain part of the correlation, a variety of ecological factors are of equal if not greater weight. First, as was also mentioned above, river courses are favored migration paths for many species, particularly major rivers such as the Mississippi, Merrimack and Hudson. Especially in the winter months, when Varied Thrushes are apt to turn up far from their normal range, river courses provide shelter because they are depressed below the general level of the surrounding terrain. Also, due to the presence of the river, food and water tend to be more abundant along river courses in the winter than in the neighboring countryside.

Intra-annual Pattern of Records

It seems proper to move on to some of the other ways in which the data in Table 1 can be analyzed. Another such way is to examine the dates on which the Varied Thrush is present in extralimital locations. This has been done in Figure 2 by means of a bar graph. All the records listed in Table 1 are included except a few which will be commented on below. Those for the states of Colorado, Utah and Wyoming were treated as casual records and are represented by the open portions of the bars in Figure 2. The purpose of the bar graph is to illustrate the time of year in which an accidental record for this species is most likely to occur throughout the entire geographical area where such records are known. The data for this graph were extracted from Table 1 in the following manner. One bird found at one extralimital location on one day in a given month, regardless of which year, meant that that month was credited with one occurrence. If the bird was found at the same location on several days all within that month, that month was still only credited with one occurrence. But if the bird was found in that location for as much as one day in each of two or more consecutive months in a given winter season, each month during



Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Casual	0	0	5	12	0	3	4	4	4	2	5	0
Extralimital	0	1	6	9	18	50	46	45	39	8	7	0
Total	0	1	11	21	18	53	50	49	43	10	12	0

Figure 2. Number of Varied Thrushes that have occurred in extralimital territory by months. Open portions of bars represent records considered casual here.

which the bird was present for at least one day was credited with one occurrence. Thus record #33 resulted in one credit to each of the months of December, January, February, March and April. Such a technique seemed the only fair way to adjust for the fact that some birds remained in one location much longer than others.

Several conclusions can be drawn from Figure 2. The first is that the pattern for the Colorado-Utah-Wyoming area, here considered part of the casual range, is extremely constant through the winter season with the exception of the record for 12 birds in October (record #60) and the absence of any records in November. While the number of records for this area listed in Table 1 (17) is not

large enough to constitute a statistically useful sample, especially for analysis by the bar graph, it is interesting to see that the pattern is so even in an area where, as maintained here, this species should be more likely to occur than at the other locations listed in Table 1. By way of contrast, the pattern for extralimital records shows a rapidly rising trend to December, remains at a high level through January, February and March, and then drops abruptly in April and May. This pattern demonstrates just what might have been expected: extralimital records become increasingly likely as the fall progresses; the chances of an occurrence remain high through the balance of the winter months; and the likelihood of an accidental record declines sharply with the onset of the spring migration season. It comes as no surprise that December shows the highest number of credits of any winter month when one reflects on the intensified field work done by observers in connection with the annual Christmas Bird Counts given wide publicity by the National Audubon Society. It should be mentioned here that particular care was taken with respect to all records originating in these Bird Counts in an effort to insure their validity. In addition, it is of interest to note that the totals in Figure 2 for the three months following December are not significantly lower, which suggests that the Christmas Count data are not seriously out of line.

There are only two records listed in Table 1 that were not included in the data used to construct Figure 2. These were record #1, because the month could not be determined, and record #4, because "fall" could mean any month from September through November. In addition, "all winter" in the case of record #26 was interpreted to mean January and February as well as March, and "all fall" in the case of record #40 was interpreted to mean November as well as December and January for which months definite dates are available. The record from Castor, Alberta (record #13), was included in the data used to construct Figure 2.

As a rough generalization, arrival times in extralimital locations tend to be later in the winter season the farther east the location is. Some comments have already been made above relating general areas (i.e. the Minnesota, Wisconsin, Iowa and Illinois area) in extralimital territory with arrival dates in those areas. However, there are not enough records in many parts of the midwestern and eastern United States and Canada to permit rigorous statistical analysis and comparison of arrival dates between different areas. It should also be remembered when looking at Figure 2 that the sum of the "credits" allocated to all ten months equals 268 which greatly exceeds both the number of records listed in Table 1 (132) and the number of birds Table 1 probably involves (142). This is due to the way Figure 2 was designed and reflects the species' occasional propensity to linger in the same area for a while once it has reached an extralimital location. Examination of Table 1 will show that there are eight occasions when Varied Thrushes have remained at one extralimital location for parts of three months (records #23, #26, #40, #103, #104, #124, #126, and #128),

eleven times when one has stayed for parts of four months (records #47, #57, #62, #69, #70, #71, #74, #83, #116, #118, and #121), five times when one has stayed for parts of five months (records #20, #33, #89, #102, and #120), and two times when one has stayed for parts of six months (records #61 and #98). Among the records considered casual here, there is one instance of a bird staying in one place for parts of three months (record #49) and two cases where one stayed for parts of four months (records #73 and #75).

Historical Trend of Records by Years

A third way the data presented in Table 1 can be analyzed is to look at the trend in the number of birds that have occurred at extralimital locations per winter season (July 1 through June 30) since the first known one in 1848. It is more appropriate to consider the number of birds rather than the number of records because of the possibility of the same bird appearing in two places at different times. Thus Table 2, where the number of birds per season is presented, relies on the assumptions concerning possible dupli-

TABLE 2. NUMBER OF VARIED THRUSHES OCCURRING IN EXTRALIMITAL AND CASUAL TERRITORY PRESENTED IN TABLE I BY SEASONS, JULY 1 TO JUNE 30, FROM 1848 THROUGH 1966.

Season	Extralimital	Casual	Season	Extralimital	Casual
1847-1848	1	—	1944-1945	1	—
1851-1852	1	—	1945-1946	1	—
1864-1865	1	—	1946-1947	—	1
1874-1875	1	—	1948-1949	3	1
1885-1886	1	—	1949-1950	1	—
1889-1890	1	—	1950-1951	1	1
1890-1891	1	—	1951-1952	1	—
1891-1892	1	—	1952-1953	3	—
1905-1906	1	—	1953-1954	1	—
1909-1910	—	1	1955-1956	4	—
1916-1917	1	—	1956-1957	4	1
1922-1923	1	—	1957-1958	4	—
1923-1924	1	—	1958-1959	3	—
1926-1927	—	1	1959-1960	2	—
1928-1929	2	—	1960-1961	3	15
1935-1936	5	—	1961-1962	8	3
1936-1937	2	—	1962-1963	7	1
1938-1939	2	—	1963-1964	9	—
1940-1941	1	—	1964-1965	10	—
1941-1942	2	—	1965-1966	23	1
1943-1944	1	—			
			Total:	116	26

cate sightings of the same individual bird given in the footnotes to Table 1 in the appropriate columns.

Several observations can be made on Table 2. A notable one is that extralimital records have occurred with increasing regularity throughout the 118 seasons covered by this paper. The longest interval between records is the one of 13 years between the seasons of 1891-1892 and 1905-1906, and there is only one interval of as much as ten years since 1900 (1905-1906 to 1916-1917). Since 1848, there have been extralimital Varied Thrush records in 38 seasons (32 percent of the total of 118 seasons); since 1900 there have been 30 seasons during which such records have occurred (46 percent of 65 seasons); and since 1930 there have been 25 seasons with extralimital records (71 percent of 35 seasons). The increase in the above percentages indicates how much more frequently the Varied Thrush has been noted outside of its normal or casual range in recent years. As shown by Table 2 there has been only one season since 1948-1949 when one has not been recorded. Also, throughout this latter period, the number of birds seen per season has been steadily increasing, perhaps reaching some kind of a climax in the 1965-1966 season when what could almost be described as an invasion of this species occurred in the eastern half of the United States and Canada.

Some reasons for the trends indicated by Table 2 are not too difficult to imagine. Before 1900, there were few professional ornithologists in the eastern half of the United States and Canada who had either first-hand experience with this species in life or adequate comparative material in their collections to enable them to identify it. Also, the hobby of field identification of birds by people other than professional ornithologists was nearly unknown or very little trusted by professionals, which possibly resulted in a number of valid sight records never being published. However, with the publication by Roger T. Peterson of illustrated guides to field identification of eastern and western birds in 1934 and 1941, respectively, the number of people engaged in the hobby of field identification began to increase rapidly as did the level of their competence. Associated with this trend was an increase in the practice of putting out feeding stations for birds in the winter months. Thus it is clear that since 1930 conditions have been changing in the eastern half of the United States and Canada in favor of a Varied Thrush being noticed and then correctly identified if one appeared there. Table 2 provides clear evidence that Varied Thrushes were there to be seen and that they appear regularly in this area.

The regularity of appearance of this species in extralimital territory poses a problem in seeking an explanation for why it occurs, one which cannot be solved here. No attempt will be made here to correlate the records in Table 1 with the southward invasions of northern or northwestern species, for such a correlation would have to be of enormous scope to be at all conclusive. There is some evidence that wandering Varied Thrushes tend to join

flocks of migrating Robins (*Turdus migratorius*) (records #1, #88, #92, and #111) and that sometimes they associate with Blue Jays (*Cyanocitta cristata*) and Evening Grosbeaks (*Hesperiphona vespertina*) around feeding stations. But the very great majority of records are of birds all by themselves, and many correspondents wrote the author that the Varied Thrushes they saw tended to be solitary and only appeared when no other birds were present at their feeding stations. On the other hand, there is also some evidence that pairs and even small groups of Varied Thrushes turn up together in extralimital territory. Examples are the two together on Monhegan Island, Maine (records #21 and #22), at least three together at Pitt Point, Alaska (record #39), three together at Littleton, New Hampshire (records #70, #71 and #74), and at least four together at North Platte, Nebraska (record #18). The record considered casual here of twelve birds together at Brighton, Utah (record #60), should also be mentioned in this connection. One factor which might tie together the disparate observations mentioned above is that of food. These observations make some sense if one postulates that single or fewer Varied Thrushes tend to appear in extralimital locations in years when the food supply is good in the species' normal wintering range and that groups or larger numbers appear in seasons when the supply is low. Unfortunately, there is not enough recent data available to pursue this idea any further, nor does it still supply an explanation for the regularity of the Varied Thrush's extralimital appearances. As an aside, it should be mentioned here that the food eaten by this species in extralimital locations, so far as recorded, differs little in general type from its normal diet. The following foods have been noted: larvae, beetles and a pine seed by Bryant (1887); privet (*Ligustrum* sp.) berries by Lupient (1956); scratch feed, normally fed to domestic fowl, by Wickham (1966); cracked corn by Puleston (1964); bread crumbs by Hyde (1958); apples by Eliot (1963) and Baldwin (1964); wild persimmon (*Diospryros virginiana*) fruits most recently by Bull (1964); and a mixture of suet, peanut butter, dates, raisins and currants by Lerner (pers. comm.).

Sex of Extralimital Varied Thrushes

The last way in which the information given in Table 1 will be analyzed is to look at the data available on the sex of the birds recorded there. Considering the collected specimens first, 19 have been taken in all, of which only 12 are currently extant. Reliable sex determination is available for 14 specimens, however, of which 6 were females and 8 were males, giving a very even ratio of males to females considering the small size of this sample. Turning to birds that were either photographed, banded, or merely seen we find quite a different story. Twenty-seven birds were photographed and 2 were banded. Of these 29 birds, 19 were thought to be males, 6 were thought to be females, and 4 were thought to be either females or juveniles or no opinion was available. This gives over

a 3 : 1 ratio in favor of males, leaving out the birds of indeterminate sex. Of the birds only seen and for which some guess as to sex is available, just 3 were thought to be females, 39 were thought to be males, and 3 were thought to be either females or juveniles. The latter figures and those for birds banded and photographed indicate a marked inclination on the part of observers identifying this species visually in extralimital territory to consider the Varied Thrushes they see males. While a variety of reasons could be responsible for this tendency, the most likely is that such a brightly-colored bird as a Varied Thrush seen in mid-winter in areas where it is accidental, together with other local species in drab winter plumage, is automatically thought to be a male. Another possible reason is that many popular guides to field identification of birds only illustrate the male of this species. In conclusion, the above figures demonstrate clearly that the only reliable information to be had on the sex of extralimital Varied Thrushes is to be obtained from collected specimens. It seems highly unlikely that the ratio of males to females occurring as accidentals far from the species' normal or casual range would be heavily weighted toward either one sex or the other.

TAXONOMY

While this subject would not normally have a place in a paper of this kind, a few words should be devoted to it here because of current differences of opinion regarding the classification of this species. The AOU Checklist (1957) gives the scientific name of the Varied Thrush as *Ixoreus naevius* (Gmelin), this generic name being restricted in the ornithological literature to this species alone. Phillips, in Phillips, Marshall and Monson (1964), uses the scientific name *Hesperocichla naevia* (Gmelin) and states further (p. 128):

> ". . . As to the generic name *Ixoreus*, which has been misapplied to this bird, it is purely the result of mistaken identity and should not stand. Bonaparte based his genus on a South American flycatcher which he incorrectly thought was *Turdus naevius* Gmelin. (Coincidentally, while writing this account we are looking at and listening to Robert Dickerman's caged Aztec Thrush *'Ridgwayia' pinicola*. These birds must be congeneric!)"

Phillips' choice of *Hesperocichla* is based on his opinion that *Ixoreus* is invalid. *Hesperocichla* has priority over *Ridgwayia*, the generic name for the Aztec Thrush given as *Ridgwayia pinicola* by Eisenmann (1955), which as just noted Phillips feels belongs in *Hesperocichla*. In the recent classification of the thrushes by Ripley, in Deignan, Paynter and Ripley (1964), the scientific name of the Varied Thrush is given as *Zoothera naevius* (Gmelin). This classification is based on the earlier work of Ripley (1952) and has the additional feature of including the Aztec Thrush in the same genus with the name *Zoothera pinicola*, thus bringing Ripley and Phillips

into agreement that the two species are congeneric. While some other workers would put both the Varied and Aztec Thrushes in completely different genera from any mentioned so far, the discussion here will serve to identify some of the most recent opinions and to indicate that there are plenty of opinions to go around.

While the author is not qualified to venture an opinion of his own on this subject, Ripley's classification does have one provocative aspect which should be mentioned. *Zoothera* is a genus primarily represented by Eurasian, Australian and African species, several of which occur in the northeastern quarter of Asia. Ripley suggests that these species' ancestor or ancestors immigrated to North America from Asia in an invasion at a relatively late stage in the evolution of the various thrush genera. Several other passerine families having representatives which now breed in the western hemisphere are also thought to have originated in Asia. A few examples of the latter are the wagtails (*Motacillidae*), the babblers (*Timaliinae*), some "Old World" warblers (*Sylviinae*) and the creepers (*Certhiidae*). If the Varied Thrush's evolutionary ancestors did wander eastward to this continent from Asia, fairly frequent and numerous attempts probably were necessary before a breeding population became established. It may be that the regularity of extralimital wandering discussed above in this paper is a trait of this species that to some extent was responsible for its presence as a breeding species in North America in the first place. Finally, it is of further interest to note that two other species assigned by Ripley, in Deignan, Paynter and Ripley (1964), to the genus *Zoothera* are also well known as wanderers and that the normal range for both is eastern Asia. These are the Siberian Thrush (*Zoothera sibirica*) and White's Thrush (*Zoothera dauma*), both recorded as stragglers across Europe to Norway, France and Italy as mentioned by Peterson, Mountfort and Hollom (1954). The latter (*dauma*) has been so recorded more frequently than *sibirica*, as indicated by the British Ornithologists' Union Checklist (1952).

SUMMARY

A search of the literature has produced 132 records of at least 142 individual Varied Thrushes that have occurred at extralimital sites. The current locations of all specimens and photographs of birds taken in extralimital territory were found. The records are plotted on a map, and it is suggested that the casual range be expanded from the description given in the 1957 AOU Checklist. Routes by which Varied Thrushes may have reached the extralimital locations given are suggested, which are correlated with seasonal and ecological factors that appear to support the hypotheses advanced.

The most likely months of the year for extralimital records of this species are shown to be December, January, February and March. The regularity of extralimital records, especially in the last 20 years, is illustrated and discussed. Several current taxonomic treatments of the species are described, and the suggestion is made

that the extralimital wandering documented may be a trait originally responsible, in part, for the species' colonization of the western hemisphere from Asia.

ACKNOWLEDGEMENTS

I particularly want to thank all of the nearly one hundred people who made this paper possible by promptly and cheerfully answering my requests for information about records, requests which often required a considerable amount of work to answer. There are a few people who had the patience to put up with quite a few letters from me and who went out of their way to volunteer help, to whom I am especially grateful: Dr. Alfred M. Bailey, Dr. William H. Behle, Mrs. Ruth P. Emery, Ronald L. Huber, Peter C. Peterson, Jr., Chandler S. Robbins, and Rev. Samuel D. Robbins. Finally, I want to express my gratitude to Dean Amadon for many pieces of advice and helpful suggestions on the manuscript.

PARTIAL BIBLIOGRAPHY

ALCORN, J. R. 1941. New and additional Nevada bird records. *Condor*, **43**(2): 118-119.

ALCORN, J. R. 1946. The birds of Lahontan Valley, Nevada. *Condor*, **48**(3): 136.

AMERICAN ORNITHOLOGISTS' UNION. 1957 Checklist of North American Birds. Fifth edition, pp. 434-435.

ANDERSON, H. G. 1946. A varied thrush in Wisconsin. *Passenger Pigeon*, **8**(2): 68.

BAILEY, A. M., and R. J. NIEDRACH. 1965. Birds of Colorado. Denver Museum of Natural History, Denver. Vol. II, p. 614.

BAIRD, S. F., T. M. BREWER, and R. RIDGWAY. 1874. A history of North American birds. Boston. Vol. I (Land Birds), p. 29.

BALDWIN, D. H. 1964. The varied thrush in Ontario. *Ontario Field Biologist*, (**18**): 14-15.

BEARDSLEE, C. S., and H. D. MITCHELL. 1965. Birds of the Niagara frontier region. Bulletin of the Buffalo Society of Natural Sciences, Vol. 22. Buffalo.

BRITISH ORNITHOLOGISTS' UNION. 1952. Checklist of the Birds of Great Britain and Ireland. London. p. 72.

BRYANT, W. E. 1887. Additions to the ornithology of Guadalupe Island. Bull. of the Calif. Acad. of Sciences, **2**: 318.

BULL, J. 1964. Birds of the New York area. Harper & Row, New York. pp. 336-337.

COTTAM, C. 1954. Bird records for Nevada. *Condor*, **56**(4): 223-224.

COUES, E. 1878. Birds of the Colorado valley, part I. U. S. Government Printing Office, Washington, D. C. p. 19.

DEIGNAN, H. L., R. A. PAYNTER, JR., and S. D. RIPLEY. 1964. Checklist of the birds of the world, a continuation of the work of James Lee Peters; Ernst Mayr and R. A. Paynter, Jr., editors. Volume X. Museum of Comparative Zoology, Cambridge, Mass. p. 150.

EISENMANN, E. 1955. The species of Middle American birds. Transactions of the Linnaean Society of New York. Volume VII. New York. pp. 81, 83.

ELIOT, S. A., JR. 1963. January-February field notes. *Bird News of Western Mass.*, **3**(3): 4.

FISCUS, C. H. 1953. Pitt Point records from 1953. Unpublished manuscript in the library of the University of Alaska, College, Alaska. (Not examined by the author).

GABRIELSON, I. N., and F. C. LINCOLN. 1959. Birds of Alaska. Published by the Wildlife Management Institute. The Stackpole Company, Harrisburg, Pa. p. 655.

HENDERSON, J. 1920. The varied thrush in Wyoming. *Condor*, **22**(2): 75.

HENDERSON, J. 1925. Some Colorado and Wyoming records of the varied thrush and rusty blackbird. *Condor*, **27**(2): 74, 75.

HENSHAW, H. W. 1880. Ornithological report from observations and collections made in portions of California, Nevada and Oregon. Appendix L of the annual report of the chief of engineers for 1879 *in* Annual report of the geological survey west of the 100th meridian, by George M. Wheeler. p. 284.

HUBBARD, J. P. 1965. A checklist of New Mexico birds. Published by the New Mexico Ornithological Society.

HYDE, MRS. A. L. 1958. Varied thrush at Rapid City. *South Dakota Bird Notes*, **10**(4): 64.

KUMLIEN, L., and N. HOLLISTER. 1903. The Birds of Wisconsin. *Bull. of the Wis. Nat. Hist. Soc.*, **3**: 134.

KUMLIEN, L., and N. HOLLISTER. 1951. The Birds of Wisconsin, with revisions by A. W. Schorger. Published by the Wisconsin Society for Ornithology, Madison. p. 116.

LIGON, J. S. 1961. New Mexico birds. Albuquerque.

LINSDALE, J. M. 1936. The birds of Nevada. Pacific Coast Avifauna, Number 23, p. 96.

LUPIENT, M. 1956. Seasonal report. *Flicker*, **28**(2): 74.

PETERSON, R. T. 1934. A field guide to the birds. Houghton Mifflin Company, Boston.

PETERSON, R. T. 1941. A field guide to western birds. Houghton Mifflin Company, Boston.

PETERSON, R. T., G. MOUNTFORT, and P. A. D. HOLLOM. 1954. A field guide to the birds of Britain and Europe. Houghton Mifflin Company, Boston. pp. 217, 221.

PHILLIPS, A. R., J. MARSHALL, and G. MONSON. 1964. The birds of Arizona. University of Arizona Press, Tucson. p. 127.

POOLE, E. L. 1964. Pennsylvania birds. Published for the Delaware Valley Ornithological Club by Livingston Publishing Company, Narberth, Pa.

PUELSTON, D. 1964. Varied thrush at Bellport, Long Island. *Kingbird*, **14**(3): 154.

RIPLEY, S. D. 1952. The thrushes. Postilla, Yale Peabody Museum. Number 13. New Haven, Connecticut.

WICKHAM, P. P. 1966. Region 8: Mohawk-Hudson (field notes). *Kingbird*, **16**(2): 116, 119.

Blue Mill Road, New Vernon, N. J. 07976

Received June, 1967.