

NOTES ON A FALL MIGRATION AT  
MATINICUS ROCK, MAINE

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MUCH attention has been given to Matinicus Rock in the Gulf of Maine because of its nesting colonies of petrels, puffins, gulls, and terns, but I am unable to find any recorded observations of the fall migration there. Because of its strategic position at the southeast corner of the island group off Penobscot Bay, it seemed surely indicated that brisk northwest winds would blow many land birds out to it.

Ludlow Griscom had often spoken of the islet, and remarked on the probability of many stragglers touching on such an outlying spot. Spurred on by his encouragement I set about preparations for a stay on the Rock, first obtaining permission from the Coast Guard to live there in one of the small 'war surplus' (World War I) buildings. Ludlow Griscom, Josselyn Van Tyne, and the late Francis H. Allen were kind enough to read this manuscript and have made many valuable comments of which, together with their friendship and encouragement, I am most appreciative.

Landing on the Rock is possible only in good weather, and then only by means of a boat slip on the west side, which is used principally by the Coast Guard. The lobstermen who tend their traps all about this area avoid the slip. A LIFE photographer lost all his gear and cameras in attempting a landing in 1948, and near the end of my stay one of the Coast Guard boys was drowned while attempting a landing. My observations extend from August 27 to September 11, 1949.

Matinicus Rock is situated at Latitude 43° 47' N. and Longitude 68° 51.3' W., and is the southeasternmost of the Fox Islands off Penobscot Bay. It is 25 acres in total area, roughly egg-shaped, with the longest dimension northeast to southwest. The widest (also the highest) part is about three-quarters of the distance southwest from the northeast end. With the exception of a little turf on the north side, the islet is a bare rock ridge lifting out of the sea at the northeast end and gradually rising, until after reaching a height of 42 feet at the widest part it drops perhaps 5 to 8 feet for the last 50 yards, and then descends suddenly into the sea. The entire east side is precipitous. The north side shelves off more gradually, with various subsidiary ridges running northwest at right angles to the principal one. Between these smaller ridges are turf areas where the petrels and puffins nest. Also on the north side, and cut off at high tide,

is a tiny rock islet about 25 yards long. The entire island is much worn and creviced, thus providing ideal lee shelters for birds.

A Coast Guard lighthouse station with three men (and a dog) is maintained on the Rock. Because of their many duties, and probably to some extent because of the uncomfortable walking, the men rarely went to the northern end of the island. Even the dog, having had proper warning from the Great Black-backed Gulls, never left the immediate vicinity of the buildings. Besides the light (50,000 candle-power), a radio-beacon and a distance-finding station are maintained, as well as the inevitable fog horn. Via Matinicus Island there is a telephone cable to the mainland.

The nearest island is four and a half miles to the northwest; Ragged Island, now called Criehaven by the natives. Next are Matinicus Island (7 miles northwest), Wooden Ball (10 miles north) and Seal Island (11 miles north). Monhegan, a notable place for bird watching (Allen, 1908: 94; Jenney, 1919: 21; Maynard, 1909: 16; Dewis, 1919: 33; and others) is 18 miles to the westward and visible in clear weather. The nearest mainland point is Sprucehead, 18 miles to the northwest.

Because of its small size and remoteness, Matinicus Rock is an ideal resting place for migrants. My usual practice each day was to make four two-hour circuits of the island. It was possible to examine practically every nook and crevice and thus check daily the continued presence of individual birds that remained several days. Also, because of the exposed nature of the place, many birds could be found only if sought in these sheltered places. Most birds arrived during the nights, but they were not always in evidence on my first morning tour. Particularly when the rocks were wet, footing was very insecure. Many small land birds were impossible to identify because they had disappeared before I found safe footing.

The weather during my stay offered the usual New England variety, with some notably clear days. Winds varied in velocity from 5 to 45 miles per hour, usually between 15 and 35 miles. There were 5 days of east or southeast winds; otherwise (with the exception of one morning of absolute calm) winds were generally west, southwest, or northwest. I paid particular attention to the vicinity of the light during periods of fog. No dead birds were found, but several of the smaller species (petrels, vireos, and warblers) wandered into the engine house. I caught several, and they appeared unharmed. Migrating Monarch Butterflies seemed to maintain a fairly consistent proportion to the numbers of bird migrants, with a high of 75 on September 10.

Although my short stay on the island does not warrant much theorizing, three generalizations seem possible.

1. As amply shown by Gätke (1895: 74-99), Cooke (1915: 4-5), Lincoln (1935: 59-61), and as stated by Clarke (1912: 173, Vol. I), "It must first be remarked . . . that the *direction* of the wind has in itself nothing to do with the results described. The winds and the performance, or non-performance, of the migratory movements are the effects of a common cause—namely, the particular type of weather prevailing at the time, which may be favourable or unfavourable for the flight of birds to or from our islands." It must be remembered that the period under discussion was that when the land-bird migration on the coast of Maine was near its height. Consequently some migration occurred throughout my entire stay irrespective of the direction of the wind. There was not a sufficient number of individuals to attempt to correlate general weather conditions with migration. As on Monhegan (Jenney, 1919: 21), it appeared that some individuals arrived regardless of the wind's direction, but the greatest numbers arrived during very strong northwest winds. There was little difference in the number of species seen on the two islands. Dewis (1919: 33) in a somewhat shorter period on Monhegan recorded 71 species as against my 67.

2. Such 'waves' (two—on September 7 and 10) as did occur came after nights of 25- to 35-mile northwest winds, and represented usually only single individuals of each species, which seemed to arrive as a direct result of being blown out to sea. The Rock was the last land outpost to the south and east for birds subject to the influence of strong northwest winds.

3. One other direct result of the wind was that after the onset of an unfavorable wind (strong west, southwest, or south) all individuals present before the wind-change would be held over. The birds, in the face of the strong head winds, appeared to be unable to fight their way westward to Monhegan (the nearest land in anything like a southerly direction being Cape Cod). Most of the smaller land birds showed signs of fatigue. This, plus the fact that so many species were represented by single individuals, led me to believe that only such individuals appeared on the Rock as were forced out by the strong northwest winds, and only such individuals remained as were forced to remain by the strong west, southwest, or south winds. This was not true of the hawks which will be discussed in the following list. As Trowbridge (1902: 735) reported, the greatest amount of migration occurred soon after the wind veered to northwesterly, especially if it had freshened markedly after a calm. Also

if the wind continued generally in this direction for two or three days the supply of birds migrating dwindled; the greatest movement was soon after the onset of favorable winds.

*Annotated List.*—Names of forms are given in accordance with the Fourth Edition of the A.O.U. Check-List (1931) and all supplements to date. Palmer (1949) is used throughout as the source of all information regarding status in Maine and former records of species, and may be consulted for a full account of occurrence. SR—denotes breeding in Maine in numbers and areas such as to warrant expecting the species in the fall coastwise migration. TR—denotes occurrence regularly in fall coastwise flight. Exceptions are explained under species involved.

Greater Shearwater, *Puffinus gravis*.—Non-breeding (biologically wintering) summer and fall resident or visitant. Common on outer offshore waters. August 31 (1), flying west.

Leach's Petrel, *Oceanodroma leucorhoa*.—SR. There were about 200 burrows on the Rock; all that were examined contained a single young bird. Burrows were about 20 to 24 inches in length, invariably turning toward one side or the other, and were approximately horizontal. Bent (1922: 139) mentions burrows up to three feet or more, but none of the ones I observed was more than 24 inches. All were unlined and free of any material except the earth dislodged by my arm. Bent (1922: 139) gives this as the exception, stating that usually there is at the end of the burrow an enlarged chamber containing the nest, which is loosely made of dry grasses, bits of sticks, and weed stems, mixed with pieces of bark and sods.

The chicks were always at the far ends of the burrows and would try to return there as quickly as possible after having been removed. Plumages varied from downy young to almost fully fledged. All had been hatched before August 27, and none had left the island up to September 11. Many were still in downy plumage on the latter date. Photographs were made. The adults were seen on only a few occasions, when single birds were seen coming to burrows at dusk. No song was heard, perhaps because of its being drowned out in the sound of the surf.

Double-crested Cormorant, *Phalacrocorax auritus*.—SR. Always 25 to 60 present, sunning themselves on the rocks or swimming about.

American Eider, *Somateria mollissima*.—SR. Always present in water about the island. Minimum 8, maximum 23.

Goshawk, *Accipiter gentilis*.—SR. Southward movements occur from about October 20 (rarely October 1) through November. One juvenile stayed about an hour, perched on projecting rocks. Easily viewed through 35× telescope.

Sharp-shinned Hawk, *Accipiter striatus*.—SR. September 3 (1), September 6 (1), 8 (1), 10 (4). Palmer says "largest numbers are seen September 4 to 18, chiefly along the coast and even out to offshore Monhegan."

Pigeon Hawk, *Falco columbarius*.—TR. Most Maine fall records are September 5 to 30. September 7 (3), 8 (2), 9 (1), 10 (7), 11 (1). There were no adult males. They were very exciting to watch as they came in from the north. Invariably they arrived in the early morning and with one exception all flew directly toward Monhegan. That one flew due south for about 4 miles (I continued to watch it in the 60× telescope), and then suddenly veered toward Monhegan. I continued

following it for a couple of miles and then lost it. One other flew over the ocean exactly in the manner of a shearwater, barely clearing the water. A few remained until midafternoon.

Sparrow Hawk, *Falco sparverius*.—SR. Seen September 7 (2), 10 (7), and 11 (1). There were no adult males.

Semipalmated Plover, *Charadrius hiaticula*.—TR. August 27 (2).

Ruddy Turnstone, *Arenaria interpres*.—TR. Daily from August 27 to September 4 (2).

Hudsonian Curlew, *Numenius phaeopus*.—TR. Normal flight appears to be from Nova Scotia across Gulf of Maine to Cape Cod. September 2 (1), and 10 (4). Arrived during night and remained entire day. Were still present at 7:30 P.M., but had left before the next morning.

Spotted Sandpiper, *Actitis macularia*.—SR. One always present; September 2 (2).

Solitary Sandpiper, *Tringa solitaria*.—TR. Occasionally found in sheltered places on offshore islands, including Monhegan, usually in August and early September. One was always present; September 3 (2). It was strange to have one so continually present in what must have been inhospitable surroundings. Invariably found on the east side of the island by tiny brackish tide pools at the bottom of 15- to 25-foot crevices.

Greater Yellowlegs, *Totanus melanoleucus*.—TR. September 6 (1) and 10 (1).

White-rumped Sandpiper, *Erolia fuscicollis*.—TR. September 1 (1).

Least Sandpiper, *Erolia minutilla*.—TR. August 31 (12), September 1 (5), 2 (1), 4 (3), 5 (1), 6 (2), and 7 (4).

Semipalmated Sandpiper, *Ereunetes pusillus*.—TR. August 31 (3), September 10 (1).

Sanderling, *Crocethia alba*.—TR. August 31 (1), September 1 (1) and 10 (2).

Great Black-backed Gull, *Larus marinus*.—SR. 100 to 150 present in the area most of the time.

Herring Gull, *Larus argentatus*.—Resident throughout the year. About 100 always present.

Laughing Gull, *Larus atricilla*.—TR. 2 to 6 always present.

Tern (Arctic?), *Sterna (paradisaea?)*.—SR. September 3 (20), fishing nearby.

Dovekie, *Plautus alle*.—TR. and winter resident. Usually arrive during last five days of October. There are a few summer records for Maine (one in 1910 of a bird seen frequently near Matinicus Rock by the keeper of the light). August 23 (3), perched on rocks.

Black Guillemot, *Cepphus grylle*.—Year-round resident. Always one to three present in surrounding waters.

Atlantic Puffin, *Fratercula arctica*.—Year-round resident. Breeds on Matinicus Rock; according to Harry Watters, keeper of the light during my stay, there were about 60 adult birds in the 1949 nesting colony. August 27 (1) and September 3 (1).

Mourning Dove, *Zenaidura macroura*.—SR. Common in southern part of the state; rare in the eastern and most of the northern part. September 1 (1), 3 (2), 7 (1).

Nighthawk, *Chordeiles minor*.—SR. September 7 (1); stayed all day.

Chimney Swift, *Chaetura pelagica*.—SR. September 4 (1), 7 (1).

Ruby-throated Hummingbird, *Archilochus colubris*.—SR. Migration begins in Maine during first week in August, becoming conspicuous by August 10. On Matinicus Rock, September 10 (1).

- Belted Kingfisher, *Megasceryle alcyon*.—SR. September 7 (1).  
Flicker, *Colaptes auratus*.—SR. September 7 (1), 9 (1), 10 (3), 11 (2).  
Eastern Kingbird, *Tyrannus tyrannus*.—SR. September 7 (1), 8 (1); different individuals.  
Empidonax Flycatchers.—Many individuals on September 8 and 10.  
Yellow-bellied Flycatcher, *Empidonax flaviventris*.—SR. September 7 (1).  
Least Flycatcher, *Empidonax minimus*.—SR. September 7 (3).  
Eastern Wood Pewee, *Contopus virens*.—SR. September 7 (1).  
Tree Swallow, *Iridoprocne bicolor*.—SR. September 1 (1).  
Barn Swallow, *Hirundo rustica*.—SR. September 4 (1), 6 (1), 7 (1).  
Raven, *Corvus corax*.—Year-round resident; fairly common on coast. One to three wanderers from more northern islands came occasionally, never staying more than an hour; did not appear to find any food.  
Red-breasted Nuthatch, *Sitta canadensis*.—Year-round resident. One to eight present every day. Maximum number on September 7.  
Ruby-crowned Kinglet, *Regulus calendula*.—SR. August 31 (1), September 3 (1) and 7 (2).  
American Pipit, *Anthus spinoletta*.—SR. on Mt. Katahdin. TR. September 7 (1).  
Cedar Waxwing, *Bombycilla cedrorum*.—SR. September 7 (2).  
Yellow-throated Vireo, *Vireo flavifrons*.—Occasional SR in southwestern part of state—rare summer visitant throughout the remainder. September 8 (3).  
Red-eyed Vireo, *Vireo olivaceus*.—SR. September 10 (1).  
Tennessee Warbler, *Vermivora peregrina*.—SR. September 8 (1).  
Parula Warbler, *Parula americana*.—SR. September 8 (1).  
Magnolia Warbler, *Dendroica magnolia*.—SR. September 5 (1), 6 (1), 7 (5), and 9 (1).  
Cape May Warbler, *Dendroica tigrina*.—SR. August 27 (1), September 5 (2), 7 (4), 8 (3), and 11 (1).  
Black-throated Blue Warbler, *Dendroica caerulescens*.—SR. September 3 (1).  
Myrtle Warbler, *Dendroica coronata*.—SR. September 9 (2).  
Black-throated Green Warbler, *Dendroica virens*.—SR. September 8 (1).  
Blackburnian Warbler, *Dendroica fusca*.—SR. September 7 (1).  
Black-poll Warbler, *Dendroica striata*.—SR. September 6 (1), 9 (1), 10 (1), 11 (1).  
Plumage differences indicated that they were different birds.  
Oven-bird, *Seiurus aurocapillus*.—SR. September 7 (1).  
Northern Water-thrush, *Seiurus noveboracensis*.—SR. August 31 (1), September 3 (1) and 4 (1).  
Yellow-throat, *Geothlypis trichas*.—SR. September 1 (1).  
Yellow-breasted Chat, *Icteria virens*.—Rare visitant—11 records for state listed by Palmer from 1876 to 1948. Only one of these, a bird which remained on Mt. Desert Island from December 1, 1944, for 10 days, was north or east of the present record. August 27 (1), September 2 (1), 4 (1), 5 (1), and 7 (1). Believed to be the same bird throughout. Considering my most careful daily searches, it was a tribute to the bird's elusiveness that it could not be found on the intervening days.  
Wilson's Warbler, *Wilsonia pusilla*.—SR. Fairly common fall transient. September 3 (3), 4 (1), 10 (1).  
American Redstart, *Setophaga ruticilla*.—SR. September 7 (1), 8 (3).  
Bobolink, *Dolichonyx oryzivorus*.—SR. September 3 (2), 4 (1), and 6 (1). It could have been a repeat.

Red-wing, *Agelaius phoeniceus*.—SR. September 4 (1), 5 (2), 7 (1), 11 (1). Different individuals.

Baltimore Oriole, *Icterus galbula*.—SR. Migration occurs in August. Palmer gives only a few later records. September 2 (2), 8 (1), and 10 (1).

Cowbird, *Molothrus ater*.—SR. September 7 (1).

Purple Finch, *Carpodacus purpureus*.—SR. September 9 (1) and 10 (3).

Savannah Sparrow, *Passerculus sandwichensis*.—SR. August 31 (2), September 2 (2), 3 (2), 5 (3), and 7 (6).

Vesper Sparrow, *Pooecetes gramineus*.—SR. Uncommon transient on islands. August 31 (1), September 2 (2).

White-throated Sparrow, *Zonotrichia albicollis*.—SR. September 7 (1).

Song Sparrow, *Melospiza melodia*.—SR. From one to ten individuals daily. Mostly adults. The turnover, considering the early dates, probably indicated that the birds were wanderers from the neighboring islands and not migrants. However, Palmer, (p. 574), says "Migration . . . throughout September."

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*Symphony Hall, Boston, Massachusetts, December 27, 1954.*