THE 1944 HURRICANE IN NEW ENGLAND

BY NORMAN P. HILL

In the early evening of September 14, 1944, a tropical hurricane swept into southern New England causing widespread damage to trees and buildings with its high winds and flood tides. For the next week, reports of the ornithological results of this storm appeared; these seem of sufficient interest to warrant a more complete report.

Most extraordinary was the large number of Black Skimmers. Also of interest were Sooty Terns, Gull-billed Terns, Royal Terns, Wilson's Plovers and a Snowy Egret. The occurrences of these birds for the three days following the storm are tabulated. Other more usual birds which appeared in remarkable numbers or in remarkable places were Leach's Petrel, Golden Plover, Red Phalarope, Parasitic Jaeger, Herring and Laughing Gulls, and Forster's, Least, Caspian and Black Terns.

A word on meteorology. A hurricane may be described as a warm, moist mass of tropical air extending upward about 30,000 feet with a counterclockwise whirl of winds about it, the whole disturbance moved along by the prevailing winds. The centers, which average 40

TABLE 1

REPORTS OF SEPT. 15, 16, AND 17, 1944

BLACK SKIMMER

NEW BRUNSWICK			
Kent's Island	50	Sept. 15	Joy (1 collected)
MAINE			
Ile au Haut	1	Sept. 15	Cottrell
Blue Hill	"100's"	Sept. 16	Waterman
Pine Point	20	Sept. 16	Webb
Swan Island	1	Sept. 17	Tousey
Ocean Park	20	Sept. 15	Webb
NEW HAMPSHIRE—none			
MASSACHUSETTS			
Newburyport	104	Sept. 17	Mass. Aud. Soc.
Ipswich	225	Sept. 17	Cottrell & Bradford
Manchester	16	Sept. 16	Burnett
Point of Pines	20	Sept. 15	Argue
Marshfield	150	Sept. 17	———
Nauset	86	Sept. 17	Griscom & Hill
Martha's Vineyard	114	Sept. 17	Edey
Nantucket	50	Sept. 17	Heywood
Fall River	2	Sept. 15	Cooke

TABLE 1—*Continued*

RHODE ISLAND			
Sakonnet	159	Sept. 17	Emerson
Dyer's Island	35	Sept. 15	Bowen
Bonnet Shores	50	Sept. 15	Ball
Newport	185	Sept. 15	Stackpole
Block Island	12	Sept. 15	Dickens
CONNECTICUT			
Waterford	24	Sept. 17	White
Fairfield	65	Sept. 16	Saunders
		SOOTY TERN	
MASSACHUSETTS			
Nantucket	1	Sept. 15	Heywood
RHODE ISLAND			
Narragansett Bay	15	Sept. 15	Bowen
		GULL-BILLED TERN	
MASSACHUSETTS			
Nauset	1	Sept. 17	Griscom & Hill
RHODE ISLAND			
Sakonnet	1	Sept. 17	Emerson
Narragansett Bay	1	Sept. 15	Bowen
		ROYAL TERN	
MASSACHUSETTS			
Chatham	1	Sept. 15	Griscom
Nauset	1	Sept. 17	Griscom & Hill
RHODE ISLAND			
Sakonnet	1	Sept. 17	Emerson
Bonnet Shores	1	Sept. 15	Ball
		WILSON'S PLOVER	
MASSACHUSETTS			
Newburyport	2	Sept. 21	Griscom
		SNOWY EGRET	
RHODE ISLAND			
Warren	1	Sept. 16	Bowen

miles in diameter, move relatively slowly (10–12 MPH) but the surrounding winds are of high intensity, more so on the right-hand side because there is added the forward movement of the center. The energy for maintenence of the disturbance is derived from the heat of condensation of water vapor as it is carried upward in the slow (2 MPH) vertical component of the winds.

The course of the September, 1944, storm was somewhat different from that expected of most late summer hurricanes which usually stay well off the Atlantic coast. This one presumably originated off the West African coast and moved slowly westward north of the West Indies. On September 11, the center was in the region of the Bahamas; it turned northward and was about 100 miles off Jacksonville, Florida, the next day. On September 13, it made a loop inside Cape Hatteras over the North Carolina sounds and then passed again to sea. Its forward motion became accelerated at this time and it passed over eastern Long Island late in the afternoon of September 14, proceeded north over Rhode Island and then turned east to pass again to sea between Boston and Plymouth and disappeared northeastward into the Atlantic.

Now, can the variety of birds found be correlated in any way with the course of the storm? There were essentially three groups of stragglers found: (1) those found normally at sea off the North Atlantic states (Leach's Petrel, Red Phalarope and Parasitic Jaeger); (2) one from tropical seas (Sooty Tern); and (3) those typical of the Carolina coastal region (Snowy Egret, Wilson's Plover, Gull-billed and Royal Terns and Black Skimmer).

The Leach's Petrel, Parasitic Jaeger and Red Phalarope may be disposed of quickly. They are normally found off the New England coast at this season and may be blown in by any storm; i. e. it does not require a hurricane to bring them.

The Sooty Tern has frequently appeared in New England after similar storms in the past. It was presumably picked up in the West Indian regions and carried northward.

Finally, it seems reasonable to hypothesize that the Skimmers, terns, etc. were picked up as the storm looped inside Cape Hatteras, in which region these birds are abundant. It is of interest to note that a storm in August, 1879, which followed almost the same course as the one under discussion, carried many Skimmers to New England. On the other hand, a storm of August, 1924, which stayed well offshore the whole length of the coast, also brought Skimmers; this, however, was somewhat of an exception as most storms following this regular course do not bring such stragglers.

Parenthetically, it may be well to add that while the storm undoubtedly accounted for the large numbers of Forster's, Black and Caspian Terns, as well as the late dates on Least Terns and numbers of late Laughing Gulls, it is harder to draw the line here between storm-borne stragglers and normal fall occurrences, as all of these are expected every year. Apparently the storm picked up migrating individuals and carried them back northward.

There have been reports from shipboard, mostly in the Caribbean, that many birds are found in the centers of the hurricanes, but most such records refer to migrating small land birds which are already far at sea when overtaken by the storm. There is no reason to believe that any birds are picked up by the center as it sweeps over them. More probably birds such as Skimmers are lifted off the ground somewhere on the right-hand side of the center when the wind velocity exceeds the stalling speed of their flight. Then the birds may be swept in the zone of high winds around the center one or more times, or they may congregate in the center. The pattern of the distribution of Skimmers in New England cannot help us solve the problem of where and how they are carried, for they were found on both sides of, as well as directly in the path taken by, the center. There is some evidence, however, that these birds were not reported where they were deposited by the storm but rather in favorable areas where they had collected to feed and rest. This evidence is the remarkable growth of the flocks at Newburyport from 104 to nearly 400 and on Cape Cod from 86 to 386. Perhaps this increase consisted of the New Brunswick and Maine birds drifting southward.

Finally, consider the loss of bird life that must have occurred. On Cape Cod, small land birds vanished from the coastal areas with the storm. There was no trace of them inland nor did they return so it seems likely they perished. A week later, the Starlings, Meadowlarks and Redwings were present in very small fractions of their expected populations. Also many gulls were found dead. It is obviously impossible to make a guess as to mortality among the Skimmers and terns, but a high one may be suspected.

SUMMARY

The ornithological results in New England of the hurricane of September 14, 1944, are reported and the course of the storm is described.

The large number of Black Skimmers is the item of particular interest. The presence of these birds may be accounted for by the course of the storm which, on its way north, swung inside Cape Hatteras where Skimmers are abundant at that season. There is insufficient evidence at hand to determine in what part of the storm the birds were carried.

There was considerable loss of bird life noted, particularly among the smaller land birds of Cape Cod.

15 Oxford Street
Arlington, Mass.