NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION. 1972. Tide tables, high and low water predictions, 1973. Washington, D. C., U.S. Dept. Commerce.

PACKARD, C. M. 1961. Maine bird reports, May, 1961. Maine Field Observer 6 (5): 49-58.

PALMER, R. S. 1949. Maine birds. Bull. Mus. Comp. Zool. 102.

MALCOLM L. HUNTER, JR., School of Forest Resources, University of Maine, Orono, Maine 04473. Accepted 29 Nov. 73.

First Massachusetts specimen of Le Conte's Sparrow.—On 4 September 1971 a Le Conte's Sparrow (Ammospiza leconteii) was netted at the Manomet Bird Observatory. It had no fat and weighed 9.7 g with a winglength (chord) of 50 mm and a skull one-third or less ossified. The bird was a female. The specimen is now MCZ No. 330,035 in the Museum of Comparative Zoology at Harvard College. This is the first specimen for Massachusetts and New England.

Three recent sight records, all from Cape Cod, seem reliable. On 19 October 1969, Wallace Bailey and Robert V. Clem identified an immature Le Conte's Sparrow on the edge of a cornfield at a farm in Truro, Massachusetts. The bird was well seen in good light, and was found again on 22 October by Joseph F. Kenneally, Jr. at the same location. On 18 November 1970 Kenneally studied a second Le Conte's Sparrow in adult plumage with a mixed sparrow flock in a briar thicket immediately behind the Coast Guard Museum building at Nauset Beach. On 25 March 1972 Robert F. Pease found a Le Conte's Sparrow in adult plumage on the northeast side of Fort Hill in Eastham. The bird remained there for 3 weeks or more and was seen by many competent Cape Cod birders.—Kathleen S. Anderson, Manomet Bird Observatory, Manomet, Massachusetts 02345. Accepted 4 Dec. 73.

First northwestern Atlantic breeding record of the Manx Shearwater.—On 4 June 1973 a Manx Shearwater (Puffinus p. puffinus) was discovered incubating a single white egg in a burrow under two planks on Penikese Island, Massachusetts (41° 27' N, 70° 55' W). Penikese is a small, roughly 40 ha, island at the southern end of the Elizabeth Island chain, west of Martha's Vineyard. The terrain is hilly and the vegetation mostly grassy. The island formerly supported colonies of nesting Common (Sterna hirundo), Roseate (S. dougallii), and Arctic (S. paradisaea) Terns (Nisbet 1973); and Leach's Storm-Petrels (Oceanodroma leucorhoa) were discovered breeding on the island by Townsend and Allen (1933) in 1933 (cf. Drury 1973). Herring Gulls (Larus argentatus) and Great Black-backed Gulls (L. marinus) now nest on the island in large numbers.

We revisited the nest on 6 June 1973 to obtain additional photographs and the following measurements of the incubating adult: bill chord (from edge of feathers to tip of bill) 33 mm; wing 243 mm; tail 88 mm; tarsus 48.5 mm (measurements were taken as described in Palmer 1962). These measurements were compared with figures for P. p. puffinus cited by Bourne (in Palmer 1962: 187). They are near the upper limit of the variation found in 12 males, and are well above the range for eight females. Our bill measurement is at the lower limit of the variation for the females and 1.2 mm below the shortest length given for a male. This is most likely due to a different procedure in measuring the bird. Bourne does not mention which bill measurements are given in his table (from skull or from feathers). The oval egg measured 60.05 mm  $\times$  41.00 mm, well within the range cited by Bourne.

The plumage was uniformly black on the back, with several white filoplumes on the back of the head. The gradual transition between the black of the head and the white of the throat was below the eye. The undertail coverts were white, with some dark coloring on the distal halves of the outer vanes. The iris was dark brown and the feet and tarsi were mostly pink. Most of the outer tarsi, the outer edge of the outer toe, and the distal two-thirds of the middle toe were black. The upper mandible was all blackish gray, as was most of the lower, save the proximal one-quarter which was light gray with a suggestion of bluish green, especially near the cutting edge.

We were able to return to the nest site only once, on 22 July, at which time we photographed the large downy chick. No adult was in the nest burrow.

The changing status of the Manx Shearwater in the northwestern Atlantic was thoroughly reviewed by Post (1967). To summarize his findings briefly: The Manx appears to have been fairly common in the mid-19th century (three specimens still extant). No sightings were recorded for the latter part of the 19th century and the first 17 years of the 20th. A specimen was found dead on a Fire Island, New York, in 1917, and was erroneously stated by Dwight (1923) to be the "first definite capture in North America of the Manx Shearwater."

The Manx began to occur with some regularity around 1950; the first Massachusetts record was a specimen found dead on Edgartown Beach, Martha's Vineyard in 1950 (Ludwig 1951). Post lists 10 records in the waters around Martha's Vineyard and Nantucket Islands during the 1940s and 1950s.

Sightings became fairly common in the late 1950s and 1960s. One observer reported seeing 47 in the waters off Maine between 1951 and 1965 with as many as 14 in a season. An even greater increase in sightings has been reported since the late 1960s. A group of 50 to 75 was seen in the Bay of Fundy in the fall of 1971 (Finch 1972). Richard Brown (in litt.) reports that since 1969 he has regularly seen Manx Shearwaters in the waters off eastern Canada from June through September. In fact he considers it unusual to be on board a ship off eastern Nova Scotia in the summer and not see a Manx.

Locally, shortly after our discovery of the nesting bird, Baird saw five small black and white shearwaters in the Vineyard Sound between Martha's Vineyard and Woods Hole, Massachusetts, three on 8 June and two on 10 June 1973. The birds were at a considerable distance from the ship, but the flight of the birds was more suggestive of the Manx than either the Audubon's (Puffinus Iherminieri) or Little (P. assimilis baroli) Shearwaters, with which the Manx may be confused (Post 1964). On 25 June 1973 Ben David observed a flight of some 60 to 80 shearwaters, predominantly Greater Shearwaters (P. gravis), but including 10 to 15 Manx, in the same waters.

The Manx winters in the Atlantic off the coast of South America and begins to arrive at the breeding grounds in the northeastern Atlantic in late February. Thousands are present on the Skokholm breeding grounds in Wales by the end of March (Lockley 1942: 19). Nearly all records of the Manx in the northwestern Atlantic are from June through September. Post (1967) concluded that the lack of records during January through March, when migrants would be en route to their breeding grounds, was due to the lack of observers in the Atlantic then.

As the Manx apparently does not breed until its 5th or 6th year (Palmer 1962: 191) and these subadults do not return to their breeding grounds until their 3rd or 4th (Orians 1958), Post (1967) further concluded that the birds seen off the coast of eastern North America from March through August must be nonbreeders. Prior to our discovery, the westernmost breeding record for the Manx was on Bermuda

in 1905 (A.O.U. Check-list 1957), but this was apparently the last record for the island (Bourne 1957).

The regional increase in sightings and especially the frequent local occurrence of the birds strongly suggest that our discovery does not represent an isolated phenomenon, but rather may be the first reported instance of a significant breeding range extension for the Manx Shearwater.

We wish to thank George M. Moffett, Jr., who organized the initial expedition to Penikese; Davis W. Finch, who supplied useful criticism of the manuscript; and Richard G. B. Brown of the Marine Ecology Laboratory of Bedford Institute in Nova Scotia, who provided advance copies of their quantitative atlas of pelagic seabird distributions.

## LITERATURE CITED

AMERICAN ORNITHOLOGISTS' UNION. 1957. Check-list of North American birds, fifth ed. Baltimore, Amer. Ornithol. Union.

BOURNE, W. R. P. 1957. The breeding birds of Bermuda. Ibis 99: 44-105.

Drury, W. H. 1973. Population changes in New England seabirds. Bird-Banding 44: 267-313.

DWIGHT, J. 1923. First definite capture in North America of the Manx Shearwater (Puffinus puffinus). Auk 40: 125.

FINCH, D. W. 1972. Regional reports: The northeastern maritime region. Amer. Birds 26: 32-37.

LOCKLEY, R. M. 1942. Shearwaters. New York, Devin-Adair.

Ludwig, J. H., Jr. 1951. Puffinus puffinus. Bull. Massachusetts Audubon Soc. 35: 93-95.

NISBET, I. C. T. 1973. Terns in Massachusetts: Present numbers and historical changes. Bird-Banding 44: 27-55.

Orians, G. H. 1958. A capture-recapture analysis of a shearwater population. J. Anim. Ecol. 27: 71-86.

PALMER, R. S. (Ed.) 1962. Handbook of North American birds, vol. 1. New Haven, Connecticut, Yale Univ. Press.

Post, P. W. 1964. The occurrence and field identification of small "black and white shearwaters" in New York. Kingbird 14: 133-140.

Post, P. W. 1967. Manx, Audubon's and Little Shearwaters in the northwestern Atlantic. Bird-Banding 38: 278–306.

Townsend, C. W., and F. H. Allen. 1933. Leach's Petrel (Oceanodroma leucorhoa leucorhoa) breeding in Massachusetts. Auk 50: 426-427.

RICHARD O. BIERREGAARD, JR., AUGUSTUS BEN DAVID, II, TIMOTHY D. BAIRD, Felix Neck Wildlife Sanctuary, Box 1055, Oak Bluffs, Massachusetts 02557, and ROBERT E. WOODRUFF, Vineyard Conservation Society, RFD Vineyard Haven, Massachusetts 02568. Accepted 11 Dec. 73.

Roadrunner predation on ground squirrels in California.—The Roadrunner (Geococcyx californianus) is an omnivorous bird that includes a variety of plant and animal materials in its diet (Bryant 1916, Sutton 1940). Nearly 10% of its diet is of plant origin, and about 90% is animal. Mammals account for approximately 3% of the total food intake (Bryant 1916).

Mammals known to be preyed upon by Roadrunners include cotton rats (Sigmodon sp.), woodrats (Neotoma sp.), harvest mice (Reithrodontomys megalotis),