

GENERAL NOTES

Probable Bulwer's Petrel off Key West, Florida.—I observed a small, all dark petrel with a long wedge-shaped tail that I identified as a Bulwer's Petrel (*Bulweria bulwerii*) off the Florida Keys, about 15 miles east-southeast of Rebecca Light on 14 May 1969. Rebecca Light is west of Key West, approximately two-thirds of the distance to the Dry Tortugas, from which islands we were returning at the time.

One of a group of three petrels flew in to within 50 feet of our boat and stayed alongside for almost a minute. It was a uniform brownish-black with a somewhat lighter brownish band across the upper surface of its wings. Its flight was more like a shearwater than a storm petrel. It did not have the latter's fluttering flight, but rather had a gliding flight and used its wings only sparingly and then only in short bursts. In size, this bird was much smaller than Audubon's Shearwater (*Puffinus lherminieri*), several of which we had seen only a few minutes before, and larger than the storm petrels, even than the Black Petrel (*Loomelania melania*). While I realize that size comparisons based on non-contemporaneous sight records are open to some question, I had seen Black Petrels less than three weeks earlier when three of them followed our ship from the Gulf of Panama toward the Galapagos for two days.

Dr. George E. Watson of the Smithsonian Institution, who concurs with my identification, adds "In the Atlantic Ocean the Bulwer's Petrel breeds only on Madeira and the Cape Verde Islands but regularly, it seems, migrates south and west toward the Americas. It has been recorded in the Caribbean and may even be a regular migrant in the southeast Caribbean and near Trinidad. Many more observations are needed from that part of the Caribbean to establish any regular pattern of occurrence (if indeed a pattern exists). Your observations near the Tortugas, however, may only be regarded as extraordinary vagrants."

The 1957 edition of the A.O.U. Check-list in its Hypothetical List contains an old and uncertain record of the Bulwer's Petrel from Greenland. Until such time as a specimen or photograph of this bird can be obtained for North America, it must remain as a hypothetical.—JOSEPH W. TAYLOR, 20 Parish Road, Honeoye Falls, New York 14472, 19 November 1971.

Spring migration of the Gannet in Florida waters.—The Gannet (*Morus bassanus*) is a regular winter visitor to Florida waters (Sprunt, Florida bird life, Coward-McCann, New York, 1954, p. 17), but little is known of its spring migration. Palmer (Handbook of North American Birds, 1:308, 1962) reports that spring migration begins in March with the majority of birds gone from Florida waters by about mid-April. The earliest dates of migration for Florida are 3 March off the east coast at Cocoa (Stevenson, Audubon Field Notes, 12:273, 1958) and 15 March off the Gulf coast at Alligator Point, near Panacea (Stevenson, Audubon Field Notes, 9:252, 1955) but these birds may not have been migrants. The latest dates are 2 June at Alligator Point (Cunningham, Audubon Field Notes, 20:497, 1966) and 27 June about 12 miles northwest of Key West (Sprunt, Auk, 65:315, 1948).

Palmer (op. cit.:308) states that for the first three years Gannets stay at sea all year. Thomson (Brit. Birds, 32:286, 1943) reports that some young, non-breeding British Gannets remain in African waters, the winter range of the population, throughout the breeding season. I know of no records of Gannets of any age in Florida waters for July and August. Several observers have described a correlation between the age of Gannets and the time of migration. Cruickshank (Birds around New York City, Amer.

Mus. Nat. Hist., 1942) notes that in the New York area the majority of the early migrants are in adult plumage, and the majority of the later migrants are younger. Wodzicki and Stein (Emu, 58:296, 1958) note the same correlation for New Zealand Gannets. Stevenson (Audubon Field Notes, 12:273, 1958; 13:286, 1959) reports that adult-plumaged birds outnumbered younger birds in migration on two occasions in March off the east coast of Florida.

During the spring of 1971 I recorded Gannet movements and plumages in the Straits of Florida about 5 miles southeast of Marathon, Key Vaca, where on three occasions small, compact flocks were seen flying steadily northeast low over the water. No fishing or other activities were noted. The 70 Gannets I observed flew over water 75 to 100 feet deep near a reef parallel to the Florida Keys. Water depth increases rapidly seaward of the reef into the Straits of Florida. On 28 February 44 adult-plumaged Gannets were seen moving northeast in flocks of two to seven at the rate of nine birds per hour. On 4 April 23 Gannets, 18 adult-plumaged and five subadult and immature-plumaged, were seen moving northeast at the same rate. The largest flock was five. On 10 May three Gannets, one subadult and two immature-plumaged, were seen flying northeast at the rate of two birds per hour. No Gannets were seen during three subsequent trips on 17 and 31 May and 7 June.

These observations indicate that Gannet migration off Florida has begun by late February, which is earlier than previously supposed, and terminates in May. Furthermore, my observations indicate that adult-plumaged birds begin migration at an earlier date than subadults and immatures, with a mixing of age classes in April. That the Gannets followed the reef edge and avoided deep water suggests they are offshore and not pelagic birds. This may explain the lack of records of the species in the West Indies (Bond, Check-list of birds of the West Indies, 1940 and supplements) even though they occur annually in the southern Straits of Florida. This offshore habit is characteristic of other Gannet populations (Thomson, op. cit.:283-284), although New Zealand Gannets are known to migrate over sea from New Zealand to Australia by crossing the Tasman Sea and to Indian Ocean pelagic waters (Wodzicki and Stein, op. cit.:289). I wish to thank Dr. William B. Robertson, Jr. of the U. S. National Park Service and Dr. Glen E. Woolfenden of the University of South Florida for helpful suggestions on improving this manuscript.—TERRY C. MAXWELL, *CMR Box 7248, Homestead AFB, Florida 33030 (Present Address: 1025 Cactus Lane, San Angelo, Texas 76901), 10 July 1971.*

Aerial feeding in the Snowy Egret.—The Snowy Egret (*Leucophoyx thula*) is well known for its diversified feeding behavior. Catching aquatic prey while in flight has been noted by several authors. Bond (Auk, 51:500-502, 1934), Sprunt (Auk, 53:203, 1936), Grimes (Auk, 53:439, 1936) and Meyerriecks (Wilson Bull., 71:153-158, 1959) described a feeding behavior which Meyerriecks (op. cit.:154) called "hovering-stirring." An egret so engaged hovers near the water and with one or both feet agitates the water or stirs vegetation or debris beneath it. I have observed Snowy Egrets using hovering-stirring on several occasions in southern Florida. I have also witnessed a different method of aerial feeding which may be called "foot-dragging." Employing this technique, an egret flies just above the water with legs dangling beneath. It drags the toes of both feet through the water and takes prey from the water while in direct flight without hovering. I have only seen small organisms taken during such behavior and these were swallowed while the bird was in flight. A third type of aerial feeding has been noted by Dickinson (Auk, 64:306-307, 1947) and Jenni (Ecol. Monogr., 39:258, 1969) who reported Snowy Egrets feeding in direct flight but without dragging their feet.