Wilson Bull., 102(3), 1990, pp. 451–468

THE BIRDS OF RUM CAY, BAHAMA ISLANDS

DONALD W. BUDEN[1]

ABSTRACT.—Seventy species of birds are recorded from Rum Cay, 31 for the first time. Of the 38 probable breeding species, 17 are land birds. Most of the breeding species are widespread in the Bahamas generally, and no species or subspecies is endemic to Rum Cay. Nests, eggs, and young are reported for 21 species, all first breeding records for the island. The Pearly-eyed Thrasher (*Margarops fuscatus*) was the most common bird during the summer 1989 census. *Received 11 Sept. 1989, accepted 1 Dec. 1989.*

The avifauna of Rum Cay has never been reviewed systematically, and the ornithological literature consists mainly of a few brief notes from the late 1800s and early 1900s. The present paper is based largely on my observations during 25 May–9 July 1989, and it includes information summarized from the literature, data from museum labels and catalogs, and previously unpublished notes contributed by other observers.

STUDY AREA

Rum Cay is a small (16 km long, 78 km^2), low (maximum elevation ca 37 m) limestone island in the east-central Bahamas (Figs. 1 and 2). Shoal water extends only a short distance offshore, and the island, in effect, sits on its own bank never having been connected over land to adjacent islands during even the lowest Pleistocene sea level minima. The coast consists of alternating stretches of both sandy and rocky beaches and cliffs to ca 25 m high, highest along the eastern and southeastern shores.

Coastal vegetation includes strand and sparse scrub mainly on sand, and low, dense scrub mainly on rock. Coconut palms (*Cocos nucifera*) are common in Port Nelson but scarce elsewhere, and casuarinas (*Casuarina equisetifolia*) are most numerous along the southern shore. The interior is covered mainly by dense scrub consisting of bushes and small trees about 3–5 m tall. Patches or pockets of xeric-to-semimesic woodland with trees to ca 20 m tall occur mainly on the slopes of ridges and at both permanent and temporary freshwater ponds. Among the more common large trees of the interior are mahogany (*Swietenia mahagoni*), poison wood (*Metopium toxiferum*), wild tamarind (*Lysiloma latisiliquum*), wild oak (*Bucida buceras*), and an unidentified species of *Coccoloba*, probably pigeon plum (*C. diversifolia*).

Numerous salt ponds typically are bordered by buttonwood (*Conocarpus erectus*), black mangrove (*Avicennia germinans*), and, to a lesser extent, red mangrove (*Rhizophora mangle*). The latter is more common along the shores of Lake George, a large, clear salt lake with subterranean connection(s) to the sea, and the Port Nelson salt lake, which has a narrow tidal channel on its eastern shore.

Permanent freshwater ponds are much less common. At least two of the three I visited consisted of freshwater lenses on saline bases subject to tidal flow. These ponds typically

[1] Dept. of Natural Sciences, Northern State Univ., Aberdeen, South Dakota 57401, and New England Science Center, Harrington Way, Worcester, Massachusetts 01604. (Present address: Div. of Natural Science, College of the Bahamas, Nassau, Bahamas.)

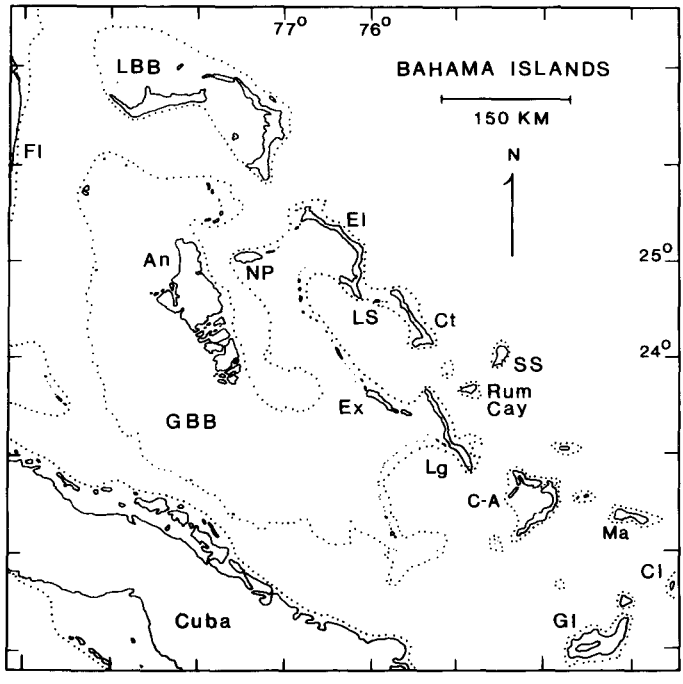

FIG. 1. Map showing the location of Rum Cay and other Bahama Islands; dotted lines denote the 100 fathom contour. An = Andros, CI = Caicos Islands, El = Eleuthera, Ex = the Exumas, Fl = Florida, GBB = Great Bahama Bank, GI = Great Inagua, LBB = Little Bahama Bank, Lg = Long Island, LS = Little San Salvador, NP = New Providence, SS = San Salvador.

are bordered by large trees and have dense growths of cattail (*Typha*) and leather fern (*Acrostichum*). Sabal palm (*Sabal palmetto*) and pond apple (*Anona glabra*) also are common here and in low-lying, swampy areas, which were dry during my visit. Some of the low areas that collect rainfall in temporary ponds have almost pure stands of *Bucida buceras,* the largest trees being ca 20 m tall and nearly 2 m in diameter at ground level. The large, trunk-like limbs (to ca 0.5 m in diameter) diverge from the main trunk one to two meters above the ground, and the sprawling branches are festooned with bromeliads. These woods are park-like in appearance as the broad-crowned trees are widely spaced (ca 15–20 m) and the ground cover and other vegetation are low and generally sparse. Broad areas of sedge (*Eleocharis*) occur in these seasonally flooded basins.

I estimated approximately 100 people resident on Rum Cay during my visit, all in Port Nelson; Bowman (1976) reported 93 censused in 1975. During the 1800s and into the early 1900s, the population ranged from several hundred to nearly 1000 (858 in 1851) and was distributed over five principal settlements, all but Port Nelson now in ruins (Bowman 1976). Bowman considered the decreased demand for sisal fiber (supplanted by synthetics) and devastations to the salt and pineapple industries by hurricanes (those of the mid-1920s were especially damaging) among the chief factors contributing to the island's decline. Areas

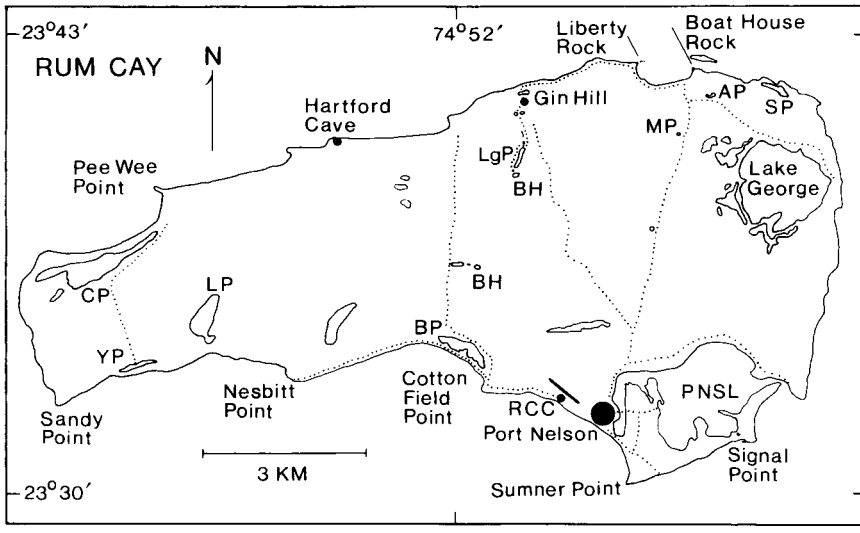

FIG. 2. Map of Rum Cay. Dotted lines show routes followed on census walks. Heavy solid line indicates airstrip. AP = Adderley's Pond, BH = Blue Hole, BP = Bay Pond, CP = Carmichael Pond, LP = Line Pond, LgP = Long Pond (local name not in map references cited), MP = Mermaid Pond, PNSL = Port Nelson Salt Lake, RCC = Rum Cay Club, SP = Shad Pond, YP = Yard Pond.

under cultivation in past decades have since reverted to scrub, and agriculture presently is limited to a few, small gardens in and around Port Nelson. Feral populations of cattle (once raised for both meat and milk), goats, and cats roam the island, being most numerous on the eastern half.

Narrow, unpaved roads circumscribe and traverse the island. The one from Port Nelson to the north side has been widened and is well-maintained. The others, for the most part, have not been maintained for decades. They are overgrown, and many are difficult to use even as foot paths. Bahama haulback (*Mimosa bahamensis*), a bushy plant with extremely sharp, recurved spines, is common throughout the island, especially in cut-over areas, and it makes travel off maintained trails extremely difficult.

Climatological data for Rum Cay generally are lacking. However, beginning in January 1988, D. Melville has kept monthly records of rainfall using a Taylor 11″ Clear-Vu Rain Gage. He recorded 44.97 inches for 1988, of which 21.39 inches fell during January–June, 7.38 inches just in June. Only 4.82 inches have been recorded January–June 1989, with no measurable precipitation during June. Many of the ponds were dry during my visit and much of the scrub was parched and withered.

ORNITHOLOGICAL HISTORY

Ridgway's (1891) list of 27 species of birds collected on Rum Cay by the naturalists of the *Albatross* Expedition in March 1886 is the first report on the avifauna of the island. Ridgway did not state what days the expedition was on Rum Cay, but the collecting dates for 26 of 27 species fall within the period 1–6 March (11 Bahama Mockingbirds [*Mimus*

gundlachii] were reported taken during 1–29 March); all specimens were deposited in the National Museum of Natural History, Smithsonian Institution (USNM). Riley (1905a) reported on the 15 species observed by the Geographical Society of Baltimore Expedition on 10 July 1903, and W. W. Worthington (in Todd and Worthington 1911) commented briefly on Killdeer (*Charadrius vociferus*) (p. 449) and Pearly-eyed Thrasher (*Margarops fuscatus*) (p. 475) seen on 28 January 1909, during a Carnegie Museum Bahama Expedition.

J. C. Greenway, Jr. stopped at Rum Cay on 15 February 1934, enroute to the Antilles aboard the *Utowana*. He collected one specimen each of the Zenaida Dove (*Zenaida aurita*) and the Pearly-eyed Thrasher for the Museum of Comparative Zoology, Harvard University (MCZ). Albert Schwartz and Richard Thomas visited Rum Cay mainly to collect reptiles, but they also obtained 11 study skins of seven species of birds during 17–20 June 1966—specimens now in the Louisiana State University Museum of Natural Science. Mary H. Clench was on the island 7–9 March 1976 on a Carnegie Museum Bahama Expedition. Her field notes cover 26 species and include many new locality records mentioned in the present report. Alexander Sprunt IV visited Rum Cay briefly during 13–14 May 1985, contributing two new locality records of migrant shorebird species to this study.

METHODS

English names and binomials follow the nomenclature of the American Ornithologists' Union (1983, 1989), but placement of the Greater Flamingo follows Olson and Feduccia (1980). Subspecies names are used only in selected cases and follow Bond (1956) unless indicated otherwise. Abbreviations of names of observers or collectors are AS = Albert Schwartz, DWB = Donald W. Buden, MHC = Mary H. Clench. Questionable records and those of extirpated populations are in brackets.

Abundance is based largely on numbers of individuals usually seen during a day in the field: VC = very common, 30 or more/day; C = common, 15–30/day; FC = fairly common, 5–15/day; UC = uncommon, 1–5 on most days, but not seen every day; S = scarce, 5–15/season; and R = rare, 1–5/season.

Residents occur year-round and breed, and summer visitors breed but are less numerous or absent in winter. Nonbreeding visitors are chiefly winter visitors or transients from continental North America, but include occasional visitors or vagrants as well as species present throughout the year but not breeding. In cases where records are especially scanty and status is uncertain, "probable" or "possible" status is inferred from records for nearby islands relying largely on Bond (1956), Brudenell-Bruce (1975), Buden (1987a, 1987b), and Miller (1978).

Censuses were done by recording all birds seen and heard calling along 12 different routes (mainly roads and trails) covering 42 km during 26 May–8 July 1989. Surveys were at different times of the day from dawn to dusk. Eleven of the routes were surveyed from one to seven times, but the 6.5 km between Port Nelson and the north side were covered 26 times. In cases where routes were surveyed more than once, the maximum number of individuals recorded during one survey was used to calculate abundance. Distances were estimated from a Bahamas Government map (Lands and Surveys Department 1972). Dimensions for Rum Cay are from the Ministry of Education (1985).

All previous locality records are included for nonbreeding visitors, as well as for rare, scarce, and uncommon residents and summer visitors, and for species whose status is uncertain. A species recorded on Rum Cay for the first time is indicated by an asterisk.

SPECIES ACCOUNTS

Least Grebe (*Tachybaptus dominicus*).—Uncommon to fairly common resident, and usually seen at small ponds with densely vegetated shores—

maximum six together at Long Pond, 23 June 1989 (DWB). Two collected on 2 and 3 March 1886 (Ridgway 1891), and "two were seen on a small lake," 10 July 1903 (Riley 1905a). Breeding is unconfirmed, but very probable. I saw one pair courting several times on Mermaid Pond during mid-June, and the birds were present at the pond throughout my stay from late May to early July 1989.

Pied-billed Grebe (*Podilymbus podiceps*).*—Status uncertain, possibly resident. Several were observed during May–July 1989, mainly at salt ponds (DWB).

White-tailed Tropicbird (*Phaethon lepturus*).*—Common to locally very common summer visitor. Usually seen near coastal cliffs in groups of 5–20, most numerous along the northeastern shore. Breeds in crevices and recesses in cliffs and caves, in sheltered areas beneath boulders, and in deeply eroded pockets in beach rock: 13 clutches (six eggs, seven downy young) between Pee Wee Point and the central part of the eastern shore, 26–31 May 1989, and one egg at Liberty Rock, 23 June 1989; 100–150 breeding pairs estimated during May–July 1989 (DWB).

Double-crested Cormorant (*Phalacrocorax auritus*).*--Status uncertain. Present in small numbers on the larger salt ponds—maximum seven together at Bay Pond on 17 June, and eight together in mangroves on the southeastern shore of Lake George, 26 June 1989 (DWB). All the cormorants I observed at close range had the diagnostic characteristics of *P. auritus,* including crooked neck in flight, relatively large, orange-colored gular pouch, and short tail.

Magnificent Frigatebird (*Fregata magnificens*).*—Nonbreeding visitor. Two sight records only: an unstated number seen 10 July 1903 (Riley 1905a), and one seen soaring high over the eastern shore, 29 May 1989 (DWB).

Great Blue Heron (*Ardea herodias*).*—Nonbreeding visitor. One seen by MHC during 7–9 March 1976 is the only record.

Little Blue Heron (*Egretta caerulea*).*—Nonbreeding visitor. The one I saw at Boat House Rock on 27 June 1989 is the only record. Squalls that passed across the northern part of Rum Cay from the west the previous night may have carried it from Long Island, ca 30 km to the west. When flushed from its perch, the bird flew westward slowly against the wind about 1 km, climbing to about 100 m. It then slowly drifted back over Boat House Rock maintaining altitude and gradually disappeared from view far to the east.

Tricolored Heron (*E. tricolor*).*—Fairly common at salt ponds and probably resident, but breeding is undocumented. Usually seen singly or in groups of two to four—maximum 11 together at Bay Pond, 17 June 1989 (DWB).

Reddish Egret (*E. rufescens*).*—Status uncertain. Possibly a scarce res-

ident. I saw probably fewer than ten individuals (all of them white phase) occasionally during May–July 1989—maximum four together in a salt pond west of Lake George, 25 June 1989.

Cattle Egret (*Bubulcus ibis*).*—Status uncertain. Possibly breeding in small numbers. I saw no more than two together occasionally during June, mainly near the airstrip, and D. Melville (pers. comm.) has seen *B. ibis* in the vicinity of the Rum Cay Club from time to time during the past ten years.

Green-backed Heron (*Butorides striatus*).—Common resident in aquatic habitats throughout and often seen in scrubland far from water. The commonest of the herons. Breeding.—One nest with two ambulatory but flightless young on a small red mangrove island ca 3 m off the southwestern shore of Lake George, 5 June 1989 (DWB).

Yellow-crowned Night-Heron (*Nyctanassa violacea*).*—Fairly common resident although breeding is undocumented. Usually seen along beaches and near ponds, occasionally in scrublands.

West Indian Whistling-Duck (*Dendrocygna arborea*).*—Probably resident, but breeding is undocumented. A flock of 10–15 was seen at Yard Pond, 1 June 1989, and 43 were counted at a small (ca 70 m in diameter) freshwater pond (identified as a "blue hole" on a Bahamas Government map—see Lands and Surveys Department 1972) approximately 2.5 km north of Cotton Field Point, 21 June 1989 (DWB). This blue hole also had a large number of White-cheeked Pintails (see account below). I collected the mummified, partial remains of a West Indian Whistling-Duck (USNM 612543) near a small, mangrove-fringed pond at the western end of the airstrip, 10 June 1989. Bobby Little, pilot for the Rum Cay Club, believed it probably was one among the occasional avian casualties caused by collisions with incoming aircraft.

White-cheeked Pintail (*Anas bahamensis*).*—Common to very common resident or summer visitor—maximum ca 75 together at Bay Pond, 25 May 1989, and 123 counted at a small, freshwater "blue hole" approximately 2.5 km north of Cotton Field Point, 21 June 1989 (DWB). The lack of sightings on previous surveys suggests *A. bahamensis* may be absent or much less common on Rum Cay in winter. Breeding.—Three or four flightless young were observed being led to safety by an adult in a swampy area near the northern end of Long Pond, 23 June 1989 (DWB).

[Greater Scaup (*Aythya marila*).—The one record requires confirmation. According to Ridgway (1891), naturalists aboard the *Albatross* collected one *A. marila* on Rum Cay and another on San Salvador on unspecified dates in 1886. Bond and Friedman (Bond 1958) considered these records doubtful as neither specimen could be found in the USNM collections (though one was cataloged under the number 108935), and because Ridg-

way (1891) had not listed the very similar *A. affinis,* a common winter duck in the Bahamas and Greater Antilles (Bond 1971a) among the birds collected on the expedition. To the best of my knowledge, the only unquestionable record of a Greater Scaup from the West Indies was reported by Bond (1971b) who, with F. Gill, examined the wing of one shot on New Providence and obtained from the hunter by a local naturalist, Paul Dean, on 31 January 1971.]

Osprey (*Pandion haliaetus*).*—Rare resident. Two or three examples of the resident "West Indian subspecies," *P. h. ridgwayi,* were seen occasionally during May–July 1989, mainly on the northern and southeastern coasts, and the partial skeleton of an Osprey (USNM 612546) was collected on a rocky beach on the eastern shore, 29 May 1989 (DWB). Breeding.—A nest on a ledge at Signal Point was empty during my visits in June, but one of the residents of Port Nelson said it contained two young earlier in the year. I found another presumably recently active nest on top of a large rock several meters off the eastern shore (near where the skeleton was recovered) and the apparently storm-wrecked remains of another nest at Pee Wee Point. Residents of Port Nelson told of a large nest on the telecommunications tower that was in use for many years until company servicemen removed the nest sometime in the mid-1980s. This nest was present when the Carnegie Museum Expedition visited the island in March 1976, but no Ospreys were seen then (MHC).

American Kestrel (*Falco sparverius*).*—Fairly common resident, most numerous in the vicinity of Port Nelson. Breeding.—Three flightless young (with scattered patches of down and incompletely emerged flight feathers) in a vertical hole (ca 0.5 m deep, 10–15 cm wide at entrance and much wider below) in beach rock near the tide line, ca 0.5 km west of Yard Pond, 15 June 1989 (DWB); also, several territorial birds apparently nesting in the tops of coconut palms in Port Nelson, and other aggressive individuals (swooping in attack) in the vicinity of coastal cliffs, all during May–July 1989 (DWB).

Clapper Rail (*Rallus longirostris*).*—Probably an uncommon resident in mangroves throughout, most numerous at the Port Nelson salt lake. One seen at the salt lake on 3 June and another on 24 June 1989; one seen at Adderley's Pond, 4 July 1989, and several others heard calling at different localities during May–July 1989 (DWB).

Common Moorhen (*Gallinula chloropus*).*—Scarce to uncommon resident, mainly in aquatic habitats with dense, weedy, shoreline vegetation. One seen at Yard Pond, 1 June, four others at a small pond just west of the blue hole north of Cotton Field Point, 21 June, and two others at Long Pond on 23 June 1989 (DWB). Breeding.—One nest containing six eggs and constructed of twigs and sparsely lined with leaves in a basin-

shaped rock at the base of a stone wall crossing Yard Pond, 1 June 1989 (DWB).

American Coot (*Fulica americana*).—Probably a nonbreeding visitor, two were collected 2 and 3 March 1886 (Ridgway 1891) and hundreds were seen at times during winter (D. Melville).

Black-bellied Plover (*Pluvialis squatarola*).*—Nonbreeding visitor. Seen on beaches occasionally during May–July (DWB). Doubtless occurring in winter but no records.

Snowy Plover (*Charadrius alexandrinus*).*—Probably a rare resident or summer visitor. Approximately eight adults (maximum four together) and one young seen at Carmichael Pond on 31 May and 15–16 June 1989 (DWB). Breeding.—One downy young with adult in attendance at the western end of Carmichael Pond, 16 June 1989 (DWB).

Wilson's Plover (*C. wilsonia*).—Fairly common in summer along shores of shallow ponds and on sandy beaches—maximum eight together at a small pond west of Lake George, 25 June 1989 (DWB). Breeding probable but not confirmed, though Riley (1905a) reported that "a pair were evidently nesting on Rum Cay, July 10 [1903]." No winter records, but recorded elsewhere in the Bahamas then (Brudenell-Bruce 1975, Buden 1987b).

Semipalmated Plover (*C. semipalmatus*).*—Nonbreeding visitor. One seen at Bay Pond, 25 May, and another at Adderley's Pond, 29 May 1989 (DWB).

Killdeer (*C. vociferus*).—Fairly common at shallow ponds throughout, and more numerous in summer than in winter. An unstated number seen on 28 January 1909 (Worthington in Todd and Worthington 1911), three seen during 7–9 March 1976 (MHC), and many observed during May–July 1989 (DWB). Breeding.—A pair copulating at Adderley's Pond, 9 June, three downy young with one adult in attendance at Mermaid Pond, 20 June 1989, and a presumed nesting bird feigning a broken wing at a dried-out pond on the north side of Gin Hill, 2 July 1989 (DWB). Summer records probably all pertain to the "West Indian subspecies," *C. vociferus ternominatus,* whereas others may be *C. v. ternominatus* or examples of the nominate race, which occurs throughout the West Indies in winter (Bond 1956). Worthington's January record (in Todd and Worthington 1911) is listed under the nominate race, but sight records of these subspecies are unreliable.

American Oystercatcher (*Haematopus palliatus*).*—Probably an uncommon resident, but no winter records, and breeding is undocumented. Usually seen in pairs along rocky beaches; 10–20 pairs estimated during May–July 1989 (DWB).

Black-necked Stilt (*Himantopus mexicanus*).—Very common at shal-

low salt ponds in summer. Many seen during May–July 1989—maximum ca 30 together at Bay Pond, 25 May (DWB). Status in winter uncertain as lack of records may be an artifact of sampling. Considered a summer visitor to the northern Bahamas (Brudenell-Bruce 1975), but occurring year-round in the southern islands, although much less numerous there in winter (Buden 1987a). Breeding.—Five nests (three with four eggs, one with three eggs, and one with one cracked and maggot-infested egg), 31 May–2 July 1989 (DWB).

[Greater Flamingo (*Phoenicopterus ruber*).—Extirpated. Last recorded breeding about 1850, at Carmichael Pond (Allen 1956:122, 127). None of the residents of Port Nelson I queried had ever seen flamingos on Rum Cay.]

Greater Yellowlegs (*Tringa melanoleuca*).*—Nonbreeding visitor. Two seen feeding with a flock of Willets on Yard Pond, and one seen at a temporary freshwater pond, ca 0.5 km north of Mermaid Pond, both on 1 June 1989 (DWB).

Lesser Yellowlegs (*T. flavipes*).—Nonbreeding visitor. One specimen collected by the *Albatross* Expedition (Ridgway 1891), undated, but presumably March 1886.

Willet (*Catoptrophorus semipalmatus*).—Common in summer and possibly resident, but no winter records. Breeding unconfirmed, but very probable. Usually seen at salt ponds and on beaches, and as pairs or singles—maximum 23 together at Yard Pond, 1 June 1989, many circling low and calling agitatedly, probably breeding. One male *C. s. semipalmatus* with slightly enlarged testes was collected at Sumner Point by A. Schwartz on 19 June 1966. The Willet is considered resident on other Bahama Islands, though it is less common in winter than in summer (Brudenell-Bruce 1975, Connor and Loftin 1985).

Spotted Sandpiper (*Actitis macularia*).*—Nonbreeding visitor. Two seen at Carmichael Pond during 13–14 May 1985 (A. Sprunt IV).

Ruddy Turnstone (*Arenaria interpres*).*—Nonbreeding visitor. Seen on beaches and at salt ponds occasionally during May–July 1989: one on 29 May, four on 3 June, one on 13 June, and five on 16 June. Doubtless occurring in winter but no records.

Western Sandpiper (*Calidris mauri*).*—Nonbreeding visitor. Six seen at Carmichael Pond during 13–14 May 1985 (A. Sprunt IV).

Short-billed Dowitcher (*Limnodromus griseus*).*—Nonbreeding visitor. One sight record only: ten at Line Pond, 15 June 1989 (DWB).

Laughing Gull (*Larus atricilla*).—Probably an uncommon to locally common summer visitor, possibly resident. "Seen in small numbers," 10 July 1903 (Riley 1905a), and seen regularly at salt ponds and less commonly on beaches in small groups of up to 20 individuals during May–

July 1989 (DWB). Breeding (all records are 1989 [DWB]).—Three nests (one with one nestling, one with three nestlings, one with one nestling and one egg), Shad Pond, 11 June; one downy young at a pond west of Lake George, 25 June; one nest with four empty, probably rat-eaten eggs at a pond southeast of Lake George, 25 June; ca 20 vociferous, apparently territorial birds (but no direct evidence of breeding) at a small pond near Signal Point, 1 July.

Gull-billed Tern (*Sterna nilotica*).—Uncommon to locally common summer visitor, mainly at salt ponds. "About a dozen were found frequenting a small inland lake," 10 July 1903 (Riley 1905a), and others were seen regularly at salt ponds during May–July 1989 (DWB). Breeding (all records are 1989 [DWB]).—Colony, ca 30 adults, six nests (three with three eggs, two with two eggs, one with one egg), small island at western end of Carmichael Pond, 31 May; colony, ca 40 adults, nine nests (four with two eggs, four with one egg, one with three eggs) plus five mobile, downy chicks, all on an exposed bar at a salt pond near the northwestern shore of Lake George, 25 June. The Carmichael Pond colony was revisited on 16 June, but rats had apparently visited earlier as evidenced by broken eggs and the remains (detached wings, heads, and legs) of several species of birds. Only two adult *S. nilotica* were seen then. Stepping stones exposed during the drought provided access to the island.

Royal Tern (*S. maxima*).—Status uncertain, possibly scarce resident. Seen occasionally along beaches in ones or twos during May–July 1989—maximum ten together at Sandy Point, 31 May (DWB). Riley (1905b) included Rum Cay in his list of localities, but I was unable to locate the source of this record in any of the references he mentioned.

Roseate Tern (*S. dougallii*).*—Uncommon summer visitor. Seen occasionally along beaches and at salt ponds in small groups of 5–20 individuals during May–July 1989 (DWB). Breeding.—Colony, ca 20 adults and several nest scrapes with eggs on a small island at the western end of Carmichael Pond, 31 May 1989 (DWB).

Least Tern (*S. antillarum*).—Common summer visitor. Recorded in July 1903 (Riley 1905a), and many seen during May–July 1989 (DWB). Breeding on exposed bars and broad shores of salt ponds (all records are 1989 [DWB]): Colony, ca 50 adults, 22 clutches (16 with two eggs, five with one egg, one with three eggs), salt pans on northern shore of Carmichael Pond, 31 May; colony, ca 50 adults, 19 clutches (11 with two eggs, seven with one egg, one with two eggs and one downy young) on an exposed bar at a salt pond near the northwestern shore of Lake George, 5 June (eight clutches there on 25 June [five with two eggs, three with one egg], but no young seen); colony, ca 15 adults, six clutches (four with

two eggs, two with one egg) on a small island at the western end of Carmichael Pond, 16 June.

Bridled Tern (*S. anaethetus*).*—Probably a regular summer visitor, but very local. Up to 30 adults seen on or near a bare, rocky islet about 200 m off the northern shore near Boat House Rock, May–July 1989 (DWB). No other locality records. Breeding.—Four clutches: one egg and one downy young in two different rocky crevices, and two downy young sheltered beneath two different slabs of rock, 2 July 1989 (DWB).

White-crowned Pigeon (*Columba leucocephala*).*—Probably an uncommon to fairly common resident, but status in winter is uncertain and breeding is undocumented. Small flocks of 2–10 were seen regularly during May–July 1989, usually roosting in the more heavily wooded areas or in flight mainly at dawn and dusk—maximum 12 together roosting in tall trees near a public well, ca 1.5 km north of Port Nelson, 29 June (DWB).

Zenaida Dove (*Zenaida aurita*).—Fairly common resident, most numerous in relatively open scrub, especially along roadsides and near freshwater—maximum 18 together at a bulldozed pit containing freshwater north of Port Nelson, 29 June 1989 (DWB). Breeding.—Two eggs in a roughly cup-shaped nest consisting only of a few loose strands of grasses on the ground in a sparsely vegetated, seasonally flooded salt flat near the northwestern shore of Lake George, 25 June 1989 (DWB).

Mourning Dove (*Z. macroura*).*—Nonbreeding visitor. Fifty seen during 7–9 March 1976 (MHC). The large number then and no other records suggest the birds were in passage.

Common Ground-Dove (*Columbina passerina*).—Fairly common resident in open scrublands and along roadsides, but breeding is unconfirmed. Most numerous in Port Nelson.

Key West Quail-Dove (*Geotrygon chrysia*).*—Scarce resident, but breeding is unconfirmed. I saw *G. chrysia* on only five occasions in six weeks during May–July 1989, all in xeric woodlands or in scrub adjacent to woodlands: one between Adderley's Pond and Lake George on 5 June, three at three different localities 2–4 km north of Port Nelson on 19 and 26 June and 1 July, and one at the blue hole south of Gin Hill on 23 June.

Mangrove Cuckoo (*Coccyzus minor*).—Probably a scarce to uncommon resident; breeding is unconfirmed. Four collected 1–5 March 1886 (Ridgway 1891), two seen during 7–9 March 1976 (MHC), and several seen and heard in scrublands and woodlands occasionally during May–July 1989 (DWB).

Smooth-billed Ani (*Crotophaga ani*).—Uncommon resident throughout, most numerous in the vicinity of Port Nelson. Breeding is uncon-

firmed. Five collected 1–5 March 1886 (Ridgway 1891), seven seen during 7–9 March 1976 (MCH), and groups of two to eight seen occasionally during May–July 1989 (DWB).

Barn Owl (*Tyto alba*).*—Rare resident, but breeding is unconfirmed. I saw one at Hartford Cave on several different occasions during June 1989, and the large number of presumed prey remains on the floor of the cave (mainly *Rattus* bones) suggests long residence there. Another was seen in *Bucida* woods north of Cotton Field Point, 5 July 1989, and one partial skeleton (USNM 612544) was collected at Hartford Cave on 28 May 1989 (DWB).

Antillean Nighthawk (*Chordeiles gundlachii*).*—Common summer visitor. Most numerous along beaches and on sparsely vegetated shores of ponds. Often seen hawking for insects at dawn and dusk—maximum eight together in flight at dusk near Boat House Rock, 6 June 1989 (DWB). Breeding (all records are 1989 [DWB]).—17 clutches (25 May–7 July) on beaches (seven), along roadsides (six), and shorelines of ponds (four); 14 with one egg, two with one flightless young on 12 and 25 June, and one with two eggs on 7 June. The first ten clutches found during 25 May–7 June were eggs only. One of 17 eggs was white without any discernible markings, whereas all the others were mottled, dusty, bluish-gray on grayish-white.

Bahama Woodstar (*Calliphlox evelynae*).—Fairly common resident throughout. Breeding.—Two used nests I found in June 1989 doubtless belonged to this species.

Yellow-bellied Sapsucker (*Sphyrapicus varius*).—Nonbreeding visitor. The only record is one collected on 1 March 1886 (Ridgway 1891), but numerous sets of horizontal holes on many of the larger trees indicate *S. varius* probably occurs regularly in winter and in passage.

Gray Kingbird (*Tyrannus dominicensis*).—Common to locally very common summer resident. I found *T. dominicensis* most numerous in trees along the coast and at the edges of ponds—maximum concentration, 27 counted in 1.5 h covering 3.5 km ($\bar{x}$ = 7.7/km) between Boat House Rock and the beach opposite Gin Hill, 2 July 1989 (24 counted on 29 June); less common inland—one to 14 counted on 26 different censuses over the 6.5 km of road between Port Nelson and the northern coast during May–July 1989 ($\bar{x}$ = 0.9/km). Breeding (all records are 1989 [DWB]).—A pair seen copulating 7 June; seven nests (two with one egg on 15 June and 2 July, one with three eggs on 27 June, one with two eggs on 7 July) and three other nests under construction, 14–16 June. All the nests were in trees bordering beaches and ponds. Seven of ten were in buttonwood (*Conocarpus erectus*), and most were 2–3 m high in branches.

Gray Catbird (*Dumetella carolinensis*).—Nonbreeding visitor. One col-

lected 6 March 1886 (Ridgway 1891); two seen 7–9 March 1976 (MHC); one seen 4 June 1989 (DWB), the latter an unusual summer record.

Northern Mockingbird (*Mimus polyglottos*).*—The only records are one seen on 7 March and two seen on 8 March 1976 (MHC). Short-lived breeding populations possibly occur from time to time, but until there is evidence to the contrary, I consider *M. polyglottos* a nonbreeding visitor to Rum Cay, probably from adjacent islands. The Northern Mockingbird is widespread throughout the Bahamas, and the few Bahaman breeding records span the archipelago (Buden 1988). The abundance of two other species of mimids, *M. gundlachii* and *Margarops fuscatus,* however, may contribute to the lack of a permanent resident population on Rum Cay. I saw no *M. polyglottos* during six weeks on the island, from late May to early July 1989.

Bahama Mockingbird (*M. gundlachii*).—Very common resident in scrublands and woodlands, but seldom seen in the settlement, where *Margarops fuscatus* is abundant. I saw and heard many calling in the topmost branches of trees and bushes during May–July 1989. Many also were seen foraging on the ground chiefly for insects and other arthropods (two were observed extracting snails [*Cerion*] from their shells), fewer gleaning fruits and insects among trees and bushes. Wing-flashing behavior was evident in some, but not so common nor so vigorous as in *M. polyglottos* elsewhere. Breeding.—One female (AS 7257) with a shelled egg in its oviduct, and one in a nest, was collected in coastal scrub between Sumner Point and Port Nelson by A. Schwartz on 18 June 1966. Many used nests of sticks and twigs I found in scrub east of Port Nelson probably belonged to this species.

Pearly-eyed Thrasher (*Margarops fuscatus*).—Very common resident in scrublands and woodlands, and in Port Nelson. The most abundant land bird on the island during summer 1989, maximum of 11 together were seen feeding and/or drinking among the blossoms of a sisal plant (*Agave sisalina*) at the edge of a beach opposite Gin Hill, 29 June, and 36 were counted during a 6.5 km walk between Port Nelson and the northern coast, 06:00–08:00 h, 1 July (DWB). Generally most numerous in or near patches of woodland or in isolated trees with a shady canopy. Mainly arboreal, usually seen in mid-levels of the vegetation, much less frequently terrestrial. Many seen also on porches of guest houses and in open-sided buildings at the Rum Cay Club. Breeding.—One nest of sticks and twigs under construction (adult observed carrying nesting material) on a shelf in a tool shed at the Rum Cay Club, 1 July 1989 (DWB). A nest I found on the porch of one of the guest houses at the Club probably also belonged to this species.

Thick-billed Vireo (*Vireo crassirostris*).—Very common resident, but

breeding is undocumented. Most numerous in dense scrublands and woodlands.

Black-and-white Warbler (*Mniotilta varia*).—Nonbreeding visitor. The only records are two collected during 2–3 March 1886 (Ridgway 1891), and one seen 7–9 March 1976 (MHC). Owing to the paucity and brevity of previous ornithological surveys, the lack of winter records of this and other warbler species should not suggest they are uncommon during winter or in passage.

Northern Parula (*Parula americana*).—Nonbreeding visitor. One collected 2 March 1886 (Ridgway 1891) and two seen during 7–9 March 1976 (MHC).

Yellow Warbler (*Dendroica petechia*).—Common resident, but breeding is undocumented. Most numerous in mangroves, but common also in scrub and wooded areas throughout. Thirty-four specimens were collected 1–6 March 1886 (Ridgway 1891), and over 50 were seen, mainly in mangroves, during 7–9 March 1976 (MHC). To the best of my knowledge, all specimens of *D. petechia* from Rum Cay are the resident "Cuban-Bahaman subspecies," *D. p. gundlachii.*

Cape May Warbler (*D. tigrina*).—Nonbreeding visitor. Five specimens collected 1–6 March 1886 (Ridgway 1891), and one seen during 7–9 March 1976 (MHC).

Yellow-rumped Warbler (*D. coronata*).—Nonbreeding visitor. Two specimens collected 2 and 5 March 1886 (Ridgway 1891).

Yellow-throated Warbler (*D. dominica*).*—Nonbreeding visitor. One seen during 7–9 March 1976 (MHC).

Prairie Warbler (*D. discolor*).—Nonbreeding visitor. Twenty collected 1–6 March 1886 (Ridgway 1891), and six seen during 7–9 March 1976 (MHC).

Palm Warbler (*D. palmarum*).—Nonbreeding visitor. Seventeen collected 1–6 March 1886 (Ridgway 1891) and more than 60 seen during 7–9 March 1976 (MHC). One I saw in coastal scrub near Boat House Rock on 5 and 6 June (presumably the same bird) in an unusual summer record.

American Redstart (*Setophaga ruticilla*).*—Nonbreeding visitor. One netted during 7–9 March 1976 (MHC).

Ovenbird (*Seiurus noveboracensis*).—Nonbreeding visitor. One collected 5 March 1886 (Ridgway 1891).

Common Yellowthroat (*Geothlypis trichas*).—Nonbreeding visitor. Ten collected 2–6 March 1886 (Ridgway 1891), and one male weighing 9.5 g netted during 7–9 March 1976 (MHC).

Bananaquit (*Coereba flaveola*).—Common resident, but breeding is undocumented. Most numerous in scrublands, and frequently seen foraging

TABLE 1

BREEDING LAND BIRDS OF RUM CAY IN DECREASING ORDER OF ABUNDANCE BASED ON GENERAL OBSERVATIONS AND WITH THE NUMBER OF BIRDS SEEN AND HEARD/KM DURING 12 COUNTS COVERING 42 KM

Species	Abundance[a]	Birds/km
Pearly-eyed Thrasher (*Margarops fuscatus*)	VC	3.7
Thick-billed Vireo (*Vireo crassirostris*)	VC	2.1
Bahama Mockingbird (*Mimus gundlachii*)	VC	1.8
Gray Kingbird (*Tyrannus dominicensis*)	C/VC	1.7
Yellow Warbler (*Dendroica petechia*)	C/VC	1.6
Bananaquit (*Coereba flaveola*)	C	1.7
Zenaida Dove (*Zenaida aurita*)	FC	1.3
Common Ground-Dove (*Columbina passerina*)	FC	1.0
Bahama Woodstar (*Calliphlox evelynae*)	FC	1.0
Antillean Nighthawk (*Chordeiles gundlachii*)	FC	0.5
White-crowned Pigeon (*Columba leucocephala*)	UC/FC	0.9
Black-faced Grassquit (*Tiaris bicolor*)	UC/FC	0.7
American Kestrel (*Falco sparverius*)	UC/FC	0.6
Smooth-billed Ani (*Crotophaga ani*)	UC	0.2
Mangrove Cuckoo (*Coccyzus minor*)	S/UC	0.1
Key West Quail-Dove (*Geotrygon chrysia*)	S	0.0
Barn Owl (*Tyto alba*)	R	0.0

[a] VC = very common, C = common, FC = fairly common, UC = uncommon, S = scarce, R = rare; see Methods for additional explanation.

among blossoms of *Tabebuia* in June and July 1989 (DWB). Two males were netted during 7–9 March, both weighing 12.0 g (MHC).

Black-faced Grassquit (*Tiaris bicolor*).—Uncommon to fairly common resident. Most numerous in dense, weedy vegetation along roads and trails, and in grassy, weedy areas (DWB). Seventeen collected 1–6 March 1886 (Ridgway 1891) and 25 seen during 7–9 March 1976 (MHC). Breeding.—One nest with three eggs, ca 1.5 m high in a bush (*Mimosa bahamensis*) near Mermaid Pond, 26 May 1989, and another with two eggs, ca 1 m high in coastal scrub near Liberty Rock, 2 June 1989 (DWB).

Savannah Sparrow (*Passerculus sandwichensis*).—Nonbreeding visitor. One collected 4 March 1886 (Ridgway 1891).

DISCUSSION

Excluding a questionable record of the Greater Scaup and the long extirpated Greater Flamingo, 70 species of birds are known from Rum Cay, a least 38 of which probably breed there, none endemic to the island. Seventeen (45%) of the breeders or probable breeders are land birds (pigeons to passerines, plus one kestrel) (Table 1), 11 are shorebirds (charadri-

iforms), three are herons, two are ducks, and the remaining five include a grebe, tropicbird, osprey, rail, and moorhen. Five other species (Pied-billed Grebe, Double-crested Cormorant, Reddish Egret, Cattle Egret, and Royal Tern) that breed elsewhere in the Bahamas possibly also breed on Rum Cay but are known only from a few records and their status remains uncertain.

The 17 breeding, land bird species on Rum Cay are widely distributed throughout the Bahamas generally. All occur on adjacent San Salvador, a somewhat larger island (156 km^2) but with proportionately much more water surface. Two land birds that breed on San Salvador but not on Rum Cay are the West Indian Red-bellied Woodpecker (the endemic race *Melanerpes superciliaris nyeanus*) and the Northern Mockingbird, the latter recorded on Rum Cay in March 1976, but not before or since.

Among widespread Bahaman species that do not occur on Rum Cay, nor on San Salvador, are La Sagra's Flycatcher (*Myiarchus sagrae*), Blue-gray Gnatcatcher (*Polioptila caerulea*), which is absent from several other islands in the central Bahamas but common in northern and southern islands, Black-whiskered Vireo (*Vireo altiloquus*), Stripe-headed Tanager (*Spindalis zena*), and Greater Antillean Bullfinch (*Loxigilla violacea*). Additionally, the Greater Antillean Pewee (*Contopus caribaeus*), Red-legged Thrush (*Turdus plumbeus*), and Bahama Yellowthroat (*Geothlypis rostrata*), all of which breed on many of the Great Bank and Little Bank islands to the north and west, also are absent from Rum Cay and San Salvador.

The land birds of Rum Cay occur in all terrestrial habitats, but strong habitat preferences are evident in some. The Zenaida Dove and Common Ground-Dove are most numerous in open, scrubby areas and along roadsides, the Antillean Nighthawk occurs mainly in sparsely vegetated areas of sand, gravel, and rock (especially on beaches, roadsides, and shorelines of ponds), the Gray Kingbird occurs mainly in trees on the coast and at the edges of ponds, and the Yellow Warbler is most numerous in mangroves and the immediately adjacent scrub. The two very common mimids, Bahama Mockingbird and Pearly-eyed Thrasher, overlap broadly in habits and habitat, but the mockingbird is much more numerous in sparse, coastal scrub, usually calls from the topmost branches of the taller trees and bushes, and frequently forages on the ground, whereas the thrasher is more numerous in the more heavily wooded areas, frequently calls and forages in mid-levels of the vegetation, and is much more edificarian, being found in and near buildings in Port Nelson and at the Rum Cay Club.

Table 1 lists the 17 breeding land birds of Rum Cay in decreasing order of abundance based on general observations and on 12 different census

counts. The only noteworthy discrepancy between general observations and censuses is the relatively low count for the Antillean Nighthawk. But during the day, it usually is seen only after being flushed from its nest site, and most individuals allow close approach to within ca 2 m before taking flight, hence the relatively low counts.

Summer is a peak breeding season for many Bahama birds (Brudenell-Bruce 1975, Buden 1987b). I found active nests, eggs, and flightless young of 12 species of waterbirds (including the Osprey) and six of the 17 land birds on Rum Cay during 25 May–8 July 1989. The numbers I obtained for Cat Island during 23 May–28 July 1987 are 14 waterbirds and 12 of 24 land birds (Buden 1987b). Among "fairly common" to "very common" species found breeding on Cat Island during summer 1987 but not on Rum Cay during summer 1989 are the Common Ground-Dove, Bahama Mockingbird, and Thick-billed Vireo. Other species occuring on both islands and found breeding on Cat Island but not on Rum Cay during these surveys were White-crowned Pigeon, Smooth-billed Ani, and Yellow Warbler. The relatively few land birds found breeding on Rum Cay during summer 1989 possibly was due to unusually severe drought (see under Study Area). A large toll of nesting birds probably is claimed also by rats and feral cats.

ACKNOWLEDGMENTS

I thank M. H. Clench and A. Sprunt IV for use of their field notes, J. V. Remsen for furnishing data from the Schwartz Collection, J. Popenoe for identifying and confirming identifications of plant specimens, G. L. Thomas for information on the history of Rum Cay, and S. Theobald for typing the manuscript. I am especially grateful to D. Melville, owner of the Rum Cay Club, for assistance with food, lodging, and transportation. Residents of Rum Cay and the staff at the club who assisted in various ways are T. Bain, B. Little, D. Morison, B. Rozzell, and D. and K. Wilson. I thank R. W. Loftin and A. Sprunt IV for reviewing the manuscript.

LITERATURE CITED

ALLEN, R. P. 1956. The flamingos. Nat. Aud. Soc. Res. Report No. 5, New York, New York.

AMERICAN ORNITHOLOGISTS' UNION. 1983. Check-list of North American birds, 6th ed. American Ornithologists' Union, Washington, D.C.

———. 1989. Thirty-seventh supplement to the American Ornithologists' Union Check-list of North American birds. Auk 106:532–538.

BOND, J. 1956. Check-list of birds of the West Indies, 4th ed. Acad. Nat. Sci. Philadelphia, Philadelphia, Pennsylvania.

———. 1958. Third supplement to the check-list of birds of the West Indies (1956). Acad. Nat. Sci. Philadelphia, Philadelphia, Pennsylvania.

———. 1971a. Birds of the West Indies, 2nd ed. Houghton Mifflin Co., Boston.

———. 1971b. Sixteenth supplement to the check-list of birds of the West Indies (1956). Acad. Nat. Sci. Philadelphia, Philadelphia, Pennsylvania.

BOWMAN, S. 1976. A history of Rum Cay. Pp. 237–258 *in* Slices of time on Rum Cay: undergraduate efforts in salvage ethnography, March–April 1975, February–March 1976 (G. L. Thomas, ed.). College Center of the Finger Lakes, Houghton House, Corning, New York.

BRUDENELL-BRUCE, P. G. C. 1975. The birds of New Providence and the Bahama Islands. Collins, London, England.

BUDEN, D. W. 1987a. The birds of the southern Bahamas. British Ornithologists' Union [check-list No. 8], London, England.

———. 1987b. The birds of Cat Island, Bahamas. Wilson Bull. 99:579–600.

———. 1988. Geographic variation and probable sources of the Northern Mockingbird in the Bahama Islands. Proc. Biol. Soc. Washington 101:475–486.

CONNOR, H. A. AND R. W. LOFTIN. 1985. The birds of Eleuthera Island, Bahamas. Florida Field Nat. 13:77–93.

LANDS AND SURVEYS DEPARTMENT. 1972. Rum Cay. BLS Series 321, scale 1:25,000. Lands and Surveys Department. Nassau, Bahamas.

MILLER, J. R. 1978. Notes on birds of San Salvador Island (Watlings), the Bahamas. Auk 95:281–287.

MINISTRY OF EDUCATION [BAHAMAS]. 1985. Atlas of the Commonwealth of the Bahamas. Ministry of Education and Culture, Nassau, Bahamas. Kingston Publ., Kingston, Jamaica.

OLSON, S. L. AND A. FEDUCCIA. 1980. Relationships and evolution of flamingos (Aves: Phoenicopteridae). Smith. Contrib. Zool. 316:1–73.

RIDGWAY, R. 1891. List of birds collected on the Bahama Islands by the naturalists of the Fish Commission Steamer *Albatross*. Auk 8:333–339.

RILEY, J. H. 1905a. List of birds collected or observed during the Bahama Expedition of the Geographic Society of Baltimore. Auk 22:349–360.

———. 1905b. Birds of the Bahama Islands. Pp. 347–368 *in* The Bahama Islands (G. B. Shattuck, ed.). Geographical Society of Baltimore and Johns Hopkins Press, Baltimore, Maryland.

TODD, W. E. C. AND W. W. WORTHINGTON. 1911. A contribution to the ornithology of the Bahama Islands. Ann. Carnegie Mus. 7:388–464.