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Cover Photo: Dr. Lynn Margulis, Symposium Keynote Speaker, describes the structure and ecology of living stromatolites. Some, visible as grayish mounds near her feet, line the shore of Storrs Lake whereas others occur farther out in deep water. (See paper by D. C. Edwards, this volume).

Back Cover Photo: Group photo of the 6th Symposium participants and speakers.

Photos by Paul Godfrey (Computer processed prints by Lanny Miller).

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A CHECKLIST OF THE BIRDS OF SAN SALVADOR ISLAND, BAHAMAS

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ABSTRACT

This paper presents the first complete checklist of the birds of San Salvador Island, Bahamas. The list was compiled primarily from published accounts of specimen and sight records, but 12 species were included on the basis of unpublished sight records. Simple status codes are presented for the relative abundance and seasonal occurrence of each species; these were determined from published sources and the author's field experience. The checklist includes a total of 153 species. Of these, 54 species may be found as year-round residents, 12 are summer residents only, and 52 are winter residents only. An additional 35 species are of transient, vagrant, or uncertain status. Forty-six species are known to have bred on San Salvador or nearby cays.

INTRODUCTION

The distribution and abundance of the birds of the West Indies are broadly known (Bond 1956, 1956-1976, 1993; Schwartz and Klinikowski 1963, 1965; Brudenell-Bruce 1975; A.O.U. 1983; Buden 1987). San Salvador Island lies within the Bahamas group in the northern part of the West Indian Faunal Region (Bond 1993). Despite its small size of 156 km², it has received enough ornithological attention to make its birds fairly well known. However, there has been no complete checklist of birds specifically for San Salvador. A checklist can be a catalyst for advancing knowledge of an avifauna as well as for furthering people's enjoyment of it; it can also aid field scientists studying other aspects of an area. Here I present a checklist for San Salvador, with the hope that it can serve birdwatchers, both amateur and professional, who visit the island.

METHODS

I examined the following references to compile a list of species that have been recorded on San Salvador: Cory (1880, 1892), Riley (1905a, 1905b), Bond (1956, 1956-1976, 1993), Schwartz and Klinikowski (1963, 1965), Paulson (1966), Miller (1978), Olson *et al.* (1990), Watson *et al.* (1991), White (1991), Murphy *in* Godfrey *et al.* (1994), and White *et al.* (1996). Most of these records are supported by specimens, but some are sight records only. To these published records I added unpublished sight records obtained from Brian White (pers. comm.) for 12 species not previously reported from San Salvador (Brown Pelican, American Wigeon, Purple Gallinule, Pectoral Sandpiper, Common Snipe, Roseate Tern, Black Skimmer, White-winged Dove, Northern Rough-winged Swallow, Bank Swallow, Blue-gray Gnatcatcher, and Brown-headed Cowbird). I also examined the following unpublished sources: a preliminary checklist of winter birds of San Salvador prepared by J. R. Miller (based on field observations made 26 November - 21 December 1973), and field notes prepared by S. B. Terrill (based on observations made 18-30 May 1990).

I used relative abundance codes similar to those of Miller (1978) and seasonal occurrence codes similar to those of White (1991). To determine relative abundance, I relied primarily on the opinions expressed by the original authors. However, some of their classifications were modified to fit the code definitions used here or to conform with my own field experience. I observed 54 species during the winter period 7-19 January 1995 and 44 species during the summer period 9-13 June 1995, for a total of 71 species that I have personally seen on San Salvador. To determine seasonal occurrence, I also relied on the conclusions of the original authors. In a few

cases I inferred the status of a species on San Salvador from its better-known status on other Bahamian islands or in the West Indies as a whole. The taxonomy of the checklist follows the 6th edition of the *A. O. U. Check-list of*

North American Birds (A. O. U. 1983) and its supplements (supplements 35-40, published in volumes 102, 104, 106, 108, 110, and 112 of *The Auk*).

CHECKLIST OF THE BIRDS
OF SAN SALVADOR ISLAND



[note: a field-card version of the checklist is available at the Bahamian Field Station]

Relative abundance (in appropriate habitat) codes:

- a = abundant, apt to be seen repeatedly each day;
- c = common, likely to be seen every day;
- u = uncommon, not likely to be seen every day;
- r = rare, very seldom would be seen.

Seasonal occurrence codes:

- R = year-round resident;
- S = summer resident only;
- W = winter resident only;
- * = known to breed on San Salvador or nearby cays.

Order PODICIPEDIFORMES

Family PODICIPEDIDAE (grebes)

- _____ Least Grebe *Tachybaptus dominicus* (uR*)
- _____ Pied-billed Grebe *Podilymbus podiceps* (rR)

Order PELECANIFORMES

Family PHAETHONTIDAE (tropicbirds)

- _____ White-tailed Tropicbird *Phaethon lepturus* (cS*)

Family SULIDAE (boobies & gannets)

- _____ Brown Booby *Sula leucogaster* (cS*)
- _____ Red-footed Booby *Sula sula* (rS*)

Family PHALACROCORACIDAE (cormorants)

- _____ Double-crested Cormorant *Phalacrocorax auritus* (uR*)

Family FREGATIDAE (frigatebirds)

- _____ Magnificent Frigatebird *Fregata magnificens* (uR*)

Order CICONIIFORMES

Family ARDEIDAE (herons)

- _____ American Bittern *Botaurus lentiginosus* (rW)
- _____ Least Bittern *Ixobrychus exilis* (rR)
- _____ Great Blue Heron *Ardea herodias* (rR)
- _____ Great Egret *Ardea alba* (cR)
- _____ Snowy Egret *Egretta thula* (rR)

- _____ **Little Blue Heron** *Egretta caerulea* (uR)
- _____ **Tricolored Heron** *Egretta tricolor* (uR*)
- _____ **Reddish Egret** *Egretta rufescens* (rR)
- _____ **Cattle Egret** *Bubulcus ibis* (uR)
- _____ **Green Heron** *Butorides virescens* (uR*)
- _____ **Yellow-crowned Night-Heron** *Nyctanassa violacea* (cR*)

Order ANSERIFORMES

Family ANATIDAE (ducks)

- _____ **West Indian Whistling-Duck** *Dendrocygna arborea* (rR)
- _____ **Mallard** *Anas platyrhynchos* (rW)
- _____ **White-cheeked Pintail (= Bahama Duck)** *Anas bahamensis* (cR*)
- _____ **Blue-winged Teal** *Anas discors* (uW)
- _____ **Northern Shoveler** *Anas clypeata* (rW)
- _____ **American Wigeon** *Anas americana* (rW)
- _____ **Ring-necked Duck** *Aythya collaris* (rW)
- _____ **Lesser Scaup** *Aythya affinis* (rW)
- _____ **Hooded Merganser** *Lophodytes cucullatus* (rW)
- _____ **Ruddy Duck** *Oxyura jamaicensis* (rW)

Order FALCONIFORMES

Family ACCIPITRIDAE (hawks)

- _____ **Osprey** *Pandion haliaetus* (cR*)
- _____ **Northern Harrier** *Circus cyaneus* (rW)

Family FALCONIDAE (falcons)

- _____ **American Kestrel** *Falco sparverius* (aR*)
- _____ **Merlin** *Falco columbarius* (rW)
- _____ **Peregrine Falcon** *Falco peregrinus* (rW)

Order GRUIFORMES

Family RALLIDAE (rails, gallinules, & coots)

- _____ **Clapper Rail** *Rallus longirostris* (rR*)
- _____ **Sora** *Porzana carolina* (rR)
- _____ **Common Moorhen** *Gallinula chloropus* (rR)
- _____ **American Coot** *Fulica americana* (cR)

Order CHARADRIIFORMES

Family CHARADRIIDAE (plovers)

- _____ **Black-bellied Plover** *Pluvialis squatarola* (cW, rS)
- _____ **Snowy Plover** *Charadrius alexandrinus* (uR*)
- _____ **Wilson's Plover** *Charadrius wilsonia* (cR*)
- _____ **Semipalmated Plover** *Charadrius semipalmatus* (uW)
- _____ **Killdeer** *Charadrius vociferus* (cR*)

Family HAEMATOPODIDAE (oystercatchers)

- _____ **American Oystercatcher** *Haematopus palliatus* (uR*)

Family RECURVIROSTRIDAE (stilts & avocets)

- _____ **Black-necked Stilt** *Himantopus mexicanus* (cS*, rW)

Family SCOLOPACIDAE (sandpipers)

- _____ **Greater Yellowlegs** *Tringa melanoleuca* (cR)
- _____ **Lesser Yellowlegs** *Tringa flavipes* (rW)
- _____ **Solitary Sandpiper** *Tringa solitaria* (rW)
- _____ **Willet** *Catoptrophorus semipalmatus* (rR*)
- _____ **Spotted Sandpiper** *Actitis macularia* (uW)

- _____ **Ruddy Turnstone** *Arenaria interpres* (cR)
- _____ **Sanderling** *Calidris alba* (cW)
- _____ **Semipalmated Sandpiper** *Calidris pusilla* (rR)
- _____ **Western Sandpiper** *Calidris mauri* (rW)
- _____ **Least Sandpiper** *Calidris minutilla* (uW)
- _____ **Dunlin** *Calidris alpina* (rW)
- _____ **Stilt Sandpiper** *Calidris himantopus* (rW)
- _____ **Short-billed Dowitcher** *Limnodromus griseus* (rW)

Family LARIDAE (gulls & terns)

- _____ **Laughing Gull** *Larus atricilla* (cS*, rW)
- _____ **Bonaparte's Gull** *Larus philadelphia* (rW)
- _____ **Ring-billed Gull** *Larus delawarensis* (rW)
- _____ **Herring Gull** *Larus argentatus* (rW)
- _____ **Gull-billed Tern** *Sterna nilotica* (uS*)
- _____ **Royal Tern** *Sterna maxima* (uS*, rW)
- _____ **Roseate Tern** *Sterna dougallii* (rS)
- _____ **Least Tern** *Sterna antillarum* (uS*)
- _____ **Bridled Tern** *Sterna anaethetus* (uS*)
- _____ **Sooty Tern** *Sterna fuscata* (cS*)
- _____ **Brown Noddy** *Anous stolidus* (cS*)

Order COLUMBIFORMES

Family COLUMBIDAE (pigeons & doves)

- _____ **Rock Dove** *Columba livia* (uR*)
- _____ **White-crowned Pigeon** *Columba leucocephala* (uR*)
- _____ **Zenaida Dove** *Zenaida aurita* (uR*)
- _____ **Mourning Dove** *Zenaida macroura* (uR)
- _____ **Common Ground-Dove** *Columbina passerina* (aR*)
- _____ **Key West Quail-Dove** *Geotrygon chrysis* (rR*)

Order CUCULIFORMES

Family CUCULIDAE (cuckoos & anis)

- _____ **Mangrove Cuckoo** *Coccyzus minor* (uR*)
- _____ **Smooth-billed Ani** *Crotophaga ani* (cR*)

Order STRIGIFORMES

Family TYTONIDAE (barn owls)

- _____ **Barn Owl** *Tyto alba* (rR*)

Family STRIGIDAE (typical owls)

- _____ **Burrowing Owl** *Speotyto cunicularia* (rW)

Order CAPRIMULGIFORMES

Family CAPRIMULGIDAE (goatsuckers)

- _____ **Antillean Nighthawk** *Chordeiles gundlachii* (cS*)

Order APODIFORMES

Family TROCHILIDAE (hummingbirds)

- _____ **Bahama Woodstar** *Calliphlox evelynae* (aR*)

Order CORACIIFORMES

Family ALCEDINIDAE (kingfishers)

- _____ **Belted Kingfisher** *Ceryle alcyon* (uR*)

Order PICIFORMES

Family PICIDAE (woodpeckers)

_____ West Indian Woodpecker *Melanerpes superciliaris* (rR*)

Order PASSERIFORMES

Family TYRANNIDAE (tyrant flycatchers)

_____ Gray Kingbird *Tyrannus dominicensis* (cS*)

Family HIRUNDINIDAE (swallows)

_____ Barn Swallow *Hirundo rustica* (rS)

Family MIMIDAE (mimic thrushes)

_____ Gray Catbird *Dumetella carolinensis* (rW)

_____ Northern Mockingbird *Mimus polyglottos* (cR*)

_____ Bahama Mockingbird *Mimus gundlachii* (aR*)

_____ Pearly-eyed Thrasher *Margarops fuscatus* (cR*)

Family STURNIDAE (starlings)

_____ European Starling *Sturnus vulgaris* (rR)

Family VIREONIDAE (vireos)

_____ White-eyed Vireo *Vireo griseus* (rW)

_____ Thick-billed Vireo *Vireo crassirostris* (cR*)

_____ Yellow-throated Vireo *Vireo flavifrons* (rW)

Family EMBERIZIDAE (emberizids)

Subfamily Parulinae (wood-warblers)

_____ Blue-winged Warbler *Vermivora pinus* (rW)

_____ Orange-crowned Warbler *Vermivora celata* (rW)

_____ Northern Parula *Parula americana* (cW)

_____ Yellow Warbler *Dendroica petechia* (aR*)

_____ Magnolia Warbler *Dendroica magnolia* (rW)

_____ Cape May Warbler *Dendroica tigrina* (cW)

_____ Black-throated Blue Warbler *Dendroica caerulescens* (rW)

_____ Yellow-rumped Warbler *Dendroica coronata* (rW)

_____ Black-throated Green Warbler *Dendroica virens* (uW)

_____ Yellow-throated Warbler *Dendroica dominica* (cW)

_____ Kirtland's Warbler *Dendroica kirtlandii* (rW)

_____ Prairie Warbler *Dendroica discolor* (cW)

_____ Palm Warbler *Dendroica palmarum* (aW)

_____ Cerulean Warbler *Dendroica cerulea* (rW)

_____ Black-and-white Warbler *Mniotilta varia* (uW)

_____ American Redstart *Setophaga ruticilla* (uW)

_____ Worm-eating Warbler *Helmitheros vermivorus* (rW)

_____ Ovenbird *Seiurus aurocapillus* (rW)

_____ Northern Waterthrush *Seiurus noveboracensis* (uW)

_____ Common Yellowthroat *Geothlypis trichas* (rW)

_____ Hooded Warbler *Wilsonia citrina* (rW)

Subfamily Coerebinae (bananaquits)

_____ Bananaquit *Coereba flaveola* (aR*)

Subfamily Cardinalinae (cardinals & allies)

_____ Indigo Bunting *Passerina cyanea* (uW)

Subfamily Emberizinae (emberizines)

_____ Black-faced Grassquit *Tiaris bicolor* (uR*)

_____ Savannah Sparrow *Passerculus sandwichensis* (rW)

_____ Grasshopper Sparrow *Ammodramus savannarum* (rW)

Species of TRANSIENT, VAGRANT, or UNCERTAIN status:

_____	Audubon's Shearwater <i>Puffinus lherminieri</i>
_____	Brown Pelican <i>Pelecanus occidentalis</i>
_____	Black-crowned Night-Heron <i>Nycticorax nycticorax</i>
_____	Fulvous Whistling-Duck <i>Dendrocygna bicolor</i>
_____	Greater Scaup <i>Aythya marila</i>
_____	Turkey Vulture <i>Cathartes aura</i>
_____	Purple Gallinule <i>Porphyryla martinica</i>
_____	American Avocet <i>Recurvirostra americana</i>
_____	Pectoral Sandpiper <i>Calidris melanotos</i>
_____	Common Snipe <i>Gallinago gallinago</i>
_____	Black Skimmer <i>Rynchops niger</i>
_____	White-winged Dove <i>Zenaida asiatica</i>
_____	Yellow-billed Cuckoo <i>Coccyzus americanus</i>
_____	Chimney Swift <i>Chaetura pelagica</i>
_____	Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>
_____	Scissor-tailed Flycatcher <i>Tyrannus forficatus</i>
_____	Tree Swallow <i>Tachycineta bicolor</i>
_____	Bahama Swallow <i>Tachycineta cyaneoviridis</i>
_____	Northern Rough-winged Swallow <i>Stelgidopteryx serripennis</i>
_____	Bank Swallow <i>Riparia riparia</i>
_____	Blue-gray Gnatcatcher <i>Poliophtila caerulea</i>
_____	American Robin <i>Turdus migratorius</i>
_____	American Pipit <i>Anthus rubescens</i>
_____	Cedar Waxwing <i>Bombycilla cedrorum</i>
_____	Red-eyed Vireo <i>Vireo olivaceus</i>
_____	Nashville Warbler <i>Vermivora ruficapilla</i>
_____	Blackburnian Warbler <i>Dendroica fusca</i>
_____	Blackpoll Warbler <i>Dendroica striata</i>
_____	Rose-breasted Grosbeak <i>Pheucticus ludovicianus</i>
_____	Blue Grosbeak <i>Guiraca caerulea</i>
_____	Dickcissel <i>Spiza americana</i>
_____	White-crowned Sparrow <i>Zonotrichia leucophrys</i>
_____	Bobolink <i>Dolichonyx oryzivorus</i>
_____	Yellow-headed Blackbird <i>Xanthocephalus xanthocephalus</i>
_____	Brown-headed Cowbird <i>Molothrus ater</i>

DISCUSSION

In his 1978 paper, Miller stated that the number of species known from San Salvador was 132. However, he specified only some of them and has not published the rest of his list or otherwise made it available. Several new species records have been added since that time (Olson *et al.* 1990, White *et al.* 1996, Methods section of this paper), and one has been deleted (Watson *et al.* 1991). Thus this paper is the first attempt to compile and present a complete list of the birds of San Salvador. The checklist includes a total of 153 species that have been recorded there. Of

these, 54 species may be found as year-round residents, 12 are summer residents only, and 52 are winter residents only. An additional 35 species are listed that are of transient, vagrant, or uncertain status. Forty-six species are known to have bred on the island or nearby cays.

Twenty-one species have been added to the island list in the 18 years since Miller (1978) first offered a number for the known species. The most recent addition was the Red-footed Booby, added in 1995 when at least three birds were seen by many people on White Cay and one pair produced a chick (pers. obs., White *et al.* 1996). A few species

new to the island will undoubtedly continue to be recorded, but most advances in knowledge of the island's birds will likely concern their biology and a better understanding of their status and distribution. I hope this checklist will facilitate such advances.

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