

New and Rare Bird Records from St. Martin, West Indies

Adam C. Brown¹ and Natalia Collier²

^{1,2} Environmental Protection In the Caribbean 200 Dr. Martin Luther King Jr. Blvd., Riviera Beach, Florida 33404
¹abrown@epicislands.org

Abstract – During January through March in 2001, 2002, and 2003, we surveyed birds in St. Martin, West Indies. These surveys included terrestrial and wetland areas. During the surveys we recorded 26 new species for the island including five introduced species. Additionally, we recorded six species that have been recorded once before, and 28 species considered rare or vagrant to the island.

Introduction

During January through March in 2001, 2002, and 2003, we surveyed bird populations on the island of St. Martin, West Indies. Our intent was to find the general distribution and status of birds on the island. On St. Martin, general bird surveys had not been carried out since the mid-1970's, and prior to that, in the 1920's and 1950's^{9; 24; 13; 23}.

St. Martin is in the northern Lesser Antilles. Habitat on St. Martin is variable. The coastline is surrounded by uplifted reef, interspersed with small stretches of sandy coastline. From the coast, moving inland over the transitional flatlands, the island has many shallow depressions, in which salt ponds, lagoons, and salt flats exist. Wetlands are surrounded typically by thorn scrub forest and scrub mangrove habitat. Covering approximately a fifth of the island's lowland areas, wetlands provide important breeding and wintering sites as well as critical migratory stopovers for waterbirds⁴. The lowland areas, which are characterized by thorn scrub, quickly progress to steep mountains in the interior, which are also generally covered with thorn scrub. Remnants of secondary dry forest occur in a few valleys on the island. Most of the dry forests on the island however, have been cut for timber, firewood, and grazing land.

Little is known regarding passerine populations and distribution in the region. Much study has been made in the Greater Antilles and Bahamas, as larger over-wintering populations can be found in those areas^{11; 26; 12; 25}. However, certain species of warblers can be found in substantial numbers in adequate habitat in the Lesser Antilles⁹.

Methods

Terrestrial Surveys

During 2001 we carried out irregular terrestrial bird surveys of several habitats on St. Martin, including thorn scrub forest and mangrove scrub forest. These surveys consisted of observing the area for song birds and recording species considered rare or vagrant to the island. No set time period was incorporated during these surveys.

In 2002, we started a standardized mist-netting and banding program in a secondary dry forest at Lotterie Farm on Pic Paradis. Nets were arranged at a density of three nets per two-ha area. Nets were 12-m long, 30-mm mesh, four-tier, tethered, nylon mist nets. Nets were open during the hours of the greatest bird activity, 0600-1200. All birds were banded with uniquely numbered USFWS metal bands. The station was run for four consecutive days. Two four day banding periods were run over two months; the first started 11 February and ended 14 February and the second started 4 March and ended 7 March 2002. Additionally, once during each four-day banding period, biologists traveled over the trails between mist-nets and recorded all the bird species seen or heard.

During 2003, we continued the banding station in the secondary dry forest but added two additional banding stations in thorn scrub, below Pic Paradis, and mangrove scrub habitat at Étang Poisson. We employed the same protocol used in 2002, with exception that we banded for five days each period. Starting 5 January, each station was run for five consecutive days. The three sites were run consecutively.

The total netting cycle was a 15-day period. Three 15-day periods were run over a three-month time span starting in January and ending in March (Table 1).

Area surveys were run concurrently with mist-net sites during the second and third periods in 2003. Surveys were conducted in the three major habitats on the island: 1) secondary dry forest, 2) thorn scrub forest, and 3) mangrove scrub forests. Each transect was made along pre-existing trails in each habitat. These trails were the only breaks in the habitat in an otherwise unbroken tracts of habitat. In the secondary dry forest habitat, these trails cross both riparian corridors as well as steep forested hillside. Within the thorn scrub habitat, these trails cross from Acacia (*Acacia turtuosa*) scrub hillsides into semi-riparian thorn scrub drainages. In the mangrove scrub forests, the trails cross from pure red mangrove (*Rhizophora mangle*) stands into drier Buttonwood (*Conocarpus erectus*) stands in the mangrove scrub areas. Ten points were established along each transect. Points were approximately 250 m apart to minimize birds previously recorded at another sampling station. Five minutes were spent at each point. Area surveys began at 0600. Data collected included all individuals seen or heard during the first three minutes and those individuals heard during the remaining two minutes. During data collection, birds flying over the site were recorded separately from individuals detected in vegetation, as these flying birds may not have been associated with the habitat surrounding the station.

Wetland Surveys

During 2001, 2002, and 2003, we visited 18 wetland areas on St. Martin and counted each bird within the area. The wetlands consisted of salt water ponds, fresh water ponds, sand flats, salt flats, lagoons, and inter-tidal areas.

The surveys were completed weekly from 7 February to 14 March 2001, 8 January to 12 March 2002, and 5 January to 8 March 2003.

At each wetland, we chose an observation point that had a view over the entire area. From this point we recorded: (1) the total number of individuals of each species of bird, (2) the total number of each species foraging, (3) the total number of each species roosting, and (4) the total number of each species nesting. Additionally, we recorded any pre-fledged birds observed.

Results

The following accounts are for each species that was a first or second record for St. Martin. Photographs were sent to VIREO and their accession numbers follow each record. Additional records are listed in Table 2 for birds observed that were considered rare or vagrants on the island, per current check lists^{23; 3; 10; 18}.

Green-winged Teals (*Anas crecca*); A male and female were present on Fresh Pond 8 January 2002 and were subsequently observed during all surveys during January, February, and March. During 2003, a male and female were present at Little Bay Pond on 27 February. These were the first and second records for St. Martin.

Mallards (*Anas platyrhynchos*); On 11 March 2001, we observed a single female and two males at Fresh Pond. These birds were not considered as introduced or escapees as their arrival coincided with that of hundreds of other ducks, including Ruddy Ducks (*Oxyura jamaicensis*) and Blue-winged Teal (*Anas discors*), during a late winter migration of ducks into the Lesser Antilles. These birds were the first records for this species on St. Martin.

Northern Shoveler (*Anas clypeata*); An adult male was observed in Fresh Pond on 29 January 2002 and during all the following surveys in February and March. An adult male Northern Shoveler was observed on 8 January 2003 in Fresh Pond, and subsequently observed on all surveys during January, February, and March. These were the first and second records for this species on St. Martin. (VIREO v06/53/001)

American Widgeon (*Anas americana*); A male and female were present on Fresh Pond on 8 January 2002. These birds were observed during all January, February, and March surveys in 2002. This was the first record for this species.

Ring-necked Ducks (*Aythya collaris*); On 29 January 2002, a single female was observed in Fresh Pond. This bird was observed during all the following surveys in January, February, and March. During 2003, Ring-necked Ducks were observed in Little Bay Pond during all surveys. A high count of nine were recorded on 19 February, including four males and five females. These were the first and second records for this species on St. Martin.

Lesser Scaup (*Aythya affinis*); A single male was observed in Little Bay Pond on 22 January 2002. The duck was observed during all following surveys in February and March. During 2003, a single female Lesser Scaup was observed in Fresh Pond on 19 January and observed during all subsequent surveys in January, February, and March. A second female Lesser Scaup was observed in Grand Case Pond on 7 March. These were the first, second and third records for this species on St. Martin.

Red-breasted Merganser (*Mergus serrator*); A single first winter bird was observed in Étang Poisson on 15 January 2003. The bird was observed through January, but was not seen during surveys in February and March. This was the first record for this species on St. Martin. (VIREO v06/53/002)

American Coot (*Fulica americana*); Twelve birds were observed at Fresh Pond on 8 January 2002. We did not observe this species on St. Martin during 2001 however, we most likely confused this species in confusion with the similar Caribbean Coot (*Fulica caribaea*). During 2002, we recorded a high count of 21 on Fresh Pond on 29 January and one at Great Salt Pond on 12 March. During 2003, we had a high count of 28 at Little Bay Pond on 19 February and eight at Fresh Pond on 13 February. Additionally, this species has been observed breeding in both Fresh Pond and Little Bay Pond. These are the first records for this species on St. Martin.

Great Black-backed Gull (*Larus marinus*); We observed a single first-winter bird at Grand Case Airport Pond on 12 January 2003 and during all following surveys that year. This was the first record for this species on St. Martin. (VIREO v06/53/003)

Forster's Tern (*Sterna forsteri*); A single first winter bird was seen roosting and foraging among many Royal Terns at Burgeaux Bay from 13-15 January 2001. This was the first record for this species on St. Martin.

Eurasian-collared Doves (*Streptopelia decaocto*); Fifteen birds were observed 14 January 2003 on St. Martin, including five at Maho and 10 at Gallion. These birds were all subsequently observed during following surveys. This species was observed copulating at Maho in February 2003, although no chicks or nests were observed. This was the first record for this species on St. Martin. (VIREO v06/53/004)

White-winged Doves (*Zenaida asiatica*); On 14 January 2003, ten birds were observed at Cul-de-sac and two birds were observed at Étang Poisson. These were the first records for this species on St. Martin.

Chuck-will's widow (*Caprimulgus carolinensis*); On 11 February 2002, a single female was observed roosting in a mango tree (*Mangifera indica*) in the secondary dry forest below Pic Paradis. We observed this bird regularly through February and March, roosting on the same branch. On 3 January 2003, we observed a single female Chuck-will's widow on the same branch as the individual observed in 2002. The bird was seen roosting on this branch during all daytime surveys in January, February, and March. A second Chuck-will's widow was observed foraging in the lights at night in Grand Case on 24 January 2003. These are the second and third records for this species on St. Martin. (VIREO v06/53/005)

Tree Swallow (*Tachycineta bicolor*); A single bird was observed foraging above Orient Pond on 4 February 2003. This bird was not observed with any other swallow species, nor was it observed again during 2003. This was the first record for this species on St. Martin.

Cliff Swallow (*Petrochelidon pyrrhonota*); A single bird was observed foraging among a large group of several hundred Barn Swallows (*Hirundo rustica*) above a field in Cul-de-sac on 14 January 2003. This was the first record for this species on St. Martin.

Yellow-throated Vireo (*Vireo flavifrons*); During area searches on 8 January 2003, a single bird was observed in the secondary dry forest on Pic Paradis. This was the first record for this species on St. Martin.

Magnolia Warbler (*Dendroica magnolia*); We observed this species on three occasions in the secondary dry forest on Pic Paradis in 2003. On 31 January, we observed two adult males and on 2 February a single female. On 1 March 2003, we banded a female Magnolia Warbler. These are the second, third, and fourth records for this species. (VIREO v06/53/006)

Yellow-rumped Warbler (*Dendroica coronata*); We encountered multiple birds of this species during 2003. The first observation of this species was at Little Bay Pond on 10 January 2003. Following a cold front in along the eastern seaboard of the United States late January, we made multiple observations of this species. We observed a single bird at Étang Poisson and two at the Mullet Bay Golf Course on 26 January 2003. We had a count of 12 birds on 28 January 2003, when we observed a single bird at Pic Paradis in the secondary dry forest, four birds in the mangroves of Étang Poisson, and seven birds in the thorn scrub at Mullet Bay. The seven birds at Mullet Bay were observed during all subsequent surveys during 2003. During area searches in the Étang Poisson mangroves we had a high count of ten Myrtle

Warblers on 19 February 2003. We banded a single Myrtle Warbler at Étang Poisson on 16 February. These are the first records for this species on St. Martin. (VIREO v06/53/007)

Prothonotary Warbler (*Protonotaria citrea*); We first observed this species on 16 January 2003 at Étang Poisson. Subsequently, we found this species in small numbers in mangrove habitat on St. Martin during 2003. We banded three birds of this species at Étang Poisson. During area searches at Étang Poisson we regularly observed single un-banded birds. We did not observe Prothonotary Warblers in any other habitat on St. Martin. The sighting on 16 January 2003 was the second record for this species. (VIREO v06/53/008)

Worm-eating Warbler (*Helmitheros vermivorus*); During area searches on 31 January 2003 we observed a single bird in the secondary dry forest on Pic Paradis. This is the second record for this species on St. Martin.

Louisiana Waterthrush (*Seiurus motacilla*); A single bird was banded in the secondary dry forest on Pic Paradis on 14 February 2002. This was the second island record for this species on St. Martin.

Kentucky Warblers (*Oporonis formosus*); We observed four birds of this species on St. Martin during 2003. On 6 January, we banded an adult male Kentucky Warbler in the secondary dry forest on Pic Paradis. We banded a second adult male on 1 March and a third bird, a second-year male, on 5 March. A fourth individual, an un-banded adult male, was observed on 5 March. This were the first records for this species on St. Martin. (VIREO v06/53/009)

Common Yellowthroat (*Geothlypis trichas*); A single adult male was observed on 7 January 2003 in thorn scrub habitat below Pic Paradis. This was the second record for this species on St. Martin.

Indigo Bunting (*Passerina cyanea*); We banded a single adult male in the thorn scrub forest below Pic Paradis on 11 January 2003. This was the first record for this species on St. Martin. (VIREO v06/53/010)

Introduced Species

Mute Swans (*Cygnus olor*); Two were introduced into Fresh Pond during January 2002. Both birds were regularly observed throughout St. Martin during 2003, including Great Salt Pond, Orient Pond, and Grand Case Pond.

Mallard (*Anas platyrhynchos*); Eight birds were introduced into Fresh Pond during January 2002. We observed two Mallards in 2003 in Fresh Pond, and they were not observed on any other ponds on St. Martin.

Muscovy Ducks (*Cairina moschata*) were regularly observed this species in many ponds on St. Martin during all surveys in 2001, 2002, and 2003. We observed them on Little Bay Pond, Fresh Pond, Great Salt Pond, Grand Case Airport Pond, and Grand Case Pond. We observed numerous Muscovy Duck ducklings at Grand Case Pond during 2003.

Rose-ringed Parakeet (*Psittacula krameri*); A single bird was observed foraging at Maho, Mullet Bay, and Terre Basse during 2003. This un-banded bird was observed daily. This species was not observed during surveys in 2001 and 2002.

Discussion

The status of birds in the West Indies region is constantly changing. Breeding success in North America and subsequent population changes affect the numbers of migrant birds that reach the Caribbean. Stability of habitat in both the breeding range and the over-wintering range affects bird populations in the Caribbean, as well. Additionally, large winter storms in North America affect the southward movements of birds into the region.

We report 18 new species for the island and six second island records. Additionally we have noted the occurrence of an additional 28 rarely occurring species as well as four introduced species. Since the last major bird census of St. Martin was in the early 1970's, such changes in bird status might be expected. North American duck species appear to be more common in the region than in previous years, and we have noted the regular occurrence of six species in our survey period (Green-winged Teal, Blue-winged Teal (*Anas discors*), Northern Shoveler, Ring-necked Duck, Lesser Scaup, and Ruddy Duck (*Oxyura jamaicensis*). Further, we have noted the regular occurrence of waders such as Tri-colored Heron (*Egretta tricolor*), a species that was previously considered rare on the island.

We have documented the change in status of many species of North American wood warblers in the over-wintering avifauna of St. Martin. During our three years of research we have noted 19 warbler species. Twelve of these species occurred greater than five times each year on the island. Of those 12 species, American Redstarts (*Setophaga ruticilla*) were the most common species, observed during area searches in the secondary dry forest habitat. Prairie Warblers (*Dendroica discolor*), Northern Parulas (*Parula americana*), and Hooded Warblers (*Wilsonia citrina*) were the most widespread, all were found in multiple habitats. The regular occurrence of Black-throated Blue Warblers (*Dendroica caerulescens*), Ovenbirds (*Seiurus aurocapillus*), and Hooded Warblers is surprising where these three species have been considered vagrants in the Lesser Antilles region^{23; 3; 10; 18}.

The status of all three regularly occurring species of raptor on St. Martin has changed. American Kestrels (*Falco sparverius*) have increased in population over the last 25 years and are now observed in all open habitats on the island. Once considered rare on St. Martin^{23; 3; 10; 18}, there are now approximately 100 birds on the island. Merlins (*Falco columbarius*), however, appear to have declined on St. Martin. Once considered uncommon^{23; 3; 10; 18}, this species was recorded only twice each year. The reasons for this decline are unknown. Peregrine Falcon (*Falco peregrinus*) numbers have risen on St. Martin as we saw an increase in their numbers on the island each year of our surveys. Populations in North America are increasing¹⁵ and their numbers within their over-wintering range reflect this change.

The Eurasian-collared Dove has reached St. Martin in its push southward from North America. This species was observed on many islands in the Lesser Antilles during the winter of 2003, reaching as far south as Grenada²². Populations in Florida have adversely affected North American species in Florida due to direct competition for food sources and nesting habitat^{21; 19}. We have recorded little data on the interactions between regional endemics and this species, and it is unknown how it will affect local bird populations.

Many of the species we observed during our research on St. Martin were observed by local bird watchers on other islands in the Lesser Antilles as well. Notable rare species found on multiple islands in the Lesser Antilles during 2003 include: Green-winged Teal (St. Thomas and St. Martin), Northern Shoveler (St. Thomas and St. Martin), Ring-necked Duck (St. Croix, Guadeloupe, and St. Martin), Lesser Scaup (Guadeloupe and St. Martin), Red-breasted Merganser (St. Thomas and St. Martin), Ruddy Duck (Guadeloupe, Barbados, and St. Martin), Eurasian-collared Dove (St. Eustatius, Dominica, Grenada, and St. Martin), White-winged Dove (St. Thomas, St. Eustatius, and St. Martin), Yellow-rumped Warbler (St. Thomas, Anguilla, Guadeloupe, and St. Martin), and Ovenbird (Guadeloupe and St. Martin)²².

Research in the Lesser Antilles increases knowledge of both the status and the conservation requirements of both over-wintering and resident avian species. Further research in all habitat types will inevitably lead to a greater understanding of the islands avifauna. Habitats such as the secondary dry forest at Pic Paradis and the mangrove forest at Étang Poisson should be afforded protection through the appropriate legislative measures. Additionally, all wetlands on St. Martin should be protected from further development. Government officials should use these attractive and easily accessible wetland areas as tourist destinations. We encourage further study of the birds of the Caribbean. The data provided by long-term monitoring efforts and habitat studies will help land managers effectively manage the islands and their diverse habitats.

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TABLES

Table 1. Bird banding dates in three habitats during 2003 on St. Martin, West Indies.

Period One:
Secondary Dry Forest: 5-9 January
Thorn Scrub Forest: 10-14 January
Scrub Mangrove Forest: 15-19 January
Period Two:
Secondary Dry Forest: 31 January - 4 February
Thorn Scrub Forest: 9-13 February
Scrub Mangrove Forest: 16-20 February
Period Three:
Secondary Dry Forest: 1-5 March
Thorn Scrub Forest: 1-5 March
Scrub Mangrove Forest: 7-11 March

Table 2. Birds observed during January through March 2001, 2002, and 2003. Table includes birds that were considered rare or vagrants on the island, per current check lists (Voous 1983; Bond 1987; Evans 1990; Raffaele et al. 1998). Date/Year indicates when the birds were observed. Location indicates where the birds were observed.

Species	Date/Year ¹	Location	Number Birds Observed
Tri-colored Heron (<i>Egretta tricolor</i>)	2002	Orient Pond	8
	2003	Orient Pond	7
	2003	Great Salt Pond	1
Blue-winged Teal (<i>Anas discors</i>)	2001	Little Bay Pond	8
	2002	Little Bay Pond	9
	2003	Little Bay Pond	35
Sora (<i>Porzana carolina</i>)	5 March 2001	Grand Étang	1
	25 February 2002	Orient Pond	1
	20 February 2003	Orient Pond	1
Caribbean Coot (<i>Fulica caribaea</i>)	8 February 2003	Fresh Pond	19
	8 February 2003	Little Bay Pond	7
American Oystercatcher (<i>Haematopus palliatus</i>)	14 March 2001	Great Salt Pond	1
	2001, 2003	Burgeaux Bay	2
	2002	Burgeaux Bay	3
	2001, 2002, 2003	Baie Rouge	2
	2001, 2002, 2003	Tintamarre Islet	2
Short-billed Dowitcher (<i>Limnodromus griseus</i>)	2001	Gallion Pond	3
	2002	Gallion Pond	4
	2003	Gallion Pond	58
Ring-billed Gull (<i>Larus delawarensis</i>)	14 February 2001	Great Salt Pond	4
	13 February 2002	Fresh Pond	2
	19 February 2002	Great Salt Pond	1
	19 February 2003	Great Salt Pond	1
Herring Gull (<i>Larus argentatus</i>)	14 February 2001	Great Salt Pond	2
	19 February 2002	Great Salt Pond	2
	19 February 2003	Great Salt Pond	1
Lesser Black-backed Gull (<i>Larus fuscus</i>)	2001	Great Salt Pond	3
	2002	Great Salt Pond	6
	2003	Great Salt Pond, Fresh Pond	4
American Kestrel (<i>Falco sparverius</i>)	14 January 2003	Island-wide	100
Merlin (<i>Falco columbarius</i>)	2001, 2002, 2003	Island-wide	2
Peregrine Falcon (<i>Falco peregrinus</i>)	14 January 2003	Island-wide	8
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	14 January 2003	Pic Paradis	4
Mangrove Cuckoo (<i>Coccyzus minor</i>)	12 January 2003	Pic Paradis	7
	19 January 2003	Étang Poisson	1
Black-whiskered Vireo (<i>Vireo altiloquus</i>)	12 March 2003	Pic Paradis	10
Northern Parula (<i>Parula americana</i>)	2002	Pic Paradis	4
	2003	Pic Paradis	10
	5 January 2003	Mullet Bay	4
	19 January 2003	Étang Poisson	3
	8 January 2003	Little Bay Pond	2
Cape May Warbler (<i>Dendroica tigrina</i>)	10 March 2001	Maho	1
	25 February 2002	Maho	1
	15 February 2003	Maho	1

Black-throated Blue Warbler (<i>Dendroica caerulescens</i>)	11 February 2002	Pic Paradis	2
	2003	Pic Paradis	9
Black-throated Green Warbler (<i>Dendroica virens</i>)	29 April 2003	Pic Paradis	1
Prairie Warbler (<i>Dendroica discolor</i>)	12 February 2002	Pic Paradis	1
	2003	Pic Paradis	6
	2003	Étang Poisson	5
Blackpoll Warbler (<i>Dendroica striata</i>)	15 March 2001	Maho	1
	5 March 2002	Pic Paradis	1
Black-and-white Warbler (<i>Mniotilta varia</i>)	15 January 2002	Pic Paradis	10
	2003	Pic Paradis	9
American Redstart (<i>Setophaga ruticilla</i>)	2002	Pic Paradis	22
	2003	Pic Paradis	18
Ovenbird (<i>Seiurus aurocapillus</i>)	4 March 2002	Pic Paradis	1
	2003	Pic Paradis	2
Northern Waterthrush (<i>Seiurus noveboracensis</i>)	2003	Étang Poisson	9
	2003	Orient Pond	1
	2003	Cul-de-sac Pond	1
	2003	Little Bay Pond	1
	2003	Fresh Pond	1
Hooded Warbler (<i>Wilsonia citrina</i>)	2002	Pic Paradis	7
	2003	Pic Paradis	10
House Sparrow (<i>Passer domesticus</i>)	13 January 2001	Maho	1
	2002	French Quarter	25
	2002	Cul-de-sac	25
	2002	Marigot	25
	2003	Island-wide	200

¹ Year was used if bird was seen on all dates during that year, whereas specific dates are given if bird was only observed on a single date.

Figures

Figure 1. Map of St. Martin with labels for study areas. Inset map of Caribbean basin with relative location of St. Martin. Numbers on map indicate bird observation locations. 1- Pic Paradis, 2- Étang Poisson, 3- Gallion Pond, 4- Orient Pond, 5- Cul-de-sac Pond, 6- Grand Case Pond, 7- Grand Étang, 8- Mullet Bay, 9- Maho Village, 10- Burgeaux Bay, 11- Little Bay Pond, 12- Fresh Pond, and 13- Great Salt Pond.

