Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

FINAL REPORT
WATERBIRDS IN SAINT MARTIN

Authors: Natalia Collier and Adam Brown

Environmental Protection in the Caribbean (EPIC)
ncollier@epicislands.org

Edited by: Verónica Anadón-Irizarry and David Wege (BirdLife International)

Part of an evaluation of waterbirds population and their conservation in the Caribbean, a project coordinated by BirdLife International within the initiative of Waterbird Conservation for the Americas and sponsored by the U.S. Fish and Wildlife Service (Neotropical Migratory Bird Conservation Act)

2007

Table of Contents

1. General Introduction 2
2. Ornithological Importance 2
3. Protected Areas 3
4. Conservation Initiatives 3
5. International Conservation Agreements 3
6. Conservation Concerns 4
7. Conservation Needs 4
8. Glossary 4
9. Locations 4
10. References 7

Appendixes

Table1. Waterbirds occurrence, distribution, habitat and population estimates in Saint Martin……9

1. GENERAL INTRODUCTION

Saint Martin is a French territory, a Commune within Guadeloupe. The island of St. Martin/St. Maarten is a condominium belonging to France (52 km²) and the Netherlands (33 km²). The center of the island is composed of mountainous areas rising to 425 m. The coastal areas are low hills or flat, punctuated by numerous ponds, primarily of high salinity. Shorelines are characterized by sand or rock beach with interspersed cliffs. Simpson Bay Lagoon, one of the largest lagoons in the Lesser Antilles, is a dominant feature of the island and a major yachting center. The French side of the lagoon is less polluted than the Dutch side and the yachting industry is less developed. St. Martin has two substantial mangrove communities. One is located in the Simpson Bay Lagoon, the other at Etang Aux Poissons. The terrestrial vegetation is thorny woodland, dominated by scrub in the lowlands and low forest cover in the mountains.

The human population is 36,000. However, the population increases greatly during the influx of seasonal visitors and tourists, which form the base of the economy.

The average annual temperature is 27ºC and average annual rainfall is 1772 mm. Much of the precipitation arrives during hurricane season in late summer and fall.

The herpetofauna is represented by 11 species, including one endemic *Anolis* species.

The primary threat is development, primarily for the tourism industry. Ponds and lagoons are filled in and altered while building takes place on steep hillsides. Disturbance due to watercraft, All Terrain Vehicles, and other recreational uses is significant due to the high concentration of residents and tourists.

2. ORNITHOLOGICAL IMPORTANCE

The most important habitats for the birds of St. Martin are the saline ponds, mangroves, and secondary dry forest of the mountains. A total of 164 avian species have been recorded on St. Martin.

➢ WATERBIRDS –

Fifty species of waterbirds have been recorded on St. Martin, including 13 species which breed. The pond Grand Etang is an important breeding area for Least Terns *Sterna antillarum* (82 nests). The offshore island of Tintamarre harbors approximately 60 Red-billed Tropicbird *Phaethon aethereus* nests. Audubon's Shearwater *Puffinus lherminieri* has been found breeding on Tintamarre as well; two nests have been located thus far.

3. Protected Areas and Conservation Systems

St. Martin's Reserve Naturelle covers 160 hectares of terrestrial area, representing 3% of the land area, and includes beaches, mangrove forests, and saline ponds. In addition, there are 2,900 hectares of protected marine area.

Loterie Farm eco-tourism site contains secondary dry forest in a canyon with a seasonal creek. The lower area has been converted to a ropes challenge course for tourists while the upper area remains a relatively pristine hiking area. Although this area has no legal protection, it is expected to remain undeveloped.

4. Conservation Initiatives

Environmental Protection In the Caribbean (EPIC) conducts avian research on St. Maarten. This year marks the fifth year of seabird and wetland surveys (weekly to monthly), including three years of pond water quality testing. Nesting success of Tropicbirds on Tintamarre and Wilson's Plover and Least Tern on St. Martin was monitored for one season. Funding is through private donors, local companies, and many volunteer hours.

The French government also sponsors periodic wetland and marine bird surveys, often conducted by Gilles LeBlond of Guadeloupe.

5. International Conservation Agreements

As a territory of France, St. Martin is party to the following international agreements:

- Convention on Biological Diversity
- Convention on Fishing and Conservation of Living Resources of the High Seas
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar)
- Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES)
- Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter (London Convention)
- International Convention for the Regulation of Whaling
- International Tropical Timber Agreement, 1994
- Kyoto Protocol to the United Nations Framework Convention on Climate Change
- Montreal Protocol on Substances That Deplete the Ozone Layer
- Protocol of 1978 Relating to the International Convention for the Prevention of Pollution From Ships, 1973 (MARPOL)
- Protocol on Environmental Protection to the Antarctic Treaty
- United Nations Convention on the Law of the Sea (LOS)

6. CONSERVATION CONCERNS

Development is a primary threat. Filling in or building encroachment at wetlands is permitted in some areas. Land based pollution via sewage and refuse is a visible problem. Nest predation by introduced species appears to be a key limiting factor in reproductive success on St. Martin. Populations of forest birds, particularly game birds such as Bridled Quail-dove, are reduced through hunting.

Primary obstacles to protection are insufficient laws and enforcement of regulations. Funding is not available for necessary projects, such as sewage treatment and predator eradication.

7. CONSERVATION NEEDS

The eradication of invasive predators from islands and wetlands would reduce a significant threat to breeding species, particularly Least Terns and Audubon's Shearwater.

Hunting should be prohibited or further restricted, given the pressures already placed on avian populations by the limited remaining habitat.

Sewage systems should be upgraded or repaired in order to reduce contaminated effluent entering local waters.

8. GLOSSARY

EPIC – Environmental Protection In the Caribbean

9. LOCATIONS

A. Grand Etang

Grand Etang (63^{O} 8.55' W 18^{O} 3.43' N) is a large saline pond located in the gated Lowlands subdivision of St. Martin. It is approximately 50 hectares in size. Due to its high salinity (>100 parts per thousand), the pond has little vegetation. At the west end, a small pond is separated from the larger pond by a narrow strip of land. Electric wires on poles cross the pond at this point. The surrounding land is low hills of scrub habitat interspersed with roads and homes on large estates. A dirt road runs directly next to the shore along one side. An exclusive resort borders the road.

Ornithological information Least Terns nest on a sandy spit located in the smaller pond of Grand Etang. Wilson's Plover nests at the same location and in surrounding areas. In the summer of 2004, nesting success of both species was monitored by EPIC. During that time, a high count of 180 Least Tern nests and 82 breeding pairs was recorded. Ten pairs of Wilson's Plover were recorded. Black-necked Stilt *Himantopus mexicanus* also breeds at Grand Etang (25 nests). Grand Etang is afforded some legal protections as a recognized natural area

Species	Season	Year	Min-Max
Least Tern *Sterna antillarum*	breeding	2004	82 breeding pairs

Conservation issues The primary threat to nesting birds at Grand Etang is flooding. Ten percent of Least Tern nests (n=130) were recorded as submerged after heavy rains raised the water level of the pond. Many others may

have been flooded as well, but this could not be confirmed because the chicks may have hatched and moved away from the waterline between checks. Introduced predators are also a major concern for nesting birds. During Least Tern nest monitoring, predation was confirmed at 5% of all nests. Wilson's Plovers experienced a 30% predation rate (n=10) at Grand Etang. The actual percentages are likely much higher. Rats and dogs are the primary culprits. Fresh dog tracks were present at almost every weekly check. A fence should be constructed around the nesting area to keep dogs out. Another possibility is to dredge around the nesting site, creating an island, which would make the area less accessible to predators. Bird are periodically found dead under the powerlines which cross Grand Etang with signs of blunt trauma such as broken necks and wings. The lines may be difficult for the birds to see, especially migratory birds arriving at night. The lines should be rerouted away from the pond or markers should be placed on the lines to make them more obvious. Yard debris from surrounding residences is dumped into the pond and often burned along the shore of Grand Etang. The resort which borders the pond periodically empties its septic system by allowing the sewage and associated debris to flow across the road and into the pond. Funding for the existing sewage treatment plant for this area is not available. An individual with a shotgun was seen once walking around the border of Grand Etang but it is not clear if he was hunting.

The Least Tern and Wilson's Plover nesting area at Grand Etang. EPIC@2006

Predated Least Tern egg at Grand Etang. EPIC@2006

Least Tern chick and egg in nest at Grand Etang. EPIC@2006

B. Tintamarre, Saint Martin

Tintamarre Island (62^{O} 58.50' W 18^{O} 7.16' N) also known as Flat Island, is located 3 kilometers from St. Martin and is approximately 100 hectares in size.

Ornithological information Red-billed Tropicbirds nest in the cliffs on the western coast. A thorough survey of all accessible crevices (48 nests) and an estimate for inaccessible areas resulted in a conservative estimate of 60

nests. Two Audubon Shearwater *Puffinus lherminieri* nests with eggs and adults were found. This population is likely limited by the presence of rats. Shearwaters may nest in greater numbers in inaccessible cliff faces. A nocturnal call-playback survey was unsuccessful in attracting any visuals or audible calls. Birds which breed in the summer are primarily on the eastern side of the island. Species found during a survey in June 2004 included Roseate Terns *Sterna dougallii* (20 nests), Brown Noddy *Anous stolidus* (140 nests), and Bridled Tern *Sterna anaethetus* (7 nests). In addition, eleven American Oystercatchers *Haematopus palliatus* were present and vocalizing alarm calls, indicating possible breeding.

Species	**Season**	**Year**	**Min-Max**
Red-billed Tropicbird *Phaethon aethereus*	breeding	2003	60 nests
Brown Noddy *Anous stolidus*	breeding	2004	140 nest

Protection status The coastline of Tintamarre Island is part of the Reserve Naturelle St. Martin and extends to 300 meters inland. The interior of the island is privately owned. Activities prohibited inside the reserve include wildlife disturbance, plant collection, mining, fishing, jet skiing, and littering.

Conservation issues The primary threat to the avifauna, particularly seabirds, of Tintamarre is nest predation by rats. A proposal has been created to eradicate rats from the island but funding has not been secured. Trampling of nests by goats is also a concern. Grazing has likely altered the vegetation of Tintamarre, although it is not clear what effect this has had. Because the interior of the island is not protected, development of the privately held areas is possible, although no plans have been made public. Seabird nesting is restricted to the coastal zone and would be impacted by development primarily through disturbance.

Red-billed Tropicbird adult with chick in crevice on Tintamarre Island.
EPIC@2006

Part of the Red-billed Tropicbird nesting area on Tintamarre Island. Note snorkelers in foreground. EPIC@2006

10. REFERENCES

BirdLife International 2007 BirdLife's online World Bird Database: the site for bird conservation. Version 2.1. Cambridge, UK: BirdLife International. Available: http://www.birdlife.org

COLLIER, N.C. and A.C. BROWN. Unpublished data. Environmental Protection In the Caribbean (EPIC) 2001-2006.

BREUIL, MICHAEL Histoire Naturelle des Amphibiens et Reptiles Terrestres de l`Archipel Guadeloupéen (Guadeloupe, Saint - Martin, Saint - Barthélemy). 2002. (Patrimoins Naturels,54). illus. 339 p.

DANFORTH, S. T. 1930. Notes on the birds of St.Martin and St. Eustatius. Auk 47:44–47.

HALEWYN, R. VAN, AND R. L. NORTON. 1984. The status and conservation of seabirds in the Caribbean.Pp. 169–222 in Status and conservation of the world's seabirds. Croxall, J. P., P. G. H. Evans, and R. W. Schreiber, Eds. ICBP Tech. Publ. No. 2. International Council for Bird Preservation, Cambridge.

HOOGERWERF, A. 1977. Notes on the birds of St. Martin, Saba, and St. Eustatius. Stud. Fauna Curaçao other Caribb. Isl. 54(176):60–123.

PINCHON, R. 1976. Faune des Antilles Françaises: les oiseaux. 2nd ed. Fort-de-France: M. Ozanne & Cie.

ROJER, A. 1997. Biological inventory of St. Maarten. Curaçao: Stichting Carmabi.

VOOUS, K. H. 1954. Het ornithologisch onderzoek van de Nederlandse Antillen tot 1951. Ardea 41:23–34.

VOOUS, K. H. 1955a. The birds of St. Martin, Saba, and St. Eustatius. Studies on the Fauna of Curaçao and Other Caribbean Islands 6:1–82.

VOOUS, K. H. 1955b. The birds of the Netherlands Antilles. Curaçao: Uitg. Natuurwet. Werkgroep Ned. Ant.

VOOUS, K. H. 1983. Birds of the Netherlands Antilles. 2nd ed. Netherlands: De Walburg Pers, Zutphen.

VOOUS, K. H. AND H. J. KOELERS. 1967. Checklist of the birds of St. Martin, Saba, and St.Eustatius. Ardea 55:115–137.

Table 1. Waterbirds occurrence, distribution, habitat and population estimates in Saint Martin.								
Family	**Species**	**English Name**	**Category (IUCN)**	**Occurrence**	**Habitat**	**Population estimate**	**Distribution**	**In-country trends**
Anatidae	Dendrocygna bicolor	Fulvous Whistling-duck	LC	Passage				
Anatidae	Dendrocygna arborea	West Indian Whistling-duck	VU	Passage				
Anatidae	Dendrocygna autumnalis	Black-bellied Whistling-duck	LC	Passage				
Anatidae	Aix sponsa	Wood Duck	LC	Passage				
Anatidae	Anas strepera	Gadwall	LC	Passage				
Anatidae	Anas americana	American Wigeon	LC	Passage				
Anatidae	Anas platyrhynchos	Mallard	LC	Passage				
Anatidae	Anas discors	Blue-winged Teal	LC	Passage				
Anatidae	Anas clypeata	Northern Shoveler	LC	Passage				
Anatidae	Anas bahamensis	White-cheeked Pintail	LC	Resident			Grand Etang	
Anatidae	Anas acuta	Northern Pintail	LC	Passage				
Anatidae	Aythya collaris	Ring-necked Duck	LC	Passage				

Anatidae	Aythya affinis	Lesser Scaup	LC	Passage				
Anatidae	Bucephala albeola	Bufflehead	LC	Passage				
Anatidae	Oxyura jamaicensis	Ruddy Duck	LC	Passage				
Procellariidae	Puffinus puffinus	Manx Shearwater	LC	Breeding	rocky areas	2 nest located (actual counts)	Tintamarre	
Hydrobatidae	Oceanites oceanicus	Wilson's Storm-petrel	LC	Passage				
Podicipedidae	Tachybaptus dominicus	Least Grebe	LC	Resident				
Podicipedidae	Podilymbus podiceps	Pied-billed Grebe	LC	Resident				
Threskiornithidae	Plegadis falcinellus	Glossy Ibis	LC	Passage				
Threskiornithidae	Platalea ajaja	Roseate Spoonbill	LC	Passage				
Ardeidae	Nycticorax nycticorax	Black-crowned Night-heron	LC	Passage				
Ardeidae	Nyctanassa violacea	Yellow-crowned Night-heron	LC	Resident			Grand Etang and Tintamarre	

Ardeidae	Butorides virescens	Green Heron	LC	Resident			Grand Etand, Tintamarre and Pic Paradis	
Ardeidae	Bubulcus ibis	Cattle Egret	LC	Resident			Grand Etand, Tintamarre and Pic Paradis	
Ardeidae	Ardea herodias	Great Blue Heron	LC	Winter			Grand Etang	
Ardeidae	Casmerodius albus	Great Egret	LC	Resident			Grand Etang	
Ardeidae	Egretta rufescens	Reddish Egret	LC	Passage				
Ardeidae	Egretta tricolor	Tricoloured Heron	LC	Resident			Grand Etang	
Ardeidae	Egretta caerulea	Little Blue Heron	LC	Resident			Grand Etang	
Ardeidae	Egretta garzetta	Little Egret	LC	Passage				
Ardeidae	Egretta thula	Snowy Egret	LC	Resident			Grand Etang	
Phaethontidae	Phaethon aethereus	Red-billed Tropicbird	LC	Breeding	rocky areas	Ac	Tintamarre	
Phaethontidae	Phaethon lepturus	White-tailed Tropicbird	LC	Passage				

Fregatidae	Fregata magnificens	Magnificent Frigatebird	LC	Resident			Grand Etang and Tintamarre	
Pelecanidae	Pelecanus occidentalis	Brown Pelican	LC	Resident			Grand Etang and Tintamarre	
Pelecanidae	Pelecanus erythrorhynchos	American White Pelican	LC	Passage				
Sulidae	Sula dactylatra	Masked Booby	LC	Passage				
Sulidae	Sula sula	Red-footed Booby	LC	Passage				
Sulidae	Sula leucogaster	Brown Booby	LC	Breeding	rocky areas		Tintamarre	
Phalacrocoracidae	Phalacrocorax brasilianus	Neotropic Cormorant	LC	Passage				
Phalacrocoracidae	Phalacrocorax auritus	Double-crested Cormorant	LC	Passage				
Rallidae	Porzana carolina	Sora	LC	Winter				
Rallidae	Porphyrio martinica	Purple Gallinule	LC	Passage				
Rallidae	Gallinula chloropus	Common Moorhen	LC	Passage				
Rallidae	Fulica americana	American Coot	LC	Passage				
Rallidae	Fulica caribaea	Caribbean Coot	NT	Passage		Few (2 individuals		

						actual count)		
Haematopodidae	Haematopus palliatus	American Oystercatcher	LC	Possibly breeding	rocky areas	11 individuals (actual count)	Tintamarre	
Recurvirostridae	Himantopus mexicanus	Black-necked Stilt	LC	Resident	pond	Ab	Grand Etang	
Charadriidae	Pluvialis dominica	American Golden Plover	LC	Passage				
Charadriidae	Pluvialis squatarola	Grey Plover	LC	Winter			Grand Etang	
Charadriidae	Charadrius semipalmatus	Semipalmated Plover	LC	Winter			Grand Etang	
Charadriidae	Charadrius wilsonia	Wilson's Plover	LC	Resident	ponds	Aa	Grand Etang	
Charadriidae	Charadrius vociferus	Killdeer	LC	Resident			Grand Etang and Tintamarre	
Charadriidae	Charadrius alexandrinus	Kentish Plover	LC	Passage				
Charadriidae	Charadrius collaris	Collared Plover	LC	Passage				
Scolopacidae	Gallinago gallinago	Common Snipe	LC	Passage				

Scolopacidae	Limnodromus griseus	Short-billed Dowitcher	LC	Winter				
Scolopacidae	Limosa haemastica	Hudsonian Godwit	LC	Passage				
Scolopacidae	Numenius phaeopus	Whimbrel	LC	Passage				
Scolopacidae	Bartramia longicauda	Upland Sandpiper	LC	Passage				
Scolopacidae	Tringa melanoleuca	Greater Yellowlegs	LC	Winter			Grand Etang	
Scolopacidae	Tringa flavipes	Lesser Yellowlegs	LC	Winter			Grand Etang	
Scolopacidae	Tringa solitaria	Solitary Sandpiper	LC	Winter				
Scolopacidae	Actitis macularius	Spotted Sandpiper	LC	Winter			Grand Etang and Tintamarre	
Scolopacidae	Catoptrophorus semipalmatus	Willet	LC	Passage				
Scolopacidae	Arenaria interpres	Ruddy Turnstone	LC	Winter			Grand Etang and Tintamarre	
Scolopacidae	Calidris canutus	Red Knot	LC	Passage				
Scolopacidae	Calidris alba	Sanderling	LC	Winter			Grand Etang and Tintamarre	

Scolopacidae	Calidris pusilla	Semipalmated Sandpiper	LC	Winter			Grand Etang	
Scolopacidae	Calidris mauri	Western Sandpiper	LC	Passage				
Scolopacidae	Calidris minutilla	Least Sandpiper	LC	Winter			Grand Etang	
Scolopacidae	Calidris fuscicollis	White-rumped Sandpiper	LC	Passage				
Scolopacidae	Calidris melanotos	Pectoral Sandpiper	LC	Passage				
Scolopacidae	Calidris himantopus	Stilt Sandpiper	LC	Winter			Grand Etang	
Scolopacidae	Tryngites subruficollis	Buff-breasted Sandpiper	NT	Passage				
Scolopacidae	Philomachus pugnax	Ruff	LC	Passage				
Laridae	Larus delawarensis	Ring-billed Gull	LC	Passage				
Laridae	Larus marinus	Great Black-backed Gull	LC	Passage				
Laridae	Larus argentatus	Herring Gull	LC	Passage				
Laridae	Larus fuscus	Lesser Black-	LC	Passage				

		backed Gull						
Laridae	Larus atricilla	Laughing Gull	LC	Resident			Grand Etang and Tintamarre	
Laridae	Sterna nilotica	Gull-billed Tern	LC	Passage				
Laridae	Sterna maxima	Royal Tern	LC	Resident			Grand Etang and Tintamarre	
Laridae	Sterna sandvicensis	Sandwich Tern	LC	Passage				
Laridae	Sterna dougallii	Roseate Tern	LC	Breeding	rocky areas	Ab	Grand Etang and Tintamarre	
Laridae	Sterna hirundo	Common Tern	LC	Passage				
Laridae	Sterna forsteri	Forster's Tern	LC	Passage				
Laridae	Sterna antillarum	Least Tern	LC	Breeding	pond	Ac	Grand Etang	
Laridae	Sterna anaethetus	Bridled Tern	LC	Breeding	rocky areas	Aa	Tintamarre	
Laridae	Sterna fuscata	Sooty Tern	LC	Passage				
Laridae	Anous stolidus	Brown Noddy	LC	Breeding	rocky areas	Ad	Tintamarre	
Stercorariidae	Stercorarius pomarinus	Pomarine Jaeger	LC	Passage				

Legend:

The ranges are based on Wetlands International estimates:

B: 10.000-25.000

C: 25.000-100.000

E: >1.000.000

For numbers below 10.000:

A.a 0-50

A.b 50-100

A.c 100-250

A.d 250-500

A.e 500-1000