ST MAARTEN

LAND AREA **33 km²** ALTITUDE **0–425 m**
HUMAN POPULATION **39,000** CAPITAL **Philipsburg**
IMPORTANT BIRD AREAS **5, totalling 8.15 km²**
IMPORTANT BIRD AREA PROTECTION **55%**
BIRD SPECIES **164**
THREATENED BIRDS **1** RESTRICTED-RANGE BIRDS **5**

NATALIA COLLIER AND ADAM BROWN
(ENVIRONMENTAL PROTECTION IN THE CARIBBEAN)

Great Salt Pond and Fresh Pond in Philipsburg. (PHOTO: JAY HAVISER)

INTRODUCTION

The island of St Martin is situated just 8 km south of Anguilla (to UK) and 20 km west-north-west of St Barthelemy (to France). The northern, French half is called St Martin and is an overseas department of the French Republic. The southern, Dutch half is called St Maarten. St Maarten, Saba and St Eustatius together form the Windward Islands of the Netherlands Antilles[1]. The Dutch and the French have shared the island—the smallest land mass in the world to be divided between two governments—for almost 350 years.

The centre of the island (across which the political boundary runs) is composed of a mountainous spine rising to 425 m. The coastal areas are a mixture of flat lands and low hills punctuated by numerous ponds, primarily of high salinity. Coastal shorelines are characterised by sand or rock beaches with cliffs in between. Simpson Bay Lagoon, one of the largest lagoons in the Lesser Antilles, is a dominant feature of the island and a major yachting centre. The St Maarten side of the lagoon is extremely polluted and the shoreline almost completely developed. The terrestrial vegetation is thorny woodland, dominated by scrub in the lowlands and low forest in the mountains (with small patches of the original semi-evergreen forest on the highest ridges). Average annual rainfall is 1,770 mm, much of which arrives during the hurricane season in late summer and fall. St Maarten is densely populated, and the population increases greatly during the influx of seasonal visitors and tourists which form the base of the economy.

Conservation

Conservation in St Maarten sits within the framework of a number of "ordinances" that provide legislation to: prevent the destruction of valuable flora and fauna (although there is no associated list of species considered valuable); prohibit construction above 200 m; and establish marine protected areas. The government has drafted, but not yet approved, new nature protection legislation (the Marine Park Ordinance). The St Maarten Marine Park (managed by the Nature Foundation of St Maarten, but still not formally designated by government) surrounds the Dutch side of the island from the coastal waters and beaches to the 60-m depth contour. The park includes Pelikan Rock IBA (AN005) and three smaller islets.

1 At some point in the near future the "Netherlands Antilles" will be dissolved. St Maarten and Curaçao will become separate countries within the Kingdom of the Netherlands (similar to the status currently enjoyed by Aruba). The islands of Bonaire, Saba and St Eustatius will be linked directly to the Netherlands as overseas territories.

Pelikan Rock. (PHOTO: NATALIA COLLIER)

Environmental Protection in the Caribbean has conducted bird research and monitoring on the island (with a particular focus on wetlands and seabirds) for the past seven years. Research has included pond water quality testing. The Nature Foundation of St Maarten has implemented a program of planting mangroves at Little Bay Pond IBA (AN001) and Fresh Pond IBA (AN002). Awareness of environmental issues is on the increase due to the work of local organisations and the conspicuous loss of natural areas and wildlife. However, the conservation concerns of the general public have not yet translated into government action.

The primary threat within St Maarten is the development of land and ponds. St Maarten is a duty-free island and the "island area" is rapidly developing free of sufficient environmental legislation. Ponds and lagoons are routinely filled in and altered (e.g. Great Salt Pond IBA—AN003—is being used for landfill and filled to create parking) while building takes place on steep hillsides. Development permits are issued without thorough environmental impact assessments, despite public outcry, and permit restrictions are difficult to impose. Without enforceable legislation, these destructive practices are likely to continue. Other threats include disturbance (which is significant due to the high concentration of residents and tourists) due to watercraft and introduced alien species. There is almost no control of exotic species introductions. Introduced predators include dogs, cats, rats, mice, raccoon *Procyon lotor*, mongoose *Herpestes auropunctatus* and green monkey *Chlorocebus sabaeus*. Groups of monkeys have been observed in the higher mountainous areas and could expand to lower elevations (as has happened on St Kitts).

Birds

Of the 164 bird species recorded from St Maarten, 39 species are resident (and breed) on the island, although the majority of species are Neotropical migrants (or vagrants). Five (of the 38) Lesser Antilles EBA restricted-range birds occur in St Maarten, none of which is endemic to the country. Three other restricted-range species—Bridled Quail-dove *Geotrygon mystacea*, Purple-throated Carib *Eulampis jugularis* and Scaly-breasted Thrasher *Margarops fuscus*—are found in the montane forests on the St Martin side of the border and probably occur. The country is important for waterbirds (in spite of the severe alteration and destruction of wetland habitats), with 50 species recorded (18 of which breed). This is partly due to the presence of two low-salinity ponds which are unique within the region.

Little Bay Pond. (PHOTO: BEVERLY MAE NISBETH, NATURE FOUNDATION ST MAARTEN)

Table 1. Key bird species at Important Bird Areas in St Maarten.

			St Maarten IBAs				
			AN001	AN002	AN003	AN004	AN005
Key bird species	Criteria	National population	Criteria				
Brown Pelican *Pelecanus occidentalis*		285				180	105
Caribbean Coot *Fulica caribaea*	NT	75		53			
Laughing Gull *Larus atricilla*		6,100			5,800		300
Royal Tern *Sterna maxima*		141					90
Green-throated Carib *Eulampis holosericeus*			✓	✓		✓	
Antillean Crested Hummingbird *Orthorhyncus cristatus*			✓	✓		✓	
Caribbean Elaenia *Elaenia martinica*			✓	✓		✓	
Pearly-eyed Thrasher *Margarops fuscatus*			✓	✓		✓	
Lesser Antillean Bullfinch *Loxigilla noctis*			✓	✓		✓	

All population figures = numbers of individuals.
Threatened birds: Near Threatened. **Restricted-range birds**. **Congregatory birds**.

Fort Amsterdam.
(PHOTO: BEVERLY MAE NISBETH, NATURE FOUNDATION ST MAARTEN)

Significant numbers of the Near Threatened Caribbean Coot *Fulica caribaea* breed at Fresh Pond IBA (AN002) and Little Bay Pond IBA (AN001) and sometimes hybridise with American Coot *F. americana*. Studies to determine nesting success, especially of *F. caribaea*, are needed to better understand the primary threats facing wetland species. Similarly, the Brown Pelican *Pelecanus occidentalis* colony at Fort Amsterdam IBA (AN004) should be studied further to determine the factors influencing fluctuations in the breeding population there. National population estimates for these waterbirds are given in Table 1.

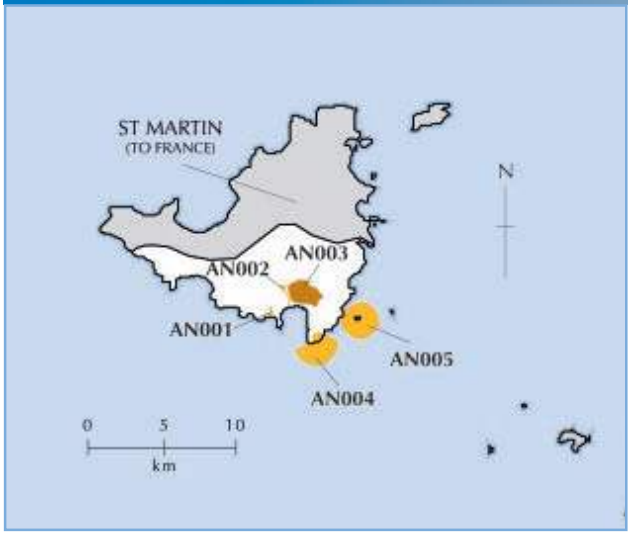
IMPORTANT BIRD AREAS

St Maarten's IBAs—the country's international site priorities for bird conservation—cover 815 ha (including marine areas), and about c.36% of the country's land area. Of the five IBAs, Pelikan Rock (AN005) is protected within the St Maarten Marine Park, and Fort Amsterdam (AN004) is protected as a historical site. The IBAs have been identified on the basis of eight key bird species (listed in Table 1) that variously trigger the IBA criteria. They are centred on wetland and marine sites being primarily significant for their populations four congregatory waterbird and seabird species (including the Near Threatened Caribbean Coot *Fulica caribeae*. However, shrublands in three IBAs support populations of the four restricted-range species known to occur in the country. With further targeted field research, three additional restricted-range birds that occur in the montane forest across the border in St Martin would be expected to be found in the semi-evergreen forest remnants on the St Maarten side. Such a discovery could warrant the identification of an additional IBA for these forest dependent species.

The wetland IBAs of Little Bay Pond, Fresh Pond and Great Salt Pond all face similar, multiple threats such as land reclamation for development, inappropriate development, use for landfill, pollution and contamination from runoff and sewage, inappropriate water management (e.g. maintaining water levels by pumping in sea water), alien invasive predators and disturbance. The Nature Foundation of St Maarten and Environmental Protection in the Caribbean (EPIC) have variously planted mangroves, constructed bird observation towers and installed educational signage at Little Bay Pond and Fresh Pond IBAs, but it is clear that enforced legislation is critical if the biological integrity of these wetlands is to be maintained in the long term.

The protection afforded Fort Amsterdam (Historical Site) and Pelikan Rock (Marine Park) IBAs appears to be preventing site-based threats although factors outside of these areas are having negative impacts such as disturbance to the mainland pelican nesting colony from jet skis, dive boats, and parasail boats. Over-fishing, oil spills, and plastics entanglement are constant threats to the marine-based seabirds and waterbirds. The regular monitoring of the waterbirds at St Maarten's IBAs (e.g. as has been undertaken by EPIC) and the monitoring of the other key bird species should be used to inform the assessment of state, pressure and response variables at each IBA in order to provide objective status assessments and inform management decisions (should the necessary legislation be enacted) that might be required to maintain these internationally important biodiversity sites.

Figure 1. Location of Important Bird Areas in St Maarten.



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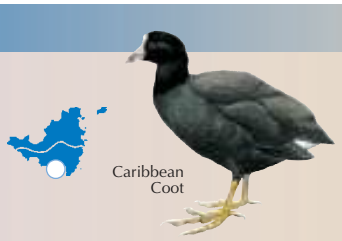
ACKNOWLEDGEMENTS

The authors would like to thank Bert Denneman (Vogelbescherming Nederlands) Beverly Mae Nisbeth (Nature Foundation of St Maarten) and Kalli de Meyer (Dutch Caribbean Nature Alliance) for their help in reviewing this chapter.

AN001 Little Bay Pond

Unprotected

COORDINATES 18°01'N 63°04'W
ADMIN REGION St Maarten
AREA 8 ha
ALTITUDE 0 m
HABITAT Inland wetland, mangrove, shrubland



THREATENED BIRDS 1
RESTRICTED-RANGE BIRDS 5
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS

Site description

Little Bay Pond IBA is near the capital city of Philipsburg, in the middle of the south coast of St Maarten. It is c.2.5 km in diameter and has low (4–8 parts per thousand) salinity. It is bordered by aquatic grasses and red, black, and white mangrove trees, with surrounding areas supporting shrubland. A busy road runs along one side of the pond, above which is a residential development. A new development is being built in the corner nearest Little Bay beach. The pond is encircled by a hiking path which connects to the sea at the rocky shore of Little Bay. A small outlet runs from the pond into the ocean.

Birds

This IBA is significant for its population of the Near Threatened Caribbean Coot *Fulica caribaea*. Up to 22 birds have been recorded and some pairs breed. A number of other waterbird species breed at the site. All five Lesser Antilles EBA restricted-range birds occur around Little Bay Pond.

Other biodiversity

Green iguanas *Iguana iguana* occur, but no threatened or endemic species have been recorded.

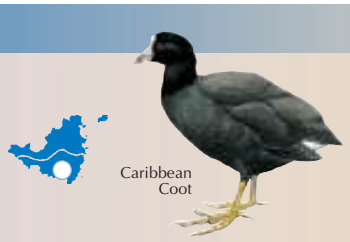
Conservation

Little Bay Pond IBA has no legal protection. It is owned by a foreign development corporation and is up for sale. Local opposition, inspired by the aesthetic and ecological value of the pond, has so far halted plans to turn the pond into a marina, but a new hotel and condominium development is being built next to Little Bay beach. The legality of owning this pond has been questioned as all ponds are supposed to be public land. Regular waterbird population counts have been conducted each winter (and during spring/summer 2004) since 2001 by Environmental Protection in the Caribbean (EPIC). The Nature Foundation of St Maarten planted mangrove trees at the site which have thrived. EPIC and the Nature Foundation, with funding from Royal Caribbean, constructed a bird observation tower and educational signage along the hiking path. Monthly educational mangrove/bird walks are held in winter. The water is high in nutrients from sewage outflow from surrounding areas, sometimes resulting in eutrophication and fish die-offs. Pollution runoff from adjacent roads is problematic. Predators such as cats, dogs, rats, and mongoose frequent the area.

AN002 Fresh Pond

Unprotected

COORDINATES 18°02′N 63°04′W
ADMIN REGION St Maarten
AREA 14 ha
ALTITUDE 0 m
HABITAT Inland wetland, mangrove



THREATENED BIRDS 1
RESTRICTED-RANGE BIRDS 5
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS

Site description
Fresh Pond IBA is within the capital city of Philipsburg and comprises a large pond (c.2.5 km by 1 km) just to the west of Great Salt Pond IBA (AN003). It is a low-salinity pond (2–3 parts per thousand) that is bordered by aquatic grasses and red mangrove trees. Artificial islands at each end of the pond are vegetated with mangroves and coconut trees and provide popular nesting sites for waterbirds. A busy bridge bisects the pond and heavy traffic and development encircle the area.

Birds
This IBA is significant for its population of Near Threatened Caribbean Coot *Fulica caribaea*. Over 50 coots have been recorded, and nesting does occur. All five Lesser Antilles EBA restricted-range birds occur. Fresh Pond IBA also supports populations of many waterbirds including 180+ Snowy Egret *Egretta thula*, Pied-billed Grebe *Podilymbus podiceps*, Great Egret *Casmerodius albus*, White-cheeked Pintail *Anas bahamensis* and Ruddy Duck *Oxyura jamaicensis*.

Other biodiversity
Green iguanas *Iguana iguana* occur, but no threatened or endemic species have been recorded.

Conservation
The open water of Fresh Pond is state-owned and "designated" public space. The surrounding land is privately owned and totally developed. Regular waterbird population counts have been conducted each winter (and during spring/summer 2004) since 2001 by Environmental Protection in the Caribbean (EPIC). The Nature Foundation of St Maarten planted mangrove trees at the site, which have thrived in the low-salinity, high-nutrient waters. EPIC and the Nature Foundation, with funding from Royal Caribbean, constructed a bird observation tower and educational signage. A sewage treatment plant on the shore of Fresh Pond causes concern regarding contamination. The water is high in nutrients from sewage outflow from surrounding areas, sometimes resulting in eutrophication and fish die-offs. Trash is prevalent among the shoreline vegetation. Pollution runoff from adjacent roads is problematic. Predators such as cats, dogs, rats, and mongoose frequent the area, and human disturbance is an issue at this urban location.

AN003 Great Salt Pond

Unprotected

COORDINATES 18°02′N 63°03′W
ADMIN REGION St Maarten
AREA 188 ha
ALTITUDE 0 m
HABITAT Inland wetland

THREATENED BIRDS
RESTRICTED-RANGE BIRDS
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS ✔

Site description
Great Salt Pond IBA is in south-central St Maarten, on the outskirts of the capital Philipsburg. It is the largest pond on the island and is bordered on all sides by busy roads. Fresh Pond IBA (AN002) lies just to the west. Great Salt Pond is highly saline (27–38 parts per thousand) as a result of which there is little visible vegetation. The borders of the pond comprise roadside grass and urban development. The pond was previously used for salt extraction and remnant rock walls, which are now important roost and nesting areas, still remain. The pond's primary use now is as landfill and land reclamation.

Birds
This IBA is significant for its population of Laughing Gull *Larus atricilla*. Up to 5,800 gulls congregate at the IBA prior to the breeding season. It is unclear if this congregation occurred historically or if the gulls now assemble to feed from the landfill. About 50 pairs of Black-necked Stilt *Himantopus mexicanus* breed—the only species confirmed to do so within the IBA.

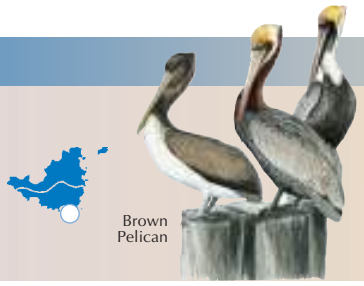
Other biodiversity
Nothing recorded.

Conservation
The open water of Great Salt Pond is state owned and "designated" public space. However, the IBA faces multiple threats. Land "reclamation" is used to create parking areas, carnival grounds, and other facilities within the pond. Trash from the landfill located within the pond and from the town is blown into the pond. Fires at the landfill occur several times a year. Pollution leaching from the landfill has caused ecological collapse, resulting in massive midge infestations which have plagued Philipsburg each year since 2006. The government undertook an intensive six-week pesticide application program to alleviate the infestation. Water levels are artificially controlled using seawater, which has resulted in flooded nests and altered salinity levels. Regular waterbird population counts have been conducted each winter (and during spring/summer 2004) since 2001 by Environmental Protection in the Caribbean.

AN004 Fort Amsterdam

Protected Historical Site

COORDINATES 18°01′N 63°02′W
ADMIN REGION St Maarten
AREA 278 ha
ALTITUDE 0–20 m
HABITAT Shrubland



THREATENED BIRDS
RESTRICTED-RANGE BIRDS 5
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS ✔

Site description
Fort Amsterdam IBA is a 2.5-km long peninsula of land in south-east St Maarten. On the top of the peninsula are ruins of a fort (a registered historical site), the slopes below which support 2 m-high thorny *Acacia macracantha* and *A. tortuosa* shrubland. The bay on the east side of the peninsula is a major cruise ship port, and a tourist resort is situated just 500 m away to the north.

Birds
This IBA is significant for Brown Pelican *Pelecanus occidentalis*. The breeding population varies greatly between years, but up to 50 pairs breed on the western side of the point, with 10 pairs on the eastern side making this a regionally important colony. Birds nest as close as 10 m from the fort ruins. All five Lesser Antilles EBA restricted-range birds occur at this IBA.

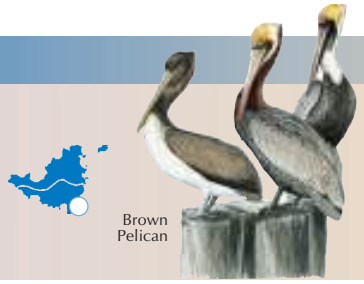
Other biodiversity
The island-endemic lizard *Anolis pogus* may be present in the IBA.

Conservation
Fort Amsterdam is privately owned and a zoned historical site, which affords it legal protection from development. Public access to the IBA is controlled by the resort's security checkpoint, and the thorny vegetation restricts visitors from accessing the pelican nesting area. The waters surrounding the peninsula are used heavily (and increasingly) by watercraft (including jet skis, dive boats, and parasail boats) which causes disturbance to the pelican nesting colony. Weekly/monthly population counts of the pelicans have been conducted every winter since 2001 by Environmental Protection in the Caribbean. A nesting success survey was also conducted in 2001.

AN005 Pelikan Rock

Marine Park

COORDINATES 18°01′N 63°01′W
ADMIN REGION St Maarten
AREA 328 ha
ALTITUDE 0–10 m
HABITAT Rocky areas, sea



THREATENED BIRDS
RESTRICTED-RANGE BIRDS
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS ✔

Site description
Pelikan Rock is a small, rocky islet about 1.5 km off the south-east coast of St Maarten. It is about 1.2 ha in size. The shoreline is rocky and difficult to access by sea, with rocky cliffs rising 6–10 m up to a grass- and low shrub-covered plateau. The IBA includes a 1-km seaward extension around the island.

Birds
This IBA is notable for its breeding waterbirds. The population of Laughing Gull *Larus atricilla* (100 pairs) is globally important, while those of Brown Pelican *Pelecanus occidentalis* (35 pairs) and Royal Tern *Sterna maxima* (47 pairs) are regionally so. Bridled Tern *S. anaethetus* also nests (c.15 pairs), and Brown Noddy *Anous stolidus* and Audubon's Shearwater *Puffinus lherminieri* have both been reported breeding, although surveys by Environmental Protection in the Caribbean in 2004 failed to find any.

Other biodiversity
Nothing recorded.

Conservation
Pelikan Rock is state owned and managed by the Nature Foundation of St Maarten as part of the St Maarten Marine Park. Fishing, anchoring, the use of jet skis and ship traffic is prohibited within the marine park, although moorings have been installed and the area is popular for diving. Access to the islet itself is prohibited and human visitation is rare. There is no evidence of rodents or other predators on the islet. Threats to birds using the IBA are found primarily outside the IBA and include issues such as over-fishing, oil spills, and plastics entanglement. EPIC has conducted weekly or monthly population counts of *P. occidentalis* from the mainland every winter since 2001. A ground-truthing survey was conducted on the islet in June 2004.