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

FINAL REPORT
WATERBIRDS IN SINT EUSTATIUS (STATIA)

Red-billed Tropicbird.
(PHOTO: BRENDA AND DUNCAN KIRKBY)

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Figure 1. Location of Sint Eustatius in the northern Netherland Antilles.

1. Introduction

Sint Eustatius, or Statia, (21 km²), is part of the northern Netherlands Antilles (Figure 1). It is politically autonomous in internal affairs while the Netherlands is responsible for international relations, the judicial system and defense. St. Eustatius is located within the Tropics at 17°N of the Equator on a longitude of 63°W. The climate is generally dry with an average temperature of 27°C. Annual rainfall is 986 mm and the majority of precipitation falls between August and November. The human population is approximately 3,000.

St. Eustatius comprises composed of a denuded volcano in the northwest, and a young volcano in the southeast, known as the Quill (601 m). Between these two formations is a low sloping plain with a sand beach on the northeast and a rocky beach on the southeast. The remainder of the coastline is steep cliffs or xeric vegetated slopes.. Coral reef surrounds much of the island. The interior vegetation is composed primarily of thorn woodland and grassland but secondary evergreen and elfin forest are found within the caldera of the Quill. There are no ponds or other terrestrial wetlands

2. Protected Areas and Conservation Systems

A marine protected area was established in 1997 in St. Eustatius, which surrounds the entire island to 30 m off shore. Dive tags and mooring fees support park operations. The Quill is actively managed by the park service STENAPA. The Boven National Park is legally protected but currently is under land dispute and is unmanaged. Although St. Eustatius was historically (pre 1800s) a major point of trade, the island is now one of the few islands which is not under threat of major tourist developments. This is likely due to its lack of calm and sandy beaches.

3. Waterbirds species occurring within Sint Eustatius (or Statia)

Fifty-four avian species have been recorded on St. Eustatius, 26 breeding species and 28 migrant species (Collier and Brown, 2006). Eight of these species are considered waterbirds (Table 1). In 2003, Environmental Protection in the Caribbean (EPIC) conducted a sea bird survey to establish a baseline data for Sint Eustatius. EPIC estimates 100-200 Red-billed Tropicbirds *Phaethon aethereus* breeding on St. Eustatius (Collier and Brown, 2006). This is 1 % of the global population estimate for the species. White-tailed Tropicbird *Phaethon lepturus* is reported in small numbers (<10). Audubon's Shearwater *Puffinus lherminieri* was recorded historically and one resident has reported hearing them call at night, but no breeding has been confirmed (Collier and Brown, 2006). Yellow-crowned Night Heron *Nyctanassa violacea* also breeds on St. Eustatius, but the population is thought to be quite small.

4. Distribution and habitat

Waterbirds within St Eustatius are distributed along the coast. Coastal habitats in the northwest peninsula consist mostly of several xeric, rocky and sandy hills and rocky shores. The Tropicbirds are found in this habitat, especially in the southeast in the Boven Subsector where the Zeelandia beach lies. In the south of the island a steep limestone area joins The Quill to the coast. The *Pelecanus occidentalis* and *Sula leucogaster* are found in this area.

5 and 6. Species of special concern and population estimates

A. *Phaethon aethereus* Red-billed Tropicbird

EPIC field surveys in 2003 demonstrated an important nesting colony of *Phaethon aethereus* present in the Boven Subsector (Figure 2). It contains more than 1% of the species' global population. This estimate was done just once in March, 2003. More field surveys need to be done, and need to include assessments of distribution in other potential areas, nesting success, predation and disturbance and population monitoring (Collier and Brown, 2003).
Current population estimate: The population of *Phaethon aethereus* is 150 individuals on its breeding grounds in the Boven Subsector.
Population tendency: Previous estimates for the species where of 30 pairs (Vous, 1983; Walsh-McGehee, 2000), suggesting that the population has increased in numbers. The species is considered by IUCN (2006) to be of Least Concern globally. However, the disappearance of colonies at a number of sites in the Lesser Antilles and declines at other sites (BirdLife, 2006), means it is of HIGH importance for researchers and conservationists interested in breeding seabirds in the Caribbean (Caribbean Waterbird Conservation Plan-SCSCB).

Threats to *Phaethon aethereus* include:
1. Introduced predators such as rats and cats.
2. Trampling of nest burrows by goats.
3. Erosion due to overgrazing.
4. Threat of oiling due to spills from the oil transfer station.

B. Other species

Other waterbird species that have been reported for Sint Eustatius are *Puffinus iherminieri*, *Phaethon lepturus*, *Sula leucogaster*, *Fregata magnificens*, *Nyctanassa violacea and Thalasseus maximus* (Table 1). Numbers are low for these species. National trends can not be provided at this moment due to insufficient information. Long-term avian research and monitoring is recommended.

7. Locations and descriptions of key sites used by aquatic species

A. Boven Subsector (Boven National Park)

Boven Subsector (17° 46.00 North, 63° 0.00 West) is an important nesting site for *Phaethon aethereus*. It comprises the northwest end of the island, approximately 25% of the land mass (Figure 2). The site is legally protected as a National Park, however, it is under land dispute and is without management. The southeast end of the area is limited by the Zeelandia beach which harbors Tropicbird nesting areas in its sandy cliffs. Boven is arid, the primary vegetation being *Acacia* thorn scrub and grasslands. Rocky outcroppings are scattered throughout the Boven hills. The coastline consists of cliffs and a rocky shore. The hills above the airport form the southern limit of the concentration of Tropicbird nesting area.

Boven National Park does not have any developments within its boundaries; however, an oil transfer station lies on the western border along the coast. The park service, STENAPA, is attempting to

manage Boven and limit grazing, although these efforts have been met with significant resistance due to ancestral claims to the land. EPIC surveyed for Tropicbirds in March 2003, and was permitted access to the area only when accompanied by park staff; the entire peninsula was not surveyed due to access and time constraints.

Collier and Brown (2003) estimated 100-200 breeding pairs of the Red-billed Tropicbirds *Phaethon aethereus.* This is 1 % of the global population, currently estimated at 20,000 individuals (Schreiber and Lee, 2000), qualifying the site as an Important Bird Area (IBA) for the species. The Boven Subsector coastline is rugged and much of it has not been surveyed for Tropicbirds. Long-term studies of this colony should be established to assess its distribution and set management guidelines. Support of, and collaboration with EPIC, Sint Eustatius National Parks (STENAPA) and other institutions are important to guarantee the protection of these breeding grounds for *Phaethon aethereus*.

B. White Wall (within Quill National Forest)

White Wall (17° 28.01 North, 62° 57.32 West) is a steep limestone area with limited vegetation. It is located at the southeastern limit of The Quill National Park (Figure 2). The Quill has been identified as important for landbirds. STENAPA conducted field surveys from 2003 – 2006, January through March, recording waterbirds species such as *Sula leucogaster* and *Pelecanus occidentalis,* which have not been identified for the Boven (see Table 1). White Wall does not hold significant populations of these waterbirds, but it is nationally important.

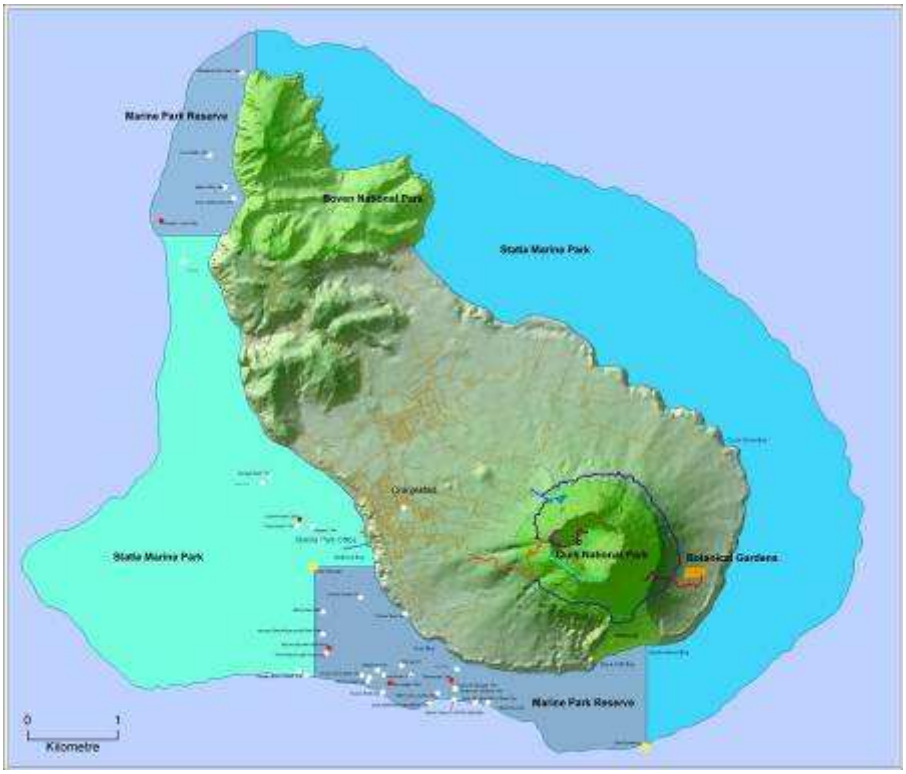

Figure 2. Boven Subsector is located at the northwest of St. Eustatius and White Wall at the south of The Quill. The map includes St Eustatius Parks and Reserves. Copyright: Sint Eustatius National Parks.

8. Issues and threats to waterbirds and their habitats/sites

a. Proper management and containment of livestock is necessary to reduce desertification.

b. A sanitary refuse disposal site is needed.
c. The oil transfer station should improve oil spill monitoring and response efforts.
d. The island's garbage landfill (Smith's Gut near Zeelandia Beach) is within a coastal ravine. During storm surges and high winds, this trash is dispersed over the coastal zone, possibly resulting in entanglement or consumption of debris such as plastics by seabirds and other marine life.
e. The park service, STENAPA, is attempting to manage Boven and limit grazing, although these efforts have been met with significant resistance due to ancestral claims to the land.

9. Ongoing aquatic bird conservation programs and participants

a. Non-regulatory programs: There is no direct bird conservation work underway in St. Eustatius. However, preservation of land and marine areas will indirectly benefit avian populations. School educational programs, sponsored by STENAPA, are increasing environmental awareness among the youth, with a focus on marine ecosystems.

b. Legislation:
   1) No specific legislation for bird protection exists for St Eustatius
   2) A marine protected area, established in 1997, surrounds the island to 30 m off shore, within which there are no-take and no anchor zones

Local environmental protection ordinances include:
- National Nature Conservation Ordinance
- Nature Foundation Management and Protection
- Fisheries Regulation
- Flora and Fauna Protection Regulation

c. Formal and informal international instruments for aquatic bird conservation:

As part of the Netherlands, St. Eustatius 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)

d. Funding sources and organizations/programs/individuals relevant to waterbird and/or wetland conservation:

1. St. Eustatius National Parks Foundation, known locally as STENAPA manages the National Parks including The Quill and the Boven Subsector. It is an environmental organization dedicated to protect the marine and land environment as well as endangered species. It also manages many ecotourism initiatives and awareness campaigns such as the reducing of plastic waste.
2. STENAPA Internship Programme, Working Abroad-volunteer programme –organized by UK/France. This is a program where University students work as volunteers during a period of time with STENAPA.

The students work in day by day tasks as trail and marine parks maintenance, and participate in other management activities within the park.
3. STENAPA coordinates educational programs including: school presentations, Snorkel Club and The Junior Ranger Programme.
4. Potential funding sources are:
- World Wildlife Fund Netherlands
- Prince Bernhard Nature Fund
- AMFO (Antillia anse Mede Financier ings Organisatie)
- IUCN – NC
- KNAP (Kleine Natuur Projecten Fonds Nederlandse Antillen)

e. Research activities
1. EPIC surveyed Tropicbirds in March 2003, and was permitted access to the area only when accompanied by park staff, the entire peninsula was not surveyed due to access and time constraints.
2. Dr. Powell published a book entitled: *Reptiles and Amphibians of the Dutch Caribbean*; St Eustatius, Saba and St Maarten.
3. Dr. Pieter Ketner and Joris Ernst from the Twente University in the Netherlands conducted studies on Corallita Vine ecology. The Corallita is an introduced vine.
4. EPIC is conducting seabird nest monitoring in the Lesser Antilles. The partner in Sint Eustatius is STENAPA. The purposes of the project are taking censuses of seabird colonies, monitoring nesting success, studying chick provisioning, and recording predation and disturbance events.
5. EPIC and the Society for the Conservation and Study of Caribbean Birds (SCSCB) are collaborating in a Seabird Atlas of the Lesser Antilles. The atlas will be a valuable tool to conserve seabird population.

f. Monitoring and indicators

There is no direct bird conservation work underway in St. Eustatius. However, STENAPA conducted annual avian surveys (point counts) on The Quill rim and at sea level around White Wall, from 2003 to 2006.

10. Recommendations (made by EPIC)

1. Encourage research on the status of resident and migrantory waterbirds to determine the health of populations.
2. Conduct censuses on the north coast for tropicbirds.
3. Search for Audubon's Shearwater (*Puffinus ilherminieri*).
4. Enact range management to control current overgrazing, which results in a significant loss of wildlife habitat and cattle feed.

11. Other related information

Sint Eustatius is part of the Dutch Caribbean Nature Alliance (DCNA). It is a new non-profit organization created to protect the natural environment and to promote sustainable management of natural resources on the six Dutch Caribbean islands (http://www.dcnanature.org/welcome/index.html).

12. References/experts consulted

a. Natalia Collier and Brown Brown, *Environmental Protection In the Caribbean*, EPIC 200 Dr. M.L. King Jr. Blvd., Riviera Beach, FL 33404 USA. ncollier@epicislands.org – Compiled information of Sint Eustatius, IBA accounts for Boven and Quill and provided pictures. (http://epicislands.org/).
b. Nicole Esteban, *Sint Eustatius National Parks* , STENAPA. – Reviewed the information and IBA accounts of The Quill in Sint Eustatius. Provided pictures and map copyright from Sint Eustatius National Parks.

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Table 1. Waterbirds occurrence, distribution, habitat and population estimates in Sint Eustatius.

Family Species English name	**Season Resident**	**Migration**	**Habitat**	**Population Estimates**	**Percent of global population**	**Distribution**	**In-country trends** (Status-IUCN)	**References**
PROCELLARIIDAE								
Puffinus lherminieri (Audubon's Shearwater)	Transient	Intratropical	Sea	Few <Aa	----------	Sea	Not possible to determine (LC)	Collier and Brown (2003)
PHAETHONTIDAE								
Phaethon lepturus (White-tailed Tropicbird)	Transient	Intratropical	Rocky and sandy cliffs	< 10	----------	Boven; White Wall in The Quill	Not possible to determine (LC)	Collier and Brown (2006); STENAPA (Field surveys 2006)
Phaeton aethereus (Red-billed Tropicbird)	Breeding	Intratropical	Rocky and sandy cliffs	150	1 %	Boven; White Wall in The Quill	Increasing (LC)	Collier and Brown (2003); STENAPA (Field surveys 2004,2006)
SULIDAE								
Sula leucogaster (Brown Booby)	Transient	Intratropical	Rocky and sandy cliffs	< 10	----------	White Wall in The Quill	Not possible to determine (LC)	STENAPA (Field surveys, 2003 , 2006)
PELECANIDAE								
Pelecanus occidentalis (Brown Pelican)	Transient	Intratropical	Sea	<10	----------	White Wall in The Quill	Not possible to determine (LC)	STENAPA (Field surveys, 2003)

Family Species English name	Season Resident	Migration	Habitat	Population Estimates	Percent of global population	Distribution	In-country trends (Status-IUCN)	References
FREGATIDAE								
Fregata magnificens (Magnificent Frigatebird)	Transient	Intratropical	Sea	1	----------	White Wall in The Quill	Uncommon (LC)	STENAPA (Field surveys, 2006)
ARDEIDAE								
Nyctanassa violacea (Yellow-crowned Night-heron)	Breeding	----------	Rocky and sandy cliffs	Few	----------	Boven	Uncommon (LC)	Collier and Brown (2003)
LARIDAE								
Thalasseus maximus (Royal Tern)	Transient	----------	Limestone	1	----------	White Wall in The Quill	Uncommon (LC)	STENAPA (Field surveys, 2004)