ST EUSTATIUS

LAND AREA **21 km²** ALTITUDE **0–802 m**
HUMAN POPULATION **3,000** CAPITAL **Oranjestad**
IMPORTANT BIRD AREAS **2, totalling 14.86 km²**
IMPORTANT BIRD AREA PROTECTION **100%**
BIRD SPECIES **54**
THREATENED BIRDS **0** RESTRICTED-RANGE BIRDS **8**

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(ENVIRONMENTAL PROTECTION IN THE CARIBBEAN)

The Quill from Boven hill, with St Kitts in the distance. (PHOTO: NICOLE ESTEBAN)

INTRODUCTION

St Eustatius (or Statia) is a small, volcanic island in the northern Lesser Antilles. It is situated c.13 km north-west of St Kitts and Nevis and c.25 km south-east of Saba. Together with Saba and St Maarten (which is c.45 km to the north) these three islands form the Windward Islands of the Netherlands Antilles[1]. Statia is saddle-shaped: the 602-m high Mount Mazinga (locally called "the Quill") is a young volcano at the south-east end of the island, and a denuded, dormant volcano—the "Northern Hills" comprising Signal Hill, Little Mountain and Boven Mountain—is at the north-west end. Between these two volcanic formations is a low sloping plain (where the majority of the island's population lives) with a sand beach on the north-east and a rocky beach on the south-east coasts. The remainder of the coastline is steep cliffs or xeric vegetated slopes. Coral reef surrounds much of the island. The interior vegetation of Statia is composed primarily of thorn woodland and grassland, but secondary evergreen and elfin forest are found within the volcanic caldera of the Quill. There are no ponds or other terrestrial wetlands on Statia. The climate is generally dry with an average of 986 mm of rain falling predominately between August and November.

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.

Conservation

The Statia government developed the National Nature Conservation Ordinance (based on the draft Netherlands Antilles Island Nature Protection Ordinance) during the mid-1990s which provided the legislative framework to designate protected areas and develop a national parks system. Three parks were designated in 1997–1998, the management authority for which was delegated to a local NGO, St Eustatius National Parks Foundation (STENAPA). The St Eustatius Marine Park encompasses 27.5 km² (including the seabed and overlying waters) from the high-tide mark to a depth of 30 m around the entire island, within which are no-take and no-anchor zones. Scuba-diving and mooring fees support the administration and management of the park. The major terrestrial park (the Netherlands Antilles first) is the Quill–Boven National Park which consists of two sub-sectors that equate to the terrestrial parts of the two Statia IBAs and cover 41% (865 ha) of Statia's land area. The Quill is actively managed by STENAPA, but

Antillean Crested Hummingbird and Green-throated Carib—two of Statia's restricted-range birds. (PHOTOS: BRENDA AND DUNCAN KIRKBY)

the Boven sub-sector, while legally protected is currently the subject of a land dispute and is unmanaged.

There is no direct bird conservation work underway in Statia although STENAPA has facilitated a number of repeat bird surveys since 2003. STENAPA is also sponsoring school educational programs (with a focus on marine ecosystems) that are increasing environmental awareness among the island's youth.

Although historically a major point of trade prior to the 1800s, Statia is not currently under threat of major tourist developments, possibly due to its lack of calm, sandy beaches. However, other threats are having an impact on the island's ecosystems. Severe overgrazing has resulted in large areas denuded of vegetation, and proper management and containment of livestock will be needed to reduce the resultant desertification. Enforcement of an animal registry program has begun and (at least within the Quill) should decrease grazing pressure. The island's refuse landfill is within a coastal ravine, meaning that during storm surges and high winds this trash is dispersed across the coastal zone, possibly resulting in entanglement or consumption of debris by seabirds and other marine life. A sanitary refuse disposal site is urgently needed. Oiling of wildlife is a concern during spills from the oil transfer station which needs to improve its oil spill monitoring and response efforts. Statia's biodiversity is also at risk from introduced predators including dogs, cats, rats and mice.

Birds

Statia's 54 recorded bird species comprise 26 breeding species and 28 Neotropical migrants (although Statia is so small it does not hold significant populations of these migrants). Eight (of the 38) Lesser Antilles EBA restricted-range birds occur on the island, although none of these is endemic to Statia. A ninth restricted-range species, the Scaly-breasted Thrasher *Margarops fuscus*, was seen at the Quill in 2003 having gone unrecorded for 76 years. Its status as a breeding species remains to be confirmed. Eurasian Collared-dove *Streptopelia decaocto* was recorded for the first time on the island in 2003.

A population of 100–200 Red-billed Tropicbirds *Phaethon aethereus* was estimated from part of the Boven IBA (AN007) in 2003, suggesting that the island breeding population may be higher. Small numbers of other seabirds including White-tailed Tropicbird *P. lepturus* (<20) and Brown Booby *Sula leucogaster* (c.10) have been recorded in the vicinity of "White Wall" within the Quill IBA (AN008). Audubon's Shearwater *Puffinus lherminieri* was historically recorded on the island,

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

Table 1. Key bird species at Imortant Bird Areas in St Eustatius.

Key bird species	Criteria	National population	Criteria	St Eustatius IBAs AN007	St Eustatius IBAs AN008
				■ ■	■
Red-billed Tropicbird *Phaethon aethereus*	■	100–200		150	
Bridled Quail-dove *Geotrygon mystacea*	■				✓
Purple-throated Carib *Eulampis jugularis*	■				✓
Green-throated Carib *Eulampis holosericeus*	■			✓	✓
Antillean Crested Hummingbird *Orthorhyncus cristatus*	■				✓
Caribbean Elaenia *Elaenia martinica*	■			✓	✓
Pearly-eyed Thrasher *Margarops fuscatus*	■			✓	✓
Brown Trembler *Cinclocerthia ruficauda*	■				✓
Lesser Antillean Bullfinch *Loxigilla noctis*	■			✓	✓

All population figures = numbers of individuals.
Restricted-range birds ■. **Congregatory birds** ■.

and one resident has reported still hearing them call at night, but no breeding has been confirmed.

IMPORTANT BIRD AREAS

Statia's two IBAs—the island's international priority sites for bird conservation—cover 41% of the island's land area. Both IBAs are formally designated as protected areas—the terrestrial components are covered within the Quill–Boven National Park, and the marine component within the St Eustatius Marine Park. The IBAs have been identified on the basis of nine species that variously trigger the IBA criteria for restricted-range birds and congregatory birds. The Quill IBA (AN008) embraces the island's forest-dependent species (the restricted-range species), while Boven IBA (AN007) supports nesting habitat for *P. aethereus*.

Resolving the land dispute within Boven IBA appears to be critical to enabling effective management of grazing and thus the successful recovery of vegetation within the park. It would also facilitate the potential control of goats, cats and rats that almost certainly represent limiting factors for the breeding population of *P. aethereus*. Enforcement of an animal registry program within the Quill IBA should decrease the incidence of grazing in the park, but both goats and chickens are often present around and within the volcano and presumably impact the native fauna. Surveys to assess the population of each of the IBA trigger species should be a priority. Such surveys should be combined with annual monitoring of state, pressure and response variables at each IBA to provide an objective status assessment and highlight management interventions that might be required to maintain these internationally important biodiversity sites.

Boven IBA.
(PHOTO: NICOLE ESTEBAN)

KEY REFERENCES

COLLIER N. C. AND BROWN, A. C. (2003) Surveys of sea and terrestrial birds in Sint Eustatius. Florida, USA: Environmental Protection in the Caribbean (Unpublished report to St Eustatius National Parks)

VAN HALEWYN, R. AND NORTON, R. L. (1984) The status and conservation of seabirds in the Caribbean. Pp 169–222 in J. P. Croxall, P. G. H. Evans and R. W. Schreiber, eds. *Status and conservation of the world's seabirds*. Cambridge, U.K.: International Council for Bird Preservation (Techn. Publ. 2).

HOOGERWERF, A. (1977) Notes on the birds of St. Martin, Saba, and St. Eustatius. *Studies on the Fauna of Curaçao and other Caribbean islands* 54(176): 60–123.

RAFFAELE, H. WILEY J., GARRIDO, O., KEITH, A. AND RAFFAELE, J. (1998) *A guide to the birds of the West Indies*. Princeton, New Jersey: Princeton University Press.

ROJER, A. (1997) Biological inventory of Sint Eustatius. Curaçao, Netherlands Antilles: Carmabi Foundation (Unpublished report)

STUFFERS, A. L. (1956) The vegetation of the Netherlands Antilles. *Studies on the Flora of Curaçao and other Caribbean Islands* 1(15).

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

VOOUS, K. H. (1983) *Birds of the Netherlands Antilles*. Zutphen, The Netherlands: De Walburg Pers.

WALSH-MCGEHEE, M. (2000) Status and conservation priorities for White-tailed and Red-billed Tropicbirds in the West Indies. Pp 31–38 in E. A. Schreiber and D. S. Lee, eds. *Status and conservation of West Indian Seabirds*. Ruston, USA: Society of Caribbean Ornithology (Spec. Publ. 1).

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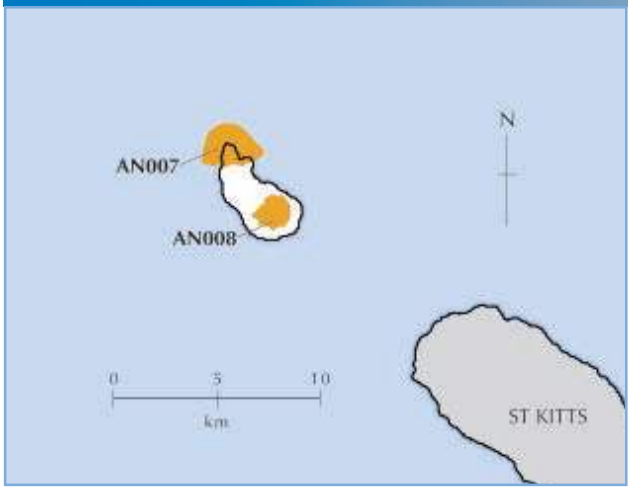
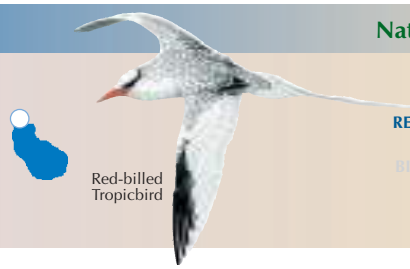
Figure 1. Location of Important Bird Areas in St Eustatius.



AN007 Boven

National Park/Marine Park

COORDINATES 17°31′N 63°00′W
ADMIN REGION St Eustatius
AREA 1,016 ha
ALTITUDE 0–300 m
HABITAT Cliff, rocky beach, shrubland, grassland



THREATENED BIRDS
RESTRICTED-RANGE BIRDS 4
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS ✔

Site description

Boven IBA is an area of xeric, uninhabited rocky hills in the north-west peninsula of St Eustatius that represents about 25% of the island's land area. Boven, Venus, Gilboa Hill, Signal Hill and Bergje comprise the "Northern Hills". These receive much less rainfall than the higher Quill IBA (AN008) resulting in a predominance of *Acacia* thorn scrublands and grassland. Rocky outcroppings are scattered through the hills. The coastline of Boven IBA is cliffs and rocky shore, from which this IBA extends 1 km out to sea. Zeelandia beach (and adjacent sandy cliffs) is at the south-east end of the area, and an oil transfer station is situated on the western border.

Birds

This IBA supports a globally significant population of Red-billed Tropicbird *Phaethon aethereus* and is important for four (of the 8) Lesser Antilles EBA restricted-range birds. *Phaethon aethereus* nest at Zeelandia beach and in the hills above the airport. Surveys in 2003 by Environmental Protection in the Caribbean (which did not cover all of the IBA due to access issues and limits on time) resulted in an estimate of 100–200 breeding individuals.

Other biodiversity

Restricted-range reptiles in the IBA include Lesser Antillean iguana *Iguana delicatissima* (Vulnerable), lizards *Ameiva erythrocephala*, *Anolis bimaculatus* and *A. wattsi*, and geckos *Sphaerodactylus sputator* and *S. sabanus*. The Near Threatened tree bat *Ardops nichollsi montserratensis* has a restricted range, and the endemic Statia morning glory *Ipomoea sphenophylla* can be found growing in the IBA.

Conservation

This mixed-ownership IBA is one sub-sector (525 ha) of the Quill–Boven National Park (the Netherlands Antilles' first park). The NGO park service, STENAPA, is attempting to manage Boven and limit grazing, although these efforts have met with resistance due to ancestral (disputed) claims to the land. Grazing continues within the protected area although vegetation has recovered from previous periods of clearance for agriculture and cattle rearing. Recreational use of the area has been hampered due to the land disputes, and visitors are rare. *Phaethon aethereus* are threatened by introduced alien predators (rats and cats), trampling of nest burrows by goats, erosion due to overgrazing and potential oiling due to spills from oil transfer station. The St Eustatius Marine Park surrounds the island and includes the 491-ha extension of this IBA.

AN008 The Quill

National Park/Marine Park

COORDINATES 17°29′N 62°58′W
ADMIN REGION St Eustatius
AREA 470 ha
ALTITUDE 0–601 m
HABITAT Shrubland, forest

THREATENED BIRDS
RESTRICTED-RANGE BIRDS 8
BIOME-RESTRICTED BIRDS
CONGREGATORY BIRDS

Site description

The Quill IBA is a dormant volcano at the south-eastern end of St Eustatius. Rising to over 600 m—the highest point on the island—it dominates the landscape. The IBA follows the national park boundaries which include the volcanic cone above 250 m (vegetated with thorn scrub transitioning to semi-evergreen seasonal forest on the north-west slope), the crater (which supports evergreen seasonal forest), the rim of the volcano (a small portion of which supports elfin forest), and the "White Wall" (a limestone formation on the southern slope of the volcano that drops down to sea-level). The IBA extends 1 km out to sea. There are no human settlements within the IBA.

Birds

This IBA is significant for supporting populations of all eight Lesser Antilles EBA restricted-range birds found on the island. A Scaly-breasted Thrasher *Margarops fuscus* was observed at the Quill in 2003 for the first time since 1927 although its status as a breeding bird (and thus a potential ninth restricted-range species) is unknown. Seabirds breed on the coast at White Wall, but the numbers are not thought to be significant internationally.

Other biodiversity

The restricted-range Antillean iguana *Iguana delicatissima* (Vulnerable) and red-bellied racer *Alsophis rufiventris* (Endangered), and the island endemic Statia morning glory *Ipomoea sphenophylla* are present in the IBA.

Conservation

This state-owned IBA is one sub-sector (340 ha) of the Quill–Boven National Park (the Netherlands Antilles' first park). STENAPA—the island's NGO park service—oversees conservation management for the Quill. Hiking trails are well maintained by volunteers and staff, and botanical interests, such as the endemic Statia morning glory, are protected. Grazing by untended goats has been problematic in the past. However, enforcement of an animal registry program has begun and should decrease the incidence of grazing within the park. The only known recent avian survey of the Quill was conducted by Environmental Protection in the Caribbean in March 2003. However, access to the crater forest was restricted due to trail repairs. The St Eustatius Marine Park surrounds the island and includes the 130-ha marine extension of this IBA.