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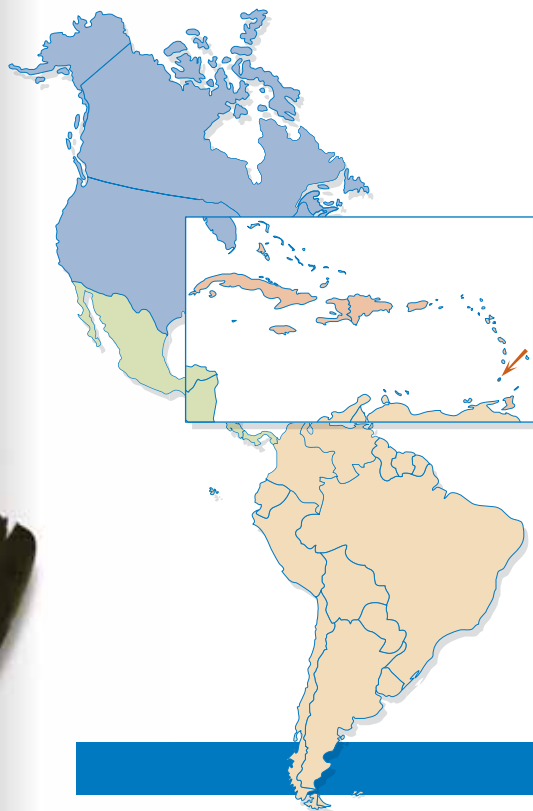
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Important Bird Areas AMERICAS

GRENADA

Bonnie L. Rusk





Country facts at a glance

Area:	344 km ²
Population:	96,000
Capital:	Saint George's
Altitude:	0–840 m
Number of IBAs:	6
Total IBA area:	2149 ha
IBA coverage of land area:	6%
Total number of birds:	164
Globally threatened birds:	1
Globally threatened birds in IBAs:	1
Country endemics:	1

General introduction

The island nation of Grenada lies at the southernmost end of the Lesser Antilles, just c.160 km north of the Venezuelan coast. It comprises three main islands: Grenada (311 km²) in the south; and the southern Grenadines islands of Carriacou (32 km², and 37 km north of Grenada) and Petit Martinique (0.7 km², and 6 km east of Carriacou) along with their associated offshore islets. Grenada is the highest remaining part of the submarine Grenada Bank that extends 180 km from Bequia (in the St Vincent Grenadines), south past Grenada. An active submarine volcano—"Kick-'em-Jenny"—sits 3 km north of Grenada. Its first recorded explosion into the atmosphere was in 1936. Carriacou and Petit Martinique are also exposed summits of the Grenada Bank.

The main island of Grenada is volcanic. The island's highest point is Mount St Catherine, part of a central chain of rugged mountains (that also includes Mount Qua Qua and Mount Sinai) that run north–south through the center of the island. South of this mountain chain is a system of curving ridges (the Southern Mountains) that run toward the south and then bend to the east and north-east and make up the Grand Etang Forest Reserve. These mountains descend gradually to an extensive lowland coastal plain in the east. Grenada supports a wide diversity of forest types with (in 1982) cloud-forest (including elfin woodlands, palm brake and montane thickets) on the highest peaks (covering c.1700 ha), then rainforests and lower montane rainforest (2280 ha), evergreen and semi-evergreen seasonal forest, deciduous forest and dry woodlands (less than 1750 ha), littoral woodland or dry coastal scrub (less than 1230 ha), and mangrove forest (less than 190 ha). Mangroves have greatly diminished in numbers and area, and pockets are found primarily along the eastern coastline from True Blue to Requirim, with some around Mount Hartman and Woburn Bays, and at Calivigny. One of the largest areas, at Levera, was mostly destroyed for development in 2003.

Like many Caribbean islands, Grenada was cleared of most of its forests to make way for sugarcane cultivation, but natural disasters paved the way for the introduction of other crops. In 1782, nutmeg (*Myristica fragrans*) was introduced to Grenada, and thrived in the island's ideal soils. The collapse of the sugar estates and the introduction of nutmeg and cacao encouraged the development of smaller landholdings, and the island developed a land-owning farmer class. Currently, Grenada relies on tourism as its main source of foreign exchange, especially since the construction of an international airport in 1985, located on the south-westernmost peninsula of Point Saline. Grenada's tropical climate is defined by a hot, humid rainy season from June to January (with maximum rainfall in November). Average annual rainfall varies between 4000 mm in the mountainous interior to 1500 mm in some coastal areas, and as little as 750 mm on the Point Saline peninsula. Grenada is divided into six parishes for administrative purposes.

The deep fertile soils on Carriacou and Petit Martinique resulted in extensive clearing for agriculture, primarily cotton and for a short period for sugarcane and fruit trees. By the late-1870s soil fertility had decreased and livestock were introduced. To this day, grazing continues to cause significant soil erosion, particularly during the dry season when the animals are released and graze freely. In spite of the clearances and livestock, recent (2004) estimates suggest that Carriacou is 65% forested (forest and woodland), albeit with just 135 ha in forest reserves (primarily High North Forest Reserve). The islands support seasonal evergreen forest, dry thorn scrub and deciduous forest, mangroves and fringing coral reefs. Offshore islets to the between Grenada and Carriacou are uninhabited.

Conservation and protected area system



The protection of Grenada’s natural resources (forests and wildlife) is directed by a series of policies and legislation, primarily under the management of the government’s Forestry and National Parks Department (FNPD). The Ordinances for the Protection of Forests, Soil and Water Conservation (1954 – 1958, with an amendment in 1984) addresses the protection of areas to provide natural and undisturbed habitat for the flora and fauna of Grenada, and gives protection mainly to the Grand Etang Forest Reserve (the area around Grand Etang Lake, Grenada) and High North Forest Reserve (Carriacou). These forest reserves serve as sanctuaries for wildlife, and the legislation prohibits hunting, trapping, and carrying firearms within them. The Birds and other Wildlife Protection Ordinances (of 1956, 1964 and 1966) were intended to provide protection to wild birds and other wildlife, with all birds and their eggs being protected throughout the year except those listed in an annex for which there is an open season. The Critically Endangered Grenada Dove (*Leptotila wellsi*) is not specifically mentioned in this legislation, but it is protected within the context of “all wild birds”.

“The plan for a System of National Parks and Protected Areas for Grenada has not been implemented nor formally adopted.”

In 1988, the Government of Grenada and the Organization of American States developed a Plan and Policy for a System of National Parks and Protected Areas for Grenada and Carriacou. However, this plan has not been implemented nor formally adopted. The National Parks and Protected Areas Act (1990) led to the establishment of both the Mount Hartman National Park and the Perseverance Protected Area (Dove Sanctuary). An amendment to this Act in 2007 enabled the re-designation of the Mount Hartman National Park

boundaries (in 2008). The FNPD initiated a participatory, National Forest Policy review which resulted in a government approved new Forest Policy (2002). The FNPD has also undertaken a review of all of Grenada’s key forest and wildlife legislation, and has drafted revisions although (as of June 2008) these revisions have not yet been implemented. The revised legislation addresses issues such as endangered species, and grants specific mention to species of special concern, such as Grenada Dove and the Grenada Hook-billed Kite (*Chondrohierax uncinatus mirus*).

About 23% of Grenada is currently forested: c.4000 ha as higher elevation forests and c.3000 ha of evergreen, semi-evergreen and deciduous seasonal forest and woodland. Almost 70% of this forest area is Crown land. However, most of Grenada’s protected land (primarily the Grand Etang Forest Reserve and the proposed Mount St Catherine Forest Reserve) cover just the high elevation montane forest-types leaving the seasonal forest, deciduous forest, dry woodlands, dry coastal scrub and mangrove forest very poorly protected. Grenada lies south of the hurricane belt, and before Hurricane Ivan (September 2004) and Emily (July 2005), the last hurricane to hit the island was in 1955 (Janet). Hurricane Ivan had a profoundly devastating effect on the island’s economy, agricultural sector and ecosystems (including those on which Grenada Dove depends). Biodiversity on the island is being affected by a range of factors (mostly related to development and agricultural pressures) which are described under the IBA profiles in BirdLife International (2008) and Data Zone. However, the introduction of the mongoose (*Herpestes auropunctatus*) during the 1880s is particularly notable. This alien invasive predator is now abundant and is thought to be having a significant impact on Grenada’s mammal, bird and herpetofauna.



Dry forest at Mount Hartman (GD006), south-west Grenada. This IBA is the single most important site for the Critically Endangered Grenada Dove (*Leptotila wellsi*), supporting approximately 37% of the global population. Photo: Bonnie Rusk



Ornithological importance

Over 160 species of bird have been recorded from Grenada, with resident landbirds represented by just 35 species. The remainder is comprised of Neotropical migrants, waterbirds and seabirds. A number of birds of South American origin are present on the island. However, the zoogeographic boundary of the West Indian region separates Grenada from Trinidad and Tobago which has a predominantly South American avifauna. Lesser Antilles Endemic Bird Area (EBA 030) restricted-range birds (of which there are 38) are represented by seven species, one of which, Grenada Dove (*Leptotila wellsi*), is endemic to the island of Grenada. The Grenada Flycatcher (*Myiarchus nugator*) and Lesser Antillean Tanager (*Tangara cucullata*) are restricted to Grenada and St Vincent. Four other Lesser Antilles restricted-range birds have been recorded from

Grenada but are not represented in IBAs as their current status is unclear. The Purple-throated Carib (*Eulampis jugularis*) was seen several times in the 1960s although it has been suggested that these may have been vagrants. Scaly-breasted Thrasher (*Margarops fuscus*) was described as “not common” and then “very rare” prior to 1940 and its current status is unknown. The Antillean Euphonia (*Euphonia musica*) is similar— recorded as “not very common” in the 1900s and “very rare” by the 1940s, the species does not seem to have been recorded since. Last, the Brown Trembler (*Cincloerthia ruficauda*) is unknown by current birdwatchers in Grenada (or visiting birding tours) although it is listed as present in the country. The presence of Lesser Antilles EBA restricted-range birds on Carriacou and Petit Martinique is poorly documented.

Development threat to Grenada Dove mitigated by conservation measures

Grenada Dove (*Leptotila wellsi*) is Grenada’s national bird, but it is Critically Endangered and since its abundance and distribution were first documented in 1987, the species has been limited to two isolated patches of secondary seasonal dry forest in the southwest (Mount Hartman National Park; GD006) and west of the island (Perseverance; GD002). The total population declined by about 50% between 1987 and 1990. In 1998, the population numbered only c.100 individuals, increasing to an estimated 180 individuals by 2004. Surveys in 2007 found 68 calling males suggesting a post-hurricane recovering population of c.136 individuals. With so few individuals in the population, the dove features prominently in the IBA analysis for Grenada, and is the focus of a range of conservation efforts being implemented by the government and the international scientific community.

Mount Hartman IBA is the single most important site for this Critically Endangered species. The Mount Hartman Estate, previously government-owned, was sold (in 2008, excluding the national park) to a private developer for a large-scale tourism development involving a hotel, golf course and over a hundred villas. In conjunction with the development, the national park boundaries were re-designated to embrace the dove’s center of abundance and a contiguous area of suitable dove habitat. Mitigation measures have also been put in place to minimize the impact on critical dove habitat.



Photo: Greg R. Homel



Mount Hartman National Park (GD006).
Photo: Lisa Sorenson

The only globally threatened bird present on the island is Grenada Dove (*Leptotila wellsi*; Box 1). The Near Threatened Caribbean Coot (*Fulica caribaea*) occurs on Grenada with 30 individuals recorded from Lake St Antoine in 1971, and an unspecified number again in 1987. However, there are no recent reports documenting the current status of the species on the island. The Near Threatened Buff-breasted Sandpiper (*Tryngites subruficollis*) is a very rare migrant on the island.

Little has been documented concerning the status and distribution of Grenada’s breeding and non-breeding seabirds (or in fact waterbirds and migrants in general). However, important areas for breeding seabirds are the unpopulated islets between Grenada and Carriacou, especially the islands close to Isle la Ronde. Boobies, presumably mostly Red-footed Booby (*Sula sula*) and Brown Booby (*S. leucogaster*) are by far the most important species group and significant rookeries (of unknown size) are to be found at “gwizo” (near Isle la Ronde), Les Tantes, and “Upper Rock”. Significant (but undocumented) numbers of Magnificent Frigatebird (*Fregata magnificens*) are resident at Sandy and Green Islands.

Brown Noddy (*Anous stolidus*) and Red-billed Tropicbird (*Phaethon aethereus*) are also found on these islands. Roseate Tern (*Sterna dougallii*), Bridled Tern (*Sterna anaethetus*), and Sooty Tern (*Sterna fuscata*) were observed (2004) around the islands between Carriacou and Kick-em-Jenny. All of these birds depend on the abundant fish (schools of anchovies and various fry or “pischet”) in the Isle la Ronde zone. Fishermen and other poachers target the young (fat-chested) boobies and Scaly-naped Pigeon or “Ramier” (*Patagioenas squamosa*), which, in 1987, were abundant on Sugarloaf and Sandy Islands.



Grenada Flycatcher (*Myiarchus nugator*), endemic to Grenada, St Vincent and the Grenadines.
Photo: Allan Sander

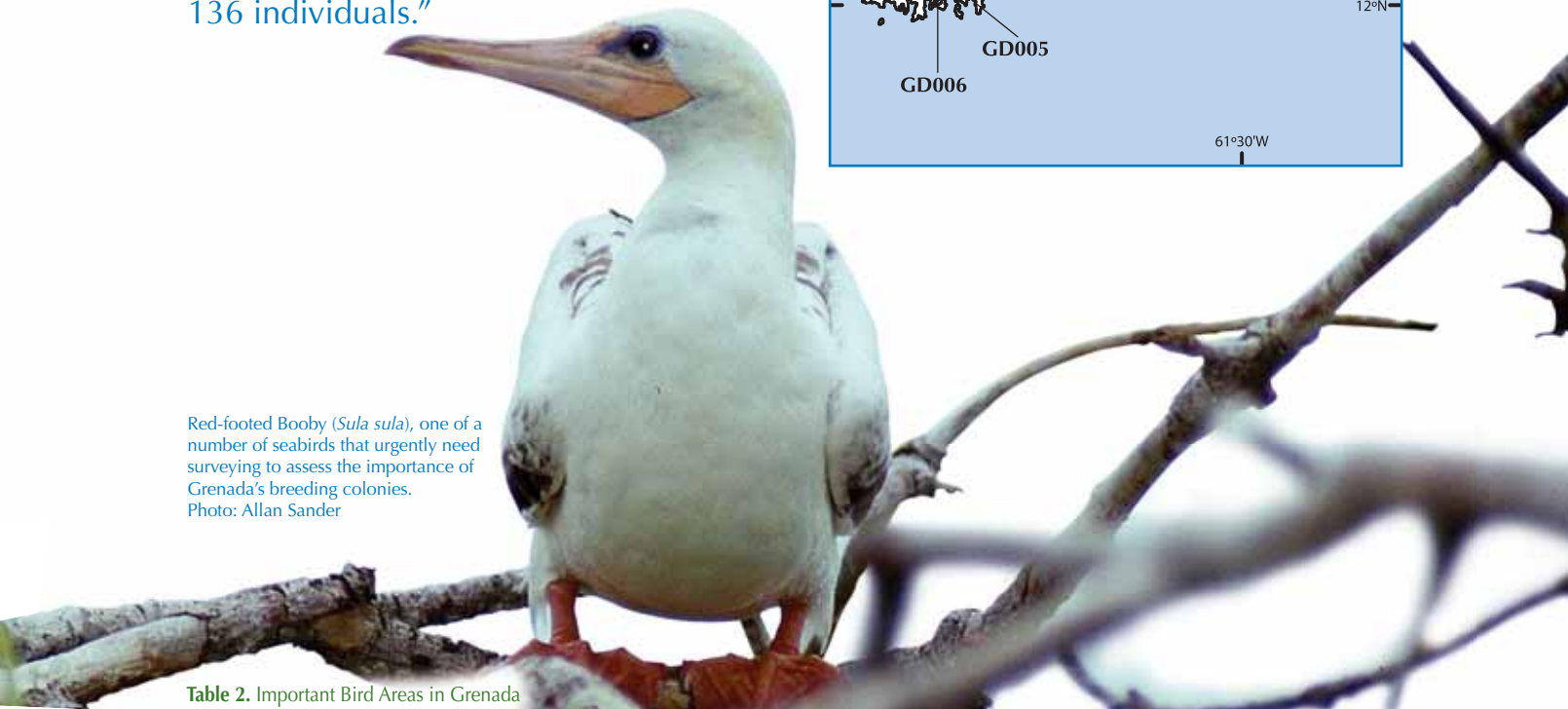
IBA overview

Grenada's six IBAs (Table 1, Figure 1) cover 21.5 km², equivalent to 30% of remaining forested area, but only 6.25% of total land cover. They have been identified on the basis of seven key bird species: all Lesser Antilles IBA restricted-range birds, one of which, Grenada Dove (*Leptotila wellsi*) is Critically Endangered. There is very little data concerning the distribution and abundance of these key species (with the exception of Grenada Dove), the other restricted-range birds that have been recorded historically, or other potential IBA trigger species such as the waterbirds and seabirds that are known to occur but in unknown numbers. As a result, five of the IBAs have been identified primarily for the Critically Endangered Grenada Dove, and together these IBAs support nearly the entire species' population. However, six males hold territories outside the IBAs: two on the west coast and four in the south-west.

Three of the IBAs (Perseverance GD002, Grand Etang GD004 and Mount Hartman GD006), are currently legally protected. The remainder include one IBA that is primarily Crown land (GD003), one that is owned (mostly) by a single land owner (GD001), and one that is held by many private land owners (GD005). These three unprotected IBAs all support critical habitat for Grenada Dove. Indeed, Woodlands IBA (GD005) supports 27% of the world population of the dove and should therefore be the focus of special management measures.

“Five of Grenada's six IBAs have been identified primarily for the Critically Endangered Grenada Dove, supporting almost the entire species' population of 136 individuals.”

Figure 1. Location of Important Bird Areas in Grenada



Red-footed Booby (*Sula sula*), one of a number of seabirds that urgently need surveying to assess the importance of Grenada's breeding colonies. Photo: Allan Sander

Table 2. Important Bird Areas in Grenada

IBA code	IBA name	Adm unit	Area (ha)	A1				A2	A3	A4			
				CR	EN	VU	NT			A4i	A4ii	A4iii	A4iv
GD001	Woodford	St. George's	26	1				X					
GD002	Perseverance	St. George's	32	1				X					
GD003	Beausejour/Grenville Vale	St. George's	101	1				X					
GD004	Grand Etang	St. George's, St. John, St. Andrew	1,730					X					
GD005	Woodlands	St. George's	198	1				X					
GD006	Mount Hartman	St. George's	62	1				X					

For information on trigger species at each IBA, see individual site accounts at BirdLife's Data Zone: www.birdlife.org/datazone/sites/

Opportunities

The paucity of data concerning the status and distribution of restricted-range species, waterbirds and seabirds suggests an urgent need for systematic surveys for these species groups throughout the islands that make up the nation of Grenada. With additional information it is likely that other IBAs will be identified. Mount St Catherines covers 573 ha of forest at 480–800 m in central Grenada. It probably supports the same key bird species that Grand Etang IBA supports, but this requires confirmation. Grand Etang IBA is Grenada's only montane protected area. It represents a significant portion of Grenada's interior high mountain forest covering different vegetation types, and it supports populations of all the restricted-range birds other than Grenada Dove. It might yet prove to support other restricted-range species (such as Purple-throated Carib; *Eulampis jugularis*, Scaly-breasted Thrasher; *Margarops fuscus*, Antillean Euphonia; *Euphonia musica* and Brown Trembler; *Cinlocerthia ruficauda*; see Ornithological importance above), and systematic surveys should be undertaken with these species in mind. Mount St Catherines is a proposed Forest Reserve currently being considered for designation by the Grenada Government. Surveys at Lake St Antoine may also highlight its continued importance for the Near

Threatened Caribbean Coot (*Fulica caribaea*), and surveys on/around the known seabird breeding colonies will help provide the necessary information to assess their international importance.

“Systematic surveys for several species groups is likely to result in further IBAs being identified.”

The existing dove monitoring program could be usefully expanded to include field assessments (surveys and subsequent monitoring) for other forested areas on Grenada and potentially the surrounding islands. All monitoring results should be used to inform the annual assessment of state, pressure and response variables at each of the country's IBAs to provide an objective status assessment and highlight management interventions that might be required to maintain these internationally important biodiversity sites.

Further information

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