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BirdLife International is a UK-registered charity No. 1042125
ISBN: 978-9942-9959-0-2

Recommended citation: DEVENISH, C., DÍAZ FERNÁNDEZ, D. F., CLAY, R. P., DAVIDSON, I. & YÉPEZ ZABALA, I. EDS. (2009) *Important Bird Areas Americas - Priority sites for biodiversity conservation*. Quito, Ecuador: BirdLife International (BirdLife Conservation Series No. 16).

To cite this chapter: PROSPER, J., JOSEPH, V., OTTO, A. & PROSPER, S. (2009) Antigua and Barbuda. Pp 53 - 58 in C. Devenish, D. F. Díaz Fernández, R. P. Clay, I. Davidson & I. Yépez Zabala Eds. *Important Bird Areas Americas - Priority sites for biodiversity conservation*. Quito, Ecuador: BirdLife International (BirdLife Conservation Series No. 16).

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Graphic design: Alejandro Miranda Baldares (alejoanime@yahoo.com)
Translations: Christian Devenish, Ítala Yépez Zabala & Amiro Pérez-Leroux
Maps: David F. Díaz Fernández, Ítala Yépez Zabala & Christian Devenish
Edition of Spanish language country chapters: Ítala Yépez Zabala, Carlos Huertas Sánchez & David F. Díaz Fernández
Graphic design volunteer (Spanish language country chapters): Adriana Valencia Tapia
Printed in Ecuador by Poligráfica C.A.

This publication and all country/territory chapters in their native languages are available for download at www.birdlife.org/

Important Bird Areas AMERICAS

ANTIGUA & BARBUDA

Joseph Prosper, Victor Joseph, Andrea Otto & Shanee Prosper



The endemic and Near Threatened Barbuda Warbler (*Dendroica subita*) is only represented in one IBA - Codrington Lagoon and the Creek (AG002).
Photo: Andrew Dobson



Country facts at a glance

Area:	441 km ²
Population:	83,000
Capital:	St John's
Altitude:	0–402 m
Number of IBAs:	11
Total IBA area:	18,893 ha
IBA coverage of land area:	13%
Total number of birds:	182
Globally threatened birds:	1
Globally threatened birds in IBAs:	1
Country endemics:	1

General introduction

The nation of Antigua and Barbuda comprises three main islands – Antigua, Barbuda and Redonda – all at the northern end of the Lesser Antilles. Antigua is the largest island (280 km²) and lies 40 km northeast of Montserrat (to the UK), 67 km east of Nevis (St Kitts and Nevis) and 60 km north of Guadeloupe (to France). Barbuda is smaller (161 km²) and located 42 km north of Antigua. Redonda is the smallest island (just 2.1 km²) and is situated 45 km west-south-west of Antigua, between Nevis (St Kitts and Nevis, 25 km to the northwest) and Montserrat (20 km southeast).

Antigua and Barbuda are emergent parts of a 3400 km² submarine platform. The depth of water between the two islands is just 27 to 33 m. Antigua is 19 km across (east to west) and 15 km from north to south. It has an intricate, deeply indented coastline with numerous islands, creeks, inlets and associated sand-bars (behind which wetlands have developed). A large portion of the east, north and south coasts are protected by fringing reefs. A flat, low-lying dry central plain gives rise to gently rolling limestone hills and valleys (vegetated with xeric scrub) in the north and east. The higher, volcanic mountains of the south-west support moist evergreen forest. Barbuda is a low limestone island with a less varied coastline although it supports extensive reef systems, especially off the east coast. Codrington Lagoon in the northwest is a large, almost enclosed saltwater lagoon bordered by mangroves and sand ridges. An area of highlands (c.35 m high) on the eastern side of the island is an escarpment with a scarp slope on the north and west, a gentle slope to the south, and sea cliffs on the east. Redonda is the cone of a volcano that rises abruptly from the sea in steep cliffs that surround the island. Antigua and Barbuda support some of the most extensive mangrove woodlands in the eastern Caribbean.



Magnificent Frigatebird (*Fregata magnificens*) chick at Codrington Lagoon - the Caribbean's largest frigatebird colony.
Photo: Jim Kushlan

Antigua and Barbuda's climate is tropical maritime and average annual precipitation is 1050 mm but severe droughts are experienced every few years (Barbuda is drier than Antigua). Rainfall is concentrated between September and November, while January to April is considered the driest period. Most of Antigua's land area (up to 92%) was under sugarcane cultivation for 300 years (the industry closed in the 1960s). The abandonment of sugar (and cotton) has resulted in a large increase of livestock production (especially cattle, but also free-roaming sheep and goats). However, tourism is now the island's major industry.

Conservation and protected area system



Legislation for the establishment of formal terrestrial protected areas in Antigua and Barbuda is lacking. In the 1990s, a draft of a new Forestry Act was written, making provision for the designation of protected areas. However this draft has not yet been enacted. The Government's Environment Division is currently engaged in the (GEF-funded) Ridges-to-Reef project that may declare specific areas as nature reserves or other protected areas, but currently, very little formal protection is afforded the terrestrial (and land-based wetland) biodiversity in Antigua and Barbuda. The marine environment is better catered for legislatively. The Fisheries Act allows for the designation of marine reserves, and in 2005 the North-East Marine Management Area (NEMMA) was declared – a 3100-ha area that extends from the northern tip of Antigua to its eastern extremity, and includes 30 offshore islands. This protected area receives more than 50,000 visitors each year, yet tourism contributes nothing to protected area management or conservation. The Fisheries Division (of the Ministry of Lands and Fisheries) has formally invited the NGO, Environmental Awareness Group (EAG) to participate in a quasi-autonomous Site Management Entity for the area's management. There is a keen desire to ensure that NEMMA becomes financially self-sustaining, and contributes tangibly to both biodiversity conservation and local livelihoods. Unfortunately, at the moment, this piece of legislation provides legal authority only for the management of the marine and not terrestrial habitats within the protected area. The Wild Bird Protection Act is a specific piece of legislation for bird protection. However, the act currently allows for an open hunting season (July 16–January 31), and thus provides little protection, for example, to the Vulnerable West Indian Whistling-duck (*Dendrocygna arborea*) or the Near Threatened Caribbean Coot (*Fulica caribaea*), both of which are listed as game species. Enforcement of this act and specific provisions for threatened species likely to be hunted are needed if this legislation is to assist bird conservation in the country.



Egret colony at McKinnon's Saltpond (AG003), one of only two New World breeding sites for Little Egret (*Egretta garzetta*).
Photo: Jim Kushlan

Effective biodiversity conservation is severely constrained by the dearth of trained staff in both the government and NGO sectors, a lack of biological knowledge, and inadequate investment by a debt-ridden government. These shortcomings are highlighted in the National Biodiversity Strategy and Action Plan which emphasizes the need for protected area and critical species management plans and for strengthened capacities in government and NGOs to manage biodiversity. Habitat loss, degradation and disturbance are serious conservation concerns. Wetland habitats in particular are under pressure on Antigua. They are converted to other uses (e.g. human settlement, tourism, and agriculture); degraded through clear-cutting of mangroves and swamp forest for lumber and agriculture; polluted with sewage, industrial water and pesticides; and impacted by natural catastrophes such as drought and hurricanes whose local effects are exacerbated by

“Currently, very little formal protection is afforded the terrestrial biodiversity in Antigua and Barbuda.”

The EAG and its partners in the Antiguan Racer Conservation Project (ARCP) and the subsequent Off-shore Islands Conservation Project have been leading an international effort to eradicate black rats (*Rattus rattus*) from approximately 15 islands, and to raise awareness of the need for an effective off-shore island management system. The ARCP has, to date, reintroduced the endemic and Critically Endangered Antiguan racer (*Alsophis antiguae*) to three rat-free islands, resulting in an increase in the population from 50 snakes in 1995 to 300 in January 2008. Interest that the ARCP generated, coupled with the realization that many jobs in tourism and fisheries depend on a healthy and biodiverse environment, recently culminated in proposals for a new protected area system to promote conservation and sustainable use. Proposed areas encompass the ranges of Antigua and Barbuda's most threatened species and habitats, from coral reefs to dry forests, and will afford an unprecedented opportunity for biodiversity restoration and protection in the country. Other than protected area designation, Antigua and Barbuda urgently needs greater enforcement and awareness of species protection laws, and an improvement in hunters' abilities to distinguish between protected and game species. There is also a need for training professionals involved in developing and administering conservation programs, and technicians involved in field implementation. At the same time, basic research is needed to assess population size, habitat use and threats to the country's key bird species to ensure that major conservation initiatives are based on sound science, and their efficacy monitored.

the other pressures. Severe overgrazing has resulted in large areas denuded of vegetation. Antigua's garbage landfill is within a coastal ravine. During storm surges, hurricanes and high winds, this trash is dispersed over the coastal-zone, possibly resulting in entanglement or consumption of debris (e.g. seabirds or other marine-life ingesting plastics). Introduced predators include small Indian mongoose (*Herpestes auropunctatus*), dogs, cats, rats and mice which are impacting breeding seabirds, ducks and shorebirds on the main islands and offshore islands alike (including Redonda). Excessive and under-regulated sport and subsistence hunting are an issue, especially for West Indian Whistling-duck. Significant progress has been made with regards to raising knowledge and awareness on the threatened status of this species and the importance of local wetlands through participation in the West Indian Whistling-duck and Wetlands Conservation Project.

Ornithological importance

At least 182 bird species have been recorded in Antigua and Barbuda, approximately 65% of which are Neotropical migratory birds. Eleven (of the 38) Lesser Antilles Endemic Bird Area (EBA 030) restricted-range birds occur on the islands. These include relatively uncommon (wet forest dependent) species such as Bridled Quail-dove (*Geotrygon mystacea*), Antillean Euphonia (*Euphonia musica*), Scaly-breasted Thrasher (*Margarops fuscus*) and Pearly-eyed Thrasher (*M. fuscatus*). However, the most significant species is the Barbuda Warbler (*Dendroica subita*) which is endemic to Barbuda. Although it occurs in the mangroves and the dry shrubland around Codrington Lagoon, little is known of this species' island distribution, population or ecological requirements. Barbuda Warbler is one of the country's four threatened and Near Threatened birds. The Near Threatened Buff-breasted Sandpiper (*Tryngites subruficollis*) and Piping Plover (*Charadrius melodus*) are only known as vagrants/rare migrants to the island and are not considered as national conservation priorities. Both West Indian Whistling-duck (*Dendrocygna arborea*) and Caribbean Coot (*Fulica caribaea*) are at risk due to the deterioration of wetland habitats across the islands, something that is impacting other waterbirds such as Masked Duck (*Nomonyx dominicus*), especially as they probably rely on a "network" of sites during their annual cycle. Hunting is also affecting the whistling-duck, and presumably the Near Threatened White-crowned Pigeon (*Patagioenas leucocephala*).

“Little is known of Barbuda Warbler’s island distribution, population or ecological requirements.”

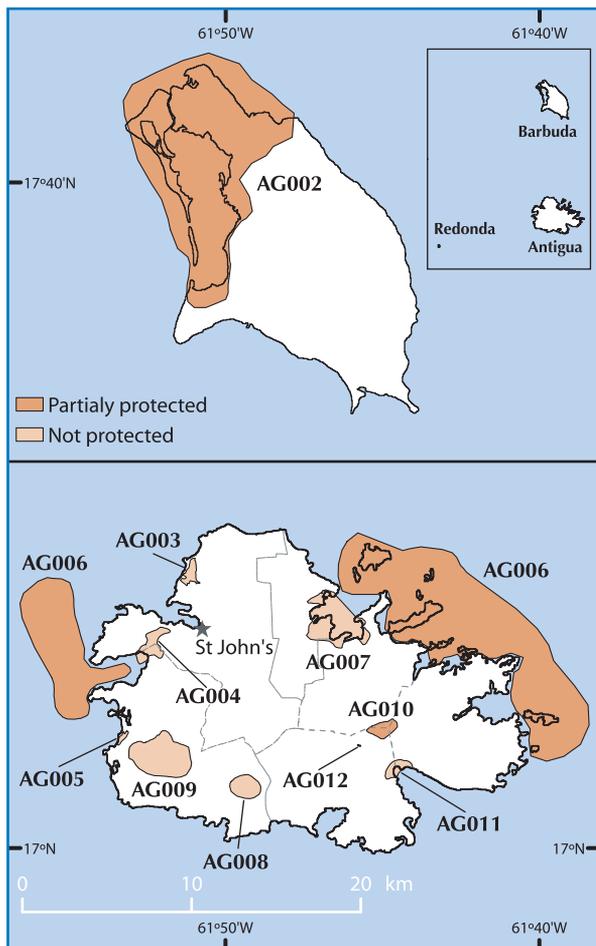
Barbuda supports the Caribbean’s largest colony of Magnificent Frigatebird (*Fregata magnificens*) with the population estimated at 5300 individuals (1743 occupied nests) in March 2008. Little is known about the current status (or population sizes) of the country’s other breeding seabirds although surveys by EAG are being undertaken. An interesting recent addition to Antigua’s breeding avifauna is the Little Egret (*Egretta garzetta*). Previously known to breed only on Barbados within the Western Hemisphere, three nests (and an island population of 12 birds) were documented on Antigua in March 2008 (Kushlan in press).



Magnificent Frigatebirds at Codrington Lagoon (AG002), the Caribbean’s largest frigate-bird colony.
Photo: Jim Kushlan

IBA overview

Figure 1. Location of Important Bird Areas in Antigua and Barbuda



Antigua and Barbuda’s 11¹ IBAs (Table 1, Figure 1) have been identified on the basis of 17 key bird species, including all four regularly occurring globally threatened and Near Threatened birds, all 11 restricted-range species, and four congregatory waterbirds/seabirds.

“Codrington Lagoon and Creek is the only IBA where the Near Threatened and endemic Barbuda Warbler occurs.”

Most of Antigua and Barbuda’s IBAs meet two or more criteria (Table 1), quite often combining significance for congregatory waterbirds/seabirds with restricted-range birds and/or globally threatened birds. For many of the congregatory species, significant populations (i.e. >1% of the global or biogeographic population of the species) are only found in one IBA. Codrington Lagoon and Creek IBA (AG002) is significant not just as the largest Magnificent Frigatebird (*Fregata magnificens*) colony in the Caribbean, but also as the only IBA where the globally Near Threatened (and endemic) Barbuda Warbler (*Dendroica subita*) occurs, and also the only IBA in the country where the restricted-range Lesser Antillean Flycatcher (*Myiarchus oberi*) is found. Wallings Forest IBA (AG008) and Christian Valley IBA (AG009) together represent Antigua’s wet forest ecosystem and are the only IBAs in the country where the restricted-range Bridled Quail-dove (*Geotrygon mystacea*), Antillean Euphonia (*Euphonia musica*), Scaly-breasted Thrasher (*Margarops fuscus*) and Pearly-eyed Thrasher (*M. fuscatus*) are found, highlighting their critical importance in maintaining Antigua’s biodiversity.



Caribbean Elaenia (*Elaenia martinica*)
Photo: Vincent Lemoine

¹ This directory only includes global IBAs, for regional IBAs using “B” or Caribbean criteria, see BirdLife International (2008).

Important Bird Areas AMERICAS

Table 1. Important Bird Areas in Antigua and Barbuda

IBA code	IBA name	Adm unit	Area (ha)	A1				A2	A3	A4				
				CR	EN	VU	NT			A4i	A4ii	A4iii	A4iv	
AG002	Codrington Lagoon and the Creek	Barbuda	7,785			1	1	X			X	X		
AG003	McKinnons Salt Pond	Antigua	78			1					X			
AG004	Hanson's Bay - Flashes	Antigua	185			1					X			
AG005	Valley Church Bay	Antigua	20			1	1	X						
AG006	Offshore Islands	Antigua	9,020			1						X		
AG007	Fitches Creek Bay	Antigua	730			1		X				X		
AG008	Wallings Forest	Antigua	190				1	X						
AG009	Christian Valley	Antigua	670				1	X						
AG010	Potsworks dam	Antigua	115			1		X				X		
AG011	Christian Cove	Antigua	95			1						X		
AG012	Bethesda Dam	Antigua	5			1	1	X				X		



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

Hunters report duck sightings instead of shooting them

Box 1

As part of the West Indian Whistling-duck and Wetlands Conservation Project, Joseph "Junior" Prosper, EAG colleagues, and volunteers have implemented a monitoring program, counting West Indian Whistling-ducks (*Dendrocygna arborea*) simultaneously on all wetlands four times per year. Prosper has also led efforts to educate hunters, landowners, decision makers and schoolchildren through talks, field trips, school projects and advocacy. Although serious threats to wetlands remain, this work has had a positive impact: many hunters have stopped shooting ducks and instead report their sightings to EAG; and nesting and local populations of whistling-ducks have increased.



West Indian Whistling-duck (*Dendrocygna arborea*).
Photo: Kristan D. Godbeer / DOE

Valley Church Bay (AG005) supports 15% of the country's West Indian Whistling-duck (*Dendrocygna arborea*) population.
Photo: Lisa Sorenson

Opportunities

State, pressure and response variables at each IBA should be monitored (e.g. Box 1) annually to provide an objective status assessment and highlight management interventions that might be required to maintain these internationally important biodiversity sites. Any such basic site status monitoring would be best informed by species-specific status information for the key species within IBAs.

Further information

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Acknowledgements

The authors would like to thank Brian Cooper, Carole McCauley, Jim Kushlan and Lisa Sorenson (Society for the Conservation and Study of Caribbean Birds) for their contributions to and reviews of this chapter.



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Antillean Crested Hummingbird (*Orthorhyncus cristatus*) triggers IBA criteria at seven sites on Antigua and Barbuda. Photo: Brenda & Duncan Kirkby