

GRENADA

INTRODUCTION

No information was received on the current situation in Grenada and its dependencies in the Grenadines. The following account is based on Vincent (1981), IUCN (1982 & 1983) and Putney (1982).

Grenada and its dependencies in the southern Grenadines are the most southerly of the Windward Islands in the Lesser Antilles. Grenada is a mountainous volcanic island rising to a peak at 840m; it is 344 km² in extent and has a humid tropical climate supporting extensive rain and cloud forests in the interior. The Grenada Grenadines to the northeast of Grenada comprise some twenty low-lying limestone islands and rocks with cactus scrub and dry woodland. Only the three largest islands, Carriacou, Petit Martinique and Ronde, are inhabited. Grenada achieved full independence in 1974; the islands have a population of about 110,000 and an economy based on agriculture, particularly the cultivation of spices.

There are several small wetlands on the main island, including a crater lake, fresh and saline ponds in the lowlands, and mangroves along the south coast. The only wetlands in the Grenadines are some small patches of mangroves on Carriacou and a saline pond with mangroves on Saline Island, a tiny island off the south coast of Carriacou. There are many beaches with nesting sea turtles (*Chelonia mydas*, *Dermochelys coriacea* and *Eretmochelys imbricata*), offshore islets with sea-bird colonies and patches of coral reef throughout the islands, and extensive sea-grass beds off the east and south coasts of Grenada and off western Carriacou.

The government department responsible for conservation is the Forestry Division within the Ministry of Agriculture. The Grenada Historical Society, a non-governmental body created in 1976, is concerned not only with the preservation of historical sites but also with the protection of areas for conservation purposes, and has worked in close collaboration with the Government on a project for the establishment of a protected area around a small lake (Levera Pond). Relevant legislation includes the Ordinance for the Protection of Forests, Soil and Water Conservation (1949, 1954 and 1958), the Ordinance for the Protection of Birds and other Wildlife (1956, 1964 and 1966), and the Ordinance for the Protection of Territorial Waters against Oil Spills (1934 and 1958). By 1981, only two protected areas had been established; Grand Etang Forest Reserve (1,544 ha) established in 1910 in the interior highlands of Grenada, and a protected area incorporating an islet off northwestern Carriacou.

WETLANDS

No recent information is available on the wetlands of Grenada and the southern Grenadines. The following site descriptions are based on Lack & Lack (1973), Vincent (1981) and Putney (1982). (For map, see Dominica.)

Levera Pond (1)

Location: 12°13'N, 61°37'W; at the northeast tip of Grenada.

Area: c.30 ha.

Altitude: 0m.

Province and type: 8.41.13; 07, 08 & 16.

Site description: A brackish pond with an average depth of 3m, completely surrounded by mangrove swamps and seasonally flooded grassland. Flooding occurs during the wet season, from June to December; at high levels the pond breaks through to the sea, and during periods of high tides and storms there is an inflow of sea water.

Principal vegetation: Mangrove swamps dominated by *Rhizophora mangle* with *Laguncularia racemosa* and a few stands of *Avicennia germinans*, some submergent vegetation, and fresh to brackish marshes; cactus scrub in surrounding areas.

Land tenure: A mixture of public and private ownership.

Protection: None.

Land use: Some harvesting of crabs.

Waterfowl: A breeding area for Ardeidae (*Bubulcus ibis* and *Egretta caerulea*), and a feeding and roosting area for a wide variety of migratory waterfowl from both North and South America. Species recorded include *Podilymbus podiceps*, *Pelecanus occidentalis*, *Anhinga anhinga*, *Nycticorax nycticorax*, *Nyctanassa violacea*, *Butorides virescens*, *Ardea herodias*, *Eudocimus ruber*, *Dendrocygna arborea*, *Oxyura jamaicensis*, *Gallinula chloropus*, *Fulica caribaea*, seventeen species of Nearctic shorebirds and *Larus atricilla*.

Other fauna: Over 80 species of birds have been recorded in the Levera area, including most of Grenada's resident birds, and migrant *Pandion haliaetus*, *Falco columbarius* and *Seiurus noveboracensis*. *Iguana iguana* forages in the swamp; a variety of fish species including the introduced *Tilapia mossambica* are common; and crabs, mainly land crabs *Geocarcinus* sp, are abundant.

Threats: Some of the mangroves have been destroyed, and large quantities of mud and silt are being deposited in the pond because of erosion in the watershed.

Research and conservation: Identified by Putney as an area with multiple resource values. Levera Pond and the nearby Sugar Loaf, Green Island and Sandy Island have been incorporated in a proposed protected area.

References: Vincent (1981); Putney (1982).

Source: See references.

Criteria for inclusion: 3a.

Lake St. Antoine (2)

Location: 12°11'N, 61°37'W; 2 km northeast of Tivoli, in the northeast lowlands of Grenada.

Area: c.25 ha.

Altitude: Near sea level.

Province and type: 8.41.13; 12.

Site description: A small freshwater lake and marshes.

Principal vegetation: Freshwater marshes; dry woodland in surrounding areas.

Land tenure: Privately owned.

Protection: None.

Land use: Some tree crops and grazing in the area.

Waterfowl: A breeding area for *Podilymbus podiceps*, *Oxyura jamaicensis* and *Fulica caribaea* and Ardeidae (30 observed in 1971).

Other fauna: No information.

Threats: No information.
References: Lack & Lack (1973); Putney (1982).
Source: See references.
Criteria for inclusion: 3a.

Grand Etang (3)

Location: 12°05'N, 61°42'W; in the southern highlands of Grenada, 7 km northeast of St. George's.
Area: 15 ha.
Altitude: c.500m.
Province and type: 8.41.13; 12.
Site description: An old freshwater crater lake with some fringing marshes.
Principal vegetation: Freshwater marshes; tropical rain forest in surrounding areas.
Land tenure: Public land (state owned).
Protection: Within the Grand Etang Forest Reserve (1,544 ha) established in 1910.
Land use: Multiple use forestry in the reserve.
Waterfowl: *Butorides virescens* occurs in the marshes.
Other fauna: The introduced monkey *Ceropithecus mona* occurs in the reserve.
Threats: No information.
References: Lack & Lack (1973); IUCN (1982); Putney (1982).
Source: See references.
Criteria for inclusion: 3a.

Calivigny Mangrove Swamps (4)

Location: 12°00'N, 61°44'W; along the south coast of Grenada between Prickly Bay and St. David's Point.
Area: Several hundred ha.
Altitude: 0m.
Province and type: 8.41.13; 01, 05, 07 & 08.
Site description: Mangrove swamps, associated brackish to saline marshes and sandy beaches in Prickly Bay, Woburn Bay and Westerhall Bay; the largest mangrove system in the southern Windward Islands.
Principal vegetation: Mangroves; cultivated land and cactus scrub inland, and sea-grass beds offshore.
Land tenure: Privately owned.
Protection: None.
Land use: Sand mining in Prickly Bay, solid waste disposal in Woburn Bay, and tourism in Westerhall Bay; cultivation inland.
Waterfowl: No information.
Other fauna: There is a sea-bird colony on Hog Island in Woburn Bay; the sea turtles *Dermochelys coriacea* and *Eretmochelys imbricata* nest on the beaches; and there are very rich marine resources offshore.
Threats: There is some seaborne pollution in the area.
References: Putney (1982).
Source: See references.
Criteria for inclusion: 3a.

Point Salines Ponds (5)

Location: 12°00'N, 61°47'W; at the southwest tip of Grenada.
Area: A few ha.
Altitude: Near sea level.

Province and type: 8.41.13; 05 & 07.

Site description: Two small saline lagoons with fringing mudflats and adjacent sandy beaches.

Principal vegetation: Cultivation and cactus scrub in surrounding areas.

Land tenure: Privately owned.

Protection: None.

Land use: None.

Waterfowl: An important area for migratory shorebirds. Lack & Lack recorded thirteen species of shorebirds including large numbers of *Tringa flavipes*, *Calidris pusilla*, *C. minutilla* and *Micropalama himantopus*. *Eudocimus ruber* has been recorded.

Other fauna: The sea turtle *Dermochelys coriacea* nests on the beaches.

Threats: No information.

References: Lack & Lack (1973); Putney (1982).

Source: See references.

Criteria for inclusion: 0.

Carriacou Mangroves (6)

Location: 12°28'N, 61°29'W; at the west end of Carriacou Island, Grenadines.

Area: c.100 ha.

Altitude: 0m.

Province and type: 8.41.13; 01, 05 & 08.

Site description: Coastal mangrove swamps and adjacent sandy beaches in three small bays.

Principal vegetation: Mangroves and littoral vegetation; dry woodland inland, and some sea-grass beds offshore.

Land tenure: Public land (state owned).

Protection: None.

Land use: Grazing by domestic livestock on adjacent land.

Waterfowl: No information.

Other fauna: Sea turtles nest on the beaches, and there are commercially important beds of the tree-oyster *Isognomon alatus*.

Threats: There is some seaborne pollution.

References: Putney (1982).

Source: See references.

Criteria for inclusion: 0.

Saline Island Pond (7)

Location: 12°26'N, 61°28'W; on Saline Island, to the south of Carriacou in the Grenadines.

Area: A few ha.

Altitude: Near sea level.

Province and type: 8.41.13; 05, 07 & 08.

Site description: A small saline lagoon with fringing mangrove swamps and nearby sandy beaches.

Principal vegetation: Mangroves.

Land tenure: Privately owned.

Protection: None.

Land use: None; the island is uninhabited.

Waterfowl: No information.

Other fauna: The sea turtle *Eretmochelys imbricata* nests on the beaches, and there are coral reefs offshore.

Threats: There is some seaborne pollution around the island.

References: Putney (1982).

Source: See references.

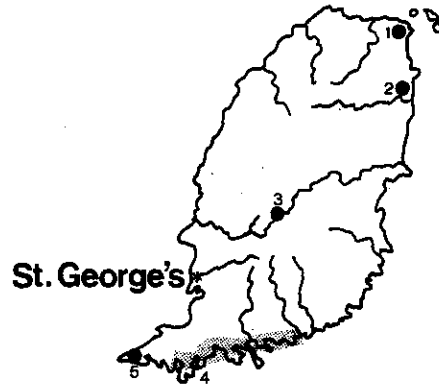
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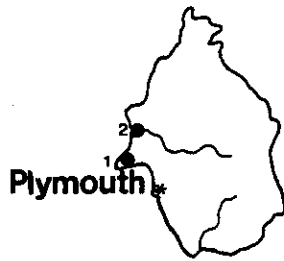
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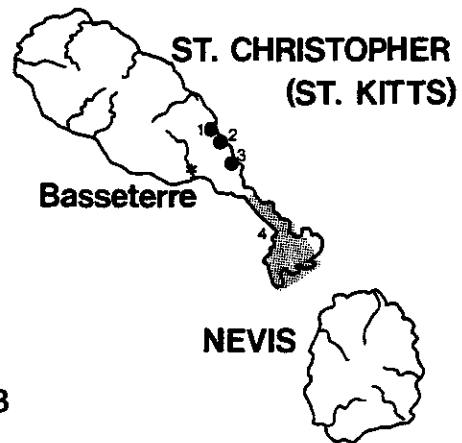
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