

INFORMATION SHEET ON RAMSAR WETLANDS BLACK RIVER LOWER MORASS

- 1. COUNTRY**
Jamaica
- 2. DATE**
September 9, 1997
- 3. REFERENCE**
6JM001
- 4. CONTACT**
Executive Director
Natural Resources Conservation Authority
53 ½ Molynes Road
Kingston 10
Jamaica
- 5. NAME**
Black River Lower Morass
- 6. DATE OF RAMSAR DESIGNATION**
07-10-1997
- 7. COORDINATES**
18 degrees 4 minutes north, 77 degrees 48 minutes west. Jamaica metric grid 10/162/153 to nearest 100 metres
- 8. LOCATION**
South-western region of Jamaica, bounded on the west and on the north by major roads linking the towns of Black River and Middle Quartes and Lacovia, on the east by Santa Cruz Mountains and on the south by the coast. Nearest town: Black River.
- 9. AREA**
Approximately 5700 hectares
- 10. WETLAND TYPE**
Marine and Coastal Wetlands
Type 9 Intertidal forested wetlands (mangrove swamps)

Inland Wetlands
Type 1 Permanent rivers and streams
Type 11 Freshwater swamp forest
Type 12 Peatlands
- 11. ELEVATION**
0-15 metres above sea level
- 12. OVERVIEW**
The Black River Lower Morass is the largest freshwater wetland ecosystem in Jamaica and the Caribbean. It is a biologically diverse and extremely complex natural wetland ecosystem that supports a large number of plants, animals and natural communities.
- 13. PHYSICAL FEATURES**
The Black River Lower Morass lies on the coastal flood plain. It is situated around the lower reaches of the Black River and receives flow from a number of tributaries and upwellings. It

consists of low marshland with limestone islands, which support human habitation, grazing of livestock and cultivation.

The morass is surrounded by Tertiary White Limestone Formation in the north and east and uplands to the north west. In the wetland, the primary Quaternary units are marsh and peat. These are underlain by clay deposits. Flat areas between the morass and the uplands are comprised of “interior valley alluvium”. The Newport Limestone dominates to the south with primarily alluvium, peat and wind-blown sand in the south-eastern areas. There is a well-developed fault pattern, the main trend being NW-SE.

The Black River Basin is about 67,341 ha in extent and includes a “well developed karstic terrain in the upper region (Cockpit Country), the gently sloping Pedro Plains, and the morasses of the coastal areas”, The Black River is the primary source of surface drainage.

14. ECOLOGICAL FEATURES

The wetland consists of a varied number of habitats, including the following:

- a) Sedge Marsh dominated by *Cladium jamaicensis* (sawgrass),
 - b) Riparian Swale dominated by *Typha domingensis*, mangrove forest consisting of *Rhizophora mangle* (Red Mangrove), *Avicennia germinans* (Black Mangrove) and *Laguncularia racemosa* (White Mangrove).
 - c) Riparian forest and the now rare and restricted Swamp Forest dominated by *Griasp cauliflora* (Anchovy Pear) and *Roystonea princeps* (Endemic Swamp Cabbage).
- The limestone islands are important physical features. These islands are covered by completely different vegetation, which has been modified. The economically important *Sabal jamaicensis* (Bull Thach) is the dominant natural plant form, but most have been replaced by *Haemotoxylum campechianum* (Logwood) and tree crops such as ackee, coconut, mango and cashew.

15. LAND TENURE

Owned by the Government of Jamaica and the Petroleum Corporation of Jamaica.

16. CONSERVATION MEASURES TAKEN

Designated a Conservation Area in the St. Elizabeth Development Order

17. CONSERVATION MEASURES PROPOSED

The area has been declared a Game Reserve under the Wild Life Protection Act, 1945 and a protected area under the Natural Resources Conservation Authority Act, 1991. It is also being nominated as a Ramsar site.

18. CURRENT LAND USE

Agricultural activity includes the cultivation of sugar cane, rice, dasheen, other food crops and fruit trees. Fishing and harvesting of shrimp takes place and in many cases this is the only means of livelihood for people. Palm fronds and thatch, mangroves as well as *Phragmites* are used for construction material and basket weaving.

19. DISTURBANCES / THREATS

Plant associations throughout the wetland have been reduced over the years by stresses such as fires, removal of trees for timber and fuel, harvesting of palm fronds, thatch and *Phragmites* for construction material and basket weaving. The most obvious negative impacts occur in the Swamp Forest and Mangrove Forest.

20. HYDROLOGICAL / PHYSICAL VALUES

The wetland is traversed by the Black River, the island's largest river system that originates in the Cockpit Country, north of the wetland. It has an important influence not only of aspects of the area's hydrology and ecology, but also on its social and economic systems. It is fed by three rivers, the YS, Middle Quarters and Broad Rivers. The first two are exogenous, also originating outside of the morass, flooding large areas with freshwater before emptying into the sea. The Broad River is the largest endogenous river, arising within the morass by artesian upwelling through morass peat, and it has intrusions of salt water which extend as far as 10 km (depending on rainfall and tides). Other rivers arising within the morass are the Styx River, Frenchmans River and Cashew Spring.

The varied number of habitats when all combined perform a number of valuable functions including the removal of nutrients carried by the Black River from the Upper Morass, as well as exporting “substantial organic carbon in the form of particulate detritus to the food web of estuarine and coastal ecosystems”, controlling flood waters from the YS and Black Rivers and acting as a buffer against the sea.

21. SOCIAL AND CULTURAL VALUES

Some of the buildings (church, courthouse and offices) in Black River have been declared National Monuments.

22. NOTEWORTHY FAUNA

A large number of vertebrates and invertebrates depend on the Black River Lower Morass. At least 150 vertebrate species have been recorded, including endangered species. Just below 50% of the island’s avian species have been identified in the morass. The morass, particularly basins around the Middle Quarters, YS and Upper Broad Rivers, is reportedly very important for wetland bird species. Reportedly 149 of the 111 aquatic species and 41 species of migratory birds occur in the Morass. Waterfowl recorded included the West Indian Whistling Duck (*Dendrocygna arborea*), Limpkin (*Aramus guarauna*), Pied-billed Grebe (*Podilymbus podiceps*), Least Bittern (*Ixobrychus exilis*), Cattle Egret (*Bubulcus ibis*), Masked Duck (*Oxyura dominica*), Clapper Rail (*Rallus longirostris*), Yellow-breasted Crake (*Porzana flaviventer*) and Common Gallinule (*Gallinula chloropus*).

The morass also provides nurseries among the mangroves for shrimp such as *Macrobrachium acanthurus* and *M. faustinum* and fish which are of commercial value such as the tarpon (*Megalops atlantica*), snook (*Centropomus undecimalis*), jack (*Caranx latus*), and snapper (*Lutjanus apodus*) as well as the endemic ticki ticki (*Gambusia melapleura*).

Reptiles of the Lower Morass include the American Crocodile, *Crocodylus acutus*, five species of Anolis lizard, *Aristelliger* sp., the endemic freshwater turtle *Pseudemys terrapen*, and the edible freshwater turtle *Chrysemys terrapen*. Amphibians include *Eleutherodactylus luteolus* and the introduced *Bufo marinus*.

23. NOTEWORTHY FLORA

The Morass supports a rich indigenous flora and comprises an important genetic reserve with 92 species of flowering plants, 25% which are considered rare, and 8% endemic to Jamaica.

24. CURRENT RESEARCH / FACILITIES

An Environmental Awareness Survey of the Black River was conducted in November 1996. Another study was conducted to look at the impact of human activities and habitation of wetlands as well as awareness and knowledge of issues such as environmental degradation and conservation. (Past research includes that only the feasibility of, and the potential impact of peat mining on the morass).

25. CONSERVATION EDUCATION

A programme will be designed to increase public awareness on environmental issues.

26. RECREATION / TOURISM

Tourism related activities are presently occurring in the morass including boat tours along the Black River, swimming, bird watching and limited sports fishing. There is potential for further expansion of tourism in the area.

27. MANAGEMENT AUTHORITY

Once declared a protected area under the Natural Resources Conservation Authority (NRCA) Act, 1991, the NRCA may delegate management authority for the site to an entity such as a non governmental or community based organization.

28. JURISDICTION

Local Government

29. REFERENCES

see original sheet (11 references)

30. REASONS FOR RAMSAR INCLUSION

Criteria # 1

The Black River Lower Morass is the largest herbaceous wetland in Jamaica and reportedly contains the best example of Amazonian type swamp forest. It also exports organic carbon to the food web of estuarine and coastal ecosystems. {1a}

Criteria # 2

The morass supports a variety of wildlife including endemic and endangered species.
{2b,2c,2d}

Criteria # 3

The Black River Lower Morass is considered among the most important habitats for wetland birds in Jamaica. {3b}

31. MAP OF SITE

see attachment