

ABSTRACT

An Assessment of the Mangrove Forests of the Great Morass in St. Thomas,

Eastern Jamaica

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Between October 2006 and March 2007 the St. Thomas Great Morass, approximately 1,660 ha was assessed to determine extent, status, uses and threats. This research was conducted using remote sensing, including desktop analysis of satellite and aerial photography, followed by preliminary surveys, ground-truthing and land survey using WAAS-GPS systems to finalize site maps. Floristic and physico-chemical data were gathered from twenty-eight belt transects (10m long) and two (20 minute) observations from a boat. The site was divided into four stands. Stand I was highly disturbed, Stands II and III had variable disturbance while Stand IV exhibited least disturbance. Though the numbers of seeds/seedlings suggests low resilience, the wetland appears stable with no discernable change in size over 28 years (1980 – 2007) with mature trees approaching 18 m in height. The Asprey and Robbins classical mangrove zonation was not evident as, *Rhizophora mangle* and *Laguncularia racemosa* dominated but *Conocarpus erectus* and *Avicennia germinans* were also observed. Narrow herbaceous strips limited to the margins of waterways were dominated by *Typha domingensis*, *Phragmites australis* and *Cyperus giganteus*. The biodiversity recorded included 80 faunal and 67 floral species, of which, 2 butterflies, 9 birds and 3 plants were endemic. The morass was interspaced by

“limestone islands” dominated by species such as *Thrinax*, *Leucena* and *Samanea*, and is adjacent to sandy beaches which are reportedly nesting areas for the endangered marine turtles *Eretmochelys imbricate* and *Dermochelys coriacea*. The anthropogenic impacts included bird-shooting, fishing, charcoal burning, fence-post cutting, subsistence agriculture, sugarcane cultivation and discharge of industrial waste (sugar). The evidence suggests the area is worthy of protection and could be declared a Ramsar site of international importance.

Keywords: Wetland, remote sensing, anthropogenic impacts, St. Thomas Great Morass, Ainsley A. Henry, Morant, Ramsar.