

**STUDY OF HUMAN IMPACTS THAT EFFECT THE COVER AND  
DENSITY OF ANNONA GLABRA L. IN THE MUTHURAJAWELA  
SANCTUARY AREA**

By

**B. M. Priyanthi Fernando**

DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE DEGREE OF  
MASTER OF SCIENCE  
IN ENVIRONMENTAL SCIENCE  
OF THE UNIVERSITY OF COLOMBO  
SRI LANKA

529879

July 2004

## ABSTRACT

Today the coastland wetland Muthurajawela is deteriorating fast, threatening its biodiversity due to many reasons. Introduction of exotic species performs a major role among other reasons. One such exotic species that has aggressively spread over large areas of muthurajawela marsh is *Annona glabra* (IUCN, 2000). This species has invaded into all landscape types within the Sanctuary.

In this study the cover and density of *Annona glabra* in the Muthurajawela Sanctuary was examined and the anthropogenic factors that effect its abundance in the sanctuary were investigated.

Fifteen locations were identified to represent the sanctuary and within each location 03 representative plots were selected and in each plot density of shrubs and branches of *Annona glabra* were enumerated. Within 100m radius of each sampling plot existing human disturbances were evaluated according to a scoring system. Human disturbances of each location were compared with density of *Annona glabra* shrubs and branches enumerated in that particular location.

According to results of the study cover and density of *Annona glabra* in different locations of Muthurajawela Sanctuary is not uniform.

Statistical analysis shows that there is a relationship between human impats that exists in the sanctuary and cover, density, height and diameter variations of *Annona glabra*.