ASSESSING THE DIVERSITY OF WOODY PLANT SPECIES IN GANNORUWA FOREST AND PREPARATION OF SIMPLE TEACHING AIDS FOR TEACHING ECOLOGICAL DIVERSITY

A PROJECT REPORT PRESENTED

BY

WEERASEKARA. W. M. N.

to the

POSTGRADUATE INSTITUTE OF SCIENCE

in partial fulfilment of the requirement

for the award of the degree of

MASTER OF SCIENCE

of the

UNIVERSITY OF PERADENIYA

SRI LANKA

October 1999

ABSTRACT

ASSESSING THE DIVERSITY OF WOODY PLANT SPECIES IN GANNORUWA FOREST AND PREPARATION OF SIMPLE TEACHING AIDS FOR TEACHING ECOLOGICAL DIVERSITY

W.M.N. Weerasekara, University of Peradeniya, Postgraduate Institute of Science.

"Biodiversity" is the variety and variation of living organisms. In the new Advance Level Biology curriculum, biodiversity has been introduced in it's second unit. Field activity based concepts like biodiversity is difficult to teach with out taking students to the field. Secondary school teachers have faced many difficulties in teaching biodiversity due to lack of suitable natural ecosystem close to their schools to use as out-door laboratories. Therefore teaching aids are very important in teaching biodiversity.

The term biodiversity includes the varieties and variation of all plant and animals at genetic and species levels as well as the variation of habitats or ecosystem. Teaching all these to A/L students is too coasting and need more resources. Therefore, in this study, the variation of woody plant and the plant ecosystems in a forest is studied.

This study was carried out at Gannoruwa forest, which is one of the remaining forest patch in the vicinity of Kandy. Three 50m × 50m experimental plots were established at randomly selected points within the mature forest patch and the woody

plant species were enumerated. Seedlings were enumerated in four 2m × 2m quadrates established in each experimental plot.

54 plant species were identified in all three plots. *Memezylon urceolatum, Maichelia champaca, Euphorbia longana* and *Neoletisia cassia* were the dominant species in the sample area. The habitat diversity is somewhat high (value of the Sorensen coefficient: 0.4163±0.004) and there are high divers and less divers patches. This less divers patches are due to the dominance of exotic plant species.

Herbarium specimens, coloured slides, coloured photographs of forest plant species and posters were prepared as aids for teaching woody plant diversity in a forest ecosystem.