THE OCCURRENCE AND DISTRIBUTION OF FRESHWATER VASCULAR PLANTS IN SELECTED AREAS OF CEBU

A Thesis

Presented to

the Faculty of the Graduate School

University of San Carlos

Cebu City

In Partial Fulfillment

of the Requirements for the Degree

MAST-BIOLOGY

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by

Brenda R. Villacanas

October, 1975

APPROVAL SHEET

This thesis entitled THE OCCURRENCE AND DISTRIBUTION OF FRESHWATER VASCULAR PLANTS IN SELECTED AREAS OF CEBU, prepared and submitted by Miss Brenda Relator Villacanas in partial fulfillment of the requirements for the degree of MAST Major in Biology has been examined and is recommended for acceptance and approval for ORAL EXAMINATION.

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ABSTRACT

The study deals with the identification and classification of the different species of freshwater vascular plants in the selected areas of Cebu, the determination of the associations, abundance and distribution of these plants in the habitats surveyed, and the effects of the physico-chemical factors of the habitats studied on the abundance and distribution of these plants. The study was conducted from August to October 1973.

A total of twelve families belonging to the classes Filicinae and Angiospermae were represented in the collection. Fourteen genera and eighteen species were identified and classified. Five of these were floating plants, three species were submerged, and nine species were emergent plants.

Dominant species and the types of plant associations differed from habitat to habitat and from quadrat to quadrat. There appears to be a slight distinction in the type of assemblage of plants in the running and standing water habitats. A wider variety of species was characteristic only of standing water habitats.

Ipomea aquatica was the most widely distributed and the most abundant species in running water and least in the standing water habitats.

Next to I. aquatica, N. minor was the most common to all the habitats surveyed. Monochoria and Cyperus were the least abundant.

The physico-chemical features of the habitats surveyed seem to have a very little differential effect on the plants. Average air and water temperature ranged from 26.5°C to 30.5°C. All habitats surveyed had clear to slightly turbid water with average depth ranging from eight cm to 73 cm. The pH ranged from 6.8 to 7.2; phosphate content from .00003 to .005 mg/liter and nitrate content from .002 to .015 mg/liter.

The nature of the substrate varied, with the muddy substrate providing a better attachment for the rooted plants.

There appears to be a definite distribution pattern for the fresh-water vascular plants with respect to the depth. Emergent plants dominate shallow waters or

margins of the water, the floating ones occupy the area farther from the shores, while the submerged plants occupy the deeper portion beyond the area of the floating plants.

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