



Rec. zool. Surv. India : 104 (Part 3-4) : 99-102, 2005

DIVERSITY AND DISTRIBUTION OF ARTHROPOD FAUNA IN RELATION TO MANGROVE VEGETATION ON A NEWLY EMERGED ISLAND ON THE RIVER HOOGHLY, WEST BENGAL

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INTRODUCTION

In the reservation and management of land for conservation, decisions on the size of areas required for maintaining species in sustainable populations is an important issue. The reverse problem is that of assessing a species' ability to persist after habitat fragmentation. In an attempt to investigate these topics an experiment was established in a newly emerged Island. The ecology of the forest ecosystem in India was mainly projected to a study of the community structure and composition, succession and management. Few of the studies from dry deciduous and pine forests soil have however, been restricted to one aspect, that is mainly on the forest ecosystem (Prabhu 1976, Mahajan and Singh 1978, Hazra 1978, Reddy and Alfred 1978). But so far the effects of planted mangrove area and natural mangrove area of the same Island and same environmental area have not been made, whereas the present paper focuses upon the quantitative account of soil fauna and their similarity index in a planted mangrove and natural mangrove area of the newly emerged Island at Haldia in West Bengal.

Key words : Mangrove, Soil arthropods.

MATERIAL AND METHODS

A total of 192 soil samples were drawn from planted mangrove area and natural mangrove area of the Island at every month for a period of one year. Samples were drawn at randomly. The extraction of soil samples was carried out by the expedition faunal apparatus modified by Macfadyen (1953). A 40 W bulb was used for heating and as light source. Index of similarity is established by the Bray and Curty (1957).