

The Distribution of Anostraca and Conchostraca (Crustacea) in the Jaffna Peninsula

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Introduction

The filling of pools and paddyfields by rainwater and subsequent dwindling of these due to dryness are important factors in the shaping of biological processes occurring in these habitats. During the existence of these pools there are not only changes in the volume of water with rain and drought but there are also changes in the concentration of dissolved substances. These phenomena could therefore influence the development of organisms in such habitats.

Such periodical water pools are a common feature in the Jaffna Peninsula. The freshwaters of this area are largely of a temporary nature and hence provide suitable habitats for organisms which are characteristic of the fauna of temporary waters.

The purpose of the present study was to determine the types of anostracans and conchostracans in the Jaffna Peninsula and their distribution in relation to ecological factors, as until now only two species have been mentioned from Jaffna (Fernando 1974). The present study forms a part of a major project to study the freshwater fauna and their distribution in the Jaffna Peninsula. This work is also the first ecological study on anostracans and conchostracans in Sri Lanka.

Materials and Methods

The work described in this paper was carried out in the Jaffna Peninsula and in the five adjoining islands, during the wet season of 1975/1976. The study area comes under the Dry Zone and hence it experiences slight to severe drought during the dry season, which extends from about May to September.

Three types of habitats were investigated, namely ponds, paddyfields and flood waters and their location is given in Fig. 1. In order to make the study more comprehensive, the entire Peninsula was divided into longitudinal zones and regular samples were collected from these areas as well as from each of the adjoining islands. The duration of water was noted from the time these habitats get filled with water up to the times they get dried up.

Temperature and pH measurements were taken in the field between 9 a.m. and 12 noon. Water samples were taken from each of the sampling areas for chemical analysis. The collections of the anostracans and conchostracans were made using a plankton net. The collections were made carefully and selectively as even a slight disturbance could make them to disappear into the mud surface or hide among the vegetation.