OBSERVATIONS ON THE SEASONAL DISTRIBUTION OF THE PLANKTON OF THE TRIVANDRUM COAST*

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INTRODUCTION

The importance of plankton study in fisheries research cannot be over-emphasised, though in India the subject is still in its infancy. While reviewing the progress of zoological research in India, since the inauguration of the Indian Science Congress in 1914, Rao (1938) tersely remarked, "Our

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knowledge of the plankton of the Indian coasts is still very meagre, but valuable contributions have been made during the period under review by Hornell and Nayudu (1923), and Aiyar, Menon, and Menon (1936), and Menon (1931) who studied the seasonal variation of the planktonic elements along the west and east coasts of Southern India respectively". Barring the pioneer contributions by these workers on the west and east coasts, very little is known about the seasonal distribution of the plankton in Indian seas.

The present paper is the result of a continuous investigation of the plankton of the Trivandrum coast during the period, July 1938 to June 1940. The purpose of the investigation was to make a preliminary quantitative and qualitative survey of the plankton of the Trivandrum coast, and to study the seasonal variation of the principal planktonic organisms, their inter-relationships and the general factors governing their distribution. The present work conforms to the generally accepted principle that in a study of the plankton of an ocean area, previously virgin ground in this respect a general qualitative and seasonal survey is the first task (Bigelow, 1926).

Thus the investigation consisted mainly of a quantitative and qualitative examination of 273 plankton samples collected twice a week during the two years.

*Physical Features and Climate of Travancore*

Travancore, one of the foremost fishing areas in India, lies between latitudes 8° 4' N., and 10° 21' N., and longitudes 76° 13' E., and 77° 37' E., separated from British India by the Western Ghats on the east and bounded by the Arabian Sea on the west. Along the western boundary close to the seacoast is a chain of lakes or backwaters which extends over nearly two-thirds the length of the State from the northern frontier to the city of Trivandrum. These backwaters are either expansions of rivers at their mouths or extensive sheets of water receiving the flood waters of several rivers arising from the Western Ghats. They are separated from the sea by a bar of sand the width of which varies from seven miles to half a mile or less.

The climate of Travancore is equable and damp. In the major part of the State the temperature varies between 70° F. and 90° F., and hardly falls below 70° F. or rises above 90° F.

The annual rainfall is variable and its distribution seems to be determined by the distance of the locality from the northern boundary and by its distance from the hills. Travancore gets its rainfall from two monsoons; the south-west monsoon which sets in during May or June, and the north-east monsoon