

QUANTITATIVE SURVEY OF THE MACROBENTHIC FAUNA ALONG THE WEST COAST OF THAILAND IN THE ANDAMAN SEA

By Bamroongsak Chatananhawej and Somchai Bussarawit
Phuket Marine Biological Center, P.O. Box 60, Phuket, 83000, THAILAND

CONTENTS

| | Page |
|---|------|
| Abstract..... | 1 |
| I. Introduction..... | 2 |
| II. Materials and Methods..... | 2 |
| (a). The study area..... | 2 |
| (b). Sampling methods..... | 2 |
| (c). Sediment analysis..... | 3 |
| III. Results..... | 4 |
| (a). Sediment characteristics and the benthic fauna..... | 4 |
| (b). Total abundance and biomass of the macrobenthos..... | 7 |
| (c). Variation in abundance and biomass..... | 10 |
| (d). Polychaeta..... | 12 |
| (e). Crustacea..... | 12 |
| (f). Mollusca..... | 14 |
| (g). Echinodermata..... | 15 |
| (h). Chordata..... | 16 |
| (i). Other groups..... | 17 |
| IV. Discussion..... | 19 |
| Acknowledgements..... | 21 |
| References..... | 22 |

ABSTRACT

The macrobenthic fauna along the west coast of Thailand was investigated at 59 stations in March-April 1982 and January-February 1983. Five grab samples (0.1m^2) were taken at each station. Average abundance of macrofauna obtained with a 1 mm mesh sieve was found to be 889 ± 432 individuals m^{-2} , ranging between stations from 248 to 2608 individuals m^{-2} . The average biomass expressed as wet weight was 20.6 ± 37.8 g m^{-2} with a range from 1 to 254 g m^{-2} .

The Polychaeta was the most abundant group (53.4% of the individuals) followed by the Crustacea (35.8%), Echinodermata (3.7%), Mollusca (1.6%), and Chordate (1.3%)

Numbers of animals obtained in the second year of investigation were somewhat higher in most areas; the average for 1982 being 861 ± 386 individuals m^{-2} and 17.7 ± 35.9 g m^{-2} , while 1983 yielded 916 ± 474 individuals m^{-2} and 23.4 ± 39.7 g m^{-2} . Abundance and biomass decreased with depth. Average abundance in the shallow onshore zone (above 30 m depth) was $1,060 \pm 433$ individuals m^{-2} , with only 593 ± 218 individuals m^{-2} in the deeper offshore area (30 to 75 m depth). Biomass was about 3.9 times higher in the onshore zone. Grain size composition and organic content of sediment proved to be poorly correlated with total abundance and biomass.

There was a notable difference between the exposed coast with a steep slope to the north of Phuket Island compared with the more sheltered estuarine and insular region to its south. In the north, average abundance and biomass were 701 ± 307 individuals m^{-2} and 10.3 ± 8.2 g m^{-2} , respectively, in the south averages were $1,123 \pm 452$ individuals m^{-2} and 33.4 ± 53.4 g biomass m^{-2} . The shallow bottoms in the southern region, from Phang-nga to Satul, are regarded as rich feeding grounds for demersal fish species.