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COMMERCIAL MOLLUSCS DISTRIBUTION OF THE WESTERN PART OF SARAWAK

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A study of the distribution of the commercial gastropod and bivalve in western Sarawak (Kuching, Bau, Lund and Sematan) was conducted for the purpose of its population distribution mapping. There are seven and four species of commercial gastropods and bivalves identified respectively. Five species of gastropods and two species of bivalves had been found in the mangrove swamp habitat and two species of gastropod and bivalves, respectively, had been identified in freshwater habitat. Distribution of commercial gastropod and bivalve in the mangrove swamp and freshwater habitats were strongly influenced by the differences of water pH at the study areas. The total commercial value of the selected commercial species was about one million ringgit per annum. Future development of aquaculture in Sarawak should take gastropod and bivalve into consideration as one of the commercial marine animal that may be cultured.

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ABSTRACT

A study of the distribution of the commercial gastropod and bivalve in western Sarawak (Kuching, Bau, Lundu and Sematan) was conducted for the purpose of its population distribution mapping. There are seven and four species of commercial gastropods and bivalves identified respectively. Five species of gastropods and two species of bivalves had been found in the mangrove swamp habitat and two species of gastropod and bivalves, respectively, had been identified in freshwater habitat. Distribution of commercial gastropod and bivalve in the mangrove swamp and freshwater habitats were strongly influenced by the differences of water pH at the study areas. The total commercial value of the selected commercial species was about one million ringgit per annum. Future development of aquaculture in Sarawak should take gastropod and bivalve into consideration as one of the commercial marine animal that may be cultured.

INTRODUCTION

Gastropod and bivalve are part of the phylum Mollusca which comprises all invertebrate animals which are soft-bodied and possess a shell (Clarke, 1981; Abbot, 1973). Amongst the member of these classes are clams, oysters and snails (Barnes, 1991). These animals have a wide variety of habitat preferences such as estuarine, coastal area, ponds, lakes and coral reefs.

Most of the previous studies on the commercial gastropod and bivalve have been focused in Sabah (Ridzwan, 1993; Shabdin *et al.*, 1998) comprising of studies done at coastal area and coral reef habitat. There are few studies on the commercial gastropod and bivalve in Sarawak and the existing studies were solely focused on *Ambal* (*Solen* spp.). There were early observation on the historical utilisation of shelled animals at Niah Cave, Sarawak by Medway (1960) and detailed excavation records by Zuraina (1982) at the same area. A study done by Supian *et al.* (1995) found that *Ambal* (*Solen* spp.) are most abundance at sandy beach areas of Buntal, Bako, Muara Tebas, Sambir, Moyan Laut and Nonok Laut. This species can also be found at Sematan, Lundu, Kabong and Kuala Matu.

Marketing of this species can also contribute to the income of the local communities because of its popularity and the high price from RM2 to RM18 per kilogram. According to the Annual Fisheries Statistics (1999), Sarawak landed 5.27 metric ton of shellfish valued at RM22,397.50.

As there were little information and detailed studies done on the commercial gastropod and bivalve in Sarawak, four sampling sites were chosen in this preliminary study. It is expected that this study will provide a list of commercial species of gastropod and bivalve and its distribution can be mapped. The data obtained in this study can provide valuable information for future studies.

MATERIALS AND METHODS

This study was conducted in Kuching, Bau, Lundu and Sematan (Fig. 1). Sampling sites in Bau were for the study of edible freshwater mollusc. Another three study areas focus on the species found at estuary and coastal area. Sampling was performed at intertidal zone of coastal area and estuary, whilst at freshwater habitat, the study was done at the sandy upper part of the river and at the adjacent swamps. The natural ponds at the swamps are muddy with a depth of 0.5 metre.