

## Introduction

Songkhla is a southern province of Thailand situated on the east coast of the peninsular Thailand. On this east coast, there are many sand bars on an eastern coastal plain where the Quaternary sediments are found (Pongsaputra *et al.*, 1991).

Along the east coast of the Peninsular Thailand from Chumporn to Narathiwat, stretches a shoreline of emergence. The sand dune where the beach vegetation occurred, is a part of these sand bars produced by a sediment deposition along the shoreline. It is an old beach deposit lying inland in the form of low ridge (1.5-2.5 m) or terrace. The rivers and ocean currents deposit sediments on the shallow sea floor, then 65 million years ago in Tertiary age, the Peninsula had sloped, so the east coast had been raised and the west coast sank down in the Indian Ocean, thus creating a wide coastal plan with many sand bars on the east coast of the Thailand Peninsula (Pongsaputra *et al.*, 1991; Vithayarat, 1995).

According to Congdon (1982) and Whitmore (1985), this kind of beach vegetation is the coastal heath forest, which is the natural vegetation of the podzols that occurred in place where parent materials consist predominantly of quartz, i.e., beach sand, sandstone or quartzite. The greatest extent of Heath forest in the Far East is in Borneo where it occurred around much of the coastline on raised terraces of poorly consolidated coarse, sandy, marine and riverine sedimentation left stranded by the fluctuating sea-level of the late Pleistocene (Burmham in Whitmore, 1985). Similar but less extensive terraces that also bear or once bore heath forest occur along the south coasts of Thailand and Cambodia (Whitmore, 1985). The characteristic of the heath forest is that trees of large girth are rare, the canopies of trees are low, uniform and usually closed with no trace of layering (Brunig in Ashton, 1971). There are more trees with small leaves than in evergreen rain forest. Many species have sclerophyllous leaves. The ground commonly has a bryophyte covered and stilt root commoner than buttressed trees. Big woody climbers are rare, but slender, wiry, independent climbers are frequent. Epiphytes and photophytes are frequent and

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occur nearer the ground than in evergreen rain forest. Myrmecophyte are abundant (Whitmore, 1985).

Smitinand (1977) did not mention heath forest. The coastal heath forest supposed to be included in the mentioned beach forest, since some of the sites and some species of the mentioned beach forest is also characteristic of the heath forest.

In Thailand, Heath forest was only once mentioned by Congdon (1982). The coastal heath forest found on Tarutao island in the peninsular Thailand has some different characteristic from typical heath forest as described by Whitmore (1985). The true heath forests are taller and contain more species than those found on Tarutao island, in any case, the environmental conditions at Tarutao sites resemble those of heath forests and many species on Tarutao coastal heath forests are characteristic of heath forest too (Congdon, 1982).