

Species Diversity and Checklist of the Herpetofauna of Pulau Tioman, Peninsular Malaysia, With a Preliminary Overview of Habitat Utilization

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Abstract. - The environmental diversity of Pulau Tioman, a 48 km² island off the eastern coast of Peninsular Malaysia, supports a remarkably diverse herpetofauna (97 species) with 22 frogs, one caecilian, one non-marine turtle, 34 lizards, and 39 snakes. The majority of this herpetofauna (74%) occurs in lowland dipterocarp forests. Fifteen new island records and eight newly described, or as yet undescribed, species are reported, bringing the number of endemic species to at least 11.

Key words. - Pulau Tioman, Malaysia, herpetofauna, habitat diversity, checklist.

Introduction

Pulau Tioman (Tioman Island) is centrally located on the Sunda Shelf 38 km off the southeast coast of Peninsular Malaysia in the South China Sea (Fig. 1). Despite its small size of approximately 48 km², it supports a diverse array of habitats. The island's coastline and low-lying periphery is dominated by mangrove and coastal vegetative communities whereas inland areas support lowland dipterocarp forest on the alluvial foothills and hill dipterocarp forest at upper elevations (Latiff et al. 1999). Topographically, Pulau Tioman is characterized by steep mountainous terrain reaching 1,035 m in elevation. Exposed granitic outcroppings consisting of large boulders define much of the island's rugged interior and its slopes are cut by several fast-flowing, boulder-strewn streams. As discussed below, this environmental diversity contributes to the island's remarkable herpetological diversity with 23 amphibians, one non-marine turtle, 33 lizards, and 39 snakes now confirmed as present on the island (Table 1). This is in contrast to the relative depauperate herpetofauna of the surrounding islands of Tulai (Grismer et al., 2001b), Aur (Escobar et al., 2002a; Grismer et al., 2001a), Dayang (Wood et al., 2003), Pemanggil (Youmans et al., 2002), Sembilan and Seribuat (Wood et al. in prep), Sibu and Besar (Wood et al., 2004a,b) and Tinggi (Escobar et al., 2002b).

Prior to Hendrickson (1966a,b), no herpetofaunal survey had been undertaken on Pulau Tioman and only

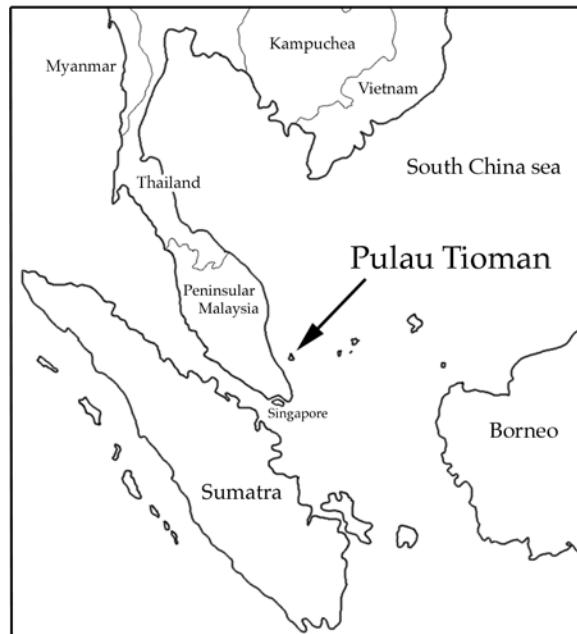


Figure 1. Location of Pulau Tioman, West Malaysia, in the South China Sea.

limited accounts on particular taxa existed (i.e., Boulenger, 1912; Smith, 1930; de Haas, 1949). However, despite the thoroughness of Hendrickson (1966a,b) and subsequent efforts by Day (1990), Lim and Lim (1999), Hien et al. (2001), and Grismer et al. (2002a), the herpetofauna of this small island still