Age at maturation of a tropical eel Anguilla bicolor bicolor in Peninsular Malaysia, Malaysia.

ABSTRACT

Anguillid eel species are widely distributed throughout the world. The eels have catadromous life history, migrate between freshwater growth habitats and offshore spawning areas. Fifteen species of Anguilla have been reported worldwide, ten of which occur in tropical regions (Ege 1939). Of the latter, seven species/subspecies occur in the western Pacific around Indonesia and Malaysia, i.e. A. celebesensis, A. interioris, A. nebulosa nebulosa, A. marmorata, A. borneensis, A. bicolor bicolor and A. bicolor pacifica (Ege, 1939; Castle & Williamson, 1974; Arai et al., 1999). The tropical species is thought to be more closely related to the ancestral (primitive) form than their temperate counterparts. Studying the distribution and life history of tropical eels may provide some clues to understanding the nature of primitive forms in anguillid eels and how the distribution of the genus became established. The recent decline of glass eel (juvenile) catches in East Asia has caused serious problems in eel aquaculture in Japan and Taiwan. Eighteen percent of the eel consumed in Japan is produced in the country (23, 211 tons, aquaculture; and 817 tons, wild in 1999), and the remainder is imported from China, Taiwan, and Malaysia (Kato & Kobayashi, 2003). Therefore, the tropical eels are considered to be a major target species for the eel trading recently. However, little attention has been given to natural populations and the resource management of eel in Malaysia. Therefore, the objective of this study was to gain the biological information of a tropical eel Anguilla bicolor bicolor collected in the Peninsular Malaysia. In the present study, we found maturing stage of the eel in Malaysian waters. There is no information available regarding the maturation in the tropical eel species. We reported the first eel biology study in Malaysia. A total of 10 specimens were collected by local fishermen mainly in Kurau River in Bukit Merah and Penang River in Peneng Island of the northwestern peninsular (4°59'-5°23 N, 100°12-100°40'E) during November 2008 and August 2010. The eels were collected by angling and bamboo trap at night. The total length (TL), predorsal length (PDL), preanal length (PAL) (Fig. 1), body weight (BW) and gonad weight were measured. The gonad and body weights were measured to determine the gonado somatic index (GSI) of each eel.

Keyword: Eel; Anguilla; Age; Life history; Maturation.