

## **Sex ratio, gonadal and condition indexes of the Asiatic hard clam, *Meretrix meretrix* in Marudu Bay, Malaysia**

### **ABSTRACT**

Asiatic hard clam, *Meretrix meretrix* is one of the important shellfishery resources in Marudu Bay, Sabah, Malaysia. It is among the most popular clam species being widely traded in the local wet markets around Sabah, Malaysia. Unfortunately, the shellfishery management for this species has not been well established. In addition to overexploitation, habitat destruction is also one of the significant threats to this species due to the extensive land use of the coastal areas in Sabah. Hence, conservation and breeding efforts for this species are greatly required. Therefore, the current study was conducted to examine the sexual maturity of the clam with respect to shell length classes for artificial seed production purposes. For this study, a total of 86 clam specimens were randomly collected from mudflats in Marudu Bay. The specimens were utilized for gonad histological and condition analyses. The clams were grouped into three shell length classes; (3.00-4.99) cm, (5.00-6.99) cm, and (7.00-8.99) cm prior to the analyses. Results showed the natural stock of the Asiatic hard clams in Marudu Bay was dominated by females (1.39:1) over males with no hermaphroditism observed. The gonadal index was recorded higher among clams with shell lengths between 5.00 and 6.99 cm. The condition index analysis also recorded high (>4.0) for clams in all the shell length classes. The findings of this study suggest that the clams with shell lengths between 5.00 cm and 7.00 cm are already fully matured and can be utilized as a broodstock candidate for an artificial breeding program in the hatchery.