

Reproductive biology of *Nemipterus japonicus* (Bloch, 1791) from the coastal waters of Bintulu (South China Sea), Sarawak, Malaysia

ABSTRACT

Samples of threadfin breams *Nemipterus japonicus* were collected from a village in Kuala Nyalau and a fish landing centre at Bintulu from April 2013 to March 2014. A total of 360 individuals of *N. japonicus* (214 male and 146 female) were used in this reproductive study. The total length (TL) of individuals were measured to the nearest 0.1 cm and body weight (BW) was recorded to the nearest 0.1 g. Month-wise distribution of the sexes was significantly higher for males in September and March, while in the month of May the number of females was significantly higher ($X(2) = 6.53$; $P < 0.05$). Males showed a preponderance in the size-class of 19.0-20.9 cm ($X(2) = 80.24$; $P < 0.001$), 21.0 -22.9 cm ($X(2) = 56.39$; $P < 0.001$) and 23.0 -24.9 cm ($X(2) = 17$; $P < 0.001$). The gonadosomatic index (GSI) values of *N. japonicus* ranged from 0.07 to 0.19 for males and 0.34 to 4.99 for females. Females had higher GSI than males throughout the study period. For males, a higher GSI (0.11-0.19) was observed during January to February, while it was found to be higher (2.73-4.99) for females during January to March, indicating the spawning season. The present study revealed that ovarian maturity based on histological analysis of *N. japonicus* was classified into seven stages namely, immature (I), immature (II), maturing (III), mature (IV), ripe (V), spawning (VI) and spent (VII). The fecundity of *N. japonicus* was estimated to be within a range of 19221 to 85923 with higher GSI (3.08-6.78) from the coastal waters of Bintulu, Sarawak.