ABSTRACT

A preliminary study on several prespawning reproductive characteristics of bungo fish (Glossogobius Cfi. aureus) in Tempe and Sidenreng Lakes, South Sulawesi has been done. A number of 3,765 individuals were collected, including 1,897 females (50.39%) and 1,868 males (49.61%). The largest fish (375 long and weight 342.70 g) was male. The fish known as Glossogobius aureus Akihito and Meguro (1975), was formally identified as G. giurus and G. giuris. As this species is similar to Glossogobius aureus but differs somewhat to sampels which have been identified by Akihito and Meguro (1975), a word compare (Cf) is added between the genus and species names.

This bungo fish is a heterosexual protogynous hermaphroditism animal with asynchronised ovaries (metachrome). Oocytes of this fish are oval with 0.28 mm to 0.65 mm length, smaller oocytes reach 0.08 mm to 0.14 mm in diameter at its width and 0.13 mm to 0.17 mm in diameter at its length. The oocytes may be grouped into three categories, i.e. large, medium and small.

The first gonadal maturity in female occurs when the measurement reaches 80 mm to 89 mm, while in males 160 mm. To maintain its population the bungo fish performs reproductive strategy by speeding up its first gonadal maturity. As the gonadal maturity level (GML) increases, the number of fish decreases, probably due to atresia. In general the gonadal maturation index (GMI) of females is bigger than the GMI of males. Fecundity of bungo fish ranges from 1.130 to 466.850 and more than 50% of the population reproductive capability is produced by those which measure less than 190 mm.

The developmental pattern of bungo fish is negative allometric, where the conditional factor value of males reaches 0.67 to 2.12, averaging 0.91 to 1.23, whilst in females it reaches 0.69 to 2.08 with the mean range of 1.12 to 1.36. The maximum length of female may reach 515.81 mm, while in males 622.3255 mm. Exploitation rate of females reach 0.659, while in males 0.6254.

In principle the bungo fish may be spawned artificially outside its habitat, because the fish responds to the hormonal treatments with hCG and ovaprim.