

Biological Aspects of Shortfin Scad Fish (*Decapterus Macrosoma*) in Barru Sea Waters, South Sulawesi

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Abstract. Shortfin Scad Fish is a pelagic fish that has a role in the economic sector of fishermen in South Sulawesi waters. Besides being consumed by the public, it is also used as bait for tuna fishing companies and is exported frozen. The last five years there has been a decrease in the catch as a result of uncontrolled exploitation. However, there is no control instrument on the exploitation of flying fish to date, so there is a concern that the sustainability of flying fish resources is threatened. This study aims to determine the biological aspects of shortfin scad fish, sex ratio, the level of gonad maturity, the first size when the gonads ripen and growth patterns. The research was conducted in the waters of Barru Regency, South Sulawesi. Direct observation method with survey. Fish samples came from the catch of fishermen landed in the Barru Regency Fish Landing which were caught with purse seine. Fish sampling was conducted from early April to early August 2017. The results showed that the sex ratio of Shortfin Scad Fish is not balanced between male and female ratios, but the results of ANOVA analysis were not significantly different ($p < 0.05$). Male and female shortfin scad fish dominate the young and immature gonads (gonad maturity level I, gonad maturity level II). Male shortfin scad fish reach gonad maturity for the first time at an average fork length ranging from 21.1537 cm - 21.7933 cm and female flying fish 18.9194 cm - 19.4157 cm. The growth pattern of male Shortfin Scad Fish is negative allometric with a value of $b < 3$, while the female is positive allometric with a value of $b > 3$. Efforts to manage shortfin scad fish in Barru sea waters are by adjusting the size that can be caught, the first size when gonad ripens and after spawning.

Keyword: biological aspects, shortfin scad fish, barru