Some Aspects of the Reproductive Biology of *Dasyatis zugei* (Pale-edged stingray) in the Gulf of Mannar, Sri Lanka

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Dasyatis zugei is one of the major non-target species caught in the bottom-set crab nets used for catching blue swimming crab (*Portunus pelagicus*) in Gulf of Mannar. This study aims to determine the length–weight relationship, size at first maturity and fecundity of *D.* zugei. In total of 1,404 individuals were collected from crab nets in two landing sites; Vankalai and Thalvupadu in Gulf of Mannar during the period of September - November, 2018. Disc Width-W_D of all the individuals were measured to the nearest mm, body weight was weighed to the nearest gram and sex was determined. The state of maturity of gonads of females was identified through dissection and macroscopic examination of ovaries. Mean ova diameter significantly varied among females according to the different maturity stages ($P<0.05$). Sex ratio in the catch was 1:1.35 (M: F). Disc width of males ranged from 85-260 mm with a mean of 175.43±22.42 and females ranged from 110-220 mm with a mean of 167.27±17.55. The Disc width-weight relationship was analyzed by Simple Linear Regression using log transformed data and it showed $\log W = -0.5923 + 2.364 \log W_D$ for male and $\log W = -3.497 + 2.599 \log W_D$ for female. The results show negative allometric growth ($b<3$) for *D. zugei*. There was no significant statistical difference ($P>0.05$) in the male and female regression co-efficient. The size at first maturity was 166.5 mm for female *D. zugei*. Embryos were found only in females ≥ 160 mm of W_D. The maximum fecundity was three embryos per female which is varied with the size of the female. This study reports the first findings on length- weight relationship and size at maturity of *D. zugei* in Sri Lankan waters.

Keywords: *Dasyatis zugei*, Size at maturity, Fecundity, Length-weight relationship, Non-target species