

Some aspects of reproductive biology and growth of tomato hind, *Cephalopholis sonnerati* (Valenciennes, 1828) (Teleostei: Epinephelidae) in Western and Southern coastal waters of Sri Lanka

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This study aims to understand some aspects of reproductive biology and growth of tomato hind (*Cephalopholis sonnerati*) found in Western and Southern coastal waters of Sri Lanka. Specimens (n=84) were obtained from Chilaw, Negombo and Beruwala in the West coast on a monthly basis via aport sampling survey from January to December in 2017. A batch of *C. sonnerati* specimens (n=79) from the Southern coastal waters was donated by the Sri Lankan Customs which also used for the study. The results obtained under the study include the Length-Weight Relationship (LWR), Fulton's condition factor (*K*), Hepato-Somatic Index (HSI), size at maturity and fecundity of *C. sonnerati*. Respective relationships/ values of parameters were obtained for the two regions separately. The average Total Length (TL) and average Standard Length (SL) of the species in the west coast was 28.3 ± 7.8 cm and 23.4 ± 6.6 cm respectively. The estimated respective values for the Southern coastal waters were 34.4 ± 5.5 cm (TL) and 28.9 ± 5.0 cm (SL). The Fulton's condition factor (*K*) estimated for the Southern population was 1.69 while it was 1.75 for the Western population. The HSI values of *C. Sonnerati* estimated for the Western and Southern regions were 0.009 and 0.007 respectively. The estimated Length-Weight Relationships of *C. Sonnerati* for the Southern and Western populations were $W=0.0117L^{3.1035}$ and $W=0.0092L^{3.195}$ respectively. The size at 50% maturity of *C. sonnerati* estimated by pooling the data was 33.8 cm (TL). This study revealed that majority (73%) of landings in the West coast comprised with immature fish with the average size of 28.3 ± 7.8 cm (TL). Average fecundity estimated by pooling the data was 12149 ± 2404 eggs/g. The study provides some basic information about *C. sonnerati* and results would be useful especially for fishery biologists and fishery managers to propose appropriate management strategies where necessary.

Keywords: *Cephalopholis sonnerati*, length-weight relationship, hepato-somatic index

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