



925/D/Poster

Some biological aspects of Frigate tuna (*Auxis thazard*) landed in the Southern, Western and Northwestern coasts of Sri Lanka

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Frigate tuna (*Auxis thazard*) is an important neritic tuna species found in Sri Lankan waters. Neritic tuna constitutes 14% of the total tuna production of Sri Lanka and frigate tuna contributes almost 42% to this total neritic tuna catches. The gear types used in the neritic tuna fishery in Sri Lanka are gillnets, ring nets and troll lines, with the gillnet being the major gear type. Frigate tuna is a commercially important species as it is favoured by the local community. In addition, due to its abundance, frigate tuna are a major prey item of the larger tunas such as yellowfin tuna and skipjack tuna. Therefore, studying the biology and the reproductive characteristics of this species is very important for the management and sustainable utilization of this species. For this study, Frigate tuna samples were collected from the fishery landing sites in Chilaw (Northwestern), Negombo (Western), Beruwela and Weligama (Southern). A total of 81 samples were collected from October 2015 to May 2016 from day-boats. The weights of the sampled fish ranged from 156 g to 1,353 g and the length varied from 23.8 cm to 42.7 cm. The most common size range of the fish sampled was 29.1 to 33.0 cm. The length weight relationship showed an allometric growth for the species. The analysis of their stomachs revealed that of the 81 stomachs, 51 (62.9%) were empty, 17 (17.3%) were one fourth full, 8 (9.9%) were half full, 5 (6.2%) were three fourths full and 3 (4%) were full. Of the stomachs which contained food, 50% contained digested fish parts (belonging to families Clupeidae and Engraulidae), 44% contained shrimp and 6% contained digested cephalopod parts. Six of the stomachs analyzed contained small nematodes with the digested food items. The Gonado Somatic Index (GSI) for the female fish showed a peak in the month of May. The study will be continued to establish the exact spawning season for the species *Auxis thazard*.

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