

## Abstract:

Population dynamics, reproductive biology and food habitat of *Trichiurus lepturus* (Lacepède) along the Hormozgan province as well as catch per unit of area (CPUA) and catch per unit of effort (CPUE) of the species along the Bushehr, Hormozgan and Sistan and Bluchestan provinces (Persian Gulf and Oman Sea) were studied between 2007-2009.

### Hormozgan Province:

Length composition data from monthly of hairtail, *T. lepturus*, landed between September 2007 to August 2008 along the Persian Gulf and Oman Sea were used to estimate the growth, mortality and exploitation parameters of the stock. Maximum Anal length and weight were 44.5 cm and 937g. Nonlinear least square fitting provided a complete set of von Bertalanffy growth estimates:  $L_{\infty}=111.3$  cm fork length;  $K=0.41$  and  $t_0= -0.28$  years. The estimated value of total mortality based on length converted catch curve using these growth parameters is  $Z=1.11$  year<sup>-1</sup>. Natural mortality based on growth parameters and mean environmental temperature ( $T=26.5^{\circ}\text{C}$ ) is  $M=0.67$  year<sup>-1</sup>. The sex ratio of *T.lepturus* was significantly different from 1:1. Monthly changes in gonadosomatic index (GSI) suggested that spawning occur round the year with peak during March-June. The average size at first spawning of hairtail, *T. lepturus*, was estimated at 26.7 cm in anal length.

For study of the catch per unit of area (CPUA) and effort in Hormozgan province the sampling area was divided into two strata and a stratified random sampling design was used to determine sampling sites. Catch per unit of area varied significantly between the two selected strata ( $P<0.001$ ). Mean CPUA for *T.lepturus* in the total area was 4308 kg nm<sup>-2</sup>. *T.lepturus* made up 74.4% of the total weight in the stratum I and 70.02% in the stratum II. Among the non-target species in the trawl catches, the species with highest catch rate were *Pampus argenteus* (4.629%), Batoids (2.274%), Carangidae (2.693%) and *Ilisha* sp. (2.672%) in stratum I and Carangidae (5.710%), *Pampus argenteus* (5.245%), Batoids (3.256%) and *Ilisha* sp (2.995%) in stratum II.

### Bushehr and Sistan and Bluchestan provinces:

Mean anal length of Hairtail in fisheries catches in Bushehr and Sistan and Bluchestan provinces were 30.5 and 35.9 respectively. *T.lepturus* made up 76% and 38% of the total weight in Bushehr and Sistan and Bluchestan provinces.

Key words: Population dynamics, Biology, CPUA, *Trichiurus lepturus*, Persian Gulf and Oman Sea