

D-81: Some aspects of reproductive biology of the *Monodactylus argenteus* in Negombo estuary

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Monodactylus argenteus was collected monthly between May 1993 and June 1994 from Negombo estuary, river mouth and coastal waters at Negombo. Gonado Somatic Indices (GSI), macroscopic and microscopic appearance of gonads were used to study the breeding cycle of *M. argenteus*. The maturity stages of females were verified histologically by the presence or absence of particular oogenic cells. Fecundity was estimated using ripe females.

GSI suggested that the period of greatest sexual development extended from June to September. Maximum GSI recorded for females (110 - 150 g DW) and males (95 - 140 g DW) were 9.36 and 4.78 respectively and they were in the samples obtained from coastal waters. The lowest gonado somatic indices, which reflect sexual inactivity were recorded between December and March and these fish were predominant in the samples obtained from the estuary.

Six and 5 maturity stages were recognised for females and males respectively. Spawning females bearing large translucent ova and males with fully grown testes were found in the samples obtained from coastal waters between June and September.

Early perinuclear oocytes were predominant in all maturity stages of females. The proportion of yolky oocytes in spawning females varied between 23-31%. Fecundity of *M. argenteus* ranged from 22,911 to 80,202; within the size range of 110 - 150 g BW ($F = 1,580 BW - 154,676$).

Results showed that *M. argenteus* migrate to the sea for spawning. Being an ornamental fish, attempts are being made to breed *M. argenteus* in captivity. The knowledge from the present study could be used to select broodfish, suitable time of the year for induction, best possible condition for hatching and rearing etc.

Financial assistance by NARESA for research grant RG/92/B/1 is acknowledged.