

FAT SNOOK (*CENTROPOMUS PARALLELUS*) REPRODUCTIVE ASPECTS IN THE DOCE RIVER ESTUARY, EAST COAST OF BRAZIL

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The reproductive aspects of the fat snook (*Centropomus parallelus*) were studied in the Doce river estuary to support the sustainable management of this natural resource.

The sexual proportion was favourable toward the males in the lengths until 240mm and toward the females in the lengths from 300mm to bigger sizes.

The total length of the first sexual maturation stage was of 280mm, with a security of 20mm distancing from the minimal total length for capture policy from IBAMA (2003) of 300mm.

The description of the oocyte diameter distribution showed the synchronic parcelled spawning.

The reproductive period of *C. parallelus* spread over the months of March to August, with peaks in May and June. The beginning of the reproductive cycle was characterized by the presence of small snook in March. These came from the river with the highest flow during the rainfall period, while in May, June and July the predominance of larger snook was stimulated by the low river flow and high salinity water penetration in the estuary. Also hydrodynamic forces, through the wave action caused by the cold air currents, led to a migration of large schools into the river mouth joining the reproduction group.

This study results recommend adjusted regulation fishery measures. Firstly to increase the period of protection in the reproductive period, secondly to test the local fishery system, specially focusing on the fishery effort and other environmental factors that could influence the reproductive cycle of the fat snook, such as the moon cycle.

Keywords: Gonad maturation; Sex ratios; Spawning, *Centropomus parallelus*; Environmental influence.