

ABSTRACT

Sauer, W.H.H., Augustyn, C.J., and M.J. Roberts (1997).

Aspects of the life cycle of the chokka squid *Loligo vulgaris reynaudii* from the inshore spawning grounds and Agulhas Bank, South Africa.

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The biology of the chokka squid *Loligo vulgaris raynaudii* was studied on the inshore spawning grounds and Agulhas Bank off the southern Cape coast of South Africa between 1986 and 1992. Three main cohorts occurred in the population structure, two cohorts of smaller individuals offshore (50-200m) on the Agulhas Bank and a cohort of larger individuals mainly on the inshore (6-50m) spawning grounds in the east. Squid on the Agulhas Bank matured at a much smaller size in the east than in the central and western areas. Seasonally they were found to mature more rapidly in spring than in autumn. At least one and sometime two major inshore spawning migrations occur each year along the south-east coast, although small-to-large concentrations of mature squid may be present throughout the year, with egg strands in depths ranging from 6m to 150m.. On the inshore spawning grounds, mature squid were found to have smaller average mantle length during winter. Overall sex ratio's on the inshore spawning grounds were biased towards males, although individual shoal were biased towards either sex. Length frequencies inshore showed no modal progression indicating growth. No evidence of post spawning mortality was observed inshore. It is postulated that squid spawn mainly in the east, in depths from 6m to 150m, and migrate offshore and westwards as they grow. Maturation takes place as the bulk of the population migrates back to the spawning grounds in the east, where the main spawning period inshore is spring to early summer.