

ABSTRACT

THE EXISTENCE OF DEEPER SPAWNING GROUNDS FOR THE SOUTH AFRICAN CHOKKA SQUID *LOLIGO VULGARIS REYNAUDII*

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It is well known by both researchers and fishers that chokka squid (*Loligo vulgaris reynaudii*) use the shallow (20-50m) inshore regions of the South African south coast for spawning. It is here that the fishery is primarily based. Of little notice over the years however, has been the occasional recovery of squid eggs in demersal trawl gear from greater depths over the midshelf region. This raises the possibility that spawning may not only be limited to the shallow inshore region but also may occur on the midshelf. The aim of this paper is to investigate this possibility and then to gauge the importance of deep spawning. Demersal trawl data from 16 research surveys covering the west and south coasts, over spring and autumn, were examined for squid eggs. Results clearly show that spawning does occur at depths greater than previously thought ie. 60m-to at least 120m. This deeper spawning ground lies adjacent to the inshore spawning ground and is probably a continuum. Egg biomass calculations estimate that, during spring and autumn, the inshore spawning grounds are 20 times more productive (kgs per unit area) than the deeper. The larger area of the latter, however, implies that about 21% of the total egg mass is produced on the deep spawning grounds. This finding clearly calls for a refinement of the presently understood life cycle and could have important implications for the conservation and management of this fishery.