

ABSTRACT

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South Africa's Tsitsikamma National Park as a protected breeding area for the commercially exploited chokka squid *Loligo vulgaris reynaudii*

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South Africa's Tsitsikamma National Park is within the general spawning area of *Loligo vulgaris reynaudii*. Spawning squid use at least 10 areas within its boundaries, sporadically throughout the year, but mainly in early summer. Spawning occurred either on sand or low-profile rocky reef at depths between 22 and 35m. Concentrations varied between a few hundred spawning pairs, with small and scattered egg mops, to thousands of spawning pairs with a large central egg bed surrounded by small egg mops. Squid paralarvae were captured within the boundaries of the Park, and squid tagged there moved to other spawning sites generally eastwards of it, where they were recaptured by commercial fishermen. The park provides protection and undisturbed breeding sites for a portion of the spawning stock for part of the spawning period, and exports squid biomass through larval dispersal. It is unlikely that the Park markedly enhances the squid fishery, because spawning there is much less frequent than in open fishing areas.