

ABSTRACT

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Hydro-acoustic targets may provide the first direct observations of chokka squid *Loligo Vulgaris Reynaudii* spawning activity in deep waters?

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Unusual and distinct hydro-acoustic targets were observed during the November 1996, May 1998 and November 1998 routine pelagic biomass surveys. In the November 1996 survey, seven such targets were observed and recorded near the bottom on the mid-shelf at depths of 115-125 m, directly south of the well known Cape St Francis shallow inshore spawning grounds. The targets were found close to prominent seabed ridges and extended 30-40 m into the water column. As the characteristics of these echo traces bore no resemblance to known species that shoal on the Eastern Agulhas Bank, it was speculated at the time that these were spawning squid. In May 1998 three similar targets were observed in depths between 55 m and 80 m outside of Plettenberg Bay, another well known squid spawning site. A mid-water trawl towed through the shallowest target identified it to be a mix of mature male and female chokka squid. In the November 1998 survey, nine unusual targets were again observed in the same position as the first in 1996, also adjacent to the seabed ridges. Drawing on fisheries hydro-acoustic experience and a good knowledge of chokka squid spawning behaviour on the inshore spawning grounds, it is thought that the deep targets are aggregations of spawning squid. Accurate positions of these sites are given for further investigation.