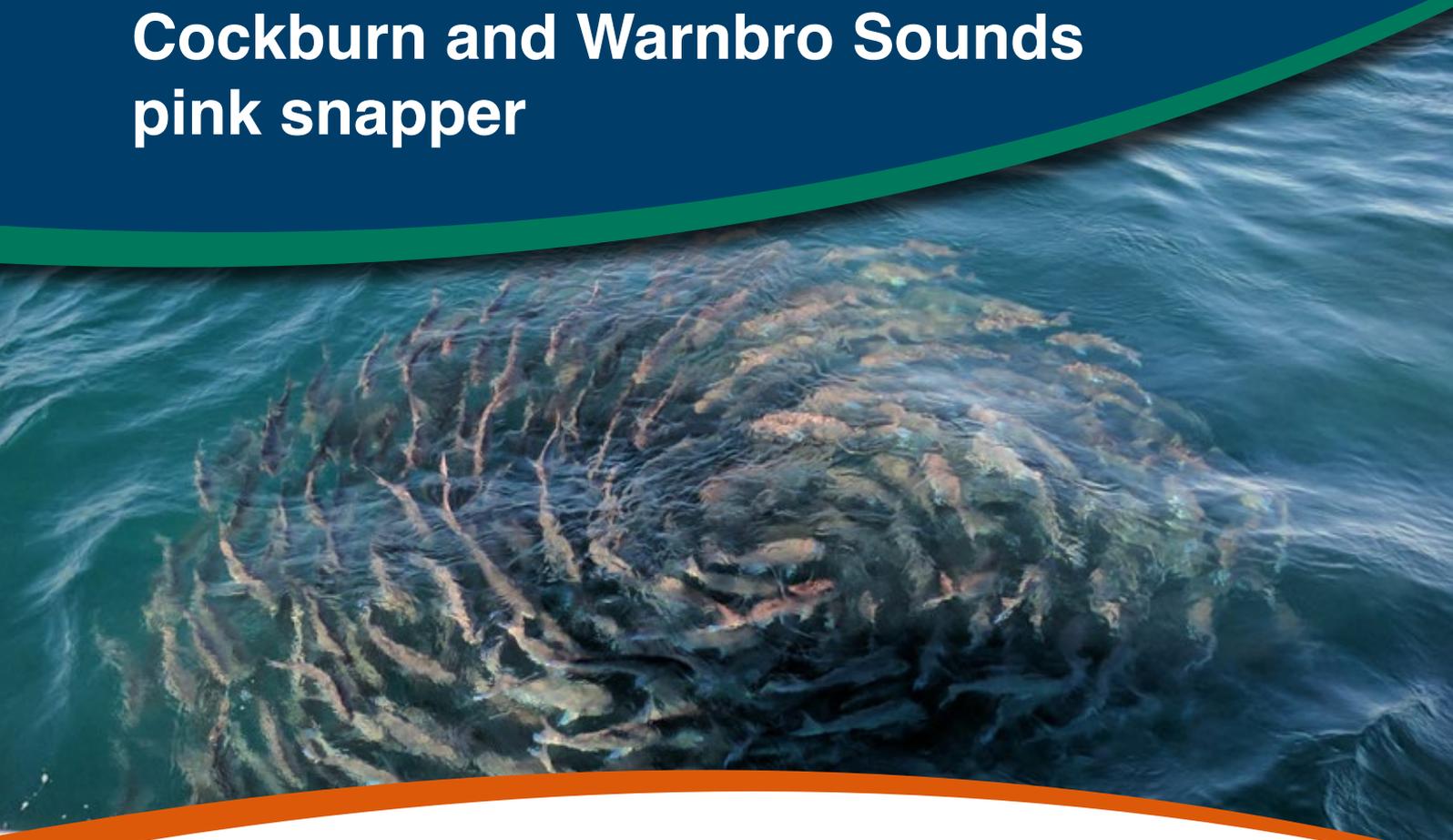




Fisheries research update - July 2019

Cockburn and Warnbro Sounds pink snapper



Protecting spawning pink snapper

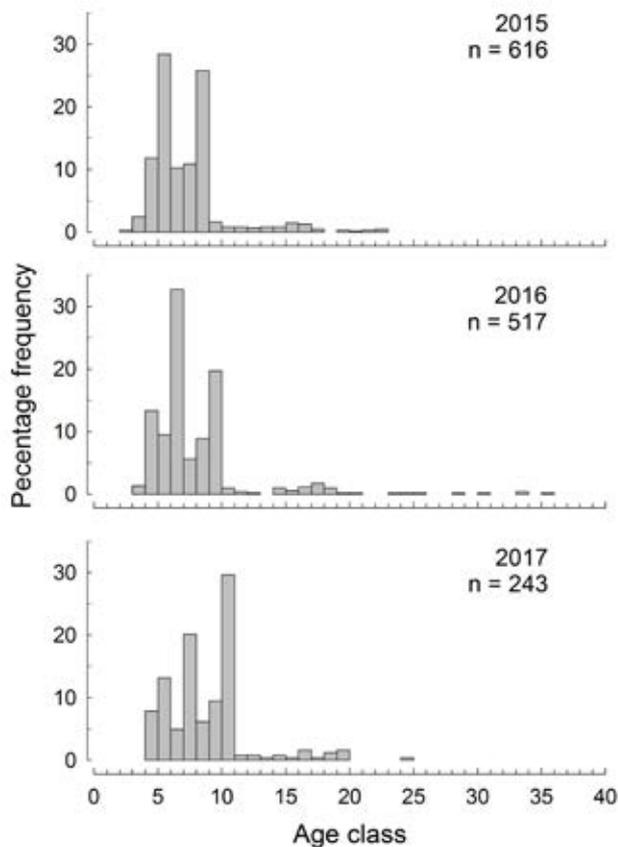
Cockburn and Warnbro Sounds support the largest known spawning schools or 'aggregations' of pink snapper in the West Coast Bioregion and are critical for sustaining adequate breeding stocks of this long lived species across the bioregion. The Cockburn and Warnbro Sounds pink snapper spawning closure, which currently runs from 1 October to 31 January each year, aims to provide targeted protection for this important spawning event. The closure has been a key management measure for pink snapper sustainability in the West Coast Bioregion since 2000.

Importance of protecting spawning aggregations

Pink snapper in the West Coast Bioregion are currently in recovery. Recreational catch of pink snapper in the Metropolitan and South-West is mainly made up of relatively young fish and little or no fish over 20 years old (see graph 1). With pink snapper living to 40 years of age, this highlights that there is still a way to go to before pink snapper stocks are considered to have recovered on the West Coast.

Pink snapper's larvae and juveniles have highly variable survival rates from year to year (we call this 'variable recruitment') with only one to two strong recruitments each decade. Recent good catches of pink snapper by recreational and

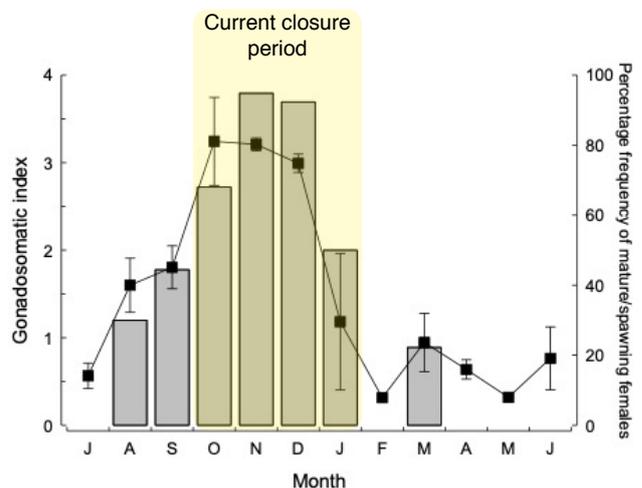
charter fishers in the Metropolitan and South West areas have mainly comprised a limited number of strong recruitment years (graph 1). For example, fish from a strong recruitment in 2007 started showing up in the fishery as four-year-old fish in 2011 and were 10 years old in 2017 (graph 1). This highlights the importance of protecting key pink snapper spawning aggregations to ensure pink snapper stocks are able to spawn successfully and boost the stock when favourable environmental conditions occur.



Graph 1. Preliminary age distribution for legal pink snapper collected from recreational fishers in the Metropolitan and South-west areas from 2015-2017.

New research on pink snapper spawning

New research shows that pink snapper in spawning condition begin to gather in Cockburn and Warnbro Sounds in August and September in readiness to spawn, well before the start of the current closure (graph 2).



Graph 2. Average gonadosomatic index of adult female pink snapper (black line) and percentage frequency of mature/spawning female pink snapper (bars) in the Metropolitan Area (Source: Wakefield 2010).

Fishing pressure

Over the last two years commercial and charter catch returns and social media content has shown targeted fishing pressure on spawning pink snapper in Cockburn and Warnbro Sounds is occurring in the lead up to the current closure. There is also evidence that recreational and charter fishers target migrating pre-spawning pink snapper on grounds adjacent to Cockburn Sound, Warnbro Sound and Owen Anchorage (e.g. Five Fathom Bank) leading up to and during the current closure.

The targeting of the spawning aggregations and migrating pre-spawning pink snapper impacts on the effectiveness of the spawning closure and therefore on the pink snapper stock as a whole. These impacts include, interrupting spawning behaviour, reducing the number of fish that can spawn and disrupting spawning itself. Studies also show that capture and release of some demersal species, prior to spawning, can cause reduced spawning success or even for a fish to skip spawning in that year.

For more information about recreational fishing rules and management visit www.fish.wa.gov.au

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