

# SPIDER CRABS

## 'NO-TAKE' SEASON FOR MORNINGTON PENINSULA

Image: Matt Testoni

### 1. INTRODUCTION

The Port Phillip EcoCentre is a not-for-profit organisation that empowers local communities to engage in environmental stewardship where they live. We strive for *“development which aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations.”*<sup>1</sup> EcoCentre's Port Phillip Baykeeper provides education and practical action and an independent, informed voice for the long term health of Port Phillip Bay to the benefit of all Victorians.

A position paper outlines the evidence-based position of the Port Phillip Baykeeper on an issue regarding the health of the Bay. A suite of position papers is available for download from the EcoCentre website.<sup>2</sup>

### 2. PURPOSE

This paper provides recommendations to the Victorian Fisheries Authority (VFA) to address widespread concerns regarding the perceived vulnerability of the Spider crab (*Leptomithrax gaimardii*) population during seasonal moulting aggregations at sites on Mornington Peninsula.

### 3. BACKGROUND

**3.1** Seasonal aggregations of Giant spider crabs were celebrated internationally in a nature documentary by the BBC in 2017.<sup>3</sup> During 2020, following concerns about the seasonal aggregations of Spider crabs at the Mornington Peninsula being targeted by recreational anglers in the past 2 years, the VFA conducted a public consultation to review crab fishing regulations. The VFA proposed to reduce the allowable daily catch from 30 to 15 Spider crabs per person. The EcoCentre submitted that we support the proposed allowable catch of 15 Spider crabs for Victoria and also proposed that the Mornington Peninsula is declared a Spider crab no-take zone from April to June every year.

<sup>1</sup> National Strategy for Ecological and Sustainable Development's definition

<sup>2</sup> [www.ecocentre.com](http://www.ecocentre.com)

<sup>3</sup> BC's Blue Planet II, narrated by Sir David Attenborough.

- 3.2** Other advocates for increased protection of the Spider crabs assert that declaration of a seasonal ‘no-take’ period for the Mornington Peninsula will:
- protect Spider crabs when they are most vulnerable;
  - demonstrate our natural resources are truly valued; and
  - allow local stakeholders to invest in creating celebratory events showcasing nature for the benefit of all Victorians.

## 4. RELEVANT LEGISLATION AND POLICY SETTING

<https://vfa.vic.gov.au/recreational-fishing/recreational-fishing-guide/catch-limits-and-closed-seasons/types-of-fish/crabs/spider-crabs-including-giant-spider-crab>

Victorian Fisheries Authority Science Report series # 17: Defining movement characteristics of Victoria’s Giant Spider crab.

## 5. SPECIFIC ISSUES

- 5.1** Caution must be applied to protect the species during moulting aggregations when they are particularly vulnerable to predation by rays, sharks and people. Availability of social media alerts to aggregations occurring on the Mornington Peninsula facilitates unprecedented levels of angler involvement due to the proximity to where they live within the Greater Melbourne region.
- 5.2** The VFA cites the intent of the revised regulations, and the conduct of a short-term radio-tracking study of a small number of crabs is to ensure crabs reproductive success for the ongoing benefit of the fishing community. While the VFA has surveyed a small group of crab-fishers in order to assess their interests and needs, there appears to have been no documented assessment of the needs and interests of other stakeholders (e.g. divers, snorkelers, tourists, local businesses that benefit from eco-tourism, etc.), despite strong advocacy by the local as well as the wider Victorian community.<sup>5</sup>
- 5.3** The VFA’s short-term radio-tracking study report<sup>6</sup> claims proof that Spider crabs migrate out of the Bay and are therefore connected to other Spider crab populations in Victoria, making them less vulnerable to fishing out during their aggregation period. However, upon examination of the methods and results, we disagree that this is a scientifically sound conclusion of this study.<sup>7</sup>
- 5.4** Investment in ongoing study of the species at a population level and how the crabs interact with the wider ecosystem is warranted; as is investigation of the value of the Spider crab aggregations to the wider community. This study could include opportunities for visitors to contribute to the process (e.g. by measuring moulted crab shells through a citizen science project) and learn about the species.

<sup>4</sup> 195 people in June 2020 <https://vfa.vic.gov.au/science-in-fisheries/spidercrabs/preliminary-spider-crab-fisher-survey>

<sup>5</sup> At the time of writing, a change.org petition called “Support NO-TAKE of Australia’s Iconic Spider Crabs during their Moulting Season” had collected over 36,530 signatures.

<sup>6</sup> Green et al (2021), Defining movement characteristics of Victoria’s Giant spider crab. Victorian Fisheries Authority Science Report Series #17

<sup>7</sup> On the basis of one tag being detected at Cape Shank, the VFA report infers that Spider crabs in the Bay interact with the wider crab population. This is doubtful as the tags are only detected once they leave the crab, float to the surface, and encounter suitably calm conditions to be satellite detected. The time the tag was released (2:00 am) is just prior to the outgoing tide at Port Phillip Heads (2:37 am) and the maximum WNW wind speed of 70 km/h at 3:08 am; and the tag was first located 8 hours and 47 minutes later. Based on the above data and the understanding that tags are detected by satellites sometime after they’ve released from the crab and floated to the surface, it is conceivable that the crab carrying tag #44 never left Port Phillip Bay. Quite conceivably, if the tag was released from the crab inside the Bay near Port Phillip Heads it would have been carried through ‘the Heads’ on the outgoing tide and prevailing WNW winds; to then be driven eastwards along the coast to Cape Shank by the prevailing SW winds.

## 6. DISCUSSION

- 6.1** The fact that the annual aggregation of Spider crabs at the Mornington Peninsula attracted coverage by an internationally acclaimed wildlife documentary attests to their potential to generate tourism to benefit all Victorians. On that basis, declaration of a no-take period for Spider crabs on the Mornington Peninsula from April to June is justified to fully capitalise on the economic and experiential benefits generated by this extraordinary natural phenomenon. As this declaration would not prevent crab-fishing elsewhere in Victoria it should be of negligible impact on the crab-fishing community.
- 6.2** The current regulations place recreational anglers who choose to take crabs in their most vulnerable season at odds with the larger majority of people who want to enjoy and celebrate the natural spectacle of the Spider crab aggregations. Noting that “*The Victorian community owns the giant crab resource...*”<sup>8</sup> we submit that the VFA must take wider community considerations into account in managing the Spider crab fishery.

## 7. RECOMMENDATIONS

- 7.1.** That the Victorian Fisheries Authority declare the Mornington Peninsula to be a Spider crab no-take area from April to July each year.
- 7.2.** That a consortium of interested stakeholder organisations including research institutes, community environment organisations, VFA, recreational angler groups, and Mornington Peninsula Shire be convened to devise and deliver a citizen science program to take the opportunity to conduct annual monitoring of age-classes of moulted Spider crabs to better understand the Spider crab population.
- 7.3.** That more scientific research is undertaken to more accurately understand Spider crab life history in Port Phillip Bay.

## CONTACT

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