

## Justine Donohue

---

**From:** POV eSubmission Form <ecosystems@parliament.vic.gov.au>  
**Sent:** Wednesday, 12 August 2020 3:13 PM  
**To:** ecosystems  
**Subject:** New Submission to Inquiry into Ecosystem Decline in Victoria

Inquiry Name: Inquiry into Ecosystem Decline in Victoria

Barbara Hall  
[REDACTED]

[REDACTED]

[REDACTED]

### **SUBMISSION CONTENT:**

--

Enquiry into biodiversity and ecosystem decline in Victoria

Introduction

A good part of my childhood was spent at the Bunburies at the sea edge of the south end of Cole Street, Williamstown, building cubby houses with stuff from the nearby rubbish dump, marooning ourselves on islands of rocks and swimming in summer.

On retiring from secondary teaching in 2000 I joined the Marine Research Group inside the Field Naturalists Club of Victoria which collects data on intertidal invertebrates during the warmer months.

In 2008 I volunteered to look after the MRG crabs in alcohol collection which necessitated I learn to identify Victorian crabs and prepare a field guide, Victorian Shallow Water Crabs. It is such work which informs my submission to the Enquiry and I do this as a citizen.

Prelude

Once upon a time before 2008 when bushfires and fire retardant lead to poisoning of the Genoa River which enters the Mallacoota Inlet the waters were clear and you could see the green ribbon straps of seagrass undulating under your boat.

Once upon a time.

Now the waters are grey and muddy and stay that way.

Once upon a time the seagrass roots bound the sediment, the swans fed upon the sea grass and the striped eye hermit crabs (*Diogenes senex*) occupied the shells of dead mud whelks.

Now the waters stay turbid and the sunlight does not sustain the former life.

PROPOSAL

We need to change our culture and expand the deployment of citizens, scientists and the resources of governments

to take account of the marvellous mystery and complexity of life.

Thousands of scientists have lost their jobs over the last 30 years that I have been reading the newspapers. Having a science degree is a route to unemployment.

I will put a little more in my conclusion.

## SPONGES

In my 40s I took up snorkelling at the Bunburies in Williamstown, a tumble of basalt rocks in the sea.

As a child I kept away from the youths with their spear guns as they occupied the sea edge of the rocks.

In summer I hung out for the coincidence of a high pressure cell and low tide when the shallows were lit up by sun and was beholden to magnificent dog sized sponges, some bright pink and some orange. However there were times, despite the ideal conditions the water was not so clear and I found myself dusting off the accumulated muck on the sponges. These sponges had gone by the end of the 90s.

After joining the FNCV I regularly attended meetings. One guest speaker was invited to talk about the biological consequences of dredging operations in Corio Bay in the 1990s. As I listened I realised that the dredging coincided with the increased turbidity and the loss of these sponges.

The speakers focus was on a few species which were not affected by the dredging.

## ANEMONES AT THE BUNBURIES AND PORT MELBOURNE

In the 1950s and 1960s the red waratah anemone ( *Actinia tenebrosa* Farquhar 1898) lived on the rocks in the sun. Us children called them blood suckers and told each other they would suck the blood out of you if you touched them.

Come my membership of the MRG it was a joy to know the name of this anemone and explore this marine environment with its abundant diversity of invertebrate species.

However the numbers of waratah anemones have dwindled, they looked brownish and sick and since 2014 I have not been able to find any.

There was another anemone (*Anthothoe albocincta* (Hutton 1879)) with usually an orange and white striped column with white tentacles which lived in the shadows under rocks. It too has disappeared from the Bunburies.

There was a stage when I found sick looking anemones called *Oulactis muscoa* (Drayton 1846) which had become detached from the substrate. This anemone is distinguished by the way sand grains adhere to the tentacles when they pull them in towards the centre. *O. muscosa* has gone from the Bunburies.

The most surprising change is what happened in Port Melbourne. In the shallows on the north side of the groin across the road from the south end of Batman Road Melway 56 H3 there were approximately 16 to 25 square meters of an aggregation of *Oulactis muscosa*. When I last visited this site more than a year ago there were about 7 left and most of these animals which had no sand grains adhering to them fell apart when touched.

I wrote a letter to the Parks Victoria Hobsons Bay about the ongoing demise of this particular species and received a letter to say that it was normal for boom and bust in species population.

I realised that Parks Victoria did not know that some anemones have very long life spans or anything of their reproductive strategies.

## BIVALVE *Laternula gracilis* (Reeve 1860)

Autumn, 2008, a friend invited me to Greenwich Bay (Melway 56 C 5) to identify what he called 'squirters' a bivalve which lives in the mud at the bottom of a water filled hole. The force of your foot sinking in the mud pressures this water to squirt up your leg.

He informed me and we also observed that these fragile pearly bivalves which have many eyes were popular as bait because there was much evidence on this and other occasions of people digging them out for bait even though it is against the law.

This aggregation of *Laternula gracilis* on the south west side of Sandy Point is no longer there possibly due to the predation of fishing bait collectors.

Nowadays if you fossick along the seaside edge of the Strand you'll be lucky to find a single one not yet got by a bait collector.

## GASTROPOD *Dicathais orbita* (Gmelin 1791)

This large white predatory snail which grows to about 60 mm is no longer to be found at the Bunburies in the intertidal zone.

#### HERMIT CRAB *Paguristes sulcatus* Baker 1905

At the Bunburies I came across a population of hermit crabs living in large dog whelk shells *Dicathais orbita*, in one small place far out at the sea edge and I nicknamed it the Hermitage. They have very hairy claws through which emerges little cones, so marked that they look like little eyes.

On one occasion I argued with people who were collecting them until they gave up and went.

However I haven't been able to find them in recent years. Besides there are no more dog whelks to die and donate their shells to the Hermitage.

#### BURROWING SHRIMP *Filhollianassa ceramica* (Fulton and Grant 1906) and the SUBSTRATE

Underfoot in the swimming area of the Bunburies it was very soft which as a kid I found yukky but I have a different opinion now because I think it is the burrowing life which keeps the sand in that condition. Bait pumping this area has been very popular and now this area is firmer under foot. According to the Victorian Recreational Fishing Guide 2018 you can take up to 100 of any burrowing shrimp species. Mind you a teenage boy gave me a very nice specimen of burrowing shrimp *Filhollianassa ceramica* in 8/4/2007.

#### MORE ABOUT SUBSTRATE

Most little marine invertebrates don't live in coarse sand which often has been used to renourish beaches like Altona and Port Melbourne. The resulting loss of marine species has not been accounted for when beaches around Port Phillip Bay are renourished.

#### ORANGE CLAWED MARSH CRAB *Parasesarma erythodactyla* (Hess 1865)

I am familiar with 2 groups of these crabs. The first group lives in the rock revetement along the west side of the Power Station Cooling Water Outlet Melway 56 C 5. Since making visits to this area after the West Footscray fire 2018 I have not seen any.

The second aggregation is in the mud of the mangroves on the east side of Hyde Street which forms the vegetation strip on the west side of the Stony Creek Park Backwash. Since the fire I have found a few juveniles.

#### STALK-EYED CRAB OF EXPOSED MUD BANKS *Tasmanoplax latifrons* (Haswell 1881)

This species of crab which lives on open mud banks has gone from the Greenwich Bay mud flat for reasons unknown.

It is a pale sand coloured crab with long stalk eyes which can be lowered into channels at the front of the carapace or raised when feeding. Come any disturbance and these crabs quickly disappear down their holes.

A bigger aggregation was to be found at the Stony Creek Backwash Melway 42 C 11. This was an area I enjoyed exploring for its invertebrate life. You could watch the crabs from the walkway above the water.

The West Footscray fire brought immense devastation. To put it briefly *T. latifrons* is no longer visible and moreover the holes it lived in are gone.

Their demise can be attributed to the West Footscray fire which devastated Stony Creek, the Stony Creek Park Backwash, the Yarra River and caused great untold damage to Port Phillip Bay.

I have made frequent visits to this area, more so after the fire. Along the Yarra people continued to fish despite the warning sign and at the Warmies in Newport I watched young men thrilled to catch tailor which were far less lively than usual.

#### COMMON CRABS ARE NO LONGER COMMON

Those who gather bait for their fishing hooks would be able to testify to this even though the Victorian Recreational Fishing Guide mandates limitations.

On Hobsons Bay I once spoke to 2 men about their gathering of bait. I could see a little rosette of sand left by a very

juvenile soldier crab and then one of them picked it out the sand and put this pathetic specimen in a tin box saying they were very good for catching bream. When I put it to them that the population might disappear they explained it was the big ships in the bay that were the problem.

## CONCLUSION

If we don't collect the data then we don't know what is happening. With no proper accounting there is no way to take responsible action.

We need to legislate for a body to collect the data which has power to access information and act to preserve what biodiversity we have.

PS All invertebrate names have been checked using the World Register of Marine Species.

--

File1:

File2:

File3: