



PIPIS IN PERIL: SUSTAINABLE HARVESTING CLAIMS UNJUSTIFIED

When it announced new management arrangements for commercial pipi harvesting in Cape Liptrap and Discovery Bay coastal parks just days before the caretaker period last year, the then Napthine Government intensified community concerns about the future for pipis on Victoria's beaches.

Already under enormous pressure from recreational harvesting, and amid signs that pipi numbers are in dramatic decline, the decision on commercial harvesting in the parks is irresponsible.

Along with declining pipi stocks, the collateral impacts of pipi harvesting are damage to coastal dune habitats from recreational harvesters accessing the beach, the loss of food for shorebirds such as the pied oystercatcher, and the disturbance of beach nesting birds like the endangered hooded plover.

Fisheries Victoria has poorly managed recreational pipi harvesting and has now increased the pressure on pipis by facilitating commercial harvesting. The agency's claims that pipi harvesting is sustainable cannot be supported by the very limited science available.

The main pipi harvesting sites in Victoria are in the intertidal zones of Cape Liptrap and Discovery Bay coastal parks. The objectives of the parks include preserving and protecting the natural environment, allowing natural processes to continue with a minimum of interference and maintaining biodiversity, while providing opportunities for appropriate recreation, education and tourism, including recreational fishing.

Although recreational harvesting, not commercial harvesting, is allowed within the management plans of both parks, it is highly unlikely that when the plans were prepared in 2003 and 2004 it was envisaged that on some days up to 2000 people could be taking pipis from the Venus Bay beach. This current scale of pipi harvesting is inappropriate in a coastal park.

In future, the responsibility of Parks Victoria to manage park values and uses should be reaffirmed and Fisheries Victoria removed from any management role.

RECOMMENDATIONS

- Establish a 12-month moratorium on the commercial harvesting of pipis in the Cape Liptrap and Discovery Bay coastal parks.

- Close parts of the coastal parks to recreational harvesting to allow pipi recovery and to assist scientific studies.
- During the moratorium:
 - Conduct an independent and ecosystem-based assessment of pipi harvesting to establish baseline data and an ongoing monitoring program to enable an ecological sustainability assessment of the fishery (commercial and recreational sectors).
 - Review the current regulations on pipi harvesting (including consistency with other jurisdictions).
 - Establish a multilingual education program to promote pipi conservation.
 - Increase compliance and enforcement activities.
 - Investigate measures to limit the number of recreational harvesters at Venus Bay.
 - Independently review the appropriateness of pipi harvesting in coastal parks.
 - Ensure Parks Victoria is the sole manager of coastal park values and uses with sufficient resources and powers to manage pipi harvesting. Fisheries Victoria should no longer manage pipi harvesting in the parks.
 - Investigate reports that some recreational harvesters are illegally selling the pipis they collect.
 - Investigate the feeding ecology of shorebirds and monitor impacts on beach-nesting birds.
 - Abandon the Pipi Now and Forever campaign of Fisheries Victoria.
- Review the moratorium towards the end of the 12 months to consider options that include:
 - Extension of the moratorium.
 - Amendments to the coastal park management plans to prohibit or better manage pipi harvesting.
 - Ending the moratorium and introducing rotational closures, minimum size regulations, more regular education/enforcement operations, and the maintenance of monitoring programs.

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PIPI BIOLOGY AND DISTRIBUTION

The pipi, *Donax (Plebidonax) deltoides*, is a small bivalve mollusc found up to 100mm below the surface of high-energy Australian beaches from southern Queensland to the mouth of the Murray River in South Australia. Pips mature after one year and at around 37mm in size across the shell, can grow up to 80mm, and live for three to five years.

Pipis are filter feeders, collecting phytoplankton from the waters of the intertidal zone. They are also an important food source for such birds as the pied oystercatcher.

In Victoria pipis are found at only a few locations where their numbers are sufficient to support either commercial or recreational harvesting. These areas are on the beaches of Discovery Bay, in western Victoria, and between Wilsons Promontory and Point Smythe in South Gippsland. A likely reason for these concentrations is the nutrient-rich waters at the mouth of the Glenelg River in the west, and Anderson Inlet and Shallow Inlet in the east.

PIPIS HARVESTING

Commercial harvesting of pipis in Australia is centred on the south-east corner of South Australia, the north coast of NSW and in the Discovery Bay and Venus Bay coastal parks of Victoria. Recreational harvesting also occurs within these states as well as in Tasmania.

Pipi population declines have been reported for NSW, Victoria and South Australia. In one management response the annual commercial quota in South Australia was cut by half in 2008 to 300 tonnes.

In Victoria, commercial harvesting of pipis occurred on South Gippsland beaches until the 1970s when stock depletion saw it become a largely recreational activity. According to the Fisheries Research and Development Corporation website, there was no reported commercial harvesting in Victoria between 2002 and 2008, and very low harvests from then to 2013. In 2012 there were two commercial fishers in the Victorian Bait Fishery and five in the ocean fishery who together harvested 76 tonnes¹ of pipis. Commercial harvesting in Discovery Bay appears to have begun in 2011.

All recreational and commercial harvesting in Victoria must be by hand i.e. no use of spades or forks. In 2010, amid concerns at the harvesting pressure on pipis,

the 5-litre maximum daily bag limit was reduced to 2 litres (there is no minimum size limit for recreational fishers). However, this coincided with a Fisheries Victoria campaign – Pipis Now and Forever – which encouraged people to go to Venus Bay and collect pipis. Since then, the number of recreational harvesters there has skyrocketed, while increased prices for pipis as bait or a delicacy have encouraged increased commercial harvesting.

In November 2013, Fisheries Victoria issued the Fisheries (Discovery Bay Pipis) Notice to 'regulate' the commercial harvesting of pipis in Discovery Bay Coastal Park by holders of an Ocean Fishery Access Licence. It also set a minimum harvest size of 35mm.

The Discovery Bay notice was rescinded with the issuing of the Fisheries (Victorian Pipi) Notice on 31 October 2014, just days before the start of the government caretaker period prior to the November state election. The notice restricted commercial harvesting of pipis to the western half of Discovery Bay Coastal Park, the south-western shoreline of Venus Bay and two areas within Waratah Bay, one along Cape Liptrap's east coast and the other on the beach in front of Shallow Inlet:

The objective of the notice is to address sustainability concerns for Victorian pipis stocks and related management issues by closing marine waters to commercial pipi harvest except for specified open areas, fixing a minimum size limit for pipis taken under commercial fishery access licences and requiring that commercial fishers prior-report their intention to fish for pipis.

The notice failed to mention that there are very few areas in Victorian marine waters where pipis are found in quantities sufficient for harvesting, and that most of those areas could now be subjected to commercial harvesting because of the notice.

Ten months earlier, Fisheries Victoria announced Operation Helix, which former MP for South Gippsland Peter Ryan said would see officers 'out in force at Venus Bay to target illegal pipi harvesting'². During the last summer Operation Sonic checked vehicles departing Venus Bay at a road block in Tarwin Lower and discovered many vehicles with more than the daily bag limit. Almost all were simply issued a warning and the confiscated pipis dumped in the Tarwin River. These well-publicised enforcement operations are likely too few to have any lasting effects.

1 FRDC website accessed 24/02/2015 <http://fish.gov.au/reports/molluscs/pipis/Pages/pipi.aspx>

2 Ryan, P. 2014, Operation Helix takes aim at illegal pipi harvesting Friday, January 10, 2014 Press release

STUDIES OF PIPI DISTRIBUTION AND ABUNDANCE IN VICTORIA

There have been four field studies of pipis in Victoria. Three have focused on the pipis of Venus Bay, largely in response to concerns expressed by local residents about the impacts of pipi harvesting.

The first was a 2009 study by Zac Lewis for his Honours thesis. The second was a Recreational Fishing Grants Program project by students Jacinta Early and Zac Lewis, with Dr Mark Scarr and Dr Carol Scarpaci, published in January 2013 and based on field surveys in 2011. The third was commissioned by the Venus Bay Community and carried out by Dr Greg Parry, Director of Marine Ecological Solutions, in 2013. Versace et al conducted the fourth study at Discovery Bay in 2011 and acknowledged there had been pipi stock declines in Venus Bay and Discovery Bay.

All three Venus Bay studies involved data collection along multiple transects across the beach between Pt Smythe and Cape Liptrap, with the Parry study using many of the transect lines from the earlier studies.

One of the key findings from the Venus Bay analyses was a marked difference in the size structure of the populations in heavily fished and lightly fished areas. In the heavily fished areas the population was dominated by small pipis, whereas in the lightly fished area, the pipis were larger. The lightly fished area at the southern end of the Venus Bay beach, which is seen by scientists as a refuge area that could support pipi recruitment in the heavily fished area to the north, has now been opened to commercial harvesting.

ECOLOGICAL SUSTAINABILITY OF PIPI HARVESTING

The Early et al 2013 study concluded that:

Results of this study suggest that the pipi resource in Venus Bay is currently harvested at a sustainable level. However, because the impacts of fishing are localised the introduction of new access points in Venus Bay may have implications on stock levels, particularly the abundance of mature pipis.

When reviewing the two previous studies by students from Victoria University in 2013, Dr Greg Parry of Marine Ecological Solutions stated:

As neither Lewis (2010) nor Early et al. (2013) provide any analysis of temporal changes in population size, nor any estimate of the total recreational catch, it is unclear how they were able to conclude this fishery is sustainable.

According to the Fisheries and Research Development Corporation (FRDC) website, the stock of pipis in Victoria is undefined i.e. it cannot be said to be sustainable under past, current or future fishing pressure because there is insufficient information on the stock.

Even so, Fisheries Victoria has used the results of the first two studies to claim sustainability for pipi harvesting in Venus Bay, to underpin its Pipis Now and Forever campaign and to justify its promotion of commercial harvesting. The two earlier studies were not assessments of ecological sustainability of pipi harvesting on Venus Bay beaches. Nor was the report by Greg Parry, but he freely acknowledged that was not its purpose.

To assess the ecological sustainability of pipi harvesting requires an ecosystem-based approach, not a narrow single species approach. In such an assessment, at least the following³ should be evaluated:

- Status of wild stocks: current population to unfished levels; the extent of overfishing; long-term trends; the habitat range of the species; the current and pre-fished age, size and sex distribution; the effectiveness of management (including management track record, monitoring and enforcement).
- Impacts of fishing on habitats and ecosystems: trophic impacts, physical effects on habitats, spatial and temporal scale of impacts; the effectiveness of management. This would include the physical impacts of beach access on sand dune habitats, the loss of food for shorebirds and the disturbance of beach nesting birds.

The impacts of pipi harvesting on the values of the two coastal parks should be added to this list of criteria.

Based on the available data from the studies mentioned above, there is clearly insufficient information to assess pipi harvesting as ecologically sustainable.

³ Australian Conservation Foundation 2011, Sustainable Australian Seafood Assessment Criteria: Wild-catch seafood products, Australian Conservation Foundation, Melbourne

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Stretching almost as far as the eye can see people harvest pipis at Venus Bay in the Cape Liptrap Coastal Park, December 2013. Photo courtesy of Friends of Venus Bay Peninsula Inc

CAPE LIPTRAP AND DISCOVERY BAY COASTAL PARKS

The areas to which the Fisheries (Victorian Pipi) Notice applies, and also the focus of recreational harvesting activity, are all within either the Discovery Bay Coastal Park or the Cape Liptrap Coastal Park; their boundaries extend to the low water mark and therefore include the intertidal zone where pipis congregate.

The management plans for both parks acknowledge that recreational harvesting of pipis (and other forms of recreational fishing) is allowed in accordance with the Fisheries Act 1995 and the Fisheries Regulations 1998.

Along with preserving and protecting the natural environment, allowing natural processes to continue and maintaining biodiversity, the coastal parks aim to provide opportunities for appropriate recreation, education and tourism, including recreational fishing and bait collection. Neither management plan refers to commercial harvesting.

On 25-26 December, 2013, the local community estimated that there were up to 4000 pipi harvesters on the Venus Bay beaches. On another occasion, scientist Greg Parry reported that when conducting field analysis, he counted more than 800. At just one beach access point, where there is a handful of parking spaces, the local community counted 500 cars accessing it on one day alone, mostly parked among coastal vegetation and along roadsides.

This is no longer an occasional recreational activity but intensive pipi harvesting (on some days buses have been used to transport recreational harvesters to Venus Bay). It could not be considered as an appropriate park use or what the authors of the park's management plan intended – they wrote the plan before the huge upsurge in harvesting pressure.

In terms of commercial harvesting, there are currently prohibitions on the use of motorised vehicles to access the pipi areas and to cart the pipis off the beach.

Commercial fishers at Venus Bay and some at Discovery Bay are using a four-wheeled trailer that can carry up to 400 kg, although quad bikes are being used by some in Discovery Bay, which is contrary to park regulations.

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