

Pipi

(Donax (Plebidonax) deltoides)

EXPLOITATION STATUS UNCERTAIN

Landings have declined markedly since 2005 and there is considerable concern amongst commercial fishers that catch rates have dropped to uneconomic levels, despite the reasonably high prices received. There is insufficient information to allow specification of an exploitation status.

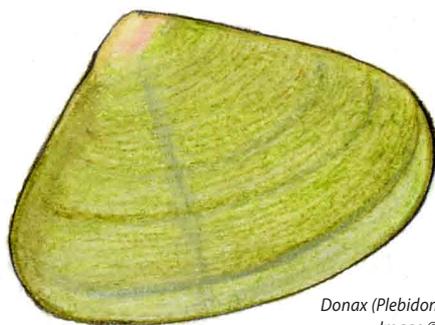
SCIENTIFIC NAME

COMMON NAME

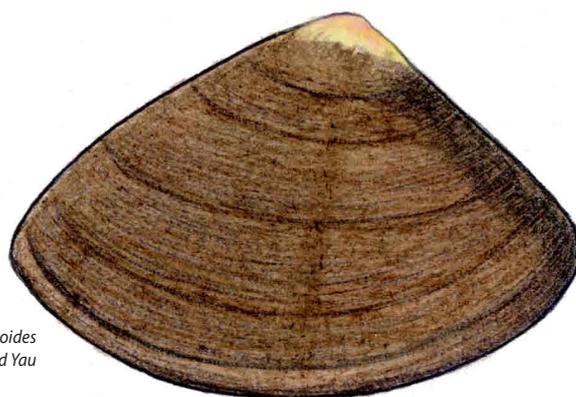
COMMENT

Donax (Plebidonax) deltoides pipi

The same species is known as eugarie in Queensland and Goolwa cockle in South Australia.



Donax (Plebidonax) deltoides
Image © Bernard Yau



Background

The pipi (*Donax (Plebidonax) deltoides*) occurs on surf beaches from southern Queensland southwards to Eyre Peninsula in SA. They are found in the surf zone, i.e. intertidal and shallow subtidal waters along high energy beach coastlines. Whilst pipis are harvested within the Estuary General Fishery, they are not normally found in estuaries. Like most bivalve molluscs, pipis filter feed by extracting microscopic matter (particularly phytoplankton) from the water.

In NSW, pipis grow rapidly and reach sexual maturity at about 3.7 cm shell length within the first 10 to 12 months of life. Pipis appear to be capable of spawning all year round, giving rise to 'cohorts' of recruitment of small pipis (less than 1 cm shell length) onto beaches. However, not all recruited cohorts become established in the population. Pipis grow to more than 6 cm shell length and are believed to live for up to 4 or 5 years.

There was a considerable peak in landings of pipis in 1996/97 before several events of human sickness following consumption of pipis caused this part of the fishery to be closed periodically during 1997 and 1998. The pipis were contaminated by algal blooms occurring off some beaches in summer. Access to this part of the fishery has subsequently been limited to fishers who operate in accordance with an approved biotoxin management program. Under the program, fishers test the water regularly for the presence of algae and cease harvesting if concentrations are above threshold levels.

Pipis are collected exclusively by hand in the Estuary General Fishery, by endorsement holders. Apart from human consumption in soups and chowders, pipis are also sold as bait for recreational fishers. Considerable quantities are also collected by recreational fishers for use as bait.

Additional Notes

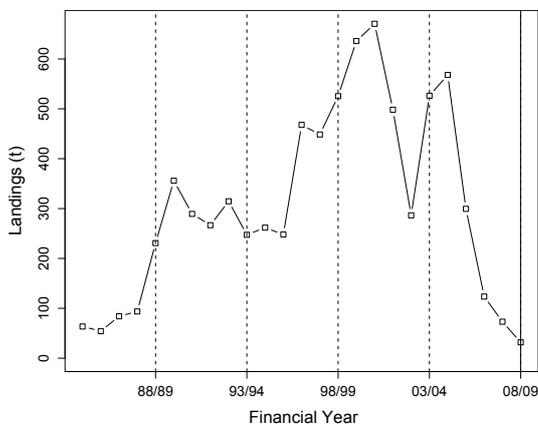
- Commercial landings have declined from more than 500 t in 2004/05 to less than 100 t in recent years, despite a very significant increase in price over this period.
- The commercial harvest may no longer be greater than the recreational harvest, although no data are available on trends in the latter.
- The unit for measuring commercial catch rates was reviewed in 2009 and found to be appropriate – catch per unit effort has declined even though effort had apparently been reasonably stable over the past decade.
- Some monitoring of size composition of catches from selected beaches has been continued at the Sydney Fish Market but catches have been sporadic. Monitoring of the size composition does not appear to provide useful information on stock status.
- There is a combined recreational bag limit of 50 cockles, mussels and pipis.

Catch

Recreational Catch of Pipi

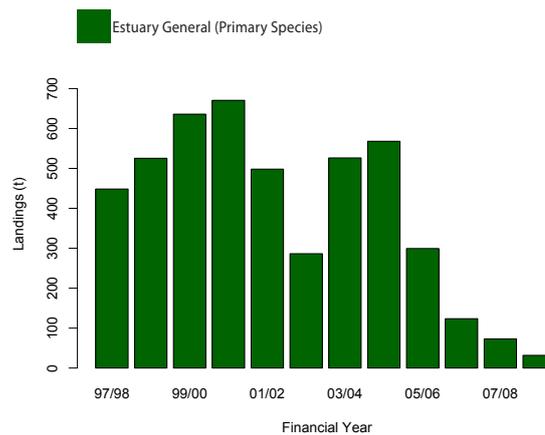
The annual recreational harvest of pipi in NSW is likely to lie between 20 and 50 t. This estimate is based upon the results of the offsite National Recreational and Indigenous Fishing Survey (Henry and Lyle, 2003) and onsite surveys undertaken by I & I NSW. Additional information is available from Murray-Jones and Steffe (2000).

Historical Landings of Pipi



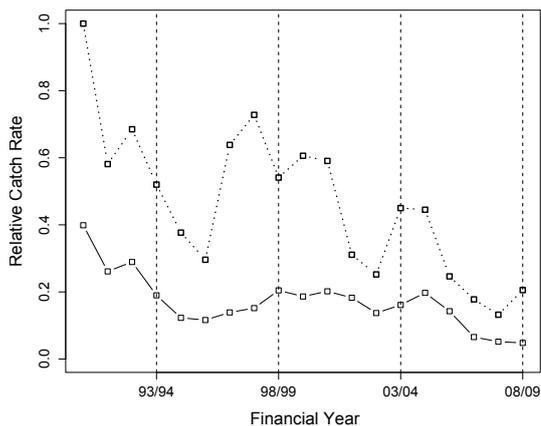
Commercial landings (including available historical records) of pipi for NSW from 1984/85 to 2008/09 for all fishing methods.

Landings by Commercial Fishery of Pipi



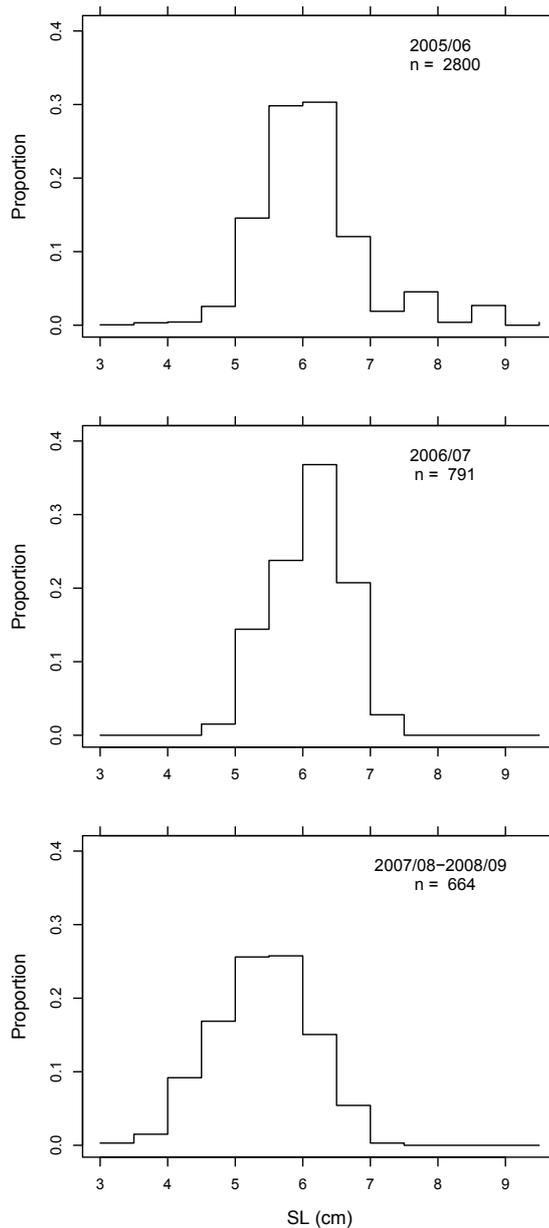
Reported landings of pipi by NSW commercial fisheries from 1997/98. Fisheries which contribute less than 2.5% of the landings are excluded for clarity and privacy.

Catch Per Unit Effort Information of Pipi Harvested by Hand Gathering in NSW



Catch rates of pipi harvested using hand gathering for NSW. Two indicators are provided: (1) median catch rate (lower solid line); and (2) 90th percentile of the catch rate (upper dashed line). Note that catch rates are not a robust indicator of abundance in many cases. Caution should be applied when interpreting these results.

Length Frequency of Pipi



The length distribution of pipis landed by NSW commercial fishers from Stockton Beach is comprised mainly of pipis between 5 and 8 cm shell length (SL). There is no minimum legal length for pipis in NSW.

Further Reading

- Ferguson, G. and S. Mayfield (2006). The South Australian Godwa Cockle (*Donax deltoides*) Fishery-Fishery Assessment Report for PIRSA Fisheries. Research Report Series No. 150. South Australia, SARDI.
- James, R. J. and P. G. Fairweather (1995). Comparison of rapid methods for sampling the pipi, *Donax deltoides* (Bivalvia: Donacidae), on sandy ocean beaches. *Marine and Freshwater Research* **46** (7): 1093-1099.
- Henry, G.W. and J.M. Lyle (2003). [The National Recreational and Indigenous Fishing Survey. Final Report to the Fisheries Research & Development Corporation and the Fisheries Action Program Project FRDC 1999/158. NSW Fisheries Final Report Series No. 48.](#) 188 pp. Cronulla, NSW Fisheries.
- Murray-Jones, S. (1998). Harvesting of the pipi, *Donax deltoides* in NSW. Final Report to FRDC Project 95/152. Wollongong, University of Wollongong.
- Murray-Jones, S. and A.S. Steffe (2000). A comparison between the commercial and recreational fisheries of the surf clam, *Donax deltoides*. *Fisheries Research (Amsterdam)* **44** (3): 219-233.
- Murray-Jones, S.E. and D.J. Ayre (1997). High levels of gene flow in the surf bivalve *Donax deltoides* (Bivalvia: Donacidae) on the east coast of Australia. *Marine Biology* **128** (1): 83-89.
- Robinson, K. and P. Gibbs (1982). [A Field Guide to the Common Shelled Molluscs of New South Wales Estuaries.](#) Sydney, Australia, Coast and Wetlands Society (N.S.W).
- Please visit the CSIRO website, <http://www.marine.csiro.au/caab/> and search for the species code (CAAB) 23 359001, common name or scientific name to find further information.

