

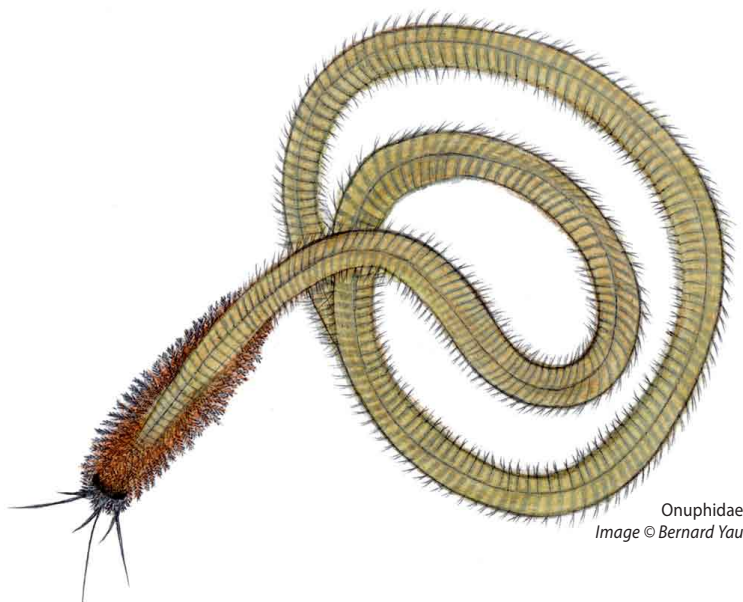
Beachworms

(Onuphidae)

EXPLOITATION STATUS UNDEFINED

The catch comprises a mixture of species and there is insufficient information to assess the status of the stocks. No precise estimate of the recreational catch is available.

SCIENTIFIC NAME	COMMON NAME	COMMENT
<i>Australonuphis parateres</i>	[a polychaete worm]	Also known as slimy.
<i>Australonuphis teres</i>	[a polychaete worm]	Also known as kingworm and stumpy.
<i>Hirsutonuphis mariahirsuta</i>	[a polychaete worm]	Also known as wiry.



Background

Beachworms are large members of the Onuphid family. Three species are considered important to commercial and recreational fishers. *Australonuphis teres*, also known as the 'kingworm' or 'stumpy', and *A. parateres*, known as the 'slimy', are the most valued. *Hirsutonuphis mariahirsuta*, known as the 'wiry', is also caught by fishers.

Australonuphis teres is found on surf beaches from Lakes Entrance in Victoria to Maroochydore in Queensland and *A. parateres* is found on surf beaches from Adelaide in SA to Yeppoon in Queensland. *H. mariahirsuta* occurs on protected beaches from Camden Haven, northern NSW to Yeppoon in Queensland.

Beachworms bury themselves in inter-tidal and sub-tidal sand habitats. They move horizontally through the sediment towards sources of food and emerge from the sand when feeding. When beachworms are at rest, they live vertically with their head towards the top of their burrow.

In contrast to other members of the Onuphidae family which build permanent tubes, beachworms build temporary burrows. For example, *H. mariahirsuta* create very thin and fragile sand encrusted tubes whilst *A. teres* and *A. parateres* strengthen the surrounding sediment with mucus.

Beachworms have biology typical of polychaete worms, with segmented bodies that absorb oxygen. These species reproduce with external fertilisation with male and female beachworms expelling gametes into the water column.

Beachworm larvae live as zooplankton that feed on phytoplankton. At about 3 cm long, the planktonic worms settle in the sand as juveniles. *Australonuphis parateres* can grow up to 300 cm long and 1.5 cm wide, whilst *A. teres* and *H. mariahirsuta* can both grow to 100 cm long and up to 1.5 and 1 cm wide respectively. *Australonuphis* spp. reach sexual maturity at a length of around 40 cm.

Beachworms are scavengers that feed on dead fish, birds, molluscs, and other invertebrates and are also known to consume seaweed. The worms are a common source of food for fish and birds.

Beachworms are collected for bait by recreational and commercial fishers in NSW. They are collected by hand, using a bait to lure the worm out of its burrow. The worm is then caught and pulled out of the sand by hand or with pliers.

Commercial beachworm collecting occurs primarily during the summer. In NSW, collecting peaks in January, slowly declines until July, and increases again in the spring. The majority of collecting occurs along the north coast. Currently there is no evidence of over harvesting of beachworms and overfishing is unlikely given the labour intensive method of collection. There have been, however, complaints about localized depletions on beaches that have high rates of collection.

Additional Notes

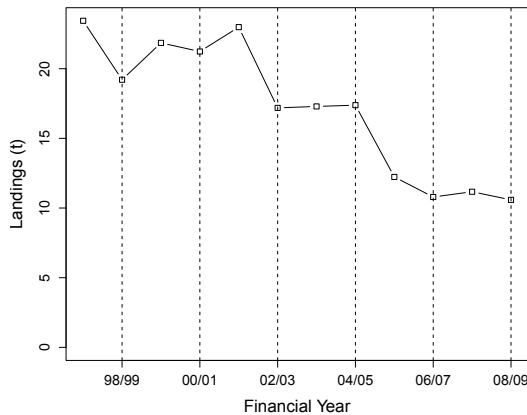
- Three species occur in catches but they are not reported separately.
- Commercial landings have declined from 20 t to 10 t in recent years, although fishing effort has also declined and catch rates have remained stable.
- Recreational landings are not accurately known, and may be significant in some areas.
- There is a recreational bag limit of 20 beachworms.

Catch

Recreational Catch of Beachworms

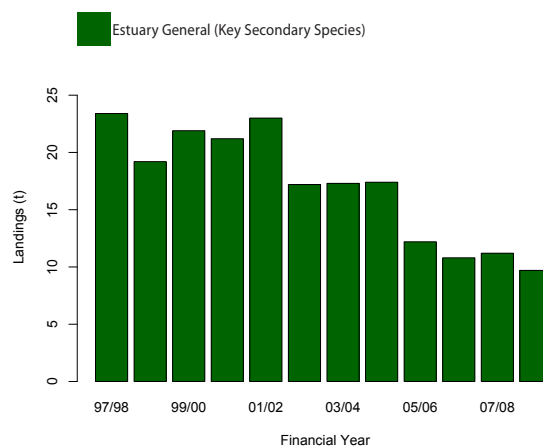
The annual recreational harvest of beachworms in NSW is likely to be less than 10 t. This estimate is based upon the results of the offsite National Recreational and Indigenous Fishing Survey (Henry and Lyle, 2003) and onsite surveys undertaken by I & I NSW.

Historical Landings of Beachworms



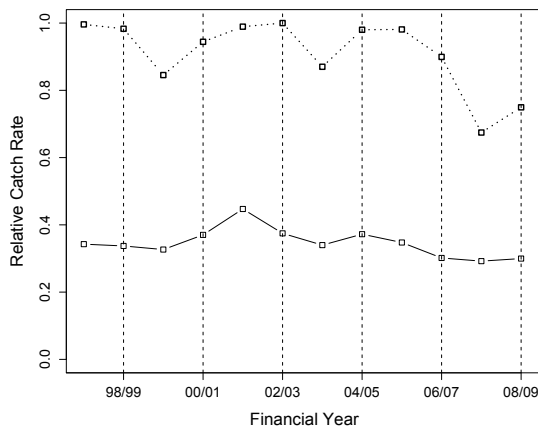
Commercial landings (including available historical records) of beachworms for NSW from 1997/98 to 2008/09 for all fishing methods.

Landings by Commercial Fishery of Beachworms



Reported landings of beachworms 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 Beachworms Harvested by Hand Gathering in NSW



Catch rates of beachworms 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.

Further Reading

Anon. (2003). Onuphidae - Bait worm, Beach worm, Quill worm. [Australian Biological Resources Study](#). Australian Government: Department of the Environment and Heritage.

Fielder, D. and M. Heasman (2000). [Status of the New South Wales Beachworm Fishery 1990/1-1995/96](#). Cronulla, NSW Fisheries.

Fielder, D. (2004). Distribution, abundance and population dynamics of beachworms (Onuphidae) in Queensland/NSW and the impact of commercial and recreational fishing. School of Life Sciences. Brisbane QLD, University of Queensland. **PhD Thesis**.

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.

Paxton, H. (1979). Taxonomy and aspects of the life history of Australian beachworms (Polychaeta: Onuphidae). *Australian Journal of Marine and Freshwater Research* **30** (2): 265-294.

Paxton, H. (1996). *Hirsutonuphis* (Polychaeta: Onuphidae) from Australia, with a discussion of setal progression in juveniles. *Invertebrate Taxonomy* **10** (1): 77-96.

Ponder, W., P. Hutchings and R. Chapman (2002). Overview of the conservation of Australian marine invertebrates: a report for Environment Australia. Sydney, Australian Museum.

Please visit the CSIRO website, <http://www.marine.csiro.au/caab/> and search for the species code (CAAB) 22 030001, 22 030002 and 22 030020, common name or scientific name to find further information.

