

The Marine Worm - *Hadrachaeta aspeta*

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Fisheries Ecosystems Unit, Port Stephens Fisheries Institute

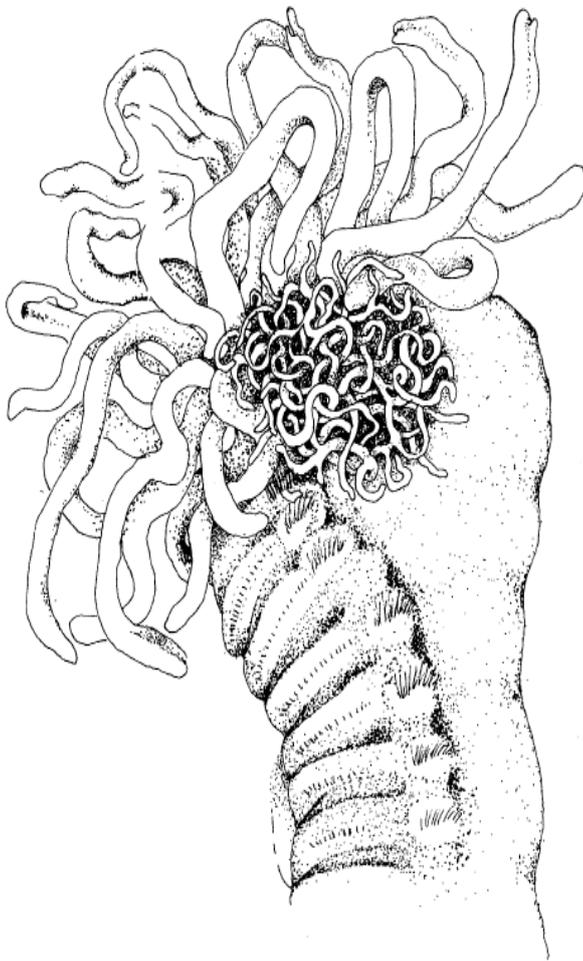


Illustration by Pat Hutchings, Australian Museum

Introduction

Hadrachaeta aspeta is a tubicolous polychaete annelid (a tube-dwelling bristle worm), of the family Terebellidae. It is the only species in its genus and is endemic to eastern Australia. The only published records are from Patonga Creek (lower Hawkesbury River) and Yamba in New South Wales, and from Serpentine Creek (Brisbane) in Queensland.

Despite targeted surveys, *Hadrachaeta aspeta* has not been collected in New South Wales waters since 1975 and is therefore presumed extinct. While the reasons for its demise are unknown, it is widely suggested that causes could include pollution from antifouling paints and accumulated toxins in sediments, as well as habitat modification and degradation.

Hadrachaeta aspeta is listed as a **species presumed extinct** in NSW.

Description

Hadrachaeta aspeta is a small species growing to a maximum length of approximately 25 mm.

The species has numerous thick, grooved tentacles and three pairs of gills on segments 2 - 4 of the body.

The species has a compact protomium (first body segment) with thickened, out-folded lips and no eye spots.

Habitat and ecology

- *Hadrachaeta aspeta* is a tube-dwelling species that lives in soft muddy sediments in the inter-tidal zone of enclosed bays and estuaries on the seaward side of mangroves.
- The species has a limited geographical distribution and restricted habitat.
- Nothing is known about its life history although based on related species, *Hadrachaeta aspeta* probably breeds annually and may live for several years.

Why did *Hadrachaeta aspeta* become extinct?

The cause of extinction of *Hadrachaeta aspeta* is not definitively known, however a range of factors are thought to have contributed including:

- Pollution caused by antifouling paints in enclosed waters.
- Accumulation of toxins in sediments in enclosed waters.
- Habitat degradation through changes in environmental conditions over the last century.

Legal implications

Although *Hadrachaeta aspeta* is presumed extinct, there is a possibility that it may still exist in some areas. As with all threatened species in NSW, it is illegal to collect, buy, sell, possess or harm the species without a specific permit, licence or other appropriate approval.

There can also be significant penalties for causing damage to the habitat of a threatened species without approval.

The impact of developments or activities that require consent or approval (in accordance with the *Environmental Planning and Assessment Act 1979*) must be assessed and considered by consent or determining authorities. Where such actions are likely to result in a significant impact on a threatened species or its habitat, a detailed species impact statement must be prepared.

How can you help?

- Be on the lookout for the species in your local area.
- If you think you may have found the species, report the sighting on the NSW DPI 24 hour automated message-taking service by calling (02) 4916 3877.

Bibliography and further reading

Fisheries Scientific Committee. 2010. Final Determination - The Marine Worm - *Hadrachaeta aspeta* as a species presumed extinct in NSW.

Hutchings, P.A., 1977. The Terebelliform Polychaeta from Australia, chiefly from Moreton Bay, Queensland. *Records of the Australian Museum* 31: 1–39.

Hutchings, P.A. & Glasby, C.J., 1988. The Amphitritinae (Polychaeta: Terebellidae) from Australia. *Records of the Australian Museum* 40: 1–60.

For further information

See the NSW DPI website: www.dpi.nsw.gov.au

Contact the NSW DPI Threatened Species Unit:

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