



Puget Sound Polychaetes: Family Magelonidae



Family Magelonidae

General characteristics (Blake, 1996)

- Body slender, threadlike, divided into 2 regions: thoracic region with 9 setigers and abdominal region with varying numbers of setigers.
- Prostomium spatulate (broad and flattened, oval outline), fused to the peristomium; 2 long papillated palps attached ventro-laterally to the posterior part of the fused prostomium-peristomium. The papillae turn red with rose bengal.
- Eversible pharynx small and sac-like, unarmed.
- Thoracic parapodia biramous; setae generally simple, bilimbate; setiger 9 (the final thoracic setiger in all species) often smaller than other thoracic setigers and may have modified setae (presence/absence, what they look like are diagnostic characteristics).
- Abdominal parapodia biramous, noto- and neuropodia well-separated, with 2 lateral lamellae between; abdominal setae consist of uni-, bi-, tri-, or multidentate hooded hooks.
- Abdomen has variable number of setigers.
- Pygidium small with 2 short anal cirri.
- Lobes on the parapodia called “lamellae” – dorsal to notopodium, ventral to neuropodium, also between the noto- and neuropodia. The shape, size, and location of these lamellae help distinguish the species. Especially those on setiger 9.

General information

- *Magelona* - only recognized genus in the family.
- Two common species in Puget Sound (*M. longicornis*, *M. sacculata*), then occasionally get three other species...more shallow, intertidal, outer coast.

Species-level diagnostic characters for Puget Sound species

- Presence or absence of fleshy frontal horns on the prostomium (prostomial horns).
- Relative length and width of prostomium.
- Presence and location of lateral pouches between abdominal segments.
- Modifications of thoracic setae of setiger 9.
- Shape, size, and orientation of abdominal hooded hooks.

Family Magelonidae

Genus *Magelona*

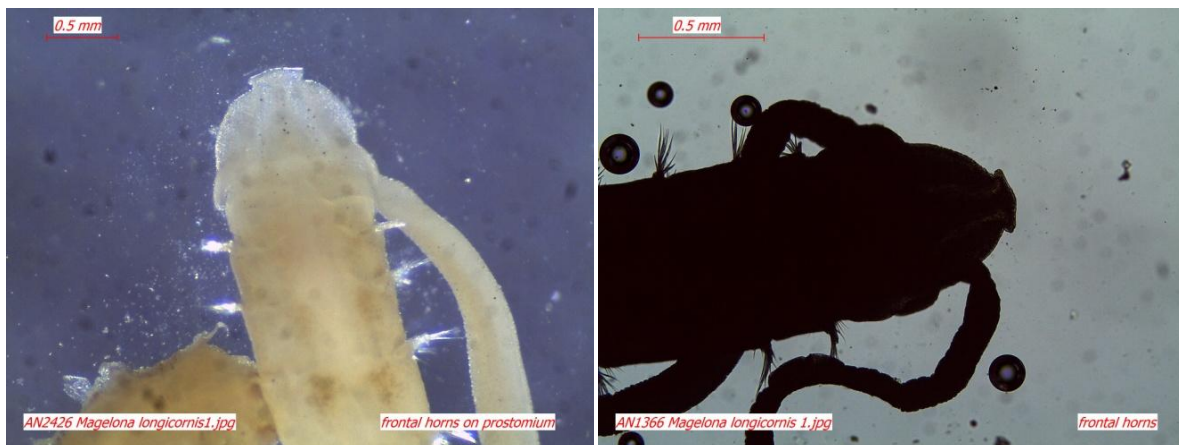
Magelona longicornis (Webster & Benedict, 1887)

(from Banse and Hobson, 1974)

- Prostomium with frontal horns.
- Setiger 9 with dorsal and ventral medial lobes and dorsal and ventral lamellae; setae the same as parapodia 1-8.
- Noto- and neuropodial hooded hooks of posterior region **bidentate**, in a **single series**.
- This is the species we get most commonly in Puget Sound. Superficially difficult to distinguish from *M. berkeleyi*.

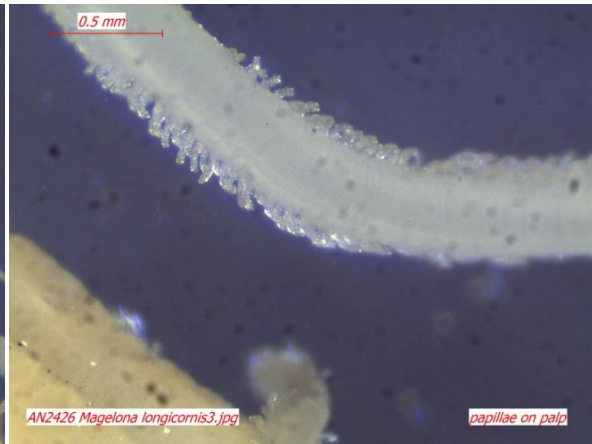


Anterior end, dorsal view (l); ventral view (r)

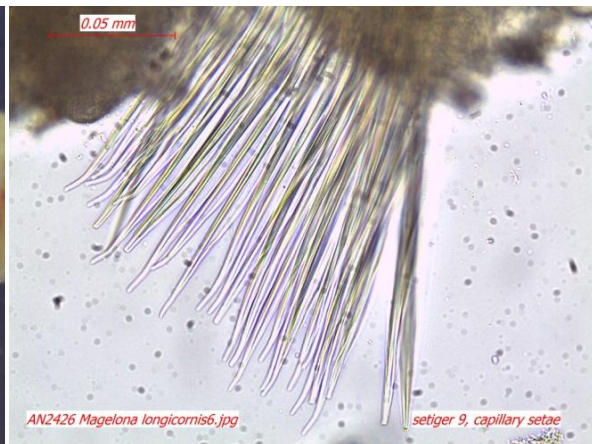


Anterior end, note frontal horns on prostomium (l,r)

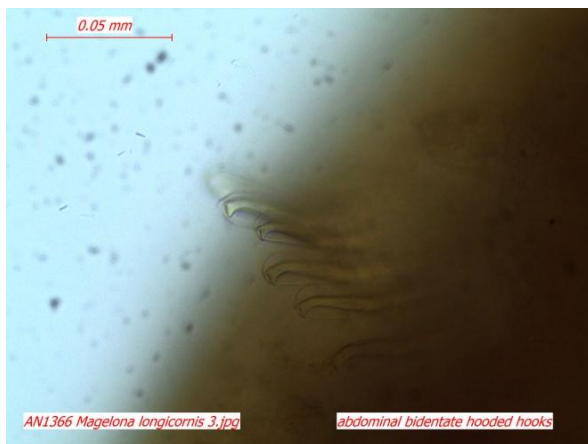
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Setiger 9 (l); papillae on palps (r)



Pygidium (l); setiger 9 capillary setae (r)



Posterior bidentate hooded hooks in a single series (l,r)

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Magelona berkeleyi Jones, 1971

(from Banse and Hobson, 1974)

- Prostomium with frontal horns.
- Setiger 9 with ventral neuropodial lobe and dorsal lateral lamella; setae the same as parapodia 1-8.
- Noto- and neuropodial hooded hooks of posterior region **tridentate**, in **two series** facing each other, all about the same size.

Magelona sacculata Hartman, 1961

(from Banse and Hobson, 1974 and Blake, 1996)

- Prostomium rounded anteriorly, **without frontal horns**.
- Setiger 9 with **conspicuous lateral lamellae**; with 2 kinds of setae: a few **elongate pointed capillaries**, and numerous medial setae with **mucronate** (having an abruptly projecting point) **tips**.
- Noto- and neuropodial hooded hooks of posterior region **tridentate**, arranged in **single rows**.
- **Lateral pouches present** between setigers 9-10, sometimes 10-11, and on an irregular number of abdominal segments.

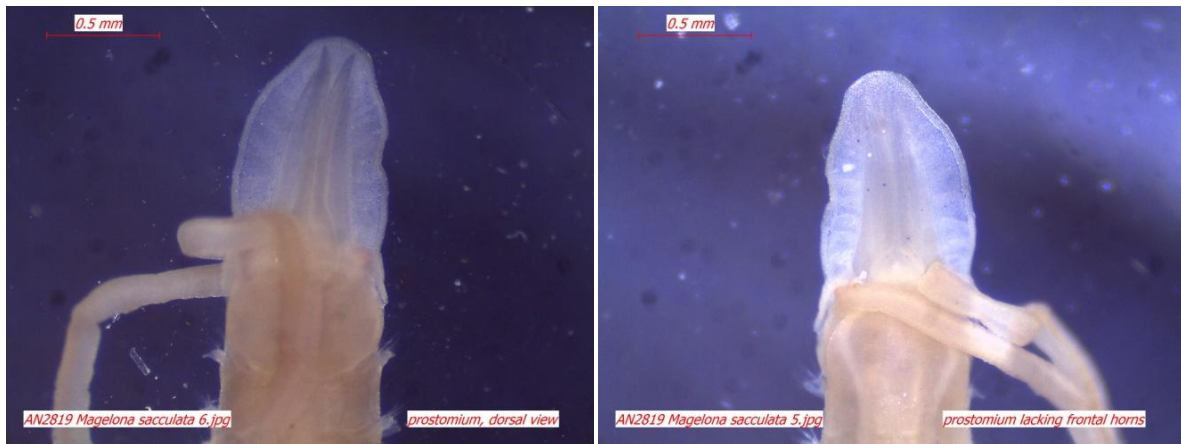


Whole body, lateral view (l); dorsal view (r)

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Whole body, ventral view (l); lateral view (r)



Prostomium, lacking frontal horns, dorsal view (l,r)

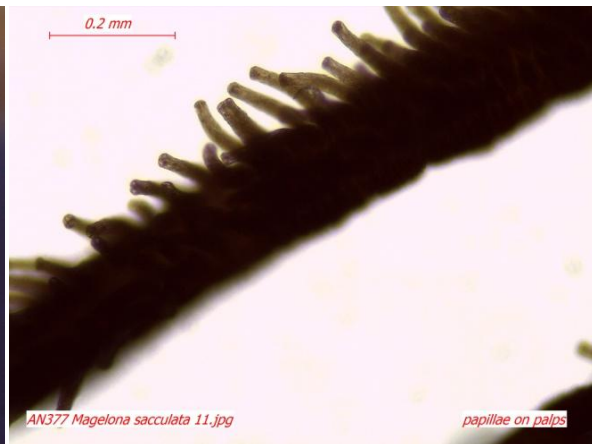


Conspicuous lateral lamellae (LL) on setiger 9, followed by lateral pouches (LP) between setigers 9 and 10 (l); posterior lateral pouches (r)

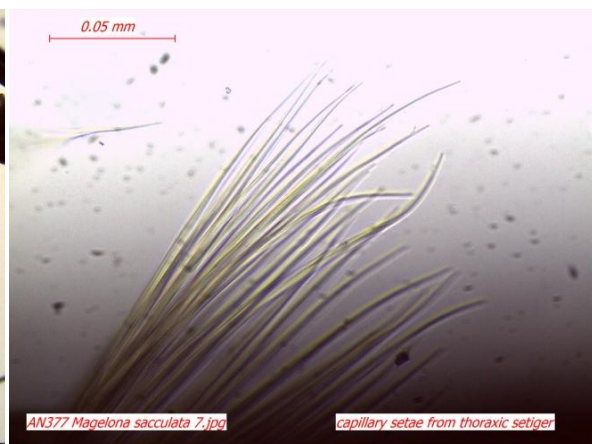
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Pygidial cirri (l,r)

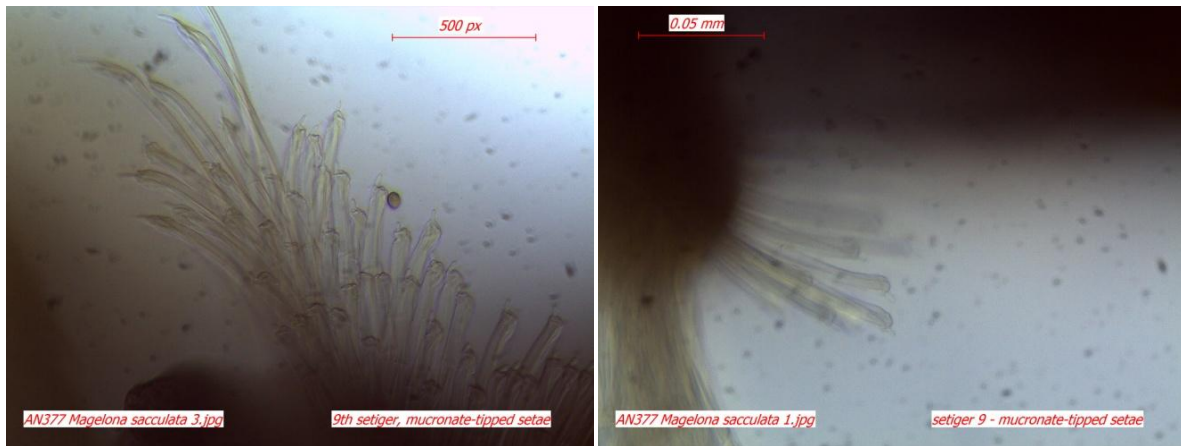


Pygidial cirri (l); papillated palps (r)



Papillated palps (l); capillary setae from thoracic setiger (r)

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Modified mucronate-tipped setae from setiger 9 (l,r in 4 photos, above)



Tridentate hooded hooks from posterior setiger

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Additional species of Magelonidae found in Puget Sound

Magelona hobsonae

Literature

Banse, K. and K.D. Hobson. 1974. Benthic errantiate polychaetes of British Columbia and Washington. Bull. Fish. Res. Board Can. 185, 111 pages.

Blake, J.A. 1996. Chapter 6. Family Magelonidae Cunningham and Ramage, 1888. Pages 253-261. IN: Blake, J. A., B. Hilbig, and P.H. Valentich-Scott (editors). Taxonomic Atlas of the Benthic Fauna of the Santa Maria Basin and Western Santa Barbara Channel. Volume 6 - The Annelida Part 3. Polychaeta: Orbiniidae to Cossuridae. Santa Barbara Museum of Natural History. Santa Barbara, California. ISBN 0-93649-11-5.

More Information

More information about Puget Sound benthic invertebrates is available at:
<http://www.ecy.wa.gov/programs/eap/sediment/>

This document is available on the Department of Ecology's website at
<https://fortress.wa.gov/ecy/publications/SummaryPages/1403239.html>.

If you need this document in a format for the visually impaired, call (360) 407-6764. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341.

These notes were compiled by Kathy Welch and Maggie Dutch after a polychaete workshop held on March 12, 2014 at the Department of Ecology.