Puget Sound Polychaetes: Family Apistobranchidae

Family Apistobranchidae

General characters (from Blake, 1996):

- Anteriors resemble spionids; posteriors resemble orbiniids.
- Body elongate, fragile (usually fragmented when preserved, accurate setiger counts difficult).
- Prostomium broadly rounded anteriorly; one pair of grooved palps attached just posterior to the prostomium.
- Parapodia subbiramous.
- Notopodia reduced to clavate (club-shaped), erect ciliated structures; function as gills but are supported by internal aciculae. There are no notosetae.
- Neuropodia of first 7 setigers enlarged with numerous setae. They look fuzzy because there are so many setae.
- Interramal cirri present between notopodia and neuropodia in anterior setigers. They are very obvious anteriorly.
- Neurosetae simple, curved, with finely pointed tips.
- Only one genus in family, *Apistobranchus*.

Observations:

- Two palps are located right behind the prostomium; often contract when preserved so may appear to be very short.
- Often, specimens will only have a few setigers because they are so fragile and fall apart when preserved.
- In Blake, 1996, Santa Barbara Taxonomic Atlas, there is long write up about the history of the taxonomy of this family and why it's so confusing! Numerous errors on the part of Wesenberg-Lund (1951) and Hartman (1965, 1969) in descriptions, redescriptions, and keys, which were subsequently perpetuated by other authors, have been untangled and clarified to a great extent.
- Blake, 1996 concludes that the California species is *A. ornatus*.
- Gene Ruff (*personal communication*) has concluded that we have *A. tullbergi* (a northern to arctic species) based on specimen characters and because we are more northern and linked to arctic species.
- In *A. tullbergi*, notopodial structures are supposed to be present in all segments from setiger 2, but they often fall off, so can't tell if a specimen is *A. tullbergi* and *A. ornatus*. We may have both species in Puget Sound; further examination required.
- There is a recorded staining pattern for *A. ornatus*, but we don't know the pattern for *A. tullbergi*, so we can't compare the staining patterns of the 2 species at the present time.

- Key to species of Apistobranchidae on p. 74 in Santa Barbara atlas.
- We will check our specimens to see if we think we have one, the other, or both species. On 2/21/2014 we found specimens with notopodia both present and absent (fell off?) on setigers 7-10, but the neuropodia of setiger 4 had a single lobe, so we are calling them *A. tullbergi*.

Apistobranchus ornatus Hartman, 1965

- Notopodia present on setigers 2-6(7), absent on setigers 7(8)-10(11), then continuing to near posterior end.
- Neuropodia of setiger 4 multi-lobed.

Apistobranchus tullbergi (Theel, 1879)

- Notopodia present on all segments from setiger 2, except last few.
- Neuropodia of setiger 4 with single lobe.

Anterior end, lateral view - notopodia (no) present on all segments (l); notopodia (no) starting on setiger 2, note interramal cirri (ic) (r)

Anterior end, lateral view – setiger 4 neuropodia (ne) with single lobe; note pair of palps (pa)(l); anterior end, dorsal view - setiger 4 neuropodia (ne) with single lobe (r)

References:

Blake, J.A., 1996. Chapter 3. Family Apistobranchidae Mesnil and Caullery, 1898. Pages 71-79. IN: Blake, J. A.; B. Hilbig; and P. H. Valentich-Scott (editors). 1996. 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/1403233.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 February 21, 2014 at the Department of Ecology.