

 Puget Sound Polychaetes:
Family Sphaerodoridae

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General characteristics (from Banse and Hobson, 1974)

- Body either short and grub-like, or long and slender.
- Body bearing rows of epidermal protuberances on both dorsal and ventral surfaces, including:
 - **Macrotubercles** - conspicuous bulbous structure that are either sessile or stalked and may have terminal papilla; generally larger.
 - **Microtubercles** - small structures with a basal collar surrounding a terminal papilla; smaller.
 - **Papillae** - conical, cylindrical, or hemispherical, no terminal papillae; smallest.
- Prostomium and peristomium inconspicuous, with a median antenna and one or more pairs of lateral antennae.
- Parapodia uniramous; setae simple or compound; simple curved hooks may be present in anterior parapodia.

General information

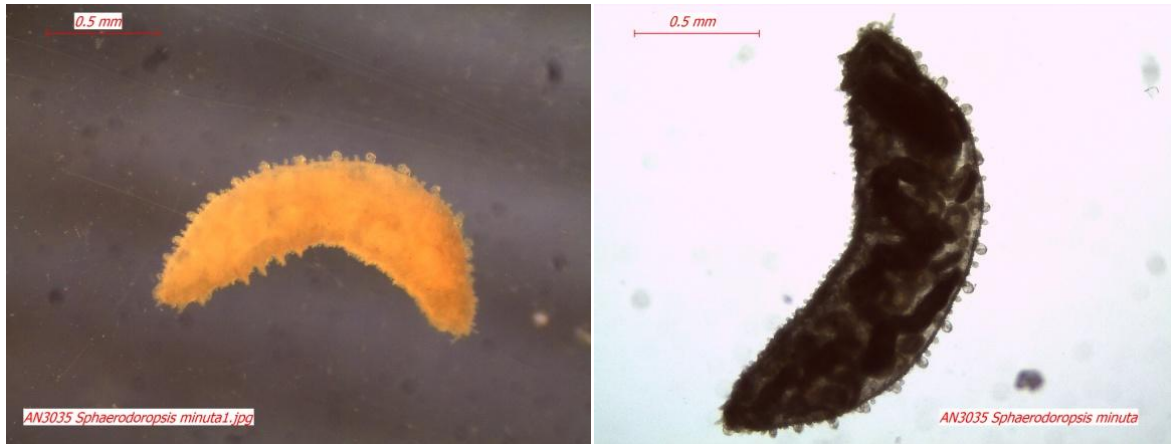
- Use the Banse and Hobson, 1974 key, as it is simple. There are many species in California, and the Santa Barbara Atlas is confusing for use in Puget Sound because there are so many California species.
- In Puget Sound we get the Genus *Sphaerodoropsis*, with less than 30 segments, and the Genus *Sphaerodorum*, with more than 30 segments.

Genus *Sphaerodoropsis*

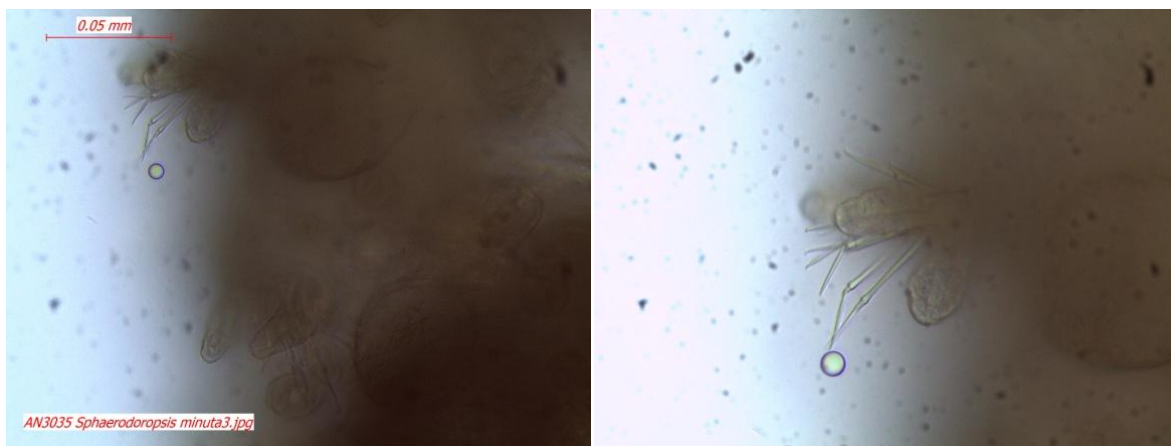
Sphaerodoropsis minuta (Webster & Benedict, 1887)

- Body short, grub-like, less than 30 segments.
- Dorsum with numerous irregularly arranged papillae in addition to macrotubercles.
- All setae compound.
- We don't see this often as it is tiny and goes through the sieve.

Family Sphaerodoridae



Whole body, stereomicroscope view (l); compound microscope view (r); note irregularly arranged papillae and macrotubercles.



Compound setae (l,r)

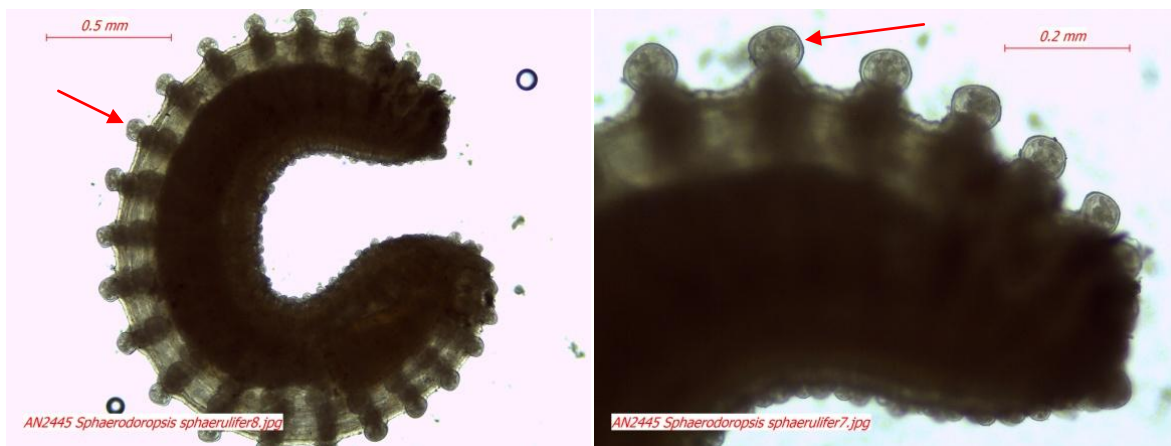
Sphaerodoropsis sphaerulifer (Moore, 1909)

- Body short, grub-like, less than 30 segments.
- Prostomium with inflated median antenna and 2 pairs of short, truncate lateral antennae.
- Dorsum bearing sessile macrotubercles without terminal papillae in 7-8 transverse rows.
- All setae compound.

Family Sphaerodoridae

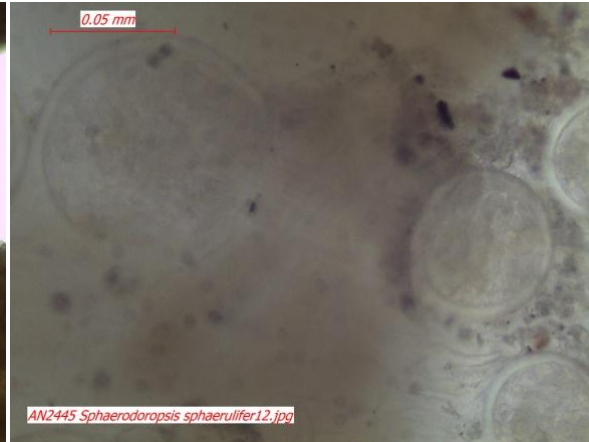
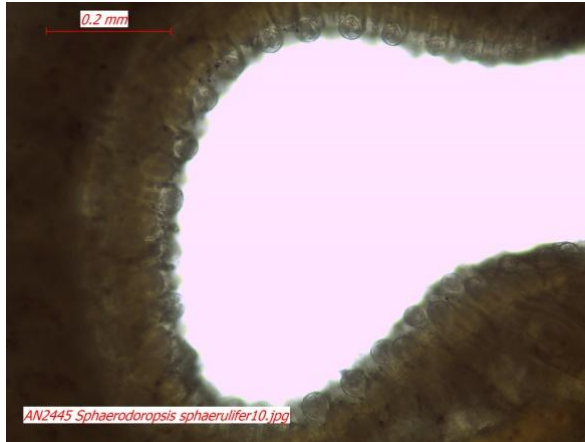


Whole body, dorsum bearing sessile macrotubercles (ma) without terminal papillae in 7-8 transverse rows, stereomicroscope view (l,r)

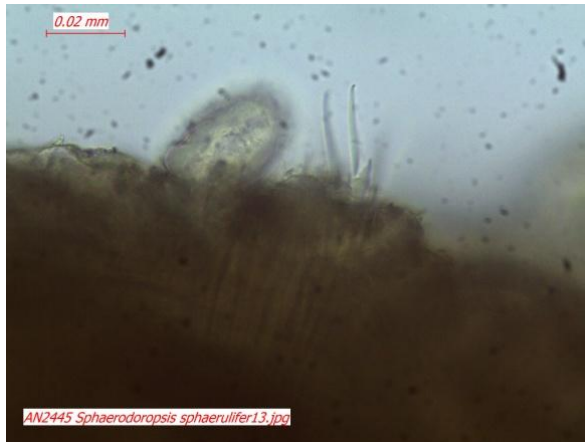


Whole body, dorsum bearing sessile macrotubercles without terminal papillae in 7-8 transverse rows, compound microscope view (l); posterior end (r)

Family Sphaerodoridae



Mid-body, ventral surface (l); sessile macrotubercles (r)



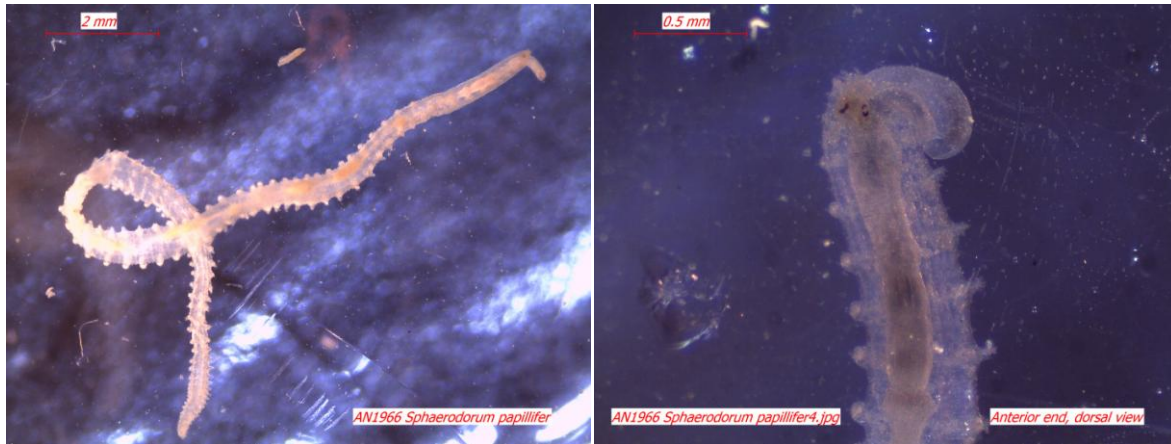
Compound setae

Genus *Sphaerodorum*

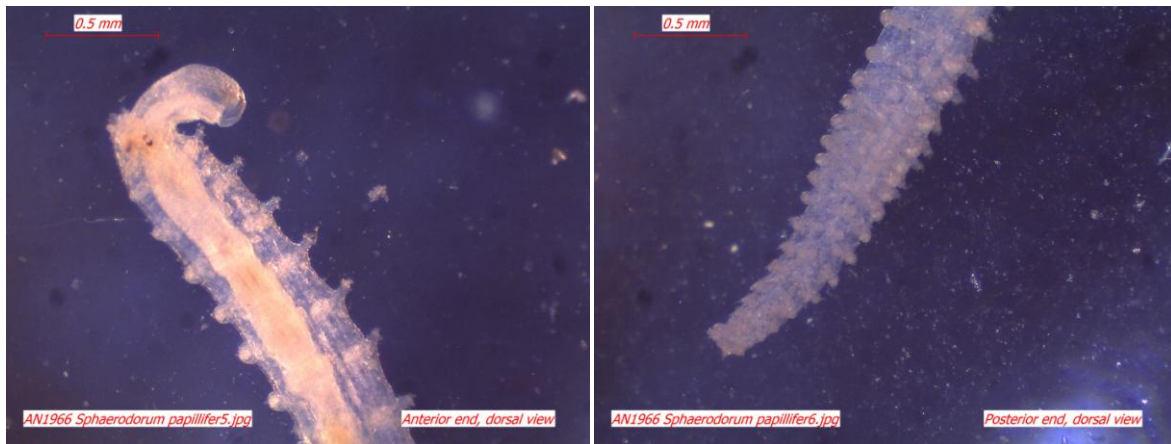
Sphaerodorum papillifer Moore, 1909

- Body long, tapered at both ends.
- Prostomium with stout, digitiform median antenna plus 2 pairs of lateral antennae; prostomium usually retracted in preserved specimens, so antennae may not be apparent.
- Two to 3 pairs of V-shaped eyes present on dorsum through setiger 2.

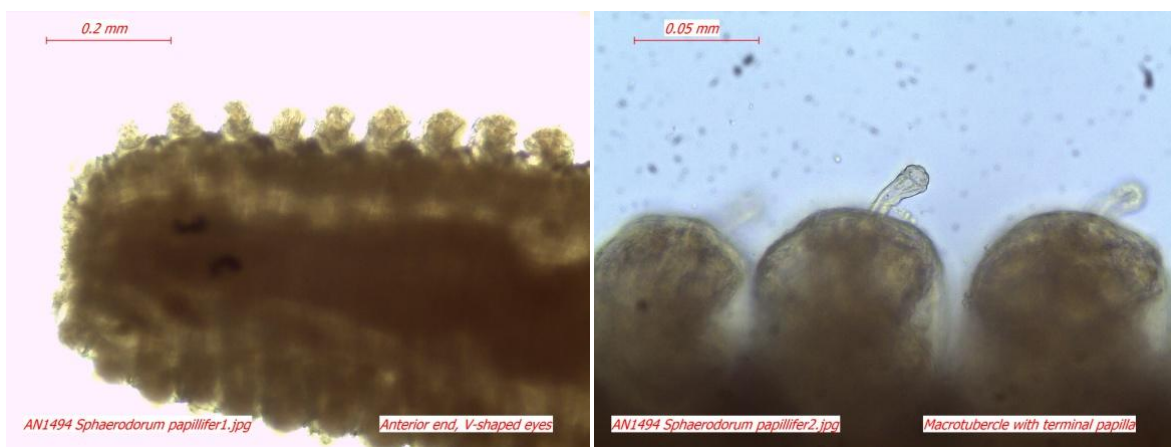
Family Sphaerodoridae



Whole body (l), anterior end, dorsal view, proboscis everted, eyespots (r)

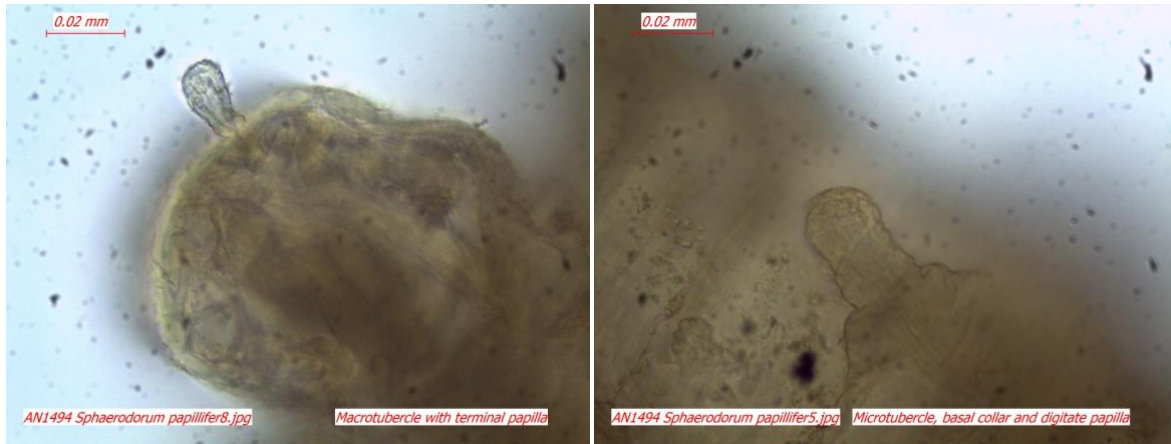


Anterior end, dorsal view, proboscis everted, eyespots (l); posterior end (r)

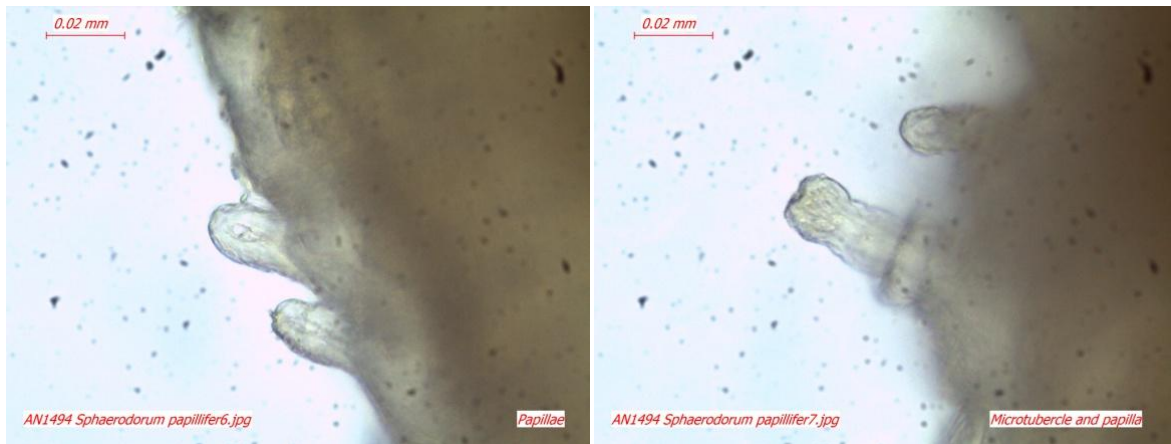


Anterior end, dorsal view, eyespots (l); macrotubercle with terminal papilla (r)

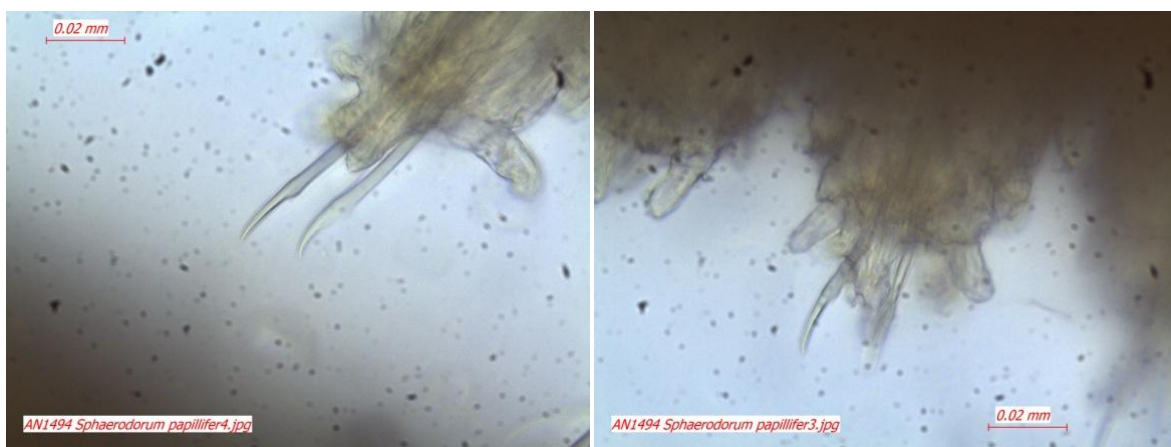
Family Sphaerodoridae



Macrotubercle with terminal papilla (l); microtubercle, basal collar and digitate papilla (r)



Papillae (l); microtubercle and papilla (r)



Uniramous parapodium with simple setae

Family Sphaerodoridae

Additional species of Sphaerodoridae found in Puget Sound

Amacrodorum bipapillatum

References

- Banse, K. and K.D. Hobson. 1968. Benthic polychaetes from Puget Sound, Washington, with remarks on four other species. *Proceedings of the United States National Museum* 125(3667): 1-53.
- Banse, K. and K.D. Hobson. 1974. Benthic errantiate polychaetes of British Columbia and Washington. *Bull. Fish. Res. Board Can.* 185, 111 pages.
- Kudenov, J.D. 1987. Four species of Sphaerodoridae (Annelida, Polychaeta) including one new genus and three new species from Alaska. *Proceedings of The Biological Society of Washington* 100:917-926.
- Kudenov, Jerry D. 1994. Family Sphaerodoridae Malmgren, 1867. Pages 231-242. 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 4 -The Annelida Part 1. Oligochaeta and Polychaeta: Phyllodocida (Phyllodocidae to Paralacydoniidae)*. Santa Barbara Museum of Natural History, Santa Barbara, California. ISBN 0-93649-09-03.

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/1403249.html>.

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These notes were compiled by Kathy Welch and Maggie Dutch after a polychaete workshop held on February 21, 2014 at the Department of Ecology.