



## *Sternaspis affinis* Stimpson, 1864

### Nomenclature

Phylum	Annelida
Class	Polychaeta
Family	Sternaspidae
Synonyms	<i>Sternaspis scutata</i> (Ranzani, 1817) <i>Sternaspis fossor</i> Stimpson 1854 <i>Sternaspis</i> cf. <i>fossor</i>

### Distribution

Type Locality	Strait of Georgia, BC, Canada
Geographic Distribution	Alaska (Gulf of Alaska) south along the coast and inland waters to Monterey, California, and into the Gulf of California.
Habitat	From 2-268 m in Puget Sound, in fine mud to coarse sand/gravel



### Description

From Sendall and Sallazar-Vallejo 2013 (unless otherwise noted)

**Size/Color:** About 25 mm long, 6-7 mm wide, for about 30 segments (Petersen 2000). Gray to cream in alcohol, with brown tentacles and reddish-brown ventro-caudal shield (posterior).

**Body:** Oval-shaped when anterior portion of body retracted (see photo, right); otherwise dumbbell-shaped.

**Prostomium:** Hemispherical, smooth, iridescent. Numerous papillae around mouth (Petersen 2000). May be completely retracted into body

**Chaetae:** 10 lateral bundles arranged in an oval shape around posterior caudal shield, and 5 bundles along shield's posterior margin in a linear arrangement. Peg chaetae on conical extensions emerging under most prominent oblique rib of the shield, and a small fascicle of delicate capillary chaetae between peg chaetae and 1st bundle of posterior chaetae. Segments 2-4 with fans of 8-14 pale brownish, widely-spaced spines.

**Caudal Shield:** Often encrusted with sand or silt. Concentric lines and weak ribs present; medial suture extended throughout shield (except in larger specimens). Anterior margins rounded; anterior depression deep. Lateral margins rounded (straighter in larger specimens), not expanding posteriorly. Fan truncate, almost straight in juveniles, sometimes with median notch, becoming crenulated in larger specimens.

**Branchiae:** Long and coiled, protruding from two oval plates on either side of anus.

**Pygidium:** Anal tube or cone, located mid-ventrally behind posterior shield chaetae (Petersen 2000).



## Diagnostic Characteristics

Diagnostic Characteristics (Sendall and Sallazar-Vallejo 2013)

Photo, Illustrations

Photo, Illustration Credit

**Characteristics of ventro-caudal shield:**

Deep depression in anterior margin (A)

Fan with shallow median notch (B)

Posterior corners distinct (C)

Weak (but clear) ribs present (D)

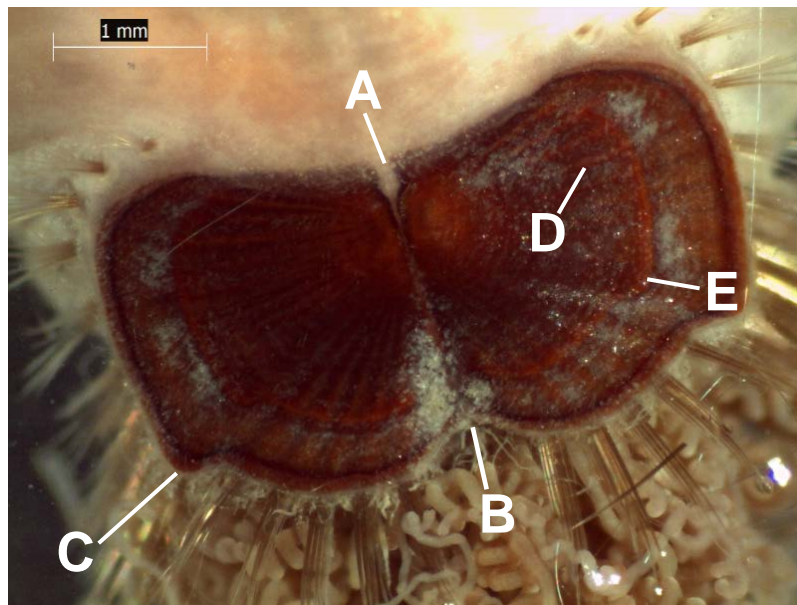
Concentric lines present (E)

5 bundles of posterior chaetae in linear pattern (indicated by yellow text in bottom photo)

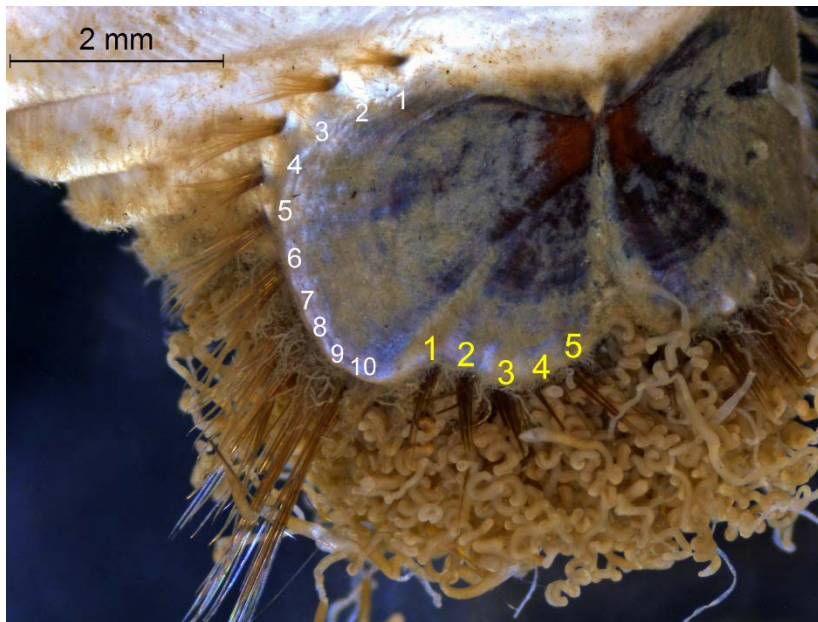
10 bundles of lateral chaetae (indicated by white text in bottom photo)



*S. affinis*



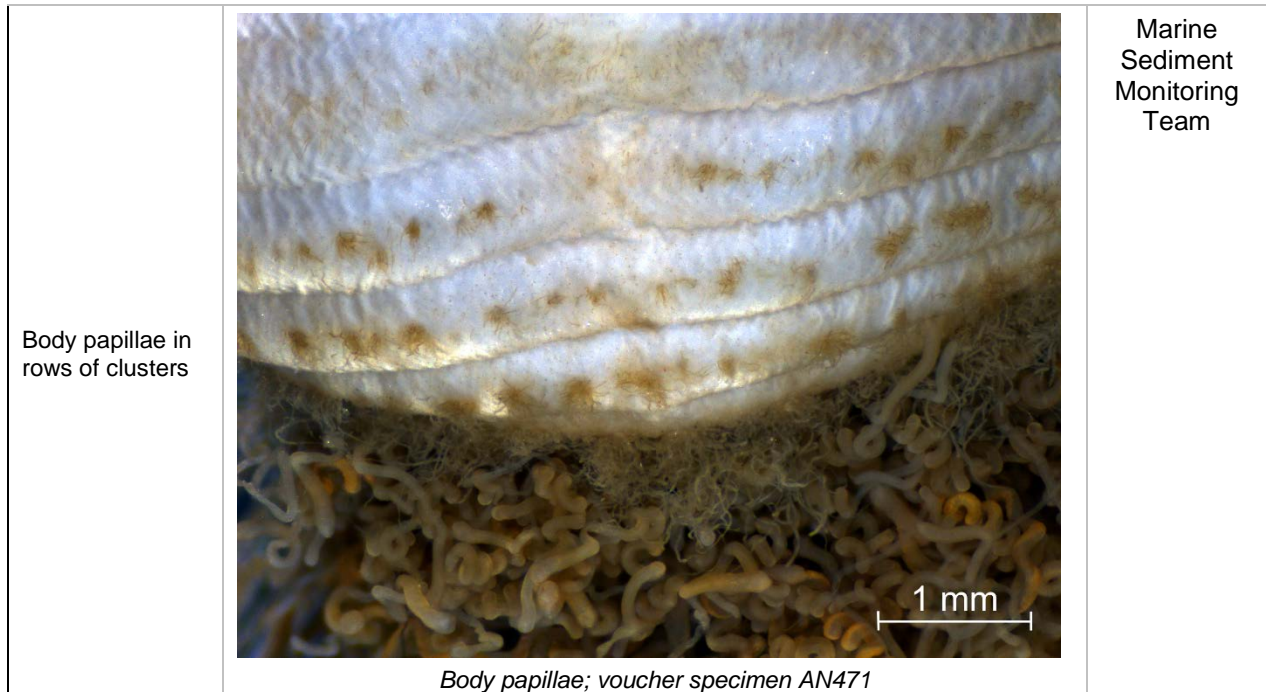
Ventro-caudal shield; specimen from 2014 PSEMP Long-term Station 4 Rep 2 (Bellingham Bay, WA)



Ventro-caudal shield; voucher specimen AN471

Modified from Sendall and Sallazar-Vallejo 2013, p. 5, figure B

Marine Sediment Monitoring - Team



<b>Related Species and Characteristic Differences</b> From Sendall and Sallazar-Vallejo 2013	
Species Name	Diagnostic Characteristics
<i>Sternaspis fossor</i>	Radiating ribs and posterior corners of shield barely developed or not present; body papillae dense, distributed over most of body. <i>Distribution: Northwestern Atlantic.</i>
<i>Sternaspis maior</i>	Concentric lines of shield not visible or barely visible. <i>Distribution: Central part of the Gulf of California, México.</i>
<i>Sternaspis islandica</i>	Shield with very shallow anterior depression. <i>Distribution: Norwegian Sea and Northeast Atlantic Ocean around Iceland and the Faroe Islands.</i>
<i>Sternaspis scutata</i>	6 bundles of posterior shield chaetae; body papillae sparse, evenly distributed. <i>Distribution: Mediterranean Sea.</i>

**Comments**

**From Sendall and Salazar-Vallejo 2013:** “It appears that *Sternaspis affinis* has not been reported since 1875. However, many collections hold specimens collected over the last hundred years of what appears to be the only species present along the northeast Pacific coast of North America, from the Beaufort Sea to California, and into the Gulf of California. These have been labelled either as *Sternaspis scutata* or *Sternaspis fossor*. The original description by Stimpson is brief and only includes a scant comparison of the cuticle with the Atlantic species, *Sternaspis fossor*. As Stimpson’s description agrees with the characters of the specimens found along the northeast Pacific coast, we propose the emendation above with the designation of a neotype.”

## Literature

Fauvel, P. 1927. Polychètes sédentaires. Addenda aux errantes, Arachiannélides, Myzostomaires. *Faune de France Volume 16. Paul Lechevalier. Paris.* 1-494.

Hartman, O. 1969. *Atlas of the sedentariate polychaetous annelids from California.* Allan Hancock Foundation, University of Southern California, Los Angeles. 812 pp. (p. 351, as *Sternaspis fossor*)

Petersen, Mary E. 2000. Family Sternaspidae Carus, 1863, including a review of described species and comments on some points of confusion. Pp. 311-336. *IN: Blake, J.A.; Hilbig, B.; and P. Valentich Scott. Taxonomic Atlas of the Benthic Fauna of Santa Maria Basin and the Western Santa Barbara Channel. Volume 7. The Annelida Part 4, Polychaeta: Flabelligeridae to Sternaspidae.* Santa Barbara Museum of Natural History, Santa Barbara, CA. (p. 323-326, as *Sternaspis* cf. *fossor*)

Sendall, Kelly and Sergio Salazar-Vallejo. 2013. Revision of *Sternaspis* Otto, 1821 (Polychaeta, Sternaspidae). *ZooKeys* 286 (0): 1-74.

Stimpson, W. 1864. Descriptions of new species of marine Invertebrata from Puget Sound, collected by the naturalists of the North-West Boundary Commission, A.H. Campbell, Esq., Commissioner. *Proceedings of the Academy of Natural Sciences of Philadelphia.* 153-161.

## More Information

To learn more about our Voucher Sheet project, please visit: <http://ecologywa.blogspot.com/2017/03/eyes-under-puget-sound-voucher-sheet.html>

More information on Puget Sound marine monitoring is available on our [website](#), including a full list of published [benthic invertebrate voucher sheets](#).

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