



**LOS ANGELES COUNTY
SANITATION DISTRICTS**
Converting Waste Into Resources

Voucher Sheet

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Cossura modica Fauchald & Hancock, 1981

Synonyms: none

Family: Cossuridae

Infraclass: Scolecida

Subclass: Sedentaria

Class: Polychaeta

Phylum: Annelida

P-Code – P132

ITI – none assigned

Diagnostic Characters: (*sensu* Fauchald & Hancock {1981} and Hilbig {1996})

- Branchial filament arising from posterior margin of chaetiger 4, reaching back to chaetiger 20 when complete (Fauchald & Hancock), or extending nearly length of body (Hilbig) (Image A)
- Thorax with 14-26 chaetigers
- Pygidium with 3 short anal cirri (Hilbig {1996}) illustrates these as long (Image A)

Pigmentation/Methyl Green Stain Pattern: (*sensu* Hilbig {1996})

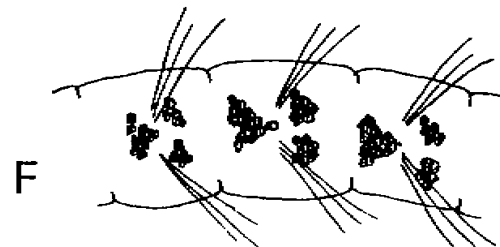
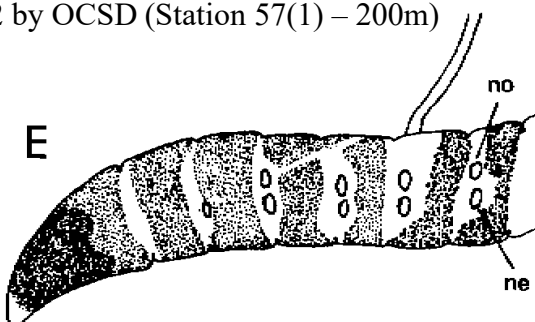
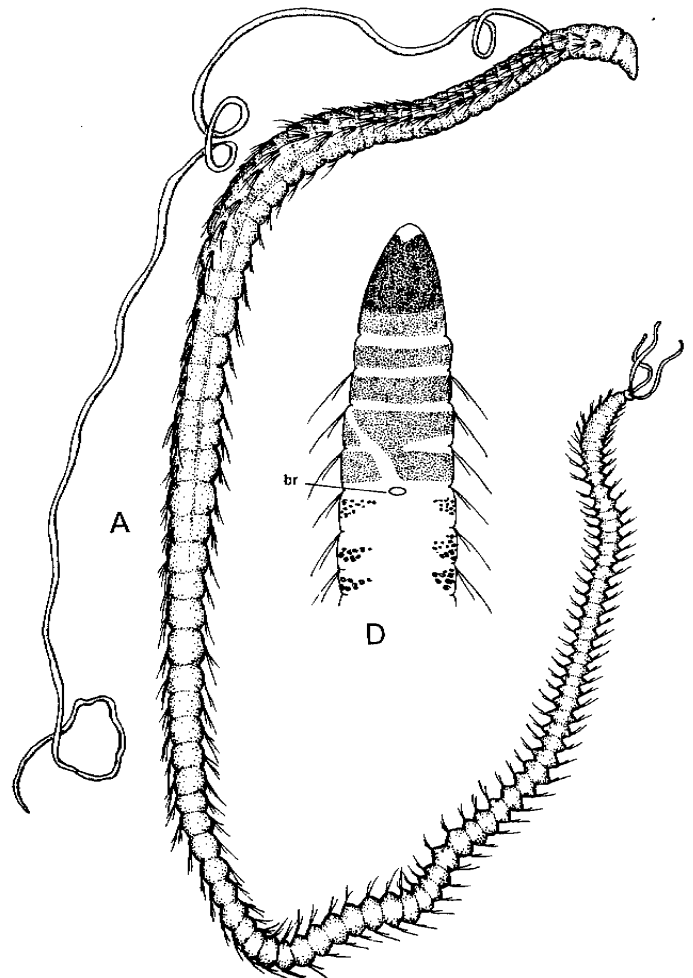
- Prostomium, peristomium & chaetigers 1-3 staining deeply except for small unstained tip (Image D)
 - with unstained oblique line extending from C2 to branchial insertion
- Thorax with dorsolateral patches, fading toward abdomen
- Thorax with lateral stain between chaetal fascicles (Image E)
- Abdomen with dark lateral patches anterior to fascicles and 2 smaller patches posterior (Image F)

Material Examined:

No specimens available for examination

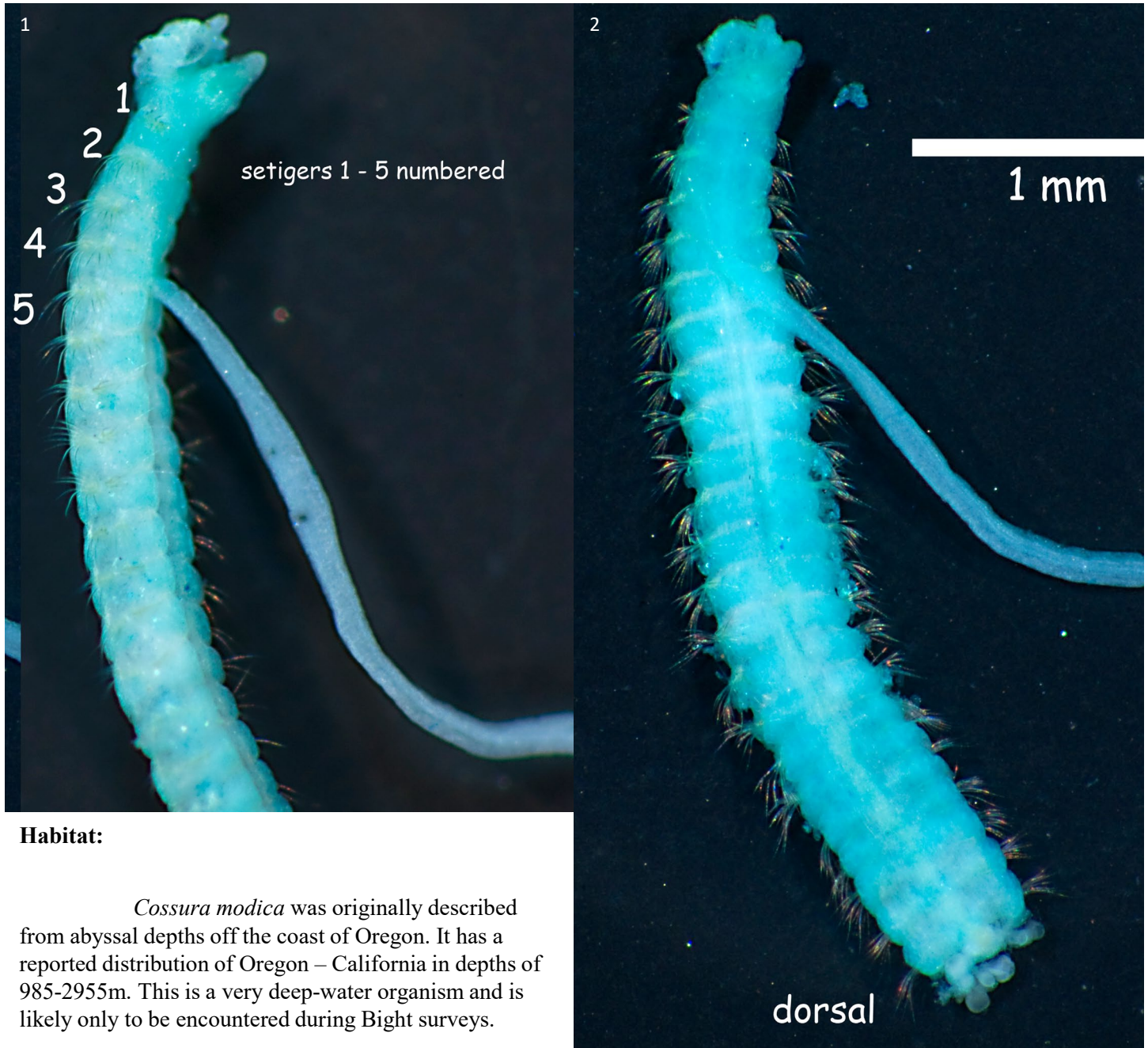
Images A, D, E & F modified from Hilbig (1996)

Images 1 & 2 by OCSD (Station 57(1) – 200m)





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Habitat:

Cossura modica was originally described from abyssal depths off the coast of Oregon. It has a reported distribution of Oregon – California in depths of 985-2955m. This is a very deep-water organism and is likely only to be encountered during Bight surveys.

Similar Species:

Cossura modica is the only local cossurid with its branchial filament inserted on the 4th chaetiger. It can be differentiated from other local cossurids by the following additional characteristics.

Cossura bansei Hilbig, 1996—*Cossura bansei* can be differentiated from *Cossura modica* by its slightly longer thorax, having 20-31 thoracic chaetigers compared to only 14-26 in *C. modica*. *Cossura bansei* has a lateral stain that does not connect behind the chaetal fascicles while *Cossura modica* has an intensely staining pre-branchial region and lateral stain that connects behind the chaetal fascicle. *Cossura bansei* is a shelf and upper slope animal, reported from 23-301m.



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Similar Species cont.:

Cossura brunnea Fauchald, 1972—*Cossura brunnea* has 16-18 thoracic chaetigers while *Cossura modica* has 14-26. *Cossura modica* and *C. brunnea* both have lateral stain that connects behind the chaetal fascicle. The pygidial cirri of *Cossura brunnea* are very long while those of *Cossura modica* are short. *Cossura brunnea* is a very deep-water animal, reported from 1600-2200m.

Cossura candida Hartman, 1955—Both species have a thoracic stain that connects laterally behind the chaetal fascicles. It can also be differentiated from *Cossura modica* by its slightly longer thorax, having 24-35 thoracic chaetigers compared to only 14-26 thoracic chaetigers in *Cossura modica*. The type of *Cossura candida* is from 14 m inside Los Angeles Harbor but has been reported down to 2478m.

Cossura pygodactylata Jones, 1956 – *Cossura pygodactylata* and *Cossura modica* have an overlapping range of thoracic chaetigers, *C. pygodactylata* with 13-21 and *C. modica* with 14-26. The two species differ in their stain pattern, with *Cossura pygodactylata* lacking stain patches that connect laterally behind the chaetal fascicle while *C. modica* has stain patches that connect laterally behind the chaetal fascicles. *Cossura pygodactylata* has 3 long anal cirri and 6-10 additional short papillae on each side. The additional short papillae are absent in *Cossura modica*. *Cossura pygodactylata* was originally described from San Francisco Bay and has a reported range of 1-2720m and spans the North Pacific from Japan to central California and the North Atlantic from South Carolina to western France. See additional comments on the *Cossura pygodactylata* voucher sheet.

Cossura rostrata Fauchald, 1972—*Cossura rostrata* and *Cossura modica* both have intensely staining pre-branchial regions and lateral stain that connects behind the thoracic chaetal fascicles. The two species can be differentiated length of their thorax, with 29-36 in *Cossura rostrata* and *Cossura modica* having only 14-26 thoracic chaetigers. *Cossura rostrata* has been reported from Oregon to western Mexico from 6-3348m. See additional comments on the *Cossura rostrata* voucher sheet.

Cossura sp A SCAMIT, 2025 §—*Cossura* sp A has a slightly longer thoracic region than *Cossura modica*, with 24-30 in *Cossura* sp A and only 14-26 thoracic chaetigers in *Cossura modica*. *Cossura* sp A has a dark prostomium and the rest of the pre-branchial region is lightly stained, and the lateral stain does not connect behind the chaetal fascicles while *Cossura modica* has an intensely staining pre-branchial region and lateral stain that connects behind the chaetal fascicle. *Cossura* sp A is reported from 8-305 m.

Cossura sp LA2 Haggin, 2025 §—*Cossura* sp LA2 has a longer thorax, with 32-33 thoracic chaetigers compared to *C. modica* with only 14-26 thoracic chaetigers. *Cossura* sp LA2 has a dark prostomium, an unstained peristomium and the rest of the pre-branchial region is lightly stained, and the lateral stain does not connect behind the chaetal fascicles while *Cossura modica* has an intensely staining pre-branchial region and lateral stain that connects behind the chaetal fascicle. *Cossura* sp LA2 is currently known only from bays and harbors, being report from 8m in LA/LB Harbor and 7m from Newport Bay.

Discussion:

The most recent diagnosis of the genus *Cossura* was given by Liñero-Arana & Díaz-Díaz (2010) and is provided below.

Diagnosis: Prostomium pointed or rounded anteriorly or with well developed anterior lateral horns. Peristomium subdivided by a dorsal transverse furrow. Single branchial filament arising middorsally between segments 2 and 5. Simple capillary bilimbate or hirsute and heavy sickle-shape setae.



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Discussion cont.:

Cossura modica was originally described from abyssal depths off the coast of Oregon. OCSD has a report from Station 57(1) that was identified as *Cossura cf modica* (Images 1 & 2). This identification was based on the insertion of the branchial filament on the posterior of chaetiger 4. This specimen was from a depth of 200m and does not retain stain as described by Hilbig (1996). If encountered again, this organisms should be treated as a provisional species. I am usure if this was added to the SCAMIT species list from the OCSD record or if it was reported during a Bight survey.

Anterior fragments of less than 35 chaetigers, or even whole animals with inconclusive stain patterns should be identified as *Cossura* sp. The P-code assigned is a generic code assigned to all taxa within the genus.

References:

- Fauchald, K.** 1972. Benthic Polychaetous Annelids from Deep Water Off Western Mexico and Adjacent Areas in the Eastern Pacific Ocean. *Allan Hancock Monographs in Marine Biology* 7: 1-575.
- Fauchald, K. & Hancock, D. R.** 1981. Deep-Water Polychaetes from a Transect off Central Oregon. *Allan Hancock Foundation Monograph* 11: 1-73.
- Hartman, O.** 1955. Endemism in the North Pacific Ocean, with emphasis on the distribution of marine annelids, and descriptions of new or little known species. pp. 39-60. IN: Allan Hancock Foundation (Ed.) *Essays in the Natural Sciences in Honor of Captain Allan Hancock on the occasion of his birthday July 26, 1955*. Los Angeles, University of Southern California Press.
- Hilbig, B.** 1996. Family Cossuridae Day, 1963. Pages 385-404. IN: Blake, James A.; Hilbig, Brigitte; and Scott, Paul H. *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.
- Jones, M. L.** 1956. *Cossura pygodactylata*, a new annelid from San Francisco Bay (Polychaeta: Cirratulidae). *Journal of the Washington Academy of Sciences* 46(4): 127-130.
- Liñero-Arana, I. & Díaz-Díaz, O.** 2010. A new species of Cossuridae (Annelida: Polychaeta) from Venezuela. *Interciencia* 35(10): 789-792.
- Rowe, R. C.** 1995. *Cossura* species of Pt. Loma. *SCAMIT Handout*.

Other Literature Consulted:

- Fournier, J. A. & Petersen, M. E.** 1991. *Cossura longocirrata*: Redescription and Distribution, with Notes on Reproductive Biology and a Comparison of Described Species of *Cossura* (Polychaeta: Cossuridae). *Ophelia* Supplement 5: 63-80.
- Read, G. B.** 2000. Taxonomy and distribution of a new *Cossura* species (Annelida: Polychaeta: Cossuridae) from New Zealand. *Proceedings of the Biological Society of Washington* 113(4): 1096-1110.
- Zhadan, A. E., Vortsepneva, E. V. & Tzetlin, A. B.** 2012. Redescription and biology of *Cossura pygodactylata* Jones, 1956 (Polychaeta: Cossuridae) in the White Sea. *Invertebrate Zoology* 9(2): 115-125.

Version History:

Version 1.0 – Voucher sheet created (20JUL2026 – BMH)