



Voucher Sheet

B. Haggin
April, 2023

Species: *Syllis sp A* SCAMIT, 2023 §
Synonyms: *Syllis sp LA4* Haggin, 2019 §

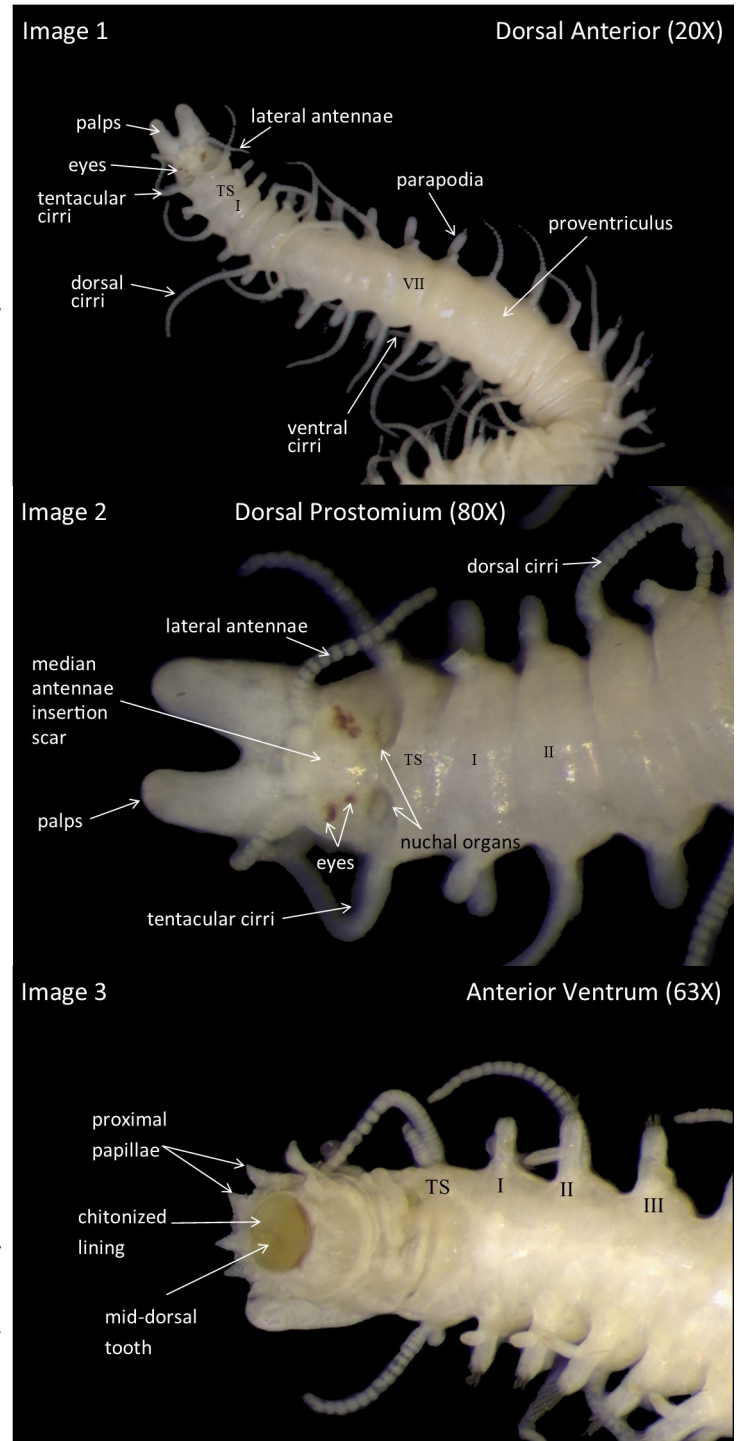
P-code—see Discussion
ITI-code—none assigned

Subfamily: Syllinae
Family: Syllidae
Suborder: Nereidiformia
Order: Phyllodocta
Subclass: Errantia
Class: Polychaeta
Phylum: Annelida

Diagnostic Characters:

~121 chaetigers long (complete); 26.4mm X 0.6mm (across proventriculus, without parapodia)

- 1) Prostomium ovoid, wider than long.
- 2) 2 pairs of eyes, anterior pair crescent-shaped, posterior pair round (Images 1 & 2).
- 3) Median antennae inserted in middle of prostomium (broken, # or articles unknown).
- 4) Lateral antennae inserted anterior to 1st pair of eyes, near edge of prostomium (w/ 16-17 articles) (Image 2).
- 5) Palps large, rounded apically, slightly fused basally (~25% longer than prostomium) (Images 1 & 2).
- 6) Nuchal organs present on posterior of prostomium, lateral to anterior projection of peristomium (Images 1 & 2).
- 7) Tentacular segment w/ medial anterior projection over posterior of prostomium (Image 2).
- 8) Proboscis w/ mid-dorsal tooth anteriorly, 10 proximal papillae & a chitonized lining (not a trepan) (Images 3 & 5).
- 9) Proventriculus from chaetiger 8, thru 6-7 chaetigers.
- 10) 2 pair of tentacular cirri—Dorsal pair w/ ~25 articles, ventral pair w/ ~16 articles (Images 1 & 2).
- 11) Parapodia uniramous, elongate, w/ ventral cirrus inserted medially (Images 4 & 7).
- 12) Dorsal cirri longest in first 15 chaetigers (w/ 29-37 articles), becoming uniform in length to posterior (w/ 14-16 articles).
- 13) Ventral cirri long, digiform. Extending beyond tip of parapodia but not beyond chaetae (Images 4 & 7).
- 14) Anterior parapodia w/ 3-4 acicula (1-3 large & 1 small) & ~ 10 compound falcigers (both reducing in # posteriorly) (Image 6).



Images 1-13 by B. Haggin
Images 14 & 15 by V. Rodriguez
(from *Syllis (Typosyllis) sp SD1* voucher sheet)

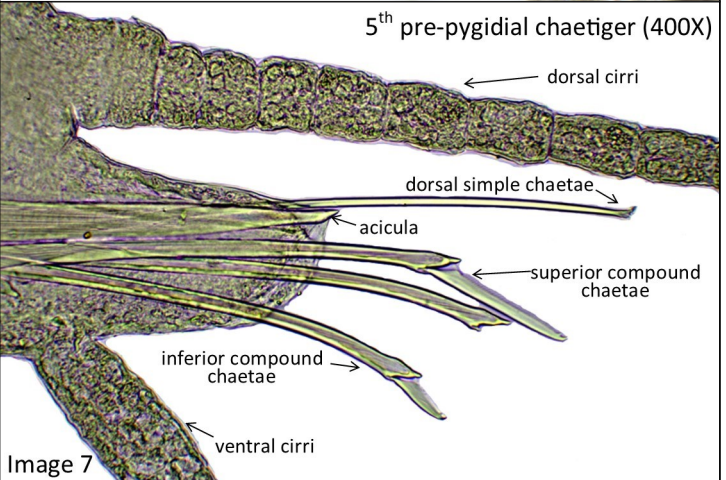
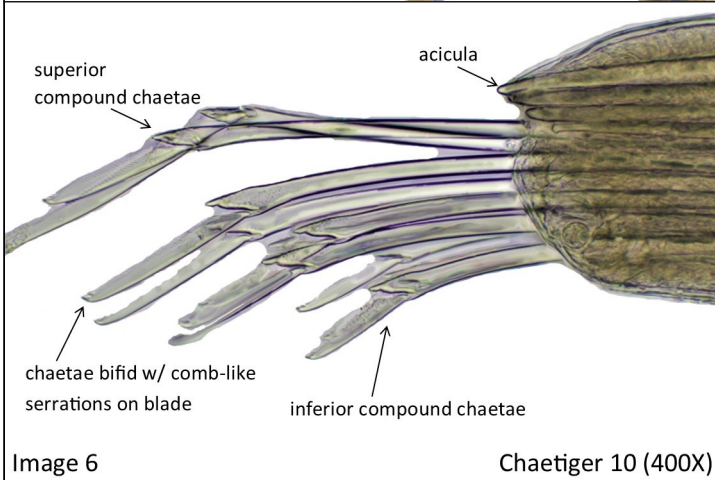
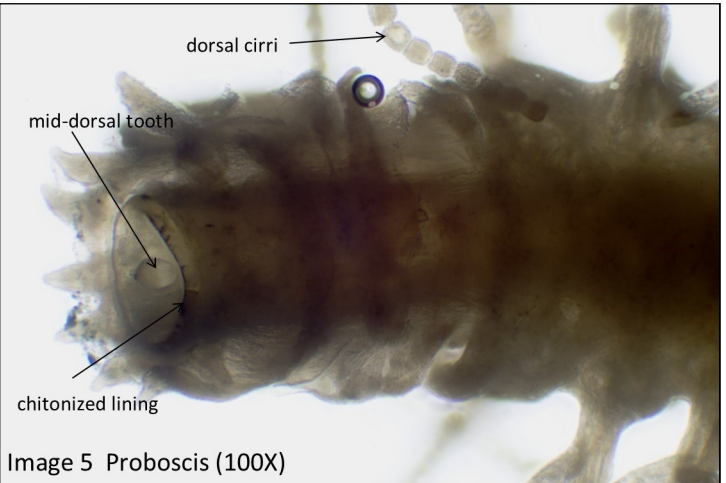
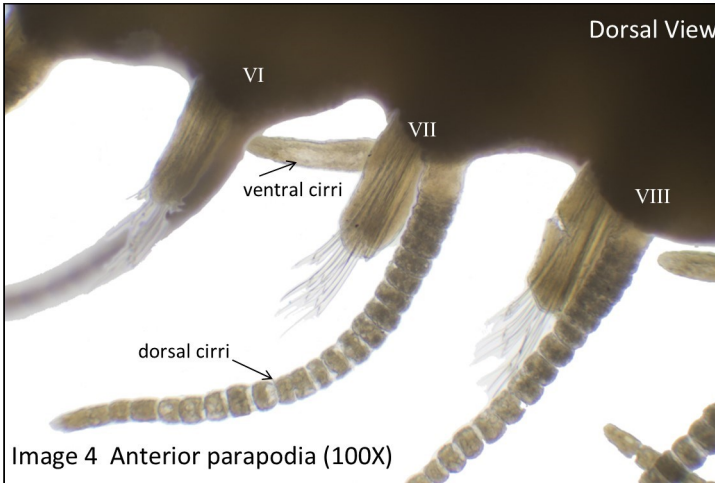
Syllis sp A

SCAMIT, 2023 §



Voucher Sheet

B. Haggin
April, 2023



Diagnostic Characters (cont.):

- 15) Acicula stout, unidentate (large) or distally expanded, knob-like (small) (Image 6).
- 16) Compound falcigers distally bidentate, w/ comb-like serrations on blade; shafts w/ oblique, expanded joint w/ small spines on joint (superior blades ~3X longer than inferior blades w/in same fascicle) (Images 6, 9 & 12).
- 17) Dorsal simple chaetae present only in last 5 chaetigers. Simple chaetae long, slender w/ unidentate tip (Tip may be frayed, appearing pilose) (Images 7 & 8).
- 18) Ventral simple chaetae present only in last 4 chaetigers. Simple chaetae slender, slightly curved w/ bidentate tip and two small subterminal teeth, also with a larger, stouter chaetae just superior to ventral simple chaetae (similar in shape to shafts of compound falcigers, but ~3X's greater shaft diameter) (Images 10, 11 & 12).
- 19) Pygidium a terminal ring, without papillae or cirri (Image 13).

Pigmentation/MGS:

Preserved material white/ivory in color, without pigment or pigment pattern not evident. Tips of posterior ventral cirri (~last 25 chaetigers) retaining MGS. No other stain pattern evident.

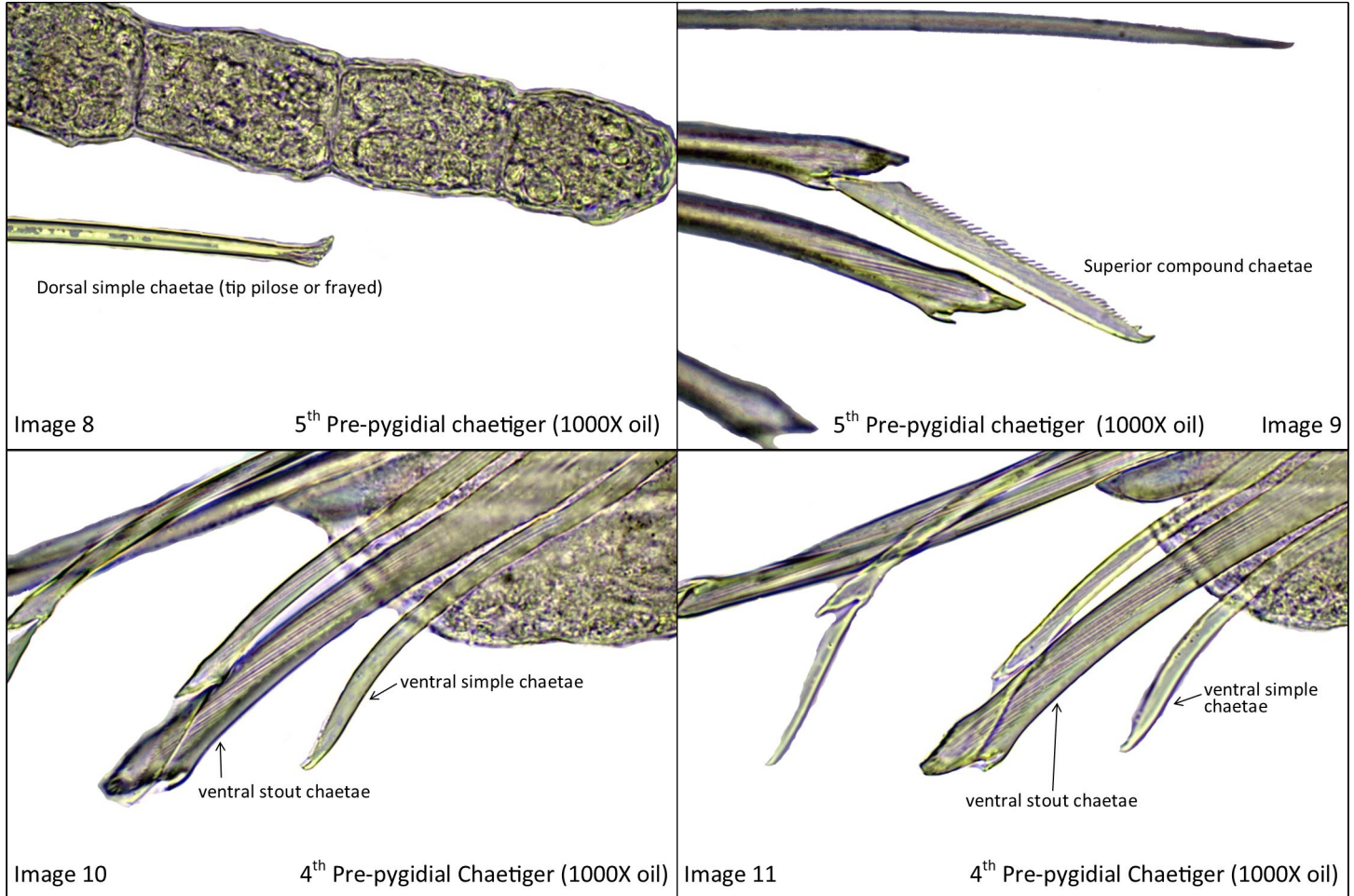


Syllis sp A

SCAMIT, 2023 §

Voucher Sheet

B. Haggin
April, 2023



Material Examined:

B'18-10362—San Pedro Channel, 745 m (33.63467N, 118.58360W—02AUG18) (1 ind.)

Similar Species:

Syllis alternata Moore, 1908 - *Syllis alternata* has dorsal cirri that alternate in length (# of articles 25 for long & 18 for short) throughout the body, *Syllis* sp A has dorsal cirri with a similar # or articles (14-16) throughout the body. The proventriculus of *Syllis alternata* starts in chaetiger 11 and is present thru 12 - 16 chaetigers, in *Syllis* sp A the proventriculus begins in chaetiger 8 and is present thru 7 chaetigers.

Syllis heterochaeta Moore, 1909 - *Syllis heterochaeta* has up to 7 acicula and 28 compound falcigers in anterior parapodia while *Syllis* sp A has up to 4 acicula and around 10 compound falcigers in anterior parapodia. The blades of the superior compound falcigers in *Syllis heterochaeta* are ~4X longer and more slender than the inferior blades, while the superior blades of *Syllis* sp A are ~3X longer and of equal width as the inferior blades. The inferior blades of *Syllis heterochaeta* often appear unidentate while *Syllis* sp A are definitely bidentate. The dorsal simple setae of *Syllis heterochaeta* begins in mid-body and the ventral simple setae are bidentate. The dorsal simple setae of *Syllis* sp A are present only in the last 5 setigers and the ventral simple setae are multidentate, with two apical teeth and two small subterminal teeth.

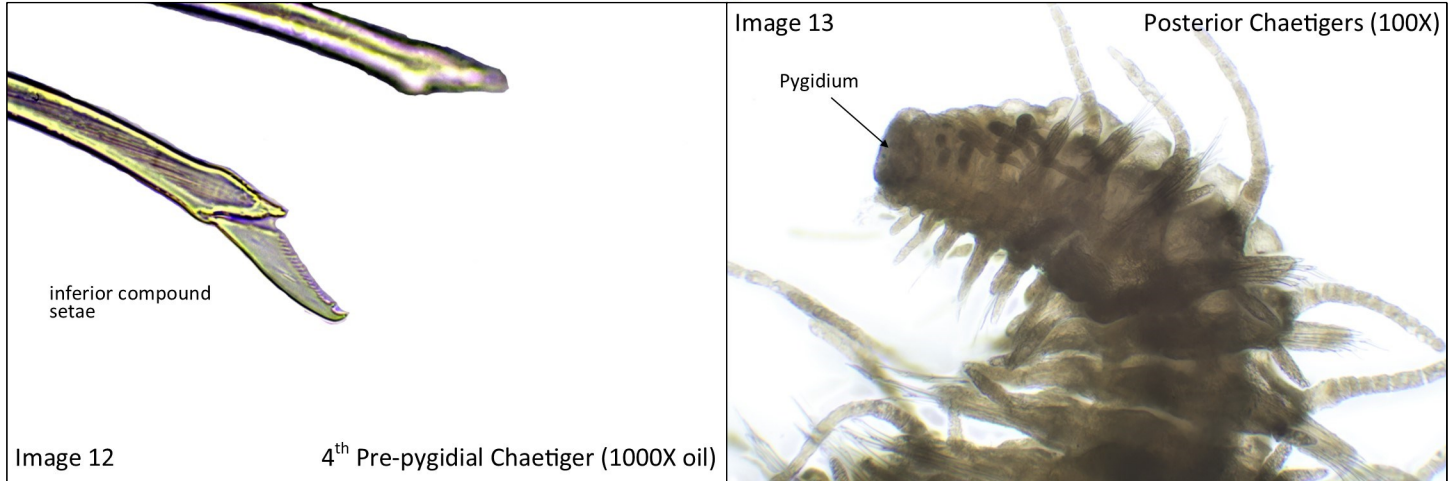


Syllis sp A

SCAMIT, 2023 §

Voucher Sheet

B. Haggin
April, 2023



Similar Species (cont.):

Syllis adamantea (Treadwell, 1914) - *Syllis adamantea* has compound falcigers that are unidentate, while *Syllis* sp A has bidentate compound falcigers. *Syllis adamantea* has a diamond-shaped pigment patch dorsally on each anterior chaetiger with a medial extension running to the parapodia. *Syllis* sp A lacks dorsal pigment. *Syllis adamantea* inhabits shallow water and can be found in soft-bottoms, rip-rap and pier pilings (L. Harris & T. Phillips pers. comm.).

Syllis hyperioni Dorsey & Phillips, 1987 - *Syllis hyperioni* lacks eyes while they are present in *Syllis* sp A. The superior blades of the compound falcigers in *Syllis hyperioni* are ~10X longer and more slender than the inferior blades. The superior blades of *Syllis* sp A are ~3X longer and of equal width as the inferior blades. The articulations of the tentacular cirri of *Syllis hyperioni* # 15(D) & 9(V) whereas the articulations of the tentacular cirri of *Syllis* sp A # 25(D) & 16(V).

Syllis gracilis Cmplx - The *Syllis gracilis* Cmplx is in need of revision but it does have ypsiloid (pseudocomposite) chaetae that are absent in *Syllis* sp A.

Syllis farallonensis (Blake & Walton, 1977) - *Syllis farallonensis* has short dorsal cirri (6-7 articles or less) throughout and indistinctly bidentate to unidentate compound chaetae while *Syllis* sp A has much longer dorsal cirri (at least 14 articles) and distinctly bidentate compound falcigers.

Syllis sp SD1 Rodriguez, 2008 § - *Syllis* sp SD1 is similar to *Syllis* sp A in having numerous articles in the dorsal cirri, 13-29 in *S.* sp SD1 and 14-37 in *S.* sp A, though it appears that *Syllis* sp SD1 irregularly alternates from short to long dorsal cirri throughout the body while *Syllis* sp A has consistently long dorsal cirri in the anterior chaetigers and consistently shorter dorsal cirri posteriorly. Both species have two pairs of large eyes visible, but *Syllis* sp SD1 actually has three pair (one pair hidden by the lateral antennae) in a lateral arrangement (Image 14) while *Syllis* sp A has only two pair in an anterior-posterior arrangement (Images 1 & 2). Both *Syllis* sp SD1 and *Syllis* sp A have bidentate compound falcigers but *Syllis* sp SD1 have compound falcigers that are of near equal length within the same fascicle (Image 15) and *Syllis* sp A have compound falcigers ~3X longer than the shortest in the same fascicle (Images 6 & 7). *Syllis* sp SD1 was originally described from 21 m near the US-Mexico border while *Syllis* sp A was found in 745 m in the San Pedro Channel.

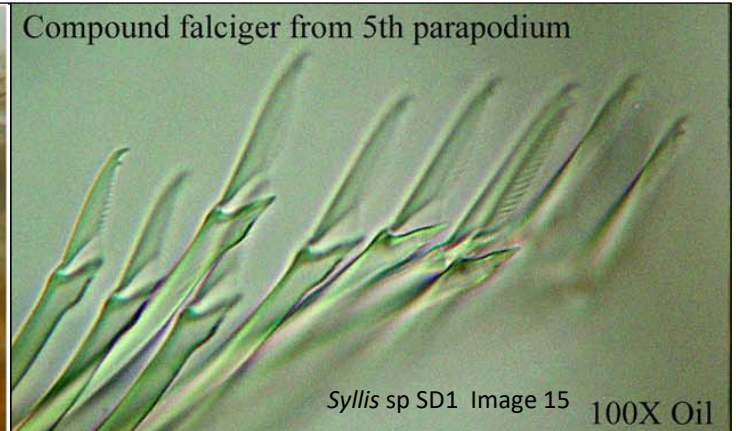
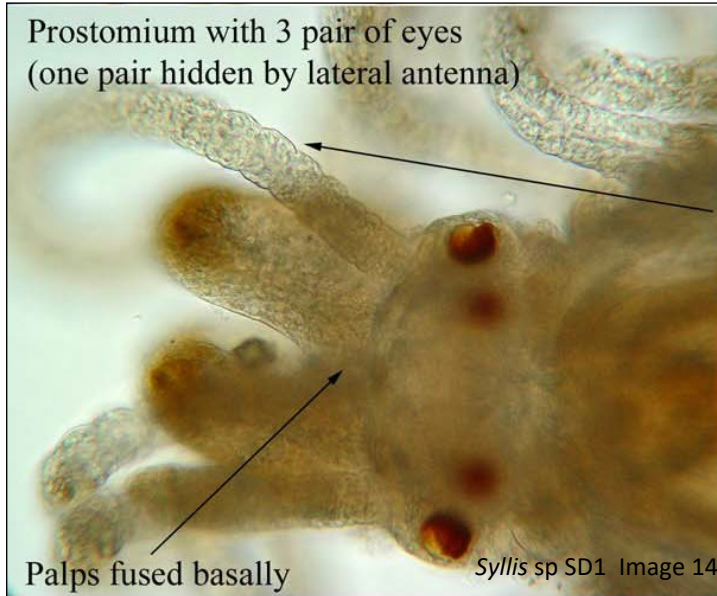


Syllis sp A

SCAMIT, 2023 §

Voucher Sheet

B. Haggin
April, 2023



Habitat:

Syllis sp A is known from a single individual from deeper water in the San Pedro Channel. It was found in sediments of clayey silt from 745 m. Also collected in the sample were the polychaetes *Myriochele gracilis* Hartman, 1955; *Maldane californiensis* Green, 1991; *Protis pacifica* Moore, 1923; *Cossura rostrata* Fauchald, 1972; *Aricidea (Acmira) rubra* Hartman, 1963; *Levinsenia oculata* (Hartman, 1957); *Phyllochaetopterus* sp A SCAMIT, 2023 § (reported as *Phyllochaetopterus* sp LA1 Haggin, 2019 §); *Lepidonotus* sp A SCAMIT, 2023 § (reported as *Lepidonotus* sp LA1 Haggin, 2019 §); *Harmothoe* sp LA1 Furlong, 2014 §; *Kirkegaardia* sp B SCAMIT, 2023 § (reported as *Kirkegaardia* sp LA1 Haggin, 2019 §); an unidentified syllid, an unidentified polynoid, and an unidentified *Cossura*.

Discussion:

Álvarez-Campos *et al.* (2015) defined the genus *Syllis* as: “Body sub-cylindrical. Palps basally fused. Distinctly annulate antennae and tentacular, anal, and dorsal cirri. Pharynx with a single tooth, located on anterior rim or slightly posteriorly, margin of pharynx with crown of soft papillae. Compound falcigerous chaetae, sometimes with pseudospinigers in some parts of body, thick pseudo-simple chaetae produced by blade-loss and shaft-enlargement or by shaft and blade fusion, only partial fusion in some species. Dorsal and ventral simple chaetae present. Reproduction by scissiparous schizogamy (one single stolon at a time).”

Currently, the P-Value Tool file states that all members of *Typosyllis* (except *T. farallonensis*, *T. heterochaeta*, and *T. hyperioni*) should be assigned P-Code “P494”. Since the tool was created, *Typosyllis* has been shown to lack systematic validity since the species belonging to the group do not form a monophyletic clade (Álvarez-Campos *et al.*, 2015; San Martín *et al.*, 2017) and has been synonymized with *Syllis*. Only *Syllis gracilis* Cmplx has a P-Code listed explicitly for *Syllis* species and only applied to bays. I am not sure if this species should inherit P-Code “P494” from the *Typosyllis* group or if it should remain without a P-Code.

WoRMS currently lists 168 valid species of *Syllis*, though this number may not be accurate as they still have *Syllis farallonensis* accepted as *Typosyllis farallonensis* even though *Typosyllis* is accepted as a synonym of *Syllis*. SCAMIT Ed. 13 has 6 named species, including *Syllis gracilis* Cmplx. SCAMIT also recognizes at least 2 additional in-house provisional species of *Syllis* from City of San Diego that are not currently on the SCAMIT species list.



Syllis sp A

SCAMIT, 2023 §

Voucher Sheet

B. Haggin
April, 2023

References:

- Álvarez-Campos, P., Riesgo, A., Hutchings, P. & San Martín, G.** 2015. The genus *Syllis* Savigny in Lamarck, 1818 (Annelida, Syllidae) from Australia. Molecular analysis and re-description of some poorly-known species. *Zootaxa* 4052(2): 297-331.
- Blake, J. A. & Walton, C. P.** 1977. New Species and Records of Polychaeta from the Gulf of the Farallones, California. Pages 307-321. IN: Reish, D. J. & Fauchald, K. *Essays on Polychaetous Annelids in Memory of Dr. Olga Hartman*. The Allan Hancock Foundation, University of Southern California, Los Angeles.
- Dorsey, J. H. & Phillips, C. A.** 1987. A New Species of *Syllis* (*Ehlersia*) (Polychaeta: Syllidae) from Southern California, and Description of the Epitoke and Atoke Variation in *S. (Ehlersia) heterochaeta* Moore, 1909. *Bulletin of the Biological Society of Washington* 7:152-161.
- Kudenov, J. D. and Harris, L. H.** 1995. Family Syllidae Grube, 1850. pages 1-97. 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. 5 - The Annelida Part 2. Polychaeta: Phyllococida (Syllidae and scale-bearing families), Amphinomida, and Euniciida*. Santa Barbara Museum of Natural History. Santa Barbara.
- Moore, J. P.** 1908. Some polychaetous annelids of the northern Pacific coast of North America. *Proceedings of the Academy of Natural Sciences of Philadelphia* 60:321-364.
- Moore, J. P.** 1909. The polychaetous annelids dredged by the U.S.S. "Albatross" off the coast of southern California in 1904. I. Syllidae, Sphaerodoridae, Hesionidae and Phyllococidae. *Proceedings of the Academy of Natural Sciences of Philadelphia* 61:321-351, plates XV-XVI.
- Read, G. & Fauchald, K.** (Ed.) 2023. World Polychaeta Database. *Syllis* Lamarck, 1818. Accessed through: World Register of Marine Species at: <https://www.marinespecies.org/aphia.php?p=taxdetails&id=129680> on 2023-04-12
- Rodriguez, V.** 2008. *Syllis (Typosyllis)* sp SD1 Voucher Sheet. *SCAMIT Handout*.
- San Martín, G., Álvarez-Campos, P. & Hutchings, P.** 2017. The genus *Syllis* Savigny in Lamarck, 1818 (Annelida: Syllidae: Syllinae) from Australia (second part): four new species and re-descriptions of twelve previously described species. *Zootaxa* 4237(2): 201-243.
- SCAMIT.** 2021. *A Taxonomic Listing of Benthic Marco- and Megainvertebrates from Infaunal & Epifaunal Monitoring and Research Programs in the Southern California Bight, Edition 13*. Cadien, D. B., Lovell, L. L., Barwick, K. L., Haggin, B. M., eds. 203pp.
- Treadwell, A. L.** 1914. New Syllidae from San Francisco Bay, collected by the U.S.S. "Albatross". *University of California Publications in Zoology* 13(9):235-238.

Other Literature Consulted:

- Álvarez-Campos, P., Giribet, G. & Riesgo, A.** 2017. The *Syllis gracilis* species complex: A molecular approach to a difficult taxonomic problem (Annelida, Syllidae). *Molecular Phylogenetics and Evolution* 109: 138-150.
- Barwick, K.** 2014. *Typosyllis* sp OC1 Voucher Sheet. *SCAMIT Handout*.
- San Martín, G.** 1992. *Syllis* Savigny in Lamarck, 1818 (Polychaeta: Syllidae: Syllinae) from Cuba, the Gulf of Mexico, Florida and North Carolina, with a revision of several species described by Verrill. *Bulletin of Marine Science* 51(2): 167-196.
- San Martín, G. & Worsfold, T. M.** 2015. Guide and keys for the identification of Syllidae (Annelida, Phyllococida) from the British Isles (reported and expected species). *ZooKeys* 488:1-29.

Version History:

Version 1.0—Voucher sheet created (01MAY2019)

Version 2.0—Updated format to conform to new SCAMIT guidelines; Updated name to *Syllis* sp A and author to SCAMIT, 2023 §; Updated Diagnostic Characters section; Updated Similar Species section; Updated images to remove image clutter and added Images 13-15; Updated References section; Added Habitat, Discussion and Other Literature Consulted sections; Added ITI-Code (12APR2023)