



Species: *Notomastus* sp LA5

Haggin, 2023 §

P-code—P336

Synonyms: *Notomastus lineatus*

of authors SCB; not Claparède, 1869

ITI-code—none

Family: Capitellidae  
Order:  
Infraclass: Scolecida  
Subclass: Sedentaria  
Class: Polychaeta  
Phylum: Annelida

**Diagnostic Characters:**

- 1) Prostomium small, conical; palpode present; eyes absent (images 1 & 2).
- 2) Thorax areolated thru chaetiger 8, then smoother (images 2 & 3).
- 3) Chaetiger 1 complete, thorax with capillary chaetae only.
- 4) Thoracic formula -  $11^c/11^c$
- 5) Branchiae present from anterior abdomen; simple lobes (image 4).
- 6) Abdominal neuropodia with long tori, nearly touching at midline (image 5).



7) Pygidium unknown.

**Pigmentation/MGS:**

- 1) Palpode unstained (image 6).
- 2) Prostomium & Peristomium staining lightly (images 2 & 6).
- 3) Chaetigers 1-3 with moderate stain (images 2 & 6).

- 4) Chaetigers 4-5 staining lightly (images 2 & 6).
- 5) Chaetiger 6 staining darkly (images 2 & 6).
- 6) Chaetigers 7-11 staining moderately, with a darker band on chaetiger 10 (images 2 & 6).
- 7) Abdomen with stain band in segmental furrow only, without prechaetal band or paired dorsal stain spots (image 7).

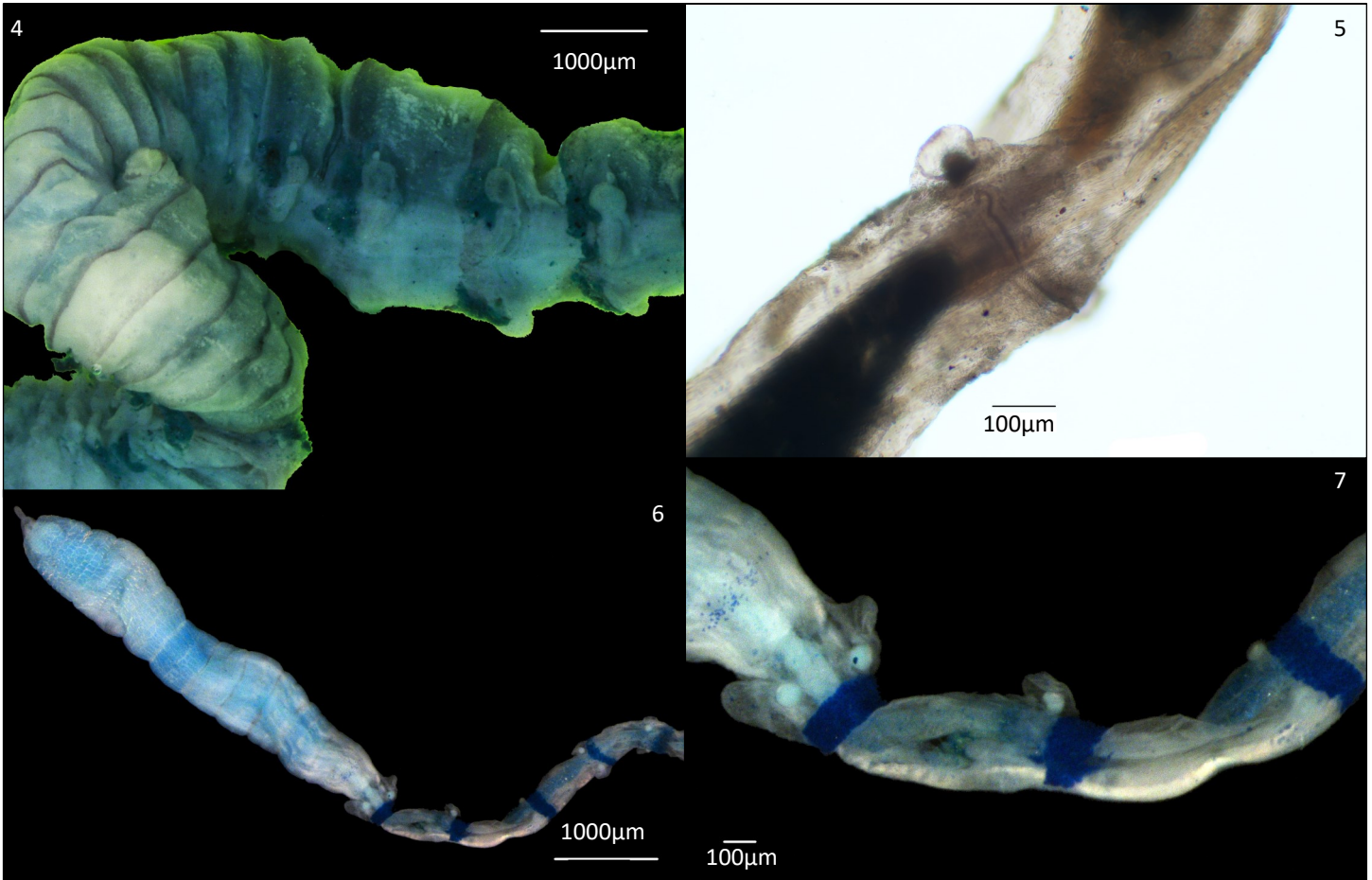


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## Voucher Sheet

B. Haggin  
June, 2024



### Material Examined:

LACSD stations: 0797-2D (31m—33.74113N, 118.42132W—09JUL97) - 1 individual (images 1 - 4); 0719-2D (30 m—33.74125N, 118.42121W—23JUL19) - 2 individuals (images 5 - 7)

All photos by B. Haggin

### Similar Species:

*Notomastus* sp LA4 is most similar to other local *Notomastus* spp. with a biramous first chaetiger, *Notomastus magnus* Hartman, 1947; *Notomastus* sp E Harris, 2021 §; *Notomastus* sp LA3 Haggin, 2023 §; *Notomastus* sp LA4 Haggin, 2023 §; *Notomastus* sp SD2 Rowe, 1999 §; and *Notomastus* sp SD3 Rowe, 2004 §. Differences between the species are detailed below.

*Notomastus* sp E Harris, 2021 §—*Notomastus* sp E differs from *Notomastus* sp LA5 in having eyes and in the stain pattern. *Notomastus* sp E has an intense staining band on chaetiger 6 while the rest of the animal retains a uniform stain without any distinctive patterns in the abdominal region. *Notomastus* sp LA5 also has a darker staining band on chaetiger 6, but also has variable staining bands on the rest of the thorax and has a distinctive post-chaetal stain band in the abdominal region (images 2, 6 & 7).



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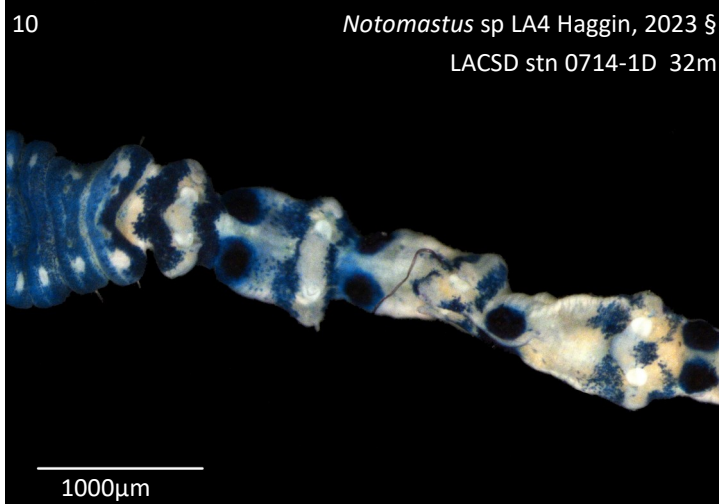


### Similar Species cont.:

*Notomastus magnus* Hartman, 1947—*Notomastus magnus* is a large, robust species that lacks eyes and has retractile, palmate branchiae from anterior abdominal chaetigers. *N. magnus* has 2 staining morphologies in the abdominal chaetigers depending on its reproductive status. The first is a large, broad dorsal patch (image 8). The second is a set of paired dorsal spots (image 9). *Notomastus* sp LA5 also lacks eyes but differs from *N. magnus* by having branchiae as simple lobes. The stain pattern of *N. sp LA5* also differs in having a single post-chaetal staining band rather than a broad dorsal patch (images 6 & 7). *Notomastus* sp LA5 lacks paired dorsal stain spots, even when reproductive.

*Notomastus* sp LA3 Haggin, 2023 §—*Notomastus* sp LA3 differs from *N. sp LA5* in having a smooth rather than an areolated thorax, having palmate rather than simple branchiae and in the abdominal stain pattern. *Notomastus* sp LA3 has a dorso-lateral abdominal stain and an unstained ventrum. The branchiae do not stain leaving a pair of unstained spots in the abdomen. *Notomastus* sp LA5 has a single staining band in the abdomen.

*Notomastus* sp LA4 Haggin, 2023 §—*Notomastus* sp LA4 differs from *N. sp LA5* in having, rather than lacking eyes and in the abdominal stain pattern. *Notomastus* sp LA4 has a both pre- and post-chaetal staining bands (image 10) rather than only a post-chaetal stain band (images 6 & 7) and reproductive *N. sp LA4* has paired dorsal stain spots (image 10) not found *Notomastus* sp LA5 regardless of reproductive state.



*Notomastus* sp SD3 Rowe, 2004 §—*Notomastus* sp SD3 differs from *N. sp LA5* in the posterior thoracic and abdominal stain pattern. The thorax of *Notomastus* sp SD3 has a dark stain band on the anterior of chaetiger 10, an unstained posterior chaetiger 10 and anterior chaetiger 11 and an intense stain band on the posterior of chaetiger 11. The abdomen has a post-chaetal mid-dorsal stain dot and a “U” shaped stain patch that opens anteriorly, giving the appearance of a smiling cyclops. *Notomastus* sp LA5 lacks the non-staining band on chaetigers 10 and 11 and the abdominal stain has only post-chaetal stain band.





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LACSD stn 0723-3D 33m

### Similar Species cont.:

*Notomastus* sp SD2 Rowe, 1999 §—*Notomastus* sp SD2 is similar to *N.* sp LA5 in lacking eyes but differs in the abdominal stain pattern. *Notomastus* sp SD2 has a broad pre-chaetal dorsal stain patch that appears as a “U” shape that opens to the posterior (image 11). *Notomastus* sp LA5 has a post-chaetal stain band in abdominal chaetigers.

### Discussion:

*Notomastus lineatus* Claparède, 1869 was originally described from the Gulf of Naples, Italy. It was subsequently reported from British Columbia, Canada by Berkeley & Berkeley (1932) and the from Newport Bay by Hartman (1947). *Notomastus lineatus* was redescribed by Ewing (1984) with material from the Gulf of Mexico but did not give a description of the methyl green stain pattern. García-Garza *et al.* (2019) mentions that this species is considered cosmopolitan but that the records need to be re-examined to confirm its wide distribution.

Green (2002) reported a species as *N.* near *lineatus* from the Andaman Sea and described its two staining variations. Both of these stain patterns are different than our local representative. She also commented on the variation in reported hooded hook dentition. These variations imply that *Notomastus lineatus* is a species complex. It currently has a reported cosmopolitan distribution and a depth range of subtidal to 298m.

García-Garza & de León-González (2011) re-examined material identified as *N. lineatus* by Bastida-Zavala in 1993 and found them to be *Dasybranchus parplatyceps* Kudenov, 1975. They also re-examined material from Hernández-Alcántara & Solís-Weiss in 1998 and found them to be a mix of *Notomastus magnus*; *N. polyodon* Gallardo, 1968; *N. cinctus* Fauchald, 1972; and *N. angelicae* Hernández-Alcántara & Solís-Weiss, 1998. True *Notomastus lineatus* is likely not found locally and the provisional species *Notomastus* sp LA5 Haggin, 2023 § should be used in its place.

### Habitat:

*Notomastus* sp LA5 is known from Pt. Vicente, Palos Verdes at a depth of 30-31m. This range is likely to expand across southern California as local reviews of *Notomastus lineatus* occur.

### References:

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- Blake, J. A.** 2000. Family Capitellidae Grube, 1862. pages 47-96. IN: Blake, J. A., Hilbig, B. & Valentich-Scott, P. *Taxonomic Atlas of the Benthic Fauna of the Santa Maria Basin and Western Santa Barbara Channel. 7 - The Annelida Part 4 - Polychaeta: Flabelligeridae to Sternaspidae.* Santa Barbara Museum of Natural History.
- Claparède, É.** 1870. Les Annélides Chétopodes du Golfe de Naples. Supplément. *Mémoires de la Société de physique et d'histoire naturelle de Genève* 20(2): 365-542.



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### References cont.:

**Ewing, R. M.** 1984. Family Capitellidae Grube, 1862. Chapter 14. IN: Uebelacker, J. M. & Johnson, P. G. *Taxonomic Guide to the Polychaetes of the Northern Gulf of Mexico. Volume II*. Minerals Management Service, Metairie, Louisiana.

**García-Garza, M. E. & de León-González, J. A.** 2011. Review of Capitellidae (Annelida, Polychaeta) from the Eastern Tropical Pacific region, with notes on selected species. *ZooKeys* 151: 17-52.

**García-Garza, M. E., de León-González, J. A. & Tovar-Hernández, M. A.** 2019. Catalogue of *Notomastus* M. Sars, 1851 (Annelida, Capitellidae) and the description of a new species from the Gulf of California. *Zootaxa* 4577 (2): 249-273.

**Green, K. D.** 2002. Capitellidae (Polychaeta) from the Andaman Sea. *Phuket Marine Biological Center Special Publication* 24: 249-343.

**Harris, L. H.** 2021. *Notomastus* sp E Harris 2021 § & comparisons to NEP *N. latericeus* & NEP *N. lineatus*, *N. magnus* & *Scyphoproctus oculatus*. *SCAMIT Handout*.

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**Pasko, D.** 1994. *Notomastus lineatus* voucher sheet. *SCAMIT Handout*.

### Other Literature Consulted:

**Ewing, R. M.** 1982. A partial revision of the genus *Notomastus* (Polychaeta: Capitellidae) with a description of a new species from the Gulf of Mexico. *Proceedings of the Biological Society of Washington* 95(2): 232-237.

**Fauchald, K.** 1977. The polychaete worms, definitions and keys to the orders, families and genera. *Natural History Museum of Los Angeles County: Los Angeles, CA (USA), Science Series* 28: 1-188.

**García-Garza, M. E. & de León-González, J. A.** 2015. The genus *Notomastus* (Polychaeta: Capitellidae) in the Gulf of California, Mexico, with the description of three new species. *Proceedings of the Biological Society of Washington* 128(2): 176-189.

**Hartman, O.** 1969. *Atlas of the sedentary polychaetous annelids from California*. 1-812. Allan Hancock Foundation, University of Southern California. Los Angeles.

**Jeong, M-K., Soh, H. Y., Wi, J. H. & Suh, H-L.** 2018. A new *Notomastus* (Annelida, Capitellidae) species from Korean waters, with genetic comparison based on three gene markers. *ZooKeys* 754: 141-155.

**Magalhães, W. F. & Blake, J. A.** 2020. 7.6.4 Capitellidae Grube, 1862. pp. 349–403, In: Purschke, G., Bögge-mann, M. & Westheide, W. (Eds.), *Handbook of Zoology. Annelida*, 2 (Pleistoannelida, Sedentaria II), pp. 1–465.

### Version History:

Version 1.0—Voucher sheet created (18JUN2024)



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