

Taking a closer look: an SEM Review of *Levinsenia* (Paraonidae: Polychaeta) from the Southern California Bight

Lawrence L. Lovell^{1,2}, Kirk Fitzhugh² and Leslie H. Harris²



¹ Marine Biology Laboratory Sanitation Districts of Los Angeles County 24501 S. Figueroa St Carson, CA 90745

² Natural History Museum of Los Angeles County 900 Exposition Blvd Los Angeles, CA 90007



Introduction

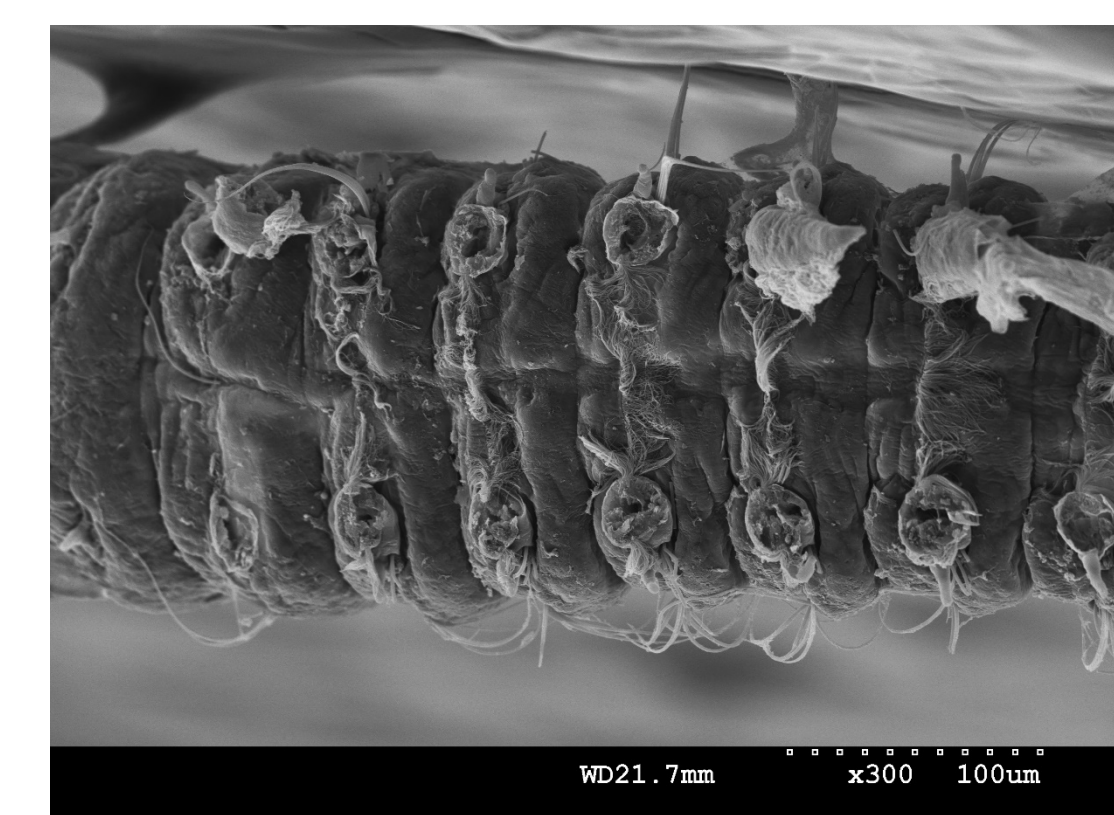
Five species of *Levinsenia* (Strelzov, 1973) are reported from the Southern California Bight (SCB) (Cadien & Lovell, 2016): *Levinsenia gracilis* (Tauber, 1879), *Levinsenia* sp B SCAMIT 2007 §, *Levinsenia multibranchiata* (Hartman, 1957), *Levinsenia oculata* (Hartman, 1957), and *Levinsenia* sp SD1 Barwick 2000 §. An SEM review of members of these species reveal new morphological characters, confirm broad geographic ranges for two species, and contribute to the description of a new species.



New *Levinsenia* Characters:

▶ Patches of cilia (*) were detected in new locations on the prostomium and are described.

▶ Ciliary bands dorsally connecting the branchiae are noted.



▶ Clusters of subnotopodial pores (*) were observed on all five *Levinsenia* species. These might have a glandular function and have been observed among members of *Aricidea*.

▶ Bifid, hooded neurochaetae are described, the first occurrence in the genus.



Range Extensions:

▶ *Levinsenia gracilis* – specimens from near the type locality (Baltic Sea) were compared with SCB material and found to be indistinguishable morphologically.

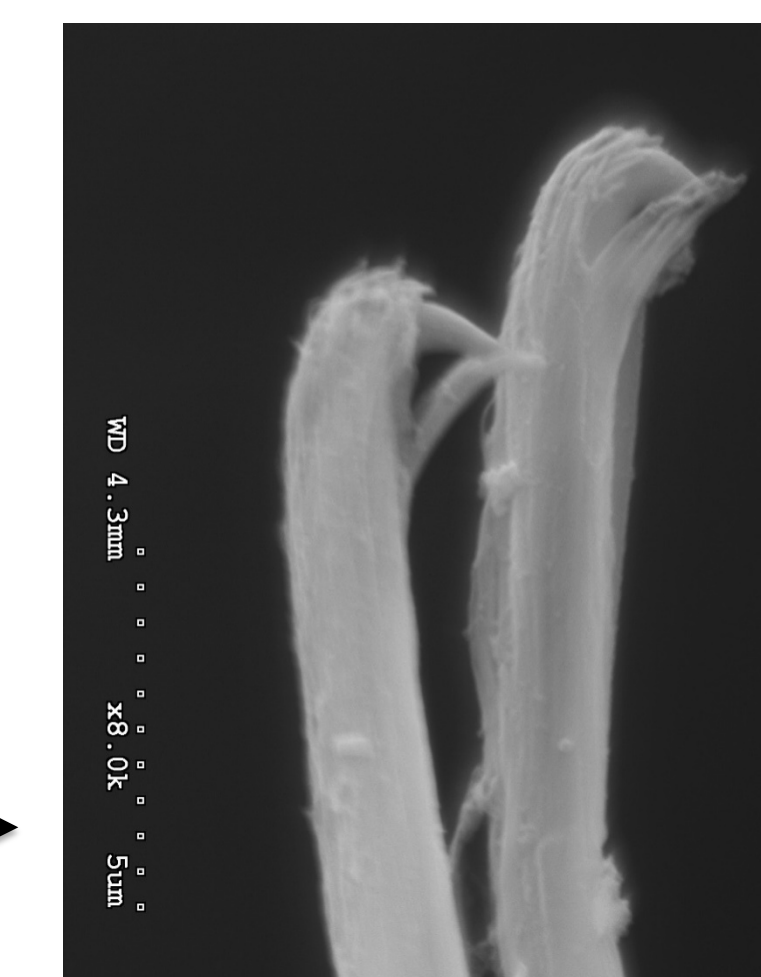
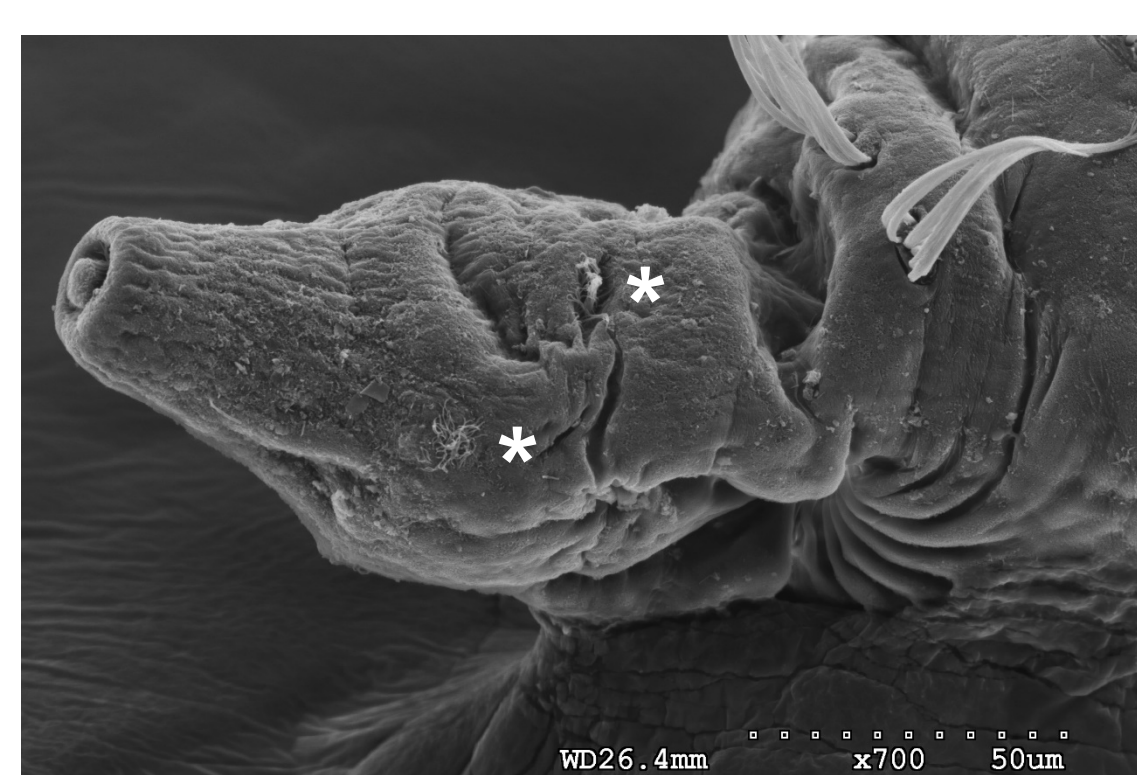
▶ *Levinsenia* sp B SCAMIT 2007 § - a synonym of *Levinsenia kirbyae* Lovell, 2002, described from the Andaman Sea.

New Species:

SEM imaging confirms *Levinsenia* sp SD1 Barwick 2000 § as undescribed with the following features:

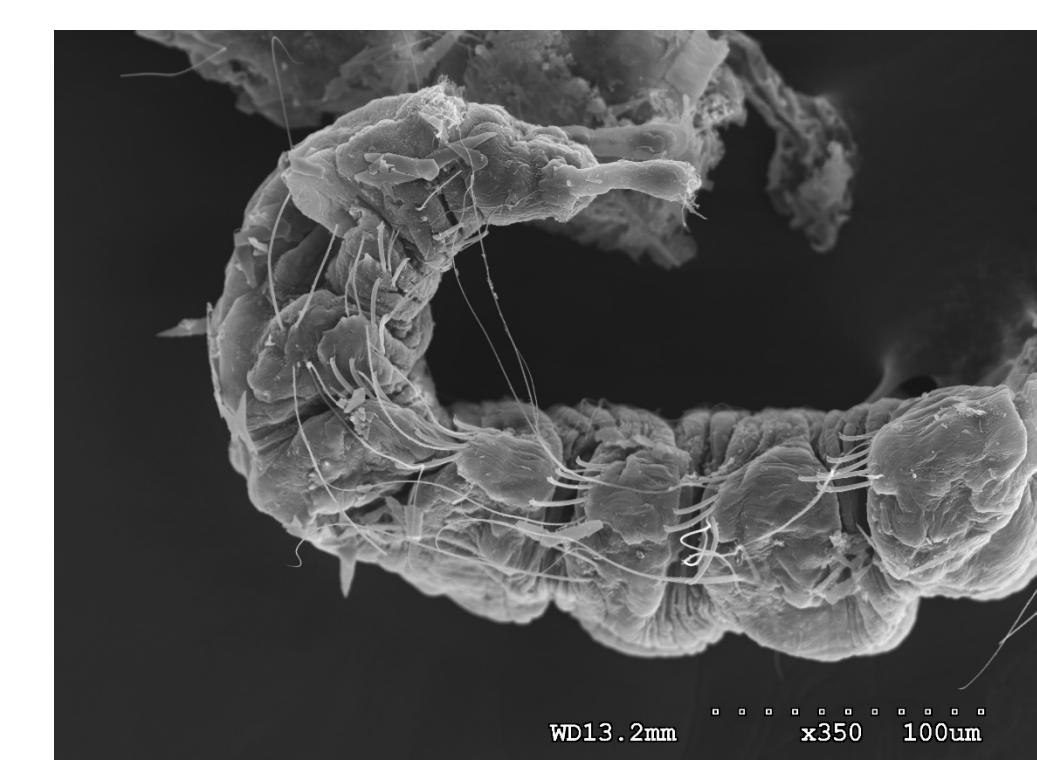
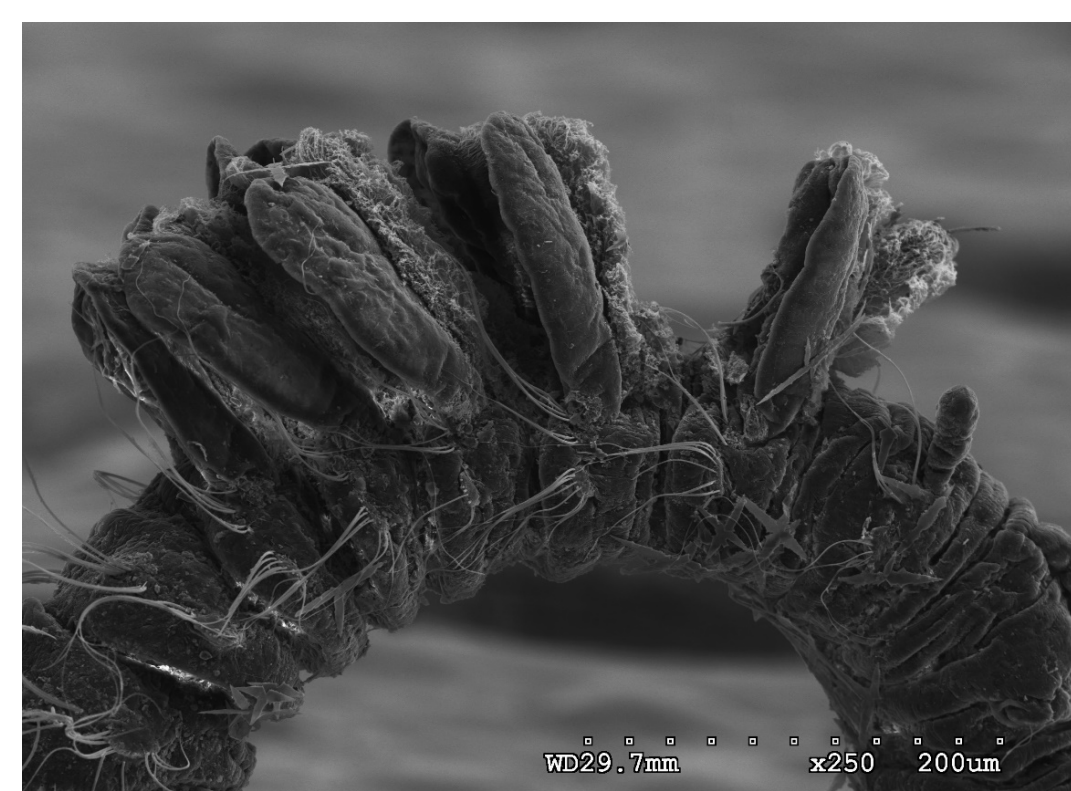
▶ Unique ciliary patches (*) on the prostomium

▶ Bifid (hooded) modified neurochaetae



▶ Flattened heavily, ciliated truncate branchiae

▶ Extremely long capillary chaetae in far posterior



Acknowledgements:

We would like to thank friends in the Southern California Association of Marine Invertebrate Taxonomists (SCAMIT), Danny Eibye-Jacobsen (Zoological Museum – University of Copenhagen), and Linda Kuntz (MBARI) for providing specimens for this study. Use of and access to the SEM was supported by the Natural History Museum of Los Angeles County. This research was supported by the County Sanitation Districts of Los Angeles County.

References:

- Cadien, D.B. & Lovell, L.L. Eds. 2016. Edition 11. A TAXONOMIC LISTING OF BENTHIC MACRO and MEGAINVERTEBRATES from Infaunal and Epifaunal Monitoring and Research Programs in the Southern California Bight. Prepared by The Southern California Association of Marine Invertebrate Taxonomists.
- Hartman, O. 1957. Orbinidae, Apistobranchidae, Paraonidae and Longosomatidae. Allen Hancock Pacific Expeditions 15(3):211-393, plates 20-44, 1 chart.
- Lovell, L. L. 2002. Paraonidae (Annelida: Polychaeta) of the Andaman Sea, Thailand. In: Eibye-Jacobsen D., Ed. Proceedings of the International Workshop of the Polychaetes of the Andaman Sea June-August 1997. *Phuket Marine Biological Center Special Publication* 24: p 33-56.
- Strelzov, V.E. 1973. Polychaetous annelids of the family Paraonidae (Polychaeta, Sedentaria). *Akademiya Nauk SSSR, Leningrad*. Pp. 1-120. (In Russian). (Translated by the Smithsonian Institution).
- Tauber, P. 1879. *Annulata Danica*. Kobenhavn. Reitzel., 143 pp.