

SCAMIT VOUCHER SHEET

Species name: *Levinsenia* sp. B SCAMIT, 2007

SCAMIT Vol. 25, No. 5

Family: Paraonidae

Prepared by: Larry Lovell, LACSD: August 31, 2007

Synonymy: *Levinsenia oculata* of authors NEP (in part), not Hartman, 1957.
Levinsenia gracilis of Blake, 1996 (in part).

Material: *Levinsenia oculata*: Holotype lot, LACM-AHF 0651, 92 specimens.
Various specimens from survey work performed in southern California
1975-present.

Literature: Blake, J. A. 1996. Paraonidae. *In* Taxonomic Atlas of the Santa Maria Basin and Western Santa Barbara Channel, Vol 6, The Annelida Part 3, Chapter 2. pp. 27-70.
Hartman, O. 1957. Orbiniidae, Apistobranchidae, Paraonidae and Longosomatidae. *Allan Hancock Pacific Expeditions* 15(3): 211-393, plates 20-44.
Lovell, L.L. 2002. Paraonidae (Annelida:Polychaeta) of the Andaman Sea, Thailand. *Phuket Marine Biological Center Special Publication*, 24: 33-56, Figs. 1-9.
Streltsov, V. A 1973. Polychaete Worms of the family Paraonidae (Polychaeta:Sedentaria) *Akademiya Nauk SSSR, Leningrad*. Pp. 1-120. (In Russian). (Translated in to English for the Smithsonian Institution and the National Science Foundation by Amerind Publishing Co. Pvt. Ltd., New Delhi, India, 1979.)

Diagnostic Characters:

1. Prostomium conical with terminal sensory organ, nuchal grooves present at rear of prostomium, median antennae absent.
2. Pre-branchial segments inflated (see Fig. 1), number 6-7. 16-20 pairs of branchiae, marginally ciliated with rounded tip, first 1-2 pairs shorter.
3. Median and posterior setigers with well-developed dorsal intersegmental furrow (see Fig. 2).
4. Up to 12 modified neurosetae, beginning around setiger 31, with a double rowed arrangement further back. Superior modified setae longer and straighter transitioning to shorter more recurved setae in the inferior position. Capillary setae only present in rear row of superior position (see Fig. 3).
5. Methyl green staining pattern with lateral spot in abdominal segments (see Fig. 2).

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Related Species and Character Differences:

Levinsenia gracilis (Tauber, 1879) – pre-branchial area not inflated, modified setae similar in size and shape with convex fringe, no inferior double row, no MG staining spots post-branchially.

Levinsenia kirbyae Lovell, 2002 – is very closely related to *L.* sp B, but comes from the Andaman Sea in the eastern Indian Ocean and Gulf of Thailand in the western Pacific Ocean. It also has double-rowed modified setae and MG staining spots.

Levinsenia multibranchiata (Hartman, 1957) – differs in having 28-36 branchial pairs, modified setae in single rows posteriorly, no MG staining spots post-branchially.

Levinsenia oculata (Hartman, 1957) – with pigmented prostomium, pre-branchial area not inflated, does not possess double rows of modified setae, no MG staining spots post-branchially. This species is poorly defined.

Levinsenia sp. SD1 *fide* Barwick, 2000 – differs by having 4-8 pairs of short, flattened, cupped branchiae; modified setae strongly curved with a hood, in a single row alternating with capillary setae.

Discussion:

When I began working on southern California Paraonidae in 1975 Streltsov (1973) had just published his review of the family in Russian. One illustration for *L. oculata* (Fig 58D) showed modified setae in the inferior position being more recurved and with a partial second row behind the first. Hartman's original description even mentioned a change in setal shape. Since other character states such as number and length of branchiae were more difficult to use, this setal character became the primary diagnostic character used by me in separating *L. gracilis* and *L. oculata*.

Examination of the holotype lot for *L. oculata* revealed that the double-rowed modified setae illustrated by Streltsov were not found on the type specimens examined. In spite of this problem, the use of the name *L. oculata* for specimens with the double-rowed modified setae was continued by most working in southern California, but not all. Blake (1996) reports a single specimen of *L. gracilis* thus, "The specimen from Sta. 94 has up to 10 spines per fascicle that are sometimes arranged in what appear to be two rows. In other respects it resembles *L. gracilis*." The specimen Blake references is probably *L.* sp B.

SCAMIT VOUCHER SHEET, cont.

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Discussion: cont.

Clearly there has been confusion regarding the identity of *Levinsenia* specimens with double-rowed modified setae. Erecting a provisional name and voucher sheet for these specimens will hopefully clarify things.

Depth range: 45 – 60 m.

Distribution: Southern California.

Illustrations:



Figure 1. Anterior showing inflated pre-branchial area.



Figure 2. Whole body showing M.G. staining and dorsal intersegmental furrow.



Figure 3. Double-rowed modified neurosetae.