



Species: *Kirkegaardia* sp B SCAMIT, 2023 §

P-Code—P059

Synonyms: *Kirkegaardia* sp LA1 Haggin, 2019 §

ITI—Group 2

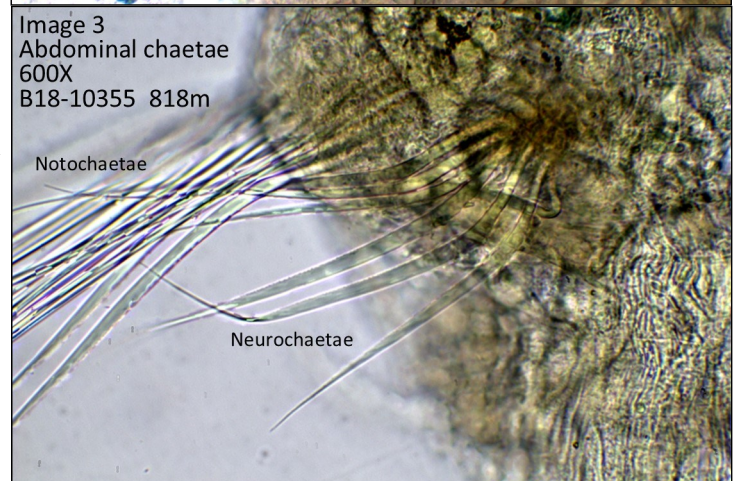
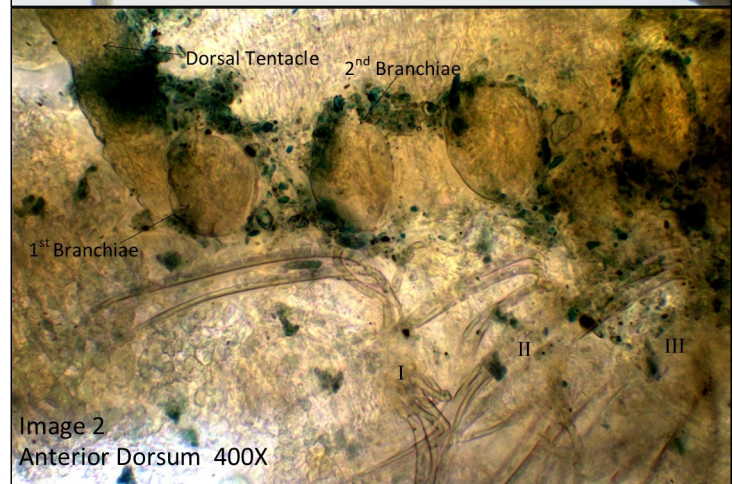
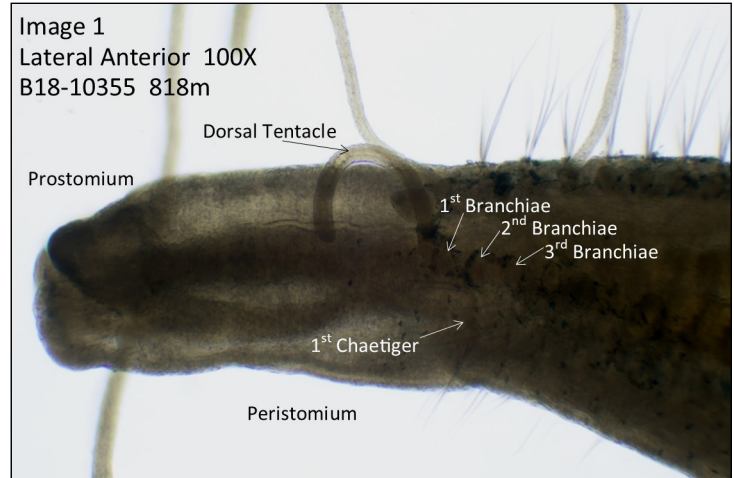
Family: Cirratulidae  
Suborder: Cirratuliformia  
Order: Terebellida  
Infraclass: Canalipalpata  
Subclass: Sedentaria  
Class: Polychaeta  
Phylum: Annelida

**Diagnostic Characters:**

- 1) Prostomium & peristomium elongate (Images 1 & 4-9).
- 2) Body long & thin (thread-like) (Image 10).
- 3) Subdermal eyes present (becomes more apparent when stained).
- 4) Dorsal tentacle & 1<sup>st</sup> branchiae inserted anterior to 1<sup>st</sup> chaetiger. Dorsal tentacle inserted more medially than 1<sup>st</sup> branchiae (Images 1 & 2).
- 5) Thorax slightly dorso-ventrally compressed but laterally inflated. Chaetigers crowded, much wider than long. Parapodia are slightly dorsally elevated, forming a slight dorsal groove (Images 1 & 4-7).
- 6) Thorax with 22-24 chaetigers (Images 8 & 10).
- 7) Abdominal chaetigers round in cross-section, longer than wide & slightly moniliform (Image 10).
- 8) Abdominal notochaetae smooth, becoming very long in mid-posterior abdomen (Image 3).
- 9) Abdominal neurochaetae tapering to fine tips, basal edge finely denticulated and flattened. Denticulations not apparent until mid-abdomen @ 600X magnification or more (Image 3).
- 10) Pygidium unknown.

**Pigmentation/MGS:**

- 1) Prostomium staining on anterior margin (Images 4, 5, 6 & 7).
- 2) Peristomium staining dorsally, speckled, not in annulation furrows. Ventrally as a band behind mouth, then as a “V”-shape extending to anterior of chaetiger 1, beginning slightly laterally. Peristomium unstained postero-laterally (Images 4-10).



All photos by B. Haggin

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Image 4  
Dorsal Anterior Stain  
40X



Image 5  
Dorsal Anterior Stain  
80X



Image 6  
Lateral Anterior Stain  
40X

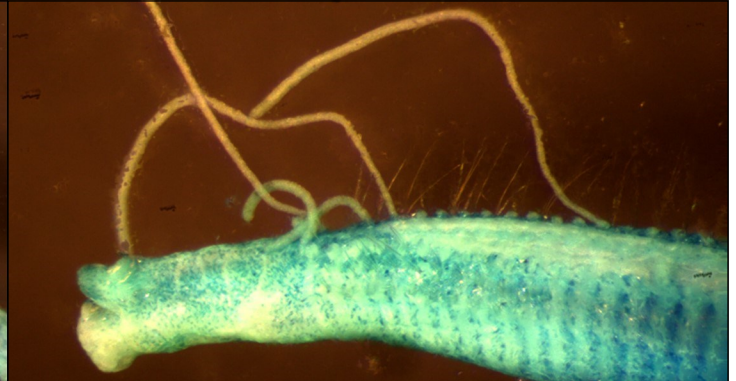


Image 7  
Lateral Anterior Stain 80X

**Pigmentation/MGS (cont.):**

- 3) Ventral Thorax w/ dark segmental bands from chaetiger 11-22, extending laterally to above notochaetae. Anterior thorax lightly speckled (Images 4, 6 & 8).
- 4) Abdomen with a lateral stain spot posterior to the chaetal fascicles. Ventrally with a medial line in each segment (Images 8 & 10).

**Material Examined:**

B'18-10355—South of Pt. Dume, Santa Monica Basin/San Pedro Channel, 818m (2 inds.) (33.88369N, 118.79006W—17AUG18) (all images)

B'18-10357—Santa Monica Basin, 839m (6 inds.) (33.85231N, 119.1947W—20JUL18)

B'18-10362—San Pedro Channel, 745m (4 inds.) (33.63469N, 118.58346W—02AUG18)

B'18-10363—San Pedro Channel, 738m (3 inds.) (33.61354N, 118.72009W—02AUG18)

B'18-10366—Off Two Harbors, Santa Catalina Island, San Pedro Channel, 883m (1 ind.) (33.42346N, 118.42346W—02AUG18)



Image 8  
Ventral Anterior Stain 63X

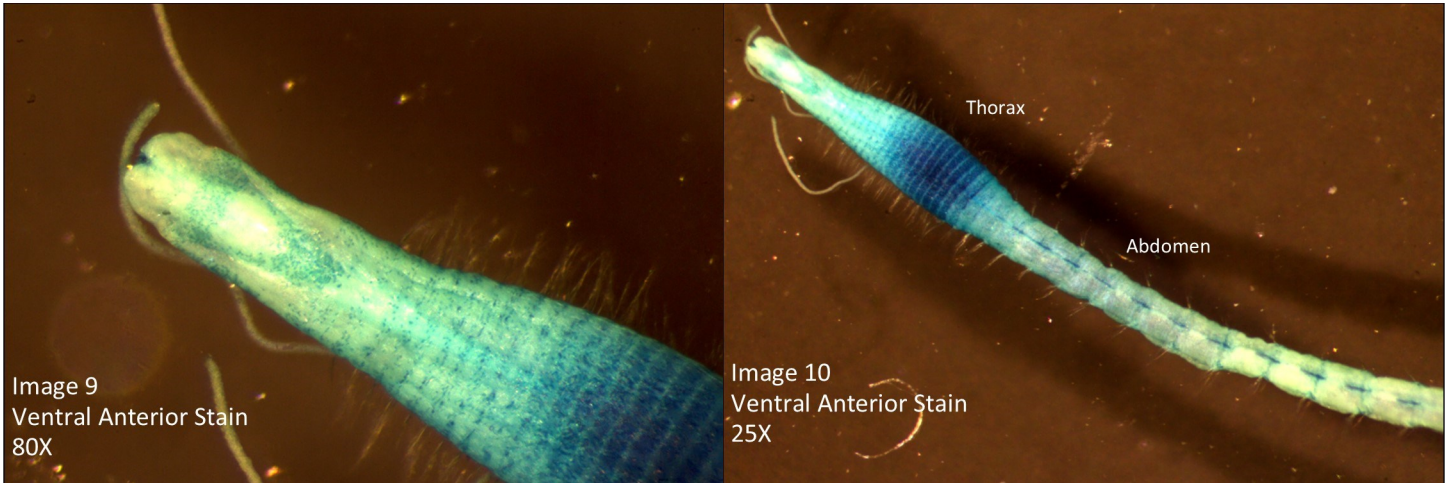


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### Similar Species:

*Kirkegaardia cryptica* (Blake, 1996) - *Kirkegaardia cryptica* & *Kirkegaardia* sp B have a very similar overall appearance. They are both long and thin (thread-like), have an elongate peristomium, the dorsal tentacle and 1st branchiae are inserted anterior to chaetiger 1 and the thoracic parapodia are slightly dorsally elevated, forming a slight dorsal groove. They differ in the denticulation of the abdominal neurochaetae where *Kirkegaardia cryptica* has a distinct sawtooth edge with individual teeth widely spaced along the cutting edge and *Kirkegaardia* sp B has a more finely denticulated cutting edge. The MGS pattern of *Kirkegaardia cryptica* and *Kirkegaardia* sp B also differ. The ventral thoracic stain of *Kirkegaardia cryptica* is a solid stain patch in the posterior thorax where in *Kirkegaardia* sp B, the posterior ventral thoracic stain occurs in distinct bands. The ventral peristomium has a distinct “V”-shaped stain in *K. sp B* that is absent in *Kirkegaardia cryptica*.

*Kirkegaardia* sp SD9 (Rodriguez-Villanueva, 2008 §) - *Kirkegaardia* sp SD9 & *Kirkegaardia* sp B have a very similar appearance as they both have an elongate peristomium and a long and thin (thread-like) body. *Kirkegaardia* sp SD9 differs in the more elongate (chaetigers are widely spaced) thorax compared to the more compressed (chaetigers are tightly packed) thorax of *Kirkegaardia* sp B. The MGS pattern of *Kirkegaardia* sp SD9 is more spread out in the ventral thorax, with the posterior thoracic ventral bands being broken, giving the appearance of 3 lines running down the ventrum. The ventral posterior thoracic stain pattern of *Kirkegaardia* sp B is not a series of broken bands.

### Habitat:

*Kirkegaardia* sp B is known from multiple individuals collected during Bight '18. It was collected between 738-883 m in the Santa Monica Basin/San Pedro Channel between Pt. Dume and Two Harbors, Santa Catalina Island in clayey silt. Also collected in the samples were the polychaetes *Protis pacifica* Moore, 1923 (10355, 10362, 10366); *Amage longibranchiata* Hartman, 1960 (10355, 10366); *Ampharete cornuta* (Hilbig, 2000) (10355); *Phyllochaetopterus* sp A SCAMIT, 2023 § (reported as *Phyllochaetopterus* sp LA1 Haggin, 2019 §) (10355, 10362, 10366); *Leiochrides hemipodus* Hartman, 1960 (10363); *Chaetozone* sp D SCAMIT, 2023 § (reported as *Chaetozone* sp LA2 Haggin, 2019 §) (10355); *Myriochele gracilis* Hartman, 1955 (10362); *Aricidea (Acmira) rubra* Hartman, 1963 (10362, 10363); *Aricidea (Acmira)* sp LA1 Lovell, 2014 § (10355, 10366); *Aricidea (Strelzovia) monicae* Laubier, 1967 (10363); *Levinsenia oculata* (Hartman, 1957) (10362, 10363); *Cossura rostrata* Fauchald, 1972 (10362); *Maldane californiensis* Green, 1991 (10362, 10363); *Spiophanes fimbriata* Moore, 1923 (10363); *Harmothoe* sp LA1 Furlong, 2014 § (10362); *Lepidonotus* sp A SCAMIT, 2023 § (reported as *Lepidonotus* sp LA1 Haggin, 2019 §) (10362); *Syllis* sp A SCAMIT, 2023 § (reported as *Syllis* sp LA4 Haggin, 2019 §) (10362); an unidentified *Aricidea* (10355), an unidentified *Cossura* (10362),

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### Habitat (cont.):

an unidentified Syllid (10362), an unidentified Polynoid (10362), an unidentified Eyclymenid (10363), and an unidentified Hesionid (10355). *Kirkegaardia* sp B was the only polychaete found in sample B'18-10357.

### Discussion:

Blake (2016) replaced the genus *Monticellina* with the genus *Kirkegaardia* after discovering that *Monticellina* was preoccupied in the Platyhelminthes and redescribed the genus as: “Bitentaculate cirratulids with distinct body regions and all setae distally pointed. Pre-setigerous area typically elongate, cylindrical, with short, blunt prostomium and long peristomium with none to many weakly developed annulations; dorsal tentacles arising on posterior margin of peristomium, anterior to setiger 1. Thoracic notopodia often shifted dorsally, elevated, producing distinct dorsal groove along thoracic region; other species with thoracic parapodia more lateral, leaving broad elevated dorsum; parapodia of middle and posterior region lateral. Middle body segments longer than wide, frequently beadlike; posterior segments wider than long, somewhat crowded, with posterior most segments usually expanded or enlarged. Setae including simple capillaries with fibrils observed under SEM and denticulated capillaries with distinct denticles present along one edge of seta; denticles visible at 400-1000X; blades usually basally expanded.”

Blake (2016) divided *Kirkegaardia* into three species groups: *Kirkegaardia dorsobranchialis-heterochaeta* group, *Kirkegaardia baptistae-tesselata* group, and *Kirkegaardia luticastella* group. The *Kirkegaardia luticastella* group is characterized by an enlarged pre-chaetigerous region and anterior thorax and occupy distinct mud balls on the seafloor. The *Kirkegaardia baptistae-tesselata* group is characterized by thoracic parapodia not elevated and without an elongated pre-chaetigerous region. The *Kirkegaardia dorsobranchialis-heterochaeta* group is characterized by elevated thoracic parapodia producing a dorsal channel and an elongated pre-chaetigerous region that is either smooth or with annular rings or a dorsal ridge. *Kirkegaardia* sp B would fall into the *Kirkegaardia dorsobranchialis-heterochaeta* group which also contains another local species, *Kirkegaardia cryptica*.

WoRMS currently lists 42 valid species of *Kirkegaardia* and SCAMIT Ed. 13 has 5 named species and 1 provisional species. SCAMIT also recognizes 1 additional in-house provisional species from City of San Diego that is not currently on the SCAMIT species list.

### References:

**Blake, J. A.** 1996. Family Cirratulidae Ryckholdt, 1851. Pages 263-384. 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.

**Blake, J. A.** 2016. *Kirkegaardia* (Polychaeta, Cirratulidae), new name for *Monticellina* Laubier, preoccupied in the Rhabdocoela, together with new records and descriptions of eight previously known and sixteen new species from the Atlantic, Pacific, and Southern Oceans. *Zootaxa* 4166(1): 1-93.

**Read, G. & Fauchald, K.** (Ed.) 2023. World Polychaeta Database. *Kirkegaardia* Blake, 2016. Accessed through: World Register of Marine Species at: <https://www.marinespecies.org/aphia.php?p=taxdetails&id=884676> on 2023-04-12

**Rodriguez-Villaneuva, V.** 2017. Cirratulidae Ryckholdt, 1851. *SCAMIT Powerpoint Presentation* (June 2017).

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**References (cont.):**

SCAMIT. 2021. *A Taxonomic Listing of Benthic Macro- 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.

**Other Literature Consulted:**

Blake, J. A. 2019. New species of Cirratulidae (Annelida, Polychaeta) from abyssal depths of the Clarion-Clipperton Fracture Zone, North Equatorial Pacific Ocean. *Zootaxa* 4629(2): 151-187.

Dean, H. K. & Blake, J. A. 2009. *Monticellina* (Polychaeta: Cirratulidae) from the Pacific coast of Costa Rica with descriptions of six new species. *Zoosymposia* 2: 105-126.

Elias, R., Rivero, M. S. & Lobo Orensanz, J. M. 2016. New species of *Monticellina* and *Chaetozone* (Polychaeta: Cirratulidae) in the SW Atlantic, and a review of *Monticellina* species. *Journal of the Marine Biological Association of the United Kingdom* 97(7): 1553-1563.

Hartman, O. 1969. *Atlas of the Sedentariate Polychaetous Annelids from California*. Los Angeles, Ca, University of California, Allan Hancock Foundation.

**Version History:**

Version 1.0—Voucher sheet created (02JUL2019)

Version 2.0—Updated voucher sheet to new SCAMIT guidelines; Updated name to *Kirkegaardia* sp B and author to SCAMIT, 2023 §; Added Discussion, Habitat and Other Literature Consulted sections; Added ITI & P-Code (12APR2023)