Generic descriptions for Flabelligeridae, de Saint-Joseph, 1894
Prepared by Adam Webb, City of San Diego, 2025

Species present in SCAMIT Ed 14:
Bradabyssa pilosa (Moore 1906)
Bradabyssa pluribranchiata (Moore 1923)
Bradabyssa tenebricosa (Berkeley 1966)
Diplocirrus sp SD1 Rowe 1998
Flabelliderma ockeri Salazar-Vallejo 2007
Flabelliderma papillosa (Essenberg 1922)
Flabelligera infundibularis Johnson 1901
Flabesymbios commensalis (Moore 1909)
Flabesymbios roberti Salazar-Vallejo 2012
Lamispina schmidtii (Annenkova-Chlopina 1924)
Pherusa andersonorum Salazar-Vallejo 2014
Pherusa neopapillata Hartman 1961
Pherusa papillata (Johnson 1901)
Piromis capulata (Moore 1909)
Semiodera inflata (Treadwell 1914)
Therochaeta pacifica Fauchald 1972
Trophoniella harrisae Salazar-Vallejo 2012
Trophoniella hospita (Fauchald 1972)

Annenkova Salazar-Vallejo 2012 *not in SCAMIT **Figure 1**
Notopodia lateral, neuropodia ventrolateral
Neurohooks with thin, tapering crest, apparently articulated (no real articulation)
Salazar-Vallejo, 2012, Revision of Flabelligera Sars, 1829 (Polychaeta: Flabelligeridae), Zootaxa 3203.

Brada Stimpson 1853 *not in SCAMIT **Figure 2**
Sediment often adhered to tunic
Cephalic cage absent, reduced, or short
Eight branchial filaments
Blunt neurospines
Salazar-Vallejo, 2017, Revision of Brada Stimpson, 1853, and Bradabyssa Hartman, 1967 (Annelida, Flabelligeridae), Zootaxa 4303.

Bradabyssa Hartman 1967 **Figure 3**
Similar to Brada
Papillae outgrowths as tubercles when multiple papillae are fused
Sediment often adhered to tunic
Cephalic cage absent, reduced, or short
Aristate neurospines
Median neurochaetae anchylose
Salazar-Vallejo, 2017, Revision of Brada Stimpson, 1853, and Bradabyssa Hartman, 1967 (Annelida, Flabelligeridae), Zootaxa 4303.

Buskiella McIntosh 1885 *not in SCAMIT **Figure 4**
Pelagic, abyssopelagic habitats

Cephalic cage absent
Soft tunic
Salazar-Vallejo, 2007, Revision of Buskiella McIntosh, 1885 (including Flota Hartman 1967), and description of its trifid organ (Polychaeta: Flotidae), Invertebrate Zoology 4(1).

Daylithos Salazar-Vallejo 2012 *not in SCAMIT **Figure 5**
Resembling Semiodera body type (no pseudocompound neurohooks)
Capillary neurochaetae in a few anterior chaetigers
Posterior region often depressed, usually with many neurohooks per chaetiger
Salazar-Vallejo, 2012, Revision of Semiodera Chamberlin, 1919 (Polychaeta: Flabelligeridae), Zootaxa 3562.

Diplocirrus Haase 1915 **Figure 6**
Neurochaetae multiarticulated, not like *Flabehlersia*, but possibly along more of chaetae
Notochaetae multiarticulated (possible that this is referred to as anchylose in later papers, not sure, but neurochaetae do appear truly multiarticulated)
Body clavate, subcylindrical, with a few anterior chaetigers often swollen and longer than others
Cephalic cage present, variable in size
Salazar-Vallejo, Buzhinskaja, 2011, Revision of Diplocirrus Haase, 1915, including Bradiella Rullier, 1965, and Diversibranchius Buzhinskaja, 1993 (Polychaeta, Flabelligeridae), ZooKeys 106.

Flabegraviera Salazar-Vallejo 2012 *not in SCAMIT **Figure 7**
Very thick and resistant tunic
Short cephalic cage chaetae
Very long notochaetae that are mostly uncovered by the tunic and arranged in descending series
Ventrolateral neuropodia
Often anchylosed neurochaetae that look simple
Salazar-Vallejo, 2012, Revision of Flabelligera Sars, 1829 (Polychaeta: Flabelligeridae), Zootaxa 3203.

Flabehlersia Salazar-Vallejo 2012 *not in SCAMIT **Figure 8**
Body tapered at both ends
Notopodia displaced laterally (or ventrolaterally)
Neurochaetae multiarticulated, distally bent
Salazar-Vallejo, 2012, Revision of Flabelligera Sars, 1829 (Polychaeta: Flabelligeridae), Zootaxa 3203.

Flabelliderma Hartman 1969 **Figure 9**
Cephalic cage setae arranged in a transverse line
Neurochaetae are multiarticulated and distally bent
Papillae forming dorsal tubercles
Salazar-Vallejo, 2007, Revision of Flabelliderma Hartman, 1969 (Polychaeta: Flabelligeridae), Journal of Natural History, 41.

Flabelligera Sars 1829 **Figure 10**
Cephalic cage setae arranged in a transverse line
Neurochaetae are multiarticulated and distally bent
Body covered by thick, mucoid sheath
Salazar-Vallejo, 2012, Revision of Flabelligera Sars, 1829 (Polychaeta: Flabelligeridae), Zootaxa 3203.

Flabesymbios Salazar-Vallejo 2012 **Figure 11**
Thin, soft tunic
Long cephalic cage chaetae
Short neurochaetae arranged in longitudinal fans that are barely covered by papillae
Neuropodia mostly displaced midventrally
Clearly articulated neurochaetae
Several are commensal, like *Flabesymbios commensalis* (associated with *Strongylocentrotus purpuratus*)
Salazar-Vallejo, 2012, Revision of Flabelligera Sars, 1829 (Polychaeta: Flabelligeridae), Zootaxa 3203.

Flota Hartman 1967 *not in SCAMIT **Figure 12**
Pelagic
Cephalic cage absent
Head with pair of large flattened processes with three rami
Buzhinskaja, 2006, On the morphology of the genus Flota Hartman, 1967 and corroboration of the family status of Flotidae Buzhinskaja, 1996 (Polychaeta), Zoosystematica Rossica 15(1).

Ilyphagus Chamberlin 1919 *not in SCAMIT F**igure 13**
Body rounded at both ends
Cephalic cage well developed
Densely covered by thin, abundant papillae, giving fuzzy appearance
Neurochaetae aristate spines, anchylose bases
Salazar-Vallejo, 2012, Revision of Ilyphagus Chamberlin, 1919 (Polychaeta: Flabelligeridae), ZooKeys 190.

Lamispina Salazar-Vallejo 2014 **Figure 14**
Similar to *Pherusa*
Long notochaetae
Mostly straight, laminate neurospines (or lamispines), often as long as body width, sometimes with bidentate tips (or distally foliose)
Salazar-Vallejo, 2014, Revision of Pherusa Oken, 1807 (Polychaeta: Flabelligeridae), Zootaxa 3886.

Paratherochaeta Salazar-Vallejo 2013 *not in SCAMIT **Figures 15-16**
Abyssal habitats
Cephalic cage present in most
Chaetae brittle, easy lost
Body papillated, with fine sediment adhering
Neurochaetae anchylosed aristate spines
Salazar-Vallejo, 2013, Revision of Therochaeta Chamberlin, 1919 (Polychaeta: Flabelligeridae), Zoosystema 35(12).

Pherusa Oken 1807 **Figures 17-18**
Well-developed cephalic cage
Eight branchial filaments
Anchylosed neurochaetae, falcate, shorter than body width
Neurochaetae usually start in 4 (5 in *P. affinis*), anchylosed
Small/juveniles may have a few anterior neurochaetae that superficially resemble pseudocompounds
-"However if their chaetae are really pseudoarticulate, they belong to *Therochaeta*."
Medium sized notochaetae, about half body width
Salazar-Vallejo, 2014, Revision of Pherusa Oken, 1807 (Polychaeta: Flabelligeridae), Zootaxa 3886.

Piromis Kinberg 1867 **Figure 19**
Sediment cover more rugose
Neurochaetae multiarticulate and bifid tipped, with anchylose bases (when present, replace short articles)
Salazar-Vallejo, 2011, Revision of Piromis Kinberg, 1867 and Pycnoderma Grube, 1877 (Polychaeta: Flabelligeridae), Zootaxa 2819.

Poeobius Heath 1930 *not in SCAMIT **Figure 20**
Pelagic
Transparent body, digestive track visible
Atypical for Flabelligeridae, single described species
Heath, 1930, A connecting link between the Annelida and the Echiuroidea (Gephyrea armata), Journal of Morphology, 49(1).

Pycnoderma Grube 1877 *not in SCAMIT **Figure 21**
Sediment cover a cleaner, more uniform looking surface
Posterior neurohooks with one or two long articles, with the distal article modified; might have subdistal swelling followed by long, delicate mucro (or swollen region might be missing)
Salazar-Vallejo, 2011, Revision of Piromis Kinberg, 1867 and Pycnoderma Grube, 1877 (Polychaeta: Flabelligeridae), Zootaxa 2819.

Saphobranchia Chamberlin 1919 *not in SCAMIT **Figure 22**
Setigers 1 and 2 longer and stouter that proceeding setigers
Neurochaetae distally multiarticulate with anchylose bases, shorter ones completely multiarticulate
Salazar-Vallejo, 2020, Four new deep-water flabelligerid species from Pacific Costa Rica (Annelida, Sedentaria, Flabelligeridae), Zootaxa 4885(4).

Semiodera Chamberlin 1919 **Figures 23-24**
Pseudocompound neurohooks in some anterior chaetigers
Posterior region generally cylindrical and narrower, with few neurohooks
Salazar-Vallejo, 2012, Revision of Semiodera Chamberlin, 1919 (Polychaeta: Flabelligeridae), Zootaxa 3562.

Stylaroides Delle Chiaje 1841 *not in SCAMIT **Figure 25**
Cephalic cage well developed, long
Cephalic hood long, with two rings
Body papillae tiny, abundant, body appearing smooth, or papillae longer with body appearing hirsute
Neurochaetae falcate, anchylose bases
Salazar-Vallejo, 2011, Revision of Stylaroides delle Chiaje, 1831 (Annelida: Flabelligeridae), Italian Journal of Zoology 78(S1).

Therochaeta Chamberlin 1919 **Figures 26-27**
Body papillae present (mentions of sediment tubercles)
Transitional neurochaetae (pseudocompound hooks starting 3-4 through 7-8 depending on species)
-All posterior neurochaetae are anchylosed falcate hooks
Second chaetiger often relatively longer than first, and subsequent ones.
Transverse constriction may be present on second chaetiger
Notochaetae are long multi-articulated, slightly longer articles distally

Salazar-Vallejo, 2013, Revision of Therochaeta Chamberlin, 1919 (Polychaeta: Flabelligeridae), Zoosystema 35(12).

Treadwellius Salazar-Vallejo 2011 *not in SCAMIT **Figure 28**
Cephalic cage well developed, long
Bifid branchial plate
Papillae abundant, filiform, adhering fine sediment basally, forming rounded tubercles both large and small
Neurohooks present from middle or posterior setigers
Salazar-Vallejo, 2011, Revision of Stylaroides delle Chiaje, 1831 (Annelida: Flabelligeridae), Italian Journal of Zoology 78(S1).

Trophoniella Caullery 1944 **Figure 29**
Similar to Piromis and Pycnoderma
Median or posterior neurochaetae with entire, bidentate or bifid tips, but articles very short and anchylosed (barely defined), not multiarticulate
Salazar-Vallejo, 2012, Revision of Trophoniella Hartman, 1959 (Polychaeta: Flabelligeridae), Zoosystema 34(3).

Definitions (per my own interpretation)
Anchylose – multi-jointed, and fused, appearing as "stacked" segments. Not to be confused with a single pseudocompound joint, like that in *Therochaeta*, or a multi-articulation, like that in *Flabelligera*. Salazar-Vallejo may also use this term to describe notochaetae, which have a stacked cylindrical segment appearance.
Articulated – jointed, but not fused as in the anchylose condition
Multiarticulated – multi jointed, with several articulation points

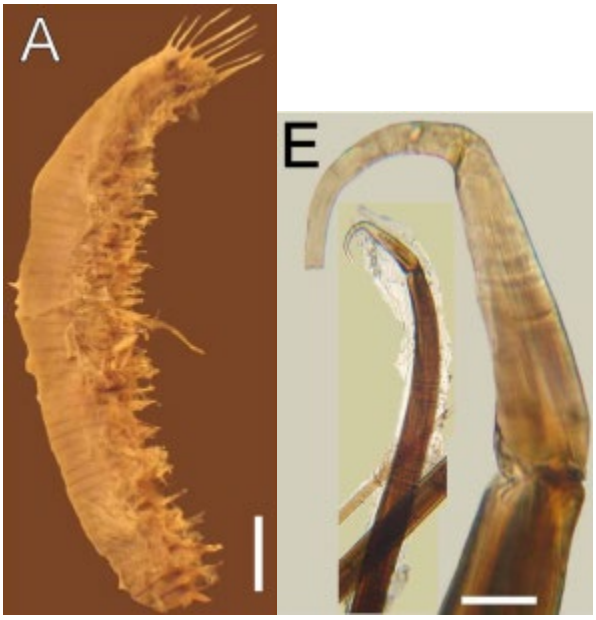


Figure 1: *Annenkova mastigophora* body (A) and neurohooks (E).

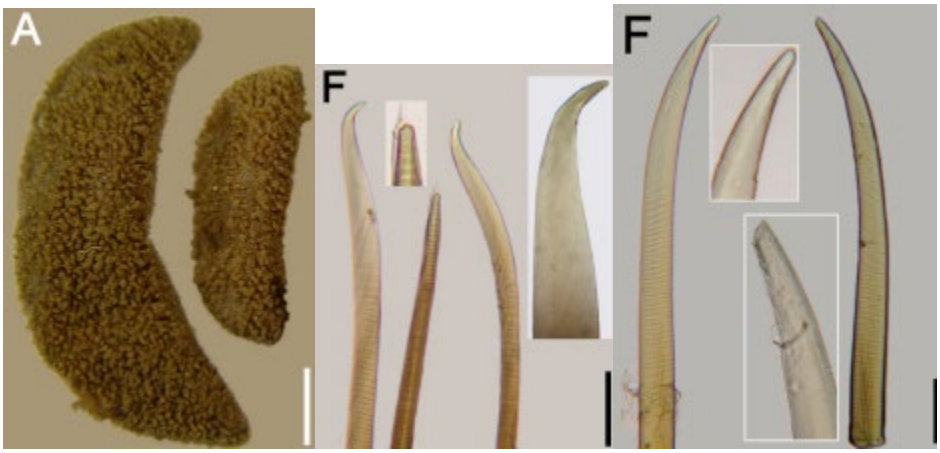


Figure 2: Body of *Brada granulosa* (A). Neurochaetae of chaetiger 10 on *B. granulosa* (middle:F) and *B. inhabilis* (right:F).

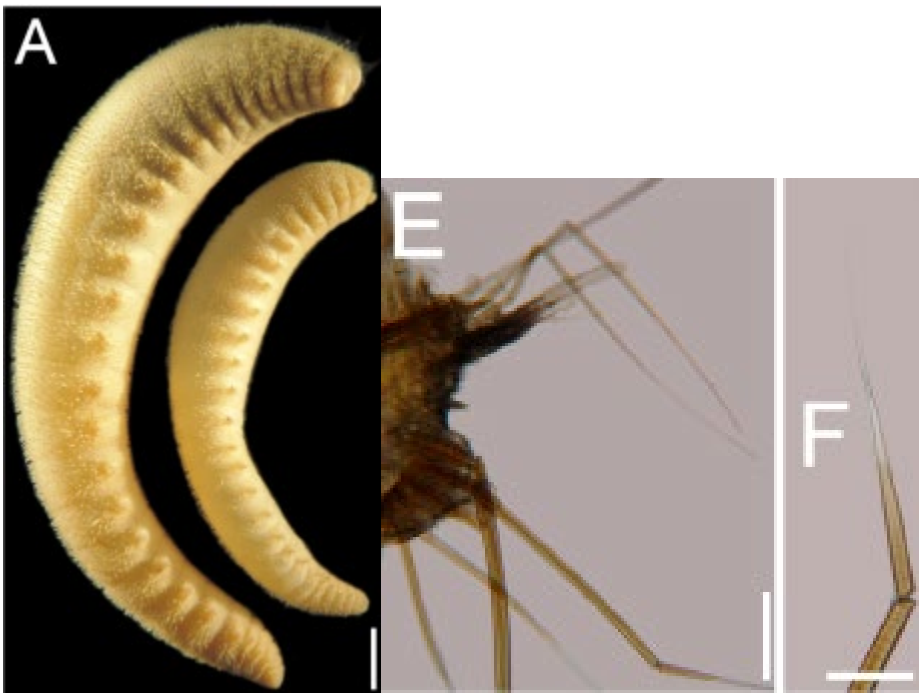


Figure 3: *Bradabyssa pilosa*, body (A) and neurochaetae (E,F).

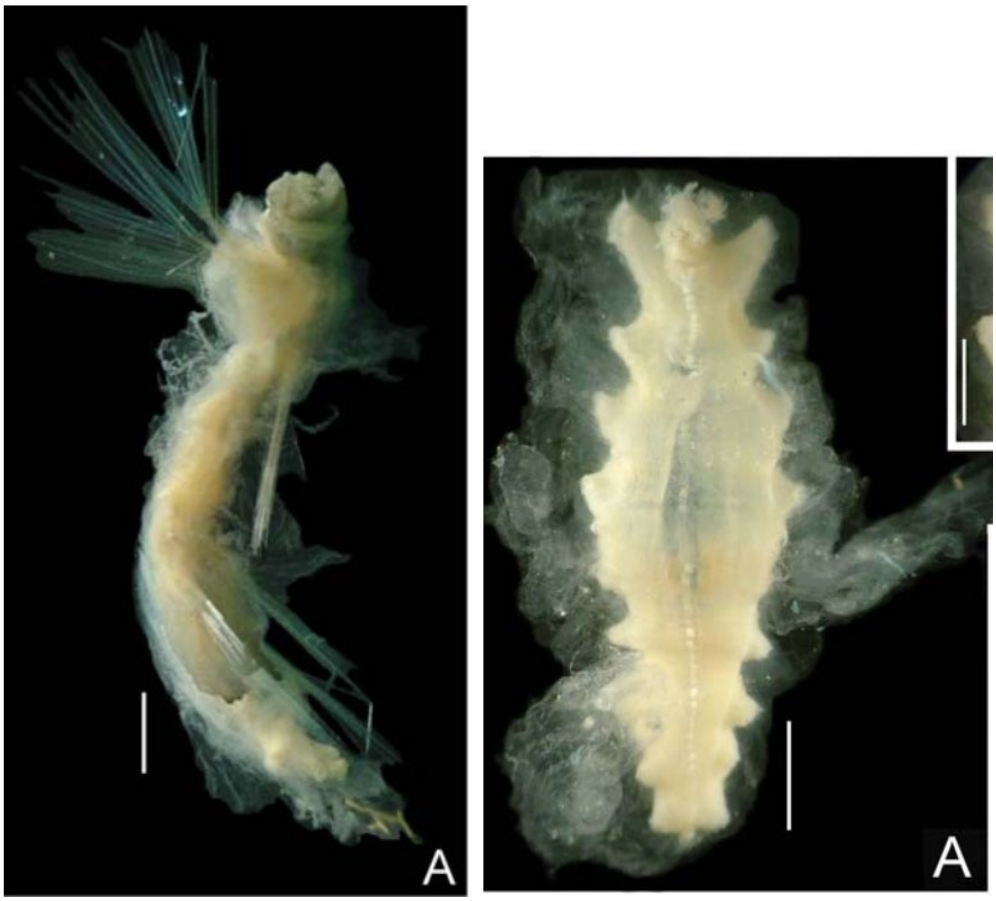


Figure 4: *Buskiella abyssorum* (left), *B. flabelligera* (right).

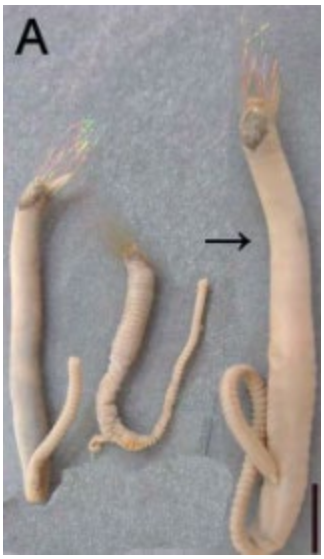


Figure 5: Body of *Daylithos dieteri* (A).

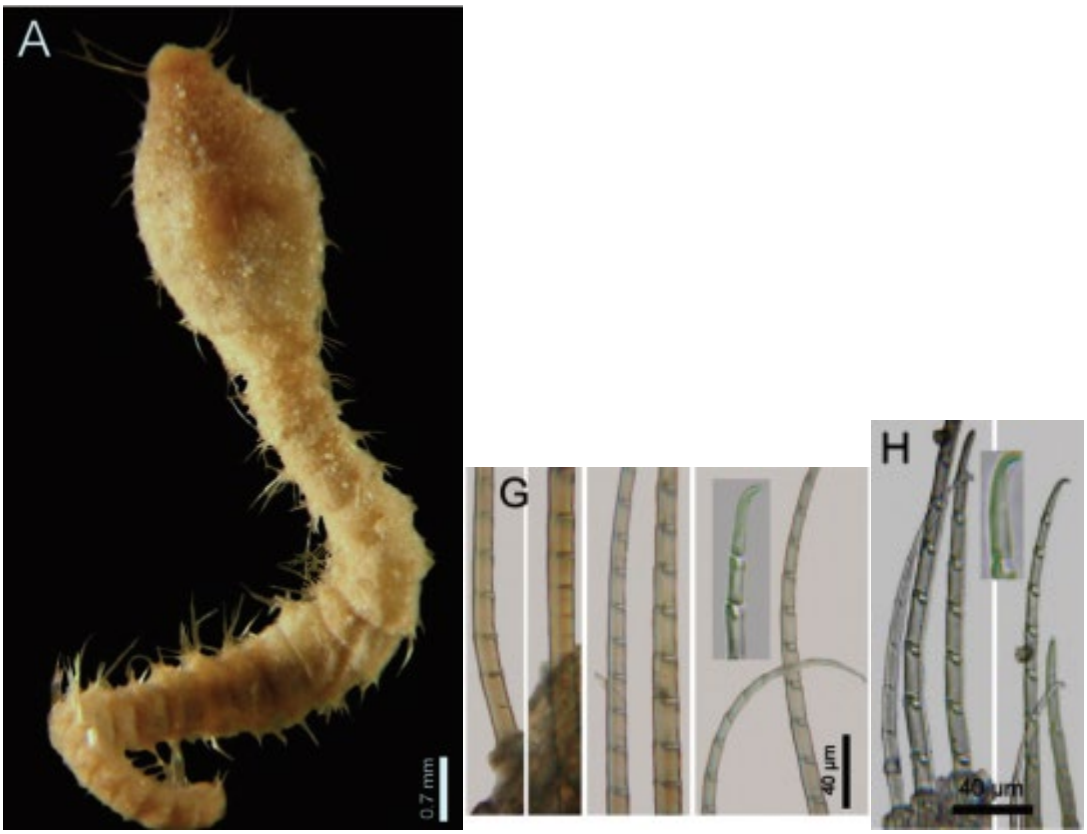


Figure 6: Body of *Diplocirrus incognitus* (A). Multiarticulated neurosetae of *Diplocirrus glaucus* (G) and *D. nicolaji* (H).

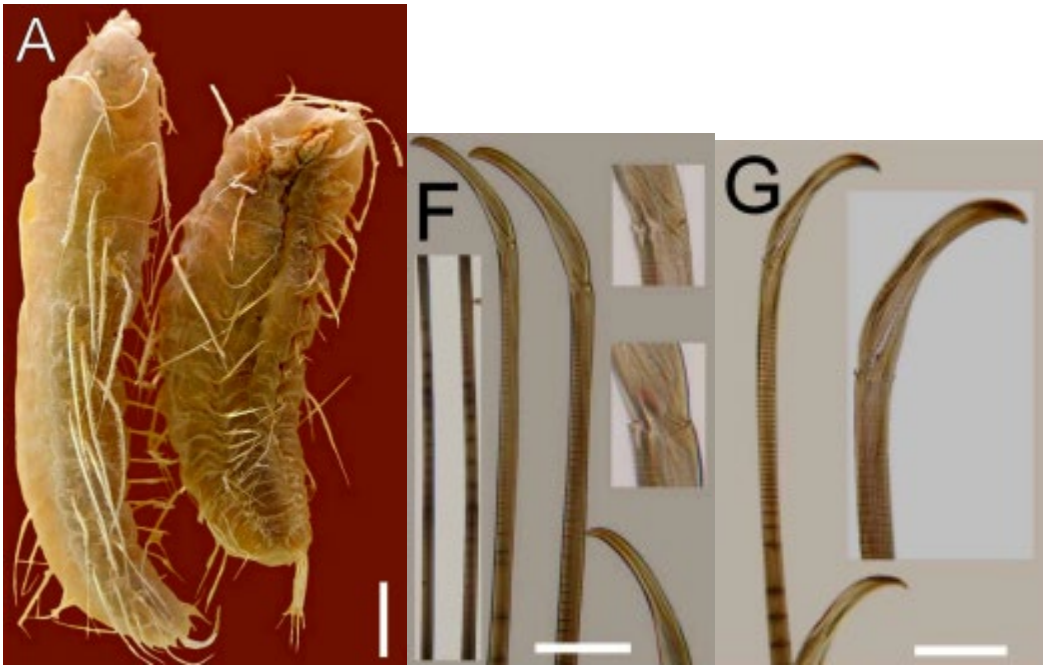


Figure 7: Body of *Flabegraviera mundata*, elongate notochaetae (A). Anchylosed neurochaetae that look simple (F,G).

Figure 8: Body of *Flabehlersia induta* (B). Neurochaetae of *F. persimilis*, multiarticulated and distally bent (right).

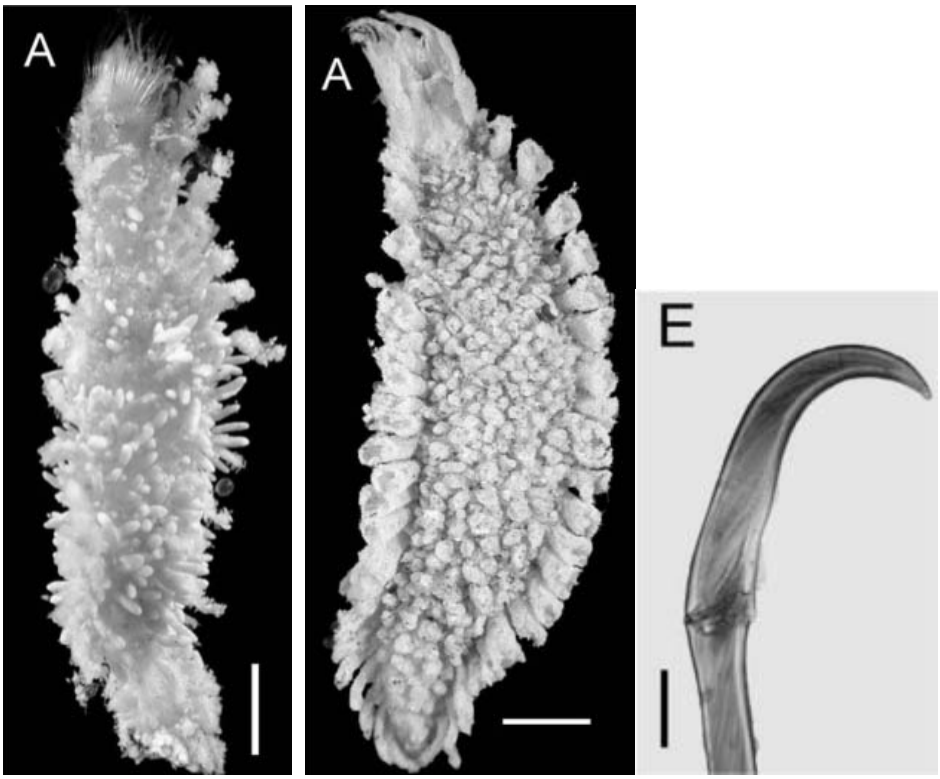


Figure 9: Papillae forming dorsal tubercles (*Flabelliderma papillosa*, left:A, *F. ockeri*, right:A). Neurochaetae of *Flabelliderma ockeri*, multiarticulated and distally bent (E).

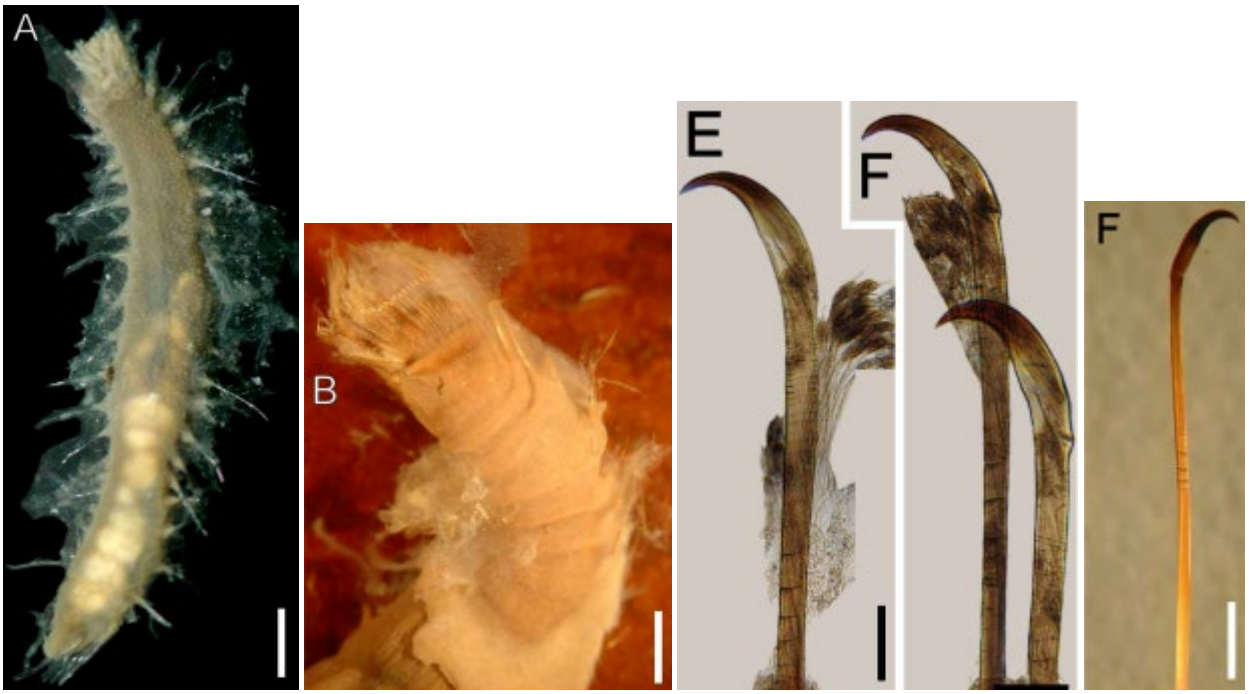


Figure 10: Body of *Flabelligera multipapillata* covered with mucous sheath (A). Cephalic cage in horizontal row (B), *F. infundibularis*. Neurochaetae of *F. haswelli* (left:E,F) and *F. infundibularis* (right:F), multiarticulated and distally bent.

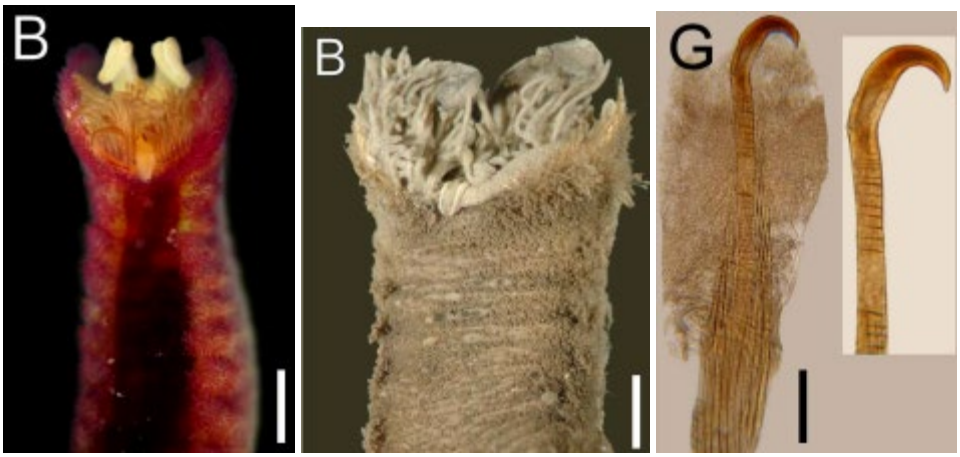
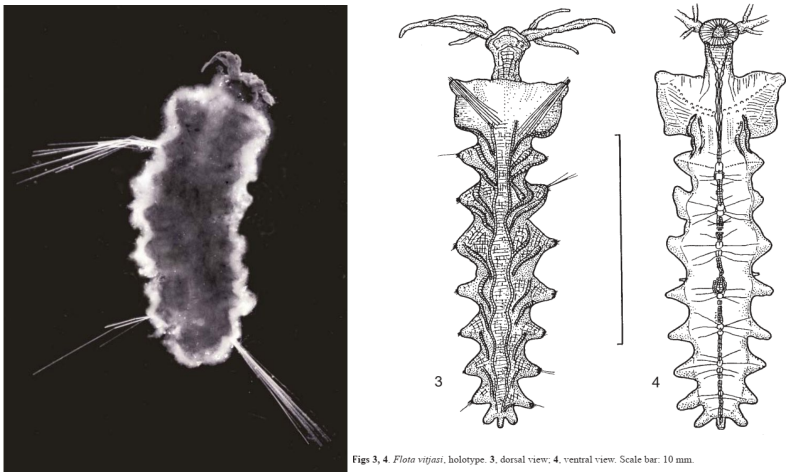


Figure 11: Anterior of *Flabesymbios commensalis* (left:B) and *F. roberti* (right:B). Neurochaetae of *F. commensalis*, clearly articulated (G).



Figs 3, 4. *Flota vitjasi*, holotype. **3**, dorsal view; **4**, ventral view. Scale bar: 10 mm.

Figure 12: Body type for *Flota vitajasi* (left), dorsal view (3) and ventral view (4).

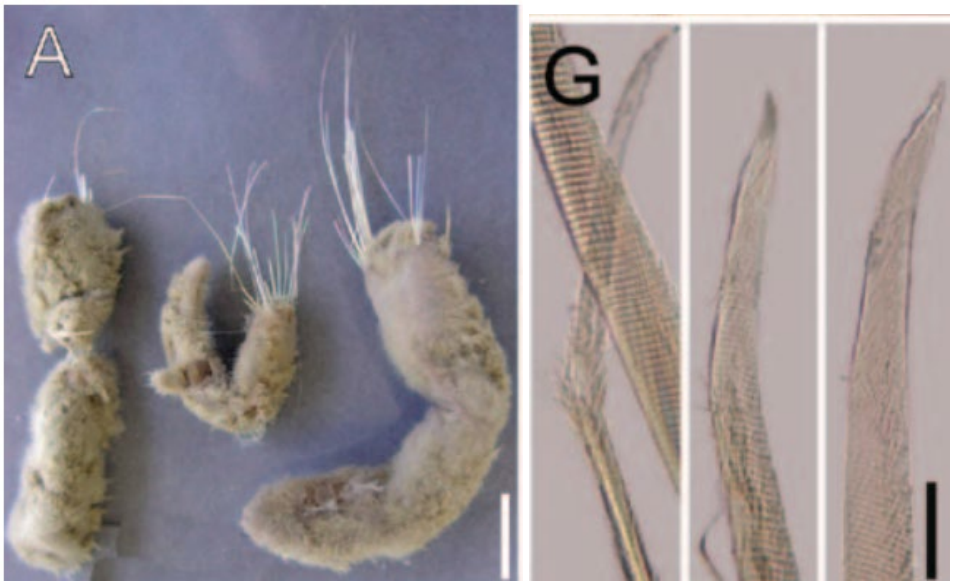


Figure 13: Body of *Ilyphagus coronatus* (A). Neurochaetae of setiger 5 (G).

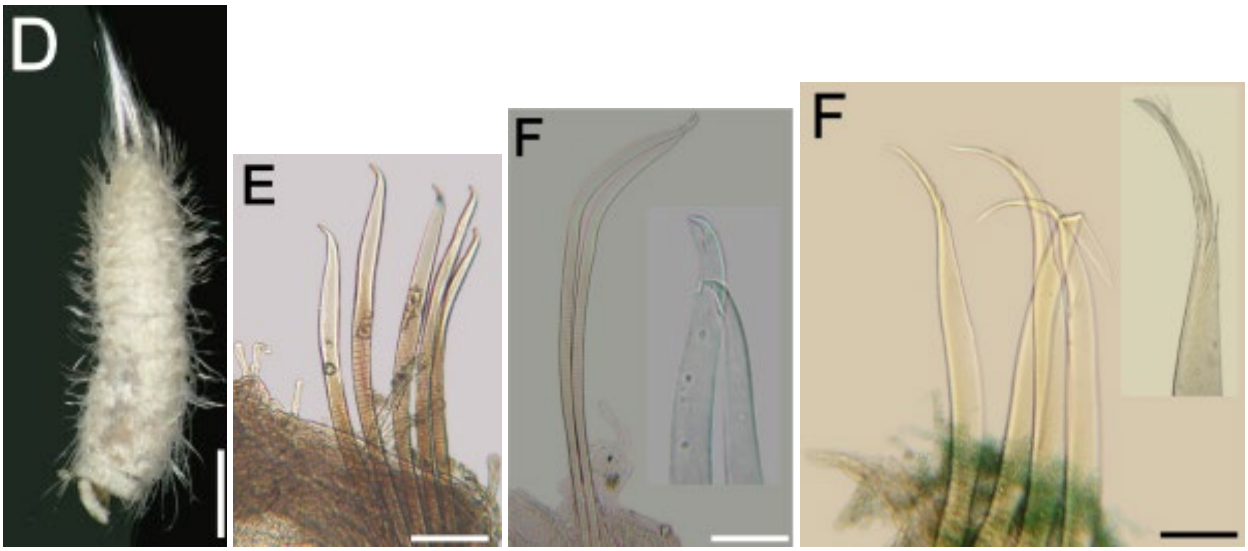


Figure 14: Body of *Lamispina schmidtii* (D). Lamispine neurochaetae of *L. horsti* (E), *L. keeli* (left:F), and *L. milligani* (right:F).

Figure 15: Body of *Paratherochaeta ehlersi* (A)

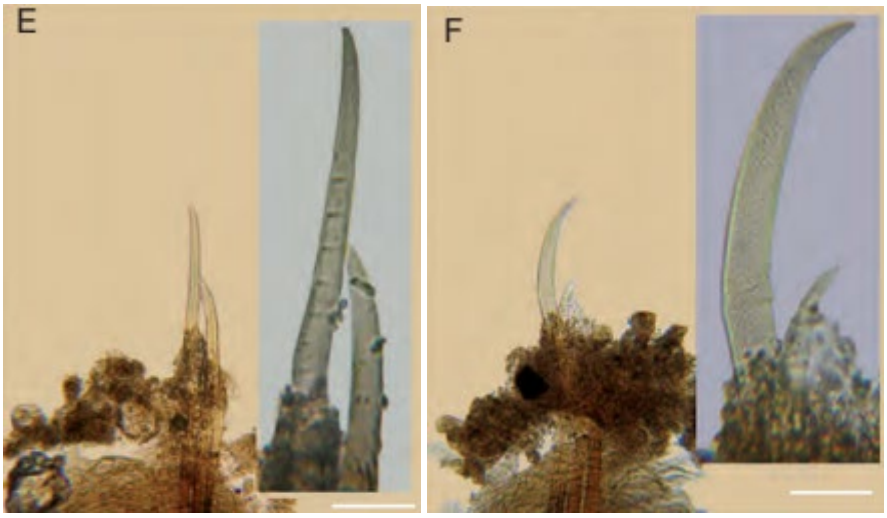


Figure 16: Transitional neurochaetae of *Paratherochaeta coronata* (E,F).

Figure 17: Body of *Pherusa andersonorum* (top right:A) and *P. neopapillata* (bottom:A)

Figure 18: Notochaetae (C) and neurochaetae with anchylose bases (D) of *Pherusa neopapillata*.

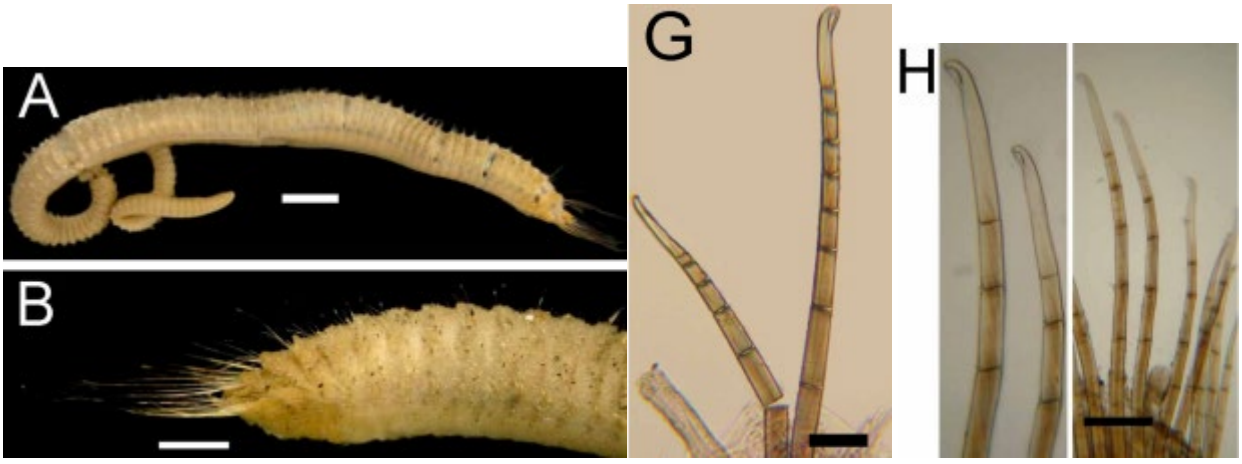


Figure 19: Body of *Piromis capulata* (A,B) and bifid neurochaetae of *P. amoureuxi* (G) and *P. capulata* (H).

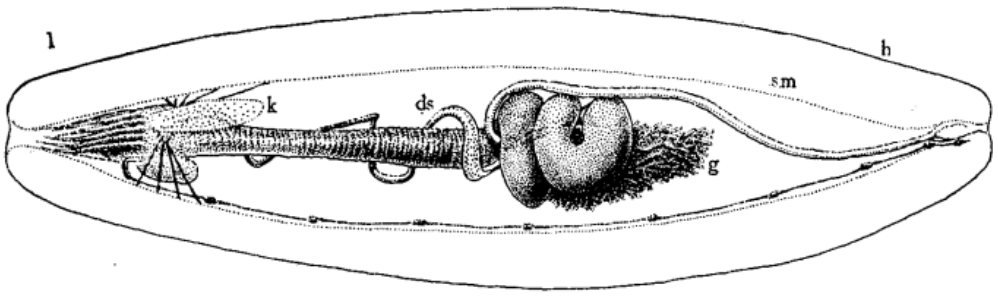


Figure 20: Body of *Poeobius meseres*.

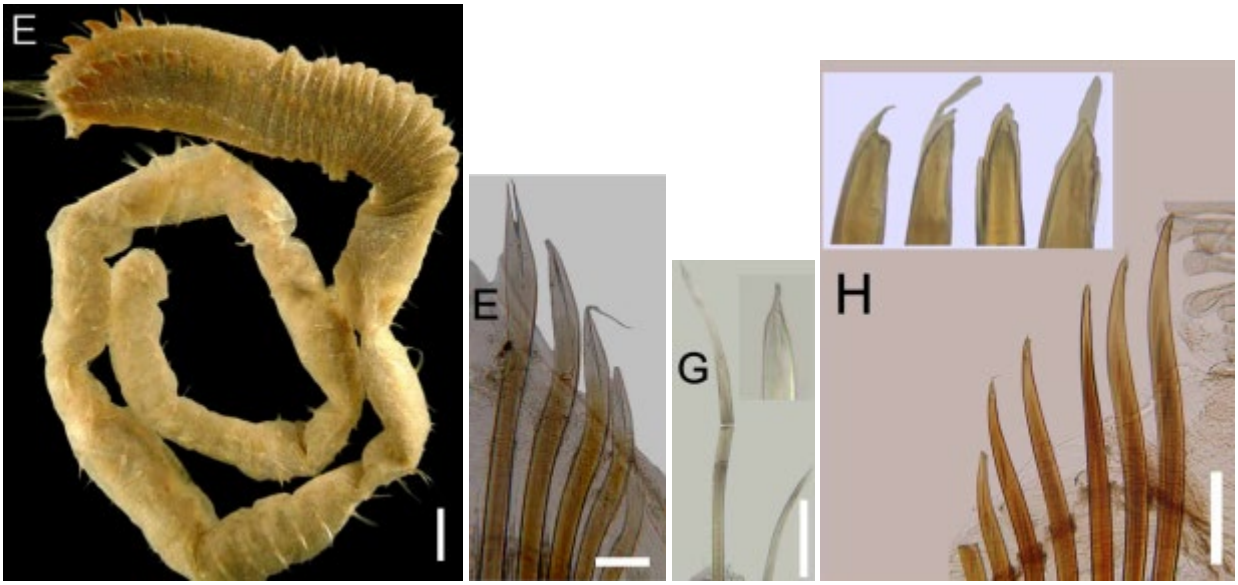


Figure 21: Body of *Pycnoderma gracilis* (E). Neurochaetae of *P. glasbyi* (E), *P. escobarae* (G), and *P. dannyi* (H).

Figure 22: Body of *Saphobranchia canela* (A), and neurochatae (right).

Figure 23: Body of *Semiodera inflata* (D).

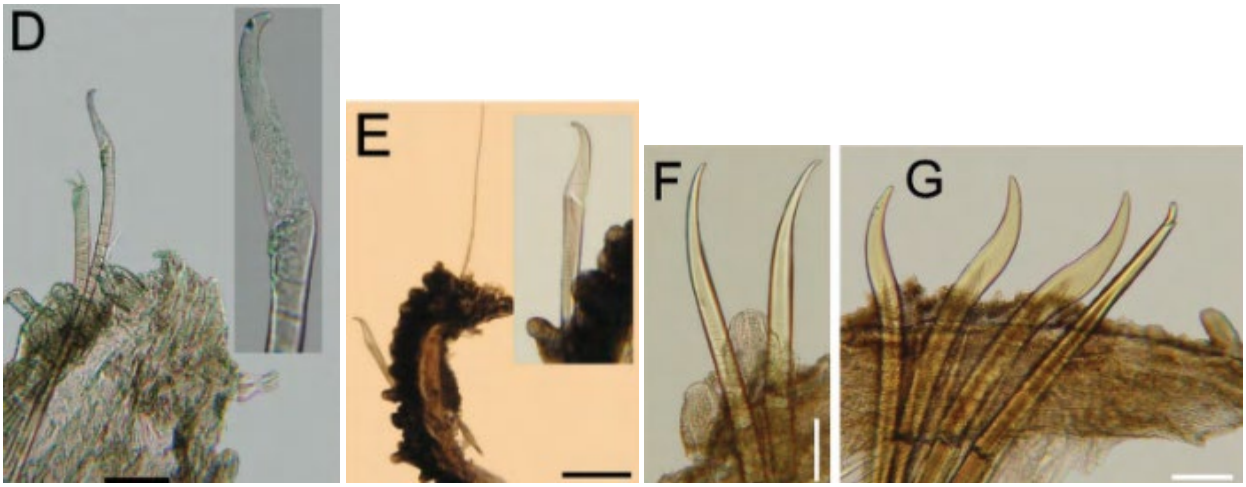


Figure 24: Pseudocompound neurochaetae of *Semiodera mezianei* (D) and *S. salazarae* (E). Anchylosed neurochaetae (F) and falcate neurochaetae (G) of *S. inflata*.

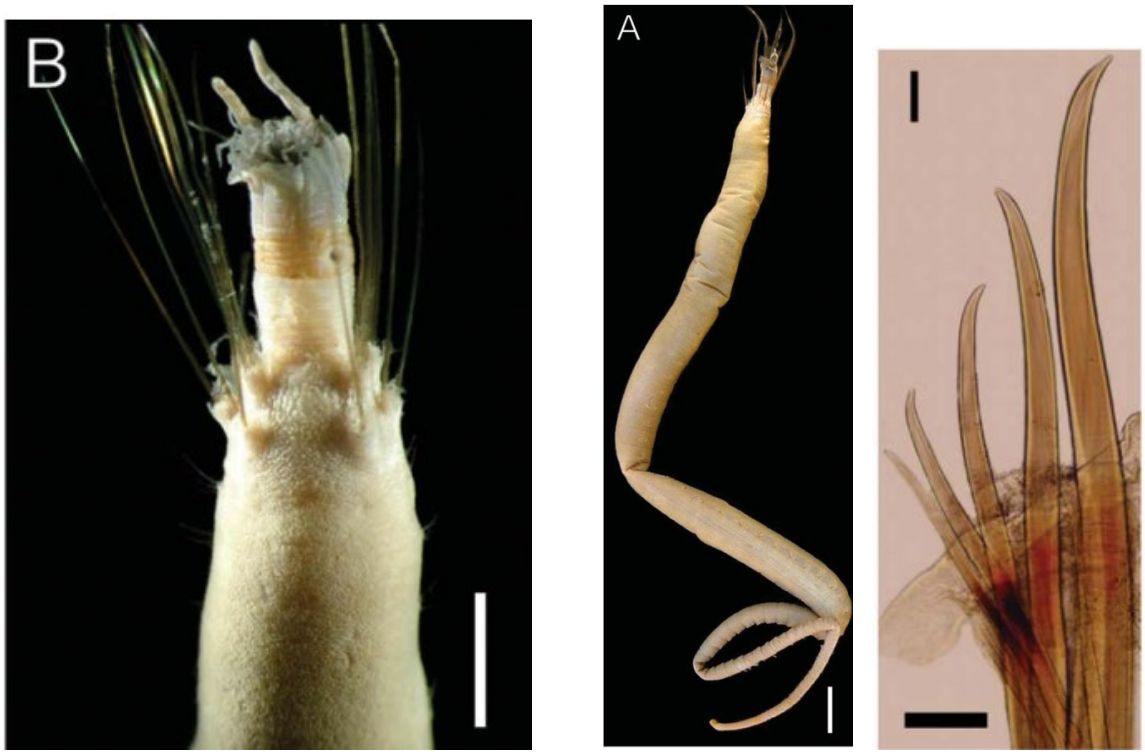


Figure 25: Anterior of *Stylaroides monilifer* (B), body (A), and neurochaetae (I).

Figure 26: Body of *Therochaeta fauchaldi* (left:A) and *T. pacifica* (right:A).

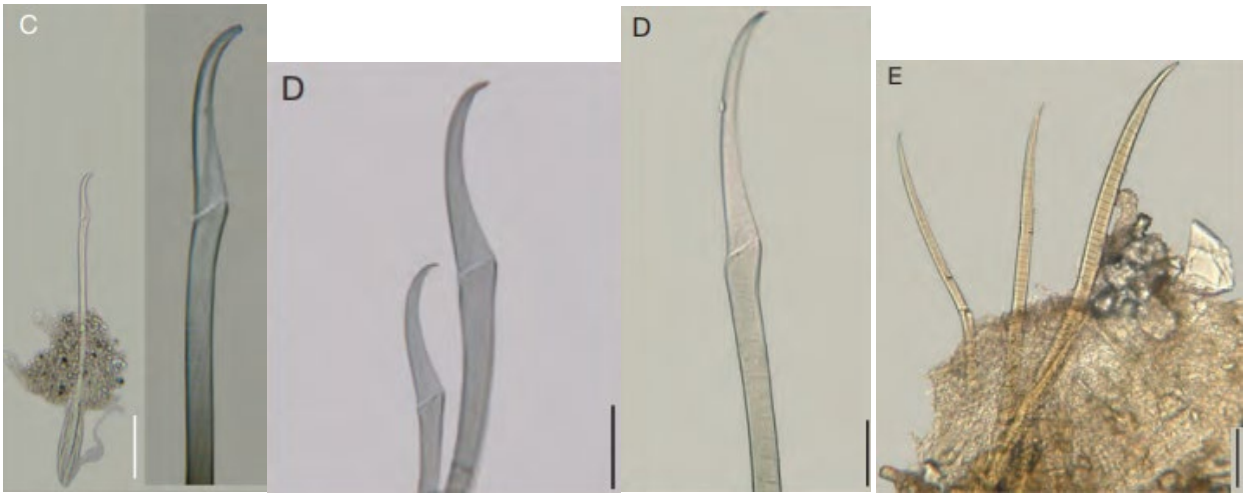


Figure 27: Pseudocompound neurochaetae from *Therochaeta caudata* (C), *T. fauchaldi* (left:D), and *T. pacifica* (right:D). Neurochaetae anchylosed simple falcate spines from chaetiger 13 of *T. pacifica* (E).

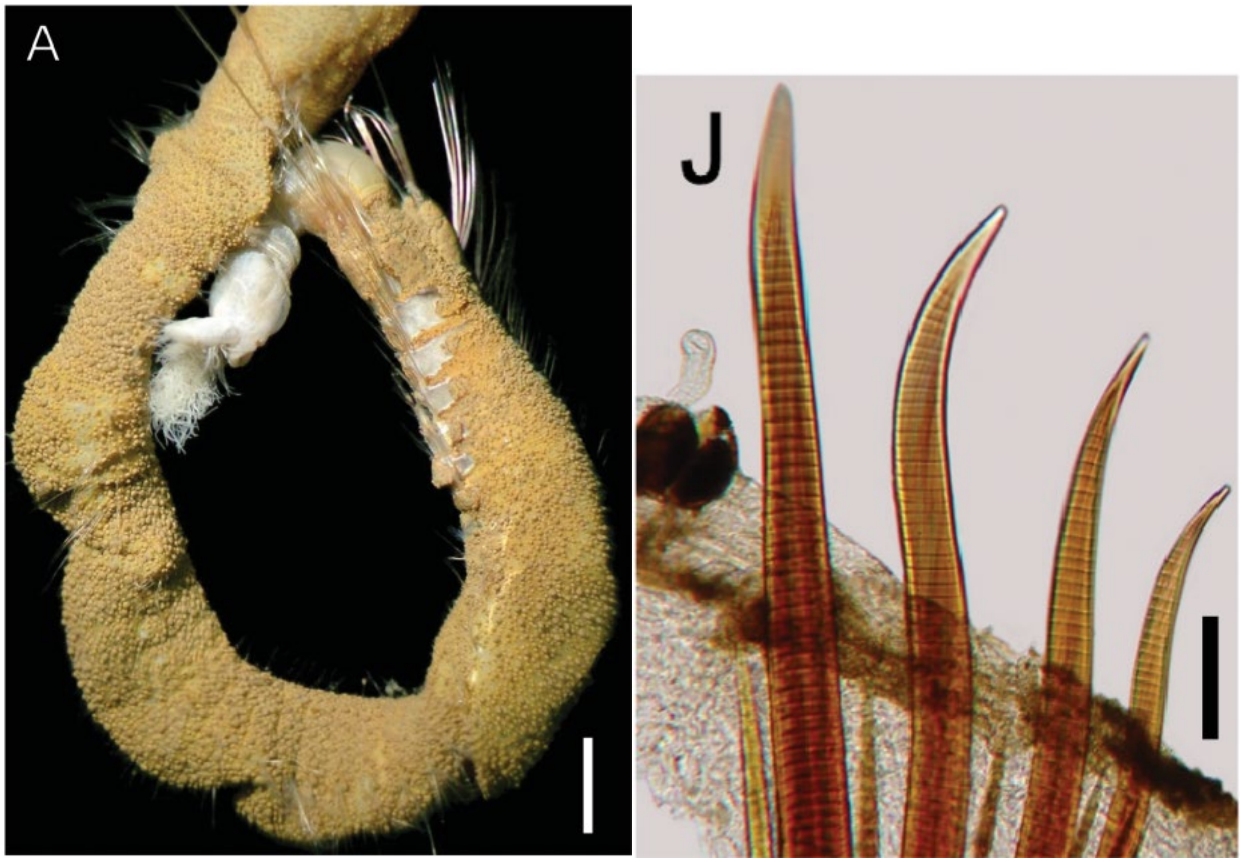


Figure 28: Body of *Treadwellius gilleti* (A), and neurochaetae (J).

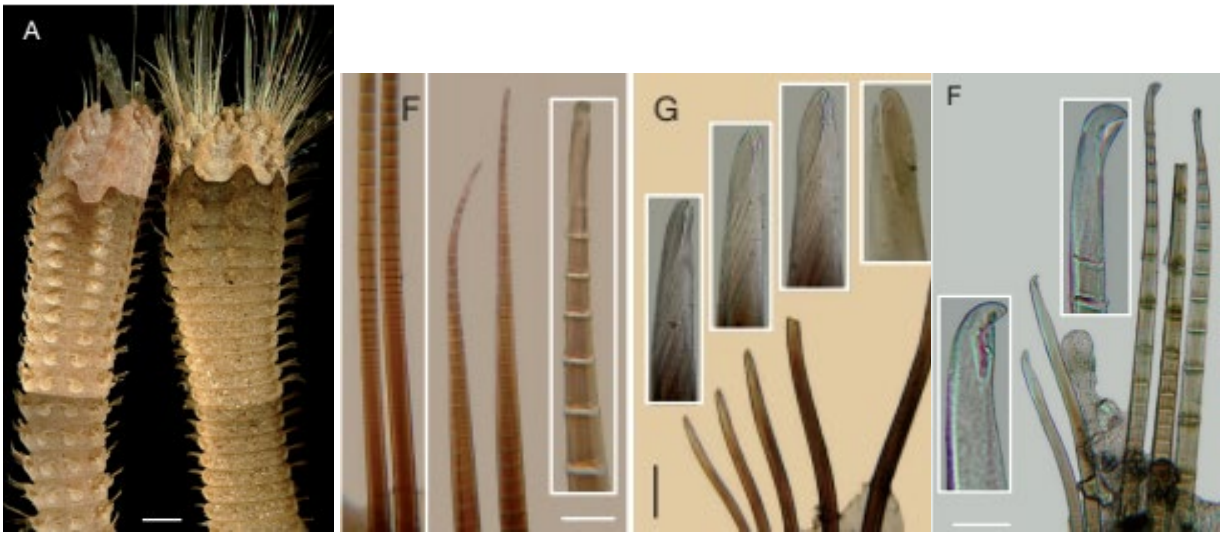


Figure 29: Anterior of *Trophoniella harrisae* (A), neurochaetae of *T. harrisae* (F,G) *T. fauveli* (right:F).