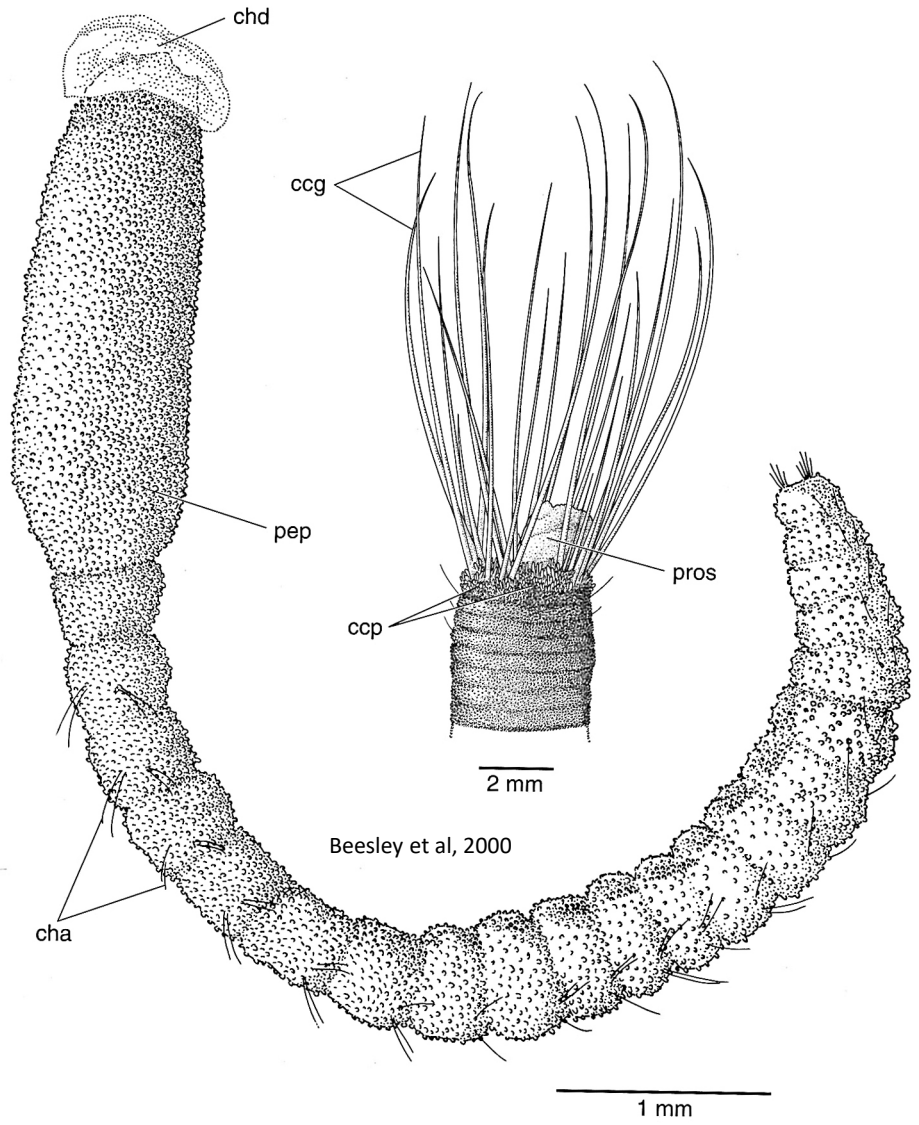
Flabelligeridae

de Saint-Joseph, 1894

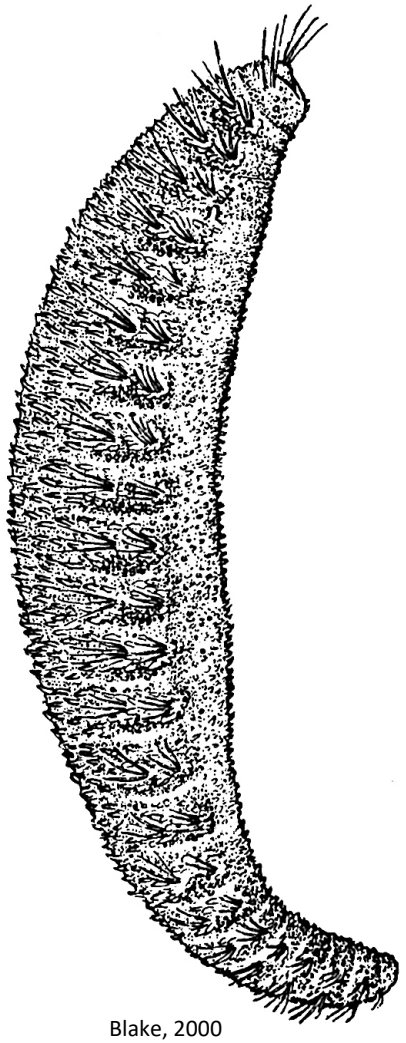
Flabelligeridae

- Sedentary or motile worms with relatively few segments (cage worms)
- Found worldwide from intertidal to abyssal depths
- Rarely found in high abundances
- 126 - 130 species worldwide (≈21 species from California waters)



Flabelligeridae

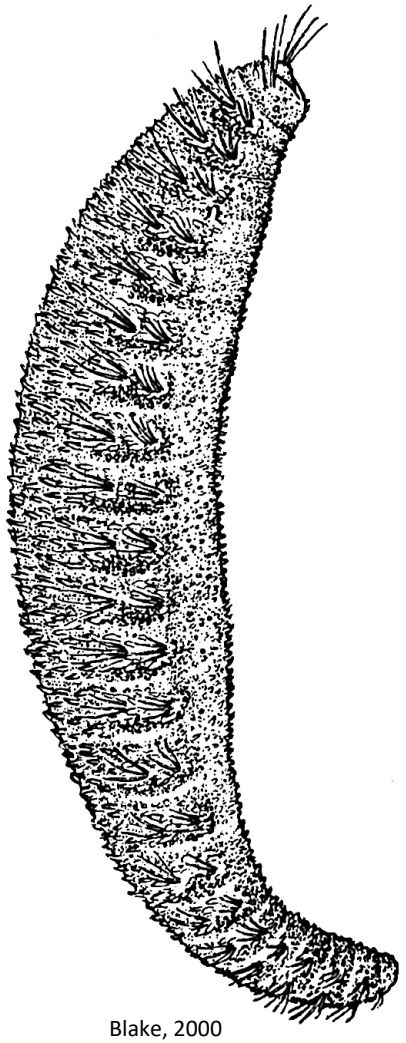
- Body sub-cylindrical
- Expanded anteriorly; tapering toward posterior
- Segments similar throughout body (no evidence of external regionation)



Blake, 2000

Flabelligeridae

- Surface deposit feeders
- Cuticle frequently covered in papillae, which secrete mucous for the protective sheath
- Most covered with mucous sheath and/or sand grains which adhere to mucous
- Segments similar throughout body (no evidence of external regionation)

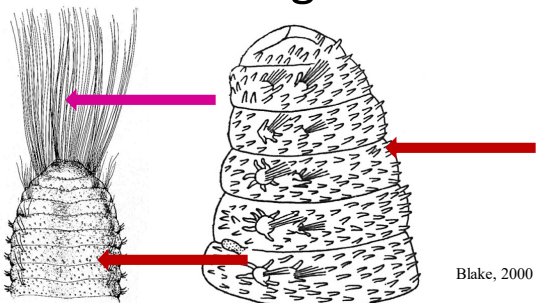


Blake, 2000

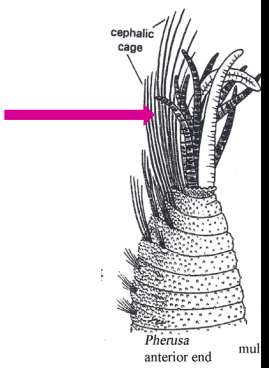
Flabelligeridae

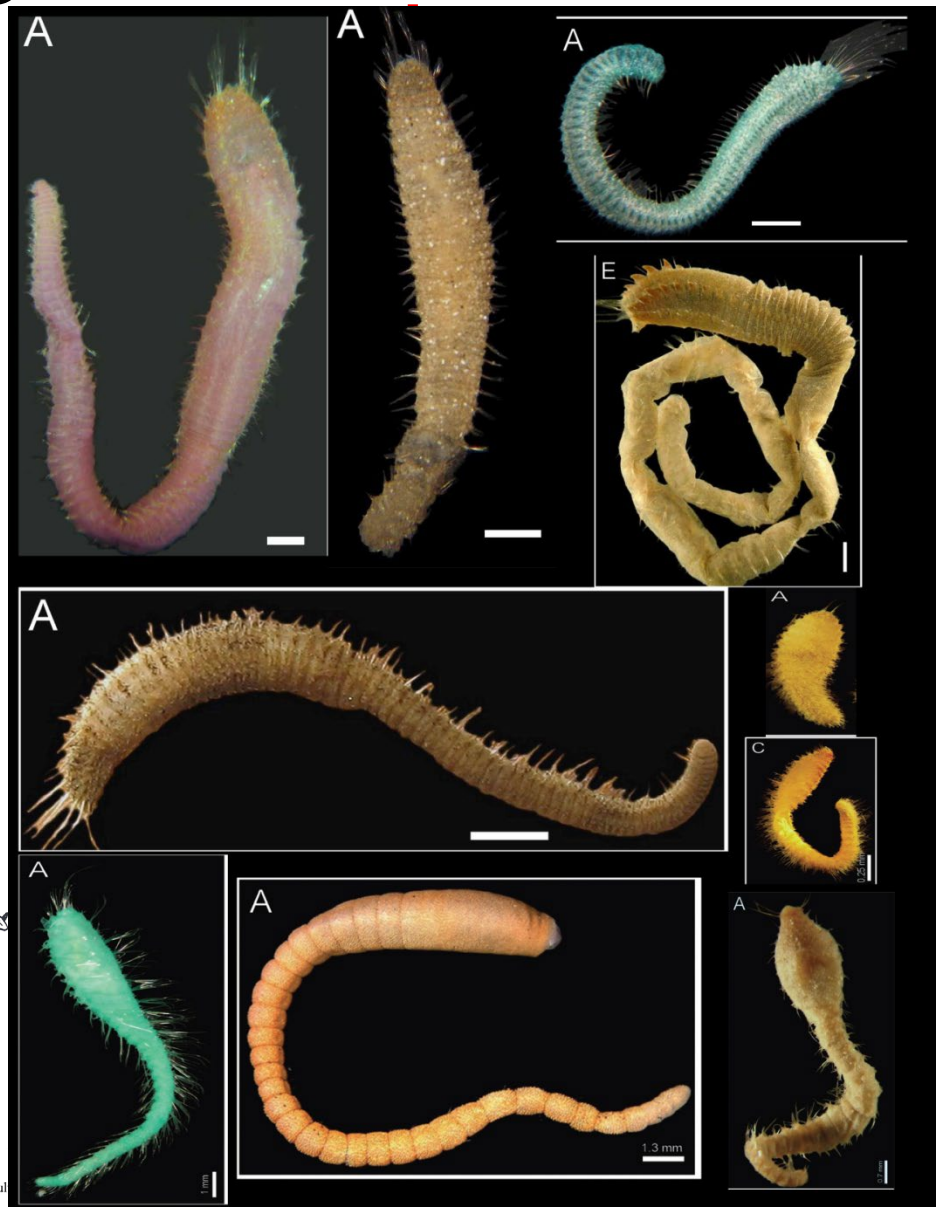
Salazar-Vallejo 2011

Flabelligeridae are relatively short worms with few segments. Generally recognizable by their **papillose epidermis** along the body, often coated with thick covering of sediment (sand and silt). They have an indistinct head with buccal tentacles which are completely retracted into a membranous sheath. The anterior segments, often bear elongate chaetae direct forward forming a **cephalic "cage"**. Sometimes called bristle-cage worms. The prostomium and peristomium make up the introvert, and are retractile into the oral cavity forming the head.



Blake, 2000

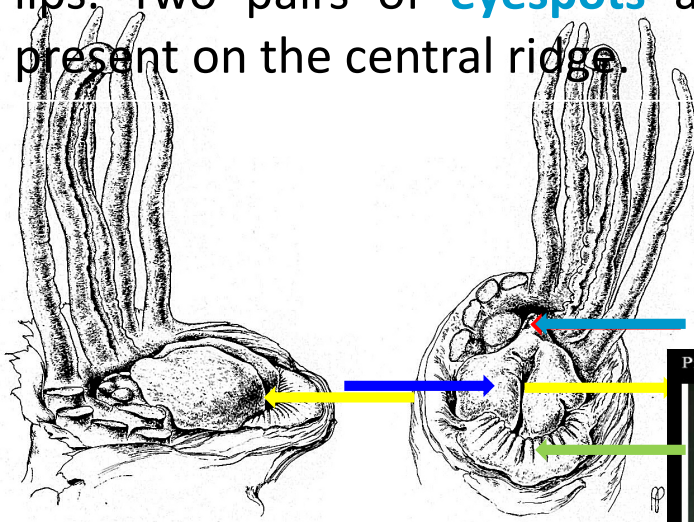


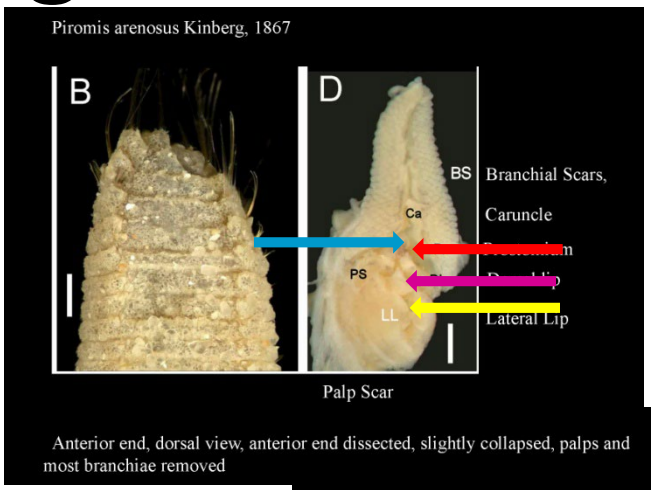


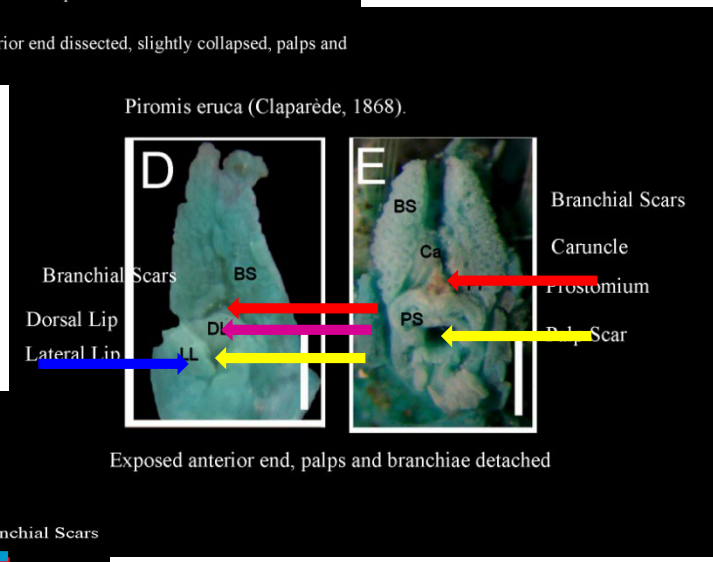
K. Barwick

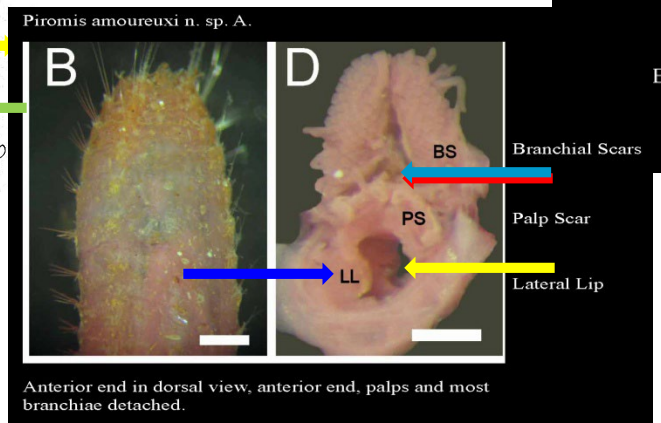
Flabelligeridae

Prostomium is indistinct, appearing as a central narrow ring, referred to as the prostomial lobe and the **dorsal lip** directly above the **mouth**. **Mouth** are enclosed in **dorsal**, **lateral** and **ventral** lips. Two pairs of **eyespots** are often present on the central ridge.



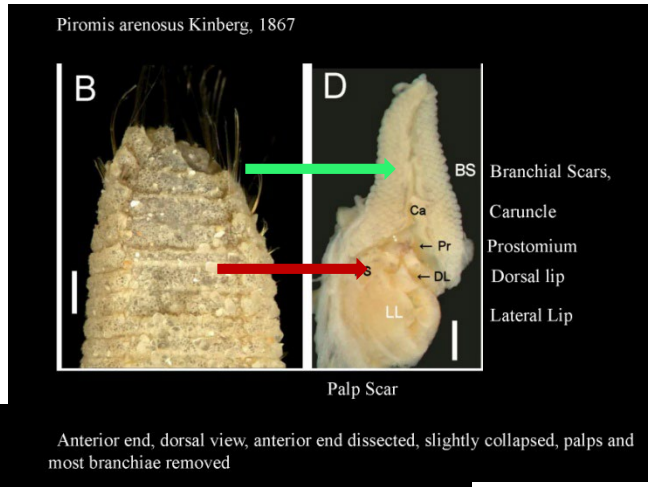


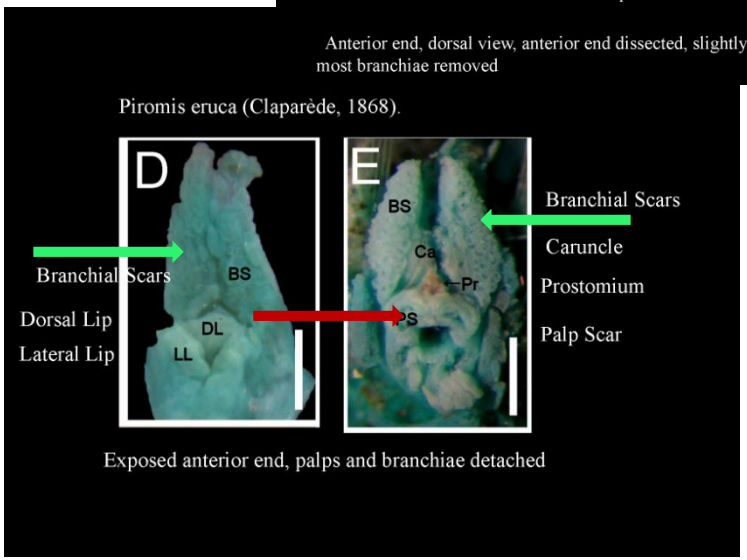


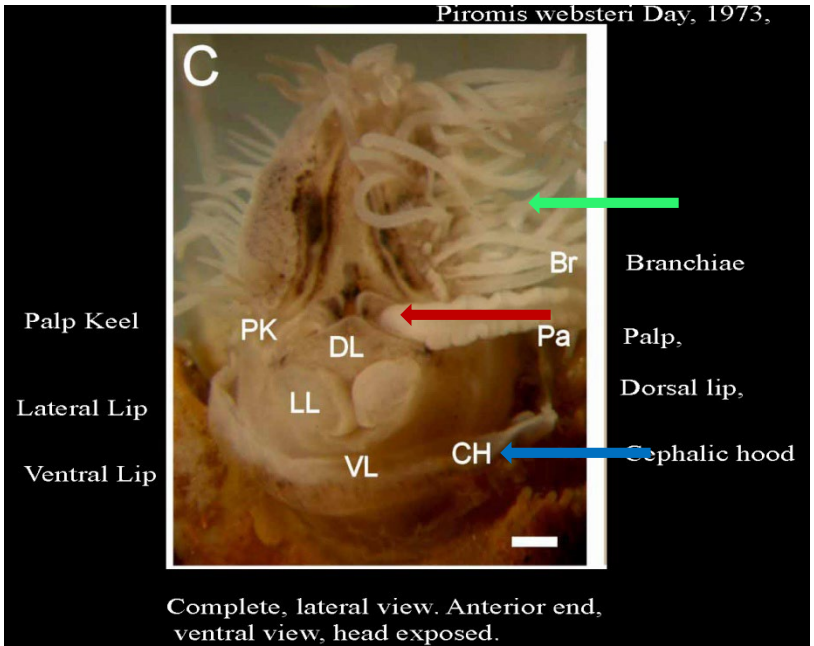


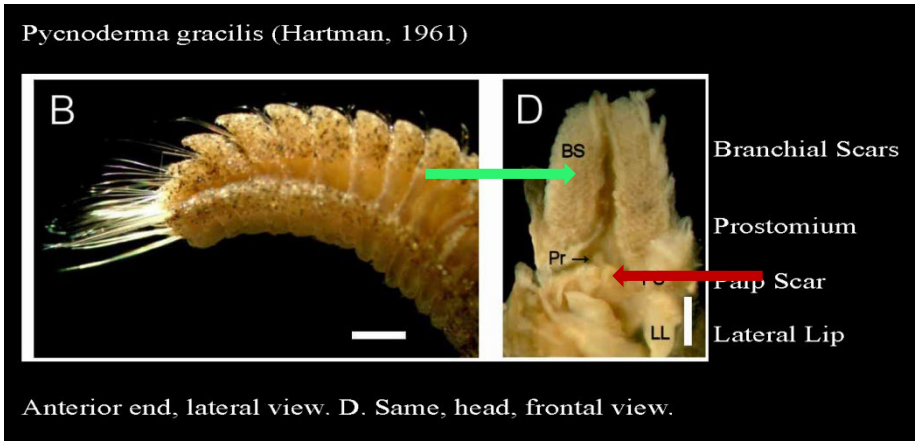
Flabelligeridae

Peristomium is reduced and the shape is difficult to discern. The **peristomial** paired **grooved palps** are located at the corners of the mouth. The peristomium also bears eight or more **branchial filaments** arising from a dorsal branchial membrane or **cephalic hood** or branchial membrane. Pharynx is non-eversible.



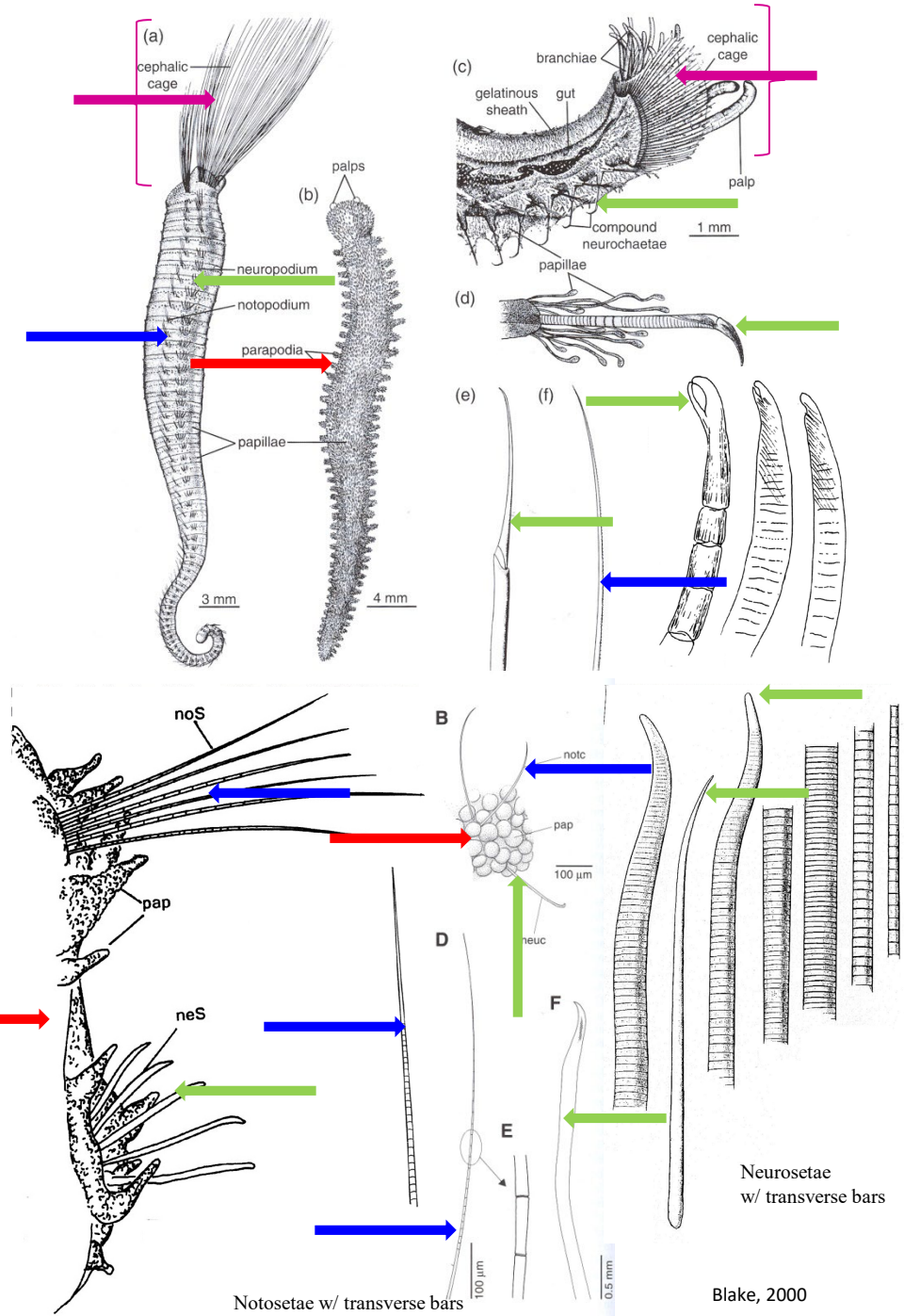






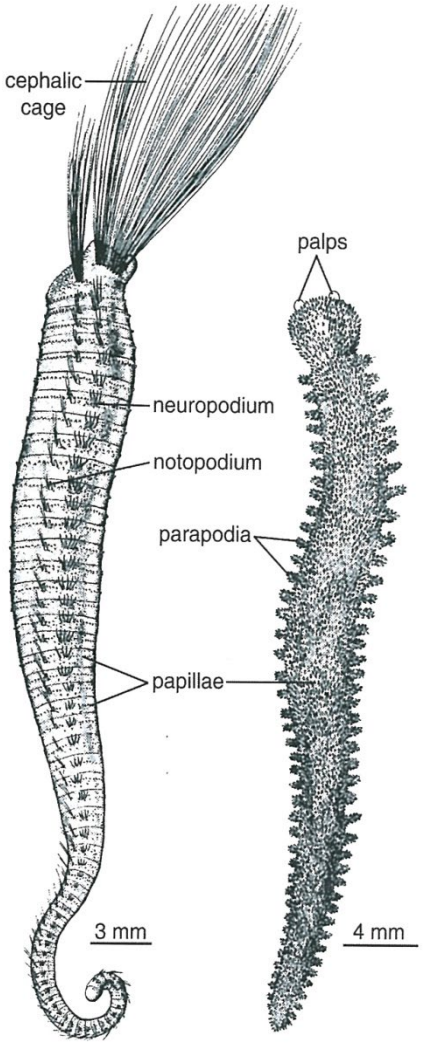
Flabelligeridae

Parapodia are biramous poorly developed quite small and may only be represented by bundles of **noto**- and **neurosetae**. **Notosetae** are all capillary with intermittent transverse bars along their length or smooth. Those of setigers 1-6 are often elongated anteriorly to form the **cephalic cage** . **Neurosetae** are quite variable and may include stout crossbarred capillary setae, simple or bidentate hooks, compound and pseudocompound hooks, or a combination of these.



Flabelligeridae

- Most do not form a tube
- Burrowers, mostly
- In general they are surface deposit feeders
- Two species commensal on sea urchins (feed on fecal matter of host)



Blake, 2000

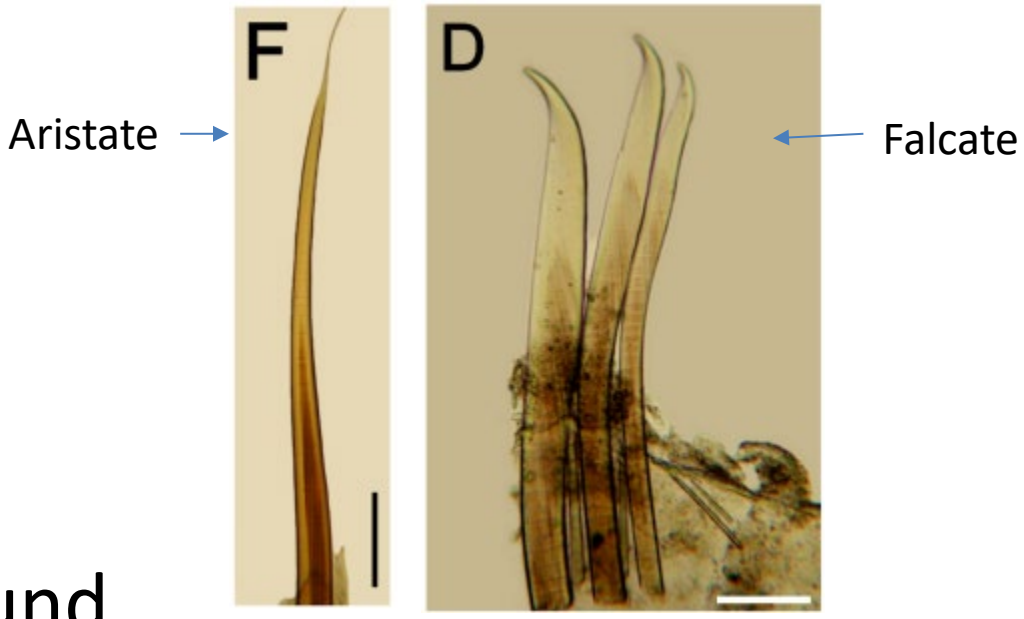
Flabelligeridae Key Characters

- Type of neurosetae (hooked, compound, etc.)
- The degree of development of cephalic cage
- Body covering (mucous sheath, sand grains, naked)
- Shape and arrangement of papillae on the body
- The degree of development of cross bars on capillary setae

Flabelligeridae Neurosetae

- Simple
  - Capillary
  - Aristate
  - Falcate
- Psuedo-compound
  - Single, partially fused joint, no true articulation
- Compound
  - True articulation; single or multiple points

Flabelligeridae Neurosetae



- Simple
  - Capillary
  - Aristate
  - Falcate
- Psuedo-compound
  - Single, partially fused joint, no true articulation
- Compound
  - True articulation; single or multiple points

ridae Neurosetae

Pseudocompound

- Si
  - –
  - –
  - –
- Ps nd
  - – used joint, no true articulation
- Compound
  - – True articulation; single or multiple points

Flabelligeridae Neurosetae

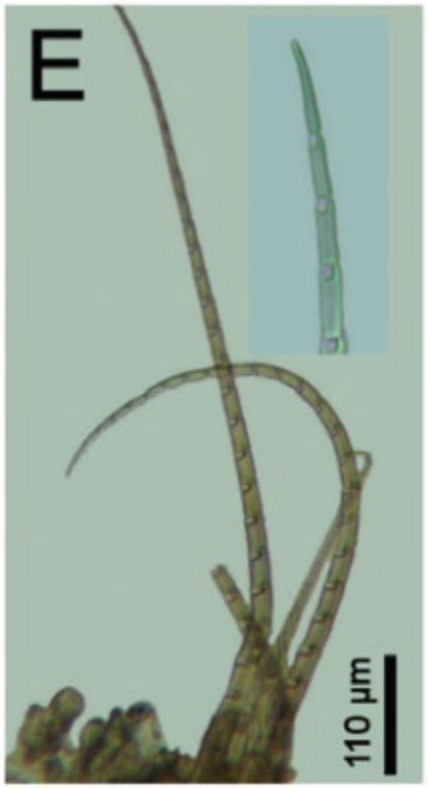
- Simple
  - Capillary
  - Aristate
  - Falcate
- Psuedo-compoun
  - Single, partially fu e articulation
- Compound
  - True articulation; single or multiple points

Compound, single point of articulation

Flabelligeridae Neurosetae

- Simple
  - Capillary
  - Aristate
  - Falcate
- Psuedo-compo
  - Single, partiall) true ar
- Compound
  - True articulation; single or multiple points

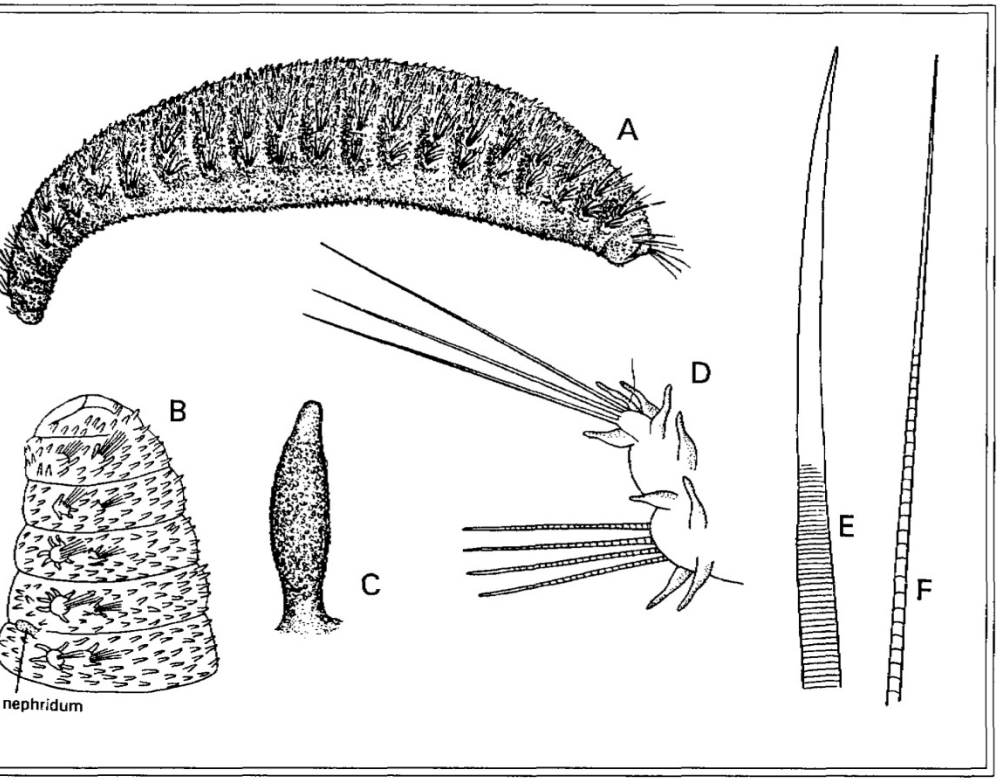
Compound, multiple points of articulation



Flabelligeridae species in SCAMIT Ed 14

- *Bradybyssa 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)

Bradabyssa pilosa
(Moore 1906)



Brada villosa: A, entire animal, lateral view; B, anterior end, lateral view; C, papilla; D, middle parapodium; E, neuroseta; F, notoseta. (A, C, F, after Støp-Bowitz, 1948; B, D, E, after Uschakov, 1955).

Dorsal view

Brada pluribranchiata
(Moore 1923)

Ventral view

PLOO E20-1
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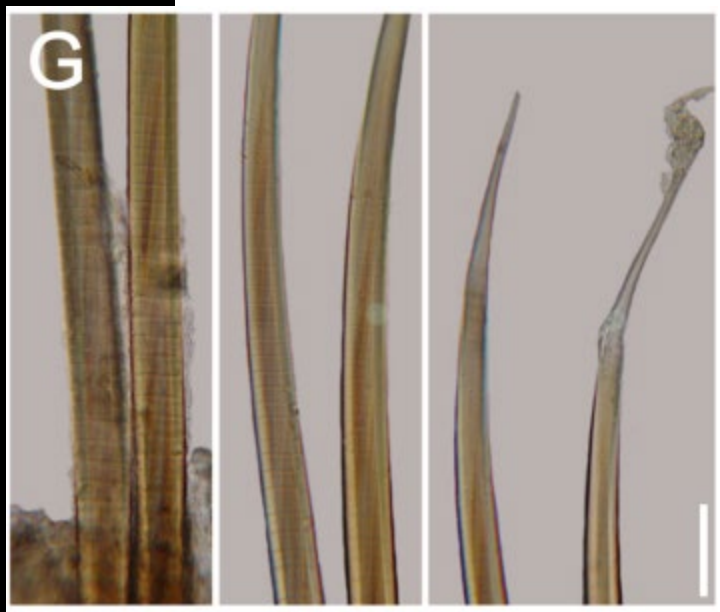
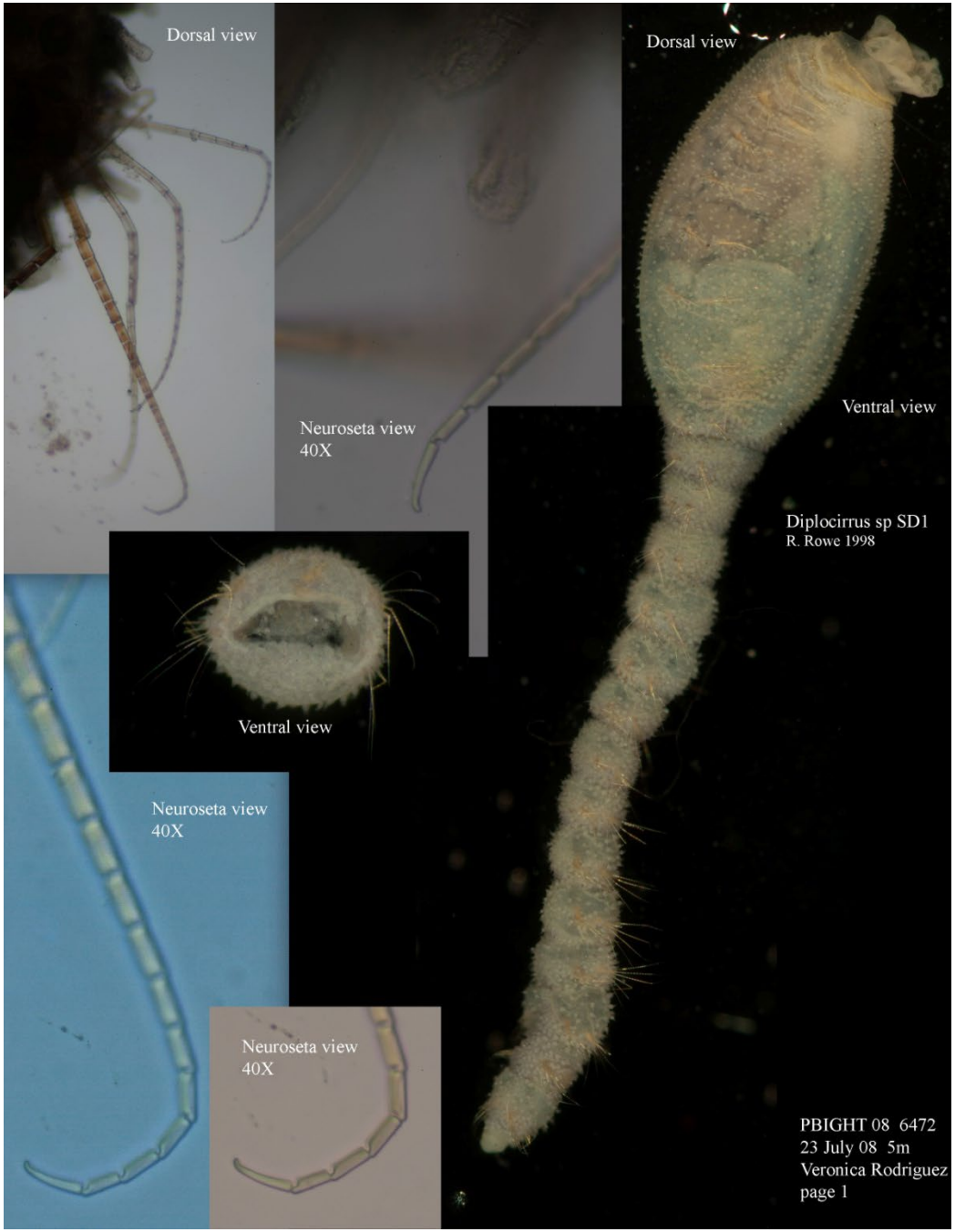
Veronica Rodriguez
page 1

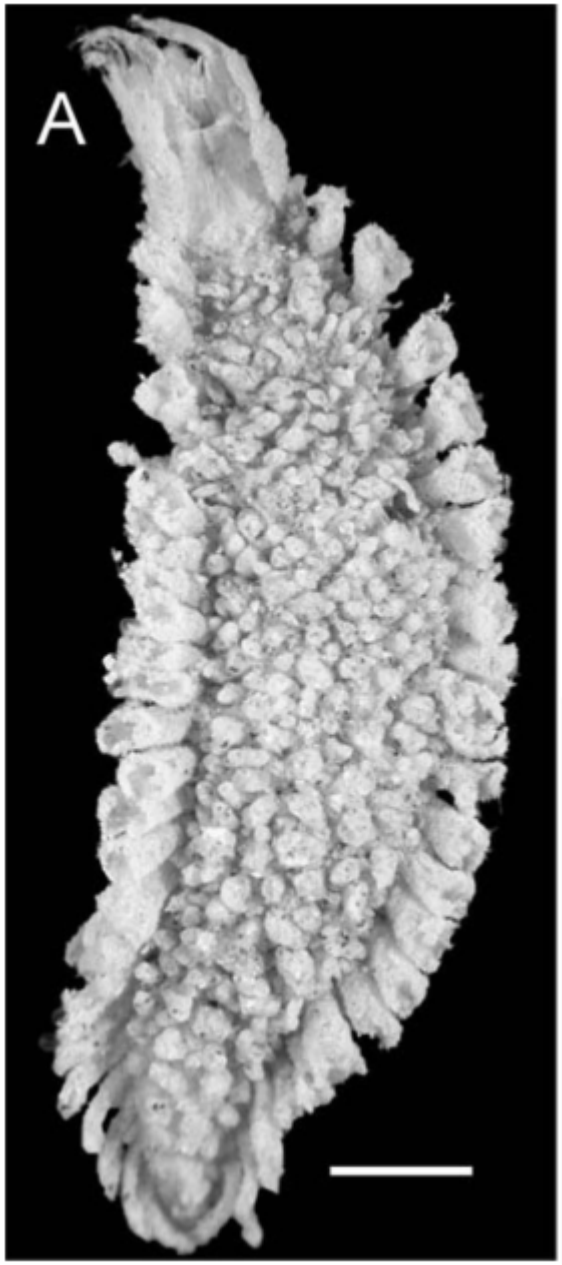
Bradabyssa pluribranchiata
(Moore 1903)



Bradabyssa tenebricosa
(Berkeley 1966)

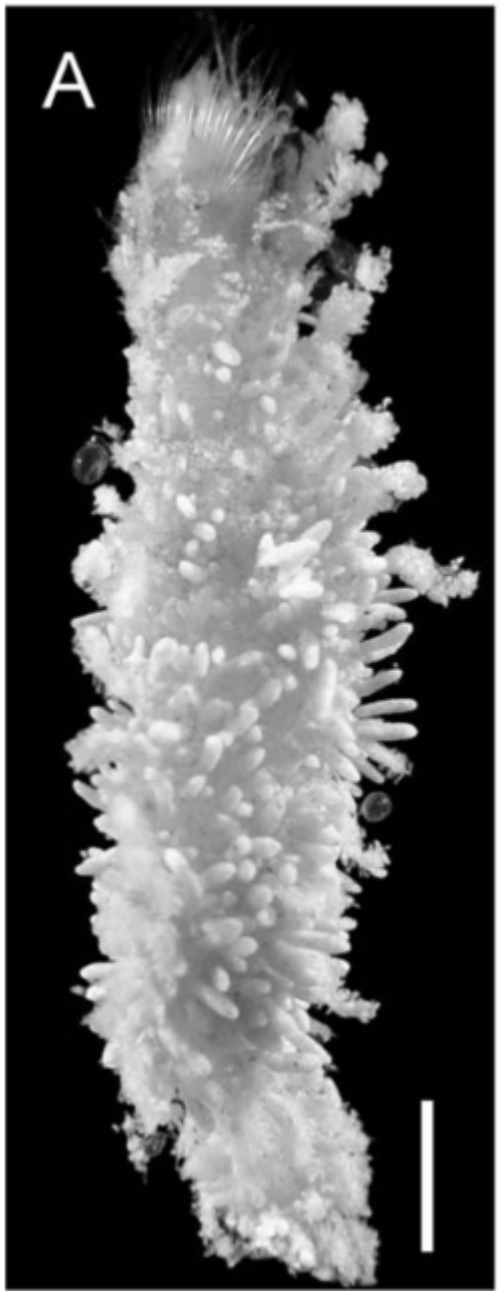


Diplocirrus sp SD1
Rowe 1998



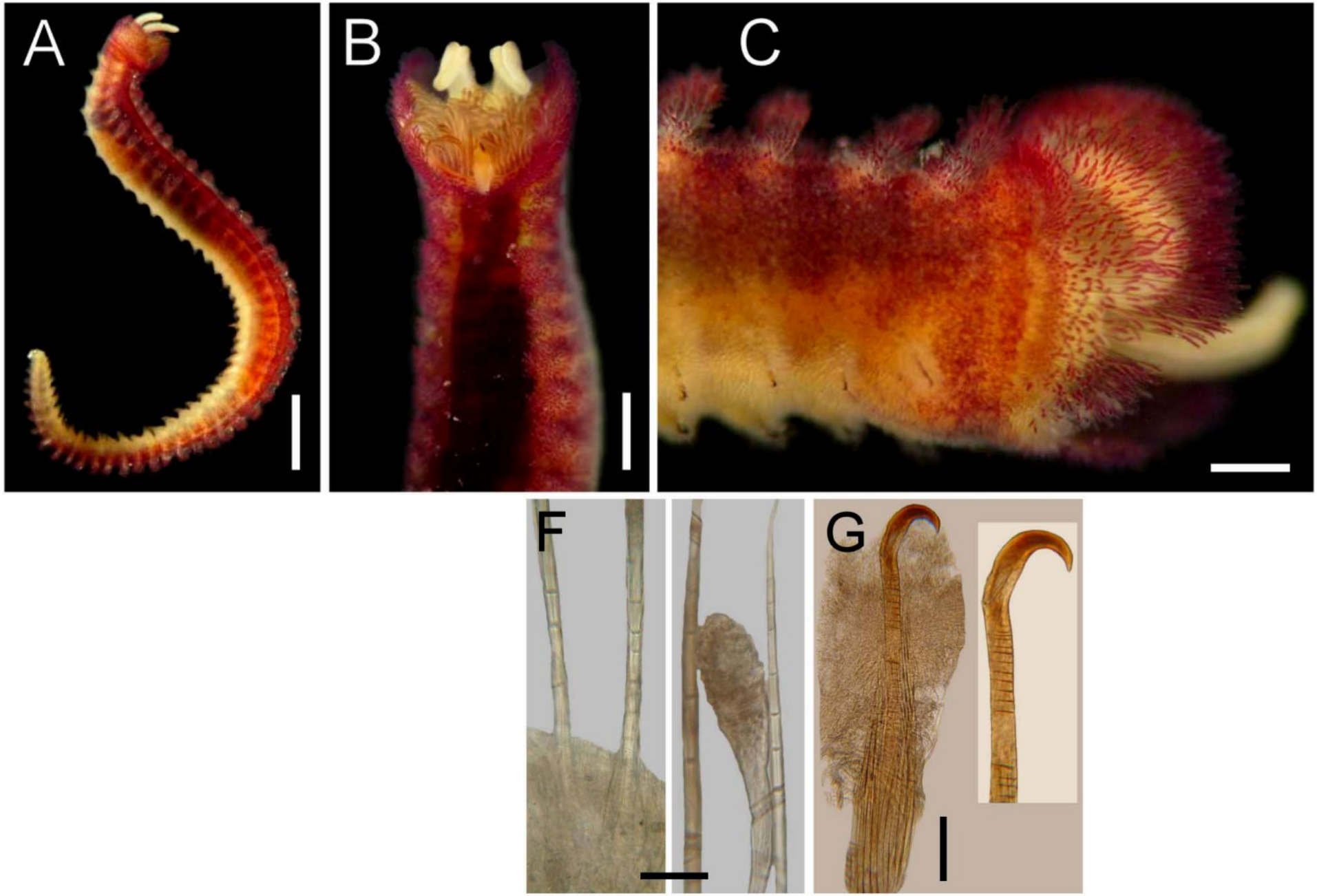
Flabelliderma ockeri
Salazar-Vallejo 2007

Flabelliderma papillosa
(Essenberg 1922)

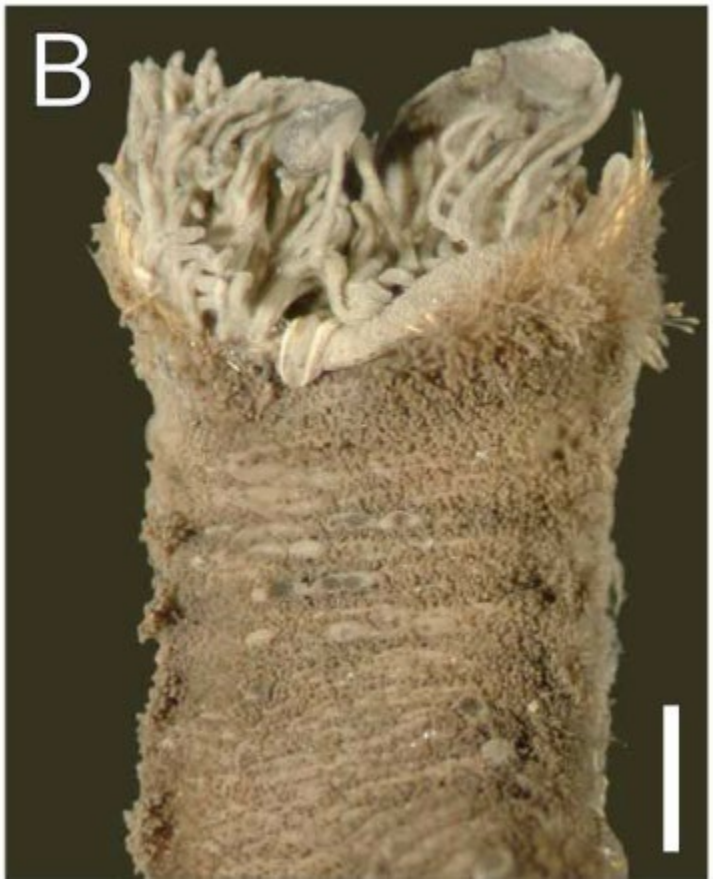


Flabelligera infundibularis
Johnson 1901

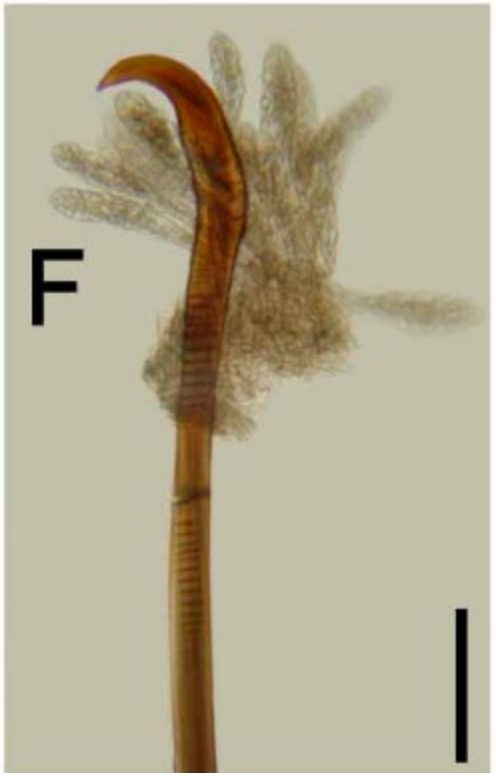
Flabesymbios commensalis
(Moore 1909)



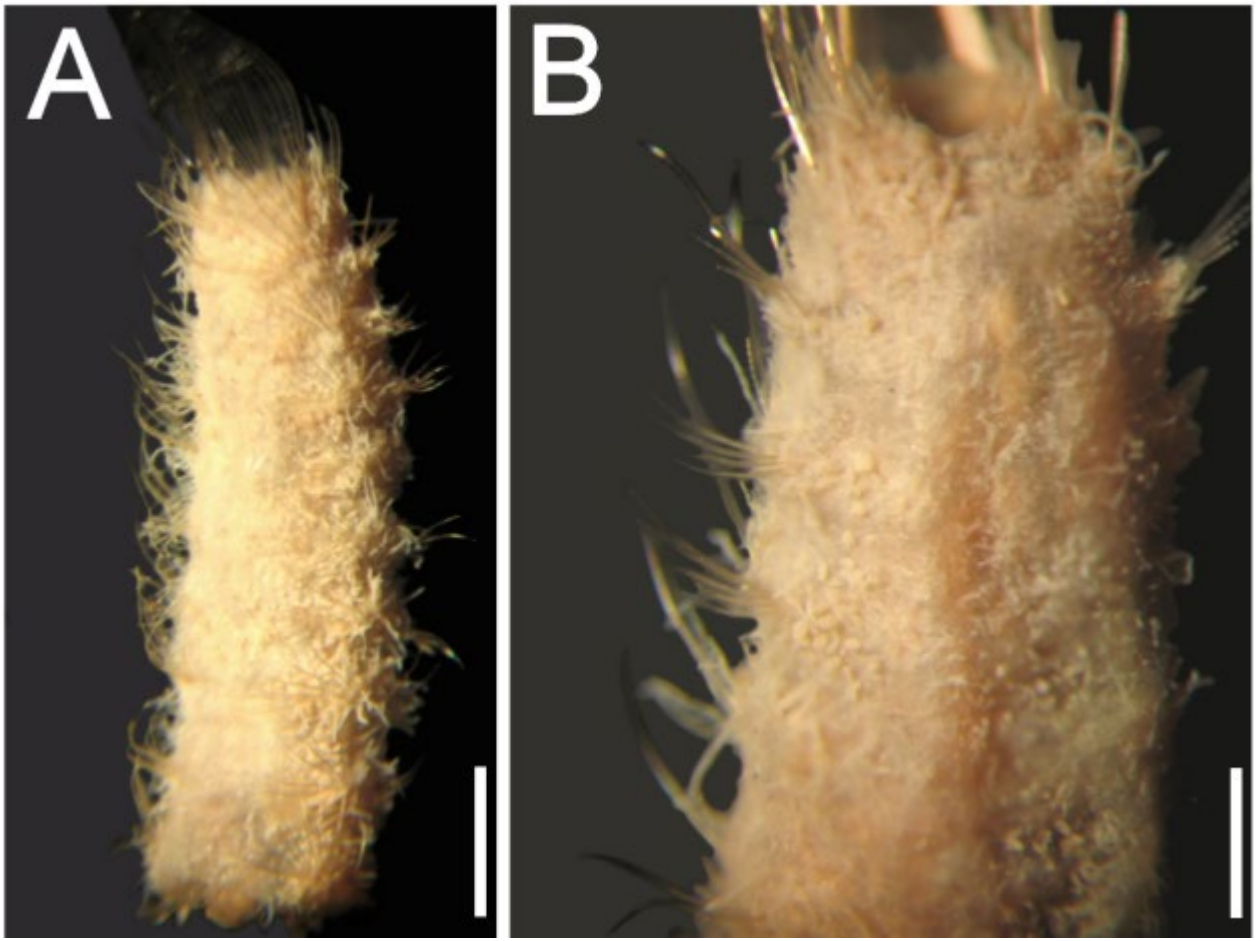
Flabesymbios roberti
Salazar-Vallejo 2012

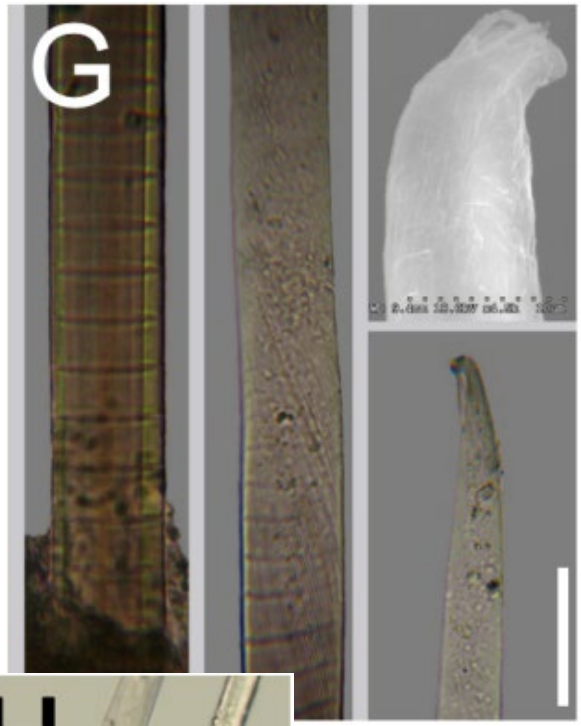


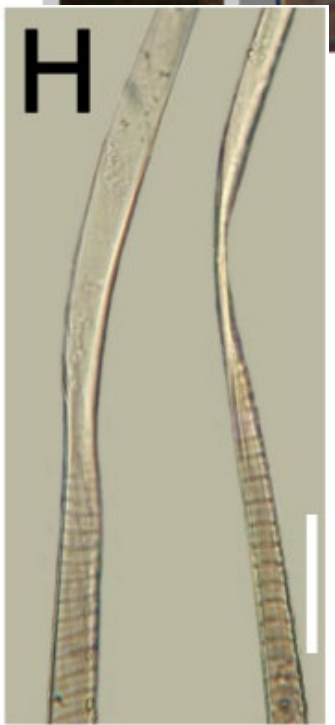
Note: Per Annelida 2022, Rouse, Pleijel, Tilic, *F. roberti* is just a synonym of *F. commensalis* and not a distinct species



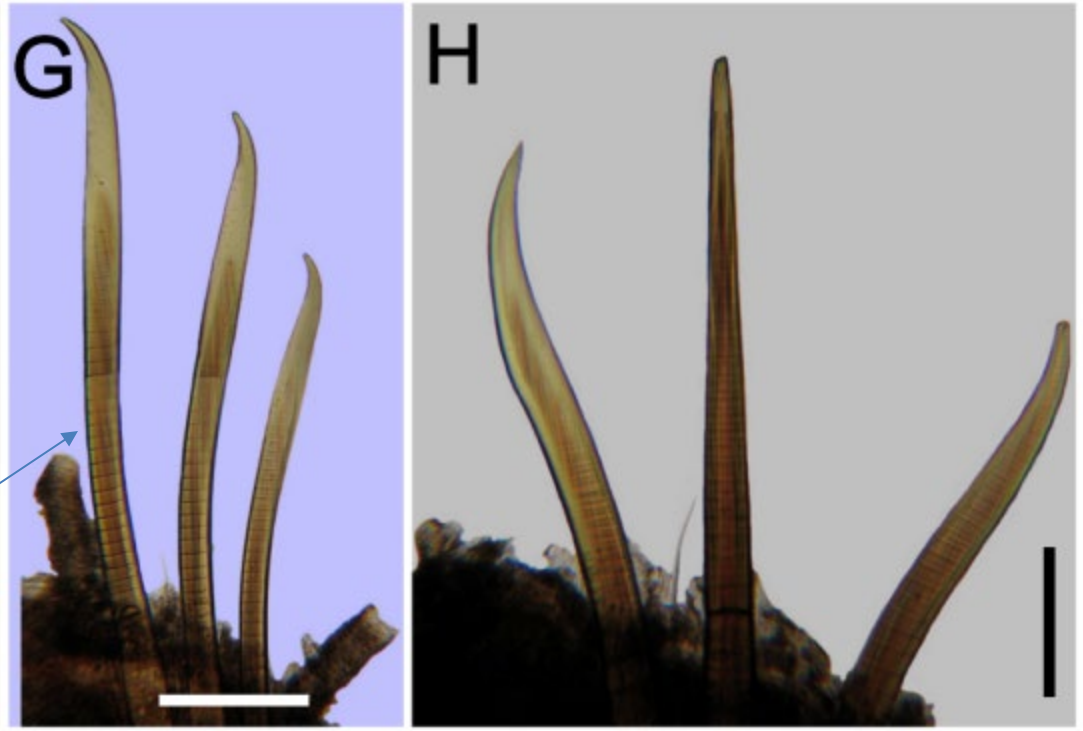
Lamispina schmidtii
(Annenkova-Chlopina 1924)





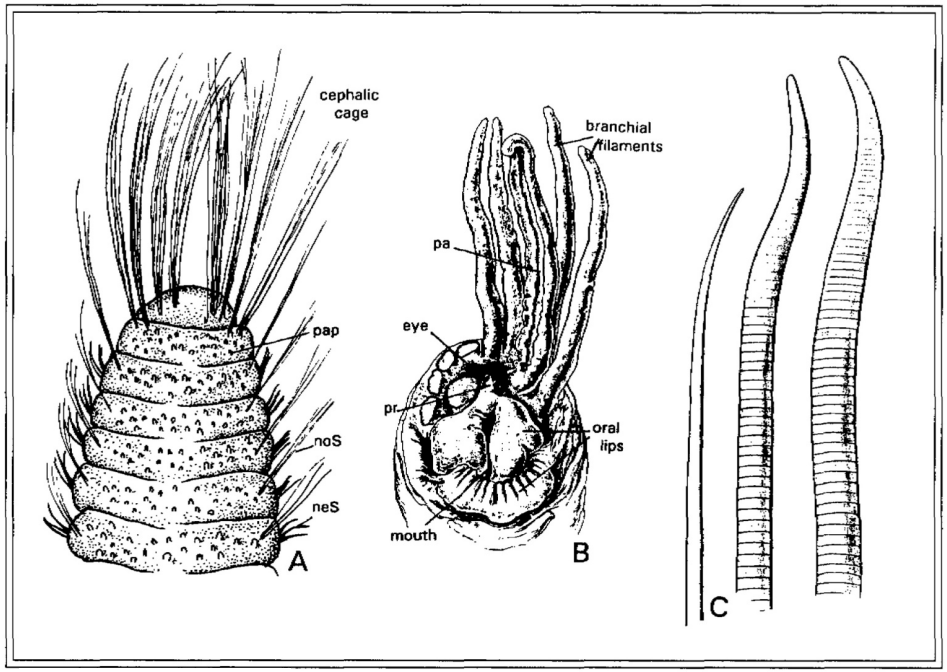


Pherusa andersonorum
Salazar-Vallejo 2014

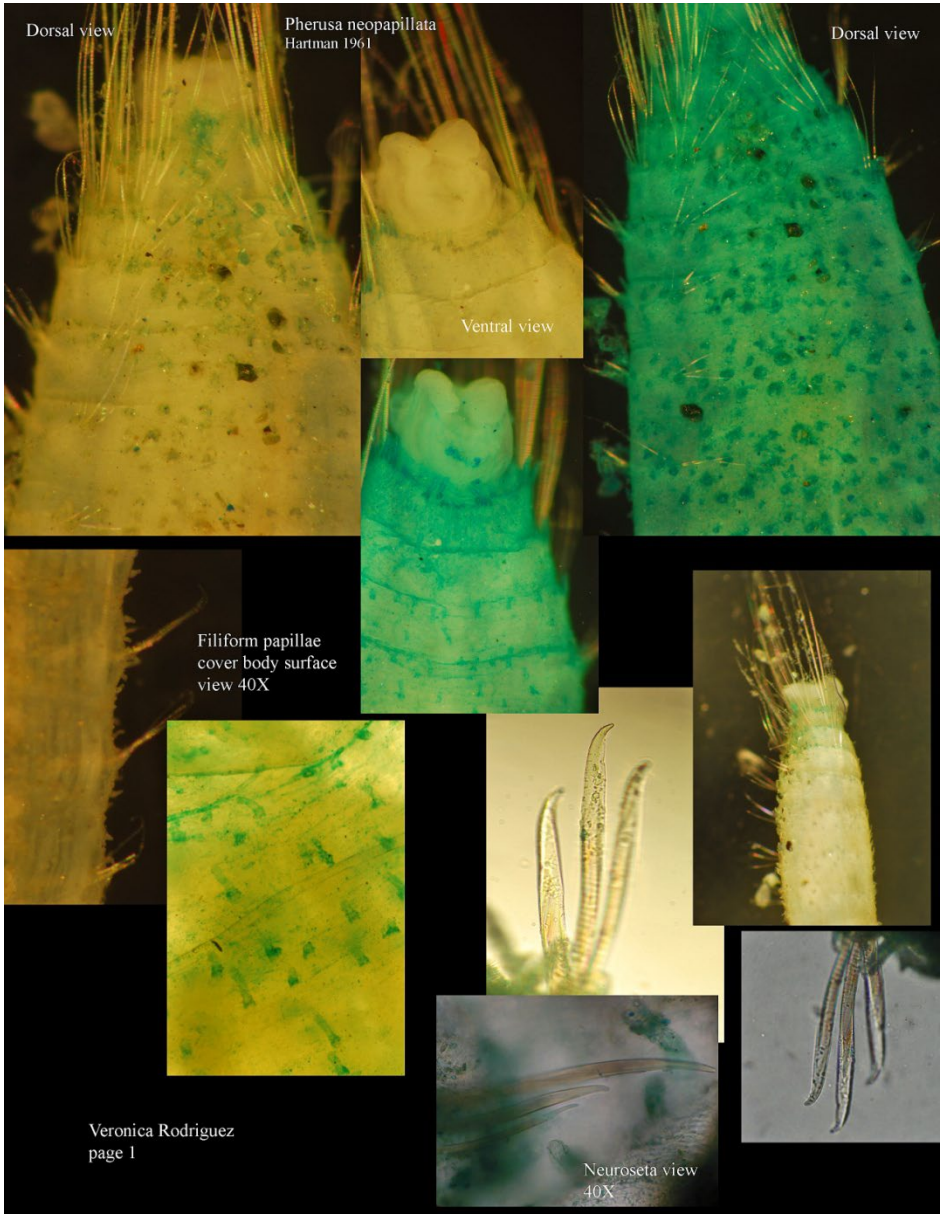


Falcate neurochaetae with anchylose bases

Pherusa neopapillata
Hartman 1961

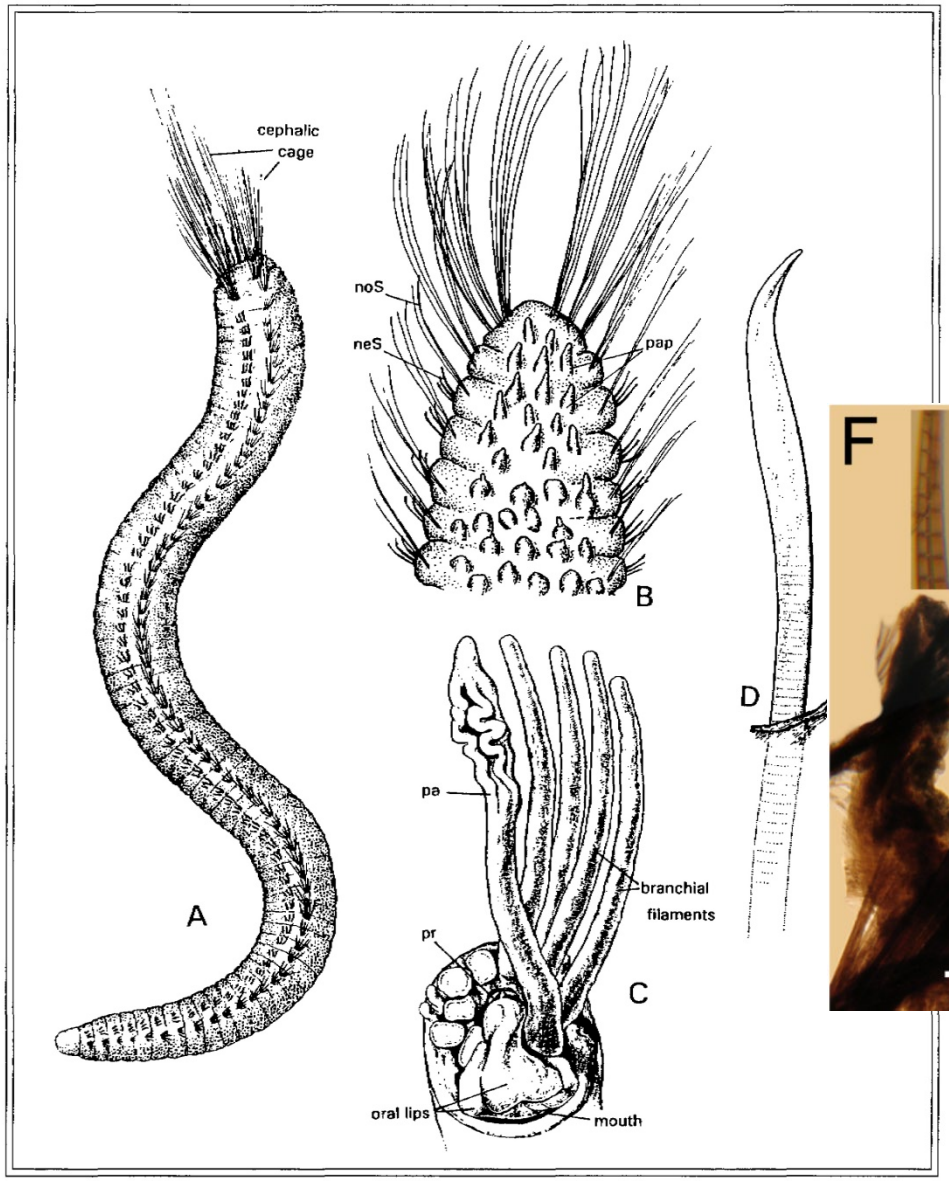


Pherusa neopapillata : A, anterior end, dorsal view; B, anterior end, frontal view showing palps, branchial filaments, scars of same, prostomium with eyes, and oral slit; C, neurosetae from setiger 14. (A, original; B, C after Hartman, 1961).



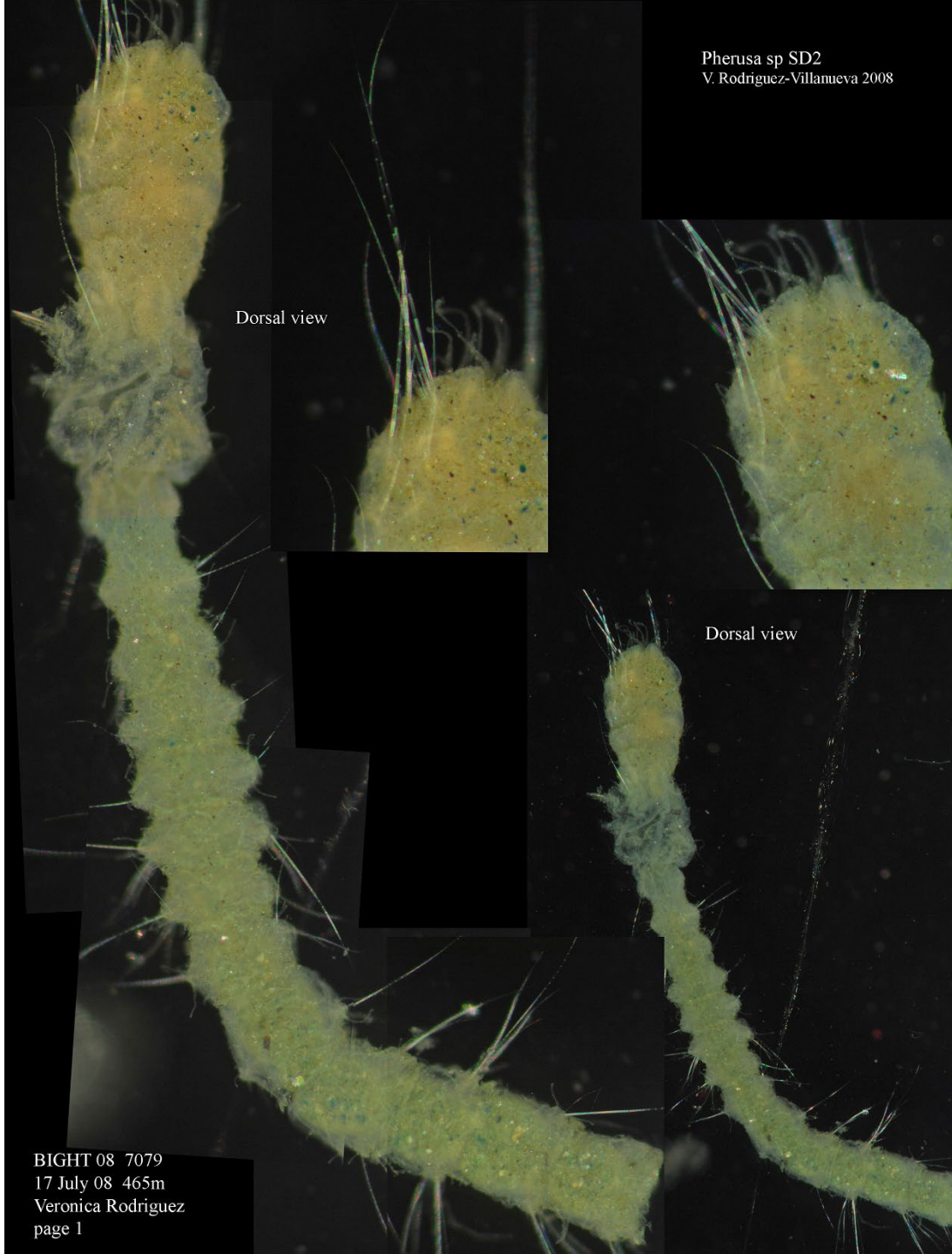
MMS images are reversed for *P. neopapillata* and *P. papillata*

Pherusa papillata
(Johnson 1901)

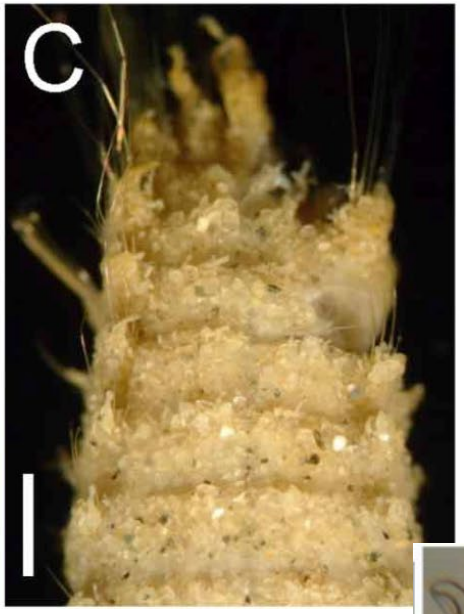


Pherusa papillata A, entire animal, lateral view; B, anterior end, dorsal view; C, anterior end, frontal view, showing palps, branchial filaments, scars of same, prostomium, and oral slit; D, neuroseta. (A, C, D, after Hartman, 1961; B, original).

Pherusa sp SD2
Rodriguez-Villanueva 2008

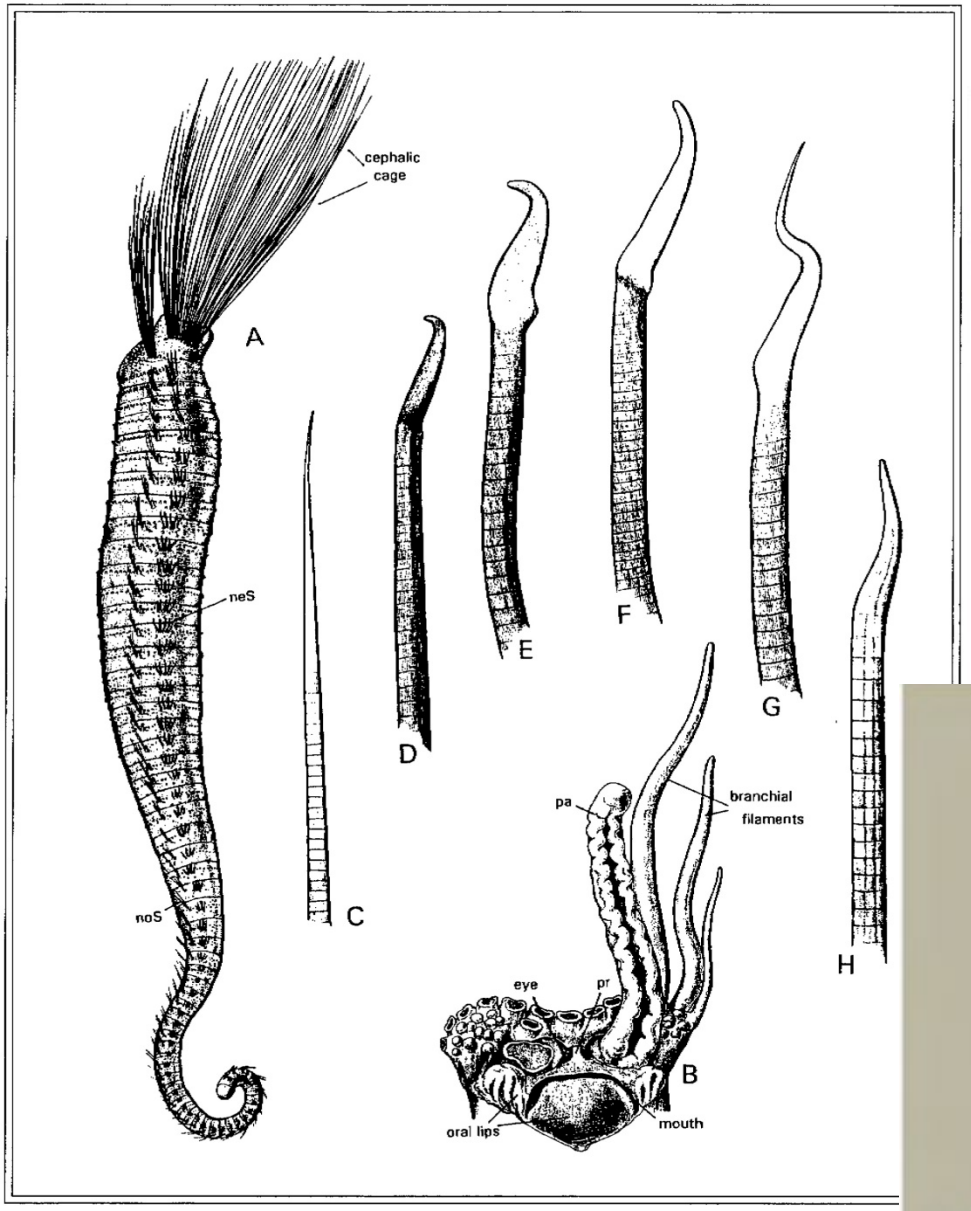


Piromis capulata
(Moore 1909)

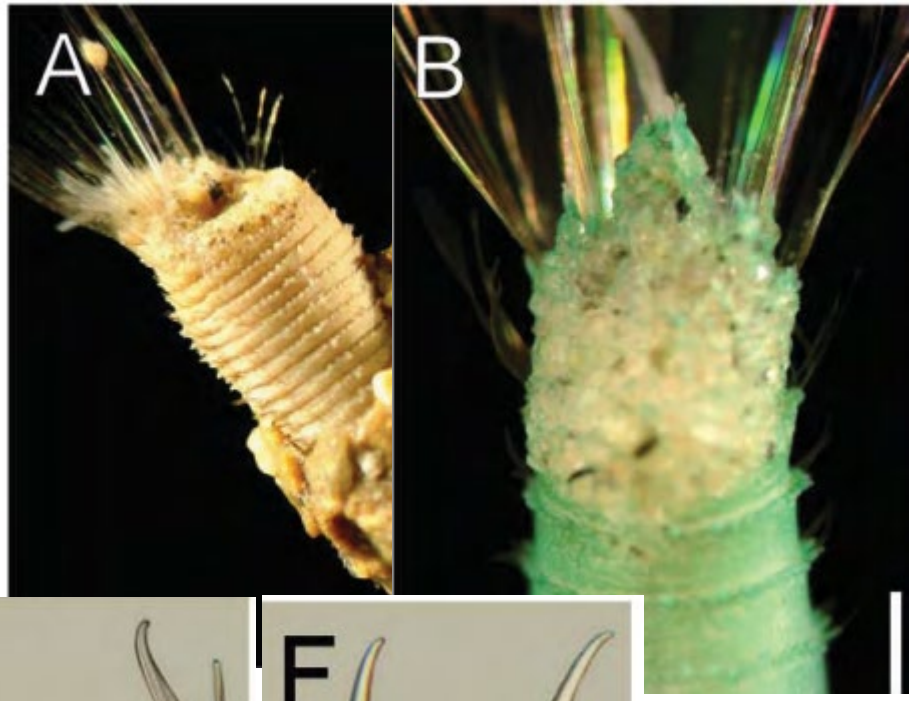


Note: Image D for *P. capulata* in Salazar-Vallejo 2011 Revision of *Piromis* and *Pycnoderma* is of *Trophoniella harrisae*

Semiodera inflata
(Treadwell 1914)

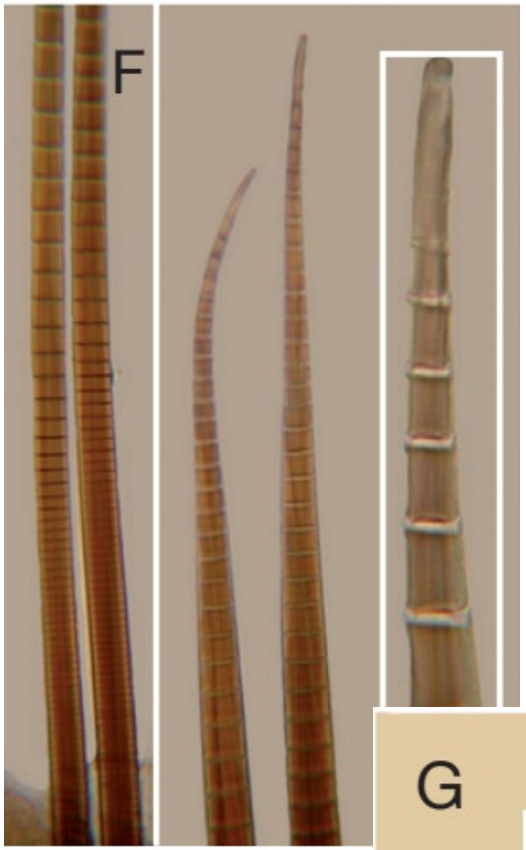


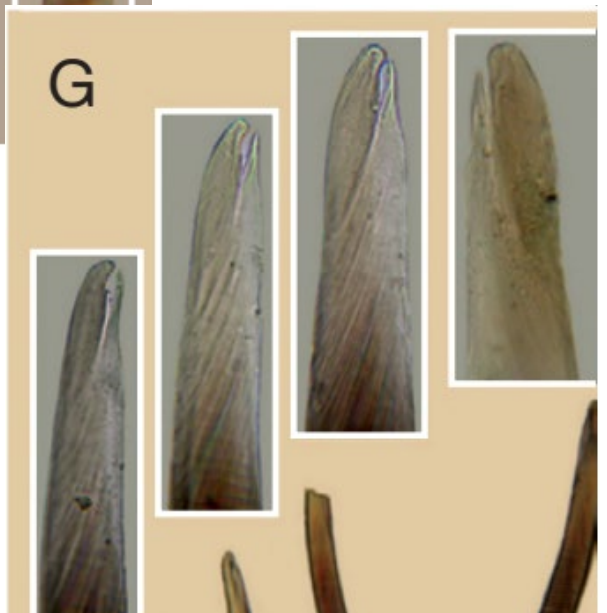
Pherusa inflata: A, entire animal, lateral view; B, anterior end, frontal view, with right palp a
branchial filaments removed showing location and arrangement of branchiae, prostomium, ey
and mouth; C, notoseta from middle body segment; D-H, neurosetae from setigers 4, 5, 6,
middle setiger. (after Hartman, 1961).



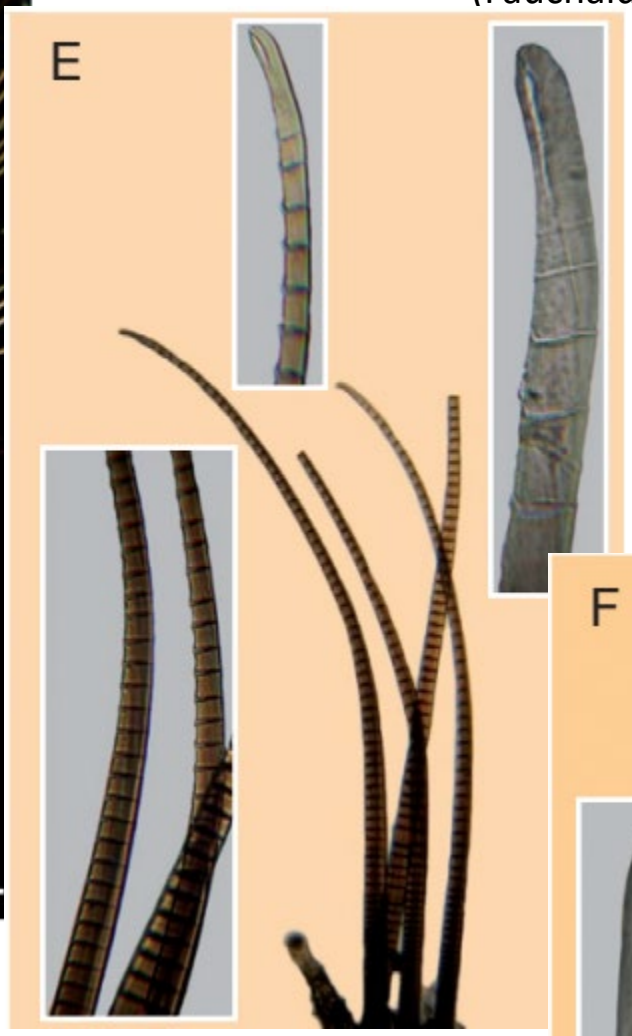
Therochaeta pacifica
Fauchald 1972

Trophoniella harissae
Salazar-Vallejo 2012





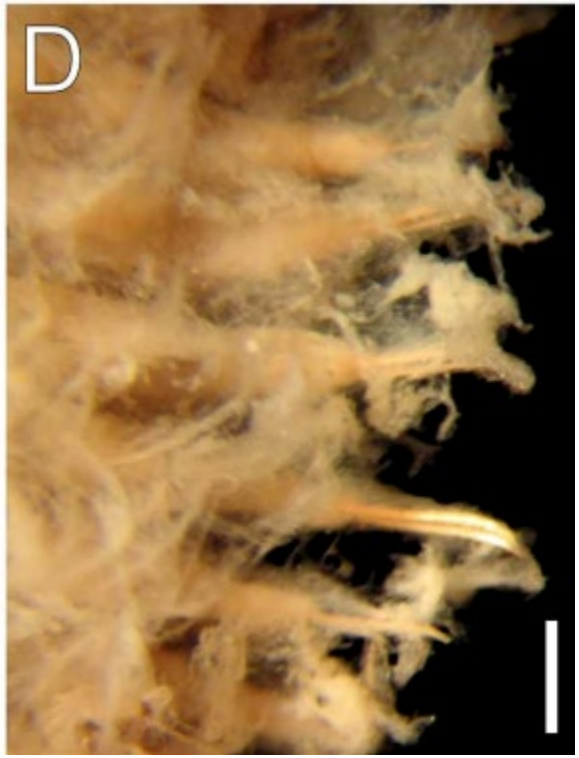
Trophoniella hospita
(Fauchald 1972)



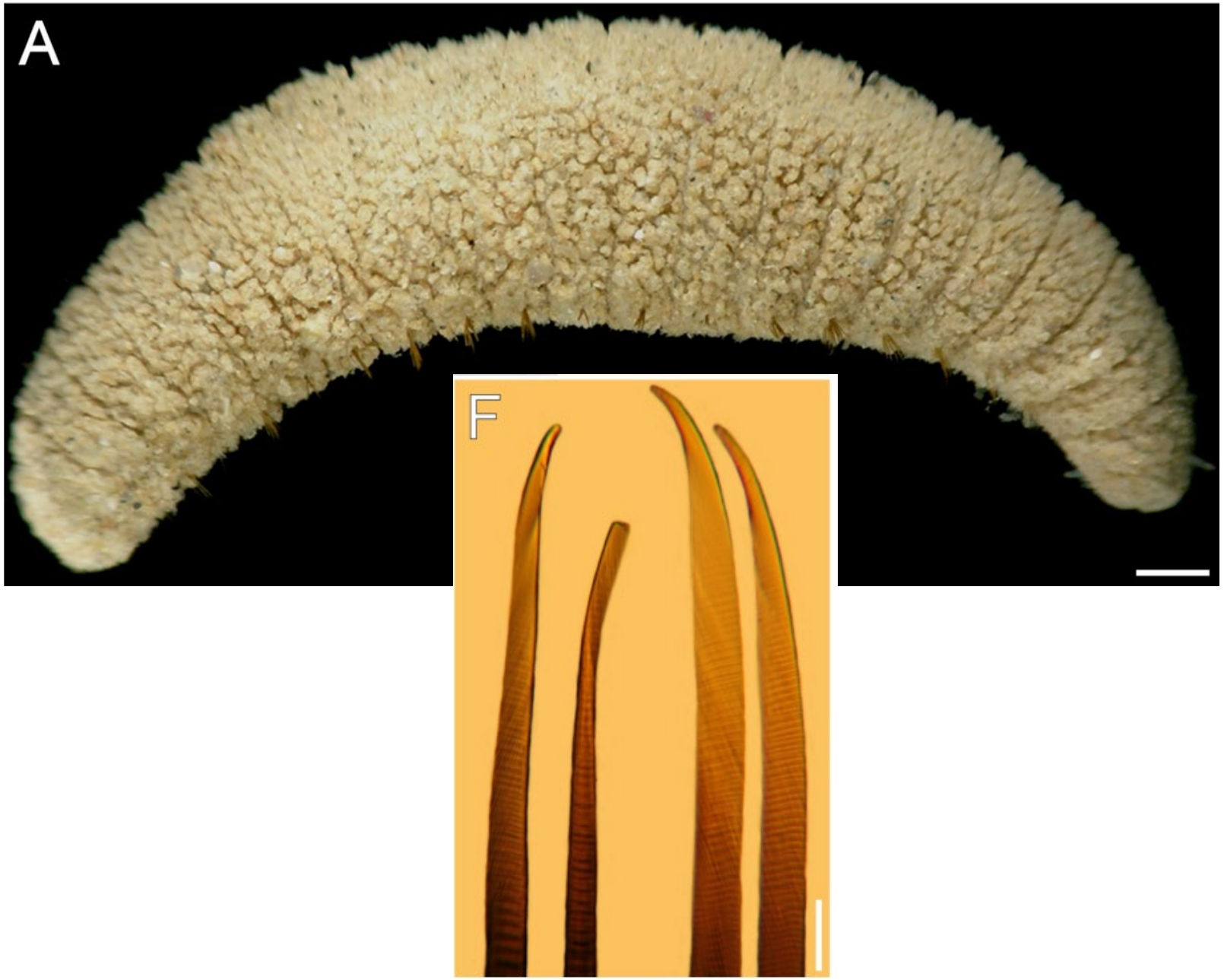
Flabelligeridae genera not found in SCAMIT region

- *Annenkova* Salazar-Vallejo 2012
- *Brada* Stimpson 1853
- *Buskiella* McIntosh 1885 *Pelagic
- *Daylithos* Salazar-Vallejo 2012
- *Flabegraviera* Salazar-Vallejo 2012
- *Flabehlersia* Salazar-Vallejo 2012
- *Flota* Hartman 1967 *Pelagic
- *Ilyphagus* Chamberlin 1919
- *Paratherochaeta* Salazar-Vallejo 2013
- *Poeobius* Heath 1930 *Pelagic
- *Pycnoderma* Grube 1877
- *Saphobranchia* Chamberlin 1919
- *Stylarioides* Delle Chiaje 1841
- *Treadwellius* Salazar-Vallejo 2011

Annenkova
Salazar-Vallejo 2012

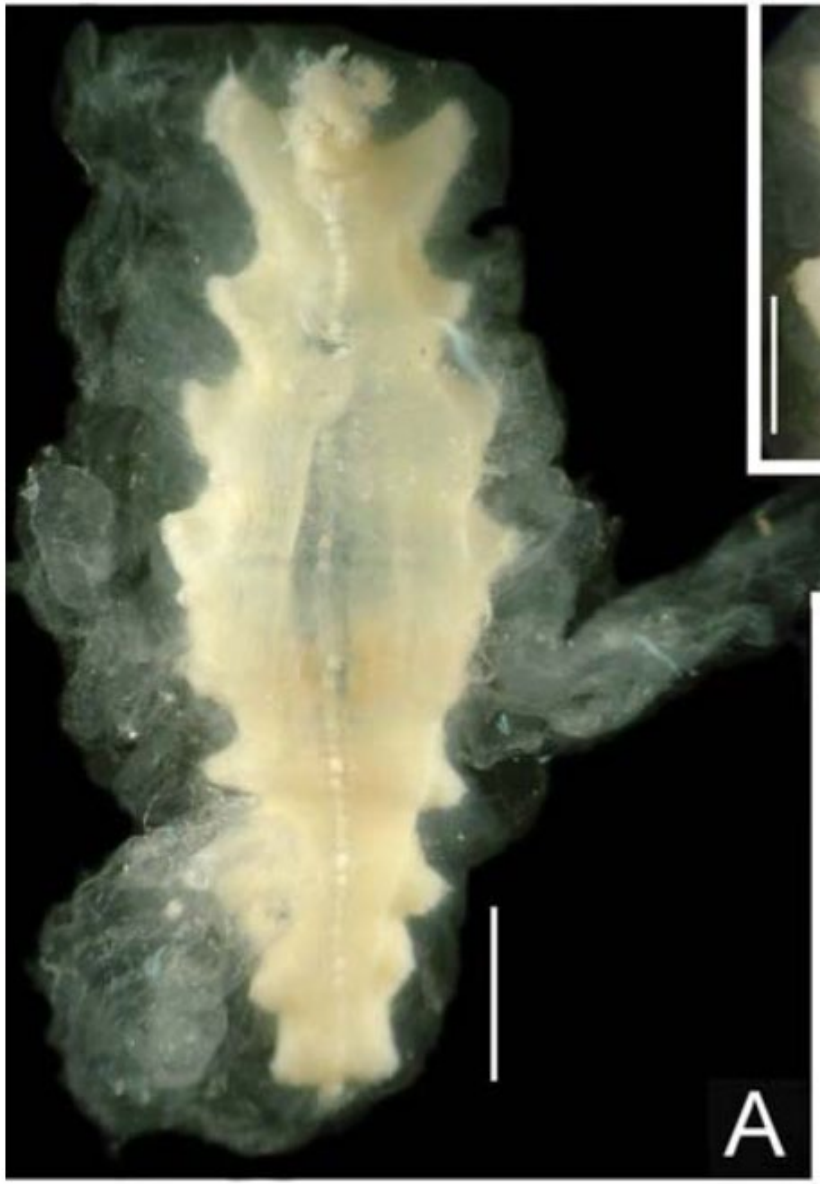


Brada
Stimpson 1853

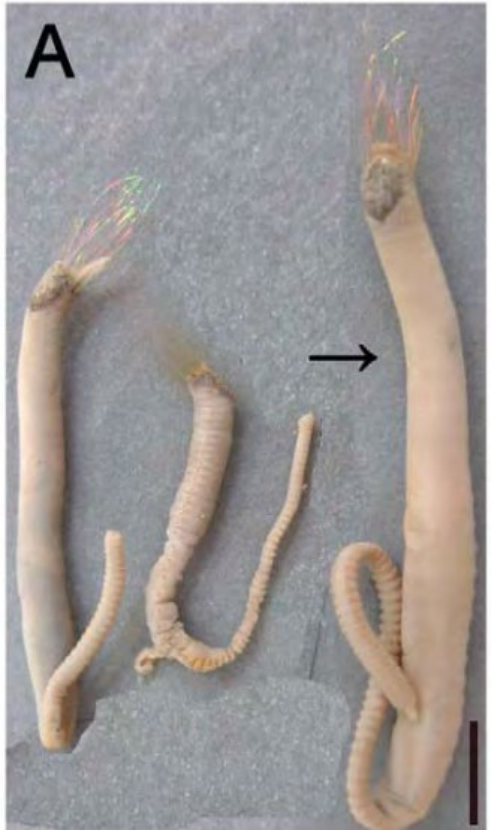


Buskiella
McIntosh 1885

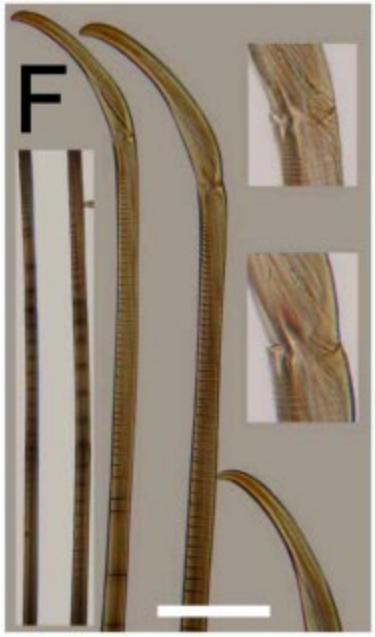
*Pelagic



Daylithos
Salazar-Vallejos 2012



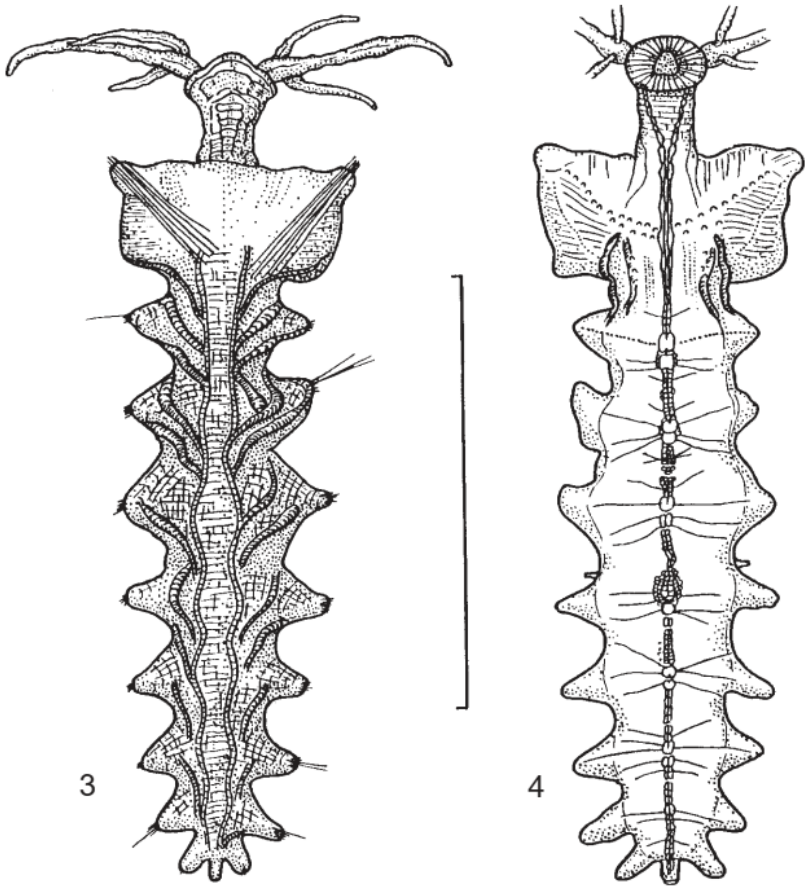
Flabegraviera
Salazar-Vallejo 2012



Flabehlersia
Salazar-Vallejo 2012

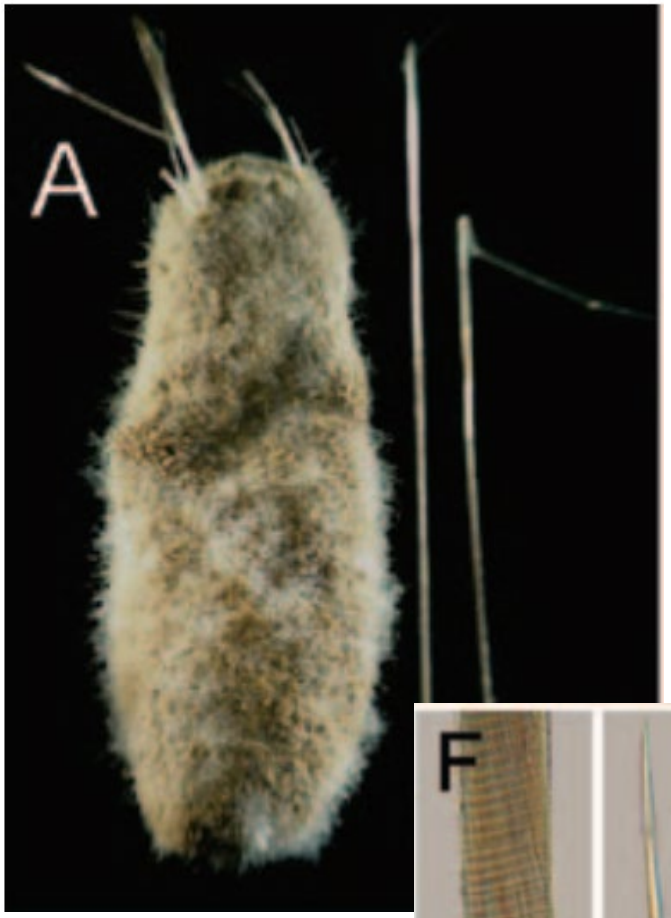
Flota
Hartman 1967

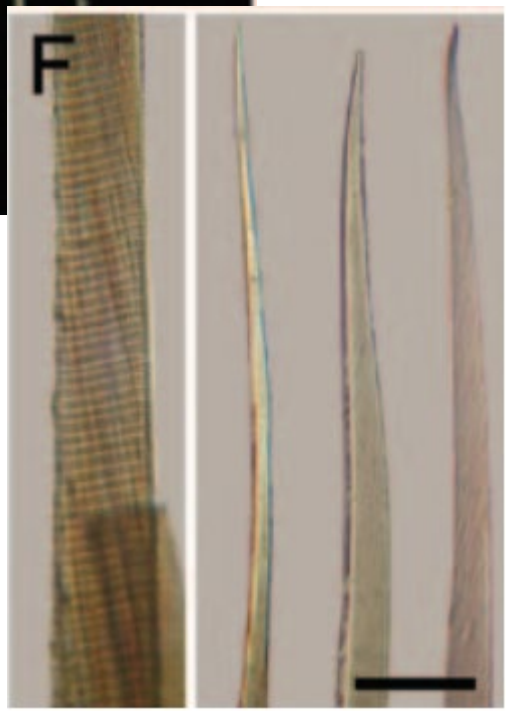
*Pelagic

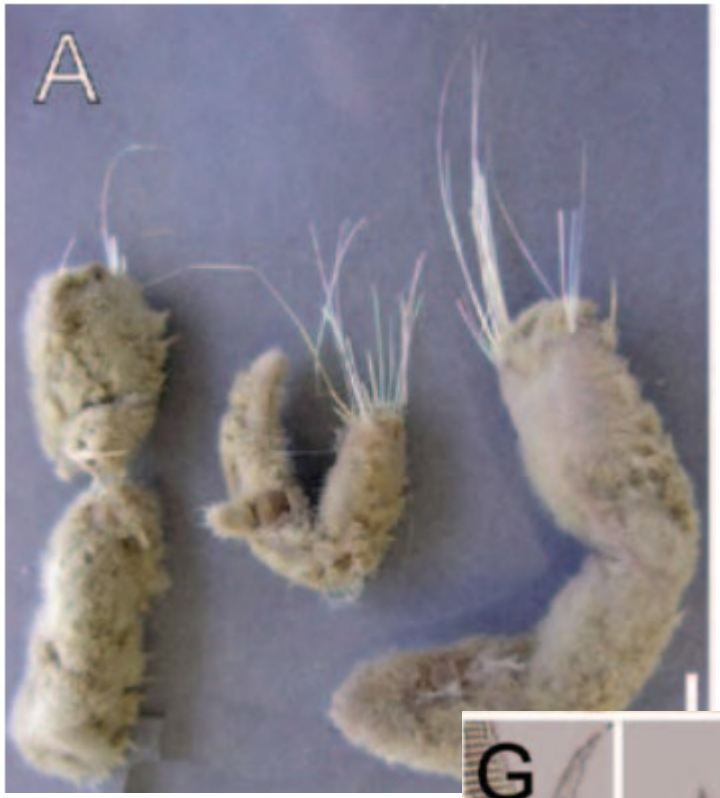


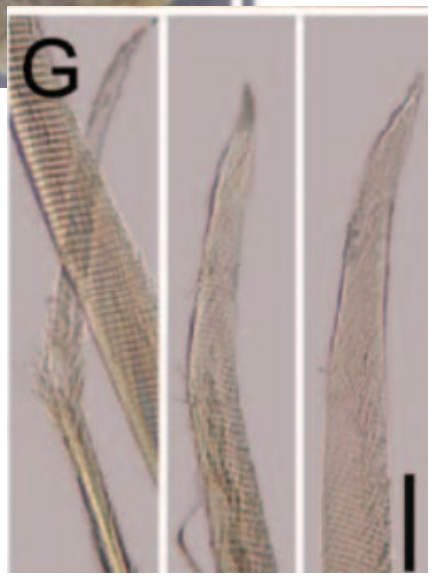
Figs 3, 4. *Flota vitjasi*, holotype. **3**, dorsal view; **4**, ventral view. Scale bar: 10 mm.

Ilyphagus
Chamberlin 1919

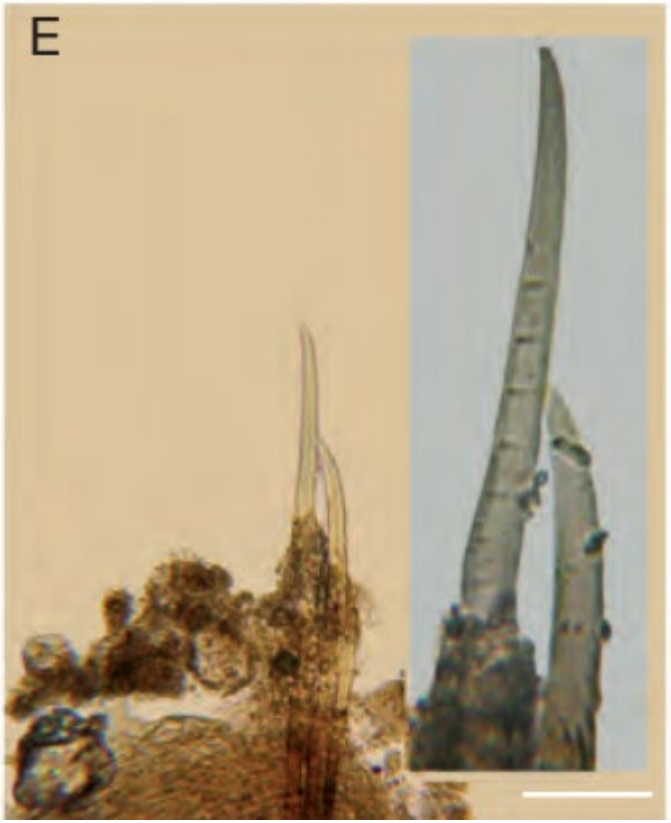






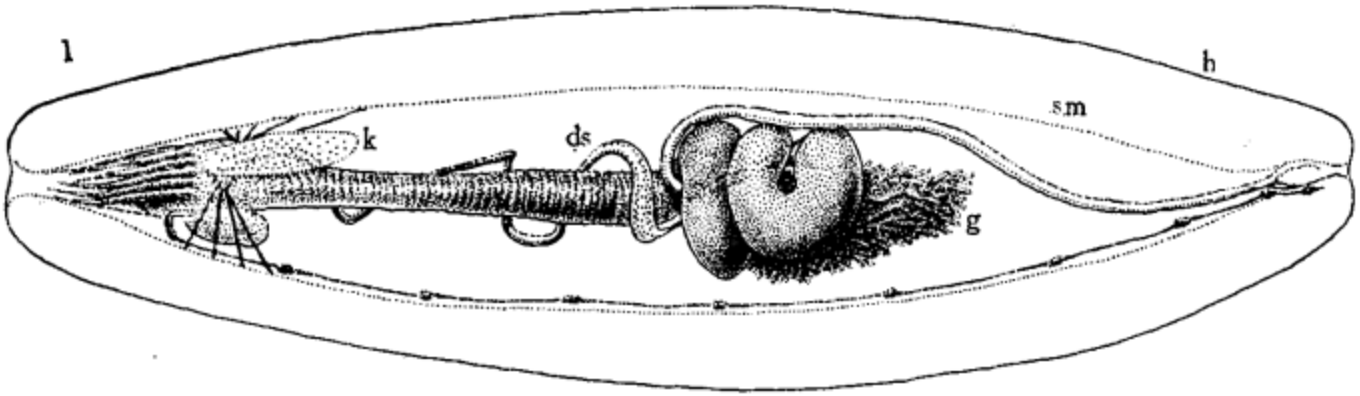


Paratherochaeta
Salazar-Vallejo 2013

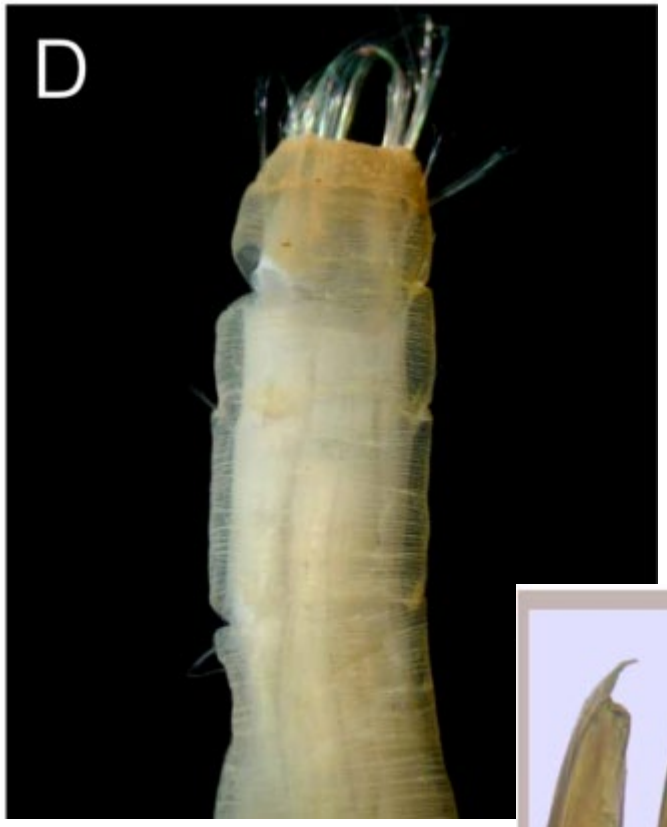


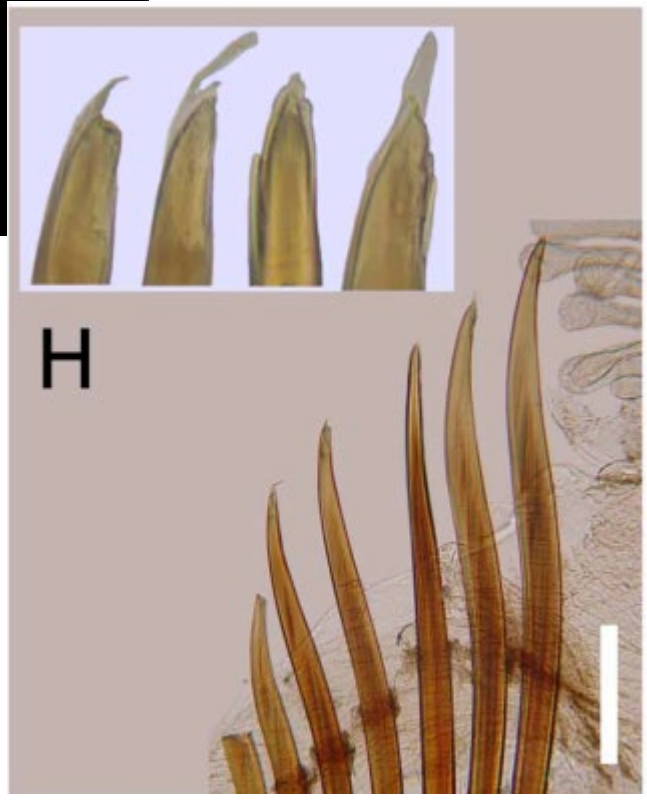
Poeobius
Heath 1930

*Pelagic



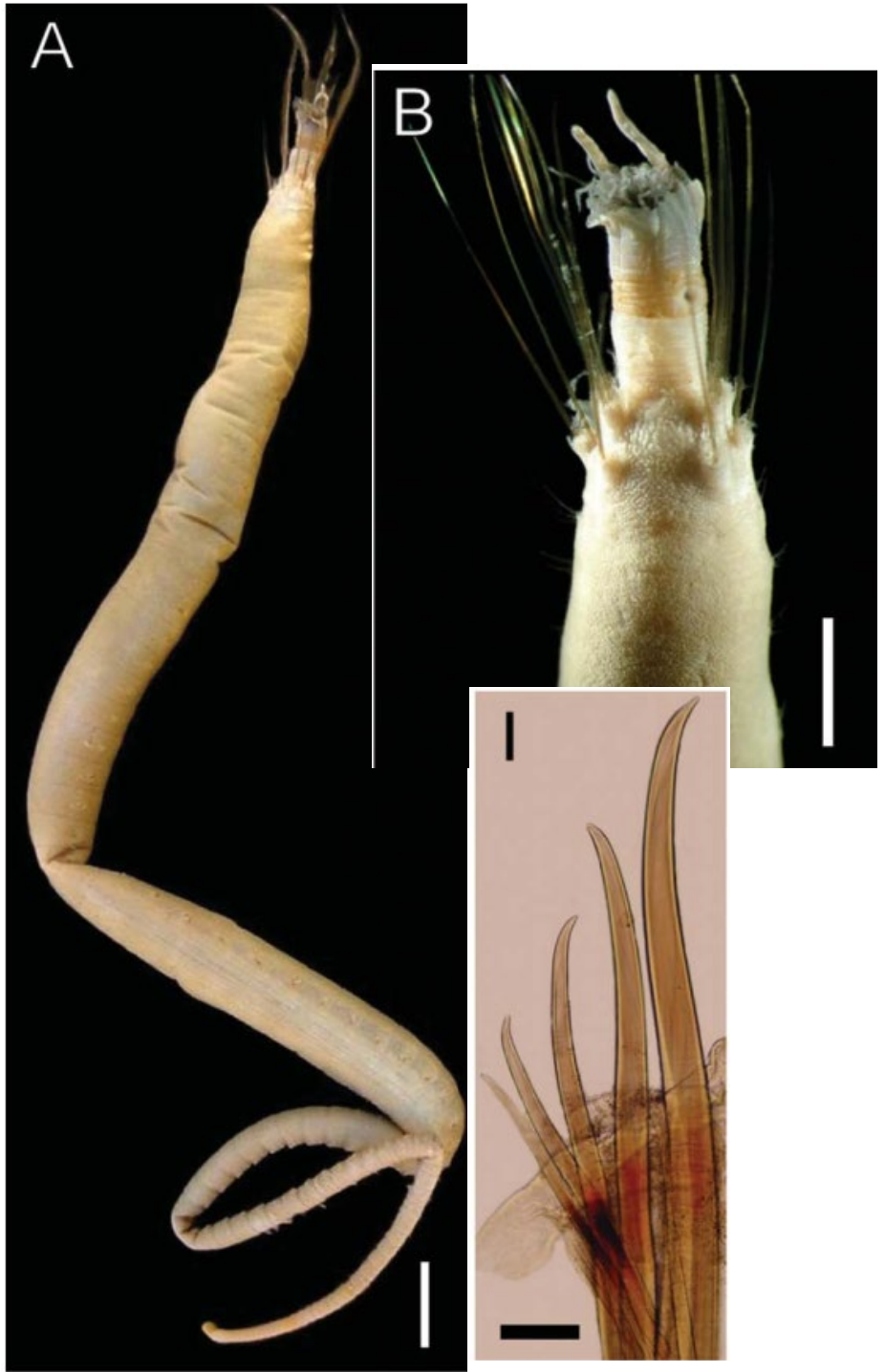
Pycnoderma
Grube 1877

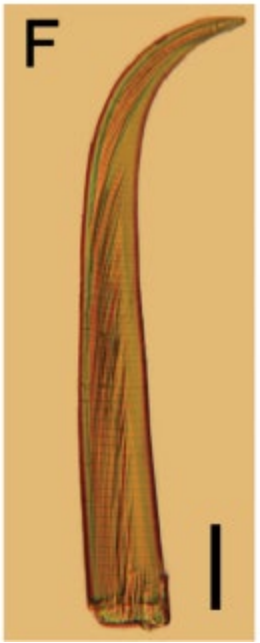




Saphobranchia
Chamberlin 1919

Stylarioides
Delle Chiaje 1841





Treadwellius
Salazar-Vallejo 2011