

# BENTHOS

## FROM THE ARCTIC

(GREENLAND AREA)



# BENTHOS FROM THE ARCTIC

Fauna catalogue prepared by

Cindy Grant, Laure de Montety & Lisa Tréau de Coeli  
Institut des sciences de la mer, Université du Québec à Rimouski

supervised by

Philippe Archambault  
Institut des sciences de la mer, Université du Québec à Rimouski

and, with the collaboration of

Martin Blicher  
Greenland Institute of Natural Resources

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# INTRODUCTION

Many teams studying benthic biodiversity have faced the challenge of identifying collected specimens while they are at sea. The use of pictures is an efficient way to increase samples processing, while limiting wrong or incorrect identifications that can be done when many people are working on the same project at different times.

This catalogue presents a non-exhaustive inventory of more than 300 taxa, most of them named to the species level, of benthic invertebrates recorded in Arctic. In this first edition, special attention was paid to species recorded in Greenland areas. This document is a work in progress and will be completed and upgraded according to species collected in 2015. We invite you to comment this edition according to your expertise, in order to enable the next edition to be better and more complete.

The photo catalogue is designed to be an accurate tool for biologists to identify benthic invertebrates during cruises, with the objective to decrease number of preserved samples. For every taxon, an update of the nomenclature was made and validated using the World Register of Marine Species in May 2015. Symbols are used to quickly indicate taxa that (1) may be mistaken for some others, (2) have to be preserved for subsequent identification in laboratory, and (3) have to be photographed for the updated edition of the catalogue.



Be aware! This species may be mistaken for some others...



This species should be observed using a microscope. Preserved it for a subsequent identification in laboratory.

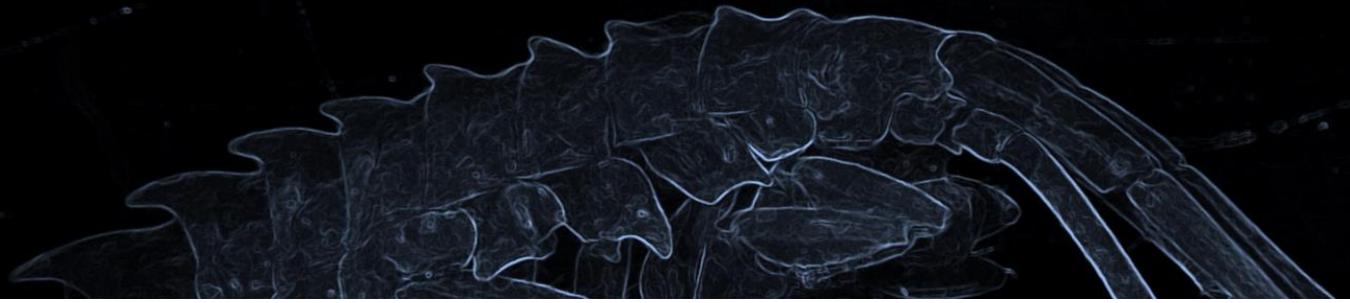


Take a picture (or 2!) of this species for the updated catalogue that will be produced!

The photos shown in the catalogue were provided by many research teams and some are from websites. Credits are given for each photo (or most of them).

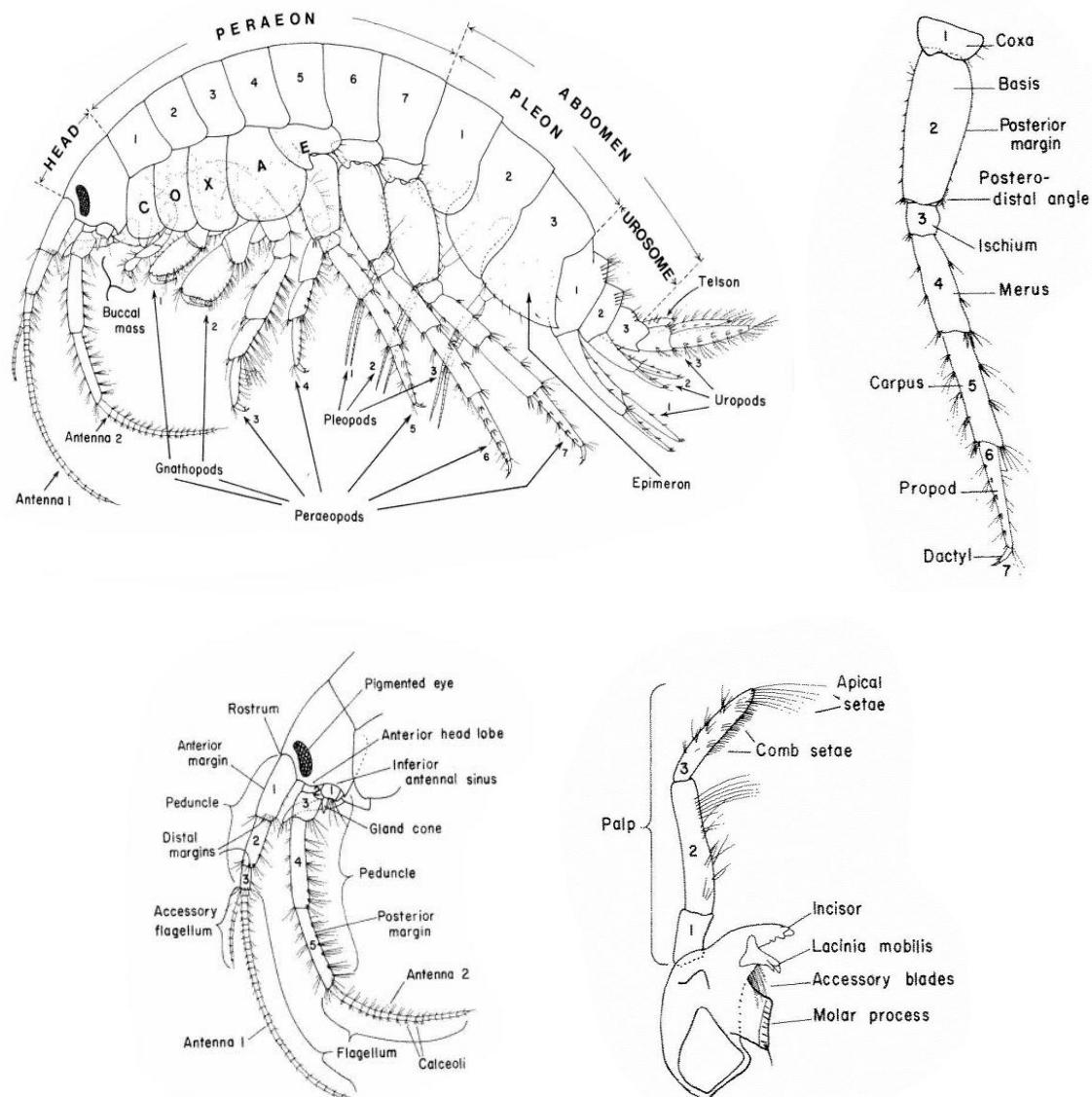
This catalogue will be under continuous development  
and it might contain errors.



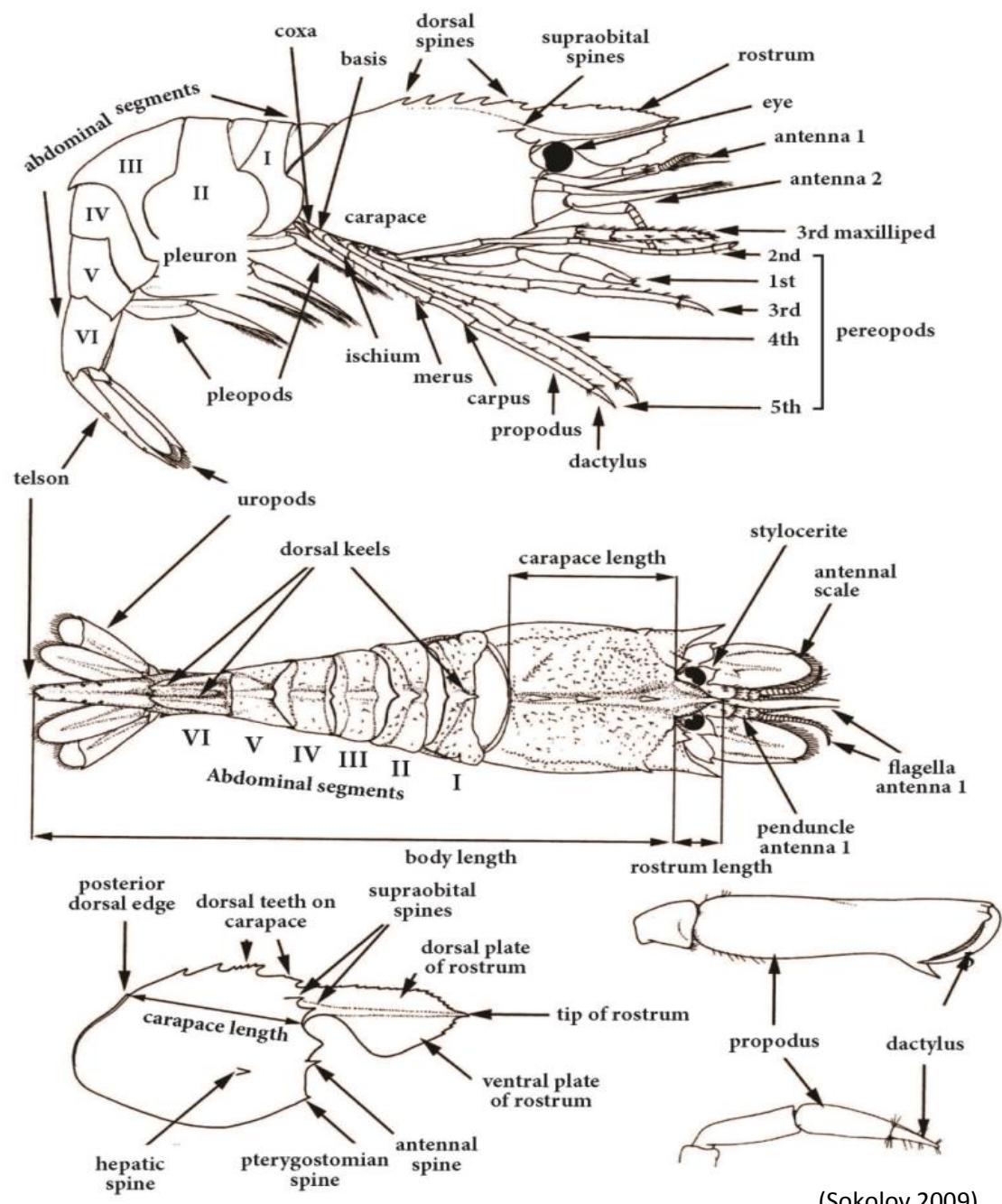


## P H Y L U M   A R T H R O P O D A

Arthropoda is the most successful and diverse phylum of organisms, containing an estimating of 900 000 species around the world (Viney 2008). In the marine environment, crustaceans are the most important order within the phylum, represented by 45 000 living worldwide species. This group differs from other arthropods by having two pairs of appendages; antennules and antennae (Newman 2014). In Arctic, around 847 arthropods species can be found (Piepenburg et al. 2011).



(Bousfield 1973)



(Sokolov 2009)

# AMPHIPODA

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**TAXONOMIC KEY –SUBORDERS  
(ACCORDING TO NEW CLASSIFICATION)**

- Hyperiidea (Hyperidae and Megalanceolidae)
- Senticaudata (Caprellidae, Gammaridae, Maeridae and Melitidae)
- Gamaridea (others families)

- 1(2) Eyes composed large covering most of head [**HYPERIIDEA**]
- 2(1) Eyes of normal size, usually occupying less than of head.
- 3(4) Presence of apical robust and developed setae on the rami of uropod 1-2 (except Caprellidae). [**SENTICAUDATA**]
- 4(3) Apical robust setae on rami of uropod 1-2 absent [**GAMMARIDEA**]

(Lowry et al. 2013)

#### TAXONOMIC KEY – HYPERIIDEA SUBORDER

- 1(2) Head usually longer than pereonite 1. Pereopod 5 usually simple [**HYPERIDAE**]
- 2(1) Head very small shorter and lower than pereonite 1. Pereopod 5-7 with retractile claws [**MEGALANCEOLIDAE**]

#### TAXONOMIC KEY – SENTICAUDATA SUBORDERS

- 1(2) Body slender and cylindrical, coxae rudimentary and degenerated abdomen and abdominal appendages. Pereopod 3-4 absent or reduced [**CAPRELLIDAE**]
- 2(1) Body large, coxal plates present (usually developed). Abdomen strong with developed appendages.
- 3(6) Eye nearly round and small. Gnathopod 1 usually smaller than gnathopod 2. Uropod 3 rami narrow, margins spinose and very long (uropod 3 almost broken).
- 4(5) Uropod 3, inner ramus at least half length of outer ramus or subequal [**MAERIDAE**]
- 5(4) Uropod 3, inner ramus minute [**MELITIDAE**]
- 6(3) Eyes reniform. Gnathopod 1 equal or larger than gnathopod 2. Uropod 3, rami usually broad and foliaceous (longer than rami 1 and 2 but smaller than Maeridae and Melitidae)  
[**GAMMARIDAE**]

(Bousfield 1973, Lowry et al. 2013)

#### SPECIFIC CHARACTERS – GAMMARIDEA SUBORDERS

**Acanthonotozomatidae:** Body carinate with strongly developed rostrum. Epimeral plate 3 bidentate. Coxa with acute apex.

**Amathilopsidae:** Body usually carinate. Rostrum present. Gnathopod 1 slightly produced along posterior margin of propodus.

**Ampeliscidae:** On each side of head; usually 2 pair of eyes. Body smooth. If need to look closer; urosome segment 2-3 fused (one urosome segment for two uropods).

**Atyidae:** Pleon usually carinate dorsally. If need to look closer; urosome segments 2-3 fused. Segment 5 of pereopod 3-4 is very short.

**Epimeriidae:** Whole body very carinate dorsally. Coxa with acute apex.

**Eurytheneidae:** Body very robust. Eyes strongly developed. Body length up to 90mm.  
\*\*Formerly in Lysianassidae\*\*

**Eusiridae:** Pleon carinate or mucronate. Gnathopods subchelate, typically large, powerfull and subequal. Pereopods 3-7 slender.

**Lepechinellidae:** Body carinate (look like a spine), pereopod 3-7, gnathopo and uropods are very slender.

**Leucothoidae:** Body compact. Ganthropod 1 complexly chelate.

**Liljeborgiidae:** Pleon and/or urosome dentate or spinose dorsally. Coxal plate 1 expanded anterodistally. Pereopod 5-7 with basis expanded; 7<sup>th</sup> distinctly longest and heavier. If need to look closer; telson deeply cleft with bifid apices.

**Lysianassidae vs Uristidae:** Need to look closer; on character separate these two families:

- 1(2) Molar modified into a setose tongue, often with a vestigial triturating patch, but some species it retains a reduced column with triturating surface similar to the tryphosine molar [**URISTIDAE**] including *Anonyx* and *Onisimus*
- 2(1) Other molar [**LYSIANASSIDAE**]

(Lowry et al. 2014)

**Oedicerotidae:** Eyes fused dorsally or at base of rostrum.

**Pleustidae:** Eyes broad-lenticular and lateral. Uropods rami are slender. If you need to look closer; urosome segment 2 short.

**Stegocephalidae:** Body very robust, strongly calcified. Eyes absent. If you need to look closer; mandible without palp.

**Synopiidae:** Head with strong recurved rostrum or galeate or with plough-shaped protuberance. Telson very long, entire or incised.

**Unciolidae:** Body depressed. Uropod 3 embraces entire telson.

**Calliopiidae:** Any specific characteristic. Body compressed or with broadly vaulted pereon, sometimes with dorsal teeth. Peduncule of antennae 1 is usually short. Gnathopod 1-2 usually feeble, subchelate.

(Stebbing 1906, Bousfield 1973, Lowry et al. 2009, Myers et al. 2003,  
Vinogradov et al. 1996, Lörz et al. 2013, Guerra-Garcia 2012)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Acanthonotozomatidae** (Family)

## *Acanthonotozoma* sp.



### *Acanthonotozoma cristatum*

Ross 1835

AphiaID: 101872

Unaccepted name:  
*Acanthonotus cristatus*



### *Acanthonotozoma inflatum*

Krøyer 1842

AphiaID: 101873

Unaccepted name: –

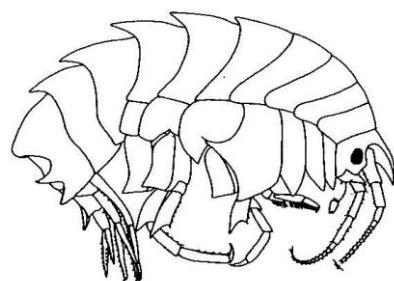
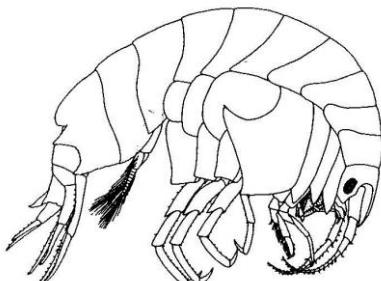
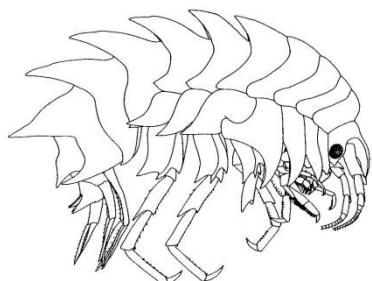


### *Acanthonotozoma serratum*

Fabricius 1780

AphiaID: 101877

Unaccepted name: –



(Just 1978)

|                         | <i>A. cristatum</i>            | <i>A. inflatum</i> | <i>A. serratum</i>         |
|-------------------------|--------------------------------|--------------------|----------------------------|
| <b>Size</b>             | Up to 19 mm                    | Up to 19 mm        | Up to 12 mm                |
| <b>Carina</b>           | Present                        | Absent             | Present                    |
| <b>Carina/pleon 3-4</b> | Not forming acute processes on |                    | Forming acute processes on |

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Amathillopsidae** (Family)

*Amathillopsis* sp.

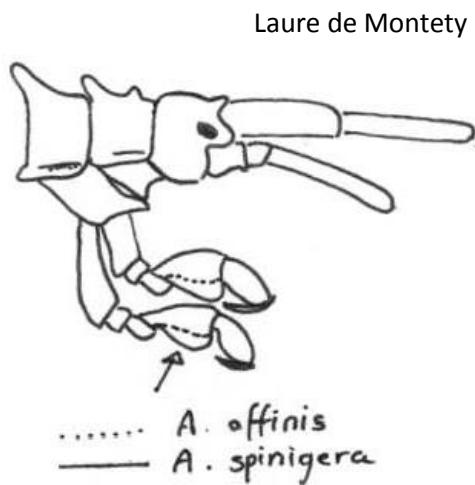


*Amathillopsis affinis*

Miers 1881

AphiaID: 101879

Unaccepted name: –

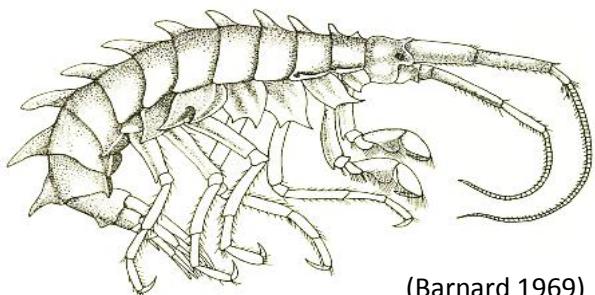


*Amathillopsis spinigera*

Heller 1875

AphiaID: 101881

Unaccepted name: –

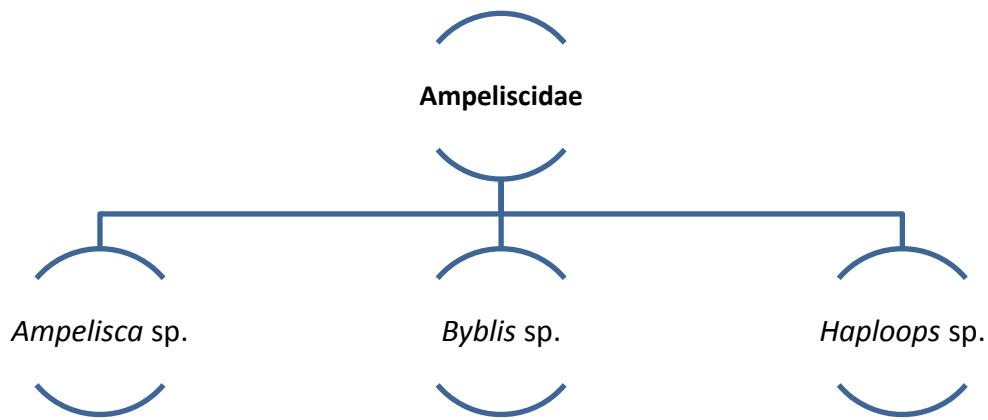


(Barnard 1969)

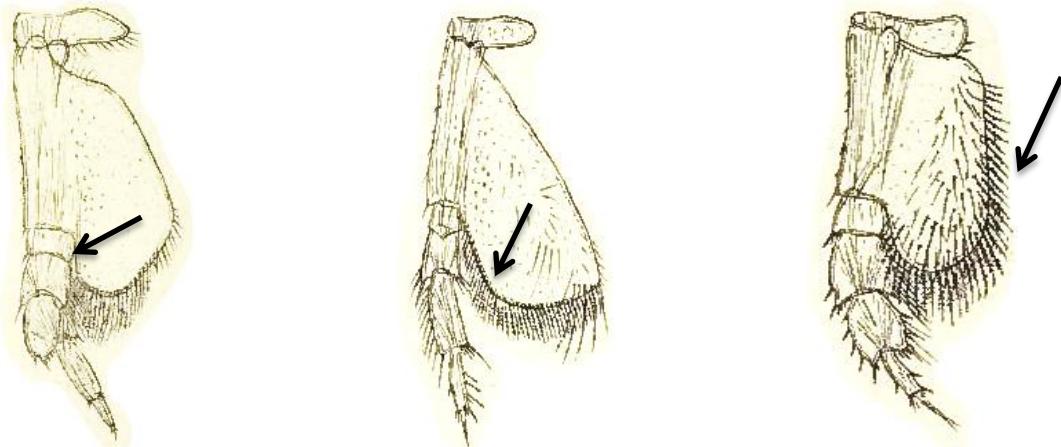
|                                      | <i>Amathillopsis affinis</i> | <i>Amathillopsis spinigera</i> |
|--------------------------------------|------------------------------|--------------------------------|
| <b>Size</b>                          | Unknown                      | Up to 57 mm                    |
| <b>Joint 5 of gnathopods 1 and 2</b> | Distally little expanded     | Much expanded                  |

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Ampeliscidae** (Family)



Pereaeopod 7 allows distinguishing the 3 genus:



(Sars 1895)

|                                  | <i>Ampelisca</i> sp.                | <i>Byblis</i> sp.                     | <i>Haploops</i> sp.       |
|----------------------------------|-------------------------------------|---------------------------------------|---------------------------|
| <b>Dactyl</b>                    | Developed                           | No dactyl, spine                      | Poorly developed          |
| <b>Segment 2 of pereaeopod 7</b> | Anterior margin of distal lobe bare | Anterior margin of distal lobe setose | Posterior margin vertical |

(Bousfield 1963)

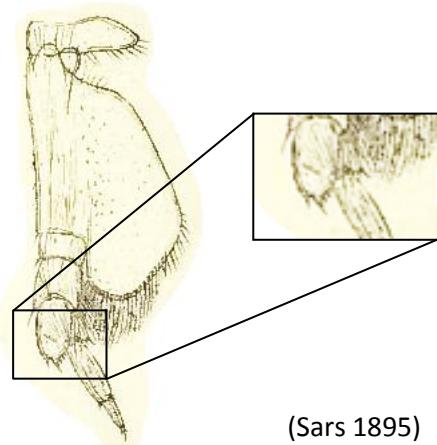
*Ampelisca eschrichtii*

Krøyer 1842

AphiaID: 101897

Unaccepted name: –

Greenland distribution: West shelf



(Sars 1895)

Size: up to 30 mm

Uropod 2: outer ramus with long marginal spines increasing in length

Pereopod 7: carpus anterior margin notched

(Stebbing 1906, Dauvin et al. 1988)

*Byblis* sp.

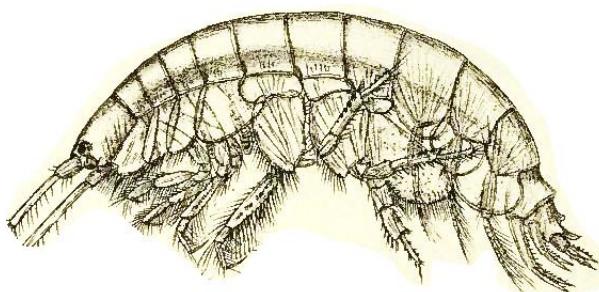
Boeck 1871

AphiaID: 101446

Unaccepted name: –



[www.marinespecies.org](http://www.marinespecies.org)



(Sars 1895)

Anterior margin of distal lobe setose on segment 2 of pereopod 7

(Bousfield 1963)

*Haploops* sp.



*Haploops laevis*

Hoek 1882

AphiaID: 101950

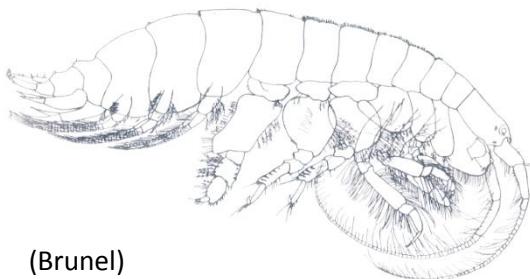
Unaccepted name: –

*Haploops setosa*

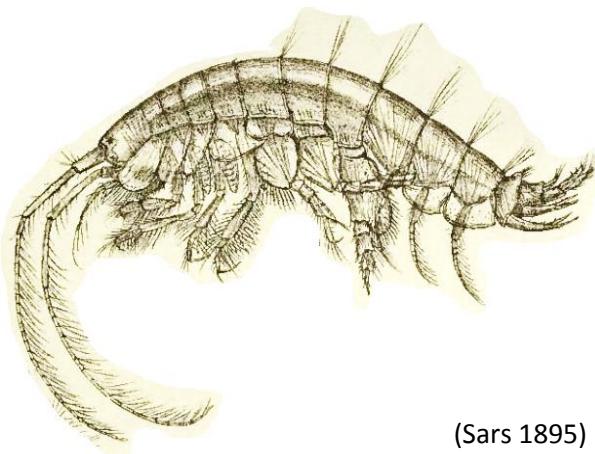
Boeck 1871

AphiaID: 101954

Unaccepted name: –



(Brunel)



(Sars 1895)

If setae are absent → *Haploops* sp.

|                      | <i>Haploops laevis</i>   | <i>Haploops setosa</i>                                       |
|----------------------|--|--|
| <b>Size</b>          | Up to 19 mm  | Up to 13 mm  |
| <b>Setae pattern</b> | Patch of small and fine setae on several pereon (looks like a fluff) | Fascicles of long setae rising end of pereon to end of pleon |

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Atylidae** (Family)

**Nototropis sp.**  
(West shelf)



***Nototropis falcatus***

Metzger 1871

AphiaID: 102139

Unaccepted name:  
*Atylus falcatus*



[www.boldsystems.org](http://www.boldsystems.org)

***Nototropis nordlandicus***

Boeck 1871

AphiaID: 488962

Unaccepted name:  
*Atylus nordlandicus*



[www.boldsystems.org](http://www.boldsystems.org)

***Nototropis swammerdamei***

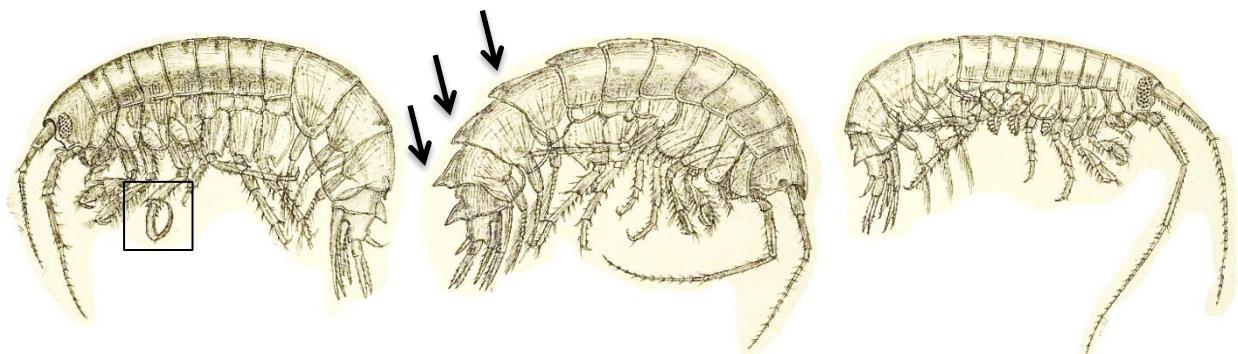
Milne Edwards 1830

AphiaID: 488966

Unaccepted name:  
*Ampithoe swammerdamei*



[www.boldsystems.org](http://www.boldsystems.org)

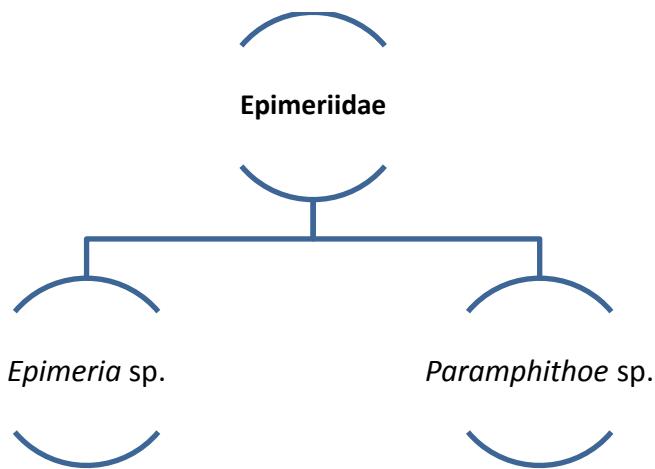


(Sars 1895)

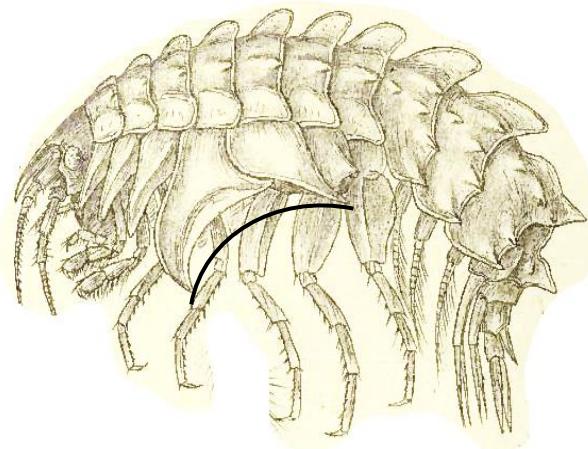
|                   | <b><i>N. falcatus</i></b> | <b><i>N. nordlandicus</i></b> | <b><i>N. swammerdamei</i></b> |
|-------------------|---------------------------|-------------------------------|-------------------------------|
| <b>Size</b>       | Up to 7 mm                | Up to 8 mm                    | Up to 9.5 mm                  |
| <b>Pereopod 3</b> | Finger very large         | Finger not very large         | Finger not very large         |
| <b>Pleon 1-3</b>  | Without dorsal teeth      | With dorsal teeth             | Without dorsal teeth          |

(Stebbing 1906)

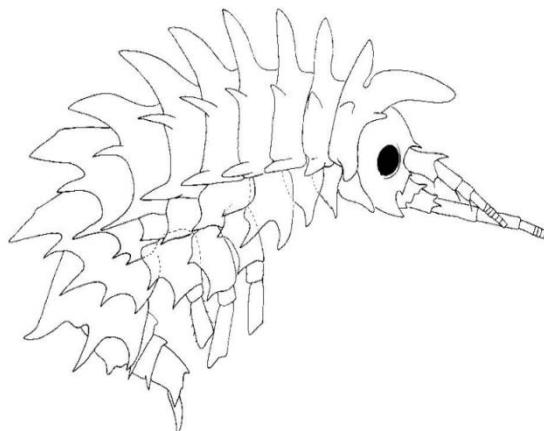
Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Epimeriidae** (Family)



Side plates 4 and 5 allow distinguishing the 2 genus:



(Sars 1895)



(D'Udekem D'acoz et al. 2004)

|                            | <i>Epimeria</i> sp.        | <i>Paramphithoe</i> sp. |
|----------------------------|----------------------------|-------------------------|
| <b>Side plates 4 and 5</b> | Forming a crescentic curve | Not forming a curve     |

(Stebbing 1906)

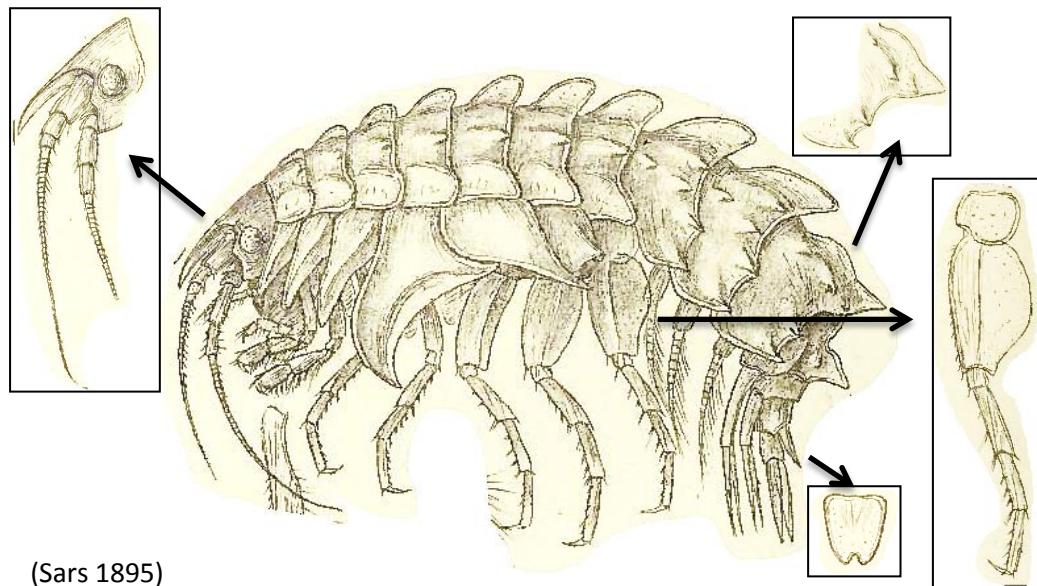
# *Epimeria loricata*

G.O. Sars 1879

AphiaID: 102146

Unaccepted name: –

Greenland distribution: West shelf, SW shelf, SE shelf slope



Size: up to 40 mm

All peraeon carinate

Subdorsal lateral tubercle present on peraeon 1-7

Pleon 1-3 with 4 lateral tubercles

Rostrum long reaching the end of peduncle of antenna

Eyes proeminent

(Stebbing 1906)

*Paramphithoe* sp.



*Paramphithoe buchholzi*  
Stebbing 1888

AphiaID: 489693

Unaccepted name: –

Distribution unknown

*Paramphithoe hystrix*  
Ross 1835

AphiaID: 102152

Unaccepted name: –

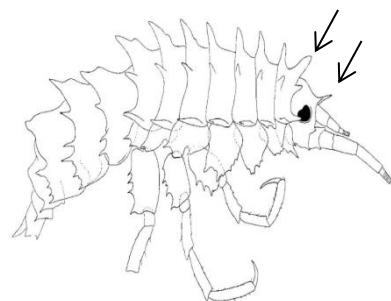
West shelf, SE shelf slope,  
SW shelf

*Paramphithoe polyacantha*  
Murdoch 1885

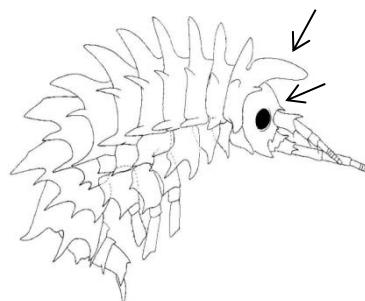
AphiaID: 102154

Unaccepted name: –

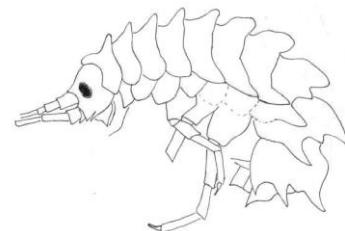
Distribution unknown



(D'acoz et al. 2004)



(D'acoz et al. 2004)



(Laure de Montety)

|                                   | <i>P. buchholzi</i> | <i>P. hystrix</i> | <i>P. polyacantha</i> |
|-----------------------------------|---------------------|-------------------|-----------------------|
| <b>Size</b>                       | Up to 22.5 mm       | Up to 30 mm       | Unknown               |
| <b>Rostrum</b>                    | Elongate            | Short             | Short                 |
| <b>Hind margin on peraeon 1-4</b> | Moderate tooth      | Elevate tooth     | Weak tooth            |

(D'Udekem et al. 2004)

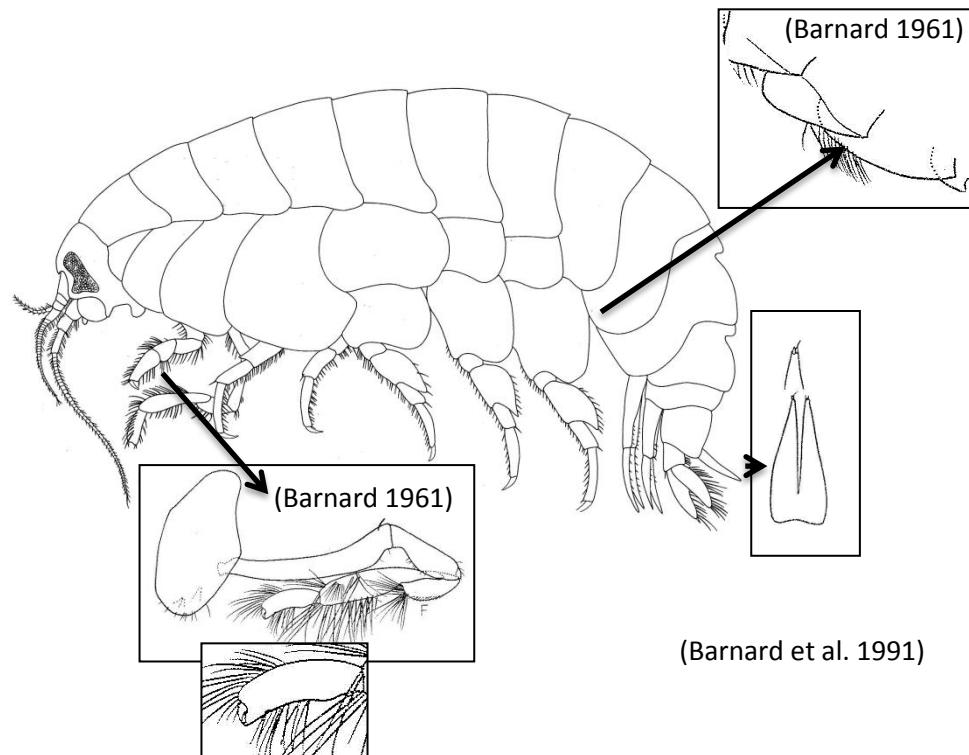
Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > Lysianassoidea (Superfamily) > **Eurytheneidae** (Family)

## *Eurythenes gryllus*

Lichtenstein in Mandt 1822

AphiaID: 102563

Unaccepted name: *Gammarus gryllus*



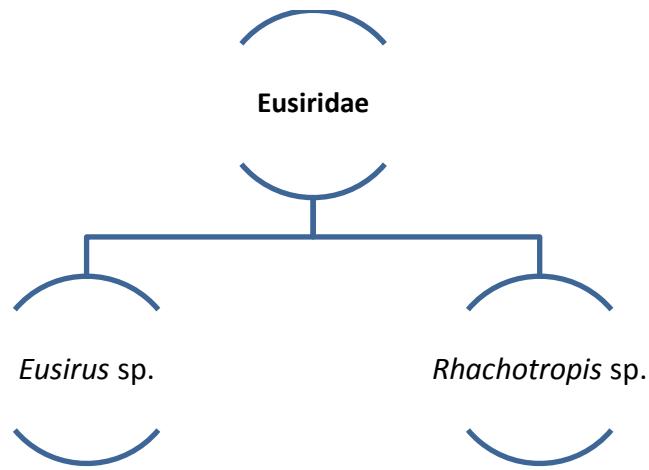
Size: up to 90 mm

Eyes very large, light orange

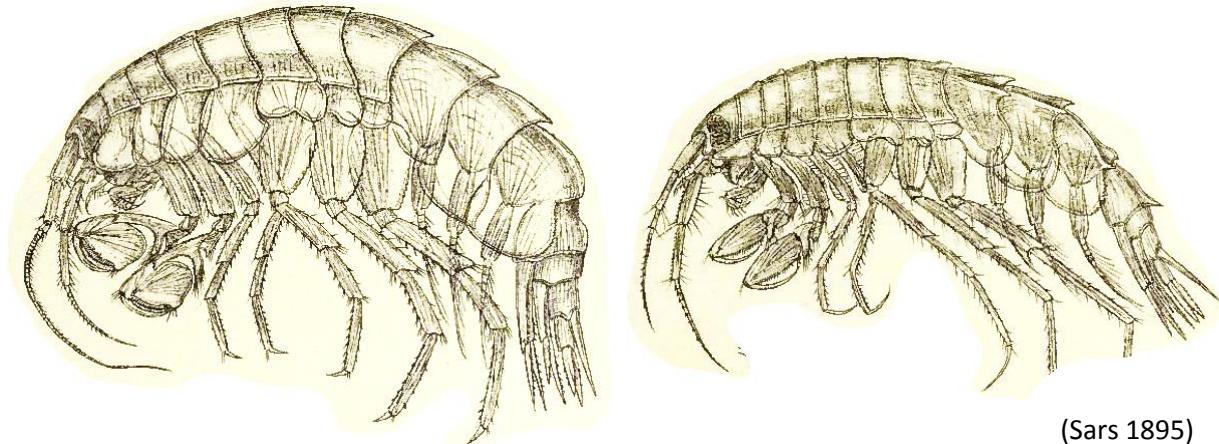
Gnathopod 2 is twice longer than gnathopod 1

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > Eusiroidea (Superfamily) > **Eusiridae** (Family)



Joint 6 of gnathopod allow distinguishing the 2 genus:



(Sars 1895)



|                                      | <i>Eusirus</i> sp.               | <i>Rhachotropis</i> sp. |
|--------------------------------------|----------------------------------|-------------------------|
| <b>Joint 6 of gnathopod attached</b> | To apex of 5 <sup>th</sup> joint | Normal outline          |

(Sars 1895)

*Eusirus* sp.



*Eusirus cuspidatus*

Krøyer 1845

AphiaID: 102199

Unaccepted name: –  
West shelf

*Eusirus holmi*

Hansen 1887

AphiaID: 102200

Unaccepted name: –

West basin, SE shelf slope, West  
shelf

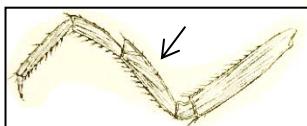
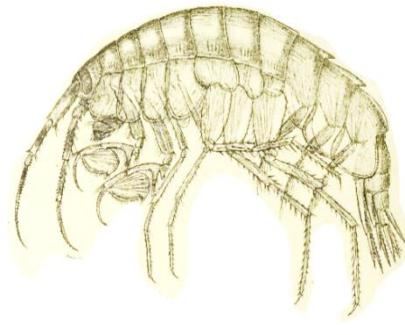
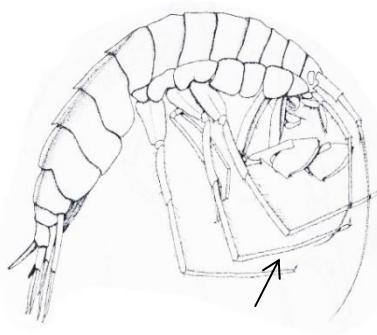
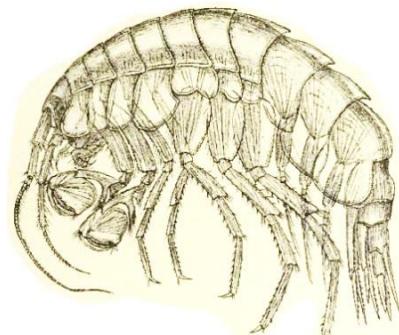
*Eusirus propinquus*

Sars 1893

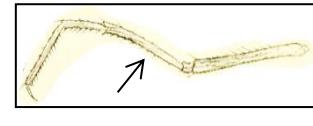
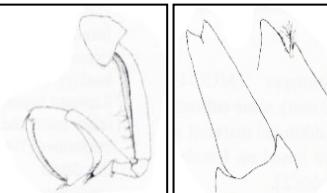
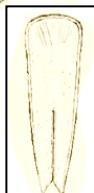
AphiaID: 102204

Unaccepted name: –

Distribution unknown



(Sars 1895)



(Sars 1895)



(Macnaughton et al. 2007)

*Eusirus cuspidatus*

Size up to 39 mm

*Eusirus holmi*

up to 53 mm

*Eusirus propinquus*

up to 12 mm

Telson cleft < 1/3 → *E. holmi*

Telson cleft > 1/3

Peraeopods 3 & 4, 4<sup>th</sup> joint not nearly twice as long as 5<sup>th</sup> → *E. cuspidatus*  
Peraeopods 3 & 4, 4<sup>th</sup> joint twice as long as 5<sup>th</sup> → *E. propinquus*

(Stebbing 1906)

## *Rhachotropis* sp.



### *Rhachotropis aculeata*

Lepechin 1780

AphiaID: 102224

Unaccepted name: –

West shelf, SW shelf, Se shelf  
slope



### *Rhachotropis helleri*

Boeck 1871

AphiaID: 102232

Unaccepted name: –

Distribution unknown



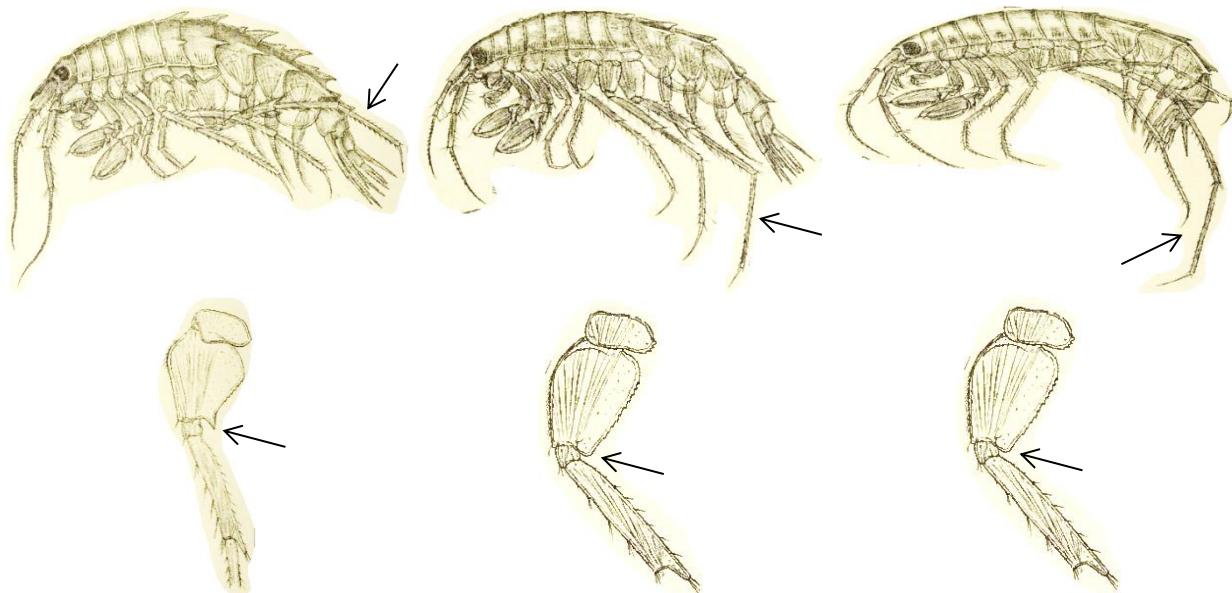
### *Rhachotropis macropus*

Sars 1893

AphiaID: 102239

Unaccepted name: –

Distribution unknown



(Sars 1895)

|  | <i>Rhachotropis aculeata</i> | <i>Rhachotropis helleri</i> | <i>Rhachotropis macropus</i> |
|--|------------------------------|-----------------------------|------------------------------|
| <b>Size</b>  | Up to 44 mm                  | Up to 12 mm                 | Up to 16 mm                  |
| <b>Lower hind angle<br/>of joint 2 on<br/>pereopod 7</b> | Acute                        | Not acute                   | Not acute                    |
| <b>Longer of<br/>pereopod 7</b>                          | Not as long as the body      | Not as long as the body     | Longer than body             |

(Stebbing 1906)

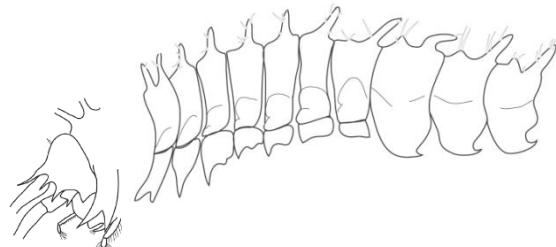
Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Lepechinellidae** (Family)

### *Lepechinella arctica*

Schellenberg 1926

AphiaID: 102450

Unaccepted name: –



Peraeon 1 with 2 mid-dorsal teeth

Peraeon 2-7 with only 1 dorsal spine

Coxal 1-7 decreasing in height

(Johansen et al. 2015)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Leucothoidae** (Family)

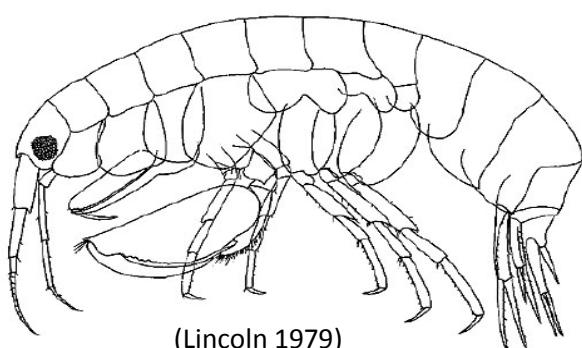
### *Leucothoe spinicarpa*

Abildgaard 1789

AphiaID: 102470

Unaccepted name: *Gammarus spinicarpa*

Greenland distribution: West shelf



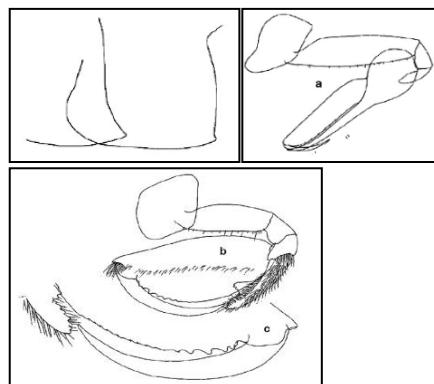
(Lincoln 1979)

Up to 18 mm  
Eyes red, oval

First joint of antenna 1 with acute apical process

Process of segment 5 spiniform on gnathopod 1

Process on segment 5 with serrate apex and setose on gnathopod 2



(Stebbing 1906)

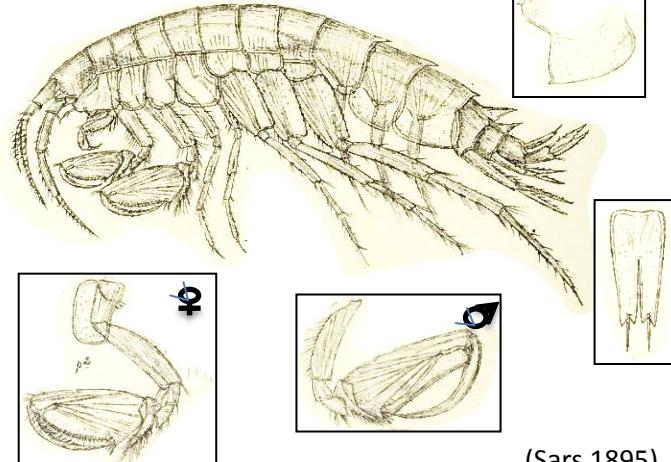
Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > Liljeborgioidea (Superfamily) > **Liljeborgiidae** (Family)

## *Liljeborgia fissicornis*

Sars 1858

AphiaID: 102481

Unaccepted name: –



(Sars 1895)

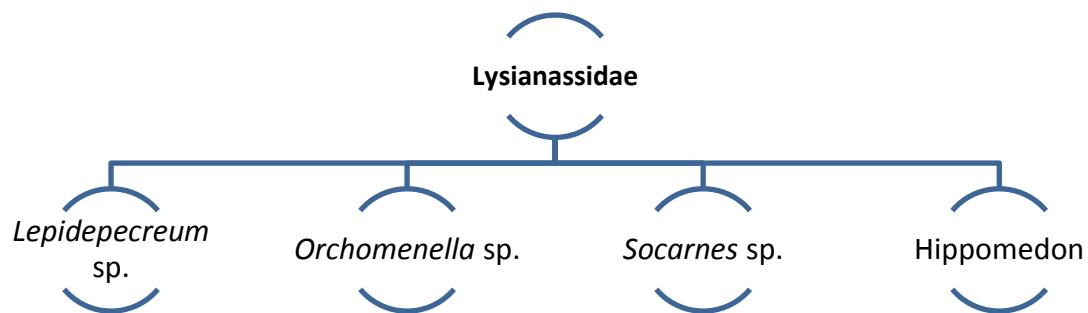
Body size: Up to 20mm.  
Pereon 1-5 with dorsal tooth  
Pleon 3 produced to a small tooth  
Eyes wanting.  
Gnathopods: sexual dimorphism

In female: Palm curved and oblique with projecting angle and strong palmar spines. Gnathopod 1 with 4 teeth at base of finger. Gnathopod 2 with 9 teeth at base of finger.

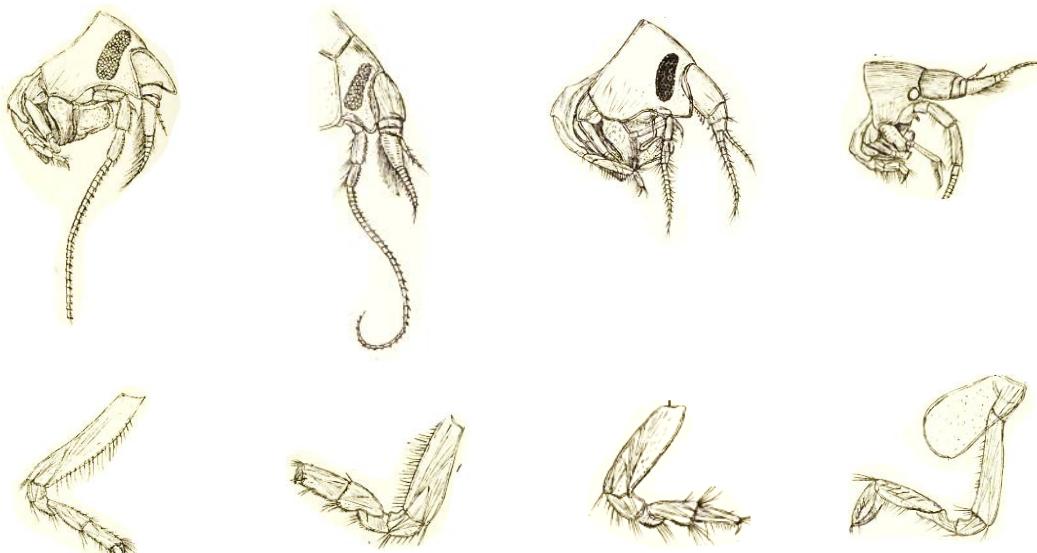
In male: Gnathopod 1 look like as ganthropod 1 of female. Gnathopod 2, joint 6 very large dilated at base then tapering. Palm long and slightly concave, finely ciliated and finger without teeth.

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > Lysianassoidea (Superfamily) > **Lysianassidae** (Family)



**Onisimus** and **Anonyx** are not anymore classified within this family. There are now **Uristidae**



(Sars 1895)

|                                | <i>Lepidepecreum</i> sp. | <i>Orchomenella</i> sp. | <i>Socarnes</i> sp. | <i>Hippomedon</i> sp. |
|--------------------------------|--------------------------|-------------------------|---------------------|-----------------------|
| <b>Carinate dorsally</b>       | Yes                      | No                      | No                  | No                    |
| <b>Joint 1 of antenna 1</b>    | Carinate produce         | Not carinate            | Not carinate        | Not carinate          |
| <b>Finger of gnathopod 1</b>   | Short                    | Short                   | Short               | Long                  |
| <b>Mandible, palp attached</b> | Behind molar             | Behind molar            | Behind molar        | Not behind molar      |
| <b>Branchial vesicles</b>      | Not applicable           | Simple                  | Complex             | Complex               |

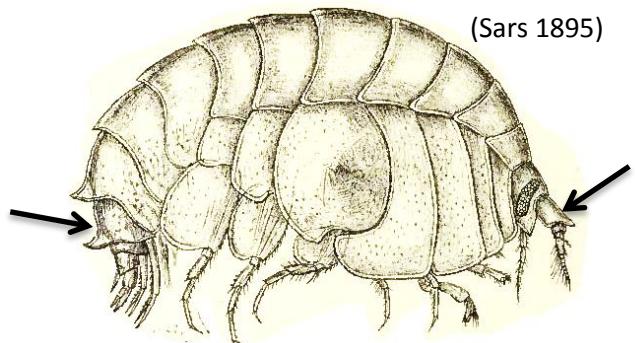
(Stebbing 1906)

## *Lepidepecreum umbo*

Göes 1866

AphiaID: 102603

Unaccepted name: *Lysianassa umbo*



Body size: Up to 11mm.

Color: Bright pink or red.

Dorsal carina extending to first joint of antenna 1.

Pleon 3 and urosome 1: carinate process acutely upturned.

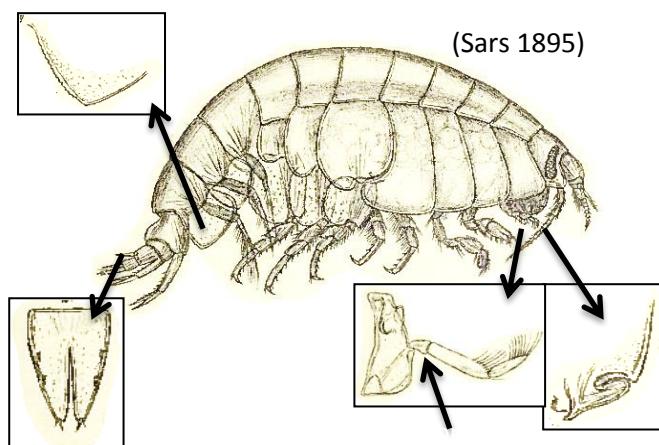
(Stebbing 1906)

## *Orchomenella pinguis*

Boeck 1861

AphiaID: 102696

Unaccepted name: –



Body size: Up to 7,5mm

Eyes present

Coxa 5 produced downward behind

(Stebbing 1906)

*Socarnes* sp.



*Socarnes bidenticulatus*

Bate 1858

AphiaID: 102722

Unaccepted names: *S. bidenticulatus ochotica*  
Gurjanova, 1962; *S. ovalis* Hoek, 1882

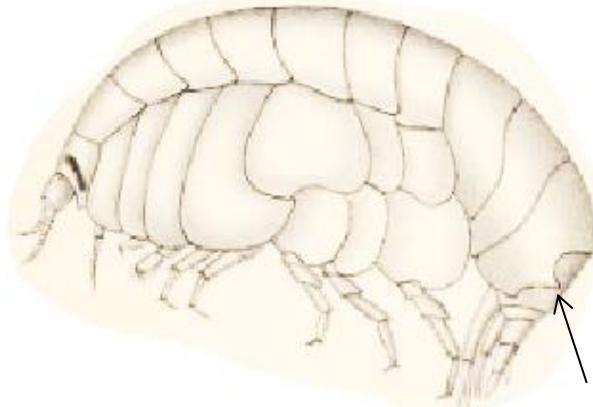


*Socarnes vahlii*

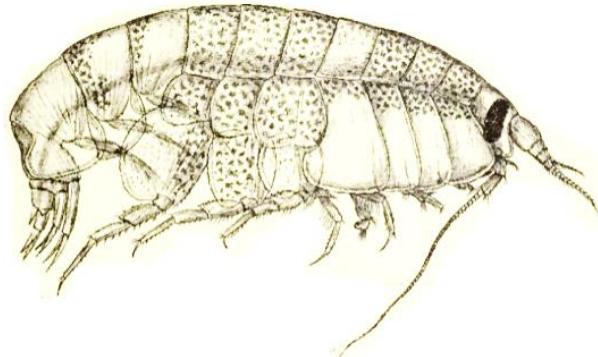
Krøyer 1838

AphiaID: 102726

Unaccepted name: –



(Sars 1885)



(Sars 1895)

|                        | <i>Socarnes bidenticulatus</i>                      | <i>Socarnes vahlii</i>                              |
|------------------------|---|---|
| <b>Size</b>            | Up to 36mm  | Up to 14mm  |
| <b>Pleon segment 3</b> | Postero-lateral margin with 2 triangular projection | Postero-lateral margin broadly rounded              |
| <b>Color</b>           | Not particular pattern                              | Whitish with broad transverse band of crimson spots |

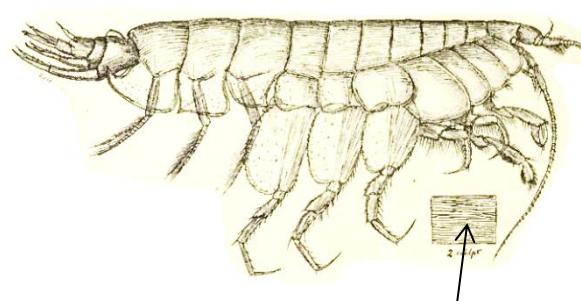
(Stebbing 1906)

*Hippomedon holbolli*

Krøyer 1846

AphiaID: 102573

Unaccepted name: –



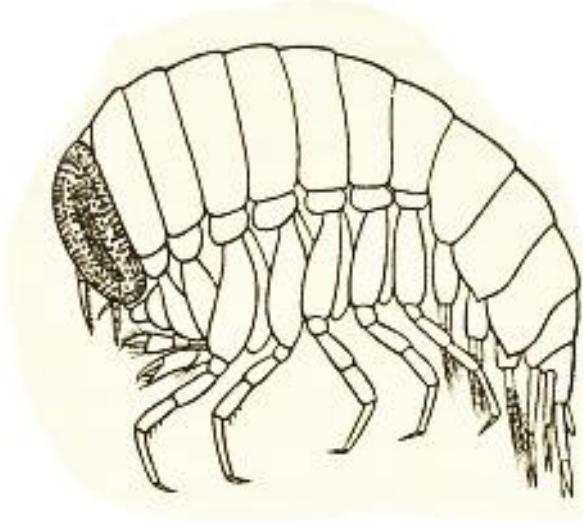
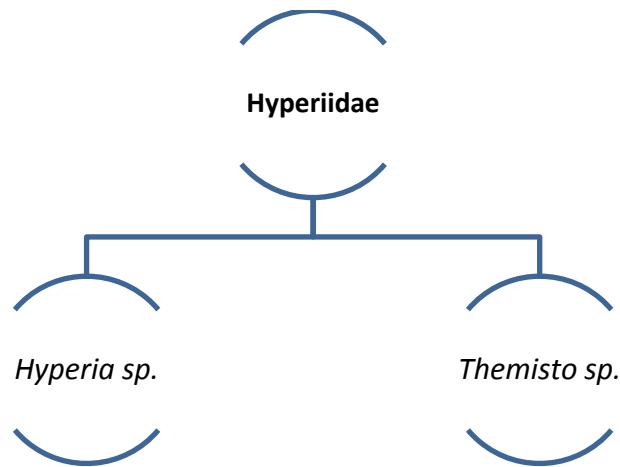
(Sars 1895)

body texture with  
horizontal stripe

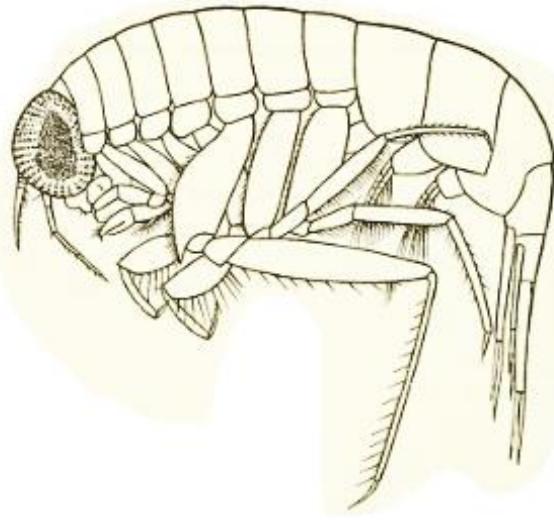
Body size: Up to 16mm  
Eyes with one conspicuous lens apiece

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Hyperiidea (Suborder) > Phronimoidea (Superfamily) > **Hyperiidae** (Family)



(Vinogradov et al. 1996)



(Vinogradov et al. 1996)

Pereopods allow distinguishing the 2 genus:

|                                     | <i>Hyperia</i> sp.      | <i>Themisto</i> sp. |
|-------------------------------------|-------------------------|---------------------|
| <b>Pereopod 5-7 VS Pereopod 3-4</b> | Differ little in length | Much longer         |

(Vinogradov et al. 1996)

*Hyperia* sp.



*Hyperia galba*

Montagu 1815

AphiaID: 103251

Unaccepted names: *Hyperia latreille*

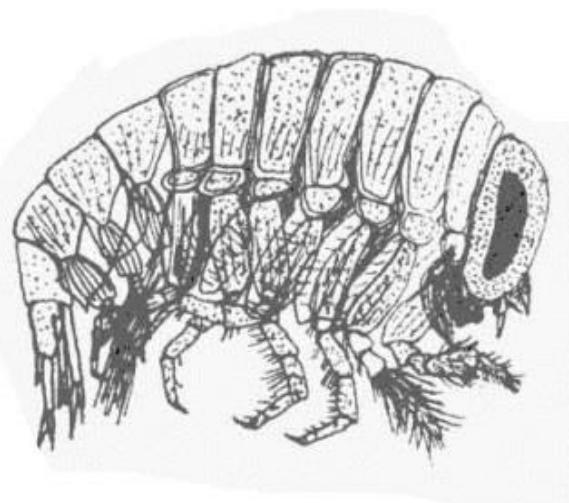


*Hyperia medusarum*

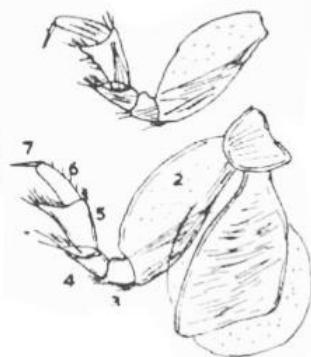
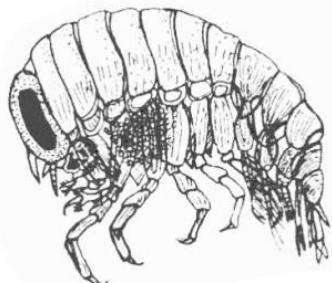
Müller 1776

AphiaID: 103253

Unaccepted name: *Hyperia histrix*, *Hyperia medusarum hystrix*



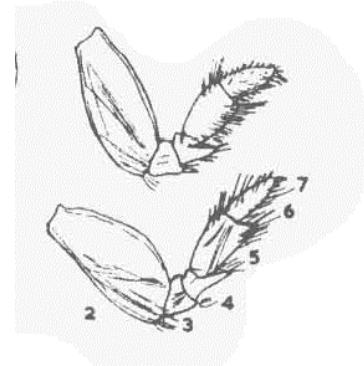
(Dunbar 1963)



*Hyperia galba*

pereopod 1

pereopod 2



*Hyperia medusarum*

|                     | <i>Hyperia galba</i>                                       | <i>Hyperia medusarum</i>                                  |
|---------------------|--|---|
| <b>Size</b>         | Up to 12mm   | Up to 20mm  |
| <b>Pereopod 1</b>   | Hand with short process                                    | Without process   |
| <b>Pereopod 1-2</b> | With strong setae and distinctly shorter than pereopod 3-7 | Densely setose and not markedly shorter than pereopod 3-7 |

(Dunbar 1963)

## *Themisto* sp.

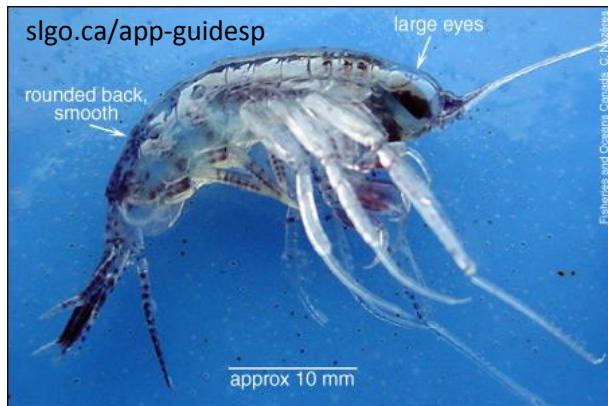


### *Themisto libellula*

Lichtenstein in Mandt 1822

AphiaID: 156452

Unaccepted names: *Euthemisto libellula*,  
*Parathemisto libellula*

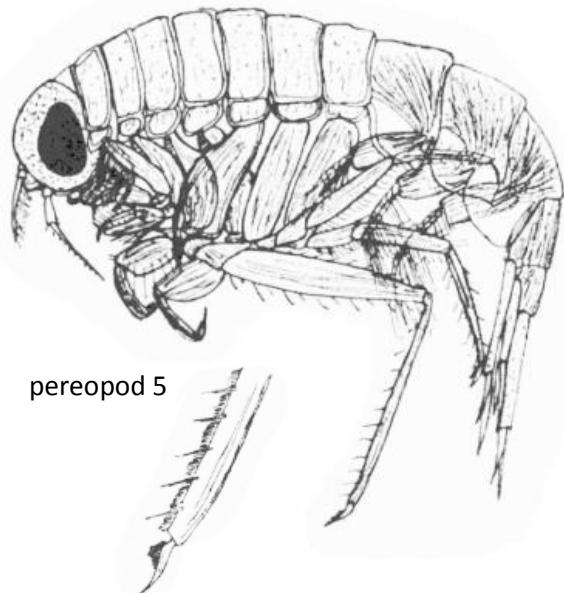


### *Themisto abyssorum*

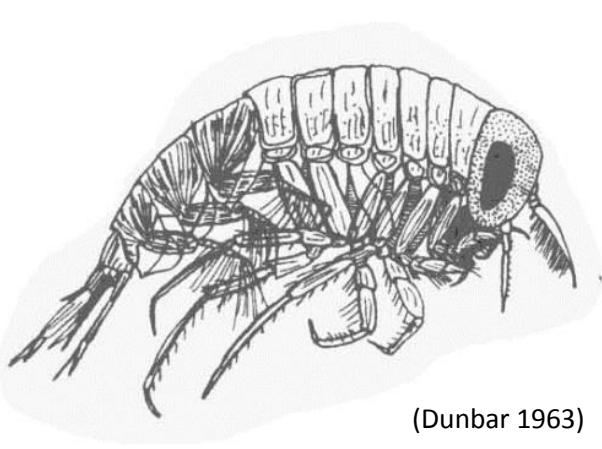
Boeck 1870

AphiaID: 103259

Unaccepted name: *Parathemisto oblivia*,  
*Parathemisto abyssorum*



pereopod 5



(Dunbar 1963)

|                                 | <i>Themisto libellula</i>                    | <i>Themisto abyssorum</i> |
|---------------------------------|--|---------------------------|
| <b>Size</b>                     | Up to 45mm                                   | Up to 22mm                |
| <b>Pereopod 5 VS Pereopod 6</b> | Longer                                       | Similar length            |
| <b>Dactyl of pereopod 5-6</b>   | Small setae on proximal end of anterior edge | Smooth                    |

(Dunbar 1963)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Hyperiidea (Suborder) > Physosomata (Infraorder) > Lanceoloidea (Superfamily) > **Megalanceolidae** (Family)

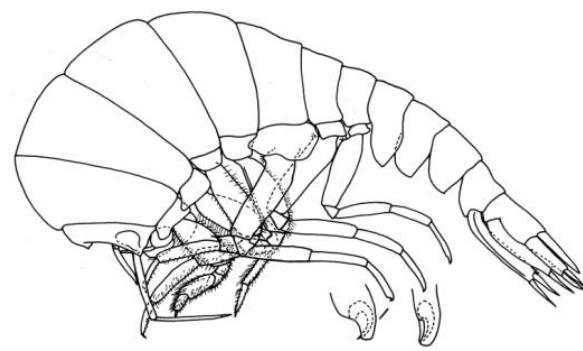
## *Megalanceola stephensi*

Chevreux 1920

AphiaID: 325364

Unaccepted name: *Lanceola stephensi*

Greenland distribution: SE shelf slope



Body size: Up to 64mm

Gnathopod 1-2: Articles 2-6 setose

Pereopod 3-4: Dactyl not retractable

Pereopod 5-7: Dactyl retractable

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Corophiida (Infraorder) > Caprellidira (Parvorder) > Caprelloidea (Superfamily) > **Caprellidae** (Family)

### *Aeginina longicornis*

Krøyer 1843

AphiaID: 101820

Unaccepted name: –

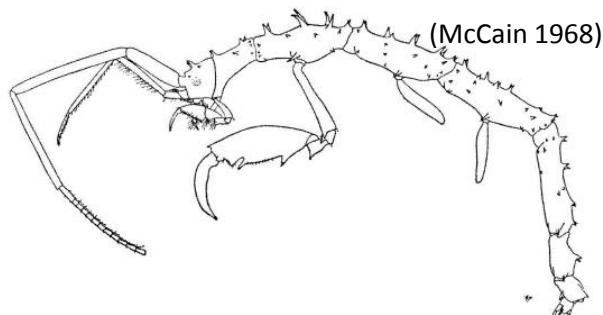
Greenland distribution: West shelf



Body size: Up to 54mm

Spines on head and pereonite 1 are paired

Antenna 1: Flagellum shorter than peduncle



Mandibular palp present

(Laubitz 1972)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Gammarida (Infraorder) > Gammaridira (Parvorder) > Gammoidea (Superfamily) > **Gammaridae** (Family)

### *Gammarus wilkitzkii*

Birula 1897

AphiaID: 102297

Unaccepted name: –

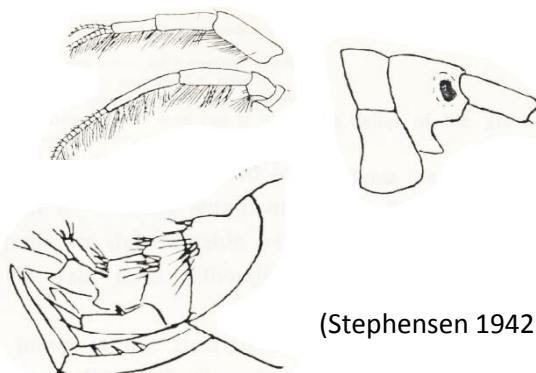
Greenland distribution: West shelf, SW shelf, SE shelf slop



Body size: Up to 40mm

Deep excavation above the base of antennae 1

Peduncule 1-3 densely beset with long setae



(Stephensen 1942)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Gammarida (Infraorder) > Gammaridira (Parvorder) > Gammaroidea (Superfamily) > **Gammaricanthidae** (Family)

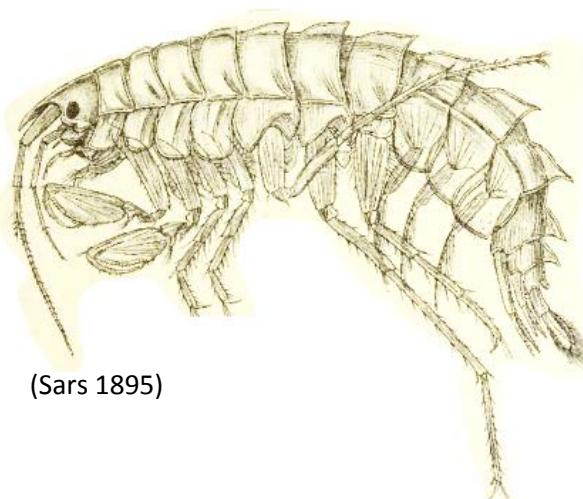
## *Gammaracanthus loricatus*

Sabine 1824

AphiaID: 102248

Unaccepted name: *Gammarus loricatus*

Greenland distribution: SW shelf



(Sars 1895)

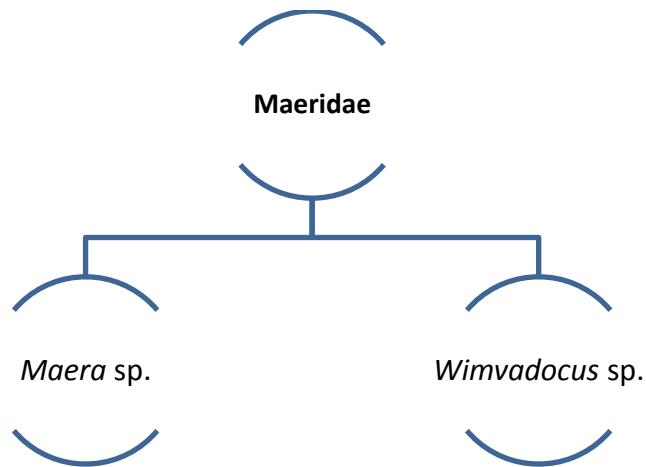
Body size: Up to 35mm

Rostrum curved produced beyond first joint of antenna 1

Pleon 2-3: Postero-lateral cornes acutely produced

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Hadziida (Infraorder) > Hadziidira (Parvorder) > Hadzioidea (Superfamily) > **Maeridae** (Family)



|                            | <i>Maera</i> sp.            | <i>Wimvadocus</i> sp.  |
|----------------------------|-----------------------------|------------------------|
| <b>Body</b>                | More slender                | Robust                 |
| <b>Palm of gnathopod 2</b> | Large, oblong, quadrangular | Large, oblong, oblique |
| <b>Maxilla 1 and 2</b>     | Not very setose (3-4 setae) | Very setose            |

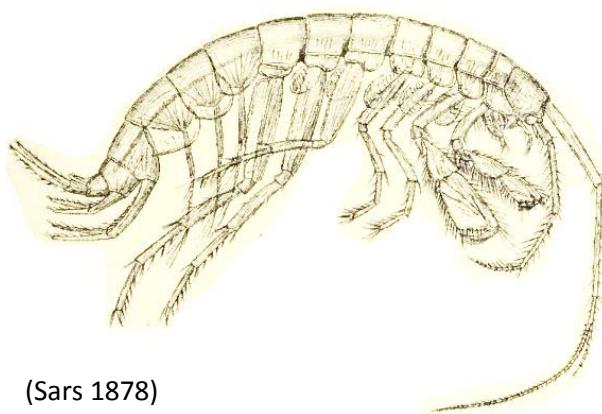
(Stebbing 1906)

## *Maera loveni*

Bruzelius 1859

AphiaID: 102820

Unaccepted name: –



Body size: Up to 26mm

Palm of gnathopod 1: subchelate

Palm of gnathopod 2: large, oblong, quadrangular

Pleon side plate 3 with tooth

If you need to look closer: maxillae 1 with 3-4 setae on inner plate

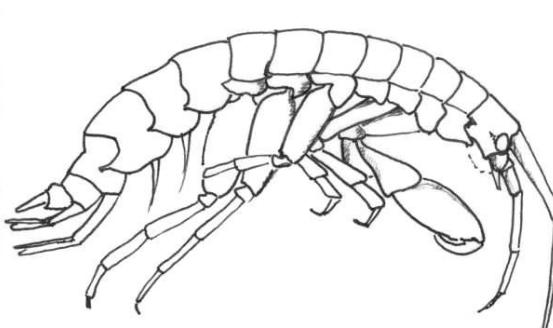
(Stebbing 1906)

## *Wimvadocus torelli*

Göes 1866

AphiaID: 535546

Unaccepted name: *Gammarus torelli*, *Ceradocus torelli*



Laure de Montety

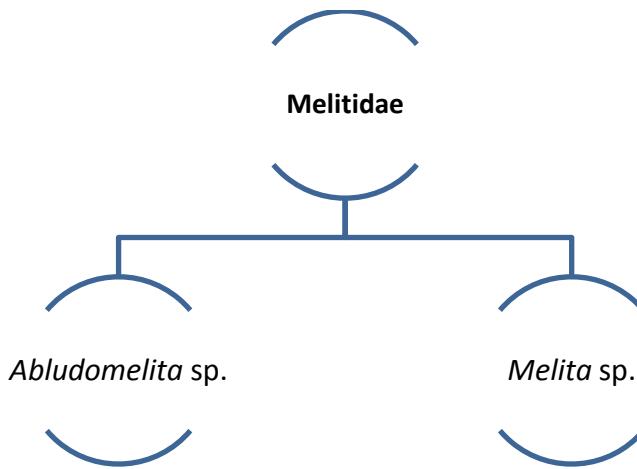
Body size: Up to 50mm

Pleon segment 1-3: postero-lateral corners with hooks

Palm of gnathopod 2 very large, oblong, and widening a little to the oblique

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Hadziida (Infraorder) > Hadziidira (Parvorder) > Hadzioidea (Superfamily) > **Melitidae** (Family)



**Characters separating these two genera are usually correct.**  
**Melitidae is a very various family and has a lot of exception. Need revision.**

|  | <i>Abludomelita</i> sp. | <i>Melita</i> sp. |
|--|-------------------------|-------------------|
| Dorsal oblique row of setae on inner lobe of maxilla 2 | Lacking                 | Usually present   |
| Second segment on the outer ramus of uropod 3          | Lacking                 | Usually present   |

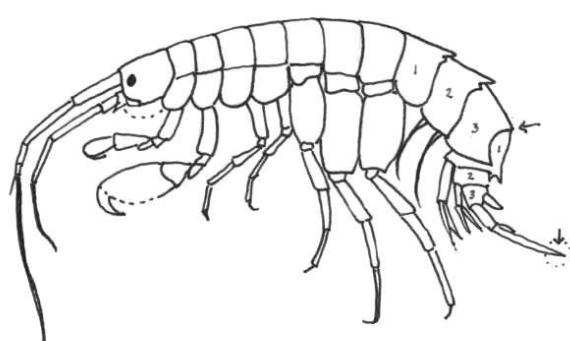
(Sawicki et al. 2005)

### *Abludomelita amoena*

Hansen 1888

AphiaID: 535959

Unaccepted name: *Melita amoena*



Laure de Montety

Body size: Up to 8.5mm  
 Color: Whitish  
 Pleonites 1-2 and urosomite 1 with 3 teeth dorsodistally  
 Pleonite 3: Lacking dorsodistal tooth  
 Uropod 3 biramous but other ramus uniarticulate

(Hirayama 1987)

*Melita* sp.  
(West shelf)



*Melita formosa*

Murdoch 1866

AphiaID: 102838

Unaccepted names: -



[www.marinespecies.org](http://www.marinespecies.org)

*Melita dentata*

Krøyer 1842

AphiaID: 102837

Unaccepted name: -



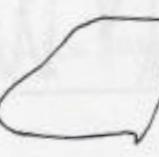
[www.boldsystem.org](http://www.boldsystem.org)

1 mm

|                  | <i>Melita formosa</i>         | <i>Melita dentata</i>                  |
|------------------|-------------------------------|--|
| <b>Body size</b> | Up to 21mm                    | Up to 22mm                             |
| <b>Pleon</b>     | Segment 2-3 with single tooth | With 3 to 11 teeth, median the largest |
| <b>Urosome</b>   | Segment 1 with 3 teeth        | With 3 to 11 teeth, median the largest |

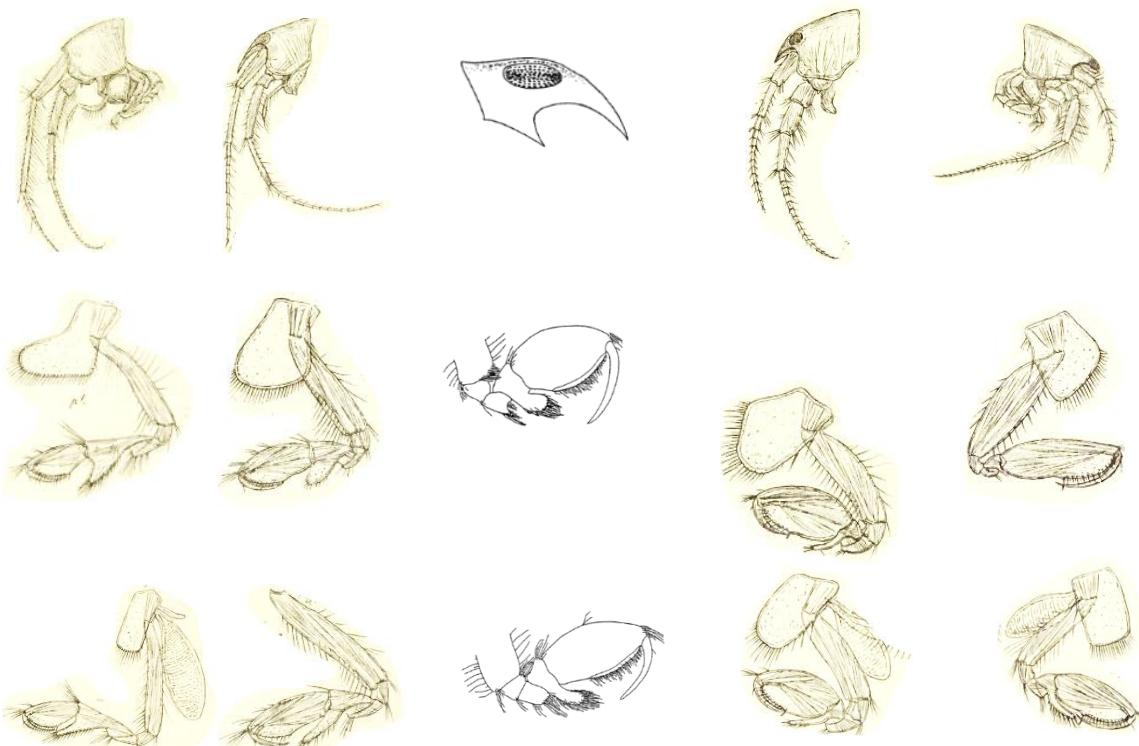
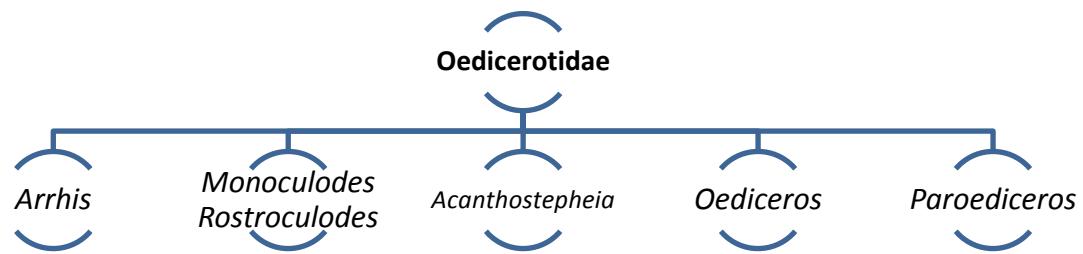
(Stebbing 1906)

*Melita dentata* & *Melita formosa*

|                                   | <u>dentata</u>  | <u>formosa</u>   |
|-----------------------------------|---|--|
| oeil                              | FONCÉ ET GRAND  | MOYENNEMENT FONCÉ<br>PETIT   |
| CONTOUR ANT.<br>DE LA TÊTE        |    |    |
| P.1 SEGMENTS<br>[6-7]             |    |    |
| P.1, PLAQUE<br>COIALE             |   |   |
| P.2<br>SEGMENT<br>[6-7]           |  |  |
|                                   |  |  |
| MÉASOME<br>[1-3]                  |  |  |
| UROSUME<br>[1-2]                  |  |  |
| PLAQUE LATÉRALE<br>DES MÉASOME 3. |   |  |

(Brunel)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Oedicerotidae** (Family)



(Sars 1895, Keast et al. 1990)

|                               | <b>Arrhis</b>   | <b>Monoculodes<br/>Rostroculodes</b> | <b>Acanthostepheia</b> | <b>Oediceros</b> | <b>Paroediceros</b> |
|-------------------------------|-----------------|--------------------------------------|------------------------|------------------|---------------------|
| <b>Frontal process (head)</b> | Without         | With                                 | With                   | With             | With                |
| <b>Eyes</b>                   | Absent          | Present                              | Present                | Present          | Present             |
| <b>Dorsal surface</b>         | Even            | Even                                 | Dentate/multicarinate  | Even             | Even                |
| <b>Joint 5 (gnathopo 1)</b>   | With projection | With projection                      | With projection        | With projection  | Without projection  |
| <b>Gnathopod 1-2</b>          | Alike           | Different                            | Alike                  | Alike            | Different           |

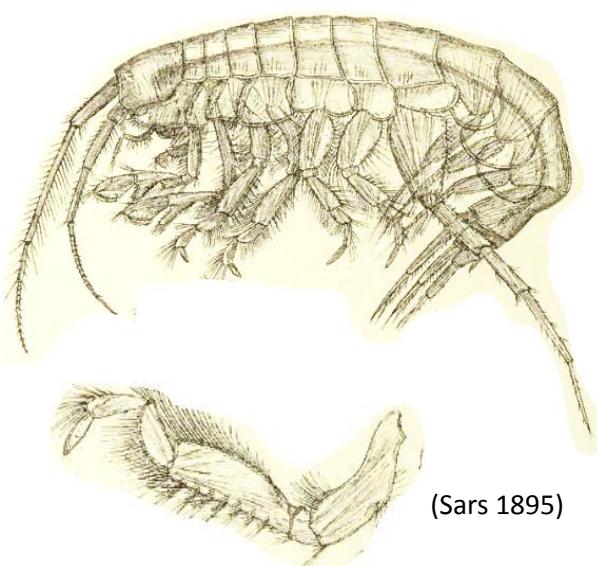
(Brunel)

*Arrhis phyllonyx*

Sars 1858

AphiaID: 102870

Unaccepted name: *Leucothoe phyllonyx*



Body size: Up to 20mm

Antenna 1: Peduncular segment 2 much longer than segment 1-3

Tumid anteriorly, front truncate

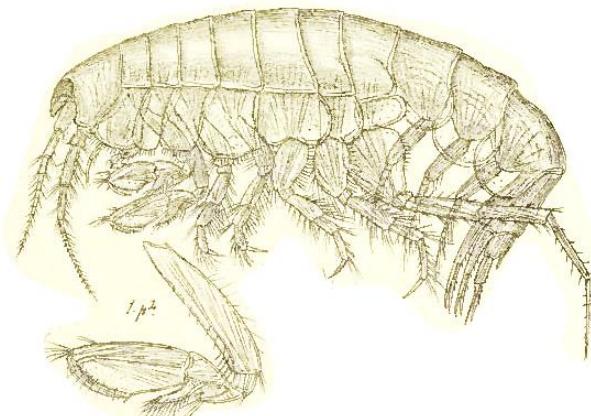
Dactyl of pereopod 3-6 large and lanceolate

(Stebbing 1906)

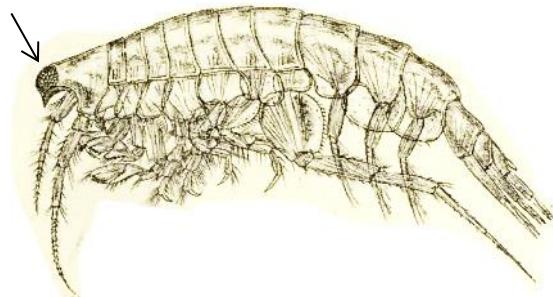
*Monoculodes* sp.  
*Rostroculodes* sp.



*Monoculodes latimanus*  
Goës 1866  
AphialID: 102888  
Unaccepted name: -



*Rostroculodes schneideri*  
Sars 1895  
AphialID: 423729  
Unaccepted name: *Monoculodes schneideri*



(Sars 1895)

|                              | <i>Monoculodes latimanus</i>            | <i>Rostroculodes schneideri</i> |
|------------------------------|---|---------------------------------|
| <b>Body size</b>             | Up to 7mm                               | Up to 6mm                       |
| <b>Rostrum</b>               | Short, not strongly deflexed            | Abruptly deflexed               |
| <b>Eyes</b>                  | Very large, protuberant                 | Small, rounded                  |
| <b>Joint 5 (Gnathopod 2)</b> | Small reaching beyond middle of joint 6 | Reaching palm of joint 6        |

(Stebbing 1906)

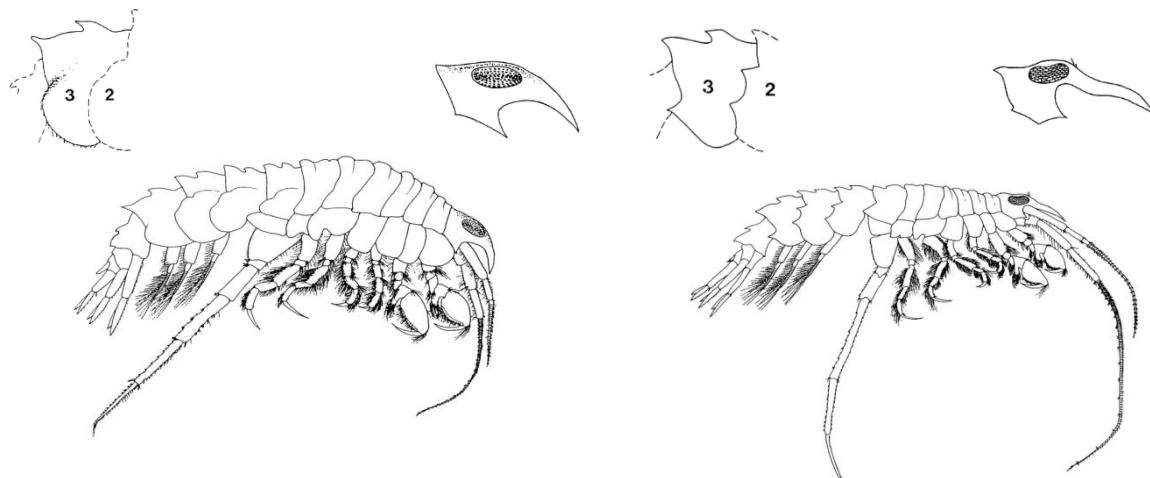
*Acanthostepheia* sp.



*Acanthostepheia behringiensis*  
Lockington 1877  
AphidID: 102862  
Unaccepted name: *Acanthostepheia pulchra*



*Acanthostepheia malmgreni*  
Goës 1866  
AphidID: 102864  
Unaccepted name: –



(Keast et al. 1990)

|                                  | <i>Acanthostepheia behringiensis</i> | <i>Acanthostepheia malmgreni</i> |
|----------------------------------|--------------------------------------|----------------------------------|
| <b>Size</b>                      | Up to 37mm                           | Up to 45mm                       |
| <b>Epimeral plates 2 &amp; 3</b> | rounded                              | Acute                            |
| <b>Eyes</b>                      | Parallel                             | Divergent                        |

(Stebbing 1906)

*Oediceros* sp.

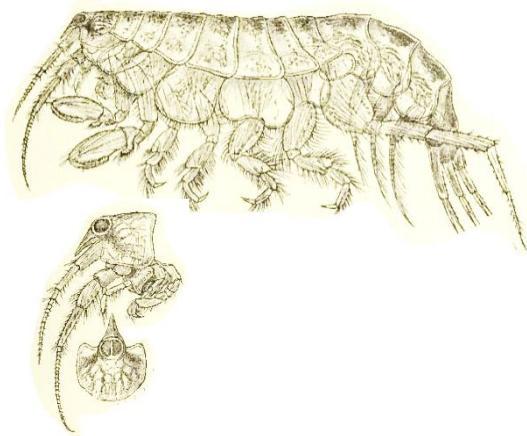


*Oediceros saginatus*

Krøyer 1842

AphialID: 102908

Unaccepted name: -

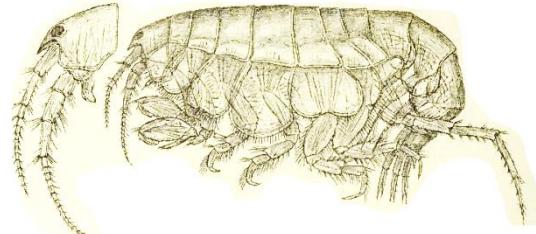


*Oediceros borealis*

Boeck 1871

AphialID: 102906

Unaccepted name: -



(Sars 1895)

|                | <i>Oediceros saginatus</i> | <i>Oediceros borealis</i> |
|----------------|----------------------------|---------------------------|
| <b>Size</b>    | Up to 30mm                 | Up to 9mm                 |
| <b>Rostrum</b> | Geniculate                 | Gently curved             |

(Stebbing 1906)

*Paroediceros* sp.



*Paroediceros lynceus*

Sars 1858

AphiaID: 102911

Unaccepted name: *Oediceros lynceus*,  
*Paroediceros nubilatus*



[www.marinespecies.org](http://www.marinespecies.org)

*Paroediceros propinquus*

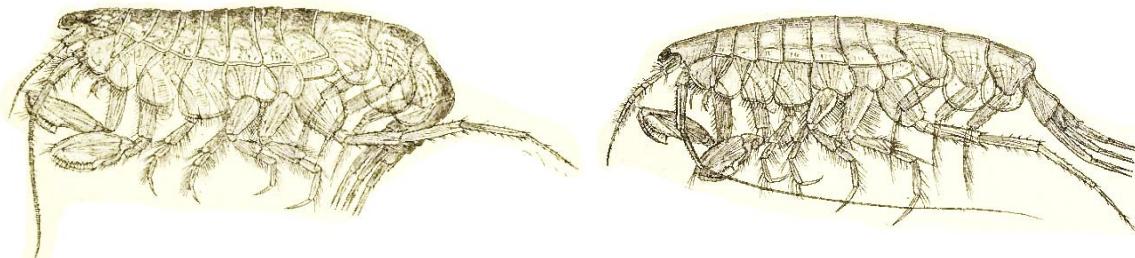
Goës 1866

AphiaID: 102913

Unaccepted name: *Paroediceros microps*



[www.boldsystems.org](http://www.boldsystems.org)



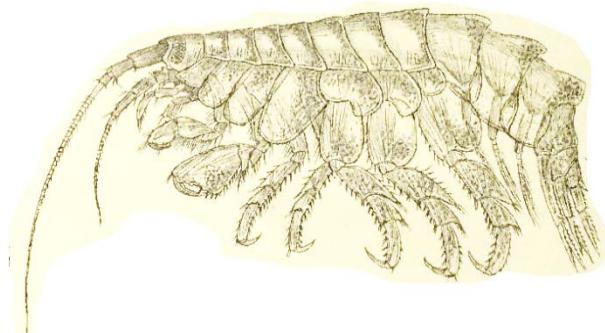
(Sars 1895)

|                      | <i>Paroediceros lynceus</i> | <i>Paroediceros propinquus</i> |
|----------------------|-----------------------------|--------------------------------|
| <b>Size</b>          | Up to 25mm                  | Up to 11mm                     |
| <b>Color of body</b> | Transverse bands            | No colour band                 |

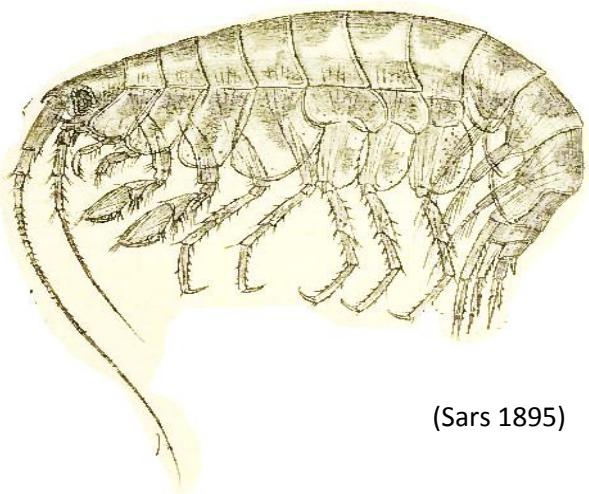
(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Pleustidae** (Family)

*Stenopleustes* sp.



*Pleusymtes* sp.



(Sars 1895)

Parapleustinae



[www.boldsystems.org](http://www.boldsystems.org)

Pleustinae



[www.boldsystems.org](http://www.boldsystems.org)

Pleusymtinae



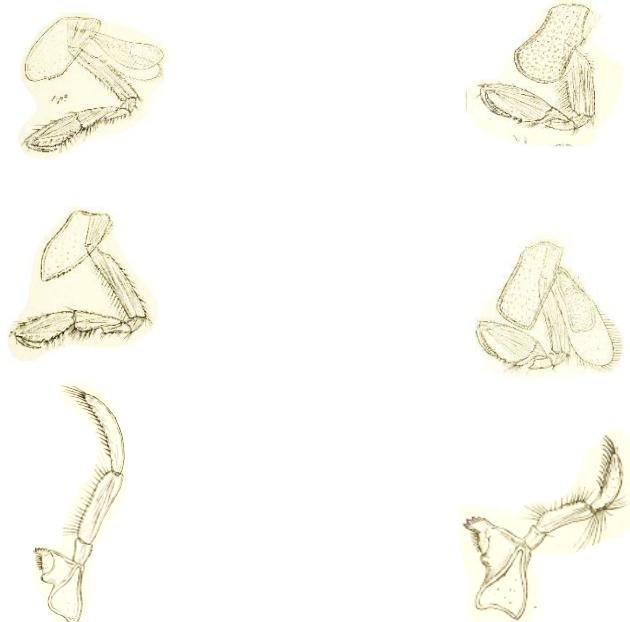
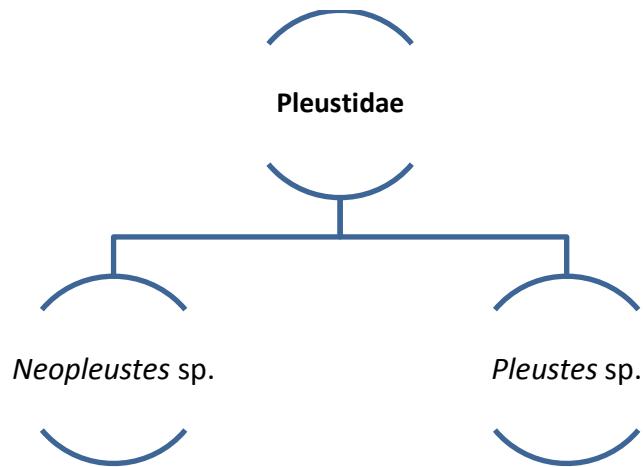
[www.boldsystems.org](http://www.boldsystems.org)

Neopleustinae



[www.boldsystems.org](http://www.boldsystems.org)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Pleustidae** (Family)



(Sars 1895)

**Specimens of this family need to be dissected  
for identification to the species level.**

|                 | <i>Neopleustes</i> sp. | <i>Pleustes</i> sp. |
|-----------------|------------------------|---------------------|
| Gnathopod 1-2   | Moderate size          | Powerfull           |
| Mandibular palp | Large                  | Moderate size       |

(Stebbing 1906)

## *Neopleustes pulchellus*

Krøyer 1846

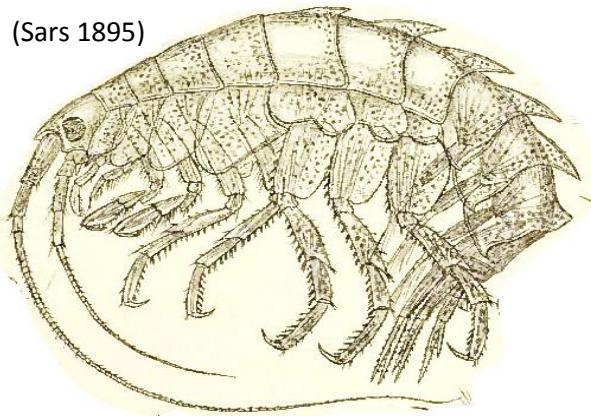
AphiaID: 102999

Unaccepted name: *Amphitoe pulchella*



[www.boldsystems.org](http://www.boldsystems.org)

(Sars 1895)



Body size: Up to 17mm

Head with blunt rostrum

Sharp with compressed teeth on pereon segment 5-7 and sometimes on segment 4

Similar teeth on pleon 1-2 and pleon 3 with lamellar upturned extension

Coxal plate 1 tapering and coxal plate 2 rounded apically with serrate margin

(Stebbing 1906)

## *Pleustes (Pleustes) panoplus*

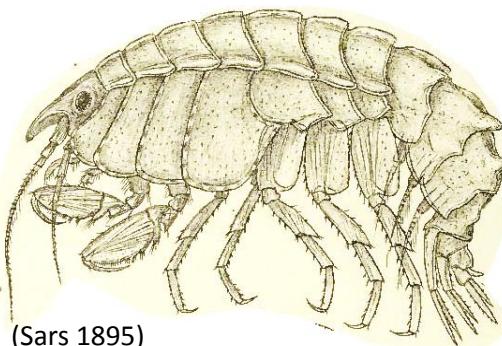
Krøyer 1838

AphiaID: 549692

Unaccepted name: *Ampithoe panopla*



[www.marinespecies.org](http://www.marinespecies.org)



(Sars 1895)

Body size: Up to 27mm

Color: Dark brown or whitish

Head with rostrum large, obtuse or subacute and carinate below

Body dorsally carinate, strongly on pereon which also has lateral margins carinate

Pleon 1-3 and urosome 1 and 3 with pair of dorsal projections

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Stegocephalidae** (Family)



### *Stegocephalus* sp.



#### *Stegocephalus inflatus*

Krøyer 1842

AphiaID: 103105

Unaccepted name: –

West shelf, SW shelf, SE shelf slope



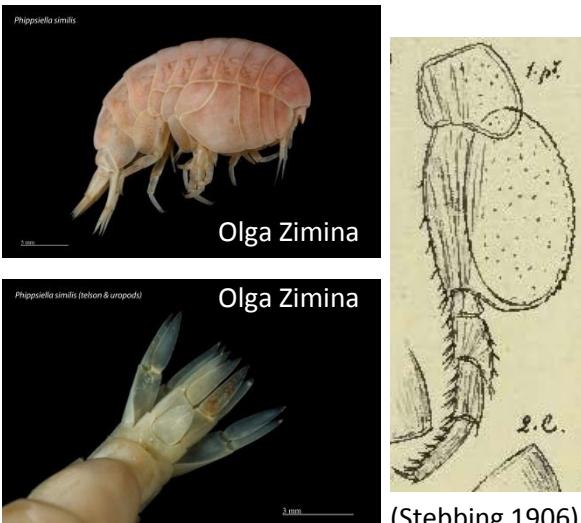
#### *Stegocephalus similis*

Sars 1891

AphiaID: 103106

Unaccepted name: *Phippsiella similis*

Distribution unknown



If < 10 mm: specimen must be checked under magnification for identification.

|                           | <i>Stegocephalus inflatus</i>       | <i>Stegocephalus similis</i>        |
|---------------------------|-------------------------------------|-------------------------------------|
| <b>Size</b>               | Up to 47 mm                         | Up to 12 mm                         |
| <b>Peraeropod 7</b>       | Basis acute                         | Basis rounded                       |
| <b>Pleon side plate 3</b> | Lower margin serrate, hinder smooth | Lower margin smooth, hinder serrate |

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > **Synopiidae** (Family)

*Syrrhoe crenulata*

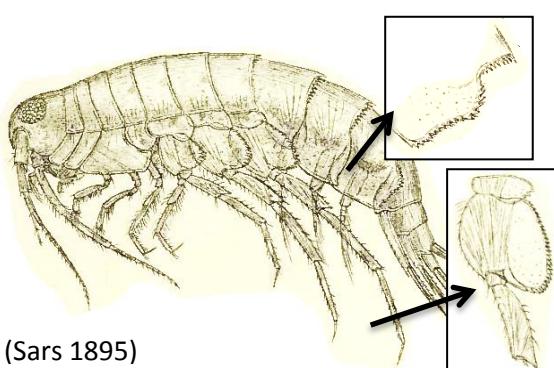
Göes 1866

AphiaID: 103188

Unaccepted name: –



[www.marinespecies.org](http://www.marinespecies.org)



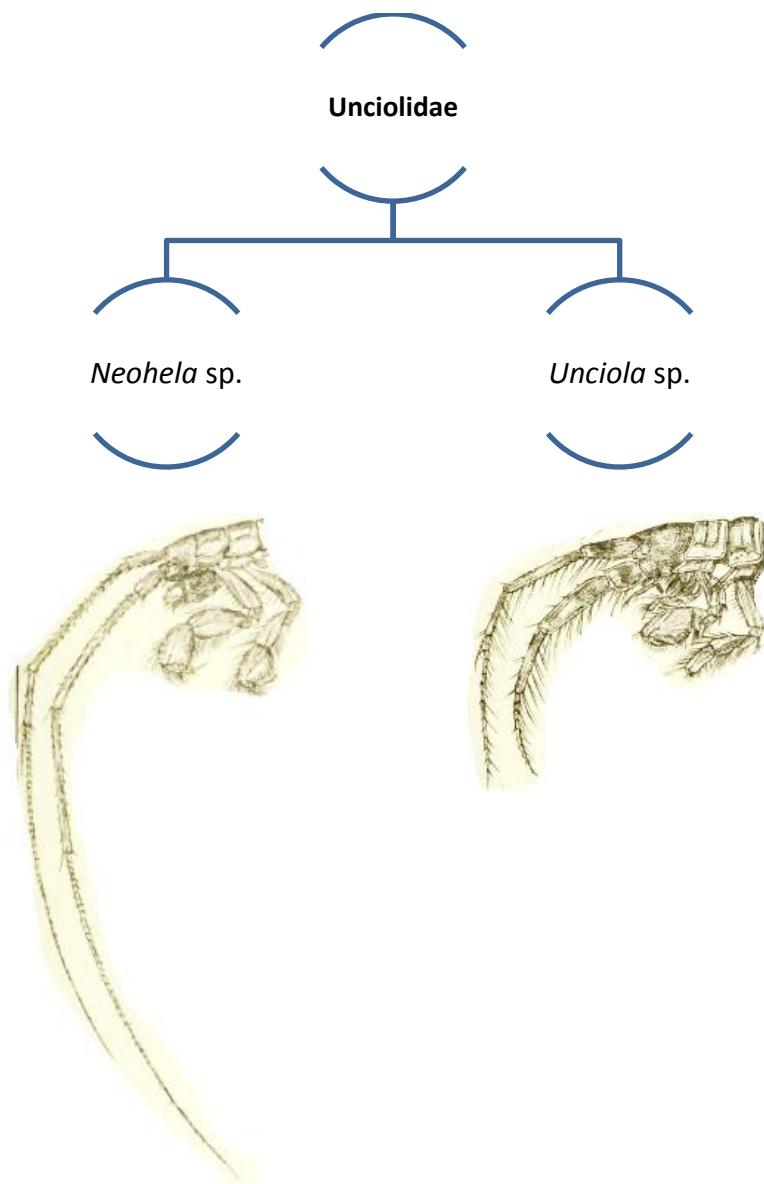
(Sars 1895)

Body size: Up to 10mm

Pleon segment 3, postero-lateral margin wholly serrate

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Corophiida (Infraorder) > Corophiidira (Parvorder) > Aoroidea (Superfamily) **Unciolidae** (Family)



Antennae allow distinguishing the 2 genus:

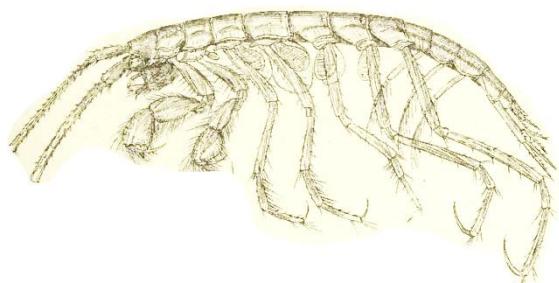
|                 | <i>Neohela</i> sp. | <i>Unciola</i> sp. |
|-----------------|--------------------|--------------------|
| <b>Antennae</b> | Very long          | Not very elongate  |

## *Neohela monstrosa*

Boeck 1861

AphiaID: 102108

Unaccepted name: –



(Sars 1895)

Body size: Up to 30mm

Eyes with opaque whitish pigment and impectly developed

Antenna very long

Postero-lateral angles absent on pleon 3

Telson triangular

(Stebbing 1906)

## *Unciola leucopis*

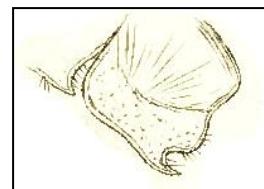
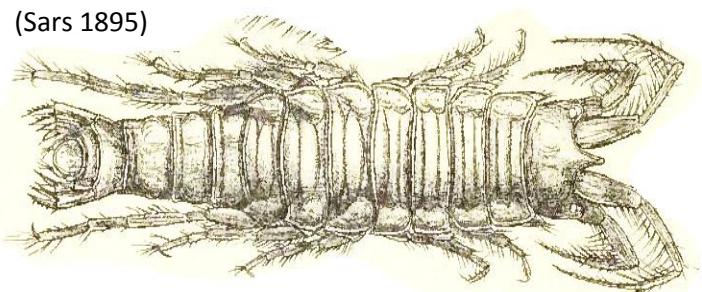
Krøyer 1845

AphiaID: 102059

Unaccepted name: –



(Sars 1895)



Body size: Up to 13mm

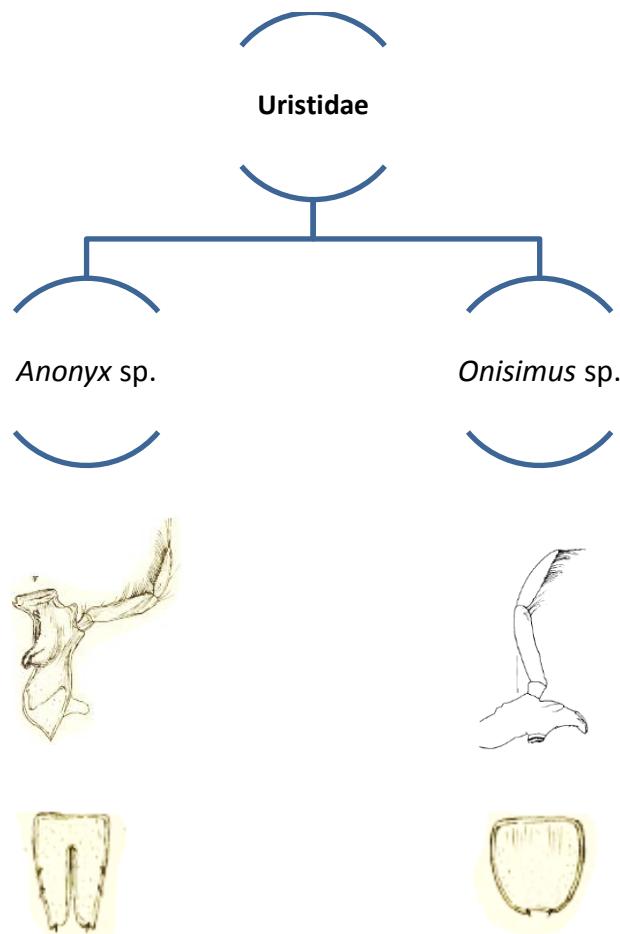
Eyes small rounded

Pleon segment 3 with postero-lateral cornes acute with sinus

Telson rounded

(Stebbing 1906)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Gammaridea (Suborder) > Lysianassoidea (Superfamily) > **Uristidae** (Family)



(Sars 1895) (Lowry et al. 1993)

**These genera need to be looked under dissecting scope  
for a species level identification (especially for molar)**

|                                    | <i>Anonyx</i> sp.                          | <i>Onisimus</i> sp.            |
|------------------------------------|--|--------------------------------|
| <b>Body size</b>                   | Up to 45mm                                 | Up to 15mm                     |
| <b>Molar</b>                       | Prominent, conically produced and ciliated | Strong                         |
| <b>Tooth on pleon side plate 3</b> | Well developed                             | Small                          |
| <b>Telson</b>                      | Deeply cleft (>50%)                        | Entire or weakly cleft (<=50%) |
| <b>Uropod 2</b>                    | Constricted                                | Not constricted                |

(Stebbing 1906)

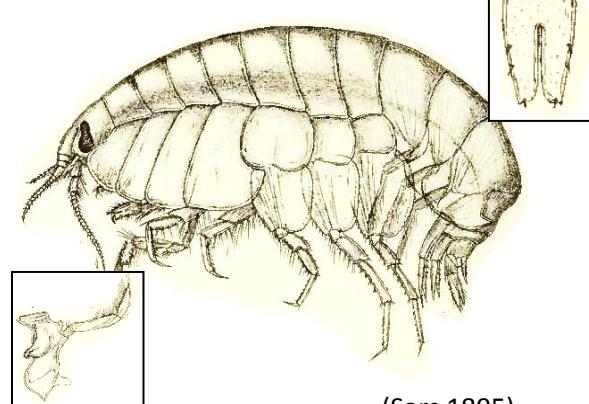
*Anonyx* sp.

Krøyer 1838

AphiaID: 101592

Unaccepted name: –

Greenland distribution: SE shelf slope, SW shelf, West shelf



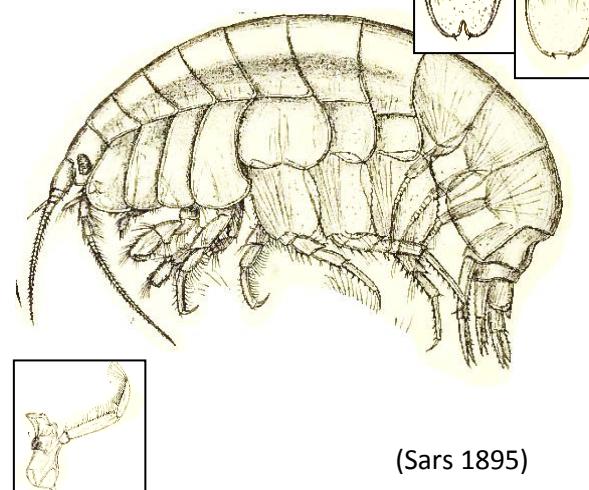
**Need to be looked under dissecting scope for a species level identification**

*Onisimus* sp.

Boeck 1871

AphiaID: 101631

Unaccepted name: –



**Need to be looked under dissecting scope for a species level identification**

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Amphipoda (Order) > Senticaudata (Suborder) > Hadziida (Infraorder) > Hadziidira (Parvorder) > Calliopoioidea (Superfamily) **Calliopiidae** (Family)

*Cleippides* sp.



*Cleippides quadricuspis*

Heller 1875

AphiaID: 102181

Unaccepted name: –

Greenland distribution: SE shelf slope

*Cleippides tricuspis*

Krøyer 1846

AphiaID: 102182

Unaccepted name: *Acanthonotus tricuspis*

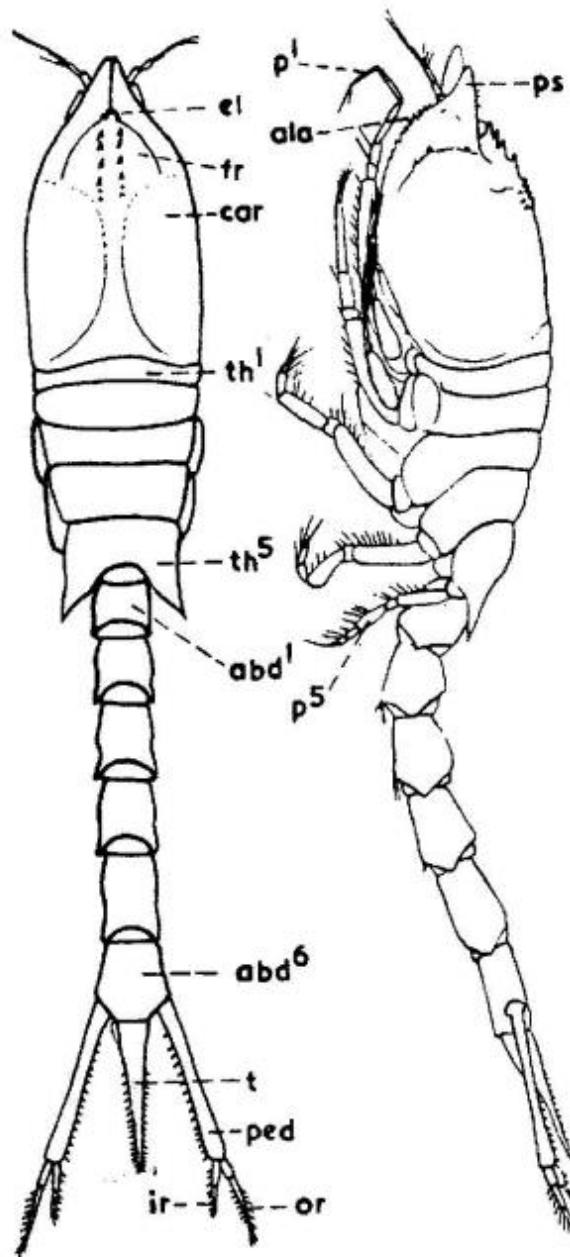
Distribution unknown



|   | <i>Cleippides quadricuspis</i> | <i>Cleippides tricuspis</i> |
|---|--------------------------------|-----------------------------|
| <b>Body size</b>  | Up to 52mm                     | >16mm                       |
| <b>Number of segments produced</b><br><b>dorsal tooth</b> | 4                              | 3                           |

(Stebbing 1906)

## CUMACEA



1(2) Independent telson present. Telson with lateral spines and 2 apical spines [**DIASTYLIDAE**]

2(1) No independent telson. Male with 2 pairs of pleopods [**LEUCONIDAE**]

(Jones 1957)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Cumacea (Order) > **Diastylidae** (Family)

***Diastylis* sp.**  
(West shelf)



***Diastylis goodsiri***

Bell 1855

AphiaID: 110479

Unaccepted name: –

SW shelf, West shelf



BREA

***Diastylis scorpioides***

Lepechin 1780

AphiaID: 110489

Unaccepted name: –

West shelf



[www.marinespecies.org](http://www.marinespecies.org)

***Diastylis rathkei***

Krøyer 1841

AphiaID: 110487

Unaccepted name:

*Cumma rathkii*

unknown



[vedenin-diver.narod.ru](http://vedenin-diver.narod.ru)

***Diastylis edwardsii***

Krøyer 1841

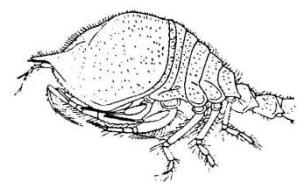
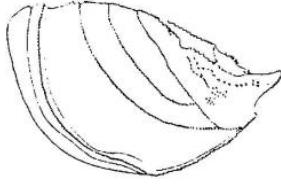
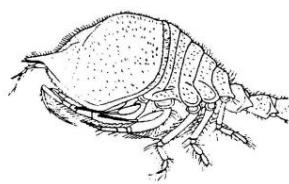
AphiaID: 110477

Unaccepted names: –

unknown



[www.boldsystems.org](http://www.boldsystems.org)

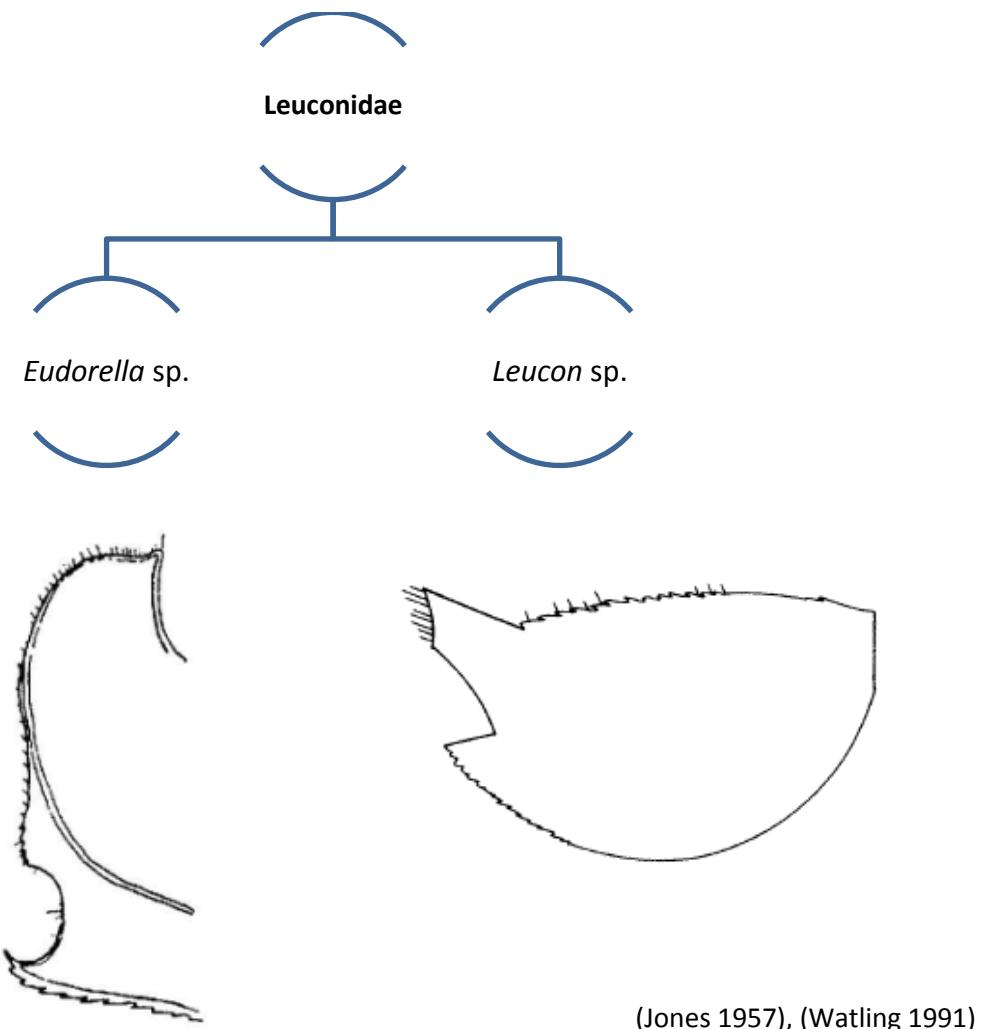


(Jones 1957)

|   | <b><i>D. goodsiri</i></b> | <b><i>D. scorpioides</i></b> | <b><i>D. rathkei</i></b> | <b><i>D. edwardsii</i></b> |
|---|---------------------------|------------------------------|--------------------------|----------------------------|
| <b>Body size</b>                        | Up to 35mm                | Up to 20mm                   | Up to 22mm               | Up to 15mm                 |
| <b># folds</b>                          | 0                         | >2                           | 0                        | >2                         |
| <b>Insection fold 2 on 1 (carapace)</b> | -                         | Rounded                      | -                        | Acute                      |
| <b>Beset hair</b>                       | Yes                       | No                           | No                       | No                         |
| <b>Pereon 5</b>                         | Not acute                 | Not acute                    | Acute                    | Not acute                  |

(Jones 1957)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Cumacea (Order) > **Leuconidae** (Family)



(Jones 1957), (Watling 1991)

Pseudorostrum allows distinguishing the 2 genus:

|                      | <i>Eudorella</i> sp.   | <i>Leucon</i> sp. |
|----------------------|------------------------|-------------------|
| <b>Pseudorostrum</b> | No distinct (truncate) | Distinct          |

(Jones 1957)

*Eudorella emarginata*

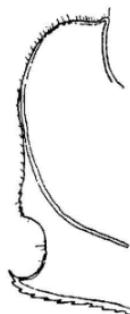
Krøyer 1846

AphiaID: 110524

Unaccepted name: –



Body size: Up to 12mm  
Front end of carapace serrate with a single large sinus



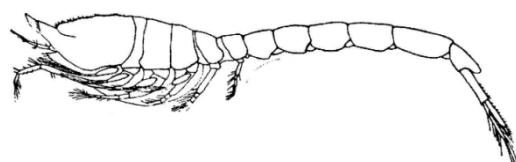
(Jones 1957)

*Leucon (Leucon) nasica*

Krøyer 1841

AphiaID: 110618

Unaccepted name: –



(Jones 1957)

Body size: Up to 12mm

Toothed crest with break in the hinder third of carapace

1 or 2 teeth on each side of frontal lobe

(Jones 1957)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Lophogastrida (Order) > **Gnathophausiidae** (Family)

### *Gnathophausia zoea*

Willemoes-Suhm 1873

AphiaID: 119930

Unaccepted names: *Gnathophausia cristata*, *G. sarsi*, *G. willemoesii*

Greenland distribution: West basin, SE shelf slope



### *Neognathophausia gigas*

Willemoes-Suhm 1873

AphiaID: 119931

Unaccepted name: *Gnathophausia gigas*



## DECAPODA

| FAMILY          | PAGE |
|-----------------|------|
| Acanthephyridae | 60   |
| Crangonidae     | 64   |
| Hippolytidae    | 69   |
| Pandalidae      | 76   |
| Pasiphaeidae    | 79   |
| Lithodidae      | 81   |
| Munididae       | 84   |
| Munidopsidae    | 85   |
| Paguridae       | 86   |
| Oregoniidae     | 87   |
| Geryonidae      | 89   |
| Polychelidae    | 90   |
| Benthesicymidae | 91   |
| Sergestidae     | 92   |

### TAXONOMIC KEY – FAMILIES

- 1(10) Body usually depressed (flattened horizontally)
- 2(7) Sternite of the last somite free. Telson asymmetrical or with sutures.
- 3(4) Uropod lacking, body calcified and look like a crab-shaped. **[LITHODIDAE]**
- 4(3) Uropod present, abdomen soft. Terga and pleura reduced.
- 5(6) Abdomen asymmetrical often twisted spirally. Uropod crescent shaped their function to holding body in shell **[PAGURIDAE]**
- 6(5) Uropod symmetrical. Telson sutured **[MUNIDIDAE]**
- 7(2) Sternite of the last thoracic somite not free. Abdomen small, flattened dorsoventrally and symmetrical. Cephalothorax enlarged enlarged and tail fan not developed.
- 8(9) Carapace usually narrowed in front. Rostrum distinct **[OREGONIIDAE]**
- 9(8) Carapace wide in front. Rostrum reduced or absent. Spines on anterolateral border of carapace with 2 median teeth at front **[GERYONIDAE]**
- 10(1) Body usually compressed (flattened compressed).
- 11(14) Pereopod 3 with chela. Pleura of abdominal somite not overlapping the first and third one.
- 12(13) Last two pairs of pereopods developed **[BENTHESICYMIDAE]**
- 13(12) Last two pairs of pereopods reduced. Carapace moderately compressed **[SERGESTIDAE]**
- 14(11) Pereopod 3 without chela. Pleura of abdominal somite overlapping the first somite and the third one.

15(16) Pereopod 1 subchelate [**CRANGONIDAE**]

16(15) Pereopod 1 chelate or simple.

17(18) First pair of chela with fingers slender and long, their cutting edges pectinate  
[**PASIPHAEIDAE**]

18(17) First pair of chela, the cutting edges of finger not all pectinate.

19(20) Carpus of pereopod 2 not annulated. Carpus of each pereopod shorter than propodus  
[**ACANTHEPHYRIDAE**]

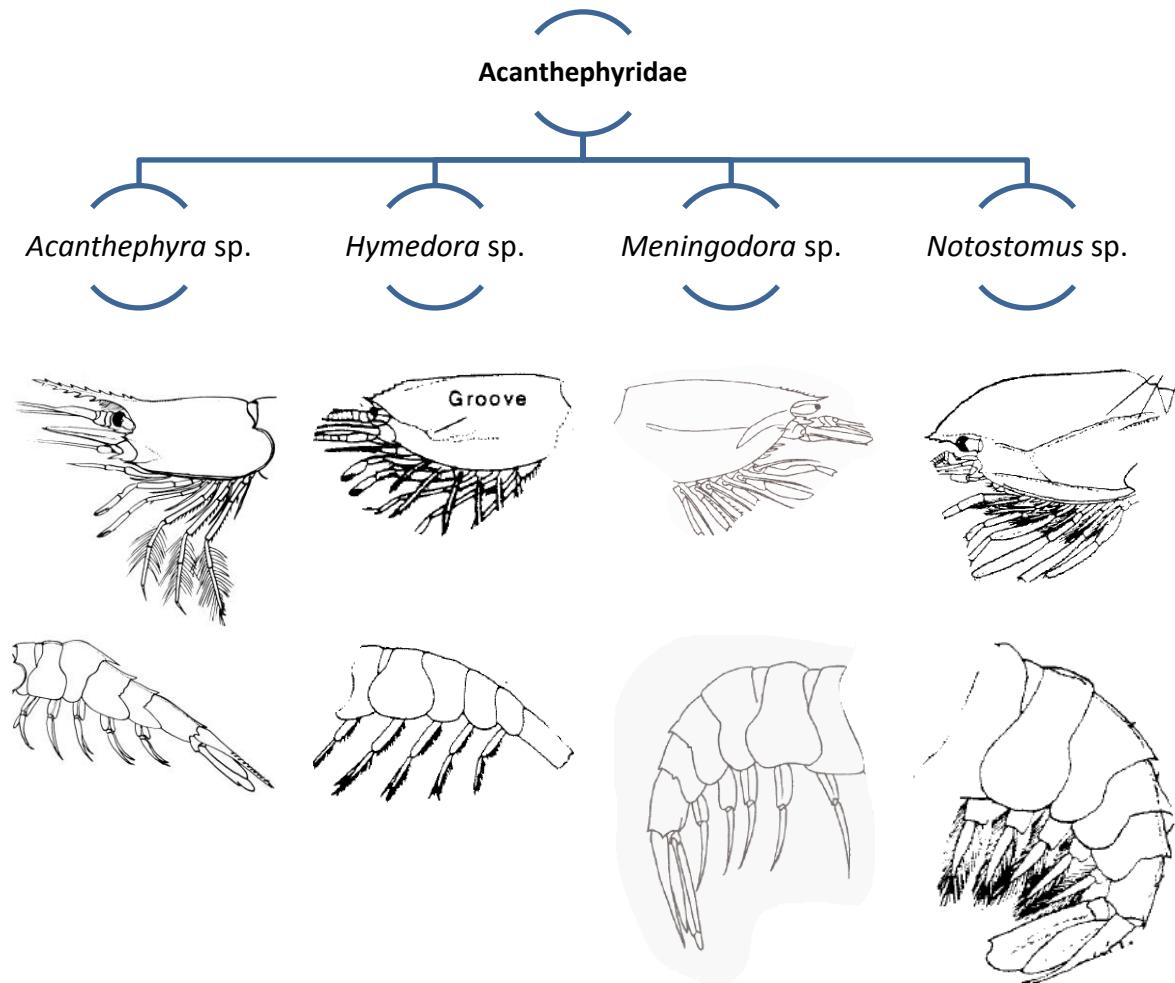
20(19) Carpus of pereopod 2 with at least two annulations.

21(22) First pair of pereopod 1 with small or indistinct chela [**PANDALIDAE**]

22(21) First pair of pereopod 1 with distinct chela and heavier than pereopod 2 [**HIPPOLYTIDAE**]

(Squires 1990)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > **Acanthephyridae** (Family)



(Pohle 1988, Rice 1967, Squire 1990)

|                                   | <i>Acanthephyra</i> sp. | <i>Hymedora</i> sp.  | <i>Meningodora</i> sp.  | <i>Notostomus</i> sp.   |
|-----------------------------------|-------------------------|--|---|---|
| <b>Dorsal carinate VS</b>         | Carinate                | Not carinate   | Carinate  | Carinate  |
| <b>Abdominal segment 6</b>        |                         |  |   |   |
| <b>Lateral carina on carapace</b> | Absent                  | Not present  | Present   | Present   |
| <b>Carinae design on carapace</b> | —                       | Orbito-gastric groove extend obliquely backward from the orbit to hepatic area | Hepatic groove cut off abruptly from branchial region by an oblique ridge | Oblique carina joining lateral carinae just behind hepatic area |

(Squire 1990, Rice 1967)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Caridea (Infraorder) > Oplophoroidea (Superfamily) > **Acanthephyridae** (Family)

*Acanthephyra* sp.



*Acanthephyra pelagica*

Risso 1816

AphiaID: 107581

Unaccepted name: *Alpheus pelagicus*

West shelf, SE shelf slope, West basin

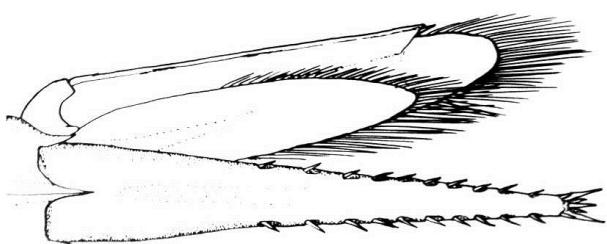
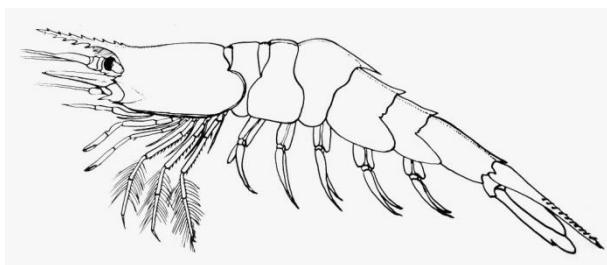
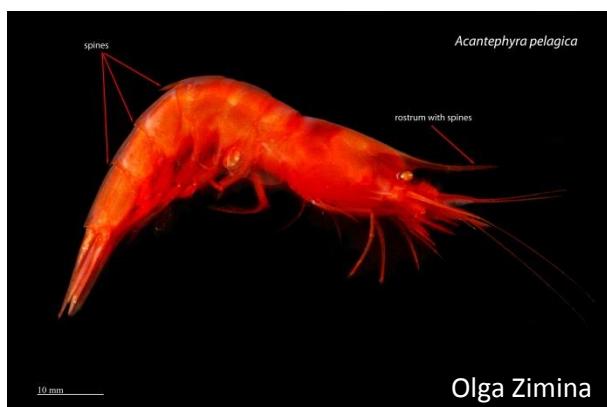
*Acanthephyra purpurea*

A. Milne-Edwards 1881

AphiaID: 107582

Unaccepted name: –

SE shelf slope



(Squirre 1990)

*Acanthephyra pelagica*:

About 10 pairs of dorsolateral spines on telson

*Hymenodora* sp.



*Hymenodora glacialis*

Buchholz 1874

AphiaID: 107590

Unaccepted name: *Pasiphaë glacialis*

West basin, SE shelf slope, West shelf

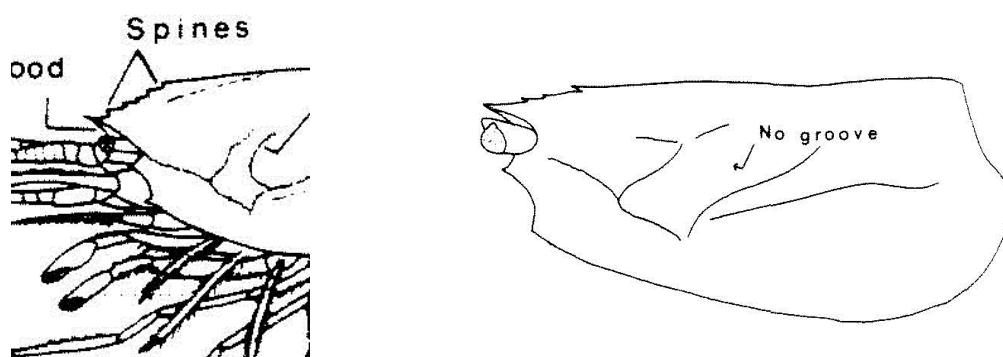


*Hymenodora gracilis*

Smith 1886

AphiaID: 107591

Unaccepted name: –



|                               | <i>Hymenodora glacialis</i> | <i>Hymenodora gracilis</i> |
|-------------------------------|-----------------------------|----------------------------|
| <b>Carapace length</b>        | Up to 20 mm                 | Up to 15 mm                |
| <b>Crescent-shaped groove</b> | Present                     | Not present                |

(Pohle 1988)

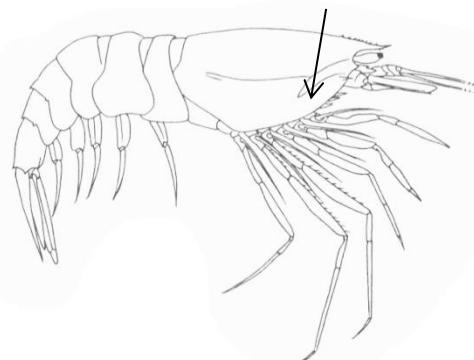
## *Meningodora mollis*

Smith 1882

AphiaID: 107596

Unaccepted name: *Notostomus fragilis*

Greenland distribution: SE shelf slope



(Rice 1967)

Carapace length: Up to 19.5mm

Integument very thin and fragile; Body compressed

Acutely triangular rostrum (length: half as long as the antennal scale)

Back of rostrum: 5 or 6 very indistinct teeth

Abdominal segment one and one half times as long as fifth

(Rice 1967, Smith 1880)

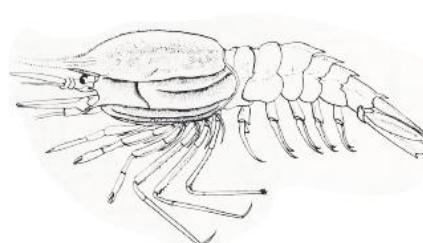
## *Notostomus elegans*

Milne-Edwards 1881

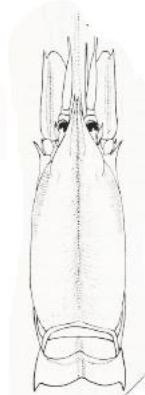
AphiaID: 107600

Unaccepted name: *Notostomus atlanticus*

Greenland distribution: West shelf



(Pohle 1988)



Carapace length: Up to 45mm;

Body color: Dark crimson-red

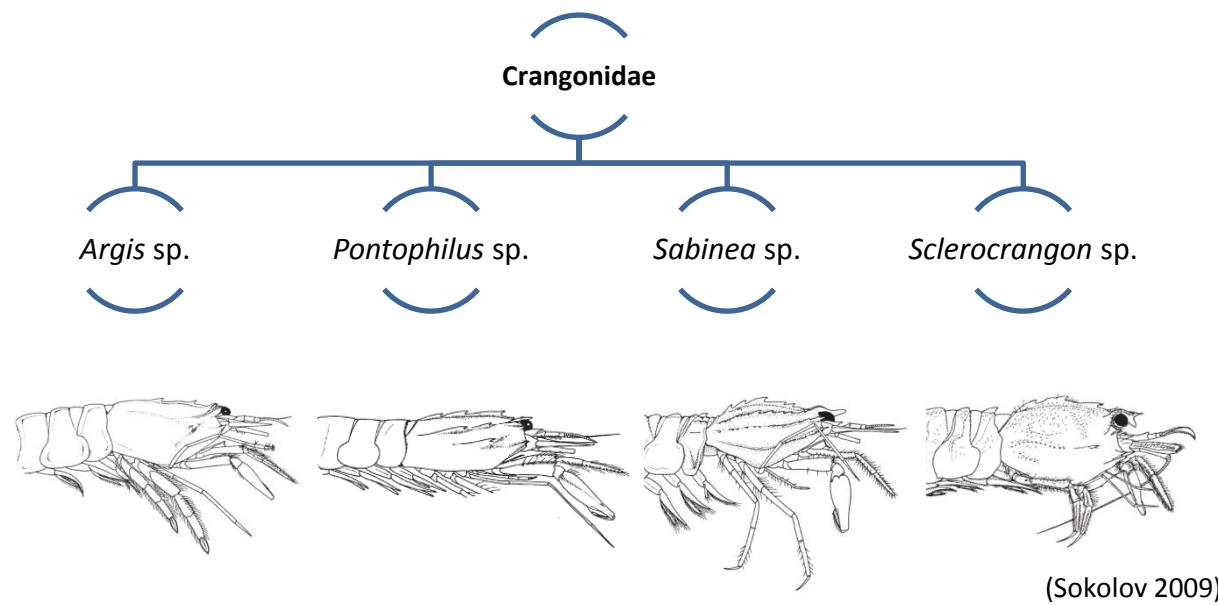
Carapace with 5 longitudinal ridges laterally

Rostrum long and pointed with 2 lateral ridges at base (series of ~20 spines dorsally decreasing size)

Carapace with 18 spines ventrally

(Pohle 1988)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Caridea (Infraorder) > Crangonoidea (Superfamily) > **Crangonidae** (Family)



|  | <i>Argis</i> sp.      | <i>Pontophilus</i> sp. | <i>Sabinea</i> sp. | <i>Sclerocrangon</i> sp. |
|--|-----------------------|------------------------|--------------------|--------------------------|
| <b>7 denticulate ridges (carapace)</b> | No                    | No                     | Yes                | No                       |
| <b>Pereopod 2</b>                      | Lacking chela         | Lacking chela          | With chela         | Lacking chela            |
| <b>Dactylus of pereopod 4-5</b>        | Widened and flattened | Normal                 | Normal             | Normal                   |
| <b>Rostrum covering base of eye</b>    | Yes                   | No                     | No                 | No                       |
| <b>Three first abdominal pleurons</b>  | Lacking spine         | Lacking spine          | Lacking spine      | At least one spine       |

(Sokolov 2009)

*Argis* sp.  
(West shelf)



*Argis dentata*

Rathbun 1902

AphiaID: 107550

Unaccepted name: *Nectocrangon dentata*

West shelf



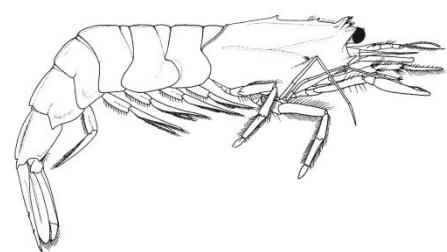
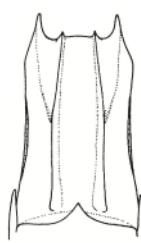
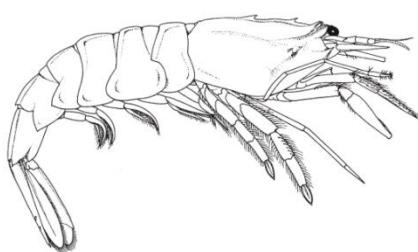
*Argis lar*

Owen 1839

AphiaID: 254487

Unaccepted name: *Crangon lar*

West shelf, SW shelf



(Sokolov 2009)

|  | <i>Argis dentata</i> | <i>Argis lar</i> |
|--|----------------------|------------------|
| <b>Carapace length</b>                               | Up to 27mm           | Up to 24.3mm     |
| <b>Dorsal keels on abdominal segment 6 terminate</b> | In points            | Rounded          |

(Sokolov 2009)

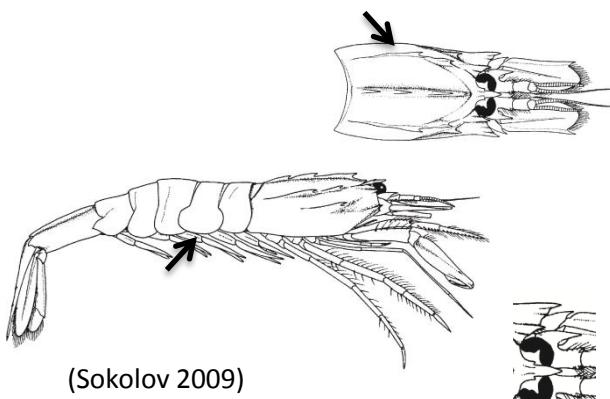
# *Pontophilus norvegicus*

M. Sars 1861

AphiaID: 107563

Unaccepted name: *Crangon norvegicus*

Greenland distribution: West shelf, West basin, SE shelf slope, SW shelf



Carapace length: 19mm

2 small spines at base of rostrum (one by side)

2 keels present of dorsolateral line (one by side)

(Sokolov 2009)

*Sabinea* sp.  
(West shelf)



*Sabinea hystrix*

A. Milne-Edwards 1881

AphiaID: 107565

Unaccepted name:

*Paracrangon hystrix*

West shelf, West basin



Olga Zimina

*Sabinea sarsii*

Smith 1879

AphiaID: 107566

Unaccepted name: –

West shelf, SW shelf, SE shelf slope



*Sabinea septemcarinata*

Sabine 1824

AphiaID: 107567

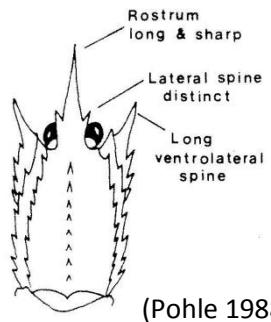
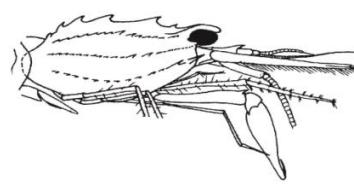
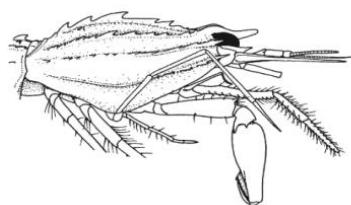
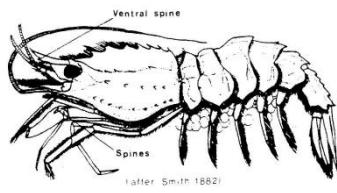
Unaccepted name:

*Crangon septemcarinata*

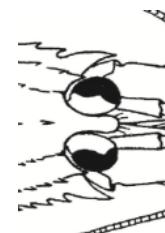
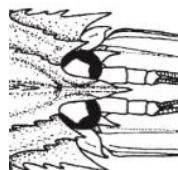
West shelf, SW shelf



Olga Zimina



(Pohle 1988)



(Sokolov 2009)

|                        | <i>S. hystrix</i>             | <i>S. sarsii</i>     | <i>S. septemcarinata</i> |
|------------------------|-------------------------------|----------------------|--------------------------|
| <b>Carapace length</b> | Up to 24mm                    | Up to 72mm           | Up to 21mm               |
| <b>Rostrum</b>         | Very long with bidentate apex | Acute without spines | Obtuse, rounded          |

(Squires 1990)

*Sclerocrangon* sp.



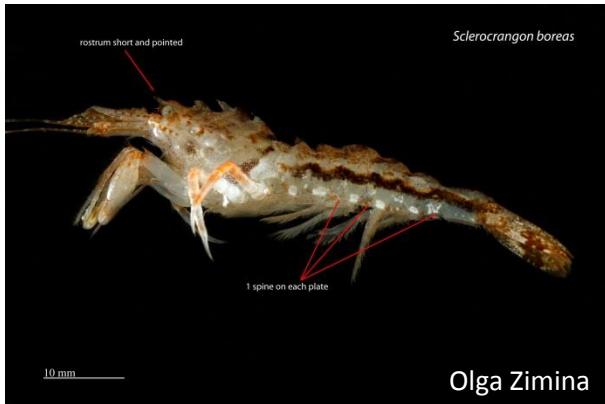
*Sclerocrangon boreas*

Phipps 1774

AphiaID: 107568

Unaccepted name: *Cancer boreas*

SE shelf slope, SW shelf, West shelf



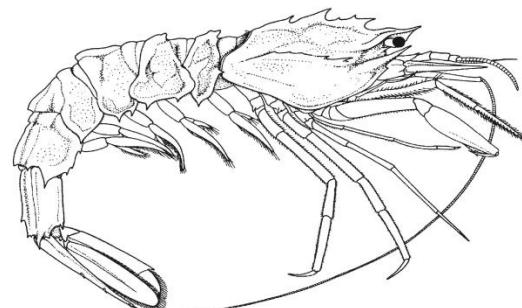
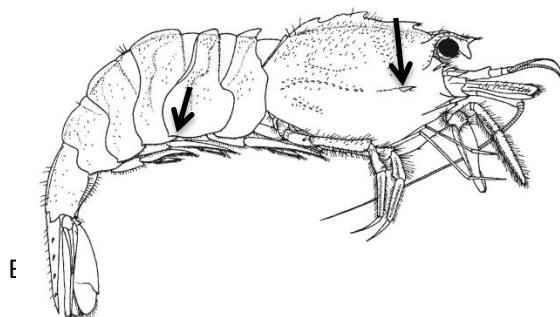
*Sclerocrangon ferox*

G.O. Sars 1877

AphiaID: 107569

Unaccepted name: –

SE shelf slope, West shelf

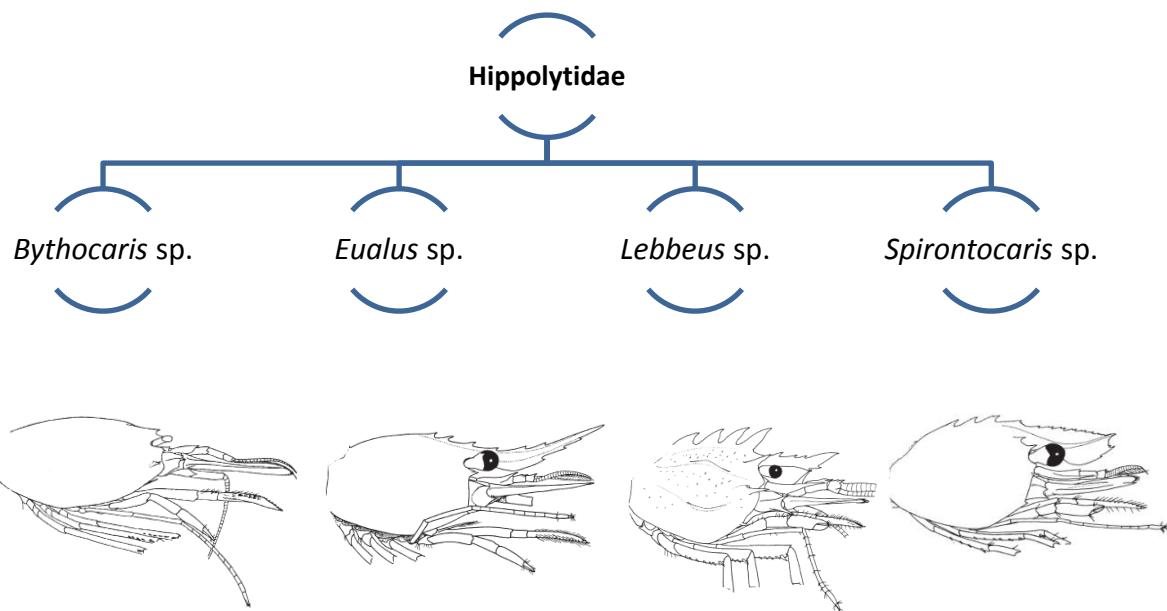


(Sokolov 2009)

|                           | <i>Sclerocrangon boreas</i> | <i>Sclerocrangon ferox</i> |
|---------------------------|-----------------------------|----------------------------|
| <b>Carapace length</b>    | Up to 35mm                  | Up to 31mm                 |
| <b>Rostrum</b>            | Blunt                       | Pointed                    |
| <b>Hepatic spine</b>      | 1                           | 2                          |
| <b>Pleurons 2 &amp; 3</b> | With a single small tooth   | With 2 spines              |

(Sokolov 2009)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Caridea (Infraorder) > Alpheoidea (Superfamily) > **Hippolytidae** (Family)



(Sokolov 2009)

|   | <i>Bythocaris sp.</i> | <i>Eualus sp.</i> | <i>Lebbeus sp.</i> | <i>Spirontocaris sp.</i> |
|---|-----------------------|-------------------|--------------------|--------------------------|
| <b>Number segments<br/>carpus leg 2</b> | 9                     | 7                 | 7                  | 7                        |
| <b>Number supraorbital<br/>spines</b>   | 0                     | 0                 | 1                  | 2                        |

(Squires 1990)

*Bythocaris* sp.  
(West shelf)



|                                      | <b>Rostrum</b>   | <b>Segment 4 of pereopods 3-5</b> | <b>Eyes</b>             | <b>Eyestalks</b>   | <b>Carapace</b>   | <b>Number of posterolateral tooth on abdominal pleura</b> | <b>Antennal peduncle length vs scaphocerite</b> |
|--------------------------------------|--|-----------------------------------|-------------------------|--------------------|---|---|---|
| <b><i>B. biruli</i></b><br>          | Compressed dorsoventrally  | With spines                       | Without pigment (white) | Short & conical    | Up to 19mm  | ≤4  |   |
| <b><i>B. curvirostris</i></b><br>    | Compressed dorsoventrally<br>Reaching (or beyond) anterior edge of eyes    | Without spines                    |                         |                    | Without dorsal spine. Supraorbital teeth rising above rostrum | ≤4  |   |
| <b><i>B. grumanti</i></b><br>        | Long<br>Compressed laterally   |                                   |                         |                    | Up to 57mm (body)   | ≤4  |   |
| <b><i>B. irene</i></b><br>           | Compressed dorsoventrally  | With spines                       | Without pigment (white) | Long & cylindrical | Up to 17.6mm  | ≤4  |   |
| <b><i>B. leucopis</i></b><br>        | Compressed dorsoventrally<br>Not rising above level of supraorbital spines | Without spines                    | Without pigment         |                    | With at least 1 dorsal tooth<br>Up to 22.5mm                  | ≤4  |   |
| <b><i>B. payeri</i></b><br>          | Compressed dorsoventrally<br>Overreaching supraorbital spines              | With spines                       | With dark pigment       |                    | Hepatic spine present<br>Up to 13mm                           | ≤4  | <1/2  |
| <b><i>B. gracilis</i></b><br>        | Compressed dorsoventrally<br>Overreaching supraorbital spines              | With spines                       | With dark pigment       |                    | Hepatic spine present<br>Up to 8mm                            | ≤4  | ≥1/2  |
| <b><i>B. simplicirostris</i></b><br> | Reaching cornea of eyes  | With spines                       | With dark pigment       |                    | Up to 8mm   | 6   |   |

*Bythocaris biruli*

Kobjakova 1964

AphiaID: 423252

Unaccepted name: –

*Bythocaris curvirostris*

Kobjakova 1957

AphiaID: 107493

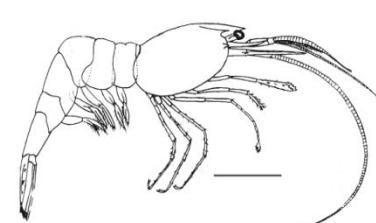
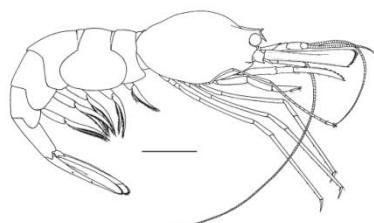
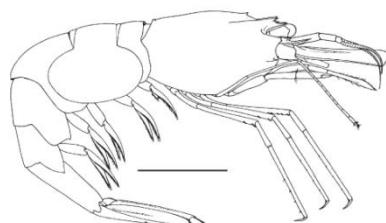
Unaccepted name: –

*Bythocaris grumanti*

Burukovsky 1966

AphiaID: 107495

Unaccepted name: –



*Bythocaris irene*

Retowsky 1946

AphiaID: 423253

Unaccepted name: –

*Bythocaris leucopis*

G.O. Sars 1879

AphiaID: 254699

Unaccepted name: –

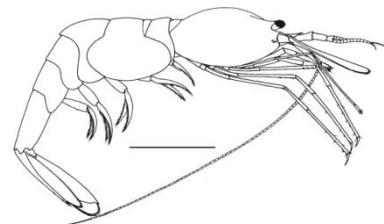
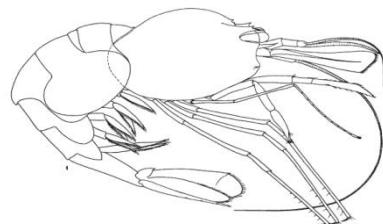
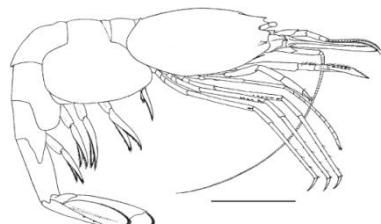
*Bythocaris payeri*

Heller 1875

AphiaID: 107497

Unaccepted name:

*Hippolyte payeri*

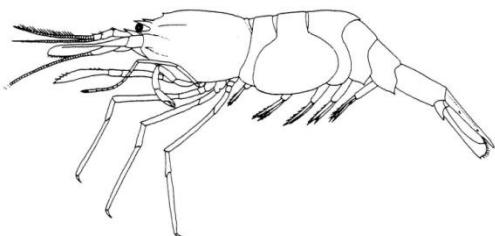


*Bythocaris gracilis*

Smith 1885

AphiaID: 158352

Unaccepted name: –



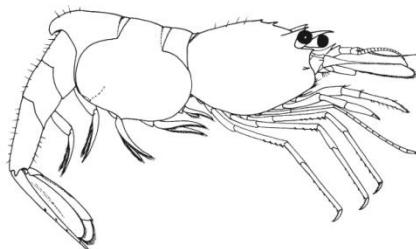
(Pohle 1988)

*Bythocaris simplicirostris*

Sars 1870

AphiaID: 107498

Unaccepted name: *Bythocaris spinipleura*



(Sokolov 2009)

*Eualus* sp.  
(West shelf)



*Eualus gaimardii belcheri*  
Bell 1855  
AphiaID: 158358  
Unaccepted name: *Hippolyte belcheri*



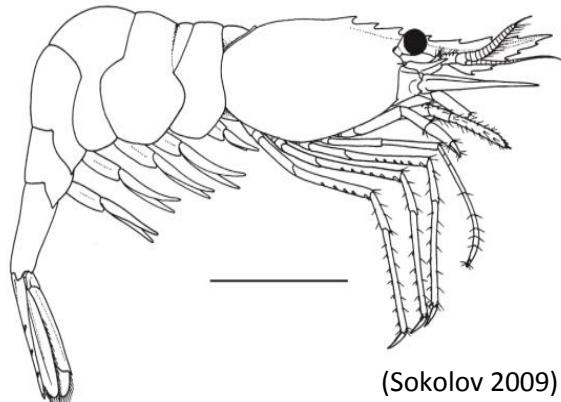
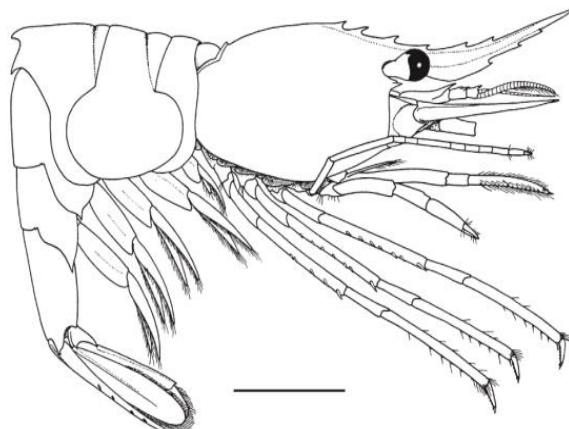
Cindy Grant

*Eualus gaimardii gaimardii*  
H. Milne Edwards 1837  
AphiaID: 515737  
Unaccepted name: *Hippolyte gaimardii*



*Eualus gaimardi gaimardi*

Olga Zimina



(Sokolov 2009)

|                                | <i>E. gaimardii belcheri</i> | <i>E. gaimardii gaimardii</i> |
|--------------------------------|------------------------------|-------------------------------|
| <b>Carapace length</b>         | Up to 22 mm                  | Up to 14 mm                   |
| <b>Color pattern</b>           | Red stripes on the body      | Without stripes               |
| <b>Third abdominal segment</b> | With strong hook             | Weak hook or absent           |

(Sokolov 2009)

*Lebbeus* sp.

(West shelf)



*Lebbeus groenlandicus*

Fabricius 1775

AphiaID: 107520

Unaccepted name: *Astacus groenlandicus*

West shelf, SW shelf



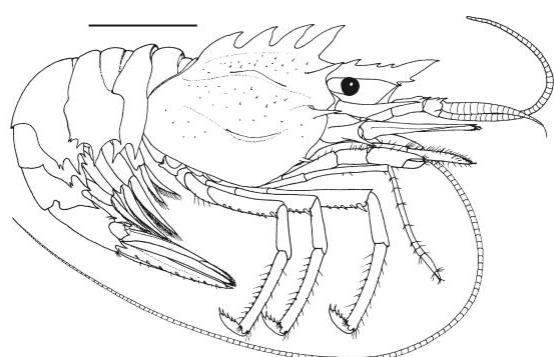
*Lebbeus polaris*

Sabine 1824

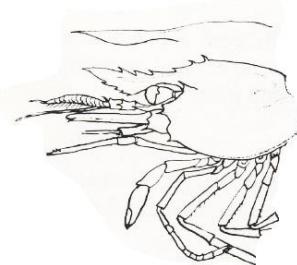
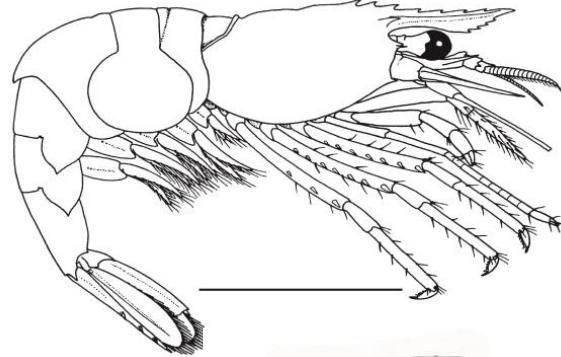
AphiaID: 107521

Unaccepted name: *Alpheus polaris*

West shelf, SW shelf, SE shelf slope



(Sokolov 2009)



|                          | <i>Lebbeus groenlandicus</i>             | <i>Lebbeus polaris</i>   |
|--------------------------|--|--|
| <b>Carapace length</b>   | Up to 24.6 mm                            | Up to 20 mm  |
| <b>Rostrum</b>           | With teeth                               | May have 2 shapes: rostrum bare (no teeth, photo) or rostrum with teeth (schema) |
| <b>Abdominal pleuron</b> | With one to five spines on ventral edges | First three rounded without spines   |

(Squires 1990), (Sokolov 2009)

*Spirontocaris* sp.

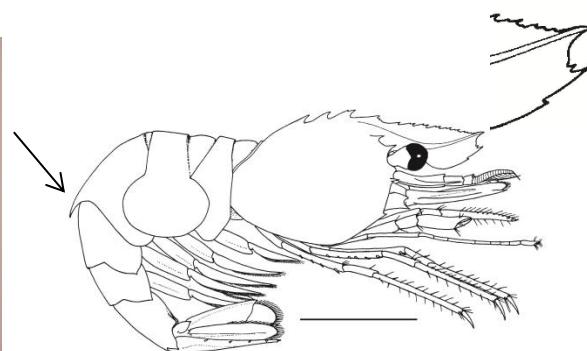


*Spirontocaris intermedia*

Kobjakova 1936

AphiaID: 515331

Unaccepted names: –



(Sokolov 2009)

Carapace length: Up to 17,5mm

Antennal scale short, not extend beyond anterior end of peduncle of antenna 1.

(Sokolov 2009)

*S. spinus*

Sowerby 1805

AphiaID: 107533

Unaccepted name: –

West shelf, SW shelf

*S. liljeborgii*

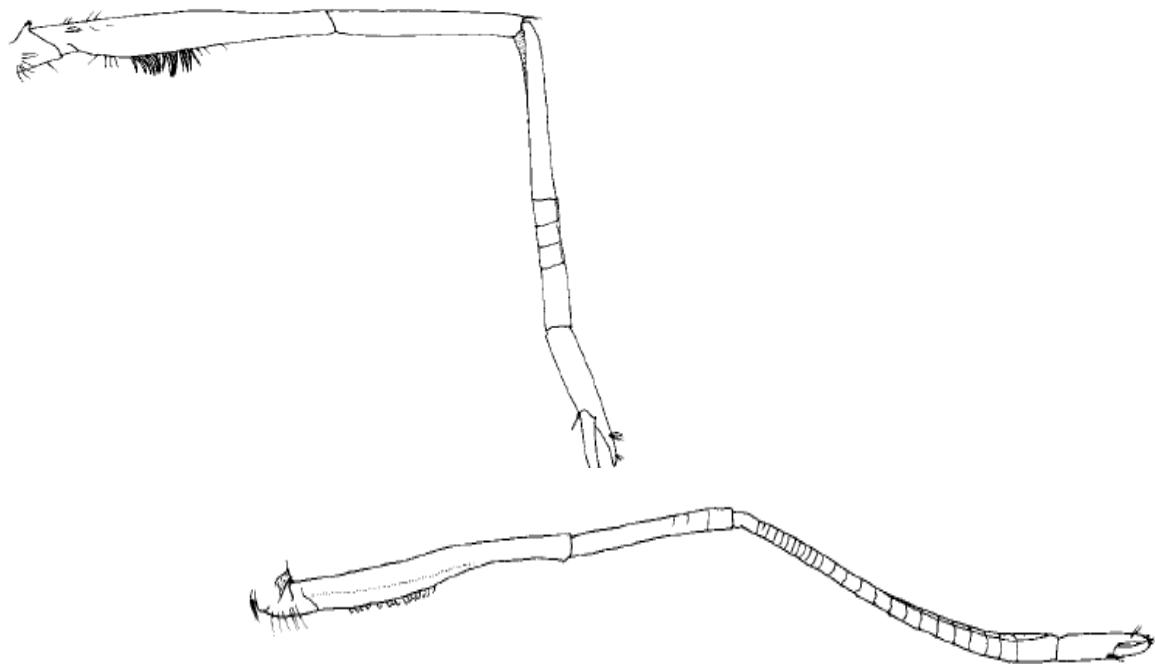
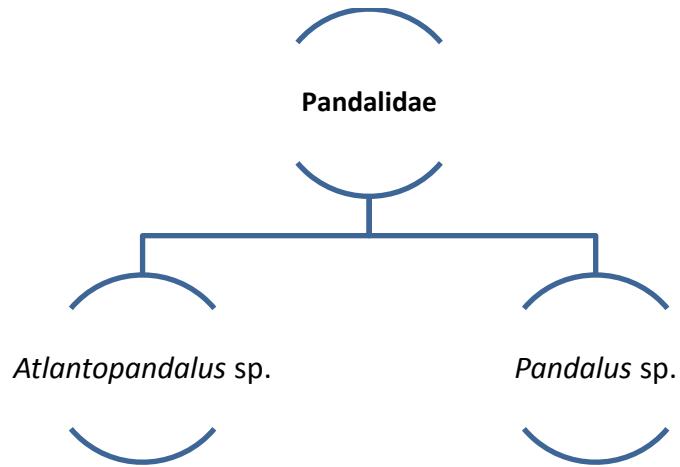
Danielssen 1859

AphiaID: 107531

Unaccepted name: –

West shelf

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Caridea (Infraorder) > Pandaloidea (Superfamily) > **Pandalidae** (Family)



(Komai 1999)

Pereopod 2 allows distinguishing the 2 genus:

|   | <i>Atlantopandalus</i> sp. | <i>Pandalus</i> sp. |
|---|----------------------------|---------------------|
| Number of divisions of carpus on pereopod 2 on right side | 4 or 5                     | At least 20         |

(Squires 1990)

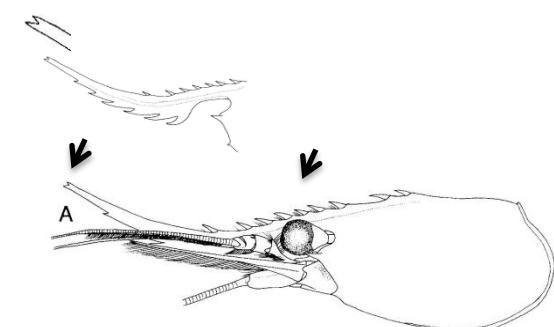
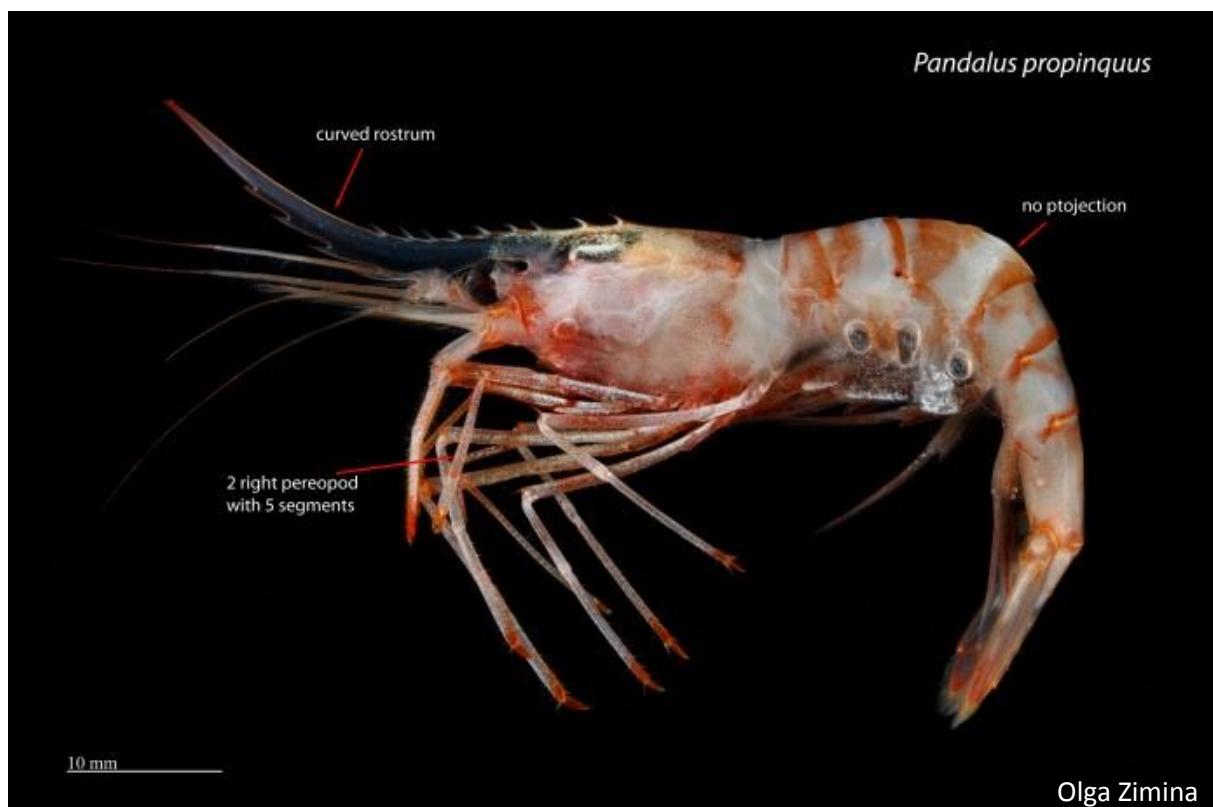
*Atlantopandalus propinquus*

Sars G.O. 1870

AphiaID: 158351

Unaccepted name: *Pandalus propinquus*

Greenland distribution: West shelf, SW shelf, SE shelf slope, West basin



Carapace length: Up to 20mm

Rostrum developed, upturned with bifid tip and dorsal spines absent on anterior two-third.

Pereopod 2: right carpus with only five segments, on left 25 divisions.

(Squires 1990)

*Pandalus* sp.



*Pandalus borealis*

Krøyer 1838

AphiaID: 107649

Unaccepted name: –

West shelf, SW shelf, SE shelf slope, West basin



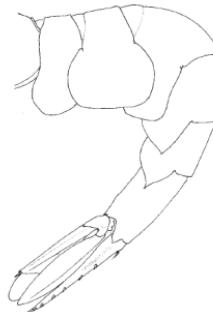
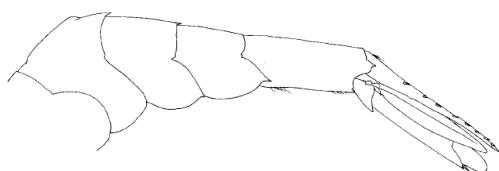
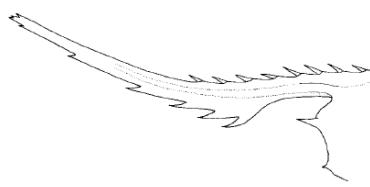
*Pandalus montagui*

Leach in Leach 1813-1814

AphiaID: 107651

Unaccepted name: –

West shelf, SW shelf, SE shelf slope, West basin



(Komai 1999)

|                           | <i>Pandalus borealis</i>    | <i>Pandalus montagui</i>            |
|---------------------------|-----------------------------|-------------------------------------|
| <b>Carapace length</b>    | Up to 35mm                  | Up to 32mm                          |
| <b>Rostrum</b>            | Toothed, anteriorly slender | No dorsal spines anteriorly, deeper |
| <b>Abdominal somite 3</b> | Prominent dorsal lobe       | No dorsal lobe                      |

(Squires 1990)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Caridea (Infraorder) > Pasiphaeoidea (Superfamily) > **Pasiphaeidae** (Family)

## *Parapasiphae sulcatifrons*

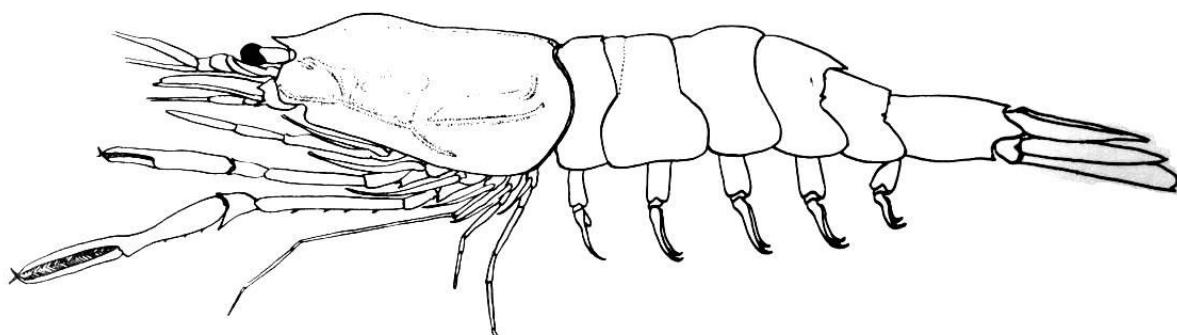
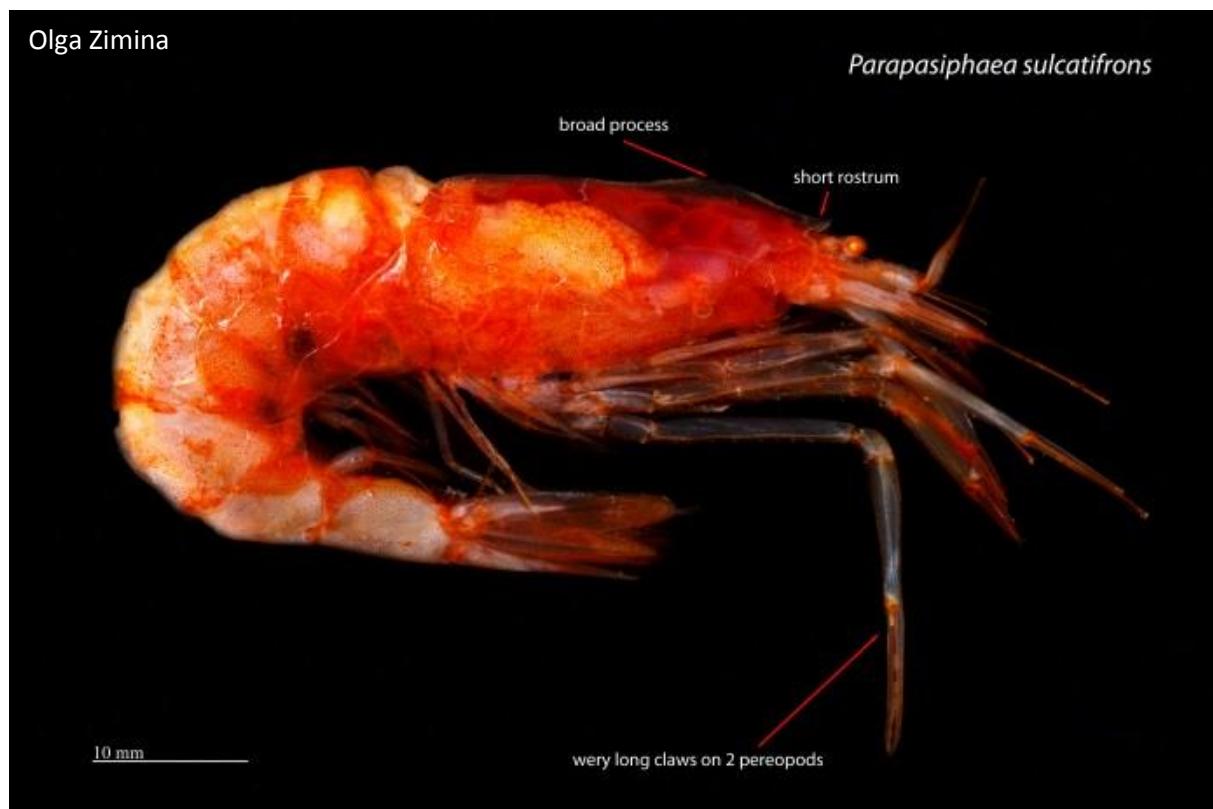
Smith 1884



AphiaID: 107673

Unaccepted names: *Dantecia caudani*, *Orphania tenuimana*, *Pasiphaea metriomma*

Greenland distribution: West shelf, SE shelf slope, West basin



(Squires 1990)

*Pasiphaea* sp.  
(West shelf, SW shelf, SE shelf slope)



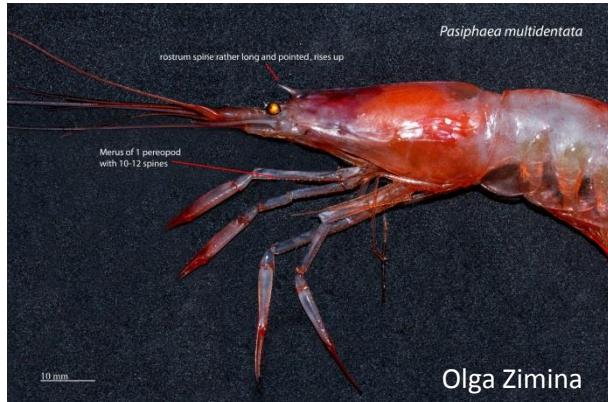
*Pasiphaea multidentata*

Esmark 1866

AphialID: 107676

Unaccepted name: –

West shelf, SW shelf, SE shelf slope, West basin



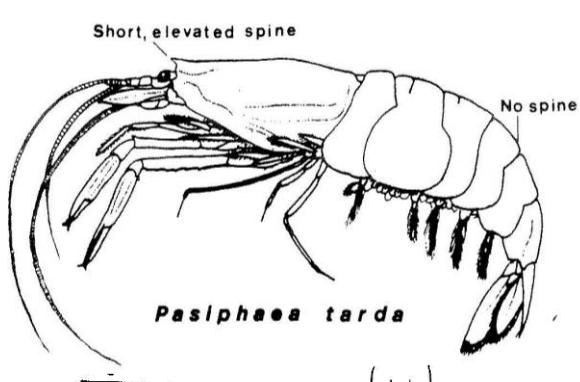
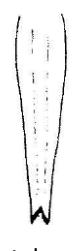
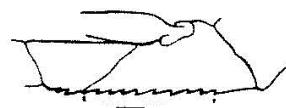
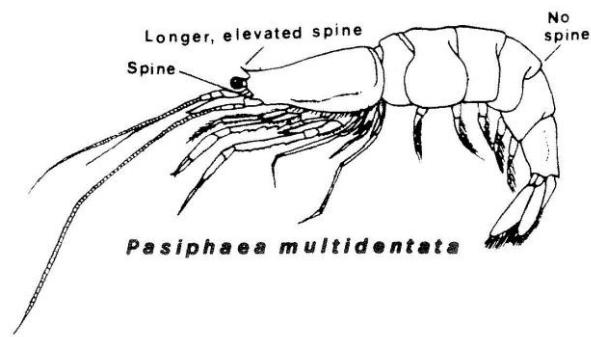
*Pasiphaea tarda*

Krøyer 1845

AphialID: 107678

Unaccepted name: *Pasiphaea principalis*

West shelf, SE shelf slope, West basin



(Pohle 1988)

*Pasiphaea multidentata*

**Carapace length**

Up to 30mm

*Pasiphaea tarda*

Up to 75 mm

**Color**

Almost transparent

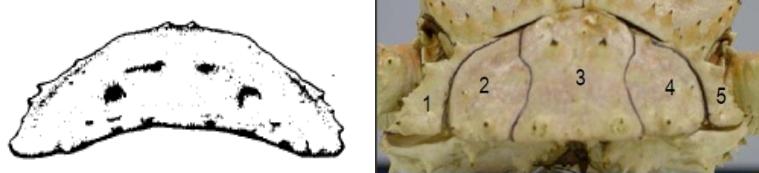
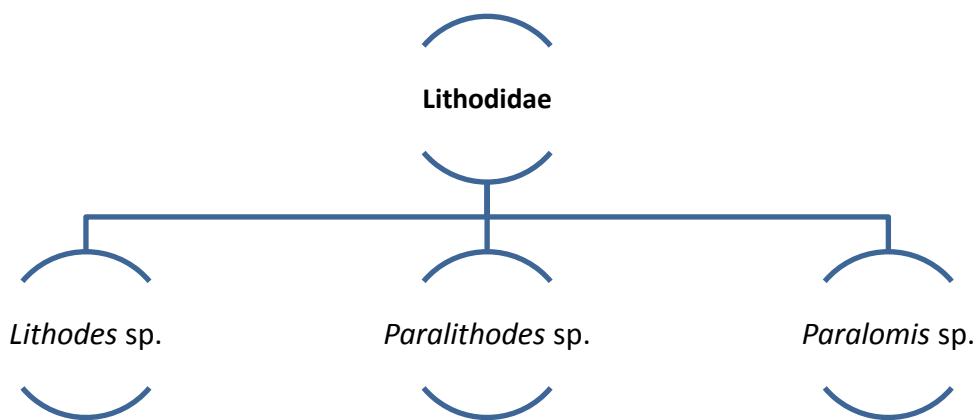
Reddish

**Number of spines on distal lower edge basis leg 2**

1-5

(Squire 1990, Pohle 1988)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Anomura (Infraorder) > Lithodoidea (Superfamily) > **Lithodidae** (Family)



(Dawson et al. 1995)

|  | <i>Lithodes</i> sp. | <i>Paralithodes</i> sp. | <i>Paralomis</i> sp. |
|--|---------------------|-------------------------|----------------------|
| <b>Second largest segment of abdomen</b> | Completely fused    | With 5 separate plates  |                      |
| <b>Antennal scale</b>                    | Rudimentary         | Well developed          |                      |

(Petryashov 2009)

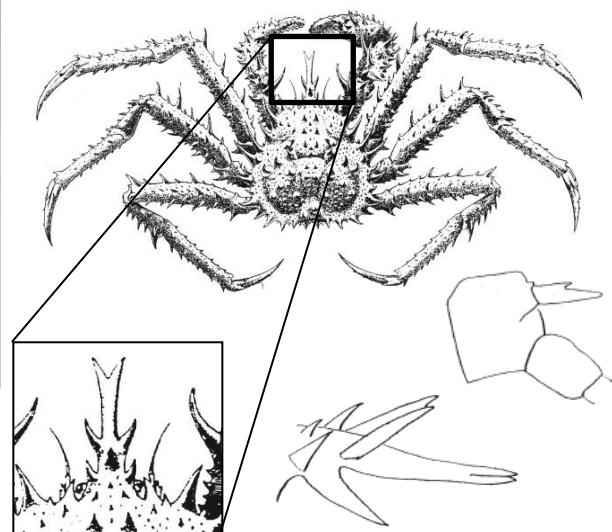
## *Lithodes maja*

Linnaeus 1758

AphiaID: 107205

Unaccepted name: *Cancer maja*

Greenland distribution: West shelf, SW shelf, SE shelf slope, West basin



Carapace length: 108mm

Rostrum with 8 spines

Surface of the carapace covered with small and large spines

Surface of second abdominal segment with spines

(Petryashov 2009)

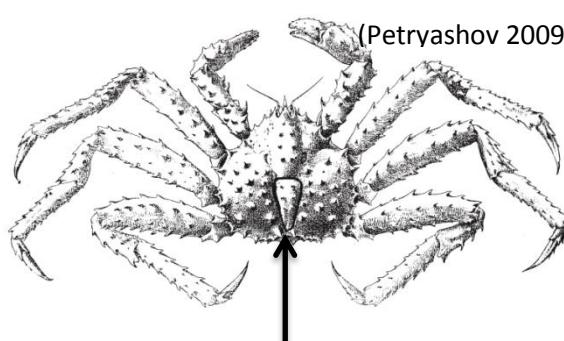
(Petryahov 2009)

## *Paralithodes camtschaticus*

Tilesius 1815

AphiaID: 233889

Unaccepted name: *Maja camtschatica*



3 pairs of spines on the pericardial region



[www.takuyamorihisa.com](http://www.takuyamorihisa.com)



Carapace length: 105mm

Antennal scale uniramous

(Petryashov 2009)

*Paralomis spectabilis*

Hansen 1908

AphiaID: 107210

Unaccepted name: –



*Munida* sp.



*Munida sarsi*

Huus 1935

AphiaID: 107163

Unaccepted name: –



*Munida tenuimana*

Sars 1872

AphiaID: 107166

Unaccepted name: –

West basin, SE shelf slope, SW shelf



|  | <i>Munida sarsi</i> | <i>Munida tenuimana</i> |
|--|---------------------|-------------------------|
| <b>Carapace length</b>                     | Up to 29mm          | Up to 24 mm             |
| <b>Cardial region</b>                      | Never with spines   | Often with spines       |
| <b>Anterior branchial region</b>           | Numerous spinules   | Unarmed                 |
| <b>Ventral edge of merus of pereopod 1</b> | Unarmed             | With small spines       |

(Rice et al. 1986)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Anomura (Infraorder) > Galatheoidea (Superfamily) > **Munidopsidae** (Family)

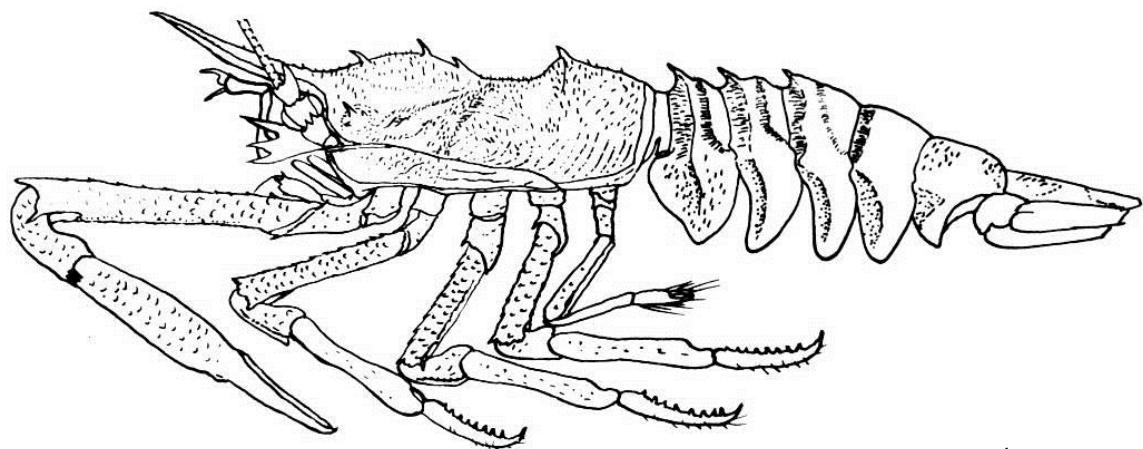
*Munidopsis curvirostra*

Whiteaves 1874

AphiaID: 107175

Unaccepted name: –

Greenland distribution: West basin



(Squirre 1990)

Rostrum long and stout curving spine, 1/2 to 2/3 of carapace length

Transverse ridge on middle of cardiac area with strong forward directed spine

2 middorsal spines behind base of rostrum

1 middorsal spine on anterior edge of somit 2-4 of abdomen

(Squirre 1990)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Anomura (Infraorder) > Paguroidea (Superfamily) > **Paguridae** (Family)

*Pagurus* sp.



*Pagurus bernhardus*

Linnaeus 1758

AphiaID: 107232

Unaccepted name: *Cancer bernhardus*

Greenland distribution: unknown



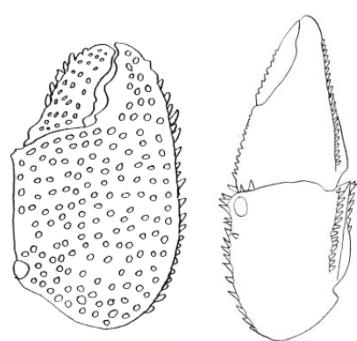
*Pagurus pubescens*

Krøyer 1838

AphiaID: 107240

Unaccepted name: –

SE shelf slope, SW shelf, West shelf

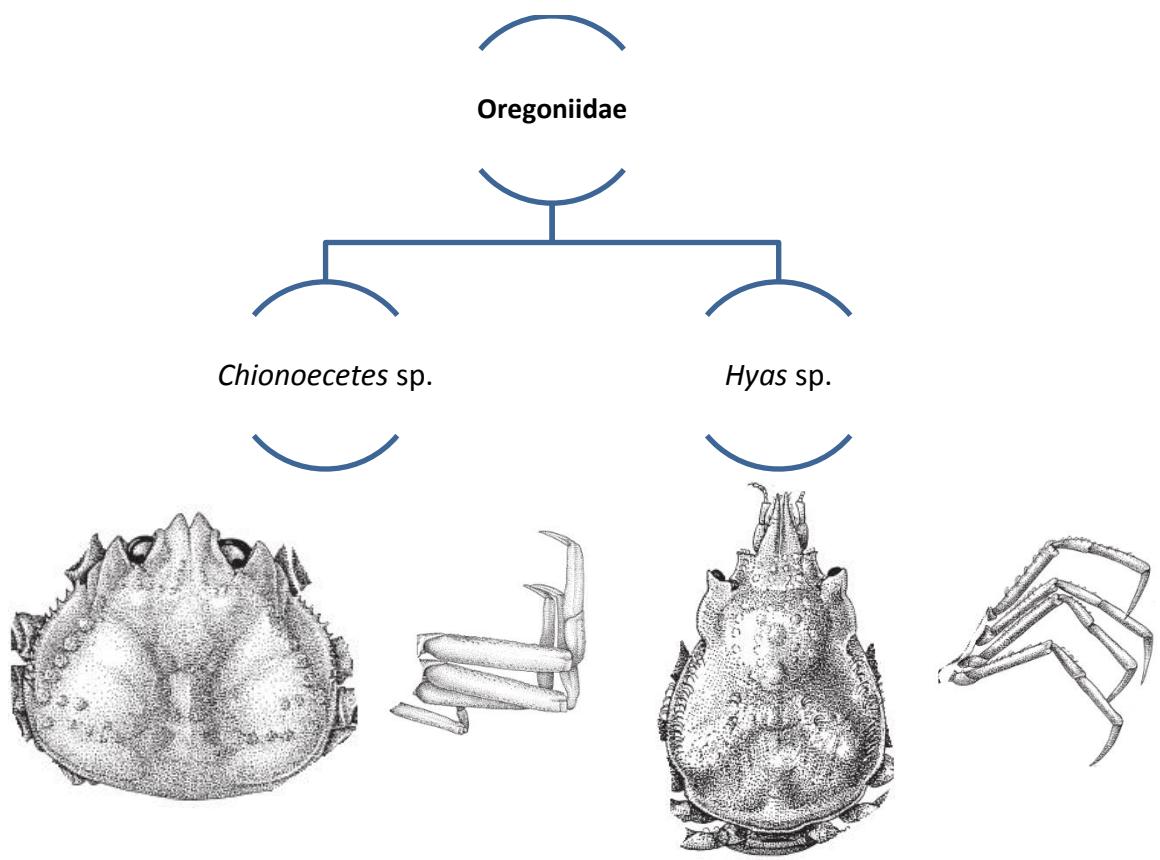


*P. bernhardus* & *P. pubescens*  
(Petryashov 2009)

|                            | <i>Pagurus bernhardus</i>   | <i>Pagurus pubescens</i>                           |
|----------------------------|-----------------------------|--|
| <b>Size carapace</b>       | Up to 13mm                  | Up to 17mm   |
| <b>Right claw/propodus</b> | Covered with round granules | Covered with spine-like granules or conical spines |

(Petryashov 2009)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Brachyura (Infraorder) > Eubrachyura (Section) > Heterotremata (Subsection) > Majoidea (Superfamily) > **Oregoniidae** (Family)



(Vassilenko 2009)

|                         | <i>Chionoecetes</i> sp.      | <i>Hyas</i> sp.               |
|-------------------------|------------------------------|-------------------------------|
| <b>Carapace</b>         | Equal to or less than width  | Greater than width            |
| <b>Articles of legs</b> | Flattened                    | Almost cylindrical            |
| <b>Abdomen of males</b> | 6 segments widening distally | 6 segments narrowing distally |

(Vassilenko 2009)

### *Chionoecetes opilio*

O. Fabricius 1788

AphiaID: 107315

Unaccepted name: *Cancer opilio*

Greenland distribution: West shelf, SW shelf, West basin



Carapace length up to 120mm  
Surface of carapace covered with bumps  
Pseudorostrum blades wide  
Rounded in shape

*Hyas* sp.  
(West shelf)



*Hyas araneus*

Linnaeus 1758

AphialID: 107322

Unaccepted name: –

SW shelf, West shelf



*Hyas coarctatus*

Leach 1816

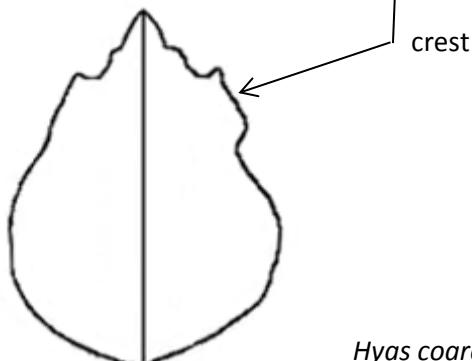
AphialID: 107323

Unaccepted name: –

SW shelf, West shelf



*Hyas araneus*



*Hyas coarctatus*

crest

|                        | <i>Hyas araneus</i>              | <i>Hyas coarctatus</i>        |
|------------------------|----------------------------------|-------------------------------|
| <b>Carapace length</b> | Up to 105mm                      | Up to 84mm                    |
| <b>Hepatic region</b>  | Without broadened hepatic region | With broadened hepatic region |
| <b>Hair on leg</b>     | Without                          | With                          |

(Vassilenko 2009)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Brachyura (Infraorder) > Eubrachyura (Section) > Heterotremata (Subsection) > Portunoidea (Superfamily) > **Geryonidae** (Family)

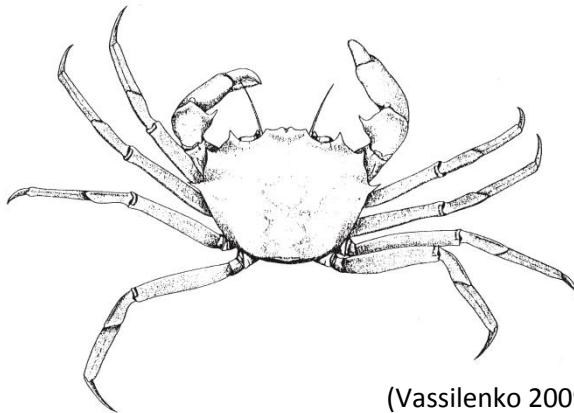
## *Geryon trispinosus*

Herbst 1803

AphiaID: 107374

Unaccepted names: *Cancer trispinosus*; *Geryon tridens*

Greenland distribution: unknown



(Vassilenko 2009)

Carapace length: Up to 80mm

Shape of carapace: hexagonal

Anterior lateral edge of carapace with 3 teeth, the last one more largest

Frontal region with 4 teeth

(Vassilenko 2009)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Pleocyemata (Suborder) > Polychelida (Infraorder) > **Polychelidae** (Family)

## Polychelidae spp.

Wood-Mason 1875

AphiaID: 106793

Unaccepted name: –

Greenland distribution: unknown



Carapace flattened dorsally, spine along lateral edges and middorsal carina  
Eyes reduced

(Squires 1990)

## *Stereomastis sculpta*

Smith 1880

AphiaID: 107700

Unaccepted name: *Polycheles sculptus*

Greenland distribution: West basin



Carapace flattened dorsally, margin fringed with small sharp spines (no more than 20 on each side)  
No eyes (orbital notches closed)  
Spine along median carina

(Squires 1990)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Dendrobranchiata (Suborder) > Penaeoidea (Superfamily) > **Benthesicymidae** (Family)

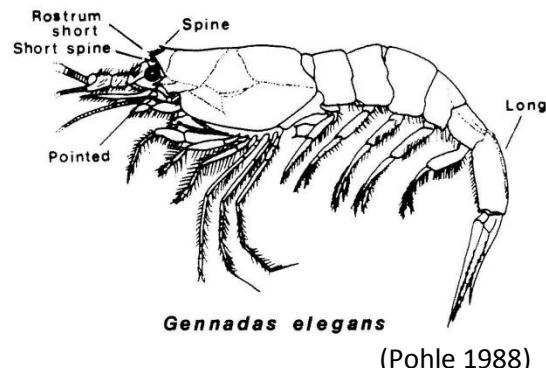
## *Gennadas elegans*

Smith 1882

AphiaID: 107095

Unaccepted name: *Amalopenaeus elegans*

Greenland distribution: West basin, SE shelf slope, West shelf



Carapace length: 11mm

Thelycum flattened, oval, pointed laterally

Thelycum without median division

Merus= carpus on leg 3

Presence a tubercle on eyestalk

Rostrum with sharp anterior point and crest over orbit with 1 spine

(Squires 1990)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Eucarida (Superorder) > Decapoda (Order) > Dendrobranchiata (Suborder) > Sergestoidea (Superfamily) > **Sergestidae** (Family)

## *Eusergestes arcticus*

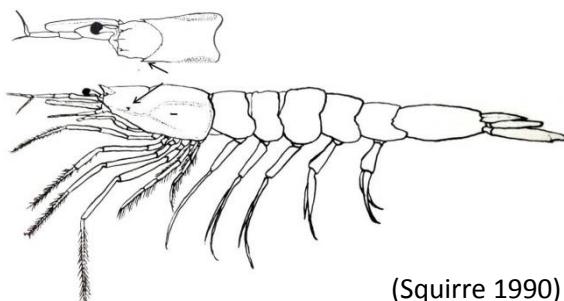
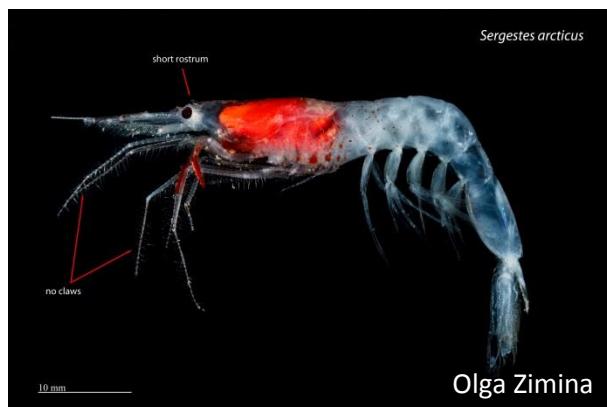
Krøyer 1855

AphiaID: 515738

Unaccepted name: *Sergestes arcticus*



Can be mistaken for *Sergia robusta*



Supraorbital and hepatic spine developed  
*Sergia robusta*: no supraorbital nor hepatic spine

## *Sergia robusta*

Smith 1882

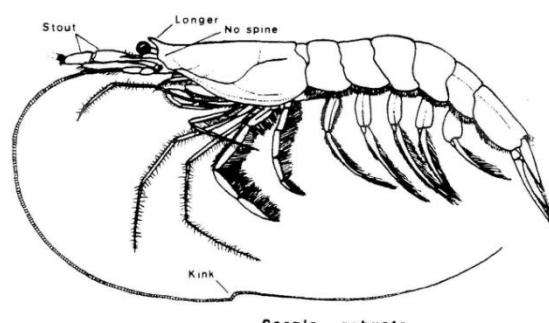
AphiaID: 107136

Unaccepted name: *Sergestes robustus*

Greenland distribution: SE shelf slope, West basin



Can be mistaken for *Eusergestes arcticus*



(Pohle 1988)

Body size: Up to 94mm

Antennal peduncle stout

Carapace without spines with short rostrum with prolonged point

Color: Bright reddish

Telsons finish in a sharp point

(Squires 1990)

# ISOPODA

| FAMILY                    | PAGE |
|---------------------------|------|
| Leptanthuridae            | 94   |
| Aegidae                   | 95   |
| Anuropidae                | 97   |
| Antarcturidae             | 98   |
| Arcturidae                | 99   |
| Chaetiliidae              | 100  |
| Cirolanidae               | 101  |
| Gnathiidae                | 102  |
| Janiroidea incertae sedis | 102  |
| Munnopsidae               | 103  |

## TAXONOMIC KEY – FAMILIES

- 1(14) Uropod lateral
- 2(9) Uropod and terminal segment of the abdomen forming together a caudal fan
- 3(4) 5 pereonites, pleonites narrower than pereonites [**GANTHIIDAE**]
- 4(3) 7 pereonites
- 5(6) Uropods lateral and superior. Body narrow elongated [**LEPTANTHURIDAE**]
- 6(5) Uropods lateral with both branches developed. Abdomen 6 segments.
- 7(8) Maxillipeds with palp embracing the cone formed by the distal parts of mouth organs (need dissecting scope) [**AEGIDAE**]
- 8(7) Maxilliped with broad and setose free palp (need dissecting scope) [**CIROLANIDAE**]
- 9(2) Uropods valve-like, inflexed, arching over the pleopods
- 10(11) Body robust, large, coxal-plate distinct on pereonites 2-7 on dorsal view [**CHAETILLIDAE**]
- 11(10) Body elongate, narrow, cylindrical, coxal plate not distinct on dorsal view. 4 anteriors legs unlike the 3 posteriors one.
- 12(13) Completed fusion of the head and pereonite 1. Absence of a lateral covering of the mouthparts [**ANTARTURIDAE**]
- 13(12) Absence fusion of the head and pereonite 1. Presence of a lateral covering the mouthparts, pereopod 1 and mouthparts are usually not visible in lateral view [**ARCTURIDAE**]
- 14(1) Uropod terminal, pleopods usually covered by a thin opercular plate.

15(16) Without acuter rostral process and without eyes. Pereopods 5-6 and/or 7 natatory. At least pereopods 3-4 very elongate [**MUNNOPSISIDAE**]

16(15) Presence acutre rostral process and dorsal eyes. Pereopod 1 stouter than pereopod II-VII [**JANINOIDEA INCERTAE SEDIS**]

(Richardson 1905), (Poore 2001), Wilkson et al. 1994)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Cymothoida (Suborder) > Anthuroidea (Superfamily) > **Leptanthuridae** (Family)

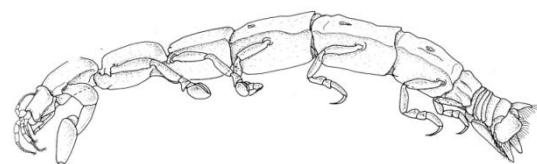
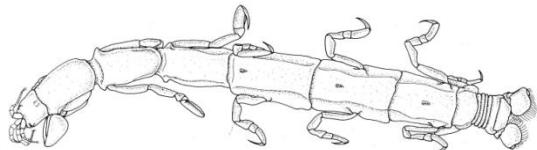
### *Calathura brachiata*

Stimpson 1853

AphiaID: 118497

Unaccepted name: *Anthura brachiata*

Greenland distribution: West shelf



(Brandt et al. 1997)

Body size: Up to 36mm

Body 14 times longer than wide

Cephalothorax almost quadrangular (dorsal view)

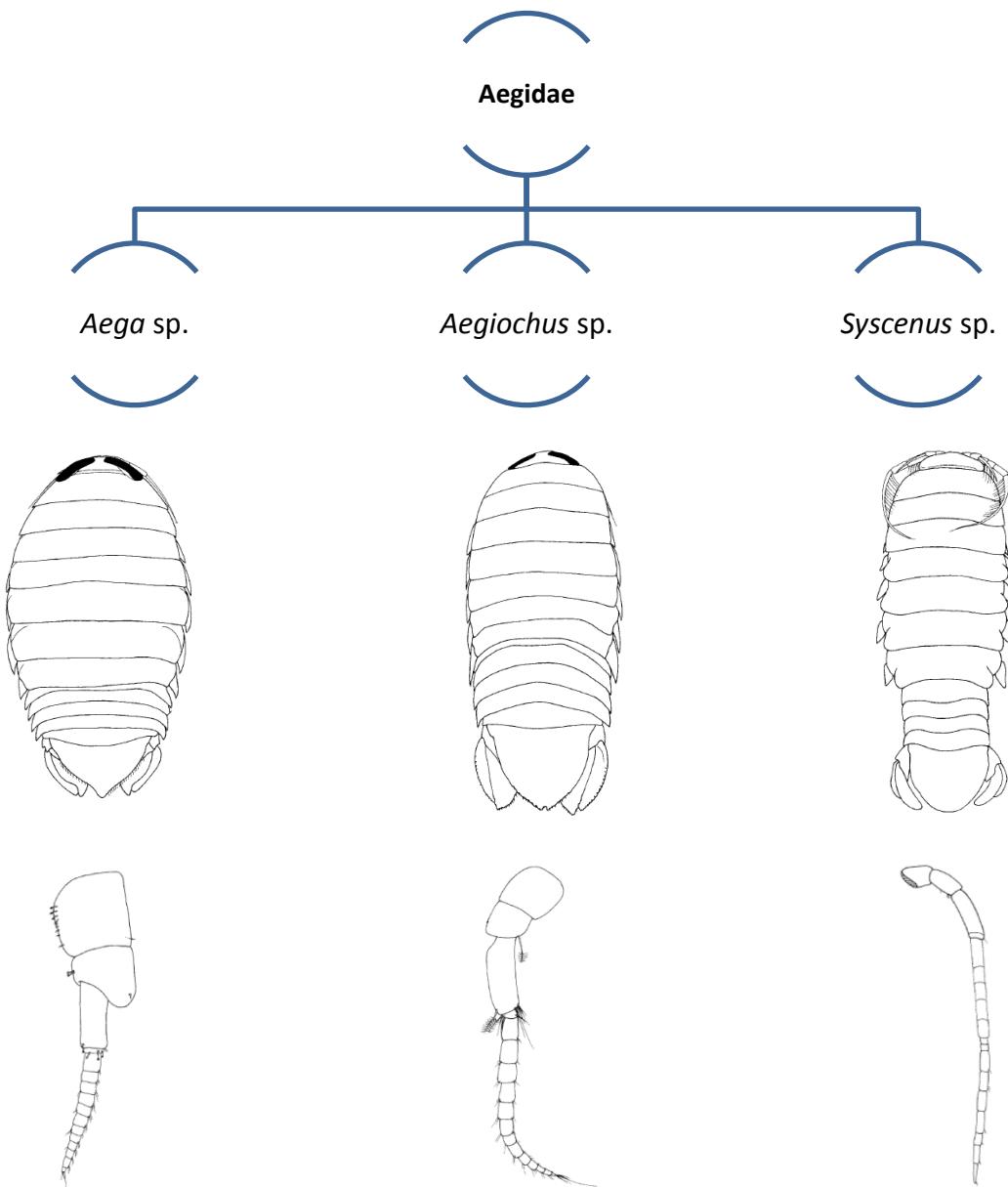
Dorsomedially at the caudal margin have a protuberance

Vestigial eyes

Pereonites 4-5 longest with depressions still pereonites 6

(Brandt et al. 1997)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Cymothoida (Suborder) > Cymothooidea (Superfamily) > **Aegidae** (Family)



(Bruce 2009)

|                              | <b><i>Aega</i> sp.</b> | <b><i>Aegiochus</i> sp.</b>                          | <b><i>Syscenus</i> sp.</b> |
|------------------------------|------------------------|--|----------------------------|
| <b>Pereonite vs pleonite</b> | Not abruptly narrower  | Not abruptly narrower                                | Abruptly narrower          |
| <b>Frontal lamina</b>        | Ventrally flat         | With free posterior margin and/or posteriorly narrow | Slender and elongate       |
| <b>Antennule peducle 1-2</b> | Flattened              | Not flattened or expanded                            | Not flattened or expanded  |

(Bruce 2009)

*Aega* sp.  
*Aegiochus* sp.  
(West shelf)



*Aega psora*  
Linnaeus 1758

AphiaID: 118827  
Unaccepted name: *Aega emarginata*, *Oniscus psora*  
SE shelf slope, SW shelf, West shelf

*Aegiochus ventrosa*  
M. Sars 1859

AphiaID: 118831  
Unaccepted name: *Aega ventrosa*  
West shelf, SE shelf slope

*Aegiochus arctica*  
Lutken 1859

AphiaID: 118814  
Unaccepted name: *Aega arctica*  
unknown



|                  | <i>Aega psora</i> | <i>Aegiochus ventrosa</i> | <i>Aegiochus arctica</i> |
|------------------|-------------------|---------------------------|--------------------------|
| <b>Body size</b> | Up to 15mm        | Up to 21mm                | Up to 24mm               |
| <b>Body</b>      | Broad, oval       | Broad, marge not parallel | Large, marge parallel    |
| <b>Eye</b>       | Separated         | Slender                   | Not slender              |

(Guðlaugsdóttir 2010, Bruce 2009)

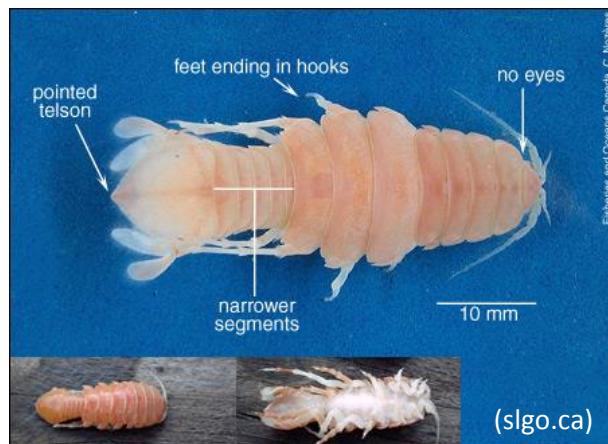
## *Syscenus infelix*

Harger 1880

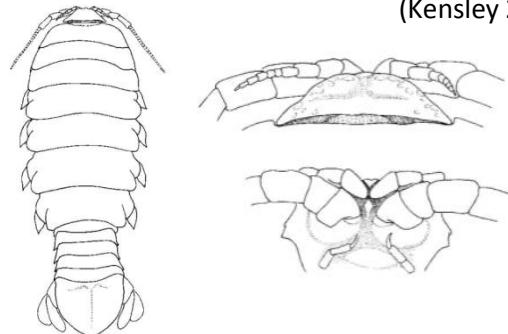
AphiaID: 156446

Unaccepted name: –

Greenland distribution: unknown



(Kensley 2004)



Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Cymothoida (Suborder) > Cymothooidea (Superfamily) > **Anuropidae** (Family)

## *Anuropus* sp.

Beddard 1886

AphiaID: 174485

Unaccepted name: –

Greenland distribution: unknown



Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Valvifera (Suborder) > **Antarcturidae** (Family)

*Pleuroprion* sp.



*Pleuroprion frigidum*

Hansen 1916

AphiaID: 119027

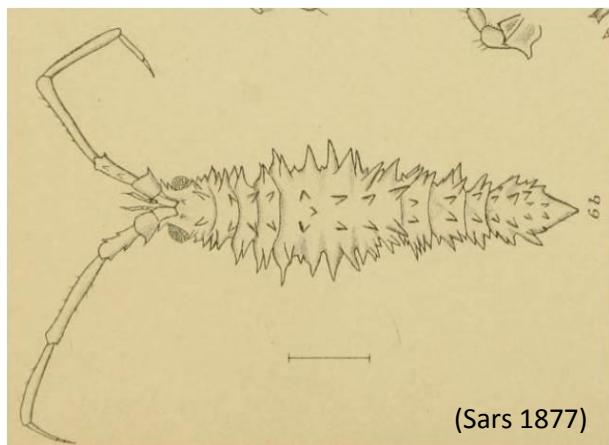
Unaccepted name: –

*Pleuroprion hystrix*

Sars 1877

AphiaID: 119028

Unaccepted name: *Arcturus hystrix*



Note : Sars made an error on end of abdomen which is bifid, and on delimitation of last thoracic segment and abdominal part (Hansen 1916)

|   | <i>P. frigidum</i>                      | <i>P. hystrix</i>                       |
|---|---|---|
| <b>Body size</b>  | Up to 9mm                               | Up to 9mm                               |
| <b>End of abdomen</b>   | Triangular, subacute or somewhat obtuse | With median incision and 2 acute points |
| <b># spiniform process in the anterior transverse row on the head</b> | 4                                       | 3                                       |
| <b># pairs submedian dorsal processes</b>                             | 1                                       | 2-3                                     |
| <b>Fifth pair of legs</b>   | No marsupial lamellae                   | Distinct marsupium with lamellae        |

(Hansen 1916)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Valvifera (Suborder) > **Arcturidae** (Family)

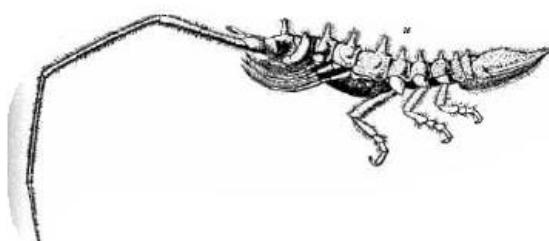
## *Arcturus baffini*

Sabine 1824

AphiaID: 146502

Unaccepted name: *Idothea baffini*

Greenland distribution: SE shelf slope, West shelf



(Richardson 1905)

Body size: Up to 40mm

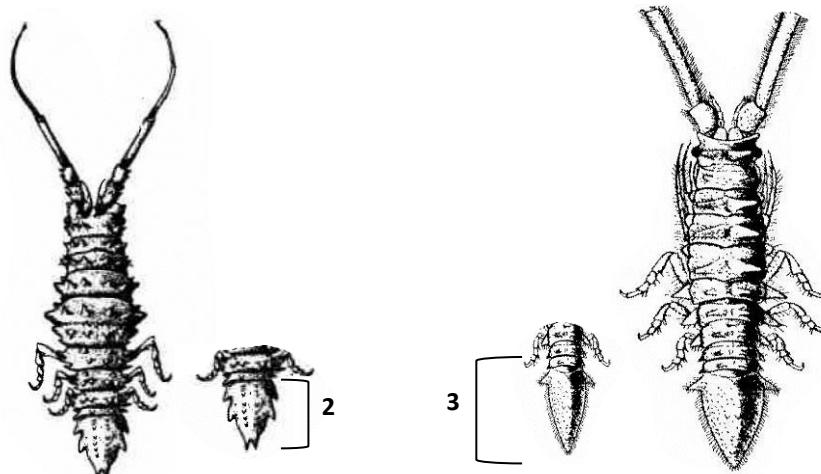
Terminal segment of abdomen without long median terminal spine

Four anterior segments of thorax with spines or tubercles

Middle line of abdomen with prominent spiny projections

## *Pleuroprion VS Arcturus*

|                        | <i>Pleuroprion</i> sp.   | <i>Arcturus</i> sp.   |
|------------------------|--|---|
| <b>Abdomen segment</b> | Composed of 2 segments, 1 segment to the large terminal segment. | Composed of 3 segments, 2 segment anterior to the large terminal one. |



(Richardson 1905)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Valvifera (Suborder) > **Chaetiliidae** (Family)

## *Saduria* sp.



### *Saduria entomon*

Linnaeus 1758

AphiaID: 119034

Unaccepted name:

*Mesidotea entomon*

Distribution unknown



wijkmark.wordpress.com

### *Saduria sabini*

Krøyer 1849

AphiaID: 119036

Unaccepted name:

*Mesidotea sabini*

West shelf



### *Saduria sibirica*

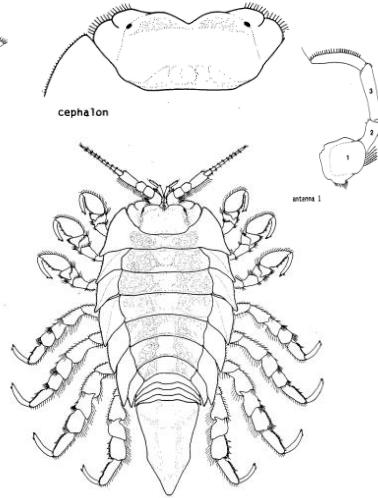
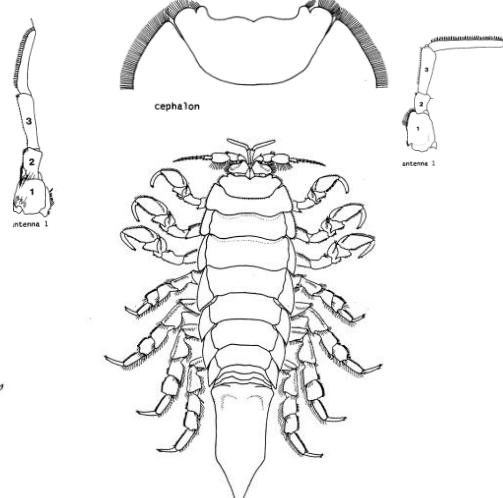
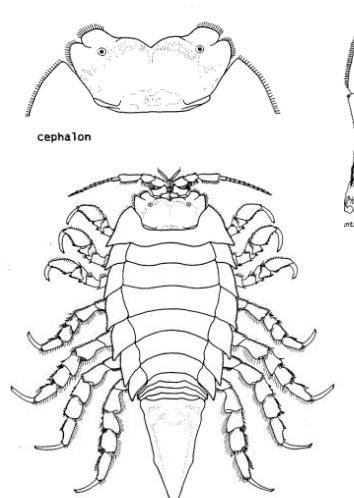
Birula 1896

AphiaID: 233981

Unaccepted name:

*Mesidotea sibirica*

Distribution unknown



|                                 | <i>Saduria entomon</i>  | <i>Saduria sabini</i>                                      | <i>Saduria sibirica</i>              |
|---------------------------------|---|--|--------------------------------------|
| <b>Body size</b>                | Up to 87mm  | Up to 90mm   | Up to 75mm                           |
| <b>Eyes</b>                     | With black eyes, small, compound and situated dorsally        | No eyes or small white eyes                                | Medium size                          |
| <b>Body</b>                     | Ovate, tapering posteriorly                                   | Elongate   | Robust                               |
| <b>Cephalon, lateral margin</b> | Cleft 2 equal lobes anterior rounded posterior slightly acute | Cleft, 2 rounded lobes posterior 2-3X larger than anterior | Cleft, 2 rounded lobes equal in size |

(Lawrence et al. 1990)

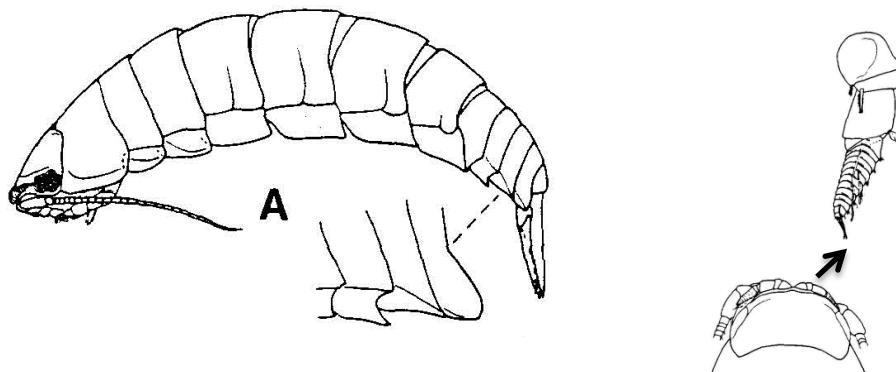
Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Cymothoida (Suborder) > Cymothooidea (Superfamily) > **Cirolanidae** (Family)

*Natatalana borealis*

Lilljeborg 1851

AphiaID: 118859

Unaccepted name: *Cirolana borealis*



(Keable et al. 1997)

Body size: Up to 31,5mm

Color: Mottled with darker brown

Eye present, well developed

Frontal lamina elongate

Pereonite 1: Furrow strongly developed on lateral margin

Pereonite 4-6: 1 long median furrow on lateral margin

Pereonite 7: One short medial furrow on lateral margin

Coxa1-2: Furrows variously developed

Pleonite 2-4: One strongly furrow on lateral margin

(Keable et al. 1997)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Cymothoida (Suborder) > Cymothooidea (Superfamily) > **Gnathiidae** (Family)

## *Caecognathia stygia*

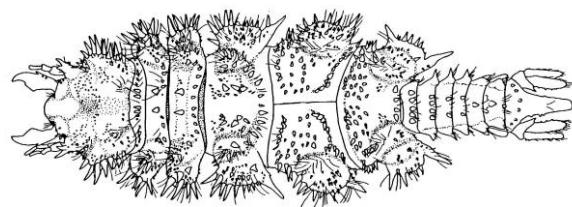
G.O. Sars 1877

AphiaID: 118986

Unaccepted name: *Gnathia stygia*



BREA



(Lawrence et al. 1990)

Body size: Up to 12mm

Without eyes

Pereopods strongly spinous

Dentate margin on uropod and telson

Body armed with sharp tubercles

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Asellota (Suborder) > Janiroidea (Superfamily) > **Janiroidea incertae sedis** (Family)

## *Tole laciniata*

Sars 1872

AphiaID: 118515

Unaccepted name: *Janira laciniata*

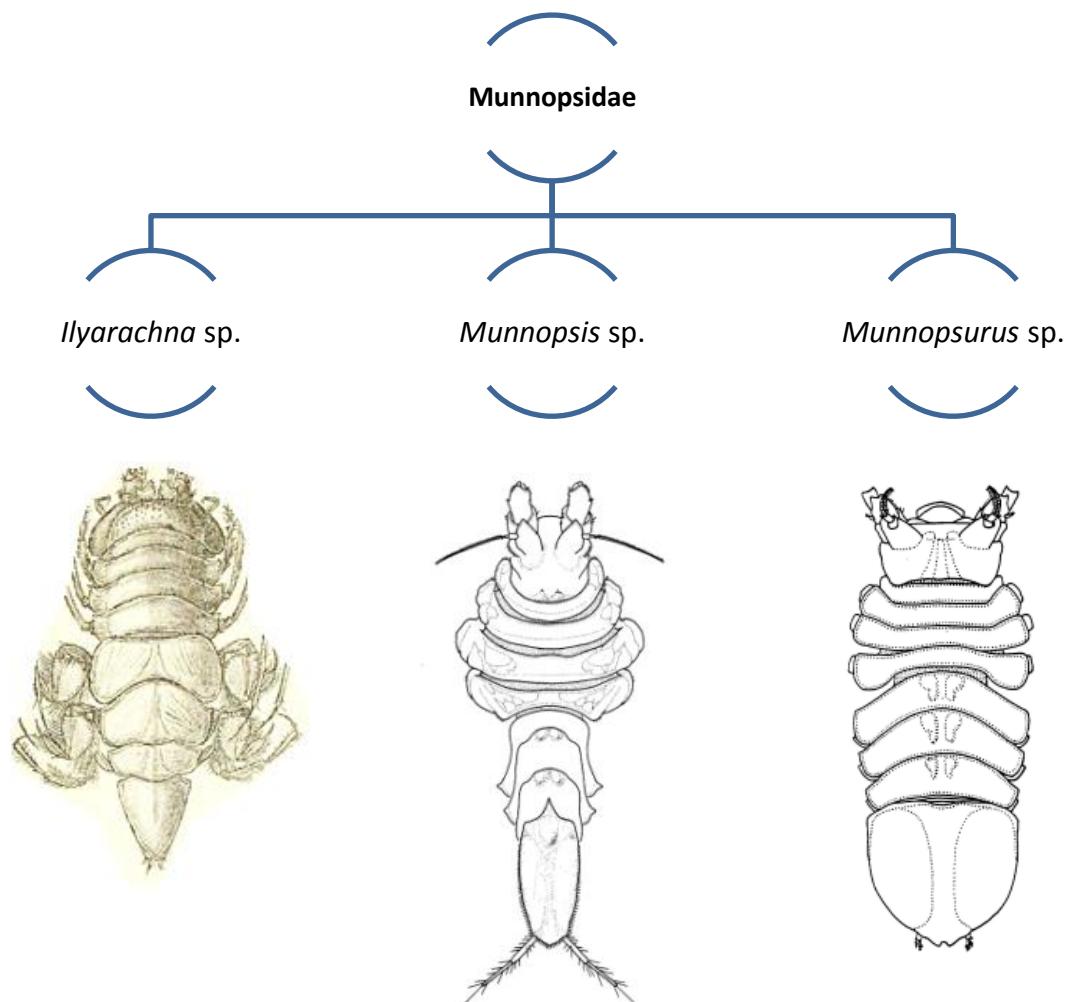
Greenland distribution: SW shelf, West shelf



Cephalon with prominent acute rostral process  
Pair of acute anterolateral projections directed anteriorly  
Eyes dorsally  
Body flattened  
Tergites with acute lateral projections  
Pleotelson with a pair of posterolateral pointed lappets

(Wilson et al. 1994)

Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Isopoda (Order) > Asellota (Suborder) > Janiroidea (Superfamily) > **Munnopsidae** (Family)



(Sars 1899, Lawrence et al. 1990)

|                           | <i>Ilyarachna</i> sp.        | <i>Munnopsis</i> sp. | <i>Munnopsurus</i> sp. |
|---------------------------|------------------------------|----------------------|------------------------|
| <b>Pereon constricted</b> | No                           | After segment 4      | No                     |
| <b>Pereopod 5-7</b>       | 5-6 natatory<br>7 ambulatory | 5-7 natatory         | 5-7 natatory           |

(Lawrence et al. 1990)

## *Ilyarachna* sp.

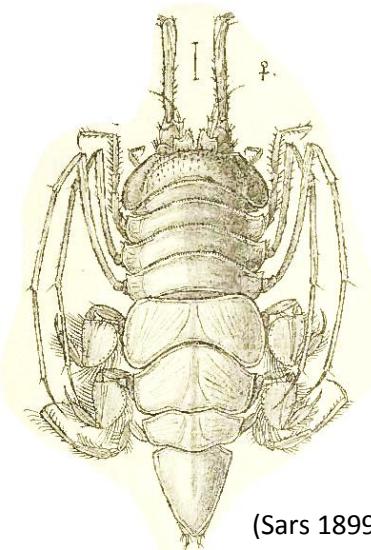
Sars 1870

AphiaID: 118354

Unaccepted name: *Mesostenus* sp.



www.boldsystems.org



(Sars 1899)

Body robust

Without distinct frontal area

Pereopod 5-6: Carpus large and expanded

Pereopod 7 narrower than 5-6

Pleotelson triangular

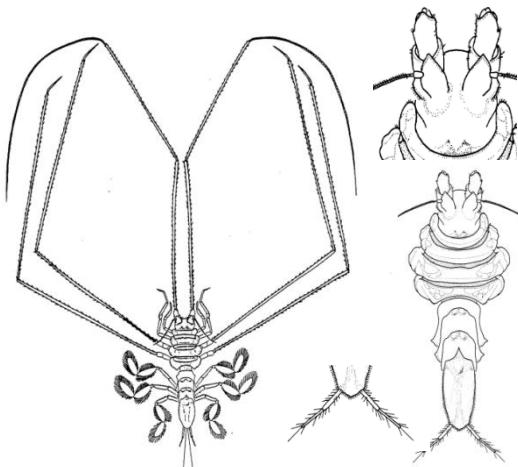
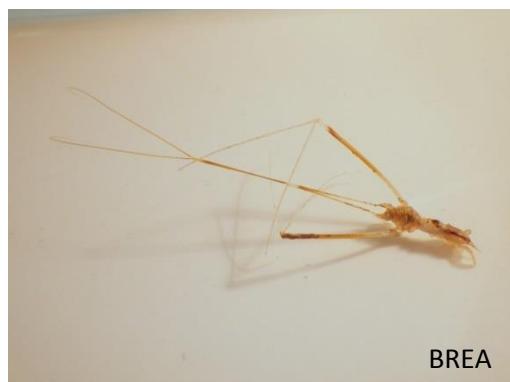
(Lawrence et al. 1990)

## *Munnopsis typica*

M. Sars 1861

AphiaID: 118770

Unaccepted name: –



Body size: Up to 16mm

Eye absent

Antenna 1, peduncle 1 large

Pereonite 1-4 broad, lateral margin rounded

Pereonite 5-7 narrower and longer

(Lawrence et al. 1990)

*Munnopsurus* sp.

(West shelf0

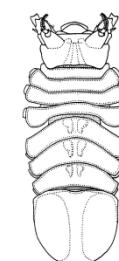
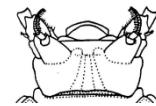
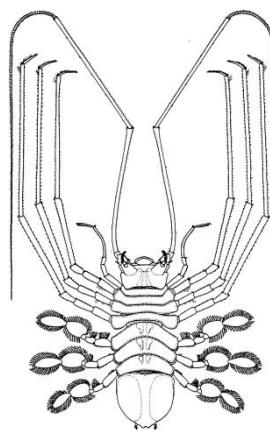


*Munnopsurus giganteus*

Sars 1877

AphiaID: 118636

Unaccepted name: –



Most of the time, legs are broken.

Body size: Up to 33mm

Body oblong, arcuate in appearance

Pereonites 1-4 shorter than pereonites 5-7 and

this group is separate by constriction

No frontal projection

(Lawrence et al. 1990)

(Lawrence et al. 1990)

## MYSIDA

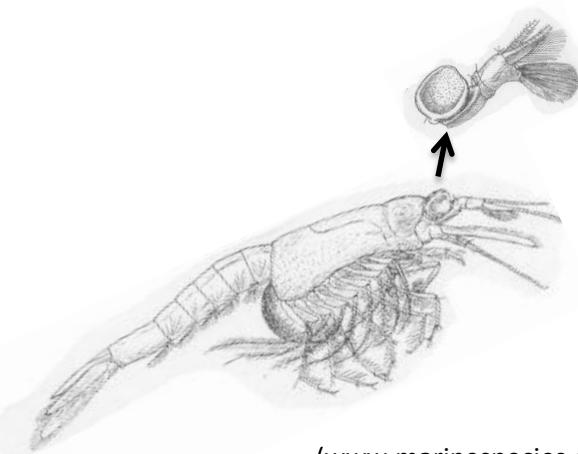
Crustacea (Subphylum) > Malacostraca (Class) > Eumalacostraca (Subclass) > Peracarida (Superorder) > Mysida (Order) > **Mysidae** (Family)

### *Birsteiniamysis inermis*

Willemoes-Suhm 1874

AphiaID: 423180

Unaccepted name: *Boreomysis inermis*



(www.marinespecies.org)

Body size: Up to 85mm

Eyes lacking pigment, outer edge often concave

(Petryashov 2009)

### *Boreomysis tridens*

G.O. Sars 1870

AphiaID: 119974

Unaccepted name: –

Greenland distribution: West basin



## NEBALIACEA

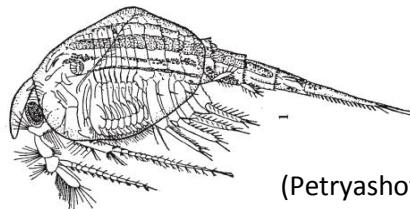
Crustacea (Subphylum) > Malacostraca (Class) > Phyllocarida (Subclass) > Leptostraca (Superorder) > Nebaliacea (Order) > **Nebaliidae** (Family)

*Nebalia* sp.

Leach 1814

AphiaID: 147031

Unaccepted names:



(Petryashov 2009)

Body size: Up to 13mm

Body in two parts: Cephalothorax and abdomen

Head segment: 5

Thoracic segment: 8

Abdominal segment: 7

(Petryashov 2009)

## PYCGONOGONIDA

| FAMILY           | PAGE |
|------------------|------|
| Ascorhynchidae   | 109  |
| Colossendeidae   | 110  |
| Callipallenidae  | 111  |
| Nymphonidae      | 112  |
| Phoxichilidiidae | 117  |
| Pycnogonidae     | 118  |

### TAXONOMIC KEY – FAMILIES

- 1(8) Appendage I present
- 2(5) Appendage II developed
- 3(4) Appendage II with 5 articles [**NYMPHONIDAE**]
- 4(3) Appendage II with 6-10 articles [**ASCORHYNCHIDAE**]
- 5(2) Appendage II rudimentary or absent
- 6(7) Appendage III 10 articulates in both sexes [**CALLIPALLENIIDAE**]
- 7(6) Appendage III 9 articulates only in males [**PHOXICHILIDIIDAE**]
- 8(1) Appendage I absent
- 9(10) Appendage II with 9 articulates [**COLOSSENDEIDAE**]
- 10(9) Appendage II absent [**PYCGONOGONIDAE**]

(Turpaeva 2009)

Chelicerata (Subphylum) > Pycnogonida (Class) > Pantopoda (Order) > Eupantopodida (Suborder) > Ascorhynchoidea (Superfamily) > **Ascorhynchidae** (Family)

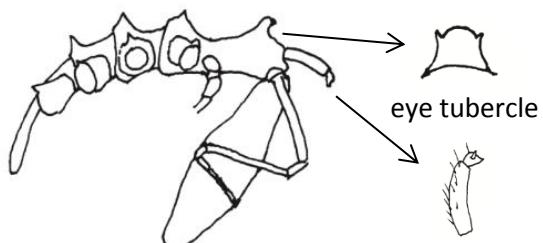
## *Ascorhynchus abyssi*

Sars 1877

AphiaID: 134618

Unaccepted name: –

Greenland distribution: SE shelf slope



appendage 1

Body size: Up to 5mm

Proboscis: Bent at proximal end, spindle-shape

Eyes tubercles: Low, eyes absent

Appendage I: 2 articulates

Accessory claws: Rudimentary or absent

(Turpaeva 2009)

Chelicerata (Subphylum) > Pycnogonida (Class) > Pantopoda (Order) > Eupantopodida (Suborder) > Colossendeidoidea (Superfamily) > **Colossendeidae** (Family)

## *Colossendeis* sp.



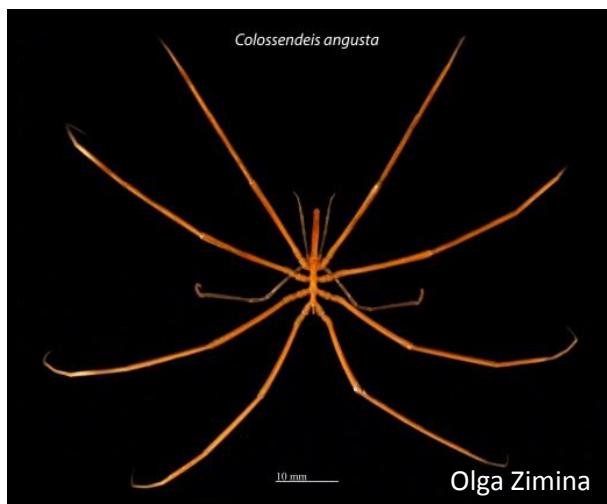
### *Colossendeis angusta*

Sars 1877

AphiaID: 134659

Unaccepted name: –

SE shelf slope



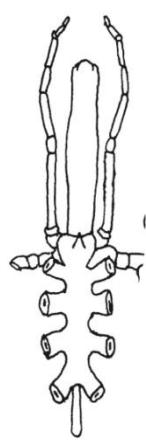
### *Colossendeis proboscidea*

Sabine 1824

AphiaID: 134669

Unaccepted name: –

SW shelf, SE shelf slope



(Turpaeva 2009)

(Turpaeva 2009)

|                          | <i>Colossendeis angusta</i>       | <i>Colossendeis proboscidea</i> |
|--------------------------|-----------------------------------|---------------------------------|
| <b>Body size</b>         | Up to 21 mm                       | Up to 50 mm                     |
| <b>Body</b>              | Elongate                          | Robust                          |
| <b>Lateral processes</b> | Separated by space                | Touch each other                |
| <b>Proboscis</b>         | Cylindrical, equal in body length | Very large, 2X body length      |

Chelicerata (Subphylum) > Pycnogonida (Class) > Pantopoda (Order) > Eupantopodida (Suborder) > Nymphonoidea (Superfamily) > **Callipallenidae** (Family)

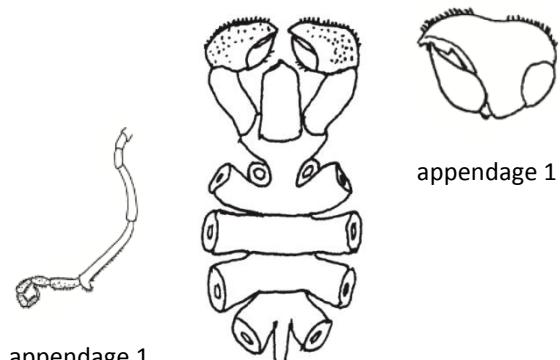
## *Pseudopallene brevicollis*

Sars 1891

AphiaID: 134654

Unaccepted name: *Cordylochele brevicolis*

Greenland distribution: SE shelf slope, SW shelf



Body size: Up to 7mm

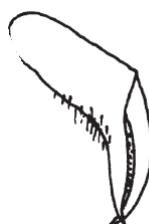
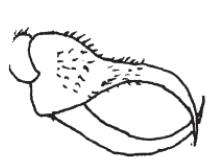
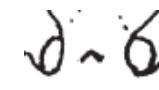
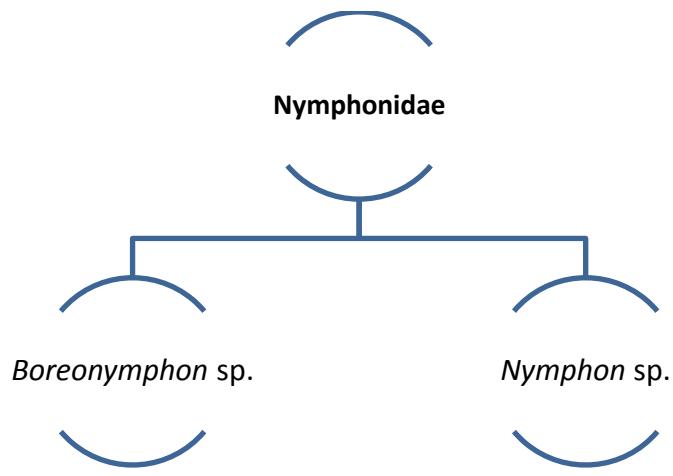
Smooth inner edge on moveable dactyl of chela of appendage I

Chela compact

Serrated spines on appendage 3 with undulating plate lacking basal spines

(Turpaeva 2009)

Chelicerata (Subphylum) > Pycnogonida (Class) > Pantopoda (Order) > Eupantopodida (Suborder) > Nymphonoidea (Superfamily) > **Nymphonidae** (Family)



|                              | <i>Boreonymphon</i> sp.     | <i>Nymphon</i> sp. |
|------------------------------|-----------------------------|--------------------|
| <b>Eyes tubercles</b>        | Low                         | High               |
| <b>Dactyl of chela</b>       | Bent to semicircular        | Slightly bent      |
| <b>Serrated spines</b>       | Smooth edge                 | Denticulate edge   |
| <b>Claw of appendage III</b> | Lacking teeth on inner edge | With teeth         |

(Turpaeva 2009)

*Boreonymphon* sp.



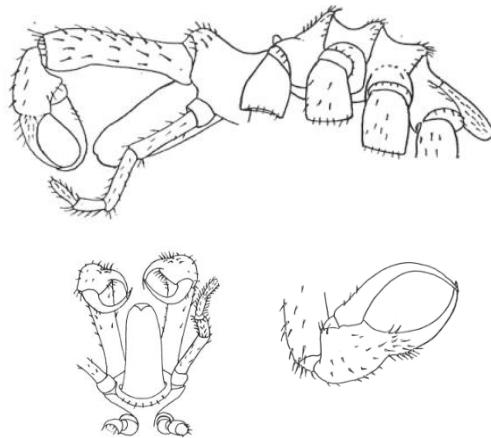
*Boreonymphon abyssorum*

Norman 1873

AphiaID: 134676

Unaccepted names *Boreonymphon robustum*  
sensu Hansen 1887, Sars 1891

SE shelf slope



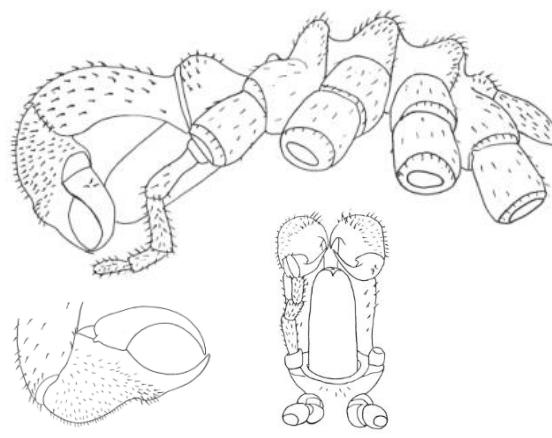
*Boreonymphon robustum*

Bell 1855

AphiaID: 134679

Unaccepted name: *Nymphon robustum*

Distribution unknown



(Just 1972)

|                               | <i>Boreonymphon abyssorum.</i>                | <i>Boreonymphon robustum</i>                   |
|-------------------------------|---|--|
| <b>Body size</b>              | Up to 22mm                                    | Up to 22mm                                     |
| <b>Trunk</b>                  | Smooth with some bristles of different length | Covered by velvet dense small hairs            |
| <b>Scapus VS Scapi</b>        | Thinner than the distance between             | Broader than the distance between              |
| <b>Proboscis</b>              | Tapering in apex                              | Cylindrical                                    |
| <b>Ocular segment length</b>  | As long as three last segments together       | As long as the two following segments together |
| <b>Eyes tubercles</b>         | Narrowly pointed in lateral view              | Apex rounded                                   |
| <b>Chelae/Moveable finger</b> | Twice longer than palm                        | Slightly longer than palm                      |

(Just 1972)

## *Nymphon* sp.

(West shelf, SW shelf, SE shelf slope)



### *Nymphon serratum*

G.O. Sars 1879

AphiaID: 134707

Unaccepted name: –

West shelf, SW shelf



### *Nymphon hirtipes*

Bell 1853

AphiaID: 134690

Unaccepted name: *Nymphon spinosum hirtipes*

West shelf, SE shelf slope



### *Nymphon stroemi*

Krøyer 1844

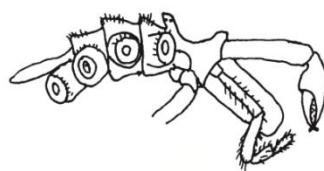
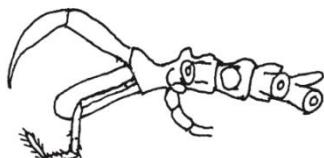
AphiaID: 134711

Unaccepted name: –

West shelf, SW shelf, SE shelf slope



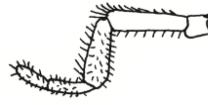
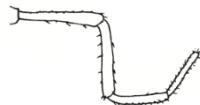
eyes tubercle



appendage 1



appendage 2



(Turpaeva 2009)

|  | <i>Nymphon serratum</i>                | <i>Nymphon hirtipes</i> | <i>Nymphon stroemi</i>       |
|--|--|-------------------------|------------------------------|
| <b>Body size</b>                       | Up to 12mm                             | Up to 12 mm             | Up to 15mm                   |
| <b>Body</b>                            | Elongate, bare                         | Large, long setae       | Elongate, bare               |
| <b>Lateral processes</b>               | Separated by space                     | Touching each other     | Separated by space           |
| <b>Length of article 4/appendage 2</b> | Not greater than 2-2,5 times its width |                         | 5-8 times greater than width |

(Turpaeva 2009)

*Nymphon* sp.

(West shelf, SW shelf, SE shelf slope)



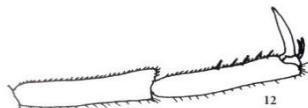
*Nymphon megalops*

Sars 1877

AphiaID: 134698

Unaccepted name: –

SE shelf slope



distal article of leg

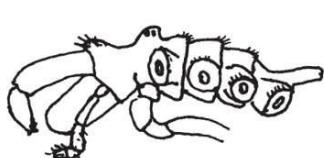
*Nymphon hirtum*

Fabricius 1780

AphiaID: 134691

Unaccepted name: –

SW shelf



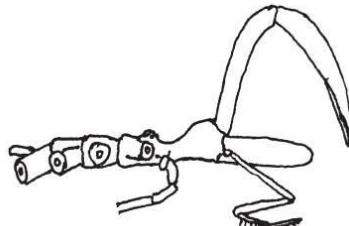
*Nymphon elegans*

Hansen 1887

AphiaID: 134686

Unaccepted name: –

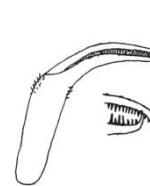
SE shelf slope



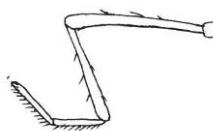
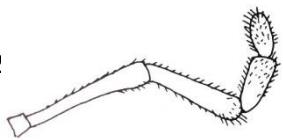
eyes tubercle



appendage 1



appendage 2



*Nymphon megalops*

**Body size**

Up to 13 mm

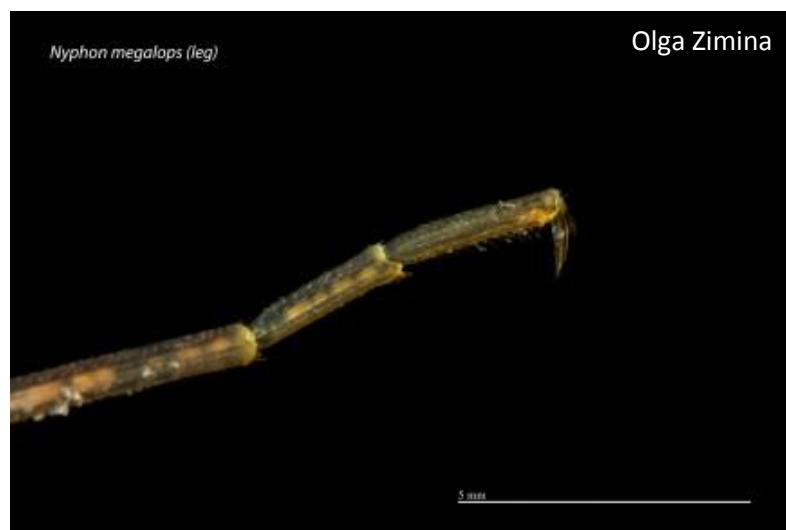
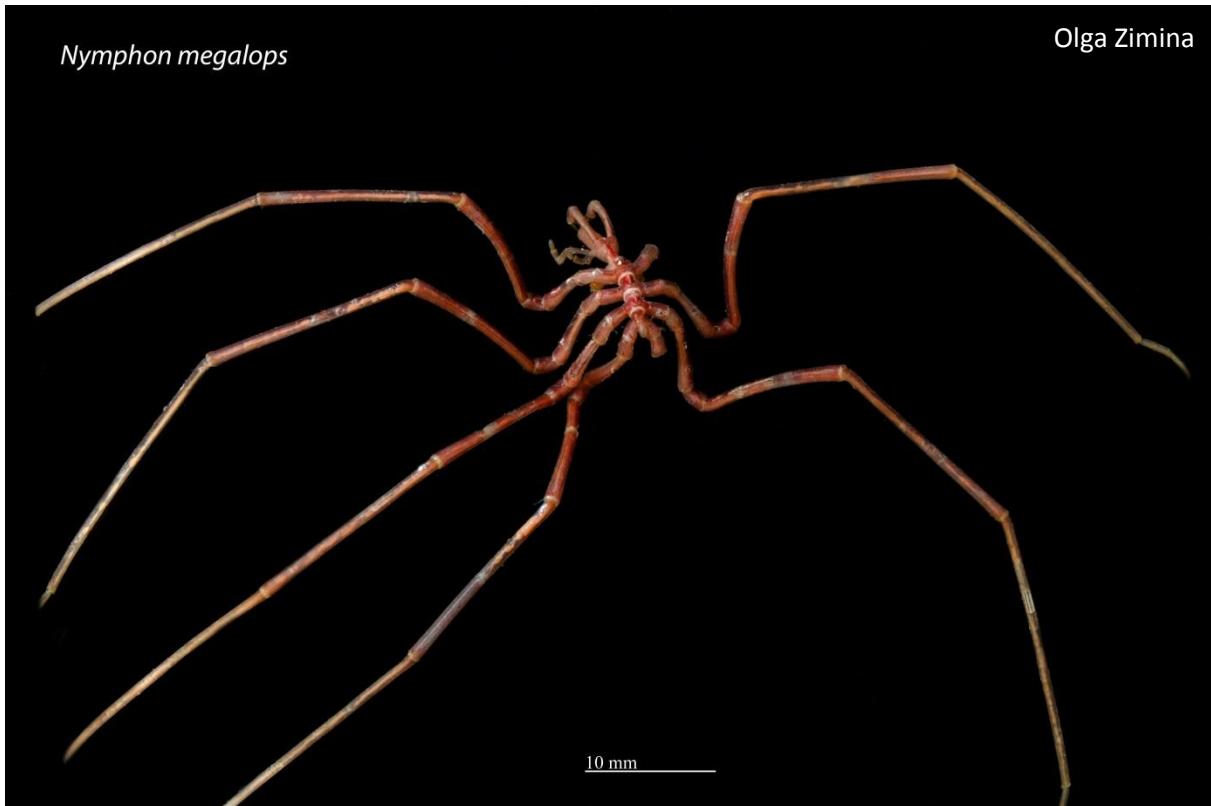
*Nymphon hirtum*

Small, up to 6mm

*Nymphon elegans*

up to 9 mm

(Turpaeva 2009)



Chelicerata (Subphylum) > Pycnogonida (Class) > Pantopoda (Order) > Eupantopodida (Suborder) > Phoxichilidoidea (Superfamily) > **Phoxichilidiidae** (Family)

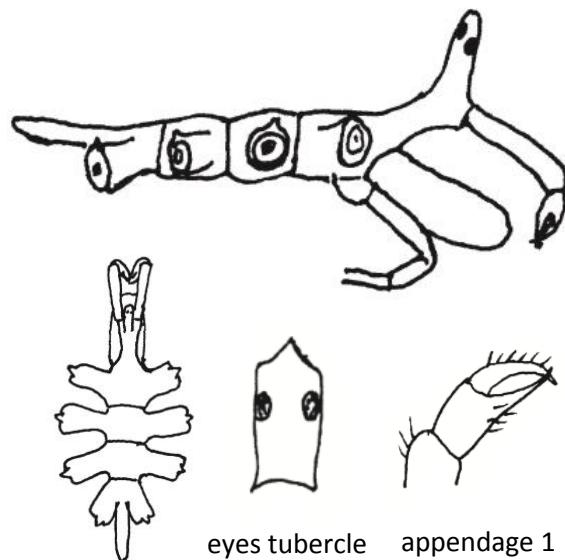
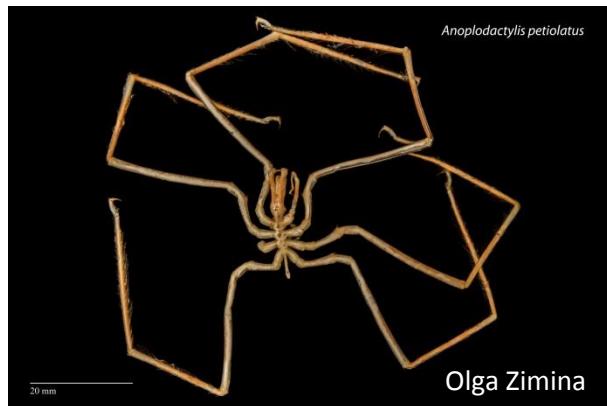
## *Anoplodactylus petiolatus*

Krøyer 1844

AphiaID: 134723

Unaccepted name: –

Greenland distribution: West basin



Body size: Up to 2mm  
Neck very long, longer beyond at base of Proboscis  
Appendage 3 : 6 articulates  
Accessory claws rudimentary



(Turpaeva 2009)

Chelicerata (Subphylum) > Pycnogonida (Class) > Pantopoda (Order) > Eupantopodida (Suborder) > Pycnogonoidea (Superfamily) > **Pycnogonidae** (Family)

*Pycnogonum* sp.

(SW shelf)



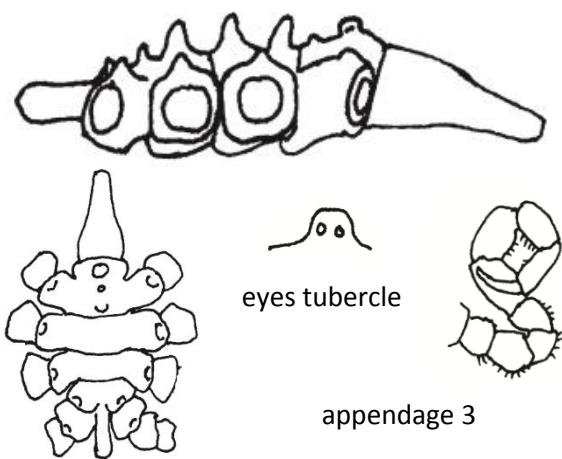
*Pycnogonum litorale*

Ström 1762

AphiaID: 239867

Unaccepted name: *Pycgonum littorale*

Greenland distribution: West shelf



Body size: Up to 15mm  
Appendage II absent  
Appendage III: 9 articulate only in males.

(Turpaeva 2009)

**Scalpellidae** : capitulum + peduncle

**Balanidae**: peduncle absent, calcareous shell with flat base

(Kolbasov 2009)

Crustacea (Subphylum) > Multicrustacea (Superclass) > Thecostraca (Subclass) > Cirripedia (Infraclass) > Thoracica (Superorder) > Scalpelliformes (Order) > **Scalpellidae** (Family)

*Ornatoscalpellum* sp.  
(West shelf)



*Ornatoscalpellum stroemii*

M. Sars 1859

AphiaID: 106203

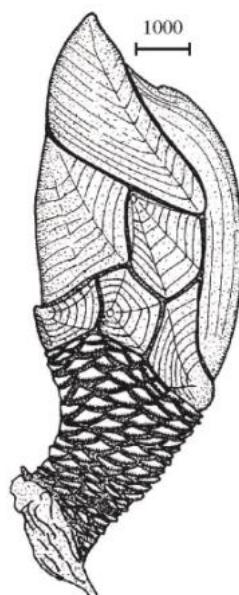
Unaccepted name: *Scalpellum stroemii*

Greenland distribution: SE shelf slope, SW shelf, West shelf)



Body size: Up to 19mm  
Scutum with apical umbo  
Umbo of mid-lateral in center of rostral margin

(Kolbasov 2009)



(Kolbasov 2009)

Crustacea (Subphylum) > Multicrustacea (Superclass) > Thecostraca (Subclass) > Cirripedia (Infraclass) > Thoracica (Superorder) > Sessilia (Order) > **Balanidae** (Family)

***Balanus* sp.**  
(West shelf)



***Balanus balanus***

Linnaeus 1758

AphiaID: 106213

Unaccepted name: *Balanus porcatus*

West shelf



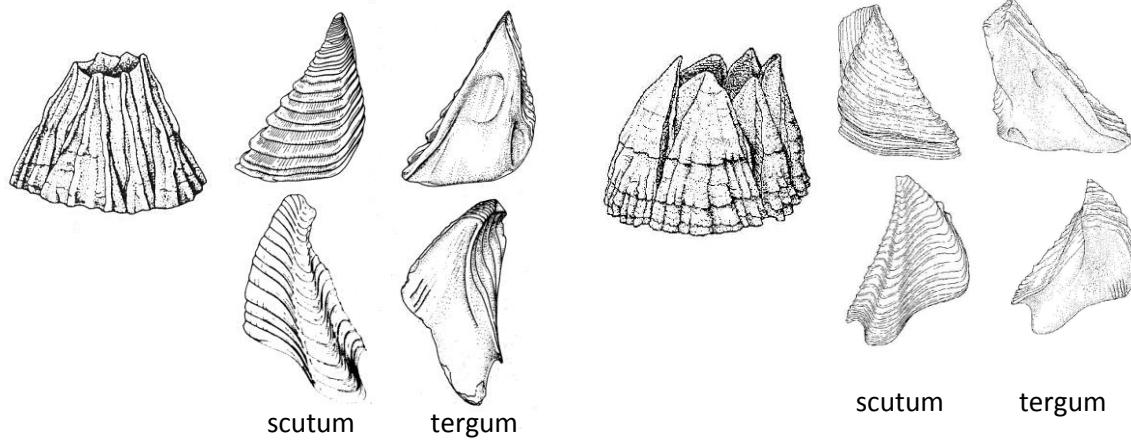
***Balanus crenatus***

Brugière 1789

AphiaID: 106215

Unaccepted name: –

West shelf, SE shelf slope

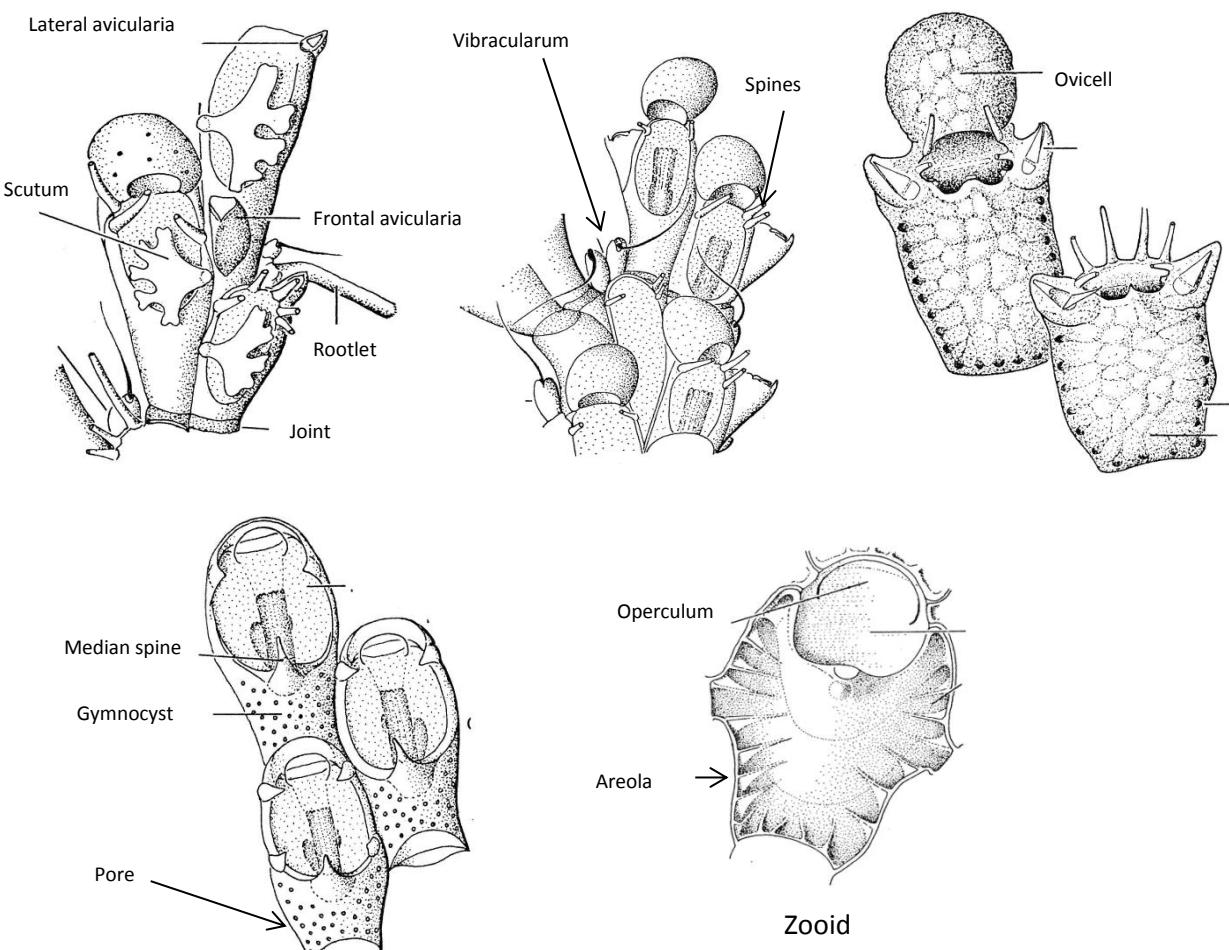


|                                 | <b><i>Balanus balanus</i></b>     | <b><i>Balanus crenatus</i></b>       |
|---------------------------------|-----------------------------------|--------------------------------------|
| <b>Body size</b>                | 40-50 mm                          | Up to 40 mm                          |
| <b>Shell plates</b>             | Internal tube                     | With internal tubes                  |
| <b>Tergum apex</b>              | Hook shapes, sharp                | Not hook-shaped                      |
| <b>Adductor ridge of scutum</b> | –                                 | Absent                               |
| <b>Exterior of scutum</b>       | Distinctly striate longitudinally | Lacking distinct longitudinal striae |

(Zullo 1979)

## P H Y L U M    B R Y O Z O A

The Bryozoa phylum is one of the 33 major branches existing on the animal kingdom (Smith et al. 2011). The most of bryozoans forming the colonies can reach more than millions individuals call zooids. In the same colony, the zooids are genetically identical but differ by their morphology because each zooid has a different function to insure their survival (Kuklinski et al. 2015). The number of worldwide lived species is evaluated at more than 5000. The Cheilostomata class is regroups the largest number of species (Ryland 2015). In Arctic, this phylum is estimated at 300 species (Bader et al. 2005).



# BRYOZOA

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| Bugulidae        | 125  |
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## TAXONOMIC KEY – ORDERS

- 1(2) Zooids chitinous [**CTENOSTOMATIDA**]
- 2(1) Zooids more or less calcified.
- 3(4) Orifices of zooids rounded and covered by a membrane [**CYCLOSTOMATIDA**]
- 4(3) Orifices of zooids usually have a semilunar form and close with a mobile, labial lid or Operculum [**CHEILOSTOMATIDA**]

(Kluge 1975)

## TAXONOMIC KEY – CTENOSTOMATIDA

- 1(1) Zoaria are whitish or yellowish-brown. Orifice is small, round and chitinous spines absent. Usually the surfaces of the colony look like a nipple appearance [**ALCYONIDIIDAE**]

(Kluge 1975)

#### TAXONOMIC KEY – CYCLOSTOMATIDA

- 1(2) Zoaria divided by chitinous articulations into joint or internodes [**CRISIIDAE**]
- 2(1) Zoaria not divided by chitinous articulations.
- 3(4) Zoaria are verrucose. Zooids arranged radially from the center separate by alveoli [**LICHENOPORIDAE**]
- 4(3) Zoaria are usually not verrucose. Zooids are usually not arranged radially and not separate by alveoli.
- 5(6) Zoarium is verrucose or free-growing. The form of colony is cup-shaped or cylindrical. Frontal side consists of radially arranged conspicuous and complex row of zooids, between which one or more gonozoids are stretched [**CYTIDIDAE**]
- 6(5) Zooids not consists of radially arranged, prominent, complex row. Zoaria prostrate or free-growing, consist of 1, 2 or more rows of zooids located on one side [**TUBULIPORIDAE**]

(Kluge 1975)

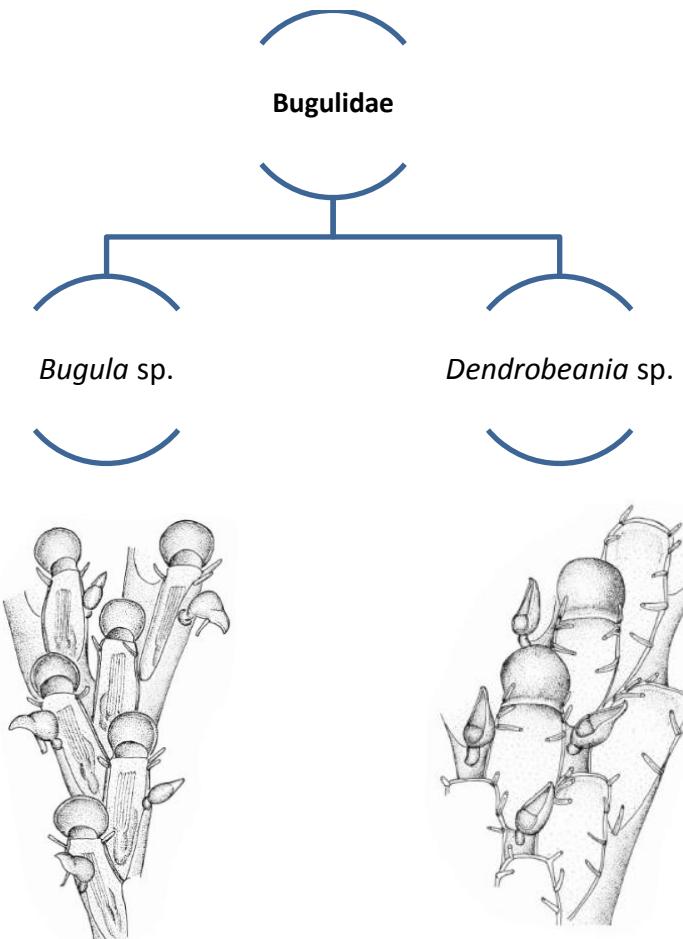
#### TAXONOMIC KEY – CHEILOSTOMATIDA

- 1(12) Zoaria are prostrate and overgrow the substrate in the form of a crust, partly encrusting, partly erected or even fully upright. The frontal wall of the zooids is completely or partially membranous.
- 2(3) Branche of colony is cylindrical. Zoaria free-growing, dichotomous and segmented by chitinous articulations into internodes [**MICROPORIDAE**]
- 3(2) If the colony is free-growing, branches of colony are not cylindrical. Rarely, the colony is prostrate (Calloporidae).
- 4(9) Zoaria bushy, primarily foliate, irregularly or dichotomous. Free-growing zoarium has vicariating avicularia and encrusting form has an adventitious or vicariating or both.
- 5(8) Zoaria ereted and branched.
- 6(7) Zooids arranged in single rows and connected with each other in pair by their basal sides (back to back). Avicularia absent [**EUCRATEIDAE**]
- 7(6) Zoaria flexible, leaf-shaped, one or two-sided. Orifice occupies wholw frontal surface and is directed in one direction [**FLUSTRIDAE**]
- 8(5) Zoaria are prostrate over the substrate in the form of a crust zooid consist of one, two or multi-rowed. Orifice occupying from one-third to the total of the frontal wall [**CALLOPORIDAE**]
- 9(4) Zoaria always free-growing composed on single-Layered and one, two, or multi-rowed. Avicularia are always adventitious.

- 10(11) Vibracula is absent. Zoaria are free-growing or creeping. Branches unjointed, single-layered and consist at one, two or multi-rowed [**BUGULIDAE**]
- 11(10) Vibracula is present. Zoaria are free-growing. Branched jointed consist at two or four rows [**SCRUPOCELLARIIDAE**]
- 12(1) Zoaria are prostrate and overgrowing or free-growing. Frontal wall of the zooids is calcified except the orifice.
- 13(14) Zoarium is prostrate or free-growing, look like an agglomeration of bumps. Usually consists a number of layers of semi-erect or erect zooids irregularly arranged [**CELLEPORIDAE**]
- 14(13) Zoarium encrusting or erected, consists of 1 or 2 zooids arranged in regular or irregular rows. Sometimes zoarium is cylindrical with zooids arranged in one layer around the middle axis of the branch.
- 15(16) Zoaria are free-growing and a complex sinuate form or funnel-shaped. Lobate nets consist of fused branches with windows or opening [**RETEPORELLA (PHIDOLOPORIDAE)**]
- 16(15) Zoaria do not form free-growing walls with windows or opening.
- 17(18) Free-growing zoaria with chitinous radicular tubes [**PSEUDOFESTRA (SMITTINIDAE)**]
- 18(17) Zoaria without chitinous radicular tubes.
- 19(20) Primary orifice has a broad or narrow or pointed lyrule in the middle of the proximal margin. Avicularium located at the proximal margin of the orifice, is sloping and forming a semi-circular protuberance [**RHAMPHOSTOMELLA (UMBONULIDAE)**]
- 20(19) Primary orifice has barely convex or concave on proximal margin.
- 21(24) Usually without sinus in the proximal margin of the primary orifice.
- 22(23) Peristome is poorly developed. Zoarium is prostrate. Avicularia is absent. Zooids surrounded by 1 or 2 row of marginal pores. Spines are present [**ESCHARELLA (ROMACHEINIDAE)**]
- 23(22) Peristome more or less developed (more strong). Zoaria are prostrate or free-growing. Avicularia are present and located at the middle of proximal margin [**PORELLA (BRYOCRYPTELLIDAE)**]
- 24(21) Sinus is present in the proximal margin of the primary orifice.
- 25(26) Zoaria are free-growing, cylindrical, branched and surface with many pores. Sinus in the proximal margin narrow and straight [**MYRIAPORIDAE**]
- 26(25) Zoaria are prostrate and overgrowing. Sinus in the proximal margin narrow and straight, sharp or rounded [**SCHIZOPORELLIDAE**]

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Buguloidea (Superfamily) > **Bugulidae** (Family)



(Ryland et al. 1991)

|   | <i>Bugula</i> sp.  | <i>Dendrobeania</i> sp.  |
|---|--|--|
| <b>Zoids</b>                                  | Small, oblong  | Large, oblong, thick   |
| <b>Avicularia</b>                             | Present, bird's beak form, flexible  | Present or absent, mobile  |
| <b>Avicularia stalk attachment originates</b> | From proximal end of the zooid's frontal surface and are perpendicular to the length of the avicularia | From proximal part in the direction or their length or perpendicular to it |
| <b>Ovicells</b>                               | Hyperstomial, round or semi-round  | Hyperstomial, incompletely calcified outer layer                           |

(Kluge 1975)

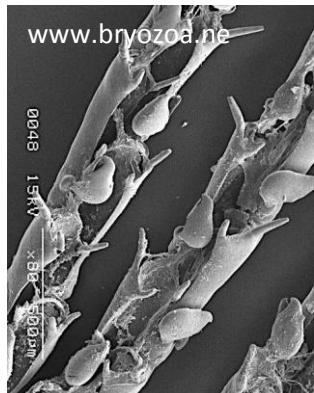
*Bugula* sp.

Oken 1815

AphiaID: 110839

Unaccepted name: –

Greenland distribution: West shelf



Free-growing and zoaria dichotomously branched

Spines are present

The avicularia look like a bird beak and flexibly attached to the lateral side

Ovicells hyperstomial and round or semi-round

(Kluge 1975)

*Dendrobeania* sp.

(West shelf)



*Dendrobeania fruticosa*

Packard 1863

AphiaID: 111173

Unaccepted name: –

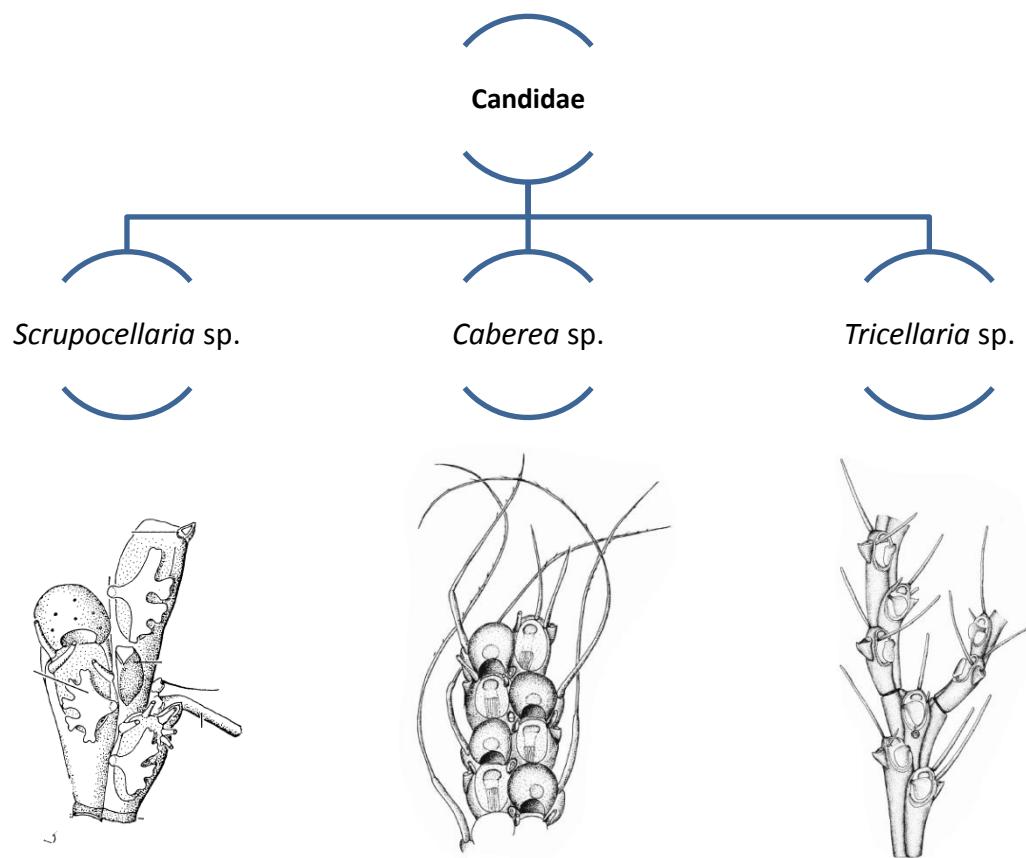
Greenland distribution: West shelf



Free-growing and zoaria are large and dichotomously branched  
1 spine to the outer corner on distal margin of the aperture or 1 on each corner  
If present, avicularia mobile

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Buguloidea (Superfamily) > **Candidae** (Family)



(Ryland et al. 1991, Ryland 1974)

|                       | <i>Scrupocellaria</i> sp. | <i>Caberea</i> sp.                             | <i>Tricellaria</i> sp. |
|-----------------------|---------------------------|--|------------------------|
| <b>Vibracula</b>      | Present or absent         | Present  | Absent                 |
| <b>Zoaria jointed</b> | Yes                       | No   | Yes                    |
| <b>Avicularia</b>     | Lateral or/and frontal    | Lateral, small and frontal<br>paired or single | Lateral or/and frontal |

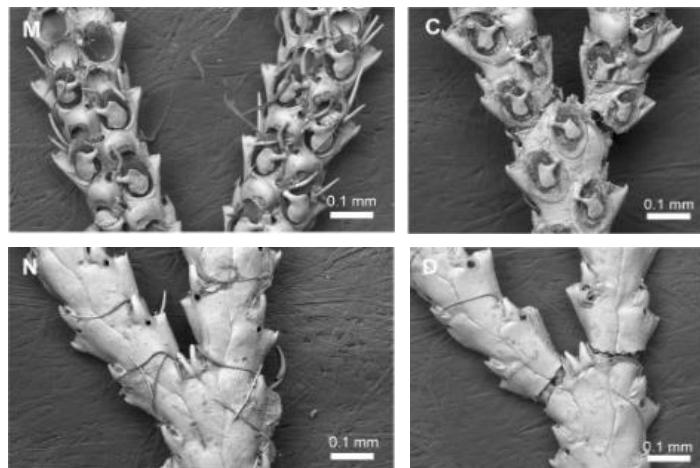
*Scrupocellaria* sp.

Van Beneden 1845

AphiaID: 110866

Unaccepted name: –

Greenland distribution: unknown



(Vieira et al. 2014)

Free-growing and zoaria dichotomously branched

Branches are jointed and biseriate

Internodes consists of 5 to 13 zooids

Often zoaria with has spines and scutum.

Lateral and frontal avicularia present or absent

Vibracula present or absent

If vibracula present, they located on the basal side of the proximal part

Ovicells are hyperstomial

(Kluge 1975)

## *Caberea ellisi*

Flemming 1814

AphiaID: 111230

Unaccepted name: –

Greenland distribution: West shelf, SW shelf, SE shelf slope



Zoaria are yellow-brown and irregularly branched

Zoids arranged in 2 to 4 rows

Oval aperture occupying almost entire surface

The marginal zooids have 2 strong spines on the distal corner and 1 on the inner.

The middle zooids have 1 spine on each corner.

Scutum is absent

Small lateral avicularia with rounded mandible are located a little below the distal corner.

Frontal avicularia are located under the proximal margin of the aperture, 1 on each side, sometimes only 1 is present

Radicular fibers are strongly developed

(Kluge 1975)

## *Tricellaria ternata*

Ellis & Solander 1786

AphiaID: 111256

Unaccepted name: –

Greenland distribution: West shelf



Zoaria bushes, dichotomous, jointed branches usually bent inward at

Tips

Internode consists of 3 zooids

Orifice is partially covered by roundish, triangular scutum

On the distal margin of aperture, 3 to 4 spines are present and 4 spines near the fork of the middle

Lateral avicularia large, usually present on the 2 proximal zooids in the internode

Small frontal avicularia are present

Ovicells are large with smooth frontal surface

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Flustroidea (Superfamily) > **Calloporidae** (Family)

*Tegella* sp.  
*Callopora* sp.  
*Cauloramphus* sp.



*Tegella* sp.

Levinsen 1909

AphiaID: 110863

Unaccepted name: –

*Callopora* sp.

Gray 1848

AphiaID: 110851

Unaccepted name: –

*Cauloramphus* sp.

Norman 1903

AphiaID: 110852

Unaccepted name: –

|                                 | <i>Tegella</i> sp.                           | <i>Callopora</i> sp.                                  | <i>Cauloramphus</i> sp.   |
|---------------------------------|--|---|---------------------------|
| <b>Location of pores plates</b> | Lateral and transverse walls                 | Along the margin side                                 | Their basal               |
| <b>Spines on zooids</b>         | Present or absent                            | Calcareous spines present                             | Calcareous spines present |
| <b>Avicularia</b>               | Adventitious or adventitious and vicariating | Adventitious and vicariating either present or absent | Petiolated                |
| <b>Ovicells</b>                 | Hyperstomial or endozoocial                  | Absent or present                                     | Hyperstomial              |

(Kluge 1975)

*Celleporina* sp.  
*Palmicellaria* sp.



*Celleporina* sp.

Gray 1848

AphiaID: 110875

Unaccepted name: –

West shelf, SW shelf, SE shelf slope

*Palmicellaria* sp.

Alder 1864

AphiaID: 110833

Unaccepted name: –

West shelf



|                   | <i>Celleporina</i> sp.   | <i>Palmicellaria</i> sp.  |
|-------------------|--|---|
| <b>Zoaria</b>     | Small, encrusting, multilaminar, pisiform, nodular or cylindrical and with suberect autozooids | Free-growing branched or prostate   |
| <b>Zoids</b>      | Cryptocystidean frontal shield with few marginal pores   | Oblong-oval and convex. Smooth surface bordered by small pores arranged in a checkered pattern along the deep margin  |
| <b>Orifice</b>    | Sinuate orifice flanked  | Primary orifice: round, semi-circular or elliptical.<br>Second orifice with developed peristome                       |
| <b>Avicularia</b> | Columnar adventitious, always paired.<br>Sometimes with vicarious avicularia                   | Protuberance located at the center of peristome. Round form with semi-circular mandible located its base on the side. |
| <b>Ovicell</b>    | A cleithral with central perforated area, called tubula  | Hyperstomial  |

(Souto et al. 2014, Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Celleporoidea (Superfamily) > **Phidoloporidae** (Family)

***Reteporella* sp.**  
(SE shelf slope, SW shelf, West shelf)



***Reteporella grimaldii***

Jullien 1903

AphiaID: 111453

Unaccepted name: *Retepora grimaldii*

Greenland distribution: SW shelf



Zoaria are free-growing; funnel shaped or complex situate or reticulate

Zoaria: Look like a lace

Zoid small and cylindrically oval in shape

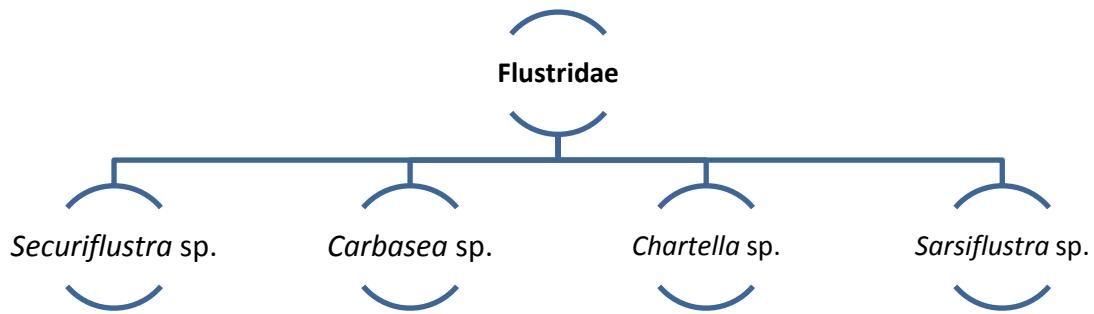
Primary orifice semi-circular and spines are present or absent

Rostral avicularium are large conical or small oval on proximal side of the secondary orifice

Adventitious avicularia may be present

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Flustoidea (Superfamily) > **Flistridae** (Family)



|                                  | <i>Securiflustra</i> sp.            | <i>Carbasea</i> sp.                                  | <i>Chartella</i> sp.   | <i>Sarsiflustra</i> sp.   |
|----------------------------------|-------------------------------------|--|--|---|
| <b>Zoids</b>                     | Rectangular with right-angle shape. | Broaden in the distal half and taper in the proximal | Oblong-hexagonal for the most part and sometimes triangular in shape | Large, tall, stretched rectangularly and slightly broadened in the middle |
| <b># layer</b>                   | Bilaminar                           | Unilaminar   | Bilaminar  | Bilaminar   |
| <b>Avicularia &amp; ovicells</b> | Present                             | Absent   | Present  | Present   |
| <b>Spines</b>                    | Present or absent                   | Reduced or absent                                    | Absent   | Absent  |

(Rosso 1994, Kluge 1975)

## *Securiflustra securifrons*

Pallas 1766

AphiaID: 111374

Unaccepted name: *Flustra securifrons*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



Light straw-yellow in color.

Zooids 4 times longer than width

Avicularia are located between 2 successive autozooids in the same row

The avicularia are rectangular and have a semi-circular mandible whose free end is directed upward

Ovicells are endozooecial, semi-circular and occupy one-fourth of the cavity of the overlying zooid

(Kluge 1975)

## *Carbasea carbarea*

Ellis & Solander 1786

AphiaID: 111362

Unaccepted name: *Flustra carbarea*

Greenland distribution: West shelf



Yellow-brown in color

Zooids about twice times longer than wide

Zooids are in alternating series, the narrow base of one between the expanded distal halves on those on either side

(Osburn 1950)

*Chartella barleei*

Busk 1860

AphiaID: 111363

Unaccepted name: –

Greenland distribution: SE shelf slope



*Sarsiflustra abyssicola*

Sars G.O. 1872

AphiaID: 111373

Unaccepted name: –

Greenland distribution: West shelf



*Porella* sp.  
(SW shelf, West shelf)



*Porella compressa*

J. Sowerby 1805

AphiaID: 111124

Unaccepted name: –

Greenland distribution: West shelf, SW shelf



Free-growing and zoaria are double-layered arising from a single-layered base, irregularly branched.

Color alive: pale flesh color

Branches are more or less flattened with roundish or truncated lobes.

Zoids are medium size, oblong-oval and broader in the distal half.

Frontal surface of zooids is finely granulated

Presence of pore along the margin of zooids. Pores more or less large, often with a radial, short, rebral structure between them.

Primary orifice: semi-circular or has a straight proximal margin or broad.

Secondary orifice: Roundish-broad located in the distal part and narrows toward the proximal margin.

Avicularium: round, large with semi-circular mandible located between proximal margin of the primary abd secondary orifices but nearer to the secondary one.

Ovicells: hyperstomial, round with smooth surface. 4 to 5 pore plates with few in the lateral wall and 2 in the distal septum.

(Kluge 1975)

*Escharella ventricosa*

Hassall 1842

AphiaID: 111496

Unaccepted name: –

Greenland distribution: unknown



Prostrate and zooids arranged in regular, straight and oblique rows.

Zoids have a granulated surface, hexagonal or oval-rhombic in form separate by deep margins.

2 rows of pores are present on the distal half and 1 row on the proximal part.

Primary orifice: sometimes trapezi-form and width is greater than height.

Secondary orifice: 4 spines are present at the distal margin and a mucro on the proximal margin.

Ovicells are peristomial and rounded.

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Lepralielloidea (Superfamily) > **Umbonulidae** (Family)

*Rhamphostomella scabra*

O. Fabricius 1780

AphiaID: 111145

Unaccepted name: –

Greenland distribution: West shelf



Zooids are large, broadly hexagonal or oval in shape.

Frontal surface bordered by a raised rebra arise between the depressions from the margin in a radial direction toward the base of the semi-circular, conical, avicularian chamber.

Primary orifice: large and semi-circular, width is greater than height, located at the distal margin of zooids.

Avicularia chamber are low semi-circular and conical with oblong-semi-circular mandible is directed toward one or the other side, while its free margin is pointed upward.

In addition, very large and oval avicularia. Ovicells are large, semi-circular, broad and with pores.

(Kluge 1975)

*Leieschara* sp.  
*Myriapora* sp.  
 (SE shelf slope, SW shelf, West shelf)



*Leieschara coarctata*

Sars 1863

AphiaID: 472376

Unaccepted name: *Myriapora coarctata*

SW shelf, West shelf



[www.marinespecies.org](http://www.marinespecies.org)

*Myriapora subgracilis*

D'Orbigny 1853

AphiaID: 470125

Unaccepted name: –



[www.pleistocenekokemushi.myspecies.info/](http://www.pleistocenekokemushi.myspecies.info/)



Ámundur Nolsø

|                            | <i>L. coarctata</i>                            | <i>M. subgracilis</i>  |
|----------------------------|--|--|
| <b>Avicularia</b>          | Large, almost equal to the zooid orifice       | Small round  |
| <b>Avicularia location</b> | One above the medial line of the zooid orifice | One on one or both sides, at the level of the distal margin of the secondary orifice |

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Microporoidea (Superfamily) > **Microporidae** (Family)

### *Microporina articulata*

Fabricius 1821

AphiaID: 160496

Unaccepted name: –

Greenland distribution: SW shelf



Free-growing with zoaria dichotomous cylindrical branched with chitinous articulations into internodes.

Cryptocyst is covered with small numerous pores and other orifices called opercules. Opercules are located on the sides of the distal part of the depressed surface.

Avicularia are round and vicariating with triangular mandible.

Avicularia located between 2 successive zooids. Apex of mandible is pointed downward.

Ovicells are absent.

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Schizoporellidoidea (Superfamily) > **Schizoporellidae** (Family)

### *Schizoporellidae* spp.

Jullien 1883

AphiaID: 110772

Unaccepted name: –

Greenland distribution: West shelf



Free-growing or zoaria are rarely prostrate.

Primary orifice: with a sinus at the proximal margin. Could be narrow, straight and pointed or rounded to broad.

Proximal margin never has a lirule.

In most instances, frontal surface is laden with pores.

Avicularia are present or absent. If present, the avicularia are often lateral.

Ovicells are usually hyperstomial.

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Flustrina (Suborder) > Smittinoidea (Superfamily) >  
**Smittinidae** (Family)

### *Pseudoflustra solida*

Stimpson 1854

AphiaID: 111088

Unaccepted name: –

Greenland distribution: West shelf, SW shelf



Free-growing and zoarium is lamellate-lobate and flat.

Zoids are oblong-rectangular, a little broader in the middle.

Frontal surface of zooid is mildly raised, continuous and granulated.

Some pores are present.

Primary orifice is semi-circular, slightly larger than length and located at the distal end of the zooids.

Avicularium is located behind the proximal margin of orifice. The distal half is occupied by a broad avicularian chamber and the proximal half by a raised rostrum which tapers toward its free ends.

It's covered by a lingulate mandible.

Hyperstomial, round, ovicells width is slightly greater than their length. Ovicells has numerous pores

(Kluge 1975)

Gymnolaemata (Class) > Cheilostomatida (Order) > Scrupariina (Suborder) > Scruparioidea (Superfamily) >  
**Eucrateidae** (Family)

### *Eucratea loricata*

Linnaeus 1758

AphiaID: 111361

Unaccepted name: *Sertularia loricata*

Greenland distribution: West shelf



Free-growing, strongly branches and bushy appearance

Zoids arranged in pairs and fuse their basal side (back to back)

Orifice is about half the length of zooids.

(Kluge 1975)

***Alcyonium* sp.**  
(West shelf, SE shelf slope)



***A. disciforme***

Smitt 1872

AphiaID: 111598

Unaccepted name: –

***A. gelatinosum***

(Hudson) J.V. Lamouroux

AphiaID: 111600

Unaccepted name: –

West shelf, SW shelf, SE shelf  
slope

***A. pseudodisciforme***

Denisenko 2009

AphiaID: 597486

Unaccepted name: –



|                    | <b><i>A. disciforme</i></b> | <b><i>A. gelatinosum</i></b>  | <b><i>A. pseudodisciforme</i></b>        |
|--------------------|-----------------------------|---|--|
| <b>Colony size</b> | Up to 65mm                  | Few centimeter to 150cm   | Up to 15mm                               |
| <b>Colony form</b> | Roundish or rig shape       | Fairly variable; often they are ramosed in the middle wider part with lobate or cylindrical protuberances originating there, or they are narrow, almost cylindrical, with many similar cylindrical branches which are sometimes shorter, sometimes longer | Roundish bean shaped or half-ring-shaped |

(Denisenko 2009, Kuklinski et al. 2004, Kluge 1975)

Sytenolaemata (Class) > Cyclostomatida (Order) > Articulina (Suborder) > **Crisiidae** (Family)

### *Crisia eburnea*

Linnaeus 1758

AphiaID: 111696

Unaccepted name: *Sertularia eburnea*

Greenland distribution: West shelf



Colony size: 1 to 3cm in height.

Zoaria are ramosae and the branches tend to bent inward, particularly in their distal part.

Internodes on branchae are present.

Sterile internode has 5 to 7 zooids and the fertile internode has 8 to 12.

Zooid in the internode arranged in alternate row and has many small pores on frontal surface.

Pyriform gonozoooid are located in the proximal part of the internode and the oecistome situated on its distal end.

(Kluge 1975)

Sytenolaemata (Class) > Cyclostomatida (Order) > Cancellata (Suborder) > **Cytididae** (Family)

### *Infundibulipora lucernaria*

Sars 1851

AphiaID: 146824

Unaccepted names: *Defrancia lucernaria*, *Domopora lucernaria*

Greenland distribution: unknown



Ámundur Nolsø



Ámundur Nolsø

Size of colony: 4 to 11mm for the height of a sexually mature zoarium, 1.5 to 2.5mm for the diameter of the stem, 6 to 12mm for the diameter of the disc.

The shape of colony looks like a Lucerne.

(Kluge 1975)

Sytenolaemata (Class) > Cyclostomatida (Order) > Cancellata (Suborder) > **Horneridae** (Family)

*Hornera* sp.  
(SW shelf, SE shelf slope)



*Hornera lichenoides*

Linnaeus 1758

AphiaID: 111723

Unaccepted name: *Stegohornera lichenoides*

Greenland distribution: West shelf, SW shelf, SE shelf slope



Sytenolaemata (Class) > Cyclostomatida (Order) > Rectangulata (Suborder) > **Lichenoporidae** (Family)

*Patinella verrucaria*

Linnaeus 1758

AphiaID: 146845

Unaccepted name: *Lichenopora verrucaria*

Greenland distribution: West shelf



Zoaria are prostrate, single, round, oval, convex or verrucose.

Zoids separated and located in checkered pattern.

The walls of zooids have sometimes rebra and they have oval orifices often with pointed spines on the upper margin.

Central surface and the interstices between zooids have alveoli.

Brood chamber are present.

(Kluge 1975)

Stenolaemata (Class) > Cyclostomatida (Order) > Tubuliporina (Suborder) > **Tubuliporidae** (Family)

*Idmidronea atlantica*

Forbes, in Johnston, 1847

AphiaID: 111752

Unaccepted name: –

Greenland distribution: SE shelf slope



Free-growing and dichotomous

Branches usually located on one pane, are somewhat triangular in the cross section with slightly convex basal side and rounded corners.

Zoids are displaced by longitudinal parallel transverse row

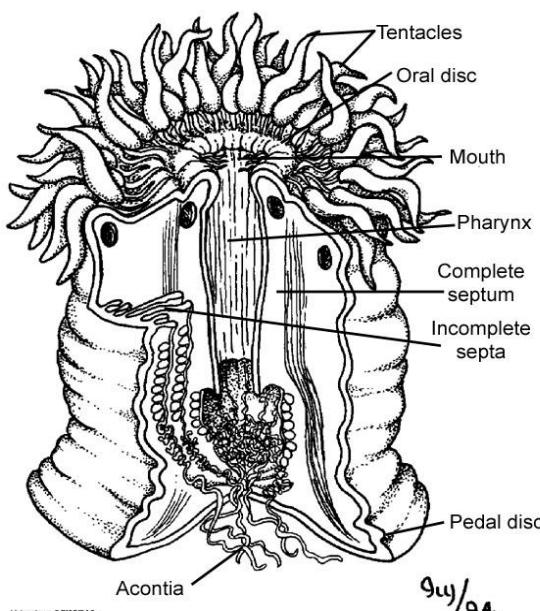
Each row has 2-4 zooids are closely attached to each other and their orifices are diverted

The longest zooids located near the middle line of the branch. The following one gradually shortens toward the margin.

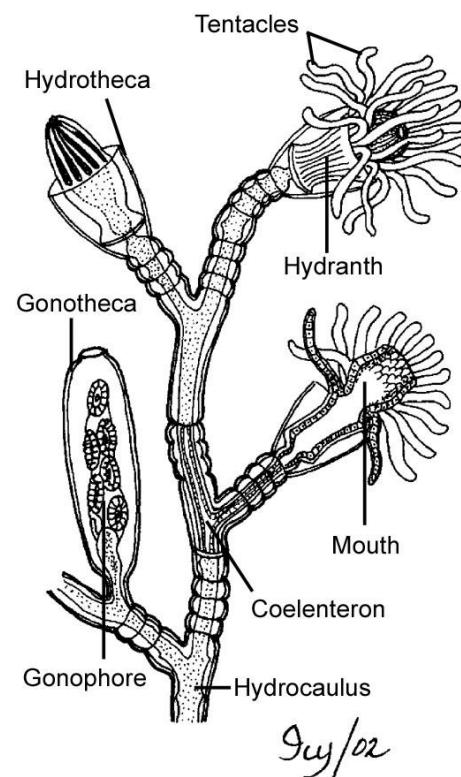
(Kluge 1975)

## P H Y L U M   C N I D A R I A

Cnidaria phylum includes sea anemone, corals, sea pens, hydrozoa and jellyfish (Ossian 2001). Around 9000 worldwide species are listed. This taxon is dominated by anthozoa, represented by 6000 species (Fautin 2015) followed by hydrozoa with around 3700 species and then scyphozoan (jellyfish) estimated to 200 species (Hammond 2009). In Arctic, jellyfish, sea anemones, corals and hydrozoans are the most widespread and diverse cnidarians, represented by more than 100 species (Nuttall 2005).



<http://www.marlin.ac.uk>



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## CERIANTHIDAE

Anthozoa (Class) > Ceriantharia (Subclass) > Spirularia (Order) > **Cerianthidae** (Family)

**Cerianthidae spp.**

Milne Edwards & Haime 1852

AphiaID: 100684

Unaccepted name: –



Body elongated without basal disk.

Borrowing sea anemone, inhabiting permanent tube.

Tentacles of two distinct kinds and cycles (oral and marginal) all elongated and slender.

(Sebens 1998, Verrill 1922)

## ACTINIARIA

| FAMILY         | PAGE |
|----------------|------|
| Actinernidae   | 148  |
| Hormathiidae   | 149  |
| Actiniidae     | 154  |
| Actinostolidae | 157  |
| Liponematidae  | 159  |
| Metridiidae    | 160  |

### TAXONOMIC KEY – FAMILIES

- 1(4) Acontia present
- 2(3) Column wall thick ( $\geq 4$ mm) and tubercles present [**HORMATHIIDAE**]
- 3(2) Column wall is thin ( $< 4$ mm) and tubercles are absent. Tentacles number:  $\geq 1000$  [**METRIDIIDAE**]
- 4(1) Acontia absent
- 5(6) Column wall weakly developed, usually flattened [**LIPONEMATIDAE**]
- 6(5) Column wall developed, clearly visible
- 7(8) Distal margin of column is usually expanded and drawn into lobes [**ACTINERNIDAE**]
- 8(7) Distal margin of column is not usually expanded and is not drawn into lobes.
- 9(10) Tentacles of secondary cycle (10-12) more numerous than the primaries (6). Column usually not divided into regions [**ACTINOSTOLIDAE**]
- 10(9) Tentacles of secondary cycle equal in number to primaries. Column usually divided into regions [**ACTINIIDAE**]

(Manuel 1981), (Sebens 1998), (Uchida 2007)

Anthozoa (Class) > Hexacorallia (Subclass) > Actiniaria (Order) > Endocoelantheae (Suborder) > **Actinernidae** (Family)

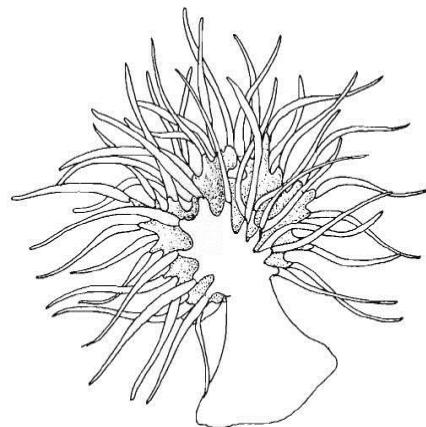
### *Actinernus nobilis*

Verrill 1879

AphiaID: 158217

Unaccepted names: *Actinernus novilis*, *Actinonernus nobilis*

Greenland distribution: West basin, SE shelf slope



(Sebens 1998)



(Sebens 1998)



Body size: Up to 5cm.

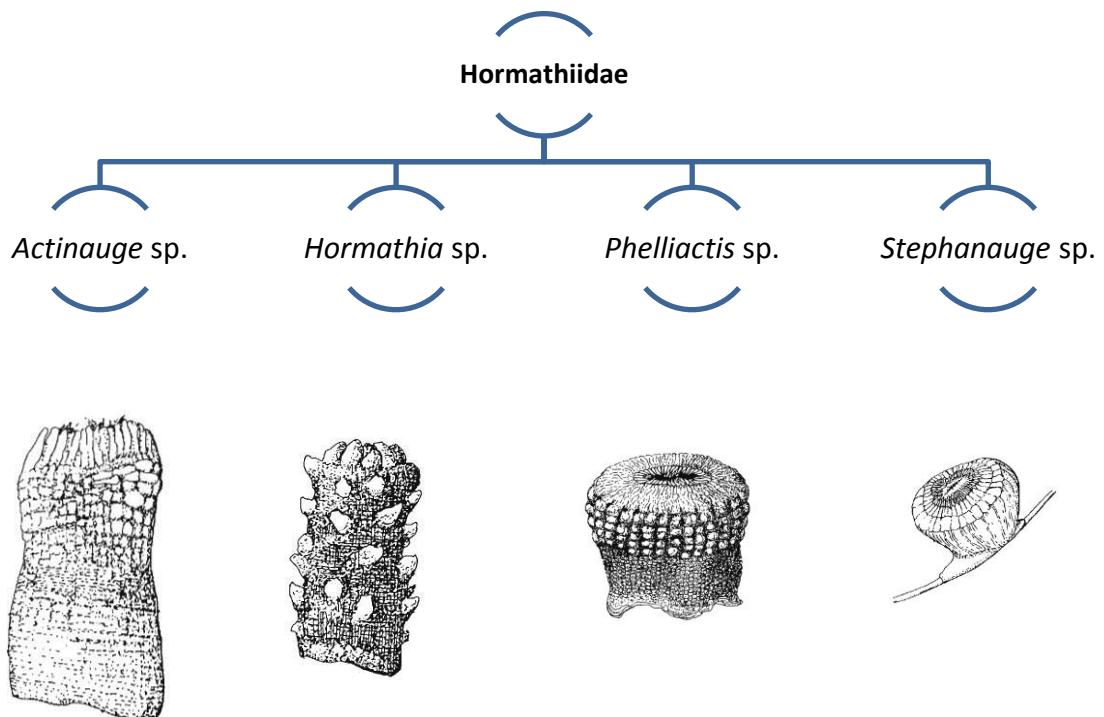
Distal margin with 4 large and 4 small lobes.

Column twice as wide as tall.

Tentacles are numerous (ca. 120).

(Sebens 1998, Uchida 2007)

Anthozoa (Class) > Hexacorallia (Subclass) > Actiniaria (Order) > Nyantheae (Suborder) > Thenaria (Infraorder) > Acontiarida (Superfamily) > **Hormathiidae** (Family)



(Sebens 1998)

|                   | <i>Actinauge</i> sp.                        | <i>Hormathia</i> sp.                | <i>Phelliactis</i> sp.                                     | <i>Stephanauge</i> sp.   |
|-------------------|---|-------------------------------------|--|--|
| <b>Pedal disc</b> | Cuplike                                     | Never cup-like or invaginated       | Cup-like   | Amplexicaul or flat  |
| <b>Tubercles</b>  | Scapus with tubercles and present on column | Tubercles in row                    | Scapus with very prominent tubercles and the size decrease | Usually with a tranverse row of verrucae on the parapet defining the capitulum |
| <b>Body</b>       | Usually symmetrical and cylindrical         | Usually symmetrical and cylindrical | Assymetrical and vase shape                                | Usually symmetrical  |

(Doumenc 1975, Sebens 1998, Verrill 1922)

*Actinauge* sp.  
(West shelf, SE shelf slope, West basin)



*Actinauge cristata*

Riemann-Zürneck 1986

AphiaID: 158210

Unaccepted name: –

Greenland distribution: West shelf, SW shelf, SE shelf slope



Body size: Up to 7,5cm.  
Column is usually covered with prominent verrucae.  
arranged in pretty vertical rows, the upper ones  
becoming larger and gradually diminishing and  
disappearing close to base.  
Pedal disc very large (look like a hole)

(Verrill 1922)

*Hormathia* sp.



*Hormathia digitata*

O.F. Müller

AphiaID: 100951

Unaccepted name: *Actinia digitata*

SE shelf slope, West shelf

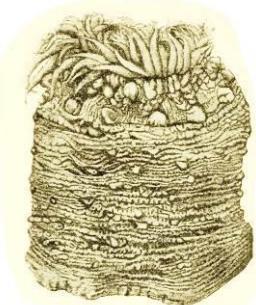
*Hormathia nodosa*

Fabricius 1780

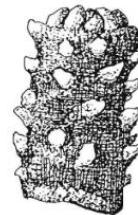
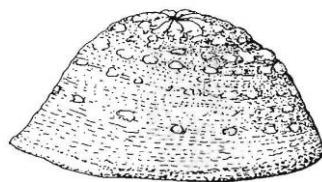
AphiaID: 100954

Unaccepted name: *Actinia nodosa*

SW shelf, West shelf



(Carlgren 1945)



(Sebens 1998)

|                                  | <i>Hormathia digitata</i>  | <i>Hormathia nodosa</i>                                |
|----------------------------------|--|--|
| <b>Size (diameter of column)</b> | Up to 100 mm   | Up to 60 mm  |
| <b>Body color</b>                | White, flesh-color, reddish or orange  | Beige, yellowish, greyish-brown                        |
| <b>Scapus</b>                    | With more or less developed solid tubercles. Tending to form longitudinal rows ending at the junction in scapulus. | White tubercles arranged in longitudinal oriented rows |
| <b>Scapulus</b>                  | Scapular ridge 12 in number  | Scapular ridge 12 in number                            |

(Manuel 1981, Widersten 1976, Carlgren 1945)

According to WoRMS, *Hormathia digitata* = *Hormathia digitata parasitica*

*Phelliactis robusta*

Carlgren 1928

AphiaID: 100966

Unaccepted name: –

Greenland distribution: West basin



Diameter size of body: 10cm

Small tentacles: more than 150.

Scapus: Except for bare limbus, this one is covered by very prominent tubercles (most around  $0.5\text{cm}^2$ ).

At scapus base, the tubercles quietly disappear to give way at horizontal folding.

Scapulus: horizontal stria with few tubercles.

Scapus color: yellowish to orange.

Tentacules and oral disc color: salmon pink

(Doumenc 1975)

# *Stephanauge nexilis*

Verrill 1883

AphiaID: 158258

Unaccepted names: *Aceractis nexilis*, *Actinauge nexilis*

Greenland distribution: West basin



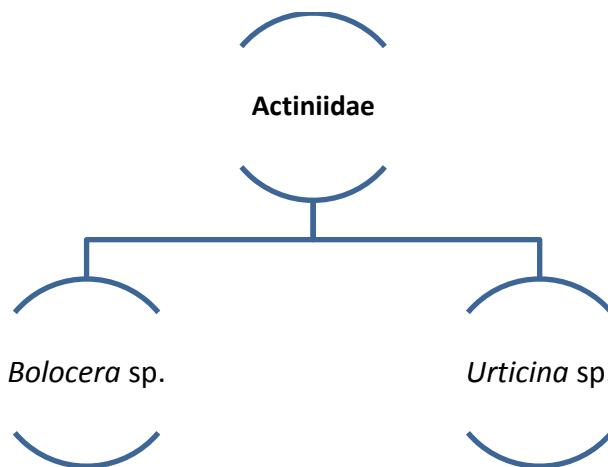
Body size: Up to 5cm

Low tubercles in one row on ridges margin.

Base attached to denuded axis of pennatulid

(Sebens 1998)

Anthozoa (Class) > Hexacorallia (Subclass) > Actiniaria (Order) > Nyantheae (Suborder) > Thenaria (Infraorder) > Endomyaria (Superfamily) > **Actiniidae** (Family)



|  | <i>Bolocera</i> sp.      | <i>Urticina</i> sp.  |
|--|--------------------------|--|
| <b>Body column</b>                     | Not divided into regions | Divided into a scapus and capitulum with prominent parapet and deep fosse. |
| <b>Verrucae and acrorhagi (column)</b> | Lacking for both         | Verrucae present on scapus but lacking acrorhagi                           |

(Manuel 1981)

*Bolocera tuediae*

Johnston 1832

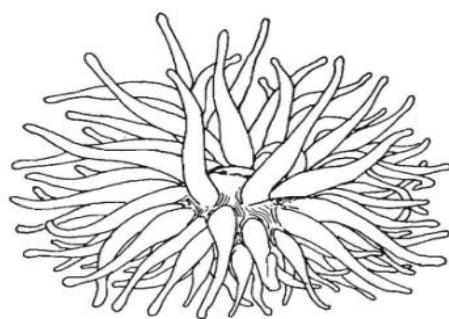
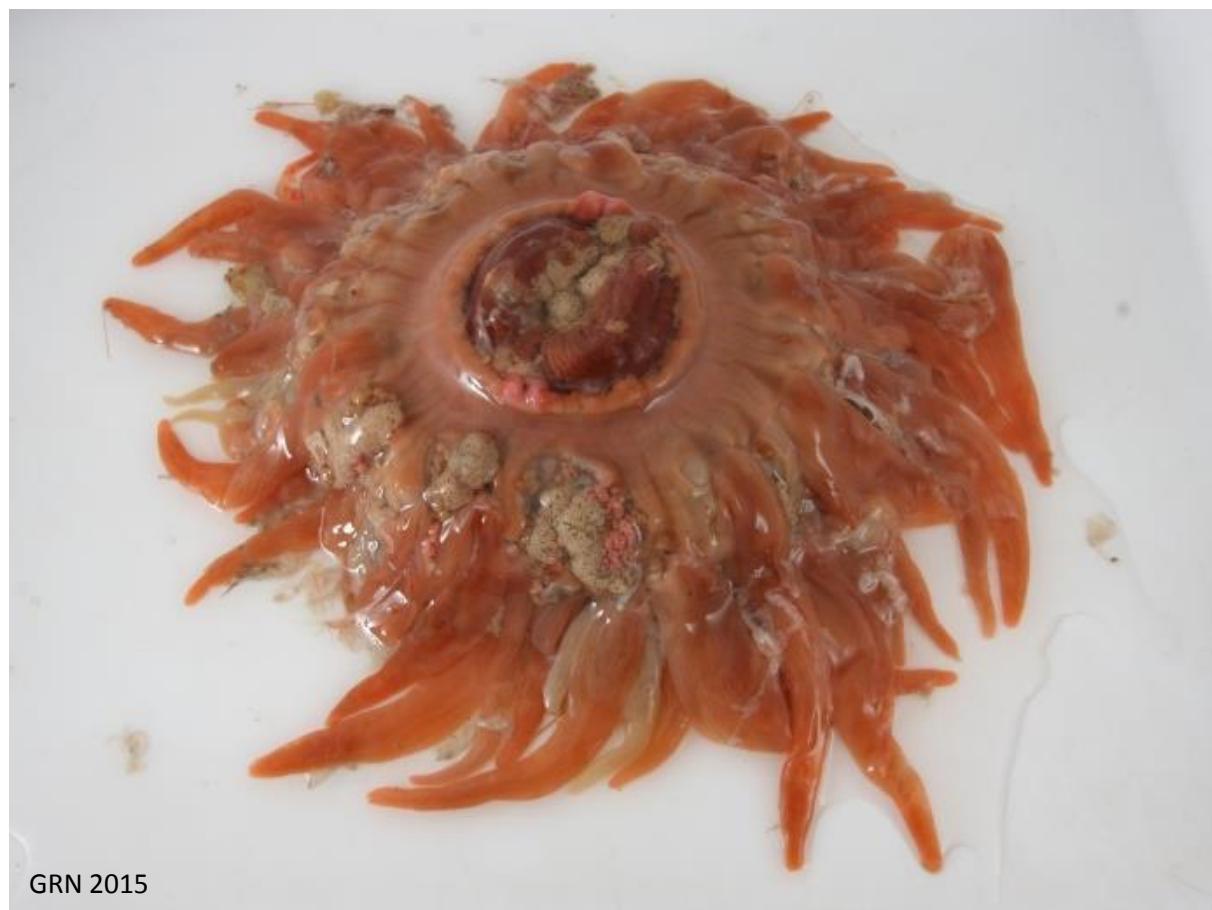
AphiaID: 100817

Unaccepted name: *Actinia tuediae*

Greenland distribution: West shelf, SW shelf, West basin



Can be mistaken for *Urticina felina*



Tentacles easily lost due to constriction at the base of each tentacle

Body size: Up to 250mm

Tentacles: up to 260 stout long tentacles

Color: orange, pink, buff or whitish

Disc and tentacles: translucent

(Sebens 1998)

## *Urticina felina*

Linnaeus 1761

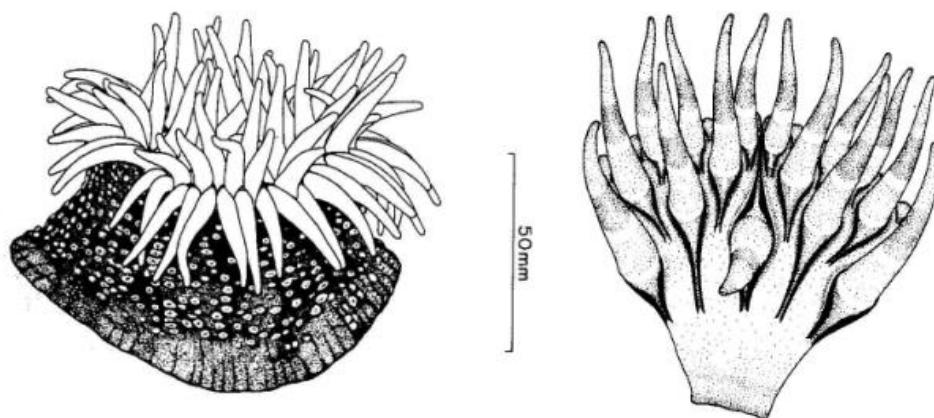
AphiaID: 100834

Unaccepted name: –

Greenland distribution: SW shelf, West shelf



Can be mistaken for *Bolocera tuediae*



Body size: Up to 120mm

Column: shorter than wide, with a well marked parapet and deep fosse.

Tentacles are stout, short, cylindrical and have 160 in number.

Tubercles are variable in size and always present.

Tubercles are largest at middle of column.

Color: prominent pattern of broad red lines amongst the tentacle base.

The mouth (cloack) of the anemone gets pointy when being kept out of water.

(Manuel 1981)

Anthozoa (Class) > Hexacorallia (Subclass) > Actiniaria (Order) > Nyantheae (Suborder) > Thenaria (Infraorder) > Mesomyaria (Superfamily) > **Actinostolidae** (Family)

## *Antholoba achates*

Drayton in Dana 1846

AphiaID: 287436

Unaccepted name: *Actinostola callosa*

Greenland distribution: unknown



Column: longer than wide, massive

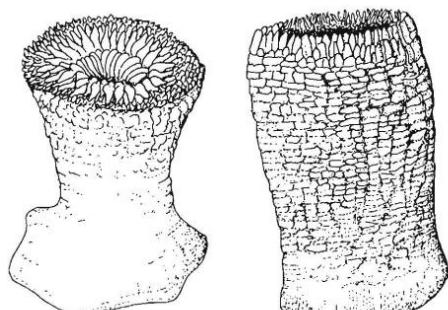
Light color

Hard-massive, rigid, takes form and colaps

Few tentacles visible

Can be very big, up to 1 kg

When small, light blue color



(Sebens 1998)

*Glandulactis spetsbergensis*

Calgren 1893

AphiaID: 100842

Unaccepted name: *Actinostola spetsbergensis*



Tentacles in 3 cycles; 156, 148, 130

(Carlgren 1933)

*Stomphia coccinea*

Müller 1776

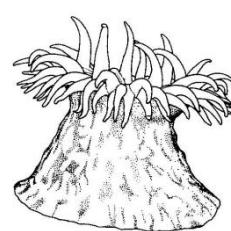
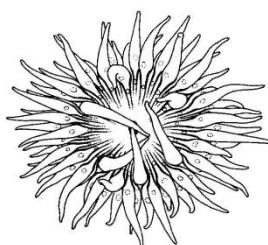
AphiaID: 100854

Unaccepted name: *Actinia coccinea*

Greenland distribution: SE shelf slope, SW shelf, West shelf



**Can be mistaken for *Urticina felina***



Smooth surface

Base wider than the disc

Color: column red, orange, white, yellowish or brown with red blotched. White spot usually present on each endocoelic radius

(Manuel 1981)

Anthozoa (Class) > Hexacorallia (Subclass) > Actiniaria (Order) > Nyantheae (Suborder) > Thenaria (Infraorder) > Endomyaria (Superfamily) > **Liponematidae** (Family)

*Liponema multicornе*

Verrill 1880

AphiaID: 593072

Unaccepted name: *Bolocera multicornis*

Greenland distribution: SE shelf slope, SW shelf, West shelf

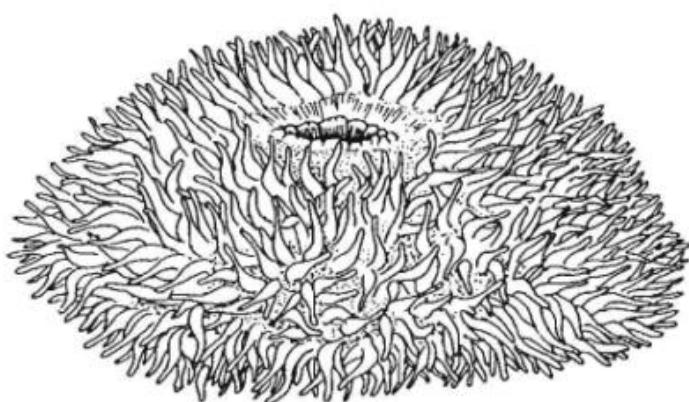


Can be mistaken for *Bolocera tuediae*



Circular abdomen

More than 200 tentacles



(Sebens 1998)

Anthozoa (Class) > Hexacorallia (Subclass) > Actiniaria (Order) > Actiniaria incertae sedis (Superfamily) > **Metridiidae** (Family)

*Metridium* sp.



*Metridium dianthus*

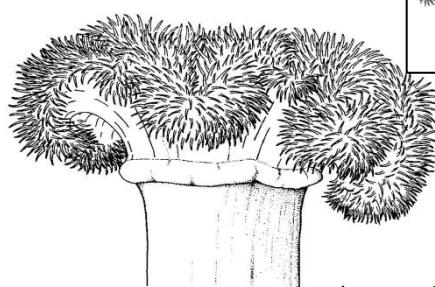
Ellis 1768

AphiaID: 158251

Unaccepted name: *Metridium senile*



[www.marinespecies.org](http://www.marinespecies.org)



(Manuel 1981)

## ALCYONACEA

| FAMILY           | PAGE |
|------------------|------|
| Alcyoniidae      | 161  |
| Isididae         | 163  |
| Nephtheidae      | 164  |
| Paragorgiidae    | 170  |
| Acanthogorgiidae | 171  |
| Plexauridae      | 172  |
| Clavulariidae    | 172  |

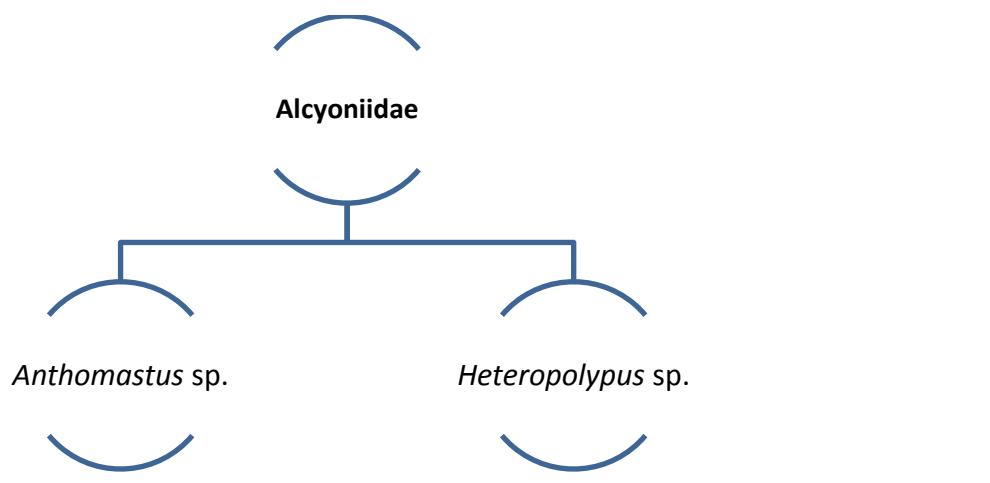
### TAXONOMIC KEY – FAMILIES

- 1(2) Polyps is free, united only at the proximal bases by reduced stolon. Retractile polyp has a cylindrical, conical or mound-like calyce. Colony arborescent [**CLAVALARIIDAE**]
- 2(1) Polyp partly joined laterally contained in common coenenchyme.
- 3(6) Outer layer and inner layer in coenenchyme are not differentiated. Gastric cavities of polyps extend throughout height of colony. Soft coral.
- 4(5) Polyps often grouped in clusters or restricted to branch tips of the polypary [**NEPHTEIDAE**]

- 5(4) If polyparium is composed of branches of clusters of polyps, is not retractile into common basal stalk or trunk. If polyparium is retractile, then is not composed of branched of clusters of polyps. Polyps evenly distributed on the surface of the polypary. Colonies have usually fleshy sclerites. Sclerite is not generally disposed by the form longitudinally large spindles. Usually calyces absent [ALCYONIIDAE]
- 6(3) Outer layer (cortex) and inner layer (medulla) in coenenchyme is differentiated or internal calcareous and/or proteinaceous axis present.
- 7(8) Colonies are dimorphic. Outer cortex and inner medulla in coenenchyme is differentiated. Medulla wholly composed of free but densely set sclerites. [PARAGORGIIDAE]
- 8(7) Colonies monomorphic
- 9(10) Axis without sclerites is segmented and composed to alternating nodes and internodes [ISIDIDAE]
- 10(9) Axis is not segmented and is continuous and uniform. Central axis is smooth or longitudinally grooved with hollow and cross-chambered core. Cross-chambered core is surrounded by horn-like layers with contain non-spicular calcareous material. Polyps are monomorphic, retractile and without sclerites form chevrons. Polyps usually have sclerites comprising some form of crown and points. Sclerites length >0.3mm [PLEXAURIDAE]

(Williams, California Academy of Sciences)

Anthozoa (Class) > Octocorallia (Subclass) > Alcyonacea (Order) > Alcyoniina (Suborder) > **Alcyoniidae** (Family)



|                            | <i>Anthomastus</i> sp.   | <i>Heteropolypus</i> sp.  |
|----------------------------|--|---|
| <b>Body shape</b>          | Hemispherical to capitate, dome-shaped capitulum gradually passing via inconspicuous stalk or mushroom-shaped with conspicuous stalk | Mushroom-shaped to obconic distinctly separate into capitulum and sterile stalk |
| <b>Autozooids position</b> | Arranged over the capitulum  | Arranged evenly over the capitulum or only at the margin                        |

(Molodtsova 2013)

*Anthomastus* sp.

Verrill 1878

AphiaID: 125285

Unaccepted name: –

Greenland distribution: West basin



*Heteropolypus insolitus*

Tixier-Durivault 1964

AphiaID: 345447

Unaccepted name: –

Greenland distribution: West basin (*H. robusta*)



Anthozoa (Class) > Octocorallia (Subclass) > Alcyonacea (Order) > Calcaxonia (Suborder) > Isididae (Family)

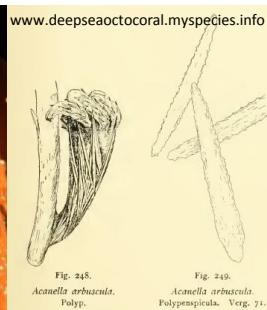
## *Acanella arbuscula*

Johnson 1862

AphiaID: 125371

Unaccepted names: *Acanella normani*, *Mopsea arbuscula*

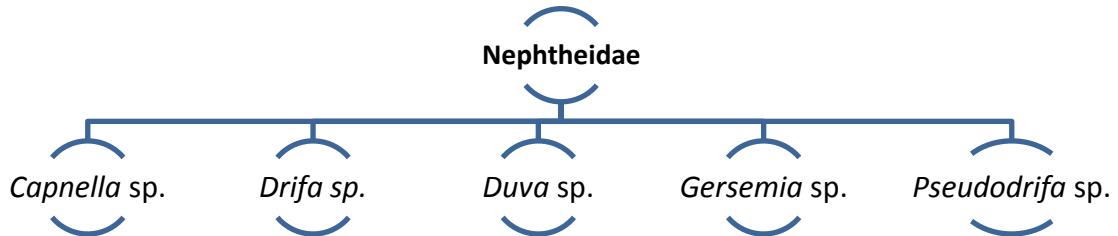
Greenland distribution: West basin



Deep-sea octocoral.

Return to lab to look the spicules under magnification.





**This family need to be looked under dissecting scope.**

**Identification is very difficult (using spicules form).**

**Identification should be done to the family level,  
except for *Capnella*, *Duva* and *Pseudodrifa***

|                               | <i>Capnella</i> sp.  | <i>Drifa</i> sp.   | <i>Duva</i> sp.   | <i>Gersemia</i> sp.   | <i>Pseudodrifa</i> sp.  |
|-------------------------------|--|--|---|---|---|
| <b>Colony forms</b>           | Cauliflower-like   | Dendritic growth form.<br>Stem thick, erect, leathery.<br>Branches closely beset polyps everywhere | Broccoli-like   | Usually typically raspberry-like  | Low shrubby growth form with short sterile stalk and polypiferous short twigs |
| <b>Polyps forms</b>           | Closely arranged on the lobes and they are bent inward, club-shaped and not retractile | Not retractile, clavate, incurved  | Somewhat contractile but not retractile, cylindrical in shape   | Relatively congested at the ends of short and narrow terminal branches and retractile or not retractile | Non-retractile, large, clavate in form  |
| <b>Spicules form (colony)</b> | Foliated clubs, foliated capstan, tuberculate double-sphere or sphere                  | Clubs  | Tuberculate, spinose rods, rods, rollers, spindles and capstans | Spindle-like, rods and rollers  | Clubs   |

(Utinomi 1961, Utinomi 1960, Williams et al. 2009)

*Capnella* sp.



*Capnella glomerata*

Verrill 1869

AphiaID: 146765

Unaccepted name: –

Greenland distribution: unknown



Non-retractable

Spicules have to be looked under magnification



*Drifa* sp.  
(West basin)



*Drifa glomerata*

Verrill 1869

AphiaID: 146941

Unaccepted names: *Briareum grandiflorum*, *Drifa flavescens*

Greenland distribution: SE shelf slope, SW shelf, West shelf



Olga Zimina

*Drifa glomerata*



*Duva florida*

Rathke 1806

AphiaID: 146943

Unaccepted names: *Capnella florida*, *Gersemia florida* Can be mistaken for *Gersemia rubiformis*

Greenland distribution: West shelf, SW shelf, SE shelf slope



Look like a “black/grey broccoli”.  
Spicules have to be looked under magnification

(MacIsaac et al. 2007)

*Gersemia* sp.



*Gersemia fruticosa*

Sars 1860

AphiaID: 156101

Unaccepted names: *Gersemia longiflora*, *Nidalia arctica*

SE shelf slope, SW shelf, West shelf

*Gersemia rubiformis*

Ehrenberg 1834

AphiaID: 156103

Unaccepted names: *Alcyonium rubiforme*,  
*Capnella rubiformis*, *Eunephthya rubiformis*,  
*Lobularia rubiformis*

SE shelf slope, SW shelf, West shelf



MacIsaac et al. 2007

|                                      | <i>Gersemia fruticosa</i>   | <i>Gersemia rubiformis</i>  |
|--------------------------------------|---|---|
| <b>Colony Color</b>                  | Yellowish gray  | Polyps yellowish and cortex of branches and stem wholly or partly pinkish |
| <b>Polyp</b>                         | Uniformly large, developed cylindrical. 2-5mm in length and 1,5mm in diameter. Not retractable. | Retractable, 1.2mm in length and 0,6mm in diameter.                       |
| <b>Lower part of the anthocardia</b> | With spicules   | Without spicules  |
| <b>Basal spicules</b>                | Irregular rollers with girdles  | Rollers with girdles  |

(Utinomi 1961, Molander 1915

*Pseudodrifa* sp.  
(West shelf)



*Pseudodrifa groenlandica*  
Molander 1915  
AphiaID: 290873  
Unaccepted name: –  
SE shelf slope

*Pseudodrifa nigra*  
Pourtales 1868  
AphiaID: 290874  
Unaccepted name: –  
unknown



|                    | <i>P. groenlandica</i>                                    | <i>P. nigra</i>  |
|--------------------|---|--|
| <b>Colony form</b> | Glomerate ramification                                    | Broad short stem radially gives off several short branche which carry number of large pear-shaped polyps |
| <b>Anthocodia</b>  | Powerfull armed. Long spindles beside the shorther clubs. | Less armed.  |

(Utinomi 1961, Molander, 1915)

Anthozoa (Class) > Octocorallia (Subclass) > Alcyonacea (Order) > Scleraxonia (Suborder) > **Paragorgiidae** (Family)

*Paragorgia arborea*

Linnaeus 1758

AphiaID: 125418

Unaccepted names: *P. nodosa*, *P. pacifica*

Greenland distribution: SE shelf slope



Can be mistaken for *Paramuricea* sp.



Anthozoa (Class) > Octocorallia (Subclass) > Alcyonacea (Order) > Holaxonia (Suborder) > **Acanthogorgiidae** (Family)

*Acanthogorgia armata*

Verrill 1878

125348

Unaccepted name: –

Greenland distribution: SE shelf slope, West basin



Anthozoa (Class) > Octocorallia (Subclass) > Alcyonacea (Order) > Holaxonia (Suborder) > **Plexauridae** (Family)

*Paramuricea* sp.

Koelliker 1865

AphiaID: 125311

Unaccepted name: –

Greenland distribution: West shelf, SW shelf, West basin



Can be mistaken for *Paragorgia arborea*



West Greenland  
Up to 80 cm high

Anthozoa (Class) > Octocorallia (Subclass) > Alcyonacea (Order) > Stolonifera (Suborder) > **Clavulariidae** (Family)

*Clavularia arctica*

Sars 1860

AphiaID: 125337

Unaccepted name: –

Greenland distribution: SW shelf, West shelf



## ANTIPATHARIA

Anthozoa (Class) > Hexacorallia (Subclass) > Antipatharia (Order) > **Schizopathidae** (Family)

### *Stauropathes arctica*

Lütken 1871

AphiaID: 291111

Unaccepted names: *Antipathes arctica*, *Bathypathes arctica*

Greenland distribution: SE shelf slope, West basin



# PENNATULACEA

| FAMILY        | PAGE |
|---------------|------|
| Anthoptilidae | 174  |
| Pennatulidae  | 175  |
| Umbellulidae  | 176  |

## TAXONOMIC KEY – FAMILIES

- 1(4) Adjacent polyps are free, never fused to any degree. Colonies are cylindrical, capitate, clavate or elongate. The rachis is erect but not lying on substratum.
- 2(3) Autozooids arranged in a terminal cluster at the end of a long slender stalk [**UMBELLULIDAE**]
- 3(2) Autozooids arranged along the sides of the rachis. Colonies without sclerites and polyps disposed biserially without calyces.
- 4(1) Proximal portions of adjacent autozooids are fused to some degree. They are forming polyp leaves that emanate laterally along the rachis in two opposite longitudinal series. Polyp leaf sclerites are numerous and conspicuous [**PENNATULIDAE**]

(Williams, California Academy of Sciences)

Anthozoa (Class) > Octocorallia (Subclass) > Pennatulacea (Order) > Sessiliflorae (Suborder) > **Anthoptilidae** (Family)

### *Anthoptilum grandiflorum*

Verrill 1879

AphiaID: 128504

Unaccepted name: *Pennatula argentina*

Greenland distribution: West basin, West shelf



[www.marbef.org](http://www.marbef.org)

West Greenland  
50 cm high

Anthozoa (Class) > Octocorallia (Subclass) > Pennatulacea (Order) > Subsessiliflorae (Suborder) > **Pennatulidae** (Family)

*Pennatula grandis*

Ehrenberg 1834

AphiaID: 128516

Unaccepted name: *Pennatula borealis*

Greenland distribution: West basin



Anthozoa (Class) > Octocorallia (Subclass) > Pennatulacea (Order) > Sessiliflorae (Suborder) > **Umbellulidae** (Family)

*Umbellula* sp.



*Umbellula encrinus*

Linnaeus 1758

AphiaID: 128529

Unaccepted name: –

SE shelf slope, West shelf



Lis Jorgensen



|                      | <i>Umbellula encrinus</i> | <i>Umbellula lindahli?</i> |
|----------------------|---------------------------|----------------------------|
| <b>Colonies tall</b> | 1000-2000mm               | 770-900mm                  |
| <b>Stalk</b>         | Thick                     | Thin                       |
| <b>Polyps</b>        | Strocky                   | Slender                    |

(William 1988, Dolan 2008)

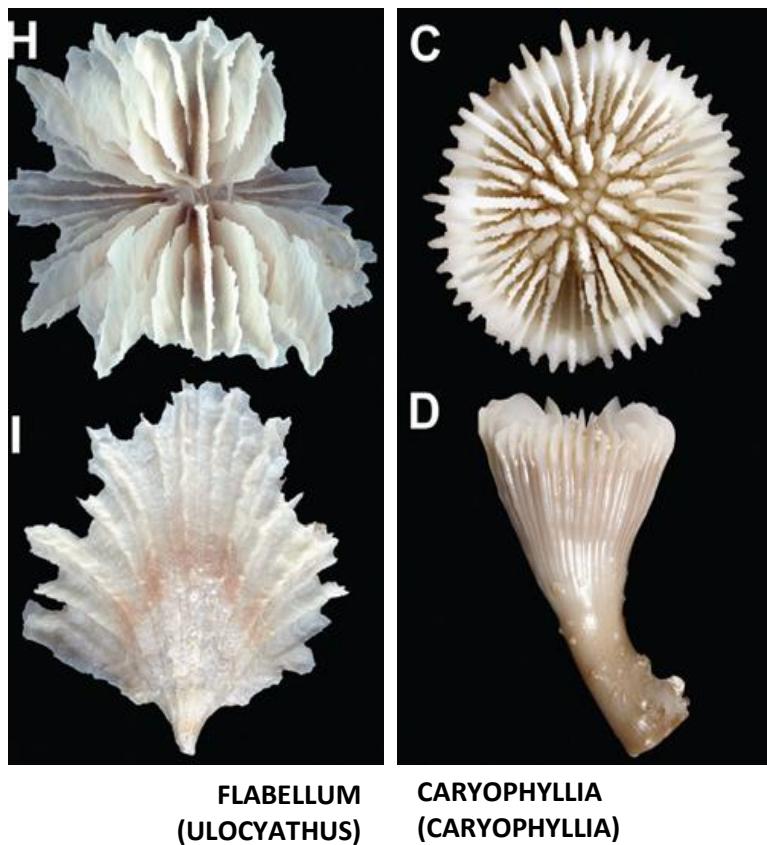
## SCLERACTINIA

| FAMILY         | PAGE |
|----------------|------|
| Caryophyllidae | 178  |
| Flabellidae    | 178  |

### TAXONOMIC KEY – GENUS

1(2) Columella is poorly developed or absent. Theca smooth and thacal spot lacking. Costae are not present. Calicular ridge jogged [**FLABELLUM (ULOCYATHUS)**]

2(1) Columella is fascicular. Presence of pali before septa of penultimate cycle (usually 3). Thecal edge spines and crests absent [**CARYOPHYLLIA (CARYOPHYLLIA)**]



(Cairns et al. 2012)

Anthozoa (Class) > Hexacorallia (Subclass) > Scleractinia (Order) > **Caryophylliidae** (Family)

***Caryophyllia (Caryophyllia) smithii***

Stokes & Broderip 1828

AphiaID: 135144

Unaccepted name: –

Greenland distribution: unknown



Anthozoa (Class) > Hexacorallia (Subclass) > Scleractinia (Order) > **Flabellidae** (Family)

***Flabellum (Uloctyathus) alabastrum***

Moseley in Thompson 1873

AphiaID: 135194

Unaccepted names: *Flabellum goodei*, *Flabellum minus*

Greenland distribution: West shelf, West basin



## ZOANTHARIA

Anthozoa (Class) > Hexacorallia (Subclass) > Zoantharia (Order) > Macrocnemina (Suborder) > **Epizoanthidae** (Family)

*Epizoanthus* sp.



*Epizoanthus danielsseni*  
Carlgren 1913

AphiaID: 101026  
Unaccepted name: –



*Epizoanthus erdmanni*  
Danielssen 1890

AphiaID: 101027  
Unaccepted name: –  
West shelf, SW shelf



*Epizoanthus incrassatus*  
Düben & Koren 1847

AphiaID: 150642  
Unaccepted name: –

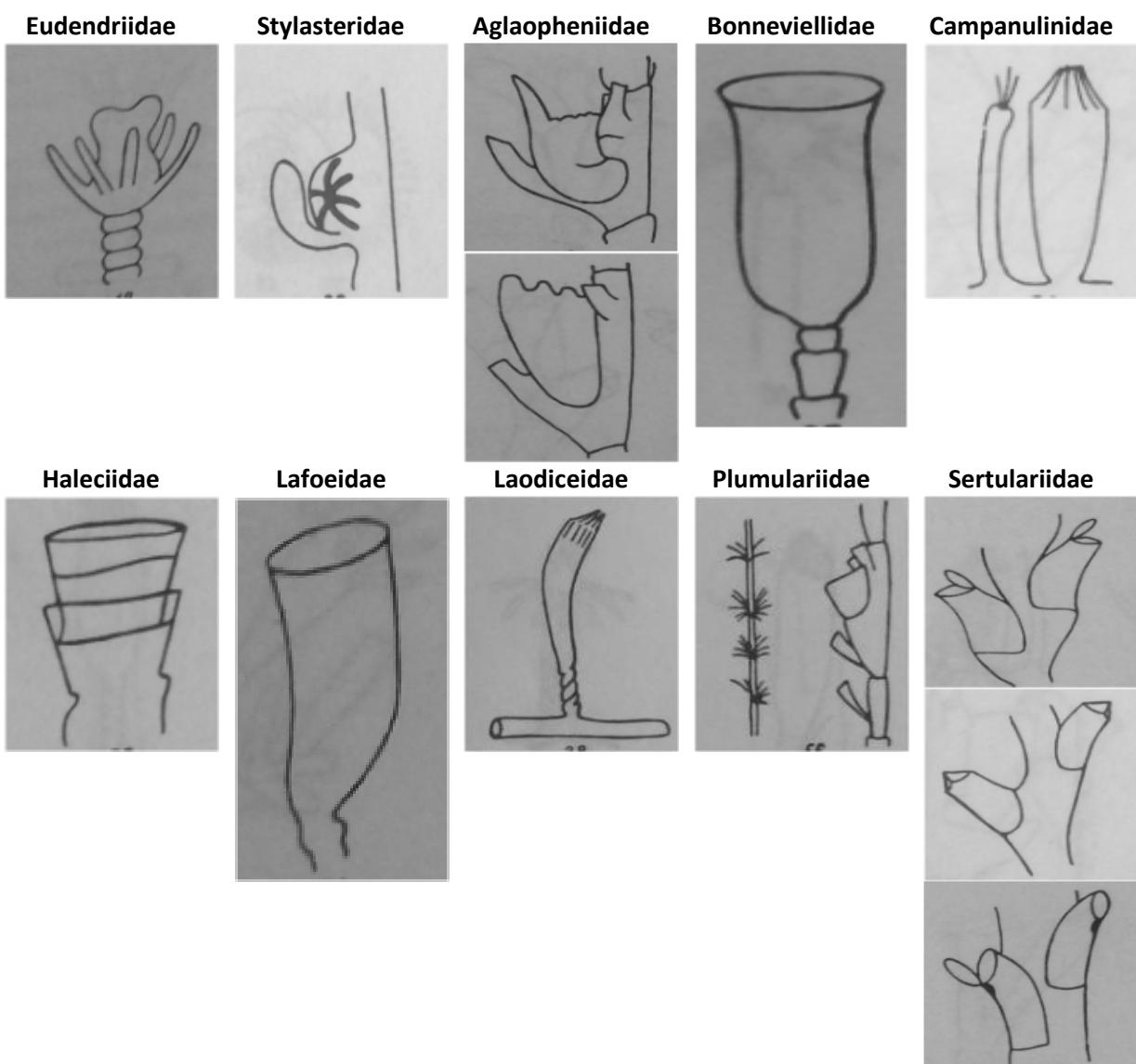
|                           | <i>E. danielsseni</i>   | <i>E. erdmanni</i>                                    | <i>E. incrassatus</i>   |
|---------------------------|---|---|---|
| <b>Polyps tall</b>        | Length : 0.08cm<br>Breadth : 0.7cm  | Free form :<br>Length : 3.5cm<br>Breadth : 2cm        | Carcinoecium form :<br>Length : 1.5cm<br>Breadth : 0.6cm<br>Free form : Length : 25mm. Breadth: 6mm |
| <b>Polyps colony</b>      | Forming a colony or not or fixed on barnacles and stones.   | Unfixed, colonies of 1-6 seldom                       | Carcinoecium form: on encrusts shells or rocks  |
| <b>Polyps arrangement</b> | Are seldom placed quite close together. Coenenchyme between them fairly well-developed and thick. | Connected with each other by tube-shaped coenenchyme. | Free form: distinct basal coenenchyme. Polyps radiate from common central point.                    |

(Calgren 1913, Manuel, 1981)

## HYDROZOA

| FAMILY         | PAGE |
|----------------|------|
| Eudendriidae   | 181  |
| Stylasteridae  | 181  |
| Aglaopheniidae | 182  |
| Bonneviellidae | 184  |
| Campanulinidae | 185  |
| Haleciidae     | 185  |
| Lafoeidae      | 185  |
| Laodiceidae    | 186  |
| Plumulariidae  | 186  |
| Sertulariidae  | 187  |

### FAMILIES



(Naumov 1960)

Hydrozoa (Class) > Hydroidolina (Subclass) > Anthoathecata (Order) > Filifera (Suborder) > **Eudendriidae** (Family)

*Eudendrium* sp.

Ehrenberg 1834

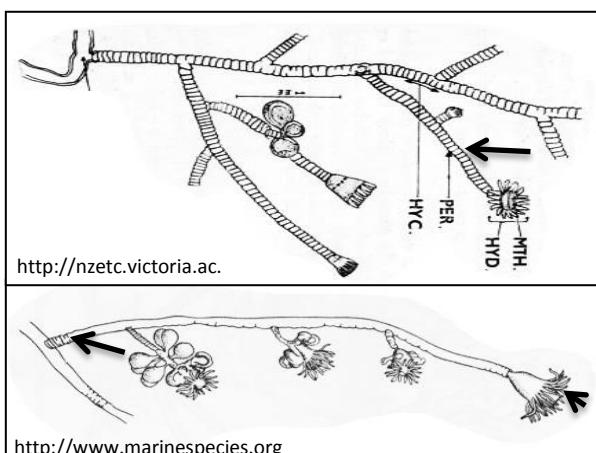
AphiaID: 117093

Unaccepted name: –

Greenland distribution: West shelf



Can be mistaken for **Campanulariidae**



Hydrozoa (Class) > Hydroidolina (Subclass) > Anthoathecata (Order) > Filifera (Suborder) > **Styasteridae** (Family)

*Styaster* sp.



*Styaster erubescens*

Pourtalès 1868

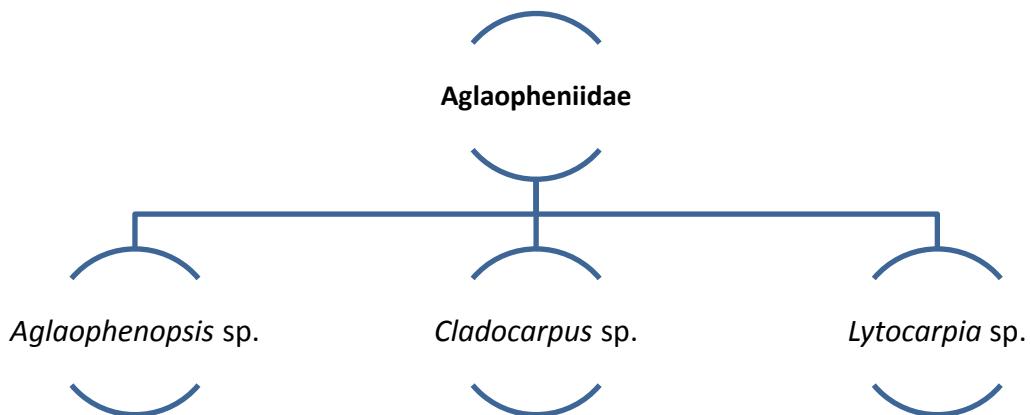
AphiaID: 117964

Unaccepted name: –

Greenland distribution: SE shelf slope



Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > Plumularioidea (Superfamily) > Aglaopheniidae (Family)



|                   | <i>Aglaophenopsis sp.</i>   | <i>Cladocarpus sp.</i>                                  | <i>Lytocarpia sp.</i>  |
|-------------------|---|---|--|
| <b>Colony</b>     | Few levels branched (tree-like). Stem with numerous internodes septa. | Ramified one plan. Branched opposite or alternating.    | Slightly branched with flattened protuberances at intervals divided into regular internodes. |
| <b>Hydrotheca</b> | Margin toothed  | Usually smooth but sometimes with median tooth or wavy. | With sharp median tooth and lateral crenulations.  |

(Fraser 1944, Naumov 1960)

### *Aglaophenopsis cornuta*

Fewkes 1881

AphiaID: 744828

Unaccepted names: *Cladocarpus cornutus*

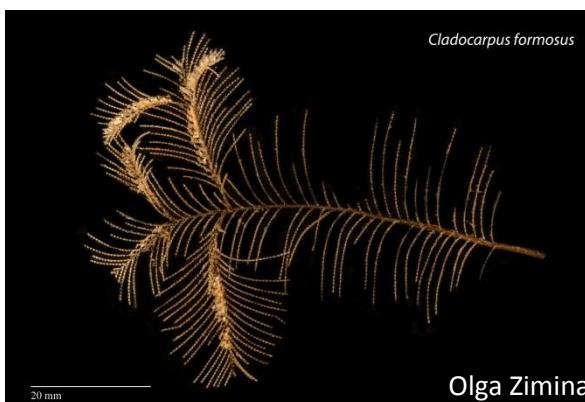
Greenland distribution: West basin, SE shelf slope



*Cladocarpus* sp.  
(West shelf)



*Cladocarpus formosus*  
Allman 1877  
AphiaID: 117293  
Unaccepted name: –  
West basin



*Cladocarpus formosus*

*Cladocarpus integer*  
Sars 1873  
AphiaID: 117294  
Unaccepted name: –  
SE shelf slope



*Cladocarpus integer*



Olga Zimina



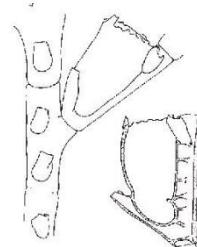
## *Lytocarpia myriophyllum*

Linnaeus 1758

AphiaID: 117302

Unaccepted names: *Sertularia myriophyllum*, *Thecocarpus myriophyllum*

Greenland distribution: unknown



(Schuchert 2001)

Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > **Bonneviellidae** (Family)

## *Bonneviella grandis*

Allman 1876

AphiaID: 117314

Unaccepted names: *Campanularia grandis*, *Lafoea gigantea*

Greenland distribution: SE shelf slope



Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > **Campanulinidae** (Family)

*Lafoeina* sp.  
(West shelf)



*Lafoeina maxima*

Levinsen 1893

AphiaID: 117411

Unaccepted names: *Keratosum complexum*, *Keratosum maximum*

Greenland distribution: West shelf



Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > **Haleciidae** (Family)

*Halecium muricatum*

Ellis & Solander 1786

AphiaID: 117597

Unaccepted name: –

Greenland distribution: West shelf, SW shelf



Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > **Lafoeidae** (Family)

*Lafoea dumosa*

Fleming 1820

AphiaID: 117702

Unaccepted names: *L. capillaris*, *L. cornuta*, *L. fructicosa*, *L. gracillima*, *L. intermedia*, *L. pocillum*, *L. tenellula*, *Lictorella flexilis*

Greenland distribution: SE shelf slope



Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > **Laodiceidae** (Family)

*Ptychogena lactea*

Agassiz 1865

AphiaID: 117728

Unaccepted name: *Ptychogena pinnulata*

Greenland distribution: West shelf, SE shelf slope, SW shelf



Hydrozoa (Class) > Hydroidolina (Subclass) > Leptothecata (Order) > Plumularioidea (Superfamily) > **Plumulariidae** (Family)

**Nemertesia spp.**

(West shelf)



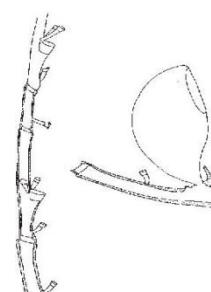
*Nemertesia antennina*

Linnaeus 1758

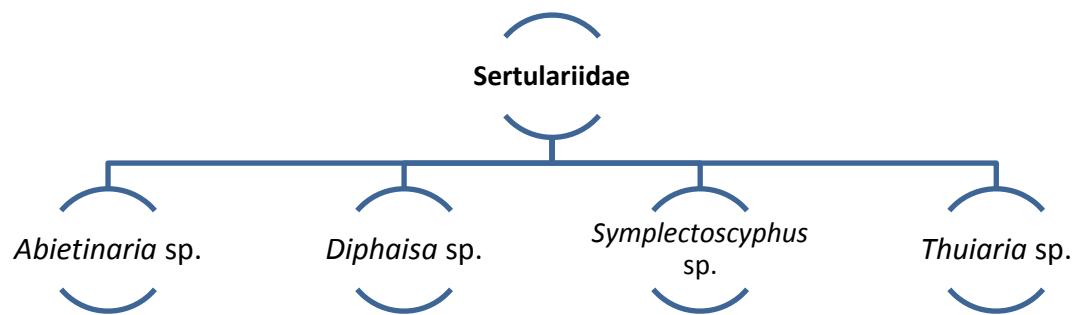
AphiaID: 117809

Unaccepted names: *Antennularia antennina*, *Sertularia antennina*

Greenland distribution: SE shelf slope, SW shelf



(Schuchert 2001)



**Sertulariidae:**



|                                     | <i>Abietinaria sp.</i>  | <i>Diphaisa sp.</i>                            | <i>Symplectoscyphus sp.</i>   | <i>Thuiaria sp.</i>   |
|-------------------------------------|---|--|---|---|
| <b>Hydrothecae arrangement</b>      | ≥1 rows on the branches. When 2 rows on the branches, never opposite. | In 2 rows on the branches, opposite.           | ≥1 rows on the branches. When 2 rows on the branches, never opposite. | ≥1 rows on the branches. When 2 rows on the branches, never opposite. |
| <b>Mouth margin of hydrothecata</b> | Devoid denticles  | Devoid denticles                               | Margin bearing 3-4 denticles  | Devoid denticles  |
| <b>Operculum</b>                    | With 1 flap attached to adjacent side of mouth                        | With 1 flap attached to adjacent side of mouth | With 3 or 4 flaps   | With 1 flap attached to remote side of mouth                          |

(Naumov 1969)

*Abietinaria* sp.

Kirchenpauer 1884

AphiaID: 117225

Unaccepted name: –

Greenland distribution: West shelf



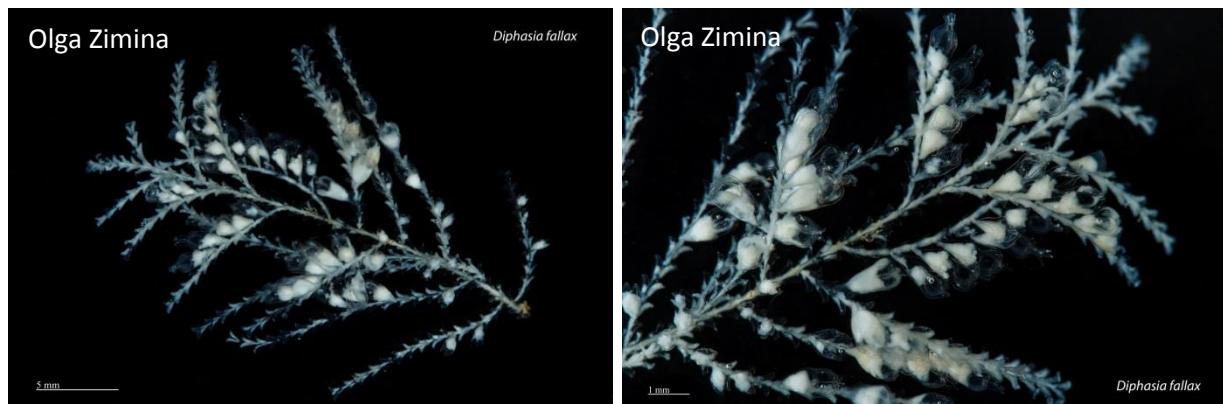
*Diphasia fallax*

Johnston 1847

AphiaID: 117879

Unaccepted name: –

Greenland distribution: SE shelf slope



*Symplectoscyphus tricuspidatus*

Alder 1856

AphiaID: 117929

Unaccepted name: *Sertularia tricuspidata*

Greenland distribution: SE shelf slope



*Thuiaria* sp.  
(SE shelf slope)



*Thuiaria thuja*  
Linnaeus 1758

AphiaID: 117940

Unaccepted name: *Biseriaria thuia*

Greenland distribution: West shelf, SE shelf slope, SW shelf



## SCYPHOZOA

Scyphozoa (Class) > Coronamedusae (Subclass) > Coronatae (Order) > Atollidae (Family)

*Atolla* sp.  
(West basin, SE shelf slope, West shelf)



*Atolla wyvillei*  
Haeckel 1880

AphiaID: 135282

Unaccepted name: –

Greenland distribution: West shelf,  
SW shelf



Scyphozoa (Class) > Coronamedusae (Subclass) > Coronatae (Order) > **Periphyllidae** (Family)

*Periphylla periphylla*

Péron & Lesueur 1810

AphiaID: 135294

Unaccepted name: –

Greenland distribution: West shelf, SE shelf slope, SW shelf, West basin



## STAUROZOA

Stauromedusae (Class) > Stauromedusae (Order) > Eleutherocarpida (Suborder) > **Lucernariidae** (Family)

*Lucernaria quadricornis*

O.F. Müller 1776

AphiaID: 135328

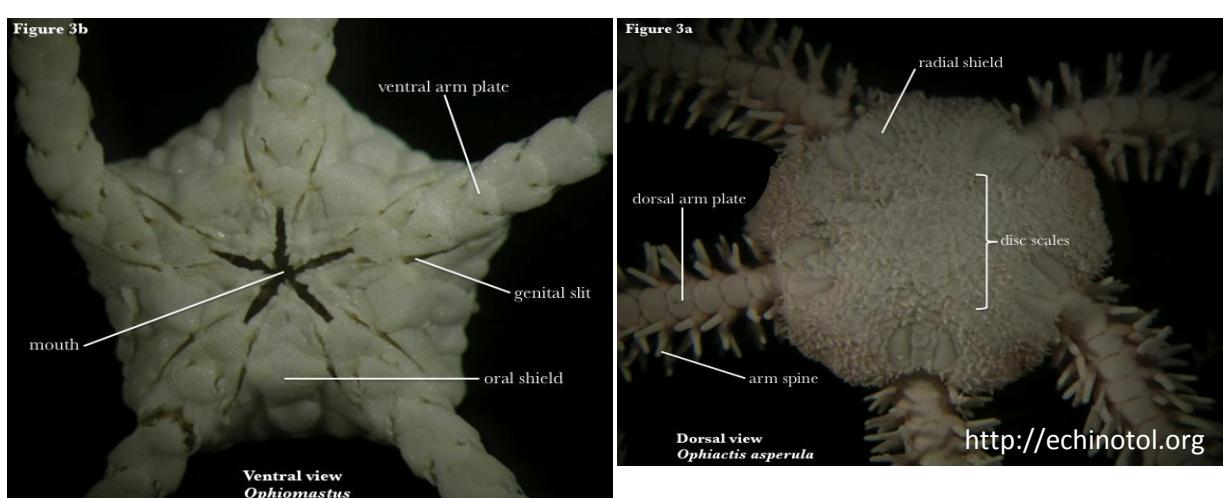
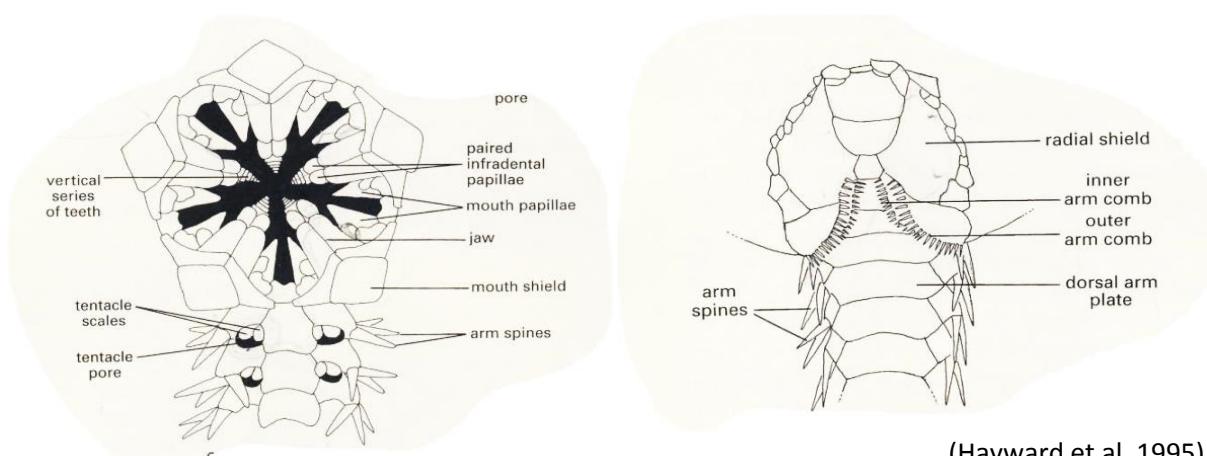
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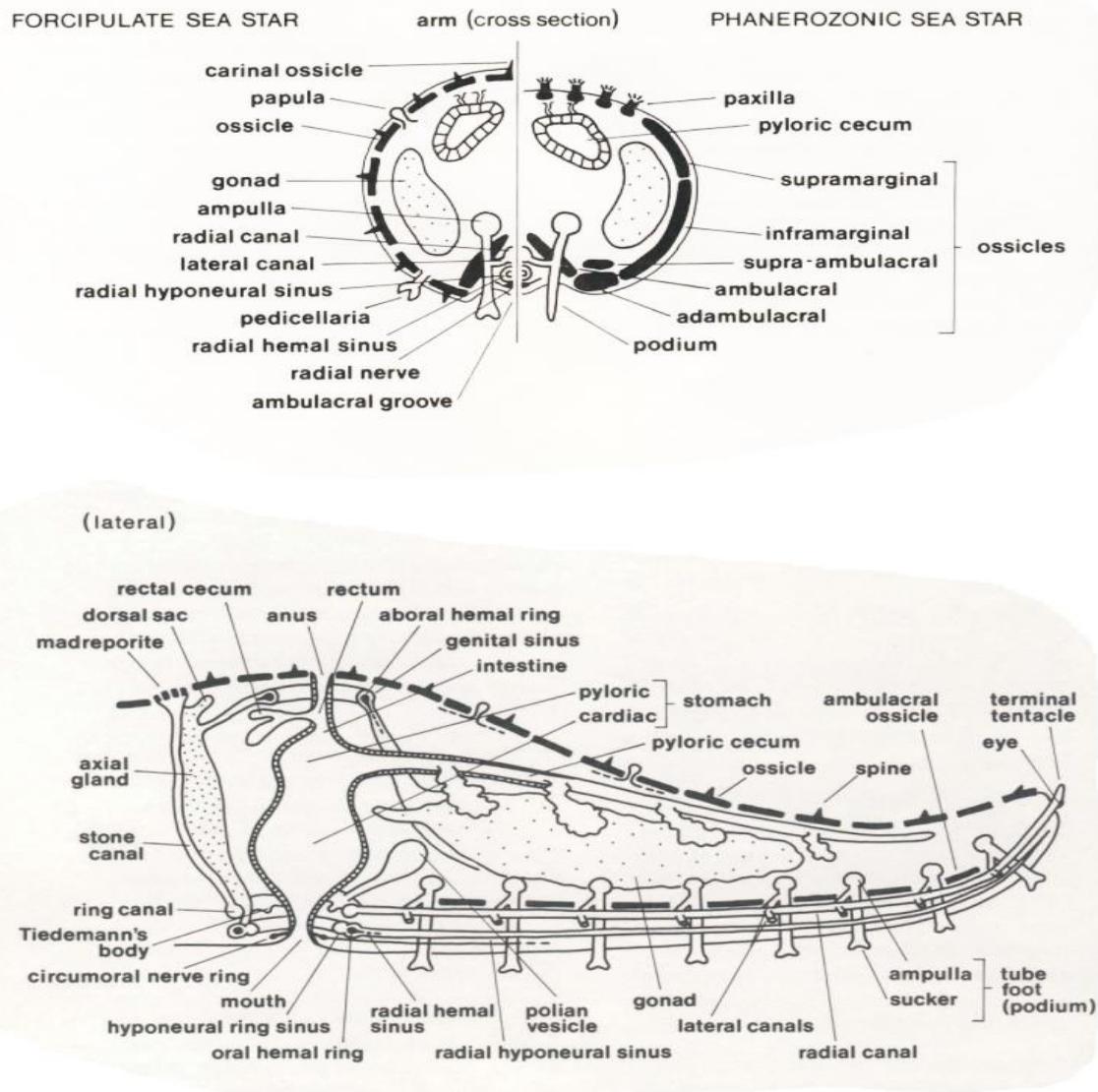
Greenland distribution: West shelf



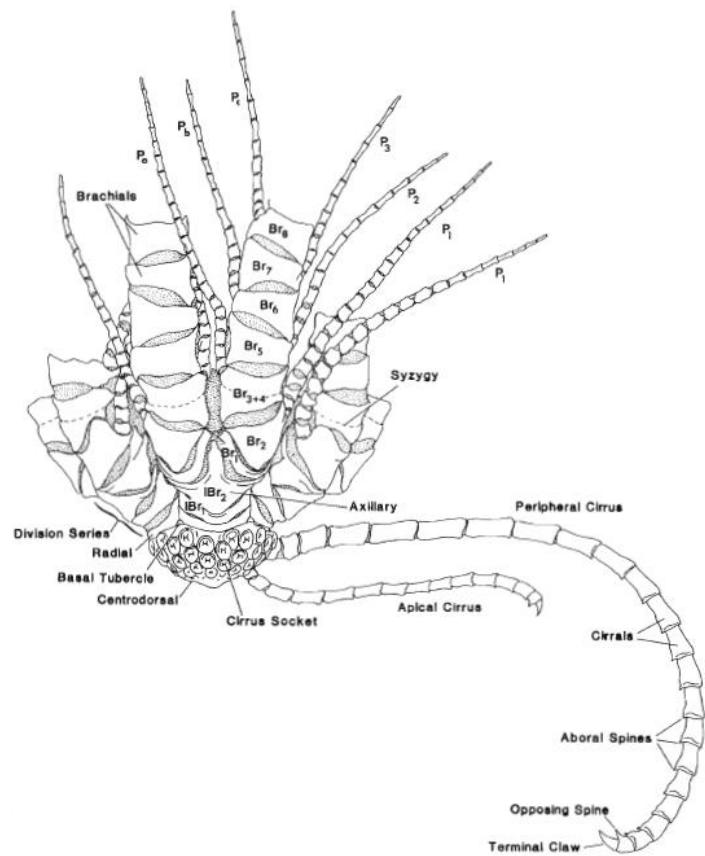
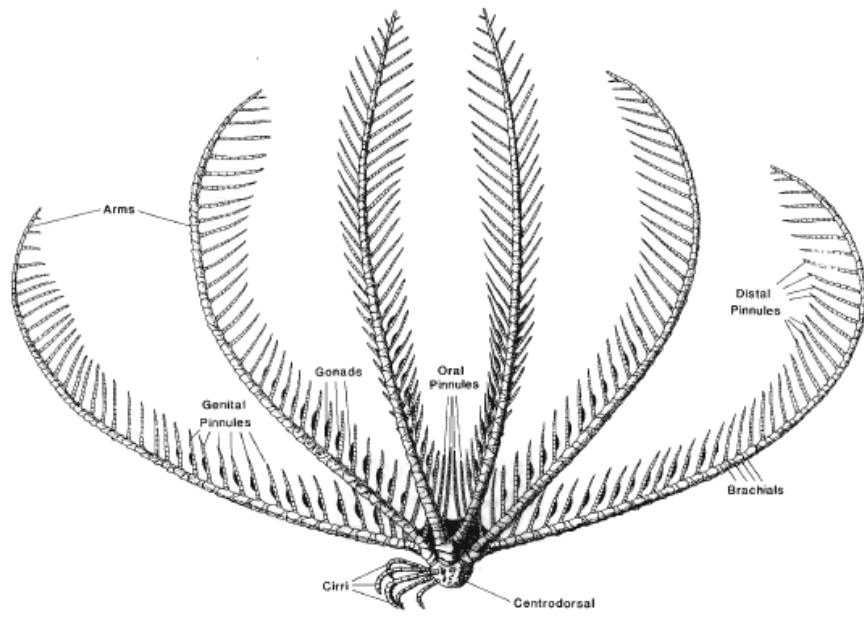
## P H Y L U M   E C H I N O D E R M A T A

Echinoderms are adapted to survive in a wide range of habitats, from coastal areas to deep water (down to 2000 m). The phylum is separated in 21 classes based on skeleton differences and includes brittle stars, urchins, sea stars, sea cucumbers and crinoids (Miller 2014). The major characteristic of echinoderms is the skin covered by spines. The estimated number of worldwide species varies from 6000 to 7000 (Chapman 2009) and, in Arctic, ~228 species can be found (Piepenburg et al. 2011).





(Stachowitsch 1991)



(Messing et al. 1990)

# ASTEROIDEA SEA STARS



| FAMILY             | PAGE |
|--------------------|------|
| Brisingidae        | 197  |
| Asteriidae         | 198  |
| Benthopectinidae   | 203  |
| Astropectinidae    | 204  |
| Luidiidae          | 207  |
| Pseudarchasteridae | 207  |
| Echinasteridae     | 208  |
| Astropectinidae    | 208  |
| Ctenodiscidae      | 209  |
| Asterinidae        | 209  |
| Goniasteridae      | 210  |
| Poraniidae         | 212  |
| Solasteridae       | 216  |
| Korethrasteridae   | 220  |
| Pterasteridae      | 221  |

## TAXONOMIC KEY – ORDERS

- 1(2) Marginal plates very developed (large and conspicuous) **[PHANEROZONIA]**
- 2(1) Marginal plates usually inconspicuous.
- 3(4) Pedicellariae are very rare, never of the crossed type. Dorsal spines are usually placed in groups. Tube-feets usually in 2 series **[SPINULOSIDA]**
- 4(3) Pedicellariae of the crossed type. Dorsal spines are single or rarely in groups. Tube feet in 2 4 series **[Forcipulatida]**

(Mortensen 1927) (Blake et al. 2014)

#### TAXONOMIC KEY – PHANEROZONIA FAMILIES

- 1(8) Tube-feet not has a sucking disc (except for Pseudarchasteridae). Paxillae are usually present on aboral side of disk and on arms.
- 2(3) Tube-feet has a sucking disc but all others features are the same at Praxillosa taxa  
**[PSEUDARCHASTERIDAE]**
- 3(2) Tube feet are pointed.
- 4(5) Cribiform organ developed between the marginal plates. Ampullae are single  
**[CTENODISCIDAE]**
- 5(4) Cribiform organ is absent on marginal plates. Ampullae are double.
- 6(7) Upper marginal plates are developed. Papulae are simple **[ASTROPECTINIDAE]**
- 7(6) Upper marginal plates are not developed (replaced by paxillae). Papulae are bush-shaped  
**[LUIDIIDAE]**
- 8(1) Tube-feet has a sucking disc.
- 9(10) Upper and lower marginal plates are alternating. Pedicellariae are simple, spiniform or pectiniform. Paxillae covered aboral side **[BENTHOPECTINIDAE]**
- 10(9) Upper and lower marginal plates are not alternating. Pedicellariae not always present are valvate and sometimes simple. Aboral side are covered with paxillae, spines or are naked.
- 11(12) Marginal plates very distinct and are not covered with skin. Edge of disk is not sharp. Dorsal side covered with flat spines or grains arranged in the form of paxillae or with scattered large spines surrounded by grains **[GONIASTERIDAE]**
- 12(11) Marginal plates are more or less indistinct and are carrying with spines or covered by naked skin. Edge of disk is sharp. Dorsal side covered with a thick, naked skin or with fine or even microscopical spines **[PORANIIDAE]**

(Mortensen 1927)

#### TAXONOMIC KEY – SPINULOSIDA FAMILIES

- 1(4) Body have a distinct edge forming a sharp limit between dorsal and oral side. Body is more or less flattened.
- 2(3) Finlike membrane along the edge of the body are present. Membrane covered paxillae of the dorsal side and lies like a roof over the whole dorsal side **[PTERASTERIDAE]**
- 3(2) Finlike membrane along the edge are absent. Membrane is not forming a roof over the dorsal side. The edge formed by indistinct marginal plates. Scalelike imbricating plates carrying small spines in irregular group or very low paxillae covered dorsal side of body  
**[ASTERINIDAE]**
- 4(1) Body do not have a distinct edge forming sharp limit between dorsal and oral side.

- 5(6) Disc of body is very small with 5 long, slender cylindrical arms. Spines on the disc are small, single, not glassy or are positioned by a small groups which do not show a regular patterns [**ECHINASTERIDAE**]
- 6(5) Disc of body is large with at less 5 arms. Spines on the disc are long and forming very distinct conspicuous paxillae.
- 7(8) The larger marginal paxillae are in single or double series. Oral interradial plates are present. Adambulacral plates have the series of spines at right angles. [**SOLASTERIDAE**]
- 8(7) The larger marginal paxillae are absent. Oral interradial plates are absent or indistinct. 5 short arms. Adambulacral plates have spines forming together those of lower marginals a single transverse series [**KORETHASTERIDAE**]

(Mortensen 1927)

#### TAXONOMIC KEY – FORCIPULATIDA FAMILIES

- 1(2) Tube-feet in two series. Rays are more or less constricted at base. Dorsal skeleton of rays are restricted to the proximal part. Long and slender marginal spines enclosed in a bag of skin and covered with crossed pedicellariae [**BRISINGIDAE**]
- 2(1) Tube-feet in four series at least in the proximal part of rays. Dorsal skeleton are irregular, reticulate with single spines [**ASTERIIDAE**]

(Mortensen 1927)

**Novodinia sp.**  
(West shelf, SE shelf slope, West basin)



***Novodinia americana***

Verrill 1880

AphiaID: 178261

Unaccepted names: *Brisinga americana*, *Odinia americana*

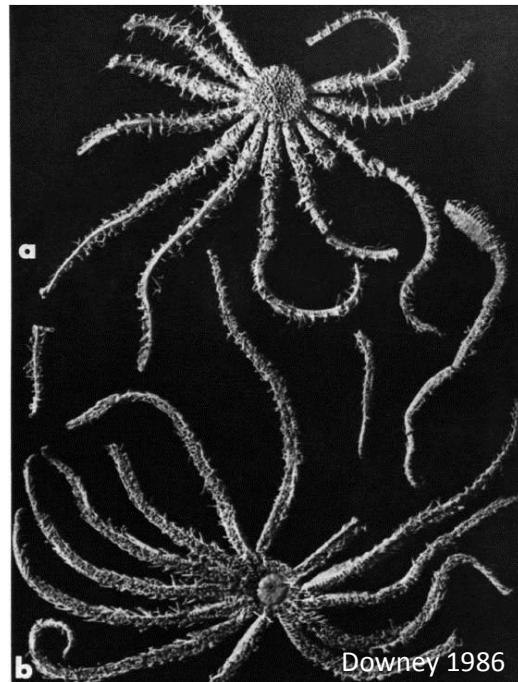


***Novodinia semicoronata***

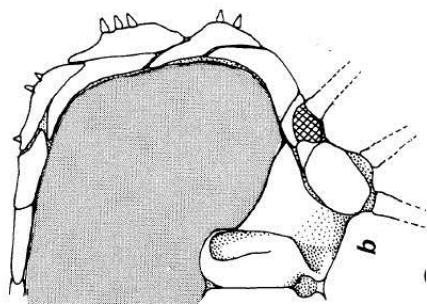
Perrier 1885

AphiaID: 123681

Unaccepted names: *Brisinga semicoronata*, *Odinia semicoronata*



Clark & Downey 1992

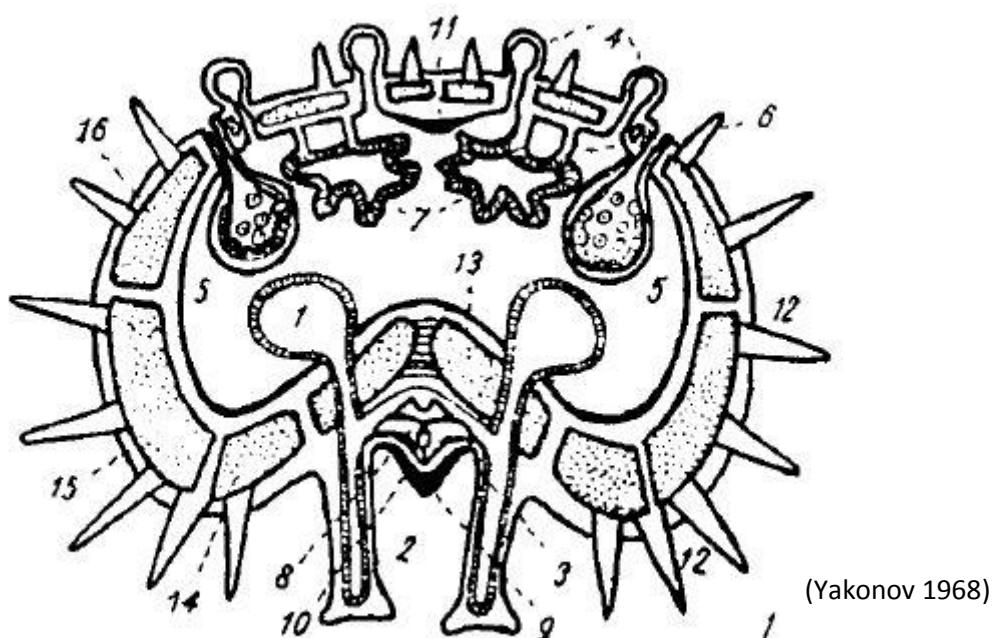


|                                   | <i>Novodinia americana</i> | <i>Novodinia semicoronata</i>                 |
|-----------------------------------|----------------------------|---|
| <b>Number of arms</b>             | 15-20                      | 15-17   |
| <b>Abactinal plates</b>           | irregularly rounded, tumid | Lobed, imbricates                             |
| <b>Abactinal armament</b>         | 2—4 acutespinelets         | 3 (1-4) long aciculate or bifurcate spinelets |
| <b>Suboral spines</b>             | no                         | Yes, long thick acicula                       |
| <b>Coastal plates</b>             | Cruciform                  | Lobed   |
| <b>Armament of coastal plates</b> | One short, acicular spine  | Spines acute ensacculate                      |

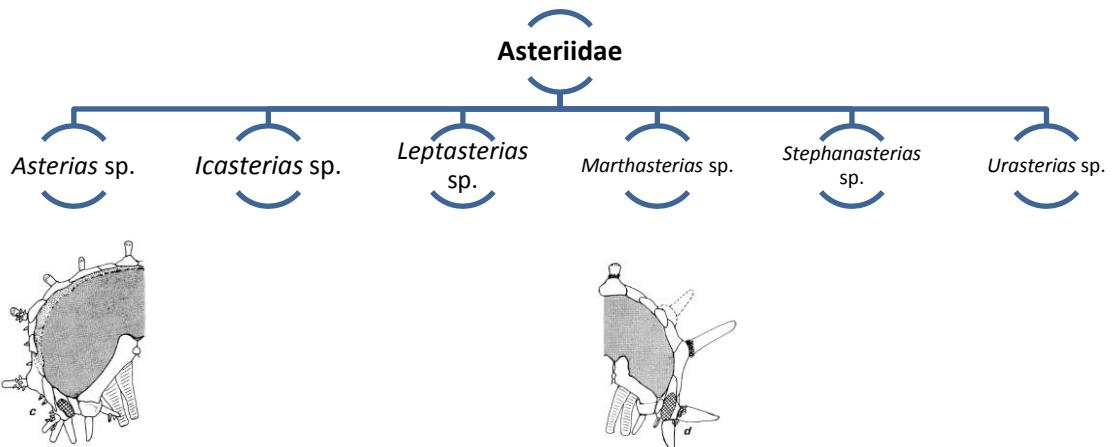
(Clark & Downey 1992, Downey 1986)

**Rare and fragile species. Deepwater sea star, often in pieces.**

Asterozoa (Subphylum) > Asteroidea (Class) > Forcipulatacea (Superorder) > Forcipulatida (Order) > **Asteriidae** (Family)



1 — ampulla [of podium]; 2 — podium; 3 — radial ambulacral [or water] canal; 4 — papulae (gills); 5 — genital organs (gonads); 6 — mesenteries; 7 — intestinal ceca; 8 — radial hemal vessel; 9 — radial nerve cord; 10 — hyponeural nervous system; 11 — aboral [or ectoneural] nervous system; 12 — spines; 13 — ambulacral plate; 14 — adambulacral plate; 15 — inframarginal plate; 16 — supramarginal plate.



|  | <i>Asterias</i>        | <i>Icasterias</i> | <i>Leptasterias</i> | <i>Marthasterias</i> | <i>Stephanasterias</i> | <i>Urasterias</i> |
|--|------------------------|-------------------|---------------------|----------------------|------------------------|-------------------|
| Pedicellariae around adambulacral spines | No                     | Yes               | No                  | Yes                  | Yes                    | Yes               |
| Spine on adambulacral plates             | 2                      |                   | 1                   | 2                    | 2                      |                   |
| Crossed pedicellariae very large         |                        | Yes               |                     | No                   | No                     | Yes               |
| Pedicellariae in tuft                    |                        | No                |                     | Yes                  |                        | Yes               |
| Alternating of adambulacral spines       | 1-2 or 2-3             |                   | 1-2                 |                      |                        |                   |
| Ventrolateral plates                     | Wanting or not visible |                   | 1 row, distinct     |                      |                        |                   |

(D'Yakonov 1968)

## *Asterias rubens*

Linnaeus 1758

AphiaID: 123776

Unaccepted name: –



Highly variable species

## *Icasterias panopla*

Stuxberg 1879

AphiaID: 123796

Unaccepted name: *Asterias panopla*

Greenland distribution: SE shelf slope, West shelf



Can be mistaken for *Urasterias linckii*



Look for arms with oral restrictions

Crossed pedicellariae very large (can be seen without magnification), but not forming tuft around marginal spine as in *Urasterias lincki*.

Carinal spines in a single straight row, usually larger than dorsolateral spines.

Single pedicelaria, arms with oral constrictions, midline of spines on arms

Reddish orange.

(Grainger 1966)

## *Leptasterias* sp.

(SE shelf slope, SW shelf, West shelf)



*L. groenlandica*  
Steenstrup 1857

AphiaID: 369176  
Unaccepted name:  
*Asteracanthion groenlandica*

*L. (Hexasterias) polaris*  
Müller & Troschel 1842

AphiaID: 125154  
Unaccepted names: *Asterias borealis*, *Asterias minuta*,  
*Leptasterias polaris*

*L. (Leptasterias) muelleri*  
M. Sars 1846

AphiaID: 125158  
Unaccepted names: *Asterias mülleri*, *Leptasterias muelleri*,  
*Stellonia hispida*



|                              | <i>L. groenlandica</i>                                 | <i>L. (Hexasterias) polaris</i>   | <i>L. (Leptasterias) muelleri</i> |
|------------------------------|--|---|-----------------------------------|
| <b>Arms</b>                  | 55   | 6   | 5                                 |
| <b>Aboral spines</b>         | Gathered in groups                                     | Gathered in groups<br>(larger central spine surrounded by several smaller spines)   | Usually single                    |
| <b>Adambulacral armature</b> | Often 2 spines/plates<br>Without crossed pedicellariae | close-meshed, usually with fairly large, slightly bulbous carinal and dorsolateral spines largely indistinguishable in size | Usually 1 spine / plate           |

(D'Yakonov 1968, Grainger 1966)

*Marthasterias glacialis*

Linnaeus 1758

AphiaID: 123803

Unaccepted names: *Asterias glacialis*

Greenland distribution: unknown



*Stephanasterias albula*

Stimpson 1853

AphiaID: 123808

Unaccepted names: *Asterias albula*, *A. gracilis*, *A. problema*

Greenland distribution: West shelf, SW shelf, SE shelf slope



## *Urasterias lincki*

Müller & Trischel 1842

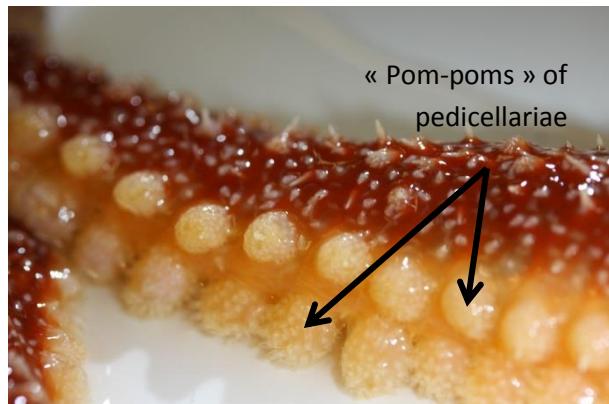
AphiaID: 123815

Unaccepted name: *Asterias linckii*

Greenland distribution: West shelf



Can be mistaken for *Icasterias panopla*



Crossed pedicellariae very large (can be seen without magnification), forming tuft or “pom-poms” (as a cheerleader pom-poms!) around marginal spine.

Carinal spines not usually distinguishable from dorsolateral spines.

Reddish to purplish with underside whitish.

Pedicelaria in groups along arms

(Grainger 1966)

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Notomyotida (Order) > **Benthopectinidae** (Family)

## *Pontaster tenuispinus*

Düben & Koren 1846

AphiaID: 123851

Unaccepted name: *Astropecten tenuispinus*

Greenland distribution: SE shelf slope



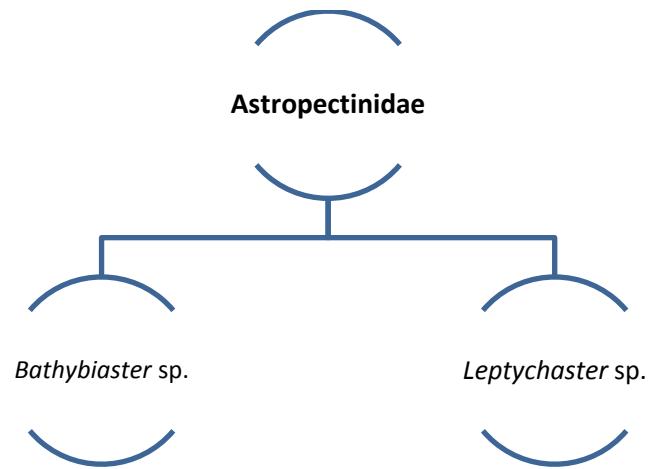
5 rays, tapering to a fine point. Small paxilliform plates with about 3 to 30 short blunt spines arranged circularly.

Near the base of the ray, supramarginal plates with a single long spine. Inframarginal with a single long spine near the aboral margin and 2 or 3 shorter spines.

Tube-feet in 2 rows with flat sucking disk.

(Grainger 1966)

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Paxillosida (Order) > **Astropectinidae** (Family)



|   | <i>Bathybiaster</i> sp.  | <i>Leptychaster</i> sp.  |
|---|--|--|
| Supra (S) and infra(I)<br>marginal plates | <p>The diagram shows a rectangular plate divided vertically into two equal halves. The left half is labeled 'S' and the right half is labeled 'I'.</p> | <p>The diagram shows a rectangular plate divided vertically into two equal halves. The top half is labeled 'S' and the bottom half is labeled 'I'.</p> |

(D'Yakonov 1968, Natalya Anisimova, comm pers)

Refer to N. Anisimova's table (p. 206) to compare  
*Bathybiaster*, *Leptychaster*, *Pseudarchaster* and *Psilaster*

## *Bathybiaster vexillifer*

W. Thomson 1873

AphiaID: 123881

Unaccepted name: –

Greenland distribution: West basin



Can be mistaken for: *Bathybiaster*,  
*Leptychaster*, *Pseudarchaster* & *Psilaster*



Refer to N. Anisimova's table (p. 206) to compare  
*Bathybiaster*, *Leptychaster*, *Pseudarchaster* and *Psilaster*

## *Leptychaster arcticus*

M. Sars 1851

AphiaID: 123896

Unaccepted name: *Astropecten arcticus*

Greenland distribution: West shelf, SW shelf, SE shelf slope

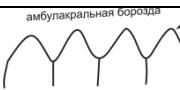
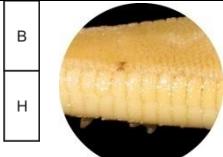
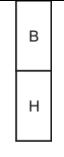
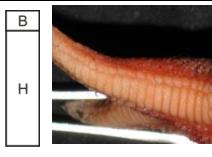


Can be mistaken for: *Bathybiaster*,  
*Leptychaster*, *Pseudarchaster* & *Psilaster*



Marginal plates of different size  
Aboral surface rounded

Refer to N. Anisimova's table (p. 206) to compare *Bathybiaster*, *Leptychaster*, *Pseudarchaster* and *Psilaster*

|   | <i>Bathybiaster vexillifer</i>   | <i>Psilaster andromeda</i>   | <i>Pseudarchaster parelii</i>   | <i>Leptichaster arcticus</i>   |
|---|--|--|---|--|
| <b>Appearance</b>   |   |   |                                     |   |
| <b>Color</b>  | Yellow, sometimes with a pink shade  | Orange, Pink   | Red   | Orange   |
| <b>Size, R</b>  | Up to 130 mm   | Up to 150 mm   | Up to 200 mm  | Up to 20-30 mm   |
| <b>Back</b>   |   |   |                                     |   |
| <b>Podia</b>  | Cone, without suckers  | Cone, without suckers  | Cylindrical with suction cup  | Cone, without suckers  |
| <b>Needles on adambulacral plates (contouring ambulacral groove).</b> | <br>амбулакральная борозда<br>амбулакральные пластины<br>Central SBA needle longer than the adjacent, so SBA needles protrude into the groove cusp of HSM | <br>амбулакральная борозда<br>амбулакральные пластины<br>Tentacle needle (6-8) of the same length, stretch out in the SBA groove semicircular protrusion. | Adambulacral plates 5-6 thin needles directed into the interior of tentacle groove                                    | Adambulacral plates 3-4 needle aimed at ambulacral groove  |
| <b>Marginal plates</b>  | <br>B<br>H  | <br>B<br>H  | <br>B<br>H                         | <br>B<br>H  |
|   | Upper and lower marginal plates of same height   | Upper and lower marginal plates of same height   | Upper and lower marginal plates of same height  | Supramarginal plates much smaller than lower   |
| <b>Distribution</b>   | Bathyal coldwater species.<br>Found in the northern part of the Barents and Kara Seas in the bathyal slope area  | Boreal species<br>Can be found in the southwestern part of the Barents Sea.<br>Rare view   | Amphiboreal view.<br>Can be found in the southwestern part of the Barents Sea.<br>In the Barents Sea - a rare species | Amphiboreal view.<br>The mass is found in the southeastern part of the Barents Sea.<br>Pretty ordinary, almost mass appearance of by-catch |

AMB - Tentacle (where tentacle legs)

SBA - Adambulacral (near ambulacral)

Table made by Natalya Anisimova Russia, Murmansk, PINRO

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Paxillosida (Order) > **Luidiidae** (Family)

### *Luidia sarsii*

Düben & Koren, in Düben 1845

AphiaID: 123922

Unaccepted name: –

Greenland distribution: unknown



Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Paxillosida (Order) > **Pseudarchasteridae** (Family)

### *Pseudarchaster parelii*

Düben & Koren, in Düben 1846

AphiaID: 124085

Unaccepted name: *Astropecten parelii*



Can be mistaken for: **Bathybiaster, Leptychaster, Pseudarchaster & Psilaster**

Greenland distribution: West shelf, SE shelf slope, West basin



Large marginal plates and same size

Aboral side flat;

Odd spinelike tooth at apex of jaw

Refer to N. Anisimova's table (p. 206) to compare  
**Bathybiaster, Leptychaster, Pseudarchaster and Psilaster**

(D'Yakonov 1968)

Asterozoa (Subphylum) > Asteroidea (Class) > Spinulosacea (Superorder) > Spinulosida (Order) > **Echinasteridae** (Family)

*Henricia* sp.

Gray 1840

AphiaID: 123276

Unaccepted name: –

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Paxillosida (Order) > **Astropectinidae** (Family)

*Psilaster andromeda*

Müller & Troschel 1842

AphiaID: 123908

Unaccepted name: –

Greenland distribution: West basin



Can be mistaken for: *Bathybiaster*,  
*Leptychaster*, *Pseudarchaster* & *Psilaster*



Small buttonlike outgrowth in the middle of the aboral disk.

(D'Yakonov 1968)

Refer to N. Anisimova's table (p. 206) to compare  
*Bathybiaster*, *Leptychaster*, *Pseudarchaster* and *Psilaster*

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Paxillosida (Order) > **Ctenodiscidae** (Family)

### *Ctenodiscus crispatus*

Retzius 1805

AphiaID: 123915

Unaccepted name: *Asterias crispata*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



Ámundur Nolsø

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Valvatida (Order) > **Asterinidae** (Family)

### *Tremaster mirabilis*

Verrill 1880

AphiaID: 124002

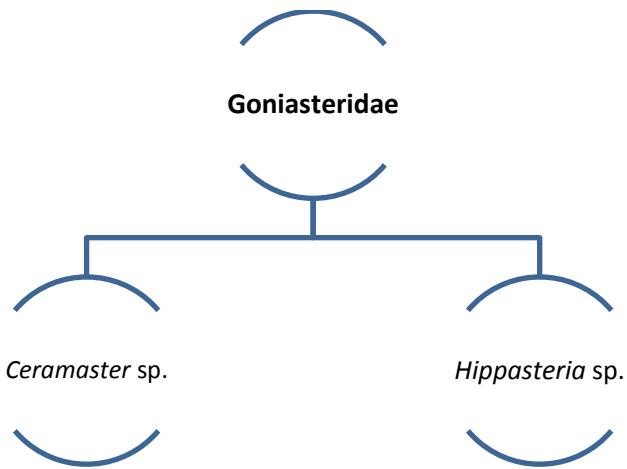
Unaccepted name: –

Greenland distribution: SE shelf slope



Olga Zimina

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Valvatida (Order) > **Goniasteridae** (Family)



|                                  | <i>Ceramaster</i> sp.                                      | <i>Hippasteria</i> sp.   |
|----------------------------------|--|--|
| <b>Aboral side</b>               | Paxilliform granules, sometimes pedicellariae<br>No spines | Bivalvate pedicellariae surrounded by granules<br>Low blunt spines |
| <b>Spines on marginal plates</b> | No   | Yes (usually) short and obtuse                                     |
| <b>Shape</b>                     | Greatly flattened  | Body somewhat tumid  |

(D'Yakonov 1968)

### *Ceramaster granularis*

Retzius 1783

AphiaID: 124020

Unaccepted name: *Asterias granularis*

Greenland distribution: SE shelf slope, SW shelf, West shelf



*Hippasteria phrygiana*

Parelius 1768

AphiaID: 124043

Unaccepted name: *Asterias phrygiana*

Greenland distribution: West basin, SW shelf, West shelf

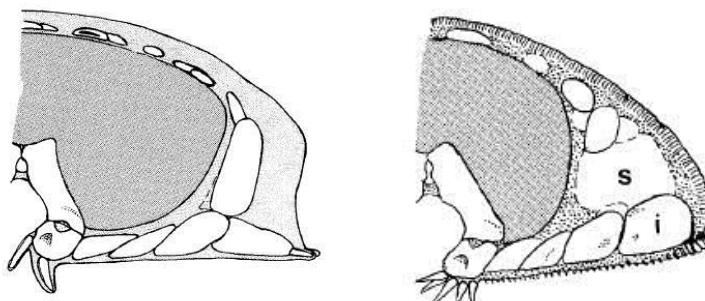
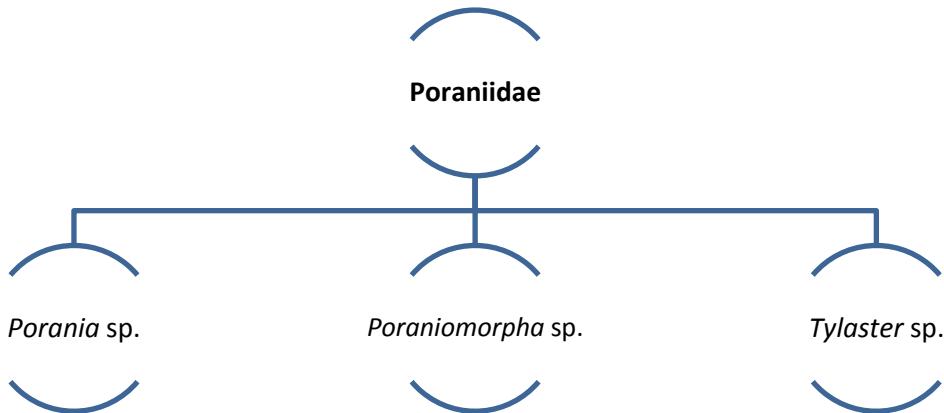


Ámundur Nolsø



Ámundur Nolsø

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Valvatida (Order) > **Poraniidae** (Family)



(Clark & Downey 1992)

|                         | <i>Porania sp.</i>  | <i>Poraniomorpha sp.</i>  | <i>Tylaster sp.</i>   |
|-------------------------|---|---|---|
| Dorsal skeletal plates  | Present   | Present   | Devoid of   |
| Dorsal surface          | Naked   | With grains or close covering of microscopical spines           | Soft, covered with a thick skin bearing numerous isolated small spines  |
| Oral interradial plates | Interradial area naked, often with distinct radiating furrows | Close overlapping, without soft intervals between adjacent rows | Small plates in 3 curved rows parallel to outer margin, separated by soft spaces and with rows of small spinelets |

(Clark & Downey 1992)

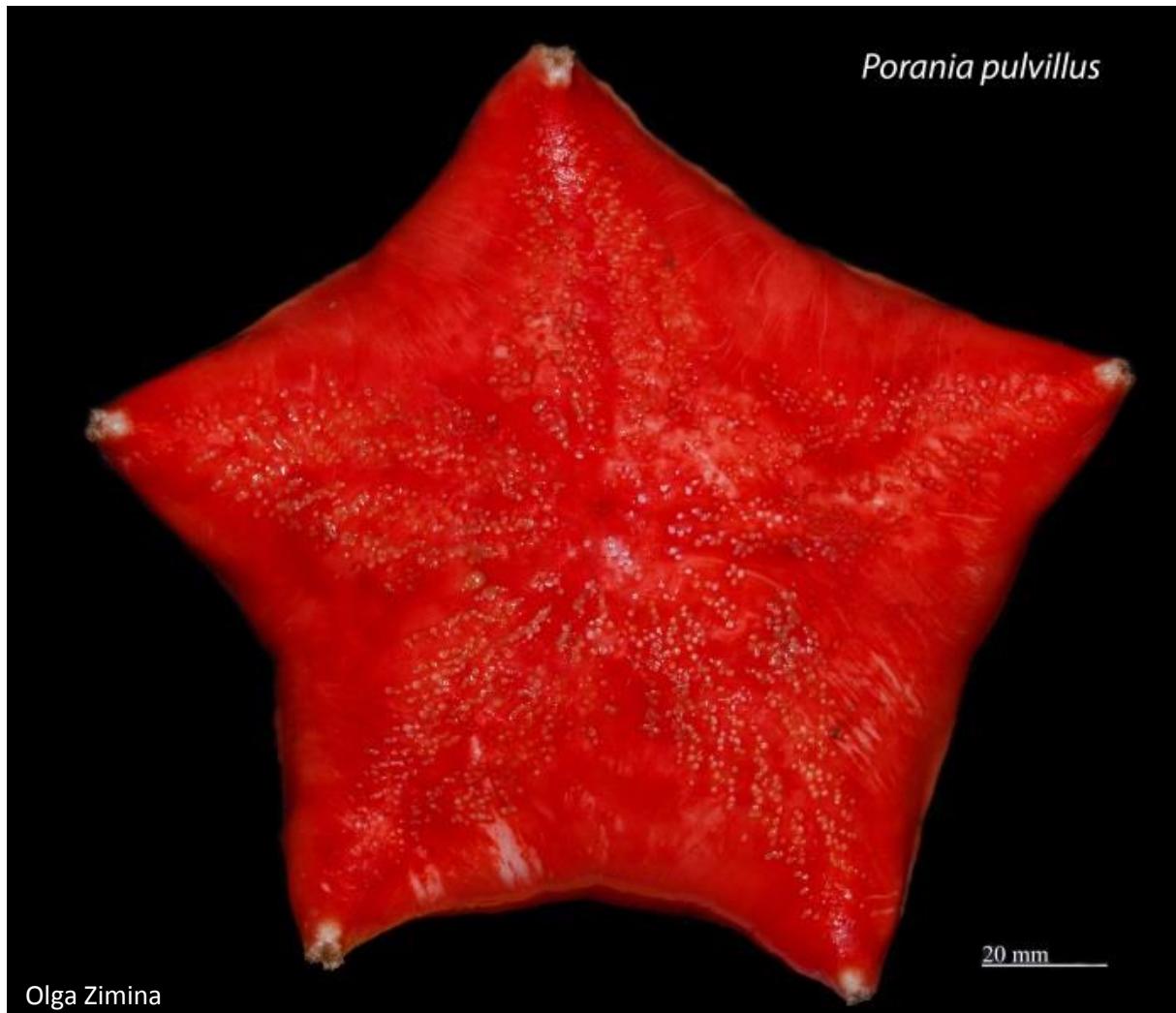
*Porania (Poranis) pulvillus*

O.F. Müller 1776

AphiaID: 125166

Unaccepted name: *Asterias pulvillus*

Greenland distribution: SE shelf slope



Olga Zimina

*Poraniomorpha (Poraniomorpha) sp*  
(West shelf)



Species difficult to identify

*P. (Poraniomorpha) bidens*  
Mortensen 1932

AphiaID: 125169

Unaccepted name: –  
SE shelf slope

*P. (Poraniomorpha) hispida*  
M. Sars 1872

AphiaID: 125170

Unaccepted name: –  
West basin, SE shelf slope, SW  
shelf

*P. (Poraniomorpha) tumida*  
Stuxberg 1878

AphiaID: 125171

Unaccepted name: –



|                                     | <i>P. (Poraniomorpha) bidens</i>                 | <i>P. (Poraniomorpha) hispida</i>                    | <i>P. (Poraniomorpha) tumida</i>                        |
|-------------------------------------|--|--|---|
| <b>Body</b>                         |  | Thick & massive                                      | More or less tumid                                      |
| <b>Aboral surface covered with:</b> |  | a thick skin concealing the plates                   | a thick skin concealing the plates                      |
| <b>Arms</b>                         |  | broad, short and not clearly delimited from the disk | fairly narrow, tapering sharply delimited from the disk |
| <b>Apex of jaw</b>                  | 2 very large, prominent, curved toothlike spines | without enlarged spines                              | without enlarged spines                                 |

(D'Yakonov 1968)

*Tylaster willei*

Danielsen & Koren 1881

AphiaID: 124121

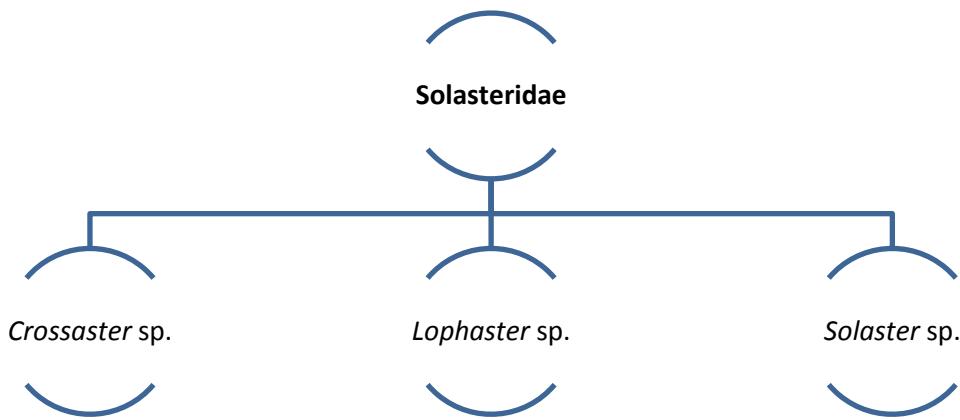
Unaccepted name: –

Greenland distribution: SE shelf slope



Ámundur Nolsø

Asterozoa (Subphylum) > Asteroidea (Class) > Valvatacea (Superorder) > Valvatida (Order) > **Solasteridae** (Family)



|                        | <i>Crossaster sp.</i>   | <i>Lophaster sp.</i> | <i>Solaster sp.</i>  |
|------------------------|---|----------------------|--|
| <b>Arms</b>            | 10  | 5                    | 7-13   |
| <b>Marginal spines</b> | One conspicuous row of marginal spines, the supramarginal almost indistinguishable from aboral spines | Two rows             | Two conspicuous rows of marginal spines, the inframarginal the larger but supramarginal clearly distinguishable from aboral spines |

(D'Yakonov 1968, Mortensen 1927)

*Crossaster* sp.

(West shelf)



*Crossaster papposus*

Linnaeus 1767

AphiaID: 124154

Unaccepted name: –

SE shelf slope, SW shelf



*Crossaster squamatus*

Döderlein 1900

AphiaID: 124155

Unaccepted name: –

SE shelf slope



|                                 | <i>Crossaster papposus</i>   | <i>Crossaster squamatus</i>   |
|---------------------------------|--|---|
| <b>Plate of aboral skeleton</b> | Elongate, forming a coarse-meshed network, many papillae in the spaces                 | Round, scalelike, imbricating, forming a very fine-meshed network. Usually one papillae in each space |
| <b>Aboral paxillae</b>          | Brushlike, not uniform, some large and some smaller                                    | Brushlike, fairly uniform   |
| <b>Be aware!</b>                | Can be mistaken for <i>C. squamatus</i> but aboral paxillae <b>not uniform</b> in size | Can be mistaken for <i>C. papposus</i> but aboral paxillae <b>uniform</b> in size                     |

(D'Yakonov 1968)

## *Solaster* sp.

(SE shelf slope, SW shelf, West shelf)

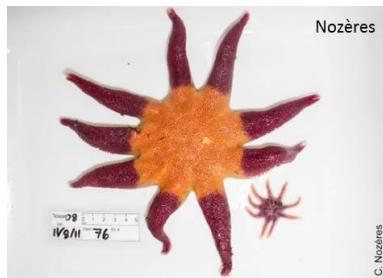


### *Solaster endeca*

Linnaeus 1771

AphiaID: 124160

Unaccepted name: –

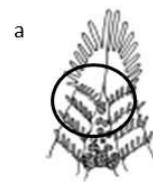


### *Solaster syrtensis*

Verrill 1894

AphiaID: 124167

Unaccepted name: –



a - Interradial area with paxillae  
 b - Adamambulacral armature  
 i: inner adambulacral spines  
 o: outer adambulacral spines  
 From Grainger 1966

### *Solaster glacialis*

Danielssen & Koren 1881

AphiaID: 124163

Unaccepted name: –



Interradial area with no paxillae  
 From Grainger 1966

|                                | <i>Solaster endeca</i> | <i>Solaster syrtensis</i> | <i>Solaster glacialis</i> |
|--------------------------------|------------------------|---------------------------|---------------------------|
| <b>Number of arms</b>          | 9-13                   | 7-9                       | 9-10                      |
| <b>Shape of dorsal paxilla</b> |                        |                           |                           |
| <b>Ambulacral spines</b>       |                        |                           |                           |
| <b>Interradius</b>             |                        |                           |                           |
| <b>Shape of dorsal plates</b>  |                        |                           |                           |

From Natalia Anisimova

|               | <i>S. endeca</i>  | <i>S. syrtensis</i>   | <i>S. glacialis</i>   |
|---------------|---|---|---|
| <b>Size</b>   | Up to 400 mm  | Up to 115 mm  | Smaller than <i>S. endeca</i>   |
| <b>Arms</b>   | 9 to 13, mostly 10, length variable but generally short   | 7 to 9  | 9 to 10   |
| <b>Disk</b>   | Very broad. Aboral side covered with numerous minute paxillae (spines very fine) gathered in erect tuft imparting to paxillae a convex appearance       | Plate of aboral skeleton rounded  | Large aboral paxillae and long adambulacral groove spines. Inframarginal paxillae high forming a prominent border along the arm edge. No paxillae in oral interradial, sometimes sparse spinelet. Plate of aboral skeleton four lobed |
| <b>Spines</b> | Inner adambulacral spines (parallel to the groove) 1-3/plate, conspicuously shorter than the outer adambulacral (right angles to the grooves) 6-8/plate | Two series of spines (10 to 11) on ventral side of oral plate. Oral interradial with well developed spine cluster. Outer adambulacral (right angles to the grooves) 4-5/plate | Inner adambulacral spines (parallel to the groove) 3-4/plate, outer adambulacral (right angles to the grooves) 4-5/plate  |
| <b>Color</b>  | Red-orange to faintly violet, oral side paler   |   | Red   |

(D'Yakonov 1968, Grainger 1966)

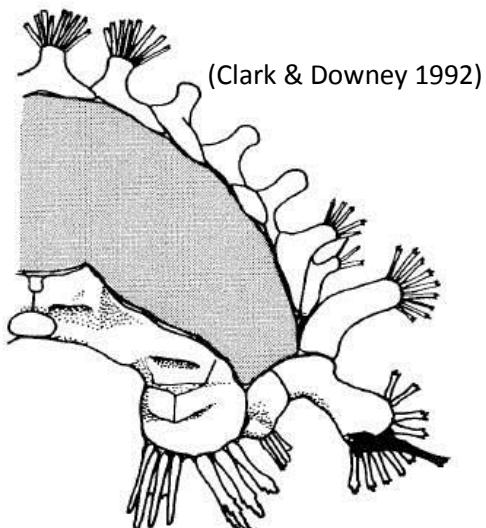
## *Lophaster furcifer*

Düben & Koren 1846

AphiaID: 124156

Unaccepted name: *Solaster furcifer*

Greenland distribution: West shelf, SE shelf slope



Disk relatively broad, arm fairly coarse.

Aboral surface with a dense cover of uniform paxillae arranged in longitudinal rows.

Column of paxillae thick and short with a crown of short, thornlike spines.

Color: brown to red-orange.

(D'Yakonov 1968, Grainger 1966)

Asterozoa (Subphylum) > Asteroidea (Class) > Velatida (Order) > **Korethrasteridae** (Family)

## *Korethraster hispidus*

Wyville Thomson 1873

AphiaID: 124123

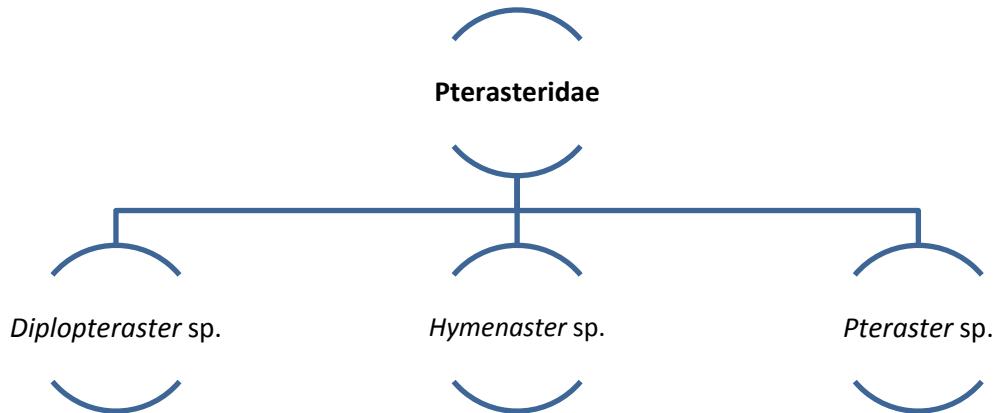
Unaccepted name: –

Greenland distribution: SE shelf slope



Very long spines creating a characteristic pattern

Asterozoa (Subphylum) > Asteroidea (Class) > Velatida (Order) > **Pterasteridae** (Family)



|                            | <i>Diplopteraster sp.</i>   | <i>Hymenaster sp.</i> | <i>Pteraster sp.</i> |
|----------------------------|---|-----------------------|----------------------|
| <b>Podia</b>               | 4 rows  | 2 rows                | 2 rows               |
| <b>Adambulacral spines</b> | united by a web   | not united by a web   | united by a web      |
| <b>Adambulacral plates</b> | 2 sorts:<br>-simple no projecting<br>into the groove<br>-alternating projecting<br>the groove at great<br>angle |                       | 1 sort: simple       |
| <b>Rays</b>                | 5   | 5                     | 5 or more            |
| <b>Body</b>                | Thick, tumid  | Flattened             | Thick, tumid         |

(D'Yakonov 1968)

### *Diplopteraster multiples*

M. Sars 1866

AphiaID: 124128

Unaccepted name: *Pteraster multiples*

Greenland distribution: West shelf, SE shelf slope, West basin



*Hymenaster pellucidus*

Thomson 1873

AphiaID: 124135

Unaccepted name: –

Greenland distribution: SE shelf slope



Size: Up to 80 mm.

Arms: 5, short, with 4 longitudinal rows of paxillae.

Disk: Body broad and flattened slightly elevated in the center.

Covered entirely with very thin and transparent skin. Actinolateral membrane finlike.

Paxillae with 6 to 7 long and very slender spines protruding slightly through the membrane.

(D'Yakonov 1968)

*Pteraster* sp.



*Pteraster militaris*

O.F. Müller 1776

AphiaID: 124147

Unaccepted name: –



*Pteraster obscurus*

Perrier 1891

AphiaID: 124149

Unaccepted name: –



*Pteraster pulvillus*

M. Sars 1861

AphiaID: 124151

Unaccepted name: –



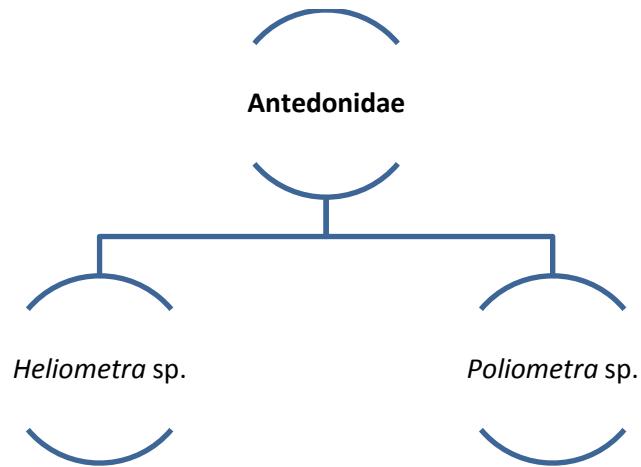
|                  | <i>Pteraster militaris</i>   | <i>Pteraster obscurus</i>   | <i>Pteraster pulvillus</i>   |
|------------------|--|---|--|
| <b>Size</b>      | up 75 mm   | up to 80 mm   | 30 to 40 mm  |
| <b>Arms</b>      | 5, well set off, longer than for <i>P. Pulvillus</i>   | 6 or more (up to 13), very short and broad  | 5, blunt, shorter than for <i>P. militaris</i>   |
| <b>Disk</b>      | body fleshy, aborally smooth and soft.<br>Supradorsal membrane thick containing thorny perforated bodies | aborally convex, bumpy.<br>Supradorsal membrane thick and coarse, without calcareous spicules.<br>Actinolateral membrane widest at the middle of arms then rapidly narrowing.<br>Adambulacral armature: transverse comb of 4-7 spines united by a leathery membrane.<br>Oral spines 5 to 6 on each side united web split in the middle. | body rather thick, aborally markedly tumid and bump, pentagonal.<br>Supradorsal membrane devoid of calcareous spicules             |
| <b>Color</b>     | pink or yellow red   | brownish  | brownish   |
| <b>Be aware!</b> | May be confused with <i>P. pulvillus</i> but body fleshy, arms larger and dorsal membrane with "bodies"  | May be confused with other <i>Pteraster</i> sp. but more than 5 arms  | May be confused with <i>P. militaris</i> but body thicker and tumid, pentagonal, arms shorter and dorsal membrane without "bodies" |

(D'Yakonov 1968)

## CRINOIDEA

### SEA LILIES

Crinozoa (Subphylum) > Crinoidea (Class) > Articulata (Subclass) > Comatulida (Order) > Antedonoidea (Superfamily) > **Antedonidae** (Family)



|                     | <i>Heliometra</i> sp.                           | <i>Poliometra</i> sp.  |
|---------------------|---|--|
| <b>Cirri</b>        | Stout   | Slender  |
| <b>Centrodorsal</b> | Rounded or flattened hemispherical or discoidal | Usually conical but sometimes more or less truncated and rounded |

(Messing et al. 1990)

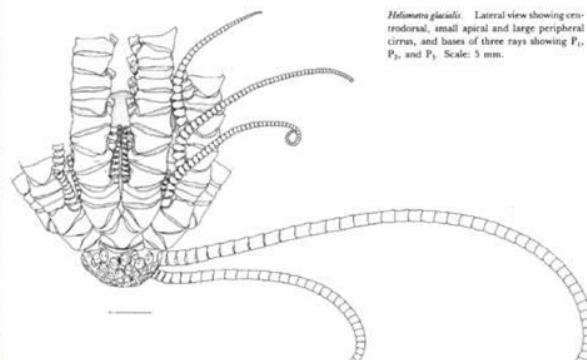
## *Heliometra glacialis*

Owen, 1833 ex Leach MS

AphiaID: 124223

Unaccepted name: *Alecto glacialis*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



Messing et al, 1990

Size: up to 200 mm.

Centrodorsal rounded, peripheral cirri up to 70 mm. Oral pinnules 1 to 3 similar in length.

(Messing et al. 1990)

## *Poliometra prolixa*

Sladen 1881

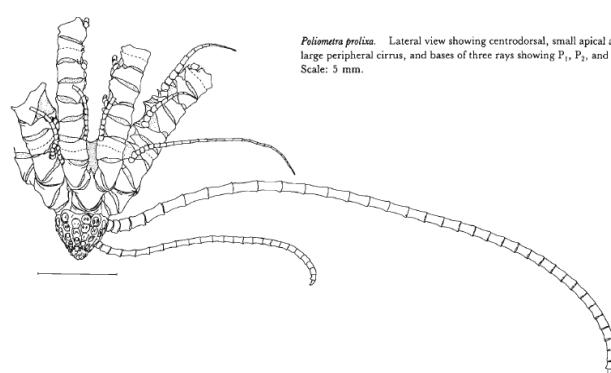
AphiaID: 124229

Unaccepted name: –

Greenland distribution: West shelf, SW shelf, SE shelf slope, West basin



Olga Zimina



(Messing et al. 1990)

Size: smaller than *Heliometra glacialis*.

Centrodorsal pointed, large cirrus sockets arranged in distinct vertical columns as well as spirally, cirri usually 30-60 mm long.

Oral pinnules PI less than half the length of peripheral cirrus, with 5-7 short basal segments.

(Messing et al. 1990)

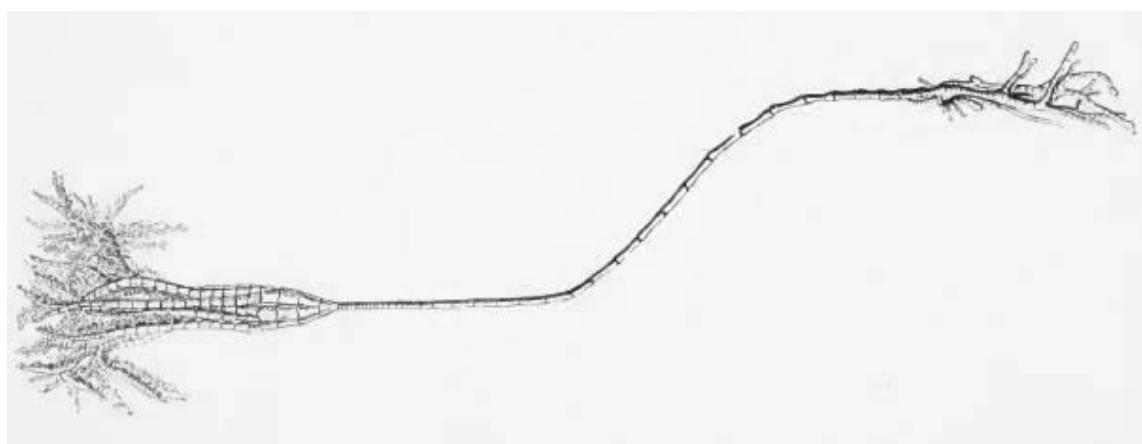
Crinozoa (Subphylum) > Crinoidea (Class) > Articulata (Subclass) > Comatulida (Order) > Comatulida incertae sedis (Superfamily) > **Bathyocrinidae** (Family)

*Bathycrinus* sp.

Thomson 1872

AphiaID: 123339

Unaccepted name: *Ilyocrinus* sp.



# ECHINOIDEA

## SEA URCHINS

| FAMILY               | PAGE |
|----------------------|------|
| Echinidae            | 229  |
| Strongylocentrotidae | 231  |
| Echinarachniidae     | 231  |
| Phormosomatidae      | 232  |
| Schizasteridae       | 233  |
| Loveniidae           | 234  |
| Spatangidae          | 234  |

### TAXONOMIC KEY – GROUPS

- 1(2) Lantern are absent in adult. Periproct is outside than apical system. Ambulacra more or less petaloid adapically or quite rudimentary **[SPATANGOIDA]**
- 2(1) Lantern are present in adult and periproct is within or outside than apical system.
- 3(4) Teeth are unkeeled or grooved. Periproct is within apical system; ambulacra with compound plates. Corona rigid: Axis of primary radioles is solid. Corona flexible: tubercles smooth. 5 genital pores are present **[ECHINOTHURIOIDA]**
- 4(3) Teeth are keeled.
- 5(6) Corona regular and periproct have an apical system. Ambulacra have usually compound plates. Corona rigid: compound ambulacral plates of diadematoid or echinoid structure **[ECHINOIDA]**
- 6(5) Corona irregular inflated or depressed and periproct is outside the system. Ambulacra usually don't have compound plates. Ambulacra petaloid are adapically and lantern is strongly developed in adult. On adoral surface, ambulacra are wider than interambulacra **[CLYPEASTEROIDA]**

(Nisiyama 1966)

### TAXONOMIC KEY – SPATANGOIDA

- 1(2) Subanal fasciole wanting **[SCHIZASTERIDAE]**
- 2(1) Subanal faciole present
- 3(4) Only a subanal fasciole present **[SPATANGUS (SPATANGOIDA)]**
- 4(3) Subanal fasciole an also inner fasciole present **[ECHINOCARDIUM (LOVENIIDAE)]**

(Mortensen 1927)

#### TAXONOMIC KEY – ECHINOTHUIROIDA

- 1(1) Test is rigid, flattened below and gently arched on the upper side. Oral side has numerous large tubercles and spines, the upper with only few of them and much smaller, which gives the two sides a very different aspect. Primary spines of oral side is club-shaped  
**[PHORMOSOMA (PHORMOSOMATIDAE)]**

(Mortensen 1927)

#### TAXONOMIC KEY – ECHINOIDA

- 1(2) Globiferous pedicellariae have teeth on both sides of the valves. Spicules are simply C-shaped  
**[ECHINIDAE]**
- 2(1) Globiferous pedicellariae don't have teeth on side of the valves. Spicules have branched ends  
**[STRONGYLOCENTROTIDAE]**

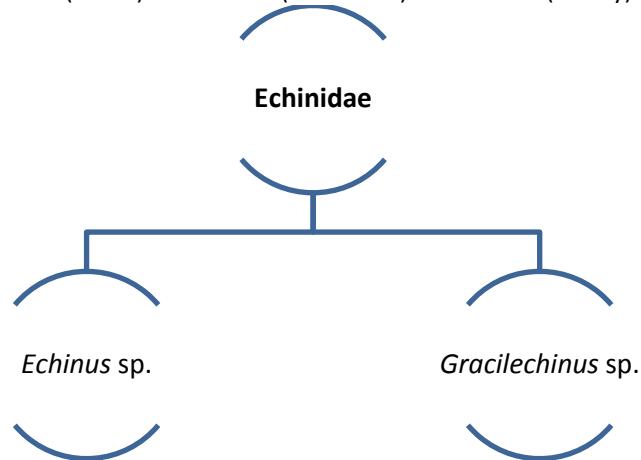
(Mortensen 1927)

#### TAXONOMIC KEY – CLYPEASTEROIDA

- 1(1) Lower side is usually flat. Spines are very short aborally and longest around peristome  
**[ECHINARCHNIUS (ECHINARACHNIIDAE)]**

(Mortensen 1927)

Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > Carinacea (Infraclass) > Echinacea (Superorder) > Camarodonta (Order) > Echinidea (Infraorder) > **Echinidae** (Family)



|              | <i>Echinus sp.</i>                        | <i>Gracilechinus sp.</i>   |
|--------------|---|--|
| <b>Test</b>  | More or less globular                     | Usually low conical often flattened                                    |
| <b>Color</b> | Mostly uniformly red with white tubercles | Red color not covering the whole test but interrupted by another color |

(Mortensen 1927)

### *Echinus esculentus*

Linnaeus 1758

AphiaID: 124287

Unaccepted name: –

Greenland distribution: SW shelf



*Gracilechinus* sp.

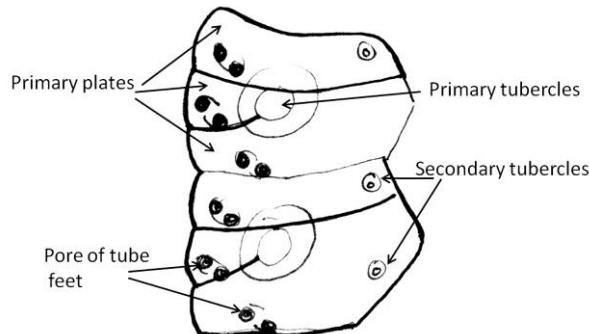


*Gracilechinus acutus*

Lamarck 1816

AphiaID: 532031

Unaccepted name: *Echinus acutus*



(Mortensen 1927)

*Gracilechinus elegans*

D'ubben & Koren 1844

AphiaID: 532035

Unaccepted name: *Echinus elegans*

West basin, SE shelf slope



|                         | <i>Gracilechinus acutus</i>  | <i>Gracilechinus elegans</i>               |
|-------------------------|--|--|
| <b>Test shape</b>       | More or less conical, often flattened                                    | Usually low, conical or arched             |
| <b>Primary tubercle</b> | On every second adambulacral plate                                       | On all adambulacral plates                 |
| <b>Color</b>            | Red, not covering the whole test but interrupted by white vertical bands | More or less distinct red or violet colour |

(Mortensen 1927)

Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > Carinacea (Infraclass) > Echinacea (Superorder) > Camarodonta (Order) > Echinidea (Infraorder) > Odontophora (Superfamily) > **Strongylocentrotidae** (Family)

*Strongylocentrotus* sp.

Brandt 1835

AphiaID: 123390

Unaccepted name: –

Greenland distribution: West shelf, SW shelf, SE shelf slope



Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > Irregularia (Infraclass) > Neognathostomata (Superorder) > Clypeasteroida (Order) > Scutellina (Suborder) > Scutelliformes (Infraorder) > **Echinorachniidae** (Family)

*Echinorachnius parma*

Lamarck 1816

AphiaID: 158062

Unaccepted name: *Scutella parma*



Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > echinothurioida (Order) > **Phormosomatidae** (Family)

***Phormosoma* sp.**  
(West basin)



***Phormosoma placenta***

Thomson 1872

AphiaID: 124343

Unaccepted name: –

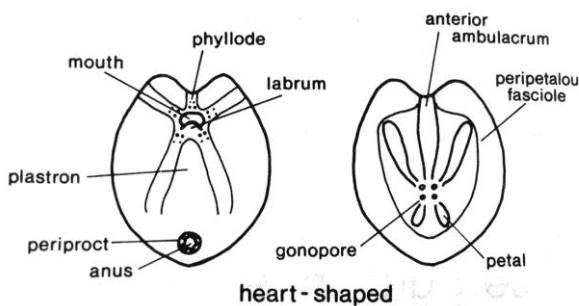
Greenland distribution: unknown



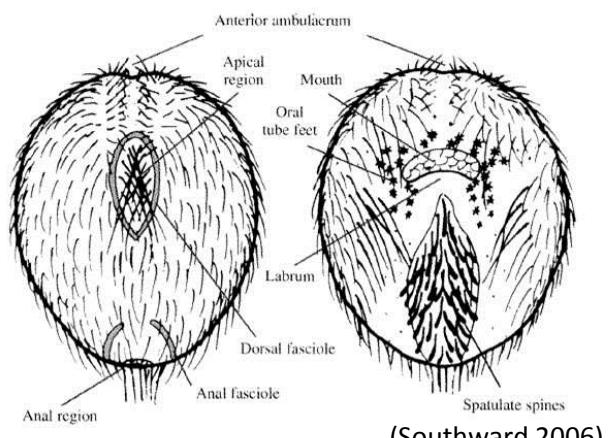
Test rather rigid, more or less leathery

## Heart shape urchins

- 1(2) Sub anal fasciole wanting. A lateral fasciole issues from the peripetalous fasciole  
[SCHIZASTERIDAE] (Brisaster)
- 2 Subanal fasciole present
- 3(4) 1 fasciole present, A narrow band of dark spines (subanal fascioles, arrow) forms a ring or oblong below the anal region [SPATANGIDAE] (Spatangus)
- 4 2 fascioles present, upper fasciole (arrow) surrounds the anterior ambulacral petal only [ECHINOCARDIIDAE] (Echinocardium)



(Stachowitsch 1992)



(Southward 2006)

Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > Irregularia (Infraclass) > Atelostomata (Superorder) > Spatangoidea (Order) > Paleopneustina (Suborder) > Schizasteridae (Family)

### *Brisaster fragilis*

Düben & Koren 1844

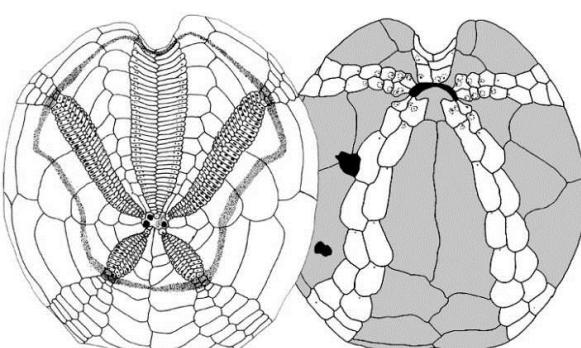
AphiaID: 124404

Unaccepted name: *Brissus fragilis*



Can be mistaken for *Echinocardium*,  
*Spatangus*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



(www.nhm.ac.uk)

Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > Irregularia (Infraclass) > Atelostomata (Superorder) > Spatangoidea (Order) > Brissidina (Suborder) > Spatangoidea (Superfamily) > **Loveniidae** (Family)

### *Echinocardium cordatum*

Pennant 1777

AphiaID: 124392

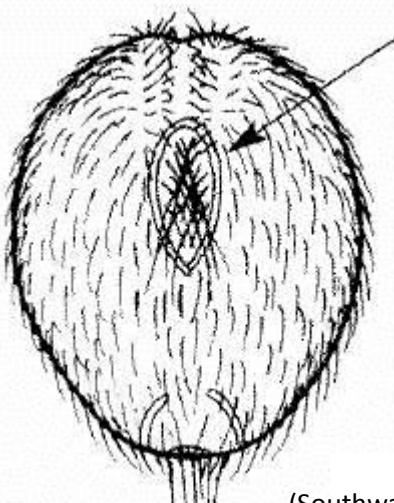
Unaccepted name: *Echinus cordatum*



Can be mistaken for *Brisaster*, *Spatangus*



[www.marlin.ac.uk](http://www.marlin.ac.uk)



(Southward 2006)

Echinozoa (Subphylum) > Echinoidea (Class) > Euechinoidea (Subclass) > Irregularia (Infraclass) > Atelostomata (Superorder) > Spatangoidea (Order) > Brissidina (Suborder) > Spatangidea (Superfamily) > **Spatangiidae** (Family)

### *Spatangus purpureus*

O.F. Müller 1776

AphiaID: 124418

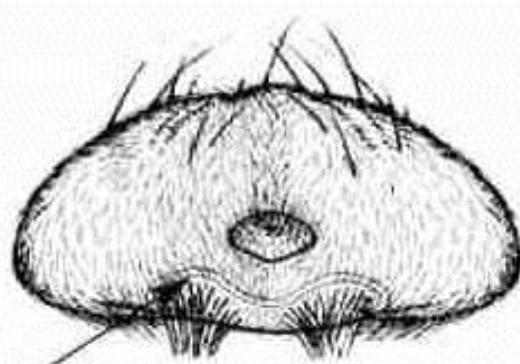
Unaccepted name: –



Can be mistaken for *Echinocardium*,  
*Brisaster*



[www.marinespecies.org](http://www.marinespecies.org)



(Southward 2006)

## HOLOTHUROIDEA SEA CUCUMBERS

| FAMILY         | PAGE |
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| Myriotrichidae | 237  |
| Stichopodidae  | 237  |
| Synallactidae  | 238  |
| Cucumariidae   | 239  |
| Phyllophoridae | 242  |
| Psolidae       | 243  |
| Laetmogonidae  | 244  |
| Molpadiidae    | 245  |

### TAXONOMIC KEY – ORDERS

- 1(4) Tube-feet are either completely lacking or present only in the shape of small papillae round the anal opening. Tentacles are feather-shaped or digitate.
- 2(3) Anal papillae are present. Body sausage-shaped have a thin caudal prolongation **[MOLPADIDA]**
- 3(2) Anal papillae are absent. Body is worm-shaped without a caudal prolongation **[APODIDA]**
- 4(1) Tube-feet are well developed. Tentacles shield or bush-shaped.
- 5(6) Tentacles are bush-shaped **[DENDROCHIROTIDA]**
- 6(5) Tentacles shield-shaped
- 7(8) Need opened: respiratory trees absent **[ELASIPODIDA]**
- 8(7) Need opened: respiratory trees present **[ASPIDOCHIROTIDA]**

(Mortensen 1927)

### TAXONOMIC KEY – MOLPADIDA

- 1(1) Body is thick, sausage-shaped with tail-like prolongation. 5 small papillae or group of papillae are present around the anus but the tube-feet absent. Tentacles are simply finger-shaped or feather-shaped **[MOLPADIIDAE]**

(Mortensen 1927)

#### TAXONOMIC KEY – APODIDA

- 1(1) Wheels spicule is only large, inwardly projecting teeth [**MYRIOTROCHUS (MYRIOTROCHIDAE)**]

(Mortensen 1927)

#### TAXONOMIC KEY – DENDROCHIROTIDA

- 1(4) Body is usually more or less cylindrical or fusiform. Well defined ventral sole is absent on the body. Tube-feet are not restricted along the ventral sole.
- 2(3) Tentacles number: 10 [**CUCUMARIIDAE**]
- 3(2) Tentacles number: 15-30 [**PHYLLOPHORIDAE**]
- 4(1) Body is more or less flattened. Sharply defined ventral sole is present on the body. Tube-feet are restricted around the ventral sole [**PSOLIDAE**]

(Mortensen 1927)

#### TAXONOMIC KEY – ELASIPODIDA

- 1(1) Body calcareous is bilaterally and symmetrical. Body have mainly wheels spicules. Tube-feet are well developed. Absence of the circular disk round the anterior end. Skin is thick and gelatinous. Tail-like prolongation is absent. Tentacles have small disk, often with finger-like lobes in the margin [**LAETMOGONIDAE**]

(Mortensen 1927)

#### TAXONOMIC KEY – ASPIDOCHIROTIDA

- 1(2) Tentacles ampullae are absent [**SYNALLACTIDAE**]
- 2(1) Tentacles ampullae are present [**STICHOPODIDAE**]

(Mortensen 1927)

Echinozoa (Subphylum) > Holothuroidea (Class) > Apodida (Order) > **Myriotrochidae** (Family)

***Myriotrochus* sp.**  
(West shelf)



***Myriotrochus rinkii***

Steenstrup 1851

AphiaID: 124446

Unaccepted name: –

Greenland distribution: unknown

Can be mistaken for *Ciona* sp. (Asciidae)



[www.marinespecies.org](http://www.marinespecies.org)

Small specimen under 20 mm should be let at *Myriotrochus* sp an other species is possible *M. theeli*, difference is in the wheel (plate) structure.

Specimen larger than 20 mm can be named *M. rinkii*.

Semitransparent pinkish worm-like body with 12 tentacles  
Epidermal calcareous bodies (wheels) visible

(Clark 1907)

Echinozoa (Subphylum) > Holothuroidea (Class) > Aspidochirotida (Order) > **Stichopodidae** (Family)

***Parastichopus tremulus***

Gunnerus 1767

AphiaID: 124535

Unaccepted names: *Holothuria tremula*, *Stichopus tremulus*



[www.marinespecies.org](http://www.marinespecies.org)

Echinozoa (Subphylum) > Holothuroidea (Class) > Aspidochirotida (Order) > **Synallactidae** (Family)

*Benthothuria funebris*

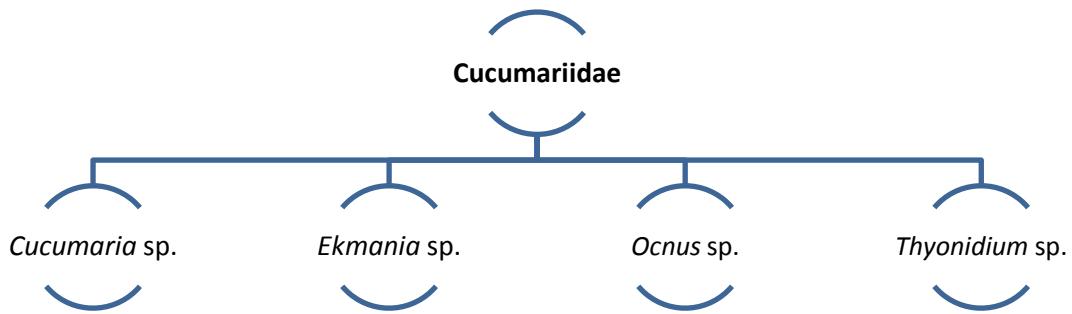
Perrier R. 1898

AphiaID: 124556

Unaccepted name: –

Greenland distribution: West basin





|                   | <i>Cucumaria</i> sp.  | <i>Ekmania</i> sp.                                    | <i>Ocnus</i> sp.  | <i>Thyonidium</i> sp.  |
|-------------------|---|---|---|--|
| <b>Body shape</b> | Cylindrical, large  | Barrel-shaped with distensible tapering posterior end | Fusiform and slightly tapering  | Cylindrical, slim  |
| <b>Tentacles</b>  | 10, 2 ventral tentacles smaller than the others               | 15, 5 large pairs outer circle alternating 5 simple   | 10  | 20, 5 large pair on outer circle and 5 small pairs on inner circle |
| <b>Tube-feet</b>  | Distinct, double rows along the radii and rarely between them | Evenly-spaced and found over the whole body           | Large and placed in zig zag rows on main body, single rows on anterior and posterior part | Spread over the body   |

(Hansen et al. 1991, Mortensen 1927)

*Cucumaria frondosa*

Gunnerus 1767

AphiaID: 124612

Unaccepted name: *Holothuria frondosa*

Greenland distribution: SW shelf, West shelf



*Ekmania sp.*

(West shelf)



*Ekmania barthii*

Troschel 1846

AphiaID: 124681

Unaccepted name: *Orcula barthii*

Greenland distribution: West shelf, SW shelf



*Ocnus glacialis*

(Ljungman, 1879)

AphiaID: 124641

Unaccepted name: *Cucumaria glacialis*



[www.marinespecies.org](http://www.marinespecies.org)

Whitish up to 5 cm fusiform slightly tapering body

Bodywall thick with crowding ossicles

Tube feet large with prominent sucking disc in zig-zag rows on main body, single rows anterior and posterior

*Thyonidium* sp.

(SE shelf slope)



*Thyonidium drummondii*

Thompson 1840

AphiaID: 124694

Unaccepted name: *Holothuria drummondii*

Greenland distribution: SW shelf, SE shelf slope



[www.boldsystems.org](http://www.boldsystems.org)

HUNT0143

Echinozoa (Subphylum) > Holothuroidea (Class) > Dendrochirotida (Order) > **Phyllophoridae** (Family)

*Pentamera calcigera*

Stimpson 1851

AphiaID: 124655

Unaccepted name: *Cucumaria calcigera*

Greenland distribution: West shelf



Up to 10 cm

*Psolus* sp.  
(West shelf, SW shelf)



*Psolus fabricii*

Düben & Koren 1846

AphiaID: 124703

Unaccepted name: *Cuvieria fabricii*

West shelf



*Psolus phantapus*

Strussenfelt 1765

AphiaID: 124710

Unaccepted name: *Holothuria phantapus*

West shelf, SW shelf



|              | <i>P. fabricii</i>   | <i>P. phantapus</i>   |
|--------------|--|---|
| <b>Size</b>  | up to 190 mm   | up to 150 mm  |
| <b>Shape</b> | no taillike projection. On sole, midventral radius without complete double row of tube feet. Scales large. | tail like projection present on posterior end of dorsal surface of body. On sole, midventral radius with complete double row of tube feet |
| <b>Color</b> | bright scarlet, red or reddish-orange  | largest specimens black, smaller specimens often yellowish-brown  |

(Pawson 1977)

Echinozoa (Subphylum) > Holothuroidea (Class) > Elasipodida (Order) > **Laetmogonidae** (Family)

*Laetmogone violacea*

Théel 1879

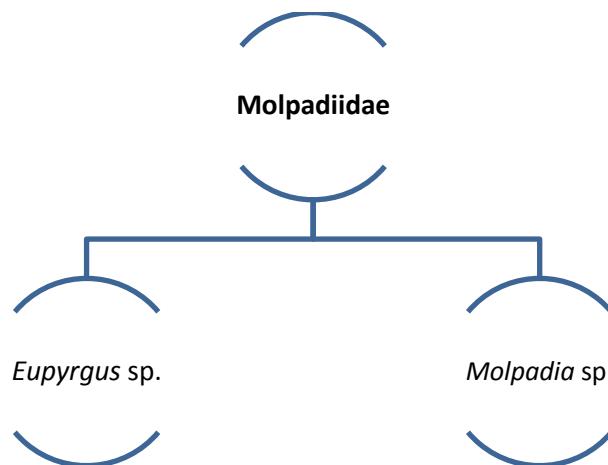
AphiaID: 124756

Unaccepted name: –

Greenland distribution: SE shelf slope, SW shelf, West shelf



Echinozoa (Subphylum) > Holothuroidea (Class) > Molpadida (Order) > **Molpadiidae** (Family)



|                          | <i>Eupyrgus</i> sp. | <i>Molpadia</i> sp.                     |
|--------------------------|---------------------|---|
| <b>Size</b>              | Small               | Moderate                                |
| <b>Tentacle-Ampullae</b> | Absent              | Present                                 |
| <b>Madreporite</b>       | Large and terminal  | Large and placed close to the body wall |
| <b>Tail prolongation</b> | Very short          | Short but distinct                      |

(Heding 1935)

### *Eupyrgus scaber*

Lütken, 1857

AphiaID: 124782

Unaccepted name: *Echinosoma hispidum*



[www.marinespecies.org](http://www.marinespecies.org)

Pale pink up to 1-2 cm ovoid with posterior end like a short conical tail  
Skin spinous from the spires of densely crowded tables

*Molpadia* sp.



*Molpadia arctica*

Marenzeller von 1877

AphiaID: 254710

Unaccepted name: *Haplodactyla arctica*

SE shelf slope

*Molpadia borealis*

Sars M 1859

AphiaID: 124798

Unaccepted name: –

SE shelf slope



|                    | <i>Molpadia arctica</i>                                    | <i>Molpadia borealis</i>   |
|--------------------|--|--|
| <b>Body size</b>   | Up to 190 mm   | 100 -135 mm  |
| <b>Tail lenght</b> | 1/10 body  | short  |
| <b>Color</b>       | Whitish, grayish, brownish more or less tinged with violet | Grayish green to violet (alive)  |
| <b>Skin</b>        | Thin and rought , lacking phosphatic deposits              | Present, often in abundance. When very abundant specimen can become black. |

(Clark 1907)

## OPHIUROIDEA BRITTLE STARS

| <b>FAMILY</b>     | <b>PAGE</b> |
|-------------------|-------------|
| Gorgonocephalidae | 248         |
| Amphiuridae       | 250         |
| Ophiacanthidae    | 251         |
| Ophiomyxidae      | 252         |
| Ophiactidae       | 253         |
| Ophiuridae        | 255         |
| Ophiolepididae    | 260         |

### TAXONOMIC KEY – FAMILIES

- 1(2) Branched arms are usually present [**GORGONOCEPHALIDAE**]
- 2(1) Branched arms are absent
- 3(4) Disk, arms and spines are covered by thick skin. Body is not cartilaginous and flabby. Aboral shields are absent or rudimentary [**OPHIOMYXIDAE**]
- 4(3) Disk, arms and spines are uncovered by thick skin. Aboral shields are present.
- 5(8) Arm combs are present.
- 6(7) The second oral tentacle pore is opens within the mouth. Oral disk have usually one apical papilla flanked by a series of continuous oral papillae [**OPHIOLEPIDIDAE**]
- 7(6) The second oral tentacle pore is opening outside the mouth slit or opening outside but entering the mouth slit via furrow. Oral disk have one to many apical papillae flanked by a continuous series of oral papillae [**OPHIURIDAE**]
- 8(5) Arm comb are absent.
- 9(10) A pair a infradental papillae are present on apex of mouth [**AMPHIURIDAE**]
- 10(9) An unpaired infradental papillae are present on apex of mouth.
- 11(12) Oral papillae is separated from the infradental papillae. Arms are short [**OPHIACTIDAE**]
- 12(11) Oral papillae is forming a continuous series with the infradental papilla. Disk is covered by a rule with uniform low conical tubercles, fine spinelets or by short stumps terminating spines. Arms are knotty [**OPHIACANTHIDAE**]

(Paterson 1985, D'Yakonov 1967)

***Gorgonocephalus* sp.**  
(West shelf, SW shelf, SE shelf slope)



***G. arcticus***

Leach 1819

AphiaID: 124966

Unaccepted name: –

***G. eucnemis***

Müller & Troschel 1842

AphiaID: 124969

Unaccepted name: *Astrophyton eucnemis*

SE shelf slope

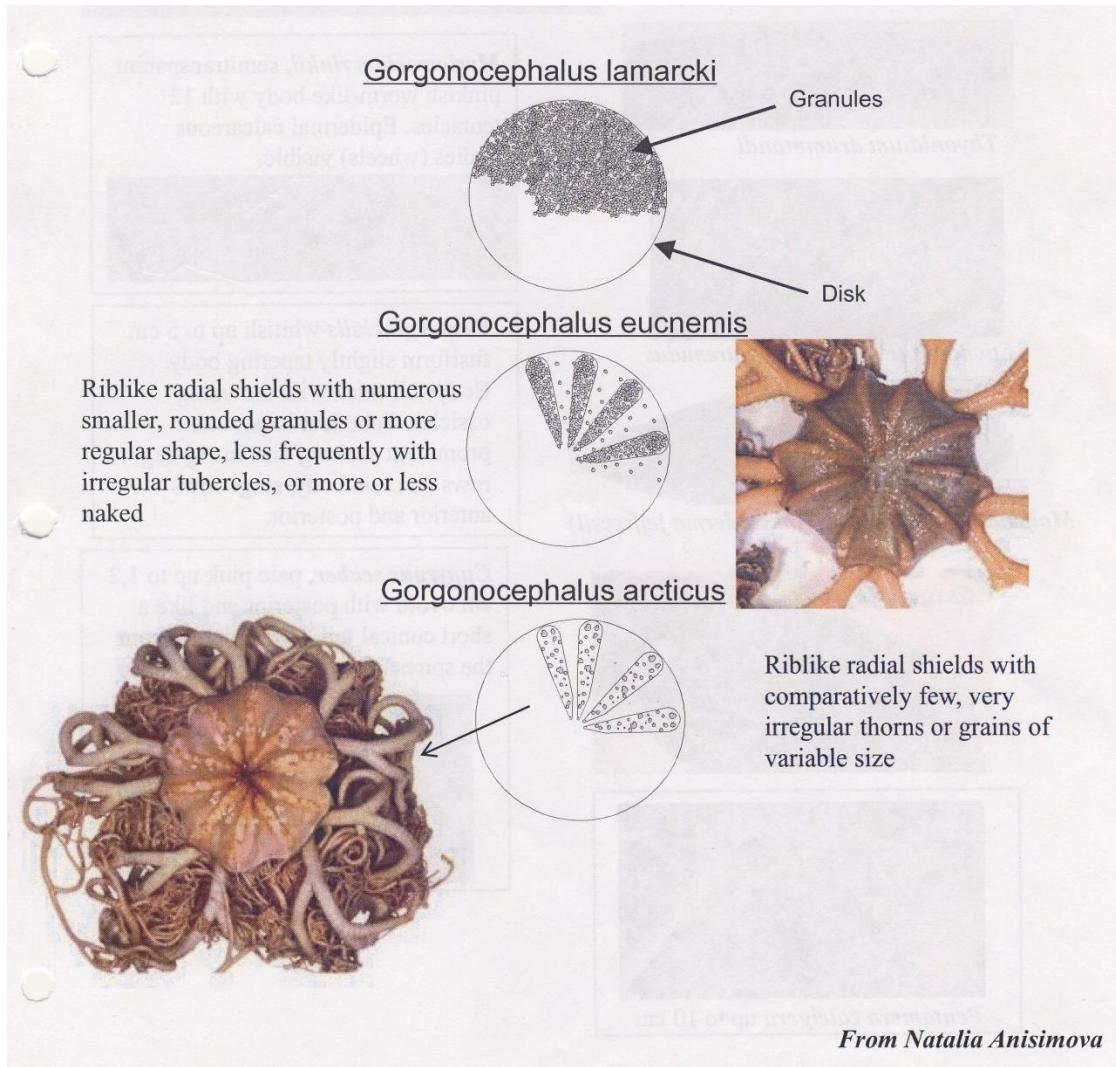
***G. lamarckii***

Müller & Troschel 1842

AphiaID: 124971

Unaccepted name: *Astrophyton lamarckii*

West shelf, SW shelf, SE shelf slope, West basin



*Gorgonocephalus arcticus*



*Gorgonocephalus eucnemis*



*Gorgonocephalus lamarckii*



Asterozoa (Subphylum) > Ophiuroidea (Class) > Ophiurida (Order) > Ophiurina (Suborder) > Gnathophiurina (Infraorder) > **Amphiuridae** (Family)

***Amphiura sundevalli***

Müller & Troschel 1842

AphiaID: 125100

Unaccepted name: *Ophiolepis sundevalli*

Greenland distribution: West basin, SE shelf slope



Pair of apical papillae.  
Presence of tentacular scales.  
Aboral arm shields very long and fine.

(D'Yakonov 1967)



*Ophiacantha* sp.  
(SE shelf slope)



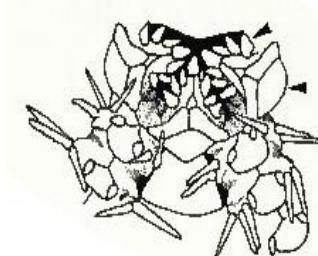
*O. bidentata*

Bruzelius 1805

AphiaID: 124978

Unaccepted name: *Asterias bidentata*

West shelf, SW shelf, SE shelf slope



(Paterson 1985)

*O. anomala*

G.O. Sars 1872

AphiaID: 124975

Unaccepted name: –

SE shelf slope, West basin



*O. spectabilis*

G.O. Sars 1871

AphiaID: 125005

Unaccepted name: –

SE shelf slope



(Mortensen 1927)

|            | <i>O. bidentata</i>  | <i>O. anomala</i>            | <i>O. spectabilis</i>  |
|------------|--|------------------------------|--|
| Tentacles  | 1  | 1                            | 2, at one, two or more of the proximal pore  |
| scales     |  |                              |  |
| Mouth      | 3 to 6   | 3-4                          | Usually 4 on each side, (up to 8 in very large specimen)                                   |
| papillae   |  |                              |  |
| Mouth      | Broader than long  | As long as broad             | Rounded prolonged outward  |
| shield     |  |                              |  |
| Arms       | 5, very spiny  | 6 (rarely 5 or 7)            | 5  |
| Arm spines | irregular and long   |                              | 8, they almost join in the middorsal line  |
| Disk       | densely covered on both sides with granules or conical tubercles | Disk with grains like stumps | Covered with rather coarse spines, long on dorsal side, more like granule on ventral side. |

(Paterson 1985, Mortensen 1927)

Asterozoa (Subphylum) > Ophiuroidea (Class) > Ophiurida (Order) > Ophiomyxina (Suborder) > **Ophiomyxidae** (Family)

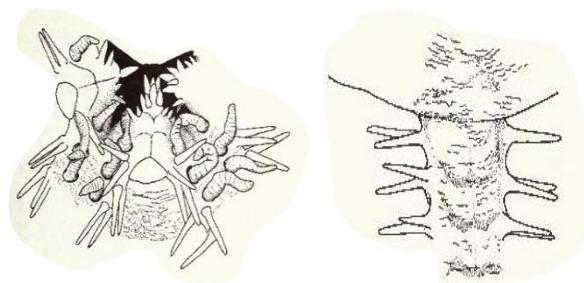
*Ophioscolex glacialis*

Müller & Troschel 1842

AphiaID: 125147

Unaccepted name: –

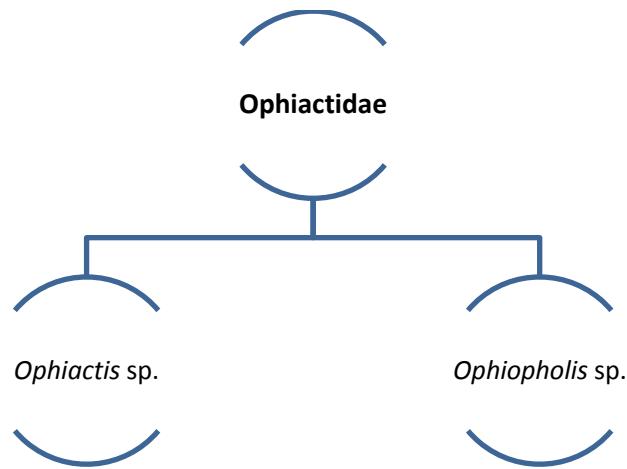
Greenland distribution: SE shelf slope, SW shelf, West shelf



No tentacle scales. Aboral surface entirely naked.  
Disk fleshy and very fragile. Stinky ophiuroid!

(Paterson 1985)

Asterozoa (Subphylum) > Ophiuroidea (Class) > Ophiurida (Order) > Ophiurina (Suborder) > Chilophiurina (Infraorder) > **Ophiactidae** (Family)



|                            | <i>Ophiactis</i> sp.  | <i>Ophiopholis</i> sp.   |
|----------------------------|---|--|
| <b>Dorsal side of disc</b> | Covered by small ordinary scales, sometimes with sparse spinelets | Naked, covered by rounded plated surrounded by granules or spinelets           |
| <b>Dorsal arm shields</b>  | Rounded-triangular, all continuous                                | Transverse-oval surrounded by rings of supplementary patelets of variable size |

(D'Yakonov 1967)

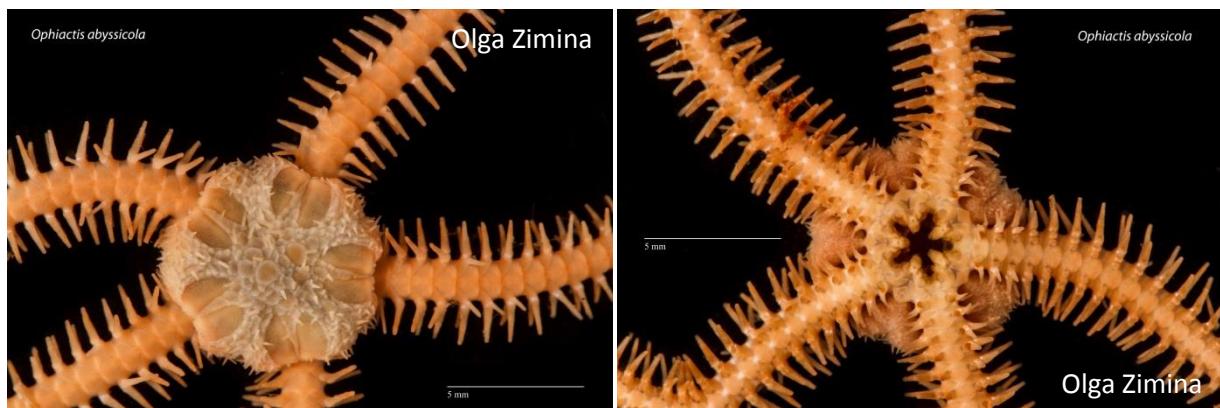
### *Ophiactis abyssicola*

M. Sars 1861

AphiaID: 125109

Unaccepted name: *Amphiura abyssicola*

Greenland distribution: SE shelf slope



*Ophiopholis* sp.

SW shelf



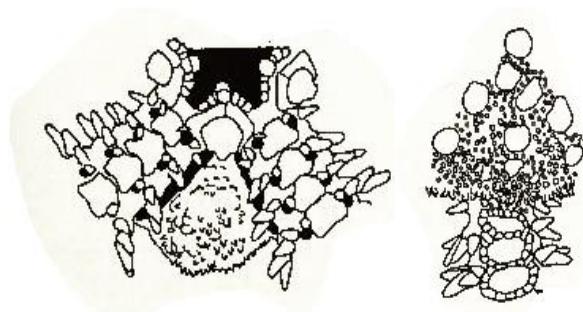
*Ophiopholis aculeata*

Linnaeus 1767

AphiaID: 125125

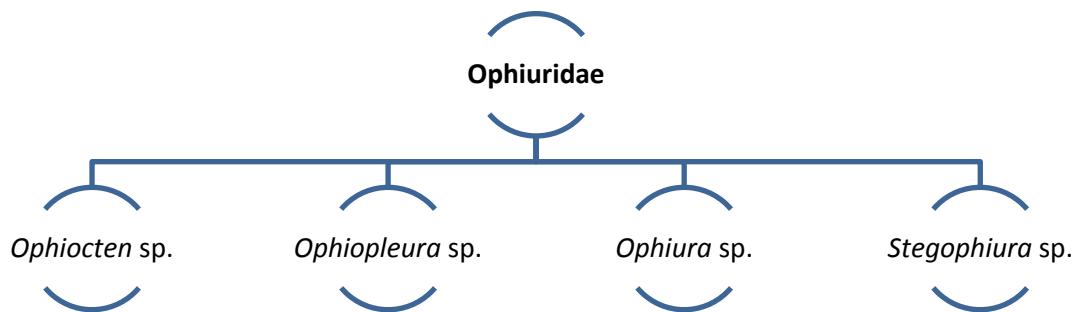
Unaccepted name: *Asterias aculeata*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



(Paterson 1985)

Asterozoa (Subphylum) > Ophiuroidea (Class) > Ophiurida (Order) > Ophiurina (Suborder) > Chilophiurina (Infraorder) > **Ophiuridae** (Family)



|                             | <i>Ophiocten sp.</i>                                   | <i>Ophiopleura sp.</i>               | <i>Ophiura sp.</i>   | <i>Stegophiura sp.</i>   |
|-----------------------------|--|--------------------------------------|--|--|
| <b>Disc notch</b>           | With papillae<br>(continuous)                          | Without papillae<br>(not continuous) | Without papillae<br>(not continuous)                           | Without papillae<br>(not continuous)                           |
| <b>Oral papillae</b>        | Row of papillae<br>continuous. Last<br>papillae large. | Row of papillae Y-<br>shaped.        | Row of papillae<br>continuous and<br>papillae on same<br>size. | Row of papillae<br>continuous and<br>papillae on same<br>size. |
| <b>Tentacles<br/>scales</b> | Minute   | Present                              | Few  | Numerous   |
| <b>Arm spines</b>           | Very long, longer<br>than arm joint                    | Usually smaller<br>than arm joint    | Usually longer<br>than arm joint                               | Biserial; upper<br>spines smaller.                             |

(D'Yakonov 1967, Paterson 1985)

*Ophiocten* sp.  
(West shelf, SE shelf slope)



*O. affinis* & *O. sericeum* are very similar

*Ophiocten affinis*

Lütken 1858

AphiaID: 124850

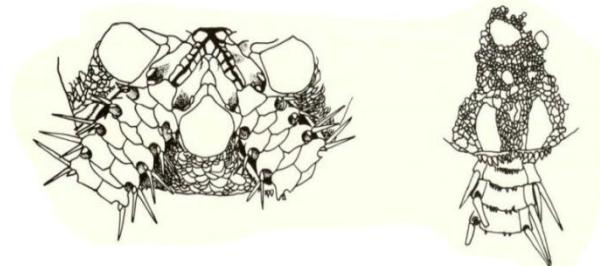
Unaccepted name: *Ophiura affinis*

*Ophiocten sericeum*

Forbes 1852

AphiaID: 124860

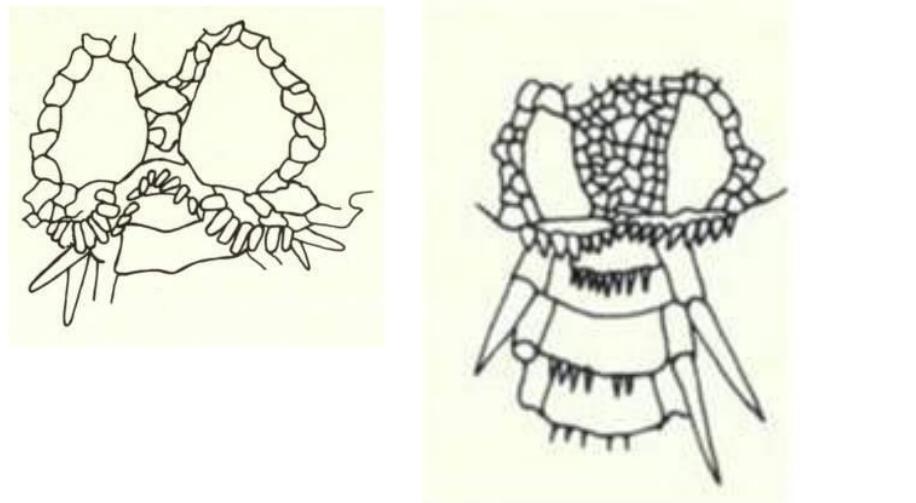
Unaccepted name: *Ophiura sericea*



(Paterson et al. 1982)

Very similar to *Ophiura sarsi*, but with sharp edge on central disc

Arm comb:



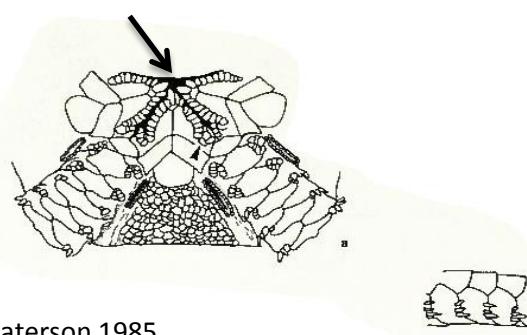
(Paterson et al. 1982)

*Ophiopleura borealis*

Danielssen & Koren 1877

AphiaID: 124900

Unaccepted name: –



Paterson 1985

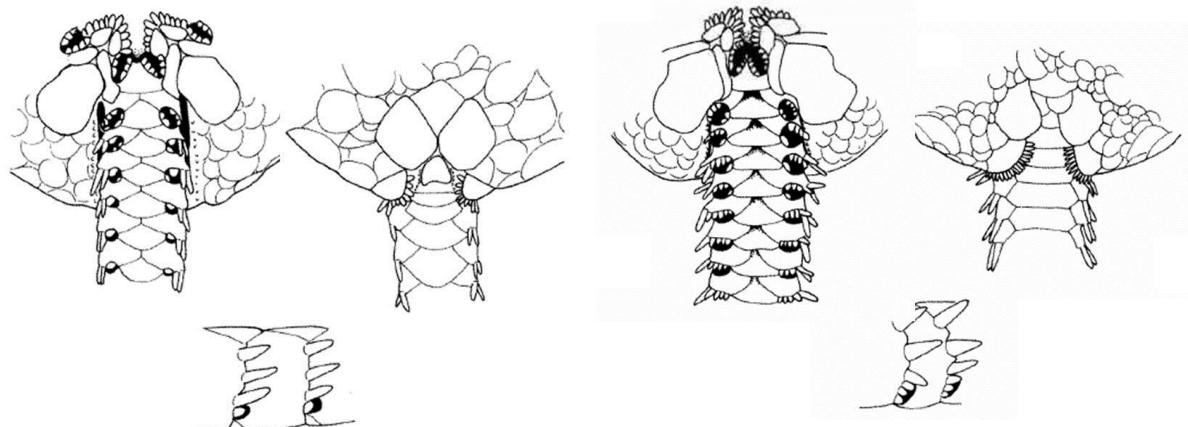
*Ophiura* sp.  
(West shelf)



*Ophiura albida*  
Forbes 1839  
AphialD: 124913  
Unaccepted name: –



*Ophiura ophiura*  
Linnaeus 1758  
AphialD: 124929  
Unaccepted name: *Asterias ophiura*



(Southward & Campbell 2006)

*Ophiura* sp.  
(West shelf)



*Ophiura robusta*

Ayres 1854

AphiaID: 124933

Unaccepted name: *Ophiolepis robusta*

West shelf, SW shelf, SE shelf slope



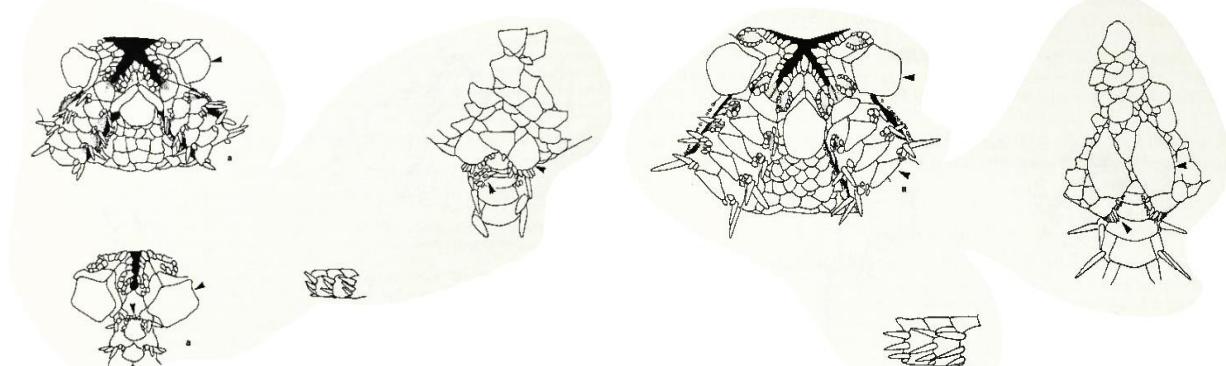
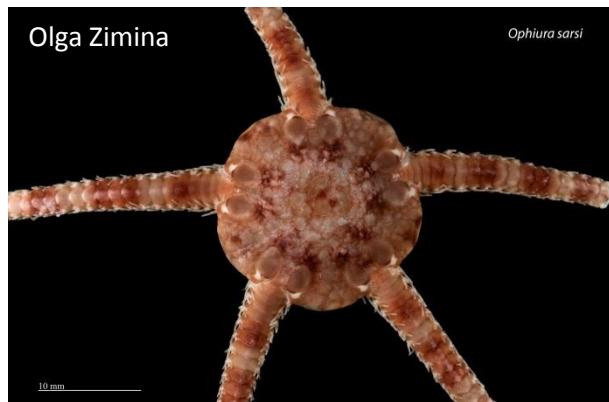
*Ophiura sarsi*

Lütken 1855

AphiaID: 124934

Unaccepted name: –

West shelf, SW shelf, SE shelf slope



## *Stegophiura nodosa*

Lütken 1855

AphiaID: 124943

Unaccepted name: *Ophiura nodosa*



Bright red ophiurid.

A series of tentacles scales

Asterozoa (Subphylum) > Ophiuroidea (Class) > Ophiurida (Order) > Ophiurina (Suborder) > Opholepidina (Infraorder) > **Opholepididae** (Family)

## *Ophiomusium lymani*

Wyville-Thomson 1873

AphiaID: 124895

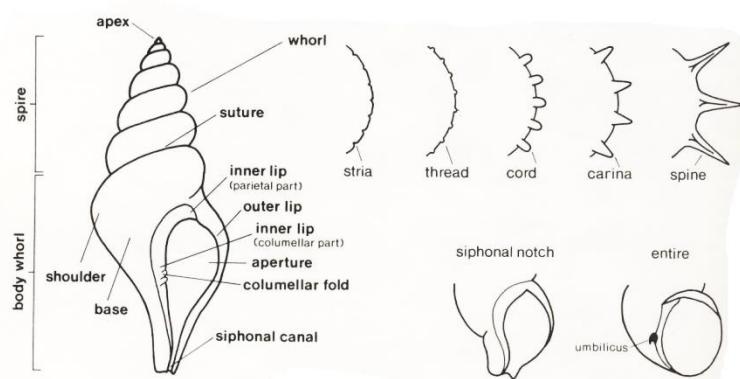
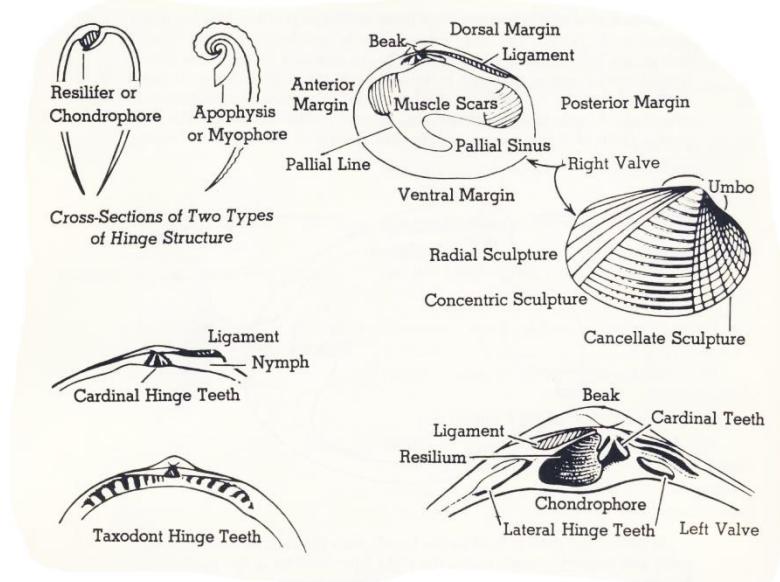
Unaccepted name: –

Greenland distribution: West basin



## PHYLUM MOLLUSCA

Mollusca is the second largest and diverse phylum after the Arthropoda. This taxa is represented at least by 50 000 living species (Bunje 2003). The real estimation would probably be around 200 000 worldwide species (Chapman 2009). Molluscs are predominantly represented by gastropods and bivalves (Piepenburg et al. 2011). Gastropods represent around 80% of this group (Campbell 2012). In Arctic, around 392 species are founded (Piepenburg et al. 2011).



(Keen 1963)

## BIVALVIA

| FAMILY         | PAGE |
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| Hiatellidae    | 264  |
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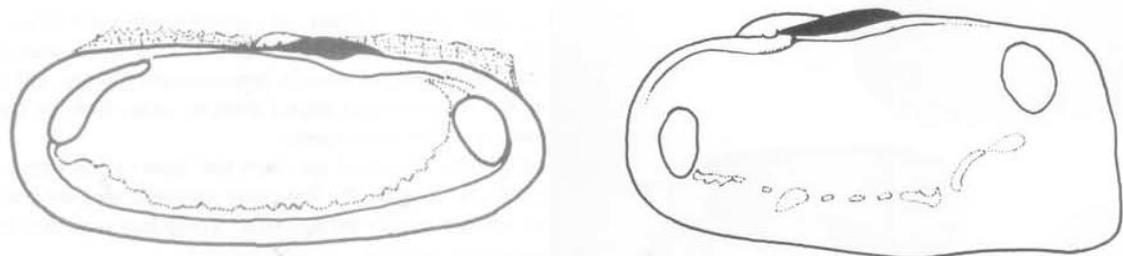
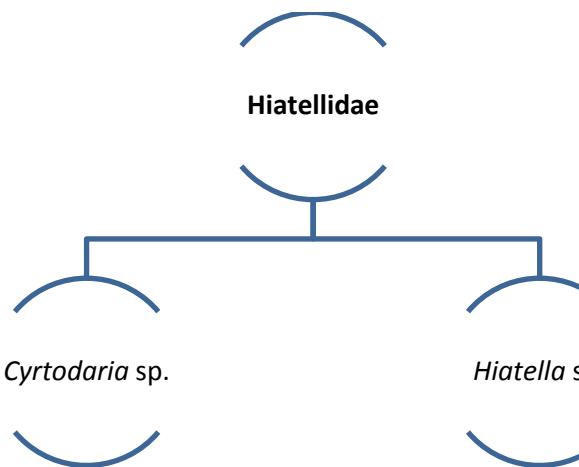
### TAXONOMIC KEY –FAMILIES

- 1(8) Dentition taxodont
- 2(3) Ligament mostly external, shell oval to elongate, surface with incremental striae or riblets, periostracum hirsute frequently with radial rows of short bristles [**ARCIDAE**]
- 3 Ligament mostly internal
- 4(5) Shell triangular to ovate, without sculpture [**NUCULIDAE**]
- 5 Shell elongate/rostrate
- 6(7) Shell rostrate, tightly closing, with concentric sculpture, resilifer small, pallial sinus small or absent [**NUCULANIDAE**]
- 7 Shell inflated, thin, ovate to elongate, posterior end sometimes gaping, resilifer large, pallial sinus deep [**YOLDIIDAE**]
- 8 Dentition other than taxodont
- 9(14) Dorsal margin produced anteriorly and posteriorly into “ears” (auricles)
- 10(11) Shell equivalve, inequilateral, higher than broad, frequently oblique [**LIMIDAE**]
- 11 Shell subequilateral
- 12(13) Radial ribs relatively well developed, corrugating the shell [**PECTINIDAE**]

- 13 Radial ribs very delicate, not corrugating the shell [**PROPEAMUSSIDAE**]
- 14 Dorsal margin not produced in ears
- 15(27) Hinge edentulous (may have ridges and tubercles)
- 16(17) Shell with posterior calcareous siphonal tube [**CUSPIDARIIRAE**]
- 17 Shell without posterior calcareous siphonal tube
- 18(19) Beaks terminal or close to [**MYTILIDAE**]
- 19(20) Beaks not terminal shell
- 20(23) Shell small ( $\leq 10$  mm),
- 21(22) Shell suborbicular to ovate to oblique, fragile, equivalve, surface smooth sometime with rusty spots on sides [**THYASIROIDAE**]
- 22 Shell ovate to trapezoidal, inflated, small, thin and fragile radial sculpture usually present [**LYONSIELLIDAE**]
- 23 Shell larger
- 23(24) Shell equivalve, quadrate to trapezoidal, inflated, frequently irregular and distorted with extensive gap. Pallial line deeply impressed and frequently discontinuous [**HIATELLIDAE**]
- 24 Shell slightly to markedly inequivalve
- 25(26) Shell markedly inequivalve, left valve convex overlapping the flattened right valve, hinge with crurae [**PANDORIDAE**]
- 26 Shell slightly inequivalve, elongate usually thin and fragile. Hinge without crurae [**LYONSIIDAE**]
- 27 Hinge plate with developed cardinal teeth
- 28(31) Two cardinal teeth in each valves
- 29(30) Shell compressed, anterior end rounded, posterior elongate, sculpture absent [**TELLINIDAE**]
- 30 Shell inflated with radial sculpture developed or obscure [**CARDIIDAE**]
- 31 Hinge with more than two teeth
- 32(33) Three cardinal teeth in each valve, shell thick, ovate to subtrigonate, commarginal sculpture. Periostracum varnished, grey to yellowish [**VENERIDAE**]
- 33 Three cardinal teeth in left valve, two in right valve, shell thick, ovate, trapezoidal or triangular, commarginal sculpture. Periostracum yellowish to brown [**ASTARTIDAE**]

(Coan et al. 2000, Bernard 1979, Keen & Coan 1974)

Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > [unassigned] Euheterodonta (Order) > Hiatelloidae (Superfamily) >**Hiatellidae** (Family)



(Bernard 1979)

*Cyrtodaria* sp.



*Cyrtodaria kurriana*

Dunker 1861

AphiaID: 236786

Unaccepted name: –

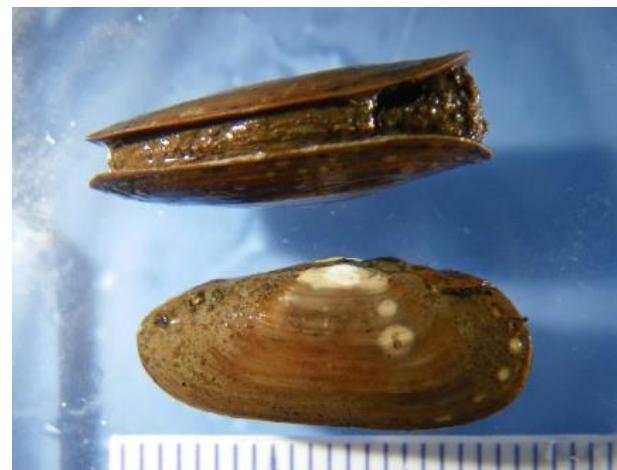


*Cyrtodaria siliqua*

Spengler 1793

AphiaID: 140102

Unaccepted name: –



|                             | <i>Cyrtodaria siliqua</i>             | <i>Cyrtodaria kurriana</i> |
|-----------------------------|---------------------------------------|----------------------------|
| <b>Size</b>                 | 50-75 mm                              | 40 mm                      |
| <b>Height -length ratio</b> | 1:2                                   | 1:3                        |
| <b>Valve shape</b>          | Slightly twisted in propeller fashion | Hardly/ not twisted        |
| <b>Distribution</b>         | Labrador to Rhode Island              | Alaska to Labrador         |

(Bernard 1979, Abbott 1974)

According to Abbott (1974) and Bernard (1979), *C. siliqua* has no Arctic distribution.  
Maybe *C. siliqua* found in Greenland waters should be transfer to *C. kurriana* as *C. siliqua*

*Hiatella arctica*

Linnaeus 1767

AphiaID: 140103

Unaccepted name: –



Size: up to 75 mm, usually less.

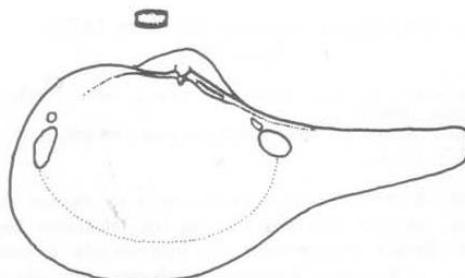
Shape: Extreme plasticity of the shell, but easily recognizable.

Juveniles: specimen has two radial spinose ribs from umbo to posterior margin.

(Bernard 1979)

Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Anomalodesmata (Order) > Cuspidarioidea (Superfamily) > **Cuspidaridae** (Family)

*Cuspidaria* sp.



Left valve of and lithodesma of *Cuspidaria cuspidata* (Olivi), Bernard 1979

*Cuspidaria arctica*

Sars 1859

AphiaID: 139437

Unaccepted name: –



*Cuspidaria glacialis*

Sars G.O. 1878

AphiaID: 139445

Unaccepted name: –

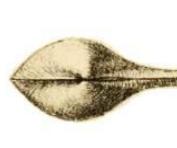


*Cuspidaria subtorta*

Sars G.O. 1878

AphiaID: 139454

Unaccepted name: –



(Sars 1878)



|                   | <i>Cuspidaria arctica</i>                                     | <i>Cuspidaria glacialis</i>     | <i>Cuspidaria subtorta</i>              |
|-------------------|---|---------------------------------|---|
| <b>Size</b>       | Up to 20 mm   | 25 to 37 mm                     | ≤ 10 mm                                 |
| <b>Shell</b>      | Globular  | Globular, thin, creamy to white | Ovate, thin and fragile                 |
| <b>Rostrum</b>    | Slightly twisted in propeller fashion                         | Tube like                       | Short, upturned and twisted to the left |
| <b>Comparison</b> | Rostrum longer and shell less globular than <i>C. arctica</i> |                                 |   |

(Bernard 1979, Sars 1878)

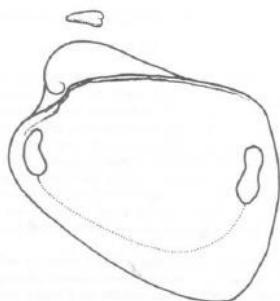
Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Anomalodesmata (Order) > Verticordioidea (Superfamily) >**Lyonsiellidae** (Family)

***Lyonsiella* sp.**

G.O. Sars 1872

AphiaID: 138654

Unaccepted name: –



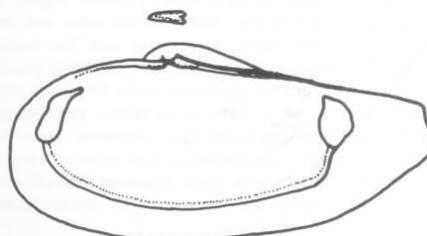
Interior of right valve and lithodesma of  
*Lyonsiella abyssicola* (Sars), Bernard 1979

Shape: shell thin, inflated, fragile. Surface ornamented by radial lines or ribs. Periostracum thin, often with adherent sand particles. Size: up to 10 mm.

(Bernard 1979)

Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Anomalodesmata (Order) > Pandoroidea (Superfamily) >**Lyonsiidae** (Family)

*Lyonsia* sp.



Interior of right valve and lithodesma of *Lyonsia norvegica* (Gmelin), Bernard 1979

*Lyonsia arenosa*

Møller 1842

AphiaID: 140290

Unaccepted name: –



*Lyonsia hyalina*

Conrad 1831

AphiaID: 156793

Unaccepted name: –



|                     | <i>Lyonsia arenosa</i>                  | <i>Lyonsia hyalina</i>            |
|---------------------|---|-----------------------------------|
| <b>Size</b>         | Up to 50 mm                             | 6 to 10 mm                        |
| <b>Shell</b>        | Thin, brittle and inflated              | Thin and fragile, semitranslucent |
| <b>Distribution</b> | Greenland to Maine; Alaska to Vancouver | Nova Scotia to South Carolina     |

(Bernard 1979, Abbott 1974)

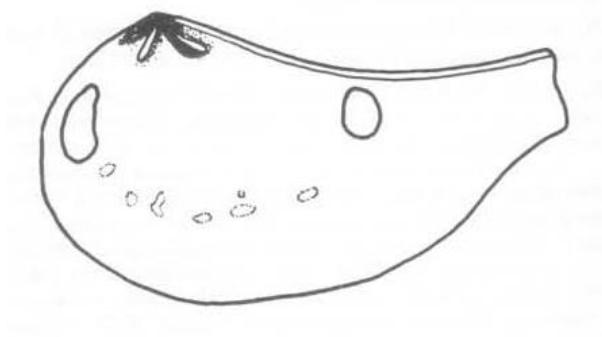
Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Anomalodesmata (Order) > Pandoroidea (Superfamily) >**Pandoridae** (Family)

*Pandora glacialis*

Leach in Ross 1819

AphiaID: 140673

Unaccepted name: –



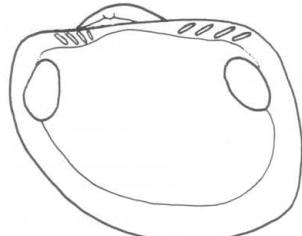
Size: up to 30 mm.

Shape: left valve inflated, overlapping right valve.

Right valve flat in the center, edge sharply concave, with fine radial lines.

(Bernard 1979, Abbott 1974)

*Bathyarca* sp.



Interior of right valve of *B. pectunculoides* (Scacchi), Bernard 1979

*B. glacialis*

Gray 1824

AphiaID: 138797

Unaccepted name: –



*B. frieli*

Friele 1879

AphiaID: 138796

Unaccepted name: –



*B. pectunculoides*

Scacchi 1835

AphiaID: 138799

Unaccepted name: –

*B. raridentata*

S.V. Wood 1840

AphiaID: 834234

Unaccepted name: –



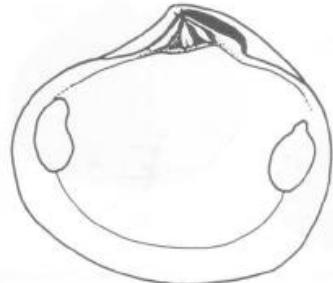
|              | <i>B. glacialis</i>  | <i>B. frieli</i>   | <i>B. pectunculoides</i>                                 | <i>B. raridentata</i>   |
|--------------|--|--|--|---|
| <b>Hinge</b> | Pseudotaxodont teeth developed. Central portion edentulous   | Hinge with 3 teeth in front and 3 behind                       |  | Pseudotaxodont teeth few and weak. Central portion edentulous   |
| <b>Shell</b> | Shell thick and chalky and inflated. Perisotracum thick, very hirsute, light brown and absent from most of the disc. Dorsal margin straight rounded at end | Perisostracum brown hairy Dorsal margin straight square at end | Very similar to <i>B. frieli</i> and <i>punctuloides</i> | Shell thin to delicate Radial and concentric riblets resulting in reticulate appearance. Perisostracum thin, hirsute. Dorsal margin straight square at end. |
| <b>Size</b>  | Up to 25 mm  |  |  | Up to 5 mm  |

Bernard 1979, Friele H. (1877)

Should be referred to *Bathyarca* sp. when shell length is < 10 mm (F.Olivier, pers. comm.)

Bivalvia (Class) > Heterodonta (Subclass) > Archiheterodonta (Infraclass) > Carditoida (Order) > Crassatelloidea (Superfamily) > **Astartidae** (Family)

## *Astarte* sp.



Interior of right valve of *Astarte sulcata* (da Costa), Bernard 1979

### *Astarte borealis*

Schumacher, 1817

AphiaID: 138818

Unaccepted name: *A. moerchi*



### *Astarte crenata*

Gray 1824:

AphiaID: 138820

Unaccepted name: –



### *Astarte montagui*

Dillwyn, 1817

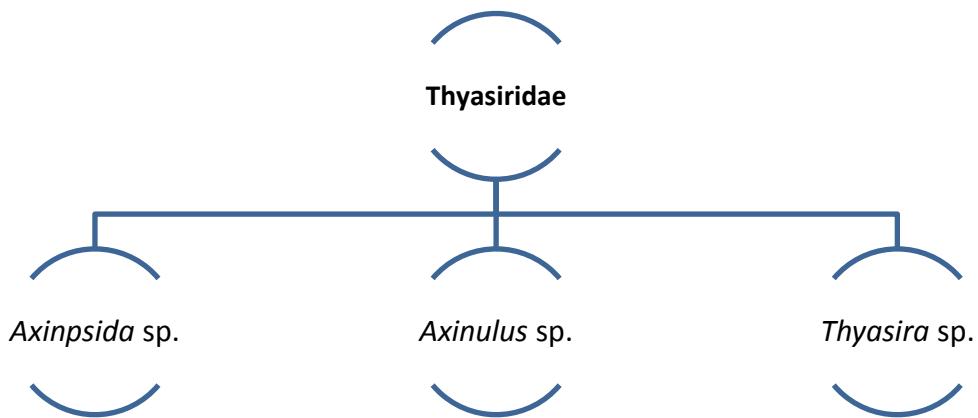
AphiaID: 138823

Unaccepted name: –

(Petersen 2001, Coan et al. 2000, Scott & Bernard 2000)

|                             | <i>Astarte borealis</i>  | <i>Astarte crenata</i>  | <i>Astarte montagui</i>   |
|-----------------------------|--|---|---|
| <b>Ventral inner margin</b> | Smooth.<br>Outside junction of valve acute   | Crenulated<br>Outside junction of valve rounded   | Smooth.<br>Outside junction of valve acute  |
| <b>Shell</b>                | Trigonal to elongate,<br>compressed.<br>Fine ribs becoming obscure<br>ventrally<br>Periostracum olive brown<br>to black, dull to silky | Ovate to rhomboidal.<br>Strong rounded<br>equidistant ribs.<br>Inner margin crenulated.<br>Perisotracum shiny light brown | Trigonal elongate,<br>moderately inflected.<br>Ribs evenly spaced on<br>umbones becoming<br>thinner on the rest of the<br>shell.<br>Periostracum blight<br>brown to black, dull to<br>silky |
| <b>Size</b>                 | Up to 55 mm  | Up to 35 mm   | Up to 45 mm   |

Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Lucinoida (Order) > Thyasiroidea (Superfamily) > **Thyasiridae** (Family)



### *Axinopsida* sp.

Keen & Chavan in Chavan, 1951

AphiaID: 138550

Unaccepted name: –



[www.marinespecies.org](http://www.marinespecies.org)

### *Axinulus* sp.

Verrill & Bush 1898

AphiaID: 152413

Unaccepted name: –



[www.naturalhistory.museum.wales.ac.uk](http://www.naturalhistory.museum.wales.ac.uk)

### *Thyasira* sp.

Lamarck 1818:

AphiaID: 138552

Unaccepted name: –



[www.naturalhistory.museum.wales.ac.uk](http://www.naturalhistory.museum.wales.ac.uk)

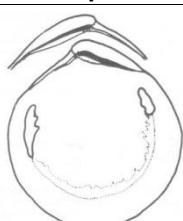
#### *Axinopsida* sp.

##### Shape



#### *Axinulus* sp.

##### Shape



#### *Thyasira* sp.

##### Shape



##### Shell

Suborbicular  
Lunule concave  
Posterior of shell with no  
radial fold

Ovate to elongate  
Without concave lunule  
No posterior fold

Subgobular to oblique  
Lunule concave  
Posterior of shell with  
radial fold

##### Size

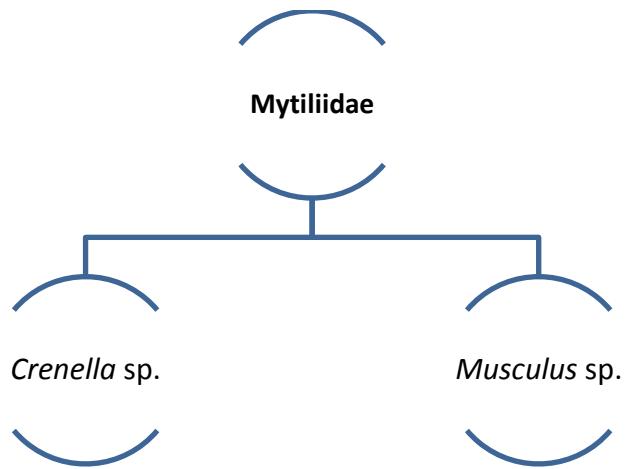
Up to 5 mm

Up to 3 mm

Up to 15 mm

(Bernard 1979)

Bivalvia (Class) > Pteriomorphia (Subclass) > Mytiloidea (Order) > Mytiloidea (Superfamily) > **Mytilidae** (Family)



|              | <i>Crenella</i> sp.                 | <i>Musculus</i> sp.   |
|--------------|-------------------------------------|---|
| <b>Shape</b> |                                     |   |
| <b>Shell</b> | Radial sculpture evenly distributed | Radial sculpture in anterior and posterior part, central portion smooth |
| <b>Size</b>  | Up to 10 mm                         | Up to 45 mm   |

(Bernard 1979, Coan et al. 2000, Scott & Bernard 2000)

*Crenella* sp.



*Crenella decussata*

Montagu 1808

AphiaID: 140440

Unaccepted name: –



[www.naturalhistory.museumwales.ac.uk](http://www.naturalhistory.museumwales.ac.uk)

*Crenella faba*

O.F. Müller 1776

AphiaID: 156763

Unaccepted name: –



Claude Nozères

|              | <i>Crenella faba</i>                  | <i>Crenella decussata</i> |
|--------------|---------------------------------------|---------------------------|
| <b>Shape</b> | Oval-oblong, umbo close to the center | Oval                      |
| <b>Ribs</b>  | Numerous and fine                     | Numerous and fine         |
| <b>Color</b> | Reddish brown                         | Yellowish gray            |
| <b>Size</b>  | 5 to 15 mm                            | Up to 5 mm                |

(Bernard 1979, Coan et al. 2000, Scott & Bernard 2000)

## *Musculus sp*



### *Musculus discors*

(Linnaeus, 1767)

AphiaID: 140472

Unaccepted names: *Musculus laevigatus*, *Modiola substriata*



### *Musculus glacialis*

(Leche, 1883)

AphiaID: 467467

Unaccepted names: *Musculus corrugatus*, *Modiolaria corrugata*

### *Musculus niger*

(J.E. Gray, 1824)

AphiaID: 140474

Unaccepted names: *Modiola nigra*, *Musculus cultellus*



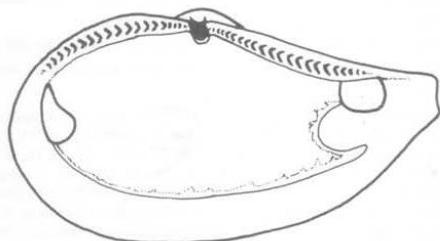
|              | <i>Musculus discors</i>  | <i>Musculus glacialis</i>   | <i>Musculus niger</i>   |
|--------------|--|---|---|
| <b>Shell</b> | Ovate to elongate<br>More inflate than <i>M. niger</i> .                                   | Shell ovate, inflated.  | Shell ovate- elongate,<br>compressed.   |
| <b>Ribs</b>  | Anterior and posterior end<br>with weak radial ribs, center<br>smooth except growth lines. | Anterior end: large radial<br>ribs. Posterior end: thinner<br>more numerous ribs, center<br>smooth except growth lines. | Anterior and posterior end<br>with strong radial ribs,<br>center smooth except<br>growth lines. |
| <b>Color</b> | Yellow to dark brown.  | Greenish yellow to black  | Greenish to dark  |
| <b>Size</b>  | 25 to 50 mm  | Up to 20 mm   | 50 to 70 mm   |

(Abbott 1974, Bernard 1979)

***Musculus sp. juveniles are hard to differentiate***  
***M. glacialis can be mistaken for M. discors***

Bivalvia (Class) > Protobranchia (Subclass) > Nuculanoida (Order) > Nuculanoidea (Superfamily) >**Nuculanidae** (Family)

*Nuculana* sp.



Interior of right valve of *Nuculana pernula* (O.F. Muller),  
Bernard 1979

*Nuculana minuta*  
(O.F. Muller 1776)

AphiaID: 140577

Unaccepted names: *Arca minuta*, *Leda complanata*

*Nuculana pernula*  
(O.F. Müller 1779)

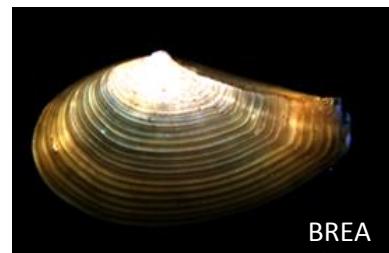
AphiaID: 140579

Unaccepted names: *Arca rostrata*, *Leda pernula*

*Nuculana radiata*  
(taxon inquirendum)

AphiaID: 254752

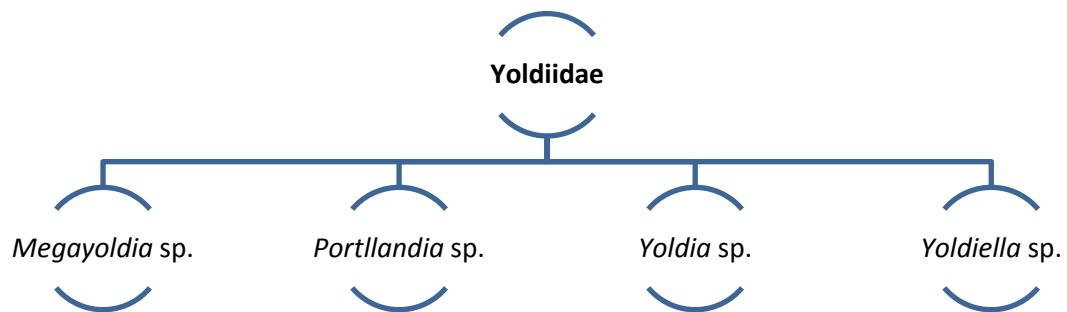
Unaccepted name: –



|                     | <i>Nuculana minuta</i> | <i>Nuculana pernula</i>  | <i>Nuculana radiata</i>                                  |
|---------------------|------------------------|--------------------------|--|
| <b>Shape</b>        | Elongate inflated      | Elongate, inflated       | Inflated   |
| <b>Rostrum</b>      | Short                  | Long, tend to be concave | Short  |
| <b>Ornmentation</b> | Coarse concentric ribs | Fine concentric lines    | Prominent concentric lines crossed by fine radial ridges |
| <b>Size</b>         | 20 mm                  | 40 mm                    | 30 mm  |

(Bernard 1979)

Bivalvia (Class) > Protobranchia (Subclass) > Nuculanoida (Order) > Nuculanoidea (Superfamily) >**Yoldiidae** (Family)



|                      | <i>Megayoldia</i> sp. | <i>Portlandia</i> sp.                                | <i>Yoldia</i> sp.       | <i>Yoldiella</i> sp.                        |
|----------------------|-----------------------|--|-------------------------|---|
| <b>Shape</b>         |                       |  |                         |   |
| <b>Shell</b>         | Elongate-subquadrate  | Ovate elongate to buquadrate subequilateral          | Elongate-subequilateral | Ovate elongate to buquadrate subequilateral |
| <b>Ornmentation</b>  | Smooth                | Shell smooth but periostracum with concentric striae |                         | Smooth                                      |
| <b>Sinus pallial</b> | Developed, large      | Developed  | Developed               | Small or absent                             |
| <b>Resilifer</b>     | Large                 | Small  | Small to large          | Small                                       |

(Bernard 1979, Coan et al. 2000, Scott & Bernard 2000)

## *Megayoldia thraciaeformis*

Storer 1838

AphiaID: 141983

Unaccepted names: *Nucula groenlandica*, *Yoldia angularis*



Shell: oblong, squarish upturned posterior end, coarse and oblique rib from the beak to posterior ventral margin. Large chondrophore.

Periostracum: coarse, dull and flaky.

Size: 35 to 50 mm.

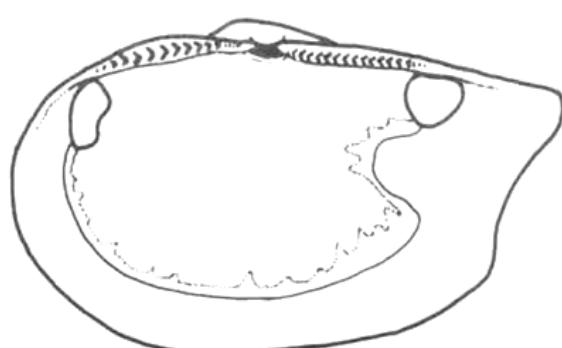
(Bernard 1979, Abbott 1974)

## *Portlandia arctica*

Gray 1824

AphiaID: 141987

Unaccepted name: –



Interior of right valve (Bernard 1979)

Shell: ovale to elongate. Posterior end produced, set off by a radial sulcus to form a small pointed rostrum.

Periostracum: thick and forming concentric raised lines.

Size: up to 30 mm.

(Bernard 1979)

*Yoldia* sp.



*Y. amygdalea*

Valenciennes 1846

AphiaID: 141988

Unaccepted name: –



[www.marinespecies.org](http://www.marinespecies.org)

*Y. hyperborea*

Gould 1841

AphiaID: 141989

Unaccepted name: –



*Y. myalis*

Couthouy 1838

AphiaID: 157006

Unaccepted name: –



[www.marinespecies.org](http://www.marinespecies.org)

*Y. sapotilla*

Gould 1841

AphiaID: 157000

Unaccepted name:  
*Nucula sapotilla*



(Bernard 1979, Abbott 1974)

|   | <i>Y. amygdalea</i>      | <i>Y. hyperborea</i>               | <i>Y. myalis</i>                           | <i>Y. sapotilla</i>      |
|---|--------------------------|------------------------------------|--|--------------------------|
| <b>Umbo</b>                                       | Near the middle          | Near the middle                    | Behind the middle                          | Near the middle          |
| <b>Periostracum</b>                               | Smooth                   | Smooth                             |  | Smooth                   |
| <b>Sinuation in<br/>antero ventral<br/>margin</b> | Yes                      | Yes                                |  | No                       |
| <b>Length/height</b>                              | Length $\geq 2^*$ height | Length $\geq 2^*$ height           |  | Length $\leq 2^*$ height |
| <b>Posterior end</b>                              | Acuminate                | Not acuminate                      |  |                          |
| <b>Size</b>                                       | 20 to 50 mm              | 16 to 35 mm                        | 25 mm                                      | 20 to 40 mm              |
| <b>Note</b>                                       |                          | Probably the more common in Arctic | Uncommon (but present in the Beaufort Sea) |                          |

*Yoldiella* sp.



*Y. frigida*

Torell 1859

AphiaID: 141997

Unaccepted name:  
*Portlandia frigida*

*Y. intermedia*

Sars 1865

AphiaID: 141999

Unaccepted name:  
*Portlandia intermedia*

*Y. lenticula*

Møller 1842

AphiaID: 142001

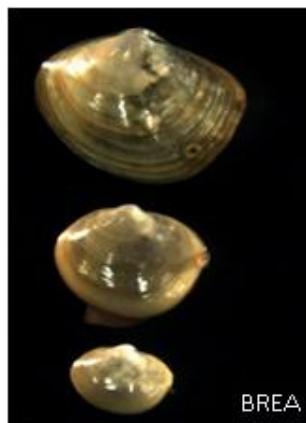
Unaccepted  
names:  
*Portlandia*  
*lenticula*

*Y. propinqua*

Leche 1878

AphiaID: 142006

Unaccepted name:  
*Portlandia propinqua*



|                     | <i>Y. frigida</i>   | <i>Y. intermedia</i>  | <i>Y. lenticula</i>   | <i>Y. propinqua</i>                                     |
|---------------------|---|---|---|---|
| <b>Shell</b>        | Deeply ovate.<br>Roughly<br>equilateral.<br>Moderately<br>inflated. | Elongate inflate.<br>Moderately<br>inequilateral.<br>Moderately<br>inflated.                                    | Elongate-oval.<br>Moderately<br>inequilateral.<br>Inflated.   | Oval.<br>Adult<br>inequilateral.<br>Moderately tumid.   |
| <b>Perisotracum</b> | Silky, slightly<br>iridescent                                       | Brilliantly<br>varnished.<br>Yellow-brown,<br>darker band at<br>growth stops.<br>Virtually lacking<br>sculpture | Slightly glossy.<br>Yellow-brown.<br>Very weak<br>striations,<br>irregular growth<br>ridges.                                | Glossy  |
| <b>Size</b>         | Up to 8 mm.   | Up to 15 mm.  | Up to 10 mm   | Up to 5 mm  |
| <b>Be aware!</b>    |   | <i>Portlandia arctica</i><br>but no rostrum or<br>oblique ridge   | <i>Yoldiella</i> .<br><i>intermedia</i> but<br>posterior part<br>shorter, shell less<br>inflated and<br>resilifer shallower | <i>Yoldiella lenticula</i><br>but shell less<br>convex. |

(Bernard 1979, Warén 1989, [www.naturalhistory.museumwales.ac.uk](http://www.naturalhistory.museumwales.ac.uk).)

Juvenile specimens should be identified to *Yoldiella* sp.

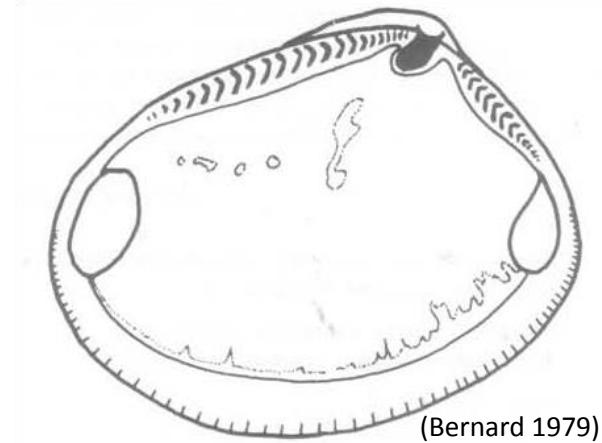
Bivalvia (Class) > Protobranchia (Subclass) > Nuculida (Order) > Nuculoidea (Superfamily) >**Nuculidae** (Family)

*Ennucula tenuis*

Montagu 1808

AphiaID: 140584

Unaccepted names: *Nucula tenuis*, *Leionucula bellotii*



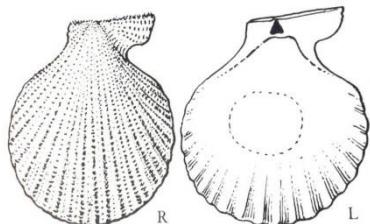
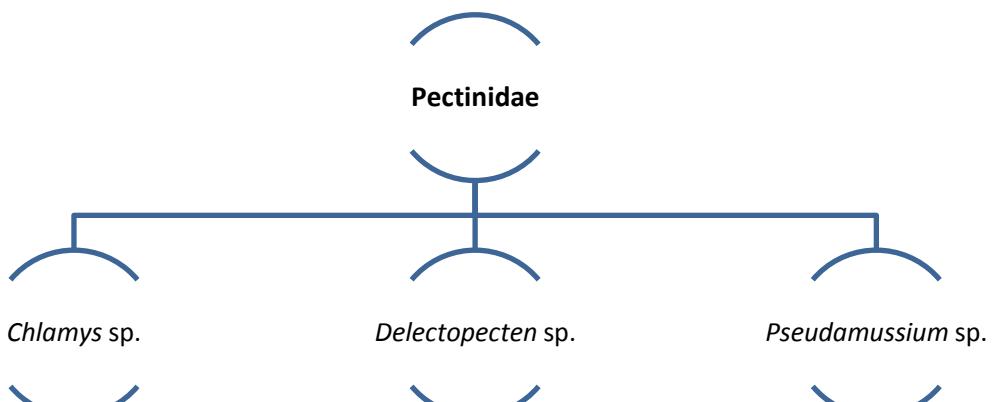
Size: up to 20 mm

Shape: ovate-trigonal, inflated, surface smooth.

Color: shiny olive-green to dark-brown.

(Coan et al. 2000, Bernard 1979, Abbott 1974,)

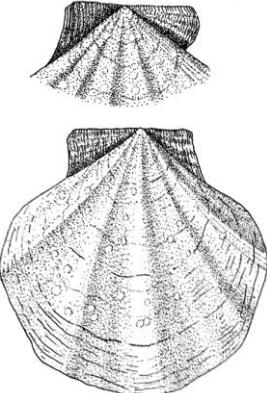
Bivalvia (Class) > Pteriomorpha (Subclass) > Pectinida (Order) > Pectinoidea (Superfamily) >**Pectinidae** (Family)



(Keen & Coan 1974)



(Bernard 1979)



(Hayward & Ryland 1995)

|                      | <i>Chlamys</i> sp.  | <i>Delectopecten</i> sp.  | <i>Propeamussium</i> sp.  |
|----------------------|---|---|---|
| <b>Shell</b>         | Shell solid, longer than wide.                            | Shell thin, translucent.  | Shell thin, as high as wide.                                    |
| <b>Ears</b>          | Large, anterior one twice as long as posterior            | Posterior ear not clearly marked off from the shell.                        | Anterior ear slightly larger than the posterior.                |
| <b>Ornamentation</b> | Strong radial ribs on both valves, corrugating the shell. | Sculpture reticulate or radial on both valves.<br>Left valve may be smooth. | Ribs foldlike.<br>Microsculpture of very fine radiating ripples |
| <b>Byssal notch</b>  | Large   | Large   | Insignificant   |
| <b>Size</b>          | Up to 140 mm  | Up to 20 mm   | Up to 50 mm   |

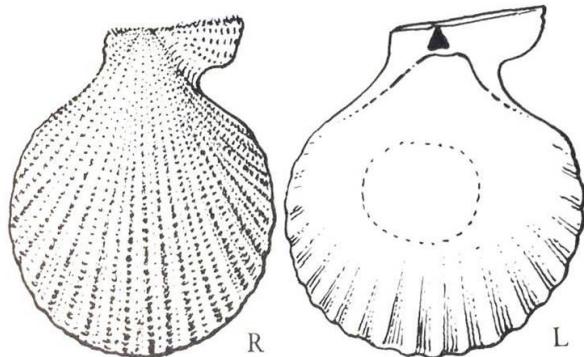
(Hayward & Ryland 1995, Abbott 1974, Keen & Coan 1974, [www.species-identification.org](http://www.species-identification.org))

## *Chlamys islandica*

O.F. Müller 1776

AphiaID: 140692

Unaccepted names: *Pecten islandica*, *Ostrea cinnabrina*



(Keen & Coan 1974)

Size: 80 to 100 mm, up to 140 mm

Shape: highly variable from much higher than long to nearly circular.

Ear: long ear twice as long as the short one.

Ornamentation: about 50 coarse ribs which split in two near the margin of the valve. Usually 5 ribs stronger. Rarely, ribs can be grouped in group of 2, 3 or 4. Small specimen (2 mm height) with already 20 ribs.

Color: dirty gray or cream, some peach, yellow or purple. Sometimes, patterns of concentric coloured bands.

(Abbott 1974, Djiskra et al. 2009)

# *Delectopecten vitreus*

Gmelin 1791

AphiaID: 140702

Unaccepted names: *Chlamys papyracea*, *Pecten vitreus*, *Pecten abyssorum*.



(Bernard 1979)

Size: up to 20 mm.

Shape: high, circular to somewhat ovate.

Ear: anterior ear slightly larger than posterior, nearly equal in length. Anterior auricle of right valve demarcated from the disc, with 3-5 radial riblets.

Ornamentation: sometimes smooth or with prominent concentrically arranged scales.

Color: Transparent to opaque.

May be confused with *Cyclopecten hoskinsy* but scales are arranged concentrically versus radially in *C. hoskinsy*.

(Abbott 1974, Djiskra et al. 2009)

*Pseudamussium peslutrae*

Linnaeus 1771

AphiaID: 140717

Unaccepted name: –



Size: up to 65 mm.

Shape: almost circular.

Ear: nearly equal in size.

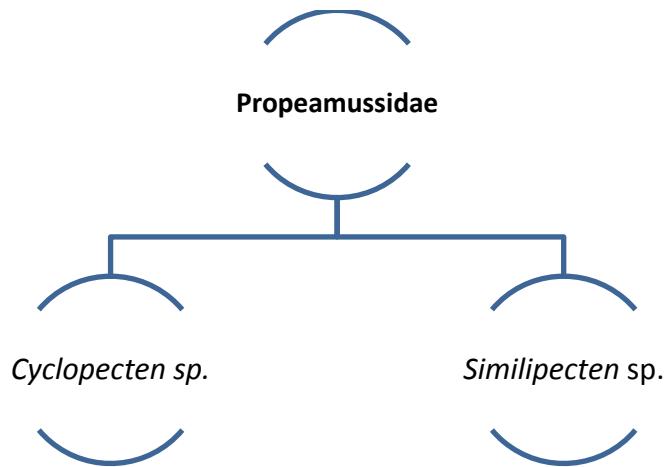
Ornamentation: Both valves with 5 -10 equidistant radial plicate, broader on right than left valve.

Rather variable.

Color: reddish brown, mottled with darker or lighter shade.

(Djiskra et al. 2009)

Bivalvia (Class) >Pteriomorpha (Subclass) >Pectinida (Order) >Pectinoidea (Superfamily) >**Propeamussiidae** (Family)



|                     | <i>Cyclopecten</i> sp.                    | <i>Similipecten</i> sp.              |
|---------------------|---|--------------------------------------|
| <b>Shell</b>        | Subcircular.<br>Shell fragile             | Subcircular.<br>Shell fragile.       |
| <b>Ears</b>         | Anterior wider and longer than posterior. | About equal                          |
| <b>Byssal notch</b> | Small, ctenolium absent                   | Small but distinct, ctenolium absent |
| <b>Size</b>         | Up to 10 mm                               | Up to 30 mm                          |

## *Cyclopecten hoskynsi*

Forbes 1844

AphiaID: 140700

Unaccepted names: *Cyclopecten imbrifer*, *Pecten pustulosus*



BREA

Size: up to 25 mm high.  
 Shape: somewhat higher than long, flattened.  
 Ear: anterior longer than posterior (posterior quite small).  
 Ornamentation: right valve with closely spaced commarginal lamellae. Left valve with broad radially arranged vesicles.  
 Color: transparent to opaque, yellowish.  
 Can be confused with *Delectopecten vitreus* but scales are arranged radially versus concentrically in *D. vitreus*.

(Djiskra et al. 2009)

## *Similipecten greenlandicus*

G.B. Sowerby II 1842

AphiaID: 181299

Unaccepted names: *Delectopecten greenlandicus*



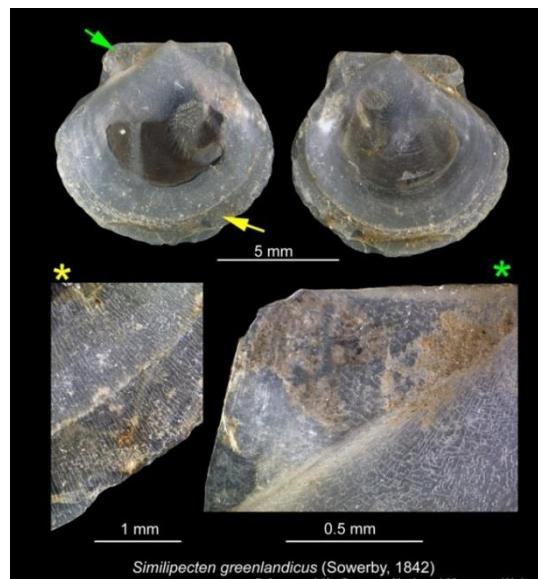
Size : up to 30 mm

Shape : almost circular, fragile, weakly convex.

Ear: anterior auricle larger than posterior.

Ornamentation: Left valve smooth but micro-sculpture of irregularly branching lines. Right valve smooth, with weak commarginal growth lines.

Color : greyish-blueish, vitreous.



(Djiskra et al. 2009)

Bivalvia (Class) > Pteriomorpha (Subclass) > Limoida (Order) > Limoidea (Superfamily) >**Limidae** (Family)

## *Acesta excavata*

Fabricius 1779

AphiaID: 140232

Unaccepted names: *Lima excavata*, *Ostrea excavata*



Size: up to 200 mm.

Shape: oval, elongate. Posterior curved, dorsal anterior straight.

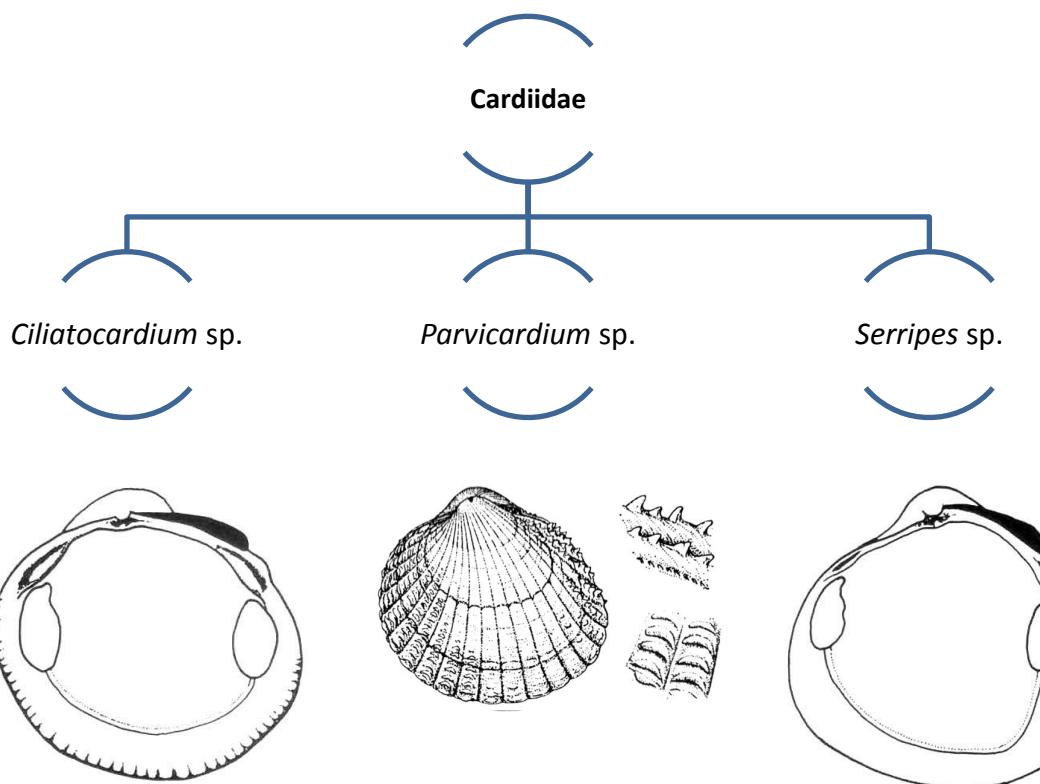
Ear: prominent posterior ear, anterior lacking.

Ornamentation: about 100 radiating narrow riblets. Inner margin weakly crenulated (fading with growth).

Color: Opalescent to dirty white

[www.naturalhistory.museumwales.ac.uk](http://www.naturalhistory.museumwales.ac.uk)

Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Veneroida (Order) > Cardioidea (Superfamily) >**Cardiidae** (Family)



(Bernard 1979)

|                     | <i>Ciliatocardium</i> sp.                                    | <i>Parvicardium</i> sp.  | <i>Serripes</i> sp.  |
|---------------------|--|--|--|
| <b>Shell</b>        | Oblique to elliptical.<br>Shell thin but solid.<br>Inflated. | Ovate-subquadrate, a little oblique.<br>Shell thin but solid.<br>Inflated. | Subequilateral to longer posteriorly.<br>Thick to thin.<br>Inflated. |
| <b>Sculpture</b>    | Radial ribs and commarginal lirae.                           | Radial ribs with plates, scales or spines.                                 | Obsolete, irregular commarginal growth lines.                        |
| <b>Periostracum</b> | Thin, adherent,<br>occasionally hirsute on ribs.             | Thin, adherent.  | Thin, adherent.  |

(Tebble 1976, Abbott 1974)  
[www.naturalhistory.museumwales.ac.uk](http://www.naturalhistory.museumwales.ac.uk)

## *Ciliatocardium ciliatum*

Fabricius 1780

AphiaID: 139000

Unaccepted names: *Clinocardium ciliatum*, *Cardium arcticum*



Size: 30 to 80 mm.

Shape: subcircular to ovate, little longer than high, inflated.

Sculpture: 32 to 38 radial ribs, less prominent in central part, crossed by coarse concentric growth line.

Periostracum: greyish-brown, thin adherent with numerous concentric fold produces over the ribs giving a ciliated appearance.

Color: grayish yellow with weak narrow concentrics bands of darker color.

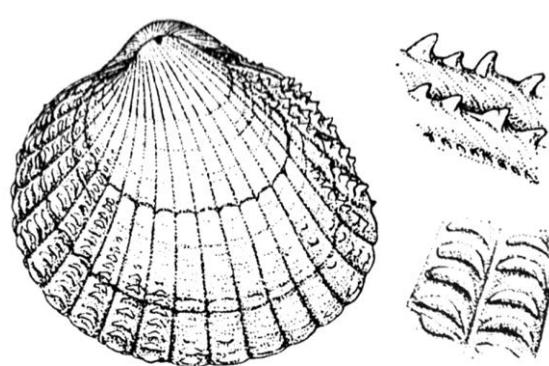
(Abbott 1974)

## *Parvicardium pinnulatum*

(Conrad 1831)

AphiaID: 181343

Unaccepted names: *Cerastoderma elegantulum*, *Parvicardium ovale*



Size: up to 12 mm.

Shape: oval-subquadrata, equivalve, beaks a little in front of the midline. Shell thin but solid.

Sculpture: 24 to 26 radial ribs with blunt scales anteriorly (as wide as the rib), small scales posteriorly and central ribs smooth.

Periostracum: thin but adherent.

Color: whitish with brown spots.

May be confused with *Ciliatocardium ciliatum*, but shell subovate and rib coarser and less numerous.

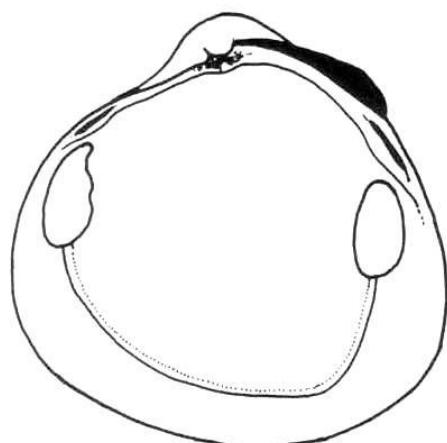
(Tebble 1976, Abbott 1974)  
[www.naturalhistory.museumwales.ac.uk](http://www.naturalhistory.museumwales.ac.uk)

*Serripes groenlandicus*

Mohr 1786

AphiaID: 582749

Unaccepted name: *Cardium groenlandicum*



Size: 50 to 100 mm in length.

Shape: rounded sub-ovate, inflated, almost round, slightly gapping at posterior end.

Sculpture: almost smooth, but (very) low radial ribs on anterior and posterior slopes.

Periostracum: thin, adherent.

Color: brownish gray and may have brown concentric rings of growth. Interior dull white.

(Abbott 1974, Bernard 1979)

Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Veneroida (Order) > Tellinoidea (Superfamily) > Tellinidae (Family)

*Macoma* sp.

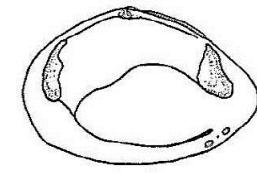
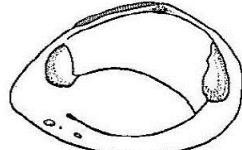


*M. balthica*

Linnaeus 1758

AphiaID: 141579

Unaccepted name:  
*Tellina balthica*

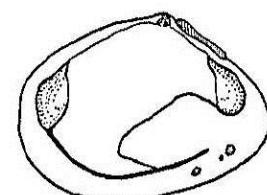
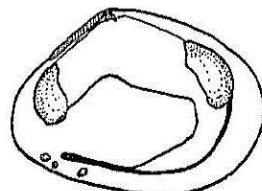


*M. calcarea*

Gmelin 1791

AphiaID: 141580

Unaccepted name:  
*Tellina calcarea*

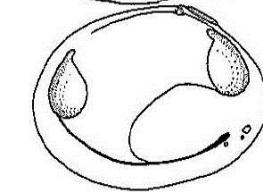
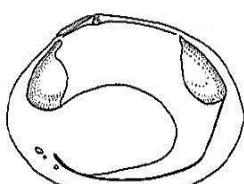


*M. loveni*

A.S. Jensen 1905

AphiaID: 156225

Unaccepted name: –

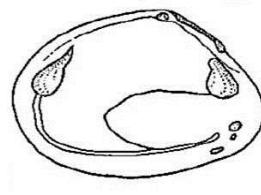
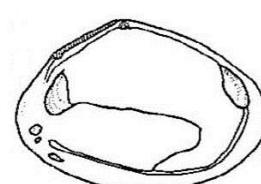


*M. moesta*

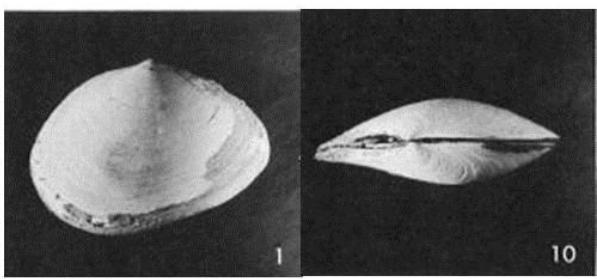
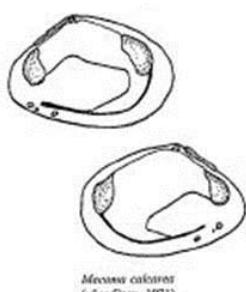
Deshayes, 1855

AphiaID: 156226

Unaccepted name:  
*Tellina moesta*



*Macoma moesta*



*Macoma moesta*



|                      | <i>Macoma balthica</i>  | <i>Macoma calcarea</i>   | <i>Macoma loveni</i>   | <i>Macoma moesta</i>   |
|----------------------|---|--|--|--|
| <b>Shape</b>         | Subovate to subtrigonal, subequilateral, moderately inflated. Posterior end rounded to pointed. | Subovate, moderately inflated. Posterior end slightly pointed and flexed to the right.   | Ovate, thin, very inflated. Anterior end longer and broadly rounded.                         | Subovate to ovate elongate, thin and compressed. Anterior end longer, broadly rounded.   |
| <b>Pallial sinus</b> | Sinuses deep in both valves, not detached.  | Very deep in left valve. Moderate in right valve. Substantially detached in both.  | Deep in left valve, substantially detached. Moderate in right valve, only slightly detached. | Deep in left valve. Moderate in right valve. Substantially detached in both.   |
| <b>Color</b>         | White, pink or red.   | Surface chalky, periostracum silky to shiny whitish to dark grey, dehiscent.   | Periostracum silky to clear brown, adherent.   | Periostracum silky to shiny greenish grey to yellow polished and adherent.   |
| <b>Size</b>          | Up to 45 mm, usually 30 mm.   | Up to 60 mm.   | Up to 37 mm.   | Up to 30-40 mm.  |
| <b>Be aware!</b>     | Specimen under 1 cm may be confused with <i>M. calcarea</i> .                                   | May be confused with <i>M. moesta</i> but, shell more inflated and pointed.<br>Specimen under 1 cm may be confused with <i>M. balthica</i> . |  | May be confused with <i>M. calcarea</i> , but shell less inflated, anterior end more rounded, posterior end shorter and less pointed. Check pallial impression |

(Coan et al. 2000, Lubinsky 1980, Bernard 1979)

**Pallial impression (lines and sinuses) must be checked on clean and dry shell.**

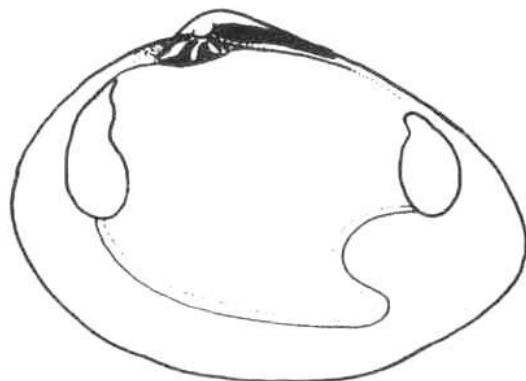
Bivalvia (Class) > Heterodonta (Subclass) > Euheterodonta (Infraclass) > Veneroida (Order) > Veneroidea (Superfamily) > **Veneridae** (Family)

*Liocyma fluctuosa*

(Gould 1841)

AphiaID: 141918

Unaccepted names: *Venus fluctuosa*, *Lyocima viridis*



Size: up to 33 mm usually 15 mm.

Shape: ovate to trigonal, compressed to inflated.

Sculpture: numerous concentric small ridges.

Color: periostracum varnished, thin, grey to yellowish strongly adherent.

(Bernard 1979, Abbott 1974)

## CEPHALOPODA

Not all Greenlandic species are presented in this section.

For more species refers to Frandsen & Zumholz (2004) *Cephalopods in Greenland Waters: A Field Guide*. Pinngortitaleriffik.

Cephalopoda (Class) > Coleoidea (Subclass) > Octopodiformes (Superorder) > Octopoda (Order) > Incirrata (Suborder) > Octopodoidea (Superfamily) > **Bathypolypodidae** (Family)

*Bathypolypus* sp.



### *B. arcticus*

Prosch 1849

AphiaID: 140596

Unaccepted names: *Octopus arcticus*, *Benthoctopus faroensis*

### *B. bairdii*

Verrill 1873

AphiaID: 157011

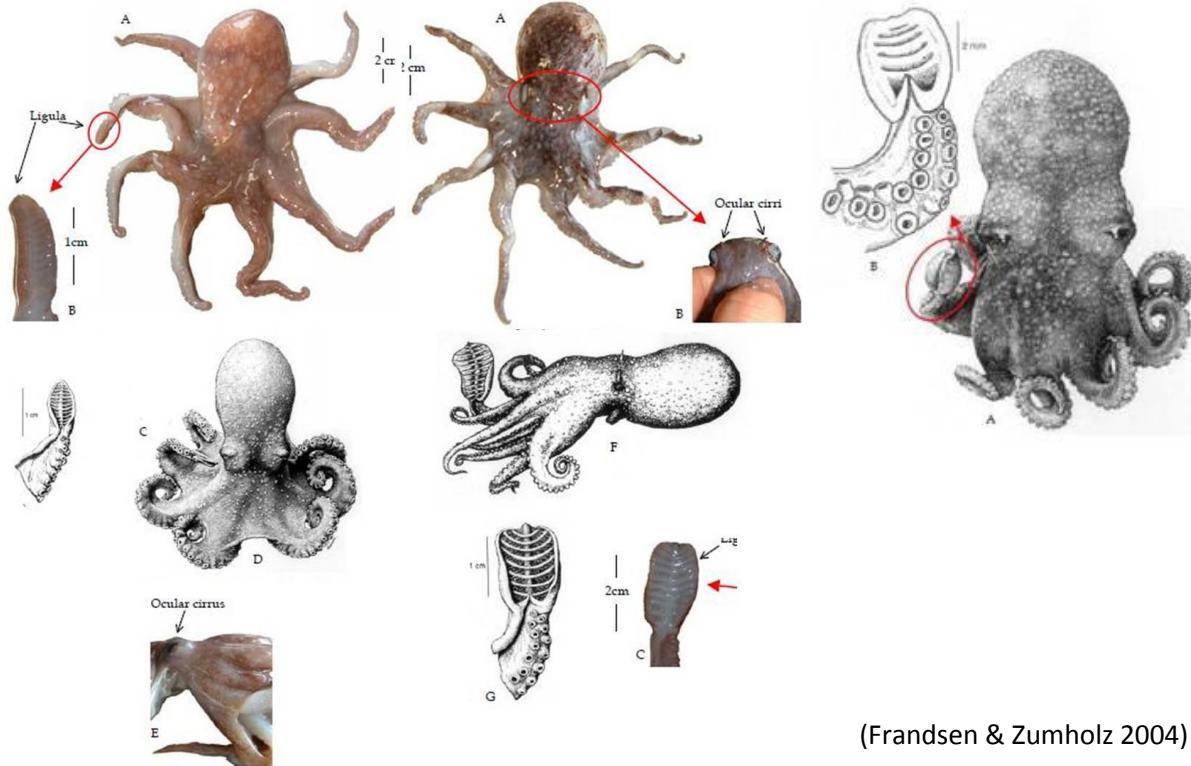
Unaccepted names: *Octopus bairdii*, *Octopus obesus*

### *B. pugniger*

Muus 2002

AphiaID: 181387

Unaccepted name: –



(Frandsen & Zumholz 2004)

## *Bathypolypus* sp.



|                             | <i>Bathypolypus arcticus</i>  | <i>Bathypolypus bairdii</i>   | <i>Bathypolypus pugniger</i>  |
|-----------------------------|---|---|---|
| <b>Size</b>                 | Up to 200 mm.   | Up to 200 mm.   | Up to 150 mm.   |
| <b>Shape</b>                | Egg-shaped with slight constriction behind the head. Above each eye, a crowd of warts forms a cirrus.                 | Square-bodied. Head broad, with large eyes, each with erectile ocular cirrus. | Square-bodied. Head is broad, with large eyes, each with ocular cirrus. |
| <b>Skin</b>                 | Smooth or papillated with minute warts often in stellate pattern on small light spots.                                | With papillated skin.   | Papillated skin.  |
| <b>Ligula</b>               | 11-17 transverse ridges.  | Spoon-shaped with 7-11 ridges.  | Short and broad with curled up sides and has 4-6 transverse ridges.     |
| <b>Be aware!</b>            | - <i>B. bairdii</i> and <i>b. pugniger</i>  | - <i>B. arcticus</i> but eyes bigger (30-45 % of mantle length).              | - <i>B. bairdii</i> , only male with ligula can be separated.           |
| <b>May be confused with</b> | but body is egg-shaped with slight constriction behind the head. Eye-balls smaller (diameter < 33% of mantle length). | - <i>B. Pugniger</i> and only male with ligula can be separate.               |   |

(Frandsen & Zumholz 2004)

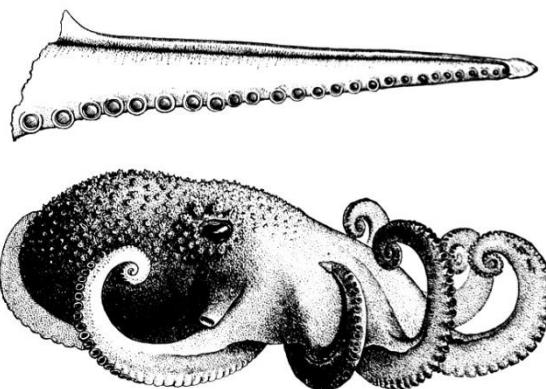
Cephalopoda (Class) > Coleoidea (Subclass) > Octopodiformes (Superorder) > Octopoda (Order) > Incirrata (Suborder) > Octopodoidea (Superfamily) >**Magaleledonidae** (Family)

### *Granelodone verrucosa*

A.E. Verril 1881

AphiaID: 157019

Unaccepted names: *Eledone verrucosa*, *Moschites verrucosa*



Body broadly ovate, eyes large but no prominent, no neck.

(Abbott 1974)

Integument dorsally warty

Arms medium-sized, with one row of suckers, undifferentiated in size

Hectocotylus small

No ink-sac

(Thiele et al. 1998)

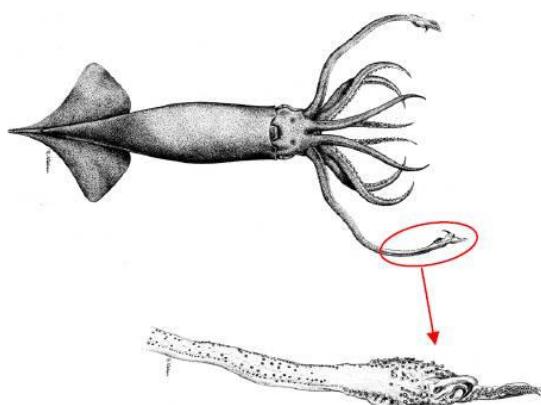
Cephalopoda (Class) > Coleoidea (Subclass) > Decapodiformes (Superorder) > Oegopsida (Order) >**Gonatidae** (Family)

***Gonatus fabricii***

Lichtenstein 1818

AphiaID: 139429

Unaccepted name:



(Frandsen & Zumholz 2004)

Size: mantle length  $\leq 35$  cm.

Shape: mantle narrow, slightly wider at the middle. On larger animals, inner 2 rows of suckers on arms I-III replaced by hooks as follow: hook on club is followed distally by another large hook and proximally by 3 small ones.

(Frandsen & Zumholz 2004)

Cephalopoda (Class) > Coleoidea (Subclass) > Decapodiformes (Superorder) > Oegopsida (Order) >**Cranchiidae** (Family)

## *Teuthowenia megalops*

(Prosch, 1849)

AphiaID: 153097

Unaccepted names: *Desmoteuthis tenera*, *Megalocranchia megalops*



Olga Zimina



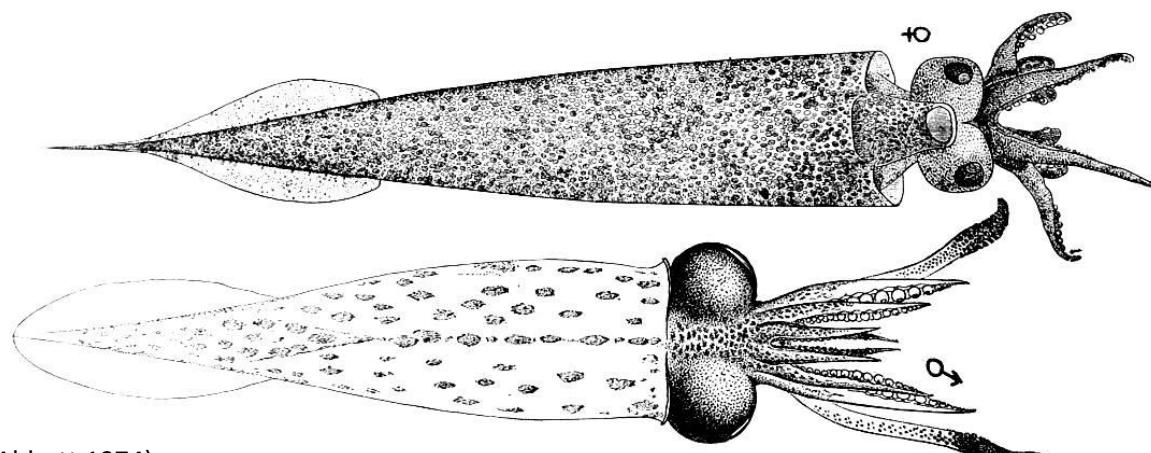
Olga Zimina



Olga Zimina

Mantle length: ≤40 cm.  
Characteristics: Mantle is thin and eyes are very big and look aside. Large light organs on ventral side of eyes.  
Suckers: Several suckers on second and third arms are considerably enlarged.  
Habitat: pelagic squid caught at depths from 50-1000 m.

(Fransen & Zumholz 2004)



(Abbott 1974)

*Rossia* sp.

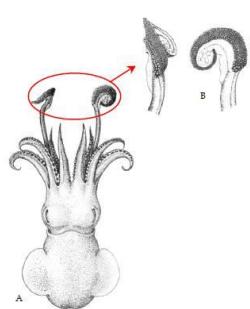


*R. macrosoma*

Delle Chiaje 1830

AphiaID: 141449

Unaccepted names:  
*Sepiola macrosoma*,  
*Rossia oweni*

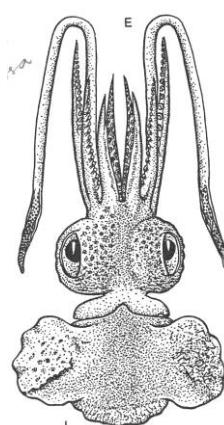


*R. megaptera*

A.E. Verrill 1881

AphiaID: 157032

Unaccepted name: –

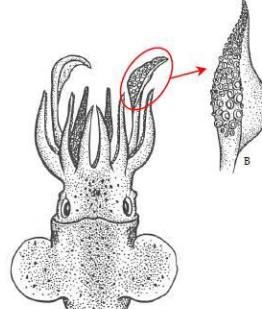


*R. moelleri*

Steenstrup 1856

AphiaID: 156383

Unaccepted name: –

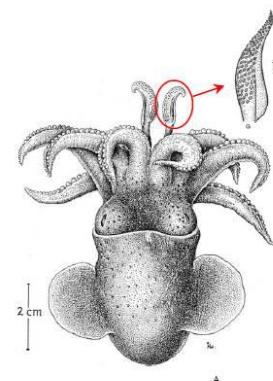


*R. palpebrosa*

Owen 1834

AphiaID: 153083

Unaccepted names:  
*Allorossia glaukopis*,  
*Rossia sublaevis*



(Frandsen & Zumholz 2004)

|                         | <i>Rossia macrosoma</i>  | <i>Rossia megaptera</i>   |
|-------------------------|--|---|
| <b>Mantle lenght:</b>   | rarely 100 mm  | ≤ 80 mm rarely 100 mm   |
| <b>Characteristics:</b> | Anterior edges of fins do not reach the anterior edge of mantle.<br>Skin smooth. | Anterior edges of fins extend beyond anterior edge of mantle.<br>Body consistency is fairly soft and eyes are large.      |
| <b>Club suckers</b>     | Approximately 10 rows of suckers on the well defined clubs.                      | tentacle clubs are long but not expanded.<br>The clubs are heavily crowded with minute suckers arranged in 8 or more rows |
| <b>Distribution</b>     | Demersal, East Greenland   | Benthic, South West Greenland   |

(Frandsen & Zumholz 2004)

*Rossia* sp.



|                         | <i>Rossia moelleri</i>   | <i>Rossia palpebrosa</i>   |
|-------------------------|--|--|
| <b>Mantle lenght:</b>   | ≤ 70 mm  | ≤ 70 mm  |
| <b>Characteristics:</b> | Skin smooth, body, slightly gelatinous.  | Dorsal side of head and mantle beset by small rounded papillae whose number, size and distribution vary greatly and may be small and poorly visible. |
| <b>Club suckers</b>     | Club suckers of very different sizes - considerably larger in proximal part of club than in distal part.<br>In proximal part of club, suckers are arranged in 4 rows; in distal part, in 6 rows. | club suckers arranged in 7-10 rows.<br>All club suckers are of similar size.   |
| <b>Distribution</b>     | Demersal   | Benthic from f 10-1250 m -(100-500 m). All around Greenland except upper north part  |

(Frandsen & Zumholz 2004)

## GASTROPODA

| FAMILY           | PAGE |
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### TAXONOMIC KEY – FAMILIES

- 1(10) No visible shell (internal or absent)
- 2(9) No shell, slug like
- 3(6) Body dorid in shape (ovate elongate)
- 4(5) Anus lateral, no gill or accessory lamellae. Body elevated, velum well developed free  
[**ARMINIDAE**]
- 5 Circle of gills enclosing the anal papillae, mantle with numerous tubercles  
[**ONCHIDORIDIDAE**]
- 6 Body limaciform
- 7(8) Rhinophores laminated with arborescent sheath, numerous cerrata ramosa along each side of the body giving a bushy appearance [**DENDRONOTIDAE**]
- 8(9) Tail with bordering papillae. Edge of the mantle with sparse simple papillae which may also be on the center of the back. Circle of gills [**POLYCYRIDAE**]

- 9 No gills circle, a ring of frilly appendages present around the edge of the back. Frontal veil fimbriated [**TRITONIIDAE**]
- 10 Shell internal (vestigial and membranous) not visible, animal “brain-like” [**VELUTINIDAE part 1**]
- 11(16) Shell turriform
- 12(13) Axial sculpture of low, thick costae. Shell with high spire, coarse and flatten spiral ridge, no umbilicus and aperture rounded [**EPITNONIIDAE**]
- 13 Without sculpture of projecting costae
- 14(15) Shell large, elongate with many whorls, spirally grooved. No umbilicus and aperture rounded [**TURRITELLIDAE**]
- 16 Shell small (up to 5 mm), smooth or cancellate, whitish. Aperture rounded-ovate, small fold on the upper part of the columella [**PYRAMIDESELLIDAE**]
- 16(22) Shell bulloid/cylindrical
- 17(18) Shell covered by the mantle, apperance in four parts [**PHILINIDAE**]
- 18 Shell not covered by the mantle, solid
- 19(20) Aperture constricted above but roundly open below (a) [**SCAPHANDRIDAE**]
- 20(21) Aperture not constricted (b) [**CYLICHNIDAE**]
- 21 Very large last whorl. Shell subglobose with 2 to 3 rapidly enlarging whorls. Mantle in some families can cover part of the shell [**VELUTINIDAE part 2**]
- 22(27) Shell patellate
- 23(24) Shell with anterior slit, notch or dorsal foramen [**FISSURELLIDAE**]
- 24 Shell without slit, notch or dorsal foramen
- 25(26) Shell with fine and numerous growth lines crossed by higher radiating ribs giving a finely reticulate -granulated appearance [**LEPETIDAE**] *Lepeta caeca*
- 26 Shell pattern variable often consisting of broken radial lines and concentric lines. Coloration of brown and white producing tessellate pattern. Inside apical region chocolate brown [**LOTTIIDAE**] *Testudinalia testudinalis*
- 27(30) Shell Trochoid
- 28(29) Shell trochoid, top-shaped, with spiral rows of beads sometimes eroded on last whorl. Umbilicus present or absent [**CALLIOSTOMATIDAE**]
- 29 Shell trochoid, smooth or with raised spiral threads. Aperture round, umbilicus more or less deep [**MARGARITIDAE**]

30(31) Shell globose, smooth, enlarged last whorl. Aperture semicircular and umbilicus prominent  
[NATICIDAE]

31 Buccinidae-like shells

32(35) Shell tall

33(34) Shell with tall spire, last whorl 60-75 % of shell height. Sculpture of spiral striae, which may or may not be prominent, with or without costae. When present, costae are very prominent, crescentic or orthocline. Aperture commonly large, broadly oval, sometimes more elongate; siphonal canal short (*Buccinum*) to long (*Colus*, *Neptunea*), never closed. Operculum with a terminal or a central nucleus [BUCCINIDAE]

34 Shell with moderately high spire. Sculpture of costae or spiral striae, or both; giving rise to conspicuous tubercles. Aperture small, oval, with siphonal canal short to long (forming a tube). Outer lip thickened, with internal teeth in mature shells. Operculum horny, with a terminal or lateral nucleus [MURICIDAE]

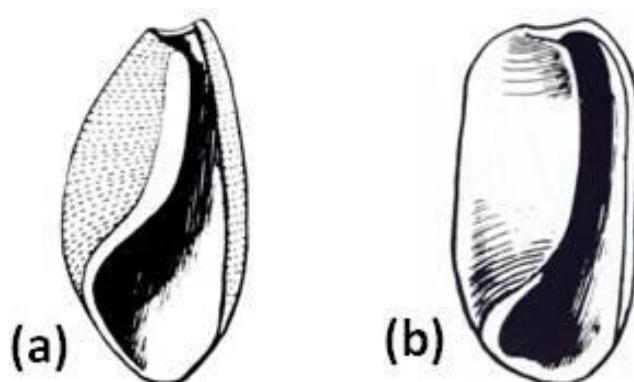
35 Shell smaller

36(39) Shell small (up to 30 mm), fusiform. Columella with 3 or 4 folds, siphonal canal short  
[VOLUTOMITRIDAE]

37(38) Shell small (up to 20 mm) ovate to fusiform with short canal and without operculum in most genera except *Propebela* and *Oenopota* [MANGELIIDAE]

39 Shell turbinate, thin-shelled but strong, spirally carinate or smooth, periostracum horny velvety. Umbilicus bordered by a fold [CAPULIDAE]

(Hayward & Ryland 1995, Abbott 1974, Keen & Coan 1974, McLean et al. 1996)



Gastropoda (Class) > Caenogastropoda (Subclass) > [unassigned] Caenogastropoda (Order) > Epitonioidae (Superfamily) >**Epitoniidae** (Family)

*Boreoscala greenlandica*

Perry 1811

AphiaID: 523706

Unaccepted names: *Epitonium greenlandicum*, *Scalaria greenlandica*.



Size: 25 mm to 60 mm length

Shape: solid, elongate

Sculpture: 9 to 12 ridge like costae sometimes very broad. Spiral sculpture usually prominent. 9 spiral cord on base

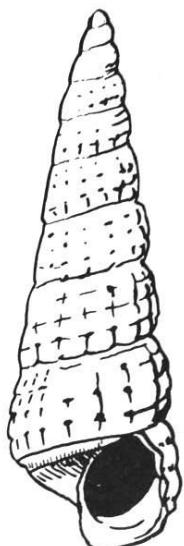
Operculum: dark brown, paucispiral

Color: chalky gray

(Abbott 1974)

Gastropoda (Class) > Caenogastropoda (Subclass) > [unassigned] Caenogastropoda (Order) > Cerithioidea (Superfamily) >**Turritellidae** (Family)

*Tachyrhynchus* sp.



(Keen & Coan 1974)

***T. erosus***

Couthouy 1838

AphiaID: 196391

Unaccepted name: *Tellina balthica*

***T. reticulatus***

(Mighels & Adams 1842)

AphiaID: 156447

Unaccepted names: *Turritella lactea*, *Alvania areolata*

***T. ventricosus***

Golikov 1986

AphiaID: 446532

Unaccepted name: *Tellina moesta*



Laure de Montety



[www.marinespecies.org](http://www.marinespecies.org)

*Tachyrhinchus* sp.



|                  | <i>Tachyrhinchus erosus</i>  | <i>Tachyrhinchus reticulatus</i>   | <i>Tachyrhinchus ventricosus</i>                                   |
|------------------|--|--|--|
| <b>Shell</b>     | Thick.<br>About 8-10 whorls<br>enlarge slowly from<br>pointed apex (often<br>worn or broken).<br>Oval aperture is 1/5<br>height.<br>Outer lip crenulated,<br>inner lip slightly<br>thickened | Moderately thin.<br>About 11 whorls enlarge<br>slowly from the apex.<br>Aperture ovate, variable in<br>size, about 1/5 height.<br>Outer lip crenulated, inner<br>lip slightly everted. No<br>umbilicus | Description not available<br>yet! (need original Russian<br>paper) |
| <b>Sculpture</b> | Axial fine growth lines.<br>Up to 8 flat spiral ribs<br>on body whorl  | Numerous straight axial<br>ribs and low close-set spiral<br>ribs   |  |
| <b>Umbilicus</b> | No   | No   |  |
|                  | Operculum: thin round<br>and spiralled from a<br>central nucleus, dark<br>brown  | Operculum: round and<br>spiralled from a central<br>nucleus  |  |
| <b>Color</b>     | Cream to chalky white.<br>Periostracum smooth<br>thick closely adherent<br>yellowish-brown   | Dingy white.<br>Periostracum thin, flaky<br>yellowish  |  |
| <b>Size</b>      | up to 25 mm long   | up to 24 mm  |  |
| <b>Be aware!</b> | May be confused with<br><i>T. reticulatus</i> , but no<br>axial ribs and straighter<br>side whorls   | May be confused with <i>T.</i><br><i>erosus</i> but more whorls,<br>presence of axial ribs   |  |

(Abbott 1974, MacPherson 1971)

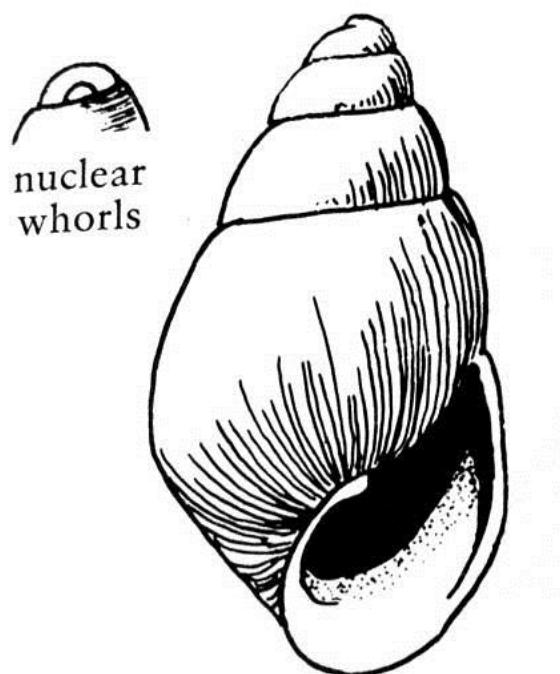
Gastropoda (Class) > Heterobranchia (Subclass) > [unassigned] Heterobranchia (Infraclass) > Pyramidelloidea (Superfamily) >**Pyramidellidae** (Family)

*Odostomia* sp.

Fleming 1813

AphiaID: 138413

Unaccepted name: –



Genus shape: small elongate conic shells, white, smooth, with a dark brown band on the upper part of the columella.

(Keen & Coan 1974)

Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Cephalaspidea (Order) > Philinoidea (Superfamily) >**Cylichnidae** (Family)

*Cylichna* sp.



Can be mistaken for *Scaphander* sp.



(Keen & Coan 1974)

*Cylichna alba*

Brown 1827

AphiaID: 139474

Unaccepted names: *Volvaria alba*, *Bulla cortica*



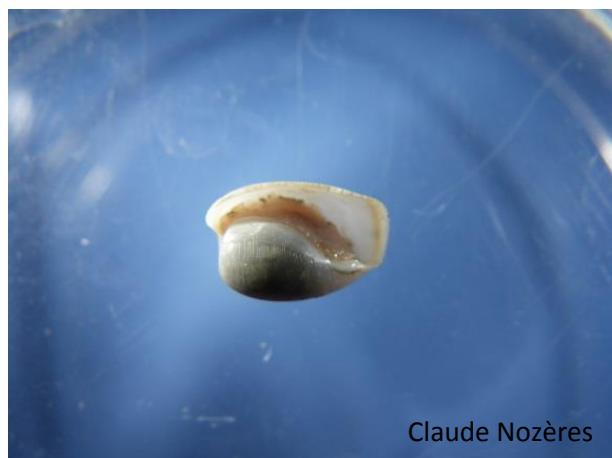
Claude Nozères

*Cylichna* sp.

Loven 1846

AphiaID: 137867

Unaccepted name: –



Claude Nozères

---

***Cylichna alba***

---

**Shell** Narrowly oblong with flat sides. Apex with a dished shallow depression.

***Cylichna* sp.**

Other possibel species in Arctic and Greenlandic water: *C. occulta*, *C. densistriata*, *C. magna*, *C. lemchei*.

**Color** Shell white.  
Periostracum thin shiny, yellowish to brown

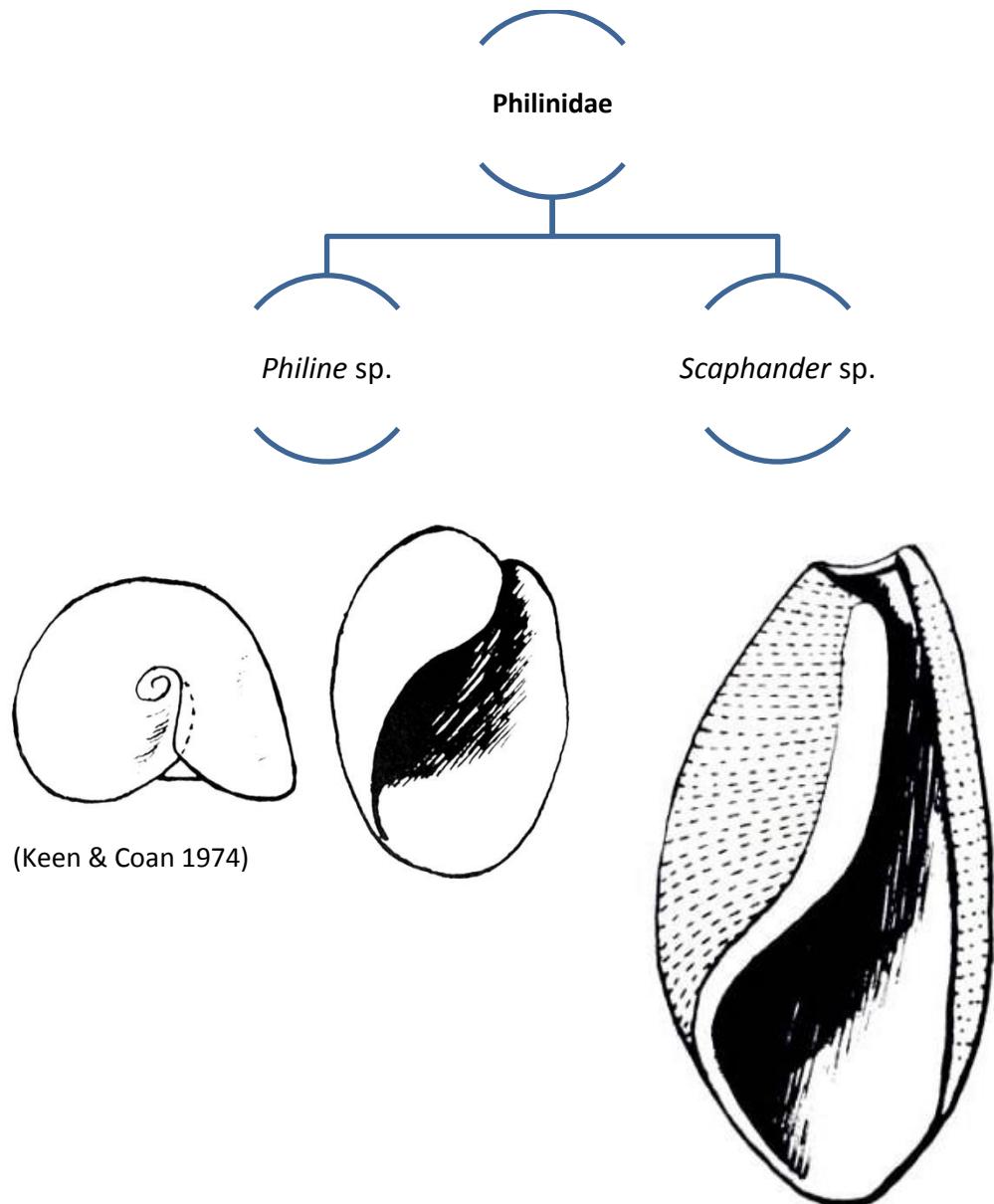
**Size** Up to 10 mm.

**Be aware!** May be confused with *Scaphander* sp.

---

(Sneli et al. 2005, Abbott 1974)

Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Cephalaspidea (Order) > Philinoidea (Superfamily) >**Philinidae** (Family)



## *Philine* sp.

Ascanius 1772

AphiaID: 138339

Unaccepted name: –



Size: 10 to 15 mm

Shape: shell bulloid, spire concealed, aperture as long as shell, thin. Shell covered by mollusc flesh which give it a “ball” aspect.

At least 5 species can be founded in Greenland waters: *Philine finmarchica*, *P. lima*, *P. punctata*, *P. quadrata*, *P. scabra*.

Species can be best differentiated by their external morphology, shells (and male reproductive system)

(Abbott 1974, Sneli et al. 2005, Ohnheiser & Malaquias 2013)

Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Cephalaspidea (Order) > Philinoidea (Superfamily) >**Scaphandridae** (Family)

## *Scaphander* sp.

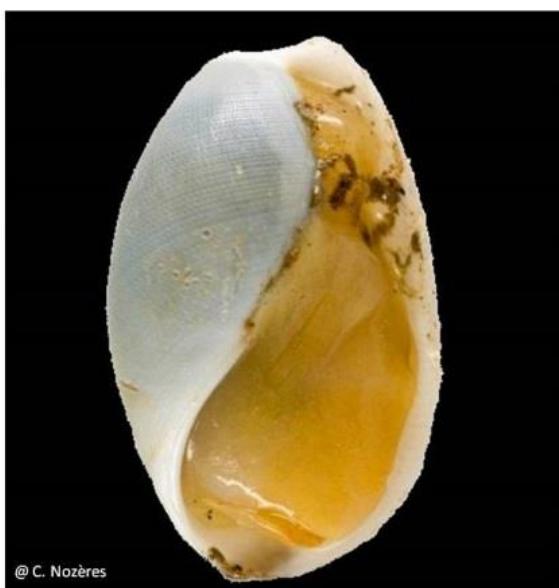
Montfort 1810

AphiaID: 137871

Unaccepted name: –



Can be mistaken for *Cylichna* sp.



Size: 25 mm to 38 mm.

Shape: shell bulloid, thin, spire concealed. Apex with a slightly sunken area. Aperture as long as shell, constricted above and roundly open below (flaring). Surface spirally punctuate, outer lip carinate.

*Scaphander punctostriatus* seems to be the species mostly found in Greenland waters.

May be confused with *Cylichna* sp. (not *C. alba*) but larger, aperture flaring, and surface spirally punctuate.

(Abbott 1974, Sneli et al. 2005)

Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Gymnosomata (Order) > Clionoidea (Superfamily) >**Clionidae** (Family)

*Clione limacina*

Phipps 1774

AphiaID: 139178

Unaccepted name: –



Mostly epi-mesopelagic.  
Sometimes found in beam trawl.

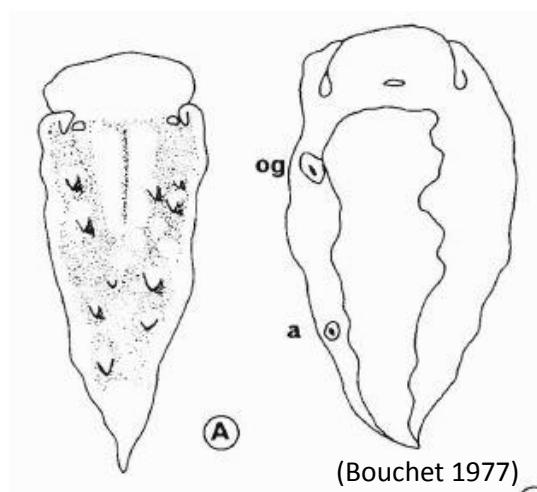
Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Nudibranchia (Order) > Dexiarchia (Suborder) > Cladobranchia (Infraorder) > Euarminida (Parvorder) > Arminoidea (Superfamily) >**Arminidae** (Family)

*Heterodoris robusta*

Verrill & Emerton 1882

AphiaID: 140101

Unaccepted name: –



Size: up to 20 mm  
Shape: few large tubercles and low anterior carina on the back. Ringed rhinophores located in a notch between the mantle and the frontal velum. Genital pore located in the first third, anus in the second third of the body. No gill or accessory lamellae, velum well developed, free.  
Color orange to red  
Feed on Isididae gorgonians

(Bouchet 1977, Abbott 1974)

Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Nudibranchia (Order) > Dexiarchia (Suborder) > Cladobranchia (Infraorder) > Dendronotida (Parvorder) > Tritonioidea (Superfamily) > **Dendronotidae** (Family)

## *Dendronotus* sp.

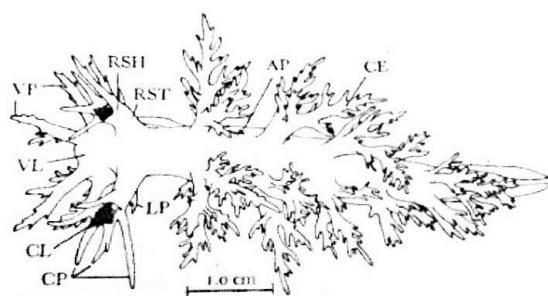
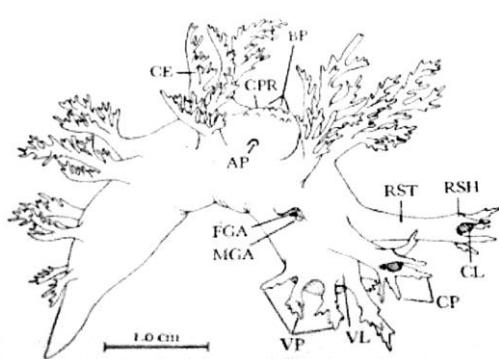


Figure 2

Dorsal view of *Dendronotus albus*, showing the external features of the body and appendages

|                         |                        |             |
|-------------------------|------------------------|-------------|
| AP = anal papilla       | CE = cerata            | CL = clavus |
| CP = crown papillae     | LP = lateral papilla   |             |
| RSH = rhinophore sheath | RST = rhinophore stalk |             |
| VL = veil               | VP = veil papillae     |             |

(Robillard 1970)

*Dendronotus* sp.



*D. dalli*

Bergh 1879

AphiaID: 156709

Unaccepted names: *Volvaria alba*, *Bulla cortica*

*D. frondosus*

Ascanius 1774

AphiaID: 139523

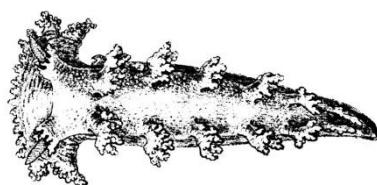
Unaccepted name: –

*D. robustus*

AE Verrill 1870

AphiaID: 139525

Unaccepted name: –



(Sars 1878)

|                               | <i>Dendronotus dalli</i>  | <i>Dendronotus frondosus</i>  | <i>Dendronotus robustus</i>   |
|-------------------------------|---|---|---|
| <b>Foot</b>                   | About 1/8 as wide as long.<br>Anterior end blunt,<br>posterior tapers abruptly  | Long, relatively narrow<br>and bluntly rounded<br>anteriorly.   | Stouter, less compressed<br>laterally and less acutely<br>tapered posteriorly than<br><i>D. frondosus</i> |
| <b>Cerrata</b>                | 6-7 (4-8) short extensively<br>branched.<br>On the tail there are 1-2<br>(1-5) unpaired but large<br>accessory cerrata.   | 5-7 (4-8) pairs, tall.<br>Arranged at decreasing<br>interval  | 6-7 pairs, relatively short<br>and stout. Not<br>exceptionally<br>arborescent.                            |
| <b>Rhinophore</b>             | Relatively short and stout,<br>with many small branches.<br>Lateral papillae arising<br>from or near the base of<br>the rhinophore.<br>Clavus have 20-24 (16-33)<br>roughly alternating leaves. | Moderately branched,<br>about equal of first pair of<br>cerrata<br>Lateral papillae arising<br>between a quarter and<br>half-way up the stalk<br>Clavus 8-12 leaves (up to<br>25 in larger animals) | Stout and round stalk.<br>No lateral papillae<br>Clavus with 10-12 or 15-20<br>leaves                     |
| <b>Head lips<br/>and veil</b> | Veil not sharply marked off<br>form the head.<br>5-5 pairs of stout<br>extensively branched veil<br>papillae.<br>Many (15-30+) simple lip<br>papillae   | 4 pairs of relatively stout<br>and branched veil papillae.<br>2-4 (0-8) long thin, simple<br>lip papillae.  | Enormous veil, 8-10 veil<br>papillae.<br>About 10 small unequally<br>sized lip papillae                   |
| <b>Size</b>                   | 130 mm  | 10 to 75 mm   | Up to 90 mm   |

(Robilliard 1970, Abbott 1974)

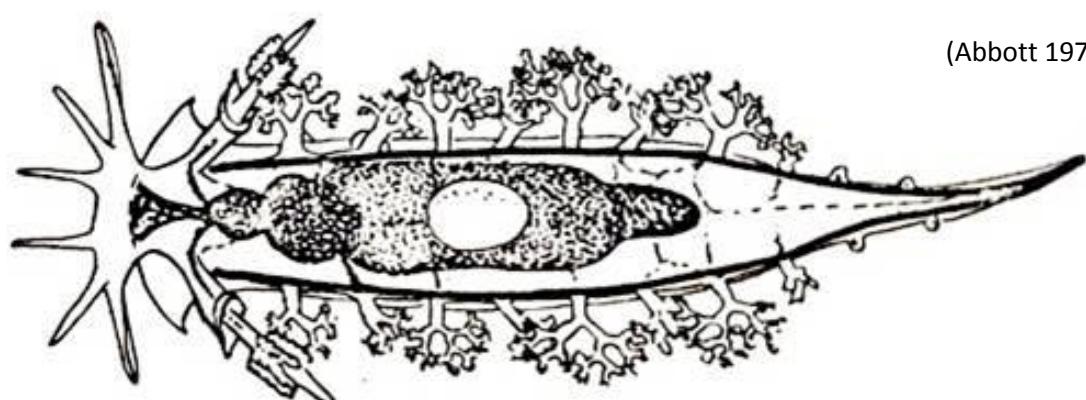
Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Nudibranchia (Order) > Dexiarchia (Suborder) > Cladobranchia (Infraorder) > Dendronotida (Parvorder) > Tritonioidea (Superfamily) > **Tritoniidae** (Family)

*Tritonia* sp.

Cuvier 1798

AphiaID: 138580

Unaccepted name: –



Size: unknown

Shape: body slug-shaped, no dorsal branchial plumes. A ring of frilly appendages around the edge of the back. Frontal veil fimbriated.

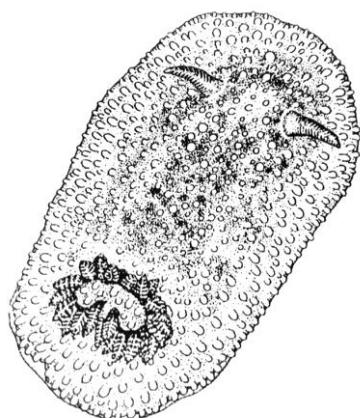
Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Nudibranchia (Order) > Ectenidiacea (Suborder) > Doridacea (Infraorder) > Onchidoridoidea (Superfamily) > **Onchidorididae** (Family)

## *Onchidoris bilamellata*

Linnaeus 1767

AphiaID: 150457

Unaccepted names: *Doris bilamellata*, *Lamellodoris fusca*



(Bleakney 1996)

Size: up to 40 mm.

Shape: body elliptical. Surface covered by width rather large, numerous club shape protuberances stiffened by calcareous spicules.

Rhinophores: 15-20 leaves on each side.

Gills: 16-32 brownish unpinnate/simple pinnate.

Color: pale-rust to flesh or marbled with the two. Brownish blotches along the back, often forming a rectangular pattern.

(Abbott 1974, Bleakney 1986)

Gastropoda (Class) > Heterobranchia (Subclass) > Opisthobranchia (Infraclass) > Nudibranchia (Order) > Ectenidiacea (Suborder) > Doridacea (Infraorder) > Polyceroidea (Superfamily) >**Polyceridae** (Family)

*Colga* sp.



*Colga villosa*

Odhner 1907

AphiaID: 146851

Unaccepted names: *Doris lacera*, *Issena abildgaardi*



Laure de Montety

*Colga* sp.

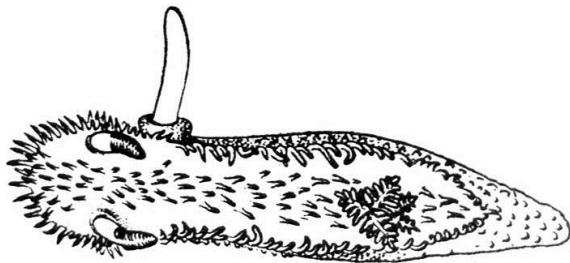
Bergh 1880

AphiaID: 138367

Unaccepted name: –



Olga Zimina



(Abbott 1974)



Olga Zimina

*Colga villosa*

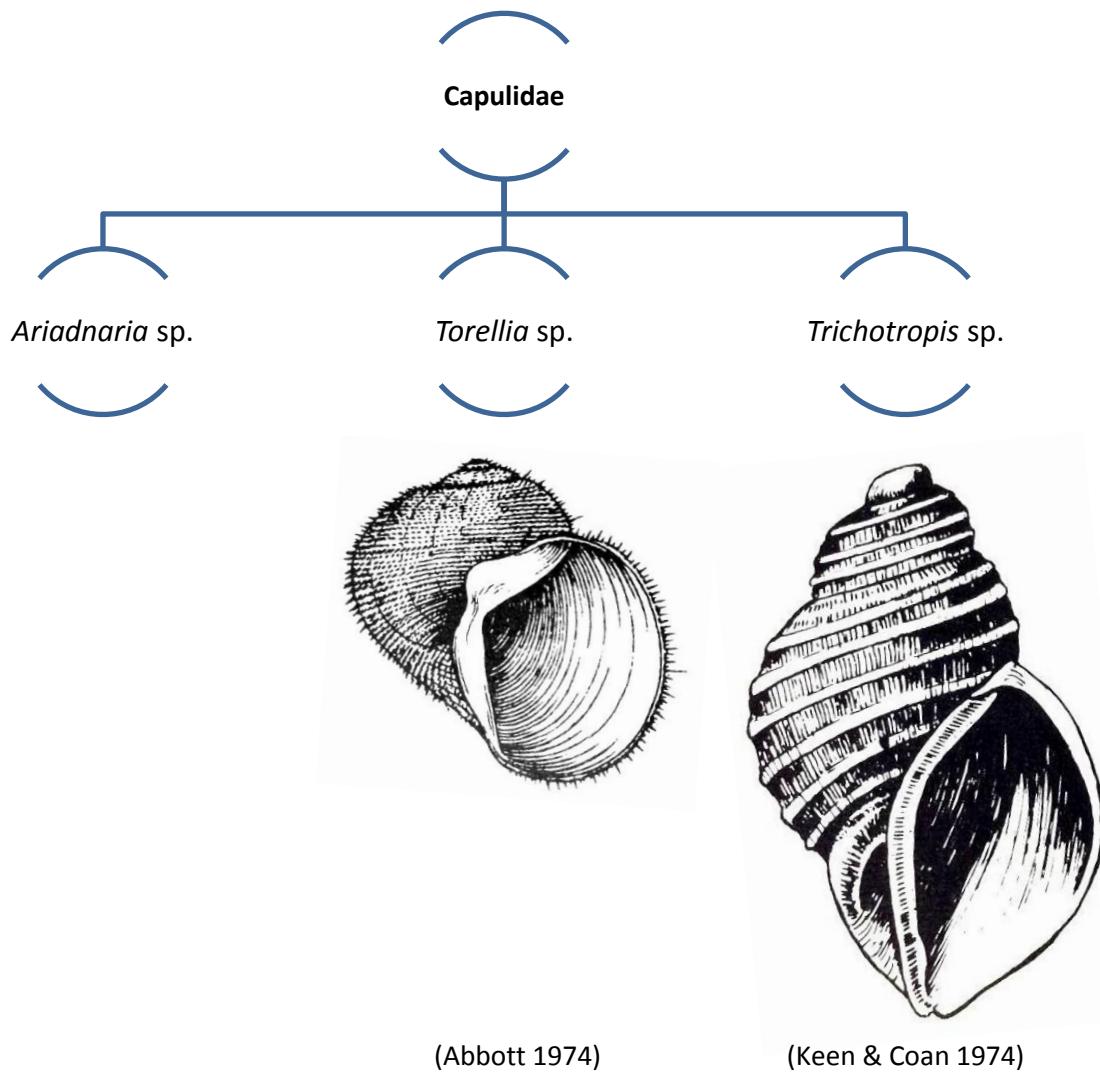
Size: unknown

Shape: body slug shape, tail with bordering papillae. Edge of mantle with sparse simple papillae (may be also in the center of the back). Oral palps auriculates

Rhinophores: retractiles into a prominent oblique sheath. Branchial plumes bi or tripinnate

(Abbott 1974)

Gastropoda (Class) > Caenogastropoda (Subclass) > Littorinimorpha (Order) > Capuloidea (Superfamily)  
**>Capulidae (Family)**



|                     | <i>Ariadnaria</i> sp.   | <i>Torellia</i> sp.  | <i>Trichotropis</i> sp.                                    |
|---------------------|---|--|--|
| <b>Shell</b>        | Not very strong, spirally carinate  | Resembling a small <i>Littorina</i> . Globose with pointed spire. 6 whorls spirally striated | Thin shelled but strong, spirally carinate. Aperture large |
| <b>Periostracum</b> | Thick brownish with hairy spicules on the carinae   | Pale-brown velvety   | Horny, with bristlelike hairs on the carinae               |
| <b>Umbilicus</b>    | Chinklike, bordered by a large spirall cord   | Narrow   | Chinklike, bordered by a large spirall cord                |
| <b>Notes</b>        | <i>Ariadnaria</i> was a subgenus of <i>Trichotropis</i> so genus description are really close |  |  |

(Abbott 1974)

## *Ariadnaria borealis*

Broderip & G.B. Sowerby I 1829

AphiaID: 714762

Unaccepted name: *Trichotropis borealis*



Can be mistaken for *Trichotropis* sp.



BREA

Size: up to 25 mm high.

Shape: 4 to 5 carinate whorls  
(body whorl = 1/3 shell height).

Sculpture: numerous and fine slightly raised growth lines. Sharp, well spaced growth rests. Spiral ribs variable between shells but rounded and clearly defined.

Aperture: more ½ height of the shell. 2 or more carinae.

Umbilicus: present, chinklike.

Operculum: small and oval, slightly pointed base.

Color: shell white, later whorls with a pale yellow or reddish brown periostracum bearing well spaced bristles.

Best distinguished from *Trichotropis bicarinata* and *T.conicus* by umbilicus and the appearance of bristles on the periostracum

(Abbott 1974, MacPherson 1971)

## *Torellia delicata*

Philippi 1844

AphiaID: 138985

Unaccepted names: *Cyclostoma delicatum*, *Torellia fimbriata*



www.marinespecies.org

Size: 10 to 15 mm.

Shape: globose, 6 whorls spirally striate, pointed spire, narrowly umbilicate.

Color: pale brown velvety periostracum.

(Abbott 1974)

*Trichotropis* sp.



Can be mistaken for *Ariadnaria* sp.

*Trichotropis bicarinata*

(Sowerby I 1825)

AphiaID: 160421

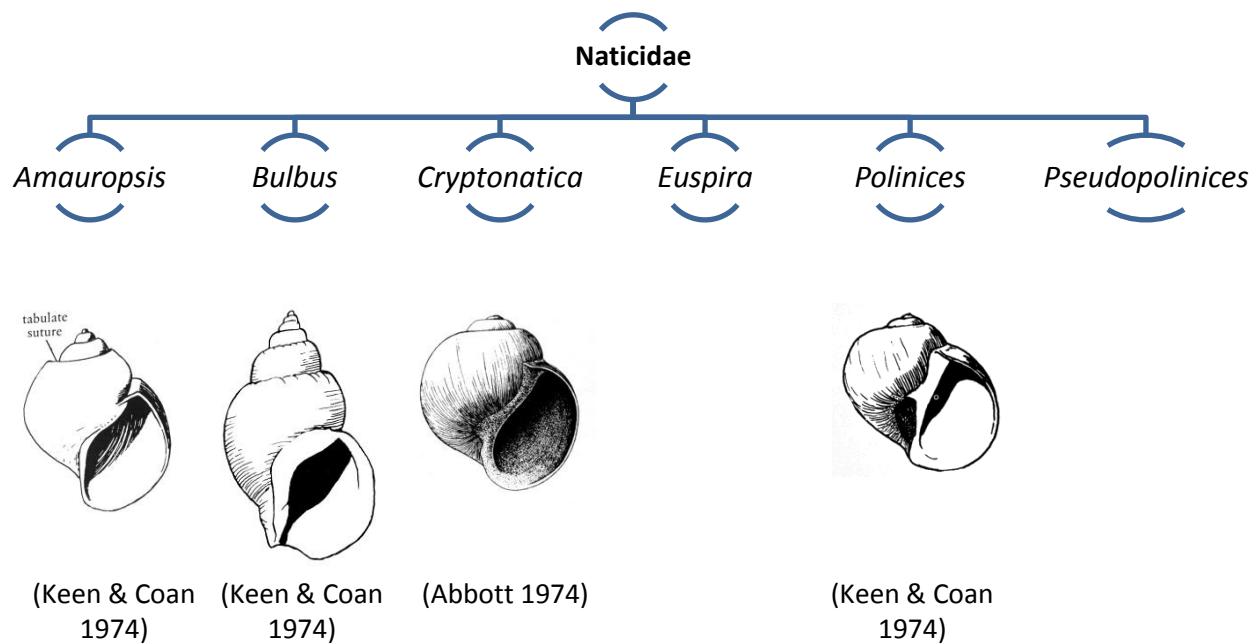
Unaccepted name: *Turbo bicarinatus*



|                           | <i>Trichotropis bicarinata</i>   | <i>Trichotropis conicus</i>  |
|---------------------------|--|--|
| <b>Shape</b>              | 6 whorls very tumid and rapidly enlarging (body whorl $\geq 2/3$ shell height).  | 6 whorls enlarge slowly from apex. Aperture, squarish, is 1/3 shell height.  |
| <b>Sculpture</b>          | Faint growth lines. 2 strong spirals ribs on the body whorl.   | Delicate growth lines. Spiral sculpture of fine distant ribs low and indistinct between shoulder and suture but higher at the middle of the body whorl. Strong keel near the base. |
| <b>Umbilicus</b>          | Present, deep in a round depression.   |  |
| <b>Operculum</b>          | Comma shaped.  | Oval with a slightly pointed base.   |
| <b>Color/periostracum</b> | Shell white, horn coloured periostracum bearing long bristles on the ribs.   | Shell white, yellowish periostracum firmly adherent to the shell.  |
| <b>Size</b>               | Up to 37 mm high for 30 mm large.  | Up to 17 mm high.  |
| <b>Be aware!</b>          | Best distinguish from <i>Ariadnaria borealis</i> and <i>Trichotropis conicus</i> by its rotund shape and the relative lack of sculpture. | Best distinguish from <i>Ariadnaria borealis</i> and <i>Trichotropis bicarinata</i> by the keel low on the body whorl and the squarish aperture.                                   |

(Abbott 1974, MacPherson 1971)

Gastropoda (Class) > Caenogastropoda (Subclass) > Littorinimorpha (Order) > Naticoidea (Superfamily)  
**> Naticidae (Family)**



|                            | <b>Shape</b>              | <b>Umbilicus</b>             | <b>Callus</b>  | <b>Operculum</b>                                 |
|----------------------------|---------------------------|------------------------------|--|--|
| <i>Amauropsis</i> sp.      | Suture tabulated          | Very small or absent         |  | Horny,<br>paucisprial<br>translucent brown       |
| <i>Bulbus</i> sp.          | Round to egg-shaped       | Very small or absent.        |  | Horny,   |
| <i>Cryptonatica</i> sp.    | Shell, strong.            | Present but sealed by callus | Small and flat, closing the umbilicus                        | Calcareous,<br>paucisprial.                      |
| <i>Euspira</i> sp.         | Rather large, very strong | Small                        |  | Corneus,<br>paucisprial,<br>filling the aperture |
| <i>Polinices</i> sp.       | Shell solid, glossy ovate | Present                      | Buttonlike,<br>partially or completely filling the aperture. | Chitinous  |
| <i>Pseudopolinices</i> sp. | Same as above             |                              |  |  |

(Abbott 1974)

## *Amauropsis islandica*

Gmelin 1791

AphiaID: 140521

Unaccepted names: *Nerita islandica*, *Amauropsis purpurea*



Size: up to 40 mm high and 20 mm large.  
Shape: Shell rather thin but strong. 4 to 5 rounded whorls rapidly enlarging. Suture grooved.  
Umbilicus: absent or very slight slit.  
Operculum: horny, translucent-brown with microscopic spiral lines.  
Color: shell yellowish-white with a thin yellowish brown periostracum which flakes off when dry.

May be confused with *Euspira pallida* but it has grooved sutures.

(Abbott 1974, MacPherson 1971, Snell et al. 2005)

## *Bulbus smithii*

T. Brown 1839

AphiaID: 140524

Unaccepted names: *Acrybia flava*, *Natica flava*



Size: up to 30 mm.  
Shape: globular, inflated whorls, fragile. Shell surface minutely reticulated by spiral threads and growth lines. Aperture very large.  
Umbilicus: very small, greatly indented.  
Operculum: thin, chitinous.  
Color: bright straw-coloured or golden periostracum.

(Abbott 1974)

## *Cryptonatica affinis*

Gmelin 1791

AphiaID: 140525

Unaccepted names: *Nerita affinis*, *Natica clausa*



Can be mistaken for *Euspira* & *Amauropis*



Laure de Montety



Laure de Montety

Size: up to 37 mm high and 37 mm large.

Shape: 4 to 5 rapidly enlarging whorl. Shell smooth.

Umbilicus: completely filled by the thickened calus.

Operculum: calcareous.

Color: from pale straw yellow to deep reddish brown.

May be confused with *Euspira pallida* but operculum is calcareous and umbilicus closed and with *Amauropis islandica* but it lack channeled structures. Small specimen may be confused with *Pseudopolinices nana* but operculum is calcareous.

Species from deep water (1000 m) must be compared with *Cryptonatica bathybia* (Sneli and all 2005).

(Abbott 1974, MacPherson 1971, Sneli et al. 2005)

## *Euspira pallida*

(Broderip & Sowerby 1829)

AphiaID: 140536

Unaccepted names: *Lunatia palliad*, *Natica pallida*



Can be mistaken for *Cryptonatica* sp.



Size: up to 42 mm high and 35 mm large.

Shape: 4 to 5 rapidly enlarging whorl. Shell smooth. Aperture long and wide, variable. Upper part of callus wider than lower part.

Umbilicus: almost close to slightly open.

Operculum: chitinous.

Colour: from pale straw yellow to dark chestnut.

May be confused with *Cryptonatica affinis* but operculum is chitinous and umbilicus open and with *Amauropsis islandica* but it lack channeled structures. Small specimen may be confused with *Pseudopolinices nana* but umbilicus is open.

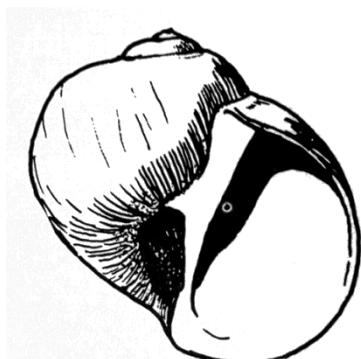
(Abbott 1974, MacPherson 1971, Sneli et al. 2005)

## *Polinices* sp.

Montfort 1810

AphiaID: 147109

Unaccepted name: –



(Abbott 1974)

Size: variable with species.

Shape: shell solid, glossy.

Umbilicus: completely filled by the button like callus

Operculum: chitinous, translucent, thin.

Most of *Polinices* species are now in *Euspira* genus. One species found in Greenland waters is *Polinices nanus* now *Pseudopolinices nanus*.

(Keen & Coan 1974)

*Pseudopolinices nanus*

Møller 1842

AphiaID: 140551

Unaccepted name: *Natica nana*



Can be mistaken for *Euspira pallida*

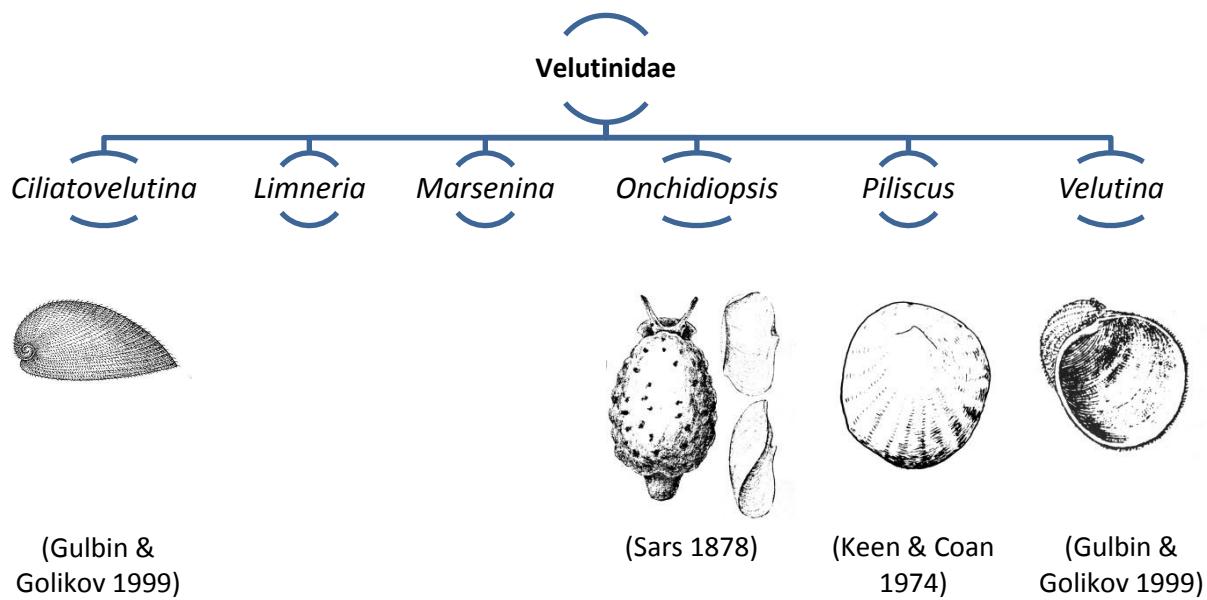


Size: up to 17 mm high and 14 mm large.  
Shape: shell solid, ovate-globose. Spire short and obtuse.  
Umbilicus closed, callus broad semicircular, flat and depressed anteriorly.  
Operculum: chitinous.  
Color: shell white, periostracum very thin inconspicuous, pale yellowishwhite or yellowish brown.

May be confused with small specimen of *Euspira pallida* but umbilicus is closed and with small specimen of *Cryptonatica affinis* but operculum is chitinous.

(Marincovich 1977, Abbott 1974)

Gastropoda (Class) > Caenogastropoda (Subclass) > Littorinimorpha (Order) > Velutinoidea (Superfamily)  
**>Velutinidae (Family)**



|                            | <b>Shape</b>   | <b>Columella</b>    | <b>Periostracum</b>   |
|----------------------------|--|---------------------|-----------------------|
| <i>Ciliatovelutina</i> sp. | Similar as <i>Velutina</i> sp.   |                     |                       |
| <i>Limneria</i> sp.        | Elongate globose.  | Flattened shelflike |                       |
| <i>Marsenina</i> sp.       | Moderately large, quite thin.<br>Aperture very large.<br>Mantle split down the center<br>and covering the outer shell. | Concave             |                       |
| <i>Onchidiopsis</i> sp.    | Sluglike. Back verrucose (brain-like). Shell under the mantle,<br>very thin  |                     |                       |
| <i>Piliscus</i> sp.        | Shell limpet-shaped, oval in<br>outline, low spire near anterior<br>end  |                     |                       |
| <i>Velutina</i> sp.        | Subglobose, 2 or 3 rapidly<br>enlarging whorls.  | Arched and narrow   | Velvety or<br>powdery |

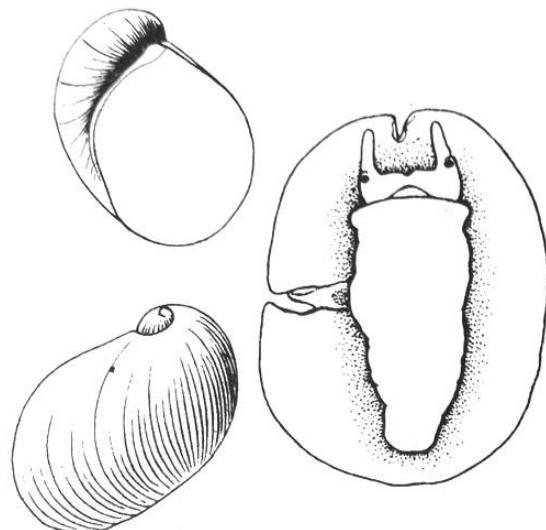
(Abbott 1974)

## *Marsenina glabra*

Couthouy 1838

AphiaID: 140175

Unaccepted names: *Oxinoe glabra*, *Sigaretus groenlandicus*



(Abbott 1974)

Size: up to 18 mm.

Shape: shell thin smooth, 2 whorls. The rosy mantle covers all but a portion of the body whorl.

Color: white.

May be confused with *Velutina* sp but the mantle is enveloping the shell.

(Abbott 1974, MacPherson 1971)

## *Onchidiopsis* sp.

Bergh 1853

AphiaID: 138628

Unaccepted name: –



Size: up 30 mm

Shape: slug/nudibranchlike. Warty back under which there is a vestigial membranaceous shell. Tentacles long with an eye at the base

Possibly 3 species: *Onchidiopsis groelandica*, *O. glacialis* and *O. carnea*

(Abbott 1974, Gulbin & Golikov 2001)

## *Piliscus commodus*

Middendorff 1851

AphiaID: 141899

Unaccepted names: *Pilidium commodum*, *Capulacmea radiata*



Laure de Montety

Size: up to 28 mm in diameter.

Shape: extremely thin, small acentric apex with a turnover tip. Sculpture=concentric lines.

Color: white, thin pale yellow periostracum.

(MacPherson 1971, Abbott 1974)

## *Ciliatovelutina lanigera*

*Limneria undata*

*Velutina* sp.



*Ciliatovelutina*

*lanigera*

Bell 1855

AphiaID: 110479

Unaccepted name: –

*Limneria*

*undata*

Lepechin 1780

AphiaID: 110489

Unaccepted name: –

*Velutina*

*plicatilis*

O.F. Müller 1776

AphiaID: 141902

Unaccepted names:

*Bulla plicatilis*,  
*velutina sitkensis*

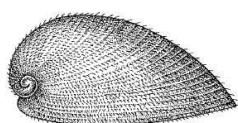
*Velutina*

*velutina*

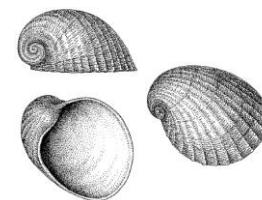
AphiaID: 141905

AphiaID: 110477

Unaccepted names:  
*Bulla velutina*, *Velutina laevigata*



(Gulbin & Golikov 1999)

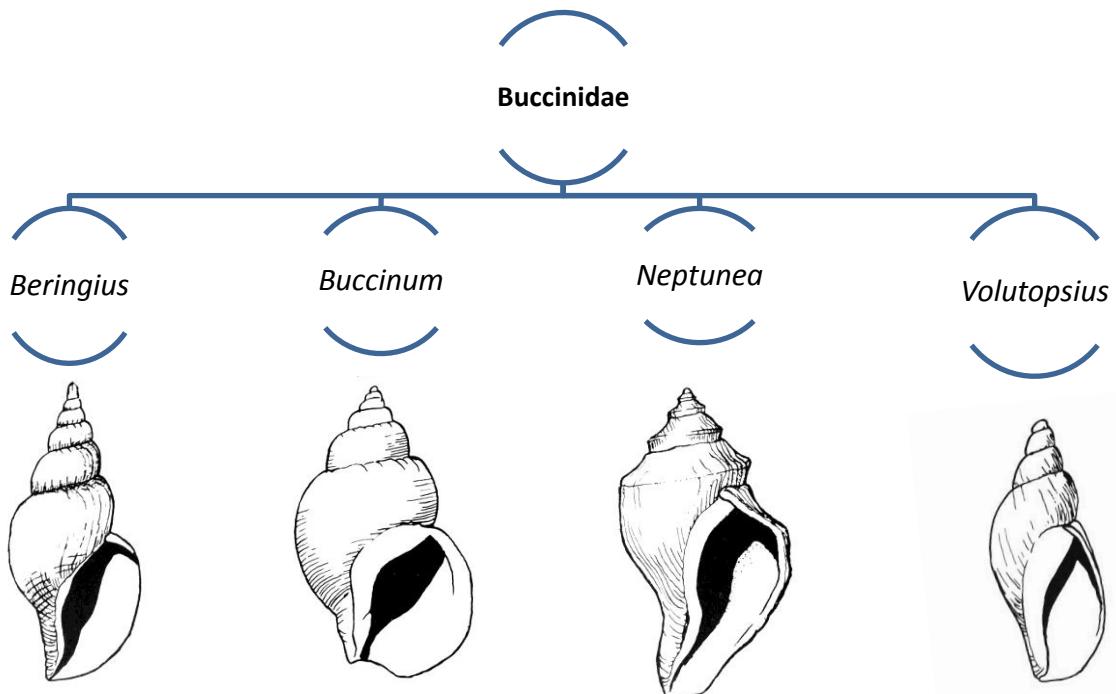


(Gulbin & Golikov 1999)

|                     | <i>Ciliatovelutina lanigera</i>   | <i>Limneria undata</i>  | <i>Velutina plicatilis</i>  | <i>Velutina velutina</i>  |
|---------------------|---|---|---|---|
| <b>Shape</b>        | Broadly ear-shaped, with 1.5 whorls and deeply impressed suture. Aperture oval, with calcareous inner lining.<br><br>Outer and inner lips thickened in upper part.<br><br>Axial sculpture of lower periostracum wrinkles bears equally sized short setae.<br><br>Spiral pattern of closely spaced periostracum wrinkles | As <i>V. velutina</i> , but more elongate.<br><br>Flattened columella | Obliquely oblong.<br><br>Inner whorl with Calcareous incrustation, spirally striate | 3 convex rounded whorls, deeply impressed suture and well developed calcareous layer and periostracum.  |
| <b>Periostracum</b> | Periostracum well developed yellow or light grey-brown.   | Fine spiral bands of brown  | Yellowish   | Periostracum fibrous, yellowish or brown, tightly adherent to shell forming closely spaced discontinuous spiral crests. Intervals between crests are equal to or 2 times the crest thickness.<br><br>Adult individuals with 22-30 crests on last whorl. |
| <b>Size</b>         | Up to 34 mm length  | 7 to 8 mm   | 10 to 30 mm   | 10 to 20 mm   |
| <b>Be aware!</b>    | <i>C. lanigera</i> is easily separated from other members of the genus by a transverse, as distinct from spiral, arrangement of rows of setae which are equal in size and shorter than in other species.  |   |   |   |

(Gulbin & Golikov 1999, Abbott 1974, MacPherson 1971)

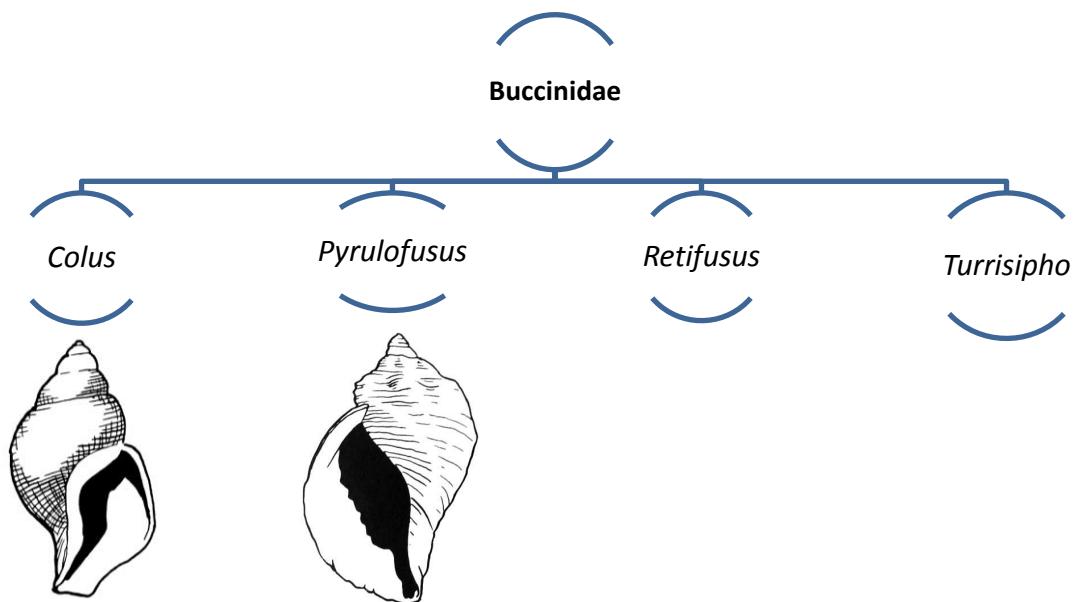
Gastropoda (Class) > Caenogastropoda (Subclass) > Neogastropoda (Order) > Buccinoidea (Superfamily)  
**>Buccinidae (Family)**



(Keen & Coan 1974)

|                     | <i>Beringius</i> sp.                                   | <i>Buccinum</i> sp.                                       | <i>Neptunea</i> sp.               | <i>Volutopsius</i> sp.   |
|---------------------|--|---|-----------------------------------|--|
| <b>Canal</b>        | Short to almost obsolete, broad or slotlike            | Moderate to long, entire                                  |                                   | Canal short to almost obsolete, broad or slotlike              |
| <b>Aperture</b>     | Ovate to quadrate, not more than one half of the shell |   |                                   | Ovate to quadrate, very large, more than one half of the shell |
| <b>Outer lip</b>    | Outer lip rounding smoothly to end of shell            | Outer lip sinuous   |                                   | Outer lip rounding smoothly to end of shell                    |
| <b>Sculpture</b>    | Base not more sculptures than rest of the shell        | Quite variable, From smooth to spiral cord and axial ribs | Entirely spiral                   | Base not more sculptures than rest of the shell                |
| <b>Coiling</b>      | Coiling dextral  | Coiling dextral   | Coiling dextral                   | Coiling dextral.   |
| <b>Columella</b>    | Straight, without fold                                 | More or less straight, with one fold                      | Curve, without fold               | Slightly arched, without fold                                  |
| <b>Operculum</b>    | Coma shaped  | Round   | Large and ovate with a blunt base |  |
| <b>Periostracum</b> | Thin   |   | Periostracum wanting              |  |

**It should be interesting to take a picture of each genus operculum**



(Keen & Coan 1974)

|                     | <i>Colus</i> sp.                                      | <i>Pyrulofusus</i> sp.                             | <i>Retifusus</i> sp.   | <i>Turrisipho</i> sp. |
|---------------------|---|--|--|-----------------------|
| <b>Canal</b>        | Moderate to long, entire                              | Canal short to almost obsolete, broad or slotlike  | Moderately Long, straight or slightly curved to left siphonal canal  |                       |
| <b>Aperture</b>     | Aperture moderately high, about one half of the shell | Ovate to quadrate, more than one half of the shell | Aperture moderately high, about one half of the shell  |                       |
| <b>Outer lip</b>    | Outer lip evenly arcuate                              | Outer lip rounding smoothly to end of shell        | Outer lip evenly arcuate   |                       |
| <b>Sculpture</b>    | Smooth or axial sculpture only                        | Base not more sculptures than rest of the shell    | Absent or prominent varying in number orthocline axial ribs, becoming obsolete on lower part of shell base |                       |
| <b>Coiling</b>      | Coiling dextral                                       | Coiling senestral                                  | Coiling dextral  | Coiling dextral       |
| <b>Columella</b>    | Straight, without fold                                | Without fold                                       | Without fold   | Without fold          |
| <b>Operculum</b>    | Narrow and pointed                                    |  | Operculum oval With terminal nucleus strongly dislodged leftward   |                       |
| <b>Periostracum</b> | Thin, adherent  |  |  |                       |

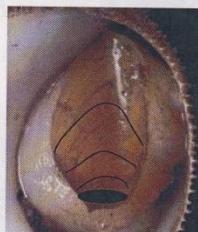
(Abbott 1974, Keen & Coan 1974, Kosyan & Kantor 2014, MacPherson 1971)

# Buccinidae first aid

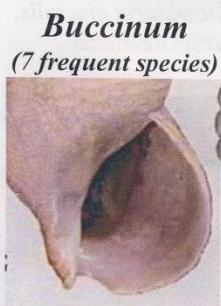
The Buccinidae gastropods is a large and difficult group. The primary goal is to divide this group into the 3 groups given below. If you are more experienced, you might be able to proceed into species level by the species given by the next pages in this compendium. You might take a photo from the front of the gastropod (inc opening) and send it to Denis ([zakharden@yandex.ru](mailto:zakharden@yandex.ru)).



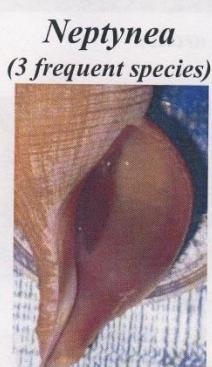
*Centric  
operculum from  
Buccinum sp*



*Operculum  
from the other  
Buccinidae  
families*



*Buccinum*  
(7 frequent species)



*Neptynea*  
(3 frequent species)



*Colus*  
(7 frequent species)

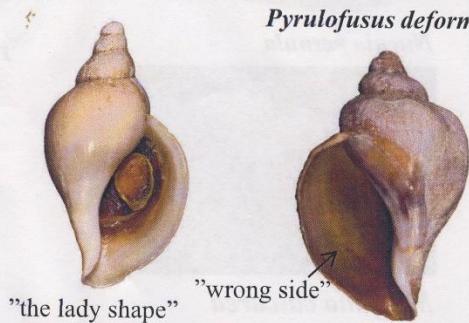
Morphology of house



*Turrisipho sp*  
(2 frequent species)



*Beringius osianii*  
(1 frequent species)



*Volutopsius norwegicus*  
(1 frequent species)

*Pyrulofusus deformis*

*Beringius turtoni*

Bean 1834

AphiaID: 138855

Unaccepted names: *Fusus turtoni*, *Beringius ossiani*



Size: large

Shape: shell, volutid-shaped with rather large cylindrical or bulbous nuclear whorls. The early 2½ whorls form a cylindrical apex. Adult 7 to 7½ whorls. Suture shallow

Aperture: oval, ½ or less the length of the shell. 7 to 7½ whorls. Canal rather short.

Sculpture: distinct growth lines and rounded spiral ribs.

Columella: straight, callus narrow.

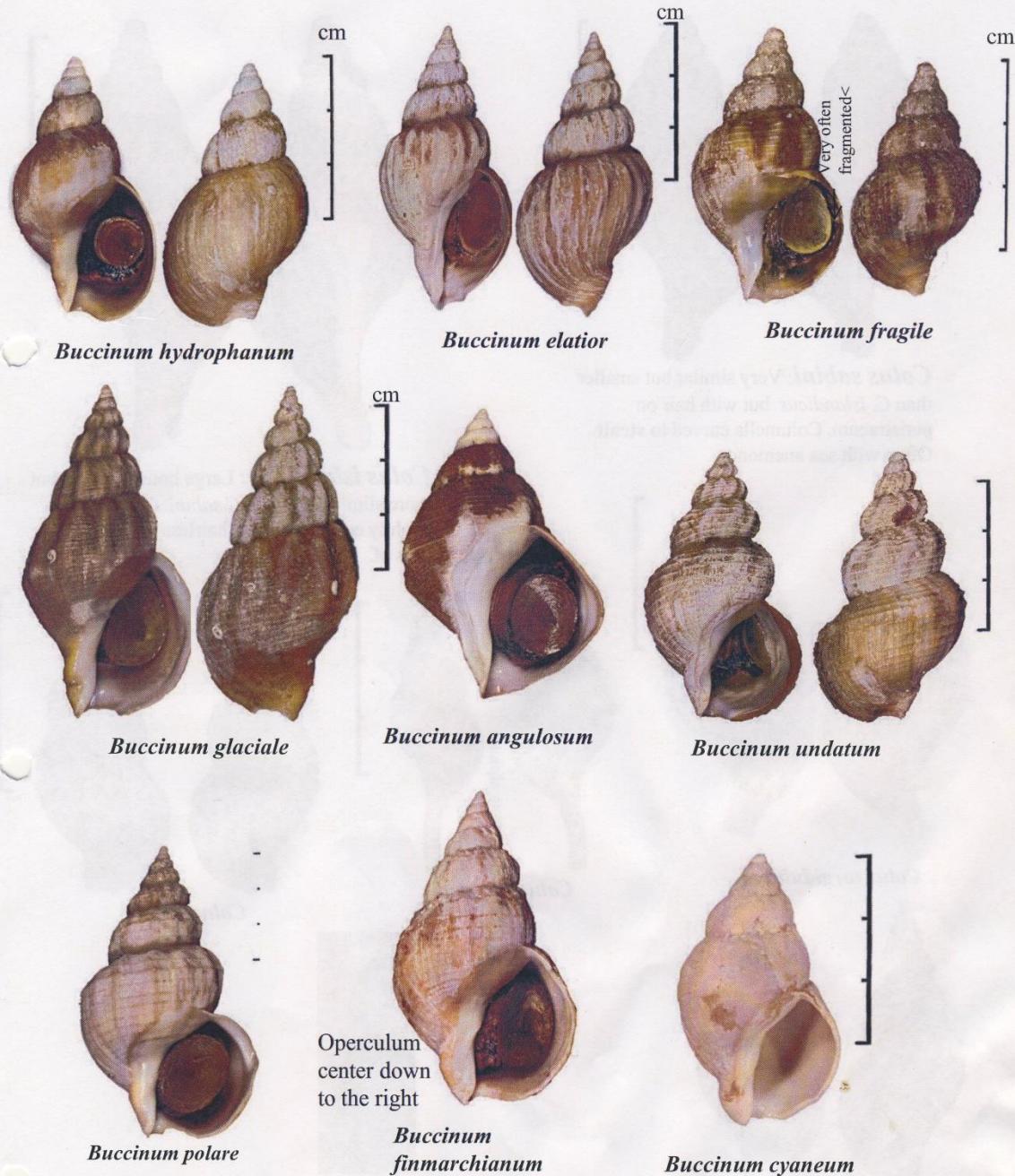
Operculum: oval large, pointed.

Color: shell white, periostracum yellowish, flaky.

*Buccinum* sp.



## Gastropoda – *Buccinum* sp



***Buccinum* sp.**

|                              | <b><i>Buccinum angulosum</i></b><br>Gray 1839<br>AphiaID: 138858  | <b><i>Buccinum belcheri</i></b><br>Reeve 1845<br>AphiaID: 138859                        | <b><i>Buccinum ciliatum ciliatum</i></b><br>Fabricius 1780<br>AphiaID: 138860   |
|------------------------------|---|---|---|
| <b>Shape</b>                 | 6 to 7 whorls with strongly sloping sides.  | 6 to 7 whorls enlarging slowly from a lopsided apex.                                    | 6 ½ whorls enlarging regularly.   |
| <b>Sculpture</b>             | Spiral ribs fine and close.   | Raised growth lines crossed low rounded spiral ribs, which are quite regular and close. | Second whorl has fine distinct spiral ribs.<br>Remaining whorls, about 15 prominent axial ribs curve somewhat obliquely extending only part way down the body whorl (mostly reduced). Over these, rounded spirals bisected by line. Growth lines distinct and sometimes raised. |
| <b>Columella</b>             | Slightly curved, callus narrow.   | Straight, one plait faintly visible. Callus wide and thin. Oval                         | One fold low on the columella visible as a distinct "tooth".  |
| <b>Aperture</b>              | ½ of the shell height.  | ½ Of the shell height.  | Narrow and oval, more than ½ of the shell height.   |
| <b>Operculum</b>             | Oblong, nucleus just outside the center.  | Small, nucleus central or just below and outside the center                             | Oval and small. Nucleus outside the center.   |
| <b>Color</b>                 | Dingy white or purplish pink.   |   |   |
| <b>Periostracum</b>          | Pale yellowish, rather thick and densely covered with short bristles.   | Thin, pale brown periostracum   | Thin yellowish with bristle along prominent growth lines.   |
| <b>Size</b>                  | Up to 63 mm.  | Small up to 35 mm   | Small, up to 27 mm  |
| <b>Be aware!</b>             | - <i>B. polare</i> but shape is more angular, the most prominent spiral rib is lower on the whorl and axial ribs are more curved and fewer. |   | - <i>B. undatum</i> but its smaller, columella is toothed, and there is bristle on the periostracum.  |
| <b>May be confused with:</b> | - <i>B. maltzani</i> but size is larger, and whorls are less rapidly enlarging and less inflated.   |   |   |

***Buccinum* sp.**

|                             | <i>Buccinum ciliatum</i><br><i>sericatum</i><br>Hancock 1846<br>AphiaID: 423840  | <i>Buccinum</i><br><i>cyaneum</i><br>Bruguière 1792<br>AphiaID: 138864   | <i>Buccinum</i><br><i>finmarkianum</i><br>Verkrüzen 1875<br>AphiaID: 160143  |
|-----------------------------|--|--|--|
| <b>Shape</b>                | Ovate, ventricose, very thin. 6 whorls, rounded.   | Shell rather thin and long. 5 to 7 whorls enlarging regularly from tiny apex.  | 7 to 8 rounded whorls with deep sutures enlarging regularly.   |
| <b>Sculpture</b>            | Fine spiral striae, few distant stronger ones crossed by minute growth lines, giving the surface a wrinkled appearance | Faint oblique axial folds distinct on early whorls, near suture. Also low spiral ribs bisected by a line. On later whorl spiral ridges more widely separated.                                      | Raised growth lines cross narrow, close, low spirals ribs of varying depth. Spiral ridges not always parallel to each other  |
| <b>Columella</b>            | Smooth regularly arched  | Columella with one fold, callus wide shiny and often chestnut coloured.  | Nearly straight, callus narrow.  |
| <b>Aperture</b>             | Rounded-ovate, $\frac{1}{2}$ spire height. Outer lip thin, sublobed in front.  | $\frac{1}{2}$ of the shell height. Outer lip usually has a sinus at the top.   | Less than $\frac{1}{2}$ of the shell height.   |
| <b>Operculum</b>            | Small with central nucleus   | Large, straight on inner side, rounded on the outer side, pointed at top and bottom. Nucleus near the outside edge.  | Large and oval, nucleus outside and below the center.  |
| <b>Color</b>                | Pale chestnut  | Yellowish-reddish to purplish brown  | Pale chestnut with reddish brown and white markings.   |
| <b>Periostracum</b>         | Greenish horn colour with minute cilia   | With short widely spaced bristles.   | Thin and pale brown smooth or sometimes with very short bristles.  |
| <b>Size</b>                 | Up to 30 mm  | Up to 58 mm  | Up to 80 mm.   |
| <b>Be aware!</b>            | - <i>B. micropoma</i> but periostracum seems without bristles  | - <i>B. hydrophanum</i> but rounded whorls are shorter, spiral sculpture is irregular and nucleus is near the outer side.<br>- <i>B. finmarkium</i> but spire is lower and nucleus more eccentric. | - <i>B. cyaneum</i> but spiral ribs distinct and closer.<br>Operculum more circular.<br>Nucleus more central.<br>- <i>B. hydrophanum</i> but spiral ribs coarser, less regular. Spire higher, columellar callus smaller.<br>Operculum nucleus acentric |
| <b>May be confused with</b> |  |  |  |

*Buccinum* sp.



|                              | <i>Buccinum<br/>fragile</i><br><i>Verkruzen, 1878</i><br>AphiaID: 160141 | <i>Buccinum<br/>glaciale</i><br>Linnaeus 1761<br>AphiaID: 138864  | <i>Buccinum<br/>hydrophanum</i><br>Hancock 1846<br>AphiaID: 138866  |
|------------------------------|--|---|---|
| <b>Shape</b>                 | <b>Ask Denis's description?!</b>   | 7 to 8 whorls enlarging slowly.   | 7 to 8 whorls, shallow sutures, enlarging gradually.  |
| <b>Sculpture</b>             |  | 12-14 oblique axial folds extending part way down body whorls. Spiral bands of numerous fine sharp lines. 2 to 8 spiral carinae on each whorl forming knobs on some specimen where they meet axial folds. | Narrow even and close spiral ribs, higher and more regular on early whorls. Later whorls, with few spiral ribs more distinct. Growth lines very faint |
| <b>Columella</b>             |  | Columella straight with one fold.   | Columella with one fold, very thin and wide callus, often of a bright color.  |
| <b>Aperture</b>              |  | Aperture oblong, less than $\frac{1}{2}$ of the shell height. Callus narrow.  | Less than $\frac{1}{2}$ of the shell height. Outer lip flaring.   |
| <b>Operculum</b>             |  | Nearly round with nearly central nucleus.   | Small rounded, nucleus in the center.   |
| <b>Color</b>                 |  | Pinkish tan   | Pale and purplish brown, pale tan or light chestnut.  |
| <b>Periostracum</b>          |  | Periostracum very thin, smooth and brown.   | Periostracum is very thin, smooth and pale yellow.  |
| <b>Size</b>                  | Up to 80 mm  | Up to 66 mm   | Up to 70 mm.  |
| <b>Be aware!</b>             |  | - <i>B. angulosum</i> but smooth periostracum, spiral bands and shape of the shell are different.   | - <i>B. finmarkium</i> but sutures are shallower, body whorl is larger and higher and operculum rounded.  |
| <b>May be confused with:</b> |  | - <i>B. polare</i> but it has oblique axial folds.  |   |

***Buccinum* sp.**

|                              | <b><i>Buccinum maltzani</i></b><br>Pfeffer 1886<br>AphiaID: 138868   | <b><i>Buccinum micropoma</i></b><br>Thorson 1944<br>AphiaID: 138869                                     | <b><i>Buccinum polare</i></b><br>Gray 1839<br>AphiaID: 138873<br>Unaccepted name:<br><i>Buccinum totteni</i>   |
|------------------------------|--|---|--|
| <b>Shape</b>                 | 6 rapidly enlarging and inflated whorls.   | 6 rotund whorls with deep sutures.  | 7 whorls, inflated, vertically compressed and rather shouldered (sometimes more straight side and no shoulders).   |
| <b>Sculpture</b>             | Narrow, sharp, slightly waved spiral ribs. Parallel to growth lines there are faint folds at the sutures.      | Growth lines are distinct and spiral ribs low rounded, well space and even. Totaly lack axial sculpture | Numerous narrow axial folds, parallel to growth lines, strongest at the suture.<br>Very fine & nearly equidistant spiral ribs. More prominent ribs (4-13 on body whorls), highest at the edge of shoulder. |
| <b>Columella</b>             | One plait visible. Very thin wash of callus.   | Slightly curved and bluish. There is a mere wash of callus.   | Nearly straight, one fold in some specimen. Callus thin and very narrow.   |
| <b>Aperture</b>              | Little more than $\frac{1}{2}$ of the shell height. Outer lip smoothly curved or with a sinus at the top.      | $\frac{1}{2}$ of the shell height, narrow at its base.  | About $\frac{1}{2}$ of the shell height.   |
| <b>Operculum</b>             | Small, oval with nucleus in an indented region near the center.  | Very small and nucleus outside the center.  | Large oval with central nucleus.   |
| <b>Color</b>                 | Pinkish-white.   | White.  | Dingy white or purplish pink.  |
| <b>Periostracum</b>          | Flaky olive brown.   | Pale yellow periostracum with well space bristles marking the sculpture of the shell.                   | Periostracum thin, yellowish brown with short bristles.  |
| <b>Size</b>                  | Small, to 30 mm.   | Small, up to 20 mm.   | Up to 67 mm  |
| <b>Be aware!</b>             | - <i>B. angulosum</i> but ribs are more sharp and distinct, periostracum is not hairy & no hint of angulation. | <i>B. ciliatum sericatum</i> but periostracum with well spaced bristles                                 | - <i>B. glaciale</i> but whorls are more convex, with fine spiral sculpture and straight axial fold  |
| <b>May be confused with:</b> | Smaller size.<br>- <i>B. cyaneum</i> but sculpture is sharper, periostracum smoother & nucleus more central.   |   |  |

*Buccinum* sp.



| <i>Buccinum scalariforme</i><br>Møller 1842<br>AphiaID: 138875 |   | <i>Buccinum undatum</i><br>Linnaeus 1758<br>AphiaID: 138878  |
|--|---|--|
| <b>Shape</b>   | 7 to 9 convex whorls, outer lip slightly sinuate and flaring. Deep sutures.   | Solid, 6 to 7 rapidly enlarging whorls with deep sutures.  |
| <b>Sculpture</b>   | Axial ribs thin, numerous intertwining and extending from suture to suture.<br>Spiral sculpture of microscopic, beaded threads giving a silky appearance.               | 9 to 18 axial ribs per whorls, extending to $\frac{1}{2}$ way down the body whorl (sometimes barely visible). Thick rounded spiral ribs. |
| <b>Columella</b>   | Straight with two folds, prominent bump on the body whorl at the base (usually). Callus has a thick, narrow, white inner part and a thinner wider darker layer outside. | Strong with a narrow callus.   |
| <b>Aperture</b>  | Less than $\frac{1}{2}$ of the shell height.  | Aperture, $\frac{1}{2}$ of the shell height.   |
| <b>Operculum</b>   | Ovate, with a straight inner and convex outer margin. Nucleous near the outer edge.   | Large, oval shape. Nucleus is between the center and the outer edge.   |
| <b>Color</b>   | Dull pinkish, yellowish, purplish light brown.  | Chalky gray to yellowish.  |
| <b>Periostracum</b>  | Pale brown on some specimen.  | Moderately thick and gray.   |
| <b>Size</b>  | 40 to 60 mm.  | Up to 66 mm.   |
| <b>Be aware!</b><br><b>May be confused with:</b>               | <i>-B. glaciale</i> but whorls are more convex, with fine spiral sculpture and straight axial fold.   |  |

(Abbott 1974, Keen 1963, MacPherson 1971)

*Colus* sp.



## Gastropoda – *Colus* sp



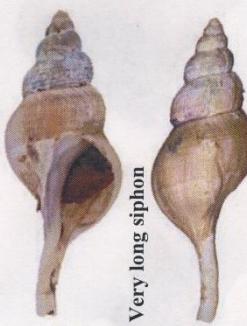
*Colus sabini*: Very similar but smaller than *C. islandicus* but with hair on peristracum. Columella curved to strait. Often with sea anemone.



*Colus islandicus*: Large house. Larger but more slim house than *C. sabini*. Columella slightly curved. Brown, hairless peristracum falls off.



*Colus turgidulus*



*Colus holboelli*



*Colus altus*



*Colus kroyeri*



*Colus latericus*

*Colus* sp.



*C. holboelli*

Møller 1842

AphiaID: 138900

Unaccepted names:  
*Fusus holboelli*, *Siphon tortuosus*

SE shelf slope

West shelf



Laure de Montety

*C. islandicus*

Mohr 1786

AphiaID: 138902

Unaccepted names:  
*Murex islandicus*,  
*Neptunia islandica*

West basin

SE shelf slope

SW shelf

West shelf



Laure de Montety

*C. pubescens*

A.E. Verrill 1882)

AphiaID: 160212

Unaccepted name: –

SW shelf

West shelf



@BREA

*C. sabini*

Gray 1824

AphiaID: 138906

Unaccepted names:  
*Colus togatus*,  
*Buccinum sabini*

West shelf



Ámundur Nolsø

|                     | <i>Colus holboelli</i>   | <i>Colus islandicus</i>  |
|---------------------|--|--|
| <b>Shape</b>        | 6 to 7 whorls with rather shallow sutures. Many specimens have a sloping shoulder below the suture especially on the last whorls | 6 whorls with deep suture  |
| <b>Sculpture</b>    | Fine growth lines cross strong, irregularly spaced spiral ribs   | Strong well spaced spiral ribs vary in height and in distance                        |
| <b>Columella</b>    | Quite curve, callus narrow   | Slightly curved. Callus is narrow  |
| <b>Aperture</b>     | Small, $\frac{1}{2}$ of the shell height. Canal quite long and narrow becoming wider at the excurred base                        | Wide, oval, about $\frac{1}{2}$ of the shell height. Canal relatively short and wide |
| <b>Operculum</b>    | Dark, narrow and pointed   | Variable but elongate in most specimen   |
| <b>Color</b>        | White  | White or white with tan marking  |
| <b>Periostracum</b> | Periostracum pale olive, reddish or olive brown  | Fibrous, yellowish or reddish brown  |
| <b>Size</b>         | Up to 58 mm long   | Up to 100 mm long  |
| <b>Be aware!</b>    | May be confused with <i>C. sabini</i> but shoulder is more sloping and operculum is narrower                                     | Shell is best recognized by its larger size and inflated body whorl                  |

(Abbott 1974, Keen 1963, MacPherson 1971)

## *Colus* sp.



|                     | <i>Colus pubescens</i>   | <i>Colus sabini</i>   |
|---------------------|--|---|
| <b>Shape</b>        | 6 to 8 whorls with slightly grooved sutures  | 5 to 6 rounded whorls   |
| <b>Sculpture</b>    | Growth lines can be raised. Spirals ribs of unequal distance, quite high   | Spiral ribs usually low, rounded  |
| <b>Columella</b>    | Curved, callus narrow, clearly defined   | Curved, callus thin and narrow  |
| <b>Aperture</b>     | ½ of the shell height. Canal rather short and moderately pointed   | Oval, a little more than ½ of the shell height. Canal varies greatly in length and width, either straight or slightly curved  |
| <b>Operculum</b>    | Narrow and pointed   | wider at the top, base narrow and blunt   |
| <b>Color</b>        | Yellowish or rosy-white  | white   |
| <b>Periostracum</b> | Light olive-brown densely covered by short bristles. It looks fuzzy  | very thin, with short well spaced bristles  |
| <b>Size</b>         | Up to 81 mm  | up to 60 mm   |
| <b>Be aware!</b>    | May be confused with:<br>- <i>C. sabini</i> but whorls are less rotund and less rapidly enlarging, operculum narrower.<br>- <i>C. islandicus</i> but it's smaller with less inflated whorls and hairy periostracum | May be confused with:<br>- <i>C. holboelli</i> but shell is thinner, whorls more rotund and canal wider.<br>Operculum wider and blunter.<br>- <i>C. pubescens</i> but periostracum is thinner, whorls more rotund and operculum wider |

(Abbott 1974, Keen 1963, MacPherson 1971)

## *Colus* sp.



### *Anomalisiphon altus*

S. Wood 1848

AphiaID: 138896

Unaccepted name: *Colus altus*

### *Plicifusus kroeyeri*

Möller 1842

AphiaID: 491269

Unaccepted name: *Colus kroyeri*

### *Colus turgidulus*

Friese 1877

AphiaID: 138907

Unaccepted name: *Fusus turgidulus*  
SW shelf

*Neptunea* sp.



## Gastropoda – *Neptunea* sp



*Neptunea denselirata*



*Neptunea despecta*



*Neptunea communis*

only Russian zone,  
maybe Svalbard bank

## *Neptunea* sp.



### *N. antiqua*

Linnaeus 1758

AphiaID: 138920

Unaccepted names:  
*Murex antiquus*, *Fusus babylonicus*



[www.marinespecies.org](http://www.marinespecies.org)

### *N. denselirata*

Brøgger 1901

AphiaID: 423556

Unaccepted names:  
*Murex islandicus*,  
*Neptunia islandica*

### *N. despecta*

Linnaeus 1758

AphiaID: 138923

Unaccepted names:  
*Murex despectus*,  
*Fusus carinatus*

West basin  
SW shelf  
West basin



### *N. ventricosa*

Gmelin 1791

AphiaID: 156264

Unaccepted names:  
*Buccinum ventricosum*,  
*Fusus bulbosus*



[www.gastropoda.com](http://www.gastropoda.com)

|                     | <i>Neptunea antiqua</i>   | <i>Neptunea denselirata</i> |
|---------------------|---|-----------------------------|
| <b>Shape</b>        | Slightly concave spire of 7 tumid whorls.<br>Last whorl about 70-80% shell height.<br>Suture slightly accentuated by narrow<br>subsutural ridge |                             |
| <b>Sculpture</b>    | Numerous, fine spiral ridges and<br>flexuous growth lines. One thick spiral<br>keel run form shell base to umbilical<br>region                  |                             |
| <b>Columella</b>    |   |                             |
| <b>Aperture</b>     | Broadly oval, pointed adapically, short<br>broad siphonal canal   |                             |
| <b>Operculum</b>    |   |                             |
| <b>Color</b>        | Yellowish, occasionally reddish tinge   |                             |
| <b>Periostracum</b> |   |                             |
| <b>Size</b>         | Up to 100 mm  |                             |

(Abbott 1974, MacPherson 1971, Hayward & Ryland 1995)

*Neptunea* sp.



|                     | <i>Neptunea despecta</i>  | <i>Neptunea ventricosa</i>  |
|---------------------|---|---|
| <b>Shape</b>        | 8 convex whorls with deep suture enlarging very regularly   | Heavy with large ventricose body whorl  |
| <b>Sculpture</b>    | Distinct and slightly raised growth lines<br>Narrow, irregularly spaced reddish spiral ribs, stronger on early whorls and varying in prominence | Axial ribs or growth lines coarse and indistinct, rarely lamellate. Shoulders sometimes weakly nodulated. Spiral weak or absent |
| <b>Columella</b>    | Curved, callus narrow   |   |
| <b>Aperture</b>     | Less than $\frac{1}{2}$ of the shell height, broad, oval, flared reflexed outer lip. Canal narrow and curved inward                             |   |
| <b>Operculum</b>    | Large, brown and ovate with blunt base  |   |
| <b>Color</b>        | Pinkish tan or horn coloured  | Dirty brownish white  |
| <b>Periostracum</b> |   |   |
| <b>Size</b>         | Up to 95 mm   | Up to 90-120 mm   |
| <b>Be aware!</b>    | Shell is characterized by thin shell, smooth rounded whorls, fine ribs and narrow canal   |   |

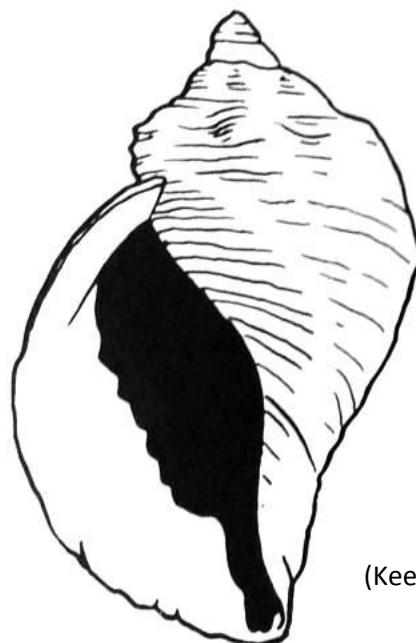
(Abbott 1974, MacPherson 1971, Hayward & Ryland 1995)

*Pyrulofusus deformis*

Reeve 1847

AphiaID: 254378

Unaccepted name: –



(Keen & Coan 1974)

Arctic Megabenthos

Size: up to 110 mm

Shape: 5 convex whorls sinistrally coiled, enlarging rapidly. Inflated body whorl is about  $\frac{3}{4}$  the height of the shell

Sculpture: weak axial folds (6 to 8) on the body whorl. Strong growth lines intersected numerous fine spiral threads

Aperture: wide, about 2/3 height of the shell

Operculum: small and brown, wider at the top

Color: purplish chestnut to pale tan

Periostracum: thin brown

(Abbott 1974, MacPherson 1971)

## *Retifusus latericeus*

Möller 1842

AphiaID: 827212

Unaccepted names: *Fusus latericeus*, *Colus latericeus*



Kosyan & Kantor 2014

Size: 10-25 mm.

Shape: elongate fusiform with high spire.

Sculpture: 10 to 17 flattened spiral sculpture cords on body whorl separated by narrower deep grooves between them. Medium high axial ribs present on all whorls in small specimens and only on upper whorls in large ones.

Operculum: oval with terminal nucleus, slightly shifted to the left.

Color: white or rosy beige.

Periostracum: thin light beige

(Kosyan & Kantor, 2014, Abbott 1974)

## *Turrisipho lachesis*

(Mörch 1869)

AphiaID: 138933

Unaccepted names: *Fusus lachesi*, *Colus lachesi*

West shelf



[www.gastropoda.com](http://www.gastropoda.com)

Size: up to 41 mm

Shape: shell elongate fusiform, about 10 whorls rather slowly enlarging

(MacPherson 1971)

# *Volutopsius norwegicus*

Gmelin 1791

AphiaID: 138938

Unaccepted names: *Strombus norwegicus*, *Fusus largillierti*

West shelf

SW shelf



Ámundur Nolsø

Size: up to 80 mm

Shape: 5 whorls with shallow sutures enlarging rapidly from a swollen apex. Body whorl is 2/3 of the shell

Sculpture: shell smooth

Columella: slightly curved with wide wash of callus

Aperture:  $\frac{1}{2}$  of shell height. Canal very short and wide

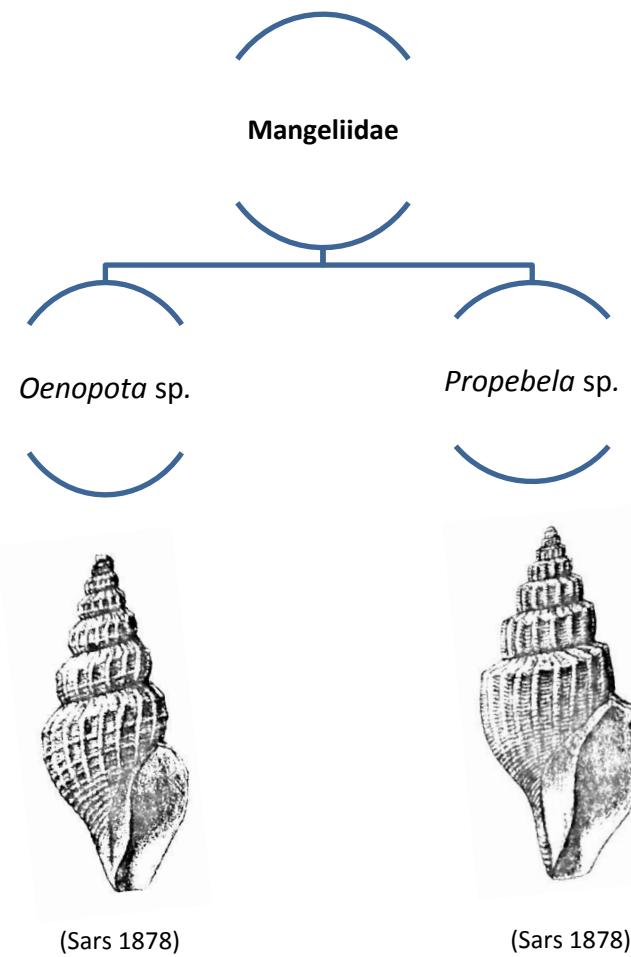
Operculum: small and ovate

Color: pale pinkish chestnut

Periostracum: brown

(MacPherson 1971, Abbott 1974)

Gastropoda (Class) > Caenogastropoda (Subclass) > Neogastropoda (Order) > Conoidea (Superfamily) > Mangeliidae (Family)



|                     | <i>Oenopota</i> sp.  | <i>Propebela</i> sp.   |
|---------------------|--|--|
| <b>Shape</b>        | Ovate-fusiform Spire elevated, shorter than the body whorl.<br>Whorls not shouldered | Ovate-fusiform Spire elevated, shorter than the body whorl.<br>Whorls shouldered |
| <b>Outer lip</b>    | With a weak posterior turrid notch   | With a weak posterior turrid notch   |
| <b>Sculpture</b>    | Axially ribbed   | Axially ribbed.  |
| <b>Columella</b>    | Flattened, siphonal canal short  | Flattened, siphonal canal short  |
| <b>Operculum</b>    | Chitinous, pear shaped   | Chitinous, pear shaped   |
| <b>Periostracum</b> | Thin, pale-brown   | Whitish  |

Abbott 1974

*Oenopota elegans*

Møller 1842

AphiaID: 139317

Unaccepted names: *Defrancia elegans*, *Lora elegans*



Size: up to 18 mm

Shape: 6 to 8 whorls sharp shouldered

Sculpture: axial ribs (up to 20 on the body whorl) are high, quite thick and well spaced. Shallow, angular sinus at the shoulder. Spiral ribs low and narrow.

Aperture: nearly  $\frac{1}{2}$  shell height. Outer lip smooth with shallow anal notch

Operculum: oval

Color: white

(MacPherson 1974)

***Oenopota/Propebela* are quite difficult to identify. Should be identified in lab.**

*Propebela nobilis*

Møller 1842

AphiaID: 160450

Unaccepted names: *Bela nobilis*, *Defrancia nobilis*

West shelf



Size: up to 26 mm

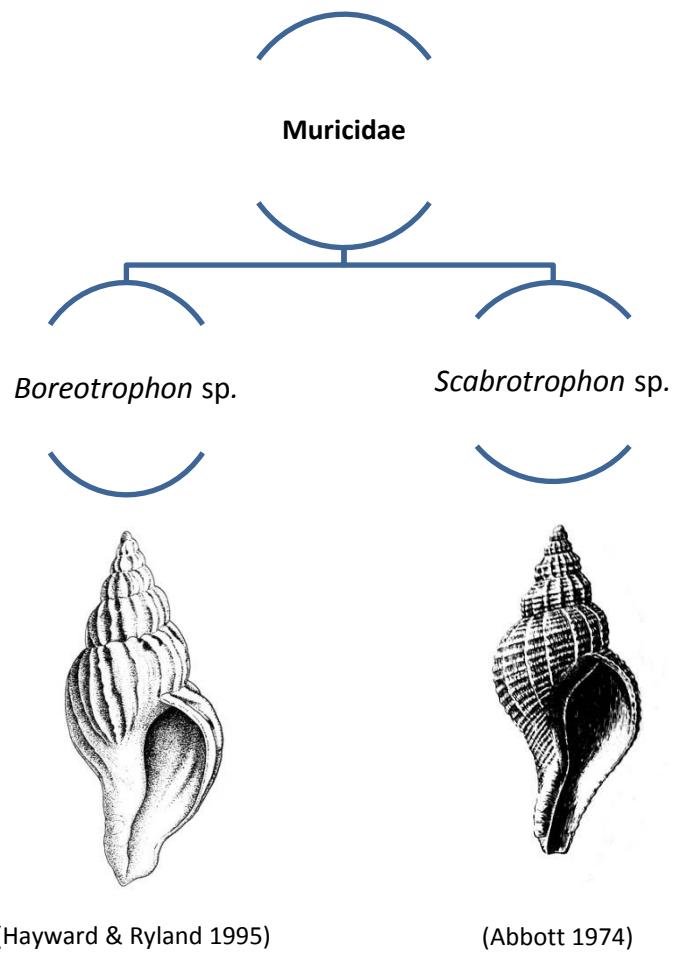
Shape: shell solid, ovate-fusiform. 6-8 tabulate whorls

Sculpture: axial ribs sharp high and straight. Shoulder may be nodulated at the of a strong spiral cord. Fine spiral lines

Color: white, sometimes slightly reddish brown

(Sars 1878)

Gastropoda (Class) > Caenogastropoda (Subclass) > Neogastropoda (Order) > Muricoidea (Superfamily) > **Muricidae** (Family)



(Hayward & Ryland 1995)

(Abbott 1974)

|                  | <i>Boreotrophon</i> sp.   | <i>Scabrotrophon</i> sp.   |
|------------------|---|--|
| <b>Shape</b>     | Shell fusiform, rounded whorls.<br>Long anterior canal  | Small to medium, fusiform.<br>Canal moderately long, open.   |
| <b>Outer lip</b> | Slightly flaring  |  |
| <b>Sculpture</b> | Axial sculpture of strong lamellae,<br>spiral sculpture if present not<br>crossing or raised above lamellae | Sculpture axial and spiral. Spiral cords<br>scabrous, overriding axial ribs of<br>mature sculpture |

(Abbott 1974, Hayward & Ryland 1995, McLean et al. 1996)

*Boreotrophon* sp. (West shelf)  
*Scabrotrophon* sp.



*Boreotrophon clathratus*  
Linnaeus 1767

AphiaID: 146732  
Unaccepted name: *Murex*  
*clathratus*



[www.marinespecies.org](http://www.marinespecies.org)

*Boreotrophon truncatus*  
Strøm 1768

AphiaID: 146733  
Unaccepted name: *Buccinum*  
*truncatum*



*Scabrotrophon fabricii*  
(Møller, 1842)

AphiaID: 147146  
Unaccepted name: *Trophon*  
*fabricii*



Ámundur Nolsø

|                  | <i>Boreotrophon clathratus</i>   | <i>Boreotrophon truncatus</i>   | <i>Scabrotrophon fabricii</i>  |
|------------------|--|---|--|
| <b>Size</b>      | Up to 37 cm  | Up to 27 mm   | Up to 46 mm  |
| <b>Shape</b>     | 5 to 6 whorls<br>More or less shouldered, inflated whorls. Deep sutures.<br>High axial lamellae, 13 to 17 on body whorl. | 7 to 8 whorls.<br>Deep sutures. Spire sharply pointed. 12 to 23 axial lamellae on the body whorls. Spiral lines fine. Columella very curved | 7 to 8 whorls<br>Shell very thick, deep suture, pointed apex.<br>Axial lamellae thin and high. Strong spiral ribs widely space |
| <b>Operculum</b> | Oblong   | Large oval operculum  | Large, ovate, broadly pointed at its base  |
| <b>Color</b>     | White to light tan   | Pale chestnut   | Pure to dingy white  |
| <b>Be aware!</b> | May be confused with <i>B. truncatus</i> but whorls fewer and more shouldered.   | May be confused with <i>B. clathratus</i> but whorls are more numerous, spire higher aperture wider and shorter canal                       | Spiral ribs and larger size best distinguish it from other <i>Boreotrophon</i> sp.   |

(Abbot 1974, MacPherson 1971)

Scabrotrophon is presented in this table as it was formerly named *Boreotrophon fabricii*

Gastropoda (Class) > Caenogastropoda (Subclass) > Neogastropoda (Order) > Muricoidea (Superfamily) > **Volutomitridae** (Family)

### *Volutomitra groenlandica*

Møller 1842

AphiaID: 141968

Unaccepted names: *Mitra groenlandica*, *Volutomitra alaskana*

West shelf



[www.gastropods.com](http://www.gastropods.com)



(Abbott 1974)

Size: up to 40 mm

Shape: ovate fusiform, columella with 4 folds

Perisotracum: dark-brown

Gastropoda (Class) > Patellogastropoda (Subclass) > Lottioidae (Superfamily) > **Lepetidae** (Family)

### *Lepeta caeca*

O.F. Müller 1776

AphiaID: 140187

Unaccepted names: *Patella caeca*, *Patella candida*

West shelf



Ámundur Nolsø

Size: up to 18 mm

Shell: limpet-shaped, oval.

Sculpture: fine and numerous, slightly elevated growth lines, crossed by much higher radiating ribs, giving the surface a granulated appearance.

Color: straw-coloured on top, white underside.

Periostracum: flaky, reticulate, light brown.

(Macpherson 1971, Abbott 1974)

Gastropoda (Class) > Patellogastropoda (Subclass) > Lottoidea (Superfamily) >**Lottiidae** (Family)

### *Testudinalia testudinalis*

O.F. Müller 1776

AphiaID: 234208

Unaccepted names: *Tectura tessulata*, *Lottia testudinalis*



Size: up to 30 mm long.  
Shell: conical, apex toward anterior margin with anteriorly projecting beak  
Sculpture: sharp and distinct growth lines crossed by very fine radial lines  
Colour: variable pattern, mostly with light background overlain by series of irregularly branched brown bands radiating from apex to produce a tessellate pattern. Inside white with outside pattern visible marginally; apical region chocolate brown.

(Macpherson 1971, Hayward & Ryland 1995, Abbott 1974)

Gastropoda (Class) > Vetigastropoda (Subclass) > Fissurelloidea (Superfamily) >**Fissurellidae** (Family)

### *Puncturella noachina*

Linnaeus 1771

AphiaID: 139975

Unaccepted name: *Patella noachina*



Size: up to 10 mm.  
Shape: shell thin, limpet-shaped and laterally compressed. Apex is turned forward. Just behind apex a narrow fissure leading to a narrow convex internal septum.  
Sculpture: about 25 low and rounded radiating ribs. Concentric growth lines cross the ribs.  
Color: white with a thin pale tan periostracum.

**Best distinguish from other *Puncturella* sp. by its lateral compression and the relatively smaller number of ribs.**

(Abbott 1974)

Gastropoda (Class) > Vetigastropoda (Subclass) > Trochoidea (Superfamily) >**Calliostomatidae** (Family)

*Calliostoma* sp.

Swainson 1840

AphiaID: 138584

Unaccepted name: –



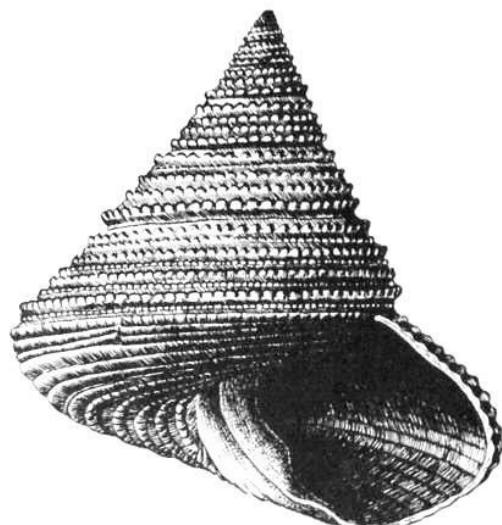
Can be mistaken for *Margarites* sp.



Ámundur Nolsø



Ámundur Nolsø



(Abbott 1974)

Size: up to 60 mm

Shape: shell top-shaped with spiral rows of beads. Columella usually arched, sometimes truncated at the base

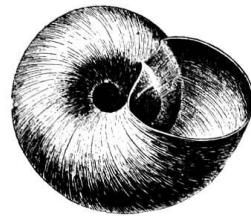
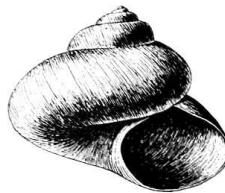
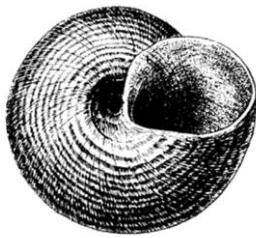
Umbilicus: present or absent. Interior of aperture iridescent

Operculum: circular, thin, horny multispiral

May be confused with *Margarites* sp.

(Abbott 1974)

*Margarites* sp. (West shelf)



(Abbott 1974)

*M. costalis*  
Gould 1841

AphiaID: 146732  
Unaccepted name:  
*Trochus costalis*

*M. groenlandicus*  
Gmelin 1791

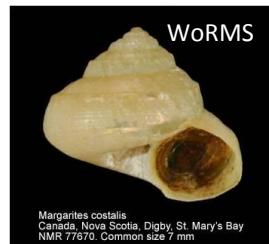
AphiaID: 141820  
Unaccepted names:  
*Margarita striata*,  
*Trochus groenlandicus*

*M. groenlandicus*  
*umbilicalis*  
Broderip & Sowerby  
1829

AphiaID: 236799  
Unaccepted name: –

*M. sordidus*  
Hancock 1846

AphiaID: 160357  
Unaccepted names:  
*Margarita sordida*,  
*Margarita striata*



|                  | <i>Margarites costalis</i>  | <i>Margarites sordidus</i> |
|------------------|---|----------------------------|
| <b>Shape</b>     | 6 to 8 whorls and a nearly flat apex  | Same                       |
|                  | Spiral ribs vary in height. On most specimens the spiral ribs continue on the underside but are lower and closer  |                            |
| <b>Umbilicus</b> | Umbilicus is deep. A groove extends beside the umbilicus along the inner lips   |                            |
| <b>Aperture</b>  | Aperture round but for an angle near the base   |                            |
|                  | Large and clearly spiralled   |                            |
| <b>Color</b>     | Dull grey or yellowish white. Iridescent blue when wet  |                            |
| <b>Size:</b>     | Up to 25 mm in diameter   |                            |
| <b>Be aware!</b> | <i>Margarites sordidus</i> is very similar to <i>Margarites costalis</i> but larger, more rounded whorls with finer spiral uneven threads. With numerous very fine slanting axial threads. For MacPherson it's the same species |                            |

(MacPherson 1971, Abbott 1974)

*Margarites* sp.



|                  | <i>Margarites groenlandicus</i>   | <i>Margarites groenlandicus umbilicalis</i>   |
|------------------|---|---|
| <b>Size:</b>     | Up to 16 mm in diameter, 11 mm high   | Up to 24 mm in diameter, 20 mm high   |
| <b>Shape</b>     | 6 to 7 rapidly enlarging whorls, apex pointed. High rounded and well spaced spiral ribs. Outer lip forming an angle at the outer edge | Very thin, large<br>5 to 7 rapidly enlarging whorls, flattened. Mostly smooth but shells have spiralled |
| <b>Umbilicus</b> | Deep and rounded, partly covered by the inner lip   | Deep, large and rounded, no groove or depression  |
| <b>Operculum</b> | Thin and spiralled  | Thin and spiralled  |
| <b>Color</b>     | Dingy white or pinkish  | Pale tan, glossy and slightly iridescent when wet   |

(MacPherson 1971, Abbott 1974)

*Margarites striatus*

Leach 1841

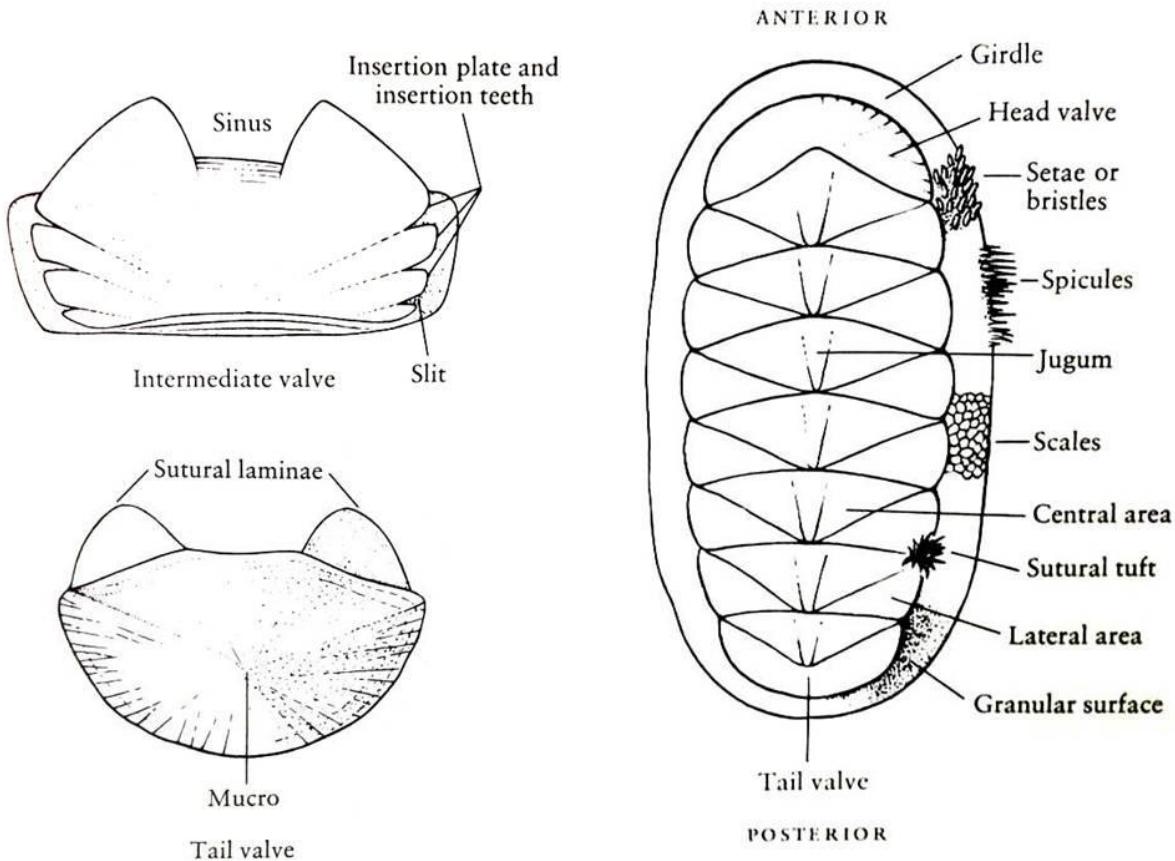
AphiaID: 153546

Unaccepted name: –

West shelf



## POLYPLACOPHORA

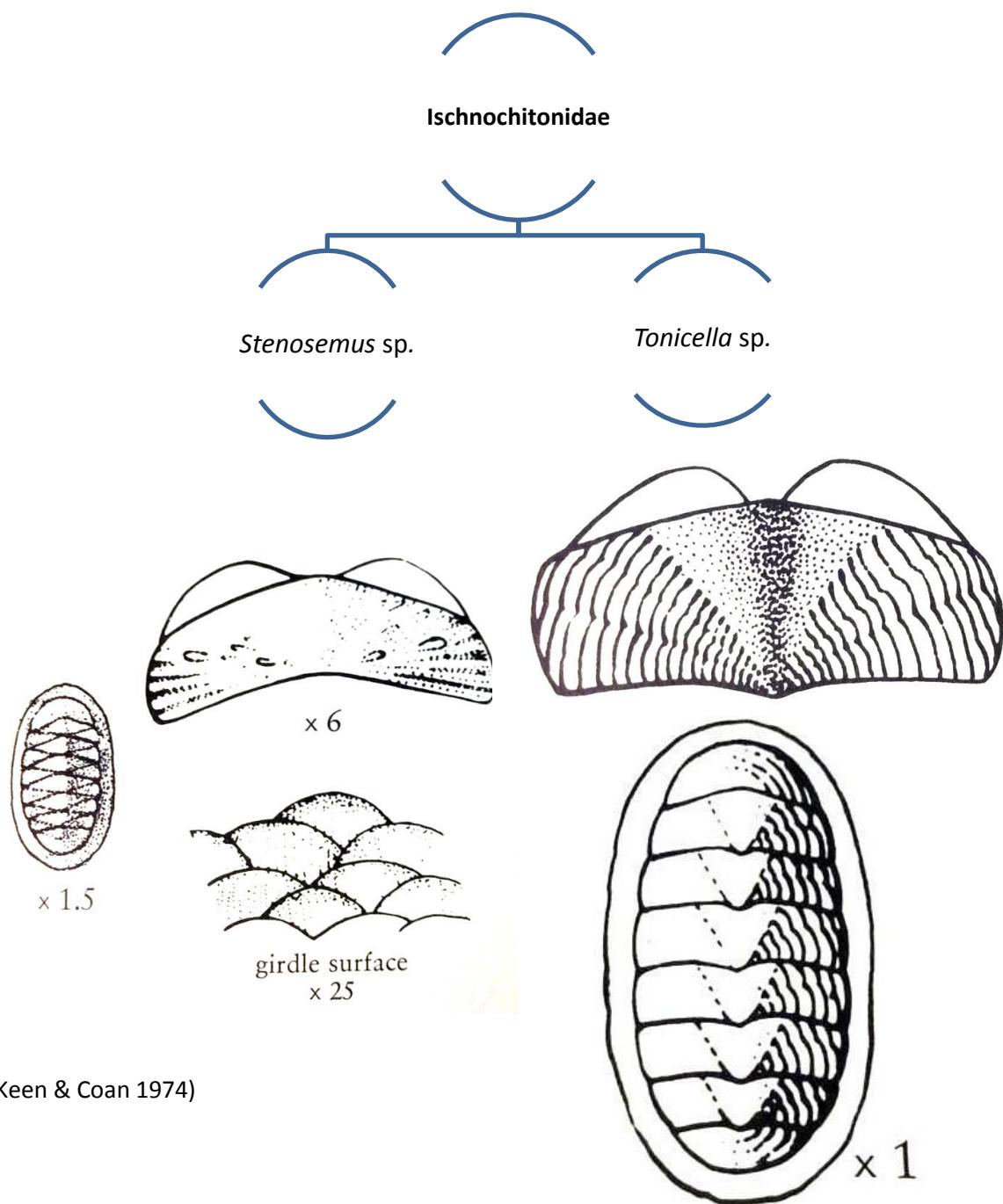


(Keen & Coan 1974)

### TAXONOMIC KEY – FAMILIES

- 1(2) Girdle covered with fine or coarse granulation, or appearing smooth, with or without recumbent spines, usually fringed with spines [**ISCHNOCHITONIDAE**]
- 2 Girdle covered with small flat scales, with randomly distributed long spines on its surface, with a fringe of equally long spines. Intermediate valves keeled. Head valves with insertion plates [**HANLEYIDAE**]

Polyplacophora (Class) > Neolericata (Subclass) > Chitonida (Order) > Chitonina (Suborder) > Chitonoidea (Superfamily) > **Ischnochitonidae** (Family)



(Keen & Coan 1974)

|                      | <i>Stenosemus</i> sp.                            | <i>Tonicella</i> sp.               |
|----------------------|--|------------------------------------|
| <b>Shape</b>         | Subovate, tail with a large mucro                | Low arched with rounded back       |
| <b>Girdle</b>        | Sandpapery, very small scales                    | Smoothish or very small scales     |
| <b>Lateral area</b>  | Usually raised with smooth or beaded radial ribs | Poorly developed                   |
| <b>Valve surface</b> |  | Smooth or microscopically granular |

(Abbott 1974, Keen & Coan 1974)

*Stenosemus albus*

Linnaeus 1767

AphiaID: 247773

Unaccepted names: *Chiton albus*, *Ischnochiton albus*

SE shelf slope

SW shelf

West shelf



Size: up to 14 mm.

Shape: rather elongate, oblong.

Surface: upper surface smooth except for concentric growth ridges. Posterior valves of 12- 13 weaks sleats, 17 to 19 lamellate gills on each side.

Girdle: sandpaperly with tiny closely packed scales.

Color: most specimens are pure white, but some are pale yellow orange. Interior of valves white.

(Macpherson 1971, Abbott 1974)

*Tonicella* sp.



*Tonicella rubra*

Linnaeus 1767

AphiaID: 140152

Unaccepted names: *Chiton ruber*, *Ischnochiton ruber*



[www.marinespecies.org](http://www.marinespecies.org)

*Tonicella marmorea*

O. Fabricius 1780

AphiaID: 140151

Unaccepted names: *Chiton flemingius*, *Chiton marmoreus*



[www.marinespecies.org](http://www.marinespecies.org)

|               | <i>Tonicella rubra</i>  | <i>Tonicella marmorea</i>   |
|---------------|---|---|
| <b>Size</b>   | Up to 30 mm   | Up to 30 mm   |
| <b>Shape</b>  | Oblong, valves rather rounded.<br>Upper surface smooth except for growth lines.<br>Posterior valves: 7 to 11 slits<br>Gills: 15 to 18 each side | Oblong, elevated and rather angular.<br>Upper surface smooth (granulated under magnification).<br>Posterior valve: 8 to 9 slits.<br>Gills: 20-25 each side. |
| <b>Girdle</b> | Reddish brown with weak maculation covered with minutes( granular) scales which do no overlap.  | Leathery and without scales or bristles.  |
| <b>Color</b>  | Valves reddish, interior of valves bright pink.   | Light tan with heavy suffusion of dark red maculations and specks. Interior of valve tinted with rose.  |

(Abbott 1974)

Polyplacophora (Class) > Neolericata (Subclass) > Lepidopleurida (Order) > Lepidopleurina (Suborder) > Hanleyidae (Family)

## *Hanleya hanleyi*

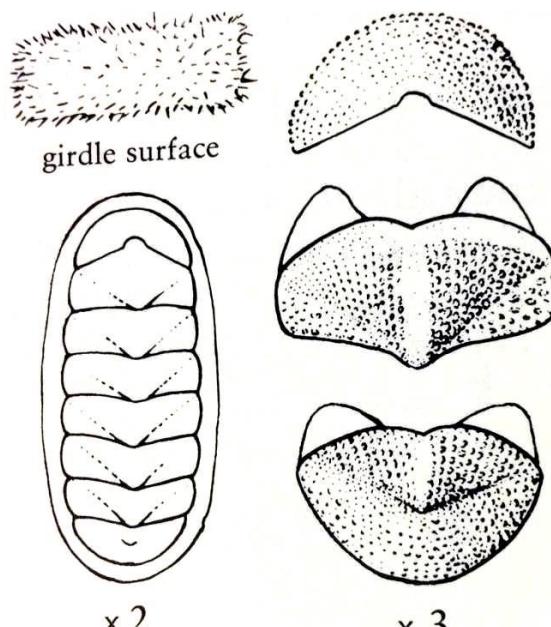
Bean in Thorpe 1844

AphiaID: 140082

Unaccepted names: *Chiton hanleyi*, *Hanleya debilis*

West shelf

SE shelf slope



(Keen & Coan 1974)

Size: up to 22 mm

Shape: elongate oval

Surface: sculpture of coarse granules in longitudinal series, conspicuous laterally and developed as protruding tubercles on head and anal valves

Girdle: covered with small flat scales interspaced with fine, recumbent spines, fringed with similar spines

Color: off white to yellowish

(Hayward & Ryland 1995, Abbott 1974)

## SCAPHPODA

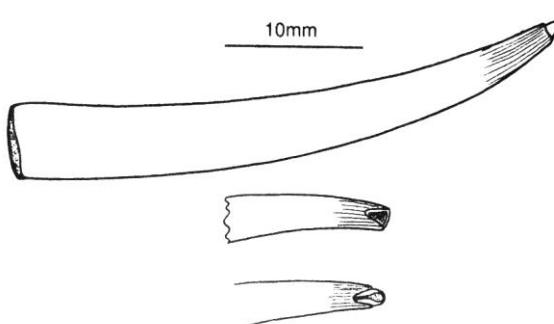
Scaphopoda (Class) > Dentaliida (Order) >**Dentalidae** (Family)

*Antalis* sp.

H. Adams & A. Adams 1854

AphiaID: 150531

Unaccepted name: –



(Jones & Baxter 1987)

Size: up to 60 mm

Shape: circular or polygonal in section and weakly ribbed

Sculpture: longitudinal riblets, frequently lacking in adults, but present in apical portion of juveniles stages

Apical orifice: generally a V-shaped notched on or near the concave side

Scaphopoda (Class) > Gadilida (Order) >Gadilimorpha (Suborder) >**Gadilidae** (Family)

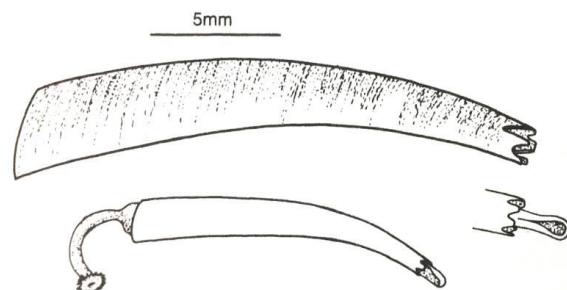
### *Siphonodentalium lobatum*

G.B. Sowerby II 1860

AphiaID: 140015

Unaccepted names:*Dentalium vitreum*, *Pulsellum lobatum*

West shelf



(Jones & Baxter 1987)

Size: up to 20 mm

Shape: shell strongly arcuate, slightly tapering with the apertural end largest. Circular in section

Sculpture: smooth

Apical orifice: distinctly notched into lobes or teeth

Color: white, smooth shiny, porcelaneous

(Abbott 1974, Jones & Baxter 1987)

## CAUDOFOVEATA

### Caudofoveata

C.R. Boettger 1956

AphiaID: 151365

Unaccepted name: Chaetodermomorpha

West shelf



Shape: wormlike in appearance.

Body lacks a definite head or other subdivision, covered with calcareous spicules which give them an hairy appearance.

No ventral furrow.

(Jones & Baxter 1987)

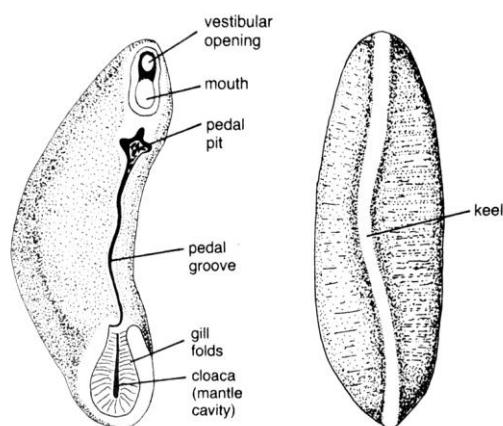
## SOLENOGASTRES

### Solenogastres

Gegenbaur 1878

AphiaID: 2094

Unaccepted name: –



Shape: short, wormlike in appearance

Body lacks a definite head or other subdivision, it's covered with calcareous spicules

Presence of a ventral furrow

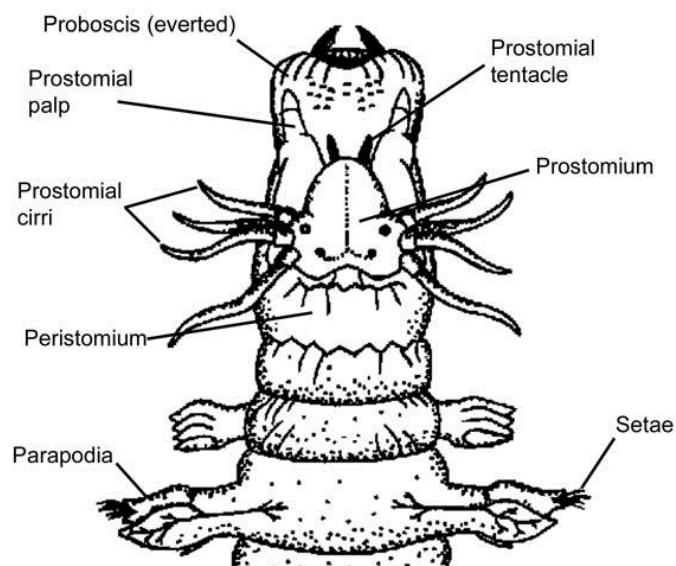
(Jones & Baxter 1987)

(Jones & Baxter 1987)



## P H Y L U M   P O L Y C H A E T A

The estimation of the number of described species on Annelida phylum is around 16 600 (Chapman 2009). Polychaetes are the most diverse and abundant group in Annelid taxon. Polychaetes are represented by over 80 families. In 2015, 13 834 worldwide species are identified but many species are not identified yet. This taxon is successful in mud and sand habitats and their density can exceed the number of sediment-dwelling molluscs and crustaceans you can find alongside them (Fauchald 2015). After polychaete this phylum is represented by 3 000 species of oligochaete and 500 species of hirudinea (Chapman 2009). In Arctic the estimation of annelid included all members is 668 (Pipenburg et al. 2011).



J.G. de G. 2000 <http://www.marlin.ac.uk>

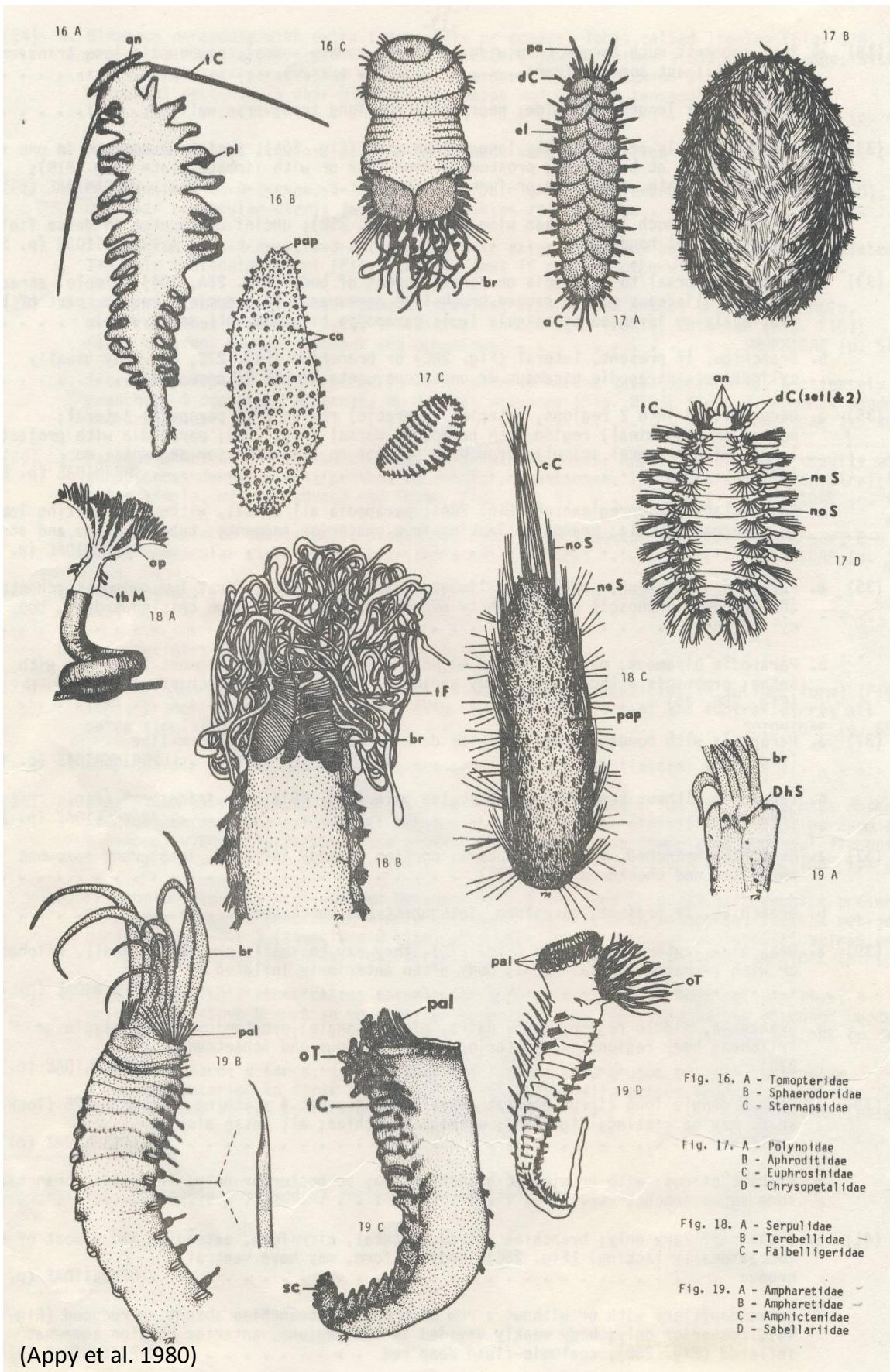


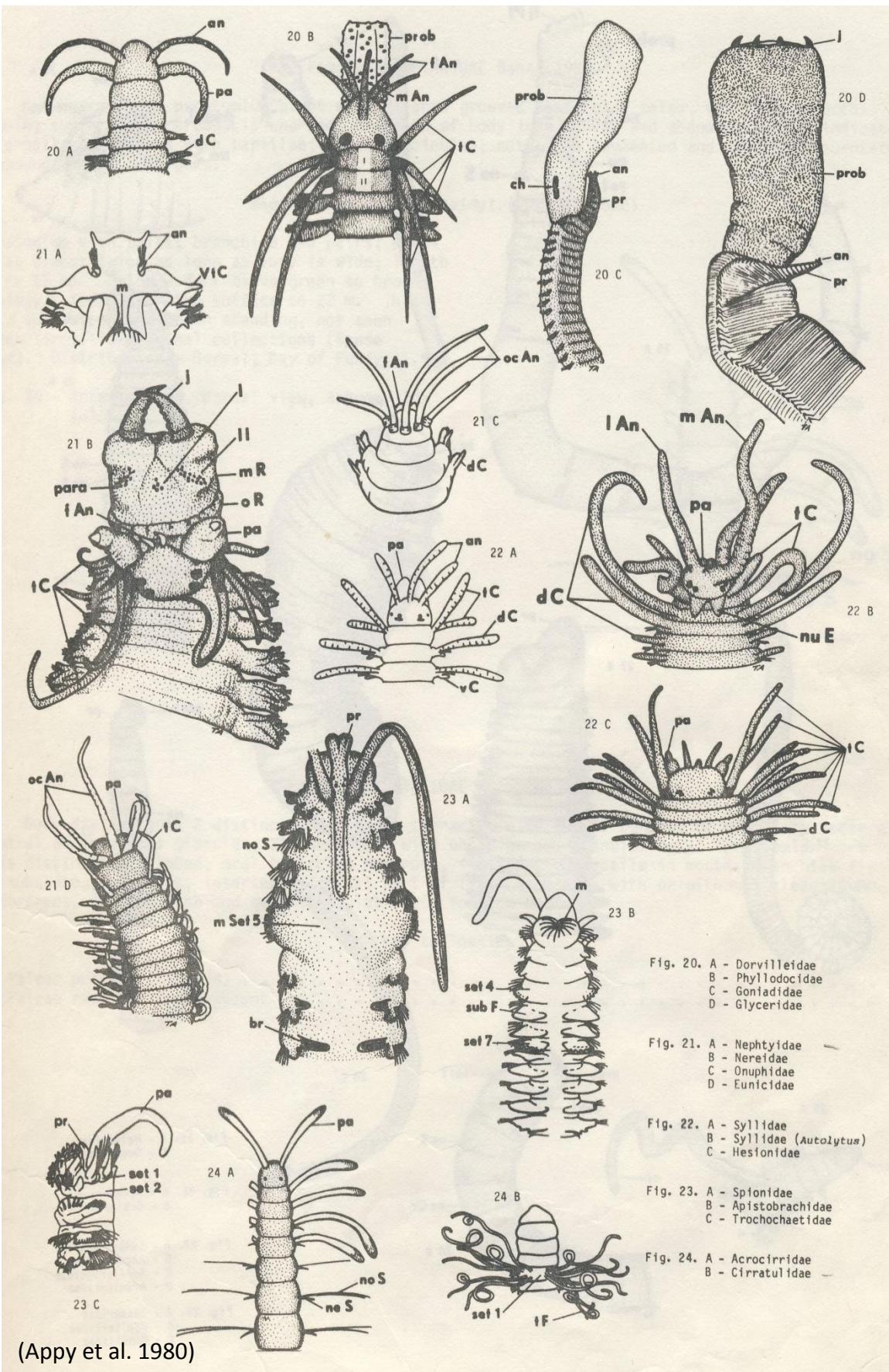
Fig. 16. A - Tomopteridae  
B - Sphaerodoridae  
C - Sternapsidae

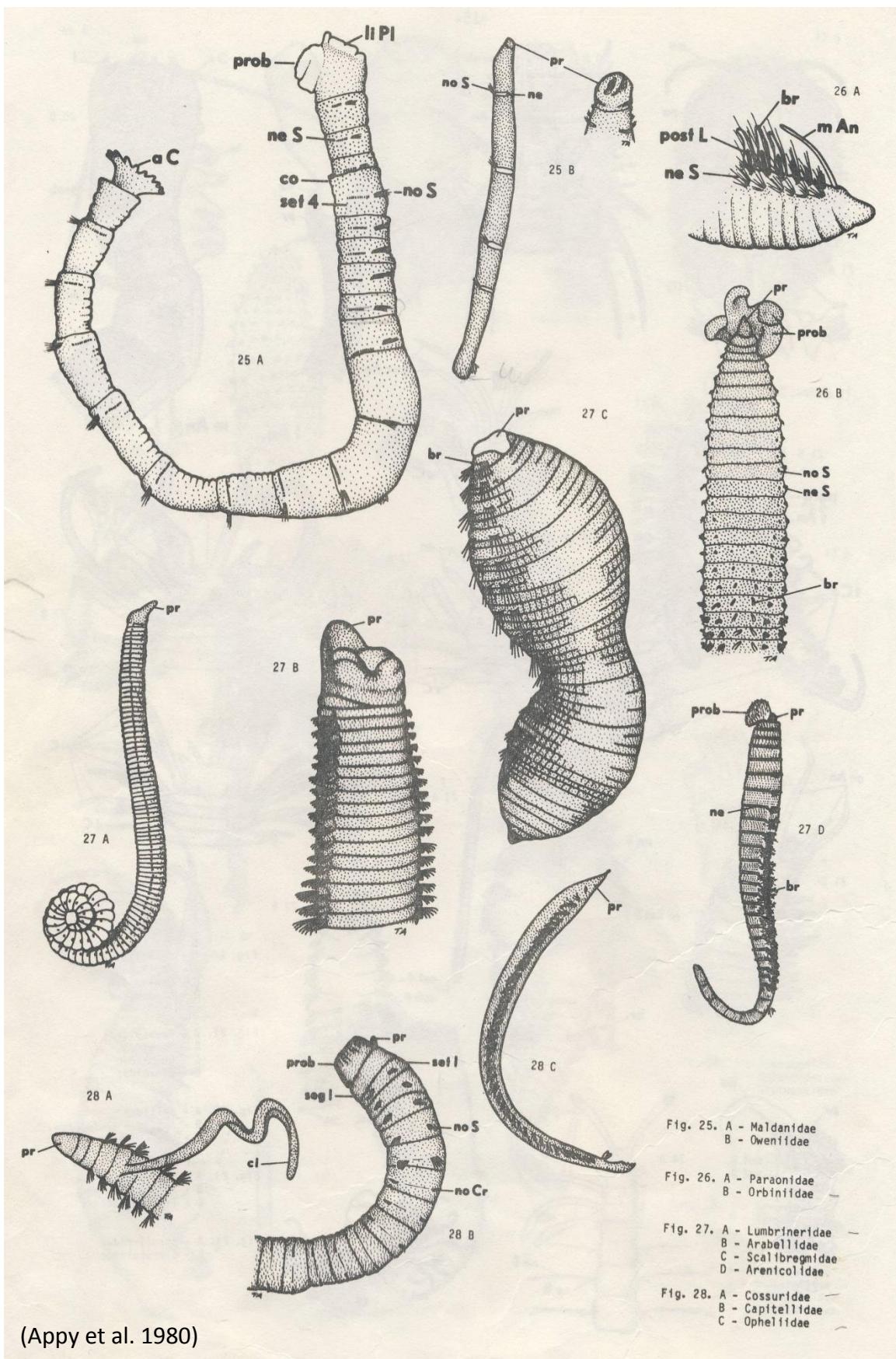
Fig. 17. A - Polynoidae  
B - Aphroditidae  
C - Euphrosinidae  
D - Chrysopetalidae

Fig. 18. A - Serpulidae  
B - Terebellidae  
C - Falbelligeridae

Fig. 19. A - Ampharetidae  
B - Ampharetidae  
C - Amphictenidae  
D - Sabellariidae

(Appy et al. 1980)





## ERRANT POLYCHAETES

| FAMILY        | PAGE |
|---------------|------|
| Euphrasinidae | 372  |
| Aphroditidae  | 374  |
| Polynoidae    | 375  |
| Goniadidae    | 377  |
| Nereididae    | 378  |
| Nephtyidae    | 379  |
| Phyllodocidae | 379  |

### TAXONOMIC KEY – FAMILIES

- 1(6) Dorsum is more or less covered by deciduous scales or elytra or distinct elytral scars or by dorsal surface bristly.
- 2(5) Dorsum has scales, elytra, elytral scales or scales and feltage.
- 3(4) Scales are completely or partially obscured by felt-like covering. Facial tubercle is developed and a single median antenna is present. Globular papillae are present on ventral surface and parapodia [**APHRODITIDAE**]
- 4(3) Scales are not obscured by felt-like covering. Facial tubercle is poorly developed or lacking. Prostomium is bilobed and one to three antennae are present. Globular papillae are absent on ventral surface and parapodia. Neurosetae simple [**POLYNOIDAE**]
- 5(2) Dorsum is bristly, convex, with numerous spine-like notosetae in transverse rows. Branchiae are present and dichotomously branched [**EUPHROSINIDAE**]
- 6(1) Dorsum doesn't have elytra, elytral scars, feltage or bristles. Prostomium has at least one pair of appendages, either antennae or palps
- 7(8) Prostomium doesn't have any appendage. Body usually iridescent and earthworm like [**LUMBRINERIDAE**]
- 8(7) Prostomium has at least one pair of appendages, either antennae or palps.
- 9(12) Protomium has 4 minute antennae, with 0 or 2 tentacular cirri and without palp.
- 10(11) Prostomium is subquadrate, small and has 2 pairs of minute antennae, 1 pair frontal and 1 pair concealed at lateroposterior corners of prostomium. Parapodia are biramous with lamellae and usually with branchiae between lamellae [**NEPHTYIDAE**]
- 11(10) Prostomium is conical. Parapodia on anterior part of body are uniramous and posterior part is biramous [**GONIADIDAE**]
- 12(9) Prostomium has 2-5 medium to large antennae, 0-8 pairs of tentacular cirri and with or without palps.

13(14) Prostomium is conical with 4 frontal antennae at tip sometimes with one occipital antenna.  
Prostomium has two eyes and two at four tentacular cirri. Parapodia uniramous with dorsal  
and ventral flattened cirri are developed [**PHYLLODOCIDAE**]

14(13) Prostomium has 4 eyes, 2 frontal antennae, 1 pair of biarticulate palp and 4 pair of tentacular  
cirri. Parapodia are biramous with tongue-like or conical lobes called ligules [**NEREIDIDAE**]



*Euphrosine* sp.



*Euphrosine borealis*

Örstedt 1843

AphiaID: 130081

Unaccepted name: –

West shelf

SW shelf

SE shelf slope



Olga Zimina

*Euphrosine cirrata*

Sars 1862

AphiaID: 157381

Unaccepted name: –

SE shelf slope



Olga Zimina



Olga Zimina

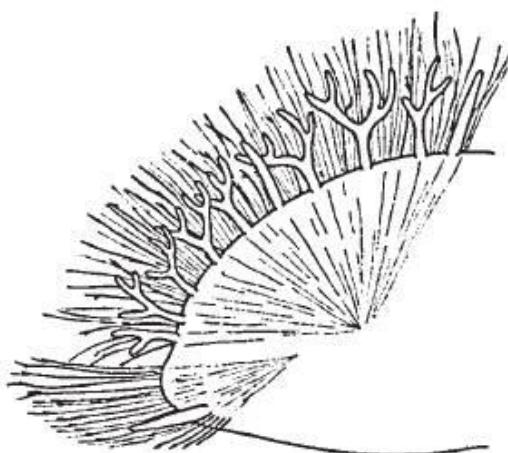


Olga Zimina

*Euphosine* sp.



*Euphosine borealis*  
Örstedt 1843



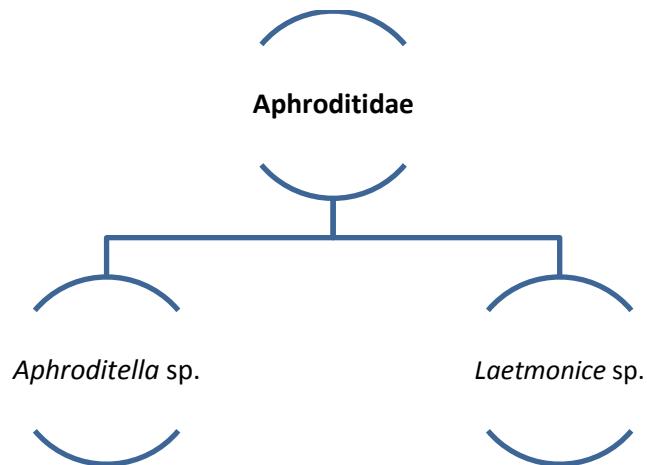
*Euphosine cirrata*  
Sars 1862



|                   | <i>Euphosine borealis</i>   | <i>Euphosine cirrata</i>   |
|-------------------|---|--|
| <b>Notoseatae</b> | 2 kinds:<br>-Very unequally bifurcated, smooth<br>-Unequally bifurcated with branches longer, serrated on inner side. | Single kind:<br>Very unequally bifurcated, smooth, long, giving a spiny aspect |
| <b>Branchia</b>   | More numerous, branched, in a row posterior to notoseatae   | Single curled filament close to upper dorsal cirrus                            |

(Pettibone 1963)

Polychaeta (Class) > Errantia (Subclass) > Phyllodocida (Order) > Aphroditiformia (Suborder) > **Aphroditidae** (Family)



|                             | <i>Aphroditella sp.</i>                              | <i>Laetmonice sp.</i>  |
|-----------------------------|--|--|
| <b>Dorsal feltage</b>       | Thick tangled matting completely covering by elytra. | Loose, more or less developed, usually not covered by elytra completely. |
| <b>Large dark notosetae</b> | Without barbed tips                                  | With tips barbed (harpoon like)  |
| <b>Ocular peduncle</b>      | Prostomium without                                   | Prostomium with  |

(Pettibone 1963)

### *Aphroditella hastata*

Moore 1905

AphiaID: 333005

Unaccepted name: –

Greenland distribution: SW shelf, West shelf



Ámundur Nolsø

# *Laetmonice filicornis*

Kinberg 1856

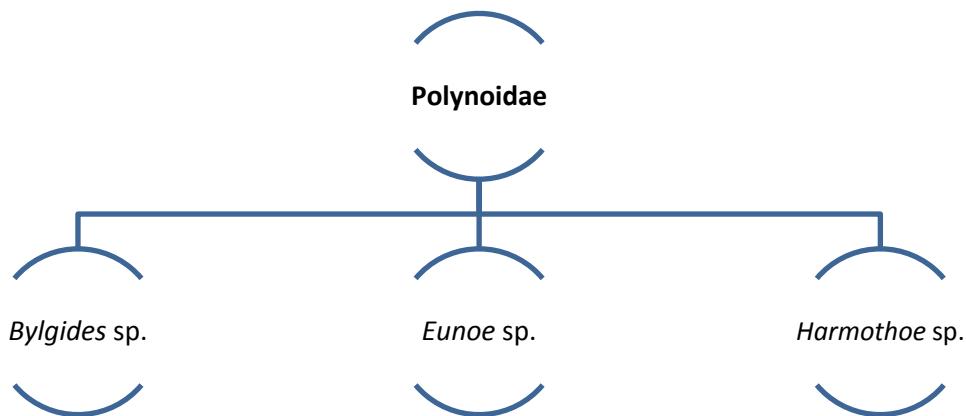
AphiaID: 129844

Unaccepted name: –

Greenland distribution: SW shelf, SE shelf slope



Polychaeta (Class) > Errantia (Subclass) > Phyllodocida (Order) > Aphroditiformia (Suborder) > **Polynoidae** > (Family)



Polynoidae need dissecting scope for genus identification  
Stay to the family

|                   | <i>Bylgides</i> sp.                            | <i>Eunoe</i> sp.               | <i>Harmothoe</i> sp.         |
|-------------------|--|--------------------------------|------------------------------|
| <b>Neurosetae</b> | Long slender at least some with capillary tips | Stout with bare tip and hooked | Stout with subterminal tooth |

(Pettibone 1963)

*Bylgides* sp.

Chamberlin 1919

AphiaID:129483

Unaccepted name: –

Greenland distribution: West shelf



*Eunoe* sp.

(West shelf, SE shelf slope)



*Eunoe barbata*

Moore 1910

AphiaID:327833

Unaccepted name: –

Greenland distribution: West shelf

*Eunoe nodosa*

Sars 1861

AphiaID: 130745

Unaccepted name: –

Greenland distribution: SE shelf slope



*Harmothoe* sp.  
(West shelf)



*Harmothoe globifera*

Sars G.O. 1873

AphiaID:130766

Unaccepted name: –

Greenland distribution: unknown

Polychaeta (Class) > Errantia (Subclass) > Phyllodocida (Order) > Glyceriformia (Suborder) > **Goniadidae** (Family)

*Goniada norvegica*

Örsted 1845

AphiaID: 130141

Unaccepted name: –

Greenland distribution: unknown



*Nereis* sp.  
(SE shelf slope)



*Nereis pelagica*

Linnaeus 1758

AphiaID:130404

Unaccepted name: –

Greenland distribution: West shelf

*Nereis zonata*

Malmgren 1867

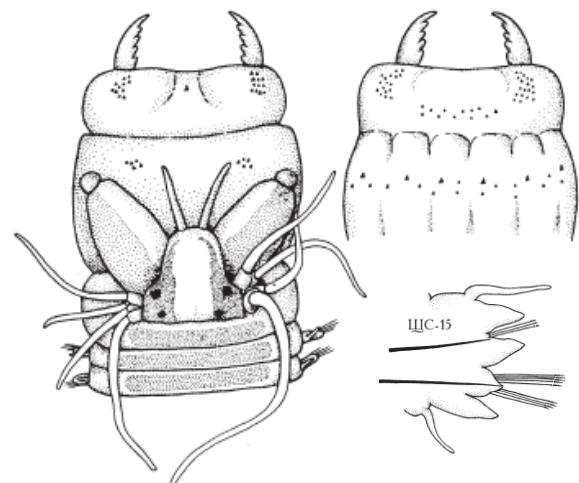
AphiaID: 130407

Unaccepted name: –

Greenland distribution: West shelf



CHONe



Jirkov 2001

Polychaeta (Class) > Errantia (Subclass) > Phyllodocida (Order) > Phyllodocida incertae sedis (Suborder) > Nephtyidae > (Family)

*Nephtys* sp.

Cuvier 1817

AphiaID: 129370

Unaccepted name: –

Greenland distribution: West shelf, SE shelf slope



Polychaeta (Class) > Errantia (Subclass) > Phyllodocida (Order) > Phyllodociformia (Suborder) > **Phyllodocidae** > (Family)

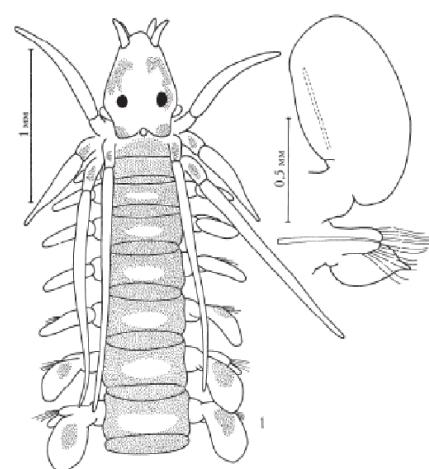
*Phyllodoce groenlandica*

Örsted 1842

AphiaID: 334506

Unaccepted name: –

Greenland distribution: unknown



## SEDENTARY POLYCHAETES

| FAMILY           | PAGE |
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| Maldanidae       | 386  |
| Opheliidae       | 387  |
| Pectinariidae    | 387  |

### TAXONOMIC KEY – FAMILIES

- 1(2) Posterior end is covered ventrally by two large trapezoidal sternal plates [**STERNASPIDAE**]
- 2(1) Posterior end is not covered by sternal plates.
- 3(4) Tube is parchment like. Body is separated by three distinct regions [**CHAETOPTERIDAE**]
- 4(3) Tube is not parchment like. Body is not separated by three distinct regions.
- 5(20) Prostomium is more or less concealed and anterior end transformed by a crown of feathery tentacles or long tentacular filaments or chitinous golden paleae or by setae directed forward sometimes forming a cephalic cage.
- 6(9) Anterior end has branchial plume of feathery tentacles.
- 7(8) Tube is calcareous irregular and form with usually with operculum [**SERPULIDAE**]
- 8(7) Tube is not calcareous, may be horny, mucoid or membranous and without operculum. Setae are dorsal and uncinigerous tori are ventral in thoracic region and switch on abdominal region [**SABELLIDAE**]



- 9(6) Anterior end without branchial plume. Prostomium has tentacular filaments or paleae or specialized setae.
- 10(13) Anterior end has golden paleae.
- 11(12) Posterior end has scaphe and anterior end has 2 bundles of paleae in horizontal rows. Tubes look-like a cornet [**PECTINARIIDAE**]
- 12(11) Posterior end doesn't have a scaphe and anterior end with 2 paleae on each side of the head with 4 pairs of branchiae. Tubes is membranous and covered by mud [**AMPHARETIDAE**]
- 13(10) Anterior end doesn't have a paleae.
- 14(15) Anterior end usually has a long chambered setae directed forward forming a cephalic cage or without tentacular filaments. Body is papillated and sometimes covered by mucus [**FLABELLIGERIDAE**]
- 15(14) Anterior end without cephalic cage and has tentacular segment. Body is not papillated.
- 16(17) 3 or 4 pairs of branchiae are present in one row. Buccal tentacles are short and retractile [**AMPHARETIDAE**]
- 17(16) If present, 1-3 pairs of branchiae are present not in one rows but positionned vertically (usually 1 pair of branchiae by segment). Buccal tentacles are long, numerous and non retractile.
- 18(19) Anterior part with 1 pair of lamellate branchiae (lung-like). Double tori of uncini are absent on thoracic segment [**TRICHOBRANCHIDAE**]
- 19(18) Anterior part lacking or with 2-3 pairs of arborescent or dichotomously branchiae. Double tori of uncini are present on thoracic segment [**TEREBELLIDAE**]
- 20(5) Prostomium are usually visible and without tentacular crown or long specialized setae.
- 21(22) Segments of the body are more longer than wide (bamboo worms) [**MALDANIDAE**]



- 22(21) Segments of body are not more longer than wide. Body are tapering at the both end. Setae are capillary only. Branchiae are may be present. Ventral groove is present [**OPHELIIDAE**]

(Appy et al. 1980)

Polychaeta (Class) > Sedentaria (Subclass) > Canalipalpata (Infraclass) > Sabellida (Order) > **Serpulidae** (Family)

*Apomastus globifer*

Théel 1878

AphiaID: 238208

Unaccepted name: *Protula globifer*

Greenland distribution: unknown



*Placostegus tridentatus*

Fabricius 1779

AphiaID: 131025

Unaccepted name: *Serpula tridentata*

Greenland distribution: West shelf



Polychaeta (Class) > Sedentaria (Subclass) > Canalipalpata (Infraclass) > Terebellida (Order) > Cirratuliformia (Suborder) > **Flabelligeridae** (Family)

*Brada* sp.



*Brada inhabilis*

Rathke 1843

AphiaID: 130097

Unaccepted name: *Siphonostoma inhabile*

Greenland distribution: SE shelf slope, SW shelf, West shelf



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Polychaeta (Class) > Errantia (Subclass) > Terebellida (Order) > Cirratuliformia (Suborder) > **Sternaspidae** > (Family)

*Sternaspis* sp.



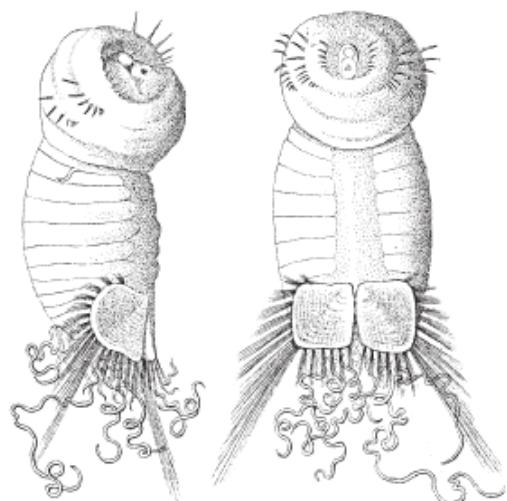
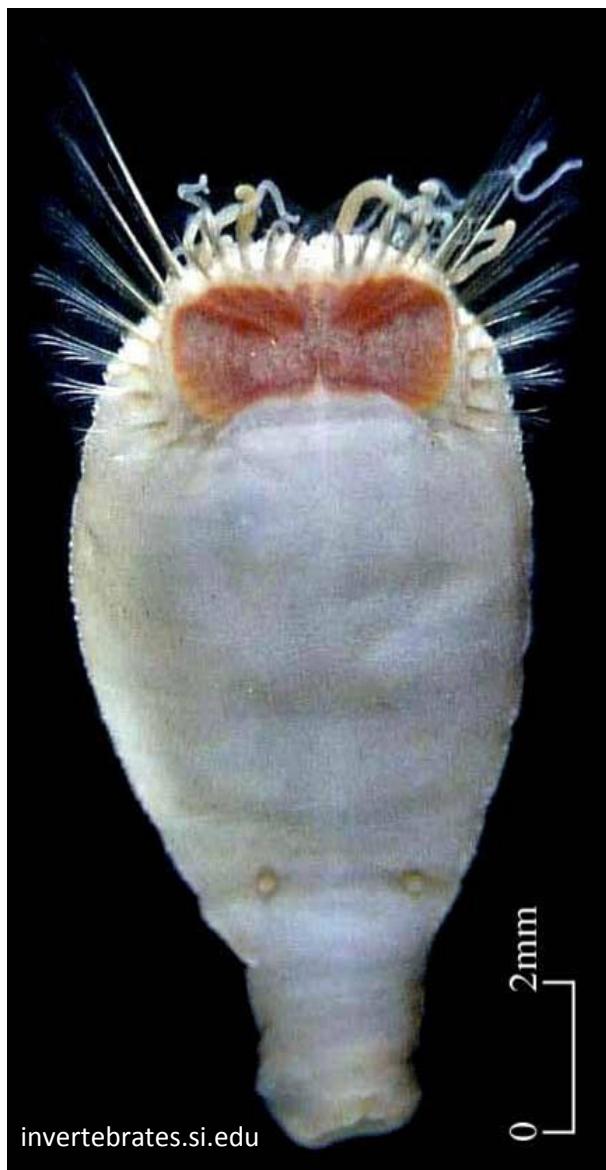
*Sternaspis scutata*

Ranzani 1817

AphiaID:131242

Unaccepted name: –

Greenland distribution: West shelf, SW shelf



Jirkov 2001

Polychaeta (Class) > Sedentaria (Subclass) > Canalipalpata (Infraclass) > Terebellida (Order) > Terebellomorpha (Suborder) > **Ampharetidae** (Family)

*Melinna* sp.

Malmgren 1866

AphiaID: 129168

Unaccepted name: –

Greenland distribution: West shelf



Polychaeta (Class) > Sedentaria (Subclass) > Canalipalpata (Infraclass) > Terebellida (Order) > Terebellomorpha (Suborder) > **Terebellidae** (Family)

*Artacama proboscidea*

Malmgren 1866

AphiaID: 131482

Unaccepted name: –

Greenland distribution: West shelf



Polychaeta (Class) > Sedentaria (Subclass) > Canalipalpata (Infraclass) > Terebellida (Order) > Terebellomorpha (Suborder) > **Trichobranchinae** (Family)

*Terebellides stroemii*

Sars 1835

AphiaID: 131573

Unaccepted name: –

Greenland distribution: West shelf



Polychaeta (Class) > Sedentaria (Subclass) > **Chaetopteridae** (Family)

*Spiochaetopterus* sp.  
(SW shelf)



*Spiochaetopterus typicus*

M Sars 1856

AphiaID: 129924

Unaccepted name: –

Greenland distribution: West shelf



Polychaeta (Class) > Sedentaria (Subclass) > Scolecida (Infraclass) > **Maldanidae** (Family)

*Maldane sarsi*

Malmgren 1865

AphiaID: 130305

Unaccepted name: –

Greenland distribution: West shelf



Polychaeta (Class) > Sedentaria (Subclass) > **Opheliidae** (Family)

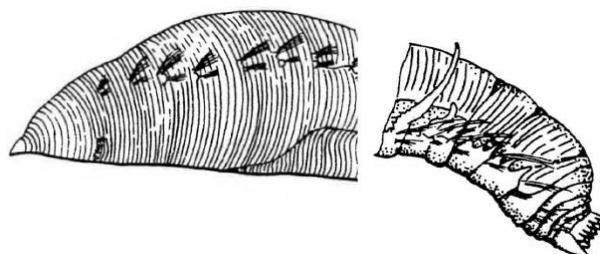
*Ophelia* sp.

Savigny 1822

AphiaID: 129413

Unaccepted name: –

Greenland distribution: unknown



Pocklington 1989

Polychaeta (Class) > Sedentaria (Subclass) > Terebellidae (Order) > Terebellomorpha (Suborder) > **Pectinariidae** > (Family)

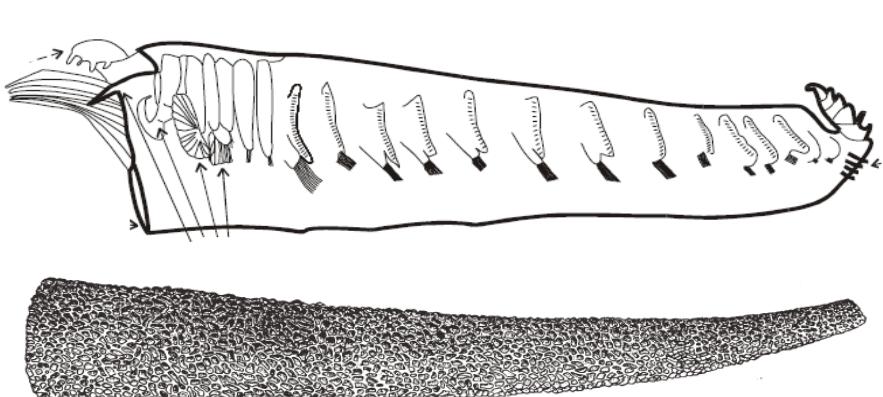
*Pectinaria/Cistenides* sp.

Lamarck 1818/Malmgren 1866

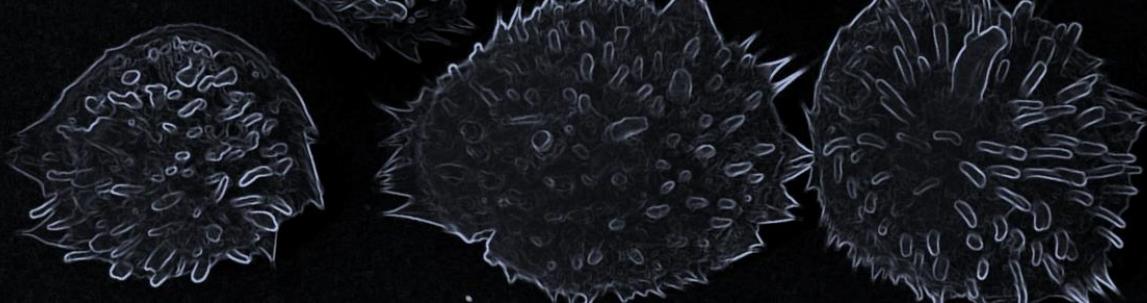
AphiaID: 129437/157316

Unaccepted name: –

Greenland distribution: West shelf



(Jirkov 2001)



## P H Y L U M   P O R I F E R A

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### FAMILIES

|                        | <b>Morphology</b>  | <b>Color</b>  | <b>Other characters</b>   | <b>Size</b>            |
|------------------------|--|---|---|------------------------|
| <b>Chalinidae</b>      | 2 forms: massive to hemispherical and fan-shaped and stalked | Reddish brown or golden brown                       | Consistency is soft, elastic and easily torn                          | 10X10cm                |
| <b>Cladorhizidae</b>   | Thin, pen/feather-shaped                                     | White to yellow                                     | One end with small branches and the other smooth and slightly widened | Up to 10cm in longer   |
| <b>Coelosphaeridae</b> | Small, round   | Dark yellow or brown with bright yellow projections | With several projections  | Up to 2cm in diameter  |
| <b>Microcionidae</b>   | Thinly ramosed, dichotomous branched                         | Yellowish with reddish tinges                       | Finely hispid surface   | Up to 40cm             |
| <b>Mycalidae</b>       | Usually cone, vase-shape with slender stalk                  | Yellow to greenish yellow to brown                  | Polymorphic: encrusting or stalked                                    | Up to 1m               |
| <b>Myxillidae</b>      | Round/Bladder-like "Papery skin"                             | Yellowish-white Whitish-grey                        | With short flattened projections                                      | Up to 10cm in diameter |

|                        | <b>Morphology</b>  | <b>Color</b>  | <b>Other characters</b>  | <b>Size</b>   |
|------------------------|--|---|--|---|
| <b>Polymastiidae</b>   | Usually thick, roundish  | Brown, reddish, yellow, white                                     | Usually with many projections of various length  | Up to 15cm  |
|                        | Usually “nipple sponge”  |   |  |   |
| <b>Polymastiidae</b>   | Half-sphere with a distinct fringe of a long spicules at the outer edge          | Light brown, white-grey   | With several projections from upper surface (few to 20)  | Up to 8cm in diameter                                   |
| <b>Polymastidae</b>    | Toadstool-like, with cylindrical body and rounded top                            | Light pink, pinkish-brown, yellowish-grey                         | >1 small projections arise the top   | Up to 4cm in high, 3cm in diameter                      |
| <b>Suberitidae</b>     | Long, thin, branching stalk  | Yellow, yellowish-grey  | With a root-like support system  | Up to 6cm in longer, 1cm in wider and stalk up to 30cm. |
| <b>Stylocordylidae</b> | Body sub-conical body somewhat flattened on the upper side attached to the stalk | Dark cream  | Slightly curved stalk attached by a root system.<br>Body surface irregularly hispid and smooth stalk | Body: up to 1.7X1.1cm<br>Stalk: up to 7cm               |
| <b>Theneidae</b>       | Ball to mushroom-shaped  | Brown or grey   | Surface rough  | Up to 20cm  |
| <b>Geodiidae</b>       | Massive round/lobed with or without holes  | Cream-yellow, white, pinkish or beige on the inside               | Surface smooth or rough with encrusting species  | Up to 55cm  |
| <b>Axinellidae</b>     | Cup/fan-shaped attached by stalk   | Ochre yellow, light brown, grey-beige sometimes with a green tint | Sometimes with pattern or ribbed veins fanning out from the stem<br>STINK!!!                         | Up to 20cm  |

(Best et al. 2010, Uriz et al. 2011, Stone et al. 2011, Christiansen 2010, Van Soest et al. 1986)

Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Haplosclerida (Order) >  
**Chalinidae** > (Family)

### *Cladocroce ventilabrum*

Fristedt 1887

AphiaID: 166307

Unaccepted name: *Reniera ventilabrum*

Greenland distribution: SE shelf slope, SW shelf, West shelf



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Poecilosclerida (Order) >  
**Cladorhizidae** > (Family)

### *Asbestopluma* sp.

(West shelf, SW shelf, SE shelf slope)



### *Asbestopluma pennatula*

Schmidt 1875

AphiaID: 235789

Unaccepted name: *Cladorhiza pennatula*

Greenland distribution: West shelf



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Poecilosclerida (Order) >  
**Ceolosphaeridae** > (Family)

*Histodermella* sp.

Lundbeck 1910

AphiaID: 131925

Unaccepted name: –

Greenland distribution: SE shelf slope, SW shelf, West basin, West shelf



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Poecilosclerida (Order) >  
**Microcionidae** > (Family)

*Antho (Antho) dichotoma*

Linnaeus 1767

AphiaID: 167882

Unaccepted name: *Spongia dichotoma*

Greenland distribution: SE shelf slope



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Poecilosclerida (Order) >  
**Mycalidae** > (Family)

***Mycale (Mycale) sp.***  
(SE shelf slope)



***Mycale (Mycale) loveni***

Fristedt 1887

AphiaID: 168642

Unaccepted name: *Clathria loveni*

Greenland distribution: SE shelf slope



Olga Zimina



Olga Zimina



Olga Zimina



Olga Zimina

Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Poecilosclerida (Order) >  
**Myxillidae** > (Family)

*Melonanchora elliptica*

Carter 1874

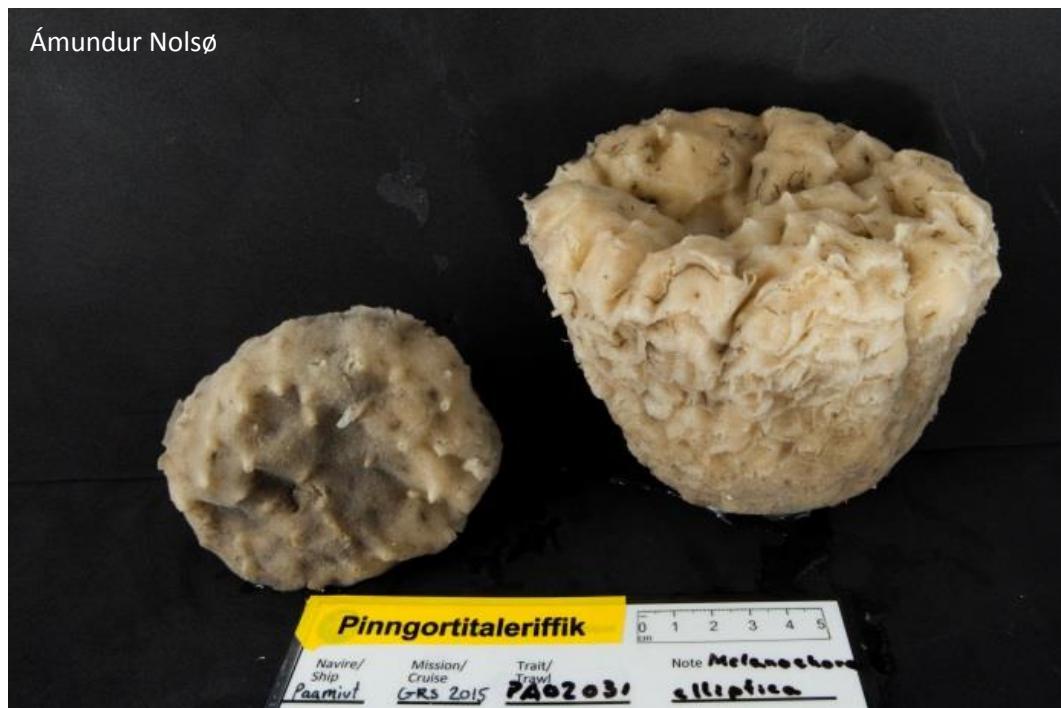
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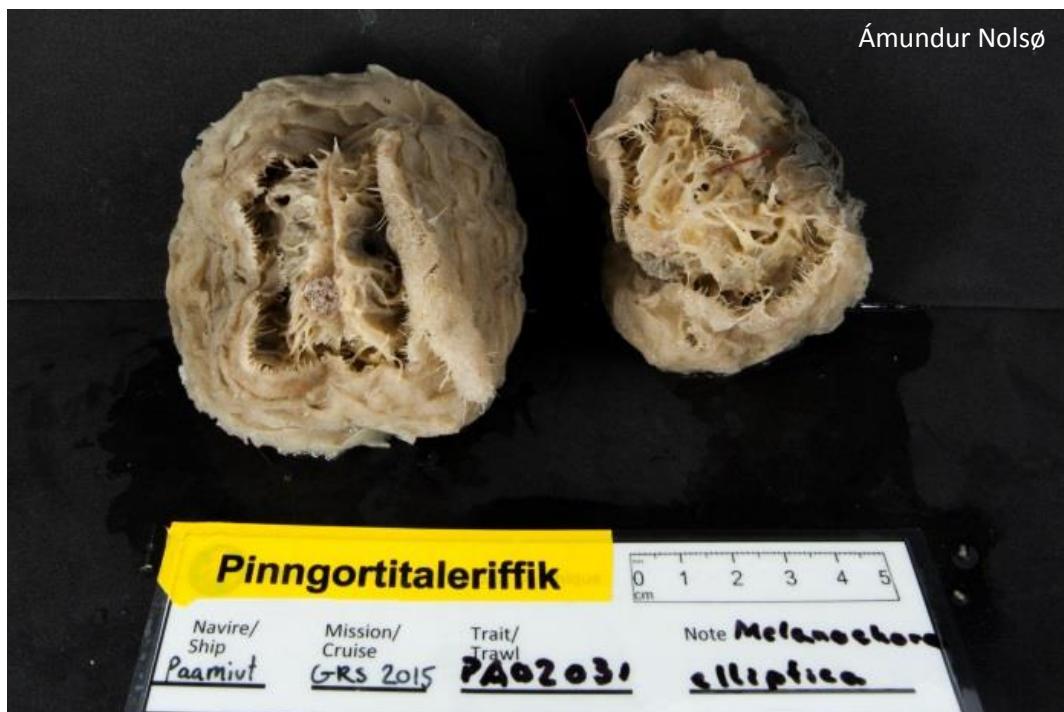
Greenland distribution: West basin, West shelf



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Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Polymastiida (Order) >  
**Polymastiidae** > (Family)

**Polymastia** sp.  
(West shelf, SW shelf, SE shelf slope, West basin)



***Polymastia grimaldii***

Topsent 1913

AphiaID: 134199

Unaccepted name: *Trichostemma grimaldii*

West shelf, West basin

***Polymastia thielei***

Koltun 1964

AphiaID: 170657

Unaccepted name: –

West shelf, SW shelf



*Radiella* sp.

(West basin, SE shelf slope, West shelf)



*Radiella hemisphaerica*

Sars 1872

AphiaID: 170674

Unaccepted name: *Trichostemma hemishaericum*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



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*Tentorium semisuberites*

Schmidt 1870

AphiaID: 134224

Unaccepted name: *Thecophora semisuberites*

Greenland distribution: West shelf, SE shelf slope, SW shelf



Laure de Montety

Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Suberitida (Order) > **Suberitidae** > (Family)

*Rhizaxinella* sp.

Keller 1880

AphialD: 132071

Unaccepted name: –

Greenland distribution: West basin



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Suberitida (Order) > **Stylocordylidae** > (Family)

*Stylocordyla* sp.

(West shelf)



*Stylocordyla borealis*

Lovén 1868

AphialD: 134240

Unaccepted name: *Hyalonema borealis*

West shelf, SE shelf slope



*Stylocordyla* sp.

Thomson 1873

AphialD: 132063

Unaccepted name: –



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Tetractinellida (Order) > Astrophorina (Suborder) > **Theneidae** > (Family)

*Thenea* sp.  
(West shelf, SE shelf slope)



### *Thenea muricata*

Bowerbank 1858

AphiaID: 134106

Unaccepted name: *Tethea muricata*

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



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Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Tetractinellida (Order) > Spirophorina (Suborder) > **Tetillidae** > (Family)

### *Craniella cranium*

Müller 1776

AphiaID: 171330

Unaccepted name: *Alcyonium cranium*



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Tetractinellida (Order) > Spirophorina (Suborder) > **Geodiidae** > (Family)

*Geodia* sp.

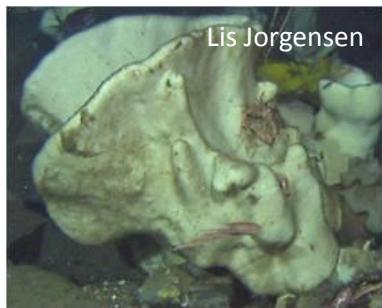


*Geodia atlantica*

Stephens 1915

AphiaID: 134022

Unaccepted name: *Sidonops atlantica*



*Geodia barretti*

Bowerbank 1858

AphiaID: 134023

Unaccepted name: –



*Geodia macandrewii*

Bowerbank 1858

AphiaID: 134033

Unaccepted name: –



Porifera (Phylum) > Desmospongiae (Class) > Heteroscleromorpha (Subclass) > Axinellida (Order) > **Axinellidae** > (Family)

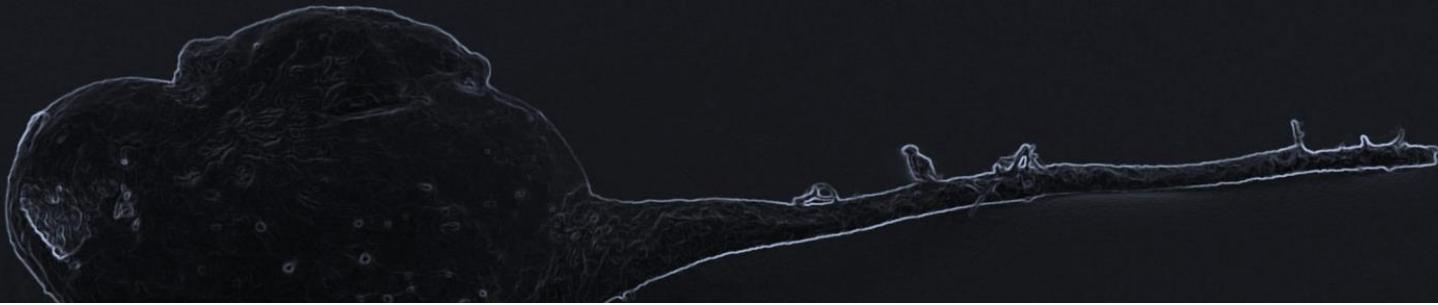
*Phakellia* sp.

Bowerbank 1862

AphiaID: 131779

Unaccepted name: –

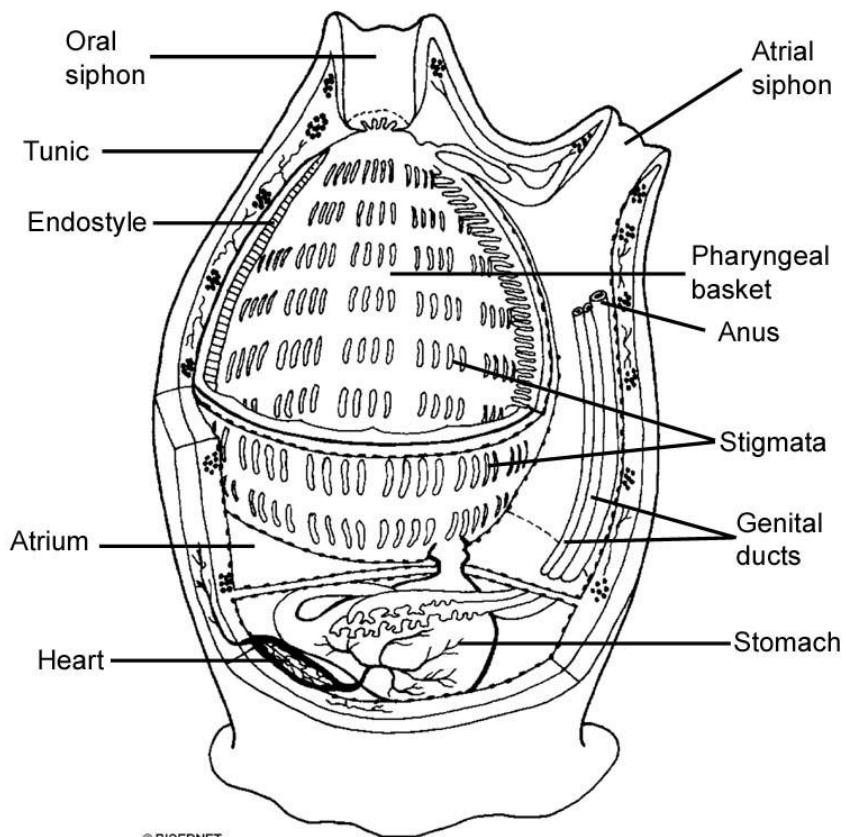




## OTHERS INVERTEBRATES

### ASCIIDIACEA

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| Polyclinidae  | 401, 407 |
| Polycitoridae | 401, 408 |
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| Cionidae      | 402, 409 |
| Corellidae    | 402, 410 |
| Pyuridae      | 402, 410 |
| Styelidae     | 403, 412 |



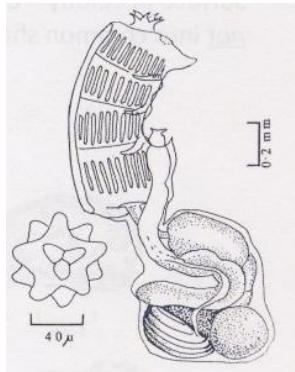
<http://www.marlin.ac.uk>

## FAMILIES

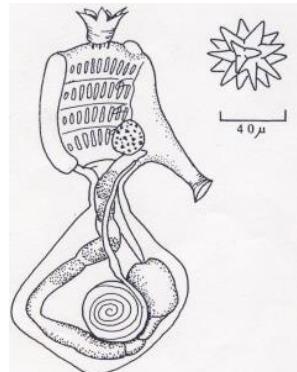
|                      | <b>Colonial or solitary</b>                                | <b># oral lobes<br/># atrial lobes</b>                        | <b>Tentacles</b>   |
|----------------------|--|---|--|
| <b>Didemnidae</b>    | Colonial   | Atrial openings leading to common cloacal cavities<br>Oral: 6 | Simple few in number   |
| <b>Polyclinidae</b>  | Colonial   | Usually oral siphons: 6 or 8<br>Atrial with a languet         | Unknown  |
| <b>Polycitoridae</b> | Colonial   | Oral: 6<br>Atrial: 6  | Simple, the smaller ones inserted in a circle a little more anterior than the larger ones. |
| <b>Asciidiidae</b>   | Solitary   | Oral: >6<br>Atrial: 4   | Unknown  |
| <b>Cionidae</b>      | Solitary   | Oral: >6<br>Atrial: >6  | Unknown  |
| <b>Corellidae</b>    | Solitary   | Oral: $\geq$ 6<br>Atrial: $\geq$ 6                            | Simple   |
| <b>Pyuridae</b>      | Solitary   | Oral: 4<br>Atrial: 4  | Branched   |
| <b>Styelidae</b>     | Solitary except <i>Kukenthalia</i> and <i>Botrylloides</i> | Oral: 4<br>Atrial: 4  | Simple   |

(Van Name 1945, Millar 1966)

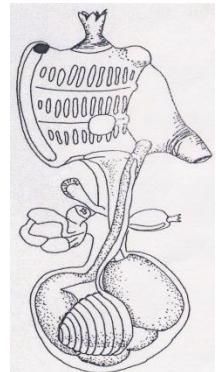
### Didemnidae



*Didemnum albidiun*

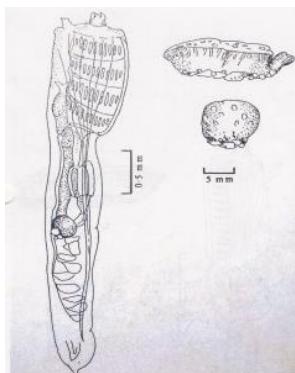


*Leptoclinides faeroensis*

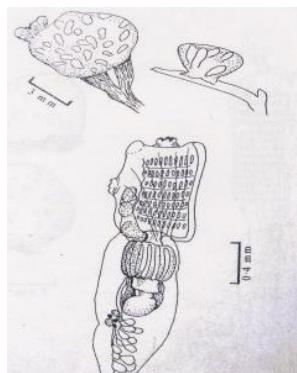


*Trididemnum tenereum*

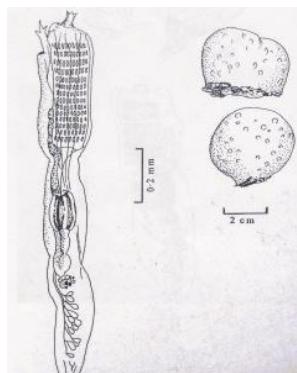
### Polyclinidae



*Aplidium spitzbergense*

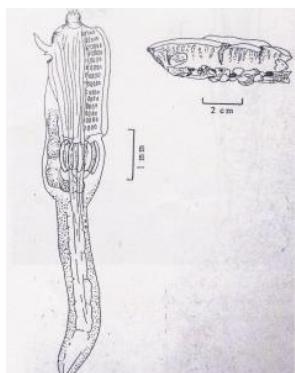


*Aplidium pallidum*

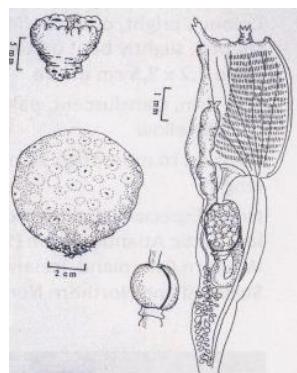


*Aplidium mutabile*

### Polyclinidae

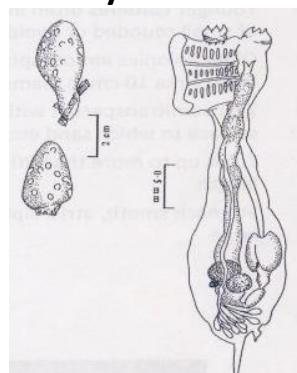


*Aplidium glabrum*



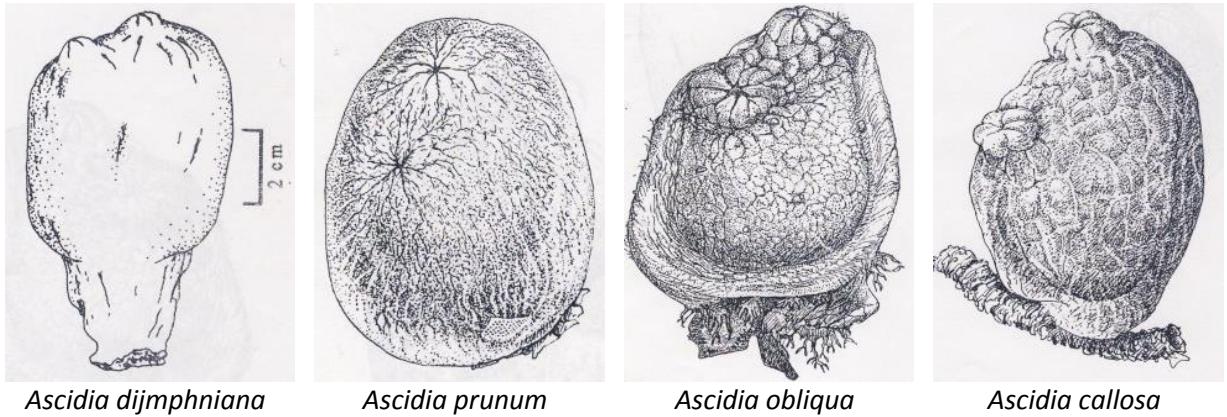
*Synoicum pulmonaria*

### Polycitoridae



*Eudistoma vitreum*

### Asciidae



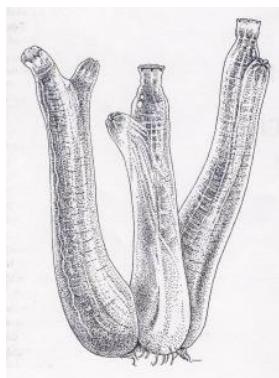
*Ascidia dijmphniana*

*Ascidia prunum*

*Ascidia obliqua*

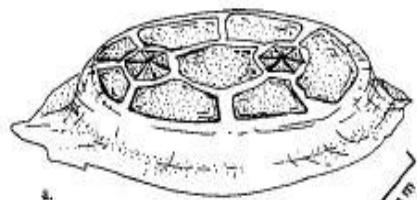
*Ascidia callosa*

### Cionidae



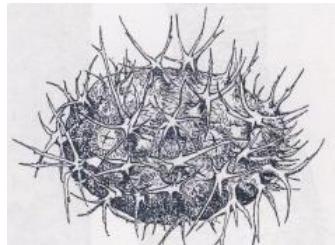
*Ciona intestinalis*

### Corellidae

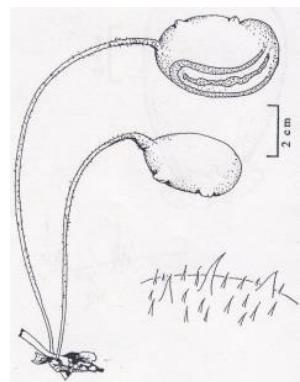


*Chelyosoma macleayanum*

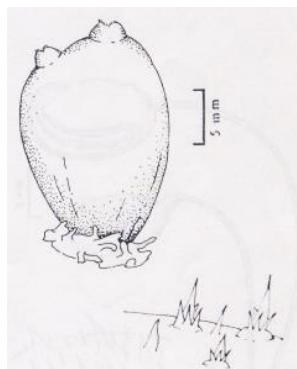
### Pyuridae



*Boltenia echinata*



*Boltenia ovifera*

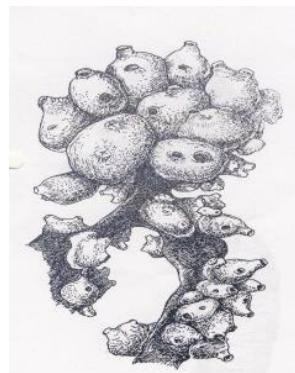


*Halocynthia pyriformis*

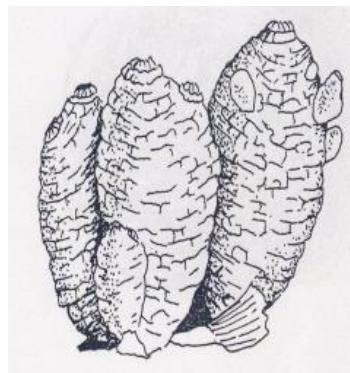
## Styelidae



*Dendrodoa pulchella*



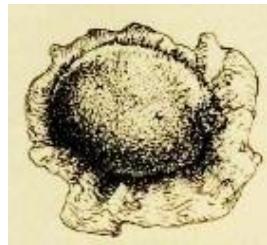
*Dendrodoa grossularia*



*Dendroboa aggregate*



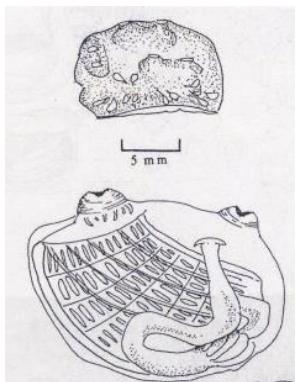
*Styela coriacea*



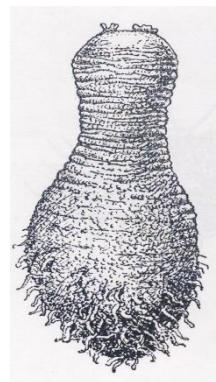
*Styela gelatinosa*



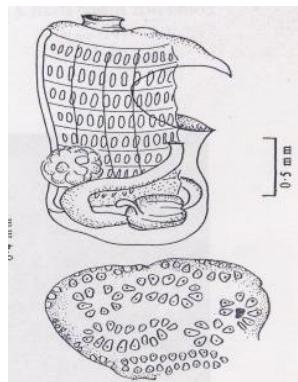
*Styela rustica*



*Kukenthalia borealis*



*Pelonaia corrugata*



*Botrylloides aureum*

|                                 | <b>Body morphology</b>  | <b>Other characteristics</b>  | <b>Body size</b>                             |
|---------------------------------|---|---|--|
| <b>Didemnidae</b>               |   |   |  |
| <i>Didemnum albidum</i>         | Encrusting and hard   | White, yellow or pink<br>Spicules densely packed throughout the test                      | Colony more around 2-3mm but can reach 100mm |
| <i>Leptoclinides faeroensis</i> | Thick, grey or white encrusting sheets  | Spicules densely packed throughout the test   | Colony between 25 to 85mm                    |
| <i>Trididemnum tenerum</i>      | Encrusting  | Test varying from dull white to almost transparent gelatinous.<br>Spicules present        | Usually colony up to 10mm but can reach 60mm |
| <b>Polyclinidae</b>             |   |   |  |
| <i>Aplidium spitzbergense</i>   | Cushion-like or rounded   | Test bare or with sand  | Colony up to 2cm                             |
| <i>Aplidium pallidum</i>        | Cushion-like or hemispherical   | Test smooth yellowish   | Colony up to 1cm in diameter                 |
| <i>Aplidium mutabile</i>        | Cushion-like, hemispherical or club-shaped  | Test with or without sand   | Colony up to 6cm in diameter                 |
| <i>Aplidium glabrum</i>         | Cushion-like or hemispherical   | Test smooth yellowish   | Colony up to 1cm in diameter                 |
| <i>Synoicum pulmonaria</i>      | Young colonies: groups of small rounded or ovoid heads<br>Old colonies: Spherical | Test semitransparent  | Mature colony: up to 10cm in diameter        |
| <b>Polycitoridae</b>            |   |   |  |
| <i>Eudistoma vitreum</i>        | Colony upright, ovate or finger shaped  | Test firm, translucent, pale grey or dull yellow  | Colony size: 7.2X3.5cm                       |
| <b>Asciidiidae</b>              |   |   |  |
| <i>Ascidia dijmephniana</i>     | Body squat, ovoid or quadrangular   | Sometimes with short stalk.<br>Surface thin<br>Siphons close together                     | Up to 8cm in longer and 6 in wide            |
| <i>Ascidia prunum</i>           | Body ovoid  | Distance between siphon: 1/3 body length<br>Surface wrinkled prune-like                   | Up to 6.5cm                                  |
| <i>Ascidia obliqua</i>          | Body ovoid  | Sometimes with stalk<br>Oral siphon terminal<br>Atrial siphon 1/3 to ½ way along the body | Up to 8cm in longer and 5cm in wide          |

|                               | <b>Body morphology</b>  | <b>Other characteristics</b>  | <b>Body size</b>                                |
|-------------------------------|---|---|---|
| <b>Asciidae</b>               |   |   |   |
| <i>Ascidia callosa</i>        | Body ovoid  | Smaller specimen: test smooth<br>Larger specimen: test rough<br>Oral siphon usually terminal<br>Atrial siphon 1/3 to 1/2 way along the body | Up to 9cm in longer                             |
| <b>Cionidae</b>               |   |   |   |
| <i>Ciona intestinalis</i>     | Body cylindrical and translucent                                | Longitudinal muscles quite conspicuous  | Up to 10cm                                      |
| <b>Corellidae</b>             |   |   |   |
| <i>Chelyosoma macleayanum</i> | Body dorso-ventrally flattened with horny disc on upper surface | Upper surface with 6 small plates immediately round each siphon   | Up to 4cm in diameter                           |
| <b>Pyuridae</b>               |   |   |   |
| <i>Boltenia echinata</i>      | Globular with characteristic branched spines                    | Small siphons   | Up to 5cm in diameter                           |
| <i>Boltenia ovifera</i>       | Kidney-shaped with long slender stalk                           | Siphons small and far apart<br>Small specimens: short spines<br>Large specimens: without spines   | Body: up to 10cm in longer<br>Stalk: up to 20cm |
| <i>Halocynthia pyriformis</i> | Barrel-shaped to ovoid « Heart-shape »                          | Orange with surface covered by minute spines  | Up to at least 8cm                              |
| <b>Styelidae</b>              |   |   |   |
| <i>Dendrodoa pulchella</i>    | Globular, tough and wrinkled                                    | Color of siphons contrast with the rest of body<br>3 branched gonad   | Up to 2,5cm in diameter                         |
| <i>Dendrodoa grossularia</i>  | Tall and cylindrical to depressed                               | Gonads unbranched   | Up to 2cm in longer                             |
| <i>Dendrodoa aggregata</i>    | Ovoid to cylindrical  | Gonad with 3-5 branches   | Up to 7cm in length                             |
| <i>Styela coriacea</i>        | Usually low and dome-shaped with expanded base                  | Surface minutely wrinkled or tuberculate  | Up to 2cm across base                           |

|                             | <b>Body morphology</b>   | <b>Other characteristics</b>   | <b>Body size</b>                 |
|-----------------------------|--|--|----------------------------------|
| <b>Styelidae</b>            |  |  |                                  |
| <i>Styela gelatinosa</i>    | Usually pear shaped, barrel shaped or cylindrical                                    | Surface smooth to quite rough and wrinkled                                       | Up to 4cm in length              |
| <i>Styela rustica</i>       | Usually upright or pillar-like<br>Stout pointed thorn-like structure between siphons | Sometimes with slightly narrow base<br>Some specimens are conical with wide base | Up to 8cm in length              |
| <i>Kukenthalia borealis</i> | Colonial<br>Zoids ovoid upright to low-dome-shaped                                   | Atrial siphon not into common shared cloaca                                      | Colony more than 2cm in diameter |
| <i>Pelonaia corrugata</i>   | Elongated, worm-like<br>Wider at lower end   | Siphons small and close together at upped end<br>Surface with sand or mud        | Up to 14cm in length             |
| <i>Botrylloides aureum</i>  | Colony flat and encrusting   | Dark red, purple to almost black<br>Atrial siphon open inot common shared cloaca | Colony up to 40mm                |

(Van Name 1945, Millar 1966, Mccann et al. 2013, Lützen, 1967)

Asidiacea (Class) > Aplousobranchia (Order) > **Didemnidiae** > (Family)



### *Didemnum albidum*

Verrill 1871

AphiaID: 103560

Unaccepted name: –

Greenland distribution: West basin, SE shelf slope, SW shelf, West shelf



## *Leptoclinides faeroensis*

Bjerk 1905

AphiaID: 103583

Unaccepted name: –

Greenland distribution: West shelf



## *Trididemnum tenerum*

Verrill 1871

AphiaID: 103598

Unaccepted name: *Lissoclinum tenerum*

Greenland distribution: unknown



Asciidae (Class) > Aplousobranchia (Order) > Polyclinidae > (Family)

## *Aplidium* sp.

(West shelf)



### *A. spitzbergense*

Hartmeyer 1903

AphiaID: 103666

Unaccepted name:

*Amaroucium sarsi*

### *A. pallidum*

Verrill 1871

AphiaID: 103658

Unaccepted name:

*Amaroecium pallidum*

### *A. mutable*

Sars 1851

AphiaID: 103654

Unaccepted name:

*Amaroucium mutable*

### *Aplidium glabrum*

Verrill 1871

AphiaID: 103647

Unaccepted name:

*Amaroecium glabrum*

*Aplidium pallidum*



[www.aphotomarine.com](http://www.aphotomarine.com)

*Aplidium glabrum*



[www.mer-littoral.org](http://www.mer-littoral.org) © W. Bay-Nouailhat

*Synoicum pulmonaria*

Ellis & Solander 1786

AphiaID: 103692

Unaccepted name: *Alcyonium pulmonaria*

Greenland distribution: West shelf, SW shelf



Asciidiacea (Class) > Aplousobranchia (Order) > **Polycitoridae** > (Family)

*Eudistoma* sp.

(West shelf)



*Eudistoma vitreum*

Sars 1851

AphiaID: 103624

Unaccepted name: *Distomum vitreum*

Greenland distribution: West shelf, SW shelf



**Ascidia sp.**

(West shelf, SW shelf, SE shelf slope, West basin)



**A. dijmphniana**

Traustedt 1886

AphiaID:103704

Unaccepted name:  
*Phallusia dijmphniana*

Distribution: unknown

*Ascidia dijmphniana*

**A. prunum**

Müller 1976

AphiaID:103714

Unaccepted name:  
*Ascidia complanata*  
unknown

**A. obliqua**

Alder 1863

AphiaID:103713

Unaccepted name:  
*Ascidia compressa*

West shelf

**A. callosa**

Stimpson 1852

AphiaID:103700

Unaccepted name:  
*Ascidia adhaerens*

unknown



Ámundur Nolsø



Ámundur Nolsø

**Ciona sp.**

(West shelf)



**Ciona intestinalis**

Linnaeus 1767

AphiaID:103732

Unaccepted name: *Ascidia intestinalis*

Greenland distribution: West shelf



Asciidiacea (Class) > Phlebobranchia (Order) > **Corellidae** > (Family)

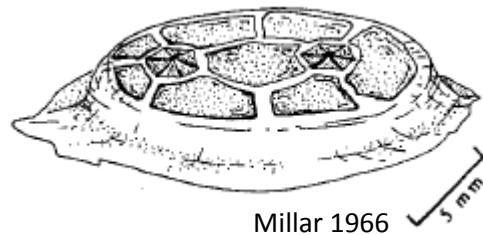
*Chelyosoma macleayanum*

Broderip & Sowerby 1830

AphiaID:103740

Unaccepted name: –

Greenland distribution: unknown



Millar 1966

Asciidiacea (Class) > Stolidobranchia (Order) > **Pyuridae** > (Family)

*Halocynthia pyriformis*

Rathke 1806

AphiaID:103828

Unaccepted name: *Ascidia pyriformis*

Greenland distribution: SW shelf



*Boltenia* sp.



*Boltenia echinata*

Linnaeus 1767

AphiaID: 103814

Unaccepted name: *Ascidia echinata*

West shelf, SE shelf slope



Ámundur Nolsø

*Boltenia ovifera*

Linnaeus 1767

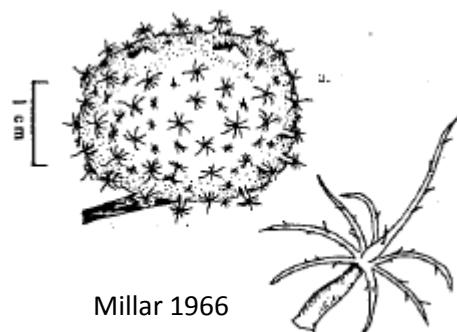
AphiaID: 103815

Unaccepted name: *Vorticella ovifera*

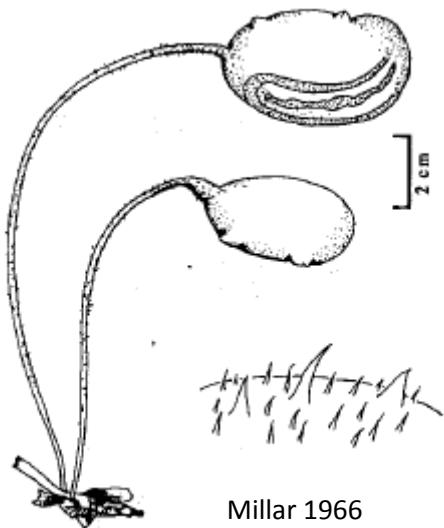
West shelf, SW shelf



Laure de Montety



Millar 1966



Millar 1966

*Dendrodoa* sp.

(West basin, SE shelf slope, SW shelf, West shelf)



*D. aggregata*

Müller 1776

AphiaID: 103880

Unaccepted name: –

*D. grossularia*

Van Beneden 1846

AphiaID: 103882

Unaccepted name: –

*D. pulchella*

Rathke 1806

AphiaID: 103885

Unaccepted name: –



*Kukenthalia borealis*

Gottschaldt 1894

AphiaID: 103893

Unaccepted name: *Goodsiria borealis*

Greenland distribution: West shelf, SW shelf, SE shelf slope



*Pelonaia corrugata*

Goodsir & Forbes 1841

AphiaID:103894

Unaccepted name: –

Greenland distribution: West shelf, SE shelf slope



Ámundur Nolsø

*Styela* sp.



*Styela coriacea*

Alder & Hancock 1848

AphiaID: 103930

Unaccepted name: *Cynthia coriacea*

West shelf



Ámundur Nolsø

*Styela gelatinosa*

Traustedt 1886

AphiaID: 103932

Unaccepted name: –

SW shelf



Ámundur Nolsø

*Styela rustica*

Linnaeus 1767

AphiaID: 103937

Unaccepted name: –

West shelf



*Botrylloides aureum*

Sars 1851

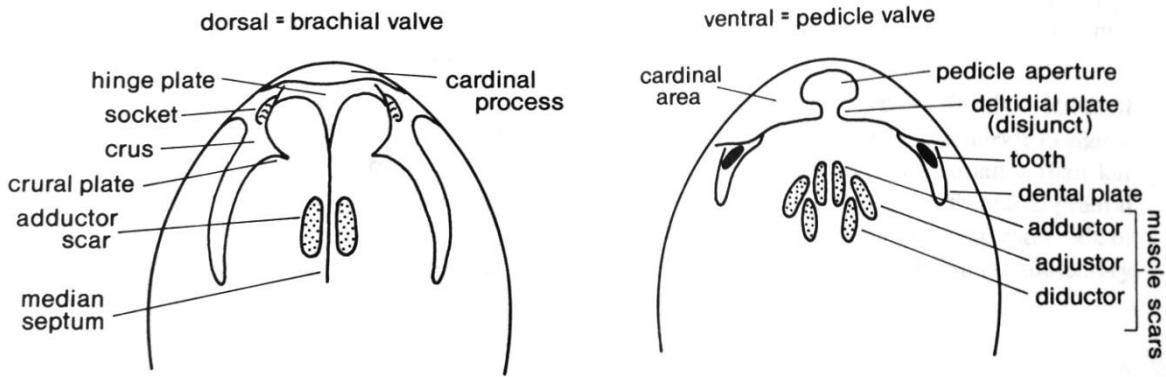
AphiaID:157862

Unaccepted name: *Botrylloides aurea*

Greenland distribution: SW shelf, West shelf

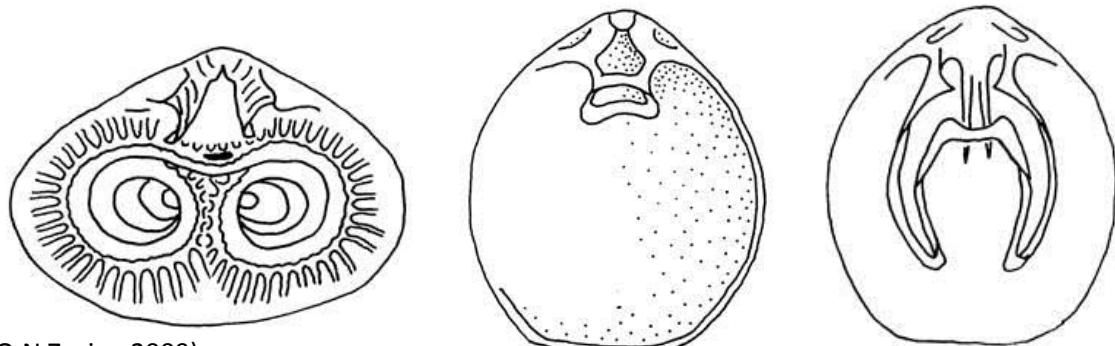


## BRACHIOPODA



(Stachowitsch 1992)

| FAMILY             | PAGE |
|--------------------|------|
| Hemithirididae     | 416  |
| Cancellothyrididae | 416  |
| Zeilleriidae       | 417  |



(O.N Zezina 2009)

### TAXONOMIC KEY – FAMILIES

- 1(2) Crura shaped like flat hooks. Middle septum of brachial valve absent or very low and short (threadlike). Shell medium size, strong, dark (grayish-brown to dark brown or black) with ribbed outer surface **[HEMITHIRIDIDAE]**
- 2(3) Crural processes fused at both ends forming a ring together with short brachial loop. Shell ribbed. Deltoidal plates not fused to one another; foramen open anteriorly. Spicules fill all soft tissue of lophophore. Along entire length of tentacles, spicule plates are rolled into unclosed tubules (grooves) **[CANCELLOTHYRIDIDAE]**
- 3 Crural processes fused at both ends forming a ring together with long “branches”. Foramen is open anteriorly. Deltoidal plates rectangular, very narrow, or absent. Middle septum in brachial valve is short, low; its connection with loop of brachial skeleton is lost during development **[MACANDREVIIDAE]**

(Zezina 2009)

Rhynchonellata (Class) > Rhynchonellida (Order) > Hemithiridoidea (Superfamily) > **Hemithirididae** > (Family)

### *Hemithiris psittacea*

Gmelin 1791

AphiaID:104054

Unaccepted name: *Anomia psittacea*

Greenland distribution: SW shelf, West shelf



Rhynchonellata (Class) > Terebratulida (Order) > Terebratellina (Suborder) > Cancellothyroidea (Superfamily) > **Cancellothyrididae** > (Family)

### *Terebratulina* sp.

(West shelf, SW shelf, SE shelf slope, West basin)



### *Terebratulina septentrionalis*

Couthouy 1838

AphiaID: 104056

Unaccepted name: *Terebratula septentrionalis*



Rhynchonellata (Class) > Terebratulida (Order) > Terebratellidina (Suborder) > Zeillerioidea (Superfamily) > Zeilleriidae > (Family)

### *Macandrevia cranium*

O.F. Müller 1776

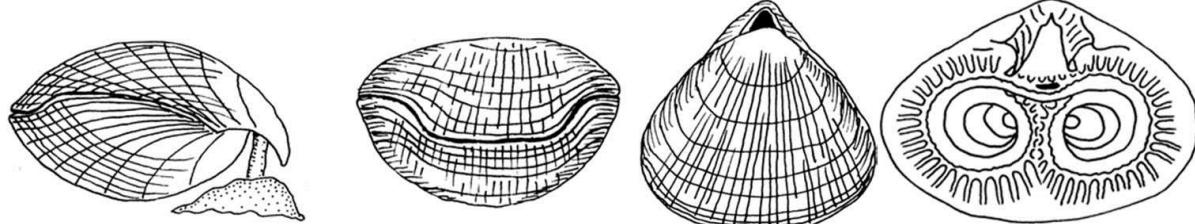
AphiaID:104062

Unaccepted name: *Terebratula cranium*

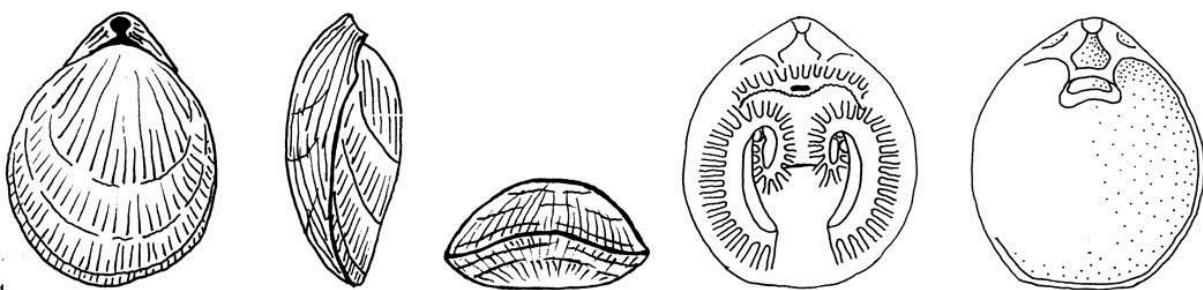
Greenland distribution: SE shelf slope, SW shelf, West shelf



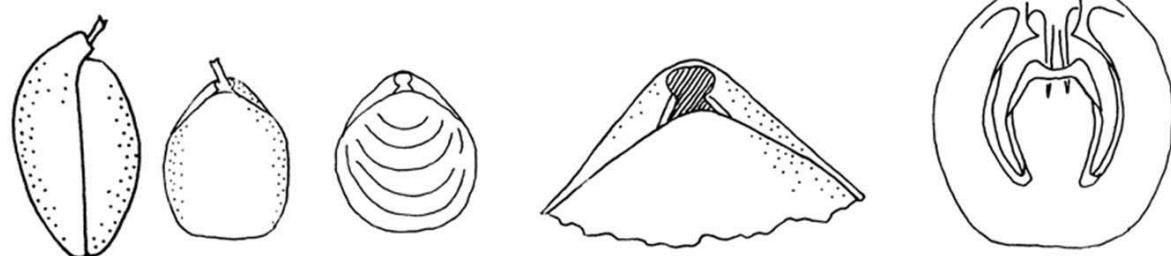
### *Hemithiris* sp.



### *Terebratulina* sp.

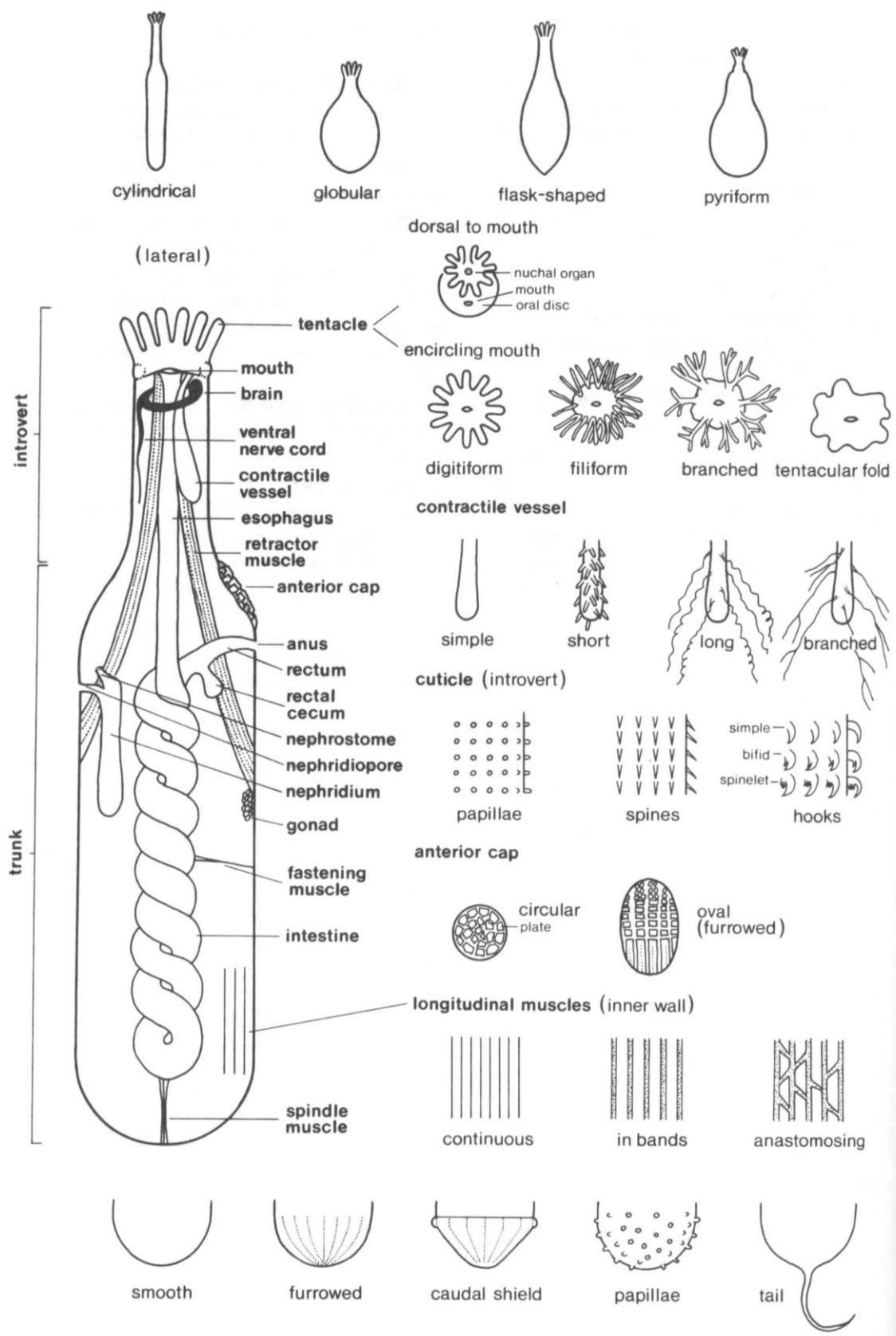


### *Macandrevia* sp.



(Zezina 2009)

# SIPUNCULA



(Stachowitsch 1992)

TAXONOMIC KEY – FAMILIES

- 1(2) Longitudinal muscle of body wall gathered into separate or anastomosing bands .  
[**SIPUNCULIDAE**]
- 2 Longitudinal muscle of body wall in a uniform continuous layer
- 3(4) One nephridium present. Body end covered with small hooks. Often found in scaphopoda or gastropoda old shells. [**PHASCOLIONIDAE**]
- 4 Two nephridia present. Body smooth. [**GOLFINGIIDAE**]

Sipunculidea (Class) > Golfingiida (Order) > **Golfingiidae** > (Family)

*Golfingia (Golfingia) margaritacea*

Sars 1851

AphiaID: 175027

Unaccepted name: *Sipunculus margaritaceus*

Greenland distribution: West shelf, SW shelf



Sipunculidea (Class) > Golfingiida (Order) > **Phascolionidae** > (Family)

**Phascolionidae spp.**

Cutler & Gibbs 1985

AphiaID: 1647

Unaccepted name: –

Greenland distribution: West shelf



Sipunculidea (Class) > Golfingiida (Order) > **Sipunculidae** > (Family)

**Sipunculidae spp.**

Rafinesque 1814

AphiaID: 1648

Unaccepted name: –



WoRMS

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