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Guide d'identification d'espèces
marines du Saint-Laurent

Marine Species Identification Guide
for the St. Lawrence

par

by

Claude Nozères

Claude Nozères

et

and

Marthe Bérubé, Viviane Haeberlé,
Roberta Miller, Françoise Proust

Marthe Bérubé, Viviane Haeberlé,
Roberta Miller, Françoise Proust

Institut Maurice-Lamontagne,
Pêches et Océans Canada
C. P. 1000, 850 route de la Mer
Mont-Joli (Québec)
G5H 3Z4

Maurice Lamontagne Institute,
Fisheries and Oceans Canada
P.O. Box 1000, 850 route de la Mer
Mont-Joli, Québec
G5H 3Z4

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Introduction

Documenting the Sea Around Us

Although we find ourselves in the 21st century, seemingly better equipped and informed than ever before, ecological knowledge, particularly of the marine realm, at times feels lacking. In Canada, a number of recent initiatives, such as the ratification of the *United Nations Convention on Biological Diversity*, the federal-provincial *Accord for the Protection of Species at Risk*, the *Species at Risk Act*, and the *Sea Around Us* project attribute a special significance to marine biodiversity. The various initiatives at documenting the underwater world highlight the need for more information regarding lesser-known species. Certainly the high cost of conducting marine surveys affects our ability to fully document biodiversity. Ship time is precious and the researcher may be faced with the daunting task of rapidly identifying many species, some of which are not often captured in standard fishing gear. And yet, much information might be obtained to help us understand marine biodiversity and ecology if more specific identifications could be reported from scientific and observer surveys.

A Complementary Tool

With this in mind, the Species at Risk and Biodiversity team of the Maurice Lamontagne Institute decided to produce a field tool to assist biologists in identifying and comparing the marine species of fishes and invertebrates that may be encountered in the Estuary and Northern Gulf of St. Lawrence. Members of the team participated in a number of scientific missions in 2001 and 2002, resulting in the collection of many specimens and images that were then reviewed for identification by consulting taxonomic keys and biologists. It should be noted that the *Marine Species Identification Guide for the St. Lawrence* is not intended to serve as a complete inventory, nor as a taxonomic key for all species. It is best used in conjunction with taxonomic references, as listed in the Bibliography.

Taxonomy

Even in today's connected world, with access to numerous references and observations, it can be a heady task to be fully confident at identifying whatever may be in hand. In part this is because taxonomy is a particular field of science, with legal protocols that can vary between certain groups of organisms, depending on history and biology (Minelli 2003). Thus we have controversies regarding the designation of certain species such as the sand lances (*Ammodytes* spp.), the attribution of families within the codfishes, or cases of synonymy such as *Parathemisto* for *Themisto* spp. Latin names can at times vary, but the common names are even less consistent, some of which are presented here for convenience and not from actual usage. This is especially the case with the incredibly diverse crustaceans.

Wherever possible, we have sought to apply the most recent latin name to the identified specimen, with the principal references being drawn from *Fishbase*, *Robins and Ray 1986*, *Scott and Scott 1988*, *Squires 1990*, and the *FAO Fisheries Synopses*. A list summarizing the species of marine fishes is also included (Appendix A), representing those species included in this guide along with others known to be found in the St. Lawrence marine ecosystem. Along with the necessity of consulting original documents or reprints of taxonomic descriptions, the ease-of-use of the world-wide web and the interest in biodiversity initiatives have resulted in the proliferation of web resources, most of which vary in their coverage and intended purpose. A selection of currently useful sites can be found at the end of the Bibliography.

Marine Species Identification Guide for the St. Lawrence

Specimens

This guide is principally a documentation of the mid-sized, open-water fishes and crustaceans as may be typically encountered in the lower maritime Estuary and Northern Gulf of St. Lawrence. The vast diversity of other fauna, both small and large species, and particularly from coastal zones is only partially represented here. This is partly because many guidebooks already exist for these organisms, and also because our specimens were mostly acquired during scientific trawling missions, whereupon the kinds of organisms observed are biased in terms of the fishing gear employed (principally shrimp and otter-trawls).

Notably, this guide has incomplete representations for the echinoderms, the molluscs, the crustacean, and the cnidarians (jellyfishes). New files will be included in a subsequent version of this guide.

The conditions experienced while acquiring specimens have meant that the photos can vary in appearance, depending on equipment, lighting, and specimen condition (live or frozen). Furthermore, several species exhibit a wide variability of natural colour forms, and the reader is cautioned to not make identifications solely on the basis of colour, of either the photos found here, or of what may be encountered in the field.

In addition to photos, the location of specimens can provide useful information. We have used survey data, principally from missions on the CCGS *Alfred Needler* from 1990 to 2002, to present simplified locality maps for the Estuary and Northern Gulf. The markings (orange pins) represent the locations when identifying specimens at-sea, to the species level whenever possible. Those specimens that were photographed while along the coastline are represented by green checkmarks. However, a number of species in this guide do not have standard records available for this region, and these await updating in future versions of the guide.

Technical notes

The images for this guide were all taken with digital cameras, principally the 1.3 MP (megapixel) Sony[®] Cybershot[®] P-30 and the 5.0 MP Nikon[®] Coolpix[®] 5000. While a 3 to 5 MP camera is preferable for making letter-size photos and enlargements, the 1 to 2 MP models are quite adequate for documenting everyday catches.

This guide is distributed as a electronic document to take advantage of the searching functionality available in Acrobat[®] (versions of the free Reader software are included on the CD). Pages are by default viewed at the screen resolution of 72 to 75 **dpi** (dots-per-inch) when at 100%. This document was designed for 150 dpi or 50% screen view to allow for acceptable printing at US letter-size on personal printers.



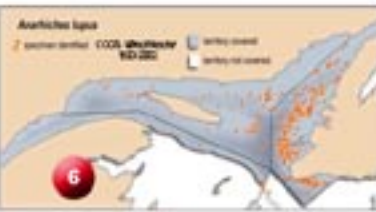
As this is a first version of the guide, we welcome suggestions and corrections that may improve upon it, allowing it to evolve as a collective work in progress. We thank you for trying it out and hope you find it useful.

Claude Nozères and Marthe Bérubé
March 2003, Mont-Joli, Québec.

How to use this guide

This guide is not a taxonomic key, but is intended as a complement, to be used alongside more complete reference works (see Bibliography). As such, the character traits shown, as well as the links to similar species, were selected to assist in making a rapid species determination with the images provided.

A typical page

1 <i>Anarhichas lupus</i>		
2 Loop atlantique	Atlantic wolffish	
< 600 mm	caudal fin distinct from the dorsal and anal fin	
		
10 or more irregular bands		
> 600 mm		
3 prominent incisors		
Characteristics: <ul style="list-style-type: none"> 4 - young: yellow-gray - adult: dark blue-gray - 10 or more irregular bands 		
May be mistaken for: <ul style="list-style-type: none"> 5 Anarhichas minor large demersals small demersals 		
		
6	7	
Family	Type of measure	Maximum size
Anarhichadidae	Total mm	1210 mm

- | | |
|--|--|
| 1 Scientific name | 5 Similar species |
| 2 Common names (French and English) | • black: not present in this guide |
| 3 Specimen photos | • blue: present in guide (click to see page) |
| 4 Notes to distinguish presented species | 6 Observations from missions |
| | 7 Measurement standard for this species |





How to navigate in this guide

Navigating in Acrobat



There are three methods of finding a species:

- Click on the name that appears in the bookmarks.
 - Click on the name that appears in the Name Index.
 - Search by name from the menu: "Edit/find/..."
- 1 Click on  to see bookmarks.
 - 2 Click on  to expand the bookmarks list.
 - 3 Current page view, also indicated by the darker bookmark.

Part II: Marine invertebrates

Name index

Acanthephyra to Plesiopenaeus
Pontophilus to Themisto



Name index: Marine invertebrates

Latin name	French name	English name
<i>Acanthephyra</i> sp.	Opophoride	Opophorid
<i>Argis dentata</i>	Crevette verte	Argid
<i>Bathypolypus arcticus</i>	Poulpe boréale	Northern Atlantic octopus
<i>Boltenia ovifera</i>	Patate de mer	Sea potato
<i>Boreomysis</i> sp.	Boreomyside	Boremysid
<i>Buccinum undatum</i>	Bourgot, buccin	Waved whelk
<i>Cancer irroratus</i>	Crabe commun	Rock crab
<i>Caprella septrionalis</i>	Caprelle	Caprellid
<i>Chionoecetes opilio</i>	Crabe des neiges	Snow crab
<i>Chlamys islandica</i>	Pétoncle d'Islande	Icelandic scallop
<i>Crangon septemspinosa</i>	Crevette grise de sable	Grey sand shrimp
<i>Crossaster papposus</i>	Soleil de mer épineux	Spiny sun star
<i>Eualus gaimardi</i>	Eualidé	Eualid
<i>Eualus macilentus</i>	Eualidé	Eualid
<i>Gammarellus homari</i>	Gammare	Gammarid
<i>Gnathophausia ingens</i>	Myside géant rouge	Giant deep-sea mysid
<i>Gorgoncephalus arcticus</i>	Gorgoncéphale	Northern basket star
<i>Halocynthia pyriformis</i>	Pêche de mer, tunicate	Sea peach, Tunicate
<i>Hippaster phyrgiana</i>	Étoile de coussin	Horse star
<i>Hyas araneus</i>	Crabe lyre (araignée)	Toad crab
<i>Hyas coarctatus</i>	Crabe lyre (arctique)	Arctic lyre crab
<i>Illex illecebrosus</i>	Encornet rouge boréale	Northern shortfin squid
<i>Lebbeus groenlandicus</i>	Bouc du Groenland	Greenland lebbeid
<i>Lebbeus polaris</i>	Bouc	Polar lebbeid
<i>Littorea littorina</i>	Bigorneau	Periwinkle
<i>Lithodes maja</i>	Crabe épineux du nord	Spiny crab
<i>Meganyctiphanes norvegica</i>	Euphausiacé	Euphausid
<i>Munidopsis curvirostrata</i>	Crabe galatheide	Galatheid crab
<i>Nymphon</i> sp.	Pycnogide	Sea spider
<i>Ophiopholis aculeata</i>	Ophiure pâquerette	Daisy brittlestar
<i>Pagurus</i> sp.	Bernard l'hermite	Hermit crab
<i>Pandalus borealis</i>	Crevette nordique	Northern shrimp
<i>Pandalus montagui</i>	Crevette ésope	Striped shrimp
<i>Pandalus propinquus</i>	Pandalide	Pandalid
<i>Pasiphaea multidentata</i>	Sivade rose	Glass shrimp
<i>Pasiphaea tarda</i>	Pasiphaeide	Pasiphaeid
<i>Placopecten magellanicus</i>	Pétoncle géant	Atlantic deep-sea scallop
<i>Plesiopeneaus edwardsianus</i>	Gambon écarlate	Giant scarlet prawn


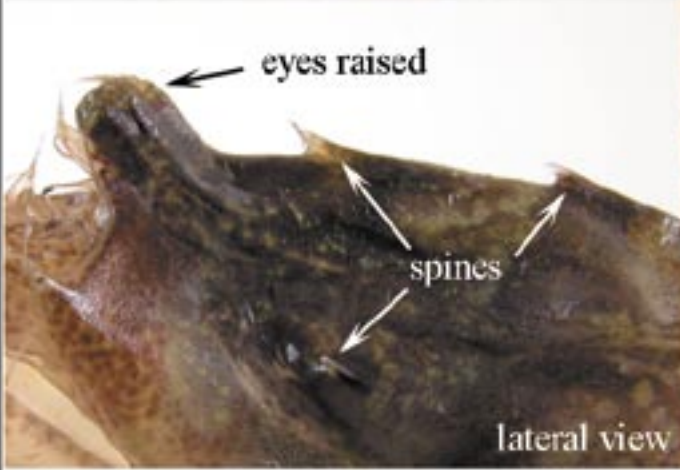
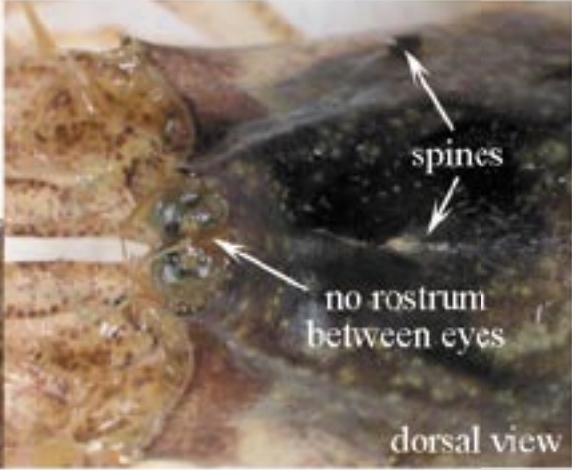
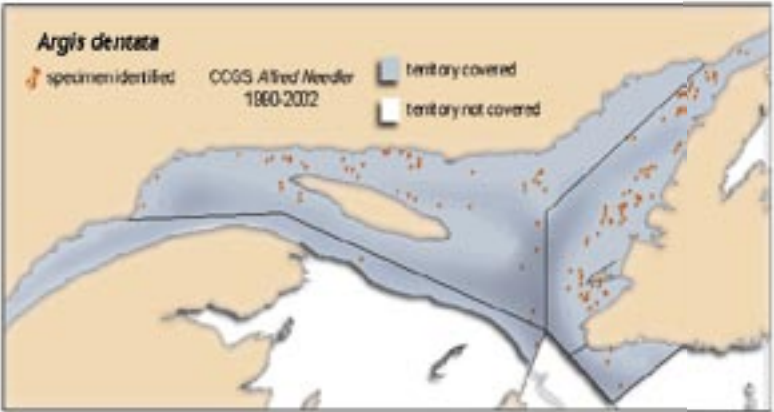
Name index: Marine invertebrates (cont'd)

Latin name	French name	English name
<i>Pontophilus norvegica</i>	Crevette de Norvège	Norwegian shrimp
<i>Rhacotropis aculeatus</i>	Eusiride, amphipode	Eusirid, amphipod
<i>Sabinea sarsi</i>	Crevette de Sars	Sars shrimp
<i>Sabinea septemcarinata</i>	Crevette à sept lignes	Sevenlined shrimp
<i>Sclerocrangon boreas</i>	Crevette de roche (ciselée)	Sculptured shrimp
<i>Semirossia tenera</i>	Sépiole calamarette	Lesser bobtail squid
<i>Sergia robustus</i>	Sergestidé écarlate	Scarlet sergestid
<i>Spirontocaris lillejeborgi</i>	Bouc épineux	Friendly blade shrimp
<i>Spirontocaris spinosus</i>	Bouc perroquet	Parrot shrimp
<i>Staurophoria mertensia</i>	Méduse à croix blanche	Whitecross jellyfish
<i>Stereomastis sculpta</i>	Polychelidé	Polychelid
<i>Syscensus infelix</i>	Isopode	Isopod
<i>Themisto libellula</i>	Hyperiid, amphipode	Hyperiid, amphipod
<i>Thysanoessa</i> sp.	Euphausiacé	Euphausid



<i>AcanthePHYra</i> sp.		
Oplophorid�	Oplophoridid	
Fisheries and Oceans Canada C. No�z�es		
<p>Characteristics:</p> <ul style="list-style-type: none"> • colour scarlet red • abdominal spine present • rostrum with spines dorsally and ventrally • no lateral carina (crests) on the cephalothorax <p>May be mistaken for: <i>Sergestes robustus</i></p>		
Family	Type of measure	Maximum size
Oplophoridae	Cephalothorax mm	n. a.

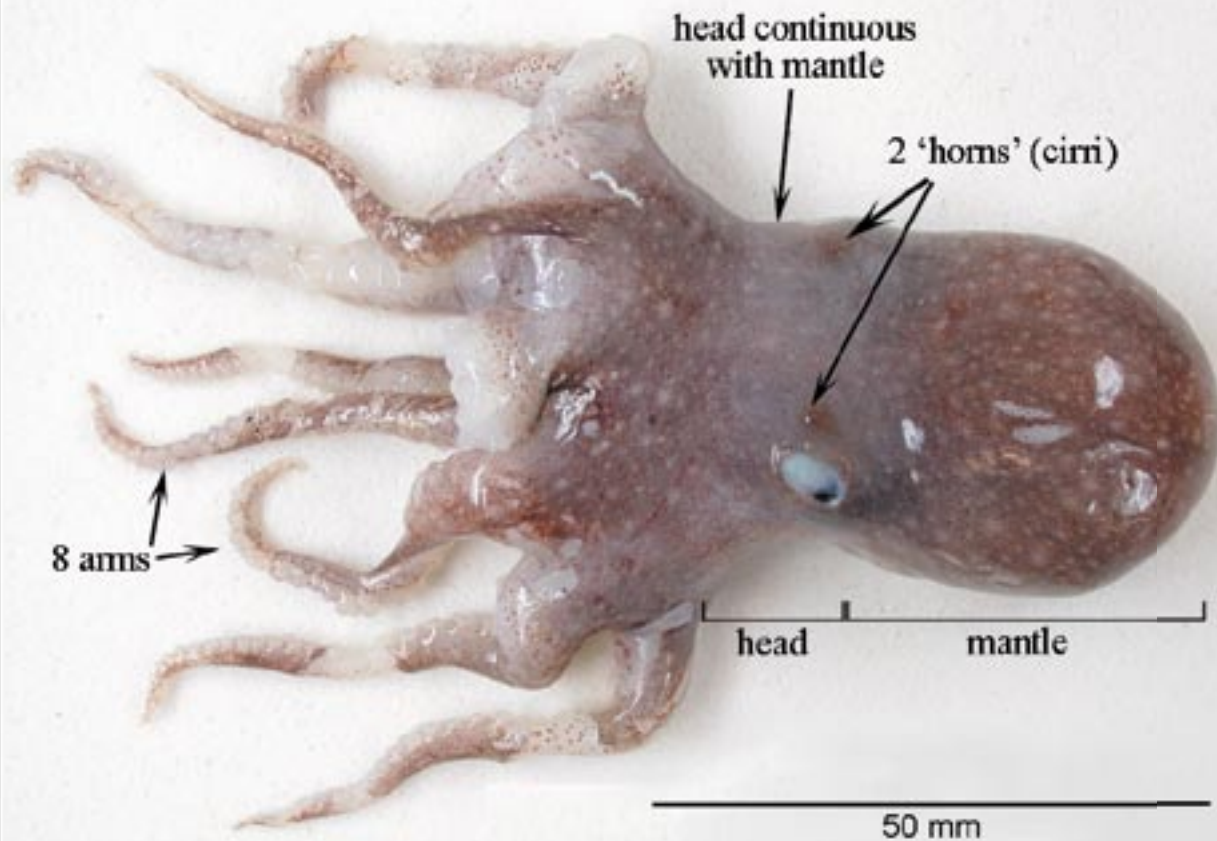


<i>Argis dentata</i>		
Crevette verte	Arctic argid	
		
Fisheries and Oceans Canada C. Noziers		
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>lateral view</p> </div> <div style="text-align: center;">  <p>dorsal view</p> </div> </div>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • gray-brown to red • elevated eyes close together • no rostrum • 4 spines on the cephalothorax: 1 each side, 2 on the median 		
<p>May be mistaken for: <i>Crangon septemspinosa</i> <i>Sclerocrangon boreas</i></p>		
		
Family	Type of measure	Maximum size
Crangonidae	Cephalothorax mm	31 mm

Bathypolypus arcticus

Poulpe boréal

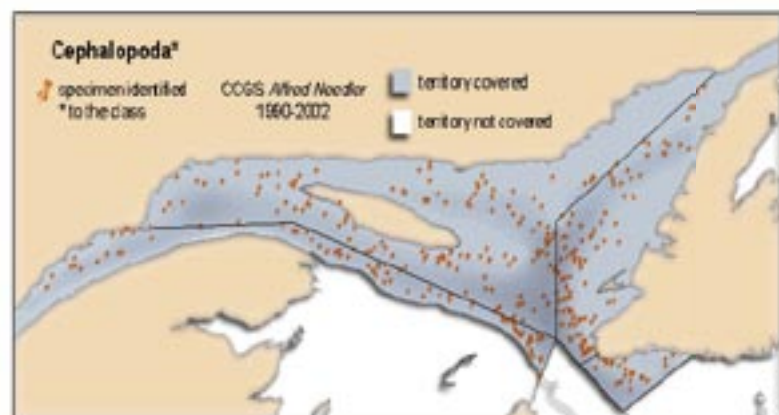
Northern Atlantic octopus



Fisheries and Oceans Canada, C. Nozères

Characteristics:

- colour pinkish-brown
- surface may be warty
- 8 arms of equal shape
- mantle covers the head
- 2 small fleshy horns (cirri) above the eyes

May be mistaken for:*Semirossia tenera*

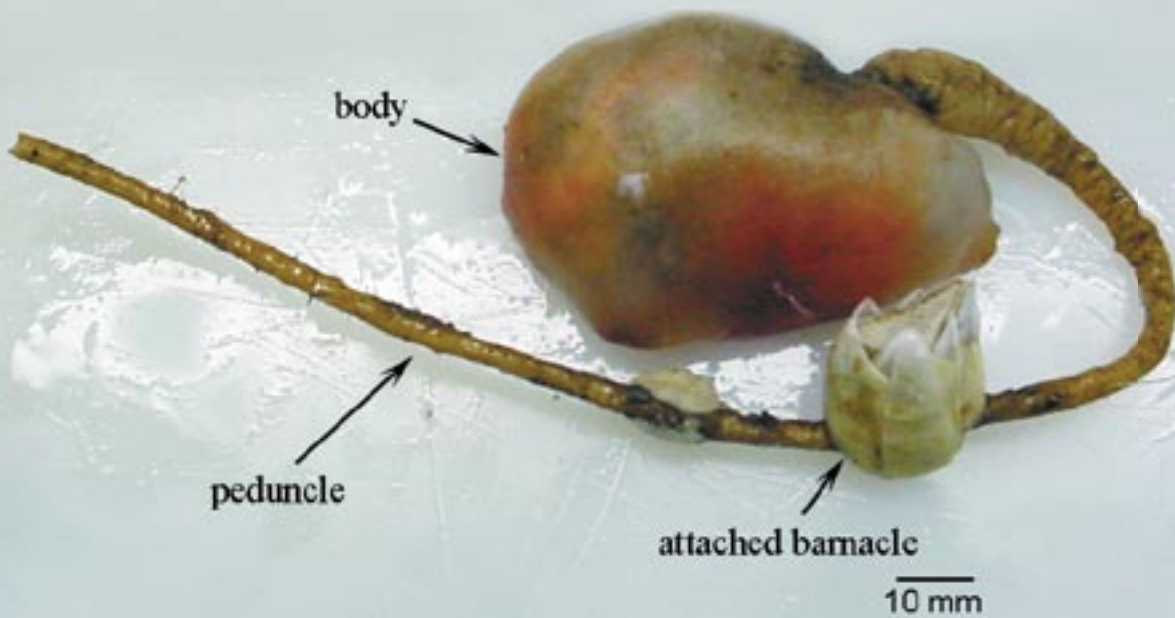
Family	Type of measure	Maximum size
Octopodidae	Mantle mm	100 mm (rarely > 60 mm)



Boltenia ovifera

Patate de mer

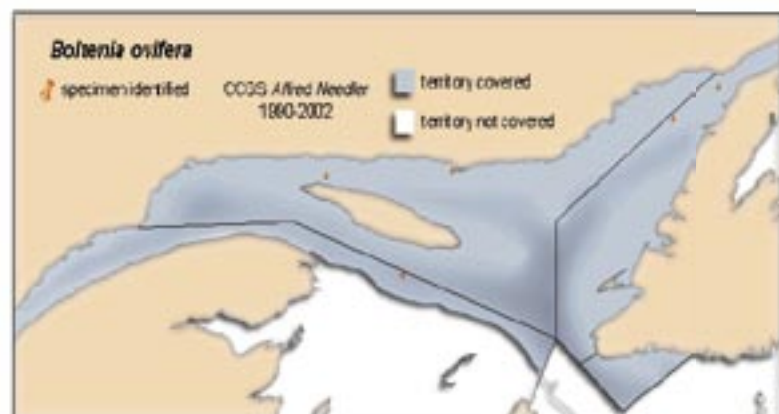
Sea potato, Stalked tunicate



Fisheries and Oceans Canada - C. Nizéens

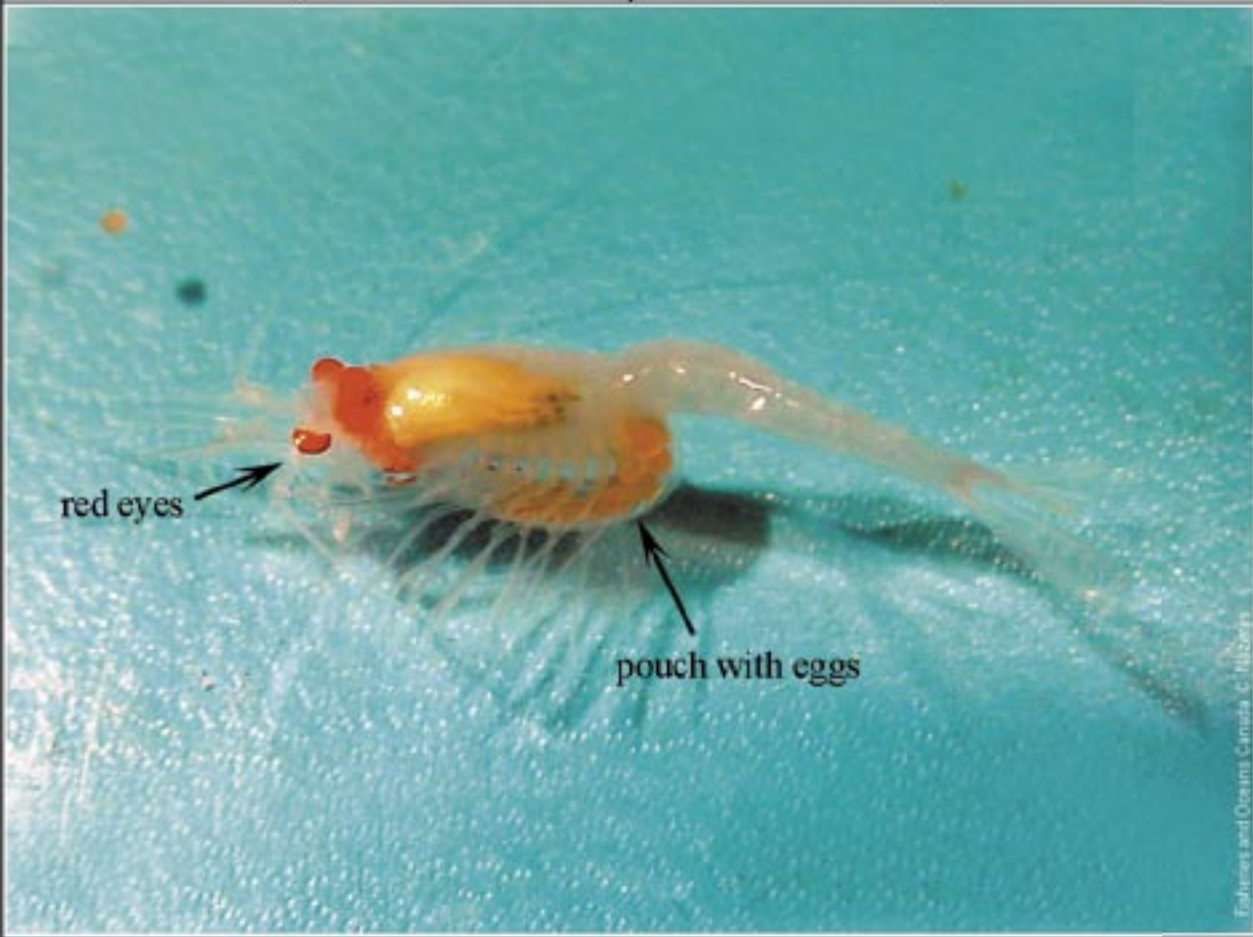
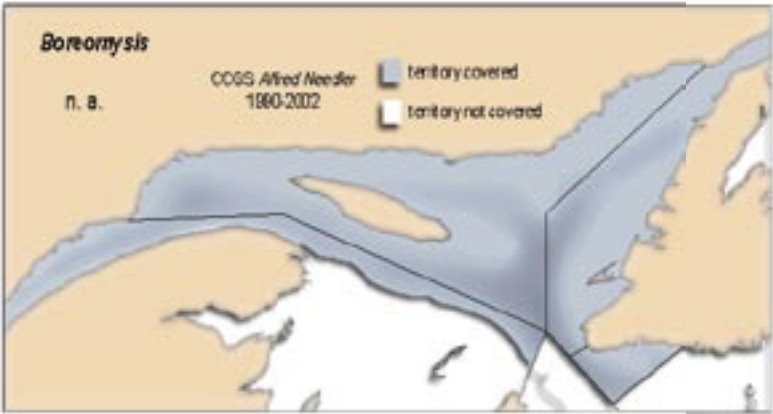
Characteristics:

- colour brown to orange
- oblong body
- long peduncle (stalk)
- may have epiphytes or others attached


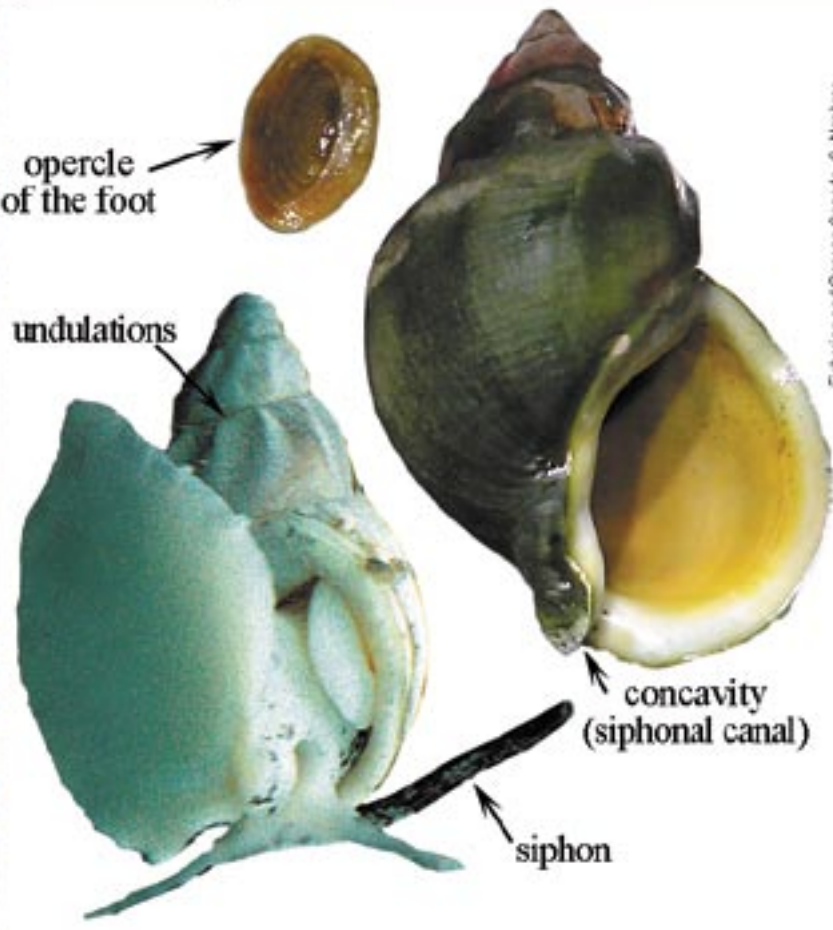
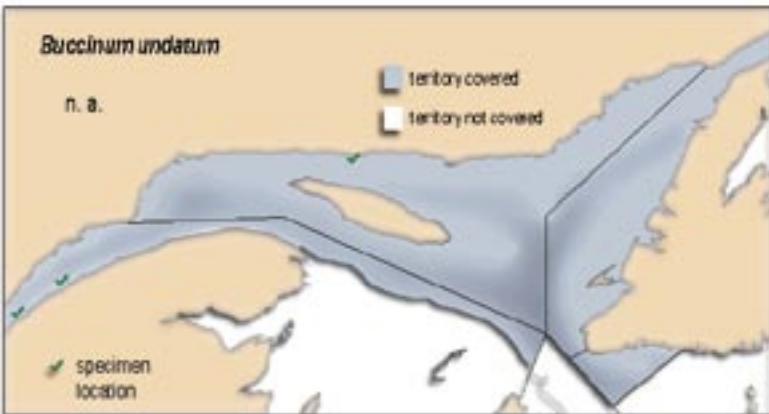
May be mistaken for:*Halocynthia pyriformis*

Family	Type of measure	Maximum size
Pyuridae	Body diameter mm	80 mm



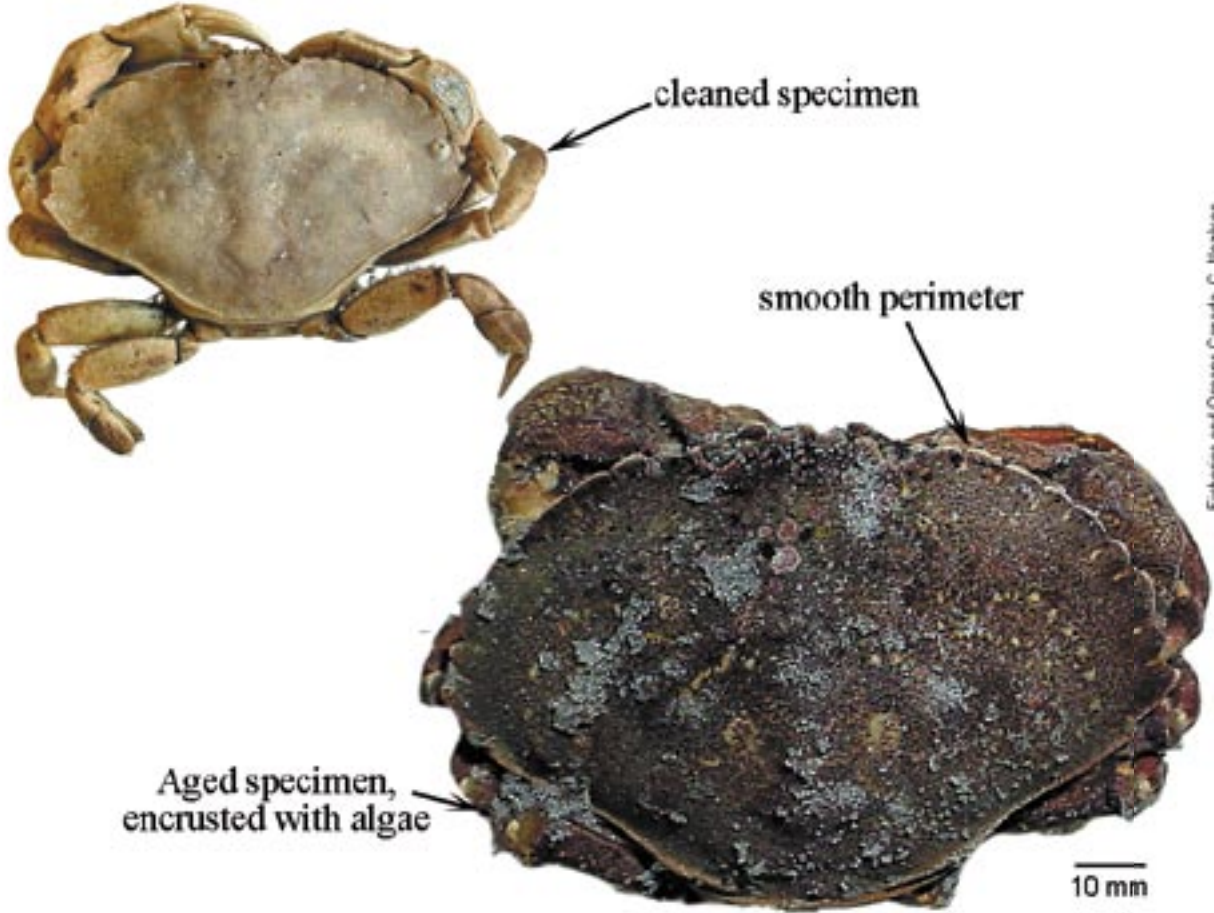
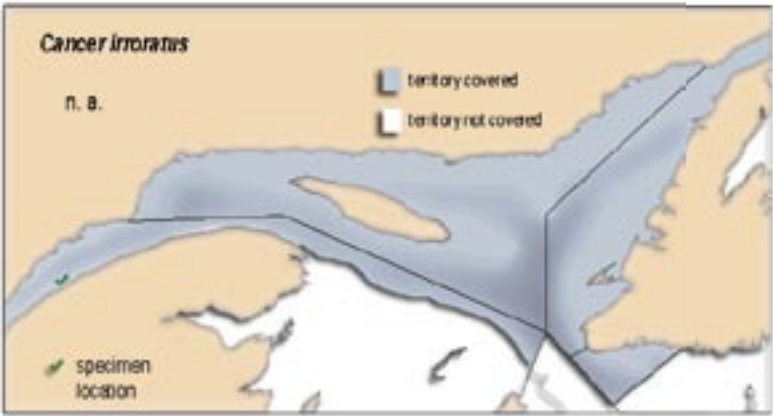
<i>Boreomysis</i> sp.		
Myside		
		Mysid
 <p style="text-align: right; font-size: small;">Fisheries and Oceans Canada - C. H. H. H.</p>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • red eyes • abdominal pouch with eggs (females only) <p>May be mistaken for:</p> <p><i>Mysis mixta</i></p> <p>Euaphausiacea</p>		
Family	Type of measure	Maximum size
Mysidae	Cephalothorax mm	7 mm



<i>Buccinum undatum</i>		
Buccin, bourgot	Waved whelk	
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • waved ribs on shell (lateral undulations) • shell mouth with a concavity for siphon <p>May be confused with: <i>Buccinum totteni</i> <i>Littorina littorea</i></p>		
Family	Type of measure	Maximum size
Buccinidae	Shell length mm	102 mm

Fisheries and Oceans Canada - C. Nizères

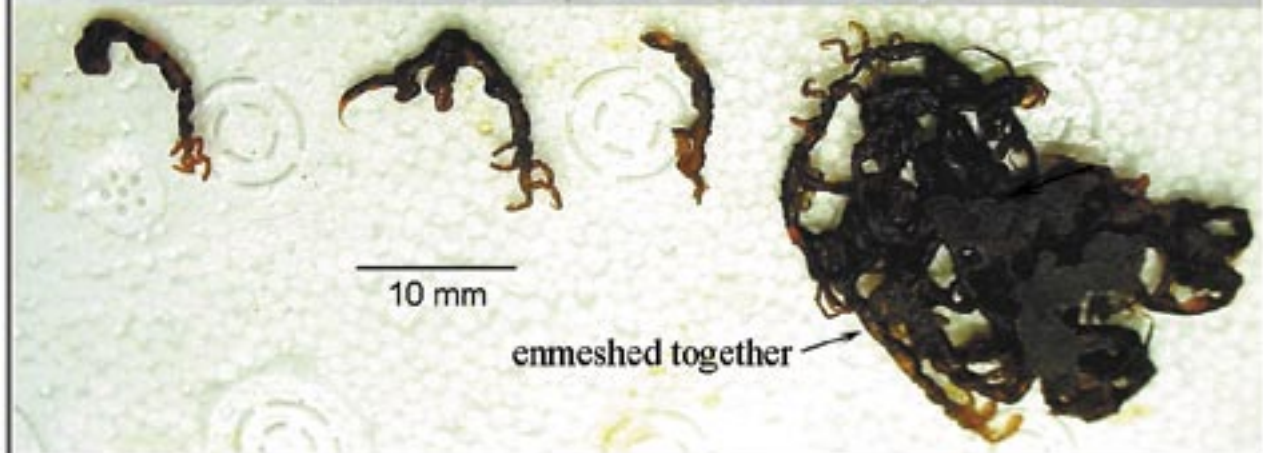
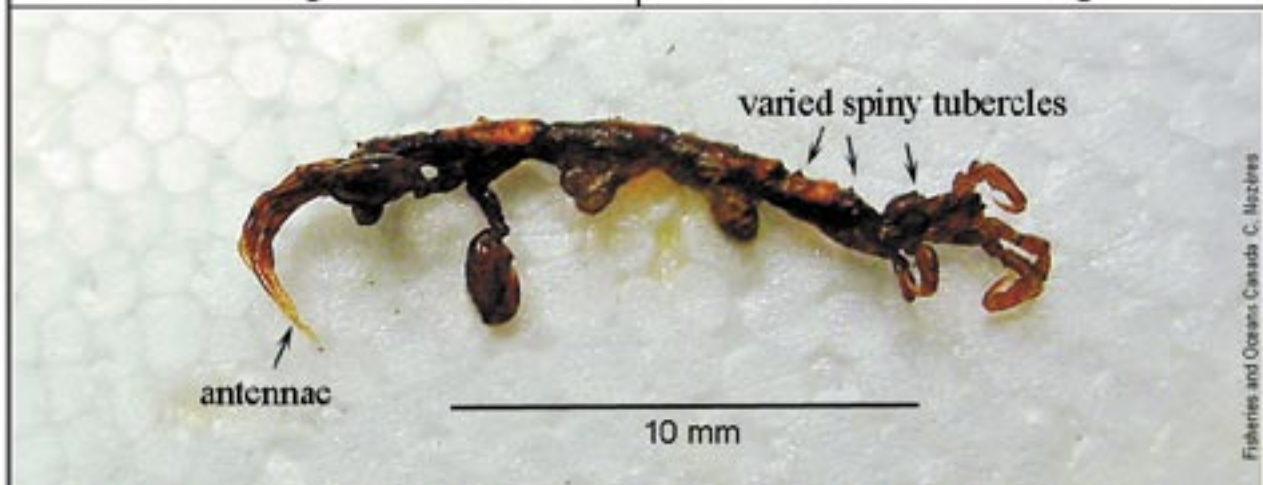


<i>Cancer irroratus</i>		
Crabe commun	Rock crab	
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • carapace wider than long • perimeter smoothed, less indented than <i>C. borealis</i> • coastal species <p>May be mistaken for: <i>Cancer borealis</i></p>		
Family	Type of measure	Maximum size
Canceridae	Carapace width mm	133 mm

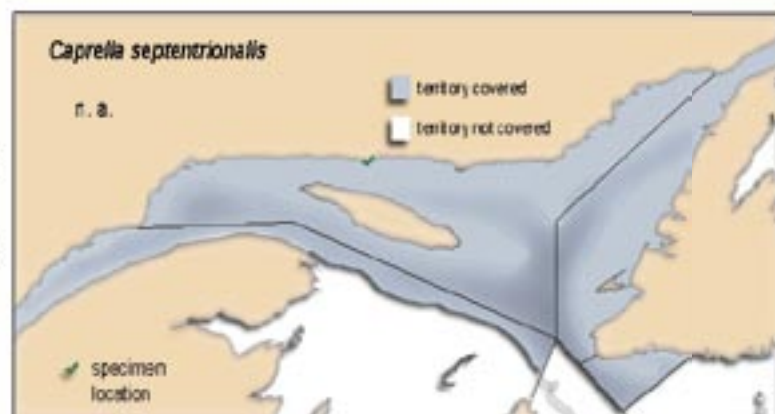
Caprella septentrionalis

Caprelle

Skeleton shrimp

**Characteristics:**

- filamentous body
- spiny protuberances, variable in form and number
- 2nd antennae at least long as 1st antennae peduncle

May be mistaken for:*Caprella linearis*

Family	Type of measure	Maximum size
Caprellidae	Total mm	54 mm



Chionoecetes opilio

Crabe des neiges

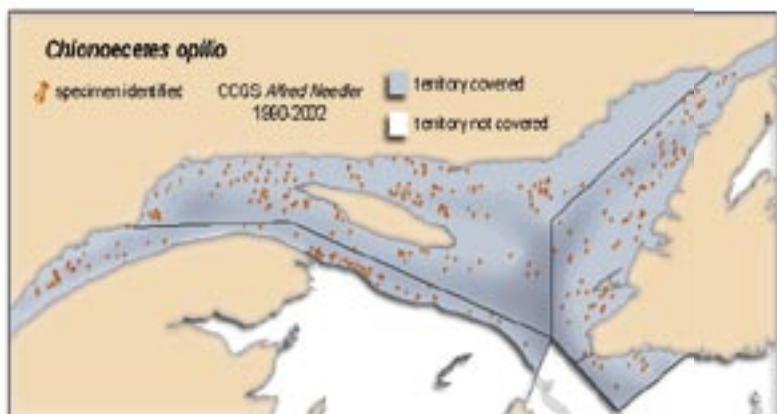
Snow crab

**Characteristics:**

- oval carapace
- robust legs
- short rostrum, less pointed than *Hyas* sp.

May be mistaken for:

Hyas araneus
Hyas coarctatus



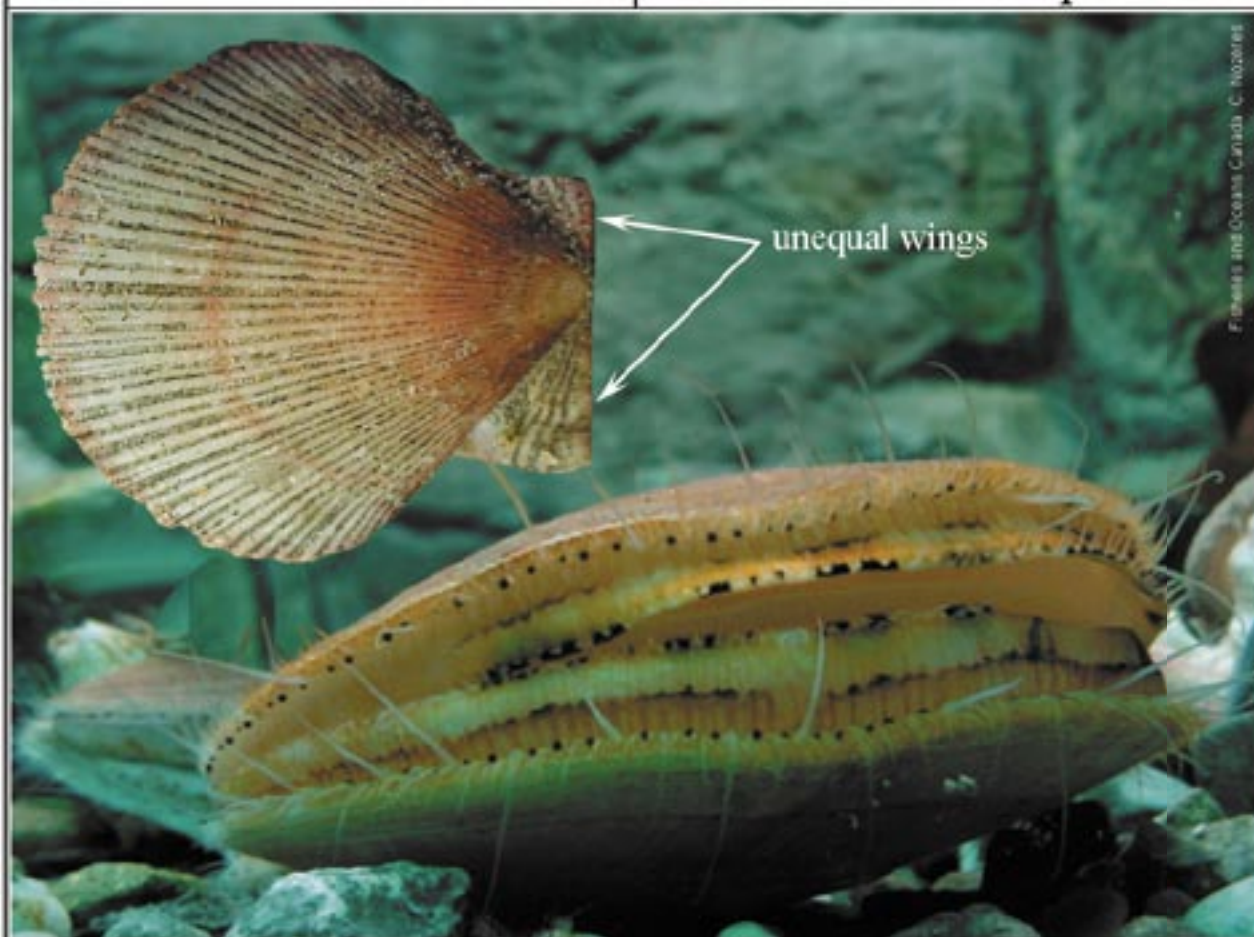
Family	Type of measure	Maximum size
Majidae	Carapace width mm	105 mm



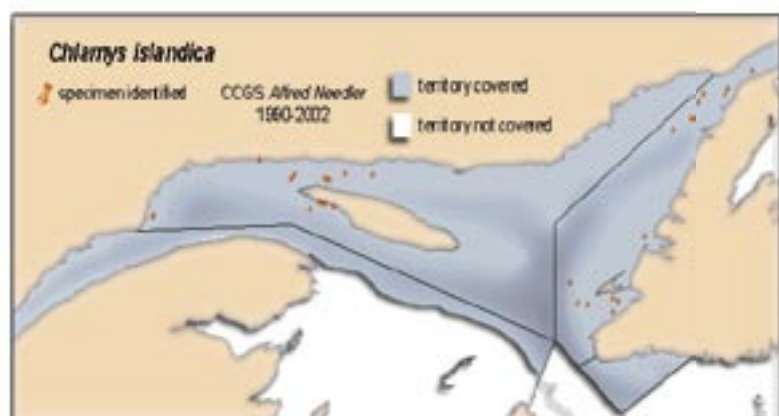
Chlamys islandica

Pétoncle d'Islande

Icelandic scallop

**Characteristics:**

- shell pink to orange
- radial ridges in relief
- wings unequal in size
- active bivalve (swimmer)

May be mistaken for:*Placopecten magellanicus*

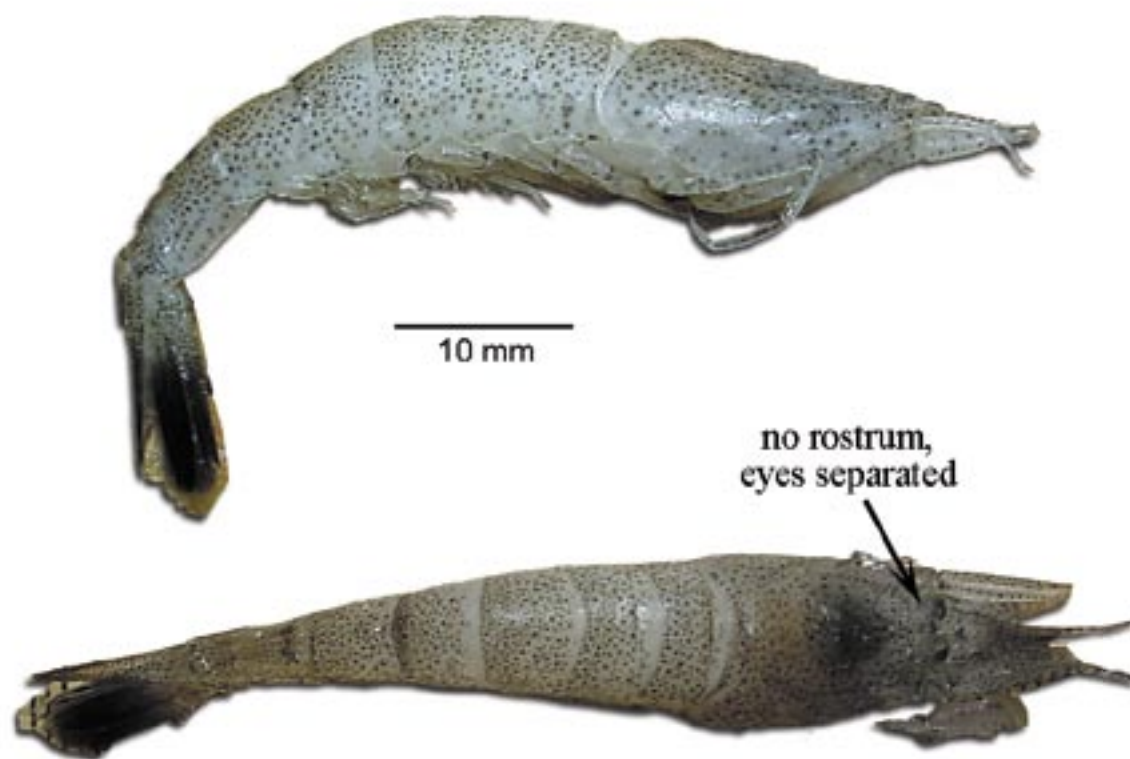
Family	Type of measure	Maximum size
Pectinidae	Shell height mm	102 mm



Crangon septemspinosa

Crevette grise de sable

Grey sand shrimp



Fisheries and Oceans Canada C. Nozibret

Characteristics:

- colour gray-green
- eyes not close together
- no rostrum
- estuarine species

May be mistaken for:*Pontophilus norvegica**Argis dentata*

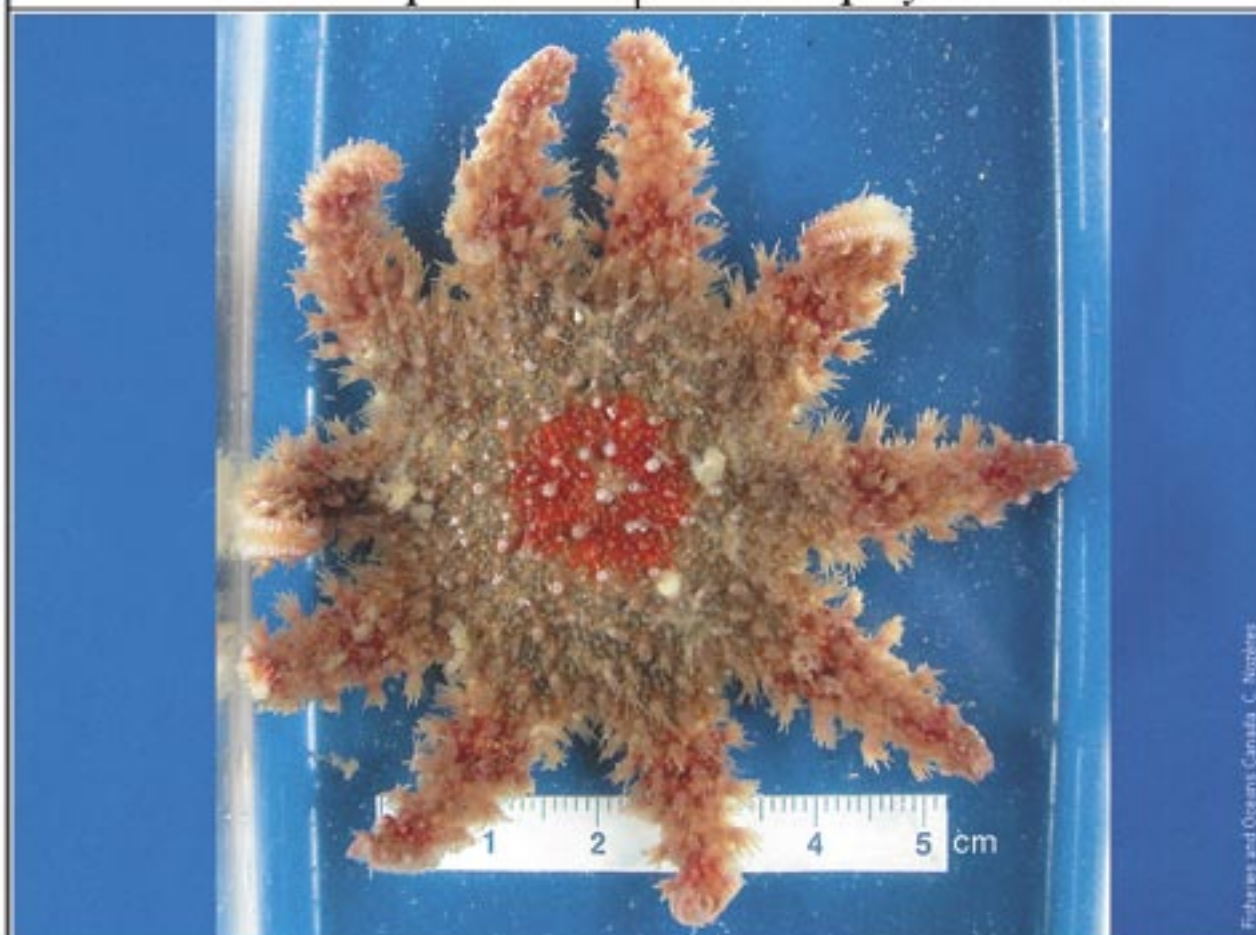
Family	Type of measure	Maximum size
Crangonidae	Cephalothorax mm	12 mm



Crossaster papposus

Soleil de mer épineux

Spiny sun star

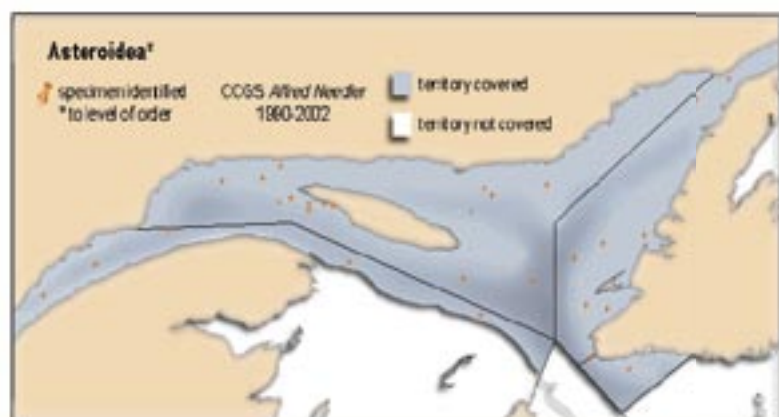


Fisheries and Oceans Canada, C. Nozibets

Characteristics:

- colour bright red to beige
- surface covered with numerous small spines
- variable number of arms (8 to 14)

May be mistaken for:
other Asteroidea



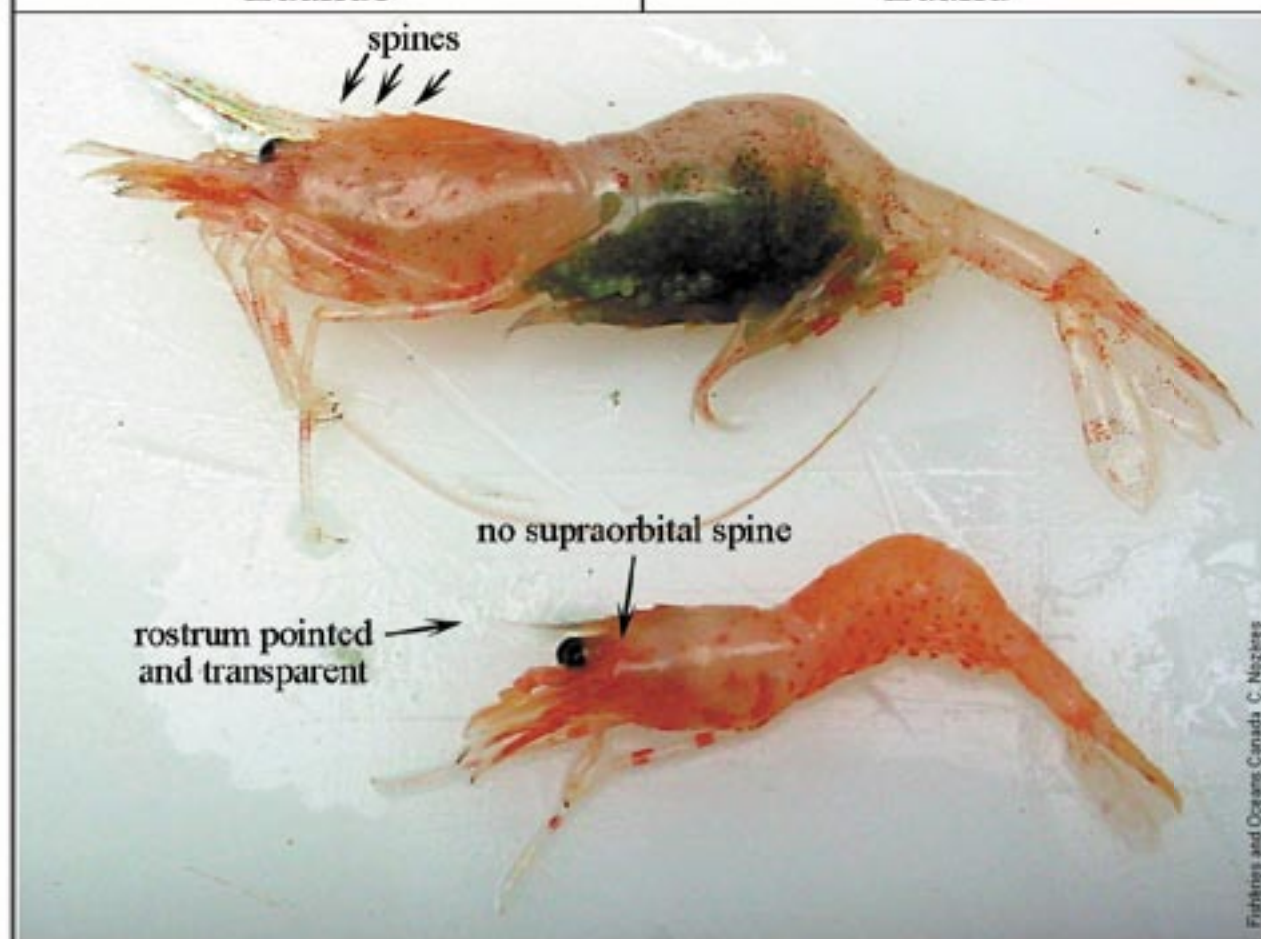
Family	Type de mesure	Maximum size
Solasteridae	Disc mm	400 mm



Eualus gaimardi

Eualidé

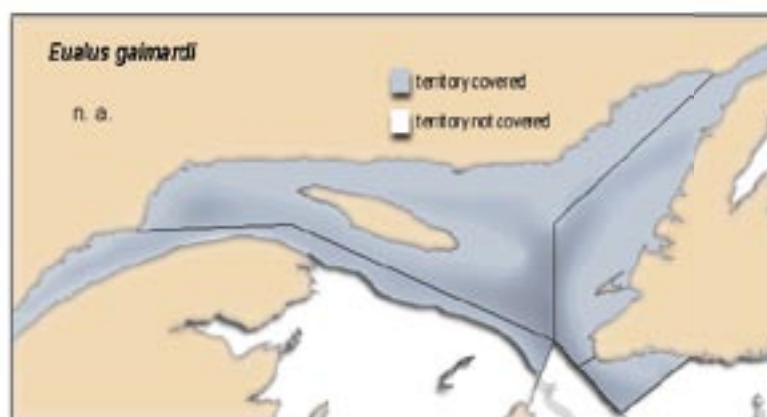
Eualid



Fisheries and Oceans Canada C. Nozilles

Characteristics:

- rostrum curved and pointed
- no supraorbital spine
- spines on the cephalothorax before the rostrum

May be mistaken for:*Lebbeus polaris**Spirontocaris lilljeborgi*

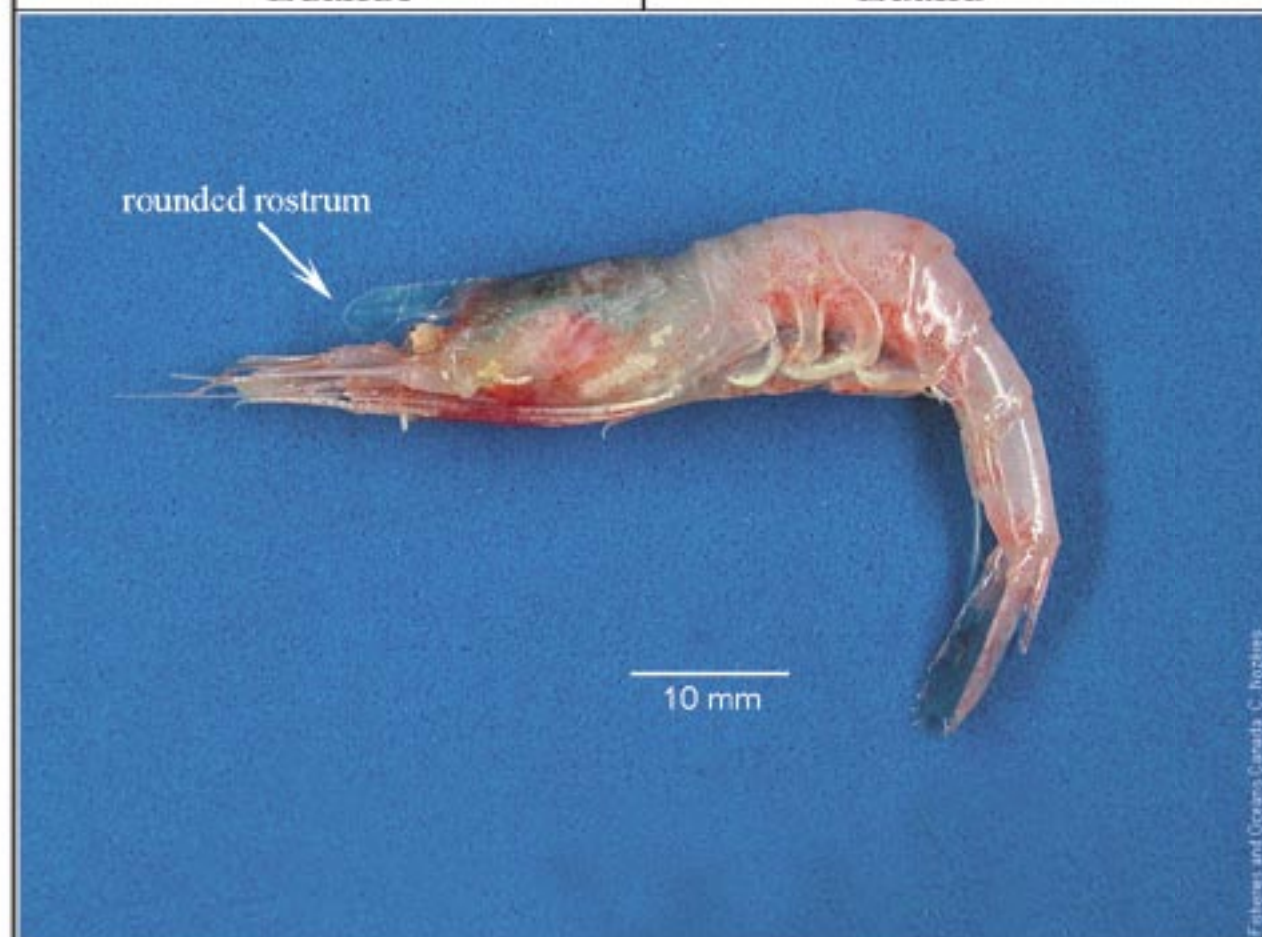
Family	Type of measure	Maximum size
Hippolytidae	Cephalothorax mm	14 mm



Eualus macilentus

Eualidé

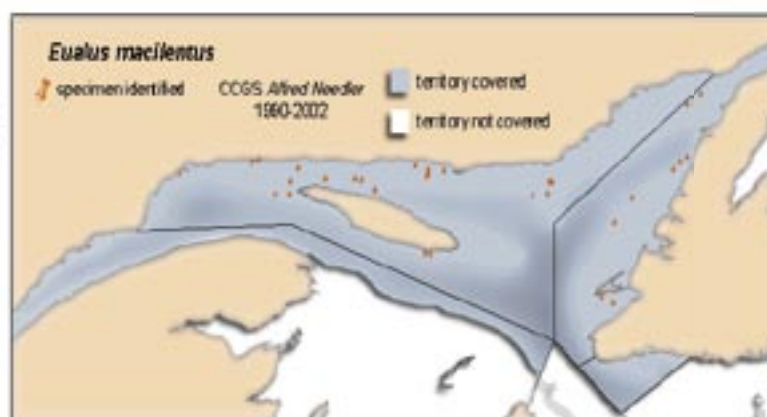
Eualid



Fisheries and Oceans Canada / C. Huchette

Characteristics:

- no supraorbital spine
- rounded, transparent rostrum with teeth like a saw dorsally

May be mistaken for:*Eualus gaimardi**Spirontocaris lilljeborgi*

Family	Type of measure	Maximum size
Hippolytidae	Cephalothorax mm	16 mm



Gammarellus homari

Gammare

Gammarid



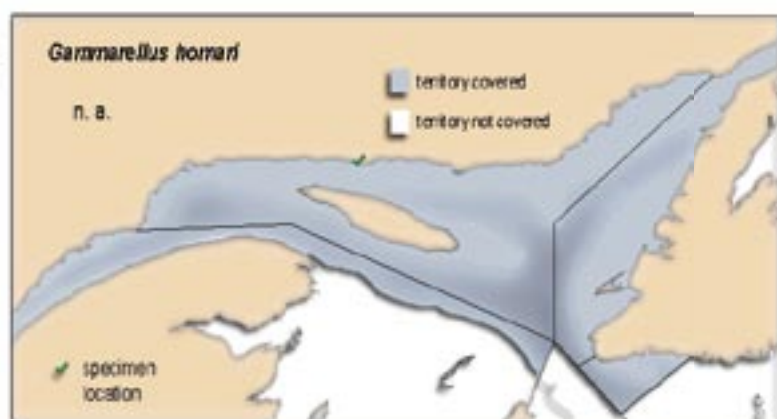
Fisheries and Oceans Canada C. Nazères

Characteristics:

- dorsal carina (rugged spines)
- ovoid in form, not as compressed laterally
- coastal species

May be mistaken for:

Gammaracanthus relictus
Gammarus dubeni
Rhachotrophis aculeata



Family	Type of measure	Maximum size
Gammaridae	Total mm	38 mm



<i>Gnathophausia ingens</i>		
Myside rouge géante	Giant red mysid	
<p>Characteristics:</p> <ul style="list-style-type: none"> • scarlet red in colour • robust, sculpted carapace with long pointed rostrum and large posterior spine • abyssal species, possessing a luminous organ 		
<p>May be mistaken for: <i>Plesiopenaeus edwardsianus</i></p>		
Family	Type of measure	Maximum size
Lophogastridae	Total mm	320 mm



Gorgonocephalus arcticus

Gorgonocéphale

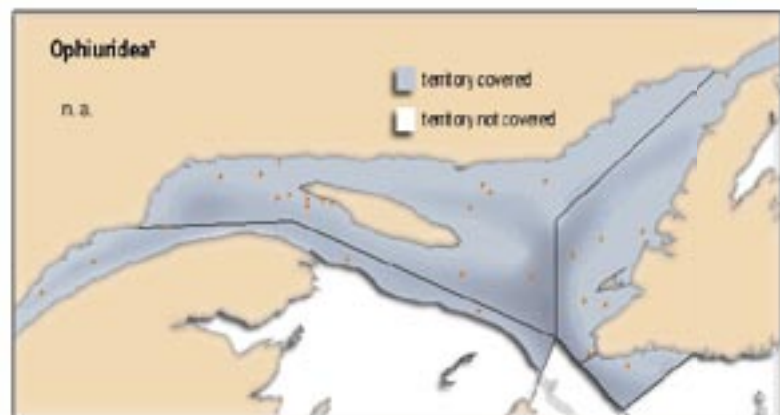
Northern basket star



Fisheries and Oceans Canada, C. Hoekens

Characteristics:

- yellowish color
- 5 arms branching out into numerous coiled filaments

May be confused with:*Gorgonocephalus eucnemis*

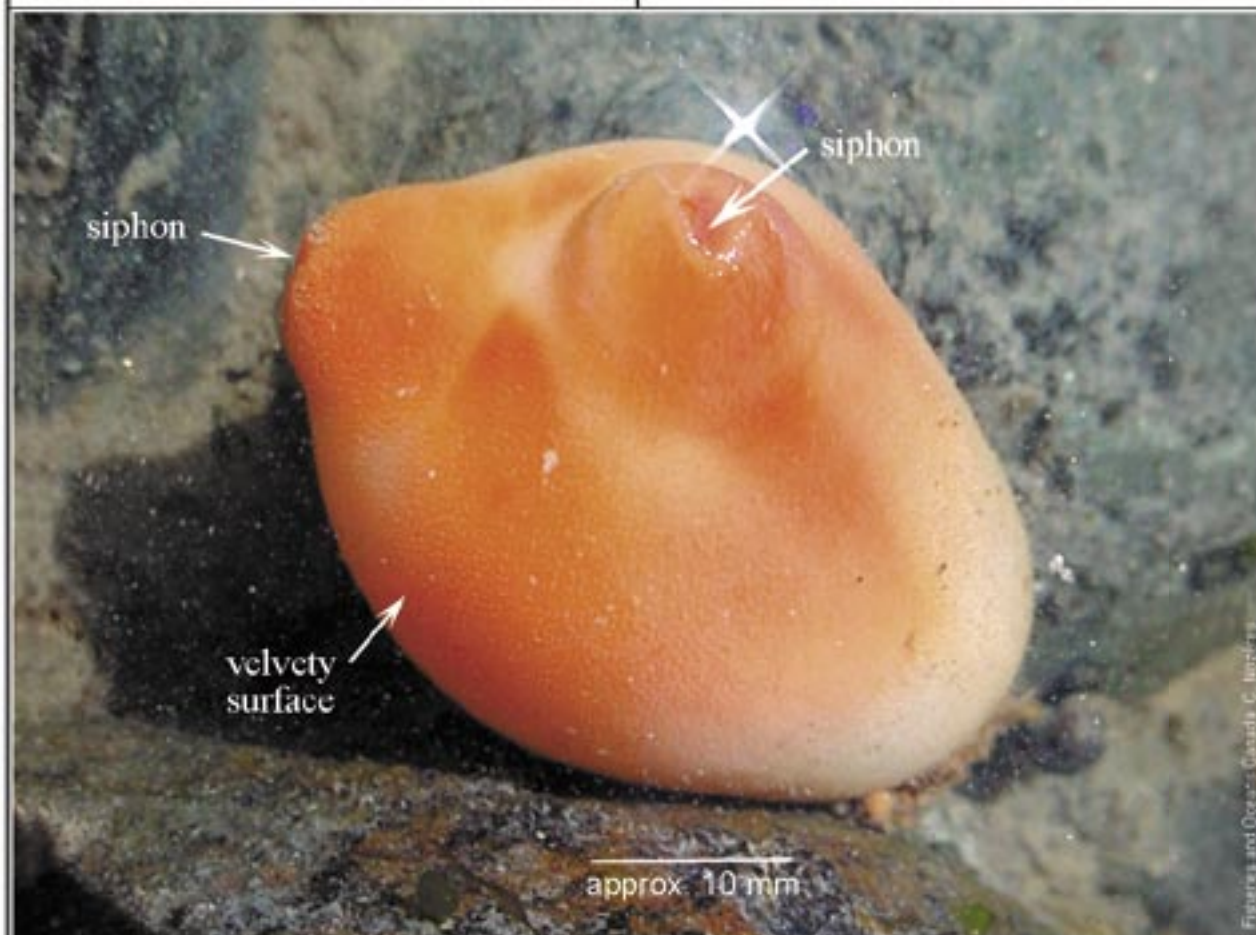
Family	Type of measure	Maximum size
Gorgonocephalidae	Disc mm	102 mm



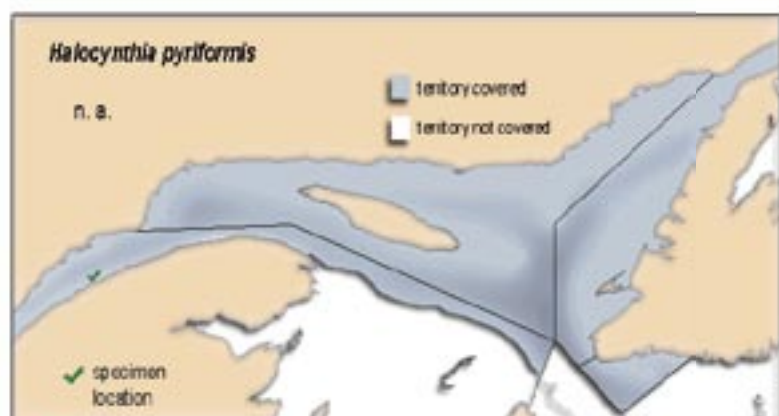
Halocynthia pyriformis

Pêche de mer

Sea Peach


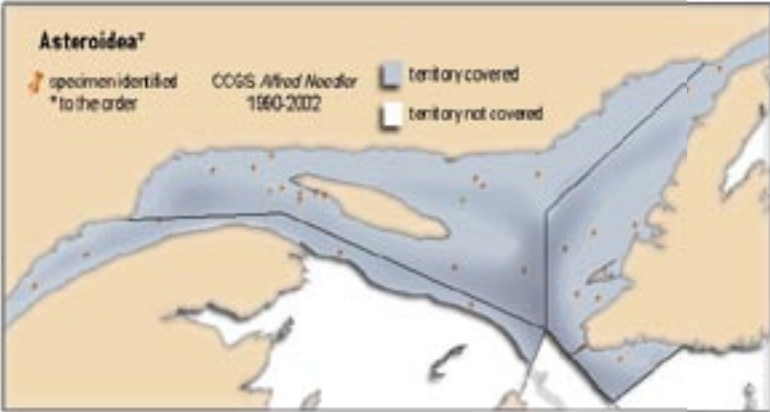
**Characteristics:**


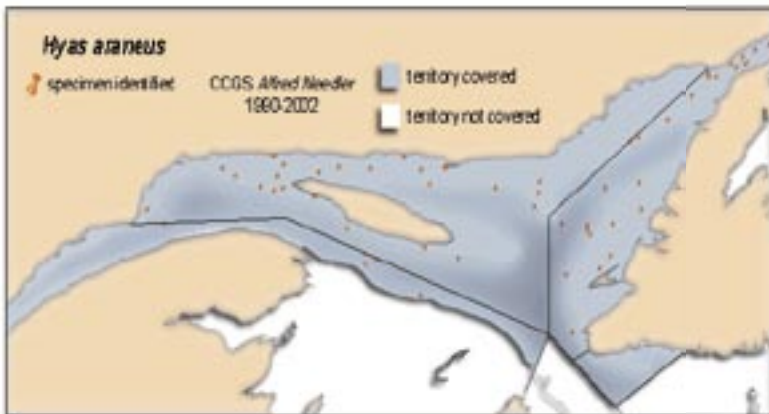
- orange colour
- velvety surface
- 2 siphons (closed here)

May be mistaken for:*Boltenia ovifera*

Family	Type of measure	Maximum size
Pyuridae	Diameter mm	80 mm



<i>Hippasteria phrygiana</i>		
Étoile de coussin	Horse star	
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • red colour • white tubercles • 5 short arms <p>May be confused with: other Asteroidea</p>		
Family	Type of measure	Maximum size
Goniasteridae	Disc mm	200 mm

<i>Hyas araneus</i>		
Crabe lyre (araignée)	Toad crab	
 <p style="text-align: right; font-size: small;">Fisheries and Oceans Canada C. Noëbres</p>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • thin limbs • triangular carapace, longer than wide • narrow rostrum <p>May be mistaken for:</p> <p><i>Hyas coarctatus</i></p> <p><i>Chionoecetes opilio</i></p>	 <p style="font-size: x-small;"> <i>Hyas araneus</i> ● specimen identified CCOS Alfred Needer 1960-2002 territory covered territory not covered </p>	
Family	Type of measure	Maximum size
Majidae	Carapace width mm	75 mm



Hyas coarctatus

Crabe lyre (arctique)

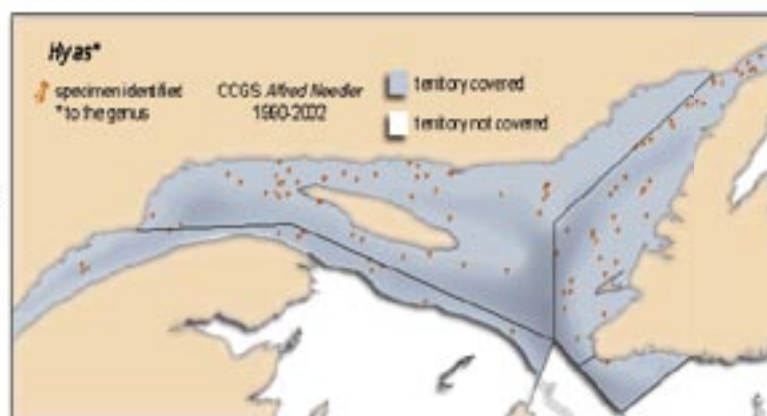
Arctic lyre crab



Fisheries and Oceans Canada C. Rozéres


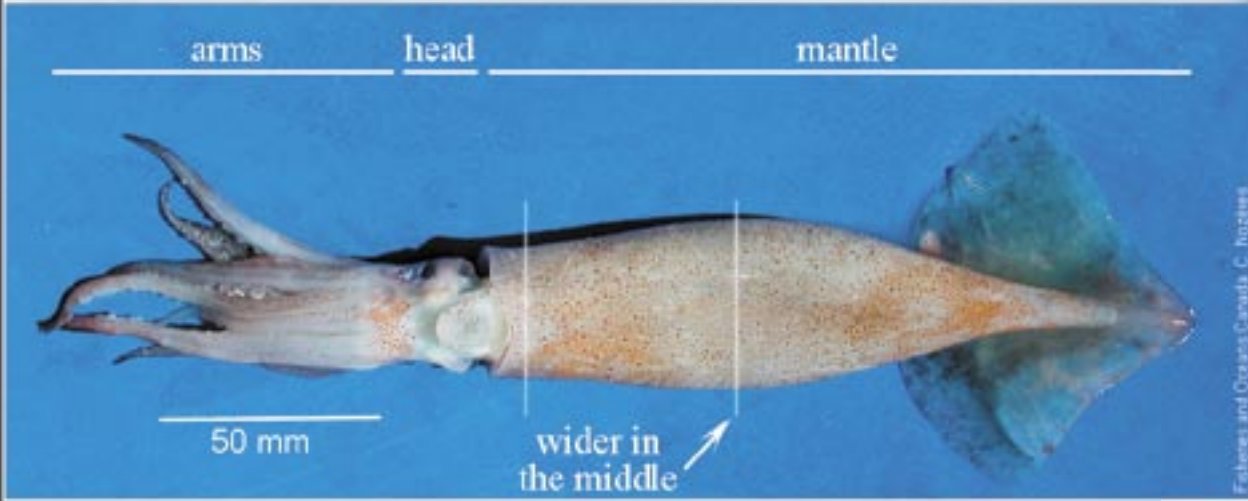
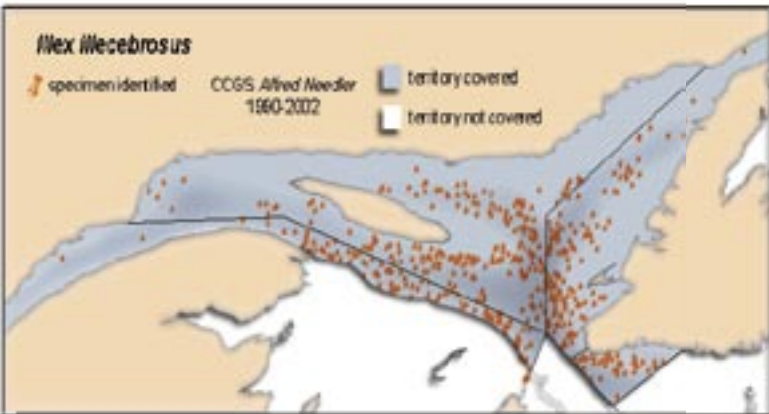
Characteristics:

- thin limbs
- lyrate carapace, longer than it is wide
- enlarged postorbital margins (thick crest behind eyes)

May be mistaken for:*Hyas araneus**Chionoecetes opilio*

Family	Type of measure	Maximum size
Majidae	Carapace width mm	87 mm



<i>Illex illecebrosus</i>		
Encornet rouge nordique	Northern shortfin squid	
		
arms	head	mantle
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • fins about 1/3 mantle length • mantle wider in the middle than at the head end • enters the Gulf in summer <p>May be mistaken for: <i>Gonatus</i> sp. <i>Loligo</i> sp.</p>		
		
Family	Type of measure	Maximum size
Ommastrephidae	Mantle mm	310 mm



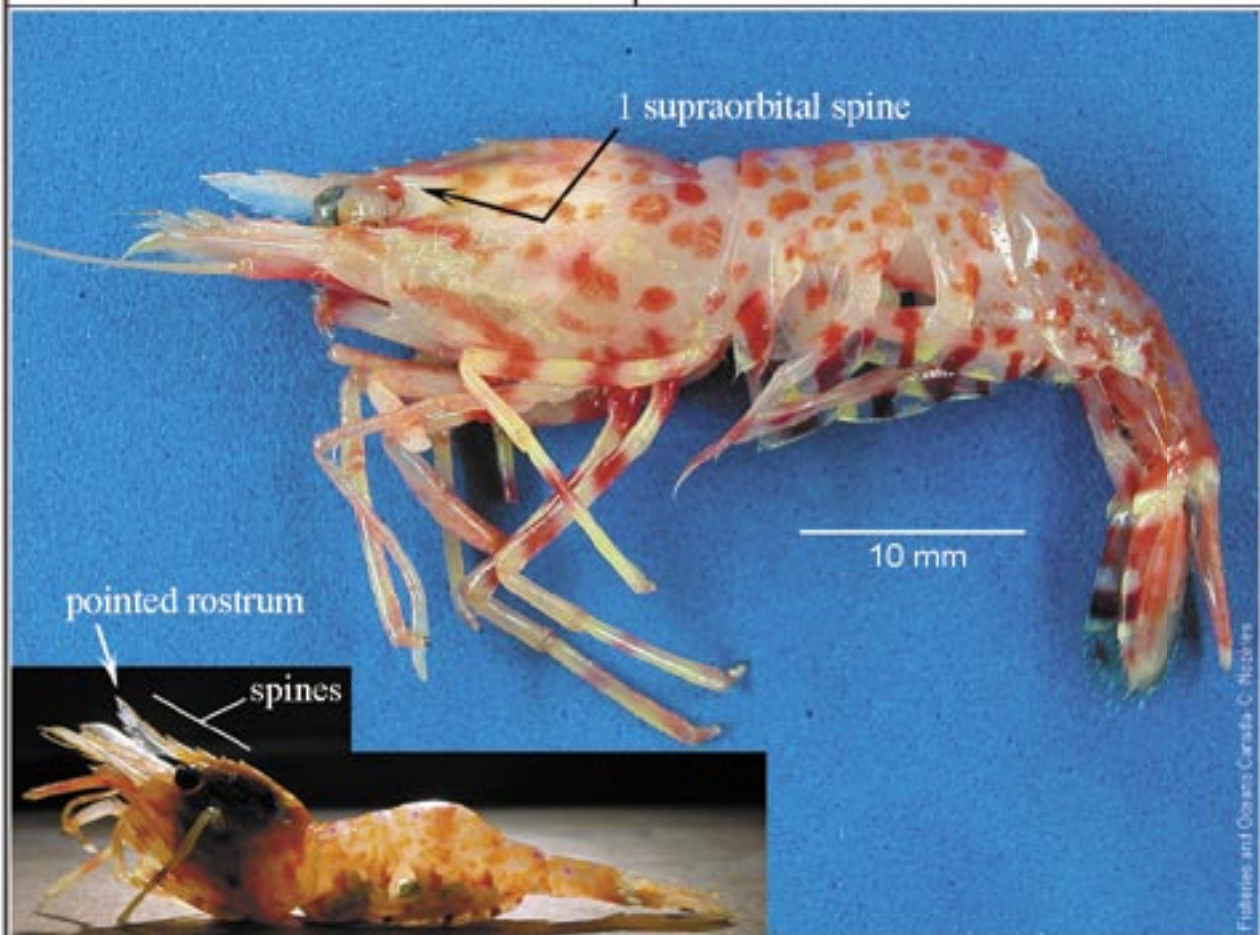
<i>Lebbeus groenlandicus</i>		
Bouc du Groenland	Greenland lebbeid	
<p>Characteristics:</p> <ul style="list-style-type: none"> • bright red and yellow • narrow, pointed rostrum • 1 supraorbital spine • spines along cephalothorax and rostrum • no abdominal spine <p>May be mistaken for: <i>Spirontocaris spinus</i></p>		
Family	Type of measure	Maximum size
Hippolytidae	Cephalothorax mm	28 mm



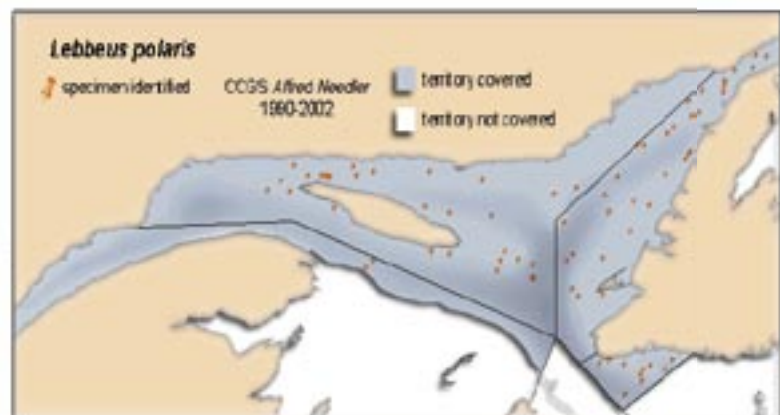
Lebbeus polaris

Bouc

Polar lebbeid

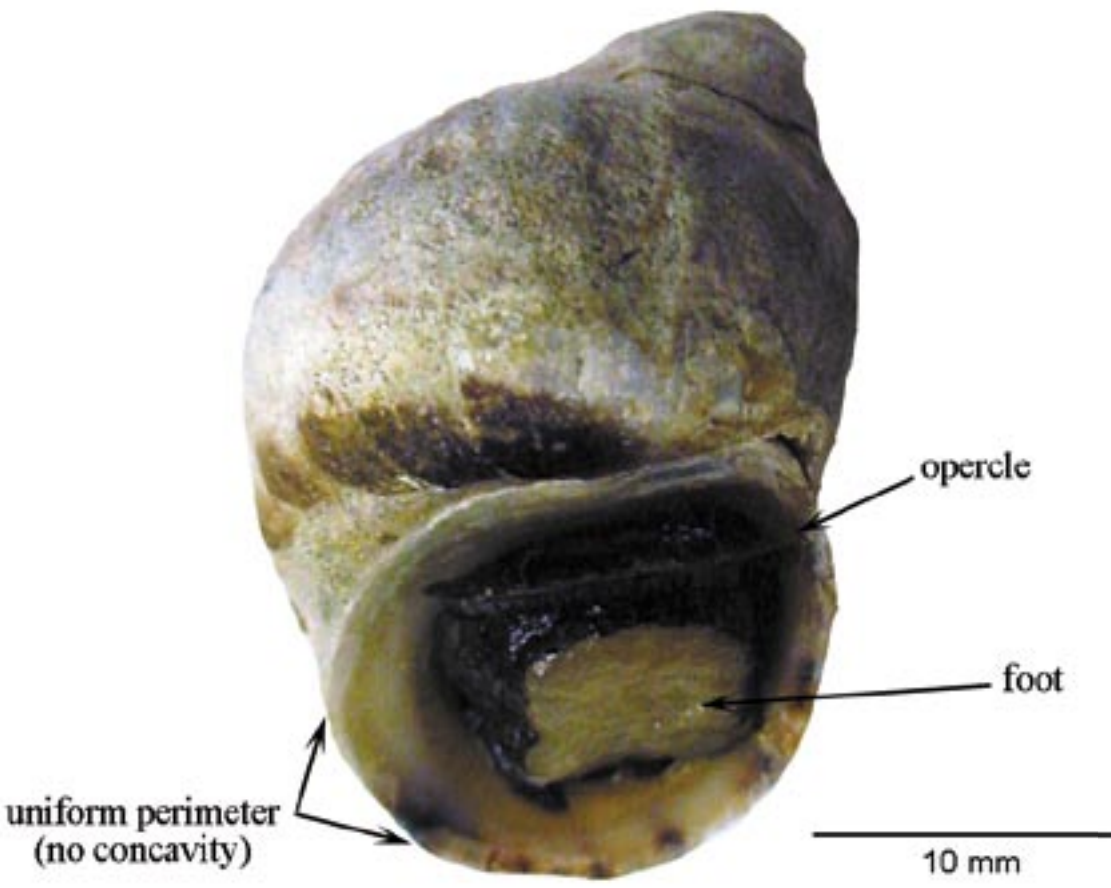
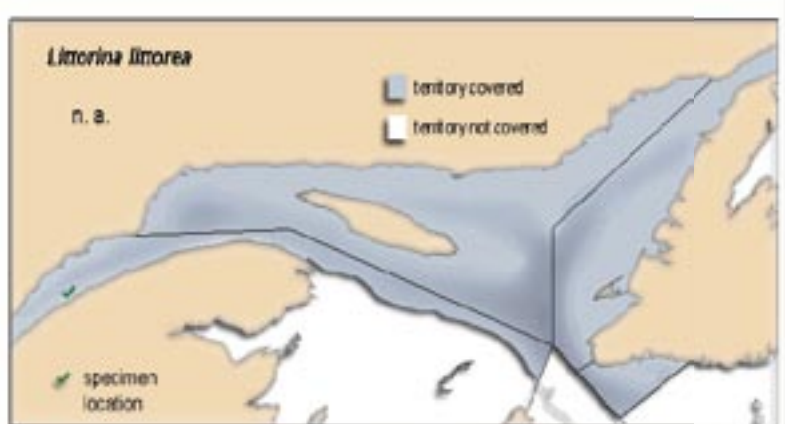
**Characteristics:**

- spotted red and orange
- 1 supraorbital spine
- flattened, robust rostrum
- small spines along rostrum and anterior 1/2 of carapace

May be mistaken for:*Eualus gaimardi**Spirontocaris lilljeborgi*



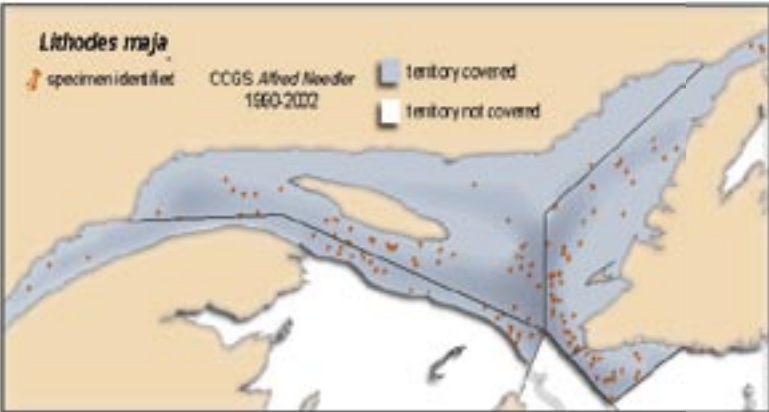
Family	Type of measure	Maximum size
Hippolytidae	Cephalothorax mm	20 mm



<i>Littorina littorea</i>		
Bigorneau	Common periwinkle	
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • shell mouth with perimeter as a simple ellipse, without a concavity <p>May be mistaken for: other Littorinidae <i>Buccinum undatum</i></p>		
		
Family	Type of measure	Maximum size
Littorinidae	Shell length mm	40 mm

Fisheries and Oceans Canada / C. Nozères



<i>Lithodes maja</i>		
Crabe épineux du nord	Spiny crab	
		
 <p>ventral view</p>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • large spines covering carapace and legs • 4 pair of legs <p>May be mistaken for: <i>Chionoecetes opilio</i> <i>Hyas araneus</i></p>		
Family	Type of measure	Maximum size
Majidae	Carapace width mm	120 mm



Meganyctiphanes norvegica

Euphausiacé

Euaphausid



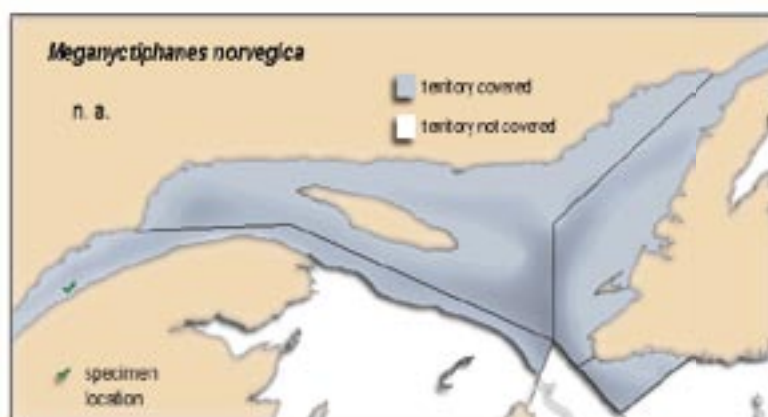
Fisheries and Oceans Canada - C. Nizkinec

Characteristics:

- short rostrum, not exceeding the eyes

May be mistaken for:*Boreomysis* sp.*Thysanoessa* sp.

other large zooplankton



Family	Type of measure	Maximum size
Euphausiaceae	Cephalothorax mm	n. a.



Munidopsis curvirostra

Galatheide crabe

Galatheid crab

long rostrum



ventral view



Fisheries and Oceans Canada, C. Noziers


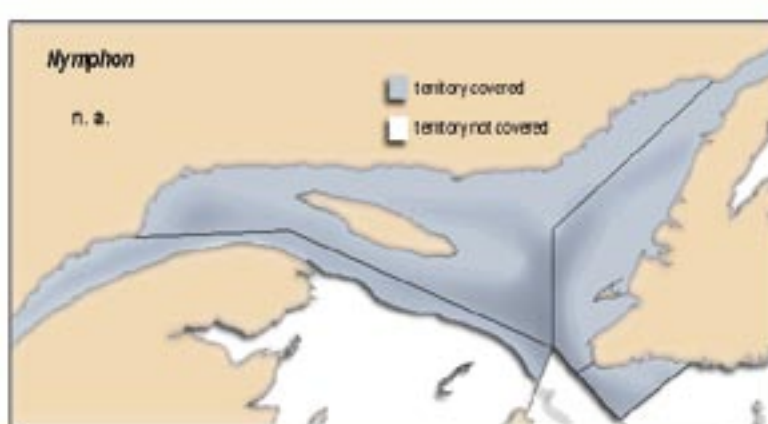
Characteristics:

- orange eyes
- robust rostrum in form of a long spine, curved upwards

May be mistaken for:*Stereomastis sculpta*

Family	Type of measure	Maximum size
Galatheidae	Carapace width mm	15 mm

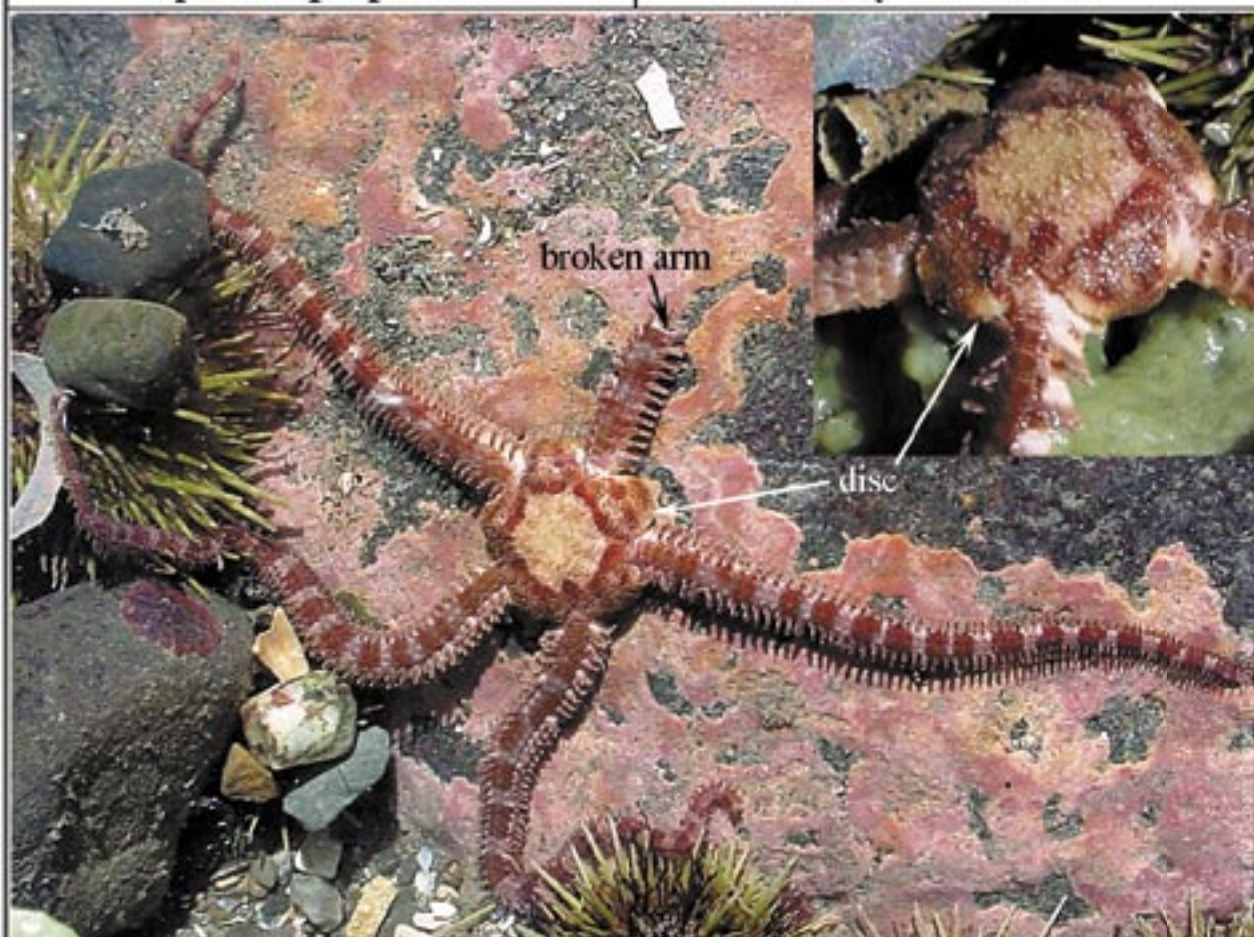


<i>Nymphon</i> sp.		
Pycnogonidé, araignée de mer	Pycnogonid, Sea spider	
 <p style="text-align: right; font-size: small;">Fisheries and Oceans Canada C. Nobiers</p>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • 8 very thin, long legs • pair of long chelicera • body very reduced <p>May be mistaken for: other Nymphonidae</p>		
Family	Type of measure	Maximum size
Nymphonidae	n. a.	n. a.

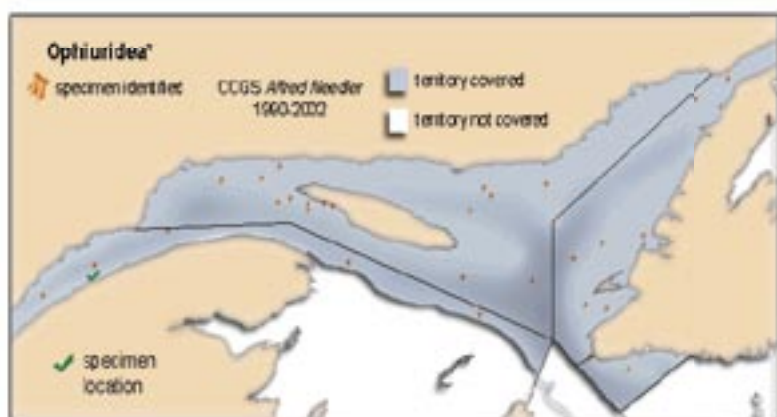
Ophiopholis aculeata

Ophiure pâquerette

Daisy brittle star

**Characteristics:**

- variable in colour, mottled
- 5 very long, fragile arms
- may be found nearshore

May be mistaken for:*Ophiura sarsi*

Family	Type of measure	Maximum size
Ophiactidae	Disc mm	19 mm



***Pagurus* sp.**

Bernard l'hermite

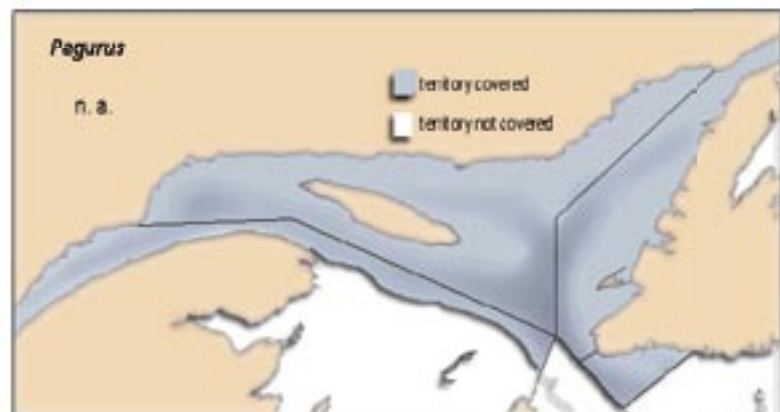
Hermit crab

**Characteristics:**

- asymmetrical abdomen
- uses a gasteropod shell

May be mistaken for:

Buccinum undatum
Polinices sp.



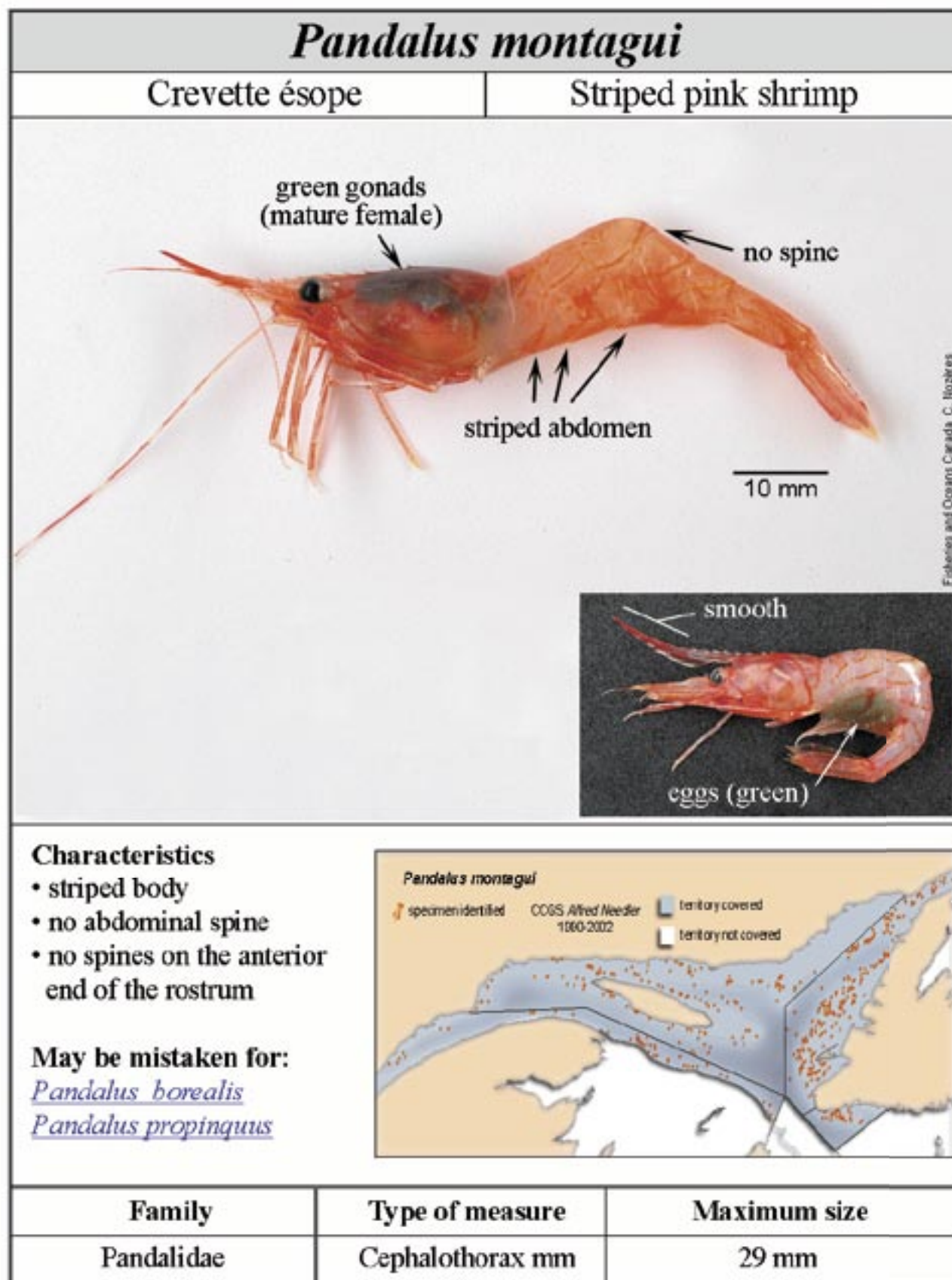
Family	Type of measure	Maximum size
Paguridae	n. a.	n. a.



Marine Species Identification Guide for the St. Lawrence

<i>Pandalus borealis</i>		
Crevette nordique	Northern shrimp	
<p>Characteristics:</p> <ul style="list-style-type: none"> • abdominal median spine • rostrum with small spines • smaller specimens are males that later become females 		
<p>May be mistaken for: <i>Pandalus montagui</i> <i>Pandalus propinquus</i></p>		
Family	Type of measure	Maximum size
Pandalidae	Cephalothorax mm	35 mm





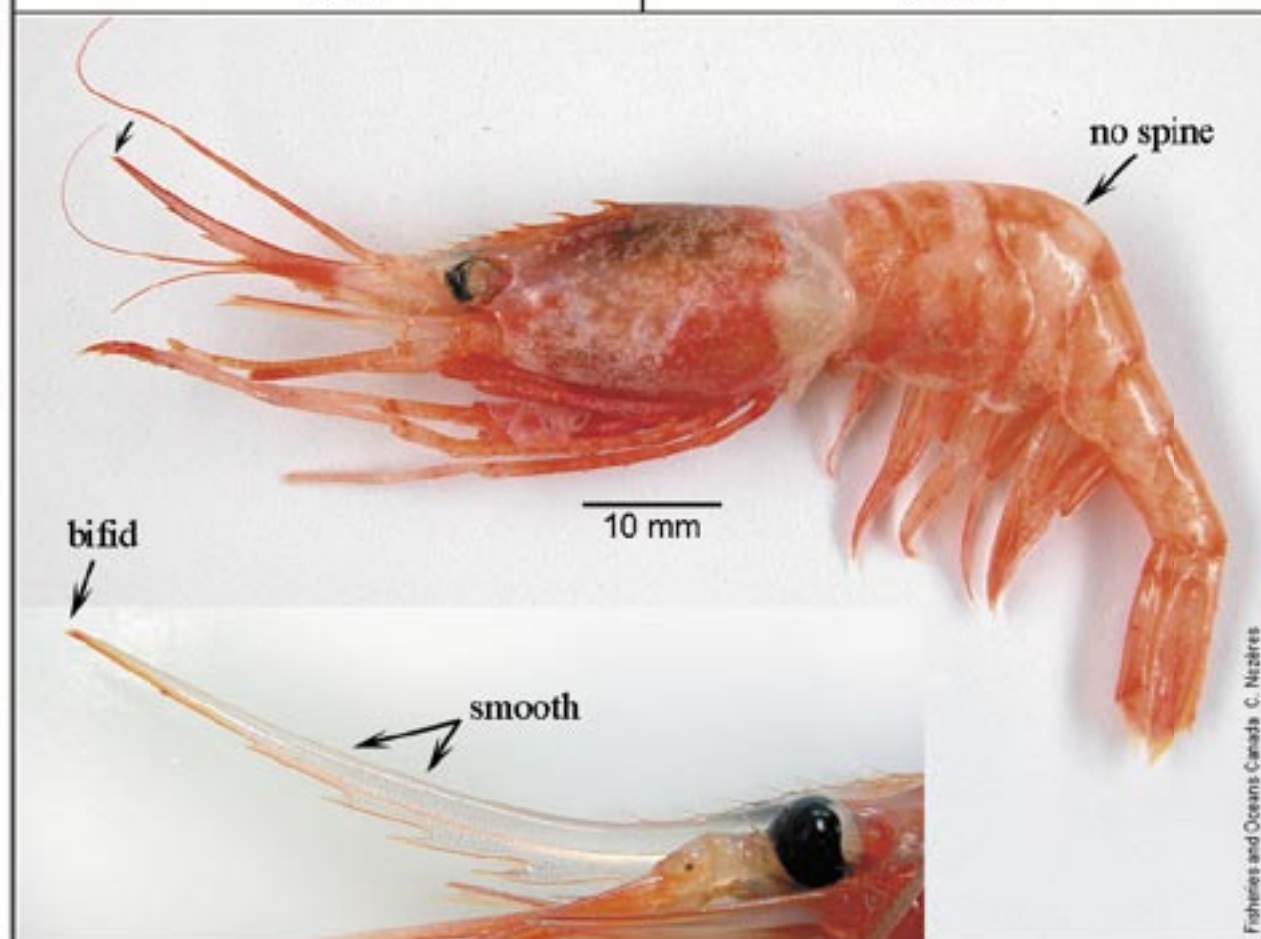
Fisheries and Oceans Canada - C. Robitres



Pandalus propinquus

n. d.

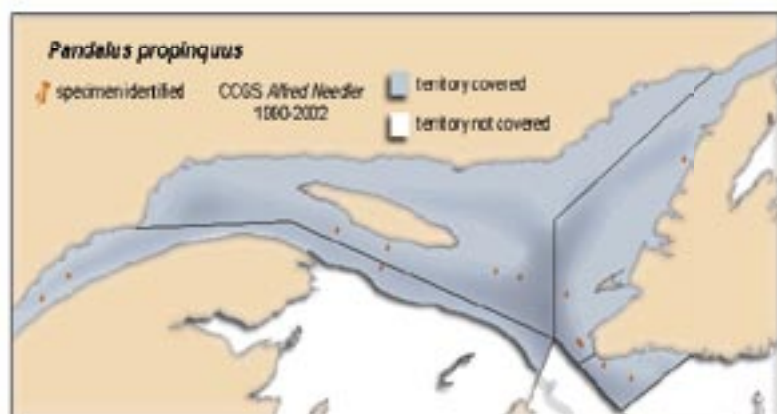
n. a.

**Characteristics:**

- rostrum bifid and more curved than *P. montagui*
- no abdominal spine
- no striping

May be mistaken for:

Pandalus borealis
Pandalus montagui



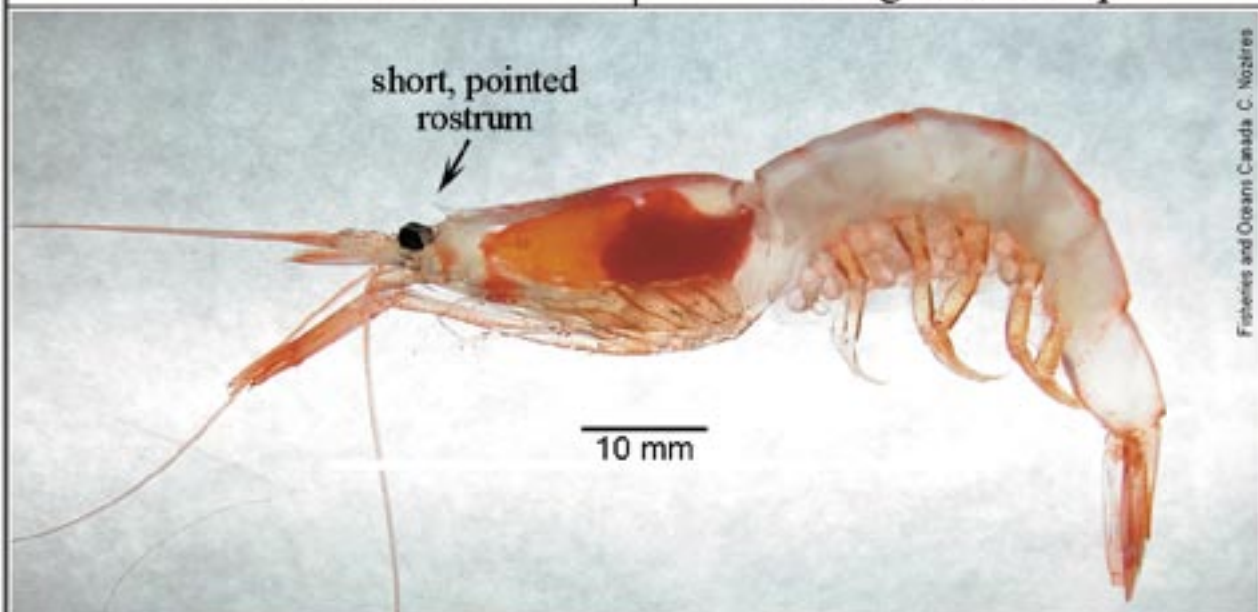
Family	Type of measure	Maximum size
Pandalidae	Cephalothorax mm	20 mm



Pasiphaea multidentata

Sivade rose

Pink glass shrimp

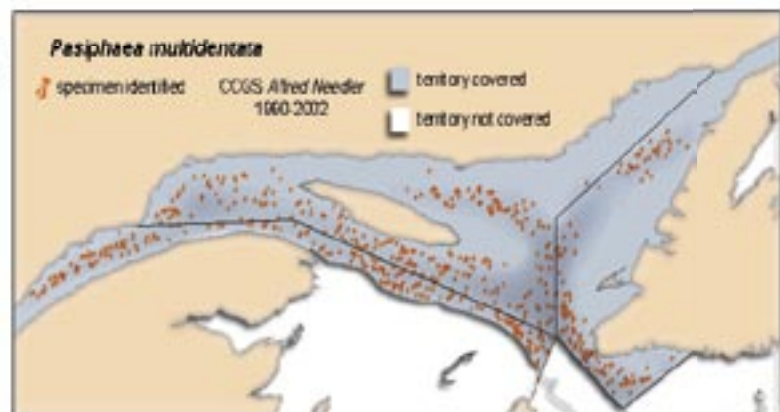


Fisheries and Oceans Canada, C. Nozdrin

**Characteristics:**

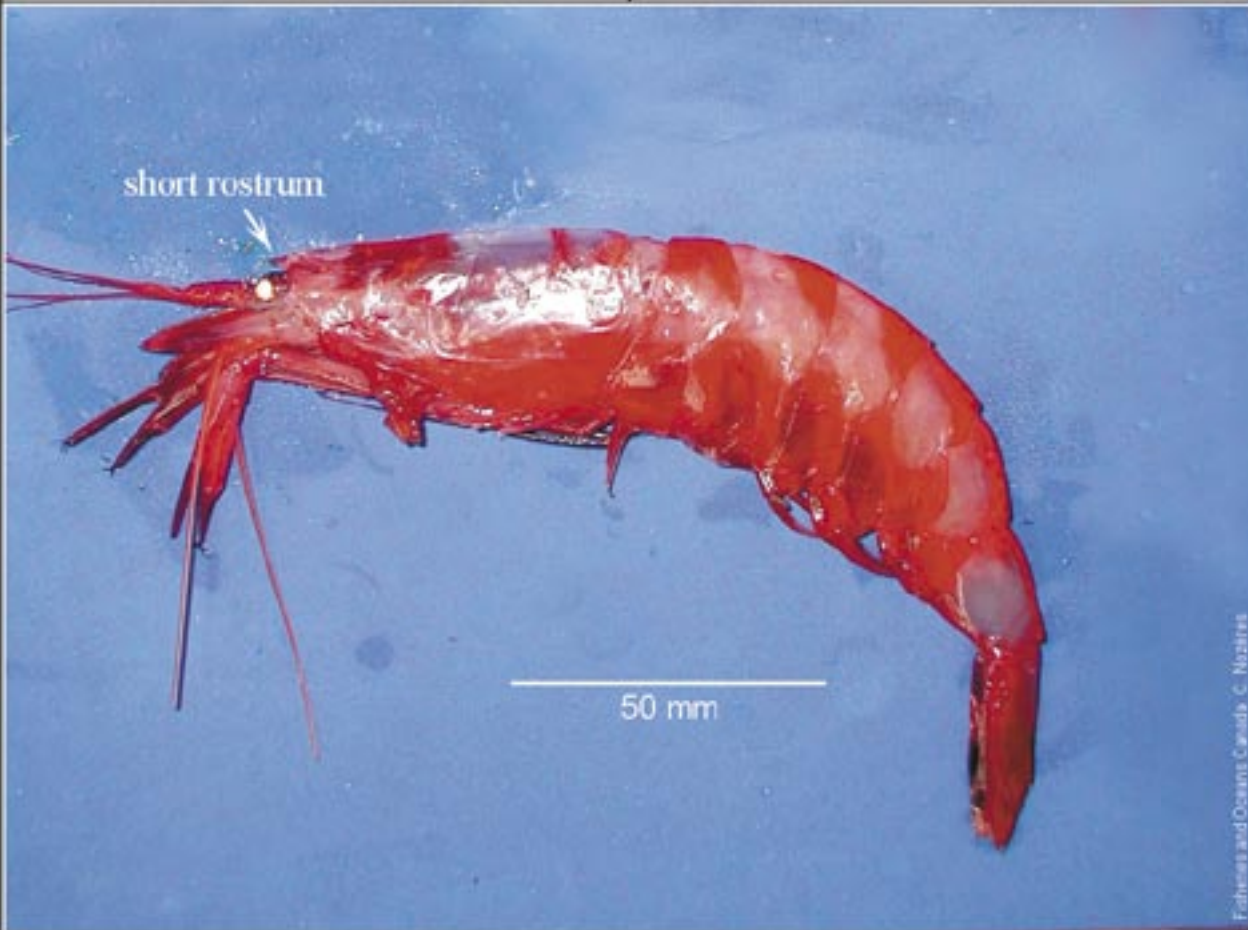
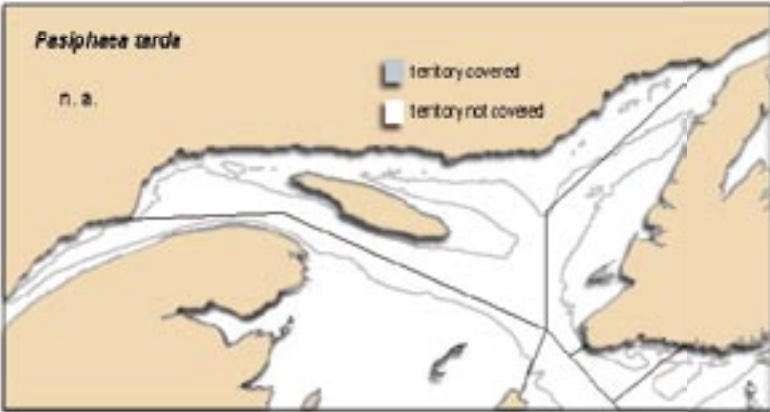
- translucent white to pink-red
- short rostrum ending in a spine pointing upwards
- carina (spine) on each side of the cephalothorax

May be mistaken for:

Sergestes robustus

Family	Type of measure	Maximum size
Pasiphaeidae	Cephalothorax mm	30 mm



<i>Pasiphaea tarda</i>		
n. d.		n. a.
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • red and white in colour • laterally-compressed body • very short rostrum ending in a small spine, curved downwards <p>May be mistaken for:</p> <p><i>Pasiphaea multidentata</i> <i>Plesiopenaeus</i> sp. <i>Sergia robustus</i></p>		
		
Family	Type of measure	Maximum size
Pasiphaeidae	Cephalothorax mm	35 mm



Placopecten magellanicus

Pétoncle géant

Atlantic deep sea scallop

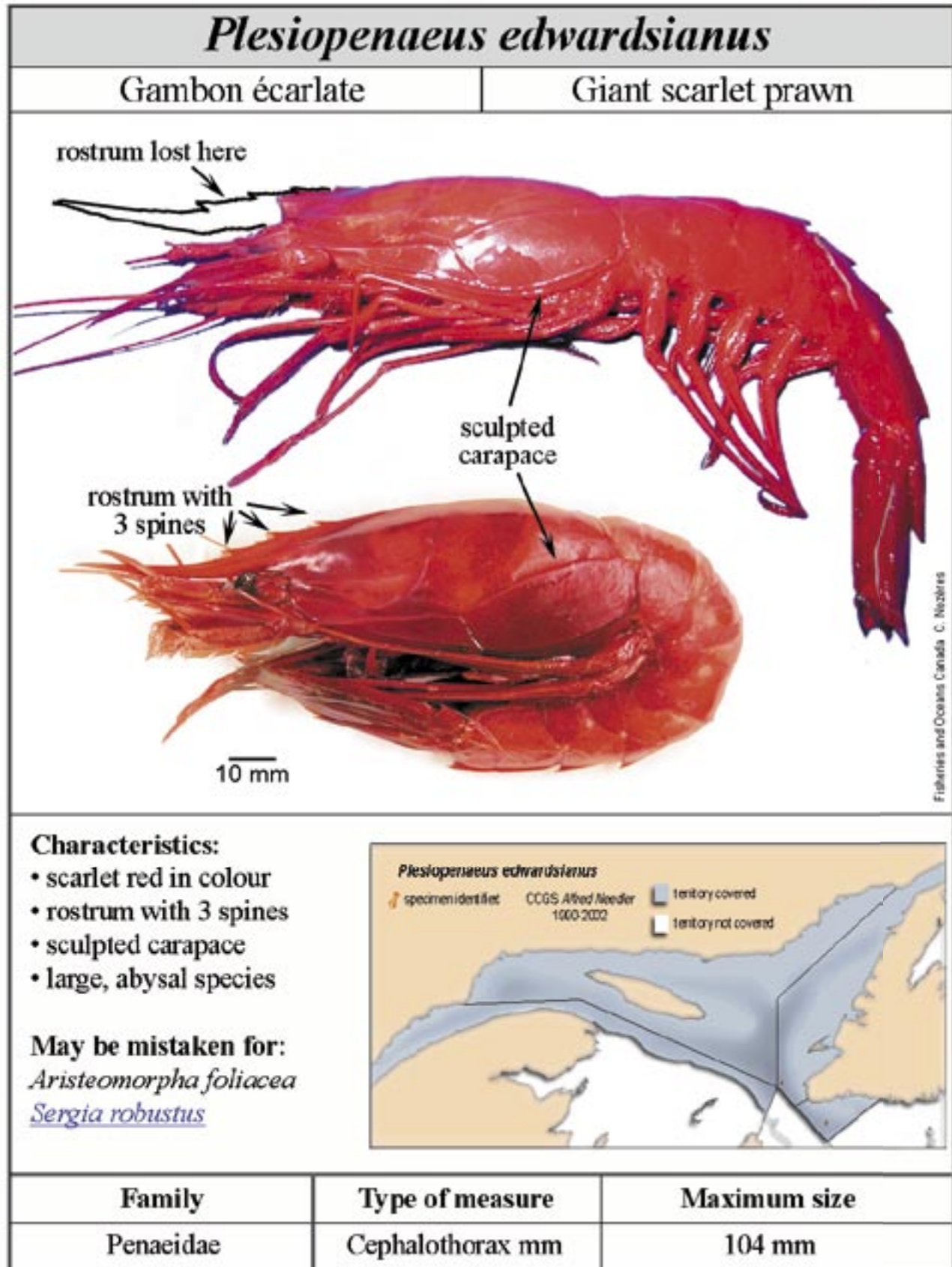
**Characteristics:**

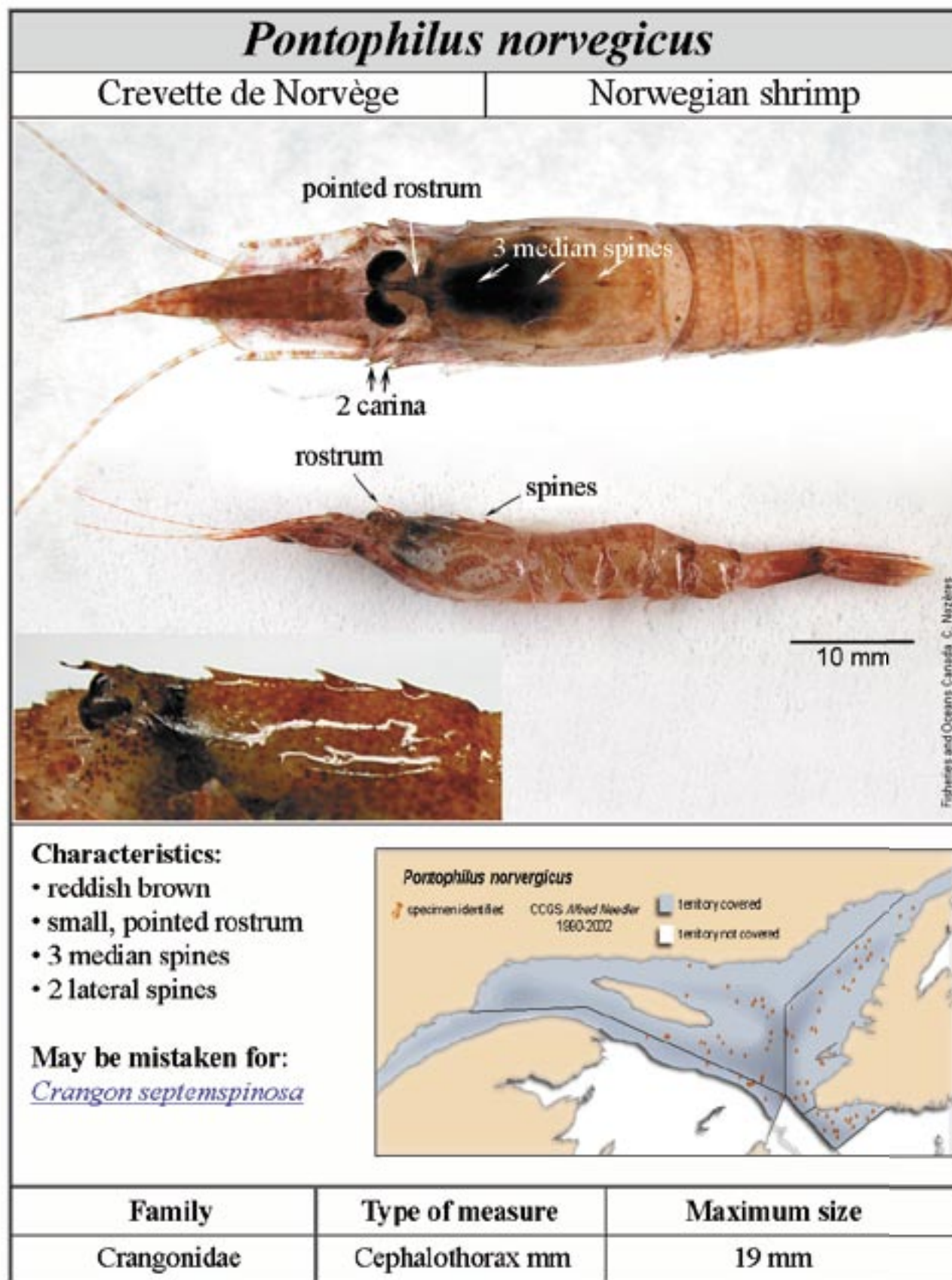
- pink to gray-green dorsally
- shell lined with fine rays
- small, equal wings

May be mistaken for:*Chlamys islandica*

Family	Type of measure	Maximum size
Pectinidae	Shell height mm	200 mm



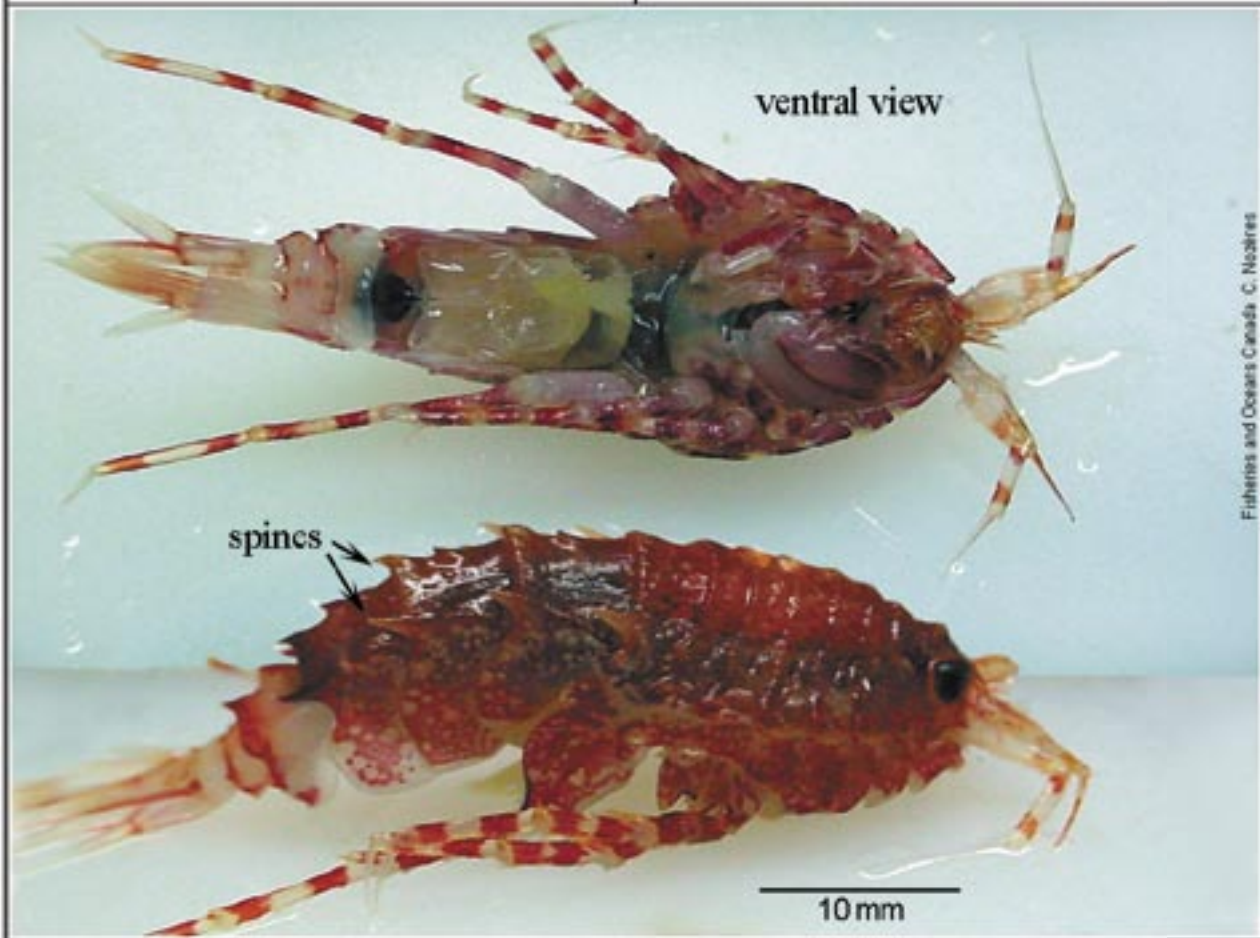




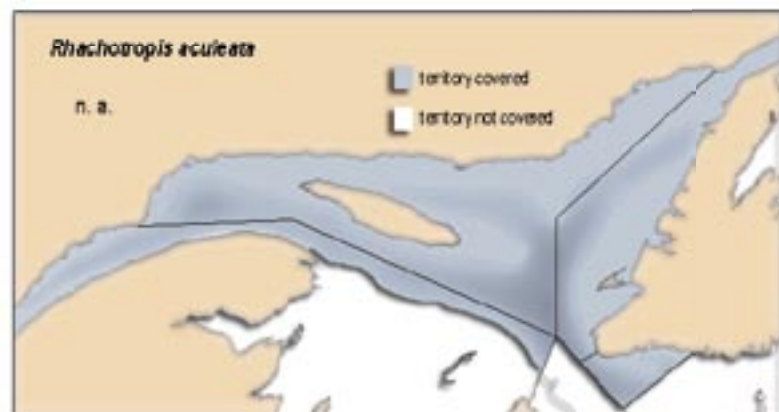
Rhachotropis aculeata

Eusiridé

Eusirid

**Characteristics:**

- spiny carina dorsally
- body less flattened than other amphipods
- pelagic species

May be mistaken for:*Gammarellus homari*

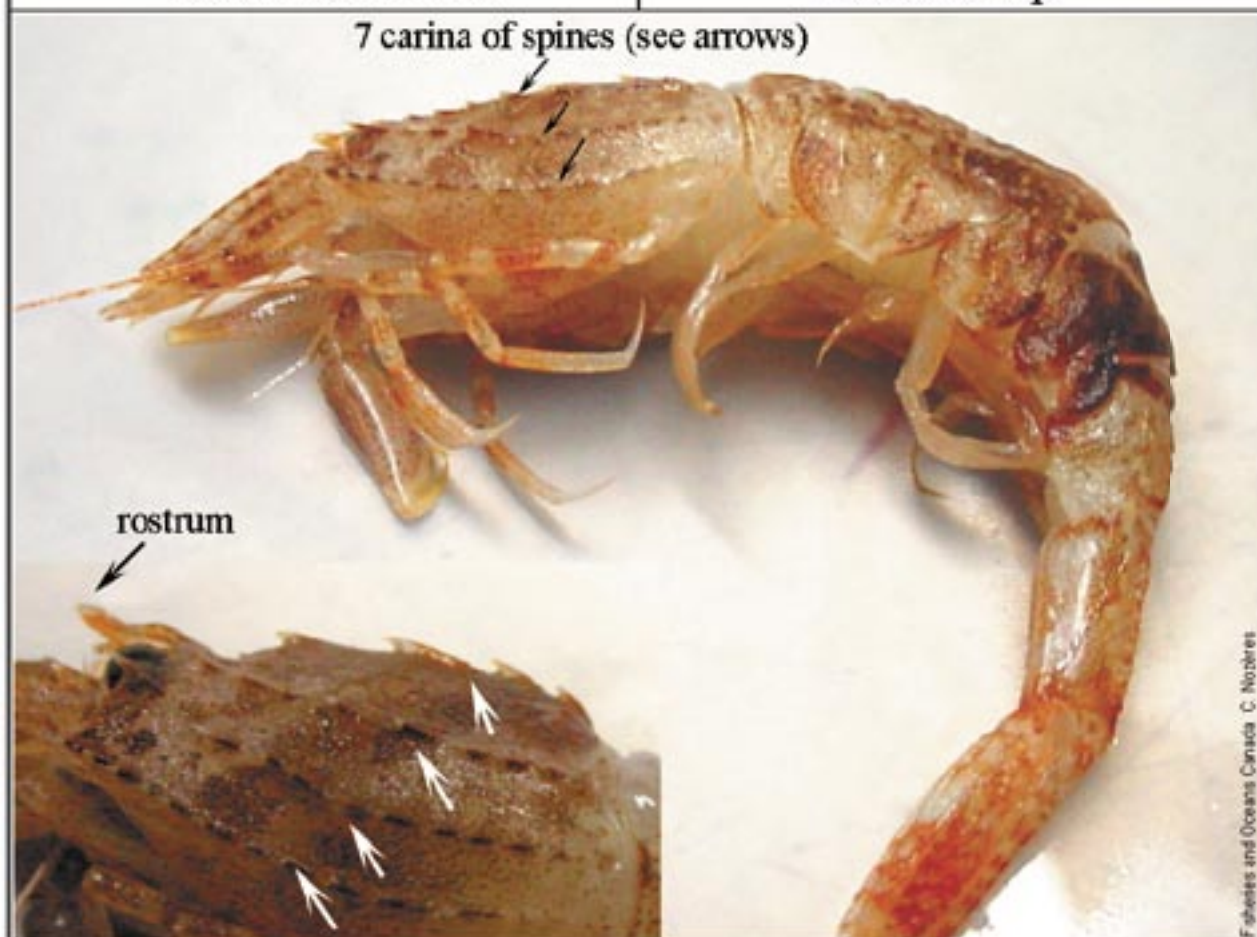
Family	Type of measure	Maximum size
Eusiridae	Total mm	31 mm



Sabinea sarsi

Crevette de Sars

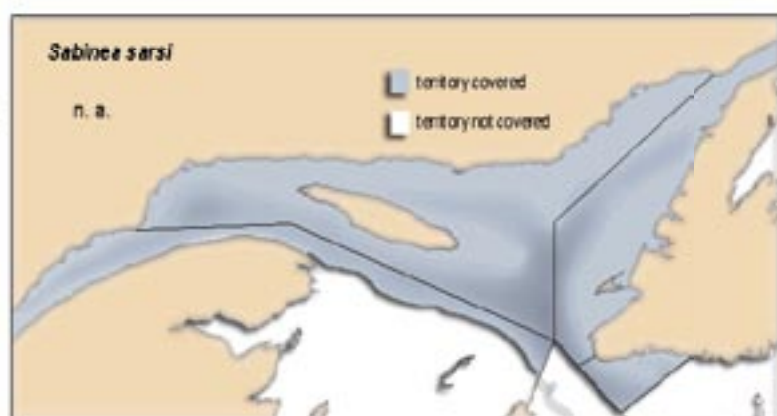
Sars shrimp

**Characteristics:**

- pale, rugged surface
- 7 spiny carina: 1 median and 3 on each side of carapace
- rostrum more pointed than *Sabinea septemcarinata*

May be mistaken for:

Pontophilus norvegica
Sabinea septemcarinata



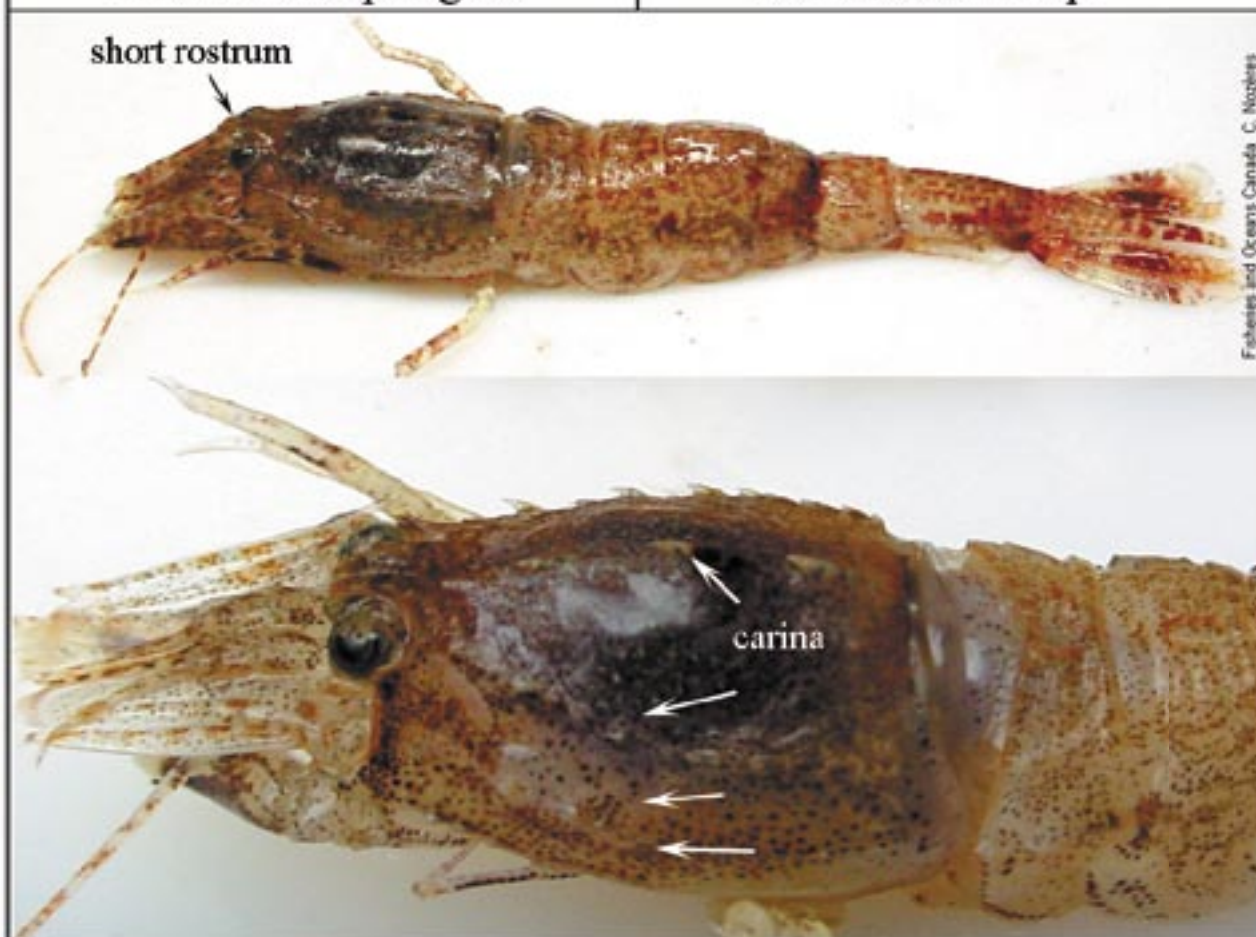
Family	Type of measure	Maximum size
Crangonidae	Cephalothorax mm	20 mm



Sabinea septemcarinata

Crevette à sept lignes

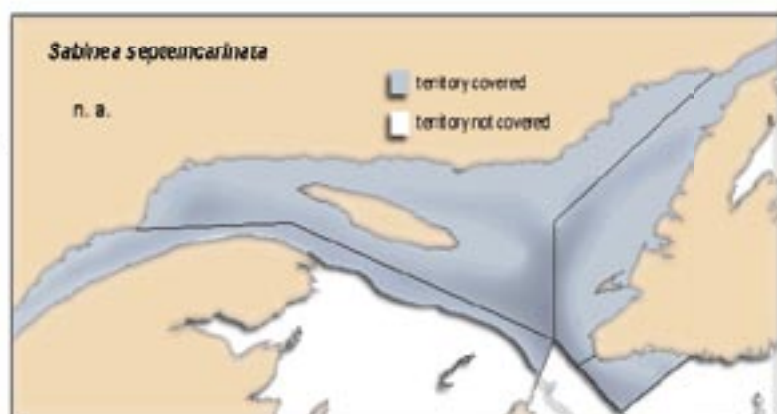
Sevenline shrimp



Fisheries and Oceans Canada C. Nizobres

Characteristics:

- 7 carina along the carapace
- small, short rostrum
- surface darker, with smaller spines than *Sabinea sarsi*

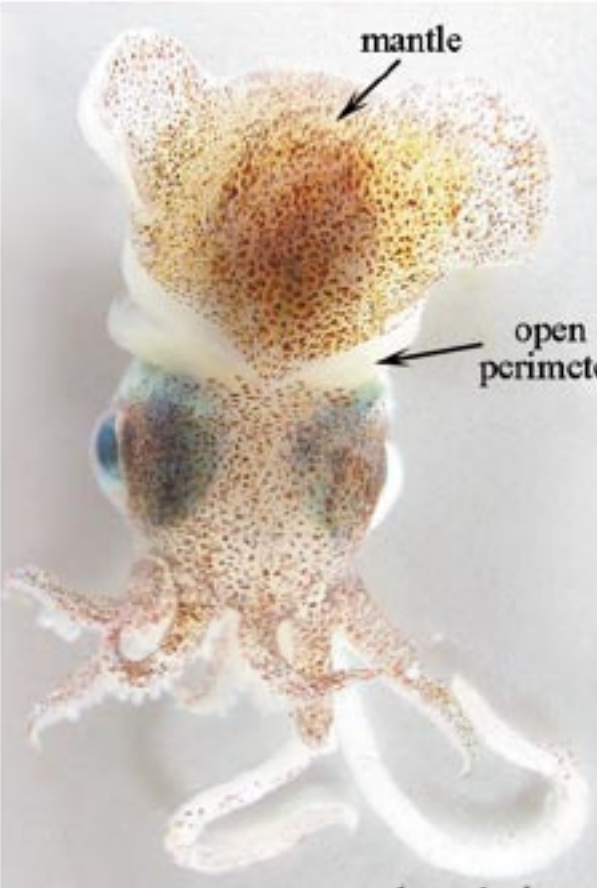
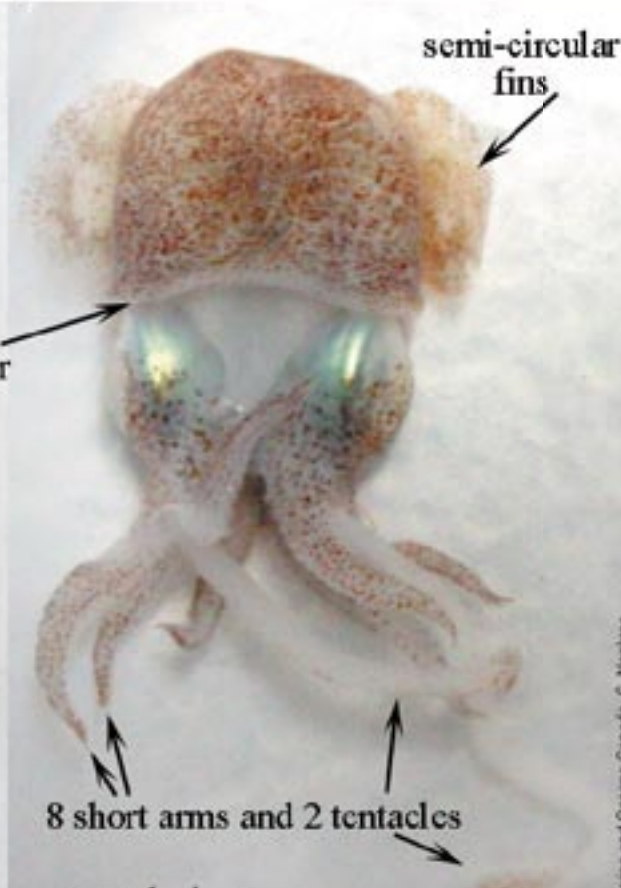
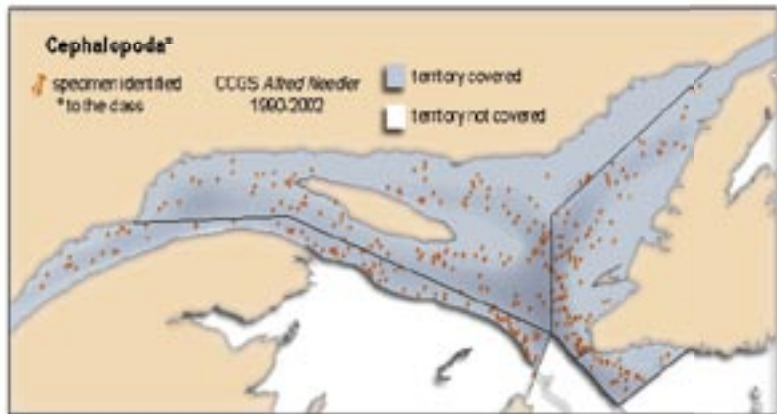
May be mistaken for:*Sabinea sarsi**Pontophilus norvegica*

Family	Type of measure	Maximum size
Crangonidae	Cephalothorax	20 mm


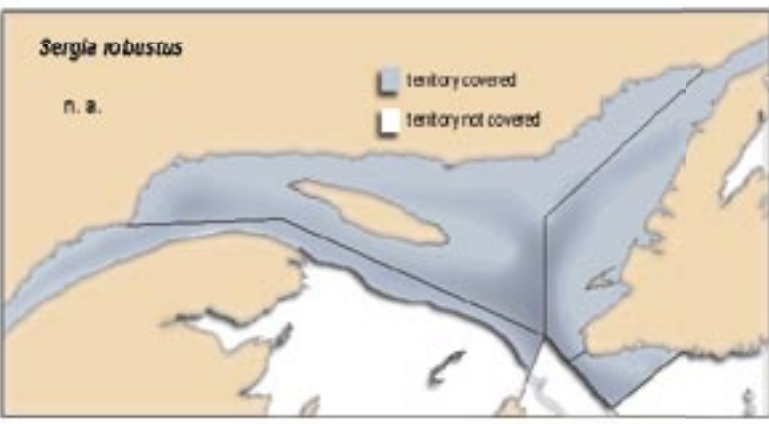


<i>Sclerocrangon boreas</i>		
Crevette de roche (ciselée)	Sculptured shrimp	
<p>3 dorsal median spines</p> <p>rostrum</p> <p>10 mm</p> <p>spatulate rostrum</p> <p>dorsal view</p>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • gray brown to pink, mottled • rugged, hairy surface • short, spatulate rostrum • 3 median spines • carinate abdomen <p>May be mistaken for: <i>Argis dentata</i></p>		
<p><i>Sclerocrangon boreas</i></p> <p>specimen identified CCGS Alfred Needler 1960-2002</p> <p>territory covered</p> <p>territory not covered</p>		
Family	Type of measure	Maximum size
Crangonidae	Céphalothorax mm	35 mm



<i>Semirossia tenera</i>		
Sépiole calamarette	Lesser bobtail squid	
 <p style="text-align: center;">mantle</p> <p style="text-align: center;">open perimeter</p> <p style="text-align: center;">10 mm</p> <p style="text-align: center;">dorsal view</p>	 <p style="text-align: center;">semi-circular fins</p> <p style="text-align: center;">8 short arms and 2 tentacles</p> <p style="text-align: center;">ventral view</p>	Fisheries and Oceans Canada C. Noblet
<p>Characteristics:</p> <ul style="list-style-type: none"> • mottled chestnut-brown • 8 short arms and 2 tentacles • mantle as wide as it is long • perimeter open all round, (not fused with the head) <p>May be mistaken for: <i>Bathypolypus arcticus</i> other Cephalopoda</p>		
Family	Type of measure	Maximum size
Sepiolidae	Mantle mm	50 mm



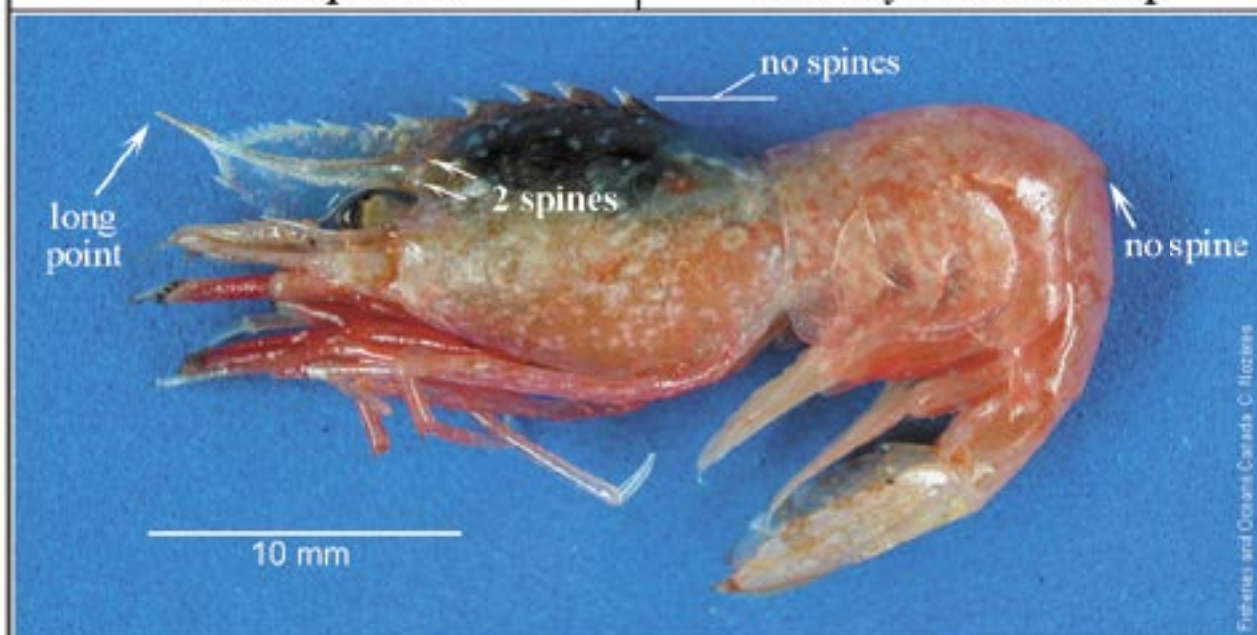
<i>Sergia robustus</i>		
Sergistidé écarlate	Scarlet sergestid	
 <p style="text-align: center;">10 mm</p> <p style="text-align: right; font-size: small;">Fisheries and Oceans Canada, C. Noziers</p>		
<p>Characteristics:</p> <ul style="list-style-type: none"> • scarlet red in colour • body laterally-compressed • no chelae (pincers) • short rostrum, ending in a strong, upward point <p>May be mistaken for:</p> <p><i>Acantheephyra tarda</i></p> <p><i>Pasiphaea tarda</i></p> <p><i>Sergestes arcticus</i></p>		
Family	Type of measure	Maximum size
Sergestidae	Cephalothorax mm	15 mm



Spirontocaris lilljeborgi

Bouc épineux

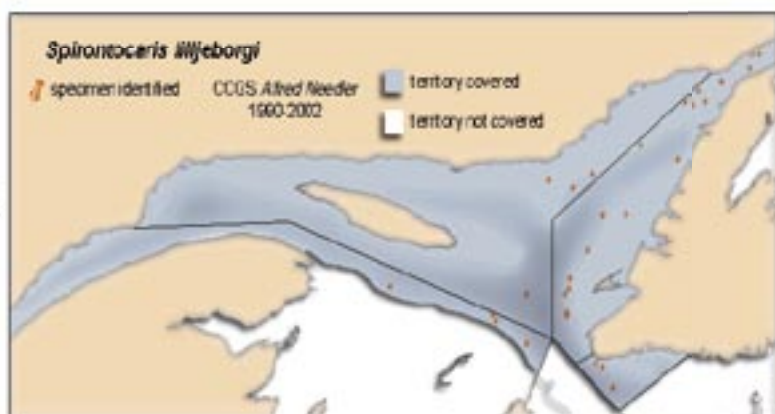
Friendly blade shrimp

**Characteristics:**

- 2 supraorbital spines
- spines on anterior half of the cephalothorax
- rostrum transparent and flat, ending in a long point

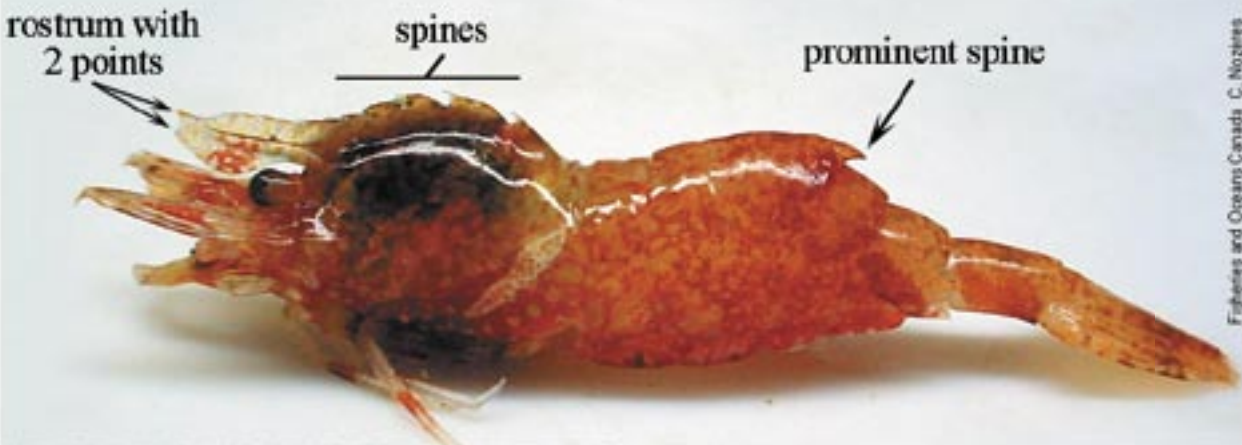

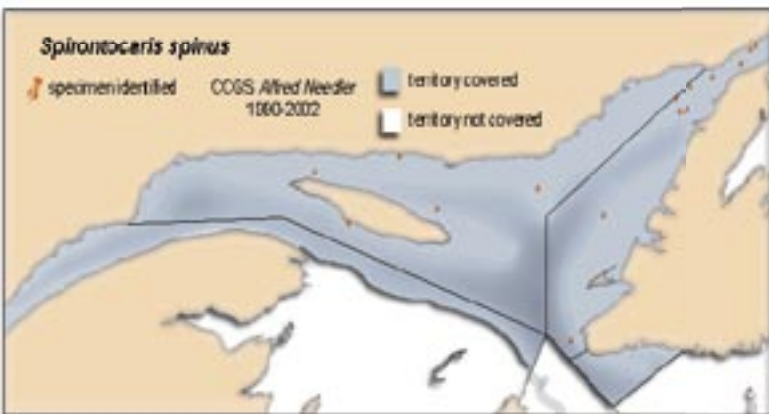
May be mistaken for:

Spirontocaris spinus
Eualus macilentus



Family	Type of measure	Maximum size
Hippolytidae	Cephalothorax mm	17 mm

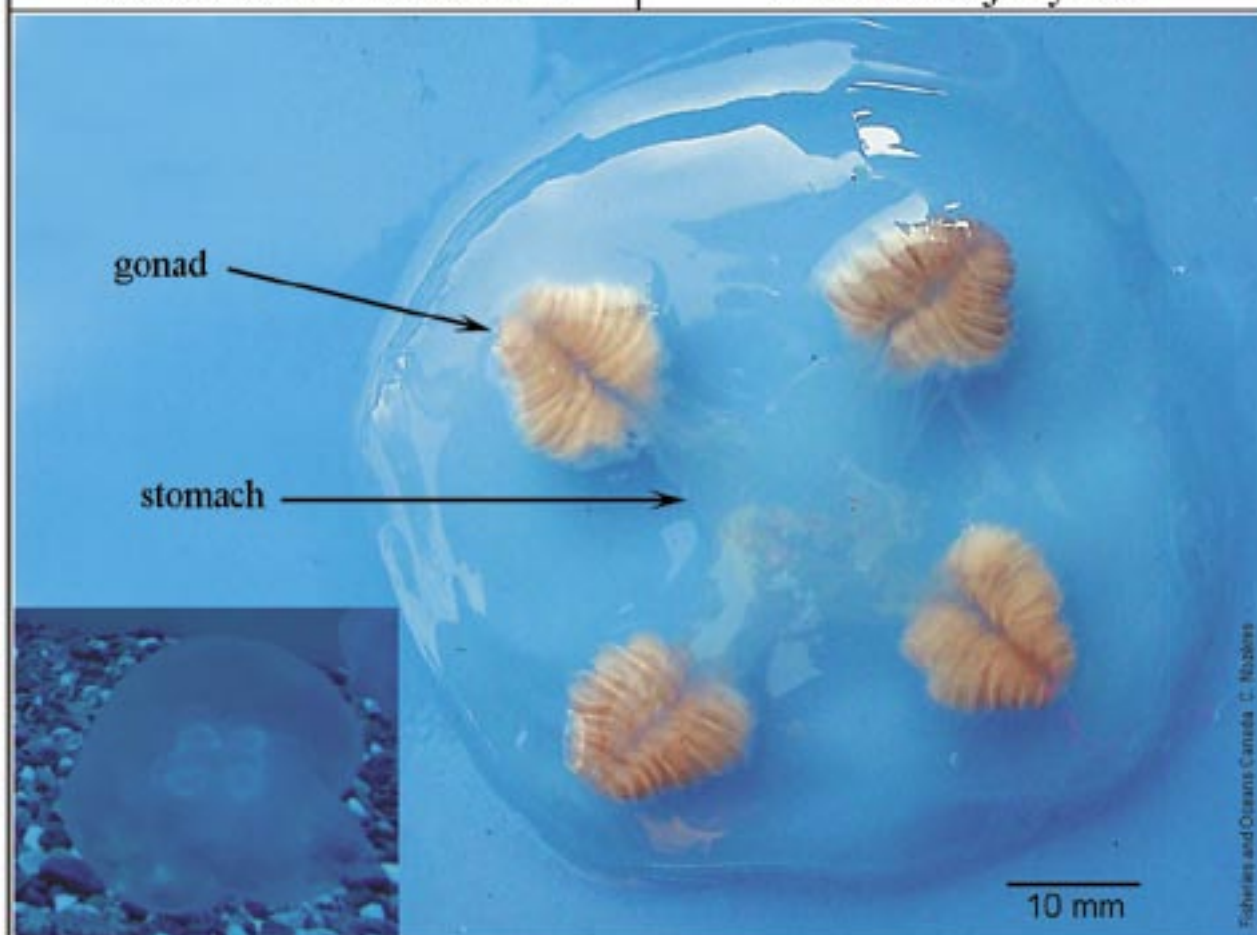


<i>Spirontocaris spinus</i>		
Bouc perroquet	Parrot shrimp	
		
Fisheries and Oceans Canada C. Nozières		
		
<p>Characteristics:</p> <ul style="list-style-type: none"> • rostrum ending in 2 points • spines along the length of the cephalothorax • 2 supraorbital spines • abdominal median spine 		
<p>May be mistaken for: <i>Lebbeus groenlandicus</i> <i>Spirontocaris lilljeborgi</i></p>		
		
Family	Type of measure	Maximum size
Hippolytidae	Cephalothorax mm	17 mm

Staurophora mertensi

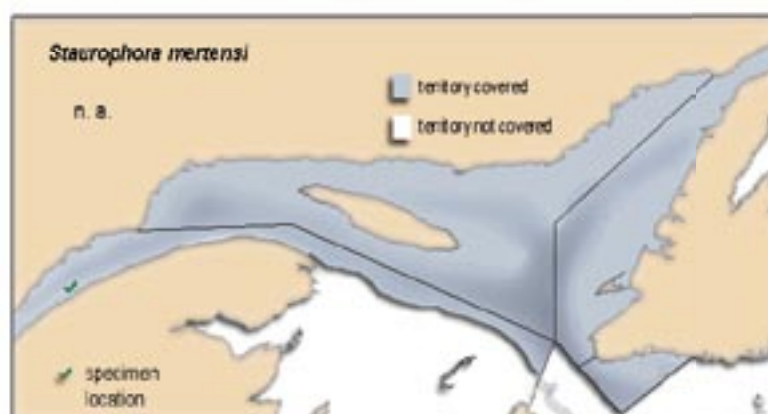
Méduse à croix blanche

Whitecross jellyfish

**Characteristics:**

- transparent body
- 4 gonads in form of a cross with the stomach

May be mistaken for:
other jellyfishes



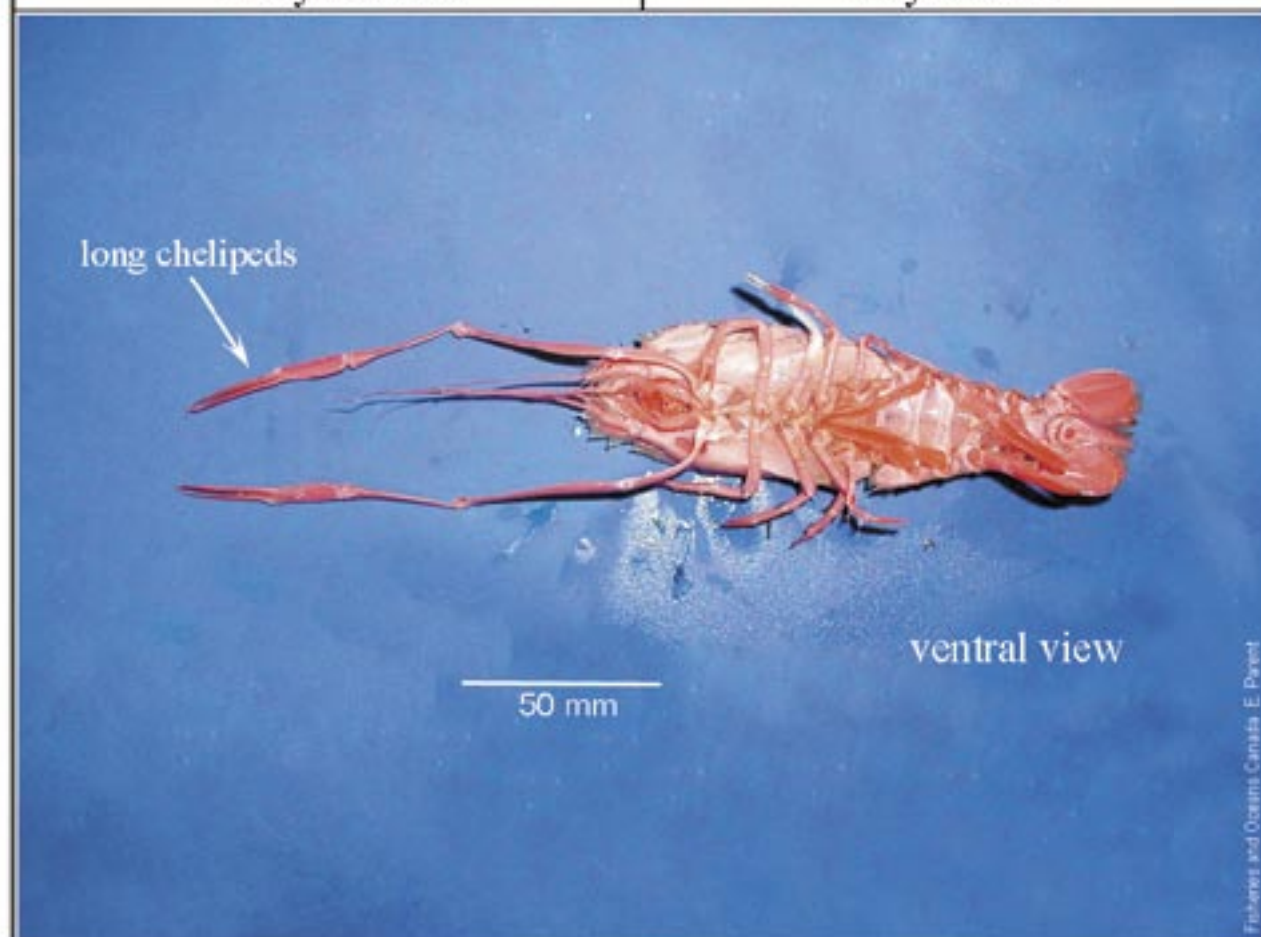
Family	Type of measure	Maximum size
Laodiceidae	Diameter mm	300 mm



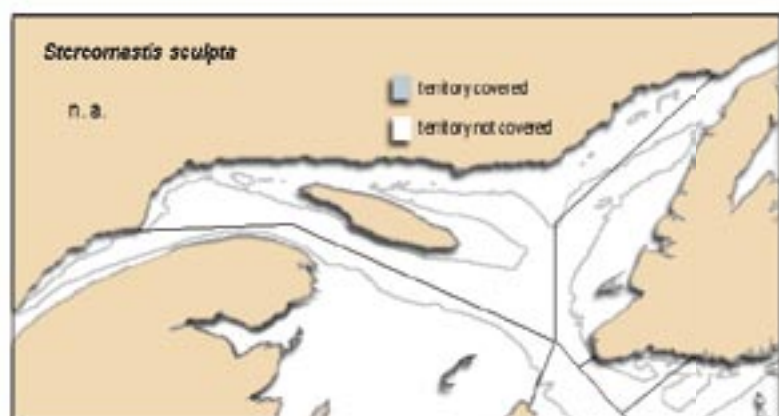
Stereomastis sculpta

Polychelidé

Polychelide

**Characteristics:**

- sculpted carapace
- long chelipeds
- abyssal species

May be mistaken for:*Munidopsis curvirostra*

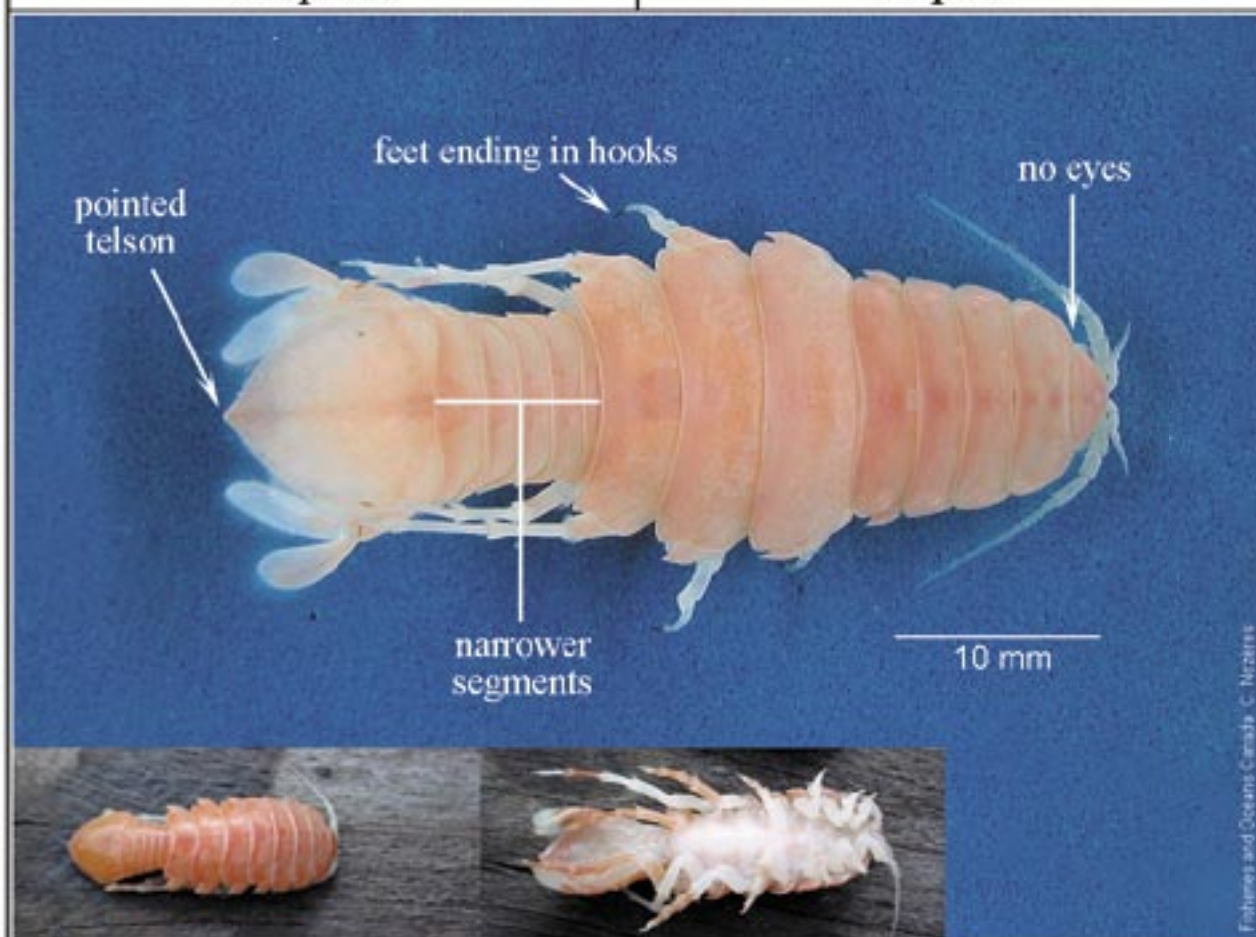
Family	Type of measure	Maximum size
Polychelidae	Cephalothorax mm	70 mm



Syscenus infelix

Isopode

Isopod



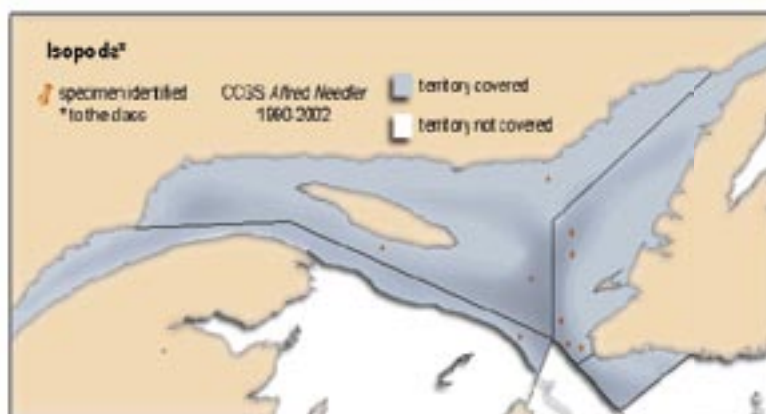
Fisheries and Oceans Canada, C. Neerink

Characteristics:

- pink, pale in colour
- blind species, of large size
- narrow posterior section
- occasional parasite on the head of *Nezumia sp.*

May be mistaken for:

Idotea balthica
other Idoteidae



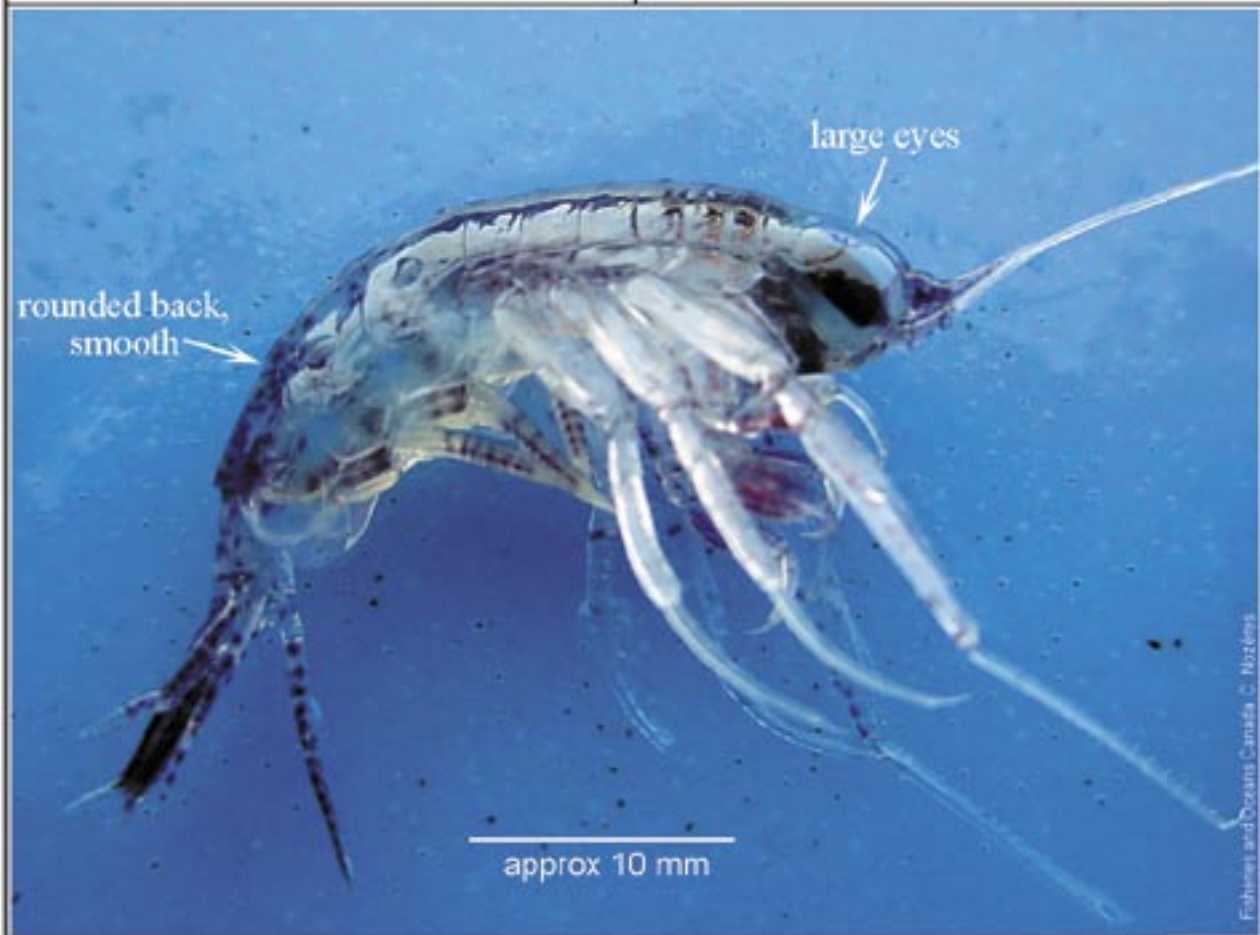
Family	Type of measure	Maximum size
Aegidae	Total mm	45 mm



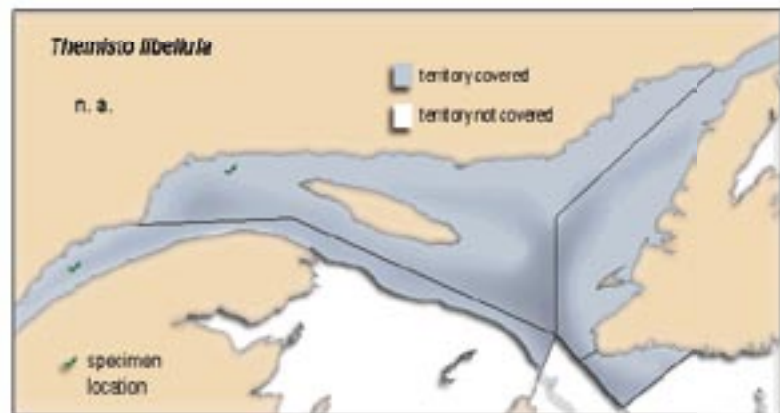
(Para-)Themisto libellula

Hyperiidé

Hyperiid

**Characteristics:**

- colour grey-violet
- very large eyes
- no dorsal spines
- pelagic amphipod
- species associated with very cold water

May be mistaken for:*Mysis mixta*

Family	Type of measure	Maximum size
Hyperiidæ	Total mm	45 mm



Part II: Marine invertebrates

Groupings

[Krill and other zooplankton](#)

[Crabs](#)

[Gasteropodan](#)

[Cephalopode](#)



Krill and other zooplankton

Mysid
Mysis mixta



Euphausiid
Thysanoessa raschi



Boreomysid
Boreomysis artica



10 mm

Hyperiid
Themisto libellula



Eualid
Eualus macilentus



Krill (euphausids): comparing carapaces

Thysanoessa raschi



Meganyctiphanes norvegica



Crabs*



Snow crab
Chionoecetes opilio

Artic lyre crab
Hyas coarctatus



Toad crab
Hyas araneus



Spiny crab
Lithodes maja



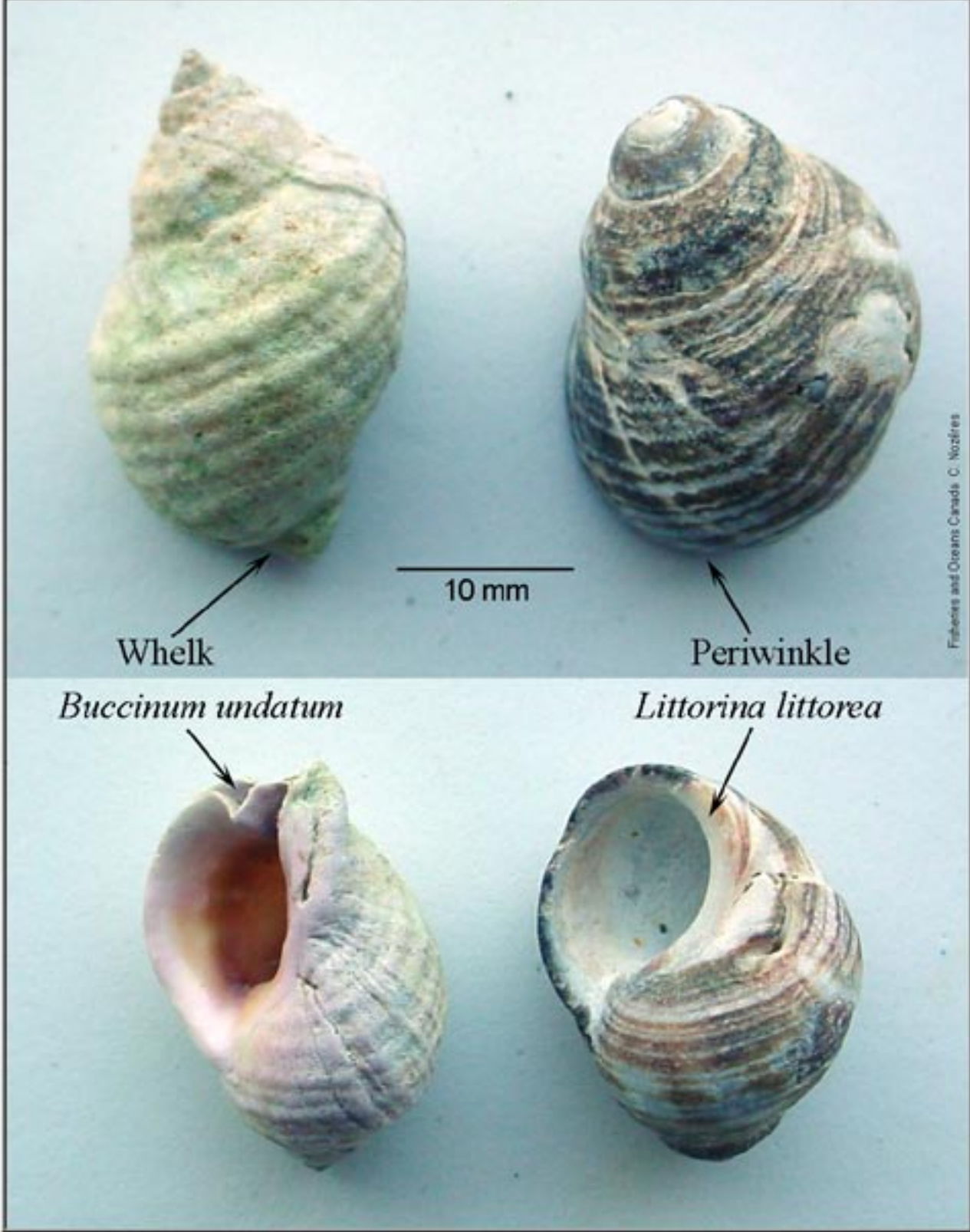
Rock crab
Cancer irroratus

*cleaned specimens

Fisheries and Oceans Canada. C. Nozdrilov



Gasteropodan



Whelk

Periwinkle

10 mm

Buccinum undatum

Littorina littorea

Fisheries and Oceans Canada C. Nozères



Cephalopoda

Northern shortfin squid
Illex illecebrosus



Fisheries and Oceans Canada / C. Hézard

Bobtail squid
Semirossia tenera



Northern Atlantic octopus
Bathypolypus arcticus



Appendix A: St. Lawrence fish species list (**bold** = species in guide)

<i>Acipenser oxyrinchus</i>	<i>Hippoglossus hippoglossus</i>	<i>Notolepis rissoi krøyeri</i>
<i>Alosa sapidissima</i>	<i>Icelus spatula</i>	<i>Osmerus mordax</i>
<i>Ammodytes americanus</i>	<i>Idiacanthus fasciola</i>	<i>Paralepis atlantica</i>
<i>Ammodytes dubius</i>	<i>Lamna nasus</i>	<i>Paralepis coregonoides</i>
<i>Anarhichas denticulatus</i>	<i>Lampadena speculigera</i>	<i>Paraliparis calidus</i>
<i>Anarhichas lupus</i>	<i>Lampanyctus macdonaldi</i>	<i>Paraliparis copei</i>
<i>Anarhichas minor</i>	<i>Leptagonus decagonus</i>	<i>Parasudis truculentus</i>
<i>Argentina silus</i>	<i>Liparis atlanticus</i>	<i>Peprilus triacanthus</i>
<i>Artediellus atlanticus</i>	<i>Liparis fabricii</i>	<i>Petromyzon marinus</i>
<i>Artediellus uncinatus</i>	<i>Liparis gibbus</i>	<i>Pholis gunnellus</i>
<i>Aspidophoroides monopterygius</i>	<i>Liparis tunicatus</i>	<i>Pollachius virens</i>
<i>Aspidophoroides olriki</i>	<i>Lophius americanus</i>	<i>Polyipnus asteroides</i>
<i>Boreogadus saida</i>	<i>Lumpenus fabricii</i>	<i>Pleuronectes americanus</i>
<i>Brosme brosme</i>	<i>Lumpenus lumpretaeformis</i>	<i>Pleuronectes putnami</i>
<i>Careproctus longipinnis</i>	<i>Lumpenus maculatus</i>	<i>Pungitius pungitius</i>
<i>Careproctus reinhardtii</i>	<i>Lycenchelys kolthoffi</i>	<i>Raja erinacea</i>
<i>Centroscyllum fabricii</i>	<i>Lycenchelys paxillus</i>	<i>Raja fyllae</i>
<i>Ceratias holboelli</i>	<i>Lycenchelys verrilli</i>	<i>Raja jenseni</i>
<i>Cetorhinus maximus</i>	<i>Lycodes atlanticusv</i>	<i>Raja laevis</i>
<i>Chauliodus sloani</i>	<i>Lycodes atratus</i>	<i>Raja mollis</i>
<i>Clupea harengus</i>	<i>Lycodes esmarki</i>	<i>Raja ocellata</i>
<i>Coelorhynchus carminatus</i>	<i>Lycodes lavalaei</i>	<i>Raja radiata</i>
<i>Coryphaenoides rupestris</i>	<i>Lycodes pallidus</i>	<i>Raja senta</i>
<i>Cottunculus microps</i>	<i>Lycodes reticulatus</i>	<i>Raja spinicauda</i>
<i>Cottunculus thompsoni</i>	<i>Lycodes vahli</i>	<i>Reinhardtius</i>
<i>Cryptacanthodes maculatus</i>	<i>Macrozoarces americanus</i>	<i>hippoglossoides</i>
<i>Cryptopsaras couesi</i>	<i>Mallotus villosus</i>	<i>Salmo salar</i>
<i>Cyclopteropsis macalpini</i>	<i>Manta birostris</i>	<i>Salvelinus fontinalis</i>
<i>Cyclopterus lumpus</i>	<i>Maurolicus muelleri</i>	<i>Scomber scombrus</i>
<i>Cyclothone microdon</i>	<i>Melanogrammus aeglefinus</i>	<i>Scomberesox saurus</i>
<i>Enchelyopus cimbrius</i>	<i>Melanostigma atlanticum</i>	<i>Scophthalmus aquosus</i>
<i>Eumesogrammus praecisus</i>	<i>Menidia menidia</i>	<i>Sebastes mentella</i>
<i>Eumicrotremus derjugini</i>	<i>Merluccius bilinearis</i>	<i>Somniosus microcephalus</i>
<i>Eumicrotremus spinosus</i>	<i>Micromesistius poutassou</i>	<i>Squalus acanthias</i>
<i>Gadus morhua</i>	<i>Myoxocephalus aenaeus</i>	<i>Stichaeus punctatus</i>
<i>Gadus ogac</i>	<i>Myoxocephalus octodecemspinosus</i>	<i>Synaphobranchus kaupii</i>
<i>Gasterosteus aculeatus</i>	<i>Myoxocephalus quadricornis</i>	<i>Tautogolabrus adspersus</i>
<i>Gaidropsarus argentatus</i>	<i>Myoxocephalus scorpioides</i>	<i>Trachyrhynchus murrayi</i>
<i>Glyptocephalus cynoglossus</i>	<i>Myoxocephalus scorpius</i>	<i>Triglops murrayi</i>
<i>Gymnocanthus tricuspis</i>	<i>Myxine glutinosa</i>	<i>Triglops nybelini</i>
<i>Helicolenus dactylopterus</i>	<i>Nemichthys scolopaceus</i>	<i>Ulvaria subbifurcata</i>
<i>Hippoglossoides platessoides</i>	<i>Nezumia bairdi</i>	<i>Urophycis chesteri</i>
<i>Hemitripterus americanus</i>	<i>Notacanthus chemnitzii</i>	<i>Urophycis tenuis</i>

Appendix B: Glossary

Abyssal

Species associated with sea bottoms of great depths (>4000 m).

Adipose fin

Small rounded fin located dorsally before the caudal peduncle and tail fin.

Amphipod

Small crustacean with a laterally-compressed body.

Anadromous

Fish that migrate from marine to freshwater to spawn.

Anal fin

Fin on the median ventral line behind the anus.

Barbels

Short, fleshy filaments on the lower jaw or nose of some fish species (Gadidae).

Bathypelagic

Species associated with the water column below all surface light (400-1000 m).

Canal, siphonal

Outer groove on gasteropod shells from which the siphon protrudes.

Carinate

With a crest or ridge, such as a line on the carapace.

Caudal fin

Tail fin.

Cephalothorax

Anterior part of crustacean body, comprising the fused head and thorax and covered by a carapace.

Chelicerae

Mouth parts, as found in spiders.

Chelipeds

Limbs with pincers in crustaceans.

Appendix B: Glossary (cont'd)

Cirri

Fleshy protuberances located above the eyes in the Northern octopus.

Demersal

Species found near or on the sea bottom.

Dorsal blade

Keel or blade-like, triangular structure located anterior to the dorsal fin.

Dorsal fin

Fin along the back, behind the head.

Fork length

Measure from the most anterior part of the head to the end of the middle ray of caudal fin.

Isopod

Crustacean lacking a carapace and with a dorso-ventrally compressed bodyform.

Lateral line

Sensory organ of fishes, which consists of a canal running along the side of the body.

Mantle

Flesh in form of a cylinder or a sack that envelops the body of cephalopods.

Ocellus

Spot or marking in form of a ring.

Opercule

Calcareous plate used to covering the shell mouth of gasteropod molluscs; protective plate covering the gills in fishes.

Pectoral fin

Pair of fins behind the gills.

Peduncle

Narrow part of fish body between the anal and caudal fin; support stalk in invertebrates.

Pelagic

Species associated with the water column from 0 to 200 m depth.

Appendix B: Glossary (cont'd)

Pelvic fin

Pair of belly fins, usually between the pectoral and anal fins.

Photophore

Organ that produces or distributes bioluminescence.

Pinnula

Series of small finlets posterior of the anal and dorsal fins (Scomberidae).

Preopercular spines

Spines on the gill covers, particularly characteristic in sculpins.

Rostrum

Narrow, dorso-anterior projection of the carapace, characteristic of crustaceans.

Siphon

Extensible, fleshy tube in Gasteropoda that serves for respiration or feeding.

Supraorbital spines

Spines just above the eye in crustaceans.

Tentacles

Pair of elongated arms in squid and sepiolids, usually with suckers only at the ends.

Total length

Measure from the most anterior end of the head to the end of the longest rays of the caudal fin.



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Useful weblinks:

Biodiversity Portrait of the St. Lawrence

lavoieverte.qc.ec.gc.ca/faune/biodiv/en/recherche/especes/PO_EN.asp

Biosis: Index to Organism Names

www.biosis.org/triton/indexfm.htm

CephBase

www.cephbase.utmb.edu

Crustacea.net

www.crustacea.net

Dictionary of Ichthyology—Brian Coad

www.purehrottle.com/briancoad/A.htm

Diving Bay of Fundy

www.unbsj.ca/sase/biology/macdonald-lab/fundydive.html

Diving St. Lawrence—Christian Poirier

www.plongeetech.com/index.html

FishBase

www.fishbase.org

Global Biodiversity Information Facility

www.gbif.org

marinelife-explorer.com

www.marinelifexplorer.com

Pilot Census of Marine Life in the Gulf of Maine

www.usm.maine.edu/gulfomaine-census

Sea Around Us Project

saup.fisheries.ubc.ca

The Tree of Life project

www.tolweb.org/tree/phlyogeny.html



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