

Common Trawl Fauna in the Chukchi and Beaufort seas

Mollusca

Disclaimer:

This is not a complete guide to the trawl fauna of the Pacific Arctic. There are many other species that are not presented in this guide. Most identifications of the depicted organisms have been verified by a variety of taxonomic experts but small taxonomic features may not be clearly visible in the images and could lead to confusion with similar taxa. As such, it is recommended that identification of new collections may be aided by this guide but that final identifications should be confirmed on vouchers by taxonomic experts.

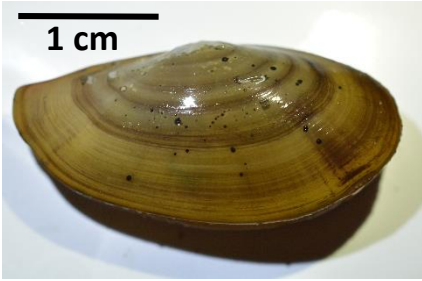
Katrin Iken, College of Fisheries and Ocean Sciences, University of Alaska Fairbanks, USA (contact: kbiken@Alaska.edu)

Bodil Bluhm, UiT The Arctic University of Norway

MBON
Marine Biodiversity
Observation Network

Mollusca: Bivalvia

Yoldia hyperborea



Megayoldia thraciaeformis



Nuculana radiata



Shell relatively smooth

Nuculana pernula

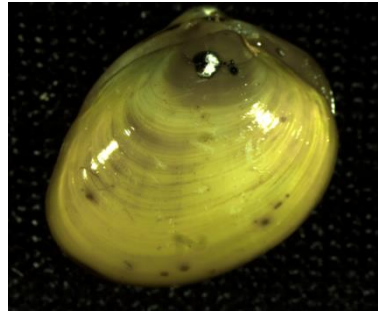
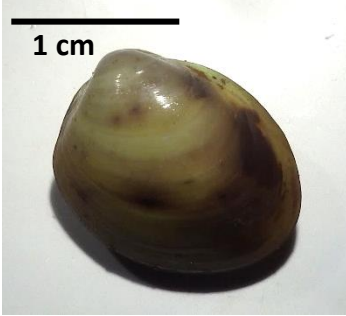


Strong shell ribbing

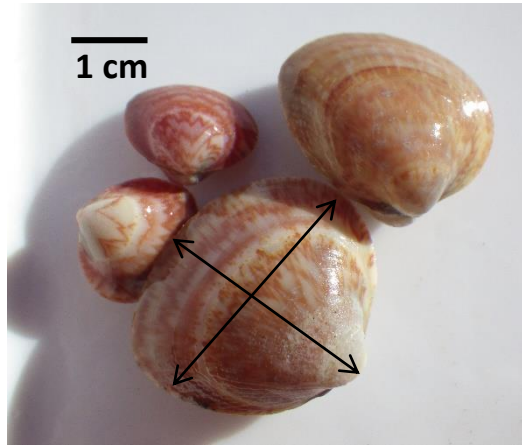


Mollusca: Bivalvia

Ennucula tenuis



Serripes groenlandicus



Shell as wide as high
(arrows)

Stronger hinge teeth

Color is NOT a good
indicator to distinguish
from *S. laperousii*

Serripes laperousii



Shell:
Wider than high
Weak hinge teeth

Cyclocardia ventricosa

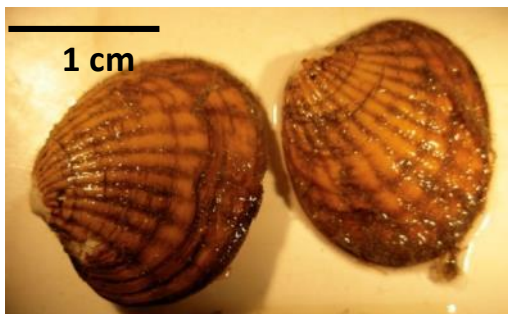


“Hairs” along shell

Cyclocardia crebricostata



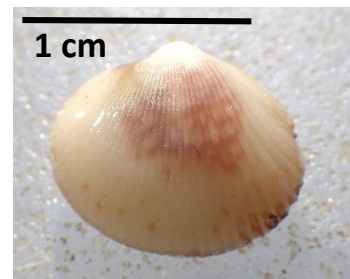
Crassicardia crassidens



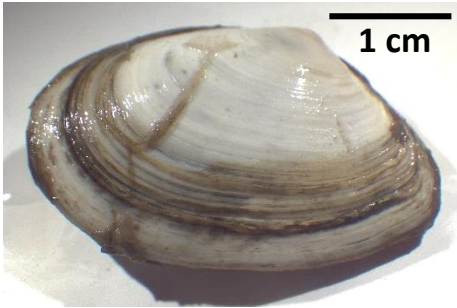
Ciliatocardium ciliatum



Keenocardium californiense



Macoma calcarea



Often with blackened periostracum at lower shell edge

Macoma moesta

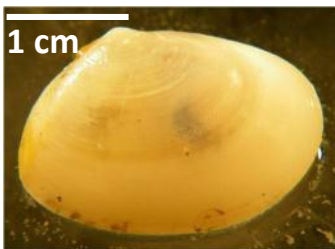


More rounded than *M. calcarea*

Macoma cf brota



Macoma torelli



Relatively thin shell

Tellina lutea

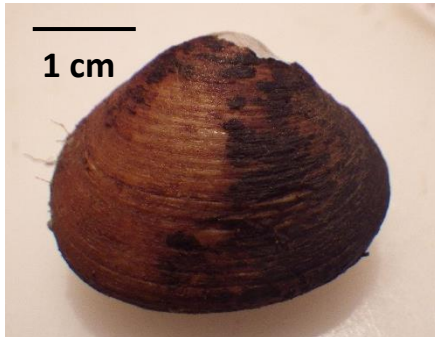


Astarte borealis



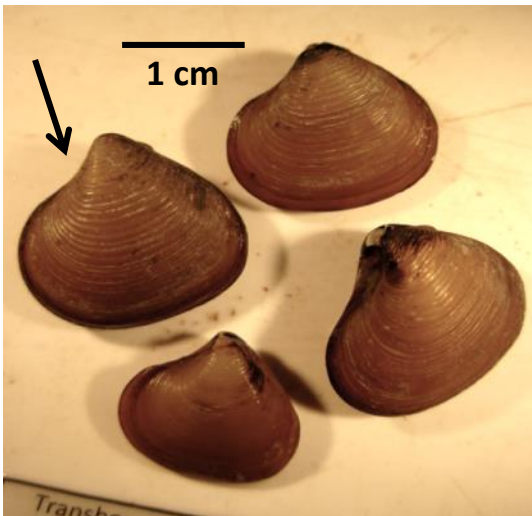
Flat shell, esp. larger individuals
Can be large
Large individuals dark brown, velvety feel

Astarte crenata



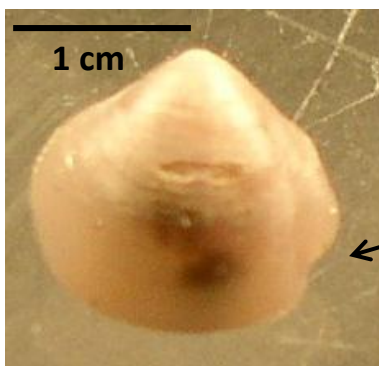
Typically chipped umbo
Thick shell
Rounded body (width)

Astarte montagui



Characteristic bend next to one side of umbo (arrow)
Golden brown color
Clear ribbing

Thyasira flexuosa



Roundish, white
distinct indentation on one side of the shell

Chlamys islandica

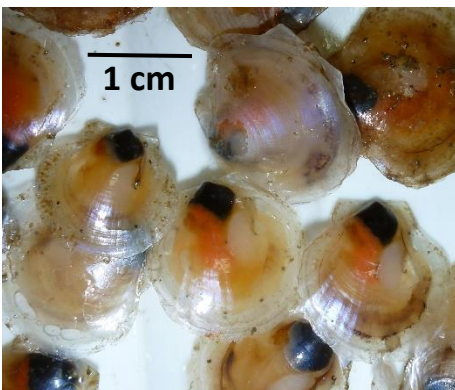


Mostly an Atlantic species

Chlamys behringiana



Similipecten greenlandicus



Extremely brittle, transparent shells
Common in the Beaufort Sea, often very common where they occur

Mollusca: Bivalvia

Mya truncata



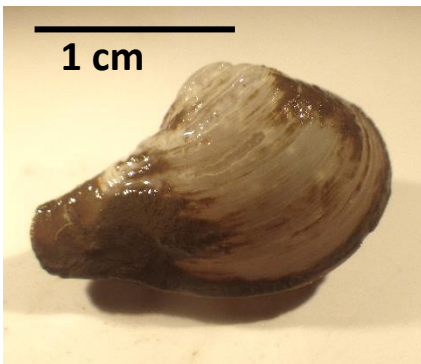
Periostracum covers siphon
Shell gapes at siphon opening

Cuspidaria beringensis



Radial ribs

Cuspidaria glacialis

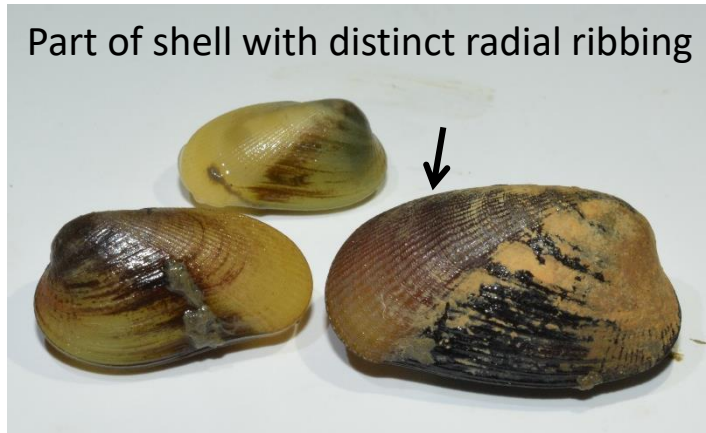


Mollusca: Bivalvia

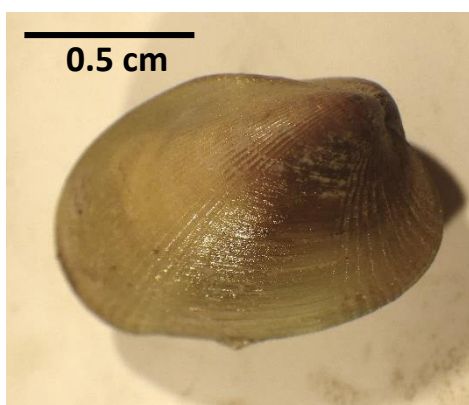
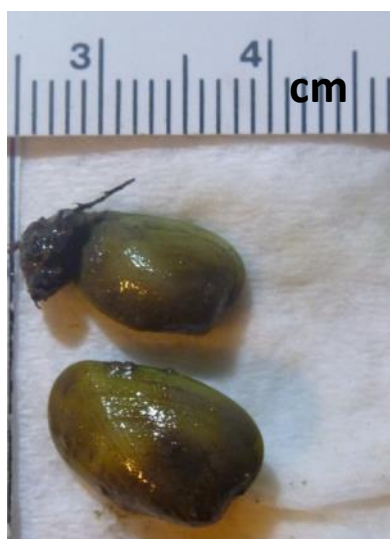
Musculus niger



Musculus glacialis



Musculus discors



Umbo distinctly elevated above shell edge

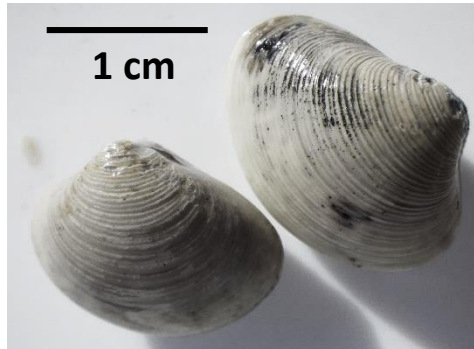
Mollusca: Bivalvia

Hiatella arctica



Row of spines on older shells (arrow)

Liocyma fluctuosa



Thick shell
Concentric rings distinct
Chalk-white to gray

Lyonsia arenosa

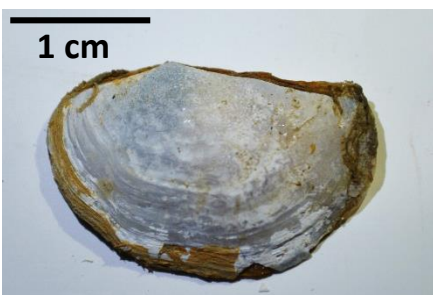


Thick shell
Radial striations
Pieces of brown periostracum common

Bathyarca glacialis



Pandora glacialis



One valve side very flat
Other valve bulging

Portlandia arctica

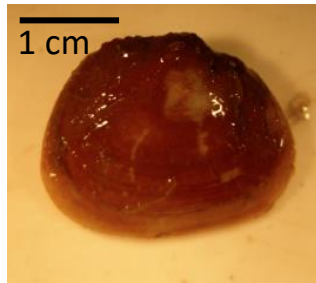


Mollusca: Bivalvia

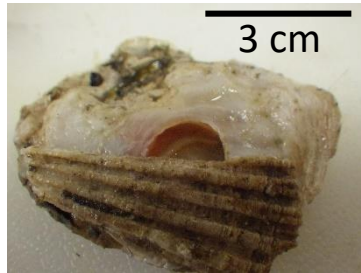
Thracia septentrionalis



Neaeromya compressa



Pododesmus macroschisma



Jingle, hole in bottom valve



Periploma aleuticum



Distinct shell indentation (arrow)



Mollusca: Polyplacophora

Amicula vestita

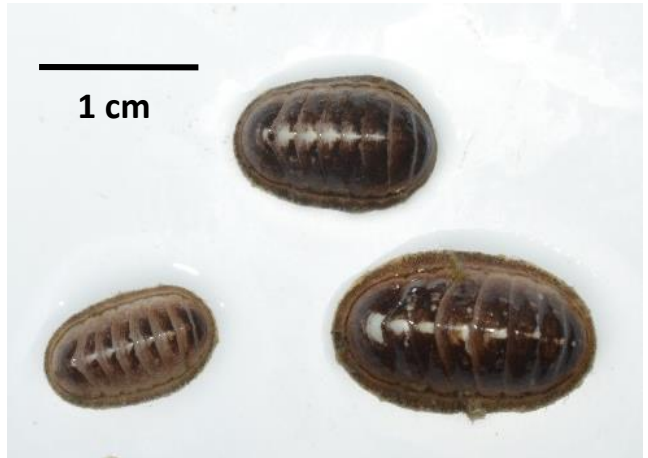
2 cm



Hairy periostracum, light brown color



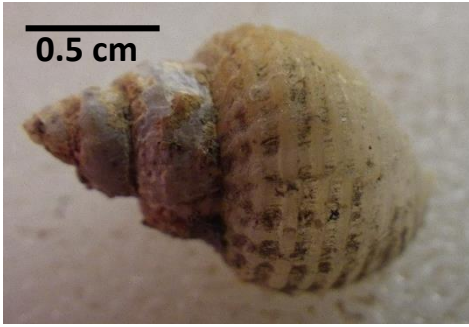
Stenosemus albus



Mollusca: Gastropoda

Admete viridula

No operculum

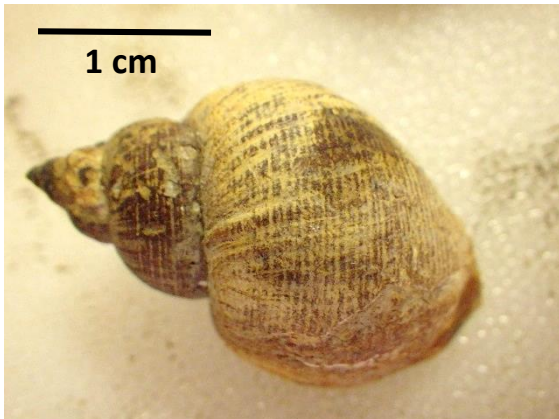


Distinct reticulate pattern, upper whorls slightly ridged



Admete solida

No operculum

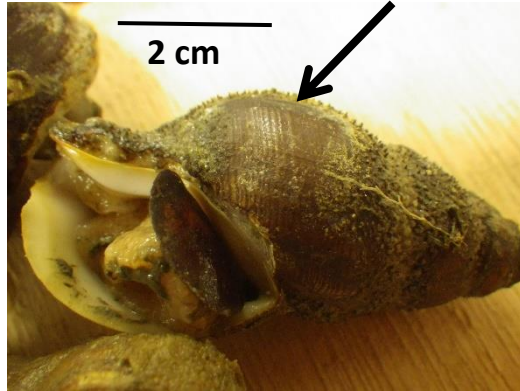


No strong reticulate pattern
Shell more solid (thicker) and larger than in *A. viridula*
Deep umbilical



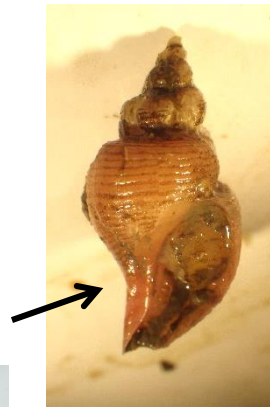
Mollusca: Gastropoda

Anomalisipho martensi (previously: *A. conulus*)



Spiral markings (arrow)
Dark brown shell with white shell inside

Anomalisipho verkruezeni (previous name *Colus verkruezeni*)



Siphon a more bent than in *A. conulus* (arrow)
Smaller than *A. conulus*

Latisipho hypolisus



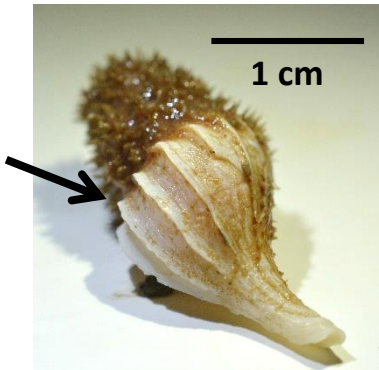
Smooth shell (compare to *Anomalisipho*)



Can be light-colored



Boreotrophon clathratus



With a bit of a spine on the ridge, at the height of the shoulder (arrow)



Boreotrophon truncatus



No spine on ridge, smooth ridge



Boreotrophon cymatus



Boreoscala greenlandica

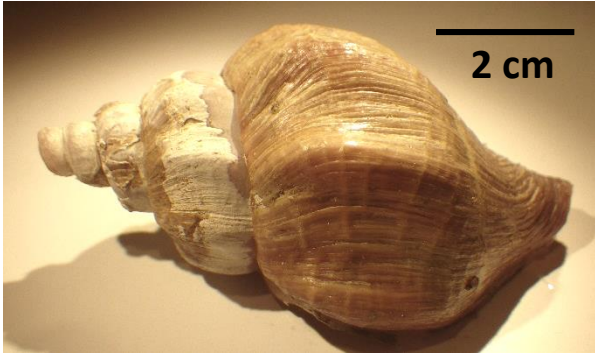


Nodulotrophon coronatus



Mollusca: Gastropoda

Beringius behringi



The canal in *Beringius* is broader and straight compared to *Neptunea*

Axial sculptures are in the form of broad low folds

Mostly a pale pink, striped color

Beringius stimpsoni



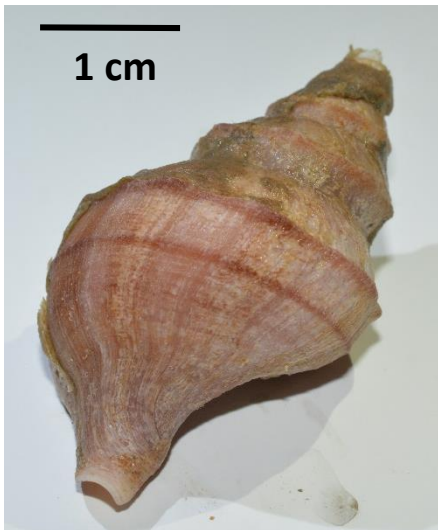
Tall spiral

Neptunea heros



Prominent blunt
"spines" along
spiral sculpture
Diffuse axial
sculptures
Can be very large

Neptunea communis

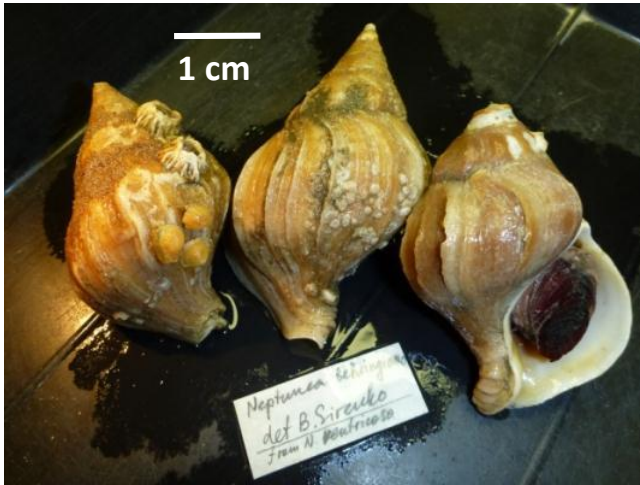


Prominent spiral sculptures

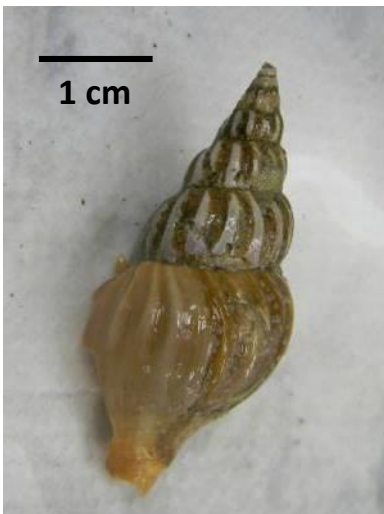
No distinct axial sculpture

Mollusca: Gastropoda

Neptunea spp. (multiple other species)



Plicifusus kroeyeri



Mollusca: Gastropoda

Pyrulofusus deformis



Spiral curves **left** – only left spiral gastropod !



Pyrulofusus sp.



Volutopsius middendorffi



Volutopsius fragilis



Volutopsius norwegicus

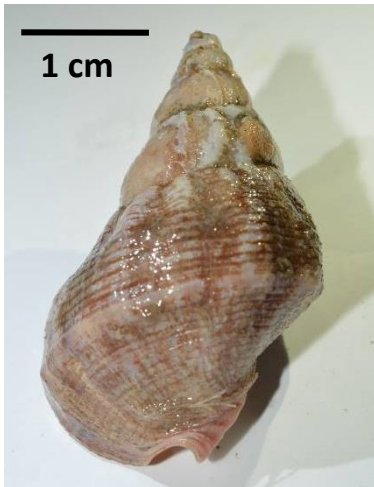


All *Buccinum*

operculum with centroid rings

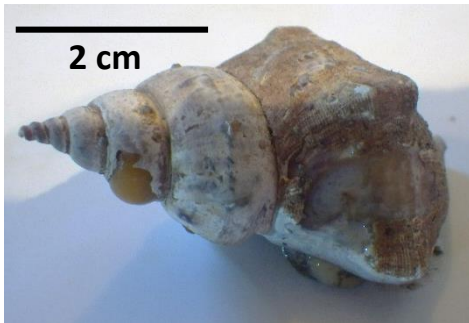


Buccinum glaciale



Cone-shape
Thin spiral
sculptures on
lower whorls

Buccinum angulosum

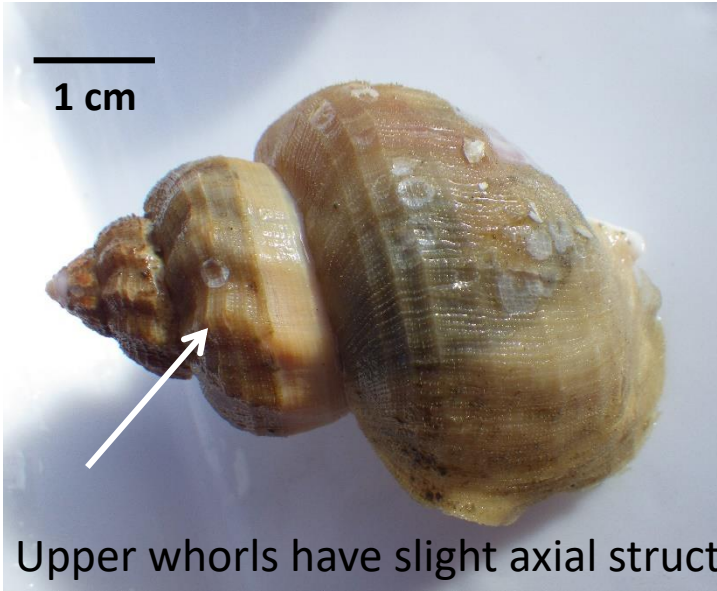


Can be confused
with *B. glaciale*

B. angulosum is
more angular with
more distinct knob-
like structures at
the change of plane
angles.

Shell opening more
distinctly angular

Buccinum polare



Common species, often occurs with multiple size classes in a catch

Buccinum beringense



B. beringense resembles *B. glaciale*, but:

Stronger spiral sculpture

Wider body

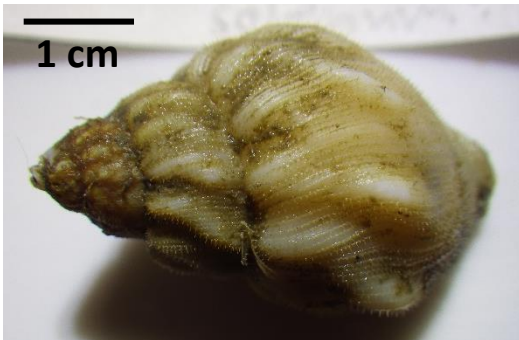
Knob-like at juncture with axial folds and spiral rib at shoulder

Buccinum scalariforme



Narrow axial folds are more straight (compare to *B. plectrum*)
Axial folds extend over the entire whorl
Mostly reddish-pink color

Buccinum solenum



Buccinum plectrum



Tall spire
Prominent sinuous axial folds
Spiral sculpture relatively widely and evenly spaced



Buccinum tenellum

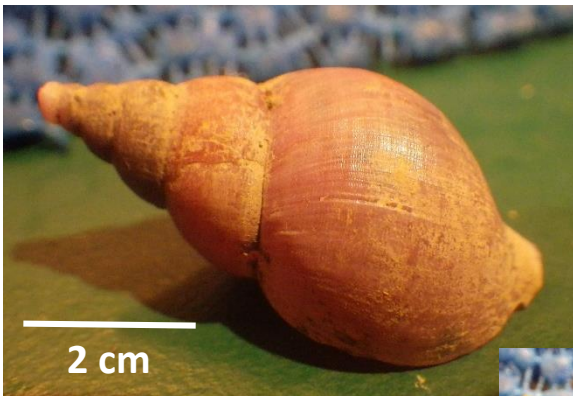


Buccinum ciliatum



Pale to dark brown periostracum with axial lines of fine hairs

Buccinum hydrophanum



Smooth shell
Light brown color



Mollusca: Gastropoda

Colus sabini



Large, thin-shelled *Colus*
Widely spaced, fine, thread-like spiral sculptures
Especially common in Beaufort Sea

Colus pubescens



Large shell with even spiral ribs
Distinctive hairy periostracum

Colus aphelus



Colus togatus



Mollusca: Gastropoda

Colus jeffreysianus



Smooth, light-brown shell

Aulacofusus brevicauda (formerly *Colus spitzbergensis* and *Neptunea brevicauda*)



Fine, spiral sculptures
Often brown color (but can be light)

Clinopegma magnum



Velvety periostracum
Very large last whorl, rounded shell shape

Mollusca: Gastropoda

Neophinoe coronata



Dense hairy fringe along the shoulder of each whorl

Neophinoe kroeyeri

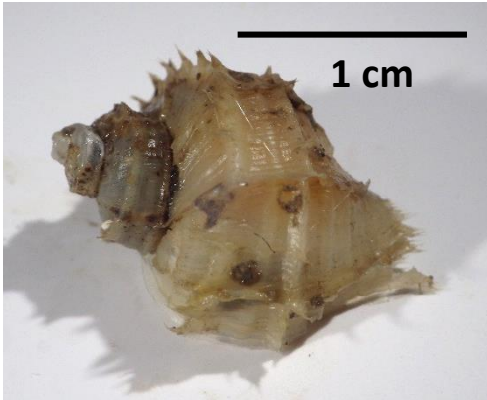


Ariadnaria borealis



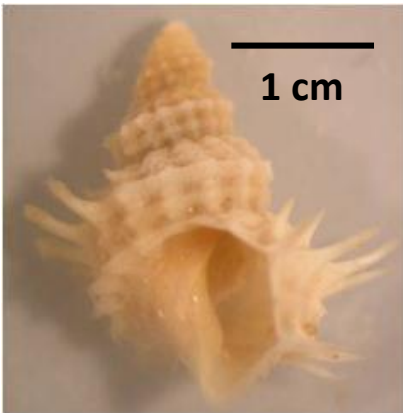
Hairy fringe along whorl shoulder but uneven
Some axial structure
Very wide shell opening

Trichotropis bicarinata



Hair tufts scattered, similar to *Ariadnaria borealis*
No axial structures, rather some spiral ridges
Regular-sized shell opening (compared to *A. borealis*)

Trichotropis cancellata



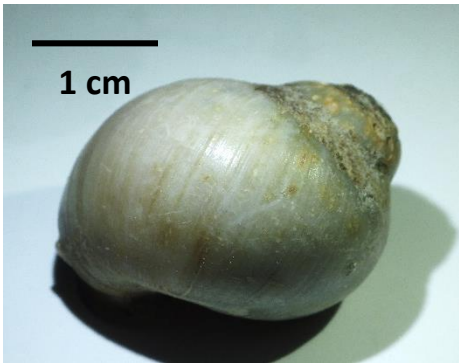
Mollusca: Gastropoda

Cryptonatica affinis (previously *Natica clausa*)



Calcareous operculum (hard)
Mostly brown shell

Euspira pallida (previously *Lunatia pallida*)



Translucent, proteinaceous operculum (flexible)
Often lighter-colored shell than *C. affinis*

Tachyrhynchus erosus



Shell typically rusty-brown,
Can be yellowish
Can be eroded and rounded

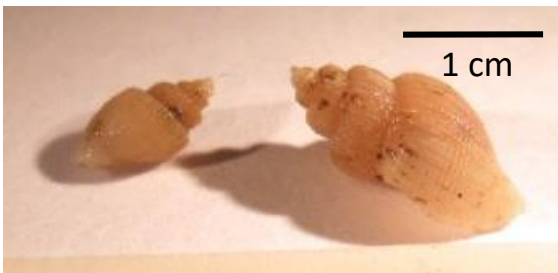


Curtitoma decussata



Axial ridges in a wavy fashion across each whorl; small species

Curtitoma novajasemljensis



Axial structures straight; small species

Curtitoma violacea



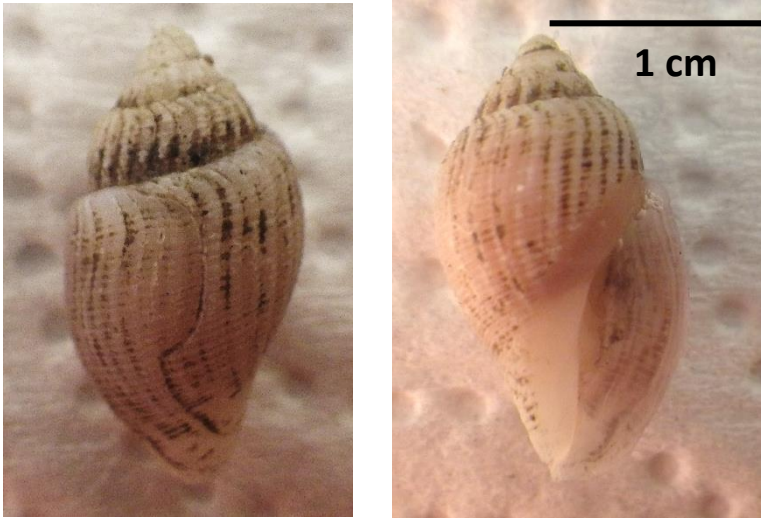
Axial and spiral structures slightly elevated
Gives shell a checkered appearance

Granotoma albrechti



Mollusca: Gastropoda

Obesotoma tenuilirata

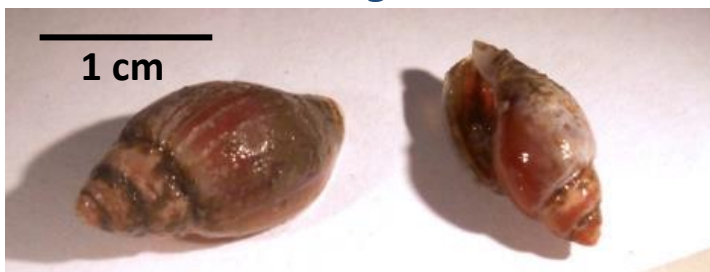


Upper whorls small

Lowest whorl large and elongated

Axial structures straight

Obesotoma laevigata

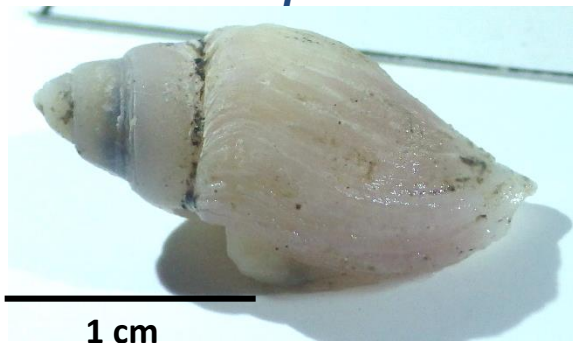


Upper whorls small

Shell smooth, brown color



Obesotoma sp



Mollusca: Gastropoda

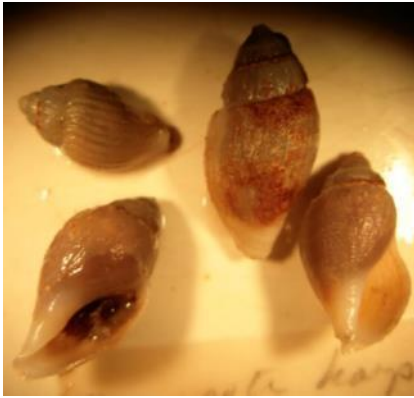
Oenopota elegans



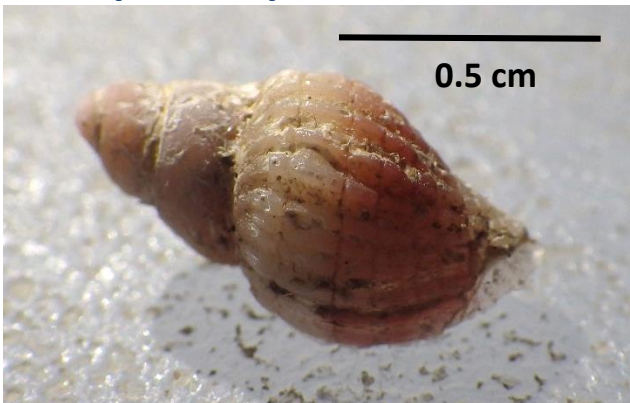
Tall, pointy spiral, shell mostly smooth, white color

[Another species: *Oenopota pyramidales*, is also white and tall spiral but also with distinctive spiral sculpture – no picture]

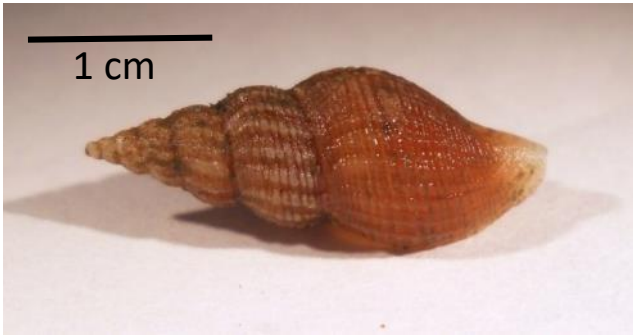
Oenopota harpa



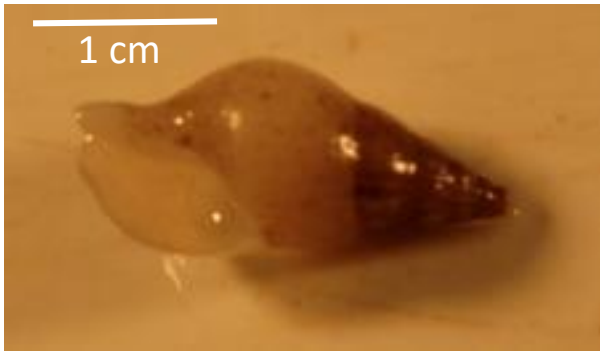
Oenopota impressa



Oenopota pingelli



Astyris rosacea

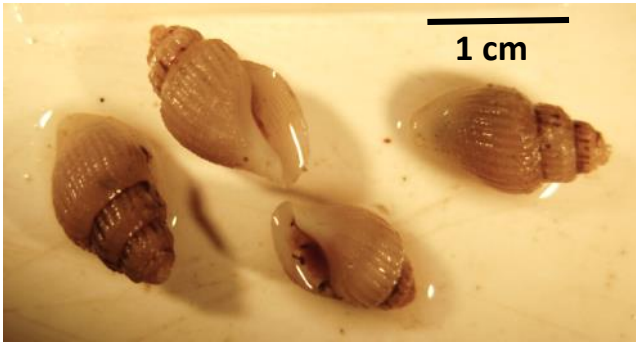


Iphionopsis sp.



Mollusca: Gastropoda

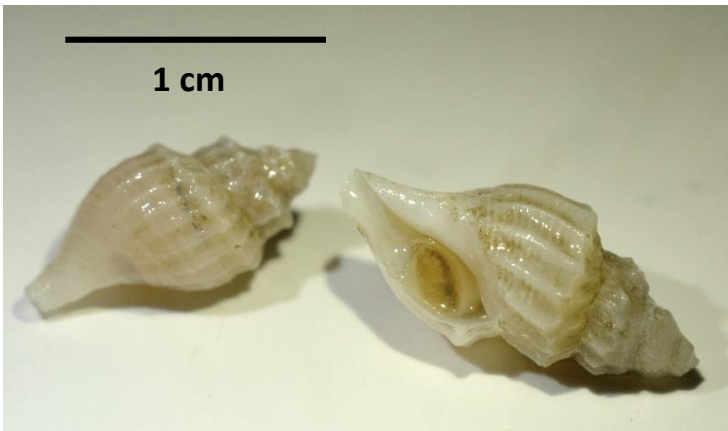
Propebela arctica



Small upper whorls

Axial structures, rounded shoulders

Propebela nobilis (sometimes also referred to as *Oenopota nobilis*)



Small upper whorls

Strong axial structures, shoulders with distinct edge

Mohnia sp.



Top of shell often eroded, blunt tip



Mollusca: Gastropoda

Retifusus roseus



Fine spiral structures



Epheria crassior



Shell very soft (flexible) and thin

Mollusca: Gastropoda

Solariella obscura



Faint axial sculptures in addition to prominent spiral
Umbilicus open, deep
Shell white to pearl color

Margarites costalis



Spiral sculptures only
Umbilicus more narrow than
in *S. obscura*
Shell white to pearl color
Can get quite large

Margarites helycinus (previously *M. beringensis*)



Shell smooth
No prominent sculpture
Shell pink and blueish hues

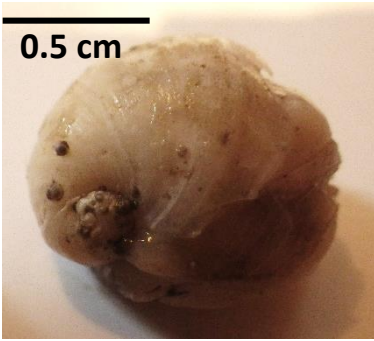
Margarites groenlandicus



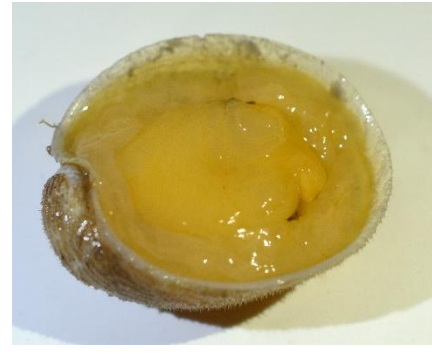
Can be confused with *S. obscura* b/c of deep, open umbilicus
Lacks axial structures
Tan-colored shell

Mollusca: Gastropoda

Velutina velutina



Covered with periostracum



Periostracum can have distinct hairs in "rows"

Limneria undata

1 cm

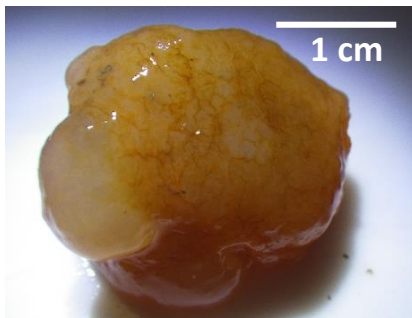


Not covered by periostracum, smooth shell



Onchidiopsis sp.

Yellow-orange-brown, shapeless "blob", gelatinous but firm



Mollusca: Gastropoda

Lepeta caeca



Puncturella noachina



Slit-like opening at top of shell

Mollusca: Gastropoda

Order: Cephalaspidea

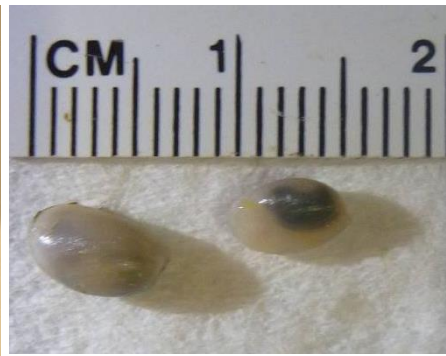
Cylichna alba



Top and bottom end of shell blunt
Shell opening along entire shell length
Brown color



Cylichnoides occultus



Shell with pointed ends
Shell mostly white to tan

Philine sp.



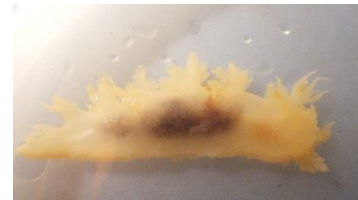
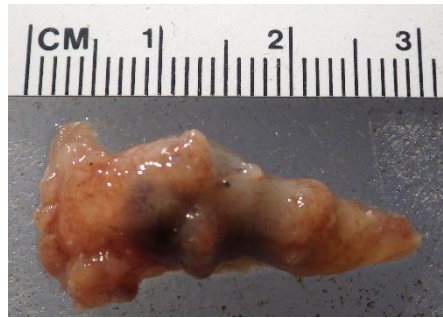
Internal shell

Mollusca: Gastropoda

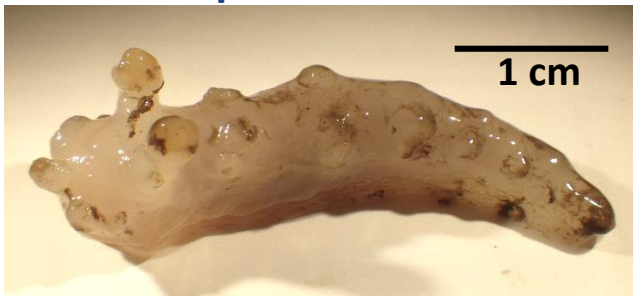
Dendronotus frondosus



Dendronotus sp.



Tritonia sp.



Coryphella sp



Mollusca: Gastropoda

Flabellina sp

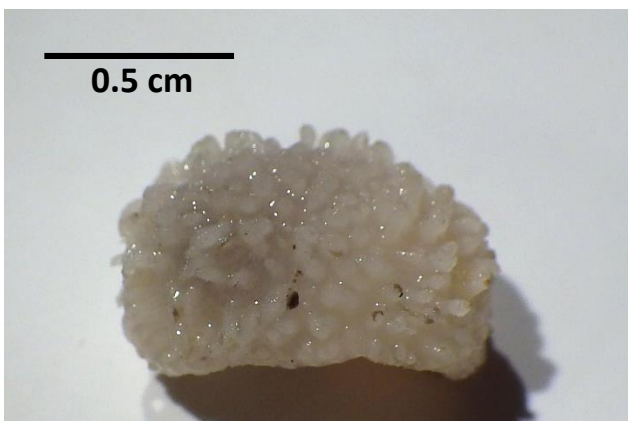


Calycidoris geuntheri



Mostly yellow in color but can also be grey

Adalaria proxima



White with papillae

Mollusca: Scaphopoda

Siphonodentalium lobatum



Chaetoderma

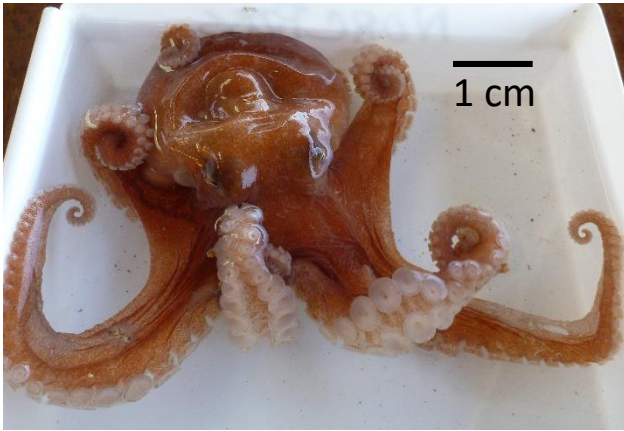


Mollusca: Aplacophora

Worm-shaped
"Furry" skin

Mollusca: Cephalopoda

Benthoctopus sibiricus



Benthoctopus sibiricus has relatively longer and thicker arms than in *Bathypolypus arcticus* and the suckers are unequal in size, especially in males, with much larger suckers on the thickest part of the arms than elsewhere.

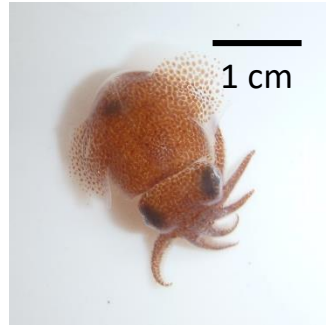
Bathypolypus arcticus



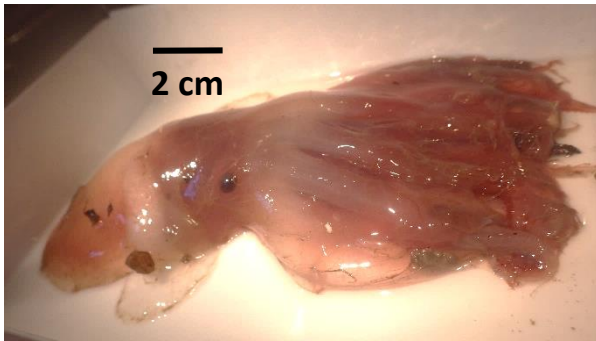
Bathypolypus arcticus suckers are relatively small and do not vary much in size along the arms

Mollusca: Cephalopoda

Rossia sp



Cirrotheuthis muelleri



Squid

