Molluscs

Around 842 species in Sweden.

Among phyla (the highest order grouping in animals), molluscs has the second highest number of described species (only arthropods has more). Seven classes are known in Sweden but two of these only occur in deep sea and are omitted here since they are very unlikely to be seen.

Most molluscs are readily identifiable by their thick shells although some groups has secondarily lost it.

All molluscs has a foot which nearly always are used for walking or to be attached to substrate and a mantle which in most species creates the shell. Even in species lacking shell, this mantle may still be a readily visible part in the front of the animal.

Nearly everything you encounter in Sweden which is visible to the naked eye is included in one of the groups discussed. Only adult individuals are guaranteed to be identifiable based on the characters listed.

All groups are found in marine water but snails and mussels are also found in freshwater and snails also on land.

The animals are ordered by taxonomy with slides noting each new class.

Lower bar generally shows class, order, family and species.

Note that the listing is partly hierarchical so both a larger group and one or more taxa within it is discussed as separate taxa. This hierarchy is noted in the upper right corner when present.

Polyplacophora: Chitons/Ledsnäckor

Polyplacophora
Chitons/Ledsnäckor

Leptochiton asellus

Tonicea rubra

Identification

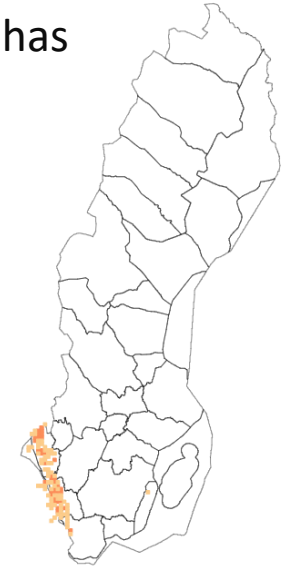
- Flattened body.
- Shell divided into eight wide plates.
- The foot sticks out around shell and is fastened to the substrate.

Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine.
- Mainly intertidal attached to rocks (but has been found at 275 m depth).



Total length	**Up to 7 cm**

Bivalvia: Bivalves/Musslor

Bivalvia
Bivalves/Musslor

Nr 3 – 13 belong to this group

Identification

- Has two more or less symmetrical, hinged shells.
- Shells close with the help of one or two abductor muscles on the inside.
- May have siphon(s) that can extend out of the shells.
- The highest part of each shell, close to the hinge is called the umbo.

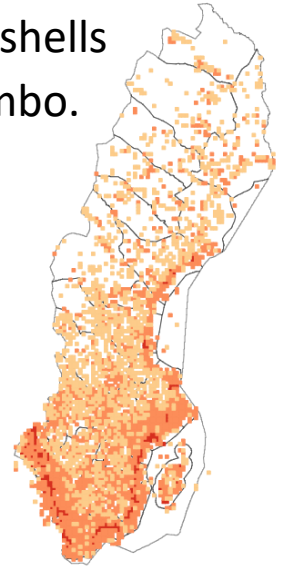
Potential misidentifications

- The rare brachiopods (other phylum) which only lives in deep water looks similar but each of their shells are symmetrical, whereas bivalve shells are +/- asymmetric especially around umbo.

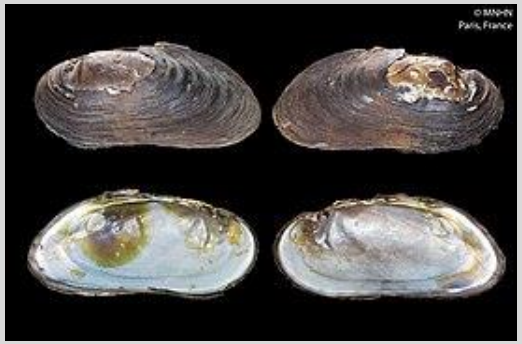
Habitat

- Freshwater, brackish or marine water.
- Intertidal to deep ocean.

Shell length	**Up to 20 cm**



Unionida
Unionida/ Unionida



Nr 4 belongs to this group

Identification

- Large to very large freshwater mussels
- Elongated shell shape
- Shell brown to green or black.

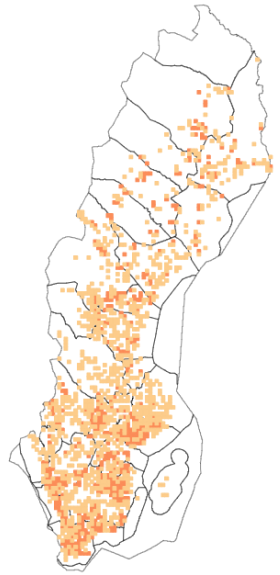
Potential misidentifications

- Some marine mussels may look +/- similar but the only other freshwater mussels in Sweden (Molluca 12-13) look very different.

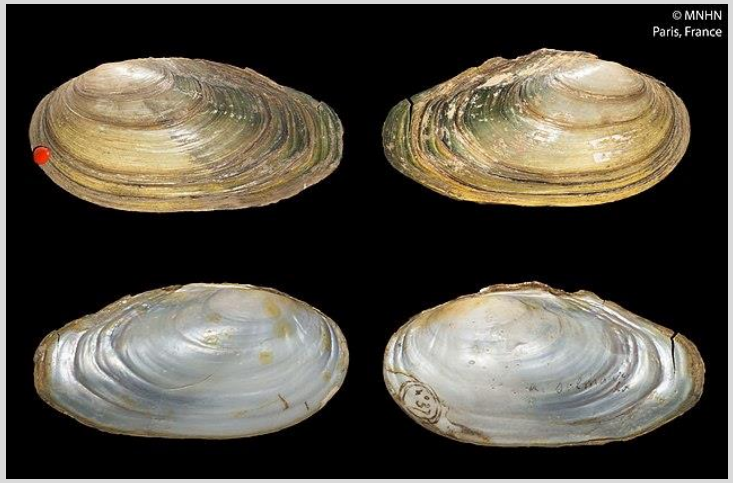
Habitat

- Freshwater.
- Both still and running water.
- Juveniles parasites of fish.
- Adult filter feeder.

Shell length	**5 – 20 cm**



Anodontini
Anodontini/Dammusslor



Identification

- Very thin and brittle shell.
- Large.
- Nearly all other mussels have “teeth” in closing between shelves (somewhat similar to how a zipper works). This group do not.

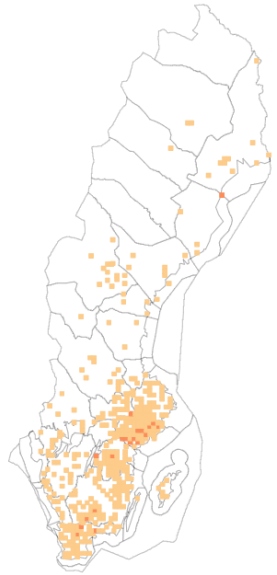
Potential misidentifications

- Live specimens are hard to tell from other Unionida but dead shells are very distinct by their extremely thin shell and by the lack of “teeth”.

Habitat

- Freshwater.
- Both still and running water.
- Juveniles parasites of fish .
- Adult filter feeder.

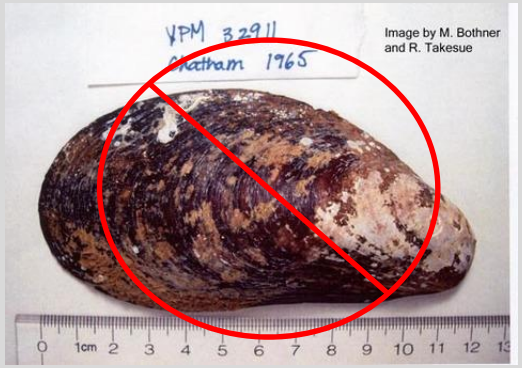
Shell length	**6 – 20 cm**



Mytilus edulis
Blue mussel/Blåmussla

LC

Mytilopsis leucophaeata



Modiolus modiolus

Identification

- Somewhat variable in form but with oblong shell with a very pointy end.
- Deep blue color with purple tones, brown mantle margin.
- Insides of shells has a pearly appearance.

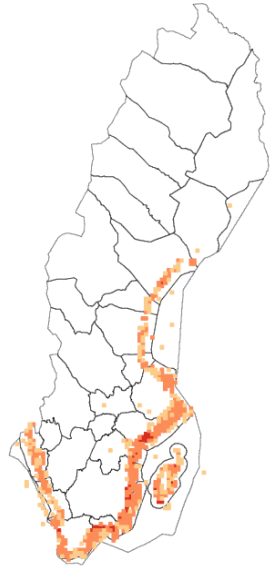
Potential misidentifications

- *Mytilopsis leucophaeata* is smalller (up to 21 mm) and narrow in the non-pointy end).
- *Modiolus modiolus* is less pointy.

Habitat

- Brackish and marine.
- Attached to substrate.
- From intertidal to around 10 m depth.
- Often seen in very high numbers.

Shell length	**Up to 8 cm**
Very rare giants	**Up to 23 cm**



Pectinidae
Scallops/Kammusslor

Identification

- Flattened shells, more or less circular.
- “Ears” (one bigger) standing out around the umbo.
- Many sensory tentacles and eyes sticking out along the shell opening.

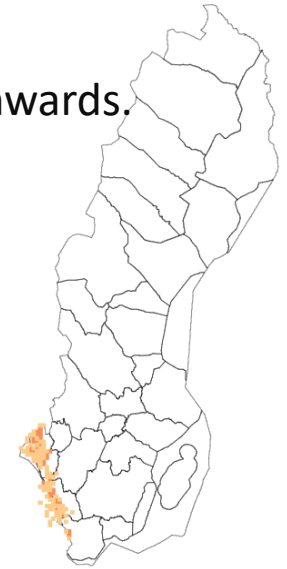
Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine in both hard and soft bottoms.
- Some attached to substrate, some not.
- Lies on bottom with concave shell downwards.
- 20 to 300 m depth.
- Some species can swim (as the only bivalves).

Shell length	**Up to 17 cm**



Magallana gigas
Pacific oyster/Japansk Jätteostron

Identification

- The two shells very different. Lower shell attached.
- Variable shape of shell depending on where it is attached.
- More or less elongated, thick and hard.
- Bottom shell usually more concave and the top one is flatter.

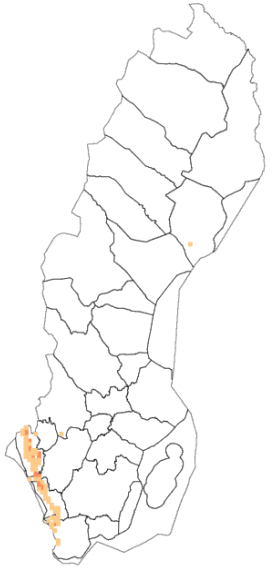
Potential misidentifications

- Other oysters in Sweden (see Mollusca nr. 9) are much rounder.

Habitat

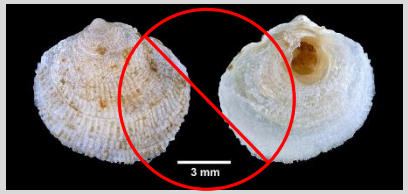
- Marine.
- Hard and soft bottoms.
- Shoreline to 40 m depth.
- Introduced; natural range Pacific Ocean.

Shell length	**Up to 12 cm**



Ostrea edulis
European flat oyster/Europeiskt ostron

LC



Identification

- The two shells very different. Lower shell attached.
- Bottom shell concave and top one flattened.
- Shell consists of thinner, scale-like structures.

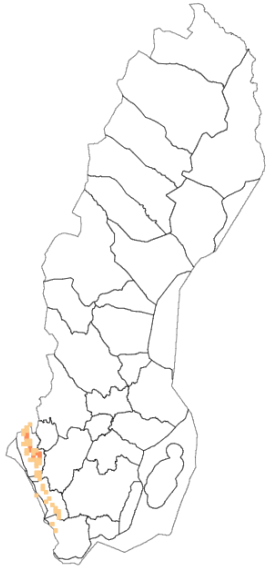
Potential misidentifications

- Pacific oysters (Mollusca nr. 8) are more elongated.
- Several species of saddle oysters (Anomiidae) are even rounder and never grow to more than 4 cm.
- Oysters are effectively always found in large beds of the same species so see if you can find some large specimens.

Habitat

- Marine in 2-10 m depth.
- Usually sandy bottoms but sometimes rocky ones.

Shell length	**Up to 15 cm**



Pharidae
Pharidae/Knivmusslor

Identification

- Very elongated shells, minimum 3.5 - 4 times longer than wide.
- Might be +/- rectangular but generally with shells in shape of a razor and 4-5 times longer than wider.

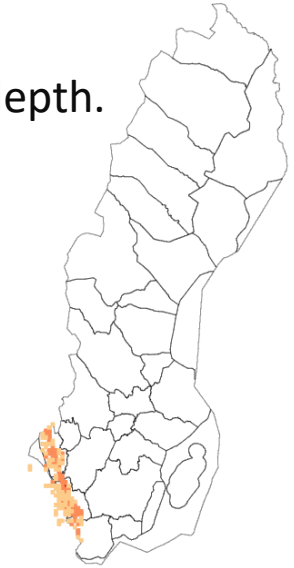
Potential misidentifications

- No similar species in Sweden.

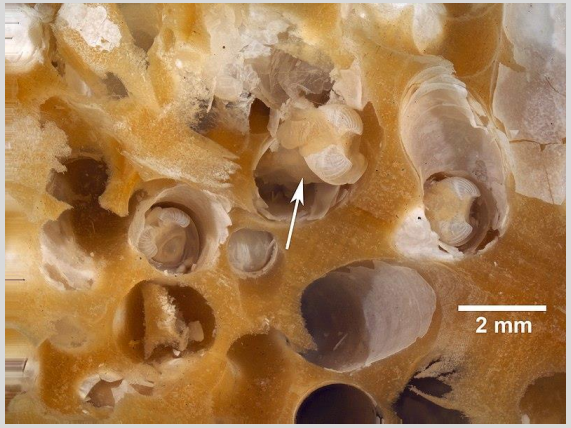
Habitat

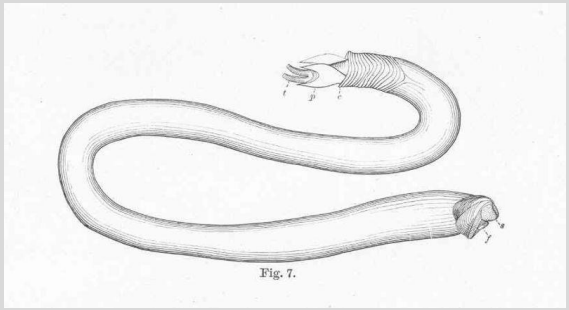
- Marine.
- Burrows vertically in soft bottom.
- Found from lower tidal zone to 100 m depth.

Shell length	**Up to 12 cm**



Teredinidae
Shipworms/Äkta skeppsmaskar





Identification

- Looks somewhat “worm-like”, because mantle is greatly prolonged.
- The shells only cover the anterior end and are used as “jaws” to burrow into wood with.
- Breaks down wood and easiest identified by the characteristic holes they make in wood e.g. flotsam washed up on shore.

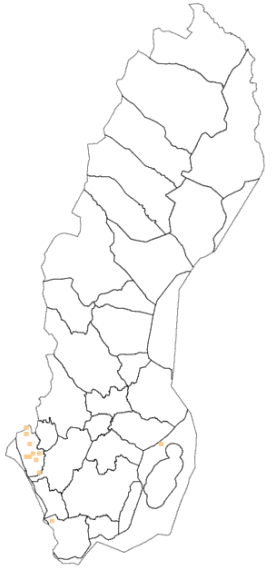
Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine.
- Burrowing in wood.
- Found from lower tidal zone down to 22 meter depth.

Total length	**Up to 60 cm**
Total Width	**Up to 2 cm**



Cardiidae
Cockles/Hjärtmusslor

Identification

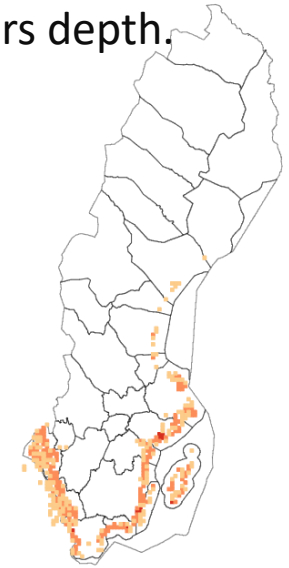
- Heart-shaped when viewed from side.
- Very pronounced radial ribs (lines on shells).
- Thick shells.

Potential misidentifications

- No similar species in Sweden.

Habitat

- Brackish and marine water.
- Buried down in sandy bottoms.
- Intertidal zone to several hundred meters depth.



Shell length	**Up to 7.5 cm**

Dreissena polymorpha
Zebra mussel/Vandrarmussla

NE

Identification

- Triangular shell not looking like other freshwater species.

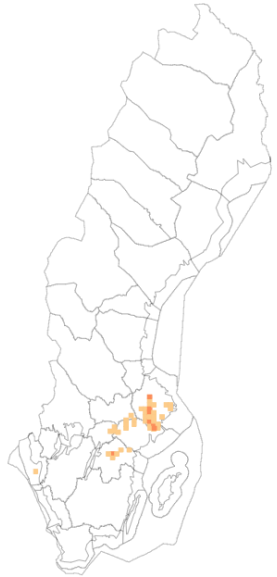
Potential misidentifications

- No freshwater species look similar.

Habitat

- Freshwater.
- Require clean water.
- Invasive and potentially spreading.

Shell length	**Up to 4 cm**



Sphaeriidae
Fingernail clams/Ärtmusslor

Identification

- Small and round.
- Generally whitish or light brown .

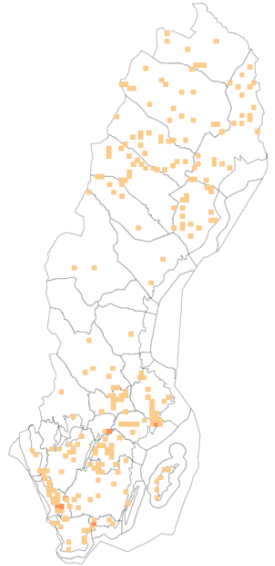
Potential misidentifications

- No freshwater species look similar.

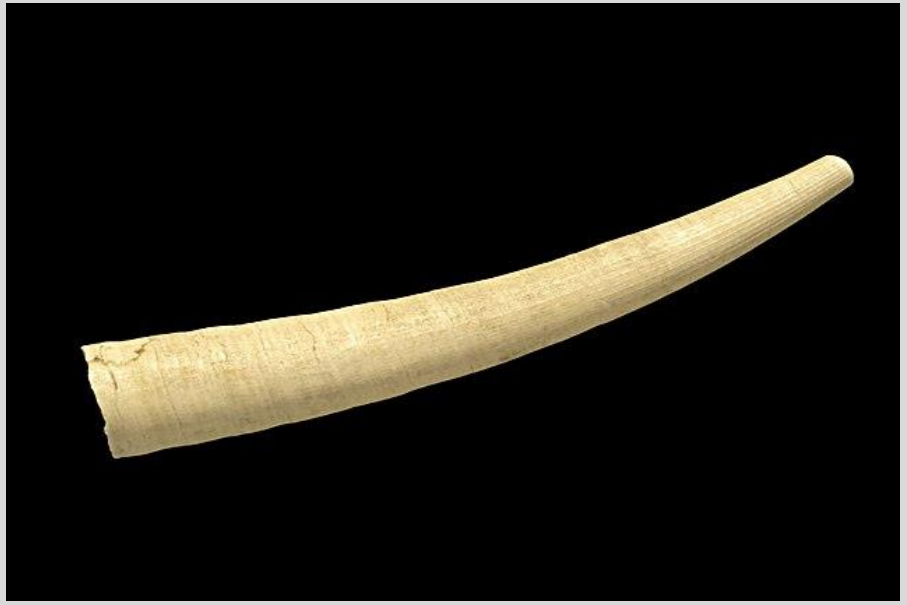
Habitat

- Freshwater.
- Different species in still or running water.

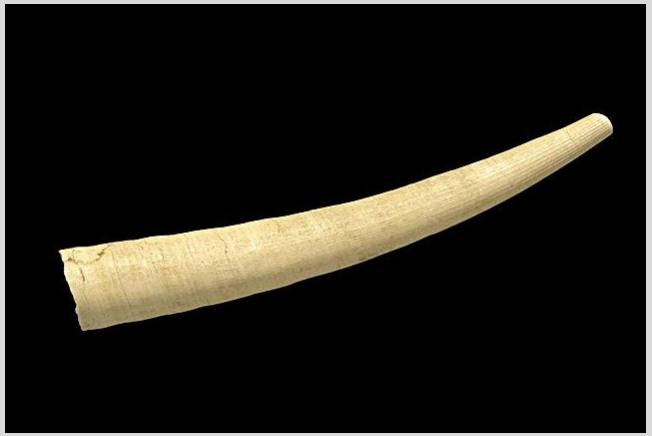
Shell length	**Up to 1 cm**



Scaphopoda: Tusk shells/Tandsnäckor



Scaphopoda
Tusk shells/Tandsnäckor



Identification

- Elongate calcareous shell shaped like a tusk, which is open in both ends.
- Head and foot extends through the large opening.
- Their shells are a rare but very distinct find on beaches.

Potential misidentifications

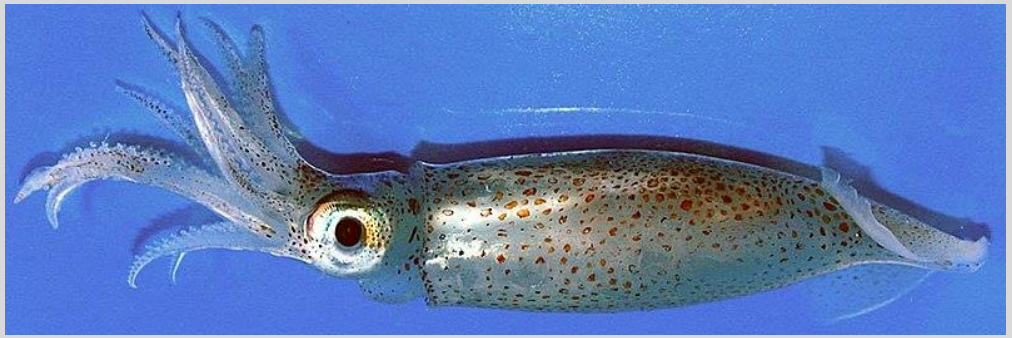
- No similar species in Sweden

Habitat

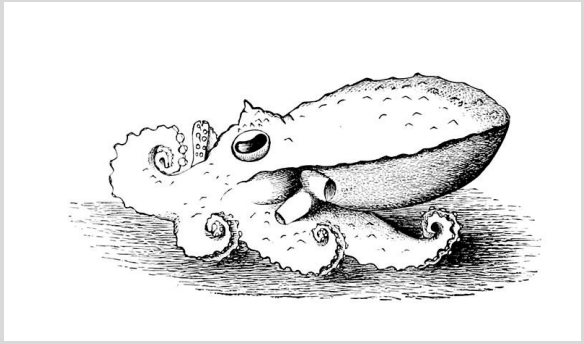
- Marine
- Soft bottoms
- 1- 3200 m depth
- Stands in sediment with wide opening (and head downwards), with narrow part barely above sediment.

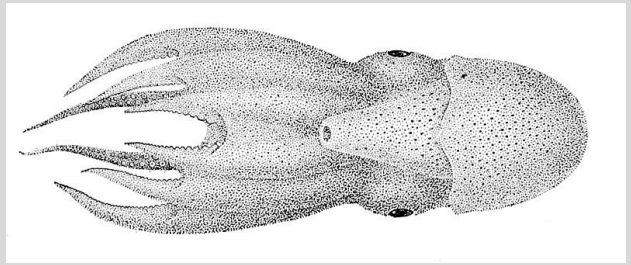
Shell length	**2 – 55 mm**

Cephalopods/Bläckfiskar



Octopoda
Octopusses/Åttaarmade bläckfiskar





Identification

- Cephalopod with eight arms of similar length.

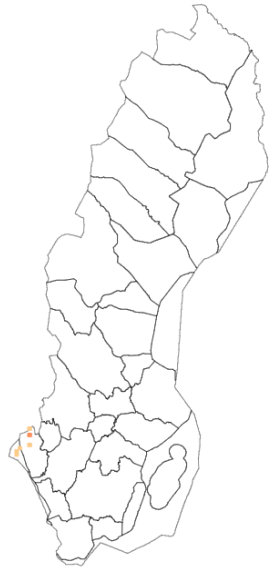
Potential misidentifications

- No similar species in Sweden.

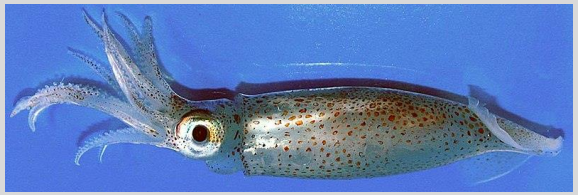
Habitat

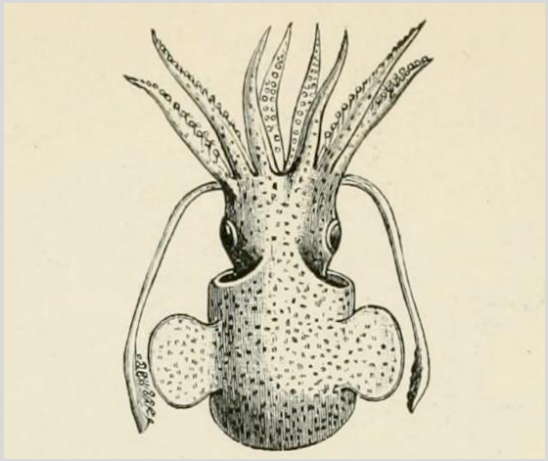
- Marine.
- Soft or hard bottoms.
- 1-500 m depth.

Total length	**Up to 50 cm** **Most <8 cm**



Decapodiformes
Squids/Tioarmade bläckfiskar





Nr 17 belongs to this group

Identification

- Cephalopod with ten arms, two of them may be much longer and often called tentacles.
- Often torpedo-like body shape.

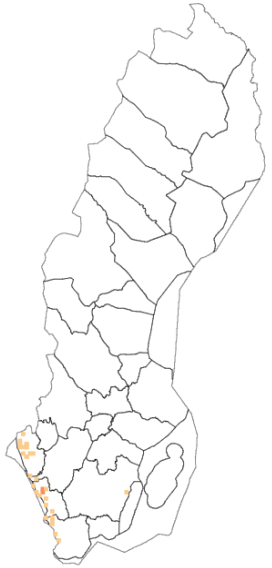
Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine.
- Intertidal to 200 m depth.

Total length	**Up to 90 cm**



Sepia officinalis
Common cuttlefish/Sidensepia

NE

Identification

- Large “fins” next to body and short arms.
- Usually striped pattern but can change color depending on surrounding and mood.
- Large internal shells that can be found washed up on shore.

Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine.
- Often seen partly buried in sandy substrates but can also stand still in water column.
- Down to 150 m.

Total length	**Up to 15 cm**

Gastropoda: Snails/Snäckor

Gastropoda
Snails/Snäckor

Nr 19 – 42 belong to this group

Identification

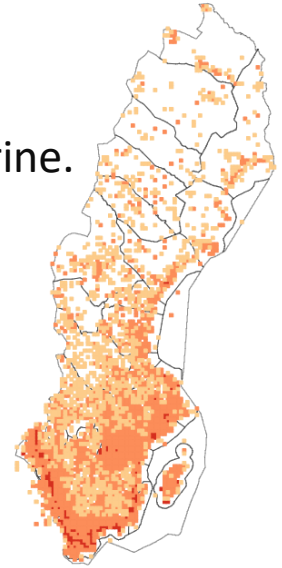
- Flat and broad foot.
- Head with tentacles and eyes.
- Most have an undivided, sometimes coiled shell.
- Multiple groups (Mullusca nr 26-30, 37-38) have lost or greatly reduced shell.
- Nearly all species are right coiled (when tip of shell points up, mouth, if facing you, is on the right).

Potential misidentifications

- No similar species in Sweden.

Habitat

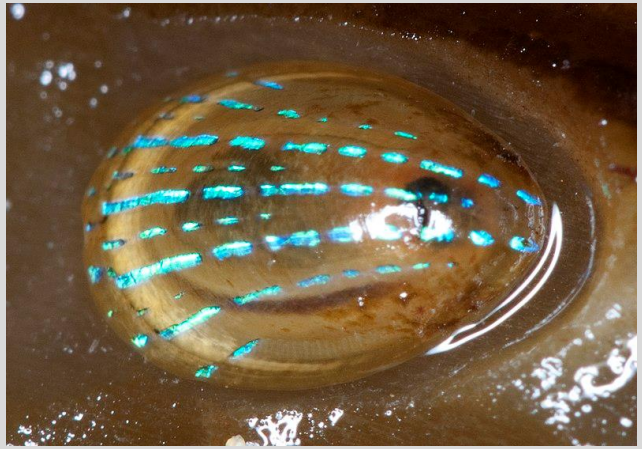
- Terrestrial, freshwater, brackish and marine.



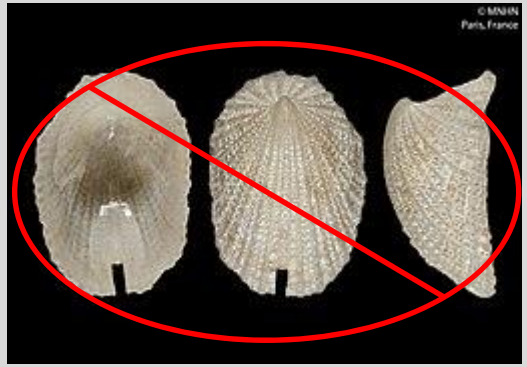
Total length	**Up to 20 cm**

Patellogastropoda
Limpets/Skålsnäckor

Testudinalia testudinalis



Patella pellucida



Identification

- Gastropods with a cup-shaped shell without coiling
- No distinct hole in shell.

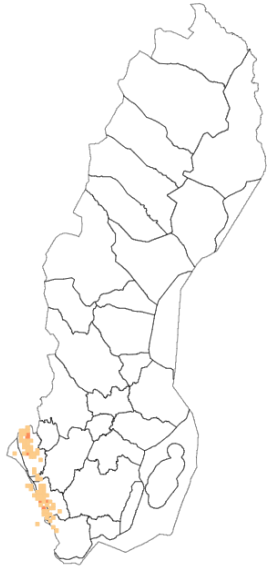
Potential misidentifications

- The uncommon keyhole limpets look similar has a hole in the shell. It may be in the top or as a deep insertion in side.
- Two freshwater species (Mollusca 30-31) look similar but are immediately identifiable by habitat.

Habitat

- Marine.
- Rocky bottoms or on kelp.
- Surface to 100 m depth.

Total length	**Up to 15 cm**



Neogastropoda
Neogastropoda/Neogastropoda

Identification

- Coiled shell and often large body.
- Has a siphon sticking out of shell (clear, visible opening for siphon at one side of shell opening).
- Shell often elongated with high spire (long pointy end).
- Often relatively long shell opening.
- Usually robust shells.

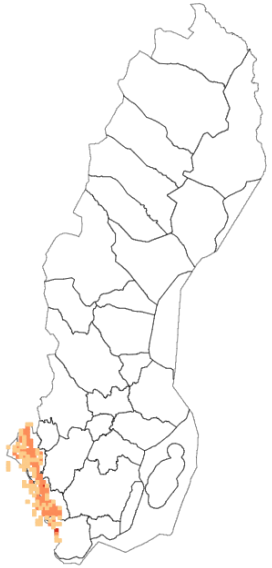
Potential misidentifications

- The distinct siphon should enable safe identification.

Habitat

- Marine.
- Hard and soft bottoms.
- Intertidal to 1200 m depth.

Total length	**Up to 11 cm**



Aporrhais pespelecani
Common pelican's foot/Pelikanfotsnäcka

LC

Identification

- Very distinct shell opening. Common name suggest that this looks like a pelican's foot.
- Peachy color with additions of violet or brown.

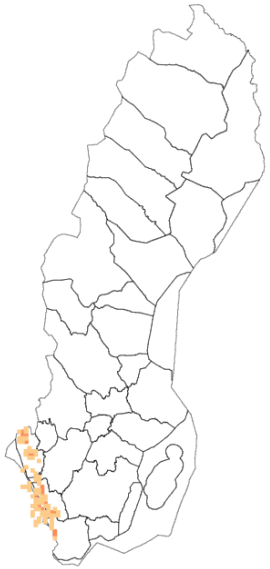
Potential misidentifications

- No similar species in Sweden.

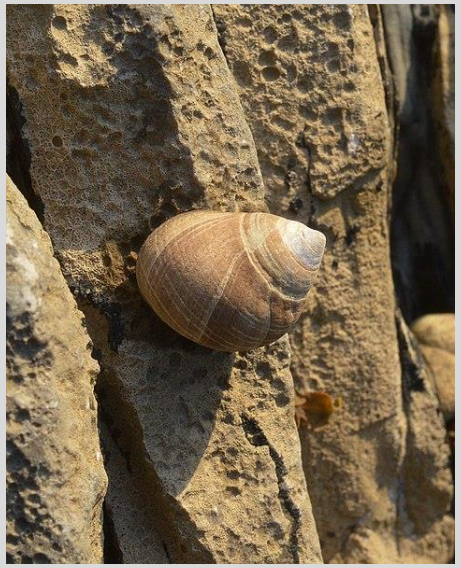
Habitat

- Marine.
- Soft bottoms.
- A few meters to 180 m depth.

Total length	**Up to 50 mm**



Littorinidae
Periwinkles/Strandsnäckor



Not typical shell structure
but notice the eye placement.

Identification

- Roundish snails, with last whorl of shell comprising more than half of total height (often more than 80%).
- Variable color, includes black, grey, brown, red, orange, white.
- One pair of threadlike antenna, eyes near the base of these (see arrow).

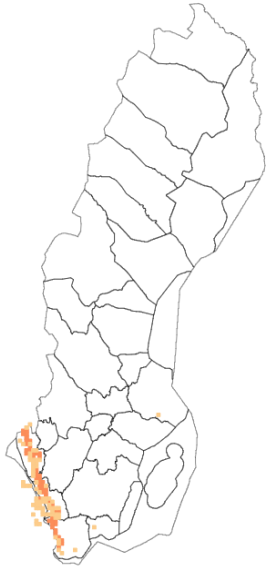
Potential misidentifications

- Shells look like the freshwater snails Pond snails (Mollusca nr. 35) and the terrestrial Amber Snails (Mollusca nr. 39) but are identifiable by habitat and antenna (see these slides).

Habitat

- Marine, either hard and soft bottoms.
- Intertidal to 60 m.

Total length	**Up to 40 mm**



Trivia arctica
Arctic cowrie/Kaffeböna

LC

Identification

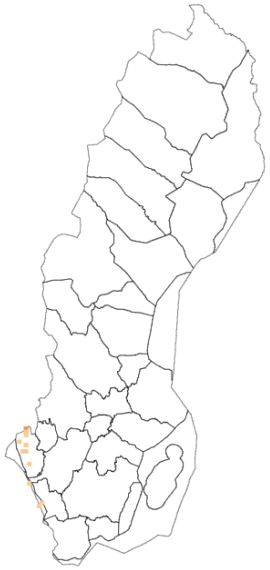
- Coffee bean-shaped thick shell.
- Shell can have variations of white, brown, red-brown or pink color.
- Around 20 thick striations.
- Side with opening is flattened.

Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine.
- Hard bottoms.
- 20-100 m depth.



Total length	**Up to 10 mm**
Total width	**Up to 8 mm**

Clione limacina
Sea angel/Änglavinge

LC

Identification

- Gastropod without shell.
- Barrel shaped body with two wing-like appendages.
- Clear head with tentacles that open up when feeding.
- See-through with orange inner organs.

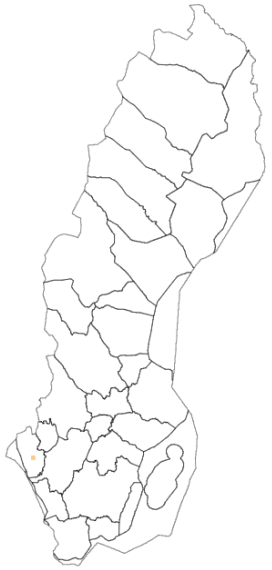
Potential misidentifications

- No similar species in Sweden.

Habitat

- Marine.
- Living in free water masses.

Total length	**Up to 40 mm**



Aplysiida
Sea hares/Sjöharesnäckor

Identification

- Gastropod with reduced shell, covered by soft tissues.
- Two pairs of tentacles on head one of which resembles hare ears may or may not be present.
- Large foot with two thin side lobes partly overing the shell.
- Usually brown/red with lighter spots.

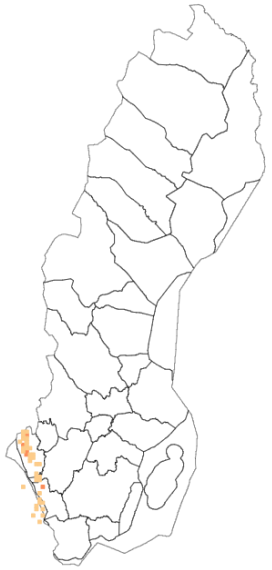
Potential misidentifications

- All other marine snails either has full or no shell. Sea hares are the only ones with a distinct shell that cannot protect entire body.

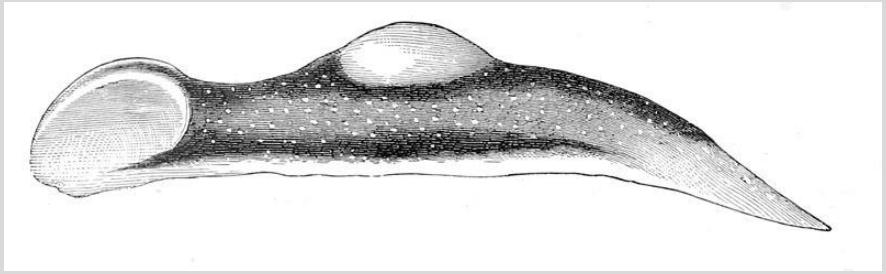
Habitat

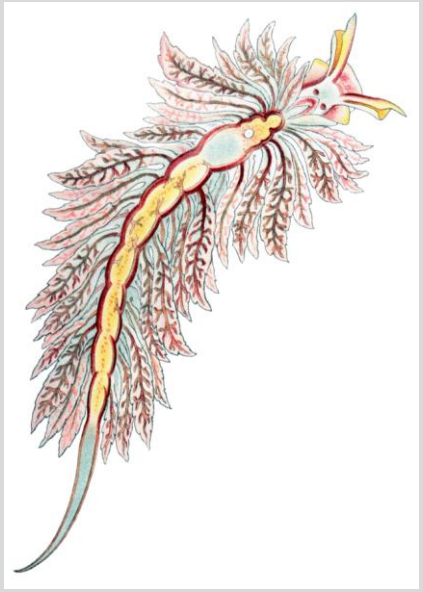
- Marine.
- Mainly among red algae or eel grass.
- Generally in depth below 25 meters.

Total length	**Up to 10 cm**



Sacoglossa
Sacoglossa/Säcktungesnäckor





Identification

- Gastropods without shells.
- Sometimes have outgrowths on dorsal (back) side. If present these are not branched and the tips distinctly different coloured than the rest of the outgrowth.
- No oral tentacles on underside next to mouth.

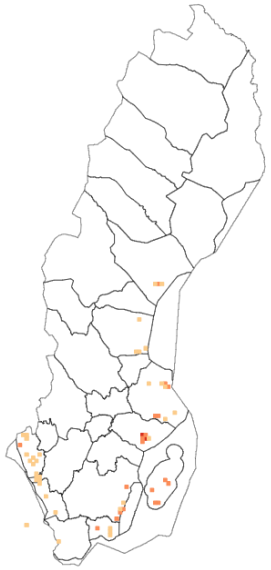
Potential misidentifications

- Hard to tell apart from nudibranchs (Mullusca nr 29-30) see entire description.

Habitat

- Brackish and marine,
- Surface to 25 m depth.

Total length	**Up to 45 mm**



Cladobranchia
Cladobranchia/Cladobranchia







Identification

- Gastropods without shells.
- Nearly always with outgrowths on back side. These may be branched and often has distinctly colored tip.
- No ring of gills on the back.
- Nearly always with two pair of tentacles, one originating from the side of mouth.
- Anal opening on anterior right side.

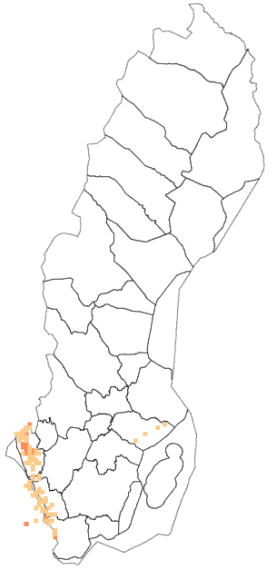
Potential misidentifications

- Likely hardest to tell apart from Saccoglossa (Mullusca nr 28) see this.

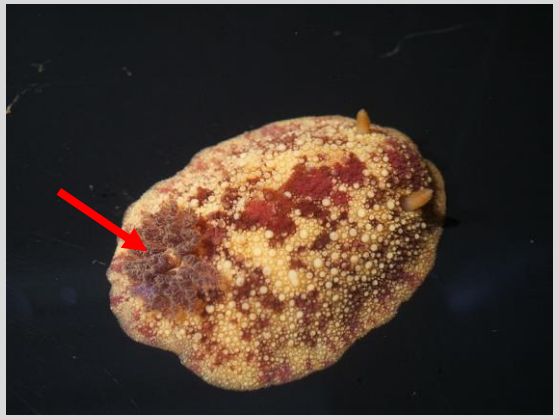
Habitat

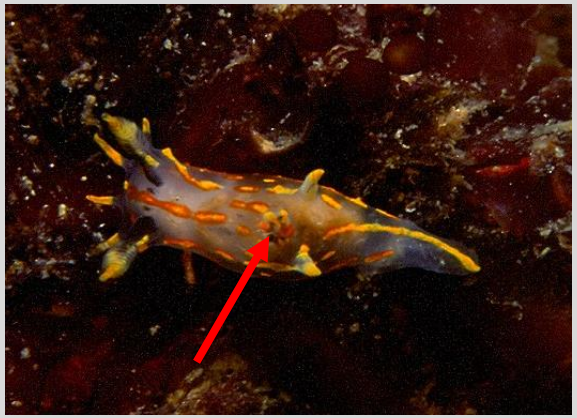
- Brackish or marine water in soft or hard bottoms. Mainly in shallow water but sometimes below 30 meters.

Total length	**Up to 120 mm**



Doridina
Doridina/Gälkransingar





Identification

- Gastropods without shells (as adults).
- Many have two head tentacles that are upward oriented.
- Two small tentacles on underside next to mouth.
- Have gills in a ring around anal opening on dorsal (back) side (see arrows).

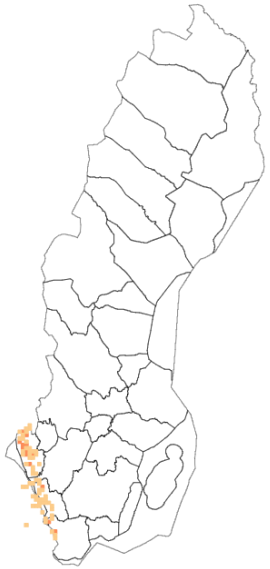
Potential misidentifications

- Likely hardest to tell apart from Cladobranchia (Mollusca nr 29) but the gills around anal opening is diagnostic.

Habitat

- Marine.
- Often in shallow water but some species seen down to 160 meters in depth.

Total length	**Up to 120 mm**



Acroloxus lacustris
Acroloxus/Dammhättesnäcka

LC

Identification

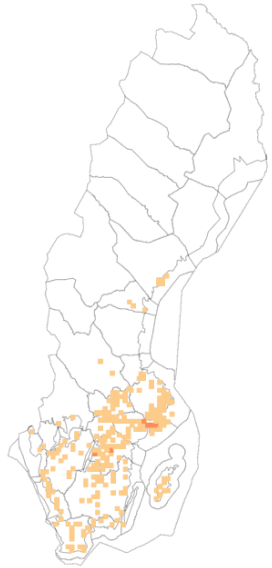
- Limpet like (i.e. one shell attached to substate without any spiral).
- Flat (height less than half length).
- Edge of shell sharp and pointing to the left.

Potential misidentifications

- Very similar to *Ancylus fluviatilis* (Mollusca nr 32) but lives in still rather than running water and with a pointy edge of shell.

Habitat

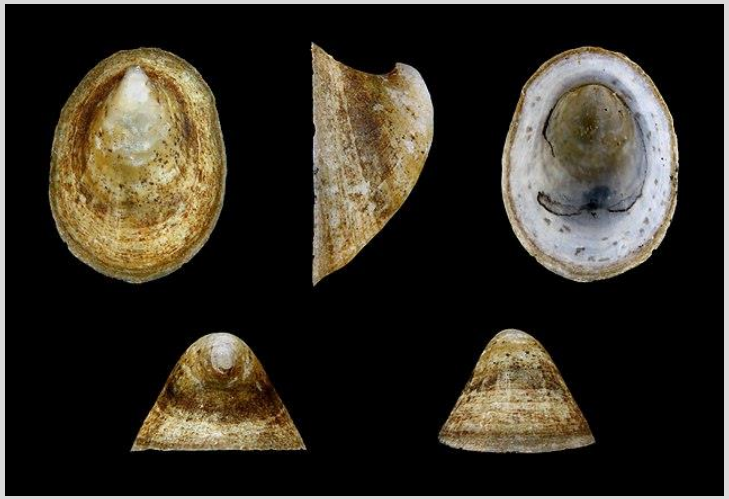
- Freshwater.
- Mainly in still water.
- Lives of algae and dead plants.



Total length	**4 – 7 mm**

Ancylus fluviatilis
Ancylus/Flodhättesnäcka

LC



Identification

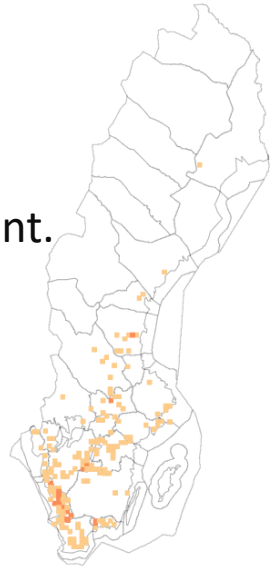
- Limpet like (i.e. one shell attached to substate without any spiral).
- Height more than half length.
- Edge of shell blunt.

Potential misidentifications

- Very similar to *Acroloxus lacustris* (Mollusca nr 31) but lives in running rather than still water and has a blunt edge of shell.

Habitat

- Freshwater.
- Only found in clean fast flowing water.
- Lives of algae which it scrapes of sediment.



Total length	**3.5 – 6 mm**

Planorbinae
Ramshorn snails/Skivsnäckor

Identification

- Subfamily is identifiable by unique shell shape among freshwater snails.
- Shell is a flat spiral.

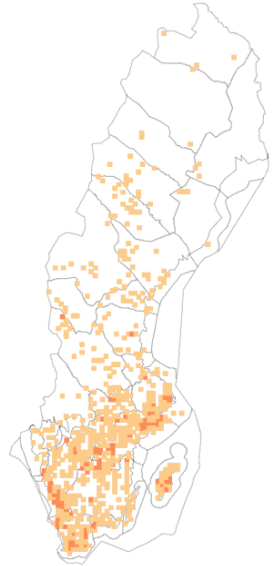
Potential misidentifications

- No similar species in Sweden.

Habitat

- Freshwater.
- Different species in different habitats.

Shell width	**2 – 40 mm**



Physidae
Bladder snails/Blåssnäckor

Identification

- Only left coiled freshwater snails (when tip of shell points up, mouth if facing you is on the left).
- Somewhat elongated shell.

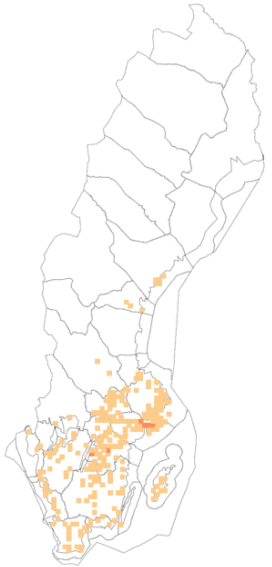
Potential misidentifications

- Should be readily identifiable based on habitat, coiling and shape.

Habitat

- Freshwater.
- Mainly in still water.
- Lives of algae and dead plants.

Shell length	**7 – 15 mm**



Lymnaeidae
Pond snails/Dammsnäckor

Lymnaea stagnalis

Radix sp.

Succineidae/Amber snail

Littorinidae/Periwinkle

Identification

- One pair of antenna with a distinctly triangular base.
- Eyes near the base of antenna.
- Last whirl very large, more than half the total length.

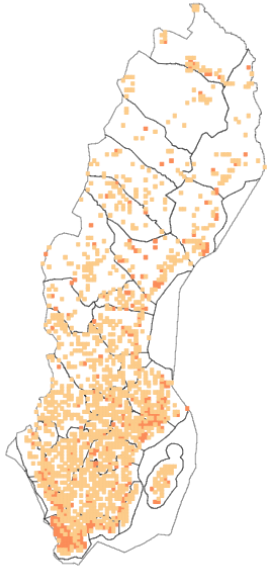
Potential misidentifications

- Shell shape similar to the marine periwinkles (Mollusca nr 24) and the terrestrial amber snails (Mollusca nr 39) but are identifiable by habitat and antenna (see these slides).

Habitat

- Freshwater.
- Mainly in still water.
- Lives of algae and dead plants.

Shell length	**5 – 55 mm**



Stylommatophora
Land snails/Landlungsnäckor

Nr 35 – 42 belong to this group

Identification

- Contain nearly all terrestrial snails. The only other strict terrestrial snails are less than 3 mm.
- Stylommatophora always have eyes at end of antenna. All other non-marine snails have eyes near the base of antenna.
- All other snails have two antenna. Nearly all Stylommatophora have four.

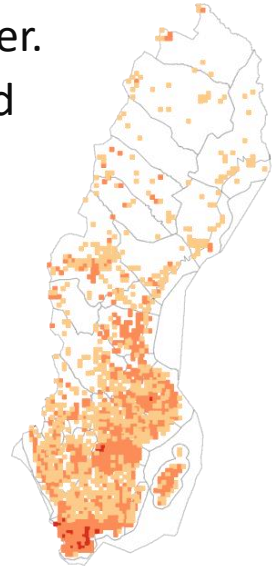
Potential misidentifications

- Some freshwater snails can potentially crawl onto land and land snails can be found in water.
- Larger specimens can safely be identified by looking at antenna and eyes.

Habitat

- Terrestrial.

Total length	**0.2 – 30 cm**



Arion sp
Roundback slugs/Skogssniglar

Arion vulgaris

Arion ater

Identification

- Slugs.
- Breathing pore (see arrow) in anterior half of mantle.
- Backend roundish.

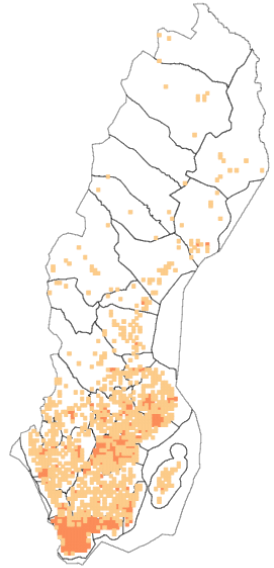
Potential misidentifications

- Limacidae/Agriolimacidae (Mollusca nr 38) look similar but their breathing poor is in posterior part of mantle and their back is pointier.

Habitat

- Terrestrial.
- Mainly eats plants.

Total length	**2 – 18 cm**



Limacidae/Agriolimacidae
Limacidae and Agriolimacidae/
Kölsniglar och Fältsniglar

Limax maximus

Deroceras reticulatum

Identification

- Slugs.
- Both these two related families have breathing pore (see arrow) in posterior half of mantle.
- Backend pointy.

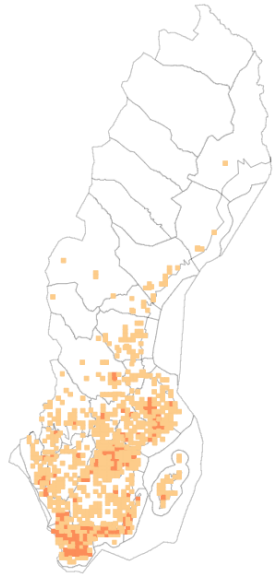
Potential misidentifications

- Roundback slugs (Mollusca nr. 37) looks similar but their breathing poor is in anterior part of body and their backend is rounder.

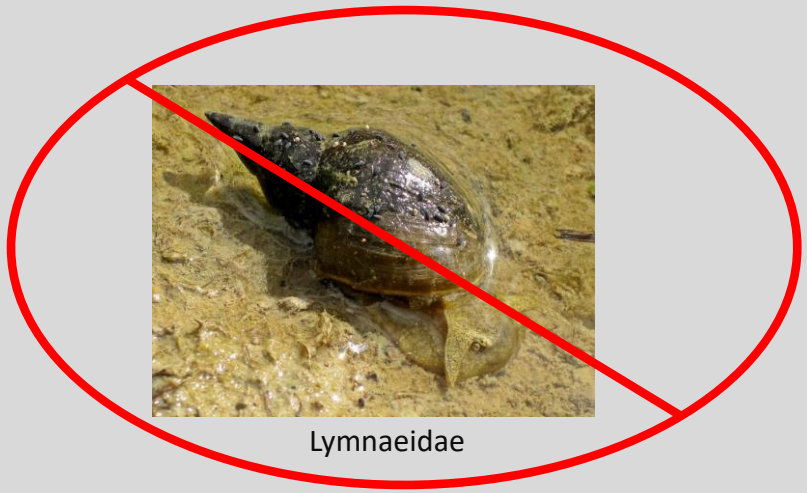
Habitat

- Terrestrial.
- Mainly eats plants.

Total length	**1.5 – 28 cm**



Succineidae
Amber Snails/Bärnstenssnäckor



Identification

- Last whirl very large, more than half the total length.
- Very elongate.

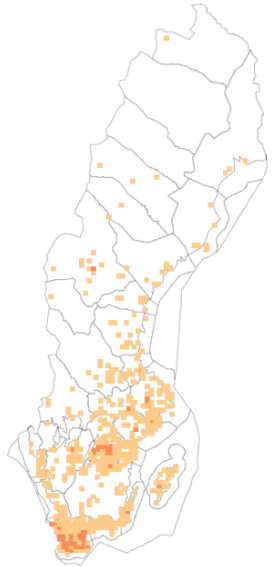
Potential misidentifications

- Shell shape similar to the marine periwinkles (Mollusca nr. 24) and the freshwater living pond snails (Mollusca nr. 35) but are identifiable by habitat and antenna (see these slides).

Habitat

- Terrestrial, but only very close to water.
- Mainly eats algae.

Shell length	**6 – 25 mm**



Clausiliidae
Door snails/Spolsnäckor

Identification

- Only left coiled land snails (when tip of shell points up, mouth if facing you is on the left).
- Very elongate.

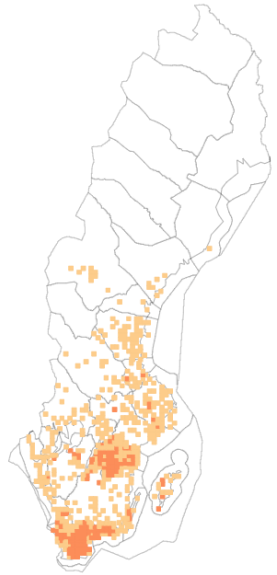
Potential misidentifications

- Should be readily identifiable based on habitat, coiling and shape.

Habitat

- Terrestrial.
- Mainly eats algae.

Total length	**5 – 50 mm**



Helicigona lapicida
Lapidary Snail/Linssnäcka

Identification

- Medium to large snail with a very distinct keel in the last whirl (red arrows).

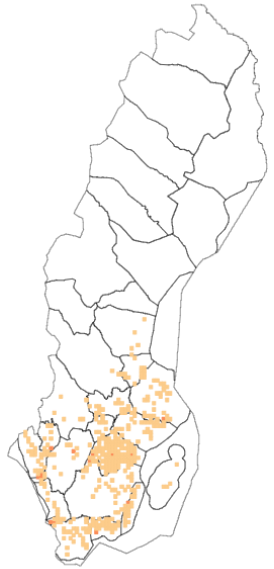
Potential misidentifications

- Should be readily identifiable based the very sharp keel.

Habitat

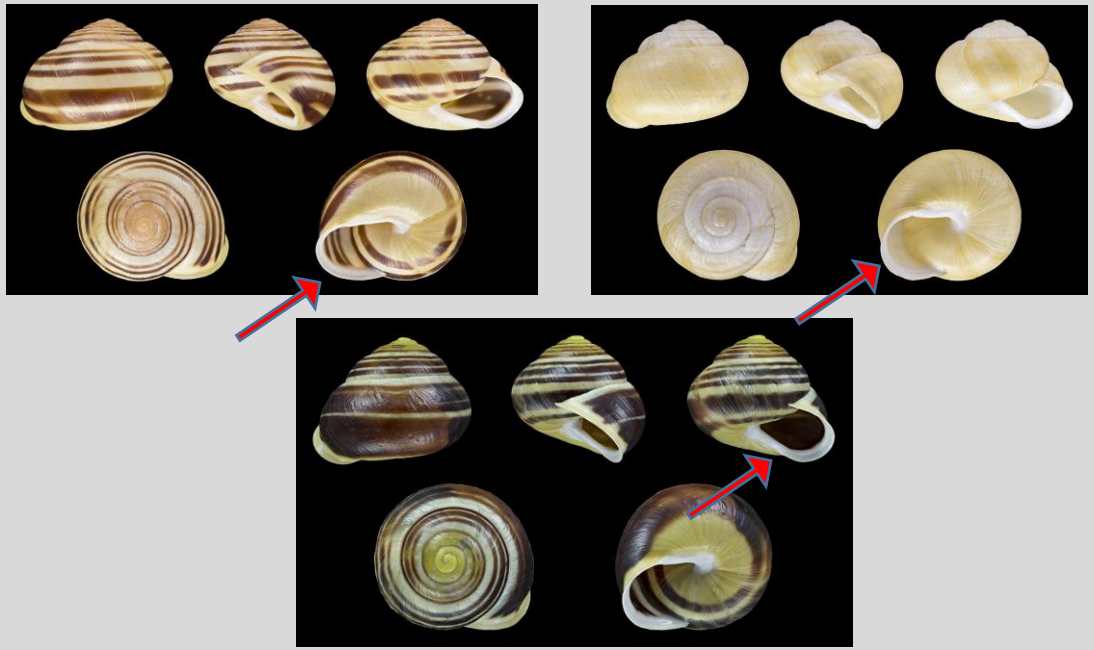
- Terrestrial.
- Feeds of algae and lichens.

Shell length	**12 – 20 mm**



Cepaea hortensis
White-lipped snail/Trädgårdssnäcka

LC



Identification

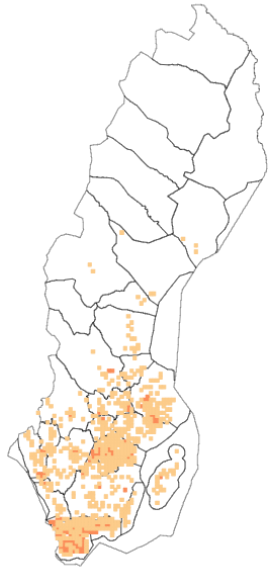
- Medium to large snail with very variable colors. Adults identifiable by white lip (extended part near mouth, see arrows).

Potential misidentifications

- Similar to grove snail (Mollusca nr 43) but identifiable by lip colour.

Habitat

- Terrestrial.
- Mainly eats plants.
- Common in garden and woodland.



Shell length	**14 – 22 mm**

Cepaea nemoralis
Grove snail/Parksnäcka

LC

Identification

- Medium to large snail with very variable colours.
- Adults identifiable by brown lip (extended part near mouth, see arrows).

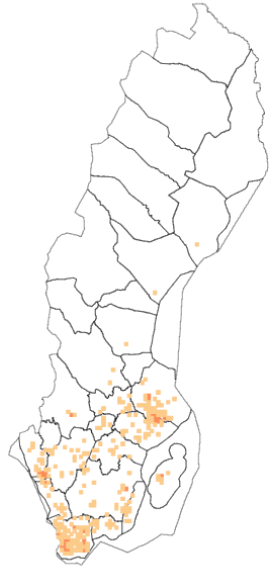
Potential misidentifications

- Similar to white lipped snail (Mollusca nr. 42) but identifiable by lip colour.

Habitat

- Terrestrial.
- Mainly eats plants.
- Common in garden and woodland.

Shell length	**18 – 25 mm**



Arianta arbustorum
Copse snail/Fläcklundsnäcka

LC

Identification

- Yellow to brown with a large number of irregular white/light spots.

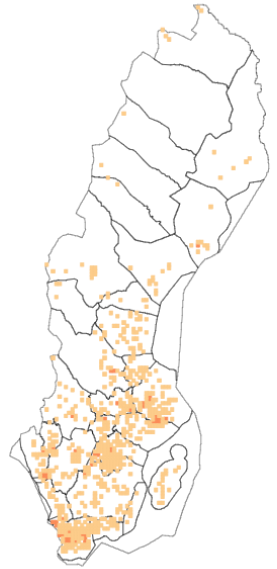
Potential misidentifications

- Shape similar to white-lipped snail and groove snail (Mollusca nr. 42-43) but the many light spots is not seen in these.

Habitat

- Terrestrial.
- Mainly eats plants.
- Common in garden and woodland.

Shell length	**14 – 28 mm**



Sources

Non-marine species selected and text written by Søren Faurby based on vital input from Ted von Proschwitz.

Marine species selected and text written by Christina Jönander and Søren Faurby.

Distributional maps for all taxa taken from artfakta.se

All pictures from wikipedia commons.