

Coral, Sponge, and Other Vulnerable Marine Ecosystem Indicator Identification Guide, NAFO Area



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Photo Credits

On the cover: Various underwater photographs taken from within the NAFO Convention Area. Coral on top (*Paragorgia arborea*); Sponge on bottom: rock wall with several sponge and coral taxa.

A. Altuna, F.J. Murillo. 2012. Diversity and distribution of sea pens (O. Pennatulacea) of the Flemish Cap, Flemish Pass and Grand Banks of Newfoundland (Northwest Atlantic Ocean). XVII Iberian Symposium on Marine Biology Studies. Donostia-San Sebastián (Spain). 11–14 septiembre de 2012. Poster: *D. gracile*.

F.J. Murillo, Instituto Español de Oceanografía (ECOVUL/ARPA project), Vigo, Spain: *G. rubiformis*, bottom; *Ombellula*, top; *B. ovifera*, top; *Pachycerianthus borealis*; *E. loricata*, *Halipteris*.

T. Patrocinio, Instituto Español de Oceanografía (ECOVUL/ARPA project), Vigo, Spain: *L. pertusa*, top.

V. Wareham, Department of Fisheries and Oceans, St. John's, Newfoundland and Labrador, Canada: *Anthomastus*, both; Nephtheidae, bottom; *S. arctica*, top; *Flabellum*, bottom right; *A. armata*, bottom; *S. pulchella*, bottom; *S. fortis*, bottom; *S. ficus*, bottom; *A. foliata*, top; *Asbestopluma*, bottom; *Chondrocladia*, both; and *Haliclona*, bottom.

Tim Siferd, Department of Fisheries and Oceans, Winnipeg, Canada: *Craniella* (bottom).

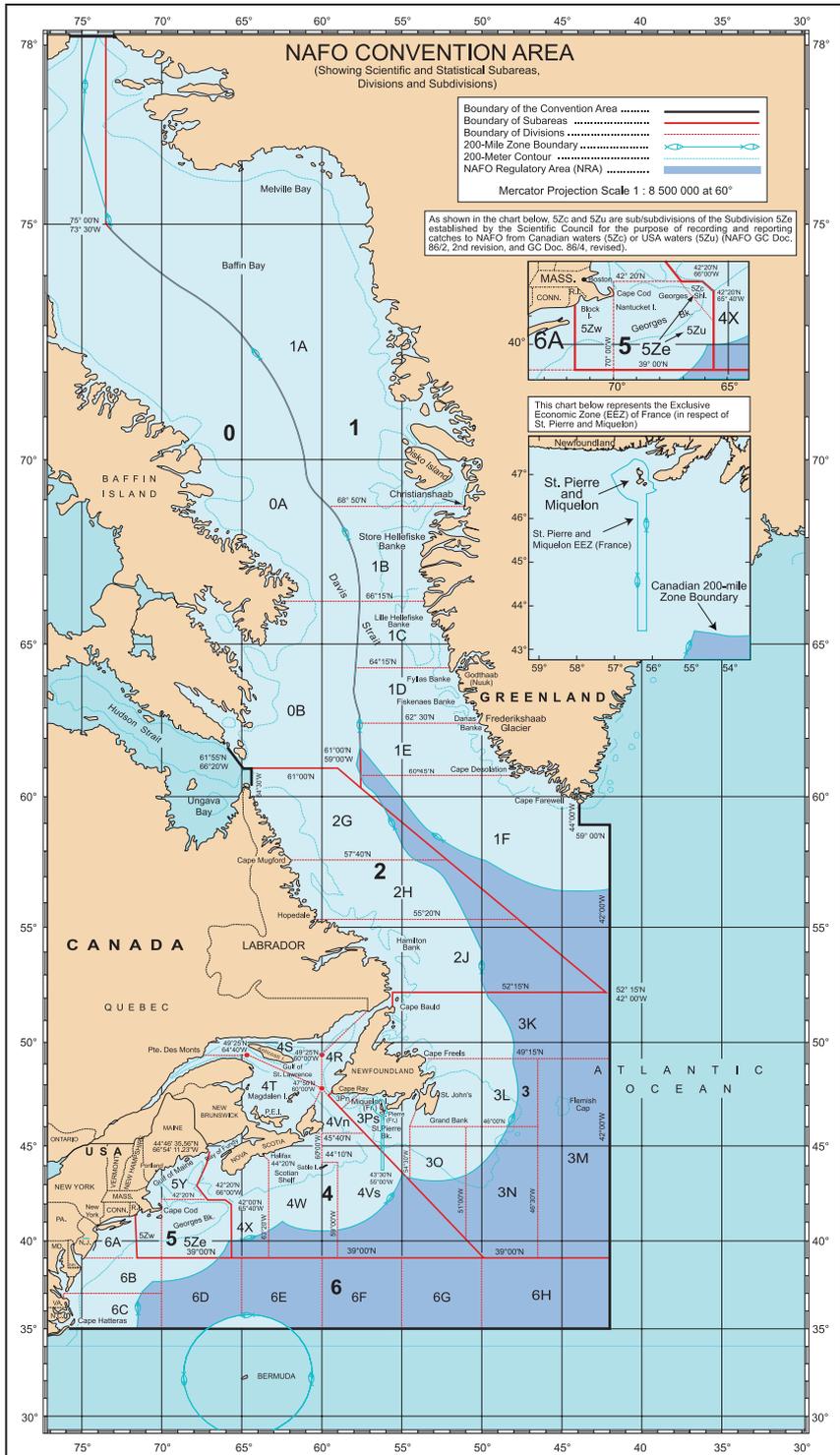
S.C. France, Department of Biology, The University of Louisiana, Lafayette, Louisiana, USA: *Stichopathes*.

M. Butler, Ecology Action Centre, Halifax, Nova Scotia, Canada: *L. pertusa*, bottom.

S.D. Fuller, Dalhousie University, Halifax, Nova Scotia, Canada: *V. pourtalesi*, top.

NEREIDA project, Department of Fisheries and Oceans Canada and Instituto Español de Oceanografía: *Forcepia*, top; *Geodia*, bottom; *H. carteri*, bottom; *S. pulchella*, top; *I. piceum*, bottom; *Dictyaulus*, both; *Asbestopluma*, top; *Cladorhiza*, both; *Rhizaxinella*, top; *S. borealis*, both; and *Sycon*, top.

All other photos courtesy of the Department of Fisheries and Oceans Canada, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada.



Preface

This guide is intended as a pictorial identification guide for coral, sponge, and other vulnerable marine ecosystem indicator taxa commonly encountered within the NAFO fishing footprint on the Grand Banks of Newfoundland. Some taxa in this guide occur more broadly within the NAFO Regulatory Area (NRA), however, taxa encountered in Divisions 5 and 6 will be under-represented in this guide. Our intent is that this guide should be useful for at-sea identifications by non-specialists. It was written for fishers, fishery observers, scientific technicians and others who may not be familiar with invertebrate identification. It is hoped that this guide will help improve data collection and our knowledge on the distribution of these vulnerable marine species. Should users find specimens that do not fit the guide, or need assistance in identification, please contact:

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Data Collection

This identification guide can be used with the NAFO Exploratory Fishery Data Collection Form. At present there are no simple species codes for corals, sponges, and other VME taxa, so use the scientific name at the top right corner of the identification page. The corals, sponges, and other VME taxa in this guide can be difficult to weigh. Small samples should be cleared of any larger organisms (e.g. sea stars). All samples must be weighed and all corals and sponges of the same type should be weighed together. Record the weight to the nearest kilogram and use <1 kg for smaller samples. The weight of very large samples (over 100 kg) can be estimated by filling a fish box with the same species and weighing that. The remaining weight can be estimated by multiplying the weight of the coral, sponge, or other VME taxa in the fish box by the estimated unweighed volume. It is also useful to note the number of specimens, if they are broken, and if associated fauna or egg casings are present.

Scientific Name Use when recording
Common Name (If any)

ITIS TSN: XXXXX • ERMS AphiaID: XXXXX

www.itis.gov • www.marbef.org/data/erms.php

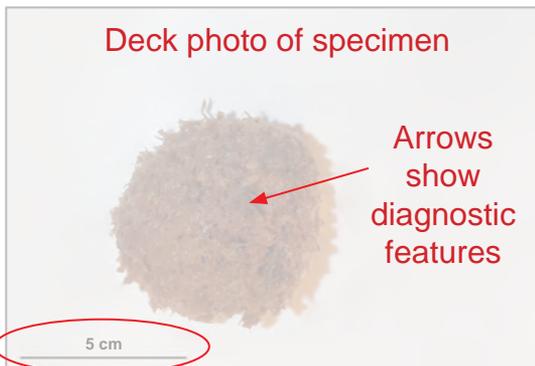


Colour range
of corals



Relative size
of sponge,
coral or other
species to
human
or human hand

Deck photo of specimen



Arrows
show
diagnostic
features

Standard 5cm scale bar



Physical Description

-

Size Information

-

Colour

-

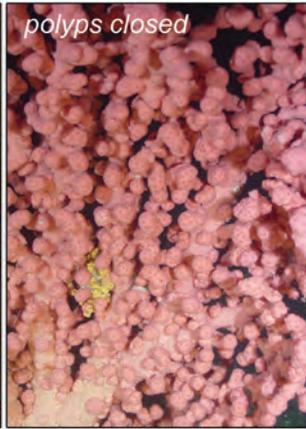
Habitat Information

-

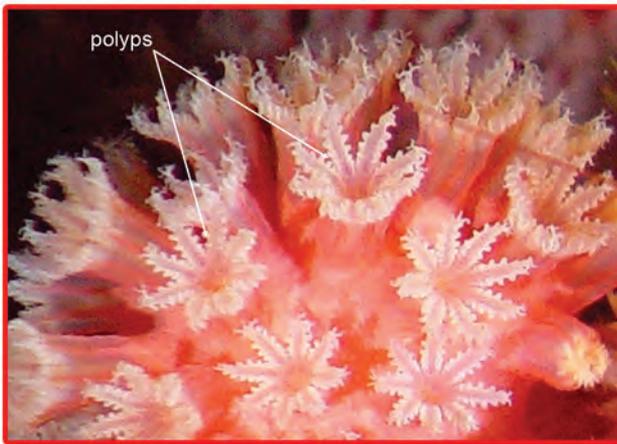
Coral Terminology- Polyps



Paragorgia arborea-
polyps open



polyps closed



polyps

Physical Description

- Tubular flower-like structures used for both feeding and reproduction
- Polyps are always closed when specimen caught
- In a variety of forms and can be clustered or solitary depending on the species or size of the individual
- An example of a coral species composed of a single polyp is *Desmophyllum dianthus* (Page 8)
- *Paragorgia arborea* is an example of a species with many hundreds of polyps per individual

Coral Morphology Categories



Soft Corals (Alcyonacea)

- Soft-bodied corals that are usually fleshy and flexible. Colonies are either erect or encrusting. Branches of arborescent species may be loose or form tight clusters



Black Corals (Antipatharia)

- Large branching or whip-like corals with firm small polyps. Skeleton, once exposed, is black or brown and may be covered in thorns



Hard Corals (Scleractinia)

- Solitary or colonial corals with a hard, calcareous skeleton. Solitary forms may resemble a cup, while colonial species may form a hard, branching network



Branching Corals (Alcyonacea)

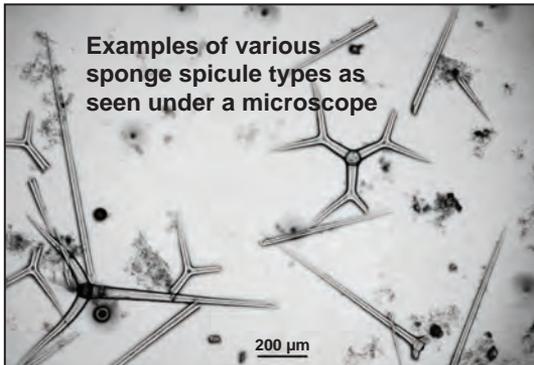
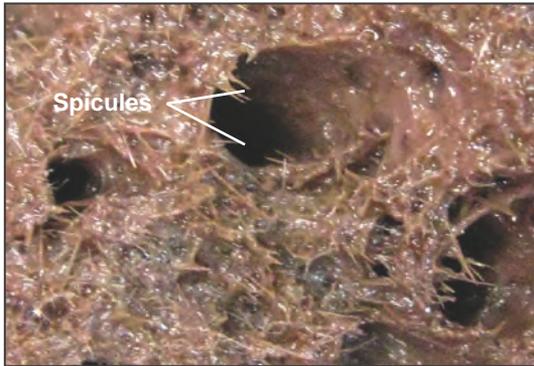
- Large, often brightly-coloured branching or whip-like corals with a firm skeleton. Branching forms may be bushy or fan-shaped



Sea Pens (Pennatulacea)

- Erect, feather-like corals with growth forms resembling a quill pen. Base of coral appears bulbous and anchors in soft substrate

Sponge Terminology



Spicules:

- Skeletal elements that give most sponges their structure
- Generally spicules are microscopic, though large spicules can be seen by the naked eye
- The characteristic shapes of these spicules are used to identify sponge species

Encrusting:

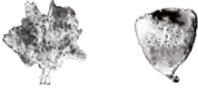
- A thin, sheet-like coating, generally on a rock or shell

Sponge Morphology Categories



Solid/Massive

- Substantial, fairly compact structure; can be round but more often irregular in shape



Leaf/Vase-Shaped

- Fleshy leaf or vase, with or without a short 'stem' anchored to hard substrate



Round with Projections

- Distinct projections are present, called 'papillae;' sometimes with visible openings at the ends



Thin-Walled, Complex

- Spicules are often arranged in intricate, mesh-like patterns visible to the naked eye; also known as 'Glass Sponges'



Stalked

- Bulk of sponge tissue is centred around a thinner 'stalk' or 'stem'

Other

- A variety of miscellaneous body types: finger-shaped, encrusting, bladder-like, excavating, etc.

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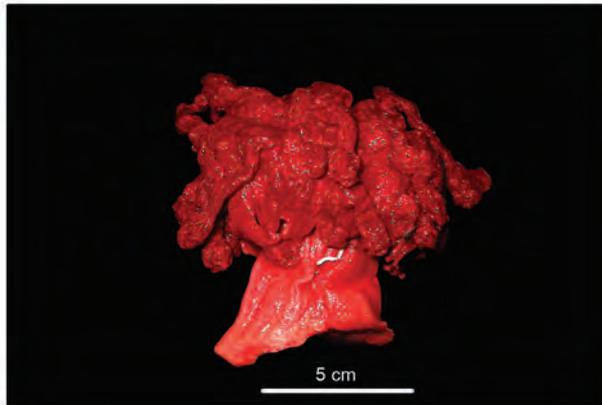
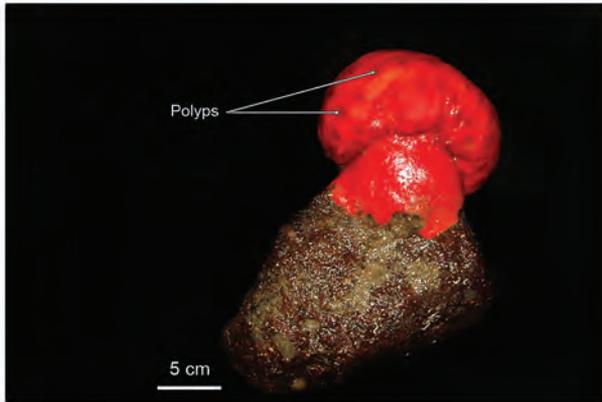
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Corals



Anthomastus

ITIS TSN: 52030 • ERMS AphiaID: 125285



Physical Description

- Soft, mushroom shaped with cap and (usually) stalk, round to flat; large tentacles (if present) attached to cap; dot-like smaller polyps scattered between larger polyps

Size Information

- Up to 10cm diameter, but typically 5cm or less

Colour

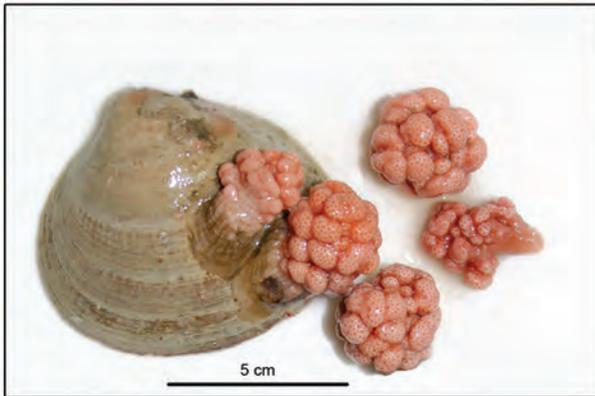
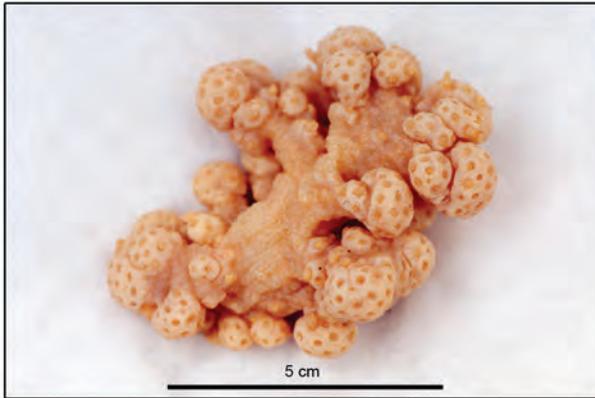
- Light to dark red

Habitat Information

- On hard bottom, attached to hard substrate; free on soft bottom; 170–1400m

Gersemia rubiformis

ITIS TSN 52037 • ERMS AphiaID:156103



Physical Description

- Soft but firm, branching, cauliflower-like to round, with polyps in tight clusters

Size Information

- Up to 10cm, but typically less than 5cm

Colour

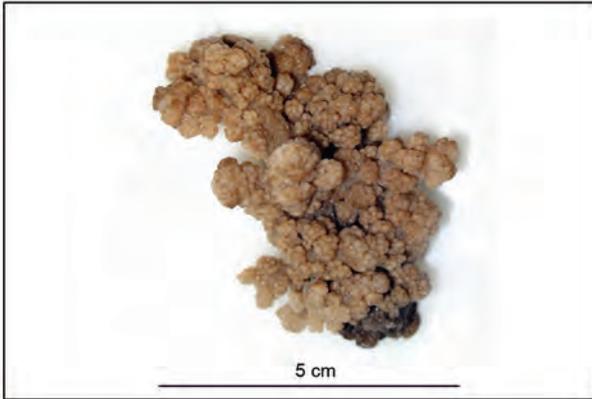
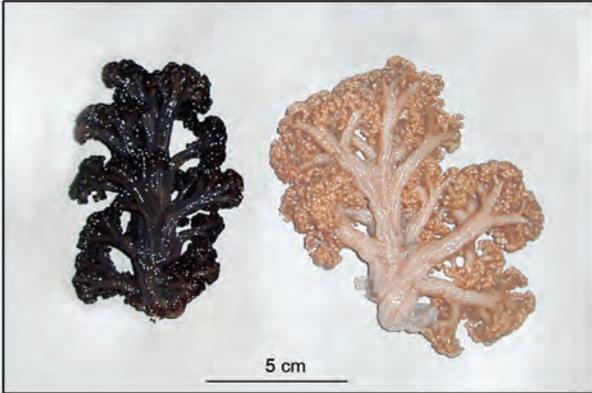
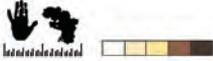
- Tan to pink

Habitat Information

- Attached to hard substrate on hard and soft bottom; 35–700m (can be common on fishing banks)

Nephtheidae

ITIS TSN: 52034 • ERMS AphiaID: 146762



Physical Description

- Soft or firmer, branching with polyps variable but may resemble clusters of grapes, stem rough or smooth to touch

Size Information

- Typically less than 25cm

Colour

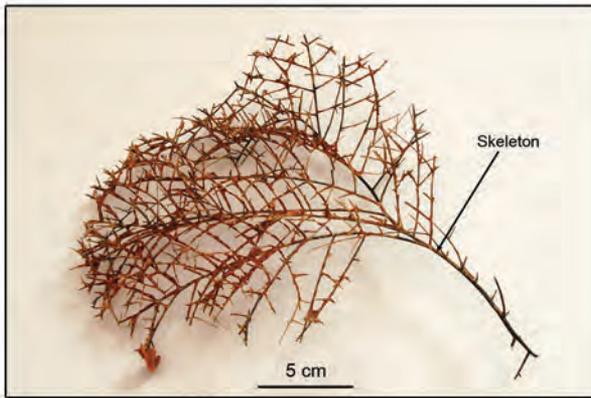
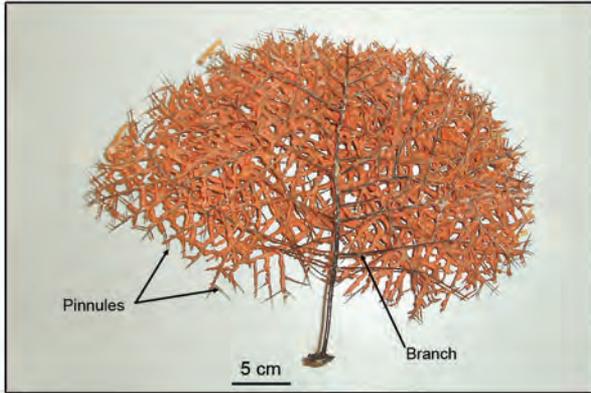
- White to tan to dark

Habitat Information

- Attached to hard substrate on hard and soft bottom; 200–1500m

Stauropathes arctica

ITIS TSN (Genus): 719057 • ERMS AphiaID: 291111



Physical Description

- Bush-like, densely branched on one plane causing flat appearance; two rows of small, unbranched pinnules (needles) on branches, often crossed and fusing with other branches/pinnules

Size Information

- Up to 80cm

Colour

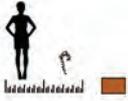
- Polyps orange, skeleton black

Habitat Information

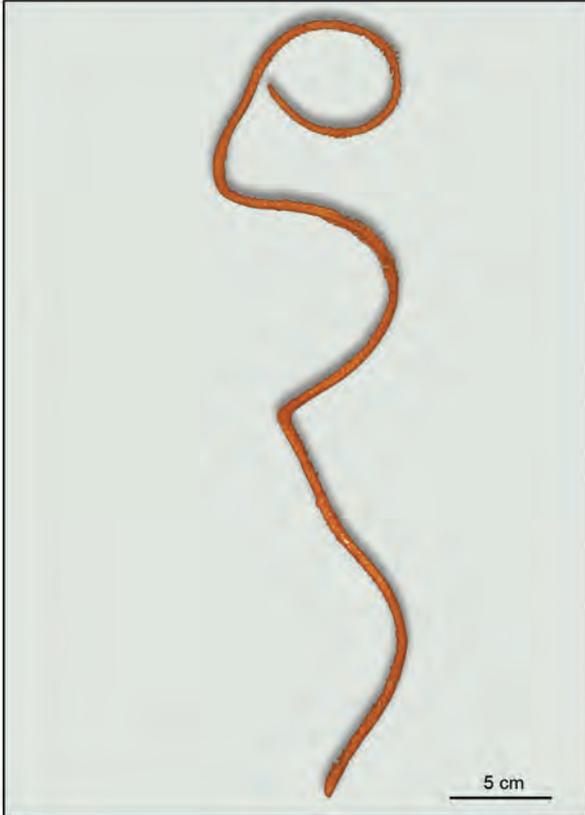
- Hard bottom; 700–1850m

Stichopathes

ITIS TSN: 51963 • ERMS AphiaID: 103308



Black Corals (Antipatharia)



Physical Description

- Elongate and whip-like; spiralled

Size Information

- Up to 80cm

Colour

- Polyps orange which can be peeled to reveal a black skeleton

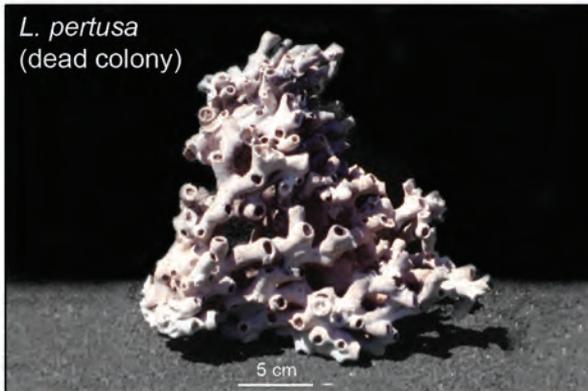
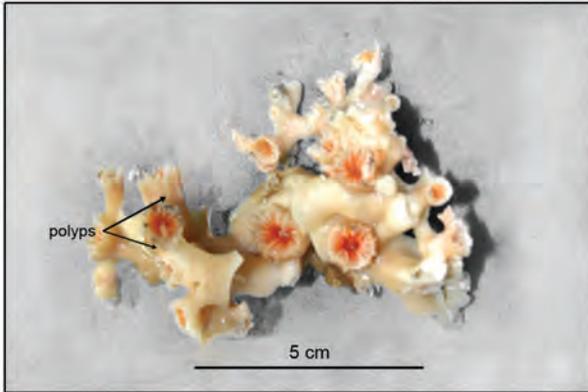
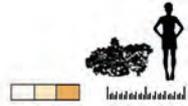
Habitat Information

- Hard bottom; 700–1300m

Lophelia pertusa

Spider Hazards

ITIS TSN: 53706 • ERMS AphiaID: 135161



Physical Description

- Hard, branching network crossed and fused
- Reef-building

Size Information

- Individual polyps several cm; colony up to 200cm; typically fragments collected

Colour

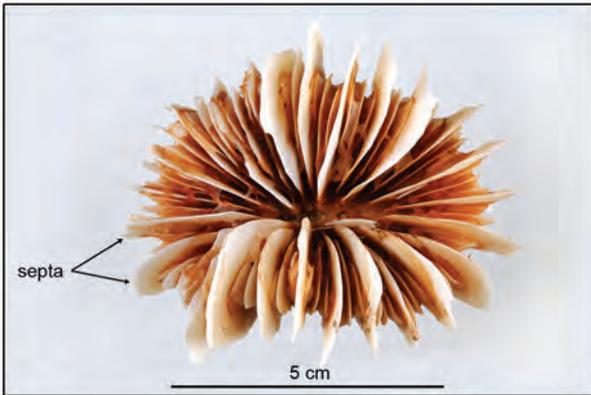
- Tissue transparent white to orange-pink; skeleton white

Habitat Information

- Hard bottom; 200–1000m

Desmophyllum dianthus

ITIS TSN: 572071 • ERMS AphiaID: 135159



Physical Description

- Hard, solitary, stalked, will show sign of breakage where removed from substrate; many blade-like plates (septa) at the top; relatively robust

Size Information

- Up to 10cm

Colour

- Polyps transparent pink, yellow, or orange; skeleton white

Habitat Information

- Hard bottom, attached; 700–1400m

Flabellum

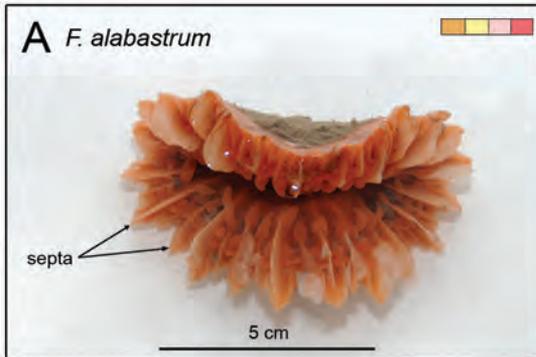
Flabellum alabastrum (A),

F. angulare (B),

F. macandrewi (C)

ITIS TSN: 572140 (A), 572141 (B), 53731 (C)

ERMS AphiaID: 135194 (A), 135195 (B), 135197 (C)



Physical Description

- Hard, solitary, conical or cup-like; no stalk, with blade-like septa; skeletons are white
- A – Cup “pinched” in centre; tissue colourless to yellow, orange, pink or red
- B – Oval-shaped cup; tissue colourless to white to yellow
- C – Cup is fragmented; tissue colourless to pink, yellow or orange

Size Information

- A – Up to 8cm
- B – Up to 8cm
- C – Up to 3cm

Habitat Information

- A – Soft bottom; 200–2000m
- B – Soft bottom, 2200–3200m
- C – Soft bottom; 180–650m

Acanella arbuscula

ITIS TSN: 52338 • ERMS AphiaID: 125371



Physical Description

- Bush-like; skeleton stiff but delicate, segmented; branching base (sometimes missing)

Size Information

- Less than 30cm

Colour

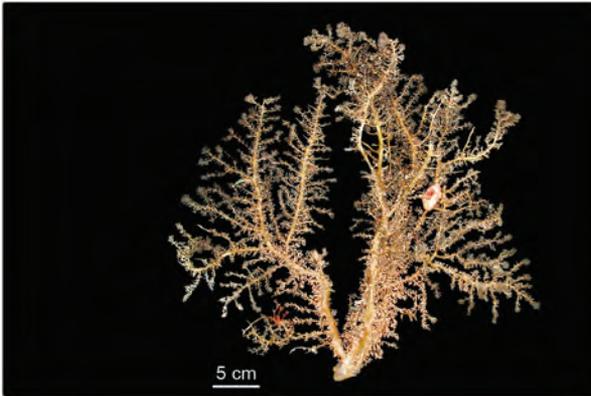
- Polyps pale to dark orange; skeleton white with darker bands

Habitat Information

- Soft bottom; 150–2300m

Acanthogorgia armata

ITIS TSN: 52119 • ERMS AphiaID: 125348



Branching Corals (Alcyonacea)

Physical Description

- Bushy, slightly flattened, rough to the touch; skeleton flexible

Size Information

- Less than 20cm; occasionally up to 50cm

Colour:

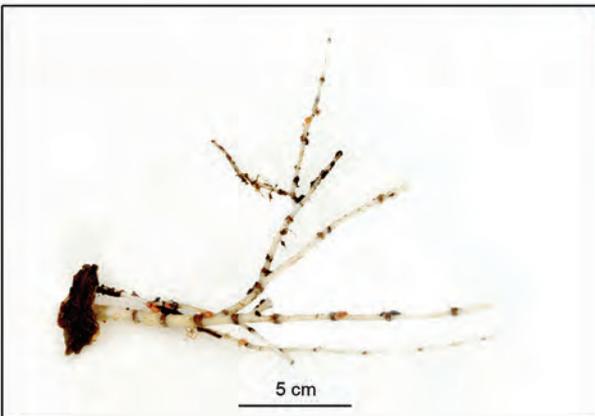
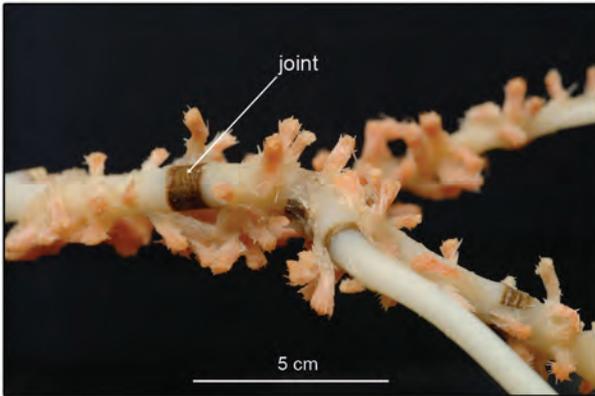
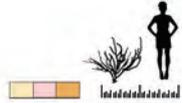
- Polyps yellow (rarely blue), grey when dead; skeleton brown to grey

Habitat Information

- Attached to hard substrate on hard and soft bottom, 170–1400m

Keratoisis Bamboo Coral

ITIS TSN: 52330 • ERMS AphiaID: 125306



Physical Description

- Tree-like; hard and rigid; long, slender, sparse branches

Size Information

- Up to 150cm

Colour

- Polyps pale pink to orange (may phosphoresce); skeleton white with golden-brown joints

Habitat Information

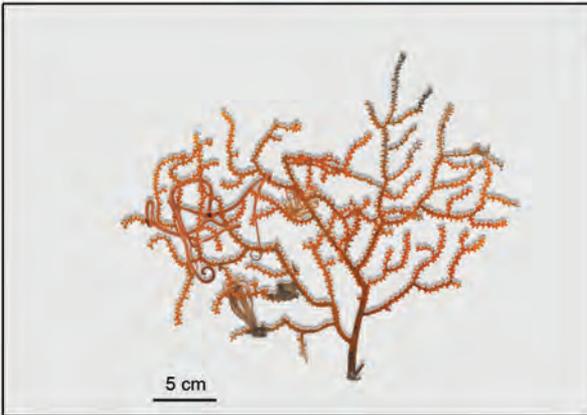
- Attached to hard substrate on hard and soft bottom; 200–2000m

Paramuricea

ITIS TSN: 52124 • ERMS AphiaID: 125311



Antennularia



Physical Description

- Fan-like, curving branches; skeleton flexible, rough to touch

Size Information

- Up to 80cm

Colour

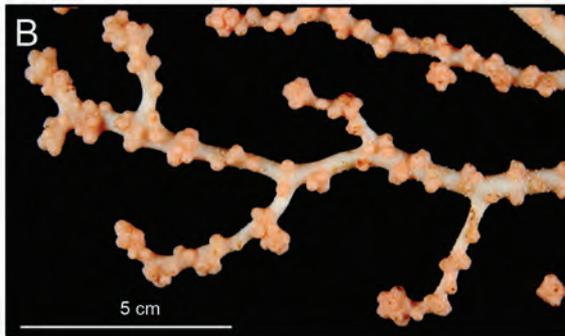
- Polyps yellow to orange; grey to black when dead; skeleton green to brown

Habitat Information

- Hard bottom; 150–2200m

Paragorgia arborea (A), P. johnsoni (B) Bubblegum Coral

ITIS TSN: 52108 (A), 52107 (B) (Genus), ERMS AphiaID: 125418 (A), 125419 (B)



Physical Description

- A – Branches thicker with tips greater than 5mm; association with basket stars common (pictured)
- B – Branches thinner with tips 2–4mm

Size Information

- A – up to 600cm, typically broken pieces collected
- B – up to 100cm, typically broken pieces collected

Colour

- A – polyps white to tan, orange, pink and red, dark purple
- B – polyps white to tan, orange, pink and red

Habitat Information

- A – Hard bottom, 200–1300m
- B – Hard bottom, 800–4100m



Primnoa resedaeformis

Sea-corn Coral

ITIS TSN: 52307 • ERMS AphiaID: 125411



Physical Description

- Bush or tree-like; skeleton stiff yet flexible, hard and rigid at the base; conspicuous scale-like polyps

Size Information

- Up to 120cm

Colour

- Polyps pink to orange, skeleton brown

Habitat Information

- Hard bottom, 150–1150m

Anthothela grandiflora

ITIS TSN: 52095 • ERMS AphiaID: 125414



Physical Description

- Soft, encrusting or mat-like, with long polyps in loose clusters
- Sometimes upright, irregular branches develop from mat

Size Information

- Encrusting

Colour

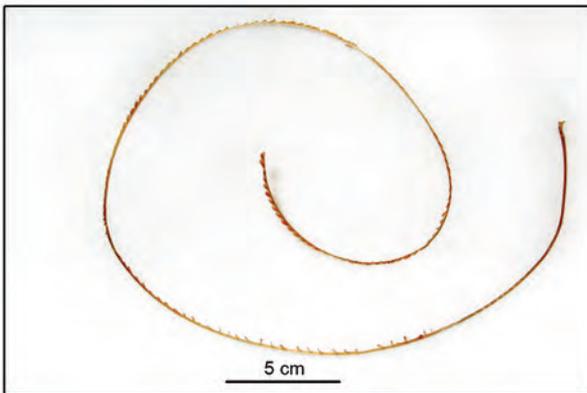
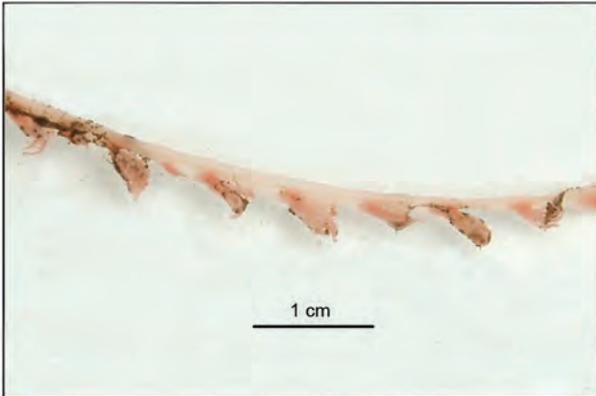
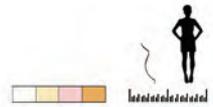
- Coral pink in colour

Habitat Information

- Grows on corals, shells, and rock

Radicipes gracilis

ITIS TSN (Genus): 719055 • ERMS AphiaID: 125357



Physical Description

- Slender, unbranched, whip-like, with slight spiral; skeleton flexible, stiff, with branching, root-like base; polyps located on one side of frond
- Lacks bulbous root

Size Information

- Up to 90cm, but typically less

Colour

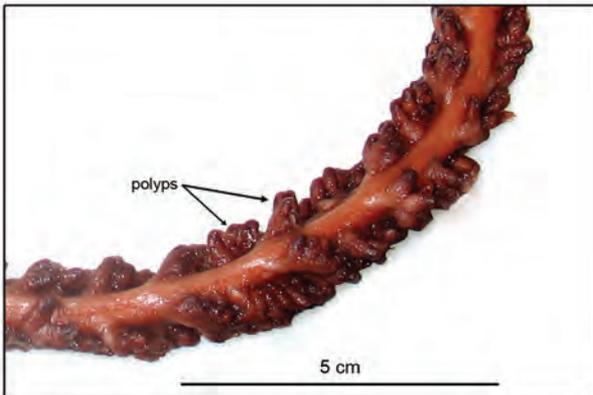
- White to pink and orange, may be irridescent

Habitat Information

- Soft bottom; 400–1500m

Anthoptilum grandiflorum

ITIS TSN: 52365 • ERMS AphiaID: 128504



Physical Description

- Elongate and whip-like, often “?” shaped; polyps at an angle to the main stem in two rows running its length, one side of the stem relatively bare of polyps; smooth to touch
- Bulbous root

Size Information

- Up to 100cm

Colour

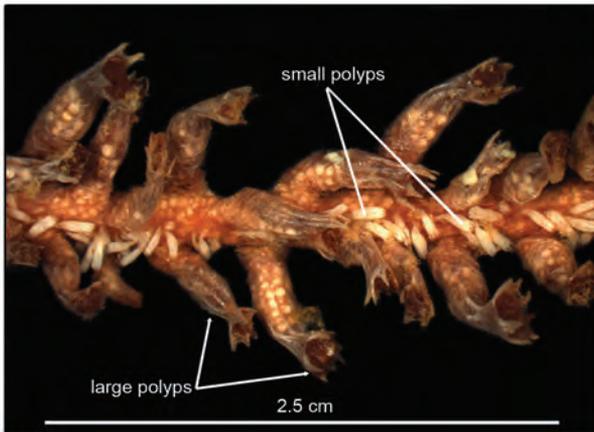
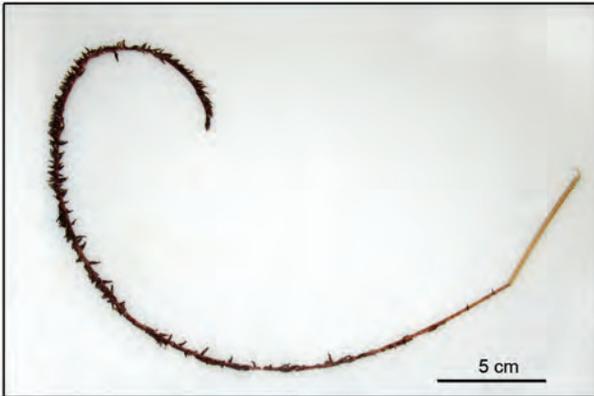
- Polyps brown to red, stalk brown to red or yellow

Habitat Information

- Soft bottom; 150–2400m

Funiculina quadrangularis

ITIS TSN: 719232 • ERMS AphiaID: 128506



Physical Description

- Elongate and whip-like, thin, tip often curled or coiled, two rows of large polyps; smaller polyps conspicuous and scattered sparsely on stalk
- Bulbous root

Size Information

- Up to 210cm

Colour

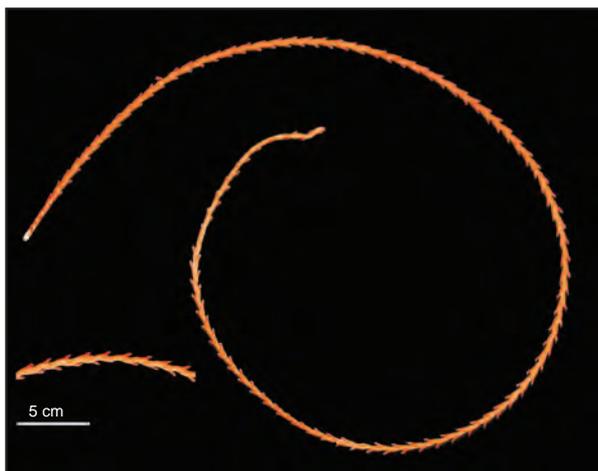
- Polyps yellow, pink to purple with root white to yellow, orange and brown

Habitat Information

- Soft bottom; 100–2700m

Distichoptilum gracile

ITIS TSN: 52371 • ERMS AphiaID: 128524



Physical Description

- Elongate and whip-like, polyps arranged in rows on one side of fleshy stalk

Size Information

- Up to 100cm in length

Colours

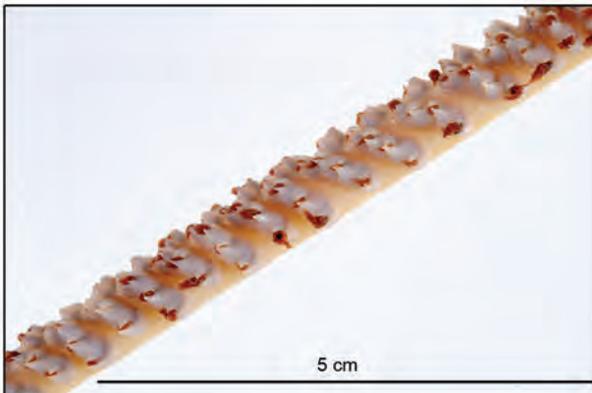
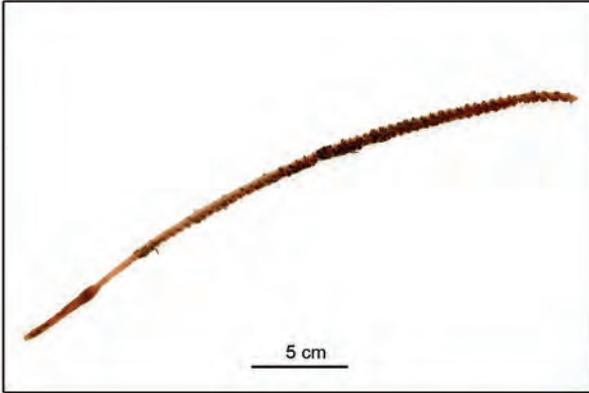
- Polyps red-orange in colour that is retained after collected; stalk flesh coloured

Habitat Information

- Soft bottom
- Recorded between 730 and 1170m, but known to occur down to 1700m

Halipteris finmarchica

ITIS TSN: 719237 • ERMS AphiaID: 128509



Physical Description

- Elongate and whip-like, polyps in rows at angle to the main stem on raised ridges, rough to touch, tip often bare or with anemones attached
- Bulbous root

Size Information

- Up to 125cm

Colour

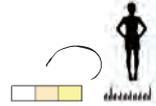
- Polyps brown to red, stalk white to yellow

Habitat Information

- Soft bottom; 110–1800m

Halipteris

ITIS TSN: 719025 • ERMS AphiaID: 128491



Physical Description

- Elongate and whip-like, polyps arranged in oblique rows
- Thick fleshy root much smaller than the stalk

Size Information

- Up to 100cm in length

Colour

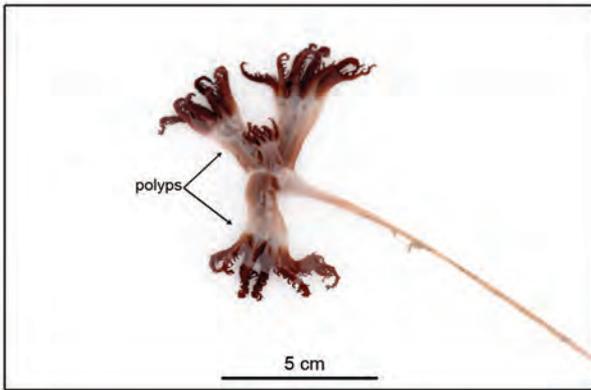
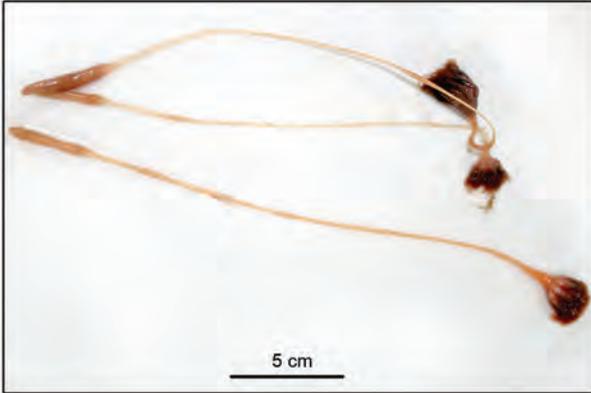
- Both the polyps and stalk are white or cream coloured to pale yellow, distinguishing it from *H. finmarchica* which has red to brown polyps

Habitat Information

- Soft bottom
- Recorded between 169 and 290m

Ombellula

ITIS TSN: 719032 • ERMS AphiaID: 128499



Physical Description

- Elongate, thin, with large polyps in cluster at top of stem

Size Information

- Up to 50cm

Colour

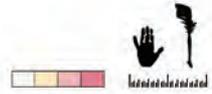
- Polyps pink to red to brown, stalk white or pink

Habitat Information

- Soft bottom; 200–2600m

Pennatula

ITIS TSN: 52417 • ERMS AphiaID: 128495



Physical Description

- Feather-like, with polyp leaves and a fleshy, thick stalk
- Leaves; 30 or more/leaf

Size Information

- Up to 40cm and greater

Colour

- Typically red to pink, but variable

Habitat Information

- Soft bottom, 200–2300m

Kophobelemnon stelliferum

ITIS TSN: 52361 • ERMS AphiaID: 128512



Physical Description

- Feather-like, with long polyps growing on one side of stalk
- Bulbous root that is slightly curved

Size Information

- Up to 6cm in height in the NAFO region

Colour

- Colour can range from white or pale brown to purple, or red

Habitat Information

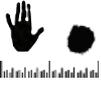
- Soft bottom
- Recorded between 660 and 1260m but is known to occur from 40 to 2500m

Sponges



Biemna variantia

ITIS TSN: 48284 • ERMS AphiaID: 133205



Physical Description

- Encrusting cushion-shaped sponge that can grow to cup or plate-like forms; thinner at edges
- Dense tracts of spicules form a rigid lattice-like framework; stout tracts pointing out from the surface give the sponge a prickly appearance
- Texture firm but brittle, sometimes slimy

Size Information

- Up to 15cm

Colour

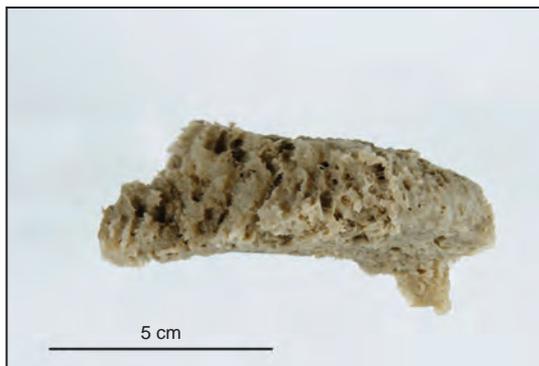
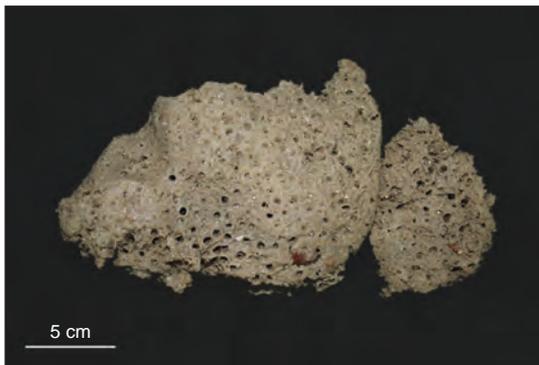
- Yellowish to brown with a pinkish hue

Habitat Information

- Mud, gravel, rock outcrops

Forcepia

ITIS TSN: 48049 • ERMS AphiaID: 131921



Physical Description

- Encrusting to massive growth forms
- Consistency soft, easily broken
- Pores distributed over surface
- Can physically resemble other sponges including *Hamacantha*

Size Information

- Up to 18cm

Colour

- White to yellow, brown, grey or pink

Habitat Information

- Sand, small gravel

Geodia

ITIS TSN: 48612 • ERMS AphiaID: 132005



Physical Description

- Massive round/lobed sponges with few or no holes in the surface
- Surface smooth, or rough with encrusting species; hard, sometimes wrinkled in appearance
- Can form “Sponge Grounds” and be found in large quantities

Size Information

- Largest specimens recorded at 55cm

Colour

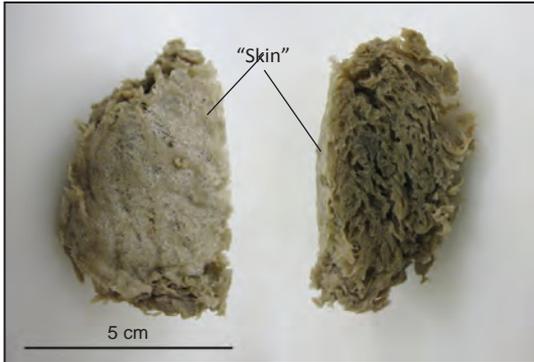
- Cream-yellow, white; pinkish or beige on the inside

Habitat Information

- Gravel, rock outcrops

Hamacantha carteri

ITIS TSN: 48299 (Genus) • ERMS AphiaID: 133230



Physical Description

- Thick, soft, with an irregular but smooth surface and a thin "skin"
- "Skin" is closely-attached, usually intact
- Thickly encrusts on small rocks
- Often confused with *Mycale lingua*, but much less common; presence of "skin" is a diagnostic feature

Size Information

- Up to 12cm

Colour

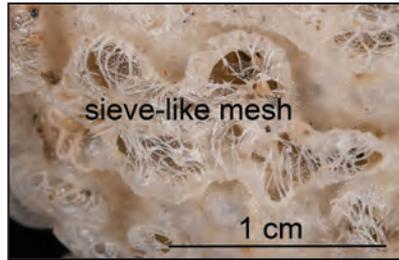
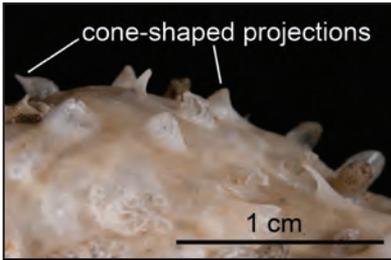
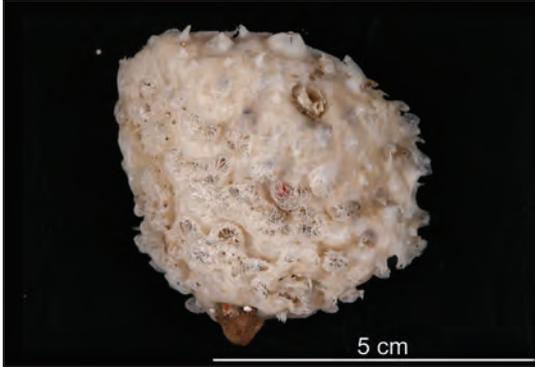
- Light brown, brownish-yellow, possibly grey

Habitat Information

- Gravel, rock outcrops

Melonanchora

ITIS TSN: 48079 • ERMS AphiaID: 131969



Physical Description

- Globular with cone-shaped projections emerging from a parchment-like surface covering
- Sieve-like spicule mesh covers some openings
- Soft interior
- Other organisms or egg cases may be on or within openings

Size Information

- Up to 10cm in diameter; possibly larger

Colour

- Yellowish-white or whitish-grey

Habitat Information

- Gravel, rock outcrops

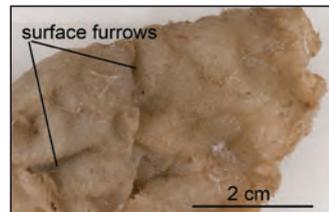
Mycale lingua

ITIS TSN: 48202 • ERMS AphiaID: 168640



Physical Description

- Body variable in shape, ranging from globular to pear-shaped
- Velvety surface tissue is furrowed; often easily detached
- Long, stringy root-like tracts extend from main body. Tracts are yellow in colour and are often broken off or collected separately
- Sometimes found with Cephalopod (i.e. octopus, squid, cuttlefish) eggs embedded



Size Information

- Up to 30cm; possibly larger

Habitat Information

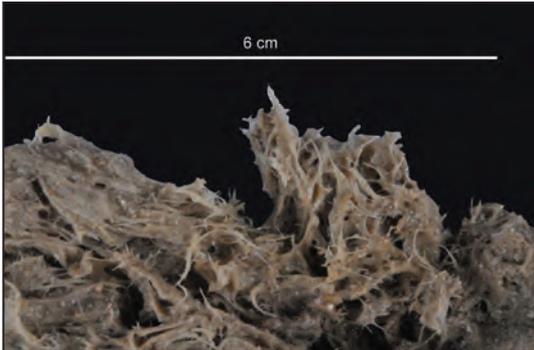
- Sand, gravel

Colour

- Brown, cream, yellow, white

Esperiopsis villosa

ITIS TSN: 48240 • ERMS AphiaID: 133272



Physical Description

- Large lobed sponge with a hairy surface
- Can appear clumped or mat-like
- Dense spicule tracts are visible

Size Information

- Up to 13cm in length and 3cm in width

Colour

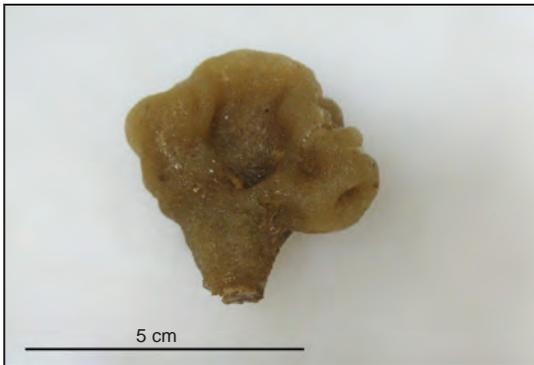
- Grey to yellow in colour

Habitat Information

- Recorded between 140 and 1295m depth but known to occur to 2190m

Spongionella pulchella

ITIS TSN: 47557 • ERMS AphiaID: 132335



Physical Description

- Plate-shaped, thickly encrusting, or upright with a short stalk
- Very elastic/"spongy," hard to tear; surface smooth and soft; velvety appearance
- Openings set in small depressions, closely-spaced on the outer edge

Size Information

- 5–10cm

Colour

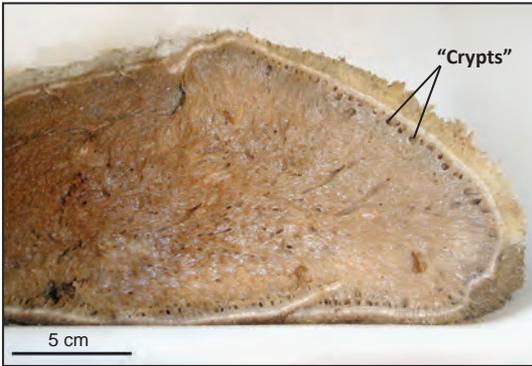
- Brown to brownish-yellow, possibly greenish-grey or cream

Habitat Information

- Gravel, rock outcrops

Stelletta

ITIS TSN: 48679 • ERMS AphiaID: 131994



Physical Description

- More or less spherical, sometimes depressed
- Surface rough due to encrusting sponges; often surface is completely covered
- Similar to *Geodia*, but is more rough and much less common. When cut in cross-section, outer skin appears darker than the inner sponge
- “Crypts” (empty spaces) below surface often very pronounced, much more so than *Geodia*

Size Information

- Up to 20cm in diameter

Colour

- Brown, reddish and purplish on the exterior; white, pinkish and light yellow on the inside

Habitat Information

- Gravel, rock outcrops

Stryphnus fortis

ITIS TSN: 659254 (Genus) • ERMS AphiaID: 133988



Physical Description

- Fairly hard, thick, rounded and irregularly-lobed. Sometimes bowl-shaped
- Surface rough, with many encrusting species attached. Spicules often come off when handling (wear gloves!)

Size Information

- Up to 40cm in diameter

Colour

- Pinkish or brown, with encrusting species generally turning a dark purple when out of water

Habitat Information

- Gravel, rock outcrops

Suberites ficus

ITIS TSN: 48488 • ERMS AphiaID: 134285



Physical Description

- Thick, lobed, sometimes cylindrical
- Firm, velvety appearance
- Often smells like garlic!

Size Information

- Variable; up to 40cm in length

Colour

- Yellow to brown, usually yellow on the inside

Habitat Information

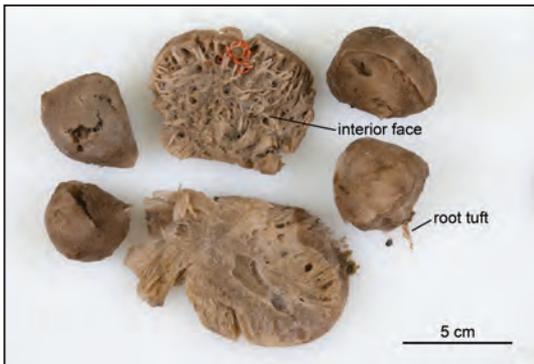
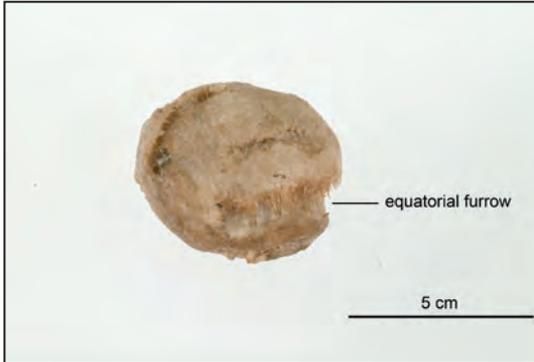
- Gravel, rock outcrops; often found encrusting on shells

Thenea

ITIS TSN: 48716 • ERMS AphiaID: 132019



Solid/Massive



Physical Description

- Ovate or irregular sponge, sometimes with multiple surface openings
- May have a long equatorial furrow which can be covered with a sieve-like spicule mesh
- Root tufts anchor the sponges into substrate
- Surface rough like sandpaper
- Sponges sometimes split open during collection, exposing interior faces

Colour

- White to brown

Habitat Information

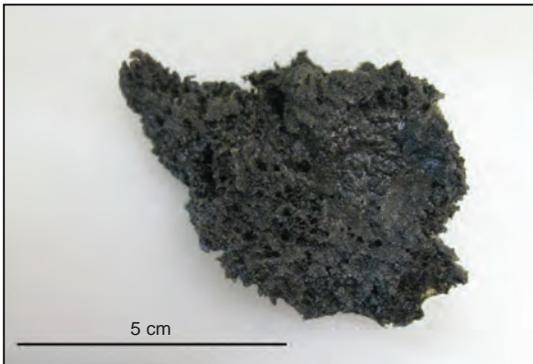
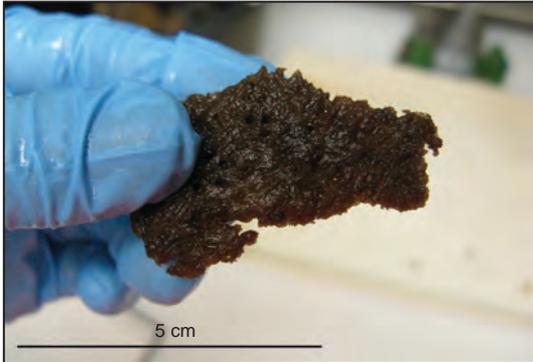
- Mud, sand

Size Information

- 1 to 20cm

Iophon piceum

ITIS TSN: 203967 (*I. piceus*) • ERMS AphiaID: 132972



Leaf/Vase-Shaped

Physical Description

- Cup/leaf-shaped when intact, but most often found in pieces 0.5 to 1.5cm thick; easily broken
- Surface smooth or somewhat grooved
- Many small openings, generally more apparent on one side than the other

Size Information

- Up to 16.5cm in height

Colour

- Generally dark brown/black, also light brown

Habitat Information

- Gravel, rock outcrops

Axinellidae

ITIS TSN: 48329 • ERMS AphiaID: 131629

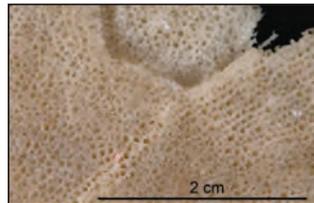


Leaf/Vase-Shaped



Physical Description

- Cup or fan-shaped, or branching sponge attached by a stalk
- Can sometimes see a pattern of ribbed veins fanning out from stem
- Honey-combed surface appearance
- Surface smooth, velvety, or slightly rough



Size Information

- Up to 30cm in height and 2mm–5cm thick

Colour

- White to yellow

Habitat Information

- Attached to gravel or rock

Vazella pourtalesi

Russian Hat

ITIS TSN: 659662 (Genus) • ERMS AphiaID: 172120 (Genus)



Leaf/Vase-Shaped



Physical Description

- Thick (1–2cm), vase-shaped, with spicules projecting out from the outer surface, giving it a spikey appearance
- Many small holes; extend through entire wall

Size Information

- Up to 30cm in height

Colour

- White, grey, brown

Habitat Information

- Mud

Craniella

ITIS TSN: 48627 • ERMS AphiaID: 132093



Physical Description

- Ball-shaped, covered in small projections (“spikey”)
- Can sometimes see opening at the top, usually this is closed
- Has a tuft at the base, often not attached
- Cross-sections show the skeleton is spirally radiate



Size Information

- 2-10cm in diameter

Colour

- Varies between white, yellow, red, and beige

Habitat Information

- Gravel, sometimes found attached to other sponges

Polymastia/Weberella

ITIS TSN: 48506 • ERMS AphiaID: 132046 (POLYMASTIA)

ITIS TSN: 659295 • ERMS AphiaID: 132059 (WEBERELLA)



Physical Description

- Dense globular or cushion-shaped sponges representing two different genera, with characteristic nipple-like projections known as papillae. The length, number and shape of papillae can be used to identify species.
- Attach to rock or other hard substrate; sometimes encrusting

Size Information

- Usually small, with some up to 15cm, possibly larger

Colour

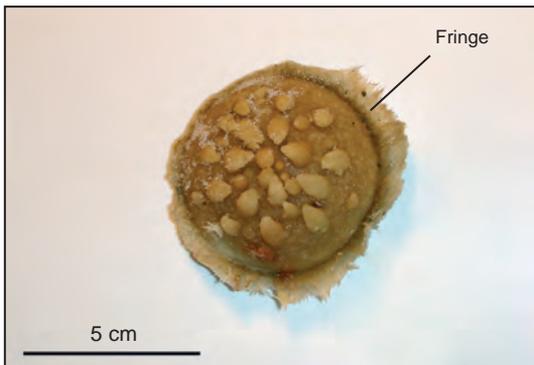
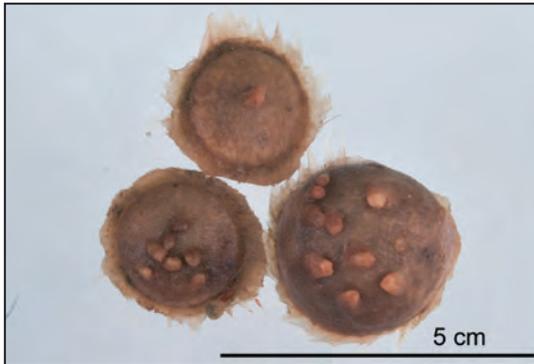
- Brown, reddish, yellow, white

Habitat Information

- Gravel, rock outcrops

Radiella hemisphaerica

ITIS TSN: 659290 (Genus) • ERMS AphiaID: 170674



Round with Projections

Physical Description

- Hemispherical or disc-like in shape, with a crown-like fringe of spicules around the edge
- Up to 20 short cone-shaped papillae on the upper convex surface
- Firm consistency
- Smooth convex upper surface and fewer papillae distinguish this species from *Polymastia grimaldii*

Size Information

- Up to 5cm in diameter

Habitat Information

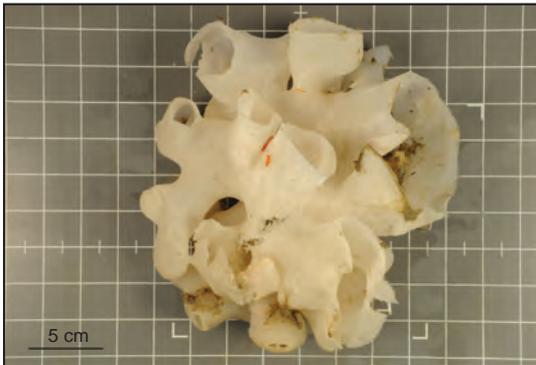
- Mud, gravel

Colour

- Light to dark brown

Asconema foliata

ITIS TSN: 659654 (Genus) • ERMS AphiaID: 132122 (Genus)



Thin-Walled, Complex

Physical Description

- Found in thin (1–2mm) fibreglass-like sheets with long linear fibres; fused tubes when intact
- Surface smooth, no holes, pulls apart very easily
- Sometimes associated brittle stars or crinoids attached

Size Information

- Entire sponge up to 40cm across

Colour

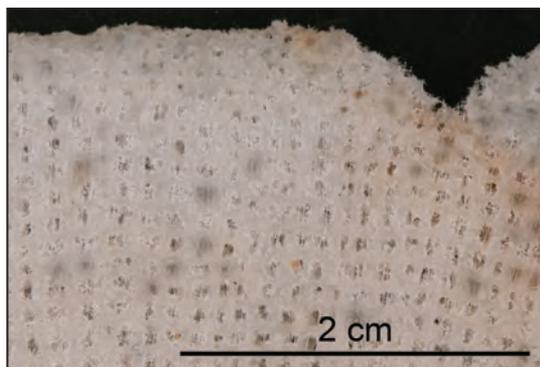
- White or grey, sometimes brown from sediment

Habitat Information

- Gravel, rock outcrops

Chonelasma choanoides

ITIS TSN: 47355 (Genus) • ERMS AphiaID:132102 (Genus)



Thin-Walled, Complex

Physical Description

- Thin (2–5mm), hard, and very brittle
- Distinct mesh-like pattern throughout
- Vase-shaped with flared edges when intact, but almost always found in small fragments

Size Information

- Large intact specimens can approach 1m in width; typically less than 50cm

Colour

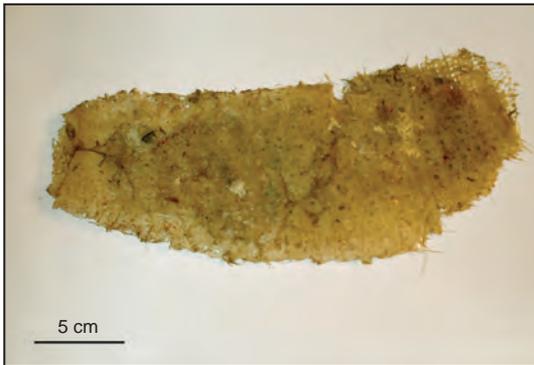
- White, greyish, or brown from sediment (usually dead); often dead specimens have encrusting sponges which gives a hue of yellow, blue, or purple

Habitat Information

- Gravel, rock outcrops

Dictyaulus

ITIS TSN: 659641 • ERMS AphiaID: N/A



Thin-Walled, Complex

Physical Description

- Thin, tube-shaped sponge with complex, mesh-like surface; tube covered with larger mesh at one end, often torn at basal end
- Comes up flattened in trawls but relatively intact
- Sometimes two associated shrimp are found inside

Size Information

- Up to 30cm in height, 15cm in diameter

Colour

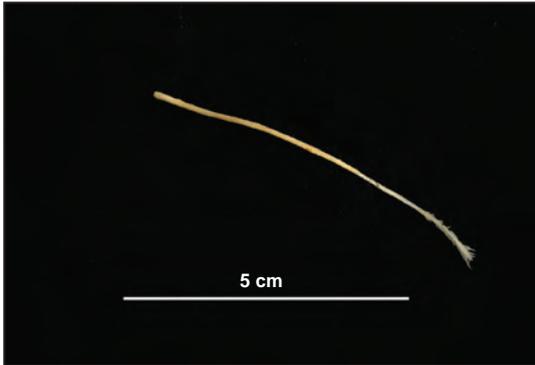
- White, greyish, or brown from sediment

Habitat Information

- Mud, gravel, rock outcrops

Asbestopluma

ITIS TSN: 48263 • ERMS AphiaID: 131893



Stalked

Physical Description

- Thin, pen/feather-shaped, one end with small branches and the other smooth and slightly widened

Size Information

- Up to 10cm long

Colour

- White to yellow

Habitat Information

- Gravel, rock outcrops

Chondrocladia

ITIS TSN: 48278 • ERMS AphiaID: 131894



Stalked

Physical Description

- Long, thin arms with bulbous ends attached to a tough, straight stalk/stem made of spiral (or slightly twisted) fibres
- Some referred to as “pine cones of the sea”

Size Information

- Up to 30cm long, 10cm wide

Colour

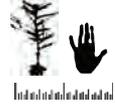
- Yellow, brown, orange, pink

Habitat Information

- Mud, coral rubble

Cladorhiza

ITIS TSN: 48274 • ERMS AphiaID: 131895



Stalked

Physical Description

- Tree-like shape, often confused with coral
- Thin (generally less than 1cm), smooth, and straight, with alternating branches and root-like structures
- Branches bulbed at ends or pointed

Size Information

- Can approach 1m in length, typically less than 20cm

Colour

- Yellow, cream, pinkish, brown

Habitat Information

- Mud

Rhizaxinella

ITIS TSN: 659300 • ERMS AphiaID: 132071



Stalked

Physical Description

- Long, thin, branching stalk, with a root-like support system
- Sponge body somewhat oval; distinguished from *Stylochordyla borealis* by its 'hairy' appearance

Size Information

- Body up to 6cm long, 1cm wide; stalk up to 30cm long, 0.5cm wide

Colour

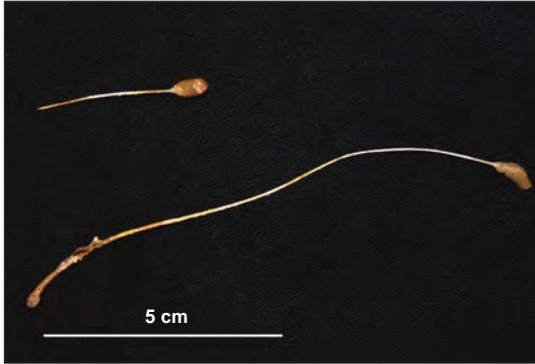
- Yellow, yellowish-grey

Habitat Information

- Mud, gravel

Stylocordyla borealis

ITIS TSN: N/A • ERMS AphiaID: 134240



Stalked

Physical Description

- Club-shaped on a long, thin, unbranched stalk, with a root-like support system
- Sponge body is oval, somewhat flattened at the top, and smooth in appearance

Size Information

- Up to 10cm long

Colour

- White, greyish, brown

Habitat Information

- Mud, sparse gravel

Haliclona Dead Man's Fingers

ITIS TSN: 47771 • ERMS AphiaID: 131834



Physical Description

- Finger-like projections, arising from a short stalk or base
- Velvety surface, with holes arranged in rows along branches

Size Information

- Commonly between 10 and 30cm

Colour

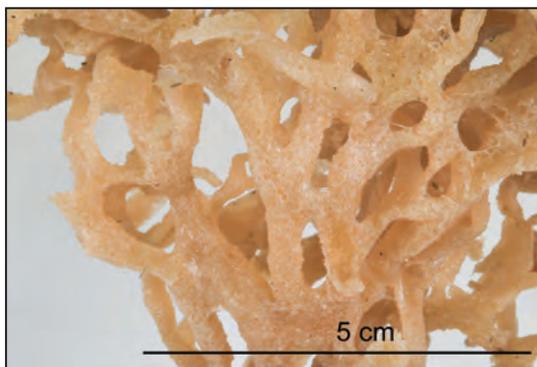
- Yellow, light brown, sometimes with a greenish or reddish tinge

Habitat Information

- Gravel, rock outcrops, corals, other sponges

Lissodendoryx complicata

ITIS TSN: 48067 (Genus) • ERMS AphiaID: 133430



Other

Physical Description

- Bush-like sponge with branches that separate and rejoin in a net-like pattern
- Branches are flexible and elastic; surface slightly rough

Size Information

- Up to 30cm in height, with branch widths up to 1cm

Colour

- White, yellow, orange, light brown

Habitat Information

- Sand, gravel, or rock outcrops; recorded up to 2000m

Homaxinella

ITIS TSN: 48340 • ERMS AphiaID: 131777



Physical Description

- Small, tough, finger-like projections, sometimes branching

Size Information

- Clumps can be 10–15cm, projections rarely more than 0.5cm wide

Colour

- Bright yellow, light brown

Habitat Information

- Gravel, rock outcrops

Hymedesmiidae

ITIS TSN: 48301 • ERMS AphiaID: 131655



Physical Description

- Extremely thin (1-2mm) encrusting sponge, sometimes with projections or depressions/holes
- Sometimes a vein-like pattern can be seen
- Soft, sometimes slimy

Size Information

- Patches up to 30cm wide

Colour

- Typically very bright colouration; blue, yellow, orange, green

Habitat Information

- Gravel, rock outcrops

Quasillina brevis

ITIS TSN: 659289 (Genus) • ERMS AphiaID: 134215



Physical Description:

- Small, bladder-like, very thin, and often stalked; attached to pebbles and small stones
- Often found broken open
- Distinguished from *Tentorium semisuberites* by its thin walls and hollow body

Size Information

- 2–4cm

Colour

- Bright yellow; also dark yellow to brown

Habitat Information

- Gravel, rock outcrops

Tentorium semisuberites

ITIS TSN: 48497 • ERMS AphiaID: 134224



Physical Description

- Toadstool-like, with a cylindrical body and a rounded top; one or more small projections arise from top, distinguishing it from *Quasillina brevis*
- Surface smooth or slippery
- Often smells like garlic when pinched

Size Information

- Up to 4cm high, 3cm in diameter; often find several small individuals (<1cm) together

Colour

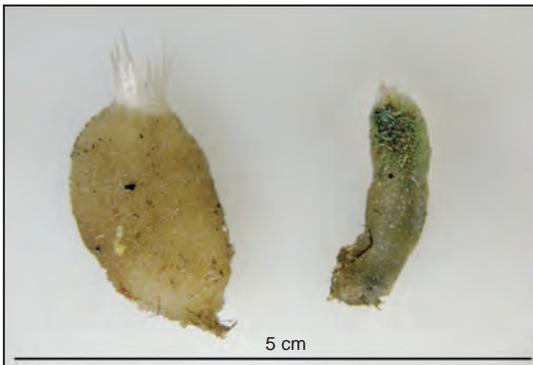
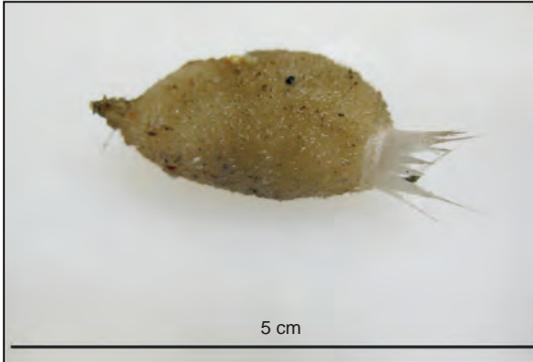
- Light pink, pinkish-brown, yellowish-grey

Habitat Information

- Mud, gravel, rock outcrops

Sycon

ITIS TSN: 47050 • ERMS AphiaID: 131723



Physical Description

- Tube-shaped, with a tuft of stiff spicules at opening
- “Hairy” surface, sometimes smooth
- Most often found as individuals, sometimes clustered

Size Information

- Up to 9cm long, though usually 1–3cm

Colour

- Off-white, grey, brown

Habitat Information

- Gravel, rock outcrops

Spicule clumps

ITIS TSN: 46861 (Porifera) • ERMS AphiaID: 558 (Porifera)



Physical Description

- Mass of sponge spicules with no discernable structure, often embedded with sediment
- Can occur in large mats on the sea floor

Size Information

- Small 1cm balls to 20cm clumps

Colour

- Whitish, grey, and brown

Habitat Information

- Mud

Other VME Indicator Taxa



Boltenia ovifera

Sea Squirt

ITIS TSN: 159485 • ERMS AphiaID: 103815



Physical Description

- A pale-coloured bulb with two openings that is attached to a stalk with a root-like base
- The stalk is usually two to three times the length of the bulb
- Commonly called “sea potato” or “sea onion”

Size Information

- Up to 150cm long including the stalk

Colour

- Colour light brown to orange-red

Habitat Information

- Recorded between 40 and 570m depth but known to occur from 10 to 1800m
- Attached to rock

Pachycerianthus borealis

Tube-Dwelling Anemone

ITIS TSN: 51988 (Cerianthus borealis) • (WoRMS AphialID): 283816



Physical Description

- A large thick pale tube with two rings of tentacles with the tube covered by a thick coat
- The inner ring of tentacles is usually shorter than the outer ring
- The tube coat can be slimy and covered with sand grains

Size Information

- Up to 45cm long with the tentacle rings 22cm wide

Colour

- Can be a different colour (red, purple, yellow, white)

Habitat Information

- Recorded between 140 and 150m depth but known to occur to 1500m
- Found on sand or mud

Eucratea loricata

Erect Bryozoan

ITIS TSN: 155809 • ERMS AphiaID: 111361



Physical Description

- A clump of soft branching stalks
- Often whitish or light-brown in colour

Size Information

- Clumps often 10cm high, but can reach up to 25cm

Colour

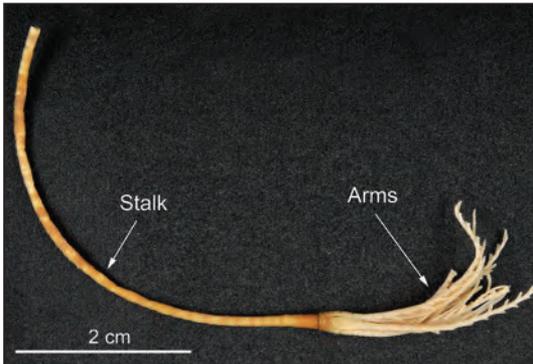
- Often whitish or light-brown in colour

Habitat Information

- Recorded at depths up to 100m
- Attached to rock

Conocrinus lofotensis Sea Lily (Crinoid)

ITIS TSN: 158615 (Rhizocrinus lofotensis) • ERMS AphiaID: 562035



Physical Description

- Thin, segmented stalk, sometimes with attached head that resembles a flower. Head usually contains 5, feathery arms
- Commonly called a “sea lily”

Size Information

- Stalk is up to 7.5cm in length, head an additional 2cm

Colour

- Yellow or grey

Habitat Information

- Soft bottom
- Has been recorded between 140 and 3475m depth

Notes