




PHYLUM: CNIDARIA

Authors

Kerry Sink[1], Mark Gibbons[2], Megan Laird[3], and Lara Atkinson[4]

Citation

Sink KJ, Gibbons MJ, Laird MC and Atkinson LJ. 2017. Phylum Cnidaria In: Atkinson LJ and Sink KJ (eds) Field Guide to the Offshore Marine Invertebrates of South Africa, Malachite Marketing and Media, Pretoria, pp. 65-115.

[1] South African National Biodiversity Institute, Marine Programme, Cape Town
[2] University of the Western Cape, Department of Biodiversity and Conservation Biology
[3] Anchor Environmental Consultants (Pty) Ltd
[4] South African Environmental Observation Network, Egagasini Node, Cape Town

Phylum: CNIDARIA

Anemones, corals, sea fans, sea pens, hydroids and jellyfish

Cnidarians are polymorphic (more than one adult form) and typically occur in one of two basic forms, namely the sessile upright polyp and the free-swimming bell-like medusa. Both polyps and medusae are radially symmetrical and do not have defined heads. Their body regions are defined as oral (near the mouth) or aboral (further from the mouth). Polyps (anemones, corals, zoanthids) have their mouths located at the top and medusa (jellyfish) have their mouths below. A distinguishing feature of the phylum is the presence of cnidocytes (nematocysts), specialised cells in the tentacles, used for prey capture.

Most cnidaria have fringes of tentacles surrounding, or near to, their mouth. The mesoglea of polyps is usually thin and soft, but in mobile medusae may be thick and springy enabling contraction and a swimming movement by means of "jet propulsion". Reproduction is both asexual (polyp stages) and sexual and often involves a complex life cycle with a number of forms and stages. Spawning can be determined by environmental factors such as water temperature changes and light cycles (sunrise, sunset or moon phases).

Many cnidarians occur in shallow water, especially those with symbiotic algae, however most species occur in deep water and low temperatures where feeding takes place by predation, filtering or absorption. Reef building cnidarians include shallow and deep forms and these provide habitats of high biodiversity and nursery areas for fish. Anthropogenic activities such as fisheries (including trawling impacts or damage from demersal longlines or traps), mining, pollution and global climate change are considered key pressures on such habitats. Cnidarians are a diverse group of animals with more than 16 000 described species. Recent South African species checklists have elevated the known number of marine cnidarians from 842 species in 2010 to more than 950 in 2018. In South Africa, deep-water cnidarians are less studied than their shallow-water counterparts and are a current research focus with new work underway on scleractinia and octocorals. Three main classes of Cnidaria are addressed in this guide: Anthozoa, Hydrozoa and Scyphozoa. A sub-phylum of parasitic cnidaria, Myxozoa, were discovered in 2007, but are not addressed further in this guide. Staurozoa (stalked jellyfish) and Cubozoa (box jellyfish) are also excluded from this guide.

Class Anthozoa

Anthozoans include all cnidarians that do not have a medusa stage in their life cycle including anemones, hard corals and soft corals. Eggs released after fertilisation develop into free-swimming planula larvae that may attach to a surface to develop into a new polyp and then, if appropriate, colony. They feed by means of capturing prey with their tentacles and any contact triggers the release of stinging nematocysts from within the cnidocytes, paralysing prey. Prey is consumed in the digestive cavity via secreted digestive enzymes. The Anthozoan class can further be divided into two subclasses namely Hexacorallia, which includes important coral reef builders such as stony corals, sea anemones and zoanthids; and Octocorallia, comprising sea pens, soft corals and blue corals.

Collection and preservation

Soft-bodied corals, anemones and sea pens can be preserved in 4-10% formalin (the larger the specimen, the higher the concentration) and in 96% ethanol for molecular studies. Sclerites are eroded by formalin, so this is not recommended for octocorals unless fixation is just for a short period. Anemones should be relaxed in a menthyl crystal solution before fixing in formalin. Sea fans and bamboo coral should be preserved in 96% ethanol (never in formalin). Ethanol should be changed with decreasing frequency.

Subclass Hexocorallia (hard-bodied stony coral) specimens should be preserved in 70% ethanol (never in formalin!) and a small piece in 96% ethanol for molecular studies. These specimens can be relaxed in a menthyl crystal solution to allow the polyps to expand. The colony should also be photographed in good light. If the colony is large, preserve a small portion in 96% ethanol and dry remaining specimen with a label attached.

Black corals (Order Antipatharia of subclass Hexocorallia) are not included in the guide currently, but may be encountered and recognised by their dark spiny or sandpapery skeletons. These can be preserved in 96% ethanol and if specimen is large, part of the colony can be dried. Photograph before preservation.

Class Hydrozoa

Found in almost any marine environment and a few freshwater systems, hydrozoans can be solitary or colonial. Hydroid polyps are sessile benthic hydrozoans bearing specialised gonophores that may release free-swimming medusae. Hydroids often resemble plants having a tree- or fan-like appearance and can be soft, feathery and flexible (hydroids) or hard and brittle (stylasterid hydrozoans). Individual hydroid polyps are usually tiny, though colonies can be big and long-lived. Hydrozoans vary in feeding methods: some trap zooplankton, others filter suspended particles or have symbiotic relationships. Some hydrozoans may sting while stylasterid hydrozoans are valuable in providing structure-forming habitat.

Collection and preservation

Hard, brittle hydrozoan specimens (i.e. stylasterid hydrozoans) should be preserved in 96% ethanol. If the specimen is large, then most of the hydrocoral can be dried, with smaller portions placed in 96% ethanol for molecular studies. The colony should be photographed in good light and weighed before it is broken up for preservation.

All other soft, flexible hydrozoan specimens (hydroids) can be placed in 5-10% formalin with a small portion in 96% ethanol. These specimens can be relaxed by slowly adding a concentrated solution of $MgCl_2$ or menthol crystals until specimens are unresponsive to touch, then transferred to formalin.

Class Scyphozoa

Adult scyphozoa, also known as jellyfish, are free-living, solitary planktonic medusa that are produced by minute, benthic polyps. During the medusa stage, scyphozoans consume a variety of crustaceans and fish which are captured by the nematocytes on their tentacles and/or oral arms. Jellyfish drift through the water relying upon ocean currents for successful distribution, while being aided by "jet propulsion" via the contraction of circular and radial muscles that push the water out from below the "bell". Scyphozoans can range in size from 20–400 mm, with larger exceptions growing up to two metres. Jellyfish are found in all the world's oceans and over a broad depth range. In high numbers, these organisms can impact global economies by affecting fishing efforts due to mass blooms leading to low fish catches. They can also damage fishing equipment, clog the filters of marine industrial plants and impact tourism.

Collection and preservation

The entire specimen can be preserved in 5-10% formalin with a small portion in 96% ethanol for molecular studies.

References

Cairns SD. 2007. Deep-water corals: an overview with special reference to diversity and distribution of deep-water scleractinian corals. *Bulletin of Marine Science, 81*(3), pp. 311-322.

Cairns SD. 2011. Global Diversity of the Stylasteridae (Cnidaria: Hydrozoa: Athecatae). *PLoS ONE* 6(7): e21670. doi:10.1371/journal.pone.0021670.

Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612. (p. 23).

Cordeiro R, van Ofwegen L and Williams G. 2018. World List of Octocorallia, Calcaxonia and Scleraxonia. Accessed through: World Register of Marine Species at: http://www.marinespecies.org on 2018-03-05.

Cornelius PFS. 1997. Keys to the genera of cubomedusae and scyphomedusae (Cnidaria). In: Den Hartog JC (ed.) Proceedings of the 6th International Conference on Coelenterate Biology, 1995. Leiden: *Nationaal Natuurhistorisch Museum*. pp. 109-122.

Daly M, Brugler MR, Cartwright P, Collins AG, Dawson MN, Fautin DG, France SC, McFadden CS, *et. al*. 2007. The phylum Cnidaria: A review of phylogenetic patterns and diversity 300 years after Linnaeus. In: Linnaeus Tercentenary: Progress in Invertebrate Taxonomy, Z-Q Zhang and WA Shear, editors. *Zootaxa* 1668: 127–182.

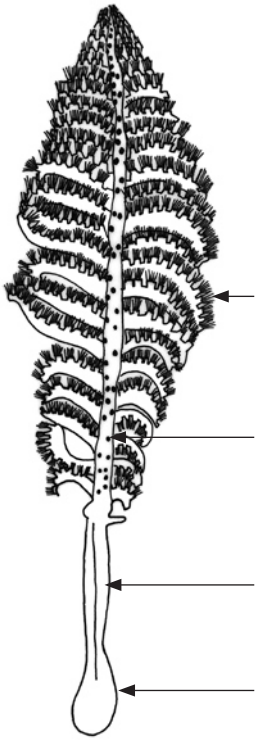
Goffredo S and Dubinsky Z. 2016. The Cnidaria, Past, Present and Future: The world of Medusa and her sisters. *Springer International Publishing*. (66 pp.) ISBN 978-3-319-31305-4.

Hartog JC den. 1977. Descriptions of two new Ceriantharia from the Caribbean region, *Pachycerianthus curacaoensis* n. sp. and *Arachnanthus nocturnus* n. sp., with a discussion of the cnidom and of the classification of the Ceriantharia. *Zoologische Mededelingen* 51 (14): 211-242.

Williams GC. 2011. The Global Diversity of Sea Pens (Cnidaria: Octocorallia: Pennatulacea). *PLoS ONE* 6(7): e22747. doi:10.1371/journal. pone.0022747.

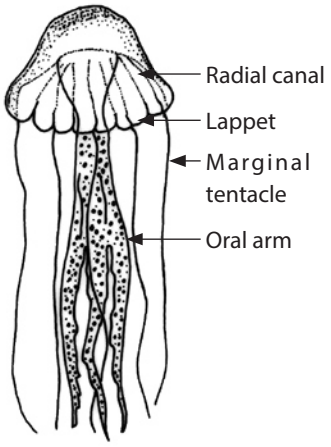
Zhang Z-Q. 2011. Animal biodiversity: An introduction to higher-level classification and taxonomic richness. *Zootaxa* 3148: 7–12.

Pennatulacea (sea pen) body plan

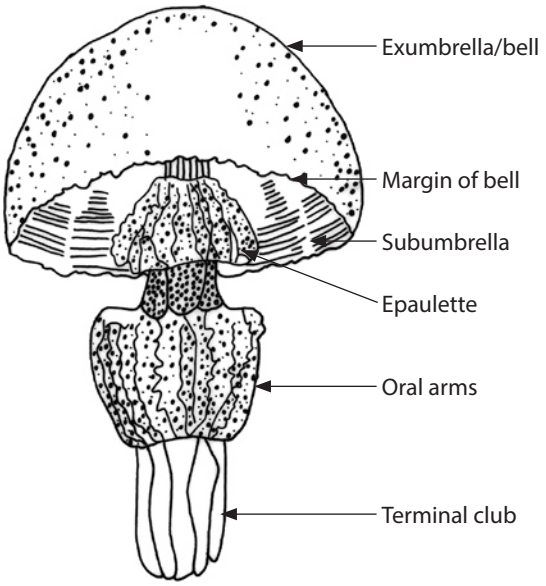


Photographs showing acontia (white, threadlike defence organs) which are a key distinguishing feature of some species of anemones.

Scyphozoa (jellyfish) body plan



Order Semaeostomeae

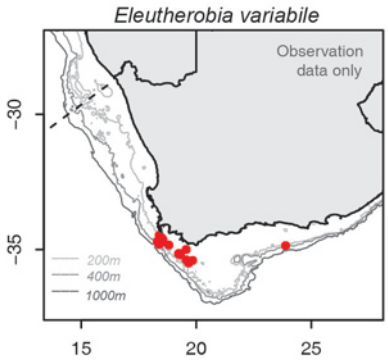


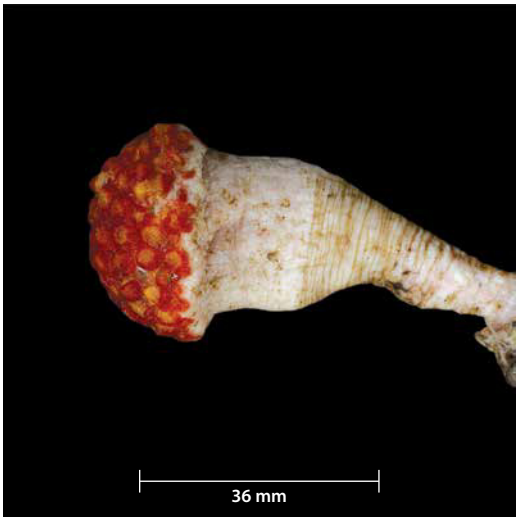
Order Rhizostomeae

Diagram adapted from Cornelius, 1997, with permission.

Eleutherobia variabile (EleVar)

Phylum:	Cnidaria
Class:	Anthozoa **Subclass:** Octocorallia
Order:	Alcyonacea
Suborder:	Alcyoniina
Family:	Alcyoniidae
Genus:	*Eleutherobia*
Species:	*variabile*
Common name:	Mushroom soft coral





Distinguishing features

Colonial soft coral with leathery, swollen, mushroom-shaped head, bearing numerous polyps. The head is clearly distinct from the smooth barren stalk. Sometimes attaching to sponges and shells.

Colour

Variable colouring ranging from orange, pale orange, tan, pink, red, yellow or white. Sometimes bicoloured or mottled.

Size

Maximum colony height 70 mm (Williams, 1986). Expanded polyps reach 12 mm.

Distribution

South African endemic. West and South Coasts of South Africa; 13–470 m depth range.

Similar species

Parasphaerasclera have monomorphic polyps and can be digitate or lobate. *Anthomastus* have far fewer and much larger polyps and arise from a longer stalk.

References

Fabricius KE and Alderslade P. 2001. *Soft corals and sea fans: a comprehensive guide to the tropical shallow water genera of the central-west Pacific, the Indian Ocean and the Red Sea*. Australian Institute of Marine Science (AIMS). pp. 100-101.

McFadden CS and Ofwegen LP. 2013. Molecular phylogenetic evidence supports a new family of octocorals and a new genus of Alcyoniidae (Ococorallia, Alcyoniidae). *ZooKeys* 346:59-83.

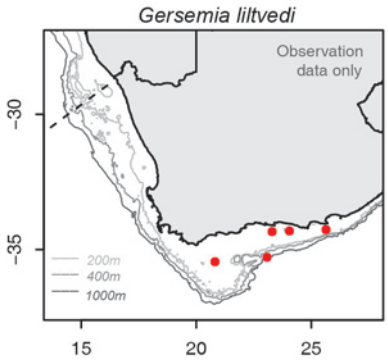
Williams G C. 1986. A new species of the octocorallian genus Alcyonium (Anthozoa: Alcyonacea) from southern Africa, with a revised diagnosis of the genus. *Journal of Natural History* 20(1), pp. 53-63.

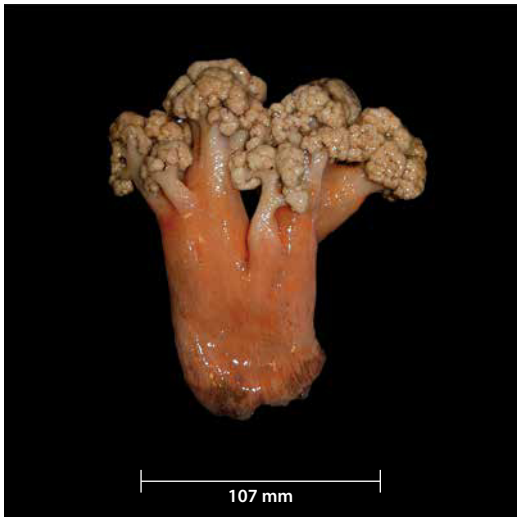
Williams GC. 1992. The Alcyonacea of Southern Africa: Stoloniferous Octocorals and Soft Corals (Coelenterata, Anthozoa). *Annals of the South African Museum* 100:3. p. 295.

Identification of specimens confirmed by Prof. Phil Alderslade, June 2015.

Gersemia liltvedi (EunThy)

Phylum:	Cnidaria
Class:	Anthozoa **Subclass:** Octocorallia
Order:	Alcyonacea
Suborder:	Alcyoniina
Family:	Nephtheidae
Genus:	*Gersemia*
Species:	*liltvedi*
Common name:	Stalked cauliflower soft coral





Distinguishing features

Colonies erect, cauliflower-like in form, arising from one main base from which several stems may arise. Polyps relatively congested at ends of short, narrow terminal branches (observed more readily in wet preserved specimens). Polyps non-retractile with calyces, supporting bundles of polyps, and polyp crowns absent.

Colour

Variable. Colonies usually pale beige, white to pink or orange.

Size

Colonies reported to range between 56 and 110 mm.

Distribution

South African endemic. Known from the South Coast of South Africa. This is a temperate genus without zooxanthellae occurring in the 20-2 000 m depth range.

Similar species

Eunephthya species (four in South Africa) generally smaller, have branches of equal width (as opposed to a range of thicker to thinner branches of *Gersemia liltvedi*). The genera *Capnella* and *Litophyton* are warm-water species that have zooxanthellae. *Anthomastus giganteus* has a more leathery stalk with fewer colonies at terminal branches, longer, far larger polyps and a bright red or white stem.

References

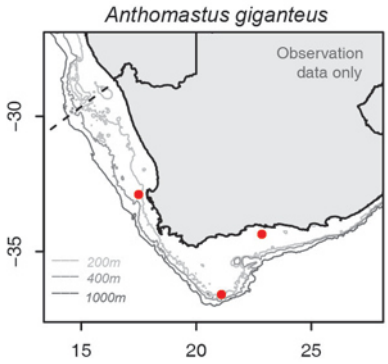
McFadden CS and Ofwegen LP. 2012. A revision of the soft coral genus, *Eunephthya* Verrill, 1869 (Anthozoa: Octocorallia: Nephtheidae), with a description of four new species from South Africa. *Zootaxa* 3485(1):1-25.

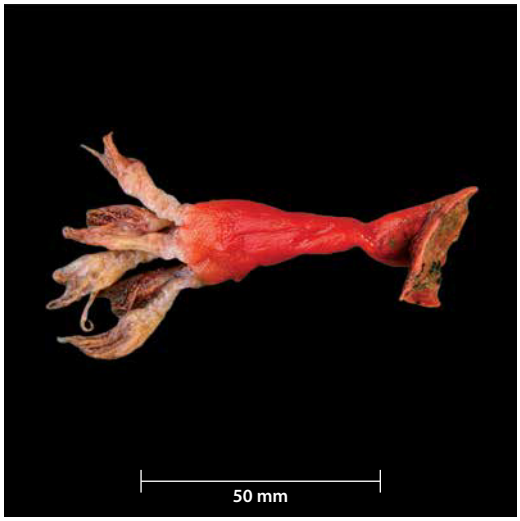
Williams GC and Lundsten L. 2009. The nephtheid soft coral genus *Gersemia* Marenzeller, 1878, with the description of a new species from the northeast Pacific and a review of two additional species (Octocorallia: Alcyonacea). *Zoologische Mededelingen* 83: 1067-1081.

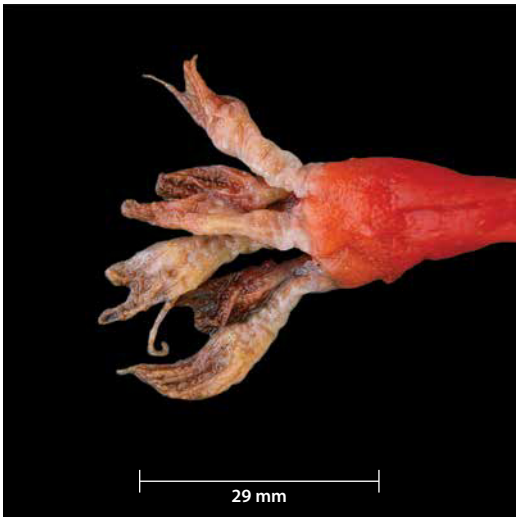
Identification confirmed by Prof. Phil Alderslade, June 2015.

Anthomastus giganteus (AntGig)

Phylum:	Cnidaria
Class:	Anthozoa **Subclass:** Octocorallia
Order:	Alcyonacea
Suborder:	Alcyoniina
Family:	Alcyoniidae
Genus:	*Anthomastus*
Species:	*giganteus*
Common name:	Gigantic soft coral







Distinguishing features
Large, fleshy, erect polyps arising from one elongate stalk. Polyps of one type (autozoids) being very large and emergent (may not retract) on stalks. Disc-like base often attached to hard substrate or debris.

Colour
Pink to orange or red stem with paler (beige, white or pinkish) terminal polyps. May occur as entirely white colony.

Size
Maximum size 150 mm.

Distribution
South and West Coasts. One of the deepest occurring soft corals, recorded to 450 m in South Africa.

Similar species
Eleutherobia is mushroom-shaped and has many more, smaller polyps. *Eunephthya* and *Gersemmia* spp. have smaller polyps and colonies are more tree- or cauliflower-like.

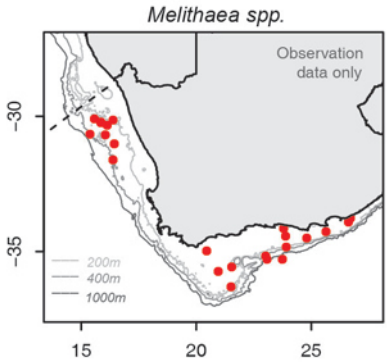
References
Williams GC. 1992. The Alcyonacea of Southern Africa: Stoloniferous Octocorals and Soft Corals (Coelenterata, Anthozoa). *Annals of the South African Museum* 100:3. p. 302.

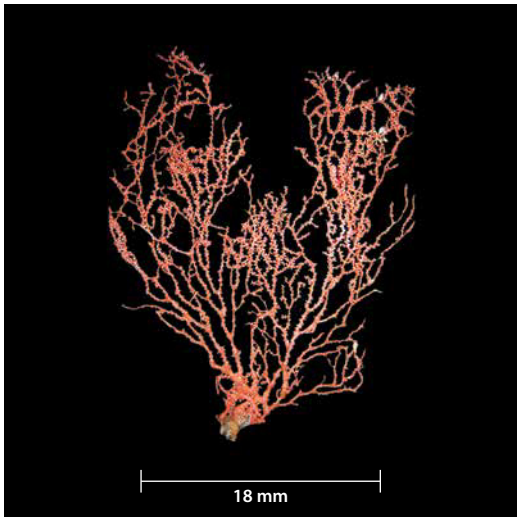
Identification confirmed by Prof. Phil Alderslade, June 2015.

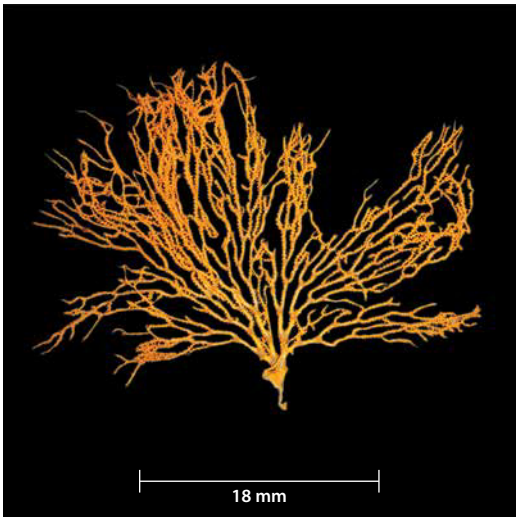
Potential VME

Melithaea spp. (Melith)

Phylum:	Cnidaria
Class:	Anthozoa **Subclass:** Octocorallia
Order:	Alcyonacea
Suborder:	Scleraxonia
Family:	Melithaeidae
Genera:	*Melithaea*
Species:	spp.
Common name:	Colourful sea fan







Distinguishing features

Sea fans with cylindrical or slightly flattened stem and many dichotomous branches. The skeleton is composed of gorgonin (a horn-like protein) and scerites and is stiff but flexible and not brittle. *Melithaea* spp. branch in one plane, have nodes but no calyces. Polyps monomorphic (1 type), small, retractile and with eight tentacles, seldom visible to the naked eye. Identification of this group is challenging, with the genera *Wrightella, Melithea* and others requiring microscopic sclerite examination.

Colour

Variable and often vivid; commonly white, red, orange, pink or yellow.

Size

Usually between 50 and 500 mm.

Distribution

West and South Coasts of South Africa, Indo-Pacific; high diversity across a broad depth range.

Similar species

Sea fans can be confused with hydroids, bamboo corals or black corals. The stem is woodier than the darker pricklier stem of black corals. Hydroids are usually brown, grey or yellow, lack the bright colour of sea fans and their stem is usually woodier than that of live sea fans. Bamboo corals have white, brittle, calcareous skeletons.

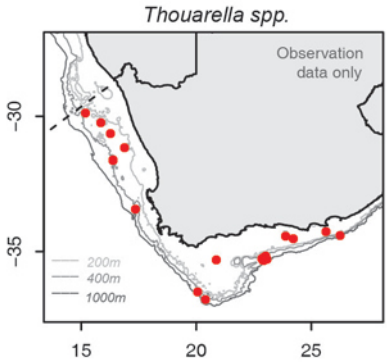
References

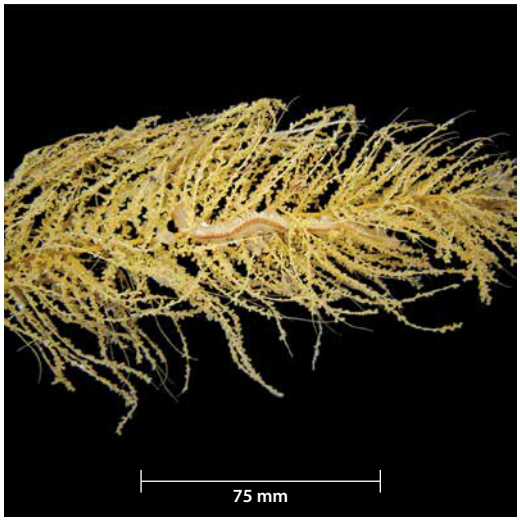
Williams GC. 1992. The Alcyonacea of Southern Africa. Gorgonian octocorals (Coelenterata, Anthozoa). *Annals of the South African Museum* 101 (8).

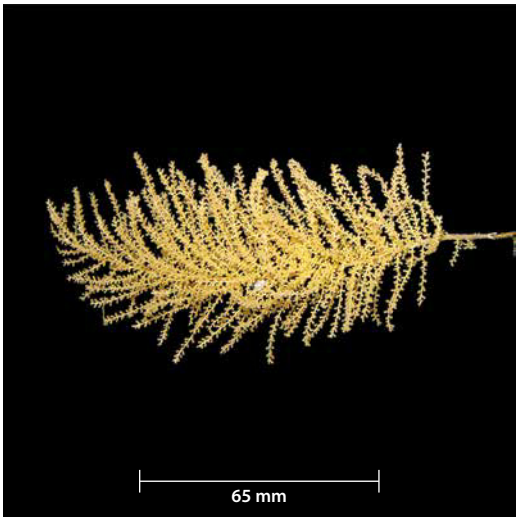
Potential VME

Thouarella spp. (ThoSpp)

Phylum:	Cnidaria
Class:	Anthozoa **Subclass:** Octocorallia
Order:	Alcyonacea
Suborder:	Calcaxonia
Family:	Primnoidae
Genera:	*Thouarella*
Species:	spp.
Common name:	Bottlebrush sea fan







Distinguishing features

Bottlebrush-shaped colonies not flattened in one plane. Stiff central rod with many polyp-bearing branches arising from a single main stem. Branching is profuse, pinnate and multi-planar. Polyps can be seen with the naked eye. Large scales present on sides of polyps giving colony a slightly stiff texture, but these are not visible with the naked eye. Frequently has associates including scale worms, brittlestars, fish eggs and larvae.

Colour

Most commonly observed in yellow, pale cream or a very pale pink.

Size

Variable. Polyps usually 1 to 1.5 mm in length, with colonies reaching 300 mm in length.

Distribution

West and South Coasts of South Africa; at 100-900 m depth range.

Similar species

Hydroids or black corals may be confused with *Thouarella*. Within the octocorals, other Primnoid sea fans may also resemble *Thouarella*. *Thouarella brucei*, *T. clavata* and *T. hicksoni* (endemic) recorded in South Africa. Although termed the "bottlebrush" genus, *Thouarella* spp. have a range of branching forms, similar to several other genera, resulting in specimens being frequently misidentified. Hydroids or black corals may also be confused with *Thouarella*.

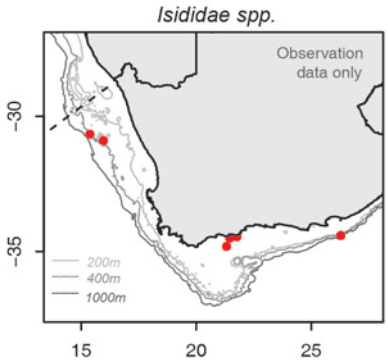
References

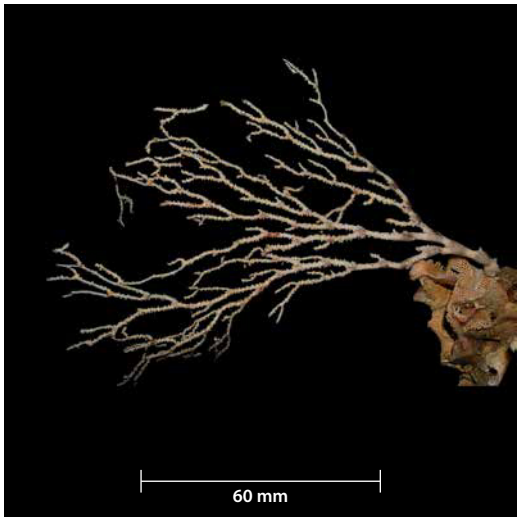
Taylor ML, Cairns SD, Agnew DJ and Rogers AD. 2013. A revision of the genus Thouarella Gray, 1870 (Octocorallia: Primnoidae), including an illustrated dichotomous key, a new species description, and comments on Plumarella Gray, 1870 and Dasystenella, Versluys, 1906. *Zootaxa* 3602 (1) 1-105.

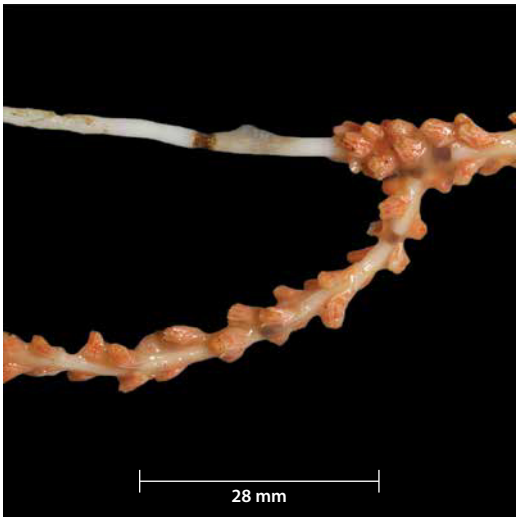
Williams GC. 1992. The Alcyonacea of Southern Africa. Gorgonian octocorals (Coelenterata, Anthozoa). *Annals of the South African Museum* 101 (8).

Potential VME

***Bamboo coral* (Bamboo)**	
Phylum:	Cnidaria
Class:	Anthozoa **Subclass:** Octocorallia
Order:	Alcyonacea
Suborder:	Calcaxonia
Family:	Isididae
Genera:	-
Species:	-
Common name:	Bamboo coral







Distinguishing features

Hollow, calcified, inflexible and segmented axes composed of nodes of horn and solid internodes of non-spicular calcium carbonate; giving 'bamboo-like' appearance. Tree-like with fine fragile branches. Specimens brittle, handle with care. Three genera reported from South Africa, *Keratoisis* species branch from the calcareous nodes and *Acanella* branches from horny internodes. *Chathamisis* is the third genus reported from South Africa. Skeleton surface is smooth (not porous or sandpapery as in stylasterine or noble corals). Global taxonomic work underway on this group and further work needed in South Africa.

Colour

Polyps are highly variable in colour. Rust-coloured, orange, pink and white colonies noted; when flesh is scraped away the skeleton is revealed with white internodes with brown joints (nodes).

Size

Colonies usually ranging between 50 and 300 mm in height; larger *in-situ*.

Distribution

Cosmopolitan, reported from West and South Coasts of South Africa; 200-4 850 m depth range.

Similar species

Could be confused with other sea fans if in small pieces. Bamboo corals break more easily than other sea fans. Bamboo corals are finer than hydrocorals (stylasterine corals) and have a smooth skeleton texture. Tissue is easily scraped from the colony revealing a white, smooth, calcareous skeleton. Parisididae (suborder Scleraxonia) are easily confused with bamboo corals but not yet recorded in South Africa. Please retain specimens.

References

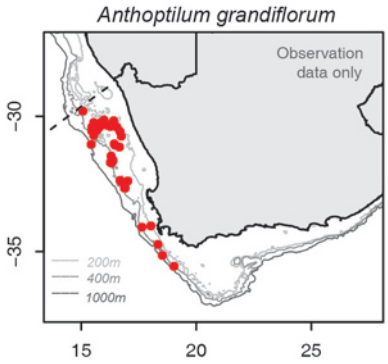
Fabricius KK and Alderslade PP. 2001. *Soft corals and sea fans: a comprehensive guide to the tropical shallow water genera of the central-west Pacific, the Indian Ocean and the Red Sea*. Australian Institute of Marine Science. p. 64.

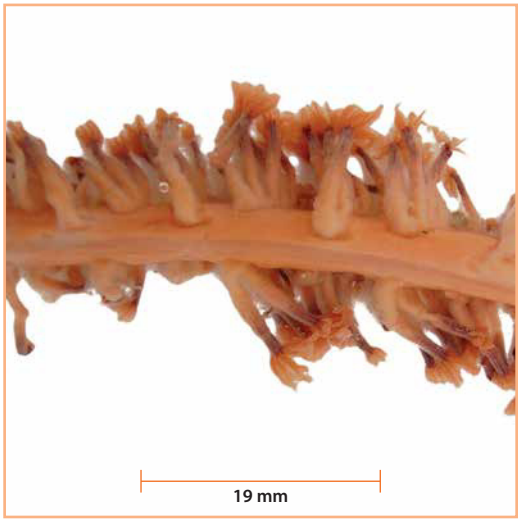
Williams GC. 1992. The Alcyonacea of Southern Africa. Gorgonian octocorals (Coelenterata, Anthozoa). *Annals of the South African Museum* 101 (8).

Potential VME

Anthoptilum grandiflorum (Virgil)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Octocorallia
Order:	Pennatulacea
Family:	Anthoptilidae
Genus:	*Anthoptilum*
Species:	*grandiflorum*
Common name:	Large sea pen





Distinguishing features

Large, whip-like central stem (calcareous rod/rachis), sometimes protruding from the top of specimens. Tentacled polyps in short, oblique rows, united at base, forming five to ten polyps per row. Polyps fused into small 'leaves', arranged in two opposing lateral rows on central stem. Base of stem (peduncle) inflated to assist rooting in soft sediment. Peduncle stout and robust, not more than 1/5th total colony length.

Colour

Variable; orange to pink or brown, but also bright red.

Size

Variable; colonies mostly up to 600 m in height, but can reach in excess of 1 m.

Distribution

Cosmopolitan, West Coast of South Africa; at 200-2 500 m depth range.

Similar species

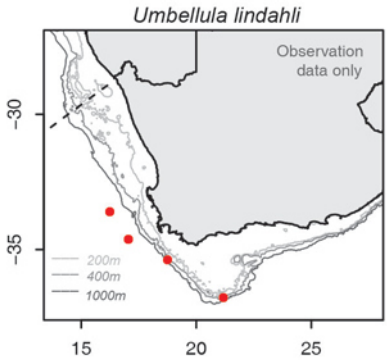
None.

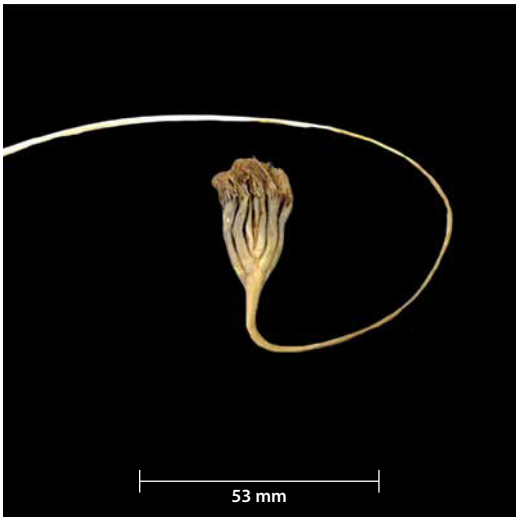
References

Williams GC. 1990. The Pennatulacea of Southern Africa (Coelenterata, Anthozoa). *Annals of the South African Museum* 99 (4).

Umbellula lindahli (UmbLin)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Octocorallia
Order:	Pennatulacea
Family:	Umbellulidae
Genus:	*Umbellula*
Species:	*lindahli*
Common name:	Umbrella sea pen





Distinguishing features
Polyps arranged in cluster at end of long, thin stalk (rachis), giving umbrella-like appearance. Thin (1-2 mm width) rachis conspicuously quadrangular in transverse section. Terminally clustered, slender polyps have eight to ten autozooids, each 20-30 mm in length. Sclerites (requiring microscopic examination) are absent.

Colour
Pale pink to orange in colour.

Size
250 to 300 mm in length. Reportedly can reach up to more than 1 m in length.

Distribution
Cosmopolitan (490-2 963 m). Recorded on West and South Coasts of South Africa.

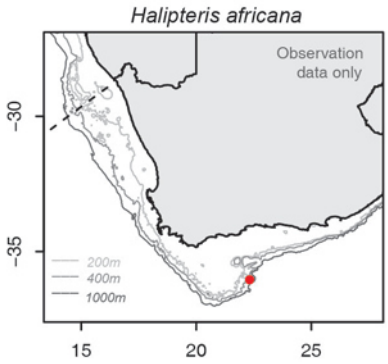
Similar species
Umbellula thompsoni (10 autozoids of 10-15 mm length) and other species may be present in South Africa. Please retain potential new records.

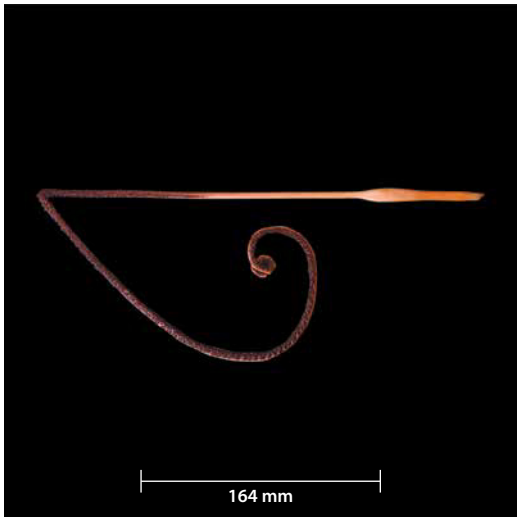
References
Williams GC. 1990. The Pennatulacea of Southern Africa (Coelenterata, Anthozoa). *Annals of the South African Museum* 99 (4).

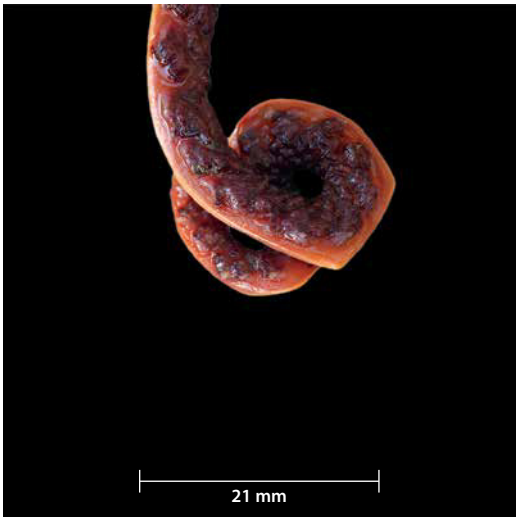
Williams GC. 2011. The Global Diversity of Sea Pens (Cnidaria: Octocorallia: Pennatulacea). *PLoS ONE* 6(7): e22747. doi:10.1371/journal. pone.0022747.

Halipteris africana (Virgul)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Octocorallia
Order:	Pennatulacea
Family:	Halipteridae
Genus:	*Halipteris*
Species:	*africana*
Common name:	Whip sea pen







Distinguishing features

Whip-like colony. Peduncle (lower section without polyps including the end bulb) stout with stiff internal axis that is rounded to rounded-quadrangular. Polyps arranged in numerous oblique rows (up to three to seven per row, usually four to six).

Colour

Pale orange, yellow to white rachis with deep purple to red-brown polyps.

Size

Approximately 10-15 mm wide. Length 200-1 550 mm. Peduncle length usually about 200 mm.

Distribution

West and South Coasts of South Africa. Reported from the Atlantic Coast of Africa between 400-700 m.

Similar species

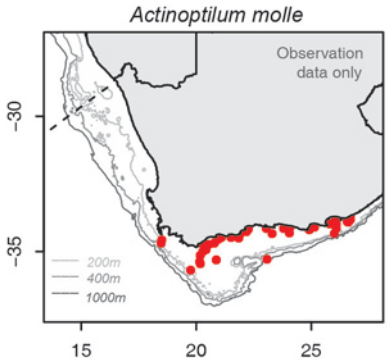
Virgularia species from South Africa are generally shorter with fleshier polyps and are more common in shallower water. There are other unidentified *Halipteris* species known from South Africa.

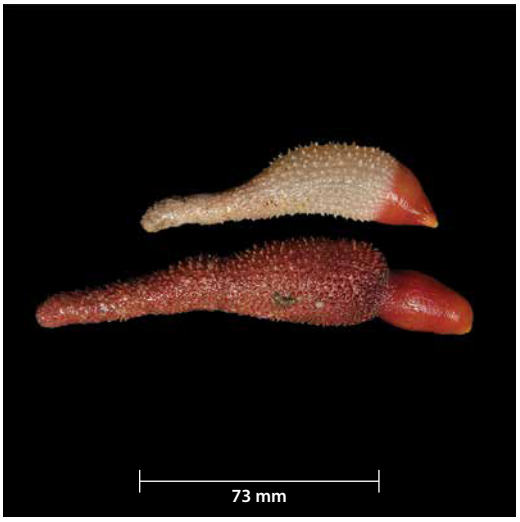
Reference

Williams GC. 1990. The Pennatulacea of Southern Africa (Coelenterata, Anthozoa). *Annals of the South African Museum* 99 (4).

Actinoptilum molle (ActMol)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Octocorallia
Order:	Pennatulacea
Family:	Echinoptilidae
Genus:	*Actinoptilum*
Species:	*molle*
Common name:	Radial sea pen





Distinguishing features

Cylindrical, plump and sausage-shaped colony. Densely clustered polyps project along approximately three quarters of body. Radial symmetry of the rachis, which tapers gradually to a rounded apex. Polyps distributed evenly on all sides, often forming longitudinal rows. Thick peduncle, tapering gradually, usually 1/5th to 1/3rd total colony length.

Colour

Highly variable; white, yellow, red, orange, pink to purple and brown. The peduncle varies between yellow, white, pinkish or brownish.

Size

Up to 240 mm, but most in the range from 60 to 80 mm in length.

Distribution

Southern African endemic. Cape Columbine to Inhaca Island (Mozambique). Known depth range 12-333 m.

Similar species

Cavernularia spp., but polyps distributed over more of body and polyps usually retracted on deck. Compared to *Veretillum* spp., *A. molle* has a radially symmetrical rachis.

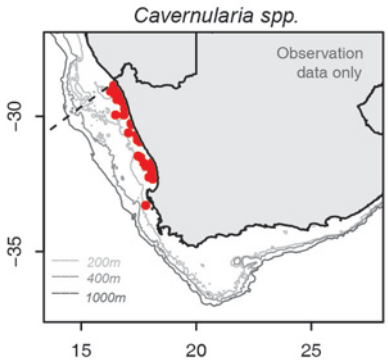
References

Williams GC. 1990. The Pennatulacea of Southern Africa (Coelenterata, Anthozoa). *Annals of the South African Museum* 99 (4).

Williams GC. 2011. The Global Diversity of Sea Pens (Cnidaria: Octocorallia: Pennatulacea). *PLoS ONE* 6(7): e22747. doi:10.1371/journal. pone.0022747.

Cavernularia spp. (SeaPen)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Octocorallia
Order:	Pennatulacea
Family:	Veretillidae
Genus:	*Cavernularia*
Species:	spp.
Common name:	Small sea pen



Distinguishing features
Colony is club-shaped with radial symmetry, may be cylindrical and club-shaped (clavate) or capitate (forming a head). Densely clustered polyps on approximately half of body evenly distributed on all sides. Thick peduncle tapering gradually to rounded apex. Peduncle slightly swollen near the junction with the rachis.

Colour
Pale orange, cream to white or grey.

Size
20-70 mm in length.

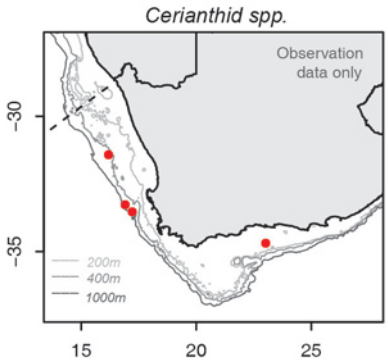
Distribution
West Coast of South Africa.

Similar species
Actinoptilum molle, but *Cavernularia* spp. has polyps projecting along only half of the body whereas *A. molle* has polyps over about three quarters of the colony.

Reference
Williams GC. 1990. The Pennatulacea of Southern Africa (Coelenterata, Anthozoa). *Annals of the South African Museum* 99 (4).

Cerianthid spp. (Cerran)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Ceriantharia
Order:	Spirularia
Family:	Cerianthidae
Genus:	Cerianthid
Species:	spp.
Common name:	Burrowing anemone



Distinguishing features

Cerianthids have a crown of two whorls of different sized tentacles. The outer whorl consists of large, long tentacles that are used for food capture and defence. The smaller, shorter, inner tentacles are held more erect. Cerianthids are also called 'tube-dwelling anemones' because they live in long tubes buried in soft sediment, with only their tentacles exposed on the seabed surface. They readily withdraw their tentacles deep inside the tube on the slightest level of disturbance and are therefore not often captured in a trawl net.

Colour

Variable.

Size

Up to 30 cm in diameter when tentacles are expanded.

Distribution

West and South Coasts of South Africa.

Similar species

Further burrowing anemones likely to be present. Additional collections and work on cerianthids needed in South Africa.

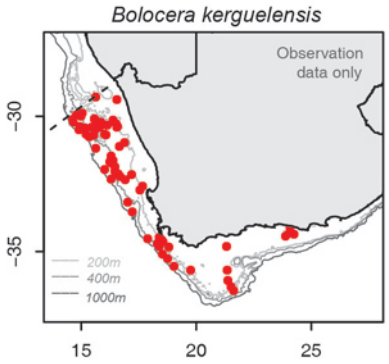
References

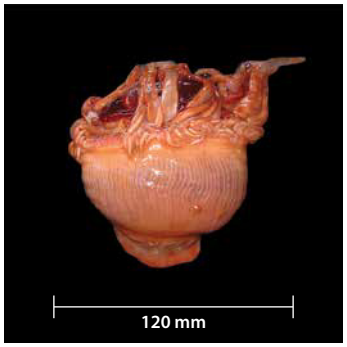
Hartog JC den. 1977. Descriptions of two new Ceriantharia from the Caribbean region, *Pachycerianthus curacaoensis* n. sp. and *Arachnanthus nocturnus* n. sp., with a discussion of the cnidom and of the classification of the Ceriantharia. *Zoologische Mededelingen* 51(14): 211-242.

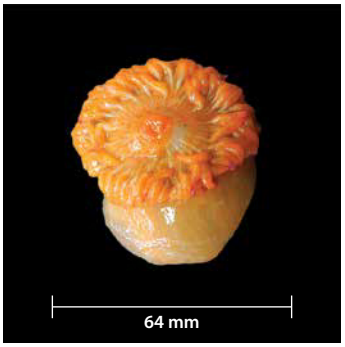
Molodtsova TN, Griffiths CL and Acuña FH. 2011. A new species of shallow-water cerianthid (Cnidaria: Anthozoa) from South Africa, with remarks on the genus Ceriantheopsis. *African Natural History* 7(1) pp.1-8.

Bolocera kerguelensis (Anemo2)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Actiniidae
Genus:	*Bolocera*
Species:	*kerguelensis*
Common name:	Blush/Coral anemone







Distinguishing features

Soft, smooth body wall that does not retain shape well out of water. Usually covered in slime. Up to 160 long tentacles, usually somewhat retracted on deck but still visible. Tentacles are often shed (released from the oral disc when disturbed) and this is diagnostic (also known as the tentacle-shedding anemone). Dark pink in colour, with smooth column which becomes horizontally wrinkled in the preserved state.

Colour

Variable but usually dark pink, orange to brown. Colour uniform with tentacles and body colour similar.

Size

Up to 100 mm height but small individuals are common. Preserved diameter of column 30-35 mm.

Distribution

West and South Coasts of South Africa; 81-750 m. Common.

Similar species

Actinostola capensis, but *A. capensis* is more rigid with a tougher body wall.

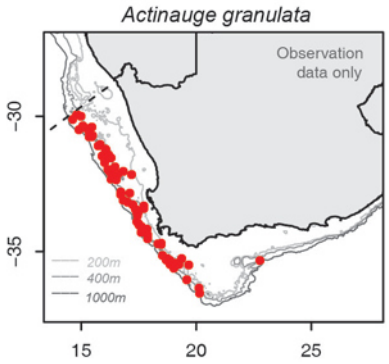
References

Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia.* Unpublished PhD thesis. University of Cape Town.

Laird MC and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1): 15-37.

Actinauge granulata (ActRic)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Hormathiidae
Genus:	*Actinauge*
Species:	*granulata*
Common name:	White anemone



Distinguishing features
Tough, leathery body wall, cylindrical in shape with warty projections or ridges, often covered with fine sediment. Usually with 96 tentacles, mostly or completely retracted when on deck, but will emerge when placed in seawater and relaxed.

Colour
White exterior body walls, often covered with fine sediment. Maroon or red/brown mouth.

Size
Large, 100 mm height. Diameter of column up to 60 mm.

Distribution
West and South Coasts of South Africa.

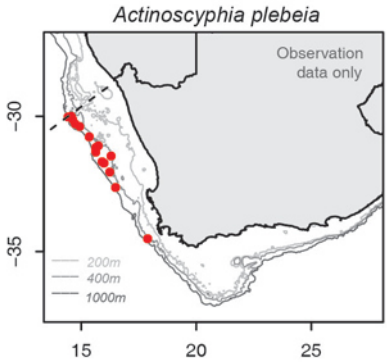
Similar species
None known.

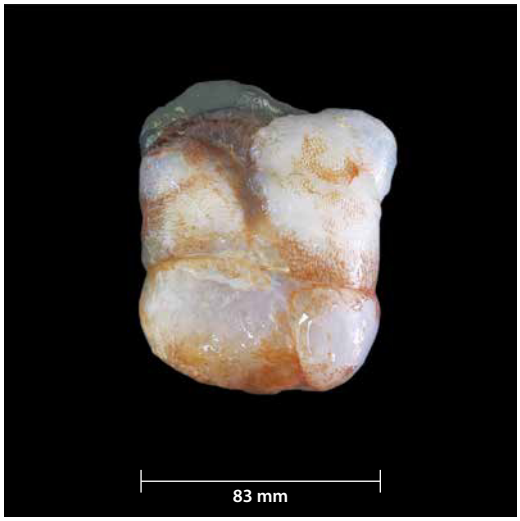
References
Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia.* Unpublished PhD thesis. University of Cape Town.

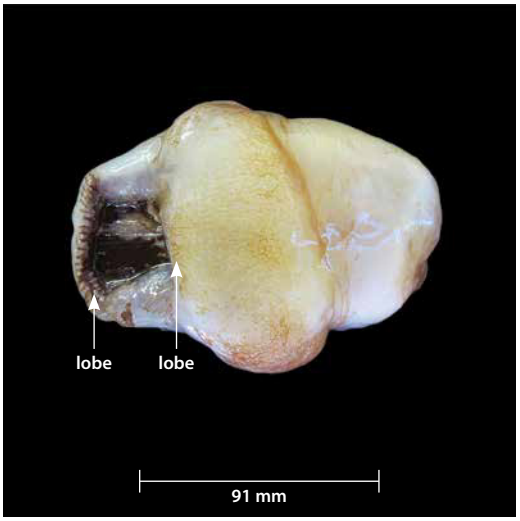
Laird MC and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1) 15-37.

Actinoscyphia plebeia (Anemo3)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Actinoscyphiidae
Genus:	*Actinoscyphia*
Species:	*plebeia*
Common name:	Maroon anemone







Distinguishing features

Fairly toughened body wall, smooth and slimy. Tentacles always well retracted on deck but occur on two distinct lobes. Between 96 and 140 short pointed tentacles arranged in two or three cycles close to the margin.

Colour

Pale pink to white, or cloudy grey on outside body wall, with mottled maroon/brown colouration patterns. Deep maroon colour tentacles visible inside of two lobes.

Size

Up to 100 mm height. Pedal disc 25-85 mm.

Distribution

Mainly West Coast of South Africa (recorded once on South Coast). Recently reported for the first time in South Africa based on Department of Agriculture, Forestry and Fisheries (DAFF) collections. Known depth 128-866 m.

Similar species

Actinostola capensis, but *A. capensis* is brighter pink in colour and does not have mottled colouration on body wall or maroon tentacles, is less slimy and does not have the two distinct lobes on which tentacles are held.

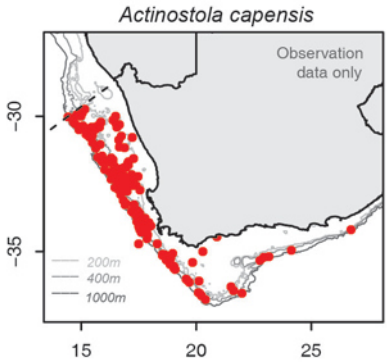
References

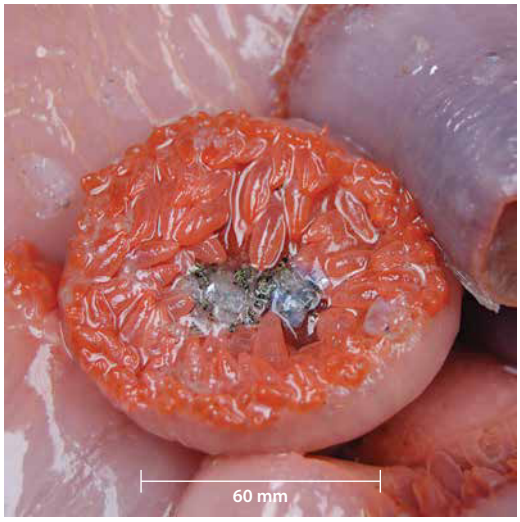
Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia*. Unpublished PhD thesis. University of Cape Town.

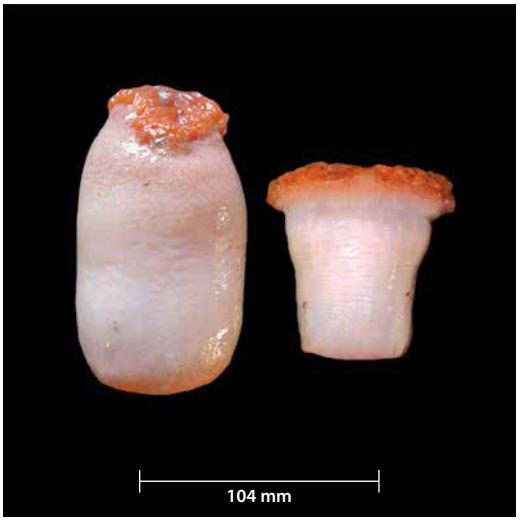
Laird MC and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1) 15-37.

Actinostola capensis (Anemo1)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Actinostolidae
Genus:	*Actinostola*
Species:	*capensis*
Common name:	Pink/Orange jelly anemone







Distinguishing features

Large anemone with fairly toughened body wall, pink to orange in colour with many (up to 450) short tentacles. When contracted, tentacles not completely covered by column. Cup-shaped with the base narrower than mouth, which may form lobes. Secretes watery slime. Distinct sucker-type foot/disc. Acontia (threadlike defence organs) absent in this genus.

Colour

Pink to pale orange, often described as flesh or rose coloured. Tentacles darker than body wall.

Size

Up to 150 mm height. Oral disc 40-155 mm. Pedal disc 35-75 mm.

Distribution

South African endemic. West and South Coasts of South Africa, abundant species. 81-1 005 m depth.

Similar species

Bolocera kerguelensis, but *B. kerguelensis* has much softer body wall and does not retain shape well out of water.

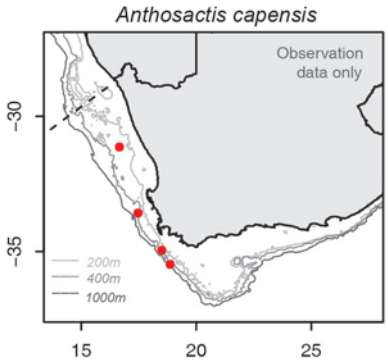
References

Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia.* Unpublished PhD thesis. University of Cape Town.

Laird MC and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1) 15-37.

Anthosactis capensis (AntCap)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Amphianthidae
Genus:	*Anthosactis*
Species:	*capensis*
Common name:	Small cup/Rose anemone



Distinguishing features

Small, firm anemone, pale body with dusky red/pink tentacles. Acontia absent. Base narrower than oral disc. Short tentacles, with outer tentacles slightly shorter than inner tentacles.

Colour

Pale cloudy grey to light pink/purple body; tentacles a burnt orange colour.

Size

Live height 25 mm, base 10 mm, oral disc 40 mm.

Distribution

South African endemic. West and South Coasts of South Africa.

Similar species

Distinguishable from *Amphianthus capensis* and *Isophellia algoaensis* due to lack of acontia. Broad, cup-shaped oral disc distinguishable from that of *Actinostola capensis* and *Halcurias capensis*.

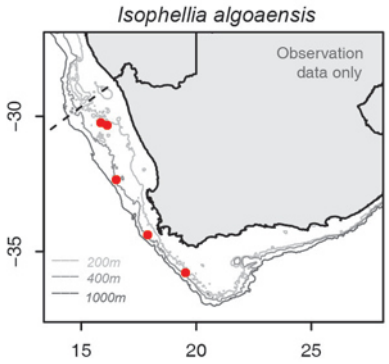
References

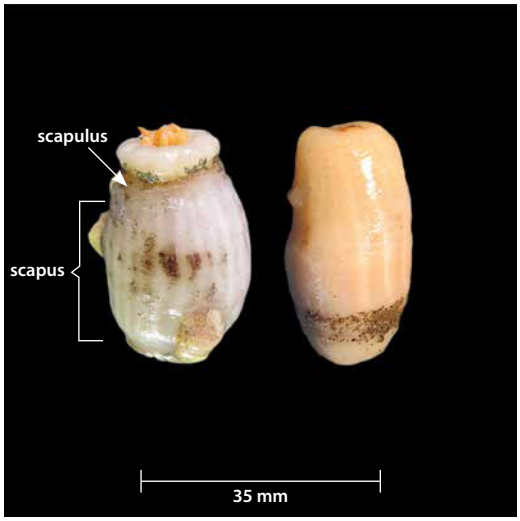
Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia.* Unpublished PhD thesis. University of Cape Town.

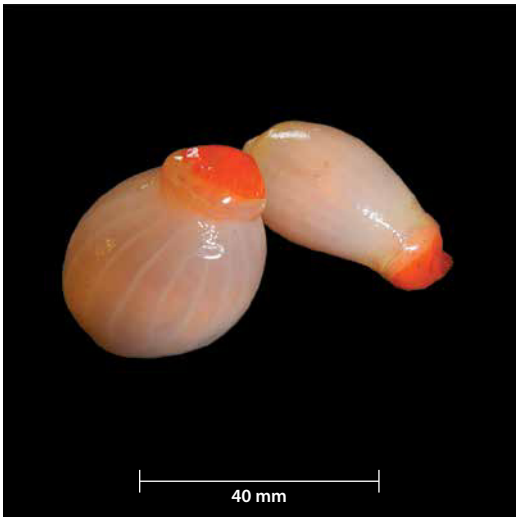
Laird MC and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1) 15-37.

Isophellia algoaensis (IsoAlg)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Isophellidae
Genus:	*Isophellia*
Species:	*algoaensis*
Common name:	Rugby ball anemone







Distinguishing features

Small, solid, oval-shaped anemone. Often has visible pale bands running longitudinally along length of body wall. Up to 96 short tentacles with inner tentacles longer than outer. Acontia (threadlike defence organs) present. Can have sediment particles sticking to base where buried in sand and may invaginate at base when removed from substrate (giving tapered rugby-ball shape at both ends).

Colour

Pale pink to orange with white/lighter bands visible. Sometimes translucent. Tentacles orange.

Size

Up to 40 mm in height.

Distribution

West Coast, Hondeklip Bay to South Coast, East London; depth range of 14 -1 240 m reported. More common on West Coast of South Africa.

Similar species

Like *Amphianthus capensis*, this species has acontia (threadlike defence organs), but the column is divided into two sections: a scapus and a scapulus.

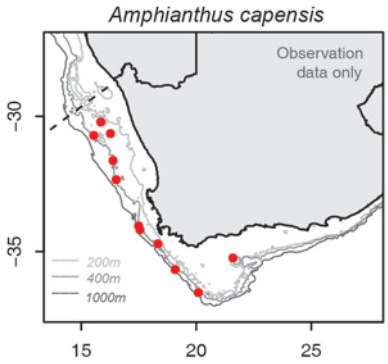
References

Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia*. Unpublished PhD thesis. University of Cape Town.

Laird MC and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1) 15-37.

Amphianthus capensis (AmpCap)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Hormathiidae
Genus:	*Amphianthus*
Species:	*capensis*
Common name:	Rock/Volcano/Splitting anemone



Distinguishing features

Short, squat, pale anemone with up to 110 small, thin tentacles that are bright red/orange/pink. Often attach to stones or other hard objects. Wide adherent pedal disk also allows this species to attach to octocorals. Acontia (white defensive threads) present that may be triggered when disturbed. Note bumps (mesogleal papillae) along oral margin.

Colour

Pale orange/pink with bright red/orange tentacles. Colour diagnostic.

Size

Up to 30 mm width by 30 mm height. Pedal disc diameter 25 mm.

Distribution

West Coast, Port Nolloth to South Coast, Port Elizabeth; reported from 12-623 m depth. One record from Sodwana (12 m), South Africa, may be misidentified. Also reported from Alaska.

Similar species

Distinguishable from *Actinostola capensis* and *Anthosactis capensis* by presence of acontia. *Isophellia algoaensis* also has acontia but is distinctly more elongated and has visible longitudinal bands on the column.

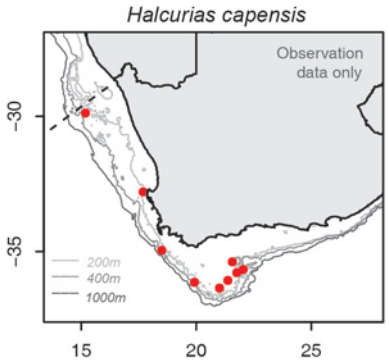
References

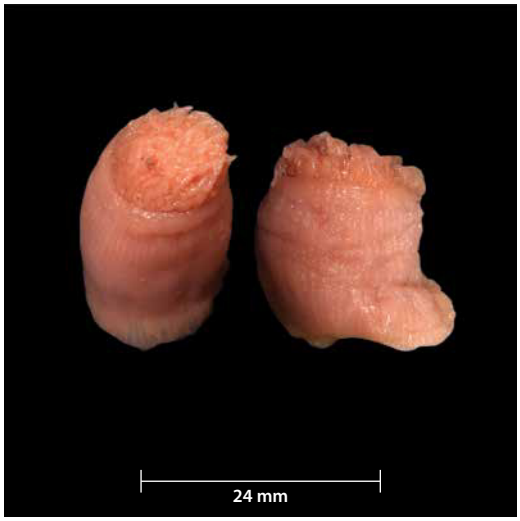
Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia*. Unpublished PhD thesis. University of Cape Town.

Laird MC. and Griffiths CL. 2016. Additions to the South African sea anemone (Cnidaria, Actinaria) fauna, with expanded distributional ranges for known species. *African Invertebrates* 57(1) 15-37.

Halcurias capensis (HalCap)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Actiniaria
Family:	Halcuriidae
Genus:	*Halcurias*
Species:	*capensis*
Common name:	Ridged anemone





Distinguishing features
Body pale and firm, 30-68 bright orange and fairly short tentacles, rarely withdrawn into the body. Column stout and smooth, with distinguishing longitudinal ridges running the length of the column (not always evident in live specimens). Lacks acontia.

Colour
Pale body, often yellow, bright orange to red tentacles and oral disc.

Size
Height 10-25 mm. Preserved pedal disk 3-22 mm.

Distribution
West and South Coasts of South Africa. Known from depths of 25-329 m. Endemic.

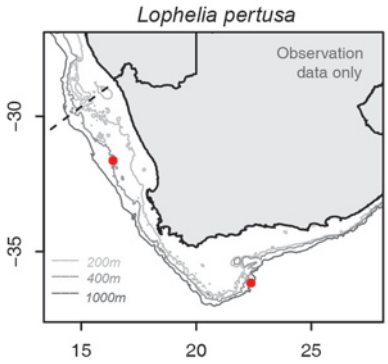
Similar species
Anthosactis capensis which is broader, has a cup-shaped oral disc and lacks ridges. Unlike *Actinostola capensis, Halcurias capensis* does not release slime.

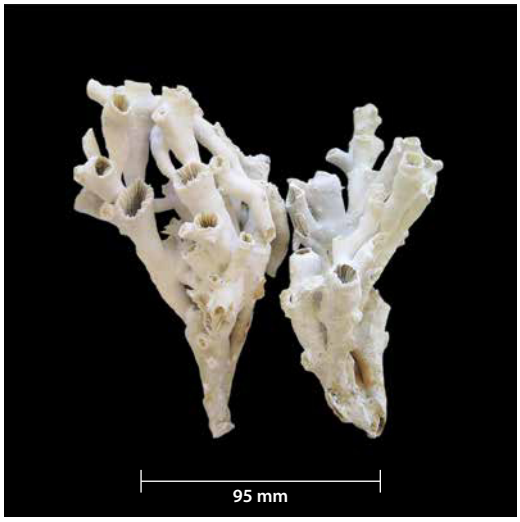
Reference
Laird MC. 2013. *Taxonomy, Systematics and Biogeography of South African Actiniaria and Corallimorpharia.* Unpublished PhD thesis. University of Cape Town.

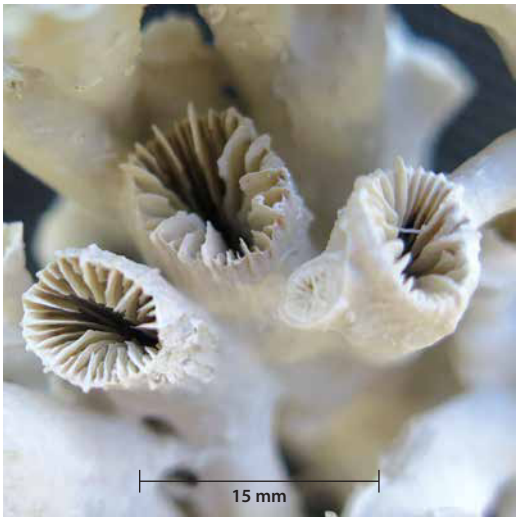
Potential VME

Lophelia pertusa (LopPer)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Caryophylliidae
Genus:	*Lophelia*
Species:	*pertusa*
Common name:	Reef-building cold water coral







Distinguishing features

Solid calcified branching skeleton, forming three-dimensional colonies or matrices. Skeleton calcareous, hard and brittle, giving glassy appearance. Each branch bearing terminal coral polyp with a single (unequal monostomaeous) budding giving an "r" shape rather than a "v" shape.

Colour

Variable; yellow, orange to pink or white when live, dead colonies being white, pinkish or brownish.

Size

Variable; colony height of 10 m reported.

Distribution

Semi-cosmopolitan, at 39-2 775 m depth range.

Similar species

Solenosmilia has equal budding with branching in a "v" shape whereas *Lophelia* branches are unequal (more of an "r" shape). *Lophelia* lacks the coenosteal bridges (small hollow tubes joining adjacent corallites) present in *Goniocorella,* which also has extratentactacular budding (new polyps added to the oral disc outside the ring of tentacles). *Lophelia* colonies often heavy and more robust than either *Goniocorella* or *Solenosmilia,* but conditions influence growth form. Several species may grow together in coral thickets.

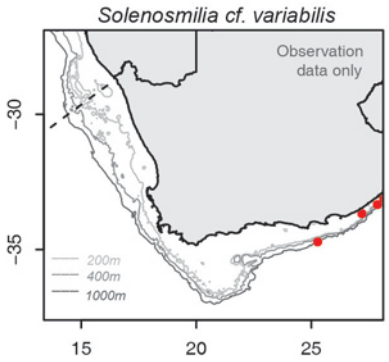
References

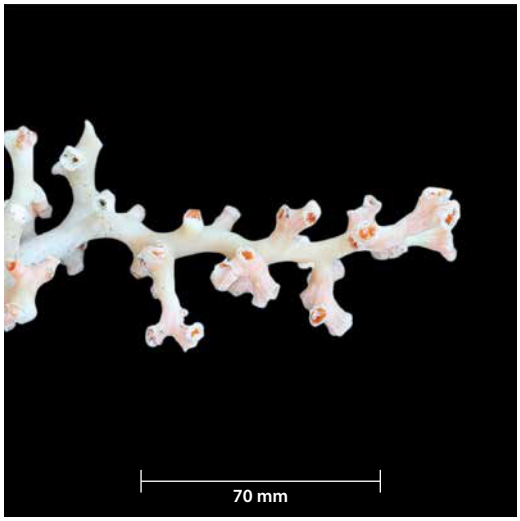
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612.

Potential VME

Solenosmilia cf. *variabilis* (Solen)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Caryophylliidae
Genus:	*Solenosmilia*
Species:	cf. *variabilis*
Common name:	Thicket coral





Distinguishing features

Large bushy colonies, equal three-dimensional branching, with dichotomous (dividing in two) branching of terminal polyp cups in a 'V' shape or approximately equal-sized branches. Intra-tentacular branching (i.e. new polyps added to the oral disc within the ring of tentacles). Texture of corallum smooth or costate (ridged). Septa (longitudinal partitions or plates within corallite) arranged normally (i.e. never bend and fuse into a Pourtalès plan).

Colour

Pink to beige (live), brownish white when dead.

Size

Reef-building species. Can form dense thickets standing tens of metres off seabed. More than a ton has been trawled on occasions.

Distribution

Semi-cosmopolitan, South Coast of South Africa; at 220-2 165 m depth range.

Similar species

Lophelia, which also branches from within the tentacle ring, but branches are unequal (leading to more "r" than "v" shaped branches), the corallums have only one mouth in *Lophelia*. *Goniocorella dumosa* has extratentacular branching and at right angles. *Solenosmilia* has thicker branches and lacks tubular bridges. Several species may grow together in coral thickets.

References

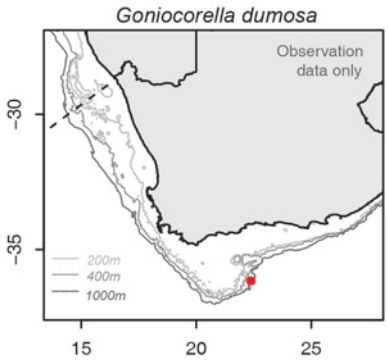
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612. p. 23.

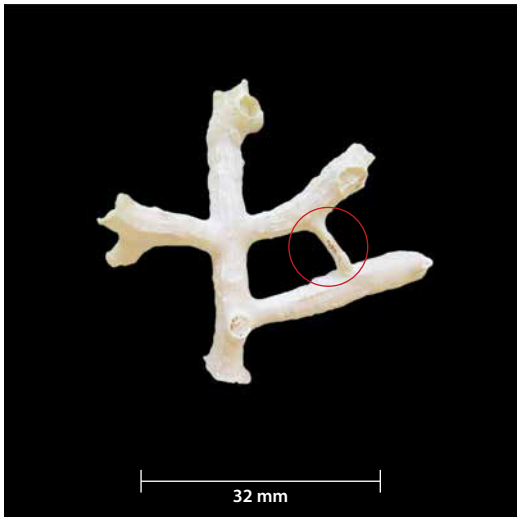
Cairns SD and Polonio V. 2013. New records of deep-sea Scleractinia off Argentina and the Falkland Islands. *Zootaxa* 3691(1): 58-86.

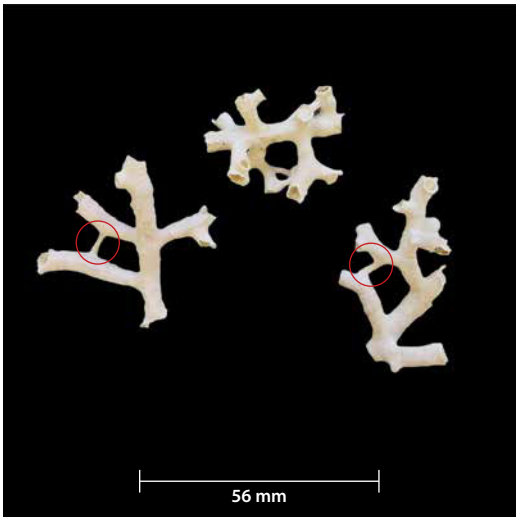
Potential VME

Goniocorella dumosa (Gonio)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Caryophylliidae
Genus:	*Goniocorella*
Species:	*dumosa*
Common name:	Fine bridge coral







Distinguishing features

Small, highly branched, bushy colonies, with adjacent branches often linked with hollow tubular bridges (circled in red). Branching is extratentacular (i.e. new polyps are added to the oral disc outside the ring of tentacles). Polyps tend to branch at right angles and branching is apart from any calice (i.e. the branches divide further away from calices than in other thicket-forming taxa).

Colour

Brownish; white in museum collections.

Size

May form very dense large thickets.

Distribution

In South Africa reported from between 86 and 760 m on the South Coast and from KwaZulu-Natal. Also known from New Zealand, Indonesia and Korea (88-1 488 m).

Similar species

Solenosmilia and *Lophelia* are generally thicker, both have intra-tentacular branching (branching at or close to calices) and lack small tubular bridges. *Solenosmilia* and *Lophelia* colonies are heavier.

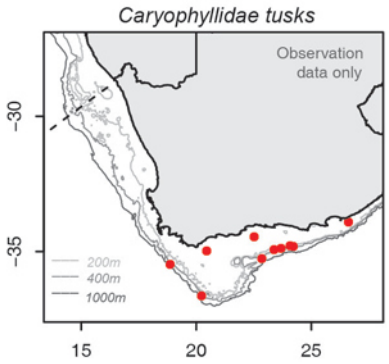
References

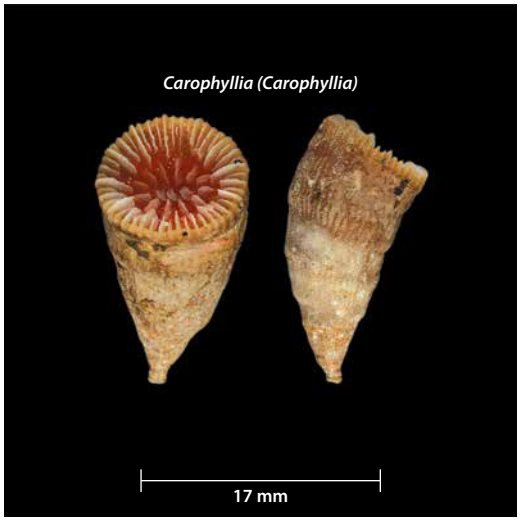
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612. p. 23.

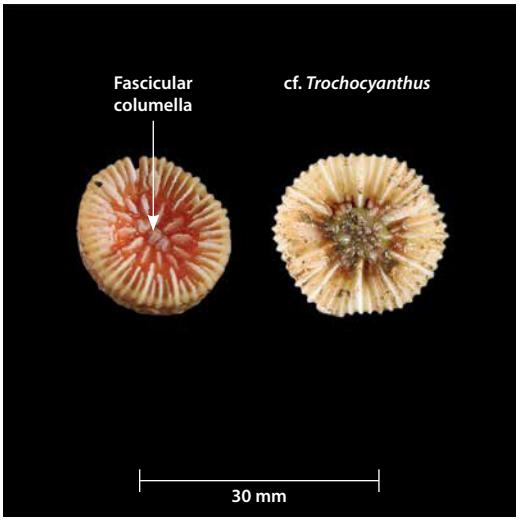
Roberts JM, Wheeler A, Freiwald A and Cairns SD. 2009. *Cold-Water Corals: The Biology and Geology of Deep-Sea Coral Habitats*. p. 32. Cambridge University Press.

Caryophyllidae tusks (Caryo)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Caryophyllidae
Genera:	*Caryophyllia / Trochocyathus*
Species:	spp.
Common name:	Small solitary tusk (conical) corals







Distinguishing features
Small cup, with twisted, pointed (ceratoid) base, ending with flat, cylindrical top. Concentric radially arranged septa in oral cavity and central portion (columella) composed of a series of twisted lamellae (fasicular) in *Carophyllia*. Always solitary with indication of a firm attachment point. Corallum often curved. *Caryophyllia* (*Caryophyllia*) (left) has a set of twisted plates in the centre (i.e. fascicular), whereas *Trochocyathus* has a papillose centre (i.e. series of rods).

Colour
White or beige, with tint of orange or pink at base.

Size
From 10 to 40 mm wide, up to 50 mm high.

Distribution
Cosmopolitan; West and South Coasts of South Africa. More common in deep water (> 300 m).

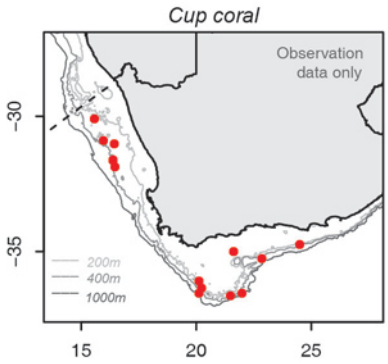
Similar species
Other small solitary cup corals such as *Conotrochus* (Carophyllidae, also with a fasicular columella) lack a firm attachment point. Identification requires careful examination of septa. *Sphenotrochus (*Family Turbinoliidae*)* are usually smaller, with a rounded base and seem to be seldom collected on routine demersal trawl surveys. They have a corallum composed of plates rather than rods. Other small solitary cup corals do not have a pointed base; *Balanophyllia* also has septa that bend and fuse (Pourtalès plan). *Javania* (Flabellidae) has a reinforced pedicel (area just above base).

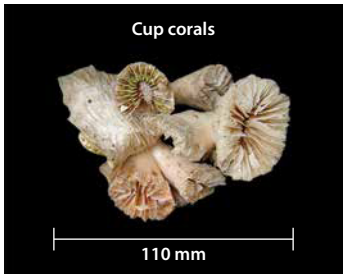
References
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612. p. 23.

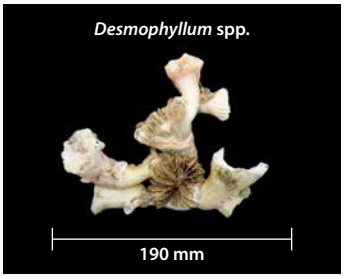
Kitahara MV, Cairns SD and Miller DJ. 2010. Monophyletic origin of Caryophyllia (Scleractinia, Caryophylliidae), with descriptions of six new species. *Systematics and Biodiversity*, 8(1). pp. 91-118.

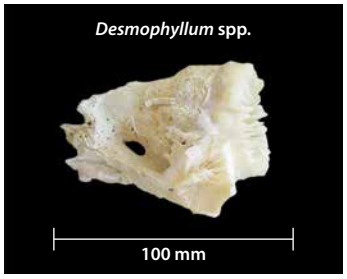
Cup coral (Caryo2)

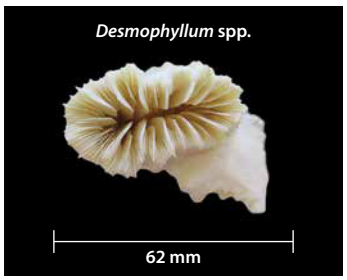
Phylum:	Cnidaria
Class:	Anthozoa (Subclass: Hexacorallia)
Order:	Scleractinia
Family:	Various
Genera:	*Desmophyllum, Caryophyllia, Balanophyllia, Rhizosmilia, Rhizopsammia* and others
Common name:	Cup corals

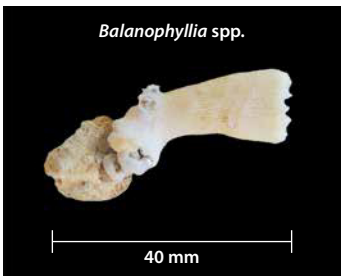


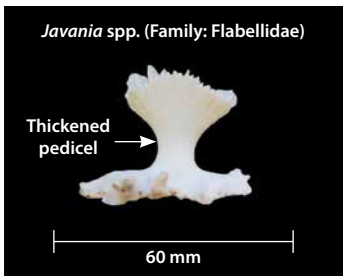












Distinguishing features

Cup corals of variable size and shape (usually between 15 mm and 150 mm length) from cylindrical, oval to serpentine. These corals may occur in clumps and it may be challenging to determine whether solitary or colonial and to genus level on deck. *Desmophyllum* are large solitary cup corals with a calice that is elliptical in shape, septa that are never fused and no columella. These corals may fuse at the base giving the impression of colonial corals. *Rhizosmilia* are colonial corals that branch from a stolon (often with massive pedicel) and they have a columella. *Rhizopsammia* colonies are connected by stolons but may appear solitary. Like *Balanophyllia*, they have some fusing of septa (Pourtalès plan). *Javania* spp. have a very smooth texture of the coral wall (theca).

Colour

White.

Size

Up to 200 mm in diameter.

Distribution

West and South Coasts of South Africa, extending into very deep water. Semi-cosmopolitan.

Similar species

Rhizotrochus has rootlets (and the columella is absent/rudimentary). Individual corallites of *Rhizopsammia compacta* (i.e. broken off from the other colonies or substrate) cannot be distinguished from *Balanophyllia*. *Rhizopsammia* has a sandpapery corallum. Tusk corals are smaller, usually curved, have a clear attachment point and with a columella (centre) that is composed of a group of rods (papillose) in *Trochocyanthus* and a set of twisted plates (fasicular) in *Carophyllia (Carophyllia)*.

References

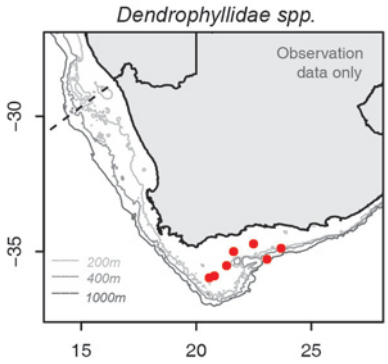
Cairns SD and Keller NB. 1993. New taxa and distributional records of azooxanthellate scleractinia (Cnidaria, Anthozoa) from the tropical South-west Indian Ocean, with comments on their zoogeography and ecology. *Annals of the South African Museum* Volume 103(5), pp. 213-292.

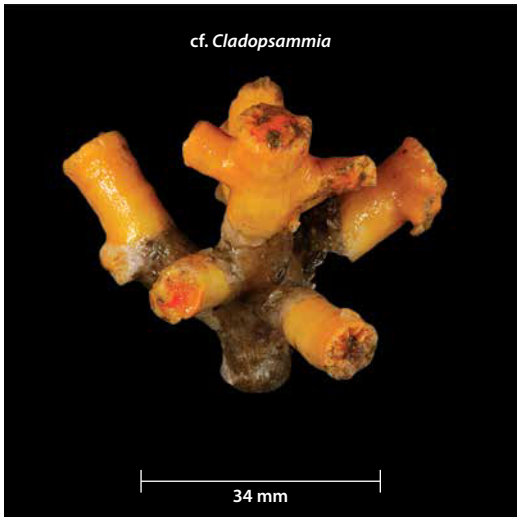
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612.

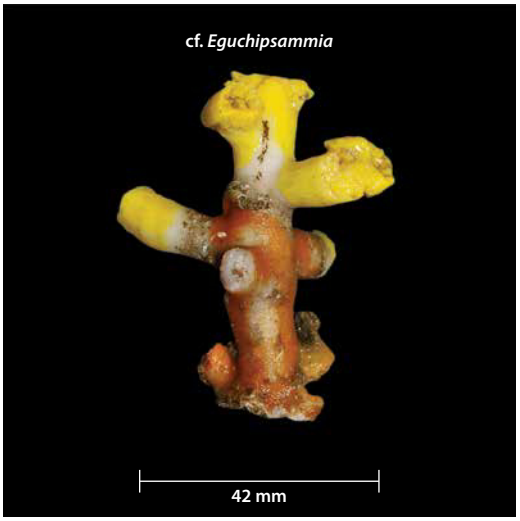
Balanophyllia capensis photographed from specimen USNM91776 provided by the Smithsonian National Museum of Natural History.

Potential VME

Dendrophyllidae spp. (CorDen)	
Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Dendrophylliidae
Genus:	*Cladopsammia* and *Eguchipsammia*
Species:	cf. spp.
Common name:	Right angled corals







Distinguishing features
Small bushy colonies, formed by extra-tentacular budding (branching away from any calyx and at close to right angles) from a common short base. Polyps fleshy with slimy tissue. The genera *Cladopsammia* and *Eguchipsammia* have colonies with septa arranged in a Pourtalès plan (septa bend and fuse). They are difficult to distinguish on deck but *Eguchipsammia* has a longer base and does not attach firmly to substrate. Current taxonomic work on this family is underway in South Africa. The more distinct ridging on the corallum and the branching at right angles may or may not be distinguishing features of *Cladopsammia*.

Colour
Orange or yellow, but may occur in other colours.

Size
Small colonies of 50-100 mm in South Africa. These taxa are not reef-forming but can comprise coral gardens (i.e dense cover).

Distribution
Only known from the South Coast of South Africa, Indo-Pacific and Atlantic; at 0-470 m depth range.

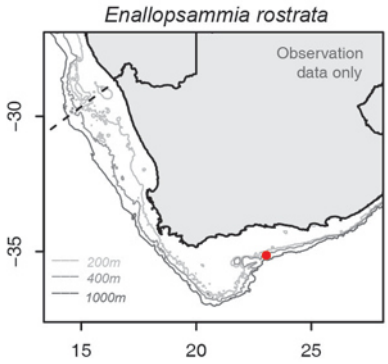
Similar species
Tubastraea spp. have normally arranged rather than fused septa and are usually from shallower water (<110m). *Dendrophyllia* spp. also have septa arranged in a Pourtalès plan and have multiple successive generations of budding that form an erect colony (arborescent or tree-like rather than bushy) or thicket-forming. A pale pink *Dendrophyllia* has been observed and collected from South Coast. Please retain.

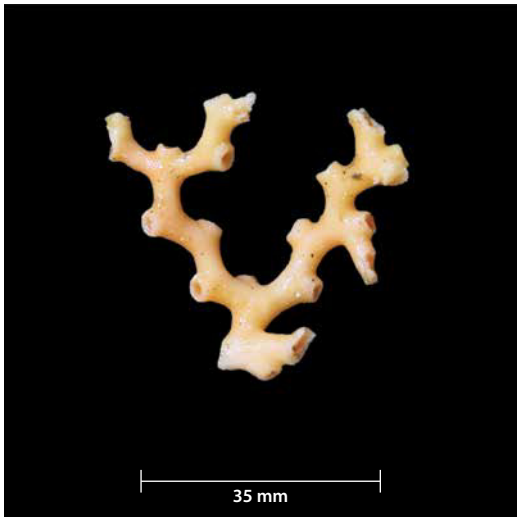
Reference
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612.

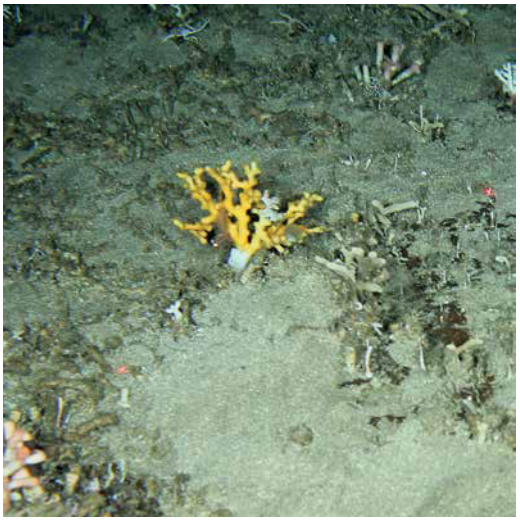
Potential VME

Enallopsammia rostrata (Enallo)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Dendrophyllidae
Genus:	*Enallopsammia*
Species:	*rostrata*
Common name:	Zigzag coral







Distinguishing features

Colonial, arborescent (tree-like growth) coral with extra-tentacular branching which occurs below the calice. Large calices on one side of the colony and normally arranged septa (i.e. do not bend and fuse to form Pourtalés plan). Texture of septa and theca (skeletal walls of corallites) rough.

Colour

Observed live in yellow or white.

Size

Total colony height of more than 400 mm observed *in situ*.

Distribution

South Coast of South Africa, deeper than 110 m. Globally 110-2 165 m. Also found in New Zealand.

Similar species

Similar to other small Dendrophylliidae species like *Cladopsammia* and *Eguchipsammia,* but readily distinguished by zigzag structure.

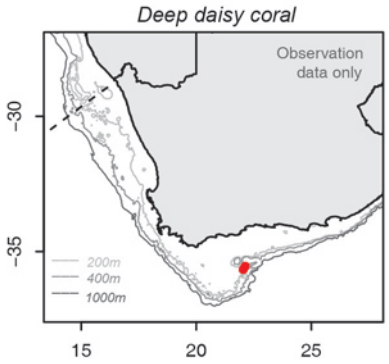
References

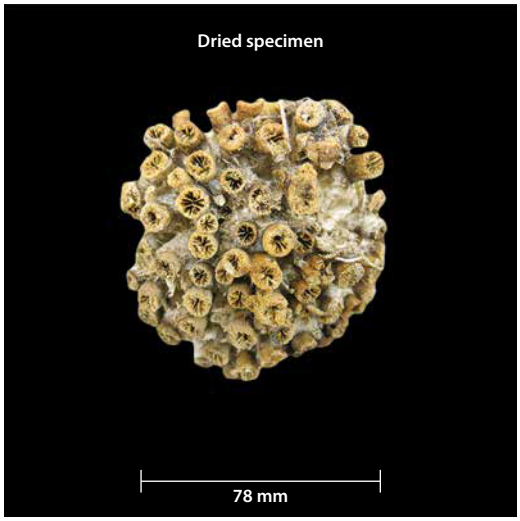
Cairns SD and Keller NB. 1993. New taxa and distributional records of azooxanthellate scleractinia (Cnidaria, Anthozoa) from the tropical South-west Indian Ocean, with comments on their zoogeography and ecology. *Annals of the South African Museum* Volume 103 Part 5.

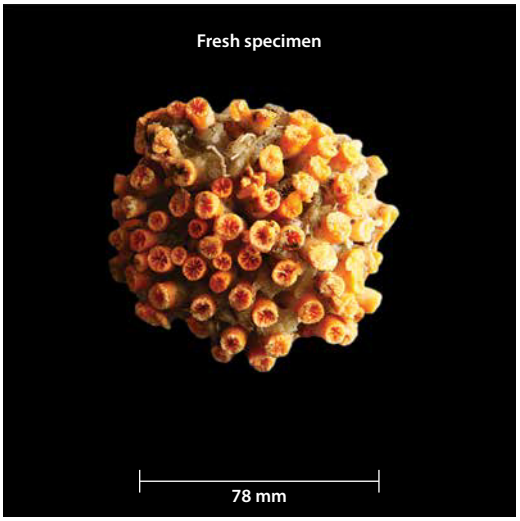
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612.

Deep Daisy Coral (Tubas)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Unidentified
Genus:	Unidentified
Species:	spp.
Common name:	Deep daisy coral







Distinguishing features
Colonial coral with corallites arising from a common base. This species superficially resembles *Coenocyathus* (Family Carophyllidae), other genera in the Family Rhizangidae (but axial edges of some septa should be finely dentate) or even *Tubastrea* (Dendrophyllidae), but further work is underway to identify this coral.

Colour
Skeleton white, pinkish or brownish. Polyps red, yellow, orange. Colour of polyps not distinguishing feature.

Size
Colonies.

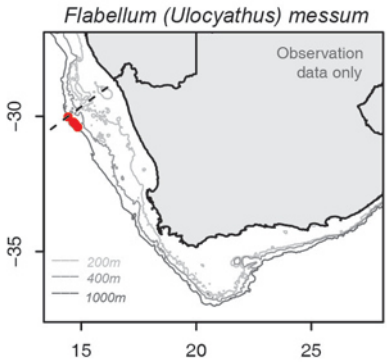
Distribution
South Coast of South Africa. Deeper than 110 m.

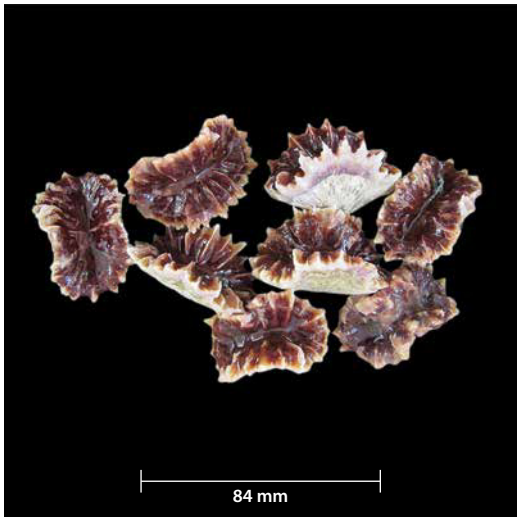
Similar species
Tubastrea known only from less than 110 m.

Reference
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227. 1-47 doi:10.3897/zookeys.227.3612. p. 23.

Flabellum (Ulocyathus) messum (Flabel)

Phylum:	Cnidaria
Class:	Anthozoa
Subclass:	Hexacorallia
Order:	Scleractinia
Family:	Flabellidae
Genera:	*Flabellum (Ulocyathus)*
Species:	*messum*
Common name:	Folded cup corals





Distinguishing features

Solitary, hard, laterally compressed (folded in half) cup giving purse-like appearance. Septa alternate between large and small in the calice (cup), giving jagged edges. Growth ridges evident along external wall. Has no obvious pedicel (stem) or base to attach to any substrate. Columella (central column that can be a plate, set of rods or folded membranes) rudimentary or absent.

Colour

Light calcareous skeleton with reddish brown to maroon corallum colour distinguishing *F. messum* from *F. lowekeyesi*.

Size

Variable; but individual corals up to 50 mm.

Distribution

Reported from West Coast of South Africa. Recorded from 385 to more than 1 000 m elsewhere.

Similar species

Other solitary cup corals, but *Flabellum* spp. appear to be folded laterally and have jagged edges. *F. pavoninum* and *F. lowekeyesi* are also present in South Africa. *Truncatoflabellum* species are usually smaller (<30 mm diameter), with smoother edges. Please retain similar taxa.

References

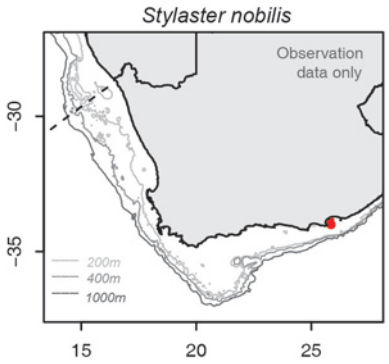
Cairns SD and Keller NB. 1993. New taxa and distributional records of azooxanthellate Scleractinia (Cnidaria, Anthozoa) from the tropical south-west Indian Ocean, with comments on their zoogeography and ecology. *Annals of the South African Museum*, 103(5):213-292.

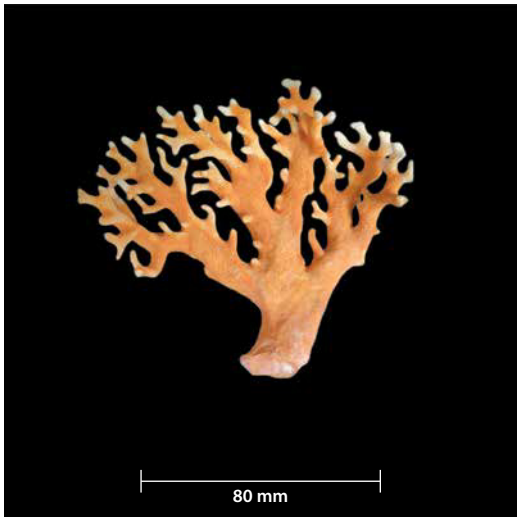
Cairns SD and Kitahara MV. 2012. An illustrated key to the genera and subgenera of the Recent azooxanthellate Scleractinia (Cnidaria, Anthozoa), with an attached glossary. *ZooKeys* 227: 1-47 doi:10.3897/zookeys.227.3612.

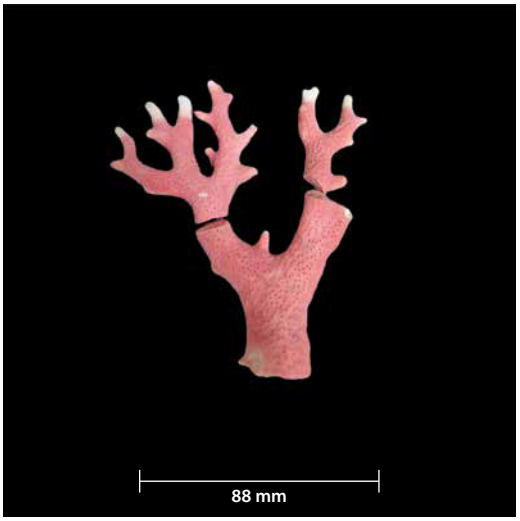
Potential VME

Stylaster nobilis (Allopo)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Anthoathecata **Suborder:** Filifera
Family:	Stylasteridae
Genus:	*Stylaster*
Species:	*nobilis*
Common name:	Noble coral







Distinguishing features

Hard, calcium carbonate skeleton with thick, robust main stem and sparse, thinner secondary dichotomous branches. Main and secondary stems branch in any direction, forming a multidimensional complex. Branch tips blunt and pale. Many tiny, star-shaped pores (these house tiny polyps) are often visible on the main stem. *Stylaster nobilis* is considerably more robust with thicker branches than other stylasterine hydrocorals.

Colour

Usually light pink to rose, or bright pink with characteristic white tips.

Size

Colonies can be up to 500 mm in size, but trawled specimens likely to be in pieces of varying size.

Distribution

South African endemic. Reported from St Helena Bay to the Eastern Cape from 3-174 m.

Similar species

Some bryozoans appear similar looking, but stylasterine hydrocorals tend to have a more distinct thicker main stem (especially this distinct species) and be more glass-like in texture. Many Stylasterids are macroscopically similar and difficult to distinguish to genus or species level. Other *Stylaster* species branch more finely, sometimes in one plane. *Stylaster nobilis* does not have branching in only one plane as for *Errina* spp.

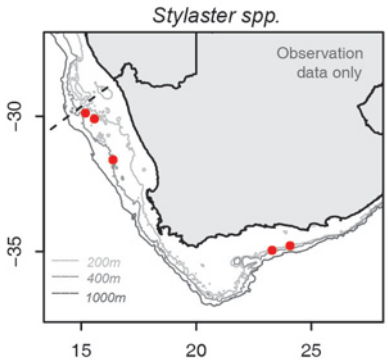
Reference

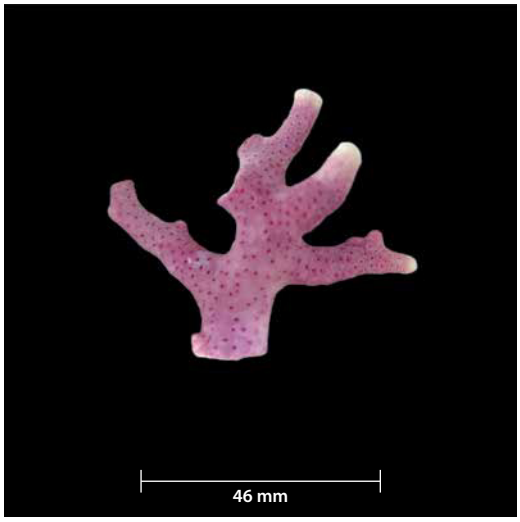
Cairns SD and Zibrowius H. 2013. Stylasteridae (Cnidaria, Hydrozoa, Filifera) from South Africa. *Zootaxa* 3691 (1):001-057.

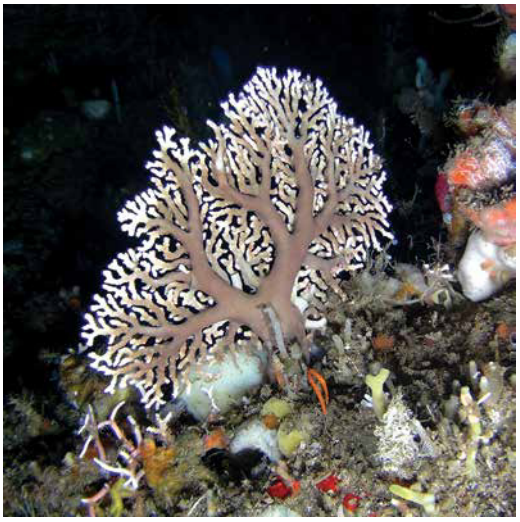
Potential VME

Stylaster spp. (Stylas)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Anthoathecata **Suborder:** Filifera
Family:	Stylasteridae
Genera:	*Stylaster*
Species:	spp.
Common name:	Fine branching hydrocoral







Distinguishing features

Smaller, fine-grained, uniplanar colonies with sparser branching compared with *Errina* and *Errinopsis* spp., but more branching than *S. nobilis*. One (not multiple) attachment to the substrate (may not be visible in trawled specimens) and without anastomosis (branches re-joining to create a lattice). *Stylaster subviolacea* and *S. griseus* have blunt tips. *S. subviolacea* has more prominent and raised cyclosystems (pores) and a coarser texture than *S. nobilis*. *S. bithalamus* is white and the branch tips are less blunt as branches continue to divide more finely (sympodial). *S. amphiheloides* is more delicate with finer tips, although even more delicate species occur.

Colour

These species range from white to grey brown and pink. *Stylaster subviolacea* is light violet or purple with pale tips. *S. griseus* is light grey to light brown when live and chalky white when dead. *S. bithalamus* is also brown. *S. amphiheloides* is uniformly white.

Size

This group of species is of moderate to small size. *S. griseus* is of moderate size, with the largest colony reported to be 70 mm x 60 mm.

Distribution

S. subviolacea is known from 22-88 m on the West and South Coasts; *S. griseus* 80-155 m on the South Coast and *S. bithalamus* from the West and South Coasts (11-155 m). *S. amphiheloides* is known from 155-1 000 m, with most specimens from deeper than 500 m. All endemic to South Africa.

Similar species

Errina and *Errinopsis* are highly branched. The genera *Conopora, Crypthelia* and *Stenohelia* also occur in South Africa. Microscopic examination is needed to confirm identification. Please dry and retain other stylasterids.

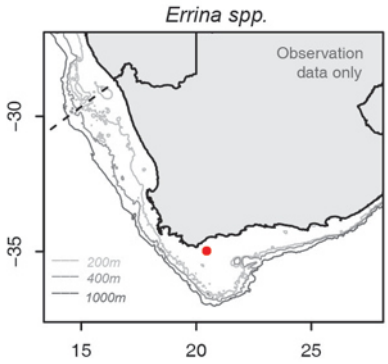
References

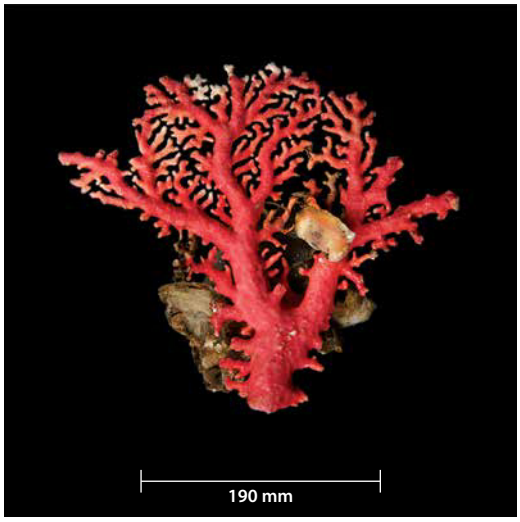
Cairns SD and Zibrowius H. 2013. Stylasteridae (Cnidaria, Hydrozoa, Filifera) from South Africa. *Zootaxa* 3691 (1):001-057.

Potential VME

Errina spp. (Errina)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Anthoathecata
Family:	Stylasteridae
Genus:	*Errina* cf.
Species:	spp.
Common name:	Red hydrocoral





Distinguishing features

Hard, calcium carbonate skeleton with thick, robust main stem supporting many thinner secondary branches that do not join. May have multiple attachments to substrate. Branching occurs in one plane only and branches do not fuse. Many tiny pores that house polyps may be visible on the main stem. No commensal polychaetes reported for *E. capensis* although barnacles commonly attached.

Colour

Photographed specimen deep pink to red. *E. capensis* is described as orange with white tips.

Size

Colonies collected of 300 mm, but trawled specimens are likely to be in smaller pieces.

Distribution

The species depicted here was trawled from 103 m on the South Coast of South Africa. *Errina* spp. are globally distributed from 10 m to up to 1 800 m. *E. capensis* is known from the South Coast, 40-174 m.

Similar species

Errina spp. are finely branched in only one plane, but does not have anastomosis (i.e. branches do not rejoin as in *Errinopsis* spp.). Many Stylasterids are macroscopically similar and difficult to distinguish to genus or species level. Some bryozoans may appear similar looking but *Stylaster* and *Errina* spp. have a distinct thick main stem and are more glass-like in texture. Some Scleractinia and Stylasterids are similar in texture but no calyces (coral cups housing individual polyps) are visible to the naked eye on *Stylaster* or *Errina* spp.

References

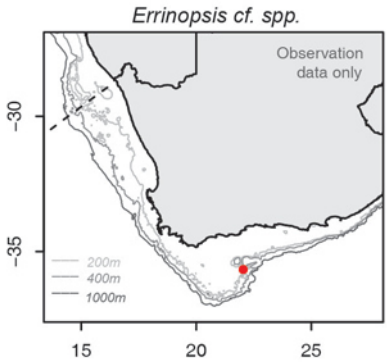
Cairns SD and Zibrowius H. 2013. Stylasteridae (Cnidaria, Hydrozoa, Filifera) from South Africa. *Zootaxa* 3691 (1):001-057.

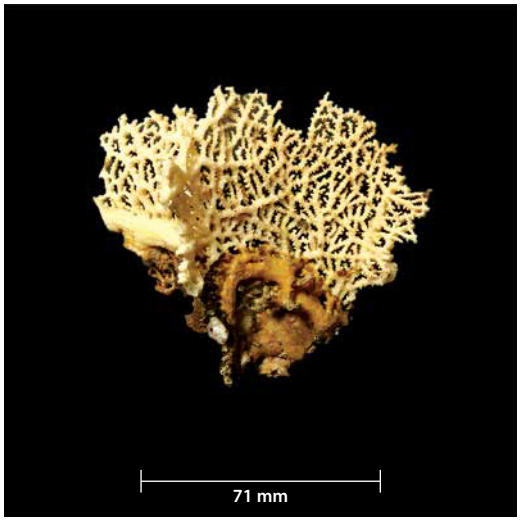
Tracey DM, Anderson OF and Naylor JR. 2011. A guide to common deepsea invertebrates in New Zealand waters. *New Zealand Aquatic Environment and Biodiversity Report* No. 86. (317pp.).

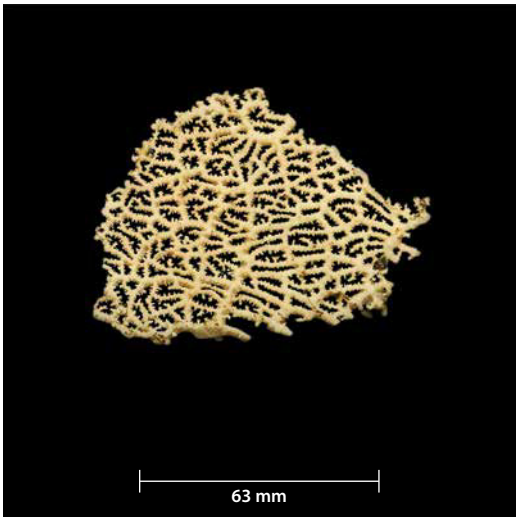
Potential VME

Errinopsis cf. spp. (Errin)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Anthoathecata
Family:	Stylasteridae
Genus:	*Errinopsis* cf.
Species:	spp.
Common name:	Fenestrate hydrocoral







Distinguishing features

Fine, brittle calcium carbonate colonies that are uniplanar to bushy. Branching fenestrate (highly anastomatic, i.e. branches join into a fine, highly connected lattice or mesh) with multiple attachments to substrate. Rough texture with spiny coenosteum (surface) on close inspection. Microscopic examination needed to confirm identification of hydrocorals.

Colour

White or cream.

Size

Colony fragments of about 200 x 100 mm and larger specimens observed *in-situ* (> 330 m).

Distribution

A rarely reported genus with two known species occurring in South Africa and sub-Antarctic America. In South Africa, *E. fenestrata* known only from near East London (174-250 m). *E. reticulatum* not yet reported in South Africa, although this may be the taxa illustrated above.

Similar species

Stylaster spp. and *Errina* spp. have less branching and lack anastomosis (branches do not fuse to make a lattice or highly connected network).

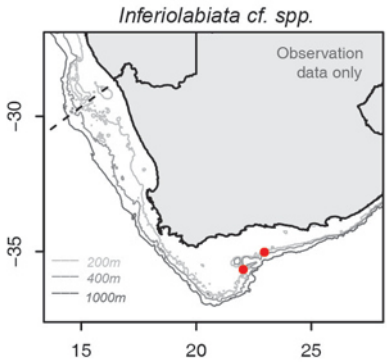
Reference

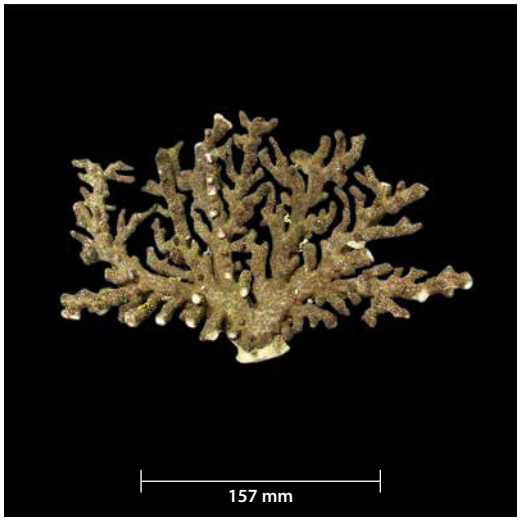
Cairns SD and Zibrowius H. 2013. Stylasteridae (Cnidaria, Hydrozoa, Filifera) from South Africa. *Zootaxa* 3691 (1):001-057.

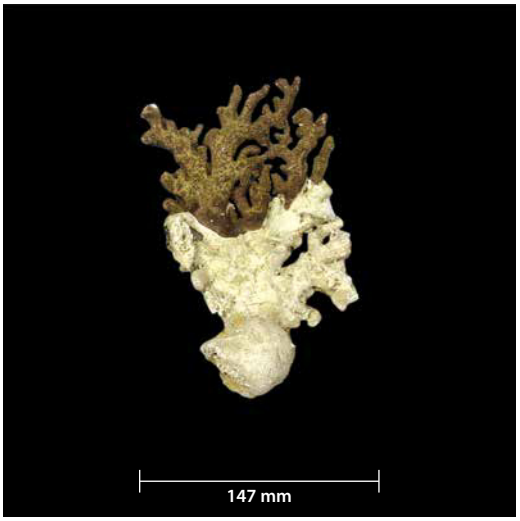
Potential VME

Inferiolabiata cf. spp. (Inferi)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Anthoathecata
Family:	Stylasteridae
Genus:	*Inferiolabiata* cf.
Species:	spp.
Common name:	Spiny lace coral







Distinguishing features
Hard, robust calcium carbonate skeleton with thick, robust main stem and slightly thinner secondary branches. May have polychaete associations. Colonies usually white, although dark brown colony has been collected. Very rough, spiny texture distinguishes this species from the other stylasterine corals commonly collected in South Africa.

Colour
White, grey or chocolate brown.

Size
Reported size of 50 mm, but a broken colony of more than 200 mm was collected and larger specimens observed *in-situ*.

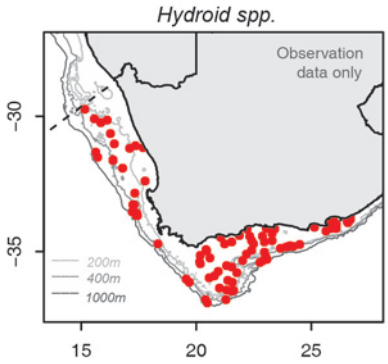
Distribution
South Coast. *I. lowei* and *I. spinosa* both reported from depths of less than 155 m. Both known from elsewhere in southern hemisphere.

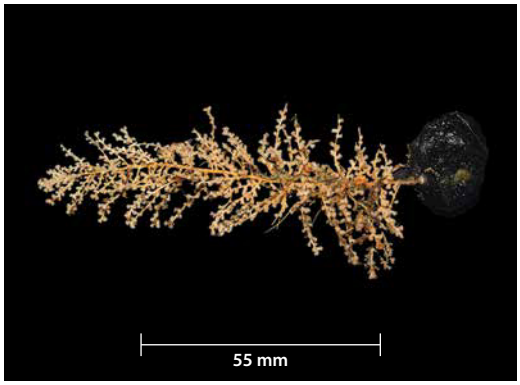
Similar species
Stylaster species do not have a spiny texture. Robust, very hard, almost cylindrical branches. Many stylasterids are macroscopically similar and difficult to distinguish to genus or species level. *Lepidopora* spp. have a similar surface texture.

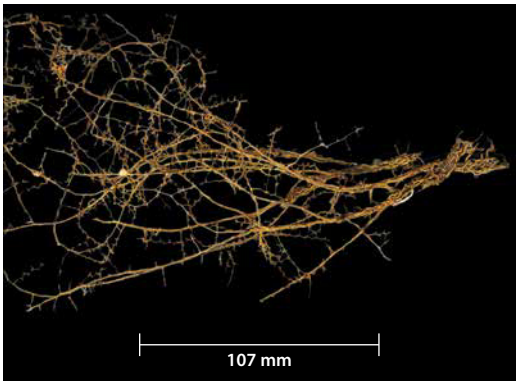
Reference
Cairns SD and Zibrowius H. 2013. Stylasteridae (Cnidaria, Hydrozoa, Filifera) from South Africa. *Zootaxa* 3691 (1):001-057.

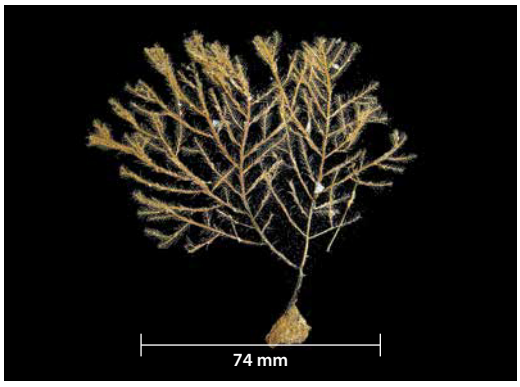
Hydroid spp. (Hydrod)

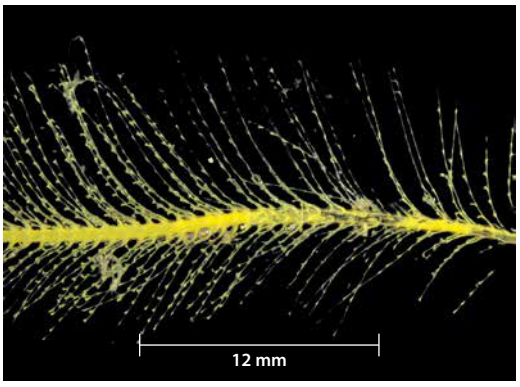
Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	-
Order:	-
Family:	-
Genus:	-
Species:	-
Common name:	Hydroid











Distinguishing features
Fine branching "tree-like" bushy structure; individual polyps not clearly visible (unlike gorgonian polyps), appearing as fine 'hairs', fern-like or feathery. The base is often fused to form a "root-like" structure. Difficult to identify to genus or species level without detailed microscope examination. Some species produce larger polyps that appear similar to small anemones. Hydroids are usually more flexible than gorgonians.

Colour
Variable; usually brown to white or pale yellow.

Size
Highly variable.

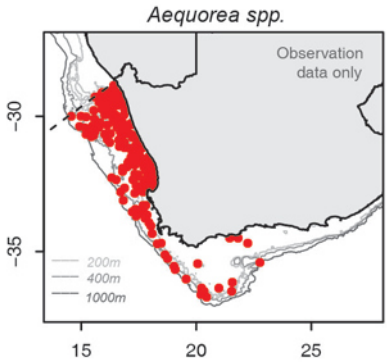
Distribution
Widely distributed within South Africa's Exclusive Economic Zone.

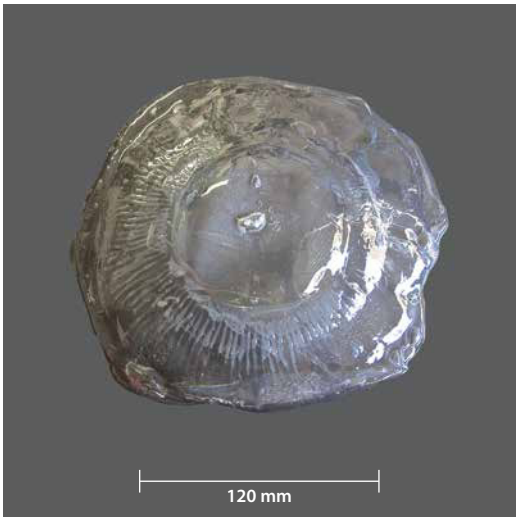
Similar species
Often confused with small specimens of black corals, whose tissue is usually more slimy (and skeleton sandpapery), and seafans, which are usually more rigid (except for that of the woody hydroid), are often brightly coloured or white and have distinct polyps.

Reference
Millard NAH. 1975. Monograph on the Hydroida of southern Africa. *Annals of the South African Museum* 68: 1-513.

Aequorea spp. (AeqSpp)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Leptothecata
Family:	Aequoreidea
Genus:	*Aequorea*
Species:	spp.
Common name:	Mag jellyfish





Distinguishing features

The bell is saucer-shaped, transparent and centrally thickened; frequently damaged on capture with margin broken off, leaving only the central "magnifying lens". When collected whole, a network of uniformly distributed radial canals extend outwards from edge of "lens" to margin. Radial canals are uniform and do not start on the centre portion of disc. Possesses numerous fine marginal tentacles.

Size

Up to 200 mm in diameter.

Distribution

Worldwide, particularly common in the Benguela region, West Coast of South Africa.

Similar species

Zygocana vegans, from which it can be distinguished by its larger size, thicker bell and by the fact that the radial canals are uniform and do not start at disc centre. NOTE: there are many species of *Aequorea* present in the region that are difficult to separate from each other unless in pristine condition.

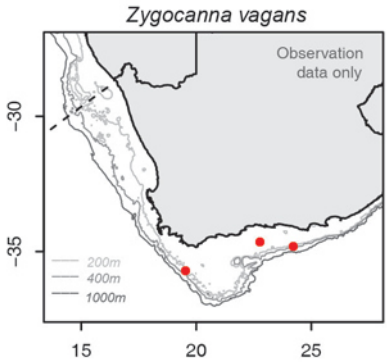
References

Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Pagès F, Gili JM and Bouillon J. 1992. Medusae (Hydrozoa, Scyphozoa, Cubozoa) of the Benguela Current (southeastern Atlantic). *Scientia Marina* 56, pp. 1–64.

Zygocanna vagans (ZygVeg)

Phylum:	Cnidaria
Class:	Hydrozoa
Subclass:	Hydroidolina
Order:	Leptothecata
Family:	Aequoreidae
Genus:	*Zygocanna*
Species:	*vagans*
Common name:	Warty jellyfish



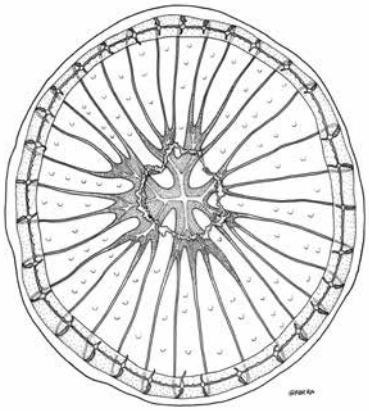


Figure reproduced from Pagès et al., 1992, with permission.

Distinguishing features

Bell is saucer-shaped, transparent and slightly thickened centrally; frequently damaged on capture. Under-surface of bell with radial bands of papillae (illustrated left). When collected whole, a network of irregularly fusing radial canals extend outwards from centre of "lens" to margin. Possesses numerous fine marginal tentacles.

Size

Up to 70 mm in diameter.

Distribution

Worldwide; common in the Benguela ecosystem, West and South Coasts of South Africa.

Similar species

Aequorea spp., from which it can be distinguished by smaller size, thinner bell, radially distributed papillae on subumbrella, and irregularly fusing network of radial canals that originate from centre of lens.

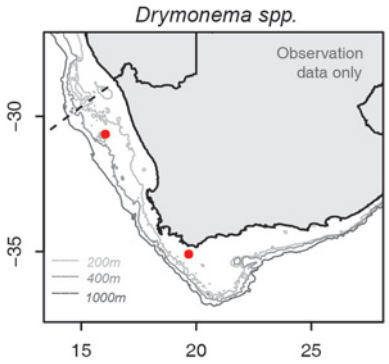
References

Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Pagès F, Gili JM and Bouillon J. 1992. Medusae (Hydrozoa, Scyphozoa, Cubozoa) of the Benguela Current (southeastern Atlantic). *Scientia Marina* 56, pp. 1–64.

Drymonema spp. (Drymon)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Semaeostomae
Family:	Drymonematidae
Genus:	*Drymonema*
Species:	spp.
Common name:	Pink meany jellyfish



Distinguishing features

Relatively thick, flattened dome-shaped bell with patterned branching canals visible (often purple or pink), but not originating from the centre of the bell. Tentacles arise from a broad annular (ring-like) band toward the centre of the subumbrella. Pendulous gonads hang below the subumbrella in complexly folded eversions (turned outwards) of the subumbrellar wall, and the stomach forms over 100 radiate pouches at the bell margin. Rhopalia (small sensory structures) occur in deep subumbrellar niches about a third of the bell radius from the margin toward the mouth.

Colour

Base colour opaque white to transparent with pink, purple or brown branching canals.

Size

Up to 1 000 mm in diameter.

Distribution

North and South Atlantic Oceans, Mediterranean Sea. Uncommon along the West Coast of South Africa, but does occur.

Similar species

Thysanostoma spp. where the branching canals originate at the centre of the bell.

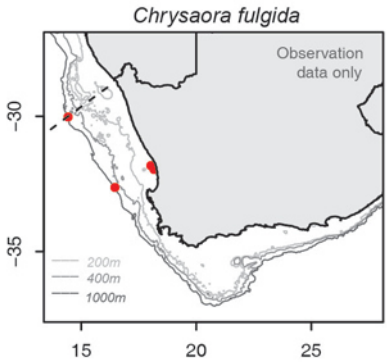
References

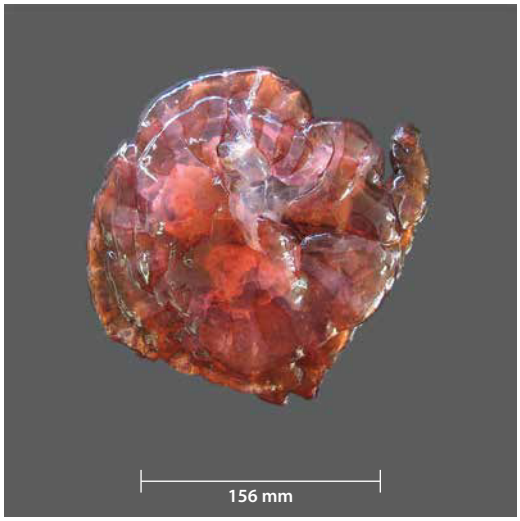
Bayha KM and Dawson MN. 2010. New Family of Allomorphic Jellyfishes Drymonematidae (Scyphozoa, Discomedusae), emphasises evolution in the functional morphology and trophic ecology of gelatinous zooplankton. *The Biological Bulletin* 219 (3): 249-267.

Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Chrysaora fulgida (ChrFul)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Semaeostomeae
Family:	Pelagiidae
Genus:	*Chrysaora*
Species:	*fulgida*
Common name:	Benguela compass jellyfish





Distinguishing features

Compass jelly; rose pink to orange brown in base colour, with 16 darker radiating triangles on upper surface; bell thick. Four long oral arms; spiralled basally, orange/brown in colour. The bell margin is scalloped into 32 lightly pigmented lappets. Possesses 24 delicate, maroon-coloured marginal tentacles (eight persistent). Juveniles are rose-pink in colour, without prominent marks but with eight thin, maroon marginal tentacles.

Size

Can be up to 800 mm in diameter, weighing 20 kg, but usually smaller than this.

Distribution

Regional endemic: common off Namibia (especially so) and the West Coast of South Africa to the Agulhas Bank, South Coast.

Similar species

Chrysaora africana and *C. agulhensis*, from which it can be distinguished by colour, and tentacle number and form. Juvenile *C. fulgida* could be confused with *Pelagia noctiluca* but latter with rough bell and pronounced pink gonads.

References

Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

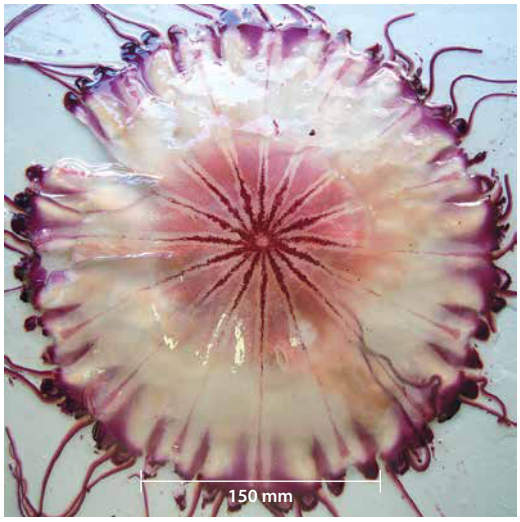
Morandini AC and Marques AC. 2010. Revision of the genus Chrysaora Péron & Lesuer, 1810 (Cnidaria: Scyphozoa). *Zootaxa*, 2464: 1-97.

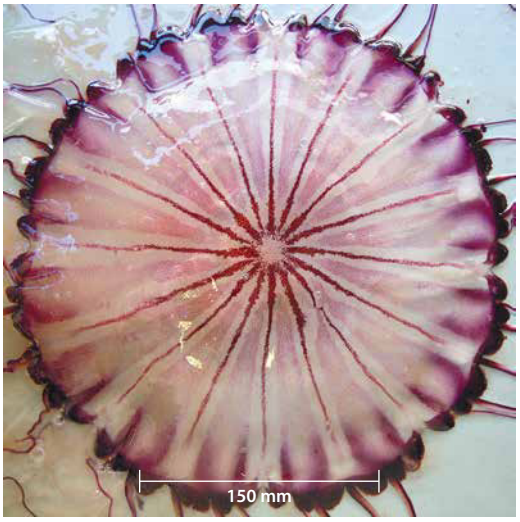
Neethling S. 2010. Re-descriptions of some South African scyphozoa: out with the old and 1532 in with the new. Unpublished MSc thesis, University of the Western Cape.

Chrysaora africana (ChrAfr)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Semaeostomeae
Family:	Pelagiidae
Genus:	*Chrysaora*
Species:	*africana*
Common name:	West African compass jellyfish

Not yet recorded in South Africa, but known to occur in the broader region.





Distinguishing features

Compass jelly; transparent/white in base colour, with 16 darker purple radiating triangles on upper surface: pattern variable. The bell margin is scalloped into 48 (generally purple) lappets. Four long oral arms, white in colour. Individuals possess 40 persistent, ribbon-like marginal tentacles that are purple in colour. Juveniles have similar colour markings to adults.

Size

Up to 400 mm diameter.

Distribution

Uncommon off South Africa but more common off Namibia: range extends up the West Coast of Africa to the Gulf of Guinea.

Similar species

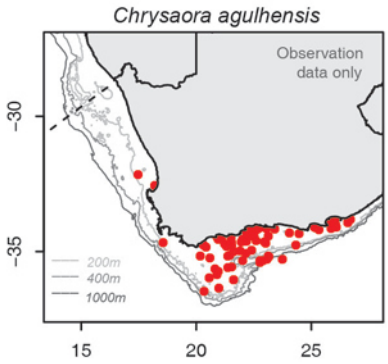
Chrysaora fulgida and *C. agulhensis*, from which it can be distinguished by colour, and tentacle number and form.

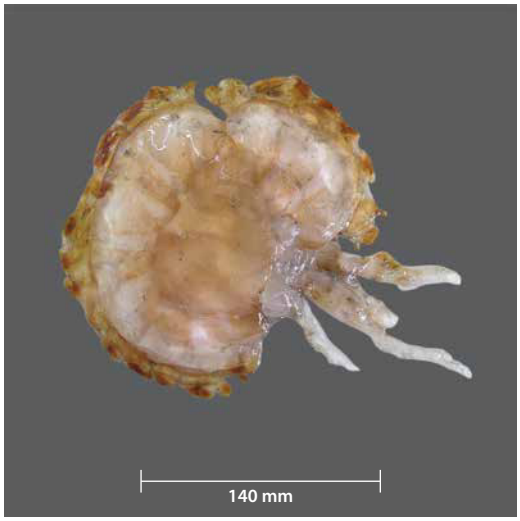
Reference

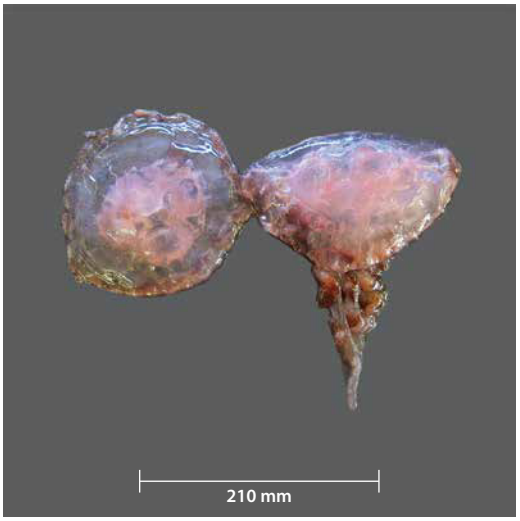
Neethling S. 2010. Re-descriptions of some South African scyphozoa: out with the old and 1532 in with the new. Unpublished MSc thesis, University of the Western Cape.

Chrysaora agulhensis (ChrAgu)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Semaeostomeae
Family:	Pelagiidae
Genus:	*Chrysaora*
Species:	*agulhensis*
Common name:	Agulhas Bank compass jellyfish







Distinguishing features

Compass jelly: transparent/white in base colour with 16 faintly darker brown/purple radiating triangles on the upper surface; variable in pattern; centre of bell clear; with numerous white spots. Four long, semi-spiralled oral arms, uniformly white in colour in smaller specimens, but base may be red/brown in larger individuals. The bell margin is scalloped into 32 strongly pigmented purple/brown lappets. Animals possess 24 persistent, robust, ribbon-like marginal tentacles (expanded at base) that are white in colour. Juveniles resemble adults in colouration.

Size

Up to 400 mm diameter.

Distribution

Endemic, commonly occurring from Table Bay (West Coast) to Port Elizabeth (South Coast).

Similar species

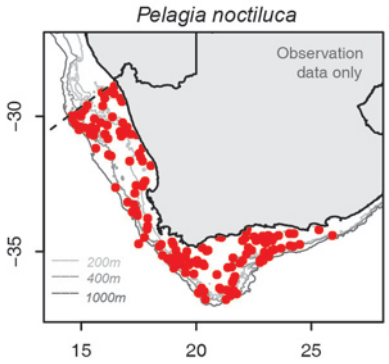
Chrysaora fulgida and *C. africana*, from which it can be distinguished by colour, and tentacle number and form.

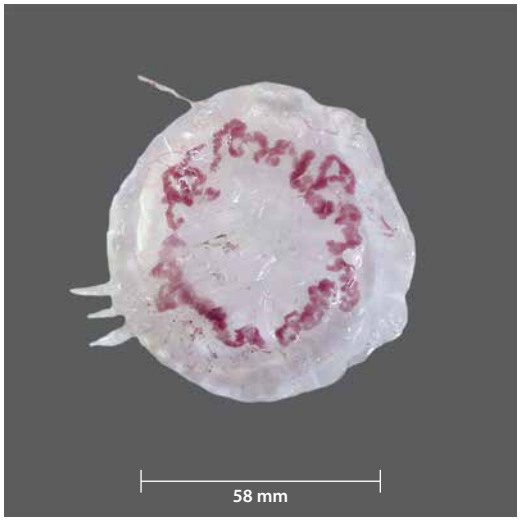
Reference

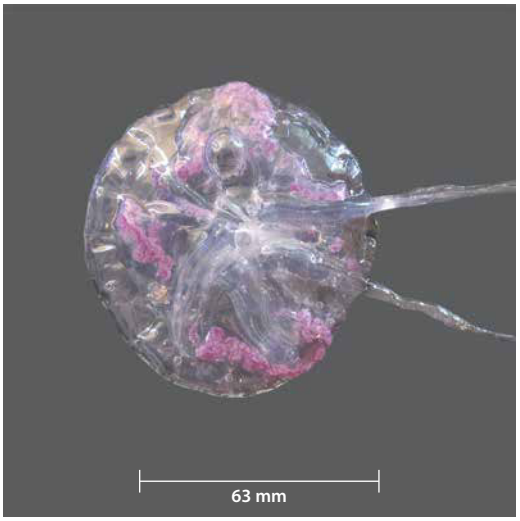
Ras V. 2017. Towards an unravelling of the taxonomy of *Chrysaora* (Scyphozoa; Semaeostomeae; Pelagiidae) from around South Africa. Unpublished MSc Thesis, University of the Western Cape.

Pelagia noctiluca (PelNoc)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Semaeostomeae
Family:	Pelagiidae
Genus:	*Pelagia*
Species:	*noctiluca*
Common name:	Pink stripe jellyfish/Pink stinger







Distinguishing features

The bell is translucent, tinged slightly pink, and covered with fine warts. The bell margin has four short, translucent oral arms. Animals possess eight long, persistent pink tentacles. Gonads form four crescents in bell centre; clearly visible and pink in colour. Painful sting; exercise caution.

Size

Up to 150 mm in bell diameter.

Distribution

Worldwide; common off the West and South Coasts of South Africa.

Similar species

Juvenile *Chrysaora fulgida*, from which it can be distinguished by presence of gonads (pink), short oral arms and warty bell.

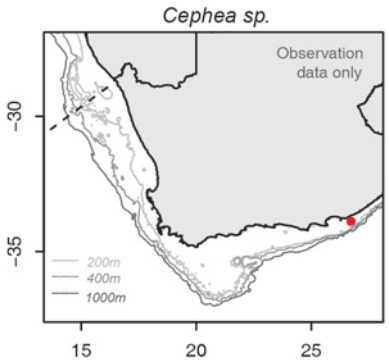
References

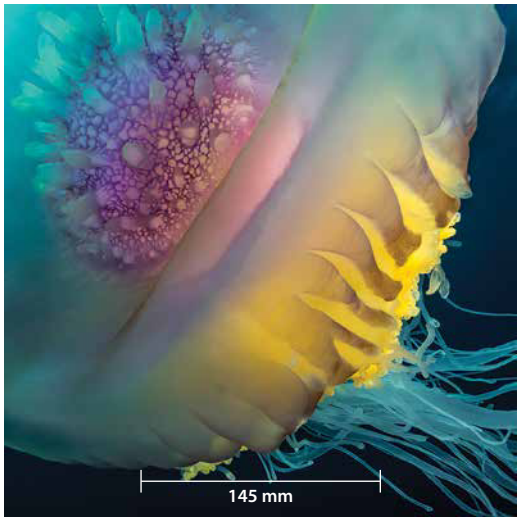
Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

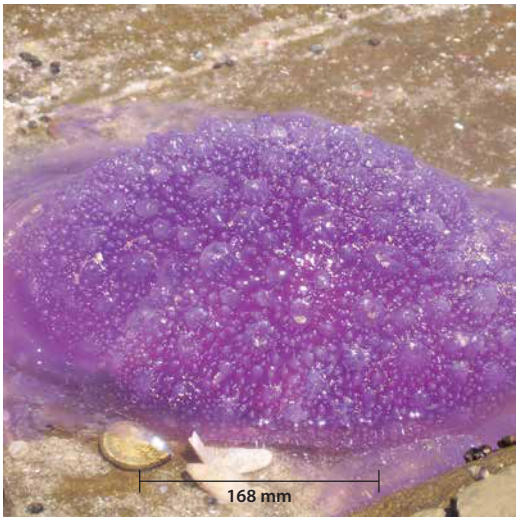
Russell FS. 1970. *The medusae of the British Isles II. Pelagic Scyphozoa* with a supplement to the first volume on hydromedusae. Cambridge: Cambridge University Press.

Cephea sp. (CepBlu)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Rhizostomeae
Family:	Cepheidae
Genus:	*Cephea*
Species:	sp.
Common name:	Blue crown jellyfish







Distinguishing features

Bell thick, blue/purple in colour, with noticeable knobs or warts at centre resembling a crown. No marginal tentacles. Oral arms with long, thin filaments at terminal end. This species not yet encountered in trawl surveys but is likely to be.

Size

Up to 500 mm diameter.

Distribution

Uncommonly reported along the East and South East Coasts of South Africa, between Sodwana Bay and Mossel Bay, Indo-Pacific region.

Similar species

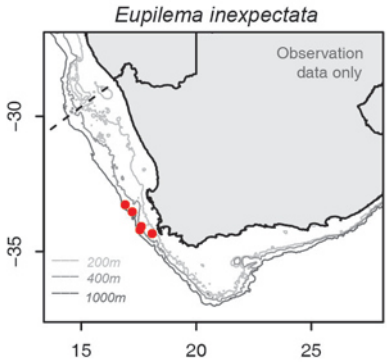
None.

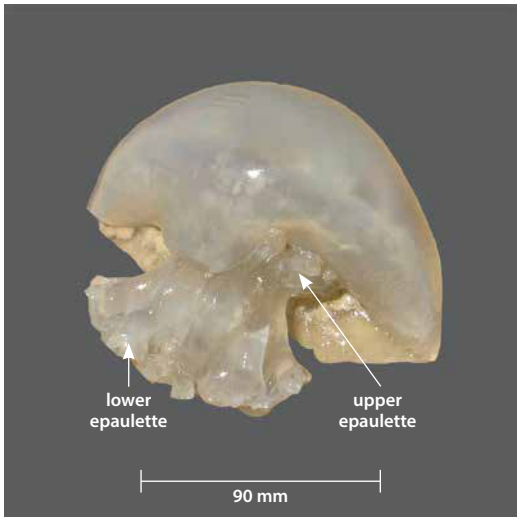
Reference

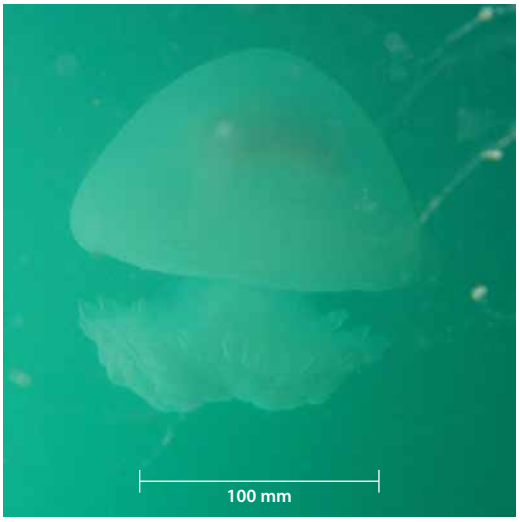
Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Eupilema inexpectata (EupIne)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Rhizostomeae
Family:	Rhizostomatidae
Genus:	*Eupilema*
Species:	*inexpectata*
Common name:	Root mouthed jellyfish







Distinguishing features

Thick dome-shaped bell; opaque and white in colour, often with a slightly blue tinge. The upper surface of bell has a granular texture. Animals lack marginal tentacles. Animals have eight relatively stiff, short (less than bell diameter in length) white oral arms that are fused for more than half their length. The oral arms lack "frills" and appendages terminally and have an epaulette basally.

Size

Up to 400 mm in diameter.

Distribution

Endemic to the Southwestern Cape; predominantly nearshore; uncommon.

Similar species

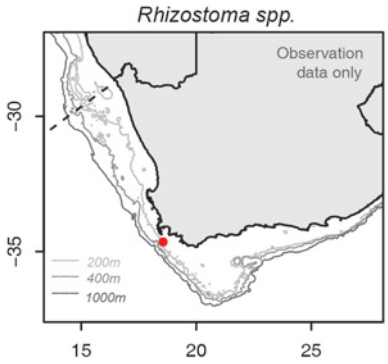
Rhizostoma spp., from which it can be distinguished by the relatively short, stiff oral arms that lack terminal appendages or frills.

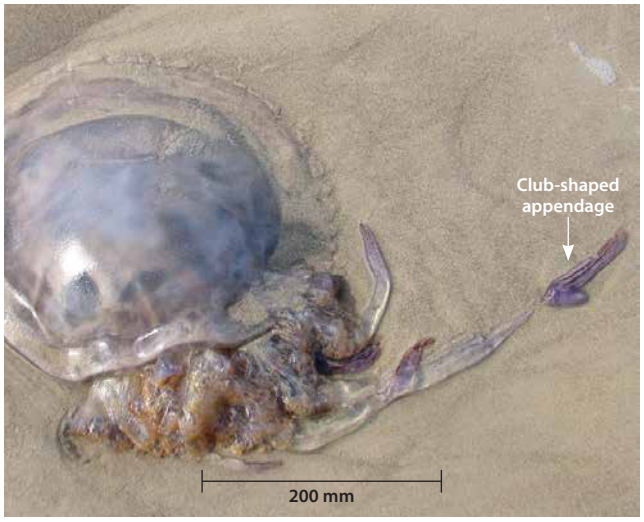
Reference

Pagès F, Gili JM and Bouillon J. 1992. Medusae (Hydrozoa, Scyphozoa, Cubozoa) of the Benguela Current (southeastern Atlantic). *Scientia Marina* 56, pp. 1–64.

Rhizostoma spp. (Rhizo)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Rhizostomeae
Family:	Rhizostomatidae
Genus:	*Rhizostoma*
Species:	spp.
Common name:	Barrel jellyfish





Distinguishing features

Thick dome-shaped bell; opaque and white in colour, often with a slightly blue tinge. The upper surface of bell has a granular texture. Margin of bell scalloped, with between 64 and 80 marginal lappets. Lack marginal tentacles, but have eight oral arms that are fused basally for less than half their length. Oral arms are not stiff and possess "frills" (indicated above) and a club-shaped appendage terminally (indicated above), which may be lost on capture; "frilly" epaulettes present basally.

Size

Up to 900 mm in diameter.

Distribution

Widespread in cool temperate waters of the Atlantic Ocean. Particularly common along the South Coast, but can be found anywhere around South Africa.

Similar species

There are two species of *Rhizostoma* around South Africa (*R. pulmo* and *R. luteum*), that can be distinguished by the number of marginal lappets and the nature of the terminal appendage. Distinguished from *Eupilema inexpectata* by the relatively long, flexible "frilly" oral arms that possess terminal appendages.

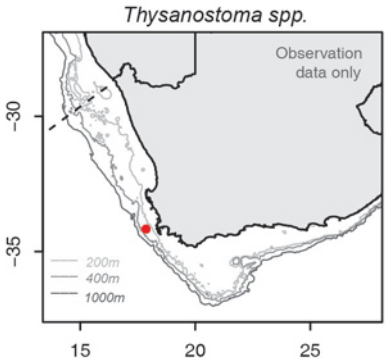
References

Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Russell FS. 1970. *The medusae of the British Isles II. Pelagic Scyphozoa* with a supplement to the first volume on hydromedusae. Cambridge: Cambridge University Press.

Thysanostoma spp. (Thysan)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Discomedusae
Order:	Rhizostomeae
Family:	Thysanostomatidae
Genus:	*Thysanostoma*
Species:	spp.
Common name:	Purple branching canal jellyfish



Distinguishing features

Relatively thick, dome-shaped bell; of variable colour but with pattern of branching canals visible. Upper surface of bell has a finely granular texture. Margin of bell scalloped, with up to 64 marginal lappets. Lack marginal tentacles, but have eight long, thin oral arms that are not fused basally. The oral arms lack conspicuous clubs or filaments along their length, but may have a small appendage terminally.

Size

Up to 250 mm in diameter.

Distribution

An Indo-Pacific genus found in subtropical and warm temperate waters. Uncommon along the coast of South Africa.

Similar species

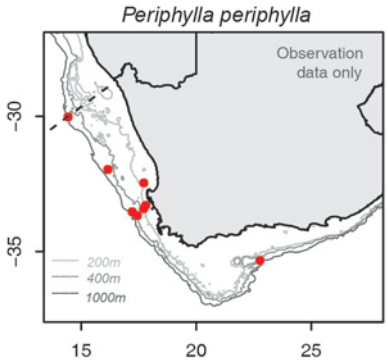
Drymonema spp. also have pattern of branching canals visible on the bell, however *Thysanostoma* spp. have canals originating from the centre of the bell.

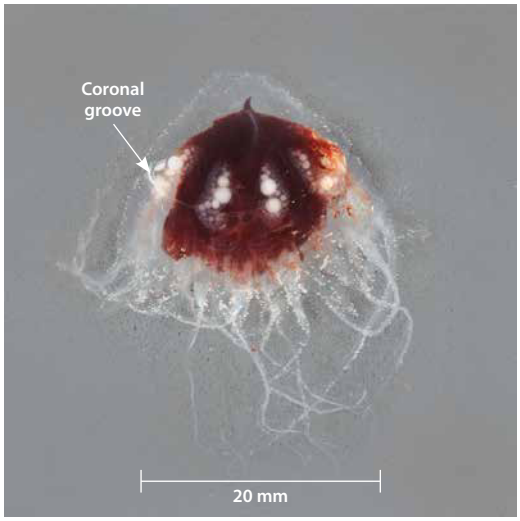
Reference

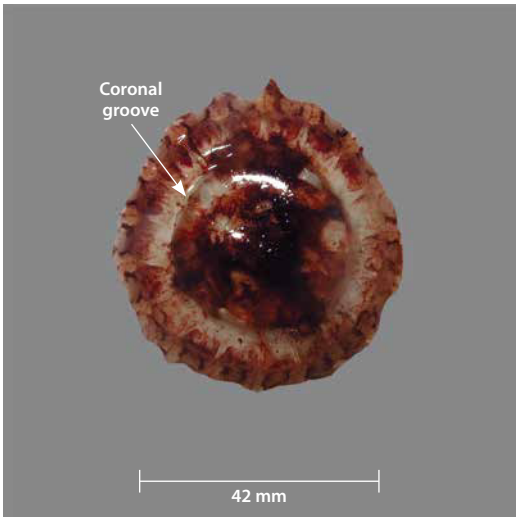
Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Periphylla periphylla (PerPer)

Phylum:	Cnidaria
Class:	Scyphozoa
Subclass:	Coronamedusae
Order:	Coronatae
Family:	Periphyllidae
Genus:	*Periphylla*
Species:	*periphylla*
Common name:	Purple helmet jellyfish







Distinguishing features

Bell conical or dome-shaped, with a coronal groove situated around midline; mesoglea (jelly substance) thick, transparent. Stomach and sinuses deep red/purple in colour. Sixteen lappets at bell margin and 12 rigid tentacles, arranged as four groups of three. Four marginal sense organs. Bioluminescent.

Size

Up to 350 mm in diameter.

Distribution

Circumglobal. Generally deep-water species; uncommon.

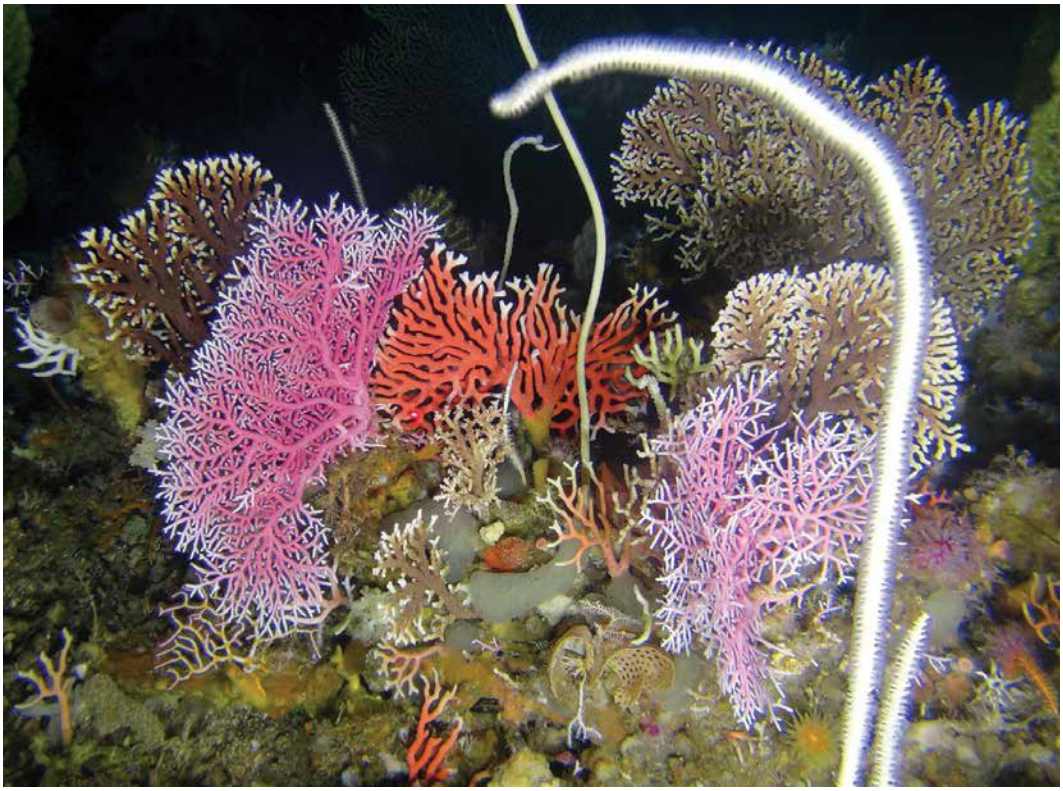
Similar species

None – monospecific genus.

References

Kramp PL. 1961. Synopsis of the medusae of the world. *Journal of Marine Biological Association of the United Kingdom* 40, pp. 1–469.

Pagès F, Gili JM and Bouillon J. 1992. Medusae (Hydrozoa, Scyphozoa, Cubozoa) of the Benguela Current (southeastern Atlantic). *Scientia Marina* 56, pp. 1–64.



Stylasterine lace corals from the outer shelf in the Proposed Amathole Offshore Marine Protected Areas constitute Vulnerable Marine Ecosystems that are easily damaged by activities impacting the seabed. Photo credit: ACEP Imida Project

Visual surveys of the seabed using a tow camera have recently provided the first images of deep cold water coral habitats in South Africa. These lace and stony corals form part of a feature known as Secret Reef at 340 m off Knysna. Photo credit: ACEP Deep Secrets Project