












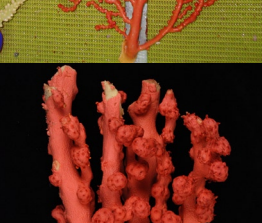






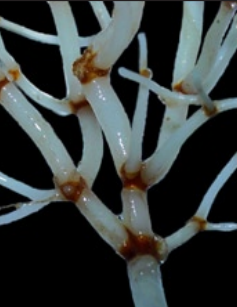



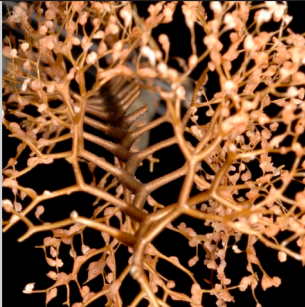
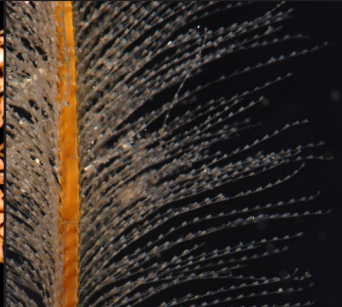




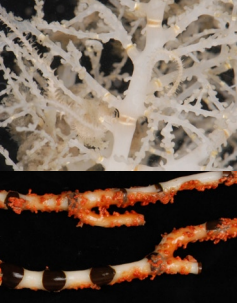

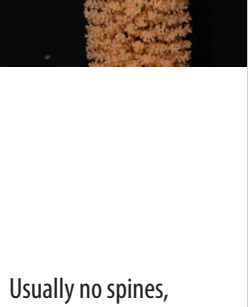
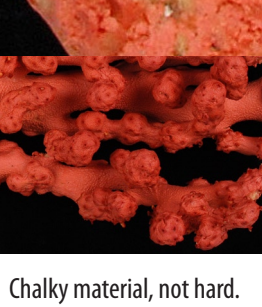
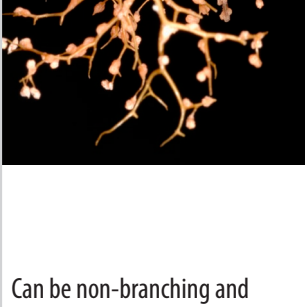
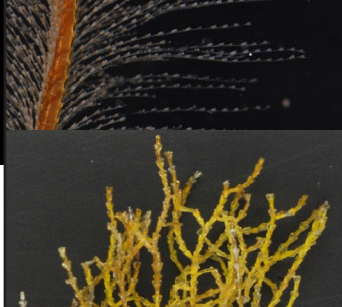

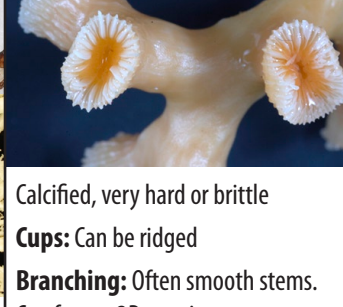

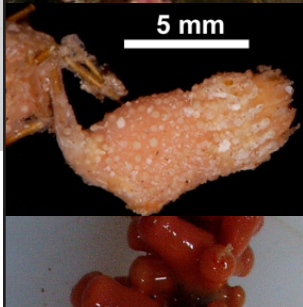
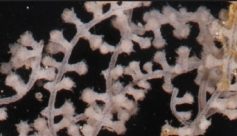






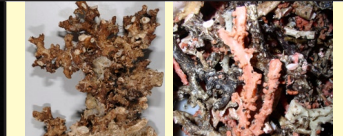


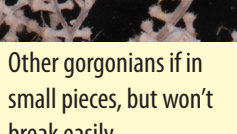
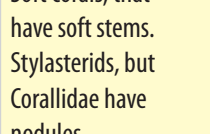
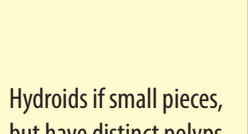
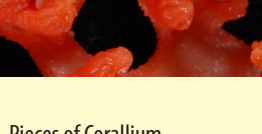
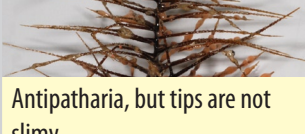
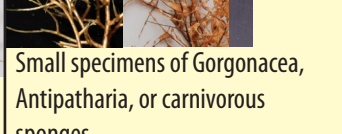
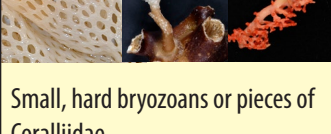
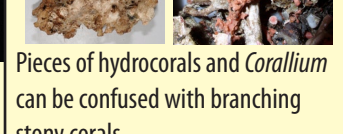
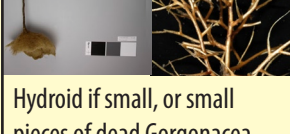

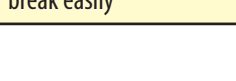
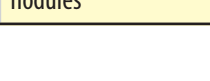
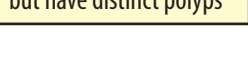
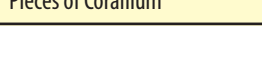
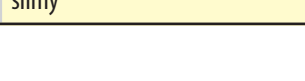
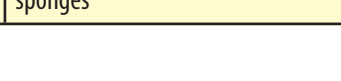
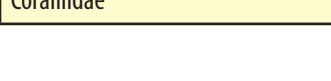
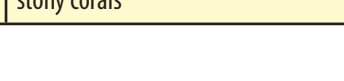
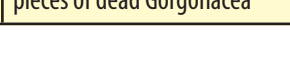
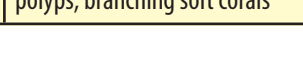












SIOFA VME Taxa Classification Guide 2025

These groups are not included



Phylum	Cnidaria (CNI)									
Code	GGW					HQZ	AZN	CSS	AQZ	ZOT
Level	Octocorallia (Class, syn. Gorgonacea)					Hydrozoa (Class)	Anthoathecatae (Family)	Scleractinia (Order)	Antipatharia (Order)	Zoantharia (Order)
Taxon	Isididae (Bamboo)	Coralliidae (Red / precious)	Primnoidae (Bottle brush, sea fans)	Paragorgiidae (Bubblegum)	Chrysogorgiidae (Golden)	Hydroids	Stylasterids (Hydrocorals)	Stony corals	Black corals	Zoanthids
Form, size										
										
Detail (texture, colour, polyps)										
										
Commonly mistaken for other groups, such as:										
										
Commonly mistaken for other groups, such as:										
										

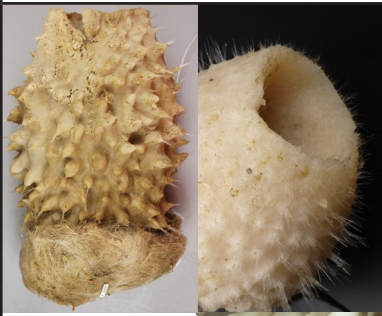
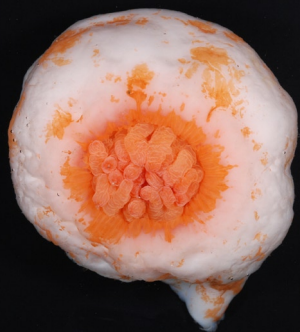
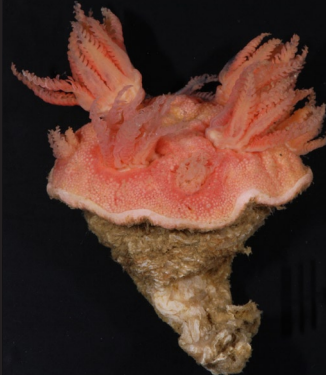
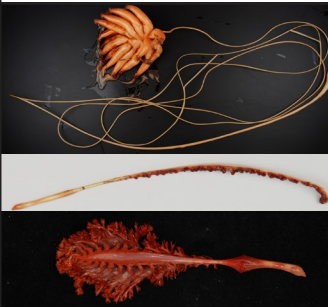








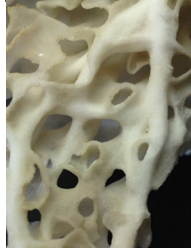



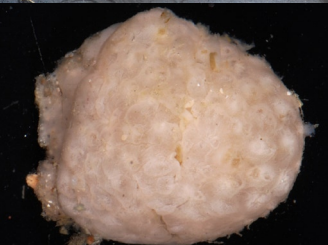
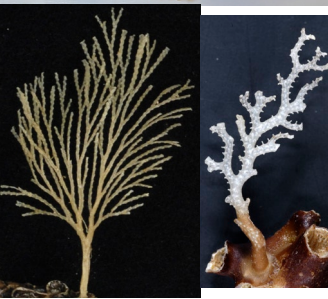








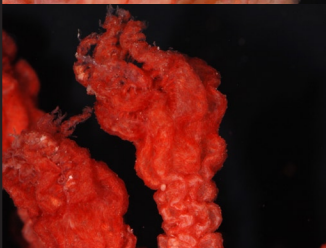






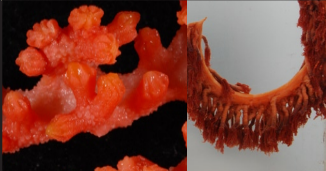
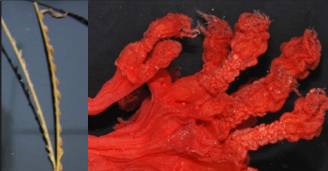


SIOFA VME Taxa Classification Guide 2025

These groups are not included

 Snails

 Starfish

 Crabs

Phylum	Porifera (PFR)		Cnidaria (CNI)			Chordata (CZR)	Bryozoa	Chemosynthetic		
Code	HXY	DMO	ATX	AJZ	NTW	SSX	BZN	CXY		
Level	Hexactinellida (Class)		Actiniaria (Order)		Alcyonacea (Order)	Pennatulacea (Order)	Ascidiacea (Class)	Bryozoa (Phylum)	Various groups	
Taxon	Glass sponges		Anemones		Soft corals	Sea pens	Sea squirts	Lace corals	Chemosynthetic communities	
Form, size									<p>Chemosynthetic habitat sites, including cold seeps, vents, whale falls and sunken wood include some of the following associated biota:</p>      	
										
	Diverse shapes: hollow central chamber spiky & vase-like, egg-shaped with hairy mass at base, honeycombed tubular crystalline forms		Rubbery bottom with single polyp with lots of tentacles. Usually in retracted hardened cylinder form when captured		Can be mushroom shaped. Floppy or soft, leather-like surface texture. Usually multiple large polyps, body not symmetrical, no foot or stalk		Feather-shaped with fleshy polyps. Non-branching to whip-like cartilaginous stalk. Fleshy foot or anchor present, body symmetrical. Can be tall, >1 m		No tentacles or polyps. Stalked solitary or colonial. No skeleton, stalk-like or encrusting over substrate	Typically small, (<30 cm). Variable forms. Can be hard or soft (most commonly hard) branching, lace-like, or cornflake shaped, calcified, and brittle, surface cannot be scraped off
Detail (texture, colour, polyps)									<p>Sediment or organisms may smell of rotten eggs - sulphurous</p>	
										
Commonly mistaken for other indicator groups, such as:										Species belonging to the same taxa – to date only the white squat lobsters have been recorded in the Antarctic region. Because these communities are little known, retain samples to be identified by experts
	Bryozoans or scleractinians that are small and of a hard matrix		Some Alcyonaceans, Ascidians, which are not spongy but fleshy and have polyps or siphons, and Bryozoans.		Alcyonaceans, which usually have several polyps	Small pieces of Corallidae or some sea pens	Alcyonaceans or some gorgonians due to large polyps and size	Spherical demosponges or piece of sea pen	Stylasterids if hard, hydroids if soft, carnivorous demosponge	







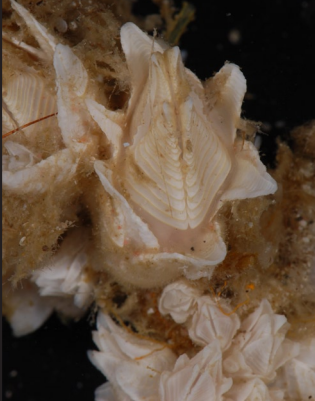




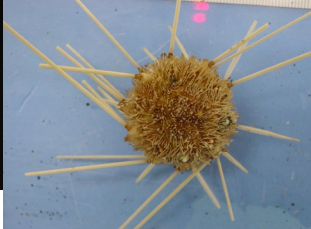











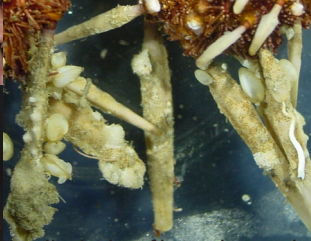





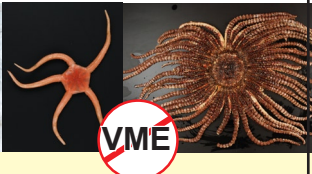

SIOFA VME Taxa Classification Guide 2025

These groups are not included

Snails

Starfish

Crabs

Phylum	Brachiopoda	Hemichordata (HET)	Annelida (NHE)	Xenophyophoroidea	Arthropoda (AXX)	Echinodermata (ECH)		
Code	BVH	PBQ	SZS	XEY	BWY	CWD	OYY	CVD
Level	Brachiopoda (Phylum)	Pterobranchia (Class)	Serpulidae (Family)	Xenophyophora (Phylum)	Bathylasmatidae (Family)	Crinoidea (Class)	Ophiurida (Order)	Cidaroida (Order)
Taxon	Lamp shells	Acorn worms	Serpulid tube worms	Xenophyophores	Goose and acorn barnacles	Stalked crinoids (Sea lilies)	Basket and snake stars	Pencil spine urchins
Form, size				 	 These are stalked (goose barnacles) 		 	 
	Valves enclose the body dorsally and ventrally rather than laterally. Ventral valve typically larger than the dorsal. Attached species have a short stalk emerging from the hinge area of the valves	Tubes conjoined into colonies. Usually gelatinous, often semi-transparent	Tube dwelling marine worms. Each tube flange is about 3.5 mm diameter. Forms large clumps, somewhat coral-like, typically Subantarctic distribution	A specialised group, is among the largest single-celled protozoans. Colony size can be 10-20 cm in diameter	and non-stalked (acorn barnacles)	Stalked. Small tulip-like body. Arms usually branched. Crinoids are generally fragile, often only fragments. A long stalk, some bearing whorls of hooklike cirri. Body length up to 20 cm	Large disc with 5-6 arms splitting at the disc into many coiled branches	Regularly spherical, rigid structure, typically 2–10 cm in diameter. Covered with small spines and 10 distinct columns of large pencil-like spines
Detail (texture, colour, polyps)					 	 	 	 
	Delicate shell; clam like. Each valve is bilaterally symmetrical and may be ornamented with concentric growth lines and a fluted or spiny surface	Red-orange to brown. Tubes closely or loosely bound	Serpulid worms in hard calcareous tubes	Varied appearance ranging from spherical to flat. Many species have a rounded, lumpy form and irregular netlike surface structure. Most are fragile but one group is felt-like & robust. Found >500 m	The mantle surface of any barnacle bears at least 5 major plates, which are pulled together for protection. Heavily armoured	Fragile, not flexible. Brittle and segmented	Distinguished from other sea stars by branched or highly coiled arms and lack of ventral groove on underside of arms	Usually shades of beige, burgundy or purple. Spines paler, they can be a substrate for other organisms. Large spines can be cylindrical or flattened
Commonly mistaken for other indicator groups, such as:	Resemble bivalve molluscs but one valve is much larger, and overhangs the smaller valve	 Algae, marine tube worms, tunicates or demosponges	 Other worm like forms in sediment tubes	 Fragments of demosponges sponges (see image), colonial ascidians, bryozoans, or 'inorganic concretions'	 Cup corals or clusters of tube worm casings	 Arm fragments can look like other animals such as basketstars, or feather stars if stalk not present	 Other sea stars with multiple or coiled arms and more common forms with non-branching arms	 Urchins that lack the large pencil-like spines

SIOFA VME Taxa Classification Guide

SIOFA Conservation and Management Measure 01 requires vessels to monitor bycatch for the presence of vulnerable marine ecosystem (VME) taxa as defined by the Agreement. The level of classification required is relatively coarse for most taxa, where phylum, class or order is sufficient. However, some groups may require classification to family or even species. In addition, several groups can be confused at first sight. Therefore, a classification guide is needed to assist in the rapid and efficient classification of VME taxa.

Instructions

This SIOFA VME Taxa Classification Guide provides observers, fishers, and biologists at sea with a taxon-specific, quick, on-deck guide to aid in the classification of macroscopic marine invertebrate bycatch into the required VME groupings. VME taxa are a subset of the total invertebrate taxa encountered as fishery bycatch, and therefore additional processes are still required to collect information on non-VME taxonomic groups. Typically, invertebrate identification is not done at sea because it requires specialised tools. The format of the VME guide is a “compare and contrast table”, using photographs and key characteristics to correctly assign VME taxa to the appropriate grouping. It also highlights commonly confused groups. Symbols representing non-VME groups are listed in the top right-hand margin.

The guide is organised into columns, each describing a taxonomic group and colour coded by phylum. Those groups that appear similar have been placed next to each other where possible. The top row for each column is a parent column that identifies the phylum for the vulnerable groups below. The FAO 3-letter taxonomic code for each group is provided at the top of each column and for the parent group. Below the codes are the scientific and common names for each group. The first row contains photographs and brief descriptions of the overall size and shape of specimens for each group. The next row then provides details of the specimen’s appearance, such as texture, colour, or polyp characteristics, and also includes close-up images as examples. A final row (with a yellow background) has images and descriptions of specimens representing other phyla. This row shows how these specimens can be commonly mistaken for other taxa and flags details on what to look out for during classification. Text in this row should be read beginning with the phrase in the row heading to aid in clarity.

Photographs of Antarctic specimens have been used where possible to aid in the identification of VME groups. The guide has been linked through colour coding to phyla in the “Guide to common deepsea invertebrates in New Zealand waters” (Tracey et al. 2007), the SPRFMO VME taxa guide (Tracey et al. 2008), and the Field identification guide to Heard Island and McDonald Island (HIMI) benthic invertebrates (Hibberd and Moore 2009). Invertebrate specimens that cannot be identified with confidence need to be identified to the lowest taxonomic level possible, retained on board, and returned frozen as biological specimens for formal identification.



Acknowledgments

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