



SEAFOOD
NEW ZEALAND

DEEPWATER TRAWL
BENTHIC
OPERATIONAL PROCEDURES
2023-24

Photo credit: NIWA

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PART 1: INTRODUCTION

The following Operational Procedures (OPs) stipulate the management measures for the identification, disposal and reporting of benthic organisms (benthos) incidentally captured during fishing operations. This includes protected species as required by regulation.

These OPs have been agreed upon by Seafood New Zealand - Deepwater Council (DWC) shareholders and are administered by DWC.

Any references to benthos within these OPs refer specifically to sessile (i.e., non-mobile) epi-benthic organisms (i.e., animals that extend upwards from the seabed, including corals, sponges, and bryozoans) that are attached to the seabed and are required to be reported on catch returns. These OPs also provide guidance for reporting other benthic organisms such as anemones.

Disclaimer

Nothing in these procedures shall be interpreted to replace or override any of the requirements in the fisheries legislation or other regulations, including those for Health & Safety and Maritime Safety. Vessel operators are required to ensure that at all times, both they and their crew understand all regulations that are relevant to these fisheries and to the operating environment that they are in.

Background to these procedures

There is concern over the incidental capture of epi-benthic organisms by bottom trawling. Many sessile species have by definition no means of escape from a bottom trawl, have low physical resilience to impacts from a trawl and for some species slow growth rates.

Assemblages of sessile epi-benthic species may create habitats for non-sessile organisms. New Zealand has a number of coral orders or families (groups of species) listed as protected Deepwater fisheries interact with some of these.

While incidental impacts on non-target organisms are expressly provided for in the Fisheries Act, we all have the responsibility to ensure the ongoing sustainable management and conservation of our marine environment. This includes the obligation to mitigate, remedy or avoid any adverse effects on the aquatic environment.

Avoiding or mitigating incidental interactions with the benthos should be a part of each vessel operator's and captain's considerations when planning fishing events.

Identification of benthos captures for reporting purposes can be difficult and accurate reporting using the correct codes is required to ensure reported data are useful. Reporting of types of benthic organisms is required (i.e., not required to species level).

Purpose of these procedures

The purpose of these OPs is to support the mitigation of risks to benthic invertebrate species due to fishing operations.

Objectives of these procedures

The objectives of these OPs are to:

- Ensure correct reporting of benthos, both protected and non-protected
- Enable avoidance or mitigation of catches of benthos
- These OPs apply to all >28m trawlers

Application of these procedures

These OPs apply to all trawlers over 28 m targeting stocks represented by DWC.

Legislative framework

Key legislation that underpins the management of benthos and protected corals in New Zealand includes:

- **Fisheries Act 1996** provides for the utilisation of fisheries resources while ensuring sustainability, which requires:
 - Maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and avoiding, remedying or mitigating any adverse effects of fishing on the aquatic environment; and that
 - All catch be accurately reported
- **Wildlife Act 1953** states:
 - It is an offence to deliberately take, or attempt to take or retain all or any part of any protected species
 - Protected species captures must be accurately reported

Responsibilities of vessel owner, operator or manager

All vessel owners, operators and managers must:

- Ensure the current OPs are easily accessible
- Ensure key crew are briefed on these OPs and fully understand the actions required
- Ensure each vessel has a copy of, and key crew understand, the latest Fisheries New Zealand Electronic Reporting System (ERS) Guidelines and Requirements
- Advise DWC of the need for any Liaison Officer review, refresher or briefing of new captains or managers
- Ensure any handover to new or relief managers or captains includes a refresher on DWC's OPs
- Have oversight of NFPS catch reports
- Respond to Observer audit reports via DWC.

Responsibilities of captain and crew

The vessel's captain and crew must:

- Ensure the current OPs are on board and easily accessible
- Have been briefed on these OPs and fully understand the actions required
- Adhere to the requirements of these OPs
- Seek support from shore management or DWC when needed.

Shore management

Maintain oversight of any Non-Fish or Protected Fish Species (NFPS) and disposal daily reports, review significant catches of benthos and make relevant operational decisions subsequently.

Protected coral groups or families

Most coral species are protected under the Wildlife Act within one of the orders or family groups as indicated below. It is neither possible nor expected that crew would be able to identify these corals to species level.

It is proposed, for the avoidance of doubt, that vessels treat all and any coral or coral-like bycatch as protected and ensure they meet the straightforward requirements of the Wildlife Act, as noted above (see Appendix 2 - Deepwater Benthic ID Guide for more coral images).

Unless instructed otherwise by a Fisheries New Zealand Observer, all protected corals must be returned to the sea as carefully and as quickly as possible after they have been recorded properly for reporting purposes.

Corals protected under the Wildlife Act 1953

- Gorgonians – Order Gorgonacea (Figure 1)
- Black corals – Order Antipatharia (Figure 2)
- Stony Corals – Order Scleractinia (Figure 3)
- Hydrocorals – Family Stylasteridae (Figure 4)



Figure 1: Gorgonians – Order Gorgonacea

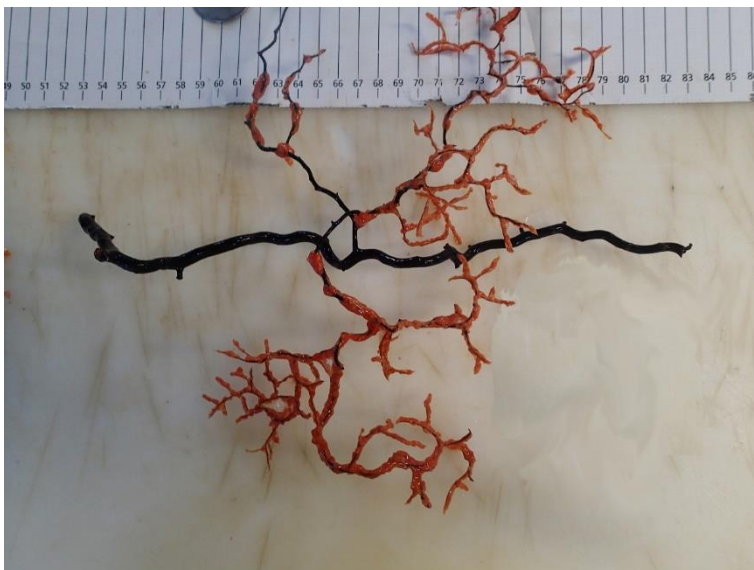


Figure 2: Black corals – Order Antipatharia



Figure 3: Stony Corals – Order Scleractinia

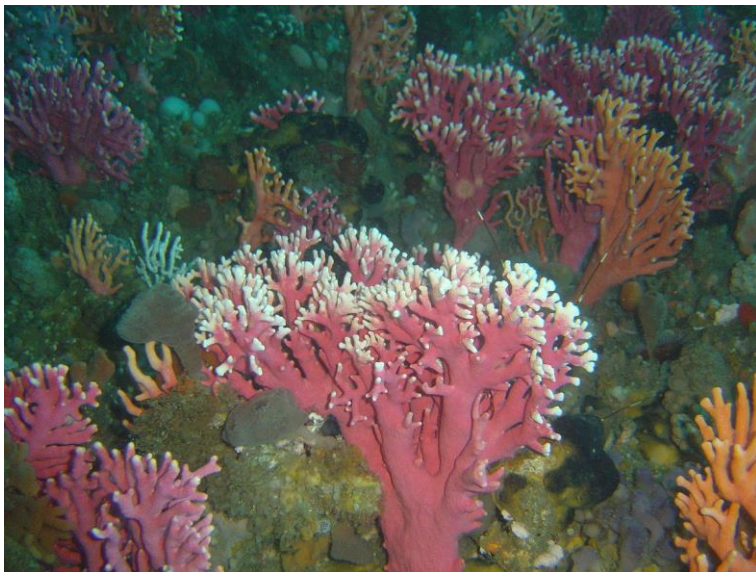


Figure 4: Hydrocorals – Family Stylasteridae

PART 2: MANAGING RISKS

Vessels

All vessels will operate in accordance with a principle of avoidance from areas where there may be significant catches of benthos as a result of prior experience or knowledge.

This strategy includes consideration of the effects of weather and tide on the vessel's operations and the ability to maintain gear on targeted tow lines and not drift or be forced off into areas of significant benthos.

If a significant catch of benthos is encountered, scout the area with an echosounder, and consider how and where to undertake the next fishing event to mitigate the risk of a similar outcome.

Steps to take when benthos capture occurs

- Ensure adequate time is taken to sort into groups (e.g., sponge, coral, bryozoans etc.). See Figures 5 and 6 for examples of sponges and bryozoans.
- Coral rubble – dead coral should be separated for estimation (Figure 7).
- Remove all non-biogenic material (i.e., items which are neither, nor ever have been, alive such as rocks or sediment etc.) and return to the sea (**these do not need to be reported**).
- Ensure that an adequately prepared crew member identifies and carefully estimates the weight of each category (i.e., coral, sponge, bryozoans, coral rubble) to be reported, noting that fractions of a kilogram can and should be used for reporting quantities less than 1 kilogram. For fractions above 1 kilogram, reports can be rounded down to the nearest whole kilogram.
- **If a significant catch of benthos is encountered (now specified as a benthic trigger event), consider how and where to undertake the next fishing event to mitigate the risk of a similar outcome.**
- Benthic triggers should be reported to DWC (admin@deepwatergroup.org) as soon as practical with a description of the event and circumstances (see Part 3)

Table 1: Guidance on what is deemed 'significant' benthos (benthic triggers)

| BENTHOS TYPE | WEIGHT |
|--------------|---------|
| Coral | 50 kgs |
| Sponge | 600 kgs |



Figure 5: Sponge



Figure 6: Bryozoan



Figure 7: Coral rubble

PART 3: REPORTING – WHEN CAPTURES OCCUR

DWC trigger points and vessel action

Report all DWC trigger point breaches immediately (within 24 hours) to admin@deepwatergroup.org.

Emails to this address are automatically forwarded to John Cleal, Environmental Liaison Officer (ELO), and Ben Steele-Mortimer, Environmental Programme Manager.

The ELO will follow up to provide support and may seek additional information.

| DWC CONTACTS (AVAILABLE 24/7) | PHONE |
|-------------------------------|--------------|
| John Cleal (ELO) | 021 305 825 |
| Ben Steele-Mortimer | 027 234 3140 |

| BENTHIC TRIGGERS | | |
|------------------|-------------------|--|
| BENTHOS TYPE | TRIGGER WEIGHT | TRIGGER ACTION |
| Coral | 50 kgs (per tow) | <ul style="list-style-type: none"> Report trigger to shore management with two good photos. Indicate whether it was an old tow line or new and any other relevant information. Avoid areas where high amounts of benthos are known to be |
| Sponge | 600 kgs (per tow) | |

Identification and reporting of benthic bycatch

Fisheries New Zealand mandatory reporting requirements

It is not illegal to accidentally capture protected species, but it is illegal to fail to report the capture. It is mandatory to report other Non-Fish catch as well.

Quote from Fisheries New Zealand Reporting Guidelines:

“It is important to note that only three types of benthic (bottom-dwelling) organisms are required to be reported on NFPS reports: corals, sponges and bryozoans. Any other types that are captured should be reported on Disposal reports. Fisheries New Zealand does not require recording of non-biogenic material such as rocks, wood or rubbish. However, we encourage the recording of unusual incidents via the “notes” field of Fish catch or Disposal reports.”

Report all captures as legally required in your ERS using the correct codes. Fisheries New Zealand provides guidance and information here: [Fisheries New Zealand Reporting Requirements and Guidelines¹](#) and vessel crews and managers should be aware of updates and ensure the latest information is available and understood.

- **Report** using the correct NFPS reporting codes (Table 2) in your ERS.
- **AVOID** using the generic mixed benthos code CSB (unless it is not possible to separate by group). Using this code may lead to an overestimation of actually protected coral catch.
- **Notes section:** Use the *Notes* section to report coral rubble (dead coral skeleton - see Figure 7) as opposed to live coral.
- **Note** that fractions of a kilogram can and should be used for reporting quantities less than 1 kilogram. For fractions above 1 kilogram, reports can be rounded down to the nearest whole kilogram.
- **Note** vessels operating outside of New Zealand’s EEZ in international waters under SPRFMO High Seas Permits will have additional reporting requirements and will need to be aware of these (see link¹ or your High Seas Permit).
- **Note** all other benthic catch should be reported in the disposals report

Table 2: NFPS reporting codes for corals, sponges and bryozoans.

| GENERIC NAME | REPORTING CODE |
|---|----------------|
| Corals: Black corals – Order Antipatharia Gorgonians – Order Gorgonacea Stony Corals – Order Scleractinia Hydrocorals – Family Stylasteridae | COU |
| Sponges (Porifera) | ONG |
| Bryozoans | COZ |

¹ <https://www.mpi.govt.nz/fishing-aquaculture/commercial-fishing/fisheries-change-programme/electronic-catch-and-position-reporting/>

APPENDIX 1: TEN COMMANDMENTS



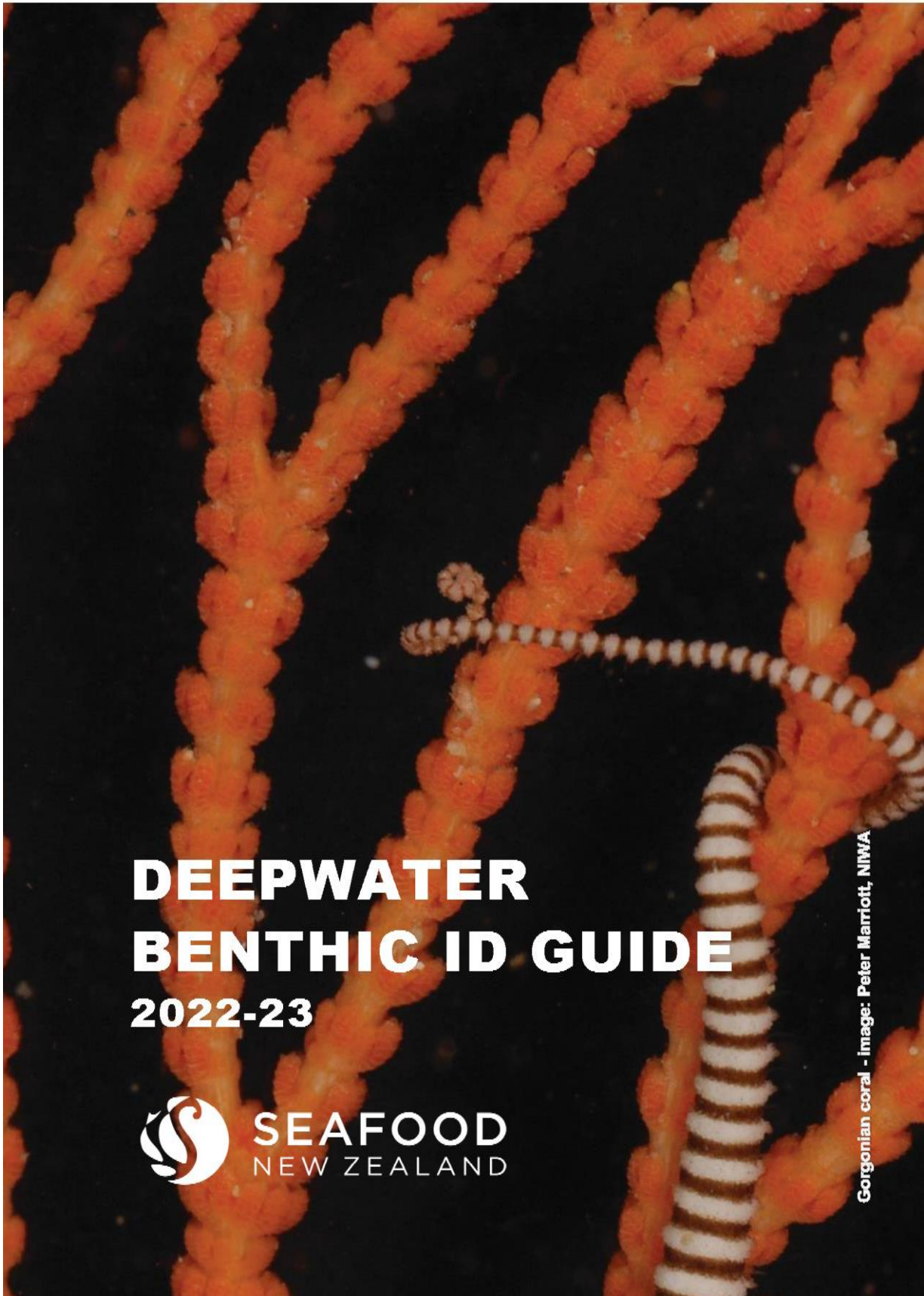
TEN COMMANDMENTS

BENTHIC

1. Ensure senior crew are aware of the restrictions of fishing in Benthic Protection Areas.
2. Ensure senior crew are briefed, comply with the DWC Benthic OPs and are familiar with the Deepwater Benthic ID Guide and quiz (tinyurl.com/BenthicIDguide and tinyurl.com/BenthicIDquiz)
3. Ensure at least one crew member is adequately prepared to identify between corals, sponges and bryozoan.
4. All vessels will operate in accordance with a principle of avoidance from areas where there may be significant catches of benthos as a result of prior experience or knowledge.
5. If a significant catch of benthos is encountered, scout the area with an echosounder, and consider how and where to undertake the next fishing event
6. For the avoidance of doubt, vessels should treat all and any coral or coral-like bycatch as protected and ensure they meet the requirements of the Wildlife Act
7. Vessels must report corals, sponges and bryozoans on NFPS reports (other benthic captures should be reported in disposals)
8. Use the Notes section to report coral rubble and anything else worth noting about the incident.
9. Report coral captures of >50 kg and sponge captures of >600 kg to DWC (admin@deepwatergroup.org) with a photo of the coral and/or the sponge.
10. As legally required report all captures via your vessel's Electronic Reporting System.

SEAFOOD NEW ZEALAND | DEEPWATER COUNCIL
FOR SUPPORT PHONE JOHN CLEAL: 021 305 825 OR BEN STEELE-MORTIMER: 027 234 3140

APPENDIX 2: BENTHIC ID GUIDE



DEEPWATER BENTHIC ID GUIDE 2022-23



Gorgonian coral - image: Peter Marriott, NIWA

Benthic ID Quiz image credits: Ministry of Primary Industries, NIWA, DOC

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Monday, 5 August 2024

TAKE THE BENTHIC ID QUIZ

To take the **Benthic ID Quiz**, please scan the QR code with your mobile device or enter this URL tinyurl.com/BenthicIDQuiz on your PC to open the quiz online at EdApp.com.

Once you've set up an account, identifying the 42 images will take about 15 minutes.



The image shows two parts of the quiz interface. On the left is a registration form titled 'Welcome to EdApp' with fields for email, password, and name. On the right is a mobile app screen for the 'Benthic ID Quiz' showing a question with two images of bryozoans and three multiple-choice options: BRYOZOAN, CORAL, and SPONGE. A yellow arrow points from a text box to the zoom icon in the top right corner of the image area on the app screen.

To enlarge images on your mobile device, click the icon in the top right corner of the image.

While we're looking at integrating the quiz with the DWG OP app, for now, we're using this software aimed at the educational sector, which is why the quiz is referred to as a 'lesson' and in places may feel somewhat childish.

The quiz is designed as a training resource for fishers to ensure they can use the identification resources provided by DWG to correctly ID corals, bryozoans, and sponges and use the correct reporting codes.

It is not a test – there is no pass or fail.

Please make sure you have the following in front of you when completing the quiz:

- *Deepwater Benthic ID Guide 2022-23* (this document)
- *DOC Coral Identification Guide* tinyurl.com/CoralGuideDOC
Both documents can be accessed from the "Briefcase" when you open the EdApp website or app.

For more information on sponges: [Splendid Sponges Version4 2022 NIWA web.pdf](#)

For more information on bryozoans: [Bountiful bryozoans - a guide to the bryozoans of New Zealand \(niwa.co.nz\)](#)

For any questions or clarification please call:

John Cleal – Environmental Liaison Officer on 021 305 825
Ben Steele-Mortimer – Environmental Manager on 027 234 3140

CORAL (COU)

- Corals are tiny inter-connected individual 'polyps' that sit on an exoskeleton made of calcium carbonate. The polyp is shaped like a tube with a mouth surrounded by tentacles at one end and is the living part of the animal.
- Corals have very diverse shapes, including sea fan, bushy, tree, spiral and reef-building forms. Most of them are protected species.
- Use code COU for all unidentifiable corals.



CORAL (COU)



Stony branching coral



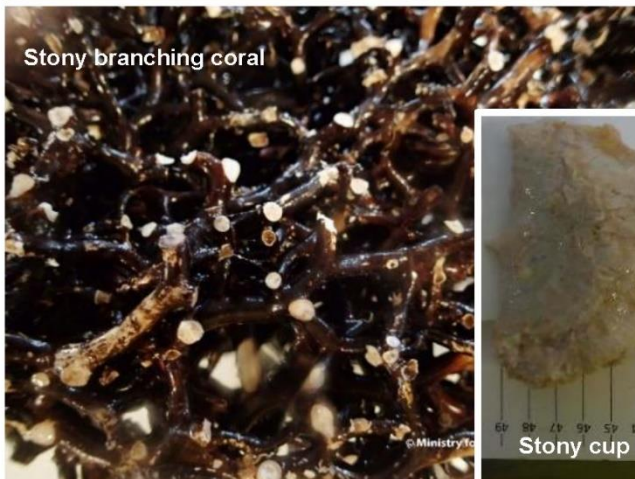
Anthothelid coral



Stony cup coral



Bubblegum coral



Stony branching coral

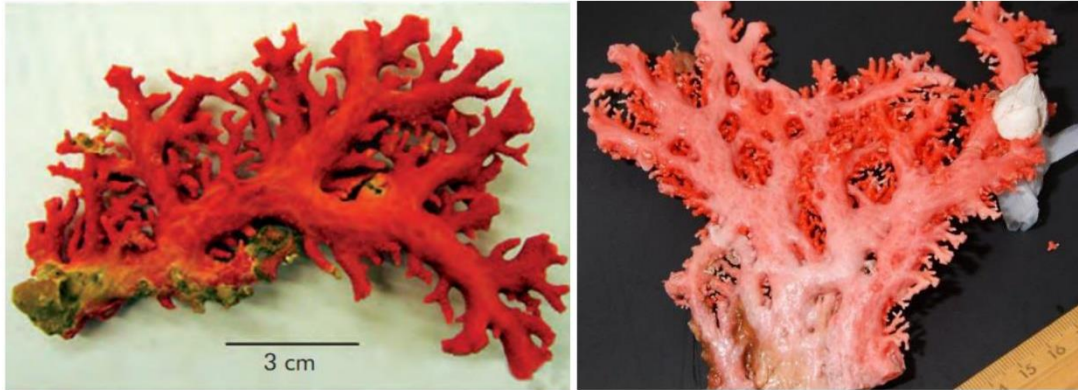


Stony cup coral

CORAL (COU)

Red hydrocorals (ERR)

Only use this code if you are certain of the coral type. If you are uncertain of the coral type, use code COU.



CORAL (COU)

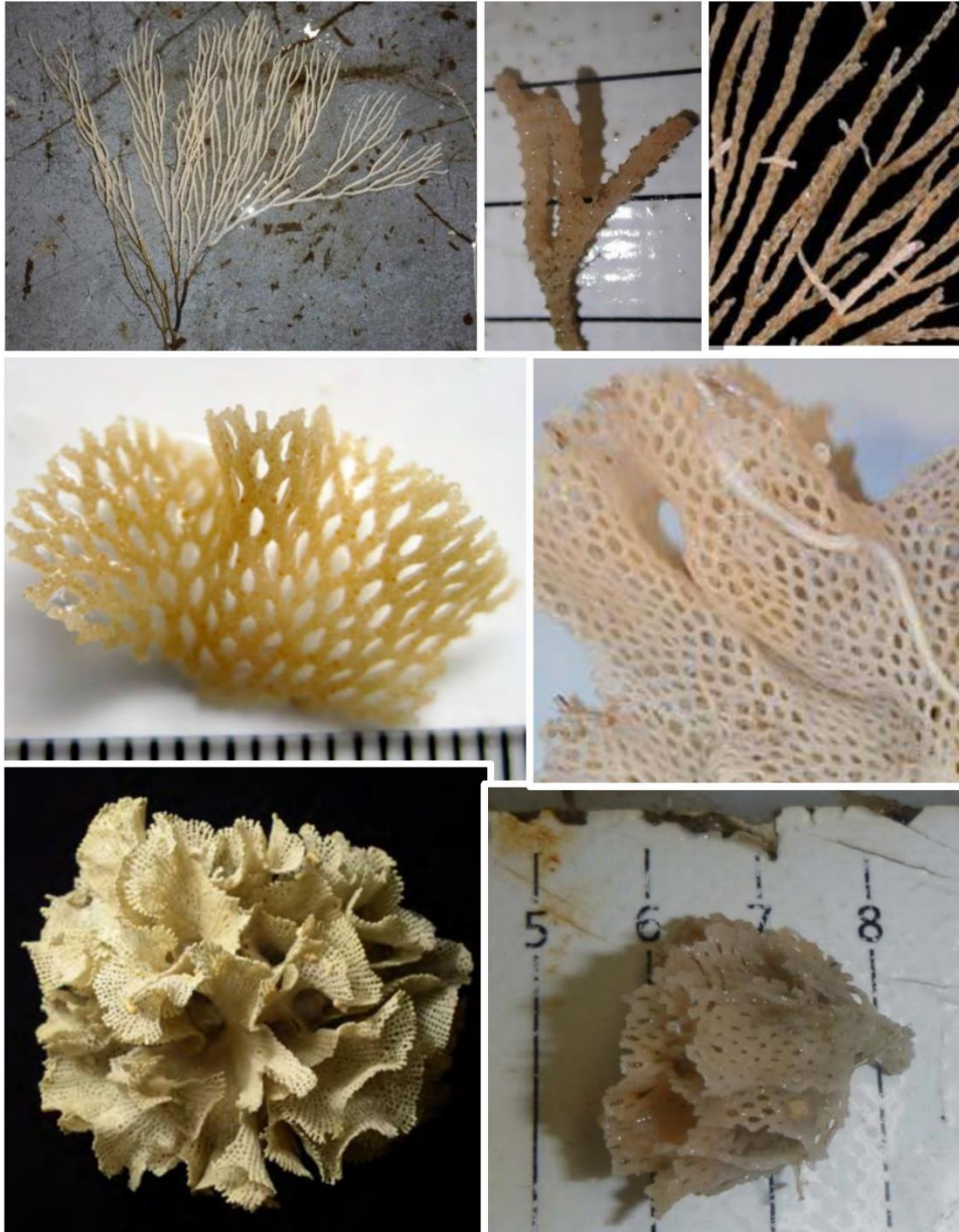
Black corals (COB)

Only use this code if you are certain of the coral type. If you are uncertain of the coral type, use code COU.



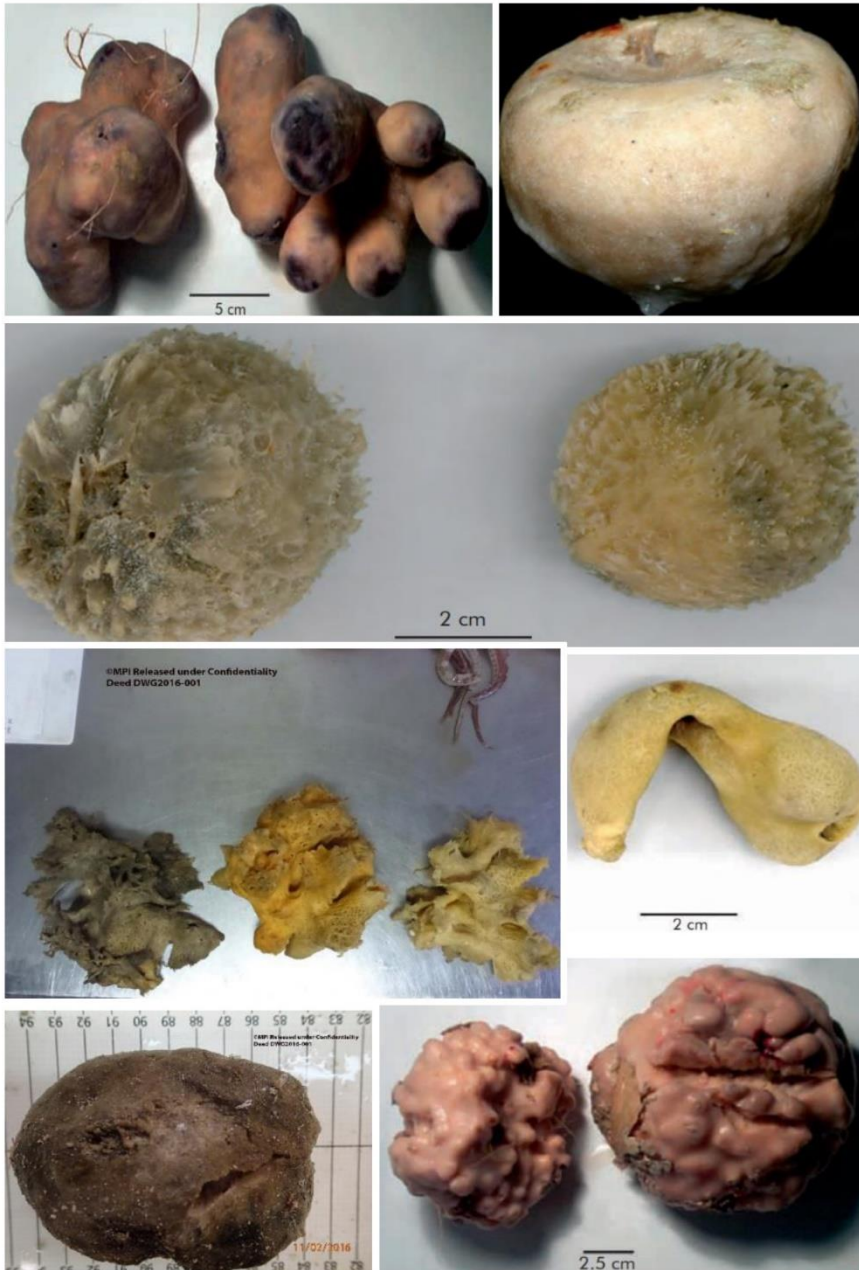
BRYOZOANS (COZ)

- Plant-like with branches and trunks but 'crunchy', can also be flat, encrusting colonies also 'crunchy'; skeleton made up of many tiny individuals called zooids.
- All structures within one colony are identical. Often resemble hard corals.



SPONGES (ONG)

- Spongy, no definite appendages, some with obvious glass spicules.
- Variety of shapes and structures including encrusting mats, tubular, round, fan-shaped, vase-shaped and branching.
- If unsure break off a small piece, internally should look like and feel like a bath sponge.



SPONGES (ONG)

