Beware Reef
Marine Sanctuary
Identification Booklet
Third Edition
Acknowledgements

Many people contributed their knowledge, time and passion to put this Identification Booklet together. We are grateful for the help of:

• Friends to Beware Reef Marine Sanctuary
• Coastcare Victoria – Gippsland
• Graham J. Edgar
• Parks Victoria


Disclaimer

Lots of effort was put in to provide accurate information, unfortunately this Identification Booklet may not be perfect. It is proposed to be a simple guide only and should be considered as such.
Table of Contents

1 Algae .....................................................................................................................................................3
2 Poriferas (Sponges) ...............................................................................................................................7
3 Cnidarians (Jellyfish, Anemones, Corals and Hydroids) .................................................................12
4 Arthropods (Crayfish, Sea Spiders and Shrimps) ...........................................................................21
5 Molluscs (Snails, Cuttlefish, Octopus and Nudibranchs) .............................................................23
6 Bryozoans (Lace Corals) ....................................................................................................................28
7 Echinoderms (Seastars & Urchins) ....................................................................................................30
8 Ascidians ...........................................................................................................................................35
9 Fish .................................................................................................................................................... 40
10 Out of Range Species .......................................................................................................................50
Beware Reef Marine Sanctuary

Beware Reef Marine Sanctuary encompasses a series of pinnacles of granite rock rising 30 metres off the sea floor, with only a small section at its northern extremity rising some two metres above sea level. This underwater mountain range runs for just over one kilometre to the south-east from the drying part of the reef, and the marine sanctuary that protects this unique reef covers an area of 220 hectares. The reef lies five kilometres to the south-east of Cape Conran and about three kilometres offshore from the beach at Yeerung River.

The reefs that lie below the surface are rich in marine life and habitat, with a unique mix of both warmer and cooler temperate species, due to its location between the Eastern Australian current flowing from the north and a cooler westerly current flowing through Bass Strait.

To date approximately 100 fish species, 4 marine mammals, 1 marine reptile, 28 seaweeds, 40 sponges and more than 180 other invertebrates have been catalogued within the Beware Reef Marine Sanctuary.

Friends of Beware Reef

The beginnings of this group came out of a discussion on Australia Day 2005, about the underwater heritage lying within the boundaries of the newly formed Beware Reef Marine Sanctuary. This heritage was in the form of three shipwrecks: the S.S. Auckland wrecked in 1871, the Ridge Park wrecked in 1881 and the steam trawler Brolga (Albert San) wrecked in 1926.

Since it was formed, members of the group have given countless talks and presentations to a wide variety of interested groups from Flinders on Western Port Bay, to Mallacoota in East Gippsland and everywhere in between. In 2012 the group catalogued invertebrates on Beware Reef Marine Sanctuary. This identification booklet that you have in your hand is the end result of this fabulous project.
The marine plants are basically divided into three broad groups: Brown algae; Red algae and Green algae.

Green Algae are closely related to some terrestrial plants such as mosses, fern and conifers. This particular group is less common at Beware Reef due to the physical nature of the reef and dominance of deep water, but a number of species are represented in some of the shallower sections of the reef especially around the exposed section to the north.

Brown Algae are the most common seaweeds seen at Beware Reef. They include most of the larger sized species attached to the reef, which is why they seem to dominate the shallower waters.

Red Algae are very common in southern waters and make up the largest group of marine plants. Identification of this species however is very difficult because it relies on differences between plant structures rather than overall appearances.
Sawtooth Caulerpa

*Caulerpa remotifolia*
- Phylum: Chlorophyta
- Family: Caulerpaceae

Fern Caulerpa

*Caulerpa flexilis*
- Phylum: Chlorophyta
- Family: Caulerpaceae

Awled Cystophora

*Cystophora cuspidata*
- Phylum: Heterokontophyta
- Family: Cystoseiraceae
**Fanweed**

*Zonaria turneriana*

Phylum: Heterokontophyta  
Family: Dictyotaceae

**Southern Peacockweed**

*Distromium flabellatum*

Phylum: Heterokontophyta  
Family: Dictyotaceae

**Common Kelp**

*Ecklonia radiata*

Phylum: Heterokontophyta  
Family: Alariaceae
***Flat-branched Coralline***
Amphiroa anceps
Phylum: Rhodophyta
Family: Corallinaceae

***Rosy Coralline***
Haliptilon roseum
Phylum: Rhodophyta
Family: Corallinaceae

***Spongy Leafweed***
Epiglossum smithiae
Phylum: Rhodophyta
Family: Rhodomelaceae
Poriferas

Sponges are the dominant species on the deeper sections of Beware Reef. They are a very diverse species, some colourful, some free-standing whilst others are encrusting.

Their bodies are perforated by numerous pores called ostia, through which water is drawn, and a few large openings, the oscules from which the water is expelled.

Large volumes of water are passed through these sponges as they filter food as it passes through them. Because they are filter feeders they do best where there is a strong current or wave action.
Ball Sponge
Ancorina geodides
Phylum: Porifera

Apricot Tube Sponge
Siphonochalina sp.
Phylum: Porifera

Cream Honeycomb Sponge
Holopsamma Laminaefavosa
Phylum: Porifera
**Cup Sponge**
*Carteriospongia caliciformis*
Phylum: Porifera

**Prickly Rose Sponge**
*Dendrilla rosea*
Phylum: Porifera

**Sponge**
*Euryspongia sp.*
Phylum: Porifera
Orange Dimpled Sponge
Cliona sp.
Phylum: Porifera

Sponge
Pseudoceratina sp.
Phylum: Porifera

Papilate Encrusting Sponge
Strongylacidon sp.
Phylum: Porifera
Plate Sponge
*Strepsichordaia caliciformis*
Phylum: Porifera

Southern Golfball Sponge
*Tethya bergquistaee*
Phylum: Porifera

Cream Columnar Sponge
*Thorecta sp.*
Phylum: Porifera
This group of invertebrates is very widely represented within the Beware Reef Marine Sanctuary. There are two basic types of cnidarians (Pronounced: nye – dare – ee – ans).

Polyps – that have a tubular body attached at one end to the seabed, either individually or as part of a colony, with tentacles surrounding the mouth at the other.

Medusae – are free swimming hemispherical bodied animals, with tentacles surrounding a central mouth on the under surface.

An interesting characteristic of Cnidarians is that they have stinging cells in the tentacles and body wall, for either protection or capturing prey.
Umbrella Jelly

Aequorea eurhodina
Phylum: Cnidaria
Class: Hydrozoa
Order: Hydroida

Lion’s Mane Jelly

Cyanea annaskala
Phylum: Cnidaria
Class: Scyphozoa
Order: Semaeostomeae

Great Sea Pen

Sarcoptilus grandis
Phylum: Cnidaria
Class: Anthozoa
Order: Pennatulacea
**Pink Jewell Anemone**

*Corynactis australis*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Corallimorpharia

**Apricot Jewell Anemone**

*Corynactis australis*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Corallimorpharia

**Anemone**

*Epiactis sp.*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Actiniaria
Swimming Anemone

*Phlyctenactis tuberculosa*

Phylum: Cnidaria
Class: Anthozoa
Order: Actiniaria

White-striped Anemone

*Actiniid sp. 3*

Phylum: Cnidaria
Class: Anthozoa
Order: Actiniaria

Southern Sea Anemone

*Phlyctenanthus australis*

Phylum: Cnidaria
Class: Anthozoa
Order: Actiniaria
Eastern Red Sea Fan

*Mopsella* sp.
- Phylum: Cnidaria
- Class: Anthozoa
- Order: Alcyonacea

Jetty Octocoral

*Carijoa* sp.
- Phylum: Cnidaria
- Class: Anthozoa
- Order: Alcyonacea

Johnstone’s Soft Coral

*Capnella johnstonei*
- Phylum: Cnidaria
- Class: Anthozoa
- Order: Alcyonacea
Fragile Bramble Coral

*Acabaria sp.*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Alcyonacea

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Blue Green Soft Coral

*Capnella sp.*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Alcyonacea

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Delicate Soft Coral

*Clavularia sp.*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Alcyonacea
Fishbone Sea Fan
Mopsea sp.
Phylum: Cnidaria
Class: Anthozoa
Order: Alcyonacea

Elongate Seagrass Hydroid
Stereotheca elongata
Phylum: Cnidaria
Class: Hydrozoa
Order: Hydroida

Yellow Feathery Hydroid
Halopteris campanula
Phylum: Cnidaria
Class: Hydrozoa
Order: Hydroida
**Feather Hydroid**
Gymnangium sp.
Phylum: Cnidaria
Class: Hydrozoa
Order: Hydroida

**Wilson’s Hydroid**
Clathrozoon wilsoni
Phylum: Cnidaria
Class: Hydrozoa
Order: Hydroida

**Sea Fern**
Sertularia macrocarpa
Phylum: Cnidaria
Class: Hydrozoa
Order: Hydroida
Encrusting Grey Zoanthid

*Epizoanthus sabulosus*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Zoanthiniaria

Yellow Zoanthid

*Parazoanthus sp. 1*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Zoanthiniaria

Little Coral

*Culicia tenella*

Phylum: Cnidaria  
Class: Anthozoa  
Order: Scleractinia
**Arthropods**

This is another marine group that has many related species in the terrestrial world.

Crustaceans have two pairs of antennae in front of the mouth. They occur in virtually all marine environments and they all have jointed legs.

The spiders have segmented bodies, with a hardened outer skeleton, and many jointed limbs.

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**Crayfish, Sea Spiders & Shrimps**

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**Crayfish, Southern Rock Lobster**

*Jasus edwardsii*

Phylum: Arthropoda

Subphylum: Crustacea

Class: Malacostraca
Serrated Hinge-back Shrimp

Rhynchocinetes serratus
Phylum: Arthropoda
Subphylum: Crustacea
Class: Malacostraca

Evan’s Sea Spider

Anoplodactylus evansi
Phylum: Arthropoda
Subphylum: Chelicerata
Class: Pycnogonida

Gippsland Sea Spider

Pallenopsis gippslandiae
Phylum: Arthropoda
Subphylum: Chelicerata
Class: Pycnogonida
Molluscs

Molluscs are a very diverse group making it difficult to generalise on features across the group.

All molluscs have body structures of the same basic pattern, they have a head and muscular foot which may be modified to form tentacles.

Molluscs may have a single shell like snails, a pair of shells hinged together such as in mussels, have internal shells such as cuttlefish or sea hares, or can be completely absent shells such as nudibranchs and octopus.

Snails, Shells, Nudibranchs & Octopus
Elephant Snail
*Scutus antipodes*
Phylum: Mollusca
Class: Gastropoda

Smooth Helmet Shell
*Phalium pyrum*
Phylum: Mollusca
Class: Gastropoda

Marine Snail
*Caledoniella contusiformis*
Phylum: Mollusca
Class: Gastropoda
Pink Top Shell
Calliostoma armillatum
Phylum: Mollusca
Class: Gastropoda

Patterned Chiton
Rhyssoplax calliozona
Phylum: Mollusca
Class: Polyplacophora

Ridged File Shell
Limatula strangei
Phylum: Mollusca
Class: Bivalvia
Bennett’s Hypselodoris
Hypselodoris benetti
Phylum: Mollusca
Class: Gastropoda
Subclass: Opisthobranchia

Sweet Ceratosoma
Ceratosoma amoenum
Phylum: Mollusca
Class: Gastropoda
Subclass: Opisthobranchia

Tasmanian Chromodorid
Chromodoris tasmaniensis
Phylum: Mollusca
Class: Gastropoda
Subclass: Opisthobranchia
Marigold Dorid

*Neodoris chrysoderma*

Phylum: Mollusca  
Class: Gastropoda  
Subclass: Opisthobranchia

Gloomy Octopus

*Octopus tetricus*

Phylum: Mollusca  
Class: Cephalopoda

Cuttlefish

*Sepia apama*

Phylum: Mollusca  
Class: Cephalopoda
**Bryozoans**

Bryozoans are minute animals that form colonies on top of each other to build coral like structures up to one metre across.

Each animal (zooids) builds a hard case around itself, but on dying a new animal builds next to the old case, thus, over time forming a structure.

**Bryozoans & Lace Corals**
Folded-plate Bryozoan

Steginoporella chartacea

Phylum: Bryozoa

Lace Coral, Lace Bryozoan

Triphyllozoon muniliferum

Phylum: Bryozoa

Green Soft Bryozoan

Bugula dentata

Phylum: Bryozoa
Echinoderms

All Echinoderms have a radially symmetrical body, a unique internal water transport system, and have tube feet which are used for movement and gas exchange.

Nevertheless, echinoids are animals that have an internal calcareous skeleton, like vertebrates.

They have a remarkable power of regeneration. Many can grow new limbs and guts if damaged. And some deliberately shed arms as a reproduction process known as fission.

Feather Stars, Sea Cucumbers, Brittle Stars, Sea Urchins & Seastars
**Tasmanian Feather Star**
Comanthus tasmaniae  
Phylum: Echinodermata  
Class: Crinoidea

**Feather Star**
Cenolia trichoptera  
Phylum: Echinodermata  
Class: Crinoidea

**Southern Sea Cucumber**
Australostichopus mollis  
Phylum: Echinodermata  
Class: Holothuroidea  
Family: Stichopodidae
Southern Basket Star
Conocladus australis
Phylum: Echinodermata
Class: Ophiuroidea
Family: Gorgonocephalidae

Schayer’s Brittle Star
Ophionereis schayeri
Phylum: Echinodermata
Class: Ophiuroidea
Family: Ophionereidae

Heart Urchin
Echinocardium cordatum
Phylum: Echinodermata
Class: Echinoidea
Inflated Egg Urchin
*Holopneustes inflatus*
Phylum: Echinodermata
Class: Echinoidea
Family: Temnopleuridae

Hollow-spined Urchin, Black Urchin
*Centrostephanus rodgersii*
Phylum: Echinodermata
Class: Echinoidea
Subclass: Opisthobranchia
Family: Diadematidae

Common Urchin
*Heliocidaris erythrogramma*
Phylum: Echinodermata
Class: Echinoidea
Family: Echinometridae
**Eleven-armed Seastar**

Coscinasterias muricata

Phylum: Echinodermata

Class: Asteroidea

Family: Asteroiidae

**Many-spotted Seastar**

*Fromia Polypora*

Phylum: Echinodermata

Class: Asteroidea

Family: Ophidiasteridae

**Spotted Seastar**

*Nectria ocellata*

Phylum: Echinodermata

Class: Asteroidea

Family: Oreasteridae
Ascidians have two widely different stages of development. When in the larval stage (juvenile), they have a tadpole like appearance so as to be easily dispersed by wind and currents. When a suitable place to settle is found they attach themselves to the reef and grow into a mature animal.

Ascidians are essentially filter feeders that rely on the currents and wave action to bring the food to it, as it is unable to move once it has secured itself to the reef.
Magnificent ascidian
*Botrylloides magnicoecum*
Phylum: Chordata
Class: Ascidiacea
Family: Styelidae

Ascidian
*Cnemidocarpa radiocosa*
Phylum: Chordata
Class: Ascidiacea
Family: Styelidae

Deadman’s fingers
*Botrylloides perspicuus*
Phylum: Chordata
Class: Ascidiacea
Family: Styelidae
**Spongy Compound Ascidian**

*Didemnum lissoclinum*

Phylum: Chordata  
Class: Asciidiacea  
Family: Didemnidae

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**Ascidian**

*Leptoclinides frustus*

Phylum: Chordata  
Class: Asciidiacea  
Family: Didemnidae

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**Brain Ascidian**

*Sycozoa cerebriformis*

Phylum: Chordata  
Class: Asciidiacea  
Family: Holozoidae
Key-shape Ascidian

*Pseudodiazona claviformis*

Phylum: Chordata
Class: Ascidiacea
Family: Diazonidae

Grape Ascidian

*Clavelina cylindrica*

Phylum: Chordata
Class: Ascidiacea
Family: Clavelinidae

Blue Flask Ascidian

*Prodoclavella sp.*

Phylum: Chordata
Class: Ascidiacea
Family: Clavelinidae
Giant Jelly Ascidian

Polycitor giganteus
Phylum: Chordata
Class: Ascidiacea
Family: Polycitoridae

Sluiter’s Compound Ascidian

Aplidium multiplicitatum
Phylum: Chordata
Class: Ascidiacea
Family: Polyclinidae

Southern Sea Tulip

Pyura australis
Phylum: Chordata
Class: Ascidiacea
Family: Pyuridae
Fish are the most easily identifiable species that humans readily associate with the sea. Because they are a major food source they are of an economic value as well. Beware Reef, like the rest of the southern Australian coastline, is well represented with a wide variety of fish species. They are divided into a number of basic groups:

Cartilaginous fish – have a flexible skeleton made of cartilage, rigid fins, have bodies covered in fine tooth like scales called denticles, and have more than one gill slit.

Bony fish – have a bony skeleton, with a single gill opening on either side of the head, and most are covered in a scaly skin.
**Banjo Ray, Fiddler Ray**  
*Trygonorrhina fasciata*  
Phylum: Chordata  
Class: Chondrichthyes  
Family: Rhinobatidae

**Port Jackson Shark**  
*Heterodontus portusjacksoni*  
Phylum: Chordata  
Class: Chondrichthyes  
Family: Heterodontidae

**Draughtboard Shark, Swell Shark**  
*Cephaloscyllium laticeps*  
Phylum: Chordata  
Class: Chondrichthyes  
Family: Scyliorhinidae
**White Pointer Shark**
*Carcharodon carcharias*
Phylum: Chordata  
Class: Chondrichthyes  
Family: Lamnidae

**Green Moray**
*Gymnothorax prasinus*
Phylum: Chordata  
Class: Osteichthyes  
Family: Muraenidae

**Largetooth Beardie**
*Lotella rhacinus*
Phylum: Chordata  
Class: Osteichthyes  
Family: Moridae
**Red Rock Cod**
Scorpaena papillosa
Phylum: Chordata
Class: Osteichthyes
Family: Scorpaenidae

**Barber Perch (female)**
Caesioperca rasor
Phylum: Chordata
Class: Osteichthyes
Family: Serranidae

**Halfbanded Seaperch**
Hypoplectrodes maccullochi
Phylum: Chordata
Class: Osteichthyes
Family: Serranidae
Banded Seaperch
Hypoplectrodes nigroruber
Phylum: Chordata
Class: Osteichthyes
Family: Serranidae

Yellow-banded Seaperch
Hypoplectrodes annulatus
Phylum: Chordata
Class: Osteichthyes
Family: Serranidae
A/N: Yellow-banded Seaperch generally lives upside down in caves.

Butterfly Perch
Caesioperca lepidoptera
Phylum: Chordata
Class: Osteichthyes
Family: Serranidae
Melbourne Silverbelly, Lowfin

*Parequula melbournensis*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Gerreidae

Longsnout boarfish

*Pentaceropsis recurvirostris*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Pentacerotidae

Red Gurnard

*Helicolenus alporti*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Scorpaenidae
Onespot Puller
Chromis hypsilepis
Phylum: Chordata
Class: Osteichthyes
Family: Pomacentridae

Jackass Morwong, Sea Bream, Silver Perch
Nemadactylus macropterus
Phylum: Chordata
Class: Osteichthyes
Family: Cheilodactylidae

Striped Seapike
Sphyraena sp
Phylum: Chordata
Class: Osteichthyes
Family: Shyraenidae
Senator Wrasse (male)

*Pictilabrus laticlavitus*

Phylum: Chordata  
Class: Osteichthyes  
Family: Labridae

Blue-Throat Wrasse

*Notolabrus tetricus*

Phylum: Chordata  
Class: Osteichthyes  
Family: Labridae

Southern Maori Wrasse

*Ophthalmolepis lineolatus*

Phylum: Chordata  
Class: Osteichthyes  
Family: Labridae
**Crimsonband Wrasse**

*Notolabrus gymnogenis*
Phylum: Chordata  
Class: Osteichthyes  
Family: Labridae

**Rosy Weedfish**

*Heteroclinus roseus*
Phylum: Chordata  
Class: Osteichthyes  
Family: Clinidae

**Horseshoe Leatherjacket**

*Meuschenia hippocrepis*
Phylum: Chordata  
Class: Osteichthyes  
Family: Monacanthidae
**Sixspine Leatherjacket**

*Meuschenia freycineti*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Monacanthida

**Bastard Trumpeter**

*latridopsis forsteri*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Latrididae

**Globefish, Porcupine Fish**

*Diodon nicthemerus*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Diodontidae
Out of Range Species

Over recent times we have been recording more species of marine animals that have travelled from areas to the north or west to inhabit the Beware Reef Marine Sanctuary. It is believed that this is an early sign of the effects of ‘Global Warming’ on our East Gippsland Coast.

**Barred Leatherjacket**

*Cantherhines dumerilii*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Latrididae

**Round Belly Cowfish**

*Lactoria diaphana*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Ostraciidae

**Tasselled Kelpfish**

*Chironemus georgianus*

- Phylum: Chordata
- Class: Osteichthyes
- Family: Chironemidae
**Victorian Scalyfin**
*Parma vistoriae*
- Phylum: Chordata
- Class: Osteichthyes
- Family: Pomacentridae

**Thompsons Chromodoris**
*Chromodoris thompsoni*
- Phylum: Mollusca
- Class: Gastropoda
- Family: Opisthobranchia

**Seven-armed Seastar**
*Astrostole scabra*
- Phylum: Echinodermata
- Class: Asteroidea
- Family: Asteroidea
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Photography by: Friends of Beware Reef