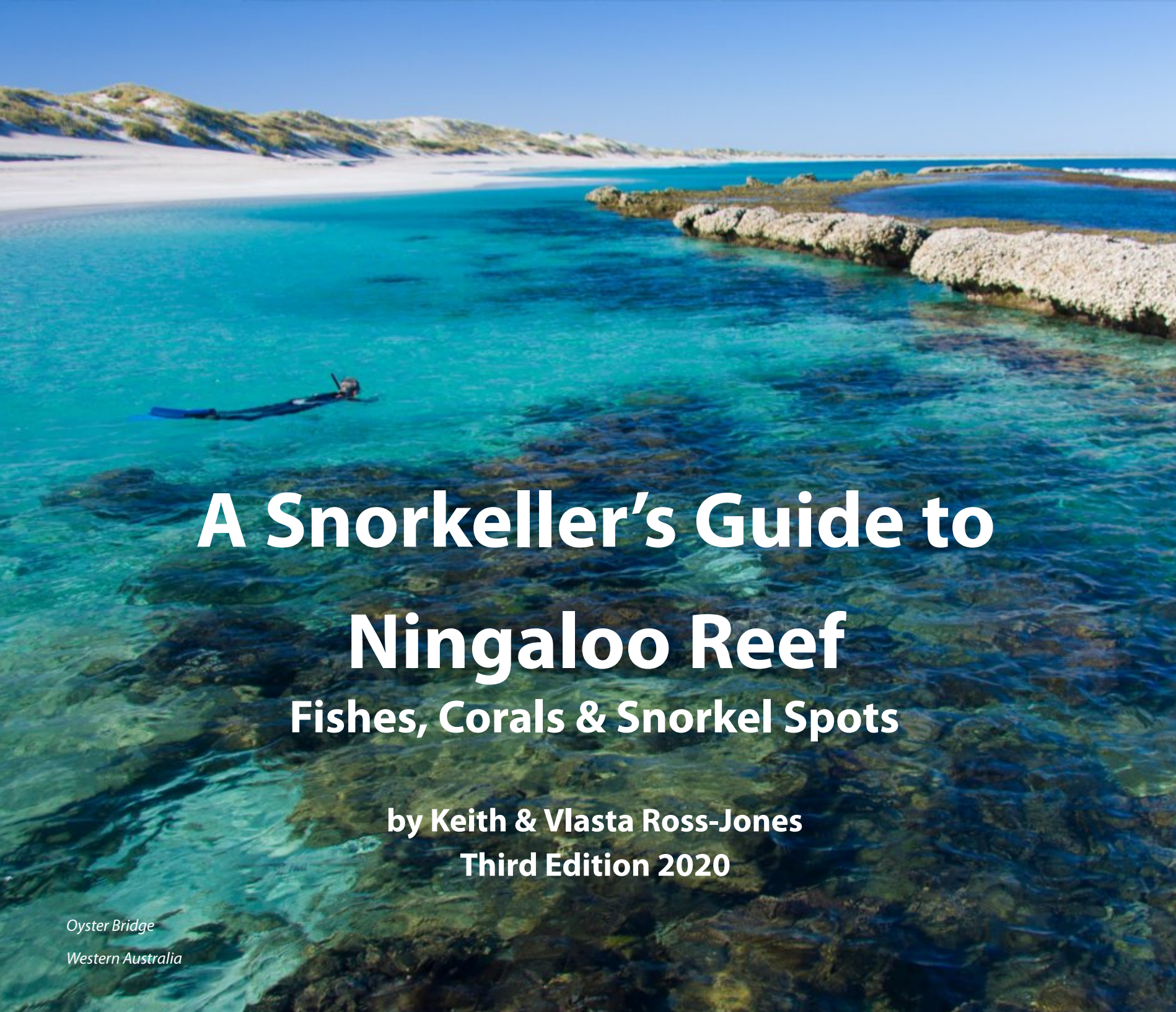

A Snorkeller's Guide to Ningaloo Reef

Fishes, Corals & Snorkel Spots

by Keith & Vlasta Ross-Jones

Third Edition 2020

Oyster Bridge

Western Australia

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Coral Bay

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Coral Bay

exception to this ordering is the grouping of Rays, Stingrays and Maskrays into the group **Ray**, *which makes for a more logical ordering. The Scientific Name (Genus and species) for each fish is also provided to help cross-reference with other books to obtain more detailed information. As you become more familiar with identifying fishes you will quickly notice the difference between Families, such as Wrasses, Butterflyfish, Parrotfish etc. which will guide you to the appropriate section of this book. Finally, each Family of fishes will start with the Family name above the first fish photo in that Family. To make searching the book easier, the Family name is also provided on the top, outer corner of each page. Below each fish is it's full Common Name, Maximum Size, Scientific Name and any further relevant details. The details provided are purely from our observations and may not necessarily be scientifically correct.*

IDENTIFICATION TIPS

The process of identifying fish begins with trying to identify what Family of fish you are seeing, such as wrasse, parrotfish, butterflyfish, rabbitfish, boxfish or one of the many other Families of fish. With practice you will begin to notice that you can place a fish in one of these Families by mostly looking at the shape of the fish. Shape is one of the most important aspects of identifying fish.

Once you have categorised the fish you start looking at other characteristics such as colour, fin shape & placement as well as habitat. Look at all the pictures you can find because many fish change with age and differ just as we differ from each other. Behaviour is also useful as often a fish will change colour depending on what they are doing or if they are feeling threatened; for example, many rabbitfish change colour pattern when resting or feeding.

The identification process we go through is something like this:

1. *Categorise the fish based on shape and any other identifying characteristic such as beaks in parrotfishes.*
2. *Try and match shape and colour patterns to the fish illustrated in this book or any other book.*
3. *Look closely at placement, shape and size of all fins as well as the tail as these often help distinguish similar fishes.*
4. *Look at juvenile or immature fish too as they can be very different from the adult.*
5. *Males and females are often very different, especially the parrotfishes.*
6. *Look at distribution as the fish you are looking at in the reference book may not even be found in the region where you found your fish.*

Identification can be very difficult and we still have pictures of fish we just have not been able to identify. The WA Museum has been very helpful when we have had trouble identifying some fish, so don't be afraid to look elsewhere for assistance. We wish you happy and successful fish viewing and identification.

UNDERWATER PHOTOGRAPHY

Underwater photography is very tricky and throws up many challenges before you produce decent photographs. By far the most challenging


Turquoise Bay

thing to get right is colour balance. Water absorbs different wavelengths of light the deeper you go and your photos will appear bluer and greener with greater depth. Fortunately as a snorkeller you probably won't be going too deep, but you will still need to adjust the white balance by adding varying amounts of red, orange or yellow when adjusting photos on a computer. The other most challenging thing is movement; not only will you be trying to photograph a moving subject but you will be hand-holding the camera while being moved around by the sea. It requires patience, practice and disappointment before you start taking good underwater photographs. Perseverance is the key as well as taking as many photos as you can of your subject.

We started taking photos using point-and-shoot cameras and so always set the camera white balance to the Underwater setting. We have now progressed to the Canon G1X Mk II and always shoot using RAW so that we can best adjust the white balance on the computer later. Even when taking RAW photos, we set the camera's white balance to the Underwater setting because when taking video the camera uses this white balance setting. All our photos, RAW and JPEG, have been adjusted on a computer to improve colour, clarity and overall quality.

WHAT'S IN A NAME

We are often asked why we use the term fishes. Firstly the word fish can be either singular or plural and the plural form of fish is used to describe many fish of the same species. So why fishes? Well, fishes is used to describe many fish of more than one species. So, if you see a school of fishes containing multiple fish of multiple species you would say you saw a school of fishes, but if you saw a school of many fish of only a single species you would say you saw a school of fish. Corals follow the same convention. So there you have it!

PERMISSION REQUIRED TO FLY DRONES

Flying drones without a permit is NOT allowed anywhere on the North West Cape including the Ningaloo Marine Park and Cape Range National Park. We would like to thank Parks and Wildlife Services for providing us with a permit to fly a drone to enable us to take the aerial photos included in this book.

ACKNOWLEDGEMENTS

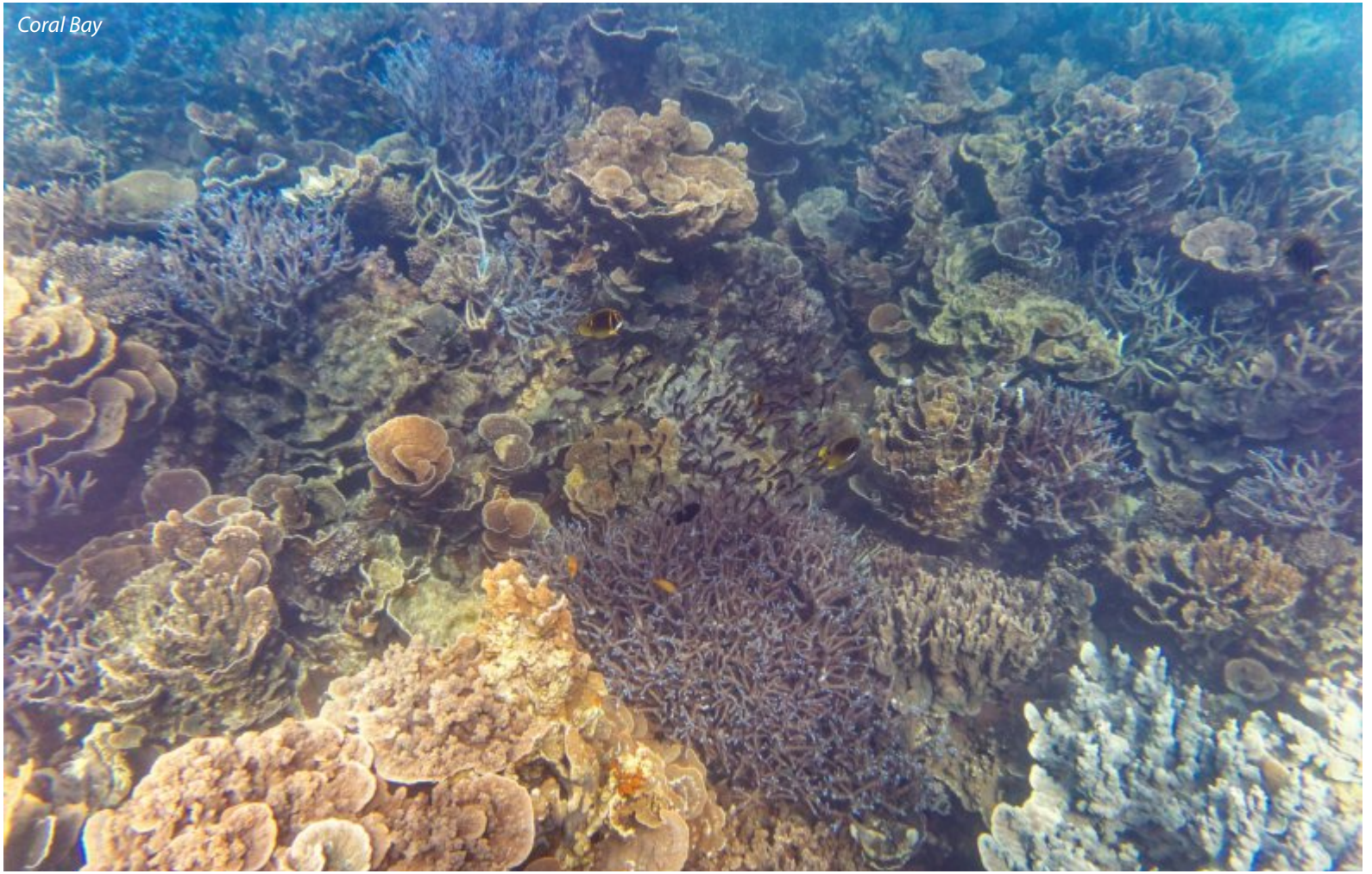
All photos in this book have been taken by us, our daughter Natasha Britz and her husband GP Britz on our many snorkelling excursions from 2008 through 2020.

We use a number of reference books to identify fishes we encounter while snorkelling the Ningaloo Reef. In writing this book, our intention is to simply assist snorkellers to identify fish so that they can then reference other books to obtain more detailed information. The reference books we have used most are: Tropical Marine Fishes of Australia by Rick Stuart-Smith, Graham Edgar, Andrew Green and Ian Shaw: Field Guide to Marine Fishes of Tropical Australia and South-East Asia by Gerald R. Allen: Fishes of Ningaloo by Denise Jenkins: Reef Fish

CORALS

Ningaloo Reef is a coral reef with a large variety of corals. When you first enter the water you may be surprised that the corals are not as colourful as you expected. As mentioned in the underwater photography section, you lose light of different wavelengths with greater depth causing some colours to appear faded. Most photographs of corals you see in books are taken with artificial light. This artificial light provides standard white light resulting in corals showing their full natural colours. The photos presented in this book are all taken in natural light and have been processed on a computer to restore their natural colours.

Corals can be classified as **Boulder**, **Foliose**, **Table**, **Encrusting**, **Elkhorn**, **Digitate**, **Mushroom**, *or* **Branching**. *Corals are also classified as either hard or soft and are invertebrate animals living in a symbiotic relationship with algae which gives them most of their colour.*



Coral Bay

Boulder Coral - *Many varieties and colours occur including Boulder Brain Coral (rows 2 & 3)*

OUR FAVOURITE SNORKELLING SPOTS

Ningaloo Reef is a World Heritage-listed site and is the largest fringing coral reef in Australia. Ningaloo Reef is also the only large reef in the world found so close to a continental land mass. The reef is approximately 300km in length and is located between Carnarvon and Exmouth in Western Australia. The reef is home to more than 500 species of tropical fish and more than 200 species of coral, and being a fringing reef makes it easily accessible from the beach for snorkelling.

The two main areas for snorkelling are located in the Cape Range National Park and Coral Bay. Cape Range National Park has a large number of beaches from which to snorkel making it a very popular holiday destination. Coral Bay has a well-protected bay in which snorkellers with varying proficiencies can explore. As the name suggests, Coral Bay is one gigantic coral garden and is our favourite destination on Ningaloo Reef.

Snorkelling close to the shore is not the only place to snorkel. The outer reef provides a different snorkelling experience with deeper water in places and additional fish species. To get to the outer reef you need to hop on a snorkelling tour boat or kayak out to moorings provided specifically for such activities. Kayak moorings are provided at Coral Bay, Bundegi Beach, Osprey Bay and Tantabiddi.

Coral Bay

Bills Bay with the town of Coral Bay visible in the distance on the left

Coral Bay is situated towards the southern end of Ningaloo Reef and has a large protected bay in which to snorkel. The bay is ideal to learn to snorkel or for those who may be nervous and not confident to venture further from shore or into deeper water. The further out in the bay you go the better the coral gets and generally the clearer the water gets. The sandy patches near the shore have many fish that are not found elsewhere, so don't discount snorkelling these waters as you could even find a Flounder, Flathead or Sole.

There are a number of kayak mooring buoys which mark interesting snorkel locations. The Coral Bay Information Centre has more information on these buoys. One of our favourite locations is the large boulder coral known as 'Ayers Rock'. The location of Ayers Rock is approximately 60m west of Kayak Buoy 7 which is about 300m north north-west of the main beach. This coral is a porites bommie and is approximately 400 years old so please treat it with respect and do not touch it but feel free to explore its perimeter and view the many species of fish which live in the area.

Coral Bay is child friendly

The side of Ayers Rock

Ayers Rock in Bills Bay with Coral Bay in the background

If you walk west along the beach and then south around the corner you will notice a 5 Knot marker in the sea. About 40m north-west of this marker is what is known locally as the 'Lavender Garden'. The Lavender Garden contains a large congregation of lavender coloured coral and provides a pleasant snorkel very close to shore. Be aware that this is close to the boating channel so be on the lookout for passing boats.

Moorish Idol over Lavender Coral

The Lavender Garden

Five Fingers

Five Fingers showing the best snorkelling areas

Five Fingers is located approximately 5km south of Coral Bay. To get to Five Fingers take the sand track located close to the entrance to the Marine Facility. A 4x4 is required to reach this location as you will be driving over soft sand. It is possible to walk here from Coral Bay but it is quite a trek either along the beach or along the sand tracks. Please remember to deflate your tyres sufficiently so that you do not damage the track which causes corrugations if you do not do so. Once you reach Five Fingers you will notice rocky fingers extending into the sea. Snorkelling anywhere in the area is good but we suggest snorkelling in the more northerly section where you will find the most coral.

This area is fairly shallow and is populated with many younger fish so be on the lookout for juvenile fish which are often very different from the adults. You are likely to encounter turtles and may even be lucky enough to see a cuttlefish. We have even spotted Batfish here.

Oyster Bridge

Oyster Bridge viewed from directly above

Oyster Bridge is a spectacular rock formation jutting out from the beach which provides a sheltered lagoon in which to snorkel. On the outer side of the rock formation the water is deeper and rougher where the more advanced snorkeller will find larger fish and even sharks. In the lagoon the oyster-covered rocks create overhangs providing cover for many fish, so have a look under these overhangs. Wobbegongs are regular visitors to these sheltered waters as are turtles and the occasional reef shark.

It is highly advisable to snorkel at the lowest tide possible as this reduces the amount of wash that comes over the rock into the lagoon, obscuring your view with bubbles.

Oyster Bridge is located approximately 10.5km from Coral Bay if you drive past the airport and along the beach from Maud's Landing. Note that the beach is closed to all vehicles between October 15th and April 30th each year because of the turtle nesting season. Oyster Bridge can also be reached via a sand track from the north. This track is

Oyster Bridge - looking north

Oyster Stacks - looking north

FISH IDENTIFICATION PHOTOGRAPHS

Anemonefish

Australian Anemonefish *12 cm*
Amphiprion rubrocinctus

Distinctive red colour with white band behind the head.

Australian Anemonefish *12 cm*
Amphiprion rubrocinctus

Some fish have a less prominent white band behind the head.

Clark's Anemonefish *14 cm*
Amphiprion clarkii

Yellow tail and pectoral fins with two white bands on the body.

Angelfish

Blue Angelfish *40 cm*
Pomacanthus semicirculatus

Adult - *Fairly large fish with distinctive yellow lips and blue colouring.*

Blue Angelfish *40 cm*
Pomacanthus semicirculatus

Subadult - *Lines fading and colour becoming mottled.*

Blue Angelfish *40 cm*
Pomacanthus semicirculatus

Juvenile - *Distinctive blue and white semicircle lines. As the fish matures the lines slowly disappear and merge into the mottled colour of the adult.*

Bluespot Butterflyfish *15 cm*
Chaetodon plebeius

Common with distinctive blue patch.

Chevron Butterflyfish *18 cm*
Chaetodon trifascialis

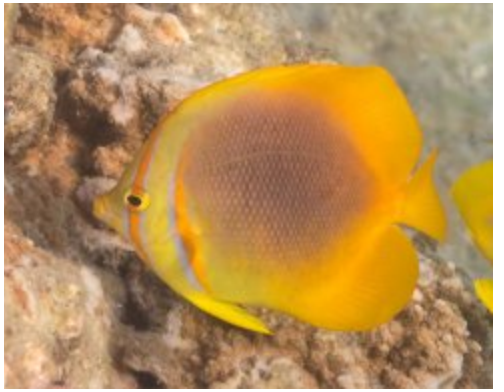
Relatively common with chevroned lines on the body.

Citron Butterflyfish *13 cm*
Chaetodon citrinellus

Smaller than most butterflyfish.

Doublesaddle Butterflyfish *15 cm*
Chaetodon ulietensis

Uncommon but very distinctive double black saddle markings.



Goldstripe Butterflyfish *12.5 cm*
Chaetodon aureofasciatus

Often seen and distinguished by two gold stripes on the head.

Klein's Butterflyfish *15 cm*
Chaetodon kleinii

Uncommon.

Flutemouth

Smooth Flutemouth *170 cm*
Fistularia commersonii
Very common and often in small schools.

Frogfish

Ocellate Frogfish *26 cm*
Halophyrne ocellatus
Distinctive but rarely seen.

Frogfish

Ocellate Frogfish *26 cm*
Halophyrne ocellatus
Normally found in deeper water.

Fusilier

Goldband Fusilier *35 cm*
Caesio caerulaurea
Uncommon.

Yellowtail Fusilier *43 cm*
Caesio cuning
Distinctive yellow tail.

Garfish

Tropical Garfish *25 cm*
Hyporhamphus affinis
Common with distinctive long slender snout and found near the surface.

Humbug

Banded Humbug *10 cm*
Dascyllus aruanus

Very common with unmistakable black and white colouring.

Headband Humbug *9 cm*
Dascyllus reticulatus

Distinctive small fish.

Humbug

Threespot Humbug *11 cm*
Dascyllus trimaculatus

Identified by three white patches, one on each side and one on the forehead.

Leatherjacket

Threespot Humbug *11 cm*
Dascyllus trimaculatus

Often found with anemones. Spots gradually fade with age.

Gillblotch Leatherjacket *14 cm*
Pervagor janthinosoma

Uncommon.

Honeycomb Leatherjacket *25 cm*
Cantherhines pardalis

Distinguished by a honeycomb pattern on the body.

Parrotfish

Bumphead Parrotfish *150 cm*
Bolbometopon muricatum

Juvenile - *Adults found outside the outer reef.*

Chameleon Parrotfish *31 cm*
Scarus chameleon

Male - *Difficult to identify due to changes in colouring but has a distinctive tail pattern.*

Chameleon Parrotfish *31 cm*
Scarus chameleon

Female - *Difficult to identify in the absence of males.*

Chameleon Parrotfish *31 cm*
Scarus chameleon

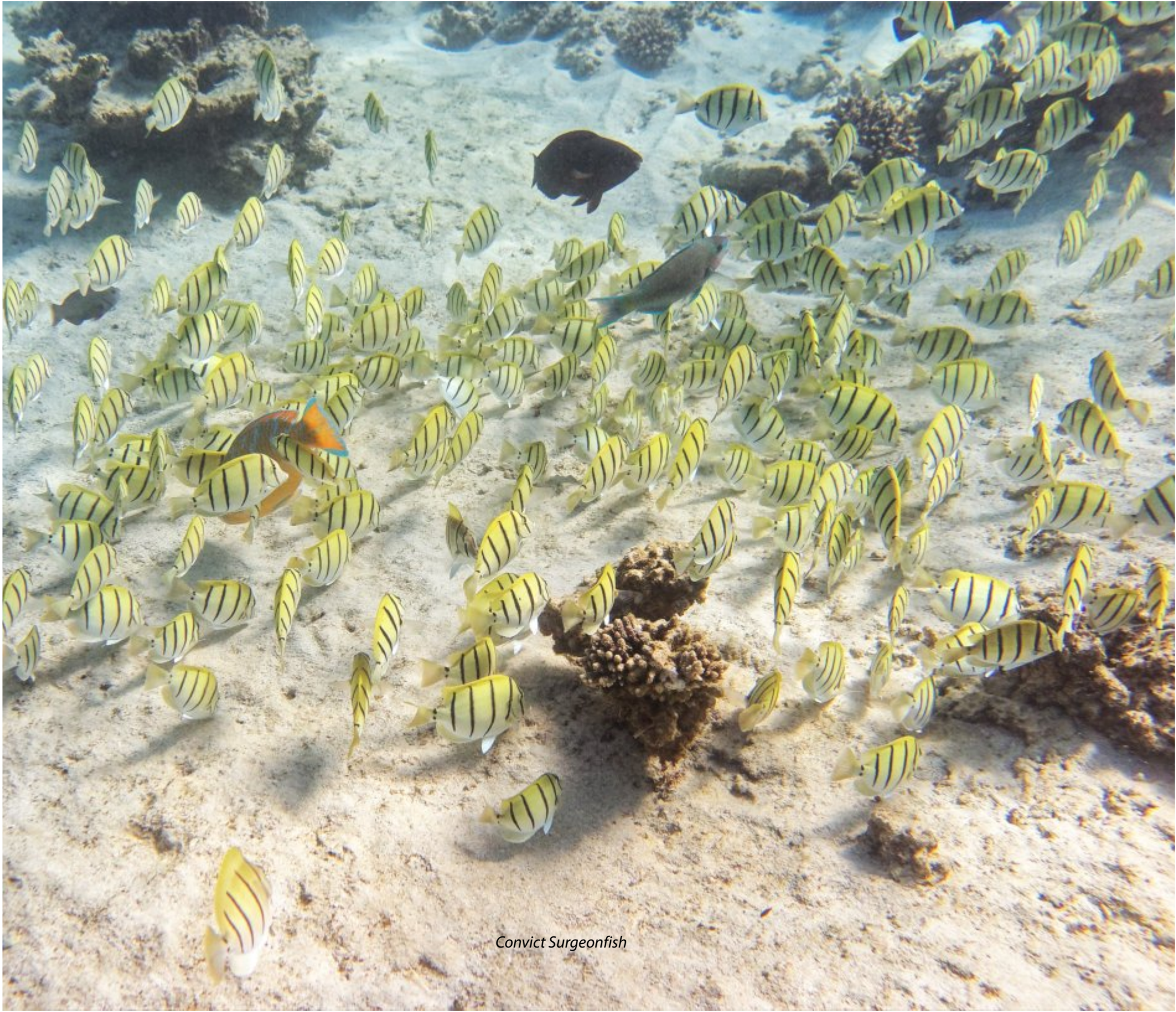
Another colour variation.

Darkcap Parrotfish *35 cm*
Scarus oviceps

Male - *Uncommon with all blue colouring and darker upper head area.*

Darkcap Parrotfish *35 cm*
Scarus oviceps

Female - *Similar darker upper head area to the male.*



Convict Surgeonfish