IT IS NOT THAT DIFFICULT, JUST SOME SIMPLE TIPS TO GET YOU STARTED.

CHRISTINE DANGER

Underwater photography

4 steps to wonder

WHEN you are a keen photographer and find yourself at the Great Barrier Reef, it is impossible to resist the attraction of being underwater with a camera in hand.

The diversity of creatures that are found just under the surface is astonishing. There is a variety of corals with intriguing shapes from wrinkled brains, to cabbages, table tops, antlers and pillars. The multitude of fish of all sizes amongst all this beautiful coral is astounding and their colour often incredibly luminous.

I could not envisage snorkelling without a camera amongst a reef, whether tropical or temperate and made a choice last year to buy a waterproof compact for underwater photography.

Most people are wooed by the incredible world and sights they discover when they go snorkelling and wish they could record what they see. In this article I will share with you some techniques to ensure that if you too decide to give underwater photography a try, you maximise your chances of taking pleasing shots regardless of the type of equipment you use.

WHAT YOU SHOULD KNOW

Whatever camera equipment you use, there are important aspects about water which you need to know, as they greatly affect the way you photograph under the surface and the quality of images you get.

The behaviour of light underwater is unlike the behaviour of light on land. For starters, the density of water is 800 times that of air. In effect, we can compare a picture taken in one metre of water to one taken on land at 800 metres away. So your subject can become blurry and low in detail very quickly.

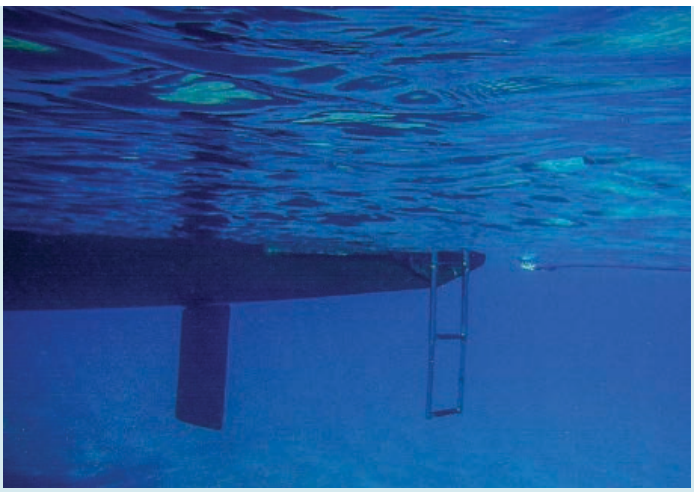
As soon as light enters the water it is absorbed and also interacts with suspended particles, resulting in loss of both colour and contrast: red goes first, then orange and yellow, until only green and blue are left. Within half a metre of the surface those bright red bathers are muted and dull.

Even with good visibility, particles in the water column in front of your camera tend to reflect and scatter light. This is what is called backscatter: little prisms of light that can ruin your shots.

Place a pencil in a glass of water and you will see that it bends at the join between the air and water. This is called refraction. Water refraction is a third more than air refraction. This means any object underwater appears one-third larger than its actual size. This fools the eye of the photographer and the camera lens … oh and of course, fisherpeople!

The combined effect of colour loss, light diffusion, refraction and backscatter leads to what you think you are photographing is not always what you find you have actually taken, unless you follow a few basic rules and tips.

Corals and fish stand out against the blue ocean at Fitzroy Reef.



RULE 1: GET CLOSE

The reduction of the water column between the lens and the subject is paramount. So get close. No, really close ... and fill the frame.

Close up shots of fish or corals are far more effective than nondescript scenes with blurred or ill-defined subjects. You need to get much closer than you think to get a clear, colourful shot.

RULE 2: DON'T SHOOT DOWN

As soon as you put a snorkelling mask on your face, you look into the sea at a downward angle. After all, this is where the fish are!

But you will get better results if you can get below a subject and shoot up towards the surface or at least at eye level. It is just the same as on land. Just think, you would not shoot down on the heads of people when taking a portrait.

But it does take practice and can be hard on your neck.

RULE 3: BEWARE OF BUILT-IN FLASH

A built-in flash works well in the air, but has a limited range underwater, the light is absorbed very quickly.

It can also bounce off small particles causing bright specks on your image (backscatter again). So to prevent backscatter you need to use an off-camera flash or a strobe in such a way that the light illuminates the subject and not the column of water in front of the lens.

RULE 4: F8 AND 1 METRE – BE THERE

This is a well-known maxim in landscape photography. It is just as relevant in underwater photography.

It is all about a catch-all situation. With compact underwater cameras, an aperture of f4 is comparable with an f8 on an SLR. In other words it is a mid-aperture.

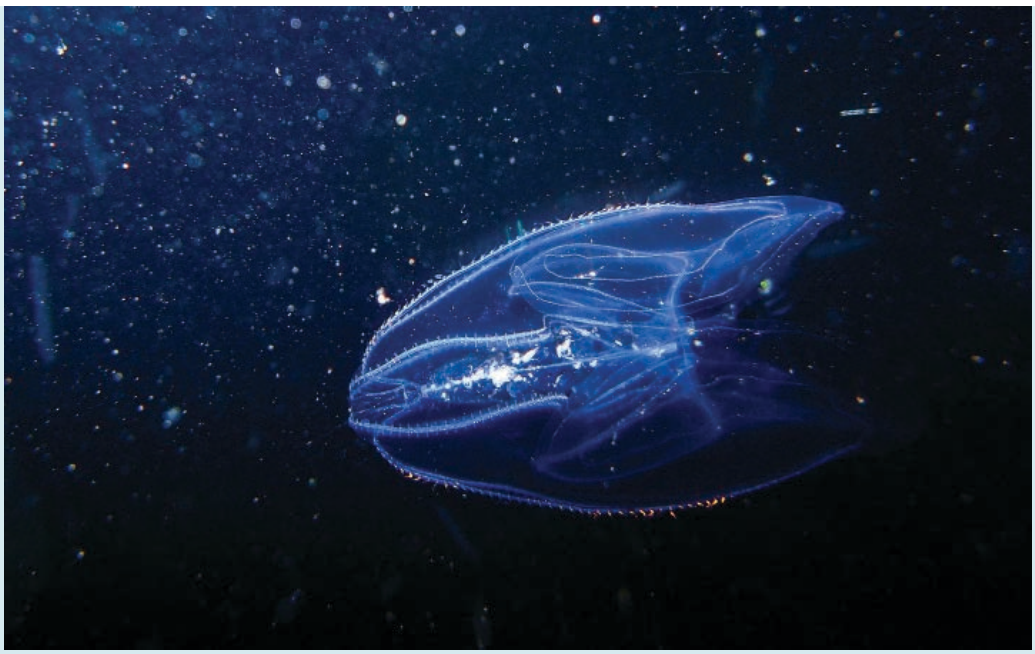
One metre from the camera lens is a comfortable working distance. You are close enough for the subject to fill the frame but not too close to threaten it. It also means good saturation and sharpness and less backscatter.

Of course you have to 'be there'. Be in the water when the magic moment appears before you.

As the saying goes: 'you have to be in it to win it'.

TIPS FROM THE PROS

What follows are some suggestions and tips picked up along the way through discussion with experienced underwater photographers and during dive courses.



COCKWISE FROM FAR LEFT:
What lurks under our hulls?

Colours and reflections just under the surface.

The amazing sight of a Ctenophore (comb jelly) at night at Wilsons Promontory, looking like a spaceship in the ocean.

Panoramic crop of Fitzroy Reef floor.

The use of complementary colours can add significant impact to your images. In the ocean the primary colour of blue surrounds you. Its opposites on a colour wheel are yellow and orange. Underwater the combinations of these colours work dynamically together. As luck would have it, there are lots of yellow fish swimming around the reef: butterflyfish, angel fish, moorish idol to name a few.

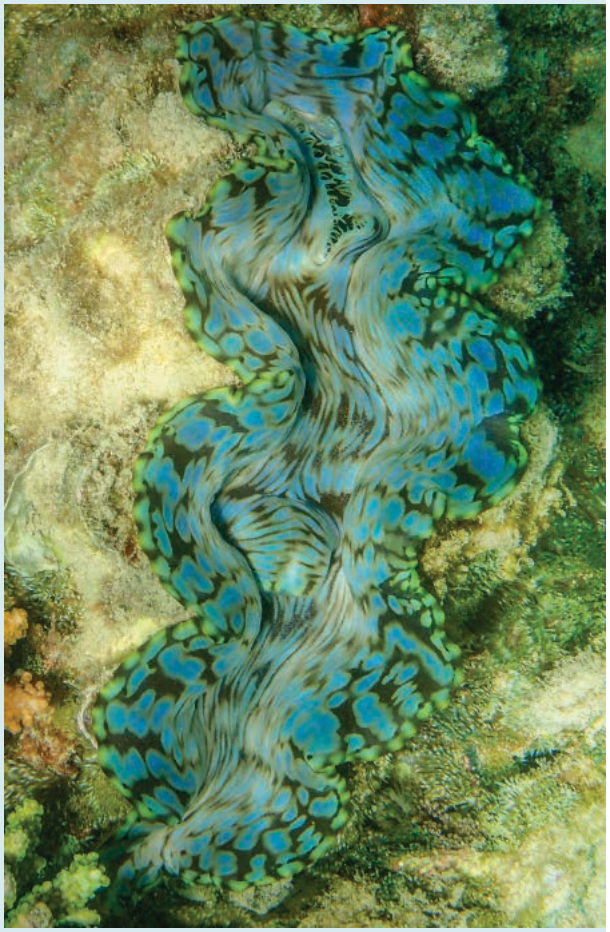
Similarly, beautiful sandy coloured antlers or table corals stand out wonderfully against a blue water background. Red is also an excellent colour to combine with blue, as in vibrant soft corals against a clear blue sea.

Underwater, we have the most intense and predictable colour cast of all, you guessed it: blue! Corals, fish, water, everything can look unnaturally blue. To overcome this, if your camera has an underwater setting, use it since it

ABOVE: Surfacing to see our boat – over/ under shot.

RIGHT: Vibrant colours and patterns of the giant clam.

ABOVE RIGHT: Yellow fish stand out well underwater as shown with this Copper-banded Butterfly fish.



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Chris and her partner Wade Bishop are Melbourne based. They have been sailing on catamarans of various sizes for the last 15 years. Their favourite cruising grounds include the Bass Strait Islands, Tasmanian waters and Australia's east coast. They live for the day when they can give up work, cruise full-time on *Take It Easy* and explore further afield. Follow their adventures on www.sv-takeiteasy.com

compensates for that blue cast. Another option is to adjust the white balance in post processing.

Shooting on a sunny day with a wide angle lens or setting, close to the surface, can often produce a rich blue background and pleasing results. So when the conditions and visibility are good, make the most of it. But when it is cloudy and visibility is reduced, then it is macro time.

EXPERIMENTING WITH IDEAS

Beyond capturing beautiful underwater gardens, portraits of fish or of your partner snorkelling, it is fun to experiment:

- *Abstract art:* you can represent a recognisable subject in an unusual way or even take away the identity of the subject matter and leave your imagination to focus on textures, lines, shapes, patterns or colours. Generally the macro mode works best for this, particularly when you fill the frame with your chosen topic such as the marbling of seagrass, or a giant clam siphon.
- *Over-under:* a fun thing to try is to use a fisheye lens and take shots that are half over and half underwater. Although it takes a lot of practice, you can get some interesting effects. The difficulty is finding half a scene that will complement the other half! You will often find a colourful, photogenic shallow reef in the foreground with nothing above the surface to complement it, or a yacht floating topside with nothing of interest under the waterline. But it is worth looking for those split layers.
- *Wave action*: capturing the movement of water and waves from unique angles

impossible to get from the shore, can be quite exciting. For instance taking waves side on to the swell, in the swell, or from underneath the wave can produce amazing results. Sometimes it does mean getting tumbled around, keep a firm hold on that camera!

- *Different angles*: because in underwater photography the horizon line is absent, you can experiment with tilting your camera and achieving dynamic diagonal lines in your composition.

WITH CONSERVATION IN MIND...

It is our hope that some of the images in this story will inspire you to explore and connect with this natural underwater world without harming it, increasing your appreciation of the complex and vulnerable wilderness beneath your hull.

When diving and snorkelling, we should all be displaying appropriate reef etiquette.

- *Don't touch coral*: it is not acceptable to make extensive contact with the reef with your body, or your fins by standing on it or grabbing hold of coral to steady yourself. Many codes of conduct about photo-diving emphasise the need to avoid touching the reef as much as possible.

"THIS FOOLS THE EYE OF THE PHOTOGRAPHER AND THE CAMERA LENS ... OH, AND OF COURSE, FISHERPEOPLE!"

Good buoyancy is a major part of getting good images but when you are underwater you are rarely still and can sway in the current, which makes taking photos challenging. There are a couple of useful techniques to practise to remain stationary and stable when you take shots. One is the two-finger technique where you use the index or middle finger and thumb to anchor yourself on a dead piece of reef for support. Another is the use of a stainless steel pointer. It is also a great tool for pushing away from the reef when finished.

- *Don't kick up sand*: if you are the type of person that tends to kick up sand as you fin, then work hard on your buoyancy before taking the camera in the water. Flailing fins not only fills your own photos with backscatter, it also endangers any marine life that is unfortunate enough to be in the way.
- *Don't harass the animals*: we must resist the temptation to touch animals or somehow interfere with them. Grabbing hold of a turtle for instance might have been an acceptable behaviour a few decades ago when we were far less aware of its impact. These days things are changing, thankfully.

It is not acceptable to stress an animal just to get a shot or grab a couple of selfies. When an animal flees, it is a sure sign you are stressing it. In fact we ought to learn to recognise signs of stress and back out if we notice the animal is disturbed by our presence.

Underwater photography can be a very absorbing and addictive hobby. But we have a responsibility to be good stewards, use common sense and not let our excitement for 'the shot' get the better of us.

GIVE IT A TRY!

Once you start playing with a camera underwater responsibly and pushing your creative boundaries, you will be hooked: guaranteed!

By the way, it does not have to be an expensive exercise. There are affordable underwater housings for most compacts, and some compacts such as the Olympus TG4 or the Nikon Coolpix will be water resistant to 10 or 15 metres, which is ample when snorkelling.

All shots in the article were taken with the Olympus TG4, some of them with the addition of a fisheye wet lens.

But most important of all it is the great fun you will have, the opportunity to extend your portfolio of amazing images and share these with land friends who are not as lucky as you are to experience this spectacular underwater world. So what are you waiting for? ≈