

Macro photography

By Don Silcock

I need to start this article off by telling you a short story – please bear with me as it is in context, well kind of....

When I was a teenager growing up in the northwest of England, every Saturday night my mates and I used to go to a local disco with the principal objectives of consuming as much beer as possible and then somehow ending up with a female partner at the end of the night. The fundamental technique involved in this complex process was something called “dancing”, which I have to admit, was always something of a black art to me.

With the wisdom of hindsight, it's now perfectly obvious to me that I simply could never judge the correct amount of beer required to get me out on to the dance floor and deliver my carefully rehearsed pick-up lines. I always seemed to over-estimate the amount of required, usually to the point where my ability to dance & speak at the same time was greatly impaired.

I am sharing this sad tale with you because my efforts on the dance floor often come to mind when I am engaged in the equally black art of underwater macro photography.

On land macro is close-up photography that uses special lenses which can focus sharply on a subject the same size as the film plane or digital sensor. Underwater, macro photography has a much broader meaning and typically refers to photographing small to medium size creatures such as fish, or small critters like shrimps & pygmy sea horses.

Specialized lenses & ports are also required and the most common question heard from photographers on a liveaboard “is this a wide-angle or macro site?” so they can prepare their equipment for the next dive.

It is often said that underwater photography is a journey, not a destination, and like most people I started mine by attempting to photograph fish. I had seen the fish portraits taken by the leading photographers at the time, and figured it should be fairly easy to get similar results if I used one of the new state of the art Nikonos 5's.

I soon realized that there was a lot more to it than just buying equipment and started acquiring “how to” books to try & develop my technique. I still have most of the books on my shelf – including that



“Coleman Shrimps” - Nikon D200 & Subal housing, 70-180 Nikon, 2 Inon 240's, f29 @ 1/125

long forgotten classic The Underwater Photographer's Handbook by a certain Peter Rowlands....

Over time the basic problem became obvious to me - viewed from the fish's perspective the approach of a very large creature, emitting copious amounts of noisy bubbles & poking a shiny device with bright lights at you, is quite intimidating and highly unlikely to make it want to relax & pose for it's photograph to be taken.

All of the underwater photography books offer advice on how to approach fish and it's usually all very relevant, however I think

the real issue is that the fish have not read the books and are just not aware that all we want to do is take their photograph...

Critter photography on the other hand is relatively much easier because the subject matter tends to be static, or slow moving, and is usually convinced that its superb camouflage makes it invisible. Therefore critters are typically much easier to photograph – once you have actually found them that is!

My hobby is writing articles about the places I visit, which I then use to populate my website (www.

indopacificimages.com) and magazine editors demand a varied selection of good images before they will consider publishing anything.

I love wide-angle photography and on a typical liveaboard trip I have to force myself to switch to a macro set-up and usually return from the dive frustrated and deep in thought about Saturday nights & discos in the north-west of England. So in late 2007 I decided that it was time I left the dome port at home and really got my arms around macro photography by doing a dedicated muck/critter trip.

After considering various locations I settled on the north coast of Bali as I knew some of the sites from previous trips and had heard good things about newer ones like Puri Jati. Plus being land based it meant that my long suffering, non-diving & boat averse wife could travel with me!

Although the physical distances to the various dive locations in Bali are not that great, the time it takes to navigate the narrow roads & traffic means a “safari” is required if multiple locations are intended. This either involves staying in a lot of different hotels, or doing a lot of driving, neither of which appealed to me very much.

After a lot of discussion I finally settled on a 12-day trip planned by AquaMarine Diving, who I have used on previous trips to Bali and found to be very well organized. The 12 day trip would allow me to take in the six main muck/macro/critter sites on the north coast: Secret Bay, Menjangan Island, Puri Jati (PJ), Tulamben, Seraya & Ahmed. Plus it only required three base locations & hotel changes – Pemuteran for Secret Bay & Menjangan, Lovina for Puri Jati and Tulamben for the Liberty Wreck, Seraya & Ahmed.

It also satisfied my key criteria that I would spend two days at each location so that if I had the



wrong lens on the first day, I could go back the following day to try and get it right.

Equipment

I gave a great deal of thought about what equipment I should take and my first decision was not to take any wide-angle stuff at all – macro only, so I would be forced to use only what I had with me.

In the end I narrowed it down to two lenses – for general fish and medium size creatures I went with the Sigma 28-70mm 2.8 EX DG which Alex Mustard recommended to me a few years ago. It's been sitting on my shelf for the last year or so, but for what I was looking to do in Bali I figured it would be a good general purpose lens because it focuses down to about 10" and is fast & very sharp.

The second lens was my trusty Nikon 70-180



“Puffer Portrait” - Nikon D200 & Subal housing, 70-180 Nikon, 2 Inon 240's, f22 @ 1/60

macro zoom, a lens that is often maligned as slow and not particularly good, but one that I have really come to love. It's true that it's not the fastest lens in the world and the auto-focus needs to be helped with a decent focus light in low light conditions, but once it has focused it is very sharp and capable of producing some stunning images.

No longer made by Nikon, this lens is apparently much sought after second hand and prices on EBay for them have apparently risen quite dramatically in the last couple of years. Rumor has it that now Nikon has upgraded both the 105mm & 60mm macro lenses, the 70-180 will be next. I would certainly invest in one should that happen, but until then I remain deeply attached to the current version!

The really great thing about the lens is its tremendous zoom range and the flexibility it offers. You can capture relatively large “fishy” type subjects, such as the moray eel being cleaned, and tiny critters like the Coleman shrimps on the same



“Harlequin Shrimp” - Nikon D200 & Subal housing, 70-180 Nikon, Athena Ring Flash, f22 @ 1/60



“Bobbit Worm” - Nikon D200 & Subal housing, 28-70 Sigma, 2 Inon 240's, f22 @ 1/200



dive - if you are lucky enough to encounter them both as I was on my first dive of the trip at Seraya.

Lighting

Dive travel is getting harder & harder these days, so I am constantly on the lookout for equipment that will reduce my “footprint” and recently bought two of the new Inon Z240 strobes as they appeared to be a great compromise between power output and size & weight.

For the Bali trip I decided to take the Z240's and an Athena ring flash I had bought about a year ago, but had struggled with and not really used.

With the Inons I tried various position configurations but eventually settled on the set-up shown below with both strobes mounted in close to the port and either pointing straight forward or angled slightly outwards if the visibility was poor.

I came to really like this set-up as it allowed me to quickly change from a horizontal to a vertical format and I found that the strobe light hit my immediate subject rather than the whole area, creating a pleasing image. I was also very pleasantly surprised that provided I got within about 0.5m of my subject there was very little backscatter - even when the visibility was down to less than 3m at low tide in Secret Bay!

Overall I have been very pleased with the Inon 240 strobes - they are small & light but quite powerful, recycle quickly and so far have been completely reliable. Whilst lacking the sheer grunt of the Ikelite DS200's I was using previously, I found that I could still use small f stops to maximize depth of field and have enough light from the Inons.

The Athena ring flash on the other hand, was something I stumbled onto on the internet after reading Martin Edge's recommendations on the use of ring flashes in his first book *The Underwater Photographer*. I really wanted to try one, but needed something that was small & light and could be used with the various Subal macro ports I own – all of



“Cuttle Fish” - Nikon D200 & Subal housing, 70-180 Nikon, 2 Inon 240’s, f19 @ 1/125

which have a 114mm outside diameter at the glass end of the port.

Athena (www.athena-opt.com/english.htm) are a Japanese company located in Okazaki City, near Nagoya about 250km south-east of Tokyo, who make a variety of underwater photography products. Their ring flash uses various adaptors to attach it to different Japanese manufacturer’s ports - they had never heard of Subal when I first contacted them.

After a number of emails back & to with Hideki Kida (export@

athena-opt.com) photos of Subal ports and reviews of dimensions were exchanged, and a final design agreed for the adaptor. I paid the requested amount and three weeks later the ring flash arrived in Sydney.

My first attempts to use it in Sydney waters left me pretty underwhelmed and I reached the conclusion it just was not powerful enough, however after a number of emails with Martin Edge I decided that maybe it was me and I needed to try again on the Bali trip.

The basic thing about ring flashes

is that they produce very even light and quite specific results, which some say makes the subject look like it has been somehow lit from inside. After forcing myself to use the Athena unit on the Bali trip, my conclusion is that for the right subject it can provide great results, but only if you are less than 12” from the subject because it just cannot produce enough light at the small f stops required to get decent depth of field.

Technique

So, back to the dance floor... Here are my basic ground rules for getting consistent results with macro photography - gleaned from reading many books, making lots of mistakes and 12 very interesting days diving the “island of the gods”:

Get Close: The more water there is between your camera & the subject the less impact the finished image will have. So you have to carefully maneuver both yourself and your camera to get as close as you can without scaring away the subject. Easier said than done, but once you have spotted your potential subject, plan your approach so that you minimize your profile and your noise footprint.

Get Closer: I am not really sure why, but often when I think I have the camera close enough to the subject I

realize that I could in fact get closer. This is one of the negatives of using a zoom lens, in that it appears easy to back off and use the zoom to frame the subject.

Always get as close as you can and if you have a zoom, use it to deal with the size of the subject, rather than the other way round.

Be Ready: There is no point in carefully maneuvering yourself into position and then start adjusting your camera settings because your intended subject will have fled the scene long before you are finally ready. So make any adjustments before you get into position.

If you are not sure what your settings should be, practice on something colorful & stationary like some coral or a sponge at the distance you think you will need to be from the intended subject. It should only take a couple of practice shots to get pretty close to the optimum and then you can make your actual approach with a good chance of success!

Look Up: The most common error I was making is shooting downwards, which means that the subject gets lost in the background and lacks the definition & isolation needed to produce a strong image.

The best images are almost always taken with the camera below the subject so that it is isolated against a neutral background, which frames it

nicely rather than detracting from the overall impact.

Negative Space: The part of the image that is not the main subject, which if we have shot upwards will usually mean the open water.

Another very common mistake I was making was concentrating so much on the main subject without thinking about the negative space, such as with this picture of a puffer fish. I find these creatures very difficult to photograph because it's hard to get them face on - they seem to know exactly when you are about to press the shutter and turn away milliseconds before...

The Eye: Depth of field is limited with macro lenses, so it's absolutely critical that the focal point of the image (the part of the image we tend to look at first) is sharp and completely in focus.

With fish & critters it's invariably the eye to which we are drawn. The multiple focus zones of the current DSLR cameras make it much easier to ensure that the eye is as sharp by placing one of the zones right over it and this is always the last thing I check before pressing the shutter.

Settings: To maximize the depth of field it's essential that a small f-stop such as f18 or f22 is used. However this means that a powerful strobe is required to force enough light through the small shutter opening to properly

illuminate the subject.

Larger f-stops, such as f5.6 of f8 mean that the shutter opening is bigger and will allow more light through – but at the expense of reduced depth of field. This is, in my opinion, why powerful strobes need to be used for macro photography rather than the common perception that a small or medium power strobe is all that is required.

I hope this article helps you to improve your macro images and as a final parting shot I thought I should mention the fact that I have been married for 26 years and have two grown-up kids – so I must have mastered that dancing technique eventually!

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