

Low Visibility

by Ross McLaren

Some of the most incredible underwater images are those jaw dropping wide angle shots of some of the world's largest animals like whale sharks, vibrant reefs that disappear off into the distance or epic ship wrecks with divers that look like the size of ants floating across the decks. These images give a sense of scale that blows the mind. Unfortunately, in murky waters these types of shots are damn near impossible to reproduce, but, that's not to say you can get some incredible images!

Before talking about the photography, the number one priority of any dive is safety. It sounds boring and a bit of a buzz kill, but when diving anywhere, not least in low visibility, safety has got to be at the forefront of any dive plan and never be sacrificed to get that perfect shot.

Even in the best conditions a camera can cause issues during a dive. It's so easy to be distracted by what's in front of you and forget to keep an eye on your gas, no decompression limits (NDL's) on your computer and dive buddies. I'm not one for doing a dive course for the sake of it, but if there's one course I always recommend to underwater photographers it's the Solo Diver/Self Reliant Diver one. Although not directly related to underwater photography, the skills and experience the courses give you mean you become more comfortable in the water and, should you get distracted and get separated from your buddy, give you have the skills to deal with the situation.

However, to avoid separation, the easiest solution is to have a clear dive plan before getting in the water. Ensure that everyone diving



Diver stirring up the bottom. Olympus E-PL9 + Olympus 30mm Macro 30mm 1/250 F3.5 ISO 6400

together has a clear understanding of things like:

Agreed separation procedures. These are usually; look around for 1mins then if no sign slowly surface. However, it can change depending on who you dive with.

What you are looking to spot and shoot.

Hand signals. Again, these can change from diver to diver.

Torch signals. Chances are if you are

diving in a low visibility environment a torch is an easier method of signalling to your buddy. So, in that case everyone should be clear on how to signal one and other... and avoid randomly looking like you're having a disco beneath the waves.

As with any diving irrespective of conditions or type of seabed, one of the biggest factors a diver has got to consider is their buoyancy. There's a phrase in diving; "Take only photos, leave only



Wolffish thrashing around in its crevasse. Sony A7CII + Sony 28-60mm Lens + AOI UH-A7CII Housing + AOI Q1 Strobes. 1/160 F8 ISO200

bubbles”. And, although exceptionally cheesy, it’s non-the-less still very important.

We can be easily distracted by what’s in front of us, to the point we forget about what’s behind or beneath. It’s not the first time I’ve turned around from taking a photo and met by a dense cloud of silt and sand billowing out from beneath my fins. Not only have I disturbed the animals, possibly even damaging them, but severely “kicked up the vis”

making finding my dive buddy all the more difficult. Learning to control your buoyancy before picking up a camera is so important no matter where you dive. But, in dark murky waters even the slightest waft of a stray fin can lead to reduction in the visibility which could turn into a more serious situation.

When it comes to underwater photography, especially in dark and murky waters the biggest consideration



Diver using video lights to take photo of aneone (Not me) Olympus E-M1 Mark II + Olympus 30mm f3.5 Macro + AOI UH-EM1 Housing + AOI Q1 Strobes. 1/60th F3.5 ISO 200

is lighting! You can have the latest full frame camera, with a gazillion mega pixel sensor, but at the end of the day, if there’s little to no light then there ain’t going to be any pictures. So, whenever anyone asks me for advice on which camera to buy, my first question is have they budgeted in lighting? Equipment for underwater photography is a real rabbit hole that is so easy to fall into. But, in terms of lighting there are two main options; each having their own

pros and cons.

Video Lights provide a constant light on the subject and what you see in front of you and on the back screen of the camera is generally what you’ll get from the final image. In general, they’re simple and easy to use and just a matter of turning them on and leaving them. The main issue with video lights are, although the numbers on the side sound “big”, like mine which are 3000 lumens, it looks to your eye like it will



Diver with good buoyancy in low vis. Sony A7CII + Sony 28-60mm Lens + AOI UH-A7CII Housing + AOI Q1 Strobes. 1/160th F6.3 ISO 200

be good and if the camera is on auto it will look good on the screen.

What's actually happening is the camera is compensating by bumping up the ISO, slowing down the shutter speed and opening up the aperture. This means that although the image will be correctly exposed, it may not actually be the image you have in your head. The slow shutter speed selected by the camera might mean that very subtle movement from the creature is just a bit



Sony A7CII + Sony 50mm Macro Lens + AOI UH-A7CII Housing + AOI Q1 Strobes. 1/160 F16 ISO160

blurry.

The high ISO will mean some post processing denoise editing could be required. And, with that wide open aperture, as I've found a lot, not all of the animals features are as sharp and in focus as you'd like.

Strobes are much more powerful than video lights. They're essentially the same as a normal flash you'd use above water. They allow you to really "freeze" the subject; with their additional power it means you can reduce ISO settings and increase shutter speed.

With strobes you can get quite creative with lighting to give a different feel to images, almost like you would if you were working in a studio with a model. This can be done with video lights, but strobes offer more options like snoots and, I find personally, more flexibility with better results.

The major down side to strobes is, with the flash not firing until you press the shutter button, the first image is generally not going to be the



AOI Q1 Strobes, with snoot attachment on one.

"insta" shot. I generally find myself taking 3 or 4 before I get one I am happy with, meaning I am having to fiddle with either the settings on the strobe itself or settings within the camera itself.

Underwater when you may only have a split second to get that perfect shot, this can obviously be problematic. With strobes I find there is a much steeper learning curve, but once you've got the basics, they really do elevate your game.

This is absolutely key to getting a good shot and a great shot... and I'll be totally honest, I've not mastered it yet! One of the biggest issues with using strobes is backscatter! In murky waters like here in Scotland, backscatter is an underwater photographers worst enemy! Basically backscatter is the "snowy" or "starry" blotches that can appear on images, and caused by the light of your strobe firing and reflecting off of particles in the water. There are a few ways to reduce backscatter, even in the murkiest of waters, but often it takes some trial and error.



Fireworks anemone with silt encroaching. Olympus E-M1 Mark II + Olympus 30mm f3.5 Macro + AOI UH-EM1 Housing + AOI Q1 Strobes. 1/160th f9 ISO 100

The first, and probably easiest, thing to do is get as close to the subject as possible, without disturbing it, or other animals around. This means there is naturally less particles between you and the “model” and also helps to fill the frame.

Strobe Positioning is where the trial and error comes in. My biggest mistake when I first started using strobes was pointing them directly at the subject. This is probably the worst thing you could do. Not only do you completely overexpose the animal,

but gives the worst backscatter possible. It sounds counterproductive, but you actually want to angle the strobes away from the animal, so when they do fire, they are only being illuminated by the edges of the flash. This reduces the reflected backscatter on the image and leads to some really nice lighting effects on the subject.

Strobe positioning is so subjective, both in terms of the conditions you find yourself in and the outcome you want to achieve. But, my default positioning is for them to be at



Bobtail Squid. Olympus E-M1 Mark II + Olympus 30mm f3.5 Macro + AOI UH-EM1 Housing + Video Lights. 1/80th F3.5 ISO 200

the 10 and 2 o'clock positions up and behind the camera lens. Both point ever so slightly out the way so when they fire the cones of “meeting in the middle” in front of the lens.

Sadly, when it comes to shooting low visibility waters, I've personally found wide angle photography has got to be shelved in favour of macro or, “mid angle” shots... is “mid angle” a thing? I've been able to just about get away with shooting “mid” sized animals like barrel and lions mane

jellyfish, but anything much bigger tends to be a “no go”. But, macro/portrait photography can be just as impressive and, if you get the right perspective, just as exciting.

It's funny, I did a night class on photography and for the first wee while I struggled to see the link between shooting a model in the studio and a crab at 15m down in a cold murky Scottish loch. But after a couple of weeks, and a few dives in between the sessions, I began to notice that the similarities are



Fireworks Anemone in Torch Light. Canon G9 X Mark II. 24mm. 1/125th F4.9 ISO 200

surprisingly many.

Just like in the studio, lighting and perspective played a vital part in “telling the story” of the shot. From the right angle the “look” on something like a crabs face can evoke a reaction. It’s not the first time I’ve looked back a shot and could almost imagine from “facial expressions” the crab giving me a torrent of abuse for shining my bright lights on them.

Macro photography can be so rewarding as well. Being “forced” to focus on the smaller creatures opens up and whole other world within an already magical one. You begin

to notice small details which would normally be missed. Don’t get me wrong, macro photography can be frustrating on land. So, as you might imagine trying to keep a nudibranch less than 3cm long in focus, whilst it’s wafting around on a piece of seaweed and all the while you yourself is moving with the current, can be pretty infuriating. But, it’s all worth it when you can that shot. That one shot out of 30 in focus makes all the struggles worthwhile.

Diving in low visibility isn’t easy, and taking photos in dark, murky environments is even more frustrating. But, one of the things



Nudibranch on seaweed. Sony A7CII + Sony 28-60mm Lens + AOI UH-A7CII Housing + AOI Q1 Strobes + AOI UCL-05 Diopter. 1/160th F16 ISO 200

that keeps me coming back each and every time is the unknown. When you get in the water and visibility is maybe only 2 or 3m in front of you, initially it can be disheartening. But as you descend deeper and your torch begins to pick out small details emerging from the gloom, the sense of excitement kicks in and it’s that buzz that pushes you on.



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