

Underwater Photography Masterclass

with Alex Mustard

Q. Your new book, *Underwater Photography Masterclass* is out soon, what can you tell us about it?

AM. 192 pages, 280 images, soft back, so light enough for travel. I actually wrote a 400 page book and then we concentrated it into 200. It is packed with techniques, tips and ideas. In some ways I don't want to say too much. I am really proud of it, but I want people to enjoy discovering what's unique about it for themselves.

I started with a blank piece of paper and planned the book cover to cover, to share what I think you really need to know. It is very much my take on underwater photography. What I think will really make the difference to your photos. That way, whatever you have read before, you'll really get lots of out reading this book too.

Q. So how have you made it different?

AM. The book is a course, or a masterclass on the whole of underwater photography, told from the perspective of understanding, controlling and mastering light and lighting. It is based on the techniques and advice that I have found really works for me and have seen really work for the students on my workshops.

It is also packed with detailed, real world tips that I have picked up shooting all around the world. It includes everything from how to get a pygmy seahorse to face your camera to why you want to flinch first when playing chicken with a basking shark!

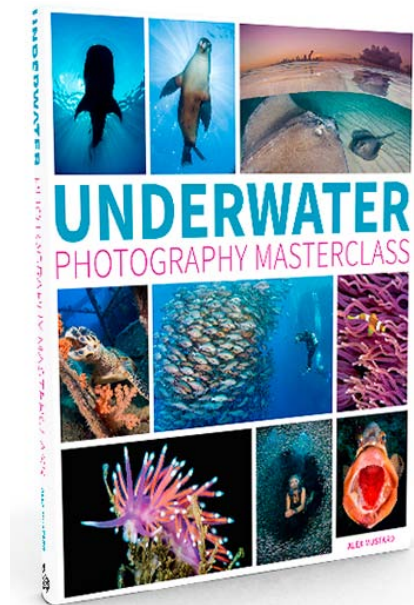
It doesn't skip on the essentials either, covering how to go about diving for your images and how to select the appropriate underwater photographic equipment. There is a section on "hacks for your housing" – how to set up your rig for the best performance and a list of common equipment problems

and field solutions.

Q. Who is the book aimed at?

AM. Although it presents some ideas and techniques that have never been in books before, I don't think of it as advanced or technical. I have taught these ideas and techniques on workshops all around the world and know that new photographers can put them into practice from their very first dive. There are just two diagrams in the whole book, and no equations!

Although it feels totally contemporary, the book also covers classic techniques (often with a modern

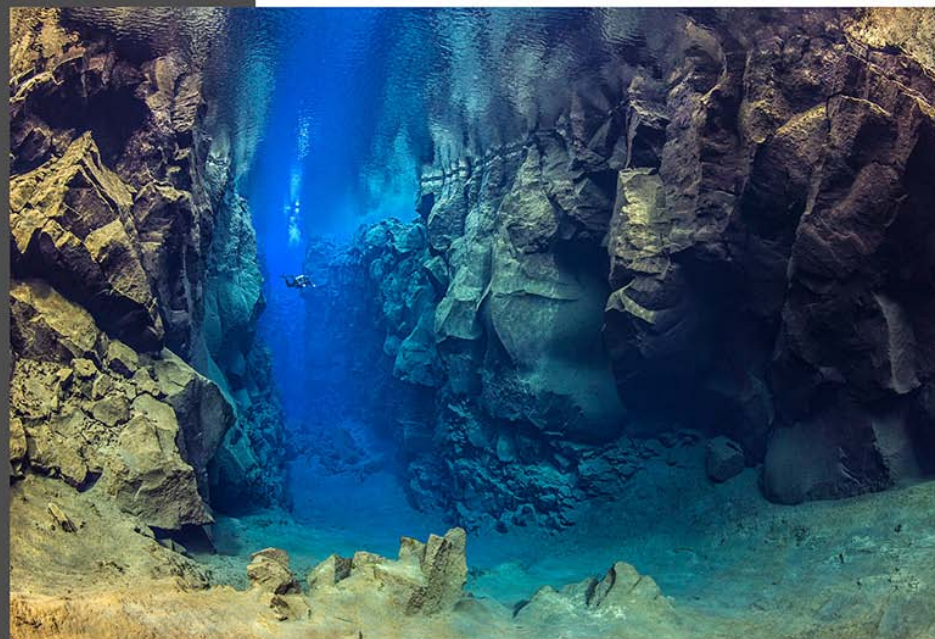


CHAPTER SIX

MASTERING AMBIENT LIGHT

Far too many underwater photographers never dive without strobes. Their arguments go, "just in case" and "they cost me a lot," which are reasonable, but I strongly believe it stops them reaching their full potential. You won't understand and be able to fully exploit ambient light until you take time to truly get to know it. Turning your strobes off for ten minutes is not enough. On my week-long Cayman workshops we all take our strobes off for a whole day! Available light suits many subjects. It gives light and color to our photographs in a completely different way and with different rules to strobes. But a major reason I suggest taking your strobes off is that mastering ambient light pays you back tenfold when you put them back on. While this chapter concerns ambient light, the lessons are just as precious for balanced light photos taken with strobes. Or, in the words of Martin Edge, "photography is all about light, underwater wide-angle is all about the natural light."

> BETWEEN CONTINENTS Ireland
The hidden pleasure of ambient light photography is leaving your strobes behind and enjoying the freedom of a maneuverable and compact rig. This is pure photography: you, your lens, and light. The hidden reward is that it teaches you lessons of light that are valuable for all your wide-angle photography.



CHAPTER SEVEN

MASTERING WIDE-ANGLE LIGHTING

Focusing and framing wide-angle photographs is straightforward; it is lighting that will make your work outstanding. This chapter focuses on creative and advanced lighting techniques. Consider them as artistic options, to be used more sparingly than the standard high-quality illumination methods covered in Chapter 4. Throughout this book, I have covered techniques individually because it makes them easier to understand and to implement, but they can, of course, be combined. Controlling light in wide-angle photography is about far more than knowing how to create these lighting effects. A true master of lighting does not simply throw the book of tricks at the subject. You should carefully select techniques that suit the scene, make the most of and help solve problems in the composition to create the image and atmosphere envisaged. In 1980, Mike Portelly produced one of the great underwater films, *The Ocean's Daughter*. Few underwater works are as creative, but for Portelly's talent is not in the innovations, rather that each effect is entirely justified by the narrative of the story he was telling.

► **WORLD WAR II BIKE, Egypt**
Creative lighting requires learning how, but just as important is when, where, and why to use it. I spent hours underwater just observing the nuances of light that could evoke such different atmospheres. Gradually I learned how to translate what I saw, or wanted to see, in a reliable way onto film. — Mike Portelly



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twist) and it is a text that celebrates and tries to learn from the rich history of underwater photography. There is even a quote from Peter Rowlands in there, and chapter 2 starts with a joke he taught me!

That said the title is Underwater Photography Masterclass, which indicates that it is not focused on the absolute basics. Instead its theme is light and lighting, which means the advice is not specific to any particular camera. Light is the same for all.

It is for enthusiastic photographers of all levels and all cameras. Although many of the lighting techniques require you to use two strobes - you wouldn't write a golfing book without assuming the student has a putter! The book explains exactly where to position them for the effect you want and importantly why. There are plenty of pictures of me underwater showing you how I shoot certain shots. The book presents

techniques for the full range of diving conditions, from clear tropical water, to chilly murky conditions.

Q. What has the feedback been like so far?

AM. My wife likes it and my dog wagged her tail! I have been very secretive with the manuscript. Nobody has read more than a couple of chapters! Last summer when I was writing it, I sent different parts to a couple of friends. I chose photographers who have never done workshops with me. I wanted feedback from people who weren't too familiar with my ways of thinking about underwater photography and my teaching methods. I wanted to make sure it is easy to follow and really useful. I wanted to check I wasn't assuming too much or too little. Without knowing each other, both wrote back to me saying that they were already trying the techniques on

UNDERWATER PHOTOGRAPHY MASTERCLASS

CONTROLLING LIGHT UNDERWATER

Auto and manual exposure modes are there to help. Although everyone will tell you to shoot manual, it is OK to use auto exposure underwater, and TTL, too, if and when it helps. The truth is that auto modes, designed to work on land, are more often a hindrance underwater, particularly in more complex lighting situations. When auto modes get it wrong, and underwater they do frequently, you can't be completely sure why. Should you dial in exposure compensation for the flash, the camera, or leave it alone in case it gets it right next time?

Manual is the most popular underwater simply because it is the easiest, most reliable way to get the shot. The big advantage of manual is that camera and strobes do what you tell them and they keep doing it. If the exposure is wrong, you see it, make a change, and it is right. As most underwater photos are taken from the same distance, exposures stay remarkably consistent.

HISTOGRAMS

A histogram is simply the image represented as a bar graph of exposure. It is a useful tool for checking exposures, when you are struggling. Histograms are particularly helpful on night dives, inside wrecks and caverns, where the LCD screen shines so brightly that correctly exposed pictures look overexposed, causing you to underexpose.

However, in my experience, histograms hinder underwater photographers more than they help. I have even banned people from having histograms overlaying their images on my workshops, because they are too focused on the graph and not the photo. Getting correct exposure is relatively easy underwater, what really marks out strong work is achieving a good quality of light, and the histogram tells you nothing about that. In fact, by overlaying a histogram on the picture, it stops you seeing the details of the lighting. Instead, look at your images full screen on your LCD to spot uneven lighting (with hotspots and unwanted shadows), identify it and remedy it (see Chapter 6). There is no correct histogram, it depends entirely on the scene and photographer's intentions, which is why I have refused to show any in this book!

EXPOSE TO THE RIGHT?

Some photographers extol the benefits of exposing to the right (ETTR), which theoretically gives better image quality. With the cameras of two years ago, there was definitely an advantage and I encouraged this technique. With the latest cameras and software, I do not see any difference between a correctly exposed image and ETTR in the final result. It remains a valued technique for my landscape photographer friends, who need something to think about to pass the time! But, underwater, I now believe it is a red herring. I see people missing shots because they were distracted trying to ETTR. It also greatly reduces the margin for error for over exposure and highlight clipping, which does ruin images.

TTL OR MANUAL?

I discussed this topic in the previous chapter (see page 32), but as it is a common question it is worth revisiting. In the days of film with just 36 exposures and zero feedback, TTL was a godsend and more reliable than guesswork. Digital cameras remove the need to use TTL to get the correct quantity of light. Good photographers now expect to get the right quantity of light and instead concern themselves with the quality of light. TTL's Achilles heel is that it commands both strobes to give the same power, often giving a poor quality of light. As you will clearly see in the coming pages, this is far from ideal. Some suggest moving the strobes backward and forward to alter the amount of light that reaches the subject, but not only is this more effort than simply adjusting the flash power in manual, but also changes in distance alter the quality of light. Manual is easy to shoot, look at the LCD, adjust, and reshoot. The good news is that LCDs are bright and clear underwater and actually exposures vary very little!

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BLACK AND BLUE BACKGROUNDS



When starting out in macro photography, particularly underwater where all pressures are greater, you tend to think only of subjects. You'll get decent shots, but the quality of your macro will sky rocket when you properly consider backgrounds. This is usually a simple thing to do, simply deciding not to shoot an exciting subject because it is badly positioned means you are on the right path. Backgrounds should be cast in the supporting actor role. When they clamor for too much attention, they pull the eye from the main subject and lessen the overall impact. Simple, single-color backgrounds are the easiest to exploit.



► **A PYGMY SEAHOARSE IN FAN (left)**
Framing a subject against open water gives the option of either black or blue/green background. Black is more graphic, blue more faithful to reality. The difference here is simply in the shutter speed: in this case 1/250 sec. for black and slowed down to 1/125 sec. to allow the blue through.

BLACK IS ALWAYS IN FASHION

Black backgrounds are the classic option for macro photography underwater. They make colors pop, they give images a strong graphic look, and they even make messy subjects look good! Or, as painter J.M.W. Turner exclaimed, "If I could find anything blacker than black I'd use it!"

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their dives (before answering any of the questions I'd specifically asked them about it)! So I am really excited about people reading the whole thing. And even more so about them putting the ideas and information into use.

www.underwaterphotographybook.com

CONTROLLING LIGHT AND CAMERA



► **A SCREEN TEST**
Use the LCD screen not to admire your work but to check for mistakes in focus and lighting. You'll be taking lots of verticals so turn off "rotate tall" or "auto-rotate" so that they are shown full screen big as a life size! You want to see them big and in the same orientation as the scene is in reality.

WHEN I USE AUTO

I choose my exposure mode, manual or auto, and my flash mode, manual or TTL, based on what gives the best chance of getting the shot. Almost all the time manual is my preference, but I will use auto exposure when it is better, say when shooting fast-moving subjects like dolphins, with really available light. I will use TTL for macro, especially on very cold water dives. It limits my lighting options, but when it is that cold, I probably wasn't going to try anything more fancy than point and shoot.



► **A PUFFER SOUNDING CRAB** Casals
I use TTL when it is the best way to get the shot. When diving in Canada, I knew my finger dexterity would not last as long as my desire to take photos. I used TTL for point and shoot simplicity for this juvenile king crab with simple flat lighting.

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MACRO LIGHTING AND TECHNIQUE

The easiest way to produce a black background is to frame a subject against open water. Easy is relative, as you will often have to comb to unlock this angle and earn your background. Use the combination of a fast shutter speed and small aperture to stop ambient light contributing to the strobe only exposure. Then, when a subject is framed against open water, you will get a black background with high quality, even lighting.

Not all compact cameras let you close the aperture to more than f/8, which can make it difficult to get a really strong black background in bright, shallow conditions. Some let you use faster shutter speeds with flash to compensate. Also ensure you are on a low ISO—which you should be for all macro. However, if you are struggling to get your "Turner Black", try using a diamond camera angle, or only chase black backgrounds in darker conditions. All cameras struggle to produce black background in very bright conditions or when framing directly toward the surface.

BLUE SEA, GREEN SEA

Black backgrounds are the most graphically powerful, but can be overused and lead your friends to ask if all your photos are from right dives. Blue or green backgrounds are also produced by framing against open water, while allowing the ambient light into the picture. Blues and greens look particularly good with pink, red, yellow, or orange subjects. They suit fish portraits and behavior shots, which benefit from the more realistic atmosphere. In murky water, a green background makes backscatter less obvious (see page 52).

The simplest way to get a blue or green background in a macro photo is to start with a black background shot and slow the shutter speed down until the color comes through. This is much more effective when you use an upward camera angle, framing the subject against the brightest background. However, macro pictures are usually taken at small apertures and you may still end up with an awfully long shutter speed, especially in darker, green water conditions. The solution is to bump ISO up a bit (losing some image quality) and open up the aperture a little (reducing depth of field). A little of all three (shutter speed, aperture, and ISO) is usually better than a lot of one. Also remember to reduce your strobe power to compensate. If the conditions are really dark, it is best to shoot black backgrounds and wait for brighter conditions for blues and greens.



► **A AMPHIPOD ON SOFT CORAL** Scotland
A clean black background is a staple of underwater photography. All colors look great against black. It makes pictures so eye-catching that some shoot all their macro shots this way.

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Underwater Photography Masterclass is published by Ammonite Press and is available for pre-order. It will be shipping in April.