

# UNDERWATER PHOTOGRAPHY

for Compact Camera Users

A step-by-step guide to taking professional  
quality photos with a point-and-shoot camera

Maria Munn

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# **UNDERWATER PHOTOGRAPHY** for Compact Camera Users

**A step-by-step guide to taking professional  
quality photos with a point-and-shoot camera**

Maria Munn

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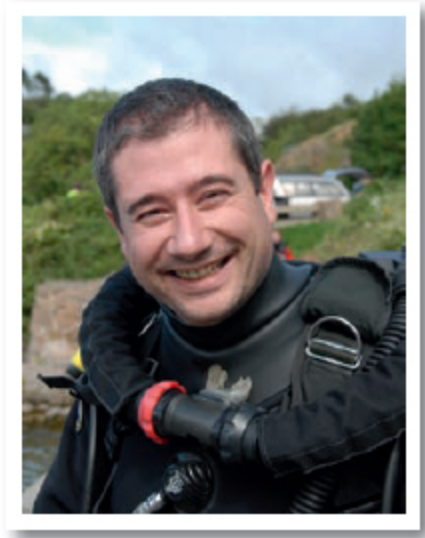
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# Foreword



In the old days of underwater photography, when camera systems were expensive and bulky, taking pictures underwater was a privilege enjoyed by a small number of dedicated enthusiasts who would go to great lengths to travel to a suitable site, shoot a maximum of 36 exposures and have to wait until the film was processed to know whether any images would be usable.

Since the birth of compact cameras, it has become very difficult to keep track of the leaps and bounds in technology. Current compact systems can truly now give award-winning results which rival the most sophisticated dSLR set-ups at a fraction of the price and bulkiness.

Nowadays, regardless of their level of experience, a vast majority of divers carry a camera to record their aquatic encounters. Initially disappointed by the lack of colour and contrast in their underwater images, many of them have turned to Maria for help to improve their technique. Her compact camera courses are extremely popular and the public response to her presentations at UK dive shows is

phenomenal. I can remember Maria trying to walk into the lecture theatre where she was about to speak only to be turned away from the room by the Birmingham NEC security staff because of overcrowding!

Maria has now adapted the course to fit a wealth of knowledge and tips into the following pages in the hope that you quickly turn those aquatic holiday snaps into stunning pictures and show your non-diving friends or family members how beautiful and fragile the underwater world is. Your images are probably the best tool to inspire others and make a real difference in the effort to preserve our seas.

For those of you looking to take your photography a little bit further, don't forget to visit your friendly, local underwater photographic club. There really is no better way to learn without getting wet!

***JP Trenque,***

*Chairman of the British Society of Underwater Photographers*

# Introduction



A big warm welcome to the first ever book completely dedicated to helping you make the most of your compact camera underwater.

Underwater photography is addictive. Whether you are a complete beginner or you are more advanced and just looking for new ideas, you'll find this book contains a wide variety of tips and tricks to help you take fabulous underwater photographs. They are explained in an easy-to-understand way and illustrated with pictures that will help you understand all the different underwater scenes, settings and compositional ideas. Many different makes and models of camera are included to help you master your own equipment. All of my photographs featured are the original images straight from the camera's card and have not been manipulated, apart from one photo of a giant pacific manta ray, demonstrating the great results that can be achieved with the simplest equipment.

I started my underwater journey back in 2001, snorkelling for three years as I was too scared to dive. I had long dreamt of going around the world following my passion for sharks after watching a television programme on the Shark Research Institute back in 1994 whilst in hospital recovering

from 15 fractures following a serious road accident. Later on, after taking three years to walk again, I went around the world following my passion for the ocean and helped to raise money and awareness for The Shark Research Institute, The Shark Trust and The Whale and Dolphin Conservation Society. I loved the photographic opportunities that snorkelling gave me. At this time I could only afford a compact camera which was a Sony Cyber-shot, a red filter and a Sea & Sea wide-angle lens. Later more models followed including Olympus, Fuji, Canon and Sea & Sea. In 2004 I set up the first Reef Environmental Education Foundation Field Station in Latin America, which was in Puerto Vallarta, Mexico.

I love using my compact camera underwater as I can take close-up, wide-angle photos and video on the same dive as well as being able to fit it into smaller crevices to photograph shy subjects. In this book I share the stories behind this unique collection of photos and the experiences of guests who have attended my photography workshops. I hope they inspire you to get creative and take amazing underwater shots with your own compact camera.

Did I shoot underwater with an SLR system at all? Yes, I did for a short while, until unfortunately it flooded. It's ability to capture the tiniest of critters as well as fast moving fish and other subjects was impressive. Although the quality and the ability to shoot a wider variety of subjects is far more possible now with compact cameras, some smaller and faster subjects may be captured better with a Bridge or SLR camera. To help you choose the right equipment ask your supplier for advice or use any of the dedicated underwater photography forums.

The Guest Gallery chapter features stunning images taken by some of my course guests and shows the great results they have been able to achieve with their compact cameras. One of my course guests has just won the British Society of

Underwater Photographers Best Beginner Portfolio Award and six others have won the coveted Photo of the Month Competition in Sport Diver UK Magazine; another was a finalist in the amateur section of BSAC's Travel Photographer of the Year Award and two more have won international competitions at Captain Don's Habitat in Bonaire. A couple more have gone on to be freelance dive journalists.

Wherever your underwater photography journey takes you don't forget to look after the amazing marine environment. We can all do our bit by participating in local beach clean-ups, only eating fish and seafood from sustainable sources and raising money for important conservation charities to help protect what we love. The oceans need our support now more than ever before.

If you have any questions, or simply wish to let me know how you are getting on with your photos email me at [maria@oceanvisionsacademy.com](mailto:maria@oceanvisionsacademy.com).

Wishing you the very best of luck with your photography and lots of safe, wonderful diving!

**Maria**

*ISO 200, f8, 1/60th sec*





# CHAPTER 1

## Introduction to Underwater Photography

*Fuji F30, INON UCL-165AD close-up lens, INON D-2000 strobe*

### 1.1 Essentials of a Good Underwater Photographer

Taking good underwater photographs is harder than it looks. The ability to stay still for long periods is important, as is heaps of patience when a subject doesn't look the right way. Then of course when it does, you need to be ready to capture the shots that you want with the correct settings to ensure the images are in focus and properly exposed.

When snorkelling don't forget to wear a protective vest or t-shirt. It is all too easy to get carried away with the overwhelming sensation of enjoying the reef life beneath you and end up badly sunburnt.

It is so easy to get carried away taking photographs that divers can forget basic diving skills. The following tips are very important to help keep you safe underwater. Make sure you know your dive kit inside out and always maintain a good, safe dive profile. Never lose sight of your buddy and make a note of where the boat or exit point is. Always start at the deepest part of your dive and gradually ascend. If you find a turtle during a dive, don't follow it deeper, wait

patiently and it will more than likely stay around for a while. The same applies if a subject is above you; don't rapidly ascend to photograph it, otherwise you may give yourself a serious lung expansion injury. Keep breathing, be patient, relax and enjoy your diving. The skill of underwater photography will open up a whole new world for you which you will never want to leave.

Perfect buoyancy is paramount and you must be able to hover motionless in the water without damaging any of the reef or marine life around you. Remember to be aware of where you put your fins and also be careful when swimming along not to stir up sand behind you. Reef sticks can help you to keep steady underwater while taking shots, but always remember to double check where you put them otherwise you might end up hurting a camouflaged subject such as a stonefish on a rock or a stargazer in the sand.

Talking to local dive guides and studying your subject before a dive helps you to find out where great photographic subjects hide and if there is anything unusual to see. Chatting to other underwater photographers in the area will help you to form a plan as to where you may like to dive in order to find the particular subject that you are looking for.

Always approach your subject as slowly as possible so as not to frighten it. Breathing slowly will also help. Talking to fish and spending a lot of time with the same subject can really help it to relax and not feel threatened in its surroundings. This is when the best photo opportunities will occur.

## **1.2 The Effects of Light Underwater**

Why is it underwater photographs sometimes look so blue? Well, water absorbs light and in doing so it filters out colours selectively as either the depth or distance from our subject increases. Reds are lost within the first few feet (1m). This is quickly followed by the loss of orange, yellow and green at about 25' (7.5m). Red subjects appear green at about 60' (18m). Try taking a tomato with you on your next dive and see what happens. Always remember that colour is lost not just the deeper you go but also the further away you are from your subject.

Torches, filters, strobes, the use of manual white balance and even the little built-in flash on your camera can all help to put colour back into your underwater photographs and will be looked at in depth in the following chapters.

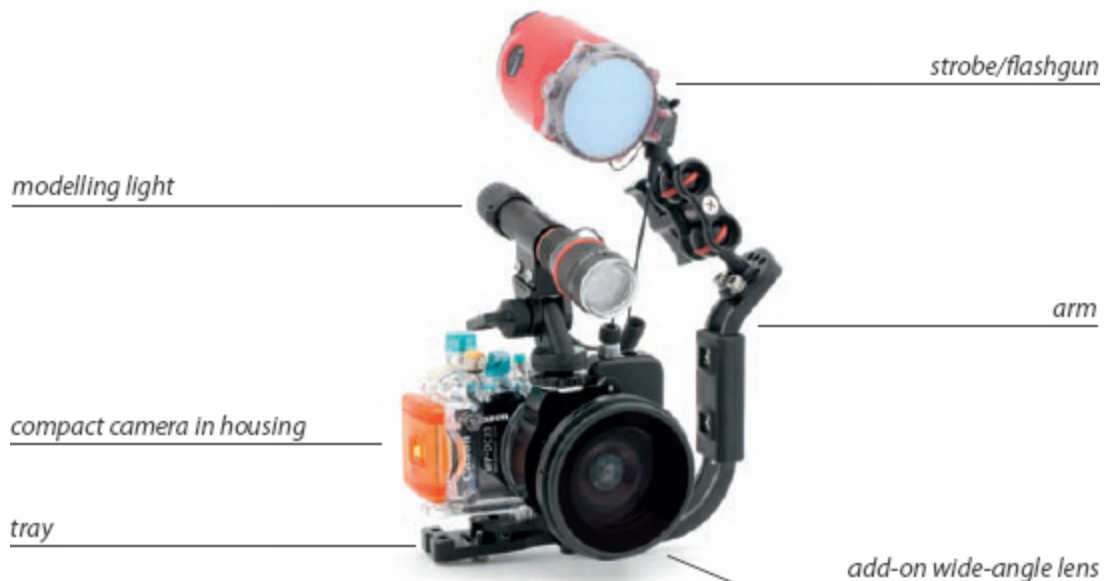
## **1.3 Choosing a Compact Camera for Underwater Use**

For those who are just starting out and looking to buy a compact camera (or perhaps you are a more advanced underwater photographer looking to buy a back-up camera to an SLR system) the choice of cameras and accessories is nothing short of overwhelming. The hardest decision can be choosing which camera to buy.

Firstly, ask yourself what you want to achieve from your underwater photography and what your budget is? What kind of depths do you dive to? If you like deep diving a housing made by Aquatica, Ikelite, Fisheye FIX or Patima for compacts will be more robust than the camera's own brand of housing. Then look at a system with which you can grow in the future, and make sure that your chosen system has spare parts which are readily available.

Next ask a few more involved questions such as what is the battery life like? Can the built-in flash be used with the camera's housing or will using the camera's flash cause a shadow? (This is likely with housings which have a large port, i.e. Canon's PowerShot G range.) For those passionate about wreck photography you will need to be able to add a wide-angle lens onto the front of the housing to photograph these large subjects. However, for those who are crazy about nudibranchs and macro photography, this might not be so important and you may decide on a close-up lens or a strobe as your first compact camera accessory. Perhaps you'd like to get really creative with your underwater photography and have full manual control over your settings to be able to change both the aperture and the shutter speed independently of each other to achieve different effects? Or if you are shooting with a strobe, being able to adjust the film speed and aperture settings on a compact camera is absolutely essential to control the lighting of your subject and prevent it from being overexposed.

Photograph by Ocean Optics ©2010



Secondly, the newer cameras with the most megapixels may not have such a huge advantage over slightly older

models with just 6 megapixels. These will still produce photographs good enough to make 16" × 12" prints comparable with an SLR set-up. Models with a 10-14 megapixel resolution will give you larger prints. If your compact starts to show digital noise (where the pixels start enlarging) at higher film speeds, simply choose to shoot on a lower resolution. Depending on your budget it may be a better idea to invest in a slightly older model and be able to buy a strobe or a wide-angle lens at the same time.

All makes of compact cameras will give you excellent results, whatever the model. A few really good entry models at the moment are Canon's IXUS or PowerShot range, SeaLife or Olympus. If you are looking for a more advanced model with which you can get really creative shots then consider the Olympus E-PL3, Sea & Sea DG-2X, Canon S100 or PowerShot G12, as well as Panasonic's Lumix range. Cameras and add-on lenses are changing all the time so do ask your local specialist supplier for their advice or look on specialist underwater photography forums.

Thirdly, decide whether underwater video is important to you? The great thing about compacts is that they have the ability to take some great movies as well, and most cameras can film in High Definition.

Lastly, make sure you can see the screen underwater and access all of the important menu functions easily. This is especially important for those who are planning to use their camera in temperate waters where gloves make the controls difficult to press. Make sure you can access the film speed setting, aperture and shutter speed controls as well as white balance. The latest compacts by Canon and Sea & Sea allow you to custom set a button to become a one-touch manual white balance setting which can be really useful when taking photographs with wide-angle scenes to help bring back the colours which are lost underwater. Cameras made by manufacturers such as Olympus or Fuji

have larger buttons which can be easier to use when wearing thicker gloves.

Before choosing, always find out as much information as you can to save expensive purchase errors. Forums such as Wetpixel ([www.wetpixel.com](http://www.wetpixel.com)) are excellent resources for anyone getting into underwater photography.

## 1.4 How Many Megapixels Do I Need?

In truth, probably not as many as you had originally thought. Even back in 2001 when I started taking photographs with a 3 megapixel camera, I could produce a decent A4 print and a 20" × 16" print onto canvas. Nowadays, a 6 megapixel camera will give a good quality 15" × 10" print or a huge 2m × 1.5m print onto canvas. Looking at the newer models with almost a 15 megapixel resolution, this means beautiful prints on larger formats.

***Turtle Silhouette by Daniel Norwood** Fuji F50fd with INON UFL-165AD fisheye lens & Sea & Sea YS-110 strobe ISO 100, f8,  $\frac{1}{1000}$ th sec (achieved using EV -1) **Winner of Sport Diver UK's Photo of the Month***



***Ornate Ghost Pipefish by Daniel Norwood*** Fuji F50fd  
with INON UFL-165AD fisheye lens & Sea & Sea YS-110  
strobe ISO 100, f8,  $\frac{1}{100}$ th sec (achieved using EV -1)







With older cameras, the more megapixels the camera had meant that there was an increased chance of grain in the resulting photograph, especially when taken in low light. Newer models don't have this problem so much apart from when using a higher ISO. It is always better to choose a camera for its other functions which can be used both above and underwater, rather than just for a high megapixel resolution.

## **1.5 Essential Accessories for Your Compact**

**Battery Chargers and Spares:** Always, always pack a spare or even two! It is better to be safe than sorry, especially if you are going on a liveaboard trip. Therefore, I always use rechargeable batteries, not just because they last longer, but they also help the environment. You can also buy a Powertraveller to help keep your appliances charged while on the move. Whatever you decide, always remember

to pack extras, especially if you are diving in colder waters, using an external strobe, or both. Be aware that using your camera's built-in flash as well as reviewing your photographs on the LCD screen will shorten the camera's battery life considerably.

**Spare Memory Cards & Storage Devices:** Needless to say these are often forgotten, but it is always a good idea to shoot on different cards. If something goes wrong with one, you will then still have others to fall back on. And some cameras now have the ability to shoot with different memory cards. Always back up your photographs at the end of the day. Most dive centres and liveboards nowadays have computer facilities to be able to download and burn your photos onto CDs. It is easy to forget in the excitement of diving, but backing up at the end of a day's photography should be every diver's mantra.

Portable storage devices are another great option and are far easier to carry than laptops. Canon and Epson, along with a few others, make these with nice large screens up to 3.7" to view photographs and movies on. Although a little more expensive to buy, they still work out far cheaper than a return trip to photograph the same subjects again should the worst case scenario happen and you lose your hard-earned work.

**Travel Adaptors:** Don't forget to pack the correct adaptor and if necessary an appliance to convert the voltage. If you have a few items to charge, it is a good idea to pack a multi-way adaptor so your electronic items can charge at the same time. Fujifilm make a World Adaptor which can be used in over 150 countries and can also come with a handy USB charger.

**Buoyancy Weights:** Each manufacturer makes small weights which screw into the tripod mount at the bottom of the housing. These help stop excess positive buoyancy underwater. Some cameras such as the larger PowerShot G

range may need a couple to help compensate for the size of the housing. Check with your supplier whether you will need them.

**Back-Up Camera:** There have been a number of times I wish I'd had a back up camera. With digital compact cameras being superseded faster than games consoles, it is a good idea, if your budget allows, to buy two of the same camera for your underwater housing in case one breaks or floods. Although a little more expensive, the cost will be saved in the long-term through not having to buy a replacement housing as well as a replacement camera if something happens. If you also have a wide-angle lens you save the cost of having to buy a new adaptor or a new lens. This in turn can save on a return trip to record your favourite underwater memories

**Cleaning Kit:** Never underestimate how important it is to maintain and look after your housing. Some of my guests have commented that they never look after theirs and nothing has ever happened. However, some have not been so lucky.

Always remember to pack a spare O-ring in case you get a little nick in the original. This happened to one overseas course guest on his first day after taking the housing in empty on his first dive and the spare O-ring saved his whole week of holiday photos on a liveaboard trip.

Extra silicone grease is very important, as are silica gel packs to help absorb moisture. Foam-tipped eye make-up applicators are fantastic for cleaning the groove of your camera housing.

Silica gel packs are essential to prevent condensation building up inside your camera. Just be careful not to trap the edge of the paper in the door of the housing when closing it. What I love about them is that you can pop them in the microwave to dry out when the crystals have expanded and then re-use them.

Finally, don't forget a lint free cleaning cloth or two to keep the port of your housing clean inside and out as well as a magnifying glass to double-check for hairs and grit that are difficult to see with the naked eye.

More care and maintenance tips follow shortly, so be sure to read them all carefully.



**Extra Maintenance Goodies:** I never forget these now after too many accidents. Cable ties are great for securing a wobbly housing to a tray arm, so always remember to pack a few. Electricians' tape can be used to ensure that the fibre optic cable is secured firmly over your camera housing's built-in flash and that the surrounding area is blacked out to prevent backscatter.

If you have any of INON's range of wet add-on lenses, then remember to pack extra screws for the adaptor in case these fall out.