Underwater Photography

Jan/Feb 2025
Issue 142

Indonesia's Leading Dive Resort

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WORLD TRAVEL AWARDS WINNER 2021 Indonesia's Leading Dive Resort

WORLD TRAVEL AWARDS WINNER 2022 Indonesia's Leading Dive Resort

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Cover shot by
Grace Schreckengaust

www.graceschreck.com

Underwater Photography

A web magazine UwP142 Jan/Feb 2025

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© PR Productions
Publisher/Editor Peter Rowlands
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peter@uwpmag.com

Editorial

Backscatter

Don't get me wrong - backscatter is the bain of most underwater photographers' lives and it was even more so in the film days because there was nothing, other than very expensive retouching, which could be done about it.

Enter BackscatterXTerminator - Erin Quigley's collaboration with clever astro AI developers - and you have a Photoshop plug in which removes backscatter at the push of a button without affecting the overall quality of the subject matter.

This is the stuff of dreams and instantly solves a problem which could have taken hours to eliminate manually.

And yet, contrary as I can be, I can't help but wonder that this instant simplicity will lead to a blanket coverage of perfect, clean images - a bit like whitened teeth - and especially in competitions where a judge is looking for images that stand out from the crowd. In this new world of image perfection it would then be the shots WITH backscatter which would stand out :-)

Fortunately BackscatterXTerminator has controls to limit the amount of correction so that you can decide if the backscatter actually contributes to the 'atmosphere' of the image. Very clever.

If you're ahead of the game, you've got nothing to fear

To improve your underwater photography you should look at and study other people's underwater images. There's nothing wrong with that as long as you don't intend to simply copy their images or style.

Some underwater photographers are reticent to divulge their secrets but those who are confident in their capabilities and on top of their game are comfortable imparting their knowledge for the benefit of others. They, after all, learnt from those before them.

Obvious examples must be Martin Edge whose several editions of the book "The Underwater Photographer" are refered to as 'the bible' and this would not be complete without including Alex Mustard whose several books are testament to his talent but his open divulgance of all his techniques in "Underwater Photography Masterclass" and "52 Assignments: Underwater Photography" make him inspirational to so many.

You see, he's happy divulging his secrets because he's already thinking of and working on new techniques to keep ahead of the game.

Getting it right can be wrong

If you are not interested in the finer vagiaries of film making and shooting broadcast quality footage underwater, you can skip this.

I always remember being saddened when I visited the late great Peter Scoones; not because he was a bit unwell, which he was at the time, but because he was working on some of his recent underwater footage and making adjustments to the colours.

This was the man who, singlehandedly, changed the way underwater natural history footage was shot as it emerged from film to video. He saw the advantages of the new electronic format with its ability to adjust all three colours - red, green and blue - to achieve perfect colour balance underwater and all of his (self made) underwater housings incorporated ergonomically placed controls to achieve just that.

The result was that when he surfaced from a dive his footage could go straight to the editor. No post processing time needed.

That's why I was sad about Peter now post processing his footage. He'd joined the almost universal thinking - they can sort that out in post.

But then I read Roger Horrocks' illuminating responses to my questions later in this issue and it all became clear.

If you are, as Peter was in most of his commissions, the only underwater cameraman, then it made sense to get it right underwater but, if you are one of several on a shoot, then the rules must change to leave the final colour grading to the post production team.

Colour is very subjective, especially in the underwater world where the natural colours vary so much depending on the water and light conditions.

The solution, as Roger so generously revealed, is "Set the white balance to daylight or 5600 Kelvin and leave it there. You shoot everything in RAW and don't do any white balancing underwater. Take a grey card and a colour card down as references and film them in situ. This provides the colourist with a baseline for what the colours actually look like."

It all makes perfect sense to me now.

Peter Rowlands
peter@uwpmag.com

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Reef Check WORLDWIDE

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Seasick Productions

News, Travel & Events

Scientists discover world's largest coral—so big it can be seen from space

From the surface, it looked like a shipwreck, long forgotten on the seabed. But when cinematographer Manu San Félix dove down to take a closer look, he was amazed to find a huge, sprawling coral.

That was the moment the National Geographic Society's Pristine Seas team says they discovered the world's largest coral colony during an October 2024 expedition in Solomon Islands, an archipelago in the southwest Pacific Ocean.

At 112 by 105 feet, this mega coral is longer than a blue whale, Earth's largest animal. It is so enormous that it can be seen from space—yet it was long hidden from view.

Solomon Islands is nation made of six major islands and over 900 small islands in the southwest Pacific Ocean. The Duff Islands seen here sit to the east and are approximately 300 nautical miles from the newly discovered 'mega coral'.

The expedition team say this is the largest coral colony ever recorded. It is made up of nearly a billion genetically identical coral polyps that work together in the colony as if they are one organism.

Although the newly discovered coral is in excellent health, researchers worry about the many threats facing all corals, including global warming and overfishing. They hope this discovery will inspire more protections for marine habitats in the Solomon Islands.

"Finding this mega coral is like discovering the tallest tree on earth," says Enric Sala, National Geographic Explorer in Residence and founder of Pristine Seas, via email. "This discovery rekindles our sense of awe and wonder about the ocean."

The organism is a type of hard coral called Pavona clavus, or shoulder blade coral because it has columns that "kind of looks like shoulders," says Timmers.

The researchers believe there could be nearly one billion polyps in this mammoth colony, which is surrounded by sand.

"It's amazing that they've just found this and nobody really noticed before," says Helen Findlay, a biological oceanographer at Plymouth Marine Laboratory in the U.K.

Researchers usually use a coral's height to estimate its age. This 16-foot-high colony is around 300 years old—but it could be even older.

Divers from National Geographic Pristine Seas measure the world's largest coral colony in the Solomon Islands.

This coral has lived through major historical events. It would have seen the first Christian missionaries visiting the Solomons during the 19th century. It was alive during the Declaration of Independence was signed, the Second World War, and the COVID-19 pandemic.

"It gives you that wow factor—life really created this and has sustained this massive colony," says Timmers. "It's like our ancestors are still there in the water."

During its 300-year life, this immense organism has witnessed striking changes to the ocean, such as global warming, overfishing, pollution, urban and agricultural development, and ocean acidification. When they visited a nearby reef, the expedition team saw that many corals had already died, but it's not clear how resilient this newly discovered colony could be in the face of these global threats.

www.nationalgeographic.com/environment/article/world-largest-coral-colony-discovery

*As part of ADEX's commitment to marine sustainability, entrants must adhere to ethical photographic principles, including capturing animals in their natural habitats exhibiting naturally occurring behaviour

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2025

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06/04

www.adex.asia

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ANIMAL BEHAVIOUR ADVISER

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- Animal Behaviour
- Cephalopods
- Waterscapes
- Short Film
- Artwork

SUBMISSIONS
JAN 1 – MAR 1, 2025
www.underwatercompetition.com/voo

Hosted by underwatercompetition.com

In association with DPG | THE REEF-WORLD FOUNDATION | GREEN FINS INTERNATIONAL COORDINATOR

Official Publication ScubaDiver oceanplanet

Organised by underwater360

Photo – Daniel Sly, VOO 2024 entry

Blue Heron Bridge Workshops with Matthew Sullivan

Join me for a 1:1 or 1:2 macro photography workshop at one of the best macro dives on earth. Blue Heron is known for an abundance of unusual and exotic critters that are hard or impossible to find elsewhere outside of the tropical Pacific. The shallow depth and variety of subjects makes it a perfect spot to work on your underwater macro skills. Frogfish, seahorses, batfish, stargazers and octopus are all superstar Blue Heron subjects but countless crustaceans, pipefish, blennies, nudibranchs and more are all present and awaiting your lenses.

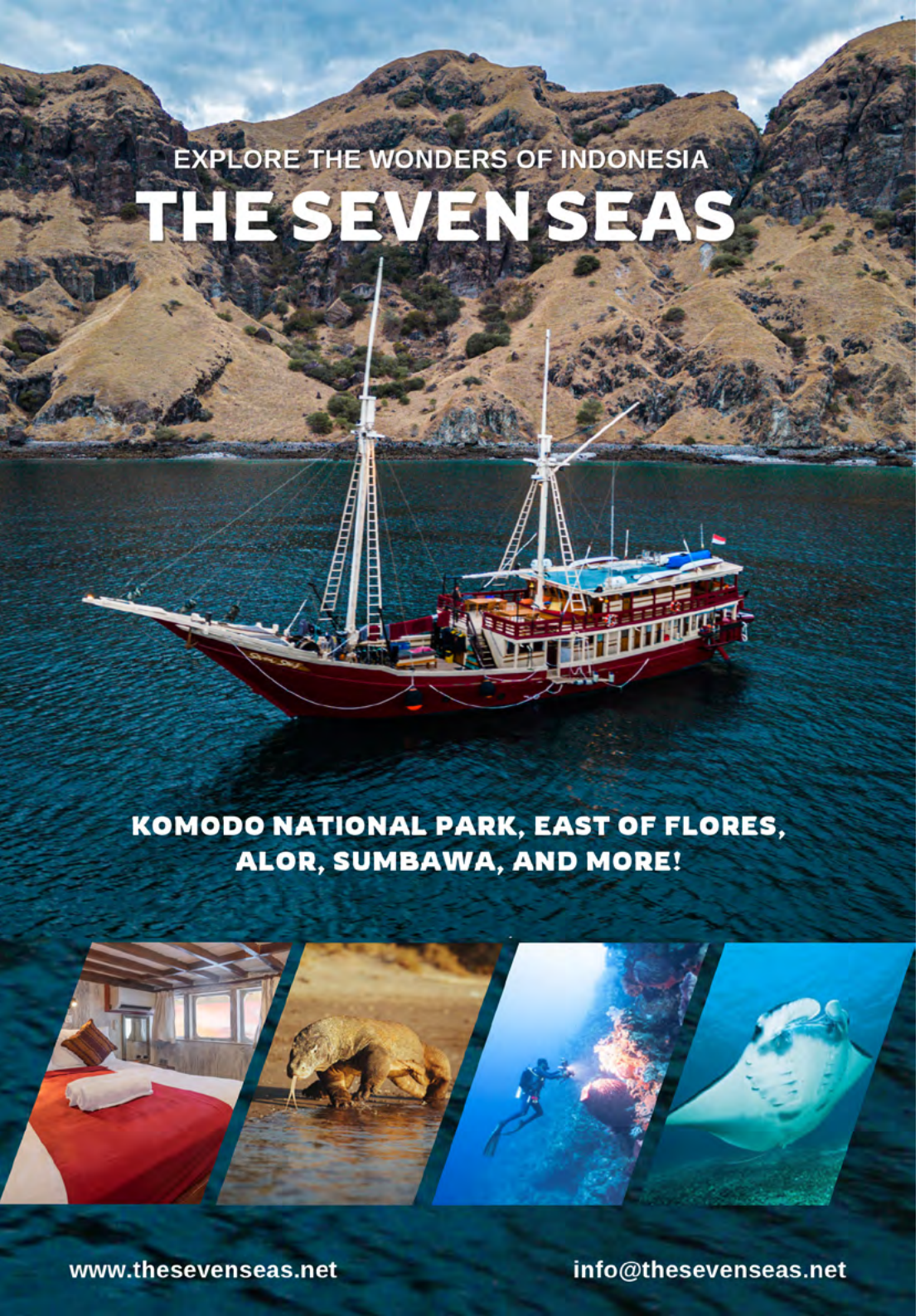
We will meet at the Phil Foster Park lot before the start of the dive, which will be dictated by high tide. That will give us time to go over techniques you are interested in working on, whether that be black backgrounds, close focus wide angle, portraits, or any other imaging style. I will help find subjects and provide in water instruction as to how to photograph each subject.

I am also available to guide/subject spot. I live close to the bridge and dive it regularly so I know the layout of the dive site and have become adept at finding many of the critters who make their home there. I do not have a camera on these dives. I will help put you on a subject, and while you are busy photographing, will do my best to locate the next one in the immediate area. NOTE: I am not a certified Divemaster.

Workshop Cost: $200 per person, per dive OR $300 per person for two dives

Guided Dive Cost: $150 per person, per dive.

www.9milesnorth.com/blue-heron-bridge



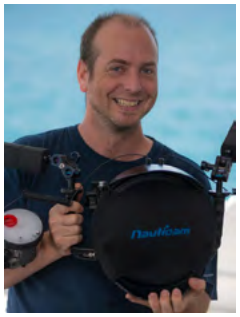
Alex Mustard Appointed President of The British Society of Underwater Photographers

Dr Alex Mustard MBE has been named as the new President of the British Society of Underwater Photographers (BSoUP). The position has been unfilled since the passing of previous President, Brian Pitkin, in 2021. Alex becomes the 5th BSoUP President, following Peter Scoones, David George, Peter Rowlands and Brian Pitkin. BSoUP was founded in 1967 and continues in its mission to share knowledge to help its members with the challenges of underwater photography and to create memorable imagery.

"We're thrilled to welcome Alex as our President as we continue to inspire and inform underwater photographers and push the boundaries of photographic excellence beneath the waves," said Nur Tucker, Chairman of BSoUP. "We could not be prouder to have Alex, not only as a member but now also as our President. Alex is an experienced, energetic and selfless mentor, and all members will benefit from his dedication to help us create powerful images underwater. And as a leading innovator in underwater photography, he is ideally placed to help elevate the name of BSoUP in Britain as well as around the world. BSoUP membership is open to all underwater photographers, with monthly online meetings attracting and audience and speakers from around the world, and themed competitions where the judge provides feedback on your pictures." Membership is £35 per year.

www.bsoup.org.uk

Bunaken Oasis 2025 Photography Workshop with Alex Tattersall



Dive into an underwater photography paradise with Alex Tattersall at Bunaken Oasis!

We are thrilled to announce our 2025 Photography Workshop, a unique opportunity for enthusiasts to elevate their skills amidst the stunning marine landscapes of Bunaken, Indonesia.

Departing the UK on 23rd September 2025, this 9-night adventure includes 8 days of diving, featuring 23 Nitrox dives and 2-night dives.

At Bunaken Oasis Dive Resort and Spa, you will receive expert instruction from Alex Tattersall, renowned for his passion and expertise in underwater photography. Immerse yourself in crystal-clear waters teeming with vibrant coral reefs and diverse marine life, while enjoying the luxury and serenity of Bunaken Oasis.

Don't miss out on this unforgettable journey for more information or call us at 01323 648924 to secure your spot today.

Join us for the ultimate underwater photography adventure and capture the ocean's beauty like never before!

www.bunakenoasis.com

Join Us At the 2025 Digital Shootout in Bonaire!

Take it seriously or take it slow, the Digital Shootout is an underwater photography/videography vacation designed to take the shooter in the group to the next level. If you're a new or an intermediate shooter, the Digital Shootout is our fast-track to better underwater imaging. In six days of seminars and diving, the Digital Shootout team will help dial in your underwater system and shooting techniques. Enter your best images in the final contest to win trips, gear, and more from our great sponsors.

The Divi Flamingo is beachfront, and approximately 20 yards from the Calabas Reef, making shore diving easy and convenient.

Divi Dive Bonaire is the island's oldest and best-known dive operator, operating what many call the most convenient dive experience in Bonaire. With the Calabas Reef just 20 yards in front on the hotel and 24 hour access to tanks, diving with Divi is the easiest dive vacation you will ever take.

Each afternoon we offer professionally produced seminars on basic and advanced photo and video techniques. Just learning how to assemble your camera for the first time? Looking for the secrets of exposure and strobe placement? Our seminars are world renowned for their simple delivery of complex topics and will take you to the next level.

The workshops and experts assembled at this event will whisk you along the learning curve of underwater photography. By the end of the week, you will be shooting well enough to enter our friendly competition. The best images shot during the week will be awarded over $30,000 in prizes.

www.backscatter.com

Grace Schreckengaust

Hi! My name is Grace Schreckengaust, I am a photographer, free diver, spearfisher, and ocean advocate!

Born and raised in Encinitas, California, I spent most of my days by the water. I moved to Oahu Hawaii when I was 18 years old, where I fell in love with the ocean and photography even more!

Free diving offers me a unique sense of freedom and tranquility, a peace that I can not seem to express any other way than through my photography; each photo taken on a single breath, it is a memory for me and a way I can share my view of the world with others!

As a photographer, I strive to share these awe-inspiring moments with the world. My images aim to evoke the wonder and serenity of the underwater realm, highlighting the delicate balance of life in our oceans, and inspire others to appreciate and protect our precious marine ecosystems.

My work has taken me to diverse environments, from lush forests to undiscovered waters, where I have honed my skills in both field photography and understanding animal behavior. I believe that each image has a story to tell, and I strive to create evocative visuals that not only showcase wildlife but also raise awareness about conservation issues.

Website/ print shop:

www.graceschreck.com
Instagram: Grace_schreck

Dive into Adventure with Apex Ocean Travel

Discover the depths of the world's most breathtaking underwater landscapes with Apex Ocean Travel, your premier US-based dive travel agency. We specialize in crafting custom personal dive vacations and exclusive group expeditions led by renowned photographers and scientists.

Whether you prefer the comfort of luxurious dive resorts, the thrill of remote liveaboards, or the excitement of adrenaline-pumping ocean safaris, we curate the perfect ocean adventure for you. Our carefully selected network of 200 elite liveaboard and dive resort partners ensures an unparalleled experience both above and below the waves.

Join us on extraordinary journeys in 2025 to: Socorro, Galapagos, French Polynesia, Bahamas, Maldives, Baja California Sur ...with more captivating destinations on the horizon.

Let us handle the planning and logistics while you focus on creating unforgettable underwater memories. If you can't make one of our group trips, we can book you on your own personal vacation with any of our partners. Visit our website and email us your bucket list destinations today!

Exclusive Offer: Mention this article to receive a $200 credit towards your next dream dive vacation.

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Sea Save Foundation

Sea Save Foundation stands witness to the health of the oceans and the threats they face, we document problems and develop solutions, arm people with knowledge, and tools so they can make a difference.

With the public as our ally, we go to the United Nations and other global bodies to effect international change. We attend these meetings so we can offer creative, economically viable, sustainable, and environmentally friendly plans to decision-makers.

Stay Informed. Get our free weekly global ocean news summaries. Stay on top of the latest, critical issues affecting our oceans.

Your Virtual Front Row at CITES CoP! Our team leads efforts to protect endangered marine species from trade threats. Join us to stay on top of this crucial mission.

We will be live at the United Nations in 2025: We're pushing for the High Seas and Plastic Pollution Treaties. Our Ocean Week in Review is a featured commitment. Sign up for immediate updates.

SCUBA Auction Alert! Divers, here's your chance to hit all your global bucket-list destinations AND support ocean conservation. Sign up now for updates!

Signup now to receive information about all topics: SeaSave.org
Questions? Director@SeaSave.org

Sea Save Foundation is a 501 (c) 3 nonprofit organization

Bilikiki Cruises Move Offers Huge Potential For Solomon Islands Dive Tourism

In a move Tourism Solomons says will have major ramifications for the Solomon Islands dive industry, Honiara-based Bilikiki Cruises has joined resources with fellow liveaboard dive boat expert Emperor Divers,

Bilikiki Cruises' live-aboard cruise programs will now comprise part of the Singapore-based Emperor Divers' existing international dive portfolio which includes Egypt, Indonesia and the Maldives.

Congratulating them on the move, Tourism Solomons CEO (Acting), Dagnal Dereveke said "Our region's rich marine biodiversity, coupled with the historic World War II wrecks scattered across its waters, makes the Solomon Islands a highly sought-after destination for divers globally."

Bilikiki Cruises' managing director, Sam Leeson said the company was delighted to have linked up with Emperor Divers to create this new working relationship.

"The chance to work with such a prominent organisation in the liveaboard industry is a great opportunity for us," Mr Leeson said.

"Very little will change in the day-to-day running of Bilikiki as our existing management and staff will keep doing the tremendous work they have been doing for years.

www.visitsolomons.com.sb
www.bilikiki.com

2025 with Wildlife Photo Tours

We are willing to welcome 2025 with enthusiasm and joy. Some new destinations, tested in 2024, have been added to our offer and are pure, crystal clear immersions in the wild, far away from the chaos of the common tourism trips.

We put the basis for long lasting collaboration with local researchers and communities.

These trips reminded us how like minded local people, deeply involved in conservation efforts, highly inspire our life style and continuously shown us the ways to protect oceans and ourselves.

Looking ahead to 2025, we'll have another full schedule and impressive year, with a few options which are still being finalized. Stay tuned to our next newsletters for details but, for now, you can browse our confirmed tours

here below.

If you have any questions regarding any of the trips we organize and lead, feel free to contact our trips' expert at tour@banfi.ch or reply to this email.

We look forward to share with you our expertise, passion, knowledge and more days in nature in 2025.

Sabrina & Franco Banfi.

www.wildlifephototours.ch

Dive with MMF in Socorro
28th June - 6th July 2025

Calling all divers! Are you ready to embark on an extraordinary adventure in 2025, and make a positive impact on our oceans?

MMF invites you to join Dr Simon Pierce, our Co-founder and Executive Director, on two incredible dive expeditions to some of the world's most iconic marine destinations – Socorro and the Galapagos!

100% of profits will directly support MMF's critical conservation and research programs. By joining us, you'll be part of a global movement to protect these incredible creatures and the oceans they call home.

Socorro

8-Nights, 28th June – 06th July '25

Socorro is where the wild (and big) things are. This will be a megafauna trip of epic proportions, where we anticipate close encounters with giant manta rays, dolphins, and multiple large shark species, with a backdrop of dramatic oceanic islands, pinnacles, and geological formations.

Led by MMF Executive Director, Dr. Simon Pierce

Dr. Madalena Cabral will deploy satellite tags on giant manta rays

Experience marine megafauna including manta rays, dolphins, & sharks

Travel aboard the legendary Nautilus UnderSea

Cost: US $3,975 (Per person, all cabins convertible to Twin or Queen)

Includes up to four dives a day and all meals.

https://marinemegafauna.org/trips

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- Huge Camera Room
- Very Few Stairs
- Small Resort - only 15 rooms

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New Products

Sea&Sea MDX-R5II housing for Canon EOS R5 Mark II

The long-awaited Sea&Sea MDX-R5II housing for the latest camera models Canon EOS R5 Mark II will be available in January.

All controls on the MDX-R5II are ergonomically designed to allow maximum camera operation. All major camera functions can be operated with the movement of your thumb and other fingers without removing your hand from the grip.

Your ports and gear can be used without modification with EF-mount lenses with mount adapters, so the system chart is identical to that of previous MDX SLR housings.

All SEA&SEA housing models will ship with both the Leak alarm sensor and the vacuum valve installed as standard equipment.

The main electronic dial and sub electronic dial 2, which are frequently used, can be quickly operated.

Video shooting can also be operated while holding the grip. You can shoot videos underwater while holding the grip, so you won't miss the shutter opportunity.

A fiber-optic cable cover is included. It prevents optical cable terminals from falling out and smartly protects light-emitting panels and cable terminals. Includes a strap to prevent loss of the cover.

Port lock operation (lock/unlock) and lens release button can be pressed from the outside of the housing. Port and lens replacement can be performed without opening the housing. (except for some lenses).

Super luminescent type special luminescent stickers are attached to each operating part. It glows brighter for a longer period of time with a short exposure to light than ordinary luminescent stickers.

A 0.5x pickup finder is standard. The 0.66x and 0.8x pick-up viewfinders, VF45 1.2x and VF180 1.2x can also be attached as options.

[Dimensions (WxHxD)] 344 x 173 x 167 mm 13.5 x 6.8 x 6.6 Inches

[Weight] Approx.2970g / 104.7oz (Including Grips).

[Depth rating] 100m / 330ft

www.seaandsea.jp/product/housing/mdx-r5ii.html

81501
MFO-1

Mid-Range Focus Optimizer 1

- provide ample focus distance for different sizes of subjects
- improved optical performance

Super Macro Convertor 3

81203
SMC-3
2.3x magnification

- The SMC-3 weighs only two-thirds of the SMC-1
- Superior Optical Performance
- Slightly less expensive than the discontinued SMC-1
- Increased Working Distance

PRE-ORDER NOW !

17342
NA-R1
Housing for
Canon EOS R1 Camera

*photo by Dr Alex Mustard
www.nauticam.com

Nauticam
Innovation underwater

AOI UIS-P1 strobe

AOI has unveiled its latest underwater strobe, the UIS-P1, targeting the mid-range market.

The new AOI UIS-P1 leverages a beloved feature of the UCS-Q1RC: the AOI InTeLi™ mode. Widely recognized as one of the most consistent and accurate TTL modes in the underwater strobe market, it revolutionized underwater macro photography. Its standout feature, the Intelligent Macro (i-Macro™) function, offers precise exposure for macro shots and has become a game-changer, particularly when paired with the best-selling OM System Tough TG series.

What is the AOI InTeLi™ Mode?

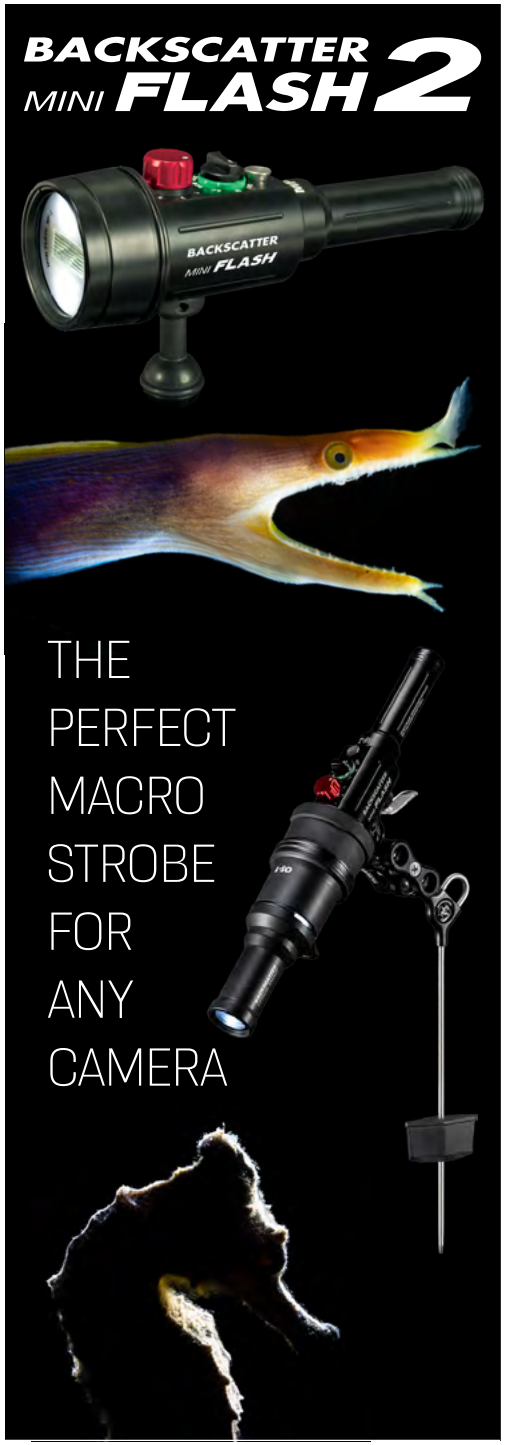
The AOI InTeLi™ Mode represents the next generation of TTL flash compatibility, optimized specifically for underwater use. Calibrated to manufacturer's specifications, it ensures consistently accurate exposures, surpassing previous generation of TTL. Underwater macro photography is further enhanced by i-Macro™, which was initially available for OM System cameras. Now, the AOI InTeLi™ Mode also supports Sony cameras, offering Sony TTL, i-Macro, TTL HSS, and M-HSS functionalities.

- Sony TTL and i-Macro
- TTL HSS and M-HSS Modes
- OM System RC TTL and i-Macro
- 10-step manual control
- Energy: 150Ws from a ring-shaped flash tube
- Beam angle: 150 degrees
- Depth-rated to 100m
- Powered by a standard-size 21700 rechargeable Li-Ion battery (minimum 15A and 5000mAh recommended)
- Flash recycle time: Under 2 seconds (full power)

www.aoi-uw.com

www.backscatter.com

www.uwcamerastore.com



Nauticam introduce the SMC-3

Nauticam is proud to introduce the SMC-3, the latest evolution in our line of water contact optics! Designed as a renewed version of the acclaimed SMC-1, the SMC-3 boasts a lightweight build—now only one-third the weight of its predecessor—without compromising on optical performance.

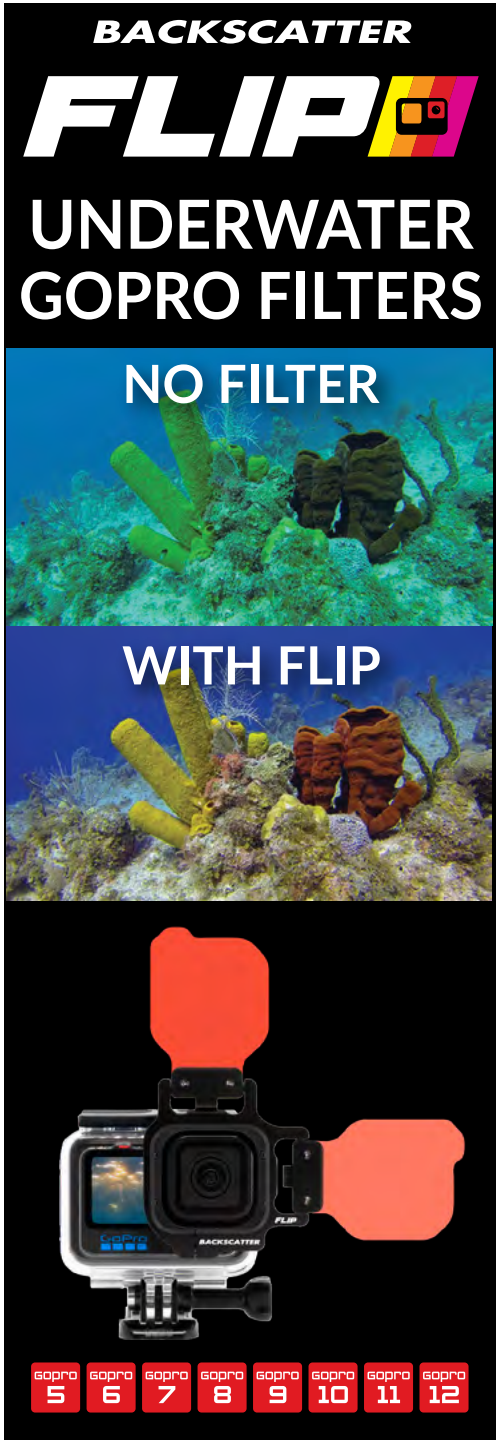
When combined with a full frame camera and a 100mm or 105mm macro lens, the device converts the optical system to provide a maximum of 2.4X magnification factor. In other words, a subject area of 15.6mm X 10.4mm will fill the whole frame of a 36mm X 24mm sensor.

By utilizing a specially developed algorithm in the optimization process, the SMC renders superior image quality over the full focusing range of the camera lens (which becomes ~50 to ~100 mm in front of the SMC). Also benefitting from the high brightness and contrast of the image, the autofocus system of the camera usually works acceptably well within this range.

Even at the maximum 2.3X magnification, there is still more than 50mm of working distance between the front element and the subject with 100/105mm macro lenses. This working distance is crucial when capturing behavior with skittish subjects.

Dimensions 70mm x H 32mm
Weight in Air 307g
Weight in Water 215g
Mount Thread Diameter M67
Depth Rating 100mm

www.nauticam.com



BACKSCATTER

THE BEST BANG FOR YOUR BUCK

OLYMPUS E-M10 IV

Nauticam NA-R1 for Canon EOS R1

The Canon EOS R1 is powered by a 24.2MP full-frame backside-illuminated stacked CMOS sensor with Canon's advanced Dual Pixel autofocus system. Its groundbreaking Cross-Type line-detection AF technology promises unparalleled autofocus speed and precision across Canon's mirrorless lineup.

When it comes to professional underwater imaging, Nauticam housings set the industry standard. Renowned for their intuitive design, unmatched reliability, and a wide range of precision-engineered optics, Nauticam remains the top choice for elite image-makers worldwide.

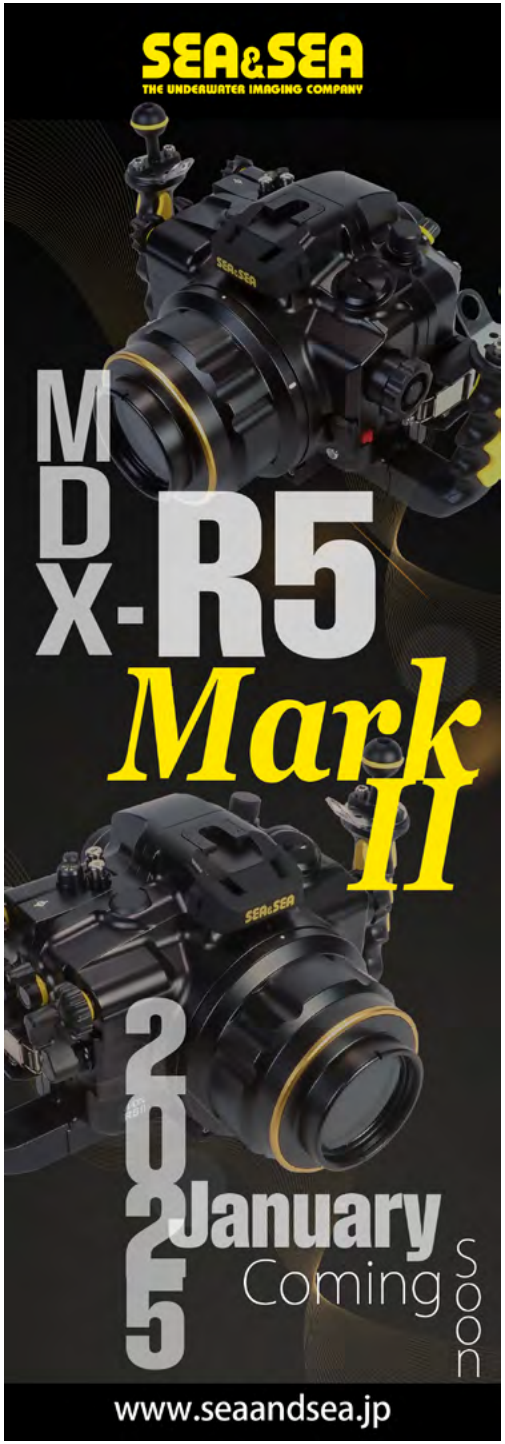
The newest addition to the Canon RF lineup, the NA-R1, brings seamless underwater control to the Canon EOS R1, offering thoughtfully positioned controls, ergonomic handles, and precision dials and levers.

The NA-R1 provides full access to all essential controls and customizable buttons, allowing professionals to tailor the housing to their exact needs.

The Canon R1's 9.44M-dot EVF is elevated further with Nauticam's Enhanced Viewfinders, which provide crystal-clear edge-to-edge viewing in both angled and straight designs, ensuring comfort and accuracy underwater.

The R1's clean 6K HDMI output can be transmitted to external monitors or recorders through Nauticam's HDMI 1.4 and 2.0 bulkheads and supported monitor housings, making it a complete solution for underwater professionals.

www.nauticam.com



Complete Guide For Gopro Hero13 Best Underwater Video & Photo Settings

The GoPro HERO 13 Black is the best camera from GoPro to date and is our favorite action camera. The GoPro HERO13 has upgraded battery life for longer shoots, super smooth image stabilization, and a suite of accessories making it a great option to capture 4K Ultra High Definition video clips underwater. The small size and simplistic operation of the GoPro makes it perfect for beginners looking to capture video underwater for the first time, or any diver looking to easily pick up high-quality video clips.

This guide is designed to set underwater GoPro users up for success by providing step-by-step instructions on how to equip, set up, and use the GoPro HERO13 for diving, freediving, and snorkeling.

Be sure to download a copy of the Cheat Sheet PDF for a hard copy of the settings. We recommend laminating a copy and keeping it in your camera bag.

www.backscatter.com

www.uwpmag.com

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Nauticam MFO-1 (Mid-range focus optimizer)

Introducing our newest Water Contact Optic, the Mid-range focus optimizer or MFO-1. The MFO-1 is designed to elevate your macro shooting experience by eliminating any noticeable focus hunting while ensuring crisper, sharper and more vibrant images.

Key Features:

Enhanced Image Quality: Say goodbye to the limitations of flat ports. The MFO-1 dramatically improves your image quality, providing more accurate color reproduction and increased clarity by minimizing lens aberration.

No Focus Hunting: The converter seamlessly adjusts the focus range of your lens, eliminating noticeable focus hunting and allowing for smooth, precise focusing even in challenging conditions.

Focus Range Conversion: For the Nikon AF-S VR Micro-NIKKOR 105mm f/2.8G IF-ED, the MFO-1 converts the focus range to an impressive 12.5cm - 114cm, giving you more flexibility to capture subjects at varying distances with ease.

Increased Magnification: For close-up enthusiasts, the MFO-1 converter slightly increases magnification, allowing for incredible detail at extremely close ranges. With the Nikon AF-S VR Micro-NIKKOR 105mm f/2.8G IF-ED, you can achieve up to 1.2X magnification at MFD, and with the Canon RF 100mm f/2.8, you'll get up to 1.6X magnification.

www.nauticam.com/products/mid-range-focus-optimizer-1-mfo-1

REEF PHOTO & VIDEO

Nauticam NA-Z8 for Nikon Z8

"Z9 Performance in a Z7 Body"

Every few years Nikon manages to hit a home run with a camera that just does everything better than seems possible.
The Z8 is that camera and more.
46MP/30FPS/
4K 120P/8K 60P/N-RAW 12-Bit/
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Lightning fast customizable AF for stills & best ever Live AF.
Nauticam has met the challenge by crafting a new level of its legendary ergonomics into the NA-Z8 housing.
Nauticam and Nikon; bringing underwater imaging to a new standard.

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Marelux R5ii housing for the Canon R5ii

Marelux has announced their R5ii housing for the Canon R5ii.

This new housing features a built-in remote shutter control module (RSCM), allowing users to capture photos from a distance. The RSCM, located under the camera's base plate, can be easily installed by users themselves using two screws and a waterproof hull. By connecting a USB-C cable (provided by Marelux) to the camera's earphone/shutter control port, users can operate the module seamlessly.

The most exciting aspect of this new technology is that the module can be controlled wirelessly using signals originated from Marelux's video light and color torch. Currently, one 1000-lumen torch and one 3000-lumen target light support this remote controller function. Both the torch and target light are equipped with a special button that has two levels of pressing: a soft press sends an encrypted signal for focusing, and a hard press to the second level releases another encrypted signal for shutter release.

Another noteworthy innovation is the 1000-lumen torch, named Spectrum 1000. This torch can emit full-spectrum colors, and users can choose the desired color by simply pushing one of the three buttons on the torch's body. This color torch provides an essential tool for users to create innovative underwater photography.

www.marelux.co

REEF
PHOTO & VIDEO

Nauticam NA-R5C
housing for Canon R5 C

"Cinema Mastery"

The excellent Canon R5 has lots of fans, but serious video shooters sometimes felt a bit throttled by the built-in limitations of that camera. Canon's answer is the R5C. All that was great about the R5 has been fully unleashed.
You get Canon best-in-class white balance and AF and simply stunning image quality.
Nauticam rose to the challenge with exceptionally elegant engineering incorporating full cinema zoom and focus in a compact form factor that inspires confidence from the very first use. Underwater cinema work has never been this easy.

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Dive and See DNC-HD7

We're thrilled to introduce the DNC-HD7 Underwater 3G-SDI Camera – a game-changer for marine researchers, wildlife monitors, and underwater broadcasters.

This professional-grade camera offers:

3-in-1 Combo Cable: Power, 3G-SDI, and remote control combined.

Lightweight Design: Only 58g, perfect for telescopic poles.

Adjustable Lens Focus: Capture fine details, even at 8 cm.

Wide-Angle Lenses: 125° standard or optional 112°.

Efficient Power Use: Operates on 12V or Sony 7.4V battery.

Perfect for marine rescue, wildlife monitoring, and underwater live broadcasting.

www.diveandsee.com

INON UFL-GR140 lenses for GoPro and Insta360

INON releases bright and quality "UFL-GR140 ZD (acrylic) ' and 'UFL-GR140 Pro ZD (glass)" working well for "8:7" frame/aspect ratio on GoPro®HERO11 or newer and Insta360®Ace Pro "ActionView" that delivers widest field of view without vignetting.

Dedicated lens adapter "ZD Front Mask for HERO12" and "ZD Front Mask for Ace Pro" are released as well.

The "ZD Lens Holder M5" / "ZD Lens Holder S" with a lock to hold the new semi-fisheye lens are released.

With the release of the "ZD Front Mask for HERO12", existing INON lenses for action cameras have "ZD Mount" version.

An "SD mount" lenses can be converted to ZD mount by customers simply by replacing the original "SD Mount" with an optional ZD Mount.

www.inon.jp

REEF PHOTO & VIDEO

Nauticam NA-A1 housing for Sony a1

"Do-Everything Powerhouse"

Sony has reconceived what a pro camera should look and feel like with the Sony a1. Sony maintained the form factor of the A7 series, but loaded it with state-of-the-art technology that provides superior stills and video performance. 4K 120p, 8K Video,50MP @ 30FPS, 9M dot EVF and more breaks new ground in this class. If you can dream it, the a1 can do it.

Married to the Nauticam NA-a1 housing with its superior ergonomics,the underwater possibilities are near limitless.

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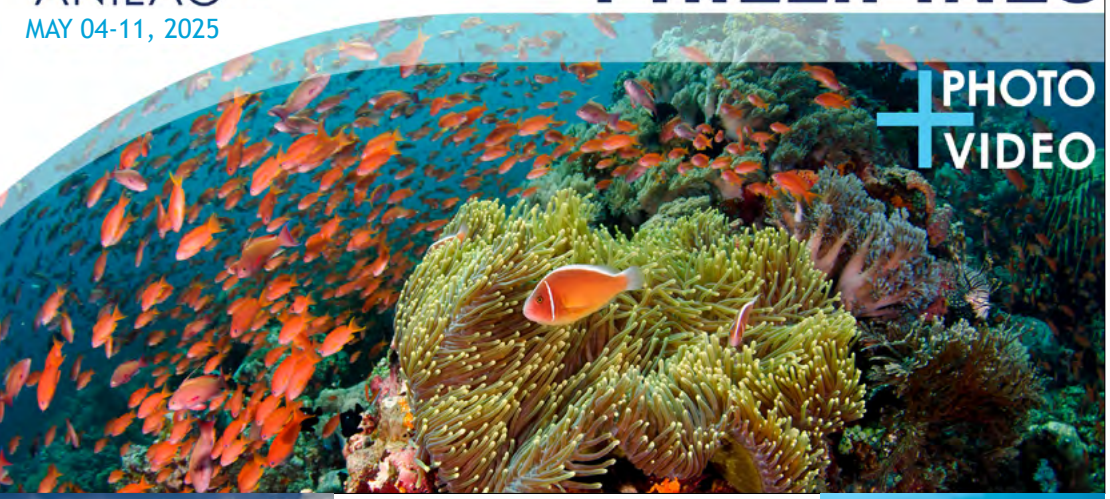
ANILAO
MAY 04-11, 2025



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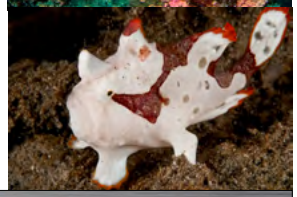

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AOI UH-A7IV housing

The Sony A7IV, though a few years old, remains a smart choice for many photographers.

Known for its versatility, the camera boasts a high-resolution sensor, fast and reliable autofocus, and excellent dynamic range-all at a reasonable price in the full frame mirrorless segment. These qualities made it one of the most popular full-frame mirroriess cameras on the market, and it continues to hold its own against newer competitors.

Introducing the NEW AOI UH-A7IV Underwater Housing

The new AOI UH-A7IV underwater housing bridges the gap in the market for Sony A7IV users who find current options either too expensive, too basic, or both.

www.aoi-uw.com
www.backscatter.com
www.uwcamerastore.com

WeeFine Smart Focus 2600

The Weefine Smart Focus 2600 is a compact dive light /underwater videolight with 1500 lumen in 9° beam-angle (for usage as dive light) and 2600 lumen in 110° flood mode (for video).
Spot light: 1500 lumen / 9° beam-angle
Flood light: 2600 lumen / 110° beam-angle
Color temperture Spot light: 6500K / RA70
Color temperture Flood light: 5000K / RA90
Full spectrum: RA90 high color rendering
Red light: 6W 620nm
Green light: 6W 525nm
Blue light: 9W 485nm & 3W 380nm
Battery: WBL-13C
Remote possible: yes
Flash trigger function: yes
€329.00. €271.90

www.uwcamerastore.com

BackscatterXterminator Launches

RC Astro and Go Ask Erin are thrilled to unveil BackscatterXterminator (BSXT), a game-changing Photoshop plugin that eliminates backscatter from underwater photos with a single miraculous click.

Backscatter, the colloquial term for particulate matter suspended in water, has long been the bane of underwater photographers. Although many editing techniques exist to get rid of goo in underwater photos, nothing comes within light years of BSXT's superpowers.

BSXT intelligently analyzes underwater images and replaces unwanted scatter with accurate image data that matches the original content and grain, leaving virtually no blurred edges or artifacts.

BSXT is a must-have for any underwater photographer who wants to dramatically improve their images without the soul-sucking process of removing backscatter spot by spot.

Thanks to BSXT's simple automated installation and workflow, even a complete Photoshop newbie can learn to master backscatter removal in minutes.

Erin Quigley's extensive video tutorial, included with purchase, guides users through the full range of features.

• Special Introductory price of $179.95 (includes 1 perpetual license that can be installed and activated on up to two computers - Mac or PC)

• Exclusive Bonus: Comprehensive step-by-step video tutorial by Erin Quigley

www.goaskerin.com/backscatterxterminator

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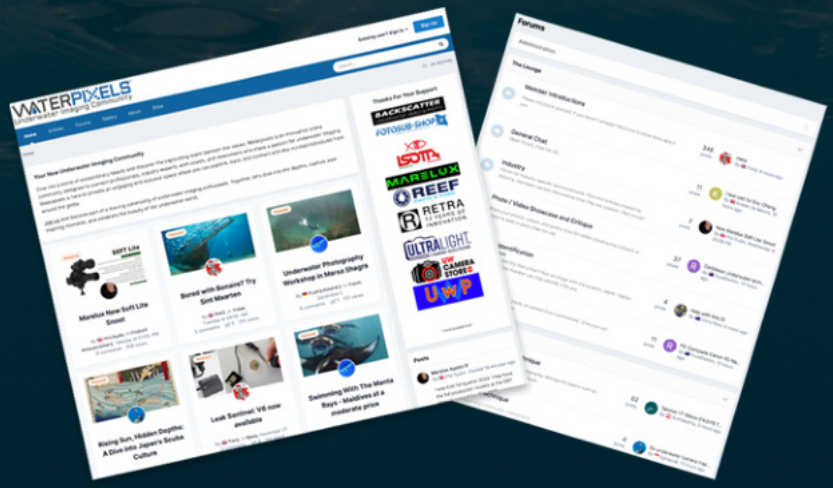


Dive into a world of extraordinary beauty and discover the captivating realm beneath the waves.

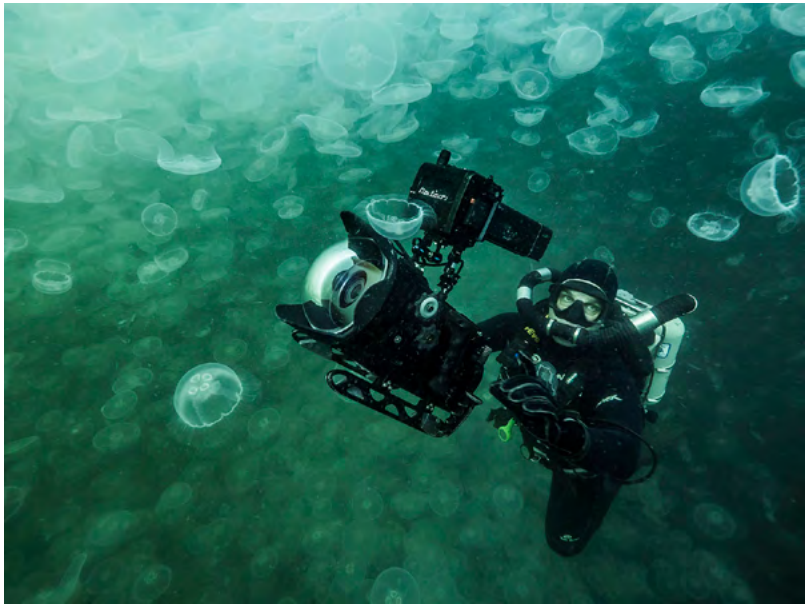
Waterpixels is an innovative online community designed to connect professionals, industry experts, enthusiasts, and newcomers who share a passion for underwater imaging. Waterpixels is here to provide an engaging and inclusive space where you can explore, learn, and connect with like-minded individuals from around the globe.

Join us and become part of a thriving community of underwater imaging enthusiasts. Together, let's dive into the depths, capture awe-inspiring moments, and celebrate the beauty of the underwater world.

www.waterpixels.net

Roger Horrocks

with Peter Rowlands



For the last fifteen years, Roger Horrocks has worked as a wildlife cinematographer on some of the most ambitious and acclaimed documentaries ever created, including My Octopus Teacher, Our Planet, and Blue Planet 2, and, most recently, as sequence cameraman for the latest Netflix production, Our Oceans, narrated by Barrack Obama.

Roger, thank you for taking the time to consider my questions.

Q) To most amateur underwater video shooters, to be able to do what they love, full-time and for payment, is the dream. Does being a full-time professional pierce that dreams with serious responsibilities, an ever-present fear of failure and long periods of inactivity both in between jobs or waiting for the marine life, or are you living the dream?

I believe being a wildlife and underwater cinematographer is possibly one of the best jobs in the world.

At our work level, you collaborate with incredible teams and contribute to some of the most ambitious and well-funded series ever created. Your work reaches a global audience and can have impact by raising awareness about wildlife and the state of our planet. That level of influence and recognition is deeply rewarding. Being so immersed in nature is a rich and rewarding experience.

There is significant pressure in this profession. Shoots often cost hundreds of thousands of pounds, and as the cinematographer, you're on the sharp end of the wedge. If you miss a critical moment, there's nothing the rest of the team can do to recover it. But I thrive under that kind of pressure—it's a big part of what I love about this job. The need to deliver in high-stakes situations pushes you to be at your best.

There are also downsides to the profession. One of the biggest is the time spent away from home. I try not be away for more than 150 days a year, which means I am home more than I am away. Beyond that, it can get very tough on personal and family relationships.

Financially, the field is not as rewarding as people might think. Coming from a corporate business background, I've often reflected on this. As the industry evolved in the BBC Natural History Unit, which has a public service ethic, it was almost seen as a virtue to work for very little. Sure, it's a great job and a privilege in many ways, but when you factor in the long hours, working weekends, and lack of overtime or dangerous pay, the payback per hour is hardly eye-watering.

However, I see this state of affairs as a given and something I have almost no control over. Entrenching yourself in the Victim Triangle and complaining about it is pointless. As a freelancer, the opportunity for more significant wealth creation lies outside the shoots in the field, it lies in what you do with the time you have at home. How do you create additional revenue streams which leverage your cinematography skills or have nothing to do with the industry at all? This has always been a focus for me and something I have done to good effect.

Q: As you developed were you inspired by any cinematographers in particular? I understand you assisted Didier Noirot in the early days. How were you fortunate to work and learn from such a legend?

The wildlife cinematography industry, particularly in Bristol, operates on an apprenticeship model. Through this process, you learn by assisting skilled cinematographers and, by osmosis and observation, develop the knowledge required to one day transition from assistant to camera operator.

In the early years of my career, I was very fortunate to work with some incredible mentors. One was Didier Noireau, Jacques Cousteau's cameraman, and another was Justin Maguire, a South African based overseas.

Both Didier and Justin were instrumental in shaping my development—refining my visual style and teaching me the spirit and approach needed to undertake these shoots and craft at the highest level.

I assisted Didier for a few years and made a film with Craig and Damon Foster that documented Didider's quest to film Nile crocodiles underwater in the Okavango Delta. During this period, I also had the privilege of assisting Doug Anderson and Hugh Miller, two of the very best in the world.

What's unique about these mentorships is that they're not so much about formal training or instruction. Instead, you learn through observation and immersion. Having such mentors in your life is transformative because they set a high benchmark. It's then up to you to close the gap and rise to the level at which they operate.

Q) Your earlier career in the 'corporate' world seems unrelated to underwater filming but were there lessons and procedures which have helped set you apart from other underwater camera operators?

Working in corporate was a stimulating time of learning, working alongside talented individuals dedicated to solving complex problems and managing intricate situations. These experiences not only enriched my management and financial skill set but also laid a strong foundation that I've been able to carry forward into my work in wildlife cinematography.

The biggest difference between working in the corporate world and working in the wildlife industry on a shoot lies in the levels of complexity. In a large corporation, you're dealing with massive systemic complexity. There are emergent properties at play, and it can often feel like you're pulling

levers without fully understanding what's driving the results. This is due to the scale of the organization, the inherent redundancies, and the intricate systems that come with managing something so large.

In contrast, the natural history space operates with small, agile teams, which I find incredibly compelling. The goals are very specific, the timeframes are clearly defined, and the indicators of success are unmistakable. You know immediately when you've succeeded and just as clearly when you've failed. That kind of direct feedback makes the work incredibly rewarding and satisfying.

Q: As our readers are very interested in equipment and gear reviews, I must ask what equipment you currently own/use, and if there is something on your wish list.

I currently run two RED DSMC2 systems, a Gemini and a Helium, and two Nauticam Cine systems, one an LT and the other an XL. As a general rule, I have both with me underwater at all times (one being carried by my assistant), and this allows me to work

with different lens setups, such as 10-24mm, 24-70mm, or 70-200mm, ensuring maximum productivity underwater and enabling a wide range of shots sizes.

Beyond cameras, my setup includes rebreathers, grip equipment like tripods (standard, underslung, and quad pods), hand-crank sliders, and other supporting gear for benthic shoots.

Another area where I've made significant investments is in drones. As a qualified drone pilot, I consider this skill set essential in today's industry. One of my favourite aspects of drone work is dual operating on an Inspire—it demands intense teamwork. The Inspire 3 is a phenomenal, next-level machine, and along with the Mavic Cine Pro 3, you have two insanely powerful camera systems that deliver in almost any condition.

Additionally, I've invested in a local RIB (Rigid Inflatable Boat). It's an 8-meter semi-rigid inflatable with twin 175-horsepower Suzuki engines, fully equipped for gimbal work, drone operations, and dive ops.

Regarding gear, I believe we've reached a point where high-end digital systems are sufficiently mature, and if you can't create compelling footage now, you never will. While there are always items on a wishlist—like a pan-and-tilt pole cam system—it's a big investment and not practical unless tied to a major project with a clear return on investment.

Overall, I'm very happy with my current gear. Interestingly, I've never sold any of my equipment. For example, I still use my Nikon D800, which I bought in 2013, as a dedicated time-lapse kit. Selling older gear doesn't make much sense to me, as resale value is often too low. Instead, I find ways to repurpose it—for use as a tow cam, pole cam, or drop cam. Every piece of gear has its place, and keeping it allows me to be versatile on shoots.

Q: What advantage do the RED cameras bring over conventional ENG cameras?

I've never used an ENG camera myself, but I have some pretty clear ideas about why RED has come to dominate the natural history space. When the industry transitioned to digital, RED was the first to innovate with modularity and significant price disruption. That strategy worked exceptionally well for them.

While they haven't fully delivered on their "obsolescence obsolete" promise, I think RED often gets unfair criticism. What they achieved in disrupting the industry was remarkable. As camera operators, we've benefited tremendously—owning a high-end cinema camera system has never been easier.

Another key factor was their digital resolution. At the time, RED's 6K and 8K systems were groundbreaking. In the wildlife industry, where you're often filming at long distances, being able to crop into an image in post-production or do a push-in without losing quality was a game-changer.

The variable frame rates are another standout feature. Since we're not dealing with syncing dialogue, we can tailor frame rates for each scene or animal behaviour. That flexibility is incredible for wildlife filmmaking.

Then there's REDCODE RAW. The compression is astonishing—it keeps file sizes manageable while maintaining phenomenal image quality. It's a big plus, especially when working in remote locations with limited storage o

Pre-record functionality is also a massive deal. The ability to run 30 seconds of pre-record means you can capture critical moments that might otherwise be missed.

Q) I have read that you rarely use additional lighting. Is this to keep it simple or do you prefer to capture behaviour naturally?

When it comes to lighting, I'm a big advocate for natural light and try to use it as much as possible. It's my preference, and I lean heavily toward relying on it in almost all situations.

That said, there are times underwater when using lights is unavoidable—like when shooting at significant depths or in caves where natural light simply doesn't reach. In those cases, the use of lights becomes a stylistic choice. I embrace the fact that lights are being used, letting the shadows and contrasts become part of the visual story rather than trying to hide it.

I've occasionally used lights in shallower waters, but my rule is that the lighting should look natural. If it's obvious that artificial lighting has been used, it detracts from the authenticity of the shot.

Another principle I stick to is only using off-board lighting. This means having an assistant manage the lights, which creates a more dynamic and cinematic result. On-camera lights, in contrast, tend to produce flat, unappealing footage that lacks depth. Of course, I recognize that solo shooters don't always have the luxury of an assistant, but for me, off-board lighting is a non negotiable.

Q) Do you set white balance underwater or shoot RAW and leave that to post-production?

When shooting on a RED camera, the standard practice is to set the white balance to daylight or 5600 Kelvin and leave it there. You shoot everything in RAW and don't do any white balancing underwater. I take a grey card and a colour card down with me as references, filming them in situ. This provides the colourist with a baseline for what the colours actually look like.

For projects like those for Netflix or the BBC, they often have strict guidelines for how footage should be acquired. For instance, creating custom looks or profiles directly in-camera is generally not allowed. Early on, I experimented with creating a look in REDCine and applying it to the camera. While it made the on-screen image more attractive by showing a LUT rather than a flat RAW image, I eventually shifted my focus to the framing and movement, trusting the RAW footage would look stunning after grading.

The approach depends on the production when I occasionally shoot with cameras like the FX3. Production companies usually require footage to be shot in LOG for professional work.

However, for personal projects, I might do a basic white balance, especially if I'm staying at a consistent depth. This can simplify post-production and save time. In some cases, I'll use one of the Cine profiles, which gives a "what you see is what you get" (WYSIWYG) experience.

Q) Personally, I think your open-water action sequences give the viewer the closest feeling of actually being there. The camera almost seems locked off leaving the action to come into frame, develop and leave, ideally. Is this why it is so effective or does your physical performance underwater encourage your subjects to forget you are there?

I established myself in the industry through my open-water baitball and fast-moving pelagic sequences. My big breaks came on dolphin projects. John Downer's Spy in the Pod was my first significant opportunity, which required immense effort filming wild dolphins in the open ocean. This transitioned into working on a the Dsiney Dolphin Reef project with Keith Scholey at Silverback Films.

These shoots allowed me to

refine my diving style, incorporating long fins and scuba to develop a fluid, fast-moving, and dynamic approach that captures the energetic and fleeting moments of ocean life. Much of this was influenced by Didier, who has an incredible eye and a talent for creating long, evocative, and lyrical shots—like the two- or three-minute sequences with whales that feel seamless and poetic. That influence is evident in my style, especially in open-water settings.

For example, the Costa Rica sequence with lanternfish and spinner dolphins, followed by mobula rays, carries a similar dynamic feel. Another memorable project was for Our Planet in the Azores, where we filmed common dolphins feeding on anchovies. I vividly recall capturing a shot of a bird diving into the baitball and popping out again. That particular baitball lasted nine minutes, and almost the entire four-minute sequence came from that single event.

When it comes to how your presence in the water affects animal behaviour, I call this dynamic "the dance." It's the delicate balance of getting close enough to film marine life while ensuring you don't disturb them.

Generally, this isn't much of an issue during feeding events. The animals are so engrossed in the action that they treat you as just another participant in the spectacle. In these moments, your focus shifts entirely to your craft—framing the shot, determining the coverage you need, and working with the available light.

When there's a lot of activity, the animals remain aware of your presence but aren't bothered by it. That allows you to fully concentrate on capturing the scene and acquiring the necessary footage.

Q) Would it be true to say that the two most significant capabilities are pre-record and rebreathers?

Rebreathers are indispensable for benthic filming of small marine creatures aren't moving much. In these scenarios, you're often using underwater tripods or other grip equipment and working with your fins off.

Rebreathers allow you to stay underwater longer on less gas, and the rich Oxygen mix benefits recovery after the dive.

They also allow for more precise camera moves when using a tripod, fluid head and probe lens. For example, when I was filming blennies for Our Oceans in Mexico, even subtle breathing movements on scuba would translate into the image. Using Rebreathers on that shoot was a necessity.

However, for open-water shooting, I typically prefer scuba. It's faster to get in and out of the water, you're confident in the air mix, and it's generally safer and more efficient for those scenarios. That said, for free-swimming scenarios like filming manta rays or mobula rays, I've occasionally used rebreathers. During the Our Planet sequence in Raja Ampat, Hugh Pearson and I filmed shoals of mobula rays on rebreathers to avoid disturbing the surrounding bait fish.

Pre-record, on the other hand, is an absolute non-negotiable in many contexts. It's invaluable for capturing unpredictable moments without wasting massive amounts of storage. For instance, during the great white shark sequence for Our Oceans, we used an Inspire 2 drone, which doesn't have pre-record functionality.

We shot nearly 40GB of footage because we had to record continuously every time a shark or seal entered the frame. With pre-record, we could have reduced that data load by 400%, capturing only the critical moments leading up to the action.

Both rebreathers and pre-record

are game-changing capabilities that elevate your ability to capture specific types of shots. While they're not always necessary, in the right circumstances, they make an immense difference in both efficiency and quality.

Q) I think it is fair to say that your My Octopus Teacher footage established you as almost a household name. At the time did you realise how groundbreaking it was and how it would touch those from so many walks of life?

Before My Octopus Teacher, I had made three films with Craig and Damon Foster, all performing well in their own right. But nothing came close to the impact of this documentary. We never anticipated the kind of reaction it received. It completely blew us away.

I'll never forget sitting through various awards ceremonies, seeing it nominated alongside films from some of the biggest natural history production houses like Silverback, and then winning. It was surreal to be part of that process. None of us knew the story would resonate so deeply with people.

I think it was the perfect storm—a simple, heartfelt story told in a beautiful, straightforward way. The timing of the pandemic amplified its appeal, offering something audiences wanted and needed to hear at that moment.

I feel incredibly grateful to have been part of such a unique project. I also know it's unlikely I'll ever be involved in something like that again.

Q) The advent of subscription TV has broken the traditional mode of natural history documentary productions. Has it brought better funding and opportunities or diluted the genre?

So Peter, that's a great question, and it touches on where natural history programming has been and where it's heading.

If you look at the "Bristol model"—the style of natural history filmmaking pioneered by the BBC's Natural History Unit in Bristol and personified by Sir David Attenborough—it was created under a public service mandate. It wasn't designed to make a profit but to serve the interests of the British public, who largely funded it. This approach fostered a particular culture and style of storytelling, which has become a national treasure in Britain and countries with close ties to Britain, like South Africa, Australia, and parts of Europe.

However, in the U.S., it's a different story. Natural history programming doesn't hold the same cultural significance. If you mention

Sir David Attenborough to most Americans, many won't know who he is.

With the rise of streaming platforms, particularly Netflix, we've seen a digital disruption of the traditional broadcast model. As the editorial power shifted to the U.S., I always suspected there would be an evolution—or even a departure—from the classic "blue-chip" style of natural history filmmaking that we all love: respectful, reverent, and almost spiritual in its awe of nature.

We're seeing that shift now. Take Our Oceans, for example. Instead of being narrated by Sir David Attenborough, it's by Barack Obama. This reflects a move towards more global storytelling tailored for a broader audience. The influence of American editorial mandates is evident in how these programs are evolving.

Streaming platforms like Disney+, Nat Geo, and more recently Apple TV, have all begun exploring natural history content. Amazon hasn't made as much of a push in this area, but it's clear that the genre is diversifying.

One thing that stands out is the oversupply of natural history content during the peak of the "streaming wars." With so much money being pumped into the industry as platforms competed, we saw a production glut. In many ways, I think this oversaturation diluted the quality of the work. Now, as the industry starts to contract, I see this as a healthy correction.

Natural history programming

will always have a place. People find these shows incredibly comforting. However, with fewer commissions going forward, I believe the value and appreciation for these programs will only increase. Less can be more, and the contraction will lead to higher-quality work that audiences cherish even more when it's released.

Q) I can't think of any other career that has such a lack of established procedures, qualifications, or formal training, yet it seems to attract a constant supply of new cameramen keen to make their living and themselves known. Is there currently enough work to consider this as a good career move?

This question depends on how you define a "good career move." If your idea of a good career is something that provides stable employment and minimizes risk, then becoming a wildlife cinematographer is not a good move. It's inherently uncertain and doesn't come with the security of a traditional job.

On the other hand, if you define a good career move as something incredibly personally rewarding—offering access to breathtaking locations and opportunities to work on some of the most well-respected natural history projects in the world—then yes, it can be an amazing career choice.

That said, it's not for the faint-hearted. You have to be comfortable with uncertainty because this is a freelance-driven industry. Developing strong entrepreneurial skills is essential to navigate the ups and downs. And yes, it's highly competitive. The sheer number of people wanting to enter this field drives competition, but that's not a bad thing. It raises the bar and pushes everyone to evolve and improve constantly.

Q) I feel a push from interested readers for me to ask the age-old but, in this world, still very pertinent question - what would your advice be to any aspiring underwater video shooters who want to make a career of it and is that why you have introduced the Ocean Footage Mastery Course?

My advice to anyone aspiring to become a full-time underwater wildlife cinematographer is this: Be maniacally focused on achieving that goal but do not put all your eggs in one basket. This principle is at the core of the mentorship program I have launched, called the Ocean Footage Mastery Program.

This advice is rooted in my own journey. When I started out as an apprentice to Didier and Justin, I only got one or two assisting jobs a year—

not enough to live off. That forced me to develop my entrepreneurial skills early on. These skills allowed me to remain freelance and flexible so I could be available for shoots when opportunities arose to seize career-changing opportunities.

The Ocean Footage Mastery Program focuses on two key areas of development.

Firstly, helping aspiring wildlife cinematographers bridge the gap from shooting mediocre footage to shooting footage that would meet the demands of high-end production companies producing shows for Netflix, Disney and the BBC.

The second is teaching the entrepreneurship and value-creation strategies and skills necessary to thrive and be viable in the 21st century. We live in a digital economy with a wealth of opportunities opening up. If you're skilled at capturing the natural world underwater or in the ocean, how can you leverage those skillsets to create intellectual property that you own and that you can make and sell? I have done this very successfully with my own stock footage library over the years, and I will be teaching this and personal branding in the program.

Ironically, this program is a great opportunity for individuals who don't want to become full-time underwater wildlife cinematographers.

Through this program, you will access the keys to unlocking your full potential as an underwater wildlife cinematographer. The only other way to do that would be to become an

underwater assistant, and for many, that is simply impossible and/or undesirable.

If you can dive like a fish and you have access to amazing dive locations, I can teach you how to shoot like I do. It's a style and language which can be learnt, and it's not rocket science.

It's then up to you to decide how you want to integrate that skillset into your current life situation and use it to generate an additional revenue stream or just reap the personal reward that comes from improving your skill level in a craft.

Roger, thank you so much for your considered, informative and inspiring answers.

Peter Rowlands
peter@uwpmag.com

www.rogerhorrocks.com

Ocean Footage Mastery Course

with Roger Horrocks

Are you a skilled diver with access to prime diving locations worldwide? Passionate about ocean conservation and have deep affinity with the underwater world and the creatures that live there?

Are you trying hard to solve the money problem and invest in your passion?

If the answer to many of the above is YES, its likely you are an excellent fit for the program.

Through this program, you will gain access to all the knowledge, protocols and systems you need to unlock your full potential. This course will teach you how to capture cinematic-quality footage that not only records your underwater experiences but also meets the industry standards - and, to top it all; I'll teach you how to package and sell it to the industry giants like Netflix, BBC, and NatGeo.

Ongoing coaching, community feedback and accountability will reinforce and accelerate your learning curve.

A key milestone will arrive when you are able to craft footage would be considered for inclusion in wildlife documentaries for Netflix and AppleTV.

Reaching this level of actualisation will empower you to pursue a full-time career as an underwater cinematographer.

Alternatively, you could work part time in the industry and contribute footage to high-end productions through stock sales.

www.rogerhorrocks.com/mentorship-program

Micro Four Thirds Macro Lenses

By Andrew McLachlan

When it comes to macro lens options, perhaps no group of underwater shooters is more spoilt for choice than those shooting Micro Four Thirds.

When picking a macro lens for the Micro Four Thirds system for underwater photography, the Olympus M.Zuiko ED 30mm f/3.5 Macro, Olympus M.Zuiko ED 60mm f/2.8 Macro, and OM System M.Zuiko ED 90mm f/3.5 IS PRO Macro are all phenomenal choices that complement each other well.

Each lens offers distinct advantages and considerations over the others. After using each of these optics over the course of the last year, I will outline what I consider to be a breakdown of the benefits and pros and cons of each lens.

Olympus M.Zuiko ED 30mm f/3.5 Macro

The physical footprint of the M.Zuiko ED 30mm f/3.5 Macro is extremely small, and it is the least expensive of our trio of lenses. It has a full-frame equivalent of a 60mm macro lens, which makes it ideal for larger macro subjects or those you are able to get extremely close to. It has a closest focusing distance—that is, measured from the subject to the camera sensor—of 3.74in (9.5cm). That's a minimum working distance of just 0.55in (1.4cm). This makes the lens perfect for capturing subjects like coral details and mid-sized reef fish such as spotted scorpionfish.

The M.Zuiko 30mm Macro provides a wider field of view to help more easily put subjects like this goldentail moray into context by showing a bit of its environment. Goldentail Moray Eel, West End, Grand Cayman AOI UH-OM1 Housing, AOI FLP-04 Lens Port, 2 X AOI Q1-RC Strobes M. Zuiko 30mm Macro Lens. ISO 200 f11 @ 1/250 sec.

Olympus M.Zuiko ED 30mm f/3.5 Macro

At the same time, the lens' small size and light weight make it easy to handle underwater with minimal drag while snorkeling or diving. Thanks to the wider focal length, the depth of field is relatively large compared to that of longer focal length lenses. Being able to photograph a slightly wider scene can be beneficial when you want context in your macro images.

Short focal lengths are less affected by water's magnifying effects, helping maintain a natural field of view. A drawback to this lens can be evident when photographing small, shy marine life that may require too close of an approach for the intended photographs, as you may spook skittish subjects or risk damaging delicate underwater environments. Getting in very close with the 30mm macro lens for tiny subjects can also make lighting the subject tricky, especially in tight quarters.

The 30mm macro lens is an excellent choice for beginners or photographers who want an affordable, compact lens for coral details and marine life of roughly 1–2 feet in length. The very short working distance of the 30mm lens is also beneficial in water containing more particulate matter than desired, as one can get very close to improve image clarity.

The 30mm is perfect for subjects that don't move, as you can get incredibly close, eliminating as much water as possible between the lens and the subject, helping boost sharpness, details, and colors

Olympus M.Zuiko ED 60mm f/2.8 Macro

Next up is my macro workhorse—the M.Zuiko ED 60mm f/2.8 Macro. The 60mm has a full-frame equivalent of 120mm. This particular lens offers a very nice balance between portability and reach. With a closest focusing distance of 7.4in (19cm), the 60mm offers a longer focal length that allows for the photographing of small subjects from further away—a minimum working distance of about 3.1in (8cm)—making it easier to photograph elusive or shy subjects. It is also easier to light images photographed with a longer focal length, as you have more space to position strobes exactly how you want them.

The M.Zuiko 60mm is known for its excellent sharpness and image quality—it is arguably the sharpest M.Zuiko lens in the entire lineup—crucial for capturing fine details like the textures and patterns of marine life. Despite its relatively long focal length, it is still compact, lightweight, and handles easily underwater. The 60mm is a good all-around macro lens for both macro and general underwater work and is capable of 1:1 true macro reproduction for high-detail shots.

For higher magnification images, combining with a wet lens diopter is a breeze. Its longer focal length provides good working distance, much better suited for shy or skittish subjects than the 30mm. The number of images I've used the 60mm for far exceeds either the 30mm or the 90mm.

The 60mm is a true 1:1 macro lens and photographing the reef's smallest denizens, like a sharknose goby for example, with razor sharp details is no issue.

The 60mm is a fantastic all-around macro lens and is fantastic for fish portraits of larger reef fish, like this four-eyed butterflyfish.
Foureye Butterflyfish, George Town, Grand Cayman
AOI UH-OM1 Housing, AOI FLP-02 Lens Port, 2 X AOI Q1-RC Strobes ISO 200 f8 @ 1/250 sec.

M.Zuiko ED 60mm f/2.8 Macro

A stunning chain moray, photographed against a black background using the Olympus M.Zuiko 60mm Macro lens—a perfect choice for tight fish portraits. AOI UH-OM1 Housing, AOI FLP-02 Lens Port, 2 X AOI Q1-RC Strobes

OM System M.Zuiko ED 90mm f/3.5 IS PRO Macro

The OM System M.Zuiko ED 90mm f/3.5 IS PRO may be quite a mouthful, but this macro lens—the first 2:1 macro lens in the Micro Four Thirds system—is also the most unique. Not only does it go beyond 1:1 reproduction, all the way to 2:1 magnification, but it is also a whopping 180mm full-frame equivalent.

This extra long focal length means you can photograph subjects from much further away, which is fantastic if photographing skittish subjects such as a fairy basslet or trying to isolate specific parts of a subject like the details of a rock-boring urchin.

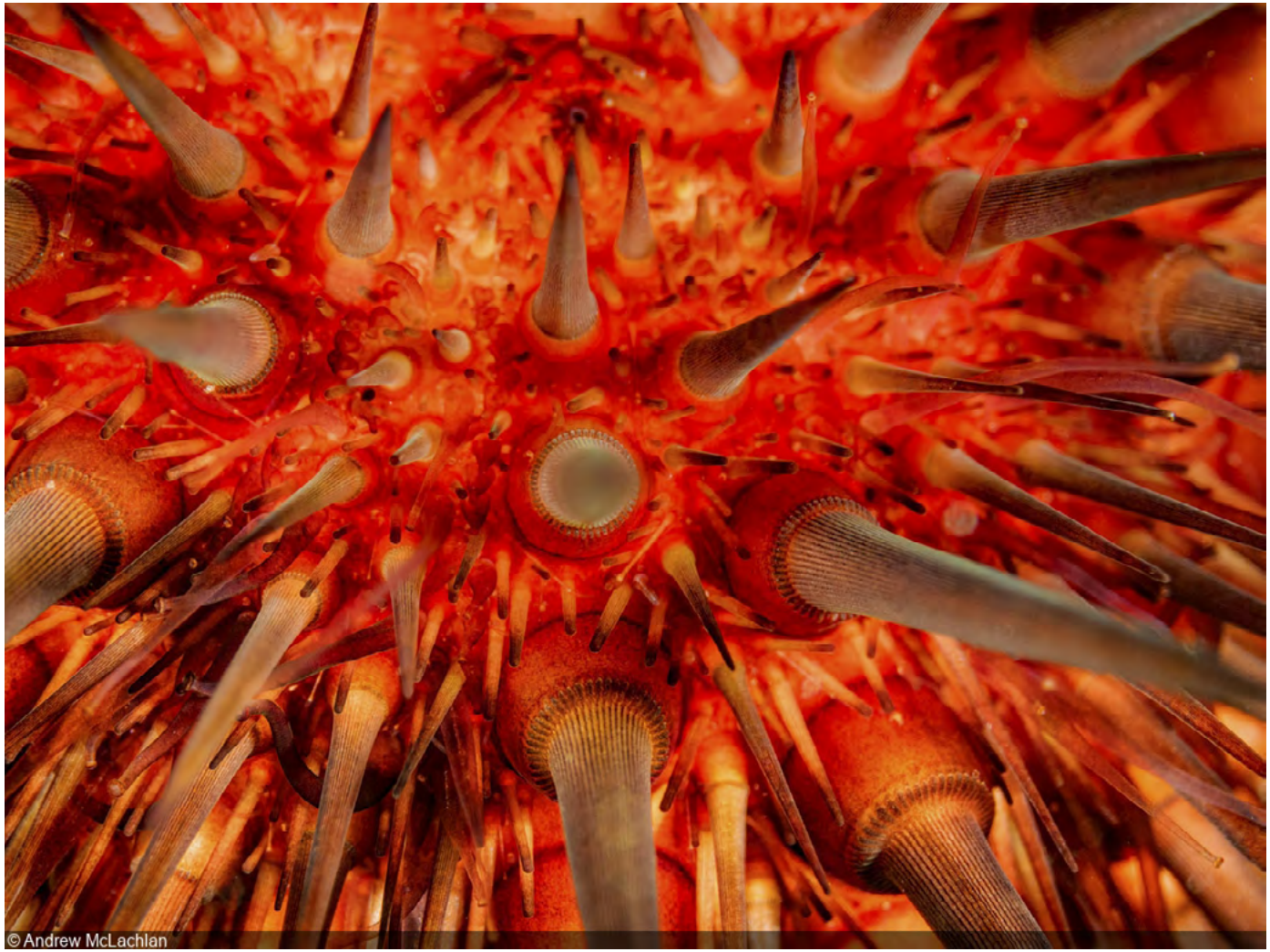
The M.Zuiko 90mm will give you that astonishing 2x magnification at its closest focusing distance of 8.66in (22cm), which is about 2.5in (6.5cm) from the front element. At 1x magnification, this increases to 3.7in (9.5cm)—a touch more working distance than the 60mm offers.

The 90mm's uniquely long focal length means isolating subjects or photographing skittish critters is much easier, as you can be significantly further away and thus run less of a risk of spooking whatever it is you're photographing

Unsurprisingly, the 90mm is the largest, heaviest and most expensive of the options discussed here. It is also provides the greatest challenge to get used to as the field of view—about 14°—is so narrow.

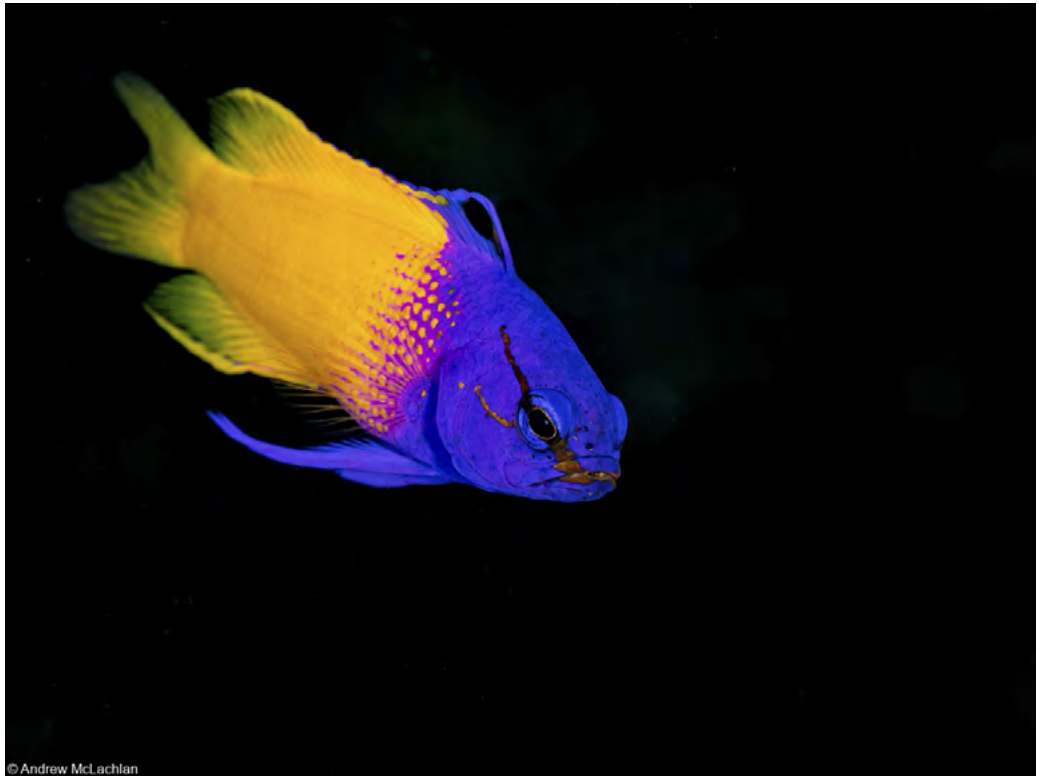
While it will likely never supplant the 60mm as my go-to lens, for those situations where the 90mm excels, it truly excels.

Isolating subjects from the background or photographing the smallest or most skittish critters is far easier with this lens than either of the other



Most macro lenses max out their magnification at 1:1. The 90mm goes all the way to 2:1, meaning even the smallest details of a rock-boring urchin are easily captured—without the need for a diopter
AOI UH-OM1 Housing, AOI FLP-09 Lens Port, 2 X AOI Q1-RC Strobes, ISO 400, f16 @ 1/250 sec.

M.Zuiko ED 90mm f/3.5 IS PRO



The 90mm's uniquely long focal length means isolating subjects or photographing skittish critters is much easier, as you can be significantly further away and thus run less of a risk of spooking whatever it is you're photographing

A small sailfin blenny peaks out of its burrow and eyes the 60mm macro lens while it is used to capture a cute portrait

options.

The sharpness is fantastic and there's also stabilization built in, which when combined with the in-body stabilization found in cameras like the OM System OM-1 and OM System OM-1 Mark II, is truly impressive.

Final Thoughts

If you are a Micro Four Thirds underwater photographer looking for macro lens options, consider the subject matter you most typically encounter during your diving or snorkeling and choose accordingly.

I honestly feel a good starting point would be to add both the 30mm and 60mm options to your kit, as combined they are much less expensive than the 90mm option and will likely be more useful to you over the course of time. However, if you are a true macro junkie looking to photograph the tiniest of marine life then the 90mm may be the lens you're looking for.

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This article was originally published on DivePhotoGuide
www.divephotoguide.com

Tamron 90mm F/2.8 Di III Macro VXD 1:1 Lens

by Phil Rudin

Tamron, a Japanese company, first began developing precision optical equipment over seventy years ago. In 1953 they began sales of Wide Vision Binoculars and later moved to manufacturing lenses for SLR cameras.

Today they make a verity of lenses for DSLR's, Mirrorless cameras, Camcorder lenses, Surveillance camera lenses, Camera modules, Automotive camera lenses and more. Anyone who has been around the camera market is aware of the excellent reputation Tamron has had for years in the camera lens industry.

Tamron announced the SP 90mm F/2.5 macro lens in 1979 and over the last 45 year of evolution Tamron has continually refined the 90mm macro.

In September 2024 Tamron announced the 90mm F/2.8 Di III Macro VXD lens for mirrorless cameras. This lens is the eleventh in the 90mm macro evolution and the first macro for mirrorless cameras.

Tamron 90mm F/2.8 Di III Macro VXD 1:1 Lens

The Tamron 90mm F/2.8 Di III VXD is a versatile macro lens for underwater photography and excellent value at the retail price of $699.00 US (£599UK) for both the Nikon Z and Sony E mount camera systems.

The 90mm angle of coverage is 27.2 degrees with a minimum focus distance of 23,1cm (9.1") at the maximum reproduction ratio of 1:1 (life size). By comparison the $1099.00 Sony 90mm F/2.8 has a 27 degree coverage and a minimum focus distance of 28cm (11.02") at the 1:1 reproduction ratio.

The Di III branding is used for all Tamron mirrorless lenses and the VXD indicates that the lens has the Voice-coil eXtreme-torque Drive Linear autofocus motor. Tamron's internal focus VXD autofocus system is noticeably faster than the older Direct Drive SSM system used in the Sony 90mm macro for both stills and video.

In use I did not detect much if

Hermit Crab, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/16, 1/250th sec

Lined Seahorse, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/11, 1/250th sec

Conch Eye Detail, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, Marelux +5 C/U lens, ISO-100, F/16, 1/250th sec

any difference in the minimum focus distance between the Sony 90mm and the Tamron 90mm.

The Tamron 90mm macro has 15 elements in twelve groups including four LD elements to greatly reduce color fringing, improved clarity, color accuracy and reduce chromatic aberration. Individual elements also have BBAR-G2 Broad-Band Anti-Reflective coating to reduce ghosting, flare, and improve color fidelity when woking in strong lighting conditions like shooting upward angles underwater.

The lens has twelve circular aperture blades which will deliver superb bokeh with nearly a perfect circular aperture opening, when wide open.

When setting the focus limiter switch on most macro lenses the normal focus range is from 1:1 (life size) to 0.5 meters. The Tamron 90mm macro has the upside of having a focus limiter setting that goes from the Minimum Focus Distance of 1:1 to 0.7 meters. This is a maximum distance of 70cm (27.56 inches) verses 50cm (19.69 inches) for other macro lenses focus limiting switch.

Limiting the focus range helps reduce the amount of hunting necessary to lock subject focus when the lens is searching the entire 1:1 to infinity range. Most macro lenses only give you the 1:1 to 0.5 meter or 1:1 to infinity settings to choose from. I can't stress enough what an upside the additional 20cm (1:1 to 27.5 inches 70cm) is for closeup to super macro compared to the hunting that occurs between 1:1 and infinity.

This lens is also weather sealed and has the same 67mm filter thread used on many Tamron lenses allowing filters and polarizers to be interchanged. The lens has no built-in image stabilization and relies on the cameras IBIS system. I use IBIS on all of my cameras and have not found the lack of lens stabilization to be an issue with any macro lenses.

The lens has a maximum aperture setting of F/16, for some this will be an issue but I did not find it to be a deal breaker.

Field testing the Tamron 90mm F/2.8 Macro

During this review I used the Tamron 90mm F/2.8 macro lens with the Sony A7R V camera, Marelux MX-A7RV housing with 45 degree viewfinder, Marelux flat macro port 32 and 60mm's of extension (40+20). For lighting I used two Marelux Apollo S strobes triggered with a UWTechnics flash trigger and four Marelux six inch arms for support.

I also used Marelux +5,+10 and +15 closeup lenses at times stacking two. I also used the Marelux LimiLink wireless flash trigger and at times fiber optic cords along with a verity of diffusers. I also used two Marelux 1500ml Flexibuoys for buoyancy control. The Tamron 90mm macro is 4mm shorter than the Sony 90mm (126.5mm V 130.5mm) which should be considered when choosing a port configuration for other housing brands.

I shoot the A7R V camera in manual mode with the auto focus set to single-shot using drive mode AF-C and tracking expanded flexible spot (medium) focus area.

I manually adjust ISO, aperture and shutter speed on the fly as I have done for decades with a starting ISO of 100 for macro.

I love my 45 degree optical finder paired with the stunning 9.44m-dot EVF on the A7RV for macro. I only use the LCD for Blackwater and a few other situations where a 180 viewfinder would be a better choice like fast moving subjects.

Spiny Lobster, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/14, 1/250th sec

I also keep the camera set to the animal eye detect setting most of the time and find that it works on some subjects and does not affect AF speed for other subjects like nudibranchs. Animal eye detect also acquires human eyes with the same accuracy and speed found with human eye detect.

With the Tamron 90mm macro and the camera's 5.5 stops IBIS system you can take shots with excellent focus down to about 1/15th sec.

Coral Polyp Detail, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/16, 1/250th sec

or less with slow moving subjects.

With the UWT flash trigger I am able to shoot above the Sony A7R V maximum sync speed of 1/250th sec. and normally shoot in the 1/100th to 1/500th second range. At times I have gone as high as 1/1600th just for testing and it is also nice to be able to drag the shutter from time to time and know you will be getting good results.

I try to keep the ISO in the 100 to 400 range while shooting between F/9 and F/16. Everything in photography is a tradeoff and I find the many excellent features of the Tamron 90 macro outweigh the loss of F/ stops above F/16.

I shoot exclusively with mechanical shutter which allows for higher shutter speeds. Mechanical shutter allows me to shoot the occasional five frames a second burst which is about as fast as you need for U/W photography. Both the lens and the Apollo S strobes easily keep up during the five frame bursts.

In the water the focus tracking locks on and easily sticks to the subject even while moving the focus point around in the image frame. The Tamron 90 macro has fast and accurate auto focus even while using closeup lenses in the +5 to +15 range.

While I am sure someone will make a manual focus gear available for the Tamron 90mm in the future I have not found a need for one with the newer Sony cameras from version IV onward.

If you read my Sigma Art 105mm F/2.8 macro review in the last issue of UWP #141 you may remember I use the same port configuration with 70mm of extension rather the 60mm I use for the Tamron 90mm. This makes packing both lenses much easer for travel with as I use the 20, 30 and 40mm extensions for several of my wide lenses as well.

The Tamron 90mm would be my goto lens for fish portraits, general closeup shots and subjects down to 1:1. The Sigma 105 macro, while very capable for fish portraits, will be my preference for macro in the 1:4 to 4:1 range where you need more distance between the subject and lens especially while using additional magnification.

For those U/W photographers just buying into a Sony full frame system who are casual macro shooters or just looking for value I would at this point be hard pressed to recommend the Sony 90mm macro over the Tamron 90mm. Both are great lenses and the Sony has some advantages like stabilization and the extra F22 stop but for speed and IQ the Tamron is a cut above. At the $699.00 price point the Tamron is also a much better value than the $999.00 US (on sale) now dated Sony 90 macro.

Phil Rudin
Instagram

The Author is the Senior Advisor for the Marelux Management Team

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BackscatterXTerminator

by Kirsty Andrews

My thanks to UWP magazine for asking me to try out and review an incredibly exciting development in image editing for underwater photographers: BackscatterXTerminator. This innovative product, a plugin for Photoshop, uses AI technology developed initially for astrophotographers, and repurposed for underwater image use; a joint effort by RC Astro, Erin Quigley of GoAskErin.com and her colleague Bruce Warner.

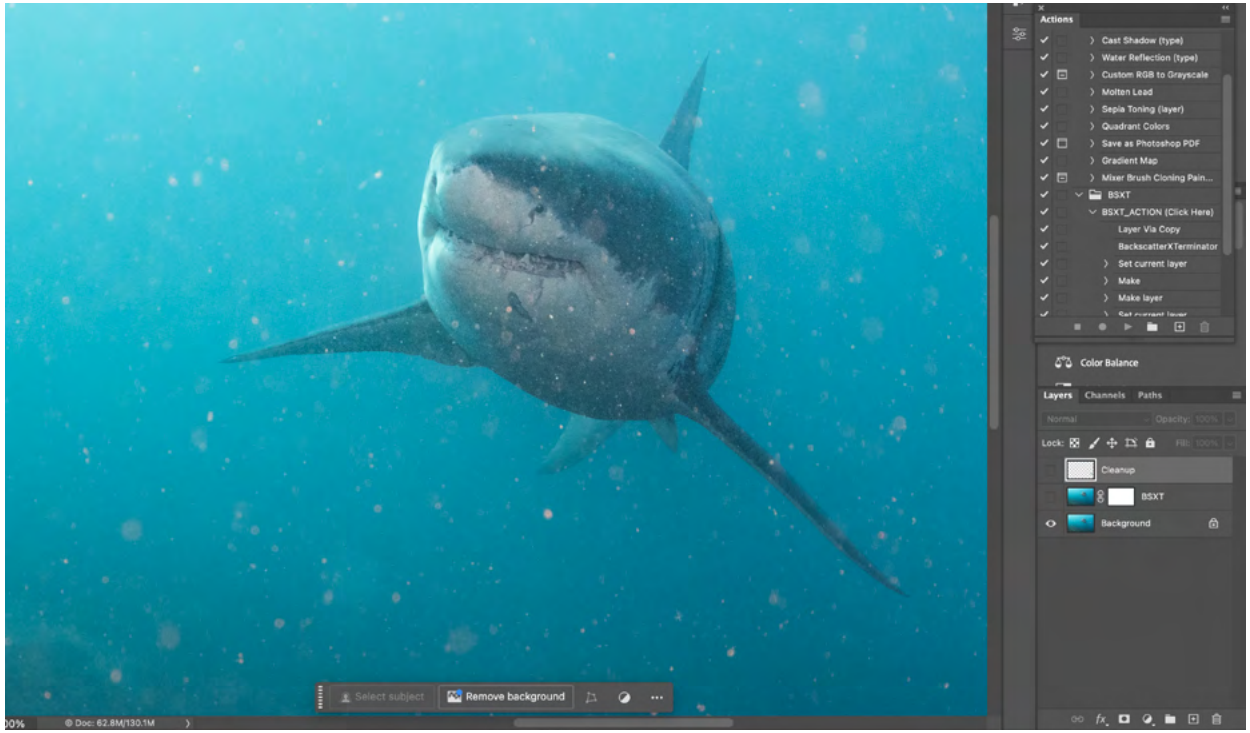
In the decade or so that I've been shooting, Adobe have made regular evolutionary updates to their available options for cleaning up imagery. The relatively unsophisticated clone stamp tool has over time morphed into a selection of patch and spot healing tools, including content aware fill. These, combined with judicious use of something like a dust and scratches filter in extreme scenarios, meant that options were available to the photographer with time on their hands. And time is the key thing as I know I'm not the only one who could spend hours 'polishing' favoured images this way, or trying to rescue one where backscatter was an issue.

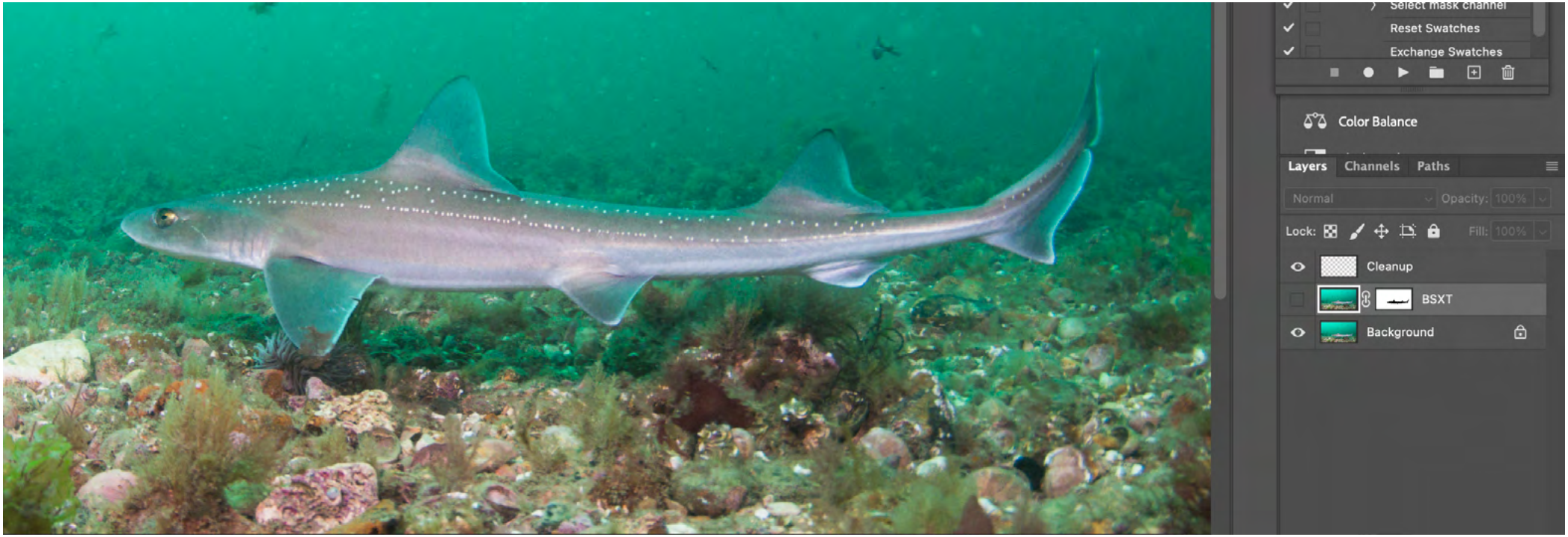
Compared with these small steps, the BackscatterXTerminator tool is utterly revolutionary. With one click and merely a few seconds' processing time, it manages to isolate backscatter while leaving underlying image details unaffected – something that would have been very difficult and time-consuming to try to achieve manually before.

I do a lot of diving in the UK and our rich temperate waters can be full of particles, so even without lighting errors (and I'm not immune to these!) wide angle shots take a bit of cleaning up. In a matter of seconds, BackscatterXTerminator removes 95% of the problem, and doesn't leave artifacts or impair image quality while doing so.

Baygitano wreck shot. Top image is the original and the bottom image is corrected.

It's not just UK underwater shots where this is an invaluable tool. Shooting this great white shark in South Africa, some backscatter was inevitable as I sought to light the large pelagic animal through less than crystal waters.
The BackscatterXTerminator tool cleaned it up in seconds. I'd previously laboriously removed backscatter from this shot using other tools, and BackscatterXTerminator did a much better job, much quicker.





One example of BackscatterXTerminator being over-jealous was with this picture of a starry smoothhound shark – the software removed the patterning on the shark. It was an easy fix by masking out the impacted areas. The layer mask tool is created as part of the BackscatterXTerminator programme and is easy to use even for occasional Photoshop users.

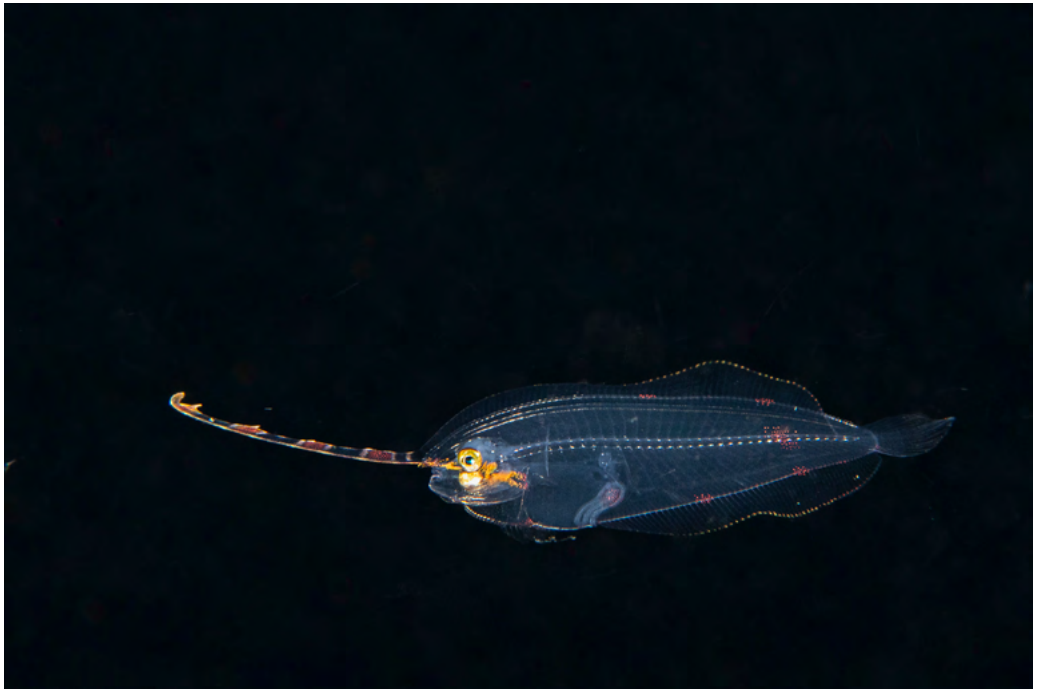
Original image

Full AI correction

50% AI correction

Another clear use case is black water photography, where the premise of the entire diving set up is to attract plankton to your light sources and therefore there will be particles in the water.
With a click of a button, the image is clear, even with subjects that are translucent in parts, the software works amazingly, which was tricky to do manually.
If, like me, you think a bit of backscatter adds a welcome reality to certain scenes, you can tone done the impact of the tool using the opacity slider – the visual impact of the backscatter is minimised within the image but it is still present, keeping truer to what was originally captured, if that is your creative wish.
For example, this bobtail squid was shot at night over a sandy seabed: the backscatter is, for me, part of the image, but it was interesting to see the effect of keeping it in but less emphatically.
This may also be a benefit if a completely clean image looks unnatural to the naked eye; as with all editing, it's a matter of taste, but the ability to tone down the effect of the plug-in may help to those who find its effect 'too much'.

I searched around for a subject which didn't work so well, and this was the nearest 'fail' – a very challenging edit, this backlit lion's mane jellyfish with sunrays coming through. The software was fine with the sunrays and removed the backscatter but also quite a lot of the jellyfish's filaments initially; I painted back in but this leaves backscatter in the areas around the jellyfish: a more painstaking approach would be needed to spot-healing would be needed to perfect the two (a reminder of the world before BackscatterXTerminator existed).



If you see areas where there is plankton which the software has not immediately removed. Erin and team have planned for this; if you operate the tool as suggested by running the simple BackscatterXTerminator programme, it creates a layer with layer mask so you can paint out unintended consequences of the software, and also creates a clean-up layer so you can finish the job yourself manually. I don't object to this as it's so much quicker than before and feel the balance is right in what the AI decides to remove.

I should note that there are minimum system requirements specified for use of this tool. On my 3-year old MacBook Pro, it worked speedily, in less than 10 seconds on average, but trying it on an older system it was more like a couple of minutes to process a 20MB file.

As instructed in the GoAskErin tutorial, I applied the tool at a relatively early stage in the editing process, only after basic exposure and tonal adjustments, and then finished off in Lightroom.

This new tool isn't 100% accurate in all cases, but it's certainly very close to it and is absolutely a game-changer which will save you time and effort in your workflow, especially for shooters in temperate waters or black-water background appreciators.

Introductory Price of $179.95 includes 1 perpetual license that can be installed and activated on up to two computers – Mac or PC plus there's an exclusive Bonus: A comprehensive step-by-step video tutorial by Erin Quigley.

There is also an option for a FREE 48 hour, fully functional trial of BSXT. Try before you buy.

Kirsty Andrews
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www.goaskerin.com/backscatterxterminator

Wide angle with the Sony A7R III

by Dr. Simon J Pierce

While this article focuses specifically on how I use my Sony A7R III camera for underwater wide-angle photography, cameras are cameras. Many concepts here should be relevant to using any given system underwater.

Firstly I love Nauticam underwater housings, and use a Nauticam NA-A7RIII housing with the A7R III and I'm a big fan of ultrawide fisheye lenses, as I spend a lot of time with large animals (particularly whale sharks, as I'm a whale shark researcher).

Sony still doesn't have a 'native' fisheye lens at this stage, so I use a Canon 8-15 mm fisheye lens (using a Metabones V adapter) with a Nauticam N120 140 mm optical glass fisheye dome port and 30 mm extension ring.

As an FYI, I always use the LCD screen to compose my shots. Nothing against viewfinders – I'm just used to it. I started my underwater photography with small cameras that only had a rear screen. I also shoot one-handed a lot, and the screen allows me to hold the camera out from my body while still viewing my composition.

The Nauticam housing has a little base plate for the camera that holds the screen out at an angle, making it easier to see, and also disabling the auto-switch function between the LCD and viewfinder.

Shooting in natural light

When I'm shooting large, slow marine animals, such as whale sharks, in good ambient light near the surface, my standard settings are 1/250 sec and f/8, in manual mode, with Auto ISO and -1.0 exposure compensation to help protect my highlights.

I use a High frame rate (8 shots per second) and continuous autofocus (AF-C). I've set "Priority Set in AF-C: Release" to minimize the lag time when I mash the shutter lever; the autofocus is normally fast, and I use "Lock-on: Wide" most of the time.

Why f/8? The A7R III is limited to f/8 or wider aperture values to maintain phase-detect autofocus in continuous shooting mode. At f/9, for instance, it will stay focused at the same distance that focus was initially achieved. Not useful when an animal is approaching you. It's fine if you're just taking photos one at a time (as I do when shooting with strobes, below), rather than shooting in bursts.

I use compressed raw files if I'm expecting any kind of fast action. I don't notice any loss of

quality in real-world shooting. What I do notice is that uncompressed raw files are ~82 MB in size, so the camera can't keep up 8 fps for long – about 28 photos – when it's moving that much data, and the buffer takes approximately 14 seconds to clear. This feels like an eternity sometimes!

The reduced file size from compressed raw increases the buffer depth (to around 76 photos) so I can keep shooting instead of swearing vigorously through my snorkel. You'll need a UHS-II SD card to help with that, too. I use a 256 GB ProGrade card.

I don't often change these settings. If I'm on a scientific expedition then I'm often taking photos of other researchers at work, so I'd rather be able to focus on composition – and trying to keep up! On that topic, I also want to have a secure hold on the camera, and adding a hand strap to the handle helps a lot with that.

I'll increase the shutter speed for fast-swimming animals, like dolphins and sea lions, where I can get away with it. Obviously I'll also decrease the shutter speed (or aperture) in low light if I absolutely have to.

Auto ISO is super helpful, particularly with Sony's great sensor. I have no problem using ISO 3200 underwater; I'll just add minor noise reduction in DxO Pure Raw 2 or Lightroom afterward if necessary.

As an aside, I've been (metaphorically) diving into the confusing subject of ISO invariance and my understanding is that, above dual gain kicking in at ISO 640, the A7R III is effectively just increasing brightness. There's an argument, then, for setting Auto ISO to 100–640 when using manual settings (as above). and adjusting the exposure in Lightroom later. That should then optimize data capture while protecting highlights. Good in theory.

However, I tried this with whale sharks in Tanzania and found that – in dark conditions (rain, or early mornings) – the autofocus struggled a lot more than usual. I'll stick to Auto ISO with 100–3200 in the future.

I use ambient light for wide-angle photography when we're also filming, as I don't want my strobe flashes to ruin the shot. It's often dark underwater in some places we work, either because of overcast skies or deeper dives (often both), so I'll commonly drop down my shutter speed to 1/160 sec to reduce ISO levels a bit.

Shooting with strobes

I use dual Sea & Sea YS-D2 strobes (now superseded by the YS-D2J) with Eneloop Pro batteries, a Sony flash trigger, and Nauticam optical sync cables. Note that YS-D2s previously weren't compatible with the flash trigger, and some shops still list this on their sites, but they are compatible with the most recent Nauticam optical sync cables. I usually use Glow Dive diffusers on the YS-D2s, which work well but definitely reduce the light output.

My "jump" settings are normally 1/125 sec, f/10 and ISO 200 (in Manual mode). I normally use Fill Flash, with the strobes set to 16, as my initial setting.

I've got a simple process when I'm shooting:

I "fix" my aperture at a setting that should get me reasonably sharp corners, often f/10.

I choose a shutter speed that will freeze the motion of whatever subject I'm planning to photograph, often starting at 1/125 sec.

I'll check what ISO I need to get a nice background exposure (using "Shot. Result Preview", as described below).

Then, I adjust my strobe(s) power to add some nice light to the foreground, depending on what I want to shoot and (especially) the distance from the subject. I usually test things out when I first get to the bottom, by photographing a rock or coral, then I can start looking for interesting critters

It's easiest to do all that in manual mode so I can easily work out what I need to change. Background too dark? Increase ISO or decrease shutter speed. I find it easiest to change shutter speed for quick background exposure corrections, as that doesn't affect the strobe lighting on the foreground. Increasing ISO, or dropping aperture, will increase perceived strobe output – or vice versa.

I've set the AEL button to ISO so it's easily accessible on the housing. I'll often adjust exposure using ISO until that hits around 640 (see my note on ISO invariance above). At that point, I'll start reducing shutter speed or aperture (if it gets really dark, or if I decide corner sharpness isn't a big deal).

There are often times when I want to switch both strobes off, temporarily, at once – for instance if I want to take a silhouette photo. The quickest way to accomplish this, that I've found so far anyway, is to switch

to silent shutter – then the strobes don't work. I've got that programmed to the C4 / Trash button.

I shoot in uncompressed raw when I'm shooting with strobes, as I'm only taking one shot at a time, and set Auto Review to 2 seconds so I can check exposure.

Note that you have to pull the strobes well back – with the front of the strobe slightly behind the handles – to avoid lighting up the sides of the image. (I'm writing this as a reminder to myself, as they're never back far enough…)

One of the great things about shooting mirrorless is the "what you see is what you get" when using the EVF or LCD. However, it's helpful to switch this off ("Live View Display: Setting Effect OFF") when shooting with strobes. Otherwise, the screen can be too dark to compose a shot easily.

Of course, you do want to see how your exposure settings are affecting your background, and there's a neat way to accomplish this: program your AF-ON button (accessed via the thumb lever on the Nauticam housing to "AF-ON Button: Shot. Result Preview". That means you can quickly check your ambient light exposure by just pressing your thumb, rather than taking a photo and checking it. (Of course, that only works if you're using shutter-linked autofocus.)

I've been playing around with automating my exposure settings more. When we're working with whale sharks in the Galapagos, in particular, we're changing depth and, with it, ambient lighting level at a speed that I find difficult to keep up with (while kicking madly to keep up with a bus-sized fish).

I've trialed using Auto ISO and negative exposure compensation – conveniently accessed via a dial on the housing – and that works quite well, as long as I keep an eye on the background exposure (using the thumb lever with Shot. Result Preview, as above). I still have to make adjustments, but it does get it approximately right in a hurry. I normally start with -1.0 exposure compensation and adjust it from there.

Settings for all occasions

I'm often shooting one-handed, as noted above, so I use shutter-linked autofocus.

I've got the "Pwr Save Start Time" – i.e., camera sleep time – set to one minute. I don't turn the camera off while I'm in the water, so this conserves battery during lulls.

I set my white balance to

"Cloudy". That adds a slight warming effect to underwater images to help counter the blue-green ocean (though I'll usually adjust white balance slightly in Lightroom anyway).

I use "Multi" metering so the camera is considering the whole frame (though I'm often shooting in manual anyway). The default setting is for exposure to be locked while the shutter is depressed. I've switched that off ("AEL w/shutter: Off") so the camera is continuously evaluating the scene even when I'm shooting a burst of images.

The "Creative Style" on the camera, applied to the embedded jpegs in the raw files, is set to Standard. I always post-process my photos in Lightroom so I don't want the camera to be adding its own edits.

I find it all too easy to bump settings in the boat or water, so I disable any buttons that I'm unlikely to be using.

A few more miscellaneous notes:

I set Auto Review to 2 Sec, so I can check things by eye when required.

I set Drive Mode to Single Shooting with strobes. Otherwise, the strobes can get out of sync due to minor variations in recycle times.

It's easy to accidentally hit the movie lever. I normally switch that off and use a GoPro for video.

I've set my defaults to the MR 1 dial position, which saves most things, except shutter-linked autofocus and other button customizations.

Hope the above is useful – I'm still working things out as I go, but I do love the functionality and customization opportunities with the Sony A7R III, and how the Nauticam housing lets me access key options quickly and easily. Ergonomics count for a lot, peeps.

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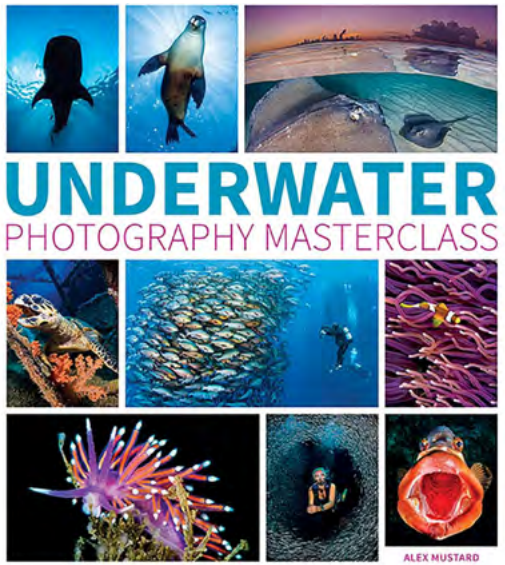
Dr. Simon J Pierce is a co-founder of the Marine Megafauna Foundation, where he leads the global whale shark research program, and an award-winning marine wildlife photographer.



If you want to learn or improve your underwater photography, I highly recommend Alex Mustard's book: Underwater Photography Masterclass. It's a fantastic guide to a rather technical subject!

Amazon

Basic Skills

by Jamie Hall

In 2015, I was asked by a friend if I would like to do some underwater photography and videography for a conservation team that were removing some 'ghost gear' (abandoned fishing nets and other marine debris which threatens marine life) from the local harbour in Wellington, New Zealand. Little did I know, this was to be the start of my underwater photography journey.

Since I was a teenager, I'd taken photos and videos of my holidays and done some basic editing, but I didn't have a passion for it at that time. However, once I was underwater with a camera in my hand, everything changed.

As a dive instructor, I've been blessed to experience some amazing and wonderful interactions with underwater wildlife. Friends and family would often ask questions and want to know more about some of the encounters, which led me to capture some of these moments to share.

There are, of course, some unique challenges with underwater photography. The greatest challenge, without doubt, comes down to one thing; your ability as a diver. I was fortunate enough to have a good foundation, with a few hundred dives under my belt, and experience of diving in quite a few places around the world, but this alone is not enough.

In all wildlife photography I think one, if not the most, important aspect is care and consideration for the wildlife. Whilst on land, this doesn't usually pose as much of a problem. On land, big zoom lenses are obviously integral to getting some of the wildlife you are shooting and the animals generally have plenty of space around them.

However, when shooting underwater, especially in places abundant with marine life (like Egypt and the Red Sea for example), you will generally find that your subjects tend to be closer in proximity, especially those which take shelter in or around rocks, sand and other surfaces. Therefore, my work leans more towards macro photography, although I do shoot some wider images, such as shipwrecks and other large structures.

Whilst underwater, one of the keys to getting good, close-up shots is to have control over your position and buoyancy in the water, not just in order to slowly approach the subject, but often to negotiate obstacles; mostly marine life, but also moderate-to-life-threatening dangers. The 'observer effect' (a physics term that can be applied to many things and certainly wildlife) is always on my mind. It is the theory that the mere observation of the phenomenon, in this case marine life, inevitably changes its behaviour; the very fact you are viewing the creature means that you are most likely altering their state in some manner.

An example of this would be that it is not possible to see any object without light hitting it and causing it to reflect that light. While the effects of observation are often negligible, the object still experiences a change.

Unfortunately, it is common to see new or inexperienced divers take in a camera, or GoPro, and disturb the marine life or cause damage to corals that they either haven't noticed or had the skill to avoid. This is heartbreaking because of the time it takes coral to regenerate.

When instructing or guiding underwater, all dives are preceeded by a dive briefing. My briefings lean towards being mindful of buoyancy and not disturbing or damaging the marine life. There is a saying within the dive community; "Take only pictures, leave only bubbles".

In most oceans and seas there is life that can cause you harm, but ninety- nine percent of it can be avoided with care and consideration. On one end of the scale there are simple things such as fire coral, which is comparable to a stinging nettle on steroids, although unlikely to cause any serious damage.

At the opposite end of the scale, in some oceans you have the infamous box jellyfish, whose sting can be fatal, or the lesser-known hazard of stonefish, who sit motionless, camouflaged on rocks or sand. Touching, or just leaning on, one of the venomous spikes running along their spine, can be potentially fatal.

Unfortunately, almost all issues are caused by diver error. Marine life can appear from anywhere when you're diving; it can be buried in the sand, sitting on a rock perfectly camouflaged, hidden in a small crevice and even lurking above you. While floating neutrally buoyant (neither ascending or descending), you need to have your eyes covering more than a full three-hundred-and-sixty degrees. This is navigating in space; the hemisphere of awareness as we look around us when we are on land doubles and becomes a sphere.

When you enter the water, there's everything underneath and above you too. I am forever looking up to

the surface, down to the ocean bed, or turning one-hundred-and-eighty degrees to see what's behind me, constantly shifting focus, trying to spot something out 'in the blue' or hiding itself within the surroundings.

A good diving skill is the ability to maintain neutral buoyancy by making tiny adjustments to your position using subtle fin-kicks and breath control. With these elements mastered, you can slowly approach your subject without causing a disturbance and have a better understanding and awareness of your surroundings and what you may come in contact with.

Once comfortable in your ability, you need to master the second element; multitasking or 'task loading', which takes a lot of practice. Most experienced photographers will find shooting in manual mode to be second-nature, but it does involve some concentration. Maintaining your position in the water, whilst keeping a consistent breathing pattern and adjusting your cameras settings all at the same time, is where things start to get tricky.

The biggest element to all photography is light and this is no different underwater, however, there are elements that makes underwater photography almost an entirely different language. The biggest difference is in the light spectrum; light breaks down into three primary colours - red, blue and green. As you start to descend in the water, red is the first to be absorbed, followed by orange and yellow. The colours disappear underwater in the same order as they appear in the colour spectrum.

Even water at a depth of five feet will have a noticeable loss of red. This explains why you see things in a blue or green scale when you are snorkelling, looking down or watching underwater footage, depending where it is taken.

The deeper you go, the darker and more

prominent the blue will look, and the more significant the loss of the red end of the spectrum. Often a big, blue scene is desirable for an underwater photo, especially wider shots. A full blue scaled image can be beautifully atmospheric and give a great sense of the underwater world.

Often a big, blue scene is desirable for an underwater photo, especially wider shots. A full blue scaled image can be beautifully atmospheric and give a great sense of the underwater world. However, if you are shooting wildlife you will want to capture those vibrant 'out of this world' colourations that you can find on the ocean dwelling species.

To capture those colours, we have two main options; white balance, or adding light. Most cameras will have a white balance setting and will do a reasonable job, especially in shallow water, at around five-to-ten metres (fifteen-to- thirty feet).

When deeper, at thirty metres (ninety feet) or more, you are only going to be able to add so much red to your images with white balancing. The preferred option is to use an underwater flash or 'strobe'.

By adding a light source, you re-introduce the red light and get much more accurate colour representations. With a topside flash, your light will only travel so far. Even the top-of-the-range underwater strobes will be quite limited in scope. Most underwater photographers opt for a wide-angle lens, allowing them to get closer to the subject and ultimately cast more light over a greater area, giving a better colour range.

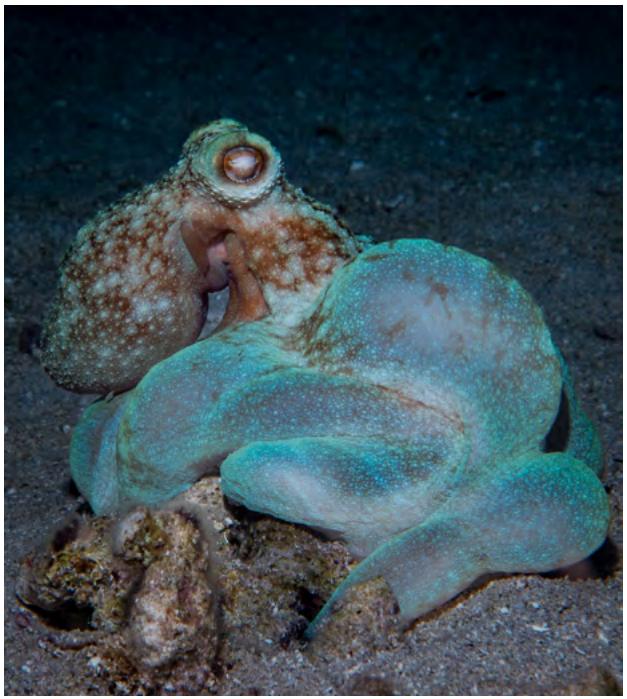
When shooting macro underwater, you don't need a huge amount of light at all. Prior to investing in a good underwater strobe, I used my camera's internal flash with an attached diffuser. This is a great set-up, as it spreads the light nice and evenly, allowing me to get some stunning close-up images of some of the smaller inhabitants.

Post-processing underwater images can be very different too. Although in both topside and underwater images you try to balance the colours as accurately as possible, using an added light source means that you have a significant inconsistency; the parts of the image in the foreground are going to have nice accurate colours which is great, but everything five-to-ten metres away is going to have a blue hue. The real struggle is the in-between, which can be a minefield.

More often than not, you will have a fringing aqua and green colour and, although sometimes this fits fine, I generally find the transition to look unnatural or undesirable. Herein lies the seemingly never-ending process of trying to balance or correct the colours.

I'm not sure that all photographers share the same hang-up but, on my depth-of-field shots where I have a clear fore, mid and background, I have likely spent too much time trying to get the colours how I want them and looking natural.

All-in-all, there are some huge advantages to capturing wildlife underwater. A good majority of marine life will allow you to get up close and personal. Shooting wildlife on land often has a proximity challenge; as you approach, they cut and run. Although this is true of a lot of marine



life, diving in warmer tropical waters often has the feeling that you are in an aquarium surrounded by fish. This is one of the reasons why I love underwater photography so much; I genuinely feel as though I am sharing the water with its inhabitants.

Sometimes I will be engulfed by schooling fish, or a large predator, or ray, will swoop by. The ocean is largely unpredictable; both with the conditions and what you are likely to encounter, making it very exciting. You never know what might appear and sometimes it can really take your breath away.

Jamie Hall

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Jamie is a full-time scuba dive instructor and also a part-time travel and underwater photographer and a passionate ocean conservationist. His aim is to share the beauty of the marine environment and its inhabitants in the hope of improving worldwide ocean health and also through raising awareness and education.

Shooting Salmon

by Matthew Sullivan

Freshwater photography used to be much less mainstream than it is now. Freshwater aquatic realms and creatures have seen a boom in popularity, hopefully leading to greater awareness and protections for these imperiled environments and their inhabitants.

Often, when we decide to shoot pictures underwater, we fly off to far-flung tropical destinations for spectacular reefs, or mucky paradises, or adventures with megafauna like sharks or whales.

Recently I've found myself drawn to a different pursuit. Take the salt out of the water, ditch the scuba gear, and focus on the usually overlooked world of freshwater photography and, more specifically, on salmonids.

My obsession began in Alaska in 2018. During a trip to Ravencroft Lodge in Prince William sound, ostensibly for salmon sharks, we got skunked on said sharks. Though they were the main target of the trip, we didn't let that stop us and decided to pursue some other interesting wildlife. To salvage our time, one afternoon we decided to explore a small mountain creek that was holding a decent sized school of massive chum salmon. This was my first experience photographing a salmon run and I was hooked right away. It was a surprisingly physically exhausting experience. The chums were gathered in a plunge pool with a ripping current and while the fish had no problem hanging in place as they waited to move upstream, my only option to hold myself steady was to wrap my legs as tightly as I could around a fallen tree. Despite that and despite the frigid, fast-flowing water, it was an absolute blast. The fish mostly ignore you - they surround you and, once in a while, they'll take a chomp at you or your gear in the heat of their hormonal rages. Salmonids in general will largely ignore a photographer during spawning season. Typically you just become another object in their environment and making images is like shooting fish in a barrel (pun intended).

Pink Salmon- Vancouver Island, BC, Canada. Nikon D500, Nikonos 13mm RS, Nauticam Housing, 1/10, f9, ISO160. Healthy pink salmon surrounding a male that is beginning to rot. It is remarkable what these fish live through before they die and the worse the fish look, often the more interesting subjects they make.

Since that first chum salmon experience in Alaska, I've been lucky enough to experience a pink salmon run in Vancouver, British Columbia, spawning brook trout in North Carolina, and Kokanee salmon in Connecticut. Each of these shoots has its own challenges but they provide some unique imaging opportunities of not often photographed fish. So few photographers pay attention to freshwater environments despite often

Chum Salmon- Prince William Sound, AK, USA. Nikon D4, Nikonos 13mm RS, Nauticam Housing, 1/40, f13, ISO250. A male Chum Salmon turning his aggression towards my lens. He wasn't going specifically at me. They'll attack anything that is even remotely close to their mouths. He bit another male, a rock, my leg, and my port in the span of 3 seconds.

Mated Pair of Pink Salmon - Vancouver Island, BC, Canada. Nikon D500, Nikon 10.5mm Fisheye, Nauticam Housing, Nauticam 140mm Dome 1/10, f11, ISO250. Salmon are one of the best subjects for natural history and behavior images. Here, two pink Salmon guard their redd. The male kept himself positioned on the protective side of the female and viciously attacked any fish that drifted too close.

Brook Trout - Great Smoky Mountains National Park, NC, USA. Nikon D500, Nikonos 13mm RS, Nauticam Housing 1/10, f10, ISO100. More skittish than salmon, but no less photogenic. Trout are beautiful fish and during breeding season they develop spectacular colors.

having to travel far less to access them.

For the shoots featured, I used either a Nikon D4 in a Nauticam NA-D4s housing, or a Nikon D500 in a Nauticam NA-D500 housing. When photographing salmonids, the action comes fast so taking your eye from the viewfinder wastes time and image opportunities. Having intuitive ergonomics is crucial so you don't have to look away and fumble around with housing functions. The LED Flash trigger (separate for the D4, built-in for the D500) is also crucial for allowing rapid fire triggering of your strobes to make sure you don't miss time waiting for on board flashes (which neither the D4 nor D500 have anyway) to recycle.

For freshwater shooting I've found a small port to be most conducive. Often you are in quite shallow water and don't have a lot of space to maneuver so a large dome would hinder image-making. That said, if you have the right spot, a large dome would be great for split level pictures. For all the images featured, I used either the Nikon 10.5mm fisheye behind the Nauticam 140mm dome port, or my Nikonos 13mm which works flawlessly with Nauticam with the proper adapter. Optics like the Nauticam WACP or WWL may also be suited for salmon shooting as the flexibility and slightly narrower field of view vs a fisheye can be hugely beneficial and allow for a greater variety of pictures.

I encourage people to go check out their local creeks, lakes, ponds, or rivers. There are some amazing things down there to shoot. Just because there isn't any salt in the water doesn't mean there aren't worthwhile subjects. Perhaps that will also lead to protection of special freshwater areas that would otherwise be degraded or destroyed.

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Snorkelling in Iceland

with Rebecca Douglas

When you think of snorkelling, images of tropical waters teeming with colourful fish might come to mind. But Iceland, with its rugged coastline, vast fjords, and crystal-clear waters, offer a snorkelling experience unlike any other. While many people flock to Silfra, a world-renowned snorkelling spot in a lake within a national park, there's an abundance of less-travelled locations: Iceland's coastline is waiting to be explored.

Whether you're an experienced snorkeler or simply curious about what lies just below the surface, snorkelling in Iceland rewards you with a sense of discovery, connection and awe. Here's how I make the most of this unique experience and celebrate the amazing encounters along the way.

Gear for snorkelling in Iceland

Snorkelling in Iceland's icy waters is a thrilling experience, but the extreme cold demands the right gear to ensure both comfort and safety. With water temperatures often in single digit degrees celsius, investing in high-quality equipment is essential for staying warm and protected while exploring these breathtaking underwater landscapes. Here's what I wear to make my snorkelling adventures in Iceland both manageable and enjoyable:

7mm winter freedive wetsuit

I rely on a 7mm winter freedive wetsuit, which is a two-piece design. This layering effect provides an impressive 14mm of neoprene around my core, offering exceptional insulation in near-freezing waters. The thickness of this wetsuit makes a huge difference in retaining body heat and it's designed to fit snugly without restricting movement. Without

Common harbour seal – Steingrímsfjörður, Westfjords, Iceland

Bloom of moon jellyfish in Ísafjarðardjúp, Westfjords Iceland – image of me captured by my friend Petr Slavík

Prepping kit ready for snorkelling – little did I know we'd meet a seal under the sea!

My best friend Katie during our Silfra Snorkel – Thingvellir National Park – Iceland

this kind of protection, staying in the water for any meaningful length of time would be impossible.

7mm mittens

Thick neoprene mittens are my go-to for keeping my hands warm. Unlike gloves, mittens allow my fingers to stay together, helping to trap warmth and reduce heat loss in the cold water. They're not only practical but also a game-changer when spending extended periods in icy conditions. I need my hands to function to use the camera and I'm able to operate all I need with these thick mittens on.

7mm Boots

Keeping my feet warm and protected is non-negotiable when snorkelling in Iceland and 7mm neoprene boots are the perfect solution. They provide much-needed insulation and comfort while also offering a sturdy sole to navigate Iceland's rocky, often sharp and jaggy lava shorelines. These boots are as much about safety as they are about warmth, making them a critical part of my gear.

Snorkel and Mask

A properly fitting snorkel and mask are essential for a good snorkelling experience, especially in Iceland's crystal-clear waters. The right mask ensures I have clear visibility to take in and shoot the underwater scenes, while a high-quality snorkel allows easy breathing in the often choppy or windy conditions.

Fins

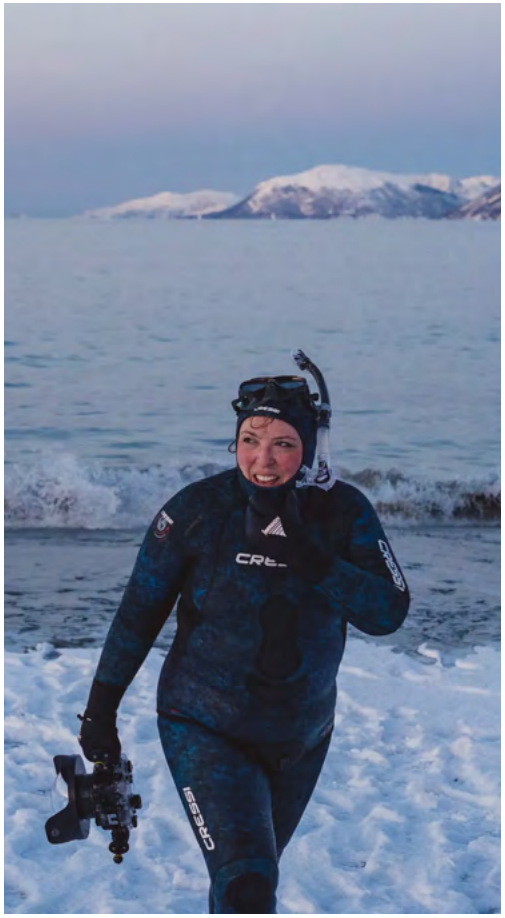
Fins might be bulky to pack, but they are absolutely worth it. They help me cover greater distances with less effort, giving me the chance to explore Iceland's underwater landscapes more thoroughly. Fins also provide stability in the water, especially when dealing with currents or waves, making them invaluable for both safety and comfort.

Dryrobe

This is an absolute non-negotiable for me. With Iceland's cold water, low air temperatures, and famously strong winds, a Dryrobe makes all the difference when getting in and out of the water. It keeps me warm while I change and offers vital protection from the wind. It's the piece of kit that ensures I can transition comfortably back to dry land after my snorkelling session.

Waterproof Bumbag

I carry a waterproof bumbag made by RED to store essentials like my keys and phone. It's compact, easy to wear, and keeps everything



The joy on my face after my first ever snorkel at Silfra in Iceland – air temp -10 deg c!

dry and secure while I'm in the water. Having this peace of mind allows me to focus fully on the snorkelling experience without worrying about my belongings.

Quick-Dry Towel

A quick-dry towel is another must-have. Lightweight and compact, it's perfect for drying off efficiently

after a session in the water. It takes up minimal space in my bag but does a fantastic job, ensuring I'm warm and comfortable as soon as I'm out of the wetsuit.

With this gear, snorkelling in Iceland's cold waters becomes an adventure I can embrace rather than endure. Each item plays a crucial role in keeping me warm, comfortable, and safe, allowing me to fully enjoy the magic of Iceland's unique underwater world.

What I use to shoot underwater

Capturing the underwater magic of snorkelling is one of the most rewarding aspects of my adventures. The surreal landscapes, vibrant colour, and incredible marine life deserve to be documented in a way that conveys their true beauty. Over time, I've curated a kit that helps me achieve

just that. Here's what I use to bring these underwater scenes to life:

My primary tool for underwater photography is the Fujifilm X-T5, a lightweight and powerful mirrorless camera. Its compact size makes it ideal for snorkelling, where space and weight can be limiting factors. I typically pair it with a 16mm f1.4 lens, which provides a wide field of view to capture expansive underwater scenes or close-ups of marine life.

To protect my camera in icy waters, I rely on a dedicated Seafrogs underwater housing. This housing is robust, watertight, and designed specifically for my camera, ensuring it stays safe while allowing full control over all camera functions. The combination of this housing around my X-T5 and the 16mm lens lets me create storytelling images of our magical underwater world.

In addition to my main camera, I often bring along a GoPro for capturing behind-the-scenes footage. Compact, durable, and easy to use, it's the perfect companion for snorkelling adventures. I attach it to the hot shoe of my Seafrogs housing, which keeps it secure and aligned with my primary camera. The GoPro provides dynamic video clips that offer a different perspective, whether it's the moment I enter the water, the ripples of sunlight through the waves, or a wider view of the environment. This dual setup allows me to document the entire experience, from creative compositions to candid moments.

This kit gives me the flexibility to focus on both the artistic and storytelling aspects of underwater photography. Whether I'm capturing the play of light beneath the surface, the textures of life on the lava rocks or the quiet grace of marine life, these tools help me bring stories from beneath the surface and share it with others.

How I pack my snorkel kit to fly

Flying with snorkelling gear can feel like a challenge, especially when trying to balance protection for your equipment with the need to minimise bulky, heavy items. Over time, I've developed a system that keeps my gear safe, organised and easy to transport, ensuring nothing gets left

behind. Here's how I pack my snorkel kit for air travel:

Snorkelling equipment can be bulky, so I opt for an additional hold bag to carry the essentials. In this bag, I pack:

Wetsuit
Gloves and Boots
Snorkel and Fins
Dryrobe
Waterproof Bumbag
Quick-Dry Towel

By dedicating a separate hold bag to this gear, I ensure my snorkelling essentials are protected and easily retrievable when I reach my destination.

My camera equipment is the most fragile and valuable part of my kit, so I always carry it with me in my hand luggage. I divide it across two bags for maximum protection and compliance with airline restrictions:

1. Main Rucksack: This is where I carry the bulk of my camera gear, including my Fujifilm X-T5 mirrorless camera and lenses. Each piece is padded and secured in compartments within the bag to prevent damage during travel. I use a camera-specific backpack with reinforced padding for extra protection.

2. Underseat Bag: My Seafrogs underwater housing, which can be disassembled for travel, fits perfectly into a small underseat bag on most airlines. Breaking it down into its components allows me to pack it more compactly, and I wrap each piece in protective cloth or foam to avoid scratches.

Keeping my camera and housing with me ensures that even if my checked luggage is delayed or mishandled, I'll still have everything I need to capture my snorkelling adventures.

This packing system allows me to transport everything safely and efficiently, balancing the needs of fragile camera equipment with the bulk of snorkelling gear. With careful organisation, I can hit the ground running, or swimming (!!!) ready to explore and share the stories of the ocean.

Snorkelling in cold water

Snorkelling in Iceland's icy waters, or any cold-water, is an unforgettable experience, offering glimpses of unique marine life and breathtaking underwater landscapes. However, the extreme temperatures demand preparation and mindfulness to ensure a safe and enjoyable outing.

This article reflects my own experiences and personal process with cold-water snorkelling. It is not an exhaustive guide to cold-water safety. Everyone's body and capabilities are different, and it's essential to approach cold-water activities with careful consideration of your own limits, skills and physical condition.

So many moon jellyfish – Ísafjarðardjúp, Westfjords Iceland

This information is shared for inspiration and reflection, not as a substitute for professional advice or preparation.

The main thing I consider when snorkelling in cold water

Acclimatise Slowly:

When I enter icy waters, I am deeply aware shock to the body is a real concern. To avoid this, I step into the water gradually and take deep, slow breaths to stay calm and help my body adapt to the cold. Sudden immersion can cause cold water shock, if an involuntary gasp reflex happens underwater you can breathe in water and it can lead to drowning. To find out more about this visit the RNLI.

Stay Warm:

Keeping warm is essential and also having an awareness of how cold I am getting whilst snorkelling is just as important. I wear a 7mm wetsuit following hiring one the first time I snorkelled in Silfra and found it to be super cosy! With 7mm gloves and boots, I stay well insulated, though my hands and feet are the first places I start to notice the cold. When I get out it is important to change as quickly as

Snorkelling out to Silfra

Snorkel crossing at Silfra

possible, with my dryrobe putting a layer of warmth around me straight away!

Listen to my body:

Recognising my limits is crucial. I tune in to my body and when I start to feel cold, because ignoring these signs can lead to hypothermia or other complications. I always choose prioritising my safety over extending my snorkelling session as this guarantees I'll have more opportunities to explore in the future!

A few other things I take into consideration when snorkelling in Iceland:

1. Tide times and water conditions: I research tides and currents before entering the water, I check the forecasts line up with what I can see to avoid dangerous conditions.
2. Sewage awareness: Be cautious of potential sewage contamination in remote areas, not all villages and remote properties have sewage removal into a treatment process and release into the sea, so I select snorkelling spots carefully.

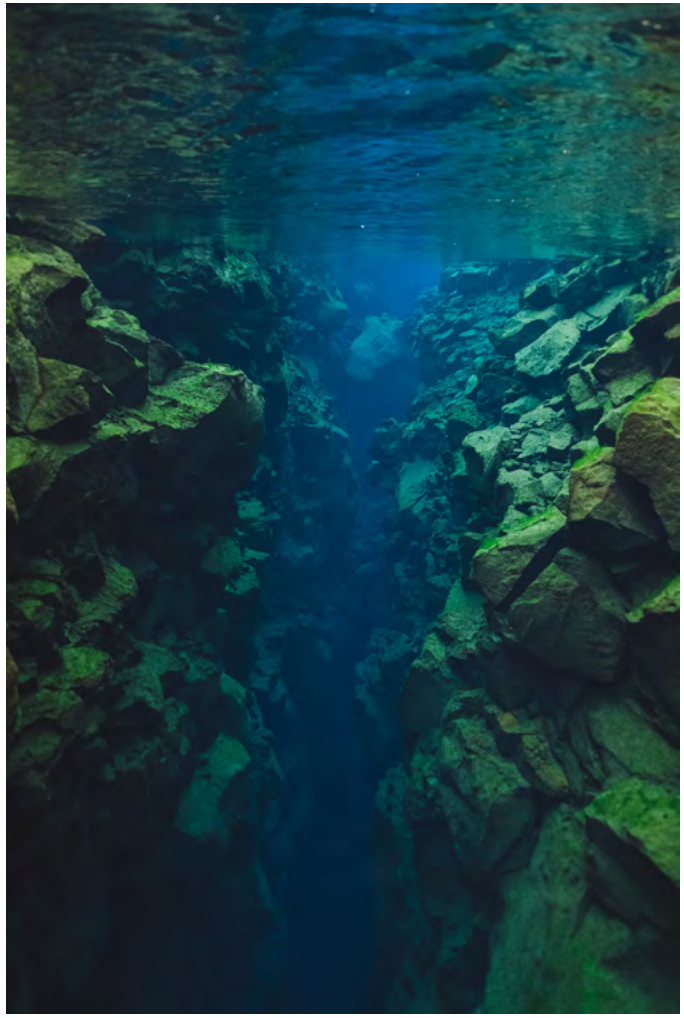
Snorkelling locations in Iceland:

ICONIC SILFRA

Silfra, located in Þingvellir National Park, is a stunning snorkelling spot, renowned for its crystal-clear glacial waters filtered through lava rock. With visibility up to 120 metres, it offers one of the most remarkable snorkelling experiences in the world. The water is as cold as it is pristine, typically hovering around 2°C. I've snorkelled here in the snow, at temperatures that dipped to -10°C! There's something magical about floating in water that is this clear. It is visibility I've never witnessed anywhere else! When you get in, the only thing that feels cold is your face, but the rest of your body stays warm inside the 7mm freedive wetsuit

Exploring beyond Silfra

Silfra is just the beginning of Iceland's snorkelling adventures. If you have your own gear, Iceland's coastline offers a wealth of hidden gems where you can explore the wild edges of its waters and encounter marine life in its purest form. Here are just a few of the amazing snorkelling locations you can discover:



The clear blue lava filtered glacier waters at Silfra at Thingvellirvatn

NAUTHÓLSVÍK GEOTHERMAL BEACH

Located near Reykjavík, Nauthólsvík which is already a popular spot for sea swimming and Iceland's unique geothermal energy heats the water, supplying a local hot pot, creating an ideal place for a quick snorkel even in the colder months as you can snorkel and then warm up in the hot pot!

I snorkelled here one March and the water is

so clear! Given the time of year I wasn't sure if there would be much to see, however, while snorkelling, I encountered so many mussels clinging to the rocks and a couple of striking purple starfish on the sea floor. My curiosity piqued when something swam under me that I'd never been before, it was moving pretty quickly and on getting back to land I have identified it as some kind of isopod, perhaps a sea slater or sea woodlouse. This area served as a beautiful reminder that even the more accessible spots in Iceland hold hidden marine wonders. While it's often potluck as to what you might find wherever you snorkel, the calmness and clarity of the water make it a peaceful place to explore.

On my way to snorkel at Nauthólsvík Geothermal Beach in Reykjavik, Iceland

Plankton Bloom Hörgshlíðarlaug, Westfjords, Iceland

ÍSAFJARÐARDJÚP

The vast fjord of Ísafjarðardjúp, located in the Westfjords, is rich in marine life and I had the incredible privilege of snorkelling among a bloom of moon jellyfish. These jellyfish, with their ethereal, translucent bodies, drifted gently through the water, creating a surreal and dream-like atmosphere. It felt like swimming in another world, surrounded by hundreds of these beautiful creatures. Alongside the moon jellyfish, I also encountered comb jellyfish with its cilia refracting rainbow colours in the light and the biggest cross jellyfish I've ever seen, adding to the magickal underwater experience. This location highlighted the diversity of Iceland's marine ecosystem and the unexpected moments of wonder that come with exploring its waters.

HÖRGSHLÍÐARLAUG

Before soaking in the hot pot at Hörgshlíðarlaug, I decided to jump into the nearby fjord for a snorkel. The water here was rich with plankton blooms, a clear indicator of a thriving ecosystem. The density of the plankton added a dreamy quality to the water, with tiny specks of light illuminating each movement. Snorkelling here was an invigorating and humbling experience, reminding me of the importance of healthy waters and the life they sustain. There is nothing quite like snorkelling in 7 deg c water and then whipping your wetsuit off and jumping into the hot pot to soak in the warmth, a truly Icelandic adventure in nature!

HVERAVÍK

Snorkelling in Hveravík is another incredible experience that combines the beauty of Iceland's clear waters with its fascinating marine life. The area was filled with moon jellies, creating a calming, ethereal scene as they floated gently in the water. As we explored, a curious common harbour seal appeared and began to interact with us, we were transfixed letting the seal lead this encounter. It was an awe-inspiring moment, with the seal gracefully swimming closer and closer, playfully swimming in the water. It is moments like this where you really wonder who is watching who. Just as we were about to leave, it almost seemed as though the seal was waving goodbye, a moment that will forever leave me full of wonder about how amazing the natural world truly is.

DRANGSNES

On my last day in the Westfjords, I ventured into the kelp forests near the village of Drangsnes. Even with a short snorkel, I was rewarded with beautiful sights, vast forests of huge kelp swaying in the water and vibrant purple sea urchins clinging to the rocks. The water here was so clear, it was like looking through glass, and the marine life was thriving in its undisturbed habitat. It's a reminder that even brief moments spent exploring Iceland's waters can lead to awe-inspiring moments.

STEINGRÍMSFJÖRÐUR

Steingrímsfjörður, another fjord in the Westfjords, greeted me with thick plankton blooms that initially limited visibility. However, as I swam

deeper, I encountered a bloom of cross jellyfish, moon jellyfish and other underwater life thriving in this nutrient-rich ecosystem. The presence of plankton blooms here is a clear sign of a healthy and thriving marine environment, one that supports the whales that are so abundant in this fjord. Witnessing the building blocks of this complex food chain firsthand was a humbling reminder of the interconnectedness of life beneath the surface.

Let's rewild our connection to nature & slip into the liminal space, trusting in the alchemy of the moment.

Rebecca Douglas
www.rebeccadouglas.co.uk

Rebecca Douglas is a visual storyteller, her work captures the beauty and fragility of our blue planet. A finalist in the Ocean Photographer of the Year competition, Rebecca earned second place in the Conservation and Impact category, recognising her ability to illuminate critical marine issues through her lens.
With a deep connection to the ocean, Rebecca's storytelling celebrates the wild edges of nature and inspires others to reconnect with its rhythms. Her snorkelling adventures in Iceland embody this ethos, as she explores its icy waters and vibrant ecosystems, sharing tales of moon jellyfish blooms, curious seals and the magic just beneath the surface.
Rebecca's work goes beyond imagery, she is a trustee at Whale Wise, a Marine Mammal Medic with BDMLR and a passionate advocate for conservation. Through her photography, videography, writing and speaking, she seeks to create impact by sparking awe and curiosity, rewilding our connection to nature to empower people to take action to protect the planet.
For those captivated by the natural world, Rebecca's fine art prints bring the wonder of nature into your home, while her workshops and storytelling inspire a deeper connection to the sea, sharing some of the secrets it holds.

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How do I get started?

by Ollie Clarke

The two questions I get asked most frequently are 'do you have any advice for people starting out in underwater photography?' And 'how did you get to where you are today?' So in this article I thought I'd share some insights on both of these questions with a bit of my journey in photography and some tips along the way.

The Hawksbill shot (right) is one of the first photos I took underwater, at least that I have access too. The first was with a disposable camera on a family holiday to Florida when I was about 11, although those priceless shots have probably been disposed of… Anyway, this photo is probably when I thought to myself 'this whole underwater photography thing is pretty cool'. I took it during my Divemaster course in Vanuatu, with a GoPro 3+ Silver and it isn't really in focus, it's badly composed and I lost my red filter during dive one so all the colour's are blue.

This is when I started spending more and more time in the water, playing around with my GoPro and taking lots of shit photos, which brings my to my first bit of advice - To take good photos in the water, you need to be good in the water. Take a freediving course, master your buoyancy control and take lots of photos, even if they are shit. Being confident and comfortable in the water is one of the most important steps in underwater photography, if you have a $15000 camera but you've been snorkelling twice, your images might not be that good…

Not too long after that trip I decided to invest in a better camera and ended up with a Sealife Micro cam, which I hated, may as well have stuck with the GoPro. (I don't want to bash Sealife too much I'm sure they're good now but that one was basically an off brand GoPro). So a little further down the line I was working as a diving instructor in Oman and got my hands on a 2nd hand Canon G16 with a Fantasea housing. The moral of this story - if you have a GoPro 9 but want to take better photos, you might need to invest in something a little bigger than the GoPro 10.

I first got to really use my new (old) camera on a trip to Malapascua in the Philippines, I was going to take amazing photos of the famous Thresher Sharks. Well it turns out the thresher dive is at daybreak and

My first significant shot - A little Hawksbill in Vanuatu, shot on my GoPro 3+ Silver. I took it during my Divemaster course in Vanuatu, with a GoPro 3+ Silver and it isn't really in focus, it's badly composed and I lost my red filter during dive one so all the colour's are blue.

On my last attempt I did get this OK one of a Thresher Shark, Malapascua Island, Philippines. At daybreak and usually at least 30m down, it's deep and dark with very little light. Canon G16 with Fantasea housing 1/30s f2.8 ISO 500

A Nudibranch in Padang Bai, Bali, Philippines, one of my first shots with the G16 and probably the first time I was really excited about one of my photos. Canon G16 with Seadragon 1500 lumen light. 1/200s f5.6 ISO 200

A hawksbill turtle, posing on a reef in the Daymaniat Islands, Oman. Canon G16, natural light.

usually at least 30m down, it's deep and dark with very little light. Perfect when you don't really know how to use your camera.

I had read an article somewhere suggesting I use aperture priority mode, the problem being the camera was setting my shutter for me and in that lighting it was struggling to expose the images with the shutter speed at 1/30 so all my shark shots were very blurry and dark. And at 4am at 35m I didn't manage to figure out how to change anything, probably the lack of coffee combined with a little nitrogen narcosis.

Now for moving subjects, I like to keep my shutter at atleast 1/200s to avoid motion blur. So another top tip - learn to control your camera, ideally before your first dive with it. Learn all the settings and buttons on dry land, but with the camera in the housing. Things can happen quickly underwater and if you're fiddling with the controls there's a good chance your thresher shark has swum off whilst you're scrolling through menus. During this trip I did discover a love of macro critters and photography, on one of my first dives there I encountered my first pygmy seahorse and it blew my mind - I spent about half an hour getting one shot in focus.

Next up, lighting. I was given a Sealife 1500 lumen video light as a present which I used to greatly improve macro shots, but for anything wide angle if you want video lights they need to be much more powerful 2x 10k lumen for example. However this little light did really help with my macro game, it meant I could use a much quicker shutter speed and sharpen up those little nudi's. I don't think I had really figured out aperture control by this point - I decided fast shutters were the way to go.

For some shots in Indonesia using my G16 and video light, something I wish I had for this trip was a wide angle port.

I decided the next thing I needed was a pair of strobes, so I invested in two Sea & Sea YS D2's. If you've never used them, the first time you take a photo with them it will probably blow your mind a little. The difference in sharpness, colour and exposure is amazing - the important thing is learning to control them properly, there's plenty of articles on this subject out there so I wont go into too much detail. But having them well positioned and the correct settings in camera can be the difference between nice clean shots and a half blind shark with a face full of backscatter.

It is also important to note they don't work if the subject is far away, on numerous occasions I've seen divers photographing something 10 - 15 metres away firing off their strobes and it's probably doing nothing but annoying all the other divers.

One last thing on strobing, with great power comes great responsibility - lots of marine life have sensitive eyes and don't need to be strobed over and over again for your enjoyment.

After a trip to Lembeh in Indonesia I decided it was time I invested in a full frame setup. I decided I wanted to try and follow a career in underwater photography and I had mastered my Canon G16, which was also leaking a fair bit as I didn't really take care of it - shoutout to Canon for making a non waterproof camera seemingly waterproof (it broke eventually).

I got a Sony A7Riii with a 16-35mm the 90mm macro and a Nauticam housing. It was a huge step up for me and quite the learning curve. At the time I was living in Timor-Leste, with some of the best reefs in the world, plenty of marine life and amazing macro dives it was the perfect place to get started.

Quite often people ask about my setup and think they need something similar to get good shots underwater. Before you invest your life savings consider what you will use it for and if you are ready for it.

My recommendations for beginner cameras are: the Olympus TG-6/7, Canon G7X series and the Sony RX100 series cameras. All of them have their pro's and con's so I'll try to be fairly brief, there's other articles out there with a lot more information. The TG-6/7 is a great starter, it is easy to learn and you can start taking great photos quickly, especially macro. The downside is you may master it quickly and feel like you want something better. That is where the Sony RX100 series cameras come in, if I wasn't using a pro setup, this is what I would use. You have full manual control, an excellent 1" sensor, 20.1mp images and 4K video options.

Fantasea also make very good plastic housings if you don't want to spend a fortune on an aluminium one like Nauticam. They also have decent optics like wide angle converters and macro lenses which will make a huge difference to your images - especially wide angle. I don't like to bash brands too much, but I would avoid Sea Frogs housings, they are cheap for a reason and the optics are

Another little Hawksbill, 8 years and thousands of dollars later. Sony A1, 28-60mm, Nauticam housing and WACP-1. One more top tip - get to know your subjects and don't chase them - you don't see wildlife photographers running through the Serengati after Giraffes.

The difference a good edit makes. This one was tricky as my shadow was falling right on the shark. RAW file, left. Lightroom adjusted, right.

crap.

I don't want to go too much into editing, but it is an important step in the photography journey. For a long time - even after getting my A7Riii I would just shoot JPEG and edit on my phone for instagram, and that's fine if its all you are going to do with your photos.

People always told me to shoot RAW and it took me a while to make the change, even when I did, I didn't really appreciate the difference right away. When you take a RAW photo, the camera collects a LOT more information giving you a lot more control when it comes to the edit - especially with colour, which is crucial underwater, I only shoot in RAW now.

I started out editing using an old version of Photoshop CS2 as it was available free and was still a powerful tool and it was a great way to learn. Eventually I made the switch to Lightroom, which simply put, is the best editing software available - it is the industry standard. I do also use Photoshop for some backscatter

UPY British Underwater Photographer of the Year 2023

UPY UP & COMING Underwater Photographer of the Year 2023

The whale sharks on the Ningaloo are often accompanied by bait-balls like this one, where the small fish use the shark as a floating shelter. However this one was huge, much denser and with a lot more fish than usual, so I was really excited to photograph it. The shark almost looked as if it was getting fed up with the small fish and it was attempting to shake off the swarm. It would make steep dives and then ascend again right away thrashing its tail, but the fish would just swirl even more densely around the poor shark, who would have barely been able to see through the bait-ball! I was hoping to spend a bit of time photographing this shark, but after some ups and downs, he dissapeared into the depths of the Indian Ocean, an encounter I'll never forget.
Ningaloo Reef, Australia
Sony, A7Riii, Nauticam NA-A7Riii, Sony 28-60 with Nauticam WACP-1 , iso 400, f/8, 1/250, Natural light

Leopard/Zebra shark on the Ningaloo Reef, Australia. Sony A7R3 Sony 28-60, Nauticam housing and WACP-1 1/320s f8 ISO320

A whale shark on the Ningaloo Reef, Australia. Sony A7R3 Sony 28-60, Nauticam housing and WACP-1. 1/250s f9 ISO250

removal.

After more than 4 years shooting with the A7Riii, I decided again it was time for an upgrade and I'm now using the Sony A1 with Nauticam housing which is amazing, the autofocus is so good it feels like you're cheating. During my 4 years with the A7Riii I changed wide angle lenses a couple of times, I liked the 16-35 but I just found it wasn't quite wide enough, especially for photographing the Ningaloo. For a while I used the Canon 8-15mm fisheye but found the autofocus painfully slow - I did have it on the wrong setting for over a year (face palm). So I am now using a Sony 28-60 with the Nauticam WACP-1 (wide angle conversion port), it converts a 28mm lens to a 130 degree field of view. This gives you something in between a typical wide lens and a fisheye which I like, although I do sometimes miss the superwide images you can create with a fisheye.

Anyway, if you've made it this far, congratulations! I hope it's been useful and or interesting. Any questions, send them my way, I'm usually happy to help :)

Ollie Clarke
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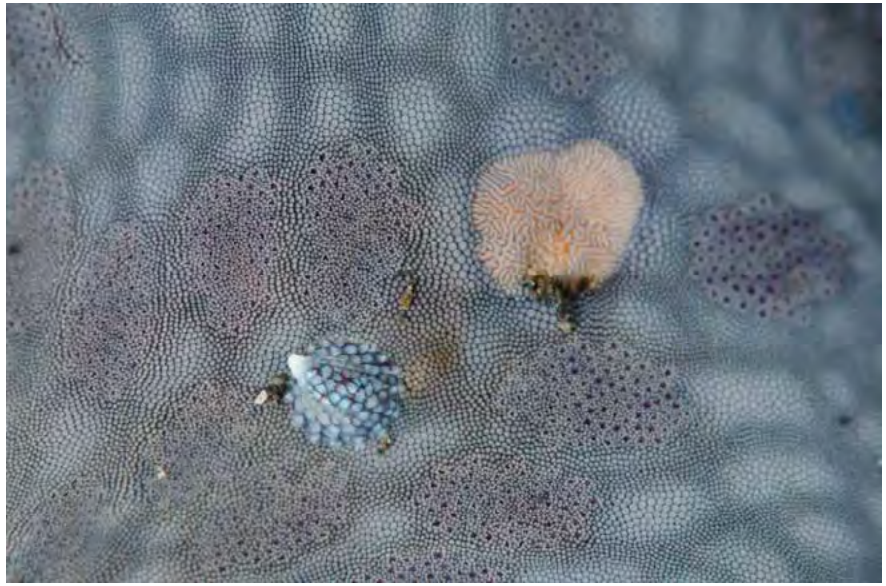
Marshall's Mysteries 19

What's going on here?
Answers on page 78

A



© Colin Marshall / BluePlanetArchive

Lembeh, Sulawesi, Indonesia — image about 2 cm across

B

© Colin Marshall / Ardea

Lembeh, Sulawesi, Indonesia — image about 10 cm across

C

© Colin Marshall / Ardea

Lembeh, Sulawesi, Indonesia — image about 4 cm across

D

© Colin Marshall / Alamy

Raja Ampat, Indonesia — Image 5 cm across

Correction

In the last publication (MM18 in UWP 141), one of the images was misnamed as a Goldstripe Wrasse (Halichoeres zeylonicus). Bart Hazes kindly let me know that it is instead Hartzfeld's Wrasse (Halichoeres hartzfeldii). H. zeylonicus is the Indian Ocean sister species with H. hartzfeldii being found in the Coral Triangle and further east, although both can occur in the "melting pot" of Bali waters.

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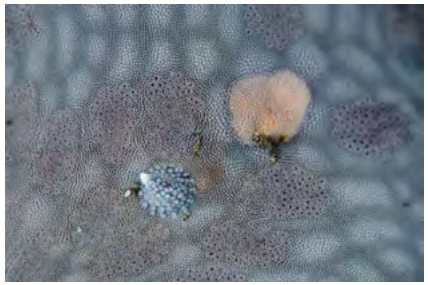
Marshall's Mysteries 19 - Answers

A



This is the underside of the common Blue Starfish, Linckia laevigata. On the Sea Star is a Parasitic Snail, Thyca cristallina.

The orange disc is the Sea Star's madreporite or sieve plate, an intake valve for seawater to flow into the the Sea Star, creating water pressure to support the Sea Star – and its tube feet, allowing movement. All Sea Stars have at least one madreporite.

The darker clusters are respiratory papulae, or skin gills, which allow the Sea Star to absorb oxygen from seawater. If there is not enough oxygen around the papulae, the Sea Star will suffocate.

Image below shows the indentation caused by suction as the Parasitic Snail adheres to & feeds on the Starfish.

© Colin Marshall / BluePlanetArchive

Lembeh, Sulawesi, Indonesia

B

Anemone Hermit Crab, Dardanus pedunculatus, with Common Hermit Anemones, Calliactis polypus, on shell for camouflage and protection.

Studies show reduced predation of the Crabs when Anemones are attached to their shell. However, the Crabs will eat their protective Anemones if starved.

The image below shows more clearly the Anemones producing the salmon pink sticky protective threads called Acontia through special pores called Cinclides (seen as the white dots or holes around the Anemone's base). Acontia contain specialized stinging cells called Cnidocytes, which deliver a neurotoxin for defense & capturing prey.

© Colin Marshall / FLPA / Minden

Lembeh, Sulawesi, Indonesia

C

Egg-eating Nudibranch (Favorinus sp) in egg sac of a polychaete worm.

Image below shows a Ringed Favorinus Nudibranch (Favorinus tsuruganus) feeding on the more structured egg mass of another nudibranch.

© Colin Marshall

Tulamben, Bali, Indonesia

© Colin Marshall / Ardea

Lembeh, Sulawesi, Indonesia

D

I saw this Marble Shrimp (Saron cf marmoratus) on a night dive, out in the open, and was surprised as it didn't move away from the light as quickly as they usually do. I then also saw there were two shrimp, which is unusual and initially thought they were mating. I then realized it was actually a single shrimp, in the process of moulting. The one on the left is the old moult or exoskeleton.

Directly below is that discarded Shrimp exoskeleton floating in the water.

Below left is a Spider Crab (Hyastenus sp) which is also moulting, with a clear exit hole in the carapace.

© Colin Marshall / FLPA / Minden

Raja Ampat, Indonesia

If you think any of the identifications or information above is wrong, please let me know at colintrmarshall@yahoo.com. Feel free to send me any images of anything you'd like some help in identifying – any particularly interesting mysteries may be included in future Underwater Photography issues.

Guidelines for contributors

The response to UwP has been nothing short of fantastic. We are looking for interesting, well illustrated articles about underwater photography. We are looking for work from existing names but would also like to discover some of the new talent out there and that could be you! UwP is the perfect publication for you to increase your profile in the underwater photography community.

The type of articles we're looking for fall into five main categories:

Uw photo techniques - Balanced light, composition, etc
Locations - Photo friendly dive sites, countries or liveaboards,
Subjects -, Anything from whale sharks to nudibranchs in full detail
Equipment reviews - Detailed appraisals of the latest equipment
Personalities - Interviews/features about leading underwater photographers

If you have an idea for an article,
contact me first before putting pen to paper.
E mail peter@uwpmag.com

How to submit articles

To keep UwP simple and financially viable, we can only accept submissions by e mail and they need to be done in the following way:

1. The text should be saved as a TEXT file and attached to the e mail
2. Images must be attached to the e mail and they need to be 150dpi

Size - Maximum length 20cm i.e. horizontal pictures would be 20 cm wide and verticals would be 20cm high.

File type - Save your image as a JPG file and set the compression to "Medium" quality. This should result in images no larger than about 120k which can be transmitted quickly. If we want larger sizes we will contact you.

3. Captions - **Each and every image MUST have full photographic details** including camera, housing, lens, lighting, film, aperture, shutter speed and exposure mode. These must also be copied and pasted into the body of the e mail.

Parting Shot

by David Fleetham

I first began diving in British Columbia, Canada back in the 70's. The cold water required a drysuit and was definitely not for everyone. Taking pictures underwater in those days involved film and was not something many divers attempted. It was these, out of the ordinary images that drew me to underwater photography. I felt it was unique and what I was capturing was exclusive to just a small group.

With the onset of digital imagery that feeling of uniqueness has somewhat slowly evaporated, that is until I began blackwater diving. That feeling has now returned. Swimming around in the open ocean, sometimes several miles from shore is again not for most divers. Indeed many seasoned divers have no interest in something that seems just a bit unbalanced to a considerable majority.

In Micronesia, at some point on every blackwater dive that I have done, squid will come zipping by. These are purpleback flying squid or purpleback squid, Sthenoteuthis oualaniensis. Occasionally you will see a dozen, and on a few nights thousands and thousands dart through your beams of light. They sometimes feel like a buddy trying to get your attention, when they occasionally collide with you, but when you spin around all that remains is an inky cloud left by a squid that is now long gone.

They rarely stop, so even in those vast numbers it can be difficult to get a shot off. They are voracious and will often, as pictured here, dine on their own species. Cannibalism at its finest. The green cloud coming from the victim is its last squirt of ink.

This image was captured at night with the bottom 3000+ feet below, a mile off the island of Yap in the Federated States of Micronesia. The downline was provided by the Manta Ray Bay Resort and Yap Divers who regularly take divers out into the darkness. The deepest point on the planet is nearby and so we expect the unexpected.

Canon EOS R5 mirrorless in an Ikelite dry-lock housing with a Sigma 70mm macro lens, 1/200 sec, F16, ISO 250, with two very powerful Ikelite 230 strobes set on TTL.

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