



Indonesia's Leading Dive Resort



Bunaken Oasis offers world-class luxury accommodation with world renowned scuba diving sites in the heart of Indonesia, Bunaken National Park in North Sulawesi. Five-time winner of Indonesia's Leading Dive Resort at the World Travel Awards

info@bunakenoasis.com
www.bunakenoasis.com



Contents

4 Editorial

The ISO race, Topaz AI, AI, My Shot & Parting Shot



5 News, Travel & Events



13 New Products



24 DPG winners 2023

by Ian Bongso-Seldrup

Cover shot by
Marco Gargiulo
DPG Best of Show 2023



27 Exhibition Competition

by Peter Rowlands & Gina Goodman



31 YS D3 Duo update

by Dan Bolt



32 Scubalamp MR6 monitor

by Peter Rowlands



35 Ikelite DS230

by Nicolas Remy

Underwater Photography

A web magazine

UwP136 Jan/Feb 2024



41 Oceanic iPhone housing

by Shannon Moran



45
OM

System TG-7 & FCN T02

by Peter Rowlands



48 FIX SystemFrame PT01

by Peter Rowlands



50 Banda Sea

by Nigel Marsh



55 Deep UK wrecks

by Rick Ayrton



63 Mar Menor Seahorses

by José Luis Alcaide Sanjurjo

67 Marshall's Mysteries 13

by Colin Marshall

Underwater Photography 2001 - 2024
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Publisher/Editor Peter Rowlands
www.pr-productions.co.uk
peter@uwpmag.com

Rick Ayrton's excellent and informative article on photographing shipwrecks in British waters is also a fascinating history of digital underwater photography; and in particular how one of the most significant, and for us most beneficial, developments has been the increase in ISO speed and quality.

I'm not going to side track the issue and ask whatever happened to ASA because I'm sure most UwP readers would look at me quizzically but Rick's superb images are a testament as to how far the image quality has been developed when shooting at high ISO settings.

Traditional film speeds started at 25 ISO and went up to the dizzy heights of 400 (Remember Kodak Tri X Black and white?). The early digital SLR cameras offered up to 500 ISO maximum for starters and it wasn't long before the speeds had three noughts on the end and needed a comma separator.

With each new flagship DSLR came an increased number until nowadays 20,000 ISO is not uncommon and the quality is very impressive.

25 to 20,000 is just under 10 stops speed increase. No wonder the deep wreck photographers have to keep upgrading their cameras!

AI

When I were a lad, AI stood for artificial insemination which was fairly new to the veterinary world in the 50s and 60s.

Now it has been taken over and renamed into what could be the start of a brave new world in all directions and at lightning speeds. There will be no side of life able to escape its effects whether good or bad if you believe what 'they' say.

The imaging world is often held up as an example of the benefits, and possibly even greater pitfalls, of this new visual capability. Being able to produce an image with just a written instruction sounds seismic so I asked ChatGPT to "Create an image of a coral reef underwater with a sunburst background".

ChatGPT replied (unbelievably instantly) "I'm sorry, but as a text-based AI model, I cannot create visual content such as images".

So maybe we're safe for a little while longer.

Topaz AI

I was introduced to this comparatively new image manipulation software by a fellow traveller who demonstrated its amazing capability to improve still images.

Now as a primarily 'video content creator' I checked if they did a video version and £177.41 later I had Topaz Video AI on my desktop and I think this will be a game changer on several levels and particularly for video. Here's why.

In addition to the obvious stabilisation, grain and motion blur settings I can 'upscale to 4k' or 'convert to 60fps' (or both!). Do you see where this is going? Does it mean I can still shoot on my small, cheap 1080p 30fps camcorder and end up with 4k 60fps?!!

Well the answer is yes and no. Upscaling to 4k is pretty impressive but I don't think it's quite as subtle as shooting in 4k originally; but converting to 60fps is much more impressive and produces buttery smooth playback by interpolation of an already high quality image.

4K 60fps cameras/camcorders tend to be considerably more expensive than 4k 30fps so you can

make significant savings or be able to carry on shooting with your existing 4k 30fps and convert it later.

True, you'll need a fast processor computer/laptop as even a few seconds can take several minutes to process but you only have to process your final output to the new quality.

Also the ability to 'freshen up' old analogue footage is a very pleasant experience indeed.

Frightened of AI for the imaging industry? As an end user I say, hell no. If this is what it can do, bring it on.

My Shot and Parting Shot

My apologies but there haven't been any contributions for these two regular slots so if you have an idea for either of these, we'd love to hear from you.

In the meantime, Happy New Year and may your pixels be perfect.

Peter Rowlands
peter@uwpmag.com

News, Travel & Events

A new underwater photography community - Waterpixels!

Many UWP readers will be familiar with the issues surrounding Wetpixel, its travel programme and its owner, Adam Hanlon.

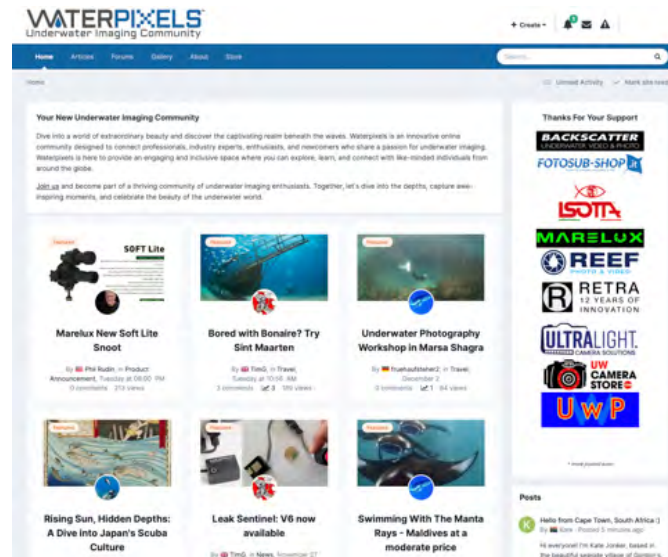
Concerns about the knock-on impact for its popular community forum were never addressed. New members were not being approved, guest access was closed-off and its front page was not updated for some months.

As a result, a small group of long-term members have got together and developed a new underwater photography forum called... Waterpixels!

The site went live recently. Early signs are very promising with lots of underwater photographers joining, posts and articles pouring in, and significant interest from the industry.

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

Waterpixels is free to join. The site administrators intend to fund the forum through the sale of merchandising in the shape of t-shirts, coffee mugs and beanie hats and, perhaps in the longer term, some advertising from the underwater photography industry. In response to public demand, they are working on stickers/decals! It's worth noting that arrangements have been made to ship from multiple locations to try and avoid,



wherever possible, import duties.

Although Wetpixel was seen sometimes as more for the high-end system user, Waterpixels aims to provide help, advice and information to all underwater photographers.

So, whether you use a GoPro, a housed iPhone or the latest and greatest mirrorless camera or DSLR, take a look at Waterpixels and join-up. You are sure of a warm welcome and to see many familiar faces and names.

www.waterpixels.net

Passport To Paradise



Oonasdivers are delighted to bring you Passport to Paradise, an exciting diving holiday that allows you to explore three superb diving destinations in one trip!

Discover Bunaken, Bangka and Lembeh, three distinct destinations in North Sulawesi. Dive the phenomenal walls of the Bunaken Marine Park where you'll lose count of the number of turtles in a single dive. Explore Bangka Island's kaleidoscopic coral reefs, abundant critters, passing pelagics and dugongs, then dive into the world's best muck diving in the Lembeh Strait.

Established in 1985, Oonasdivers are a specialist tour operator offering travel for those with an adventurous spirit. We offer diving holidays to individuals, couples, families, groups, clubs and schools.

Oonasdivers are fully bonded with ATOL (Air Transport Organisers Licence) 4032 giving you that extra peace of mind that your holidays which include flights made with us are covered by our bond.

www.oonasdivers.com

Final call for UPY 2024 entries

Midnight GMT on Friday 5th January

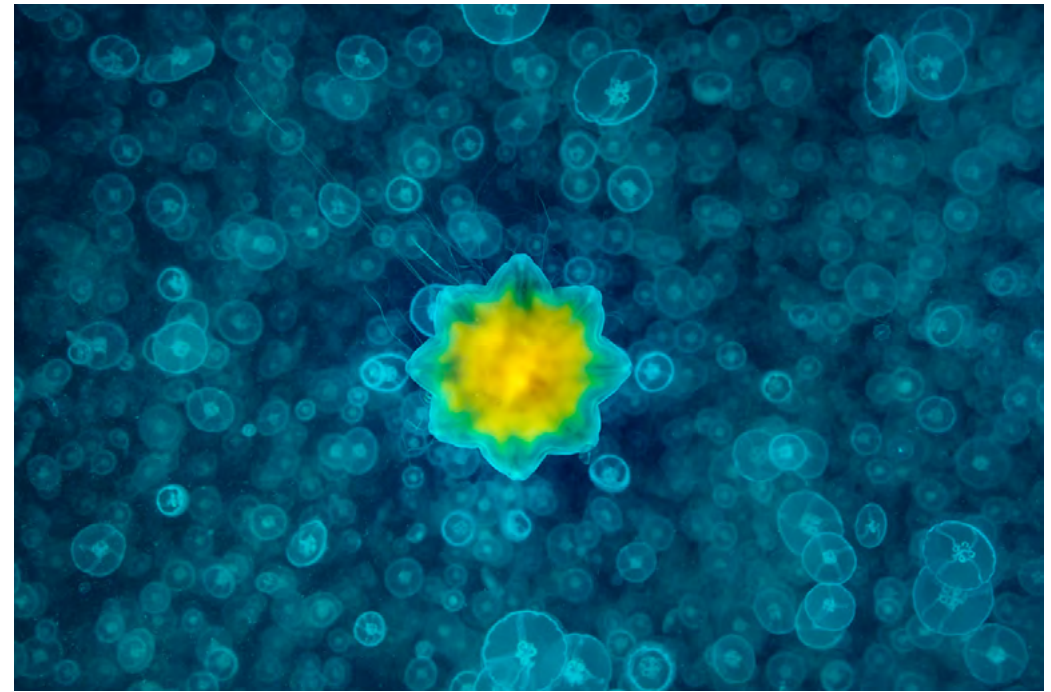


© Tanya Houppermans/UPY

We can't wait to see your amazing images again, and all three judges look forward to viewing every single image that is entered into the competition!

STOP PRESS! on Jan 1, 2024, day one of the new year, Wide Angle Category Sponsor Marelux made this advertising in Gangnam District, Seoul, South Korea, with UPY logo as a last call for the competition.

www.marelux.co



© Ron Watkins/UPY



<https://underwaterphotographeroftheyear.com>

Dive into Macro Magic Bali Workshop with Kate Jonker, 8 - 18 May 2024



Join me on an extraordinary 10-night macro underwater photography workshop trip to Bali in May 2024!

As I am keeping the group small to ensure everyone gets my undivided attention, there are only 12 spots available.

Immerse yourself in the magical waters of Tulamben, Bali, and embark on a journey to capture the awe-inspiring beauty of the underwater world through macro photography.

Whether you are a beginner looking to enhance your skills, or an experienced macro photographer seeking new inspiration, this workshop is designed to take your underwater macro photography to

new depths.

By the end of the trip, you will have an incredible set of images, have met some really awesome, like-minded underwater photographers and mastered an entire set of macro underwater photography skills.

With this comprehensive workshop approach, you'll gain a deep understanding of macro and critter photography, refine your techniques, and take your underwater images to new heights.

Price: US\$ 2 235 (per person sharing) – includes FREE daily workshops and image reviews

www.katejonker.com

Cozumel Photo Workshop May 11 - 18, 2024 Trip Leader: Linda Zath



Join us in May 2024 in one of Mexico's best diving destinations, Cozumel a year-round diving destination known for its drift dives, clear water and vibrant marine life.

12 Reasons To Join This Trip?

- We have a private boat, so we can dive the best sites whenever we want.
- We are staying at Cozumel's best resort, Iberostar.
- Resort is all-inclusive! Everything! Even sushi!
- The resort is beautiful, featuring a distinctly tropical ambiance enhanced by stunning gardens and plants, and plenty of shade. It boasts three pools equipped with swim-up bars and a truly delightful white sand beach.
- The on-site Dive shop, Dressel Divers, operates exceptionally well. It offers great tank fills, with Nitrox available, and boasts well-equipped boats providing ample shade.
- Meals are buffet-style, which means you can eat quickly if you want. But the food selection is huge, and the

food is tasty. They also have three sit-down à la carte restaurants.

- We'll have the best guides, who won't rush us during the dives, and who will find us small stuff and big stuff.
- Eagle rays! Nurse sharks! Seahorses! Eels, octopus, toadfish, reef sharks, turtles, angelfish, schools of jacks.
- The resort is super close to Cozumel's best dive sites - Palancar Reef and Cedral. Palancar is so amazing, huge sponges, pinnacles and swim-throughs!
- A sprawling resort with abundant amenities - it never feels crowded. You won't have to wait for food, drinks, etc. Best rental gear in the world! Dressel Divers has all Scubapro rental gear, no need to bring your own BCD or reg! Great for non-divers, bring your partner, they will never be bored. Ask for special prices for non-divers.
- FREE optional photo workshop.

www.bluewaterdivetravel.com



Six Senses Laamu, Maldives. May 1-31, 2024

Erin Quigley is headed back to the Maldives for the month of May! Join her at the incomparable Six Senses Laamu. Come for a week or stay for the entire month for some well-deserved pampering and dive the spectacular reefs of Laamu Atoll. This is not a structured trip, there is no daily schedule. Hang out with Erin and dive with her in paradise.

Beautifully remote, yet accessible by plane from Malé (MLE) International Airport, Six Senses Laamu is set in a palm-fringed lagoon to fill you with wonder and fuel your wanderlust. Villas with all the creature comforts are set either on stilts over the water or on the beachfront and are an easy wander from the resort's restaurants, lounges, and amazing Maldives attractions and destinations.

Six Senses Laamu is the only dive resort in the Laamu Atoll so we are virtually guaranteed of having the dive

sites to ourselves when we go out, something that is extremely rare for a world-class diving area and almost unheard of for a place with mantas year-round.

Six Senses Laamu has 97 spacious water and beachfront villas, carefully designed to harmonize with the outstanding natural beauty of the island. They offer privacy, coziness, and comfort. True to the Six Senses' philosophy of being in harmony with the environment, all of Six Senses Laamu's villas are crafted from local and sustainable materials.

For the hard core diver we are offering a package with up to 3 guided boat dives a day. Laamu offers over 30 dive sites catering to all experience levels.

www.backscatter.com

Little Cayman with Ikelite October 12-19, 2024



Clear your schedule for October 12-19, 2024 and prepare for a week of exciting diving with a focus on underwater photo and video. Join the Ikelite crew in one of the Caribbean's most iconic dive spots - Little Cayman!

We are limiting the number of guests on this trip to maximize time for one-on-one interaction. Ikelite Staff including John Brigham, Steve Miller, and Logan Wood will be on hand to provide photo instruction and inspiration.

Come to improve your imaging and make new friends at the same time! You can count on a laid-back atmosphere with fellow underwater photography enthusiasts.

Reef Divers makes the diving

easy including handling the heavy lifting and care of your boat-dive gear (unless you prefer to do it yourself). They rinse, dry, and store your BCD and regulator daily.

Marine life is incredibly healthy and diverse in Little Cayman. In addition to the colorful corals, sponges, and anemones you'll also see nurse sharks, sea turtles, octopus, sting rays, parrot fish, groupers, and maybe even seahorses. We love that the turtles and Nassau grouper feel protected enough in the waters of Little Cayman that they seem to have no fear of scuba divers or underwater photographers.

www.ikelite.com

www.uwpmag.com

NAD-Lembeh Resort



NAD-Lembeh Resort is a small, owner-operated, photography-oriented dive resort in the Lembeh Strait. We are situated in a private bay on Lembeh Island, away from the hustle and bustle of the mainland. We guarantee a 2:1 guest to guide ratio as standard, which makes for a private dive experience and lots of time to take pictures.

All our rooms (10 Beachfront Rooms, 5 Seaview Bungalows) offer ocean view, air conditioning, hot water, wifi, including full board. Our resort has only few steps, which makes our layout extremely convenient to get from your room to the restaurant, camera room, bar and floating jetty.

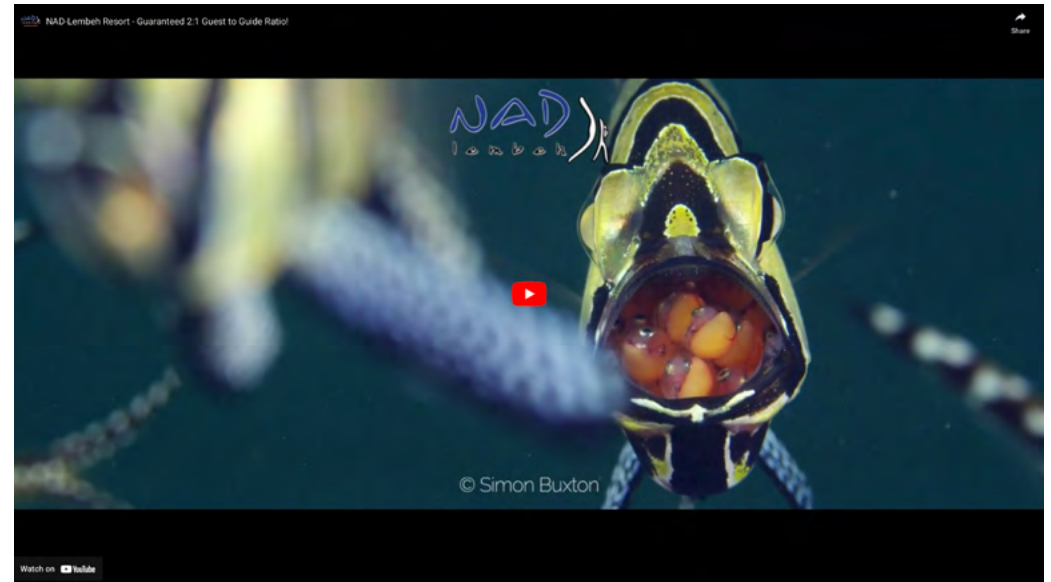
Our dive team consists of 15 full-time guides, with over 100 years of

combined experience! Air as well as Nitrox and various cylinder sizes (both DIN and Yoke are available onsite).

NAD-Lembeh has 4 large, purpose-built dive boats. Each at around 15m long, they offer lots of space and comfort for the divers. Boats feature onboard toilets, towels, drinks and snacks and first aid/oxygen.

Our jetty allows our guests dignified and quick boat entries – all our dive boats can be moored simultaneously, so there is no wading through the shallows to get on the boat for the dive!

Our focus at NAD is to take your underwater photography to the next level. We offer 1:1 photo classes and our guides are all proficient with photography, using our rental



equipment for fun dives when not diving with guests.

We shoot video up to 8K, along with Nikon/ Canon SLR and mirrorless setups. This gives us a rounded knowledge of all cameras. We are also the go-to location for natural history filming in the Straits.

Our newly renovated, huge camera room offers one work space for each and every guest. The spacious, individual benches with lots of power points were purposely built for underwater photographers. NAD's dedicated camera room is also the perfect place to work on and edit your pictures.

Several rental cameras and strobes are available onsite. We have basic tools and spare parts in our gift shop in case of minor camera



Merry Christmas and happy holidays from the NAD team to all of our guests, family and friends around the world!

problems as well as a drying cabinet, and computer for you to work on and edit your photos.

www.nad-lembeh.com

Underwater Photography Workshop



Join renowned British photographer Dr. Alex Tattershall for a 9-night underwater photography workshop. from September 24th to October 3rd 2025, at Bunaken Oasis Dive Resort, Indonesia.

Discover the incredible wide angle and macro photography that Bunaken has to offer whilst learning how to take your photography to the next level from an internationally acclaimed, award-winning photographer over 23 dives.

Contact Georgie Bartlett at Georgie.bartlett@bunakenoasis.com to register your interest and secure your place.



info@bunakenoasis.com
www.bunakenoasis.com



Phil Rudin - Marelux Product Senior Advisor



Phil Rudin has been announced as the new Senior Advisor at Marelux. Founded in California USA, Marelux has grown to become a front-runner in the expansive domain of underwater photography.

Phil is a South Florida USA based underwater photographer and Senior Reviewer for Underwater Photography Magazine (uwpmag.com) having contributed over 100+ articles on new photo equipment, photography techniques and dive travel.

Phil's images have appeared in a verity of magazines including Popular Science, Sport Diver, World's

Best Diving, Reflections, Scuba Diving, Underwater Journal, Skin Diver, Florida Underwater, South Florida Adventures, Mexican Diver and many more.

Phil has conducted underwater photography workshops for Reef Photo & Video, Underwater Digital Fiesta, Digital Jam, Hasselblad Xcursion, SFUPS, Dive Into Photography and more.

Phil has been taking underwater photos for over 55 years and he is a Platinum Pro 5000 Diver who also lectures on travel destinations and photography around the world.

<https://www.facebook.com/phil.rudin>
<https://www.instagram.com/philrudinphotography/>

www.marelux.co

www.uwpmag.com



Master Macro with Martyn Guess, May 2024, Dumaguete

Building on the fabulous 2022 workshop, Martyn Guess is returning to the Dumaguete for his popular macro workshop in the Philippines. Atmosphere resort in Dumaguete is well known to seasoned photographers and dive staff that know intimately what subject is hot and where to find them. You can log a lot of hours underwater here. The diving day offers plenty of scheduled departures, with the option to add extra shore dives or night dives. Most diving is by boat and sites are rarely more than 5-10 minutes from the resort. Atmosphere resort has an



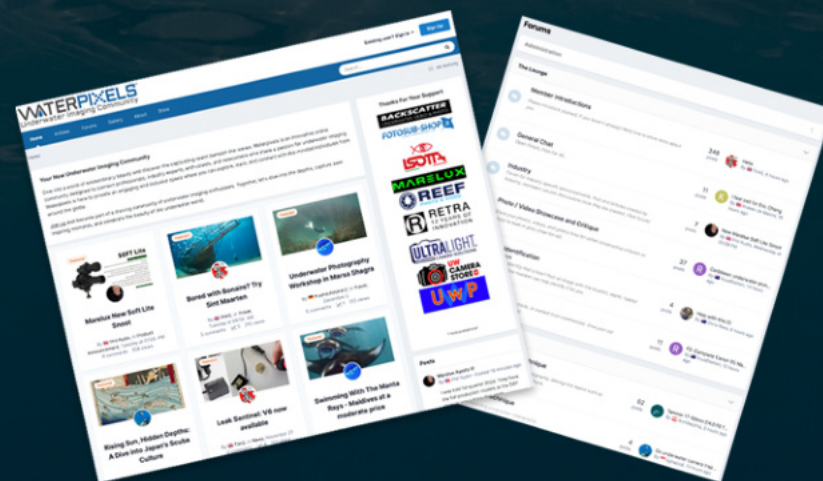
excellent purpose built camera room and TV screen for presentations and is conveniently placed directly opposite the dive centre.

www.scubatravel.com



WATERPIXELS™

Underwater Imaging Community



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

New Products

AOI Signature Series

AOI Ltd, a leading innovator in underwater imaging is thrilled to announce an exciting collaboration with renowned professional underwater videographer Kay Burn Lim. This partnership aims to revolutionize underwater photography and videography with the development of a cutting-edge underwater housing for GoPro cameras, giving birth to a new product line known as the “Signature Series.”

The “Signature Series” represents a fusion of AOI’s expertise in designing top-quality underwater camera products and accessories and Kay Burn Lim’s unparalleled experience capturing the wonders of the underwater world. The result of this collaboration will be an underwater housing for GoPro cameras that sets new industry standards for performance, durability, and versatility. The housing is milled from aluminium and will carry the moniker of AOI UH-GPX.

The housing will feature advanced optical elements to maintain the highest quality image and video capture, even in challenging underwater conditions. The housing



will have the hugely popular Quick Release systems built in, enabling it to attached the UWL-03 and UCL-03 lenses which significantly improves the optical capabilities of GoPros.

The new housing will be compatible with the recently launched GoPro 12 and backward compatible to



GoPro 9, 10, and 11.

Stay tuned for more updates on the “Signature Series” .

www.aoi-uw.com

Fisheye FIX System Frame PT01 for Olympus PT-059 / PT-058



This system frame is easy to expand with ballmounts to mount a light or even a lensholder to ‘park’ your lens.

Specifications:
Body material: Corrosion resistant aluminum alloy, rubber
Size: 225x184x58mm
Weight: 385g(Air) 230g(Water)
Included Items: Direct base, screw, Allen wrench, Opener ring

<http://www.fisheye-jp.com/en>

www.uwcamerastore.com



INNOVATIVE UNDERWATER

Built on a foundation of innovative product design & modern manufacturing technology. Both TG7 & GFX100II embodies Nauticam's Mission Control design philosophy placing essential controls within easy reach of the reinforced molded handles.



PN# 17820 / 17821

NA-TG7

FOR OLYMPUS TOUGH TG 5 / 6 / 7 CAMERA



PN# 17160

NA-GFX100II

FOR FUJIFILM GFX100II CAMERA

Flash Triggering



Integrated Bayonet Mount for #17820



83203
WWL-C



81301
CMC-1



81302
CMC-2



85204
WACP-2



85206
WACP-1B



85205
WACP-C

Nauticam
Innovation underwater

WWW.NAUTICAM.COM

Scubalamp SUPE Monitor MR6



The Scubalamp SUPE Monitor MR6 has some leading features:

- Support HDR monitoring
- Support user 3DLUT upload
- 1920x1080 full HD IPS screen, 2600nits of brightness.
- Full waveform display, waveform graph, vector diagram, RGB histogram
- Brightness histogram is a quantitative toll to testing the brightness of pictures which guides photography exposure control.
- Focus assist (Yellow/Red/Green/Blue/white focus edges are optional)
- Zebra pattern and false color assist function is convenient for guiding lighting during shooting and post-production.
- Monochrome display (gray/Red/Green/Blue)
- Image zoom function

- Warp mode
 - Image flipping horizontally and vertically and auto mirroring
 - Image still
 - Dot by dot display
 - Center marks, safety marks and banner marks
 - Image brightness, contrast, sharpness, hue, saturation and color temperature adjustment
 - 2*21700 Battery with Type-C rechargeable.
 - Battery Capacity: 18.5Wh (3.7V×5.0Ah)
 - Working Time: About 2-7 hours
 - Working Voltage: 5.4-8.4V.
- \$1098

www.fotocore.com

www.uwpmag.com

BACKSCATTER MINI FLASH 2



THE
PERFECT
MACRO
STROBE
FOR
ANY
CAMERA



Nauticam NA-TG7 Housing For Olympus TG-6/7

The NA-TG7 brings legendary Nauticam durability and ergonomics for the Olympus TG-6 and OM System TG-7 cameras. The milled aluminium housing incorporates features pioneered in the SLR, mirrorless and digital cinema lines. All camera controls are clearly labelled, and the video record button is easily identified by shape and colour. The proven rotary locking latch makes closing the housing simple and secure. The integrated thumb grip and sculpted shutter button make handling the housing intuitive and comfortable.

The Nauticam NA-TG7 comes with handle brackets and a shutter release extension for users who wish to use the optional handles and trays. Other housing features include 2 fibre optic ports, easy access zoom lever, Nauticam integrated bayonet port, scratch-resistant rear window, M10 threaded hole and a cold shoe attachment point.

Features:

- Clearly labelled controls.
- Sculpted shutter lever for easy access
- Shutter extension ships with the housing
- Dual fibre optic ports



- Integrated Nauticam bayonet mount
- M10 ball mount hole and cold shoe

Technical Specs:

- Depth rated to 100m
- Weight: 0.62kg
- Dimensions: 162mm (w) x 75mm (h) x 113mm (d)

www.nauticam.com

SEA&SEA
THE UNDERWATER IMAGING COMPANY

BRAND NEW D3.



NOW ON SALE

- 1) *Officially compliant RC mode by OM Digital Solutions.*
- 2) *High precision DS-TTL dimming.*
- 3) *Various custom functions for all cameras.*

www.seaandsea.jp

EUROPE'S NR. 1 UNDERWATER CAMERA STORE



HOUSINGS FOR THE NEW NIKON Z8!



NAUTICAM NA-Z8



NAUTICAM NA-A7RV



WE ARE UNDERWATER PHOTOGRAPHERS... JUST LIKE YOU.

SeaTouch 4 Max iPhone system



SeaTouch 4 Max underwater touchscreen housing is a revolutionary design for smartphone to use underwater up to a depth of 60 meters.

For its limitless operation to the touchscreen of the smartphone, you can simply use all the function and Apps of your smartphone. it is World's 1st underwater full touch screen diving housing for smartphone.

It is the future of underwater image, communication and entertainment.

World's 1st All-in-One Diving Assistant. Patented Underwater TouchScreen as on land for underwater iPhone diving case. This iPhone diving housing is used for protecting your iPhone and taking great videos, pictures when surfing,



diving, snorkeling, skiing, or other activities.

You can use the Compass, iPhone Built-in compass is easy to access and work well underwater. Moreover, you can Instant Upload & Share in any time.

www.divevolkdiving.com

BACKSCATTER

FLIP

UNDERWATER GOPRO FILTERS

NO FILTER



WITH FLIP



EUROPE'S NR. 1
UNDERWATER CAMERA STORE



NEW! IKELITE DS230 WITH VIDEO LIGHT



213 Ws UNDERWATER STROBE
120 DEGREES WITHOUT DIFFUSER
2500 LUMEN VIDEO LIGHT

IN STOCK READY FOR DIRECT SHIPMENT!



WE ARE UNDERWATER PHOTOGRAPHERS... JUST LIKE YOU.



Issue 136/16

SeaLife® 6"/15cm Wide Angle Dome Lens for SportDiver Smartphone Housing

SeaLife has introduced a new Wide Angle Dome Lens for their popular SportDiver underwater smartphone housing that increases the phone's camera lens field-of view by 43% and allows photographers to get closer to the subject while fitting everything into the image frame.

The new dome lens mounts directly to the SportDiver housing's lens port without any lens adapter. The 0.65x dome lens requires no skill, training, or adjustment; simply mount it and shoot.

Split shots that split the topside view with the undersea view are especially easy.

The 6" Wide Angle Dome Lens design uses high-grade acrylic optics arranged in a 2-element/2- group array that delivers crisp edge-to-edge sharpness. "This is a very versatile lens that significantly improves the phone lens' performance and allows for some creative underwater images and video" says Bjorn Harms, SeaLife's Vice President of Product Development.

The lens has a 15.6mm film-equivalent effective focal length when used, for example, with the SeaLife



SportDiver and the iPhone 15 Pro's 24mm "Ultrawide" camera lens. The lens is waterproof to 130ft/40m and is positively buoyant. The new 6"/15cm Dome Lens fits all SeaLife SportDiver housings.

The lens includes a rotatable sunshade built around the optics to help control stray sunlight. The new lens is a "wet lens" and easily attaches and removes underwater, the inner lens chambers are air-filled, and the lens is therefore buoyant.

\$199.95

www.sealife-cameras.com



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.

www.reefphoto.com

www.uwpmag.com

NOW ON SALE



**BRAND
NEW
D3.**

- 1) *Officially compliant RC mode by OM Digital Solutions.*
- 2) *High precision DS-TTI dimming.*
- 3) *Various custom functions for all cameras.*

SEA&SEA
THE UNDERWATER IMAGING COMPANY

www.seaandsea.jp

Ikelite housing and OM System Tough TG-7 Camera Kit

If you want to travel with a system that's extremely small and lightweight, the OM System Tough TG-7 with Ikelite ULTRAccompact Underwater Housing is a perfect choice.

The Olympus camera brand was sold in 2020 and rebranded as OM System. The newly formed company is committed to building on the strengths of the Olympus brand. In 2023, they introduced the Tough TG-7.

The TG-7 has a bright 25-100mm mid-range zoom lens and a high-speed back-lit CMOS image sensor for excellent performance in low-light settings. If you love to hunt down the small stuff, you'll find that the TG-7's microscope mode is among the best macro options available underwater right now. This camera is capable of macro close-up images that are as good as if not better than expensive mirrorless cameras.

When you want to explore wide angle photography, you'll be glad to have the only underwater housing that supports use of the incredible FCON-T02 Fisheye Lens. Just swap out the flat port for the optional Dome Port and gain the ability to go from macro to wide angle on the



same dive. The FCON-T02 with Dome Port are super lightweight and allow full zoom through at the touch of a button. This combination makes it easy to shoot split shots (half-in, half out of the water), which can be difficult or impossible with external wide angle lenses.

The TG-7 supports ultra HD 4K video and RAW image capture, which is a powerful tool for post-dive color corrections using either Adobe Lightroom or the included software. The TG-7 is waterproofed to 50' (15.2m) even without a housing, which makes set-up a little less stress-inducing.

Sale price \$ 900.00

www.ikelite.com



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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THE BEST BANG FOR YOUR BUCK



OLYMPUS E-M10 IV

Inon ZM80 Underwater Micro Fisheye Lens



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Inon's compact Inon ZM80 creates a fisheye effect in a very small package. This allows shooters to get a 150-degree wide angle perspective at extremely close range. Because of its tiny size, the lens can be positioned in places a normal fisheye with a dome can't get. With the correct adapter, the Inon ZM80 can mount on 67mm or 52mm threaded ports and be adjusted to achieve the correct distance from the camera lens. 27mm Threaded Lens (67mm Optional Adapter) "Bug-Eye" View Designed for Compact Cameras



Minimum Focus: 0cm / 0in (Yes, 0)
Max View Angle: 150° Underwater / 180° Topside
Depth rating: 60m / 197ft

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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/
ProRes RAW 12-Bit.

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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AOI UH-GPX



ALUMINUM UNDERWATER HOUSING FOR GOPRO

5" MONITOR

BATTERY PACK FOR LONGER OPERATING TIME

BAYONET MOUNT FOR FILTERS, MACRO- AND WIDE-ANGLE LENSES

Dive and See Universal 5" U/Water Monitor Two Inputs - HDMI and SDI. 4k 60hz



DNC-5B SDI and HDMI inputs - is the best monitor for underwater applications. It means when you have two underwater devices/housings with SDI and HDMI cameras, you need just one monitor. Simply connect the appropriate Dive And See cable, and use the universal monitor with either camera.

Rotatable Bulkhead connectors on the monitor have a low-profile Elbow shape. Waterproof cables with connectors from both ends are compatible with any Dive And See bulkhead connectors.

Completely manufacture sealed design eliminate one most common problem leakage of the equipment after the open close procedure.

With the enhanced 600 cd/m2



back-light and a 1100:1 color contrast ratio, this Video Camera Monitor produces a crystal clear picture and shows colors vividly even under sunlight. A large, manufacturer sealed, bright external DNC-5B monitor gives you the ability to frame your shots and focus with great precision, the flexibility to swivel and tilt to any angle for your convinient use.

Color temperature function allows you perfectly match a color of the screen and your Video or DSLR camera screen. Analyze the incoming video signal with built-in video monitoring tools to achieve correct exposure, focus, and color balance.

\$2,977.00



Photo by Vanessa Mignon

AOI UH-OM1 housing



The new UH-OM1 housing from AOI is a homage to the origins of the OM-1. The housing hopes to deliver a similar user experience of the camera when shooting underwater. This includes being able to use some of the most popular lenses for underwater photography while keeping the entire housing and the corresponding ports compatible with legacy port systems from Olympus and as well as those from AOI. The ergonomic design, with a hand grip makes it a favourite for freedivers or surfers. For example, when paired with 7-14mm PRO lens, using the PEN To OMD Converter Extension Ring and 8" Glass Dome on the UH-OM1, the entire rig is still positively buoyant in water. Or when using the new plastic Macro Port with the 60mm Macro Lens it is 90gm positively buoyant, which is almost neutral in water. Making the entire system with lens and port a joy to handle.

Don't be deceived by the demure stats of the UH-OM1. Although weighing only 1079 grams, it comes with a smart control box that manages the built-in integrated flash trigger, Vacuum Analyser & Wet Detection System and it is fully rechargeable. The outside dimension is only 195.9mm (W) x 129.7mm (H) x 149.7mm (D) and it is fully

compatible with legacy port systems from Olympus and as well as those from AOI. The ergonomic design, with a hand grip makes it a favourite for freedivers or surfers. For example, when paired with 7-14mm PRO lens, using the PEN To OMD Converter Extension Ring and 8" Glass Dome on the UH-OM1, the entire rig is still positively buoyant in water. Or when using the new plastic Macro Port with the 60mm Macro Lens it is 90gm positively buoyant, which is almost neutral in water. Making the entire system with lens and port a joy to handle.

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www.uwpmag.com

CUSTOM COLORS

Black Silver Grey

Olive Green Yale Blue Burgundy

MODELS

MX-R5	MX-R5C	MX-R6	MX-R6II
MX-R7	MX-A7RIII	MX-A7RIV	MX-A7IV
MX-A7RV	MX-A7SIII	MX-A1	MX-FX3
MX-Z6I/Z7II	MX-Z8	MX-TG6	MX-RX100M7

Best-in-class design, Compact and lightweight. Made by uniquely anodized aluminum, Superb scratch resistance with multiple color options.

MX Housing

Mirrorless Camera

MX-Z8

MX Strobes

Apollo S

Apollo III

Apollo X

Marelux developed three innovative strobes, world's first TTL HSS RC compatible UW strobe, with wireless trigger, patented design including wireless signal transfer. First shipments scheduled in Q1 2024.

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SOFT Lite

SOFT Lite X

Introducing the brand new patented SOFT Lite by Marelux, a revolutionary lighting solution that allows you to control the coverage range of the light beam by linking it with a strobe. Constructed from sturdy, lightweight nylon, it boasts neutral buoyancy underwater. The SOFT Lite offers adjustable settings for brightness and light color, tailored to your preferences, and includes a convenient automatic shut-off timer. Experience the durability and versatility of the SOFT Lite, making it a perfect lighting companion for various strobes.

/// MARELUX AMBASSADORS / INFLUENCERS ///



William Drumm Vanessa Mignon Nicholas Samaras Jerome Kim Tom St George

D-PRO Strobe

Instant recharge

Recycle time:0.1-1.1s Beam angle:150°

Continuous unlimited flash sync with
10 flashes/sec at first mode



- Battery capacity to fire up to 3000 flashes (500 flashes on full).
- Battery compartment sealed.



- Guide number : 30
- Flash tube : circular flash tube
- Power : 160 Ws
- Connection : optical cable / 5 pin syn cord/flash of light
- Illumination : 150°
- Color temperature : 4800K
- Flash capacity : 500 flashes at full power, 3000 flashes at 1st mode

- Recycle time : 0.1s--1.1s
- Flash speed : continuous unlimited flash sync with 10 flashes/sec at first mode
- Focus/target light : 5W / 500 lumens (center focus)
- Waterproof depth : 100m
- Weight (underwater) : 120g
- Dimensions : 170 x 90 mm
- Weight (on land) : 1080g without battery

Hands on with Reef: Nauticam EMWL



Imagine being able to shoot with a 130, 100, and 60 degree field of view, all while underwater, focusing within an inch of a subject...Ohh and did we mention you can still shoot a Macro lens too?

Sounds way too good to be true right? Well it's not, on today's episode of Hands On With Reef Lee Burghard discusses the all new Nauticam EMWL and what kind of benefits this new water contact lens offer for underwater imaging.

The EMWL was built to work with several popular macro lenses and is optimized for both stills and video. It is a wet mount design so the lens can be attached and removed underwater. This increases the versatility of the entire system and other accessories

like SMC and CMC macro converters can also be used. It is a modular design with three individual pieces that make up the EMWL, the Focusing Unit, the Relay Module and the Objective Lens. Nauticam has made components optimized to work with different camera manufacturers and their macro lenses, as well as choices for three unique perspectives.

- EMWL Set #2 includes:
- 87202 Canon Focusing Unit
 - 87211 Relay Lens
 - 87221 60° Objective Lens
 - 87222 100° Objective Lens
 - 87223 130° Objective Lens

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The Sea Lions of Los Islotes

by Luke Inman

Foreword by Steve Backshall

Visitors cannot help but be enchanted by the sea lions of Los Islotes. They emanate finesse and charm without a hint of illusion or wizardry. There is no incantation or voodoo, just an abounding sense of play that inspires every visitor.

When it comes to wild animal encounters, Los Islotes is almost nirvana. Few places so close to a city can truly offer such a convenient and accessible opportunity to interact with Mother Nature in her untamed state. California sea lions are the main residents, strangely thriving in a place so accessible to tourists.

Initial introductions begin at the surface; encounters are then formalized below the water as Poseidon's ocean ambassadors exuberantly whiz towards and around diver and snorkeler alike.

With vivid underwater photography throughout by a uniquely positioned author, *The Sea Lions of Los Islotes* takes readers straight into the world of these most charismatic marine mammals. The book contents include: A Foreword by Steve Backshall; how to tell different sea lions apart; what their lifestyle is like; their lifecycle; how to have safe



interactions; the challenges sea lions face; other visitors to the area; and how to photograph sea lions.

Luke Inman is an award-winning scuba Instructor Trainer, natural history filmmaker, photographer, writer and explorer. His work includes the BBC's *Planet Earth 3*, Netflix's *Our Planet* and advertising campaigns. Luke is the Owner and Operator of The Dive Gurus — the only PADI 5 Star Instructor Development Centre in La Paz, Baja California Sur, Mexico.

www.divedup.com

www.uwpmag.com

Big Animal Underwater Photography by Josh Blank

Ikelite Ambassador Josh Blank is best known for his incredibly powerful aquatic animal imagery. Photographing the oceans largest creatures up close and personal and in the midst of some of the most breathtaking behaviors, there's a reason Josh has tens of thousands of Instagram followers and a blue check mark next to his name.

Thankfully, Josh has written an eBook sharing the secrets that set his photography apart. In nine chapters Josh provides detailed lessons on the essentials - equipment, the exposure triangle, animal behaviors, composition, and much more. There's a host of reasons you'll want to add this book to your virtual library. Read on to find out why this eBook will be a game changer for you and to get a discount code for 15% off your purchase.

Big Animal Underwater Photography provides a ton of helpful tips and tricks that you can add to your arsenal to improve your photography. Personally, I found the Underwater Scenarios section to be



a very useful troubleshooting guide. Whether the scenario is a fast moving shark or cloud cover, Josh walks you through the solution step-by-step all while explaining the science behind the solution.

Each chapter and topic is thoughtfully, thoroughly, and succinctly explained to help the reader understand the Why behind the How of big animal underwater portraiture. I sometimes find that technical guides can either be too vague or too stuck in the minutiae, but Josh strikes the right balance in providing detailed technical advice.

www.wildnarrative.com.au



DPG

Immerse Yourself in the World of Underwater Imaging

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Keep up to date with everything that matters to underwater photographers, from the latest gear and gadgets to the newest developments in marine research

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Learn the fundamentals of underwater photography and progress to the latest, most innovative techniques taught by the top pros in the industry

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CONTESTS

Submit your best underwater images and short films to our annual contests, including the prestigious DPG Masters Underwater Imaging Competition

2023 DPG Masters Competition Winners

by Ian Bongso Seldrup

DivePhotoGuide (DPG) is proud to announce the winning images and short films in the 2023 edition of the DPG Masters Underwater Imaging Competition. Once again, thousands of photographers and filmmakers from dozens of countries competed in what has become known as the “World Championship” of international underwater imaging events.

The competition invited submissions to seven image categories and one video category, with entries evaluated by a panel of award-winning photographers: Stephen Frink, Renee Capozzola, Scott “Gutsy” Tuason, Allison Vitsky Sallmon, Matty Smith and Amanda Cotton.

This year’s “Best of Show” prize went to Italian photographer Marco Gargiulo for his extraordinary split shot of a juvenile imperial blackfish riding a jellyfish under the gaze of the famous Mount Vesuvius volcano in Italy. The photo, entitled “The Passenger,” also took Gold in the Over-Under category.

“Most remarkable for me is the juxtaposition of a blackwater subject against wide-angle topside with sunlight,” commented Renee Capozzola. “I initially thought this must be a composite, so to learn this photograph was one image clinched the decision in my view.” Stephen Frink added: “Possibly the highest compliment I can give an underwater shot is wondering, ‘How did they do



Best of Show – Over-Under – Gold – “The Passenger” by Marco Gargiulo (Italy)

Shooting Location: Castellammare di Stabia, Naples, Campania, Italy

Equipment and Settings: Nikon D850, Nikon 16–35mm f/4 lens at 35mm, Nauticam housing, Nauticam 9-inch dome, dual ONEUW One 160X strobes, f/13, 1/200s, ISO 110

Photographer’s Comment: “It’s not often you see snow on the Vesuvius volcano here in the Gulf of Naples, where I live in Sorrento. It soon vanishes due to the mild temperatures. I’ve always wanted to take a photo, and I finally managed to get into the water to do it. During my walk along the Marina Grande in Sorrento, my usual place for winter night diving, the wind pushed a large quantity of jellyfish along the coast. I was lucky to find one that had a small passenger on board, a juvenile imperial blackfish (Schedophilus ovalis).”



Blackwater – Gold – “Flamenco Pose” by Magnus Lundgren (Sweden)

Shooting Location: Anilao, Balayan Bay, Batangas, Philippines

Equipment and Settings: Nikon D850, Nikon AF-S 60mm f/2.8 macro lens, Nauticam housing, Inon Z-330 strobes, f/16, 1/250s, ISO 320

Photographer’s Comment: “It was a night filled with drama when I encountered one of my dream subjects in Balayan Bay. The Taal volcano was erupting, sending fireworks into the dark sky like a huge dragon, and the deep, thundering sound of earthquakes rolled through the ocean. At the same time, this female blanket octopus appeared from nowhere, out of the dark, in front of my camera. She started rolling out her long blanket, ending up in this Batman-like pose. False eyes decorating her flamenco-style webbing between her arms stared back at me. It is believed that the blanket is probably used to spook or confuse predators.”



Conservation – Gold – “Massacre” by Yinan Liu (China)

Shooting Location: Magdalena Bay, Baja California Sur, Mexico

Equipment and Settings: Canon EOS 5DSR, Canon 8–15mm f/4 fisheye lens at 15mm, Nauticam housing, f/10, 1/250s, ISO 200

Photographer’s Comment: “When we went out to sea in the morning, we passed a small island and saw the fishermen cutting up sharks and throwing the unused parts on the beach. When we returned in the afternoon, due to the high tide, the abandoned parts had been brought out into the sea, allowing me to go underwater and capture this heartbreaking scene. I hope that through this photo, more people can work together to protect sharks. If there is no trade, there will be no killing.”



Wide Angle – Gold – “Wishing Well” by Suliman Alatiqi (Kuwait)

Shooting Location: Phi Phi Islands, Thailand

Equipment and Settings: Nikon D850, Nikon AF-S 8–15mm f/3.5–4.5 fisheye lens, Nauticam housing, dual Sea&Sea YS-D2J strobes, f/20, 1/250s, ISO 280

Photographer’s Comment: “An underwater photo of a crab-eating macaque gazing at the water from the edge of a rocky platform, as seen through Snell’s window. After touring the islands known for their macaques, I noticed that the animals tend to stay on cliffs close to the water during the day. This made me think about the possibility of capturing an underwater perspective of the animal with the scenery above. The biggest challenge was lighting a subject completely above the water, as I did not want a silhouette. After some experimenting, I waited patiently for the right opportunity and managed to get this moment on breath-hold. The macaque seemed inquisitive about my approach, which made the photo possible.

that?” I look at this over/under and marvel at how perfectly aligned the interface is between the topside and the underwater, despite the surface chop. The blend of strobe light for the

underwater subject and the ambient light in the background is masterful. Combining artistic vision with significant technical mastery makes this the winner for me.”



Traditional – Gold – “Sea Lions at Work” by Fabien Michenet (France)

Shooting Location: Magdalena Bay, Baja California, Mexico

Equipment and Settings: Nikon Z8, Nikon AF-S 16–35mm f/4 at 16mm, Nauticam housing, f/7.1, 1/400s, ISO 640

Photographer’s Comment: “Every year, in the south of Magdalena Bay, on the Pacific coast of Mexico, a sardine run occurs between October and November. As millions of Pacific sardines (*Sardinops sagax*) gather over seamounts, fin whales, humpbacks, striped marlin, mahi-mahi, Pacific sea lions and other predators are attracted by the feast. After a few hours of searching, we found this baitball of densely packed sardines, and we observed marlin and mahi-mahi—particularly abundant this year due to the El Niño phenomenon—feeding on the fish. Suddenly, a group of sea lions took over the area, denying other predators access. Keeping the sun at my back, I positioned myself so that the scene was illuminated symmetrically, taking a few images as the ball of churning fish, surrounded by sea lions, moved away.”

The organizers are pleased to announce that 15 percent of entry proceeds will once again be donated to marine conservation efforts.

<https://uwpho.to/DPGMASTERS2023>

Exhibition Competition

by Peter Rowlands and Gina Goodman

Southwest England's Falmouth University run a 3/4 year Marine & Natural History Photography BA(Hons) Undergraduate Course which aims to provide students with the skills to create visual stories which explore and highlight our relationship with the living planet, and the ecological predicament it currently faces.

Based in some of the most outstanding landscapes in the UK, they learn from award-winning and industry-connected photographers, expert filmmakers, explorers and scientists, gaining career-boosting insights and opportunities during their studies.

During the 1st and 2nd year students have the option learn underwater photography and take images in the UK waters around Falmouth but part of the Course for 2nd years is an annual trip to the Red Sea.

This is a very popular but self funded trip which the majority of the students attend and this year 36 out of 58 spent two weeks at Marsa Sharga in Egypt. Catering for the diving underwater camera equipment needs of such a large

group is a continued but now familiar logistical challenge undertaken by Falmouth's specialist underwater photography team and UK resort agents Oonasdivers, who arranged the flights and luggage allowances.

For most of the students this was their first time in overseas waters with the water temperature a balmy 27°C and visibility far in excess of their usual Falmouth waters! An ideal underwater studio in which to practice and perfect one's underwater imaging skills and style.

'The Red Sea trip has been a part of underwater photography at Falmouth for over 14 years now and it persists because it offers a perfect 'storm' of creative and collaborative learning opportunities for our students. In the UK we dive once a week as part of the course (weather permitting), so when we identify areas for students to improve or experiment it generally takes 7 days to apply that feedback. In the Red Sea it can take as little as an hour as students often complete between 3 and 5 dives per day and are supported 24/7 by the entire underwater photography team.

If you consider that most, if not all, of our students have generally only



ever done 10 dives with a camera (at most) prior to this trip, within 3 days they have potentially doubled their overall time underwater shooting. The skills progression we see between day 1 and day 14 of the trip is astounding,' Gina Goodman, Lead of Underwater Photography at Falmouth.

A big event in the course's calendar is a major exhibition of the student's work back in Falmouth in February so this Red Sea trip is used to decide which image to use on a large poster to promote the Exhibition back home. The images had to be vertical (portrait) format and include space for overlaid text.

Students could choose just one image and these were preliminarily



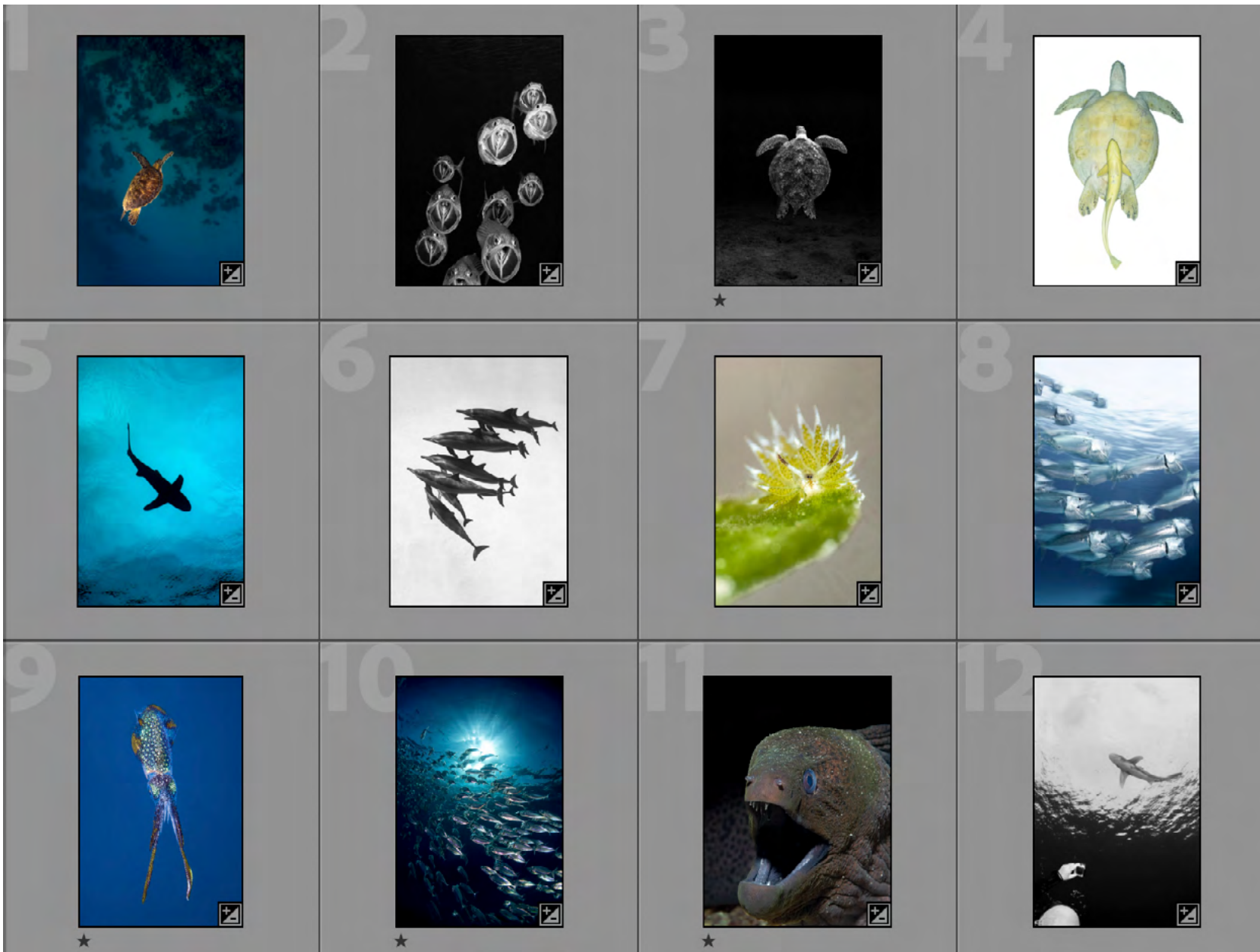
RED SEA
EXHIBITION

PRIVATE VIEW - 16 FEBRUARY, 5 - 8PM

Exhibition running from 16 - 28 February 2025.
BA(Hons) Marine and Natural History Photography, Institute of Photography Gallery,
Penryn Campus.

FALMOUTH
UNIVERSITY

Last year's winning image by Adam Tidman



- 1- Hattie Pearce
- 2- Daisy Davis
- 3- Rhonwen Hardy-Evans
- 4- Ben Lindberg
- 5- Grace Westgarth
- 6- Grace Westgarth
- 7- Morgan Osman
- 8- Ellie Fraser
- 9- Eve Brown
- 10- Woody New
- 11- Kitty Blackman
- 12- Emlyn Morris

JUDGES:

Alex Tattersall, Pete Rowlands, Jane Morgan, Shannon Moran, Morgan Osman, Elle Speirs

whittled down to just 12 by Alex Tattersall (Nauticam housings UK distributor, Pete Rowlands (Publisher of Underwater Photography Magazine, Jane Morgan (Falmouth University's Dive Safety Officer and Dive Technician), Shannon Moran (Alumni) and Morgan Osman (3rd Year Mentor) and Elle Speirs (Falmouth University Photography Technician).

The final 12 images were then voted on by the public preference of all of the students to arrive at 4 finalists and one winner.



Kitty Blackman

Olympus E-M1MarkII. Leica DG Macro 45/f2.8. Nauticam Housing, INON Strobes. 1/80, f14, ISO 400

Woody New

Nikon D850, 10-17mm Tokina. Nauticam Housing, Retra Prime Strobes. 1/5000 HSS, f11, ISO 400

Rhonwen Hardy-Evans

Nikon D7200, 10-17mm Tokina. Nauticam Housing, INON Strobes. 1/160, f10, ISO 400

Winner- Eve Brown

I encountered this exquisite creature gliding near the house reef in Marsa Shagra, Egypt. Mesmerized by it's radiant presence, time stood still while I lingered beside it at the water's surface. I felt a distinctive and inspiring connection between this beautiful creature and I. A foundation of trust was seemingly built as I had the blessing to get astonishingly close. It allowed me to capture it's beauty with precision and detail, and stayed in frame for over 40 minutes, granting me the opportunity to adjust the angle of the shot to effectively showcase it's captivating form.

Nikon D500, Nauticam housing, 60mm f2.8 Macro lens, INON Strobes 1/320, f6.3, ISO 100

Pete Rowlands commented "I think it's fair to say that, looking at all of the images on the Lightroom Lightbox layout, that the overall standard was extremely high indeed and that to have achieved it in such a comparatively

short time is a testament to the course tuition and the exciting talents of this new breed of underwater photographers.

The Falmouth University Marine & Natural History Photography BA(Hons) Exhibition will take place

between the 9th and 18th of February at Falmouth's Institute of Photography Gallery.

Peter Rowlands

peter@uwpmag.com

Gina Goodman

gina.goodman@falmouth.ac.uk

www.falmouth.ac.uk/study/undergraduate/marine-natural-history-photography

Don't settle for 2nd best



Film - No Filter No White Balance



Digital - No Filter Manual White Balance



Magic Filter Manual White Balance

Digital cameras have opened up new possibilities to underwater photographers. For available light photography manual white balance is an invaluable tool for restoring colours. But when you use it without a filter you are not making the most of the technique. You're doing all the hard work without reaping the full rewards. These three photos are all taken of the same wreck in the Red Sea. The left hand image was taken on slide film, which rendered the scene completely blue. The middle image is taken with a digital SLR without a filter; using manual white balance. The white balance has brought out some of the colour of the wreck, but it has also sucked all the blue out of the water behind the wreck, making it almost grey. The right hand image is taken with the same digital camera and lens, but this time using an original Magic Filter. The filter attenuates blue light meaning that the colours of the wreck are brought out and it stands out from the background water, which is recorded as an accurate blue.

Sea & Sea YS-D3 Duo update

by Dan Bolt

If you read my review of the new Sea & Sea YS-D3 Duo strobe in the last issue of UWP mag then you'll be aware I had a few occasions when the strobes would mis-fire and I wasn't able to isolate the root cause.

Since then I've been wracking my brains to try to think what could be causing the issue. RC mode is a protocol, and all units adhering to the protocol should be firing at almost a 100% accuracy rate.

My first thought was that the sending unit (on-camera flash in this case) wasn't using a strong enough signal. With Olympus cameras you can adjust the signal strength in the RC Mode menu; it has 3 levels of low, medium and high and defaults to low. Changing it to Medium made some difference and mis-fires were reduced, but not eliminated.

Then after a few dives and pool sessions, I started to notice a pattern forming. It seemed that when I used a certain fibre optic cable the mis-fires went away entirely! So after a bit of experimentation, I struck upon the ultimate solution to this "problem" - and as it turns out there was no "problem" with the camera nor the strobe in the first place!

It would seem that if I used any

of my right-angled fibre optic cables, I would get mis-firing of the strobe; as if only part of the RC signal was getting through. The strobe would give me confirmation on the rear control panel that it has received a signal, but it didn't fire.

Switching to straight-ended fibre optic cables, and this problem disappeared completely! I've since done a few dives and pool sessions with all of my cables and I'm certain this is what was causing the issue.

The YS-D3 Duo units I have are now working extremely well and I'm shooting a mix of manual and RC-mode light on all my dives will very pleasing (and consistent) results.

So just to complete the picture; I used three different types of right-

Set of images running through the aperture range from f/4.5 to f/22) Olympus OM-D E-M1, Panasonic 45mm macro, ISO 320, 1/250th, Aquatica housing, Subsee +5 dioptre. 2x YS-D3 Duo strobes in RC mode.

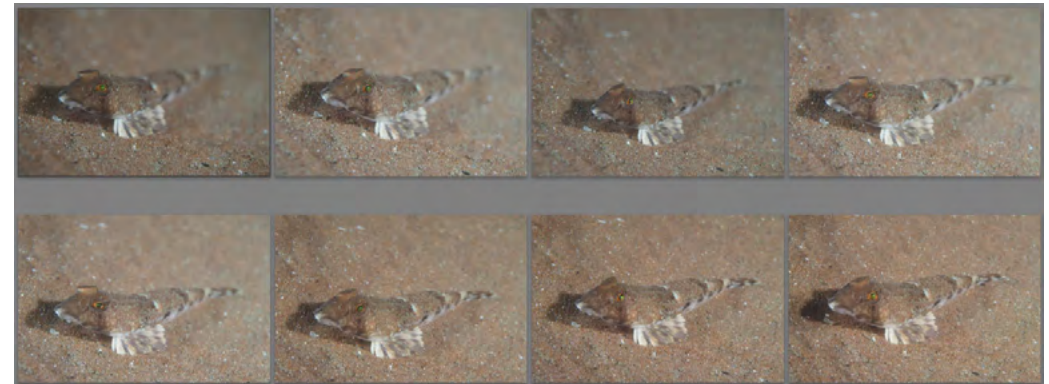
L to R: Weefine straight cable, Sea & Sea 90° (old style), Sea & Sea 90° (new style), Weefine 90°

angled cables: an old (grey) style Sea & Sea cable, a new (black) style Sea & Sea cable and a Weefine 90° cable too. All these caused issues.

I have only used a single make of straight cable, made by Weefine, and this had proven to be faultless in its light transmission when in RC mode on my Olympus OM-D EM-1 mk1.

Dan Bolt

www.underwaterpics.co.uk



Scubalamp MR6 HDMI Monitor

by Peter Rowlands

For most of my time underwater I used to shoot video using a dedicated camcorder with the attraction of a small external LCD monitor to frame images without having to have your eye up to a small internal viewfinder.

Camcorders have pretty much been overtaken by hybrid still/video cameras which offer increased image quality, frame rates and ISO capabilities. The result is that there are very few, if any, camcorder housings in production today which, for me, is a real shame but hey ho.

Over the years the LCD screens on these hybrid cameras have got bigger and have now peaked at just over 3" which is fine but they are 'line of sight' which means you have to hold the housing in front of you to get the best view of the screen. That's where an external monitor comes into its own but it's not as simple as it used to be.

Camcorders had small 'video out' sockets which only had two wires but that was all that was needed for the amount of data and quality of image that was available in those days.

Fast forward to today and most hybrids have HDMI (High-Definition Multimedia Interface) out sockets



Back in the 1990s I was shooting a Sony VX1000 camcorder in an Amphibico housing with a housed land monitor.

which now have up to nineteen, yes, nineteen wires. This, together with their physical size, has proved a complication for underwater housing designers and the result was rather bulky and complicated setups. The monitor housings were for existing land monitors which were not always ergonomically suitable to be housing but needs must. As a result I have never gone down the route of an external monitor for my Nauticam GH5 housing; until now.

Scubalamp (SUPE) have



Fast forward to 2023 and still wearing the same wetsuit and hood! An external monitor makes image viewing much easier and lets you look past it to anticipate where the action is going. Photo courtesy of Alex Tattersall.

The 6" 1920 x 1080 screen is very bright and crisp. Perfect for focus and composition.

specialized in designing and manufacturing quality underwater lighting equipment but recently announced their own external monitor, the MR6, which is a sealed unit with a 6" 1920 x 1080 pixel display. My interest was aroused and when I met them at the DEMA Show in New Orleans last November they offered to loan me one to review.

The MR6 has a very sleek profile compared to other external monitors and it is fitted with a male HDMI connector which has an M16 bulkhead





The MR6 is slim with a separate but integrated battery pack. The integrated monitor make it much slimmer than most other monitors.

fitting so your housing needs an unused M16 port. There are two sizes of internal HDMI connector and my Panasonic GH5 took the larger of the two so check what size HDMI there is on your camera input.

Fitting the internal cable was a bit fiddly as there is not a lot of space inside the housing but it squeezed in above and in front of the camera hotshoe which, because I would assume most people would want this



The inner HDMI connector is quite a tight fit but it is still easy to install and remove the camera.

monitor to shoot video rather than stills, isn't needed to fire external strobes.

There are three mounting holes for the single 1" ball socket adaptor provided - one underneath, one on the back and the final one on the top. These are very positive fittings and my configuration was best suited with the ball adaptor on the bottom fixing. The housing needs a spare 1" ball and mine had a Nauticam 25221 on the



The internal HDMI cable is available in two sizes so check which one your camera has. Most housing manufacturers design their housing to take these tight angle connectors.

right hand side.

To position the MR6 monitor as centrally as possible I used an extended ball clamp which was about 4" (10cm) long. This needs to be a good quality clamp as it is supporting the 1.3kg land weight. Underwater this is reduced but more of that later. The balljoint design allows for the monitor to be rotated left or right and tilted back or forward if needed but, in practice, I used it fixed in line and tilted slightly forward for the most comfortable view and easiest ergonomics.

The MR6 is powered by two 21700 rechargeable batteries which, conveniently, have USB-C charging sockets so you don't need another charger. The sealing cap is double O ring sealed and needs to be screwed well home as this is part of the power connection from the battery to the monitor. The spec sheet says fully charged batteries should give between 2 and 7 hours use. I recharged mine after two one hour dives and the power bar was saying just less than half full so I'm thinking I should easily be able to get three full dives out of one full charge.

Fully charged and mounted, press and hold the left hand power button and after about 5 seconds the screen lights up and is a 6" replica of the camera's 3" LCD screen. Area-wise this is almost 6 times bigger which makes standoff viewing, focusing and composition very comfortable indeed. The only niggle is that the text size of the display info such as Mode, Shutter/ Aperture etc etc is a bit small and I couldn't find any menu to enlarge it.

There are two main controls - Left button: long push and hold for On/Off and short push for 'Select' in the Menu - Right button and wheel: short push for Shortcut Menu and push and hold for Full Menu. Turning the outer wheel rotates through the Menu settings, pushing the centre button selects that part of the menu and then turning



Carrying it is best done with your right hand on the housing right handle so that the rig tilts horizontally with the monitor and housing at the same level. This is perfectly balanced.

Underwater the negative weight on top of the rig makes it want to roll forward so you have to use your wrists to keep it level. This isn't unduly tiring but I added two medium size Stix floats retained with velcro straps around the battery chamber and this reduced the roll significantly. That's all I had with me on this trip and my next job is to add the correct amount of buoyancy to make the rig neutral and this will help shooting steady footage.

It is a long time since I have shot video footage with a separate monitor for reasons outlined earlier but now that I have tried the MR6 it's like going back to the good old days again :-). The MR6 image is very bright (2600nits apparently, whatever they are) and crisp and can be viewed easily in direct sunlight from various angles.

The MR6 retails at \$1098 which I think is very good value indeed compared to other underwater monitors out there.

My thanks go to Scubalamp SUPE for the loan of the MR6. It gave me a really useful opportunity to find out if I wanted to go back to a separate monitor - and I most definitely do. As a result I have bought the MR6 and am genuinely excited about shooting footage with my 'new' GH5 rig.

the outer wheel again scrolls through the subMenu options. It, like most complex menus nowadays, takes a bit of getting used to and hardly any of the options needed changing for me as my requirements are basic - view, focus and compose, hit record and know that it is recording (red flashing light). For those with more specific requirements there is Focus peaking, Zebra, Grids, Marks, Scanning modes, Flips, Multiple wave displays, LUT settings and General settings. Very comprehensive indeed.

Physically the housing and monitor are 'a bit of a lump' - not unduly heavy, just unbalanced as the monitor makes the rig top heavy.

Peter Rowlands
peter@uwpmag.com

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Ikelite DS230 strobe review

by Nicolas Remy

When my wife Lena and myself purchased our first underwater photography rig back in 2008, we were already very keen divers and went full-on, getting ourselves an Ikelite DSLR housing (for the venerable Nikon D300) and two Ikelite DS160 strobes.

I really liked these strobes for their bright light beam, fast recycle speed and warm colour temperature. The main reason we moved over to Inon z240s afterwards was that our next housing only supported fiber optics, and at the time, we could only use electrical cables to trigger the Ikelite strobes.

Needless to say, I got quite interested when Ikelite announced their new flagship DS230 strobes, and very pleased when I won one, as part of the DPG Masters Underwater Imaging Competition 2022.

Coincidentally, I had some action-packed wide-angle work planned in 2023, for which I thought a pair of Ikelite DS230s would be helpful, and I want to thank Ikelite for sending me a second DS230 plus accessories, for the purpose of educating myself on their newest offering, and writing this review.

Strobe power and quality of light

The Ikelite DS230 is one of the most powerful strobes on the market, delivering both a bright and wide light beam, covering a 120 degrees angle (without a diffuser).

But how powerful you may ask? Well in the absence of an industry-standard protocol to compare underwater strobes, it is always difficult to give a straight answer and compare apples-to-apples. (for more details, watch the “Choosing a Strobe” lesson, Photo Equipment course). However, the power consumption is a relevant metric to use when comparing two strobes of the same manufacturer. I certainly considered my Ikelite DS160s to be powerful, wide-angle strobes and they functioned with a 160 Watt-seconds power consumption. In comparison, the new DS230 uses 213 Watt-seconds, a 33% increase which doesn't account for the years of technological progress and efficiency gains, resulting in a better use of every Watt-seconds. The key take-away is: the new DS230 strobe offers well-over 33% more “oomph” than its already



*A classic Mediterranean scene illuminated with our DS160 strobes back in 2009 (La Gabiniere, Port Cros, France). Photo credit: Lena Remy.
Nikon D300, Nikon 12-24mm, 1/125, F/10, ISO 200, 2x Ikelite DS160.*



The wide, soft light beams make it easier to illuminate large shoals of fish without overexposing their scales. Nikon D500, Tokina 10-17mm, 1/200, F/9, ISO 200. 2x Ikelite DS230 with dome diffusers.

powerful predecessor.

Overall, I found the DS230 strobe to offer excellent quality of light: with a pair of DS230 strobes, I have lit a diversity of wide-angle scenes without visible hot spots, thanks to a smooth light fall-off from the centre of the beam. In terms of colour temperature, I prefer warmer strobes as they make for deeper blues and they give green waters a more cyan tint which I also like. As of November 2023, you can find strobes rated all the way between 4500K and 5800K, making the DS230 one of the warmer strobes

with 5000K. Yet, I wish it had retained its predecessor toasty-warm 4800K colour temperature.

The above observations are based on the 8,000 shots I took with two DS230, 99% of them using the Ikelite dome diffusers. Ikelite suggest that the DS230 really doesn't need any diffuser, given the smooth light produced by their ring-shaped flash tube, and the native 120 degrees beam angle certainly supports that statement.

Still, the wider & smoother the beam, the better it is for general wide-



A rare situation where I had both DS230 at 100% power. I wanted to reveal all warm coloured corals on this large rock which was over 5m/16ft wide (Batu Goso, Bangka island, Indonesia). In only 8 meters depth, it takes a lot of strobe power to tame the bright ambient light.

Nikon D500, Tokina 10-17mm, 1/250, F/9, ISO 200. 2x Ikelite DS230 at full power (with dome diffusers attached).

angle lighting. At a minor cost of 0.5 F-stop loss and given how bright these strobes are, I was happy to make the diffuser trade-off for the vast majority of my photos. For reference, I rarely used the DS230 above 50% power, with the diffusers mounted.

For educational purposes, I haven't removed any backscatter from the images. A wide beam helps keeping backscatter at bay, provided you know how to position your

strobes (check our Lighting course for detailed guidance). The wider the beam the easier the job, which is why I use the Ikelite dome diffusers.

The diffuser is simply pushed-in over the strobe's front, and easily pulled out underwater. A metal attachment ring allows clipping them away, when needing a more controllable light-beam. Besides smoothing the light, it protects the front of the strobe,



Shooting high-speed bursts allowed me to pick that photo where the seal's flippers just fitted within the Snell's window and the background seal wasn't out of frame yet.

Nikon Z9, Nikon 8-15mm fisheye, 1/200, F/11, ISO 400, 2x Ikelite DS230 with dome diffusers.



For short bursts at 10 FPS, and 25% power or less, I found my exposure to be consistent enough, for subjects swimming sideways. Nikon Z8, Z 24-50mm, WWL-C, 1/200, F/11, ISO 320, 2x Ikelite DS230 with dome diffusers.



#4405 converter, attached to my DS230 electrical bulkhead.

The plastic screw-in cover includes a Sea&Sea fibre optic connector. Take it off (second photo) and the #4405 becomes a highly sensitive remote strobe trigger, especially when combined with Ikelite's extension cord (1m/3ft and 3m/10ft lengths available).

Recycle speed

This was the number one factor which drew me to trying out the DS230: using Ikelite's proprietary NiMH battery packs, the strobe is meant to sustain an impressive 1.2 second recycle time at full power, and 10 frames-per-second at lower powers. What interested me most was the "in-betweens": how much frames-per-second could I shoot with mid-range power settings, which would be bright enough for some wide-angle work? Fur seals are a classic subject that requires both power & fast recycling, so I took the DS230 strobes to dive the seals colony at Montague Island (Narooma, NSW, Australia), with the aim to shoot fast bursts with the Nikon Z9 (detailed review).

I was very pleased with the performance of the strobes in that scenario: at 25% power, I could

shoot brief 20 frames-per-second bursts (less than 0.5s long), which helped me capture the perfect moment as a seal was approaching the camera. To be clear, at 20 FPS, the strobes didn't have time to recycle in between shots and the light output decreased image after image, but the decrease was progressive, and partially compensated by the reduced need for strobe light, as the seal was getting closer. For a subject moving side-ways, I was happier shooting short 10 FPS bursts, at 25% power and below.

Connectivity and TTL mode

All Ikelite strobes come standard with an electrical connectivity (Ikelite ICS 5-pin bulkhead), but also offer optical converters, allowing use of fibre optic cables, which is how I fired the DS230

strobes.

If you do require an optical converter too, make sure to ask Ikelite or your chosen retailer the model you should get, which depends on your camera / strobe trigger brand. In my scenario and considering I didn't need TTL support, the recommended converter was #4405.

Given my choice of optical converter, I can't comment on TTL with the DS230, but exposure accuracy in TTL mode has long been a selling point of Ikelite's strobes, and I have no doubt it works well with their new flagship strobe. Personally, I prefer controlling the power of my strobes manually, but there are good arguments in favour of TTL too.



The Retra is a little bulkier in the front, but narrower at the back (the supercharger). The Retra Flash Pro becomes much shorter if you take the superchargers out.

Size and weight

First a good news: Ikelite managed to keep the more powerful DS230 within the same dimensions as the well-known DS160. There is nothing like a free lunch though: powerful wide-angle strobes are big and heavy.

The DS230 is roughly 18cm/7.1in long and 9cm/3.5 wide, weighing 1.3kg/2.9lb, including the battery and optical converter. To put these measurements in perspective, let's compare with another popular wide-angle strobe, which is my Retra Flash Pro, with its super-charger extension and ballmount attached. The Retra strobe weighs about 1.2kg/2.7lb (batteries included) and has the same length as the DS230 (about 18cm/7.1in), but its diameter is just a little wider at 10cm/3.9in.

In the water, the DS230 was negatively buoyant, but not as much as my Retra Flash Pro, which came as a good surprise.

The Retra is a little bulkier in the



The Ikelite DS230 in battery check mode. The lock lever is visible at the very bottom, below the lower dial.

front, but narrower at the back (the supercharger). The Retra Flash Pro becomes much shorter if you take the superchargers out.

Ergonomics and battery life

I like the straight-forward ergonomics of the Ikelite DS230 strobe. No push-buttons, only the two chunky dials which are easy to grab,



When working so close to a 30cm long subject, the it only takes a small fraction of the strobe's power to bring back colours and clear shadows. The DS230 would last for over a 1000 shots like this one.

Nikon Z8, Z 24-50mm, WWL-C, 1/100, F/13, ISO 320, 2x Ikelite DS230 with dome diffusers.

even with my dry gloves on, and they "click" in a very responsive manner.

The rear dial, mounted on the battery pack is your ON/OFF switch, which also lets you enable/disable the aiming light and it has a handy "battery test" position. The latter works by firing a couple of low-power flashes to gauge how much juice is left, and gives you a visual feedback thanks to 3 "fuel gauge" lights, in 75-100%, 50-75%, 25-50% and 0-25% chunks. This is a convenient, easy-to-

use indicator, with the caveat that I'm finding it goes surprisingly fast to the 50-75% level, whereas it stays at that level quite long.

The Ikelite DS230 is rated for over 300 full-power flashes, and I am typically at 50% or less for wide-angle, which means a fully charged battery should be good for at least 600 shots. Finally, that battery pack comes with a little "lock" lever, which prevents the strobe from accidentally turning ON before the dive or while travelling.



Left: the battery pack. Right: the DS230 strobe head.

The power dial is found on the main strobe body, and offers full manual power control with 10 different settings, ranging from 100% to 4% power, in half-stops increments. Because the clicks of that dial are so easy to feel, I routinely adjust my strobe power without taking my eye away from the camera. Controlling your strobe power manually is easier than it sounds, check our Underwater Camera Settings Course if you're curious to learn how. If you prefer to use TTL mode, simply flick that dial to the top position (subject to using a compatible housing/TTL circuitry).

Simple maintenance

It is easy to overlook the maintenance aspects when comparing two strobes' specifications sheets, but for me this can tilt the balance towards a given strobe, as I

put a lot of value in minimising the time spent fiddling around equipment at the surface. This is one of the DS230's strong points, especially if you're using fibre optics like I do.

Indeed, the battery pack's o-ring does not require lubrication. Yes, you read correctly: because it isn't a moving o-ring, all it takes is ensuring there is no salt crystals, sand or hair stuck between the o-ring and the sealing surfaces on the either sides (strobe body and battery pack), which is easy and quick to do, because of the lack of grease on that o-ring. Assuming you have a spare battery pack (my recommendation), then you can literally swap batteries in less than a minute: the battery pack is just one block, no fiddling around with AA batteries. If you don't have a spare, it will take about 4 hours to fully recharge your battery pack.

If you're using fibre optics like



At lower power settings, the DS230 delivers that soft "kiss of flash" which is just right for CFWA imagery. Nikon D500, Tokina 10-17mm, 1/200, F/10, ISO 100. 2x Ikelite DS230 with dome diffusers.

I am, the only other thing I would recommend is to ensure the optical converter is still fully tightened to the electrical bulkhead, just before the dive (mind you, I've never found it to be loose in 5 months of use, but I like to play safe).

If you are using electrical cables though, you will have more work to do. Each time you disconnect one side of a cable, you need to lubricate the small o-ring which secures that electrical connection, after removing any hair/sand/salt). You can minimise that routine by keeping the cables

in place, depending on how & where your equipment gets stored in-between dives.

Obviously, you still need to do the usual soaking and controls manipulation in freshwater after finishing diving, but that should go without saying. If you're not too sure how to care for your underwater photography equipment, head over to our Logistics Course.



When I saw my foreground was overexposed, I reached to my left strobe, dialled the power down by 2 clicks (1 stop) and took that shot, without having to look away from the camera.

Nikon D500, Tokina 10-17mm, 1/200, F/10, ISO 200. 2x Ikelite DS230 with dome diffusers.

Conclusion

If you're in a market for all-rounder strobe that is powerful enough for all sorts of wide-angle work, consider the Ikelite DS230, which is also one of the most affordable strobes in that league. By all means, it will be more than capable for fish portraits and macro work too, with the slight disadvantage of bulkiness, which comes with that kind of high-end imaging product.

The DS230 offers the wide

beam and relatively warm colour temperature which are needed for the biggest wide-angle scenes or subjects, with the bonus of keeping up with short, high-speed bursts at intermediate power levels. Its controls are easy to feel by hand and to manipulate without taking your eye away from the camera, once you have spent a few dives using the DS230. I like that Ikelite now supports fibre optics connectivity via their optional converters, and I find the maintenance

to be fast and easy, in the absence of o-ring lubrication (when using fibre optics).

This review covers the DS230 with built-in modelling light (aiming light) but Ikelite also have a version that embarks a 2500 lumen video light (replacing the aiming light). I haven't tried it, but if you find yourself routinely shooting videos in between underwater stills photos, this might be the strobe to choose, for a US\$200 premium vs the standard DS230.

Nicolas Remy

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Nicolas Remy (@nicolaslenaremy) is an Australia-based pro shooter and founder of online underwater photography Club & School The Underwater Club. His images have been widely published in print and digital media, and have won over 35 international photo awards. Nicolas would like to thank Ikelite for providing one Ikelite DS230 strobe, dome diffusers, #4405 optical converters and spare battery packs used in this review.

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Oceanic + iPhone Dive Housing

by Shannon Moran

I recently had the opportunity to test the shiny new Oceanic + iPhone housing whilst on a trip to the Red Sea. There certainly was a lot of hype surrounding this housing, it has been heavily advertised on my Instagram and Facebook feed and I was quite excited to get my hands on one.

Having done a few dives with the unit, it certainly is a great way to get underwater snaps on your holiday but I'm not sure the Oceanic housing brings any major advancements for underwater photography and videography, most of the perks are seemingly in the dive computer and app functions.

On first impression the housing is sturdy, but heavy, it feels like a quality item that can survive knocks on a dive boat and keep your phone dry and protected.

On dry land my first thoughts when holding the housing are about the size, its quite big and noticeably larger than I expected it to be after seeing the first few marketing images appearing on my social media channels.

Measuring 24.6 cm x 11.2cm x 6.9cm and weighing 975g it is slightly larger and much heavier than both

the Sealife (21.3 cm x 12.5 cm x 5.4 cm and 641g) and Divevolk (12 cm x 22.6 cm x 4.1 cm and 375g) iPhone underwater housings.

The design is sleek and ergonomic, the buttons are all easy to access without moving your hands around and can all be reached with your right hand. The housing has a thick rubber grip across the right side giving you great control when moving the housing, and the shutter button on top of this grip, making it easy to hold and operate the shutter with one hand.

The housing has an incredibly intuitive set up process, all you need is a relatively new iPhone (SE 2nd gen or newer) with iOS 16 or higher. To get started all you need to do is download the Oceanic+ app, and turn on the housing. Once in the app it prompts you to follow the step-by-step set up process, this is a great way to prevent leaks and walk you through the set up if you have never set up any underwater cameras before. There is also a selection of "getting started" videos available on the Oceanic YouTube channel if you're having any problems during your set up.

The set-up process is easy to



follow, you are prompted to turn the phone onto airplane mode and turn on the Bluetooth to allow the phone and housing to connect, then you insert your phone into the spring-

loaded phone grip.

This grip is a little fiddly, there are some small rubber grips which can be moved into the optimum position to hold the phone, if you don't get those

in the right place your phone may ping out of the spring-loaded grip before you get chance to close the housing. It did this a couple of times until I had the rubber grips in the right place.

The case opens and closes with a twist lock and the rear of the case is attached on a hinge, and one o ring on the rear of the housing to seal the unit. The twist lock has a yellow lever which you have to lift to be able to move the twist lock, preventing it accidentally unlocking, you can however twist in the wrong way so be aware of that when operating the lock.

My favourite feature of this housing is the automatic vacuum pump, seal check and leak detector. Once you have followed the set-up process via the app and closed the housing, you are instructed to unscrew the vacuum valve and then the automatic vacuum seal begins, this removes air from the housing and once completed you can close the valve.

Next the housing begins its seal check and a 3-minute countdown begins and hopefully a pass, I find this incredibly reassuring, not only does the set up have an almost fool-proof set of instructions to follow but it also then checks the quality of the set up for you and can find a leak before you get in the water.

I did set the housing up with no checks of the o ring and the seal test failed, once I inspected the o ring I found lint and sand, so no surprises that the seal test failed. Once I had cleaned the oring and sealing surface and retried the set-up, then the seal test was passed. I would trust this unit with my iPhone; it has a very thorough leak test system.

You will need the Oceanic + app to use the housing, there is a free and a paid subscription option for using the app. The free version includes



the basic dive computer with depth, time, temperature and allows access to the photo/video modes. The paid version gives you access to the NDL and decompression information on the dive computer, which I think is necessary if that is your only dive computer on the dive, and the colour-correction software.

A slightly irritating feature I discovered once set up is that you can't turn the phone or housing off again once sealed. This is fine for a short journey to a dive site but if you were on a boat for the day for example, your phone is trapped inside the housing and on the app until you unseal the housing and disconnect the app. The phone does go into a "sleep" mode but I was concerned about wasting the battery before the dive.

The housing has a similar issue, there is no off



0.5x wide



1x standard



2x tele

The Auto Color Correction does a pretty good job most of the time and can be manually tweaked to suit individual tastes.

button. To turn off the unit you have to disconnect the phone and just leave the housing for a few minutes until it turns off by itself. I suppose this doesn't affect the usage but I would prefer an off button for battery saving.

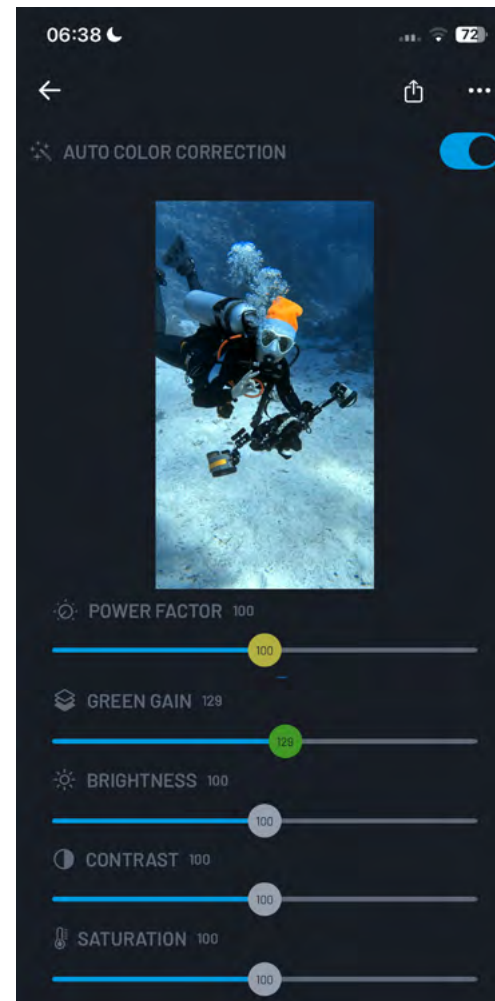
Underwater the housing is great for snaps, it is still a little heavy in the water but it certainly isn't enough to make your arm ache when using it. The moulded grip is very comfortable and I enjoyed the ease of using a phone underwater. The photo mode has 3 lens settings, wide, standard or a zoom which is great for some variation in your underwater images. I enjoyed the wide for reef shots and big shoals of fish, the standard was great for photos of the reef and corals and the zoom did well at fish portraits without having to get too close.

The performance of the camera was great, the only thing it really struggled with was directly sunlight particularly in the shallows (0-10m) where the sun was at its brightest. If you were shooting into the sun a white patch of blown out sunlight was common, and reflections of the phone inside the housing were also a possibility, but shooting away from the sun or blocking it with coral or a structure could be used to avoid



a white blown out surface in your images.

The shutter button is soft and has the right amount of resistance when pressing, there is enough resistance to stop you accidentally pressing the button but not so much that it hurts your finger operating the button. In contrast to this the arrows on the back of the housing are very hard to press, they can't be operated easily; you have to really press the button in to get it to register on the app. I was



using this housing in 25-28c waters with no gloves, in these temperatures you don't really worry about cold hands and gloves, but if you were to use this housing in a more temperate climate, I would be concerned about operating these buttons once my hands started to get a bit cold and weak.

It is quite frustrating operating the menus and dive computer with



Unlike the shutter release button, the arrows on the back of the housing are very hard to press, they can't be operated easily; you have to really press the button in to get it to register on the app.

these arrows, they are awkward to press and to navigate from the camera to the image library you must press three arrows, and to go back to the camera you need to go all the way back through those 3 menus. There is no press shutter to return to the camera like most other cameras have. Not having this in the software cost me a few images of slightly faster moving subjects, by the time I had navigated back out of the menus I missed the subject! It seems strange to me that the shutter is so easy to



Shoal of Indian mackerel with zoom lens, colour correction in Oceanic + app

press, and the arrows are so much more difficult to operate. I would also say the buttons are a little bit too close together I did slip onto the wrong button a couple of times when navigating the menus.

Once you have collected a few images and would like to review them, you can navigate through the menus using the arrows to see all of the images and videos taken on your dive. Just a note that you cannot delete any photos or video whilst in dive mode, but this isn't much of a problem unless you have low memory on your device.

When reviewing images the app doesn't show you your most recent photo first, instead it displays them from 1-35 etc and to see the 35th and most recent photo you would need to start at 1 and press the button to move forwards until you reach your most recent photo, and with those hard to press buttons I didn't bother to review my images on the dive.

The app also has a built in colour-correction software that can be turned on or off during the dive, but this had a few bugs and after a couple of tries I resorted to shooting it without the colour correction. I didn't have much success with it,



Shoal of Indian mackerel with zoom lens, colour corrected in Lightroom

when turning on the corrector the screen flicked between the natural blue water colour and a slightly pinker colour corrected screen so quickly it was hard to tell if the photos has the colour correction on or not. When facing directly into the sun the colour correction had a bit of a problem and went completely white as it struggled to correct the colours, I think I'll stick to editing the images after the dive.

I have to say, the dive computer which is integrated into the app is spot on. On multiple occasions during the dives I compared the dive computer to my Shearwater Perdix and the depth, time, NDL and safety stops were all the same.

I was also pleasantly surprised to see the computer also has a compass, it was accurate when compared to my Shearwater, many entry level dive computers don't even have a compass. The dive computer sits on the top right corner of the screen, it is visible throughout the dive and I did not find it distracting at all, if you want more information you can scroll through the dive computer to see additional information including the compass and more NDL data.

I do think the app needs some work; practically it works well and the step-by-step set up is great, but some more thought is needed to develop the app for photographer and videographers to streamline the usage. And if the buttons on the back could be made as smooth as the shutter button it would drastically improve this housing, I think it has great potential but it just isn't quite there yet.

There's great potential here, with a few bug fixes and an update to the app many of these issues could be solved. A shutter button press and return to photo/video mode would be a great feature to update and showing you the most recent photo/video you have taken first and not last would drastically improve the user experience.

I think they could be onto a winner, hopefully an update is scheduled for the near future and I'd happily take this housing out for another dive.

Shannon Moran
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OM System TG-7 & FCN T02 review

by Peter Rowlands

It weighs just 400gms including a fisheye to full frame zoom lens; fits easily into most BC pockets, shoots RAW, JPG and 4k video as well as super macro and can be used down to 15 metres without a bulky housing. Throw in a decent manual white balance and tough as nails, freezer proof for good measure. Oh yes, and it costs less than £700 (\$900) for the camera and the lens and it's called the OM TG-7 and FCN-T02 lens. So what's not to get excited about?

Well, I guess the 15 metre max depth limit, I hear you say and you'd be both right and wrong. Right because it does initially sound a bit limiting but wrong on so many other levels, photographically.

Think back to all those basic articles about how light levels are highest at the surface and then quickly lose their strength and colour spectrum as we go deeper until after about 20 metres it's almost blue/black in tropical waters and green/black in temperate. Throw in the marine biological fact that coral reefs thrive in warm, clear sunlit water and you end up asking "Why do I need to



go deeper than 15 metres anyway?". Welcome to the 'less is more world'.

A recent trip to Marsa Shagra in the Red Sea gave me the opportunity to test this diminutive duo and my thanks go to OM System UK for supplying the test equipment.

As a life long fan of available light photography both in the UK and overseas I very, very rarely dive with strobes so I am used to diving with just a housed camera or camcorder but when I took the TG-7 out for the first time underwater it felt really odd. Such a small, ordinary looking camera just didn't feel right. Operating the controls just as you would on land confirmed that these compact cameras are almost too small. Normally underwater housings



(Above) Yes, I am using a camera. (Photo courtesy of Alex Tattersall)

(Below) This is Alex taking the above picture. OM System TG-7, FCN T02 at 17mm, 1/160th @ F4, Aperture priority, ISO 100, Manual white balance





(Above) Shallow water is where the light levels are brightest, colours most vibrant and there's far less dive time limitation.

(Left) Going slightly deeper the manual white balance proved a bit 'juicy' but it's easier to mute colours that are there than add colours that are not. And anyway, you always have the option to adjust the RAW files.

(Right) Perfect point and shoot for what we did on our holidays shots.

actually make it easier to handle and control small cameras so the bare camera took a bit of getting used to.

The first job underwater is to remove the FCON T02 lens to remove any small air bubbles. Very simple to do with its bayonet mount and very positive 'click' to confirm secure location.

I deliberately didn't preset any controls prior to the dive so the first few minutes underwater were spent setting the exposure mode to Aperture Priority, ISO to Auto and, my personal

preference, -0.7 underexposure (my old habit from film days). Initially I used Auto White Balance and it produced pleasing colours in the shallows but it soon became clear that any deeper and I would have to resort to Manual White Balance. I was very pleasantly surprised to see that this coped very well right down to 15 metres. They looked punchy on the screen underwater but back on my iPad it was clear they had added a bit too much colour which is very easy to desaturate. It's much harder to add

colour that isn't there, if you get my drift.

I've never been a particular fan of circular fisheye shots and it's no different with the TG-7 especially as the top and bottom of the image are cropped so you don't get a full circle. The best setting for me was to zoom in to 17mm and this filled the frame and gave what felt like 160° coverage which is reassuringly wide.

It's very easy to drift deeper, especially if you spot an interesting subject, but the TG-7 visually

discourages this with a big red warning triangle and exclamation mark on the LCD screen which I found very effective so I moved shallower.

Available light photography is very simple underwater but there are still some basic rules to achieve better images. Firstly keep the sun behind you illuminating the scene in front of you - this will produce much less contrasty light and will produce well lit images. Secondly point the camera slightly more downwards than upwards and this will avoid too much



Keep the sun over your shoulder, aim the camera slightly down and you will get evenly lit colourful images.



The small CCD sensor and a wide angle lens provides excellent depth of focus

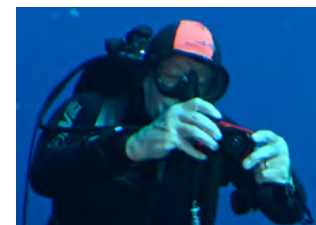
contrast, especially if you are near the surface. And that's about it, really; it leaves you free to fire away and enjoy the ease of operation which this style of photography enjoys.

I stuck with the 17mm setting for most of the rest of the dive but I could have very easily taken off the FCON T02 lens and used the built in 4.5 - 18mm (25-100mm in old money). This is a very versatile range and I look forward to using it in the UK when winter conditions allow.

After an hour in the warm, bright and colourful scenery around the coral pinnacles at Marsa Nakari I couldn't wait to get back to the iPad and show off my images which had so impressed me underwater.

Back at base the images looked good on the larger iPad screen and overall I was very impressed with the capability of this small system. Sure they lack the subtlety and biting detail of a full frame Nikon Z8 but, by the time you house that, it's cost you the best part of ten times as much. To me, that amount of investment and camera capability must make it feel serious whereas the freedom, simplicity and (comparatively) low cost of the TG7 makes it photographically fun and the images were a surprising bonus.

I think underwater photography is very lucky to have such a capable system camera as the OM System TG-7 which suits beginners out of the box but has the capability and the accessories to enable an experienced underwater photographer to take images that will impress all levels.



Peter Rowlands
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FIX SystemFrame PT01

by Peter Rowlands

The FIX SystemFrame PT01 fits to the PT-058 and 059 housings which allow the Olympus Tough TG-5, 6 and 7 cameras to be used down to 45 metres. It is a multi function accessory mount and handling frame which not only adds protection to the polycarbonate housing but also allows several accessories to be fitted such as strobes, lights and lenses.

The FIX SystemFrame PT01 is machined to a very high standard from aluminium which is then anodised for corrosion protection. It is available in three colours - black, silver and red and my review sample was the matching red which I think creates a positive sense of integrated design.

Talking of design, the polycarbonate PT housings from Olympus and now OM Systems have provided a very economic entry level for beginners and advanced alike but, by their very nature, they are not as strong as aluminium housings, especially when adding even the smallest and lightest of accessories so that is where the FIX SystemFrame PT01 comes into its own. It provides the strength of aluminium without the bulk and weight and the result really

transforms the housing into a very robust working tool.

The OM Systems PT-058 and 059 housings slide into the SystemFrame and are positively located using the cold shoe mount and then the two are secured with a tripod screw into the base of the housing. This is rather like the 'cages' used on digital cameras when used primarily for shooting video; they allow accessories such as LCD screens and lighting to be added.

The left hand handle has a ball mount fitted as standard and there are several accessories which can be added to the SystemFrame including an aluminium cold shoe for much stronger holding of strobes and lights, a Tplate and 52mm adaptor for safe storage of lenses when not needed and a strap handle for the right hand side to keep your trigger hand in the correct and comfortable position. The combination of the two handles will help steady your images and especially your video footage immeasurably.

To complete the package there are six tapped holes above the shutter release lever for additional accessories of your choice and a final M10 tapped hole on the slope to the right for



The Tplate can be added just above the camera's built in flash so that a wide angle or close up lens can be safely stored when not in use but I think the better position for this would be above the shutter release lever as it would allow the cold shoe to be fitted for a very strong and correctly positioned strobe or video light.





Whilst it supports the right hand nicely I think the strap handle limits the hand's movement when accessing the rear buttons which might need to be changed for fast moving subjects. Hand straps or not has always been about personal preference.



The solid aluminium cold shoe provides a much more secure fixing for heavier strobes and lights.



on its own; I would argue that your right hand is better suited to accessing all of the controls on the housing if it is free to move back and forward slightly to allow the most ergonomic finger or thumb to push or turn the controls.

FIX System FramePT01 USD129.95
 FIX T plate USD12.95
 FIX Hand Support 01 USD29.95
 FIX Shoe Mount USD19.95
 FIX Lens Holder USD29.95



This is my preferred layout with the solid aluminium cold shoe providing a much more secure mount for strobes and lights than the one on the housing which is a metal plate held onto the polycarbonate housing by four small screws.

The TG series of OM cameras and the PT series housings provide excellent value for money in a small, light and travel friendly package. In the right hands they are capable of much more than just point and shoot holiday images. How seriously you want to take your images is up to you but all I will say is that quality comes at a price and the fully rigged FIX SystemFrame PT01 will definitely take the performance of the basic housing to an improved level which I am sure will be reflected in the quality and consistency of your images.

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http://www.fisheye-jp.com/en_top/fe_systemframept01_e.html

Sailing Across The Banda Sea

by Nigel Marsh

The islands of the Banda Sea were once the most famous group of islands in the world. Known as the Spice Islands, this area was once the only known source of nutmeg, mace and cloves, and attracted traders and raiders from across Asia and Europe. Today these remote islands of Indonesia are better known among divers for their rich coral reefs that are overloaded with fishes and invertebrates, and at times, schools of hammerhead sharks.

The Banda Sea is a wide body of water in the east of Indonesia, located between Raja Ampat and Sulawesi. There are a few shore-based dive operators in this area, mostly around Ambon with its great muck diving, but with the best dive sites well beyond Ambon the only way to explore this area is on a liveaboard vessel. Dozens of liveaboards ply this area, with most trips departing from Ambon. However, I recently joined a very different liveaboard trip on the Cheng Ho, a sojourn across the Banda Sea from Alor to Ambon.

The Cheng Ho is a 35m long traditional style Phinisi schooner with 14 ensuite cabins that can accommodate 26 guests. The vessel is

one of four own by Sea Safari Cruises that offer liveaboard trips across Indonesia.

Flying to Alor, we were picked up at the airport and transferred to the Cheng Ho. My wife, Helen, and I quickly settled into our spacious cabin, then setup our camera gear for a special treat, an encounter with Mawar.

The itinerary didn't allow us to dive in Alor, as we had to travel over 600 nautical miles over the next nine days, which meant travelling every night and often between dives. However, before we departed Alor we headed out in two small boats to meet the local celebrity, the dugong Mawar.

This over-friendly sea cow swam straight up to the boat and proceeded to hump it. For safety reasons you are not allowed in the water with this frisky male. Instead, we took photos from the boat. This was quite an interesting photography challenge, as leaning over the side I was shooting blind, just snapping away as the dugong swam by.

Mawar the dugong - 1/400, f8, ISO 200, Nikon D500 with Tokina 10-17mm lens, Isotta Housing, natural light



The Cheng Ho liveaboard - 1/800, f14, ISO 400, Nikon D500 with 18-300mm lens





Tender boat taking divers out - 1/640, f13, ISO 400, Nikon D500 with Nikkor 18-300mm lens

He constantly swam around both boats, swimming back and forth. I snapped images as he swam by, and several times had to pull the camera housing out of the water as he stuck his face right up against it. I was a very unusual encounter, but after twenty minutes he got bored and swam off, so we got underway.

Over the next seven days we did some amazing diving off remote islands, atolls and pinnacles. For the first three days we dived sites in the southern Banda Sea. These sites were typically sloping

reefs, with pretty hard coral gardens in the shallows and barrel sponges, gorgonians and soft corals decorating the walls. Each of these reefs was home to a great variety of reef fish and a good supply of pelagic visitors. We enjoyed dives at Reong Island, Tanjung Tutan, Nyata Slope, Palau Limtutu and Terbang, typically seeing mackerel, tuna, morays, sea snakes, barracuda and garden eels.

On these dives I was swapping constantly between the wide-angle lens and the macro lens, as these sites had a great combination



Typical Banda Sea coral scene - 1/100, f8, ISO 200, Nikon D500 with Tokina 10-17mm lens, Isotta Housing and single Inon Z330 Strobe

of subjects. The corals and sponges were great for the wide-angle lens, but I found the pelagic fishes were a little harder to get close too for good photographs.

With the 60mm macro lens I found a few invertebrate subjects, however, the abundant reef fishes were the best for this lens. I shot a variety of angelfish, basslets and butterflyfish, with the best subjects being the numerous anemonefish. I was lucky enough to find two western clown anemonefish guarding their eggs. Another feature were all the dartfish. I found

and photographed arrow dartfish and elegant dartfish, and was very happy to finally get a photo of an elusive spot-tail dartfish.

A highlight in this southern area was Palau Laut. The reef at this site was washed by a current, and had lovely corals and fishes everywhere. There were dense schools of trevally, snapper, fusiliers and rainbow runners. I had my macro lens on the camera, and while I found plenty of subjects, this was one dive that I should have gone with the wide-angle lens, as we encountered a large

tawny nurse shark and a very fat porcupine ray.

Halfway through the trip we arrived at Nildesperandum, an isolated coral atoll at the very heart of the Banda Sea. This site marked the start of reefs where schooling hammerheads are found. Hammerheads are seen in the Banda Sea over two seasons - March to May and September to November. I put the macro lens away and hoped the wide-angle lens would be put to good use.

The anticipation levels were high as we jumped in for the first dive. Unfortunately, the visibility was a little poor, only 10m and not the 20m plus we'd enjoyed so far, and the water temperature was lower at 26°C. It was a little chilly, but this cooler water was perfect for hammerheads. We patrolled the coral wall for over 40 minutes peering into the gloom, yet no hammerheads. Instead, we saw schools of barracuda, trevally, rainbow runners, mackerel, fusiliers and several massive dogtooth tuna.

We were not the only boat looking for



Brown gannet visitor - 1/500, f13, ISO 400, Nikon D500 with Nikkor 18-300mm lens



Broadclub cuttlefish - 1/125, f9, ISO 200, Nikon D500 with Nikkor 60mm lens, Isotta Housing and single Inon Z330 Strobe



Chinese sea krait at Manuk - 1/100, f11, ISO 200, Nikon D500 with Tokina 10-17mm lens, Isotta Housing and single Inon Z330 Strobe

hammerheads, as there were two other liveaboards at this site. We did two more dives at Nildesperandum, and unfortunately no hammerheads. However, there was still plenty to see and photograph including gropers, pelagic fish, a hawksbill turtle and a good variety of morays, including several rare spotted morays.

The following day, we arrived at the site I most wanted to visit in the Banda Sea – Manuk. This volcanic island is named after the thousands

of sea birds that nest on it, and we had hundreds of gannets and frigates circling above us. However, the island is also famous for its large population of sea snakes.

Our first dive at Coconut Corner was sensational - 30m visibility, a wall covered in the most beautiful soft corals and sponges, fish everywhere and black volcanic sand between the corals. There were schools of barracuda, triggerfish, basslets, snappers and fusiliers. And we finally

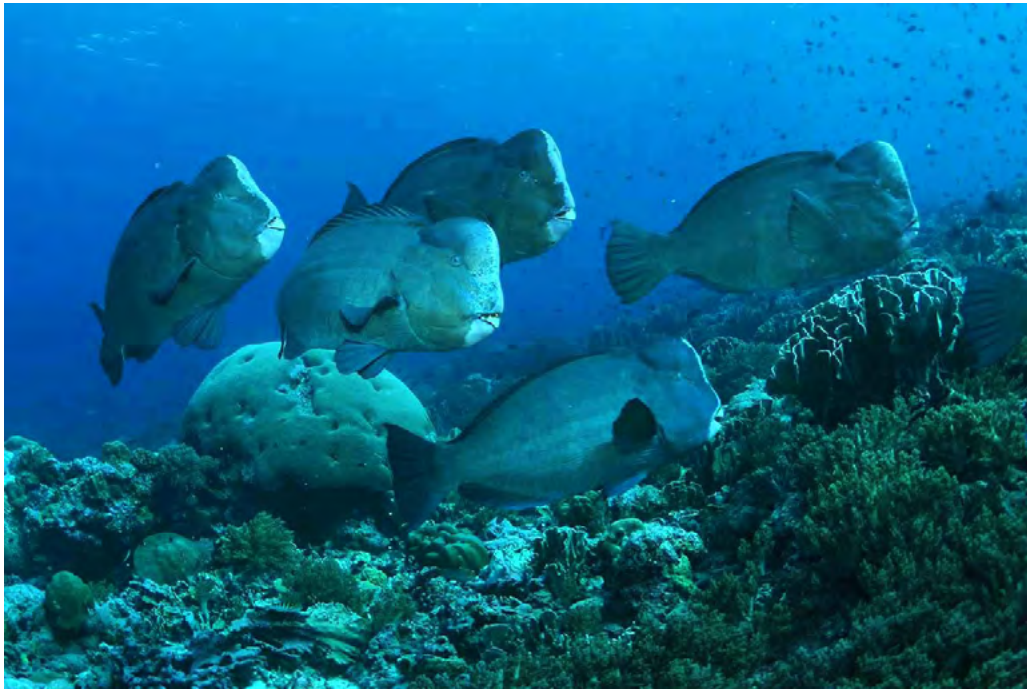
saw the first hammerhead, with a scalloped hammerhead out in the blue, well beyond camera range. I was surprised to only see ten sea snakes on this first dive, mostly Chinese sea kraits, but that quickly changed.

Our second dive at Bubble Ridge was just as good, with more pretty corals, more fishes and many more sea snakes. The sea snakes at Manuk are famous for hunting in packs, often with an escort of trevally, and this is something I dearly wanted to see and hopefully photograph. I saw dozens of sea snakes on this dive, and right at

the end we spotted a hunting pack of six moving over the reef with a group of trevally. Unfortunately, the group only stayed together for a minute and by the time we got over to them they had disbursed.

Our final dive at Manuk at Babylon Ridge was also epic, with more snakes and fish. We also spotted two more hammerheads, unfortunately very briefly.

By now we were deep into the northern Banda Sea, however, sadly this was also our last day diving recognised hammerhead sites. We



School of humphead parrotfish - 1/250, f8, ISO 200, Nikon D500 with Tokina 10-17mm lens, Isotta Housing and single Inon Z330 Strobe



Soft coral garden at Manuk - 1/125, f8, ISO 200, Nikon D500 with Tokina 10-17mm lens, Isotta Housing and single Inon Z330 Strobe

started the day with a bang, with a great dive at Kerang Hatta. This was another gorgeous reef wall covered in beautiful corals. However, we were lucky we could see the corals as swarming over the reef were millions, or possibly billions, of baby red-tooth triggerfish. We have seen schools of these fish before, but nothing like this.

Unfortunately, no hammerheads, instead we saw a school of humphead parrotfish, barracuda, mackerel, tuna, morays, groupers, a hawksbill turtle and a blacktip reef shark. We also had a brief encounter with a group of six mobula rays.

Our next stop was back in civilization at Banda Neira, the most famous of the Spice Islands. We had to stop at the port here to register, with guests given the choice of a visit to the historic town or a dive. We choose the dive at nearby Lava Flow. This site is at the base of a recent lava flow and it was a little average after the dives we had experienced. There was still pretty corals and some nice fish life, but also rubbish in the water from the nearby town.

Late in the afternoon we arrived at Suanggi, the last recognised hammerhead site. We were a bit

surprised to see a dozen local fishing boats in action around the island, and even spotted one that had landed a black marlin. There were also six other dive boats here.

It was almost sunset by the time we got into the greenish water, descending on a pinnacle off the island. The top of this pinnacle rises to 16m then drops to over 50m. The visibility was only 10m and the water was quite dark being so close to sunset. We didn't like our chances of seeing a hammerhead, but followed our guide to the reef edge and looked out into the gloom. There was a

good variety of pelagic fish on show – mackerel, giant trevally, barracuda and snappers. Unfortunately, with the limited visibility the sharks could have been 20m off the wall and we wouldn't have seen them. After 30 minutes of patrolling the wall we were the last group left, so reluctantly headed back into the shallows.

That was when the magic finally happened, when we least expected it a group of nine large scalloped hammerheads suddenly appeared cruising over the reef. They were an impressive sight, swimming around us three times, each time keeping



At last a school of scalloped hammerheads - 1/50, f8, ISO 200, Nikon D500 with Tokina 10-17mm lens, Isotta Housing and single Inon Z330 Strobe

a safe distance away. With our dive computers about to go into deco we finally ascended, happy to have finally seen the Banda Sea hammerheads. I managed a few photos that were not great, simply a record of an amazing encounter.

Our last day at Nusa Laut could have been a let-down, but the pretty coral gardens and coral bommies at this site were overflowing with life. Over three dives we saw cuttlefish, octopus, humphead parrotfish, turtles, morays, boxfish, tobies, leaf scorpionfish, garden eels and a solar-powered nudibranch, with the macro

lens getting a great workout.

Our sojourn across the Banda Sea was an epic dive adventure. We may have only done three dives a day, but sailing the historic Spice Islands and seeing hammerheads, sea snakes and a host of other great species made for an unforgettable dive trip.

Nigel Marsh

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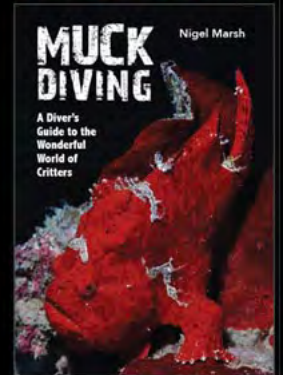
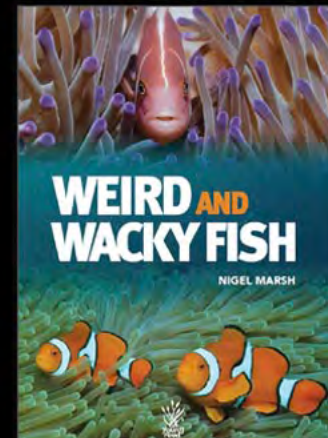
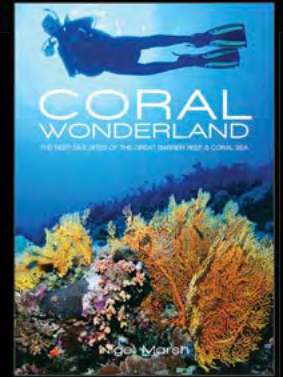
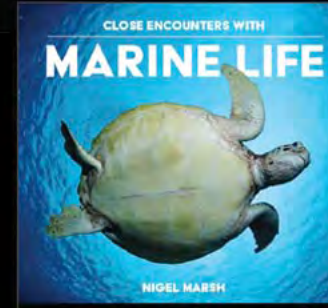
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NIGEL MARSH

Photography

Nigel Marsh is an Australian photojournalist, underwater photographer and author. Working with New Holland publishers, Nigel has produced a number of guide books for divers and snorkelers, and also a series of children's books with marine related themes.



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Photographing Shipwrecks around the British Isles

by Rick Ayrton

I had been asked to give a talk about U/W photography at Guz Tec, a new technical diving conference based in Plymouth UK, it's aim is to promote tech diving with an emphasis on UK based explorations.

As an underwater photographer I was very much aware I would be speaking to a mixed audience with a good number of non-photographers. For the talk it had to be interesting to all, stories of how the wrecks were located & dived with a sprinkling of technical photographic information.

Peter Rowlands who attended the conference subsequently asked me to write this article based on the talk. I can expand the technical side since I know that the readers of this article have self-selected and will hopefully understand the more geeky aspects!

By way of introduction this report is only about photographing UK shipwrecks, this in itself is a challenging undertaking since visibility is not one of the well-known aspects of UK diving. Being able to successfully take UK wreck shots makes the transition to clear blue

water so much easier and therefore as UK based photographers it is worth spending time to master the skills required.

Obviously finding the best UK viz you can is important, you can rarely get good images during plankton blooms or after extended periods of wind or heavy rain. Unfortunately for predictably good viz around the UK you have to go a long way offshore and by association end up getting to the deeper tech diving depths. Occasionally the stars align and good viz makes it all worth-while.

My talk was about my development as a photographer as well as how camera development has impacted on the pursuit of the perfect wreck image. I had used film SLR's topside, underwater I started with video before moving over to stills, a Canon compact started my journey but for this report we will start in 2007 when I purchased a 10MP Nikon D200 & a Sea & Sea housing & strobes. My wreck photography is all done with fisheye lenses, for the purposes of this report nothing more is to be said about lens choice.



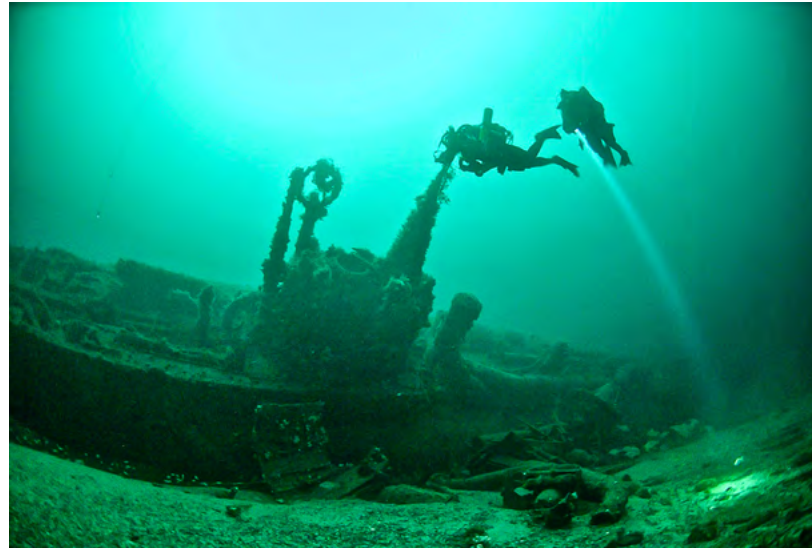
Giannis D Red Sea 25m, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, ambient light, f2.8, 1/60, iso200

One of the first trips I did in 2007 with the D200 was to the Red Sea and I was pleased to have captured this shot of the Giannis D, at the time I thought I'd got it all sorted and was looking forward to replicating the shot in the UK - little did I know!

In the UK I was tech diving, depths meant little light was available so the addition of strobe light was required. In 2008 I captured this shot (right) on an unknown wreck South of Plymouth in about 65m of water, Strokes light the scene nicely but the view is not balanced with the more distant areas of water just appearing very dark.



For the first few years I was very much learning the ropes but it all came together in 2010. I was on a trip to Orkney, looking at wrecks outside Scapa Flow and I found the holy grail, clear water & ambient light (even at



(Far left) U102 80m, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, ambient light, f2.8, 1/3, iso800

(Left) U1021 55m, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, ambient light, f2.8, 1/25, iso500

(Bottom left) U1021 periscope, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, strobe lit, f2.8, 1/25, iso800

(Below) Periscope crop

80m). The U102 submarine was lost in September 1918 with all hands as a result of hitting a mine of the Northern barrage, East of Orkney. I would be with one of the first groups to dive her. I recall seeing the whole wreck laid out in front of me and spent time kneeling on the sea bed to brace myself as I was using a long exposure 1/3 second but just ambient light.

This was one of the first UK images I managed to get that came close to the Red Sea image, I was to get another opportunity later in the year. This time diving off North Cornwall on another submarine, the WW2 U1021, this was a type VII

boat again sunk by a mine in 1945, but only in 55m. Once again good viz, ambient light and gradually increasing the iso of the D200. I was at this time still influenced by the reasoning that you should keep the iso as low as practical, keeping grain & noise to a minimum.

On the same dive I took this rather more intimate shot of the periscope lens,

What is interesting is the significant crop shows the excellent quality of the D200, especially when it is fed strobe light, the details visible are truly amazing, being able to zoom in on the intricate cogs that work the periscope, a testament



to the engineering in both the camera (only 10 MP) and the periscope which has remained (and still is) water tight since 1945.

In the years after I never had such good conditions

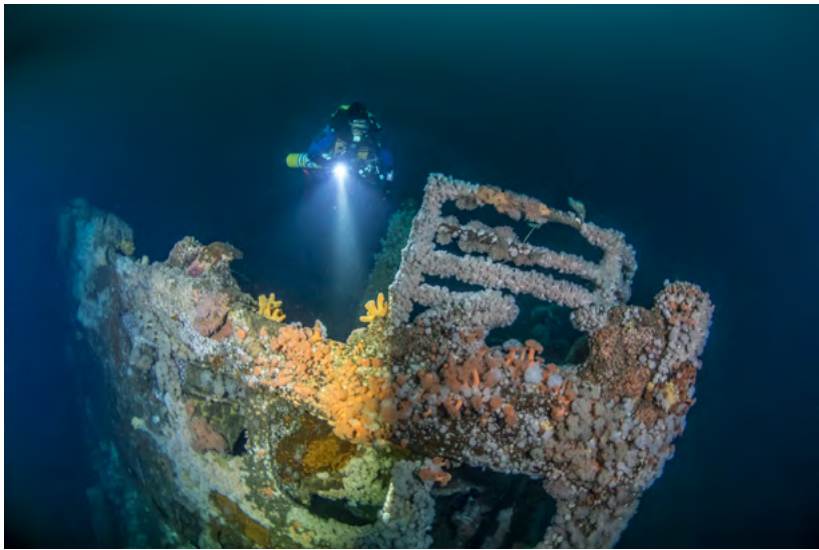
for the D200 in the UK, it was retired in 2013 when I changed to the Full Frame 24 MP D610, also changing to Nauticam housings.

I can't say that the D610 was a favoured tool it's



autofocus was not a great improvement over the D200 but I was able to nudge the Full frame sensor up to iso2500 with little grain & noise in evidence.

The Flagship DX format 24MP D500 was released in 2016 and I decided to move back to cropped sensor, also changing to Inon Z240 strobes



RMS Justicia 70m, Nikon D500, Tokina 10-17 at 10mm, Nauticam housing, D500, strobe lit, f3.5, 1/60, iso3200

since the Sea& Sea strobes would not fire consistently from the LED flash trigger.

In 2017 I returned to Malin Head, probably the region of the British Isles with the most reliable good visibility, prior visits had been with video and I was looking forward to using the D500 in the clear Atlantic viz.

Torpedoed in 1918 the ocean liner Justicia is one of the classic Malin Head wrecks, lying in 70m she is a spectacular wreck. The D500 was allowing the iso to go up to 3200 but strobe artifacts were beginning to become intrusive, note the flares of

light each side of the frame, aperture & speed are already fairly low (arguably the speed could drop) but using strobe on minimum power at high iso was becoming a problem. I started experimenting with LED powered video lights available on Amazon for little cost for off & onboard lighting, opening up a whole new way of shooting deep wrecks.

I returned to Malin the following year on a trip organised by Irish Tech diver & photographer Barry McGill and with Danish u/w photographer Rene Andersen and others attending, it was



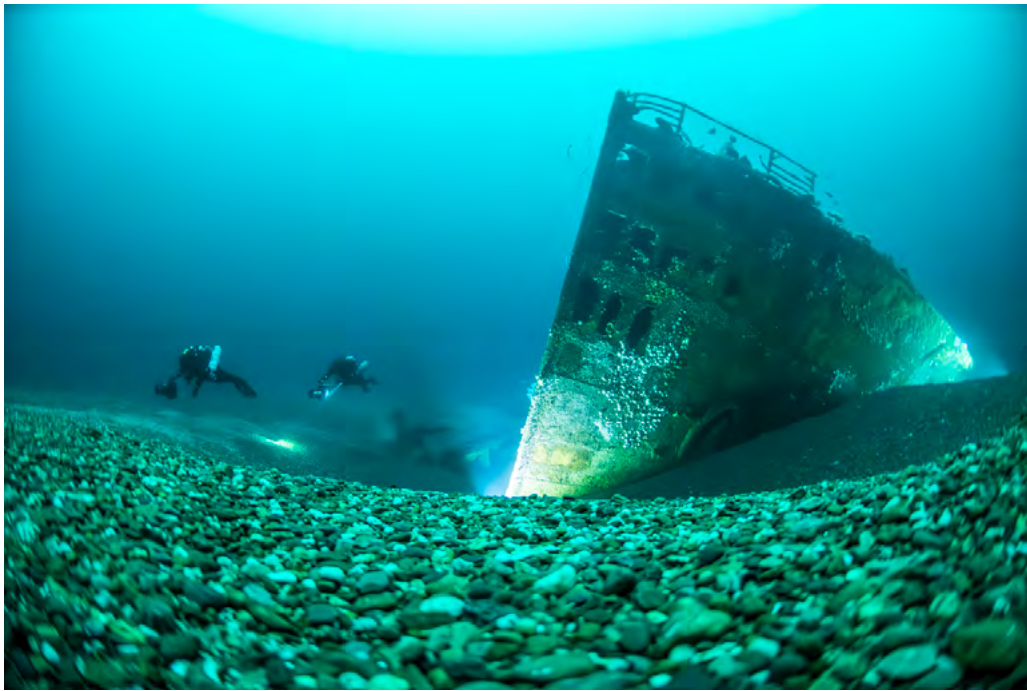
HMS Audacious 63m, Nikon D500, Tokina 10-17 at 10mm, Nauticam housing, Ambient & off board lights, f7.1, 1/30, iso4000 (3 image panorama)

an intensive week of wreck photography brainstorming. Rene introduced me to tripod use and we all discussed how far the iso could be pushed – 6400 seemed to be the answer in 2018 & the use of dedicated models.

Another Malin Classic the Empire Heritage was carrying a cargo of Sherman tanks, here the scene was discussed and planned before the dive, the diver holding the main video light was able to stay in place until we had all taken the shots we wanted.



Empire Heritage 68m, Nikon D500, Tokina 10-17 at 10mm, Nauticam housing, Ambient & off board light, f5.6, 1/40, iso6400



RMS Justicia 70m wide view, D500, Ambient & off board light, f2.8, 1/50, iso6400

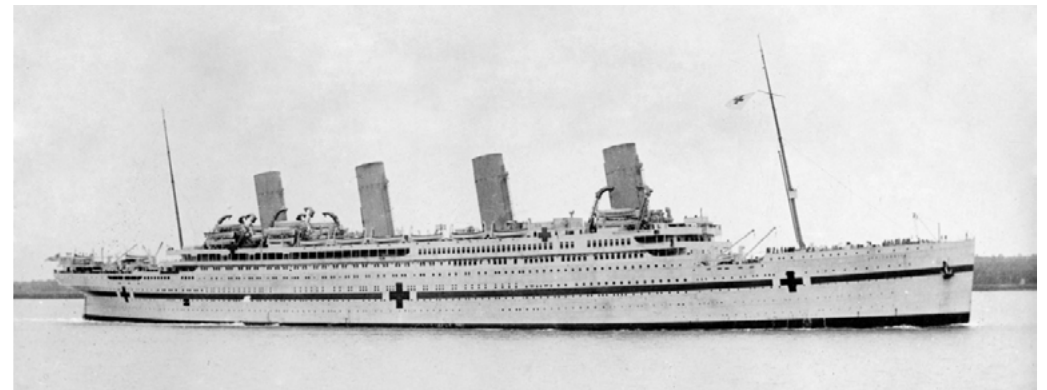
I was very pleased to get this wide view of the Justicia (above) with 2 divers scootering past, combined with last years closer view of the point of the bow and other views allows a portfolio of shots of this magnificent wreck to be built up.

In 2019 I had a trip to dive the 120m deep HMHS Britannic, I was concerned my D500 housing was only rated to 100m and could potentially fail, there were various options(including risking it) but I decided to get the newly released mirrorless 24MP Nikon Z6 with a 150m rated Nauticam housing.

I chose the Z6 because of

its alleged excellent low light performance. What I found was that iso could be elevated significantly. Using continuous light instead of strobes meant that the Auto iso settings could be usefully used on the camera, to begin with 100 – 10,000 range.

Many of my Britannic shots were taken at iso 10000 but I found later I could take it even further- up to iso20000. The Aperture & Shutter speed were generally dialled in before the dive and the auto iso facility would adjust to the correct exposure, ideal when you need to be concentrating on staying alive on a sub 100m wreck!



HMHS Britannic is the Sister ship of Titanic & lies in the Aegean south of the Greek mainland and off the island of Kea. First dived by Cousteau's team in 1975.



Britannic stern, 110m, Nikon Z6, 8-15 @15mm, f5.6, 1/30, iso 10000



SS East Point 64m, Nikon Z6, Nikon 8-15 at 15mm (on FTZ), Nauticam housing, Ambient & off board light, f6.3, 1/40, iso16,000

This wreck, (above) is the East Point, lying south of Plymouth in approx. 70m. It's a clean image with not much noise or grain at iso16,000.

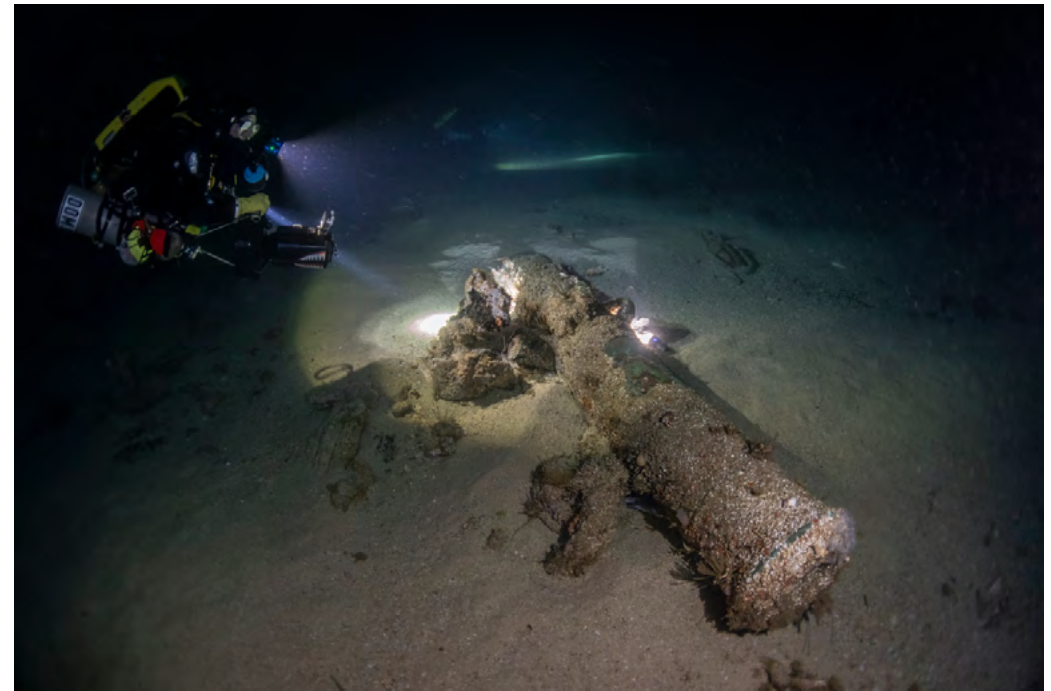
The Z6 was very capable, its low light performance was excellent, it was let down a little by it's autofocus although I learnt to live with that.

When Nikon released the 47MP Z9 flagship full frame mirrorless camera I decided that I would make the change, in addition I also purchased some Weefine smart focus 10,000 video lights, their main benefit being adjustable intensity from 0 – 100% in 10% increments,

with deep wreck diving they will be mainly set at just 10% (they also have a strobe function which I am currently experimenting with).

I made the change mainly because of the improved autofocus and accepted low light performance may not be as good as the Z6. I have found vastly improved autofocus and low light performance virtually the same as the Z6.

This next shot (above right) was taken on the historic wreck of HMS Victory (the one before the Victory in Portsmouth harbour). Lost in a storm in 1744 over 1,000 sailors perished in



HMS Victory(1744) 80m, Nikon Z9, Nikon 8-15 at 15mm (on FTZ), On & off board lights, f5.6, 1/25, iso1600

the disaster.

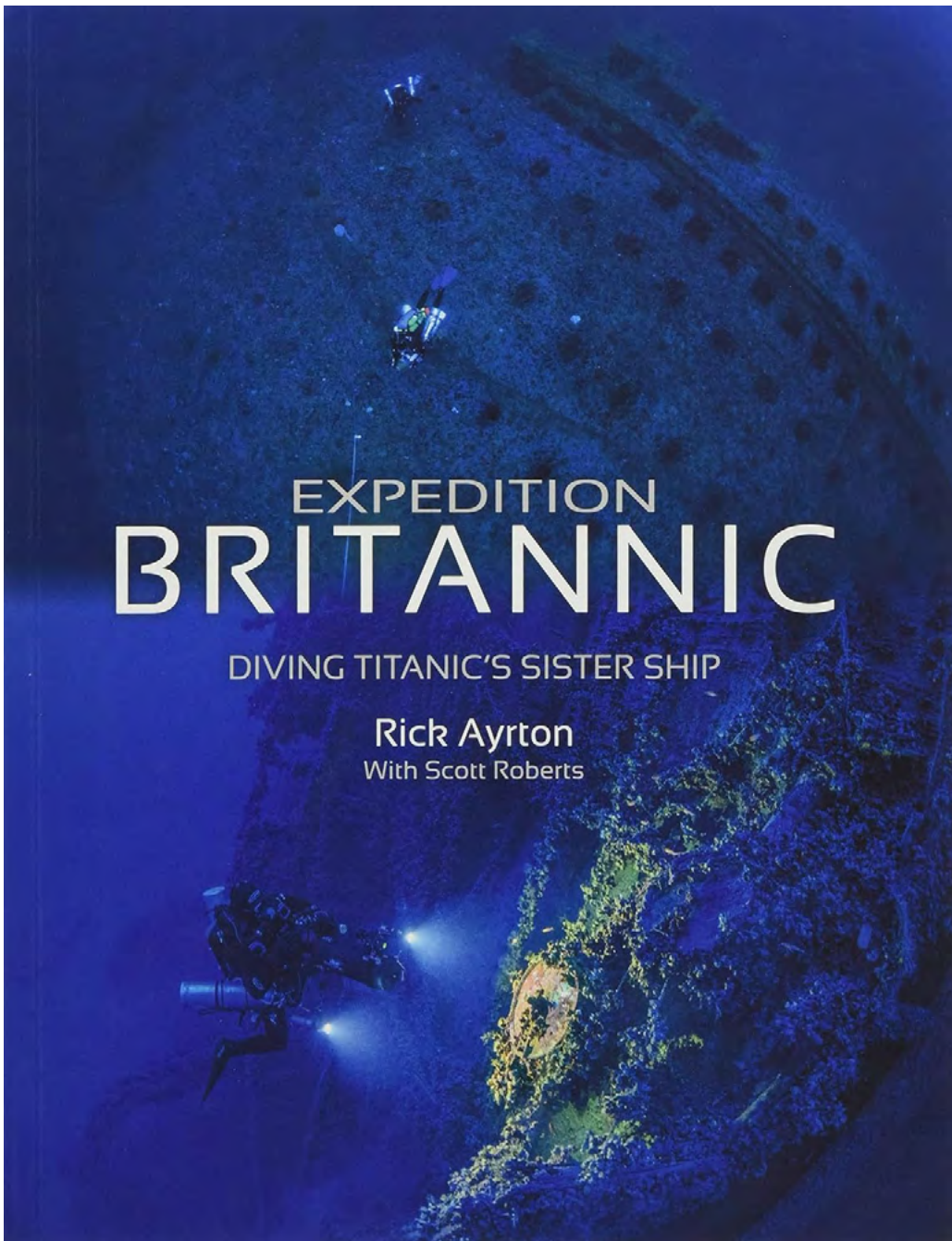
I feel this shot illustrates the benefits of the Z9, an illuminated foreground from the Weefine video lights, a buddy modelling and pointing a torch where it is needed and a further diver in the distant background giving the image depth.

I actually think the shutter speed was a bit slow on this one, this frame is sharp but others in the series show motion blur, there is no need as the iso could have compensated for any elevated shutter speed.

It was taken on a calm day in nearly 80m, dropping through a murky



layer near the surface, I knew it was going to be dark on the wreck but the camera nails focus and the sensor captures the scene.



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2022
*You are looking at
12 years of camera
development when
comparing these
images.*

U1021, 55m, Nikon Z9, Nauticam housing, 8-15mm lens at 15mm, f8, 1/30, iso5000



2010
*Obviously, I cannot say
the conditions were
exactly the same but
they must have been
pretty close.*

U1021, 55m, D200, ambient light, f2.8, 1/25, iso500

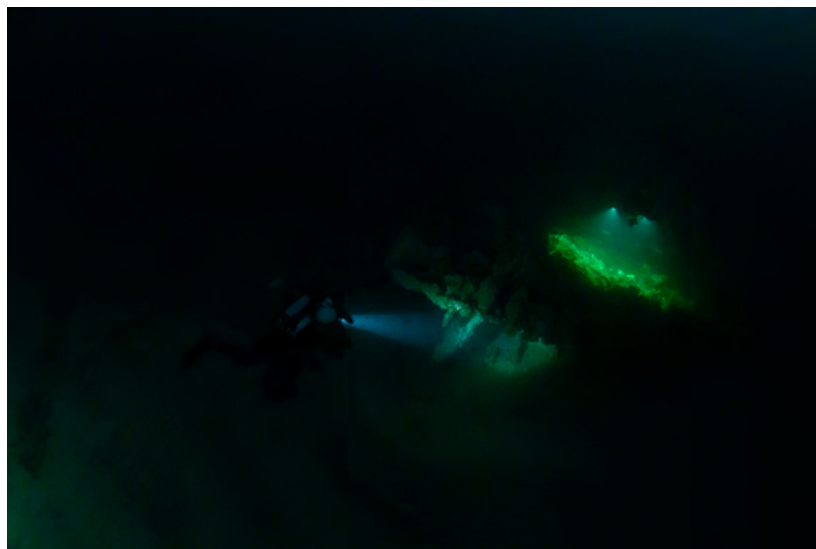
Finally, a couple of images that show the unsung hero of deep UK wreck photography – Post processing.

This image was taken after I had switched off my own lights as I was returning to the shot line. HMS Negro is in 2 parts and here a diver is swimming across the sand to the stern section,

The sensor is maxed out at iso20,000, f8, 1/40, I could perhaps have opened the aperture a little more, nevertheless, the frame is very dark but image data is present and can be recovered

Modern sensors have moved on greatly from 2005 when the D200 was released, I am now using a camera with a full frame sensor of nearly 50MP, the additional pixels allow large size prints to be made and cropping gives additional flexibility without degrading the image significantly.

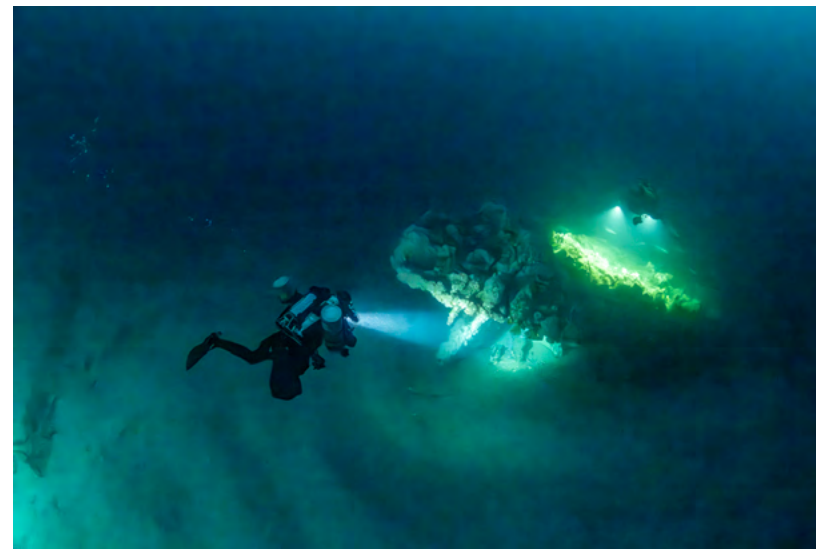
Newer sensors feature much improved low light performance in challenging conditions, the dynamic range of the modern sensor surpasses that of the older cameras significantly.



HMS Negro 102m, Nikon Z9, Nauticam housing, 8-15mm lens, Ambient light, f8, 1/40, iso20,000

Autofocus technology has improved as well with my current Z9 able to resolve and focus well in -7EV (D500/D850 = -4EV).

Whether the newer sensors make a difference does depend on use. Shooting with strobes on stationary or slow moving subjects, there is not much to be gained. For example I tried to replicate the close up of the periscope lens with the Z9 but the glass had some hard marine deposits I couldn't remove, so the best shot I have remains that taken on the D200.



Same image processed in Lightroom

Onboard Clasina with the Nikon Z9 housing mounted on a Dive X Piranha Scooter

When there is some ambient light and visibility everything changes, the power of these modern cameras can be unleashed.

I suspect the same conclusions will apply to all camera manufacturers. Having a number of competing manufacturers does make continued improvement likely from which we as end users ultimately benefit even if our pockets take a hammering!

Around the UK water clarity and ambient light are fickle but can occasionally be very good.

Capturing images of UK shipwrecks is challenging but when it comes together it is very rewarding.



© katerina barvirova

Rick Ayrton
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The Auto-Magic formula is now available in a Plexiglass filter that can be added or removed underwater.

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Mar Menor Seahorses

by José Luis Alcaide Sanjurjo

A 10-year monitoring program was developed to quantify the population dynamics of the long-snouted seahorse population in the Mar Menor coastal lagoon. Based on 985 underwater visual censuses, we estimated the long-snouted seahorse (*Hippocampus guttulatus* Cuvier, 1829) population size in the Mar Menor lagoon and its reduction in size in the last decades, as well as the effect of eutrophication crises in 2016 and 2019 on the species.

The annual recruitment for the 2013–2020 period was estimated by comparing the relative abundance of early seahorse life stages in the ichthyoplankton. The density ranged from 0.0458 specimens/m³ at the beginning of the sampling period to 0.0004 at the end, showing a statistically significant difference between the three analyzed periods ($H_{gl}=2 = 14.0$, $p = 0.001$).

The long-snouted seahorse population from the Mar Menor lagoon exemplifies the impact of fishing activities and human pressure, especially euxinic episodes and habitat destruction. As a result of this, the Mar Menor population has decreased from several million



Mar Menor coastal lagoon on the east coast of Spain



*We can see a pair of seahorses, of the species *Hippocampus guttulatus*, where the male (the one on the right) is clearly pregnant and about to give birth.*

NIKON D-200, SUBAL + INON Z240, 1/160 f13, ISO 100 - 40 mm





The first cause of seahorse mortality is caused by humans. the extraction of specimens and pollution, which also causes the disappearance of their habitat.

NIKON D-7200, SUBAL + INON Z240, 1/200 f9.0, ISO 200 - 20 mm

specimens to a few thousand, in only three decades. This species showed considerable resilience, the seahorse population began to recover once fishing activity stopped. In contrast, the long-snouted seahorse showed high vulnerability to habitat loss and an episodic flooding event. Adult seahorses showed preferences for

highly complex habitats, especially *Caulerpa prolifera*–*Cymodocea nodosa* mixed meadows and habitats of high complexity and anthropogenic origin, such as harbors, jetties, or breakwaters.

In contrast, juvenile seahorses preferred monotonous seabeds with low complexity, such as the sandy

beds that are characteristic of the Mar Menor lagoon littoral.

This organization is mainly made up of professionals and volunteers, who have been specifically developing activities to monitor marine diversity, environmental education and awareness about syngnathid populations (*Syngnathidae* family) and their underwater habitat in the Mar Menor lagoon, as well as like other species and marine habitats in general.

Since 2006, we have carried out awareness-raising and environmental education actions on the species, continuously developing periodic sampling and monitoring of seahorse populations through citizen science, in order to obtain data on the species that promote management and conservation actions. Among them, its possible inclusion in the Spanish Catalog of Endangered Species.

The coordinated actions being carried out are making it possible to define a basic reference framework

to complete the management, conservation, monitoring and educational dissemination actions of the natural marine and underwater values of the Mar Menor lagoon and its area of influence in general, and in particular, report on the status and evolution of the taxa *Hippocampus guttulatus*, *Hippocampus hippocampus*, *Syngnathus abaster* and *Syngnathus typhle* and the status of their populations.

These actions are contributing with the provision of basic information about their status and their relationship with the socio-economic development of the area, carrying out educational actions, awareness-raising, research, social participation, through citizen science and sustainable entrepreneurship in the environment of the Mar Menor, as well as other actions that can be developed for the well-being and conservation of the marine environment.

In the last of our scientific publications, written by our volunteer scientists, Miguel, Cristina, Juan Diego and José Antonio, they include a summary of all the work carried out to date. This is *The Journal Fish Biology of the United Kingdom*, where the decline of the seahorse is highlighted through its study:

<https://onlinelibrary.wiley.com/doi/abs/10.1111/jfb.15564>



We can see how they try to camouflage themselves with the environment. On many occasions, the couple remains together for some time until they are sure that the offspring is ready. Then they say goodbye and everyone is left to their own devices.
NIKON D-7200, SUBAL + INON Z240, 1/400 f20.0, ISO 100 - 20 mm



This seahorse, barely a centimeter long, is a new recruit. At this age you cannot tell if it is male or female. NIKON D-200, SUBAL + INON Z240, 1/160 f9.0, ISO 100 - 85 mm



All this effort sets its goal on the inclusion of an animal discontinued due to lack of data, in the National Catalog of Endangered Species, where if it is achieved, a program of recovery, reproduction and reintroduction into the environment, as well as care, will begin by law. , monitoring and recovery of its habitat, as damaged as it is where it currently almost survives.

The data obtained during these years is completely alarming, due to the reduction of 99.9% of individuals from its entire population in the coastal lagoon. The volunteers who make up the association have been able to personally witness this painful decline, as well as that of their peers.

They have also been able to observe the drastic change that the lagoon is undergoing. It is still an acquisition of real

knowledge of these changes in a specific place, in a time of global climate change. The observations of these changes are seen remarkably almost day by day and the data obtained are discouraging for the volunteers who observe it firsthand.

You can contribute to the study through synergies with other organizations that carry out similar scientific studies or by subscribing through our website with financial contributions as trusts or partners.

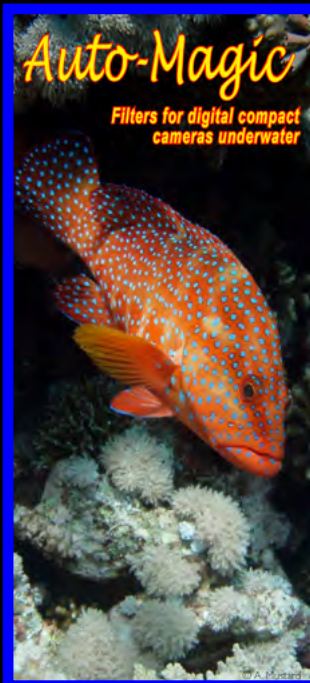
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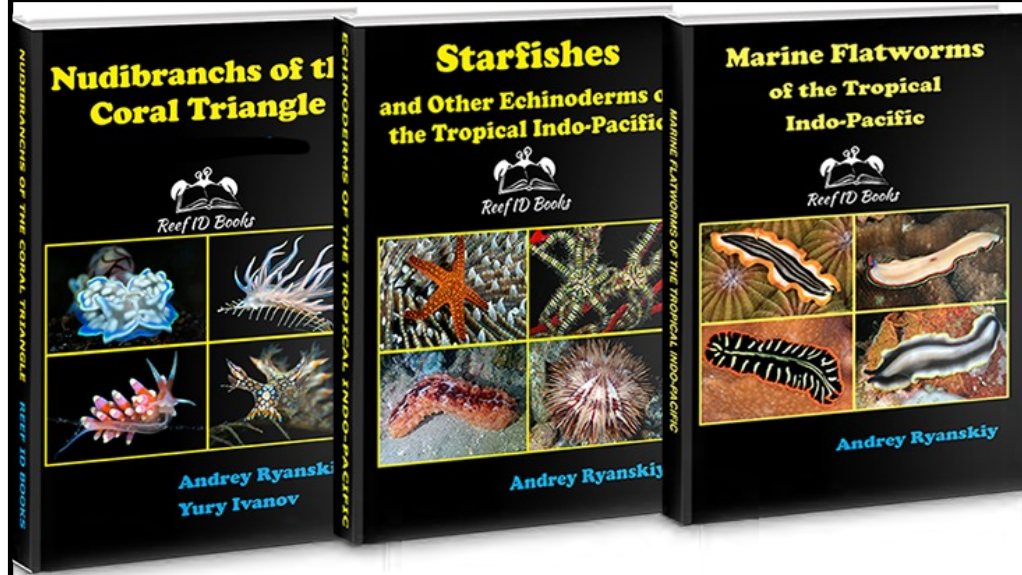
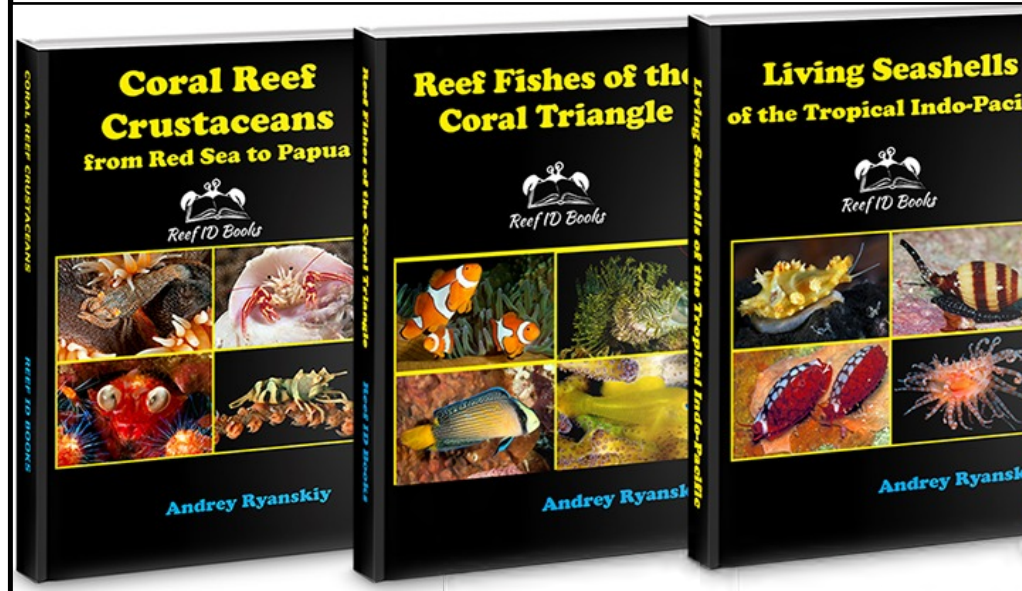


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Marshall's Mysteries 13

Do you know what these animals are, or what they are doing? Have a guess – answers on page 69

A



© Colin Marshall

Lembeh, Sulawesi, Indonesia

image about 5 cm across

B

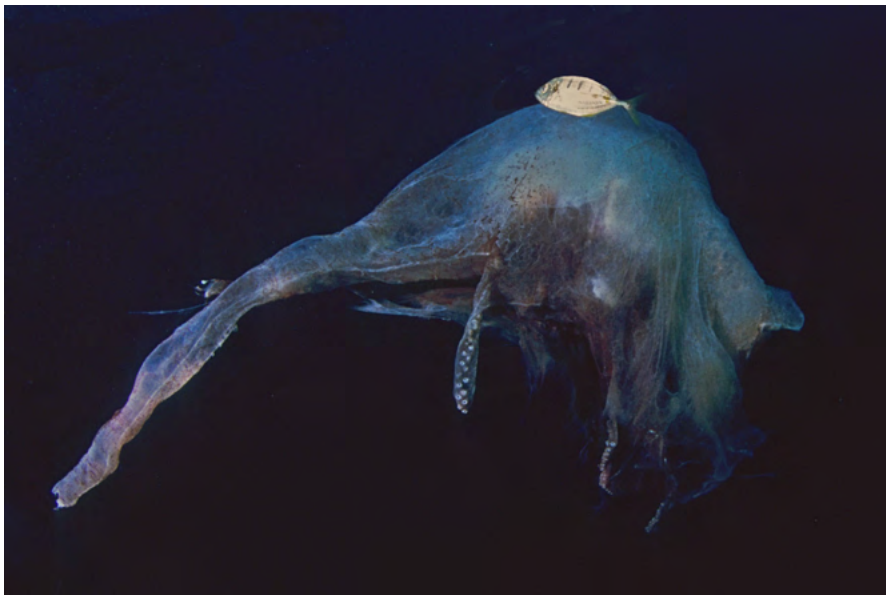


© Colin Marshall / FLPA / Minden

Lembeh, Sulawesi, Indonesia

image about 10 cm across

C



© Colin Marshall / FLPA / Minden

Raja Ampat, Indonesia

image about 1 meter across

D



© Colin Marshall / Alamy

Manuk Island, Banda Sea, Indonesia

image about 1 meter across

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Marshall's Mysteries 13 - Answers

A



Juvenile Great Egg Cowrie Shell (*Ovula ovum*) whose yellow bulbous papillae mimic poisonous Phyllidia nudibranchs or flatworms, which fish know they should not eat as these can emit noxious chemicals to resist predators.

An example of such a toxic nudibranch is the Carlsonhoff Phyllidia Nudibranch (*Phyllidia carlsonhoffae*) shown below.

This mimicry is similar to the Juvenile Graeff's Sea Cucumber (*Pearsonothuria graeffei*), which mimics poisonous Phyllidia nudibranchs as shown in MM#2 in UWP125.



Raja Ampat, Indonesia

B



Hairtail Blenny, aka Snake Blenny (*Xiphias setifer*), rarely seen (at least by me - this was the only time I have seen this species!). It can reach a length of around half a meter.

The adult Egg Cowrie (shown below, egg-laying) looks very different, as its large size means it can no longer pretend to be a nudibranch or flatworm so it switches to a camouflaging coloration.

More details on this Cowrie can be found on page 56 in "Living Seashells of the Tropical Indo-Pacific" by Andrey Ryanskiy.



Bali, Indonesia

C



Violet Blanket Octopus (*Tremoctopus violaceus*) and small Trevally. Also called the "Common" Blanket Octopus although it is a rarely-seen animal (this is the only one I have seen). It is generally pelagic, ie found in open oceans, not reefs.

It was only when the snake started hunting in the craggy lava holes in the shallows of the volcanic Manuk island that I realized the trevallies were loitering around the possible exit holes, trying to nab any fleeing prey. Presumably the arrangement works for all parties, as the presence of the trevallies at the exits may confuse the fish and cause them to become snake food.

Trevallies have symbiotic relationships with many other species. As shown on the left below, they are seen sometimes feeding with Pufferfish, in this case a Striped Puffer (*Arothron manilensis*) with a Golden Trevally (*Gnathanodon speciosus*). On the right, a Trevally is seen cruising under a Reef Manta Ray (*Mobula alfredi*), possibly using the Ray as shelter and to save swimming energy. Note that even the pelagic Blanket Octopus shown in (C) has a Trevally in its orbit.



Lembah Straits, Sulawesi, Indonesia

D



This Chinese Sea Snake (*Laticauda semifasciata*) was in a hunting alliance with a pair of Bluefin Trevallies (*Caranx melampygus*), one of which is seen in the background.



Komodo, Indonesia

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If you think any of the identifications or information above is wrong, please let me know at colinrmarshall@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.