Underwater Photography

Jan/Feb 2022
Issue 124

UWP

AQUATICA™ Digital

AR5 & A7S III Now shipping!

Canon EOS R5 *features:*

- *45MP Full-Frame CMOS Sensor*
- *8K30 Raw and 4K120 10-Bit Video*
- *DIGIC X Image Processor*
- *Sensor-Shift 5-Axis Image Stabilization*
- *Subject Tracking with Deep Learning*
- *CFexpress & SD UHS-II Memory Card Slots*

AR5: $3,199 USD

Sony Alpha a7S *III features:*

- *12MP Full-Frame Exmor R BSI CMOS Sensor*
- *Extended ISO 40-409600, 10 fps Shooting*
- *5-Axis SteadyShot Image Stabilization*
- *759-Point Fast Hybrid AF*
- *Updated 61 point auto focus*
- *Dual CFexpress Type A/SD Card Slots*

A7S III: $2,949 USD

www.aquatica.ca

Contents

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A web magazine
UwP124 Jan/Feb 2022

Cover shot
David Fleetham

Editorial

Marshall's Mysteries

On page 59 we have a new feature in this issue in the form of Marshall's Mysteries - a quiz format of four pictures to test your marine biological nouse.

It's not so highbrow that the answers are all in Latin and the answers and fascinating facts are revealed on Page 64.

Colin has assured me that he has enough images of interesting subjects to last for several UwP issues so I hope you enjoy it and I look forward to it becoming a permanent feature.

Happy New Year

It goes without saying that I wish you all Seasons Greetings and wishes for a Happy and Healthy New Year.

I'm sure that a lot of last year's crystal balls will have been returned under warranty as they got the forecast so wrong and 2022 looks no different given the current super spreading Omicron variant.

Finprints

I hope you enjoy this latest issue of UwP and that you will find it as informative and inspirational as ever. I also hope that you won't feel that the quality of the images and stories are any less than the ecclectic combination of quality which UwP has always provided.

There is a reason why I hope this; I deliberately asked if some of our regular contributors could provide images and stories from their own backyards which hadn't needed the use of an aeroplane. Now, granted, it really helps if you live in Hawaii or Bali but savour Bob Bailey's excellent images from Shetland, Alexandre Hache's native Mediterranean and Mark Kirkland's amazing images from his urban Glasgow, no less.

At this stage I'm sure that a lot of readers will be thinking "Change the record, Pete" or perhaps they even stopped reading a couple of paragraphs back when they could see where I was going but sometimes less can be more.

UP11

We've reached the penultimate issue of UP - my printed magazine which ran for two years from 1987 - and what a great reminder of these exciting times this issue is.

Take time out to read the late Peter Scoones' article about being an important part of the BBC Reefwatch team who produced the first ever underwater live broadcast from Eilat which started the career of Martha Holmes as an underwater presenter in the very visual bubble helmet which went on to become the go-to piece of kit on the numerous underwater presentation programmes which have followed over the years.

Then savour Hillary Hauser's article about Dr Jack Randall, an amazing ichthyologist who sadly passed away recently but at that time had named over 200 new species of which 11 were named after him. His excellent ID books were must haves in those days and remain classics.

There can be no doubt that Dr Jack's pioneering work inspired many of today's ichthyologists.

Peter Rowlands
peter@uwpmag.com

News, Travel & Events

Last minute call for UPY 2022 entries

Deadline Midnight GMT Jan 4th 2022

If you are a prompt UwP downloader there is still just time to get your entry in to the most prestigious competition in the underwater photography calendar.

We are delighted to have prizes reinstated for UPY 2022. The response from our traditional sponsors has been reassuringly upbeat so to them we are most grateful.

In addition to the results and prizes, seven prestigious titles will be awarded by the judges. Four of these titles are open to eligible photographers from every country:

Underwater Photographer of the Year 2022 is the top award of the UPY competition, and will go to the photographer whose single image is the best in the show (so therefore is likely to also be one of the category winners). All entrants are automatically considered for this award.

Up & Coming Underwater Photographer of the Year 2022 will be awarded to the overall winner of the Up & Coming Worldwide category.

Underwater Photography Book Of The Year 2022 will be awarded to the (print) book that most impresses the judges. Please see the description of the Underwater Photography Book category.

'Save Our Seas Foundation' Marine Conservation Photographer of the Year 2022 will be awarded to the winning image in this new category (which is free to enter). Open to both underwater and above water images.

My Backyard. With travel restrictions still affecting many people, we have retained this award to showcase images taken in "My Backyard" where very little travel was involved (certainly no flights, and limited mileage from your home).

The other two titles will be awarded to British Photographers only. British Underwater Photographer of the Year 2022 will be awarded to the British photographer whose single image is judged most outstanding in the competition (from any category). All British photographers who enter are automatically considered for this award.

Most Promising British Underwater Photographer 2022 will be awarded to a rising star on the British underwater photography scene. It will go to the British photographer, who has not won 1st place in a major underwater photography competition or been published significantly (meaning regular or big solo spreads rather than one or two shots in a general article) in publications, whose single image is judged most worthy in the competition. The winning image could be chosen from any category.

www.underwaterphotographeroftheyear.com

SFUPS

The South Florida Underwater Photography Society is a non-profit social organization dedicated to the promotion of excellence in underwater photography through its membership. Society members have been meeting since 1980 appealing to the interests of hundreds of photographers, raising the awareness of ocean conservation initiatives, and sharing with our local community images of the sea life and reef scenes South Florida waters have to offer.

Monthly meetings consist of guest speakers, digital image presentations, monthly intra-club photo competitions and exchanges of information relating to scuba diving and all aspects of underwater imaging. The Society routinely attracts marine scientists from local Universities, leaders in the dive industry, and is oftentimes a wayward point for industry professionals of underwater photography traveling through Florida to meet and dive with our members.

Meetings: The second Tuesday of each month; Social at 6:00 PM, Meeting at 7:20 PM from January to November

Courtyard Marriott, 2440 W. Cypress Creek Rd., Ft. Lauderdale, FL

www.sfups.org

One week just wasn't enough for all the great diving, learning, and fun at The Digital Shootout. The new two-week schedule allows us to offer even more classes without having to choose between attending a seminar or going on the afternoon dive. You can now do it all!

Each afternoon there will be a seminar after the PM boat dive and every other evening there will be an image critique up on the big screen.

www.thedigitalshootout.com

15th Annual MantaFest

August 27-September 10, 2022

Since 2006, our MantaFest program has brought underwater photographers, both amateur and professional, to this small island and its protected reef to compete for prizes, attend workshops, take tours of the island, and experience the unique culture of Yap, which is considered to be among the best preserved in the Pacific region.

Workshops are led by experts in the field providing their knowledge of all things related to taking better pictures including, but not limited to composition, lighting and photoshop. They also offer advice during sessions with local models in settings that include the island's unique stone money banks and traditional dance performances. Daily dive trips provide opportunities to dive with and photograph the manta rays, sharks and the plethora of small, colorful tropicals such as the brightly colored mandarin fish and many more wonders of Yap's underwater world.

Don't have a U/W camera yet? No need to worry, our sponsors will have some for you to use, free-of-charge, during the event. Our photo pro's will be happy to teach you the basics and then have you join them on the boat for personalized hands-on experience

During the 15th MantaFest event, we will be joined by top U/W photographers from around the world like David Fleetham, Frank Schneider, Ray Bullion, Steve Miller, Andy Schumacher, and Tim Rock.

www.mantaray.com/mantafest/

The tale of the ‘un-extinct’ fish

The tequila splitfin, a small species of goodied fish which grows to just 70mm in length, disappeared from the wild completely in 2003 due to pollution and the introduction of invasive, exotic fish species in waters where it had previously thrived.

It is a project - and a partnership - between conservationists in Mexico and the UK that goes back decades.

In 1998, at the outset of the project, scientists at the Michoacana University of Mexico’s Aquatic Biology Unit received five pairs of fish from Chester Zoo, delivered by the English aquarist Ivan Dibble. These 10 fish founded a new colony in the universities’ laboratory, which experts there then maintained and expanded over the next 15 years.

In preparation for the reintroduction, 40 males and 40 females from the colony were released into large, artificial ponds at the university, essentially training the captive-reared fish to a wild setting with fluctuating food resources, potential competitors, parasites, and predators. After four years, this population was estimated to have increased to 10,000 individuals and became the source for the reintroduction to the wild.

Crucially, the local community - people who live close to the Tequila fish release site in Jalisco, Mexico - are playing a key role, monitoring the water quality of the rivers and lakes.

Professor Omar Dominguez, from the Michoacana University of Mexico, whose team took a leading role in the reintroduction said: “We couldn’t have done this without the local people - they’re the ones doing the long-term conservation.

“And this is the first time an extinct species of fish has ever been successfully reintroduced in Mexico, so it’s a real landmark for conservation”.

www.bbc.co.uk/news/science-environment-59760356

Red Sea Image Makers Liveaboard
Sharm El Sheikh 30 July – 6 August 2022

Join Massimo Franzese aka Interceptor121 in one of the best wide-angle destinations in the world.
Photographers and Videographers both welcome

Itinerary will include the wrecks in the Strait of Gubal, the Thistlegorm, Ras Mohammed including Shark and Yolanda Reef

- **No fixed schedule: site selection will be based on latest conditions and site information.**
- **Best dive sites will be repeated to get more image opportunities.**
- **Special imaging orientated dive briefing**
- **Group image/video debrief – optional**
- **Covid-19 Safe boat: Snefro Pearl**
- **Small group up to 12 divers**

Price €1250 per person in twin share includes:

- **Continuous technical support and Q&A**
- **12 litre tanks 32% Nitrox included**
- **Up to 4 dives a day**
- **3 meals, snacks, soft drinks, tea/coffee**
- **Airport transfer from SSH**
- **Arrival on Saturday 30 July – check in commences at 1800**
- **Check out Saturday 6 August – 1200 latest**

Booking and Information:
Interceptor121@aol.com
Whatsapp +447974246005

Hawaii and its Endemic Riches

30th April - 7th May 2022
7-14th May 2022

Join Richard and Wendy's 'Our Beloved Seas' expeditions for 7 night trips aboard the Kona Aggressor – Perfect post-pandemic ease back into diving!

It will be a dream come true for Wendy and Rich to dive in Hawaii. Hawaii has a quarter of its reef fishes found nowhere else on Earth, so there will be plenty to look for and learn about during the trip. High on Rich's list are the Flame Flasher wrasse, Potter's Angelfish, Hawaiian Fantail Filefish and the Pyschedelic Wrasse.

More than two years since last diving on a tropical reef, it offers the perfect trip to get back into the water and enjoy some great diving. We have two trips aboard the Kona Aggressor which we have opted to run with just twelve guests on each, giving us a little more space after these years spent distancing.

The Kona Aggressor II sleeps 14 guests in privacy and comfort. She is an 80-foot catamaran, built and powered for comfort, safety, and stability and certified by the U.S. Coast Guard. Accommodations include 5 double staterooms and 1

roomy quad stateroom on the upper deck. Each stateroom bathroom and shower, extra storage and individual climate controls. The Kona Aggressor II has safes in every stateroom to store your valuables.

www.oceanrealmimages.com

We've got you covered!

Magic filters are now available in 3 options. Original Magic for use in blue water with DSLR and compact cameras with Manual White Balance, Auto-Magic for compact cameras in automatic point and shoot mode. GreenWater Magic for use in green water with DSLR and compact cameras with Manual White Balance. Prices start at just £22.

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

www.magic-filters.com

New Products

Aquatica AR5 for the Canon EOS R5

We are proud to present one of our latest housings: The AR5 for the Canon EOS R5 Mirrorless camera!

Continuing in Aquatica's reputation for offering premium quality and at affordable prices, the AR5 housing has the finest ergonomics and control accessibility combined with the famed ruggedness of our all aluminum construction and distinctive hard coating.

As to be expected with all Aquatica housings, it is CNC machined from 6061 T6 Aluminum with a MIL-A-8625 anodized coating and added on top a baked on, extra tough powder coat paint. All control shafts and push buttons are made from T304 stainless steel. This, as for all our housings, will take a licking and keep going!

The AR5 housing supports not only the new RF mount lenses but also the EF mount by simply using our new adaptor extension ring #48474. This new adapter can easily be installed and will enable the AR5 housing to function with any previous Canon EF lens and its corresponding extension ring.

The Aquatica AR5 housing is supplied with our Galileo type eye piece. This high quality and coated optical finder gives a bright and full view of the view finder. For those seeking the ultimate in viewing for still image, the optional Aqua View Finder, available in straight and 45 degrees version, are among the best of the industry, they can easily be installed in a matter of a few minutes by the user. The enlarged and enhanced image provided by the Aqua View Finder (#20054 & 20059) is second to none in clarity; it provides the photographer with tack sharp corner to corner viewing of the camera view finder for composing and critical focusing.

Surveyor monitoring system included - What was previously an optional accessory, we are now including our field proven Surveyor Vacuum System (Pump, valve and sensor) as standard.

www.aquatica.ca

Nauticam Raptor housing for RED Digital Cinema V-Raptor 8K VV

The RED Digital Cinema V-RAPTOR 8K VV is RED's latest flagship camera that can record REDCODE RAW in 8K resolution up to 120fps. When paired with the Nauticam housing, it creates one of the smallest and easiest to use cinema systems on the market. Additionally, the Nauticam Raptor housing offers full control of the RED KOMODO through an optional tray.

Dimensions 269mm x 175mm x 294mm (W x H x D)

Depth Rating 80m

Weight in air 4.9kg

Weight in water negative 1kg (includes camera and bebob V200MICRO battery)

Port Opening N120

www.nauticam.com

BACKSCATTER

THE BEST BANG FOR YOUR BUCK

OLYMPUS E-PL10

Nauticam Enhanced Viewfinders

For over a decade, our Enhanced Viewfinders have been known for superior optics, tack sharp performance and first-of-its-kind underwater dioptric adjustment. Anyone who has used these instruments has grown to appreciate what an asset they can be to any underwater photographer. But the camera world has seen radical changes in technology in the last ten years, including ever increasing size and resolution of Electronic Viewfinders (EVFs) found in the latest high-end mirrorless cameras. These newer EVFs challenge even the finest enhanced viewfinders for underwater housings.

In response to this technological evolution, we are excited to introduce the next generation of Enhanced Viewfinders designed to meet and exceed the requirements of all the current digital camera EVFs, as well as what is expected in the near future. The new Full Frame Enhanced Viewfinders employ entirely new optics to allow distortion free viewing without clipping the image frame. With the new viewfinders, reviewing images in playback or navigating the menus through the EVF has never been so easy.

www.nauticam.com

DIVEVOLK SeaTouch 4 Max

SeaTouch 4 Max underwater touchscreen housing is a revolutionary design for smartphones to use underwater up to a depth of 60 meters. With its limitless operation of the touchscreen of the smartphone, you can simply use all the functions and Apps on your smartphone. It is world's 1st underwater full touch screen diving housing for smartphones.

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

The patented Underwater TouchScreen operates as on land but underwater. Take great videos and pictures when surfing, diving, snorkeling, skiing, or other activities. You can use the Compass - the iPhone built-in compass is easy to access and works well underwater. Moreover,you can Instant Upload & Share at any time

Compatible with all Apps. No more limit accessing any App for iPhone housing. No button limit to your creativity. Enjoy more fun.

Record your best moment. With interesting photos,video and even music.

The SeaTouch 4 Max smartphone diving housing is the core product of DIVEVOLK, It turns the traditional button iPhone diving case into the full operated iPhone diving housing and also applicable to most of the Android phone.

It could be one of the best phone diving case for you in any kind of water sport scenario.

www.divevolkdiving.com

Sony A1 camera review by Jim Decker

The Sony a1 on paper looks like the "one" camera to rule them all. With high resolution (50mp), speed (up to 30 fps stills), and 8K 30p/4K 120p video, can this camera live up to being a jack of all trades AND master of all?

After testing the camera in the waters of Bonaire and the Socorro Islands, the short answer is yes.

It truly is a jack of all trades no compromise photo and video hybrid camera for underwater shooting.

Read on for the long answer on how that conclusion was reached.

www.backscatter.com

Ikelite 200DLM/A Housing for Canon EOS M50, M50 II, Kiss M cameras

A professional grade, compact waterproof housing for Canon EOS M50, EOS M50 Mark II, and EOS Kiss M mirrorless digital cameras. This system is perfect for any application in or around the water from scuba to surf to pool.

This housing replaces the previous model for the EOS M50 Mark I # 6973.15.

200 ft (60m) depth rating

www.ikelite.com

Marelux UW Housings

It is not often that we get a new UW housing brand in underwater photography equipment. Marelux is a young company, with huge experience and knowledge in underwater photography equipment, because their shareholders and owners are professional underwater photographers and engineers.

After a decade of using several brands, they got the idea of creating their housings, that will be designed and developed better for UW photographers' needs, and with all improvements that modern UW equipment should have in the twenty-first century.

From the beginning they have had a clear philosophy: To be of the highest quality, have the best ergonomics and design, to use technological innovations and price competitive with world-known brands, and to give the best after-sales support to each user worldwide. All the team and crew behind Marelux are people with a passion for UW photography and videography, as well as specialists in electronics and engineering. Perhaps most critically, they are all divers.

www.marelux.co

FLIP Filters

The FLIP10 Underwater Color Correction System Filter Kit works with the GoPro HERO10, HERO9, HERO8, HERO7, HERO6, and HERO5

We've made thousands of dives to determine the best filter formulas for all diving depths.

FLIP10 is designed to survive the drops and abuse that we regularly give our own gear.

With aircraft-grade aluminum and virtually unbreakable filter optics, we're confident you'll find that the FLIP system delivers the most rugged design along with the world's best color for GoPro.

The Pro Package includes everything from the 3 Filter Kit and the Macromate Mini +15. Save 10% by purchasing the Pro Kit over buying separately.

www.flipfilters.com

INON Bayonet Mount "XD"

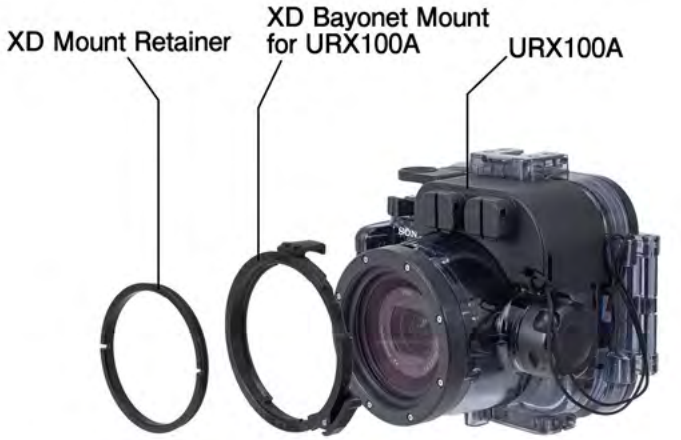
INON's new bayonet mount "XD Mount" is easy to attach and detach by pressing the lock lever and turning the lens halfway. With the "XD Lens Holder," you can switch between wide and macro smoothly without storing a lens in a BC pocket.

With the XD Mount, you don't have to worry about the lens seizing due to salt build-up that can occur with a screw-type lens mount.

The new "XD Mount" is for quick and comfortable lens exchange both on land and underwater. The "UWL-95S XD" has same optical system as "UWL-95 C24" for wide conversion lens and close-up lens.

The optical system of "UWL-95S XD" is inherited from "UWL-95 C24" with same high image quality without vignetting even at zoom wide end. Existing close-up lenses have XD Mount version making them easier to use while maintaining its performance.

The "XD Mount" for compatible housings are also available to attach/detach XD series lenses quickly.



www.inon.jp

New Ikelite strobe versions

Ikelite has announced new versions of their DS strobes. The DS230 offers 213Ws of power and has an integrated 2500 lumen video light. Its video light is shared with the DS162, which has 160Ws of power while the DS160 II has the same strobe output, without the video light.

Lastly, the DS51 II has 50 Ws of output. All the new strobes feature improved recycling times, have redesigned controls, and triggering is via either the Ikelite ICS-5 electrical plug or an optional fiber optic converter.

www.ikelite.com

Nautismart Pro Universal Smartphone Housing

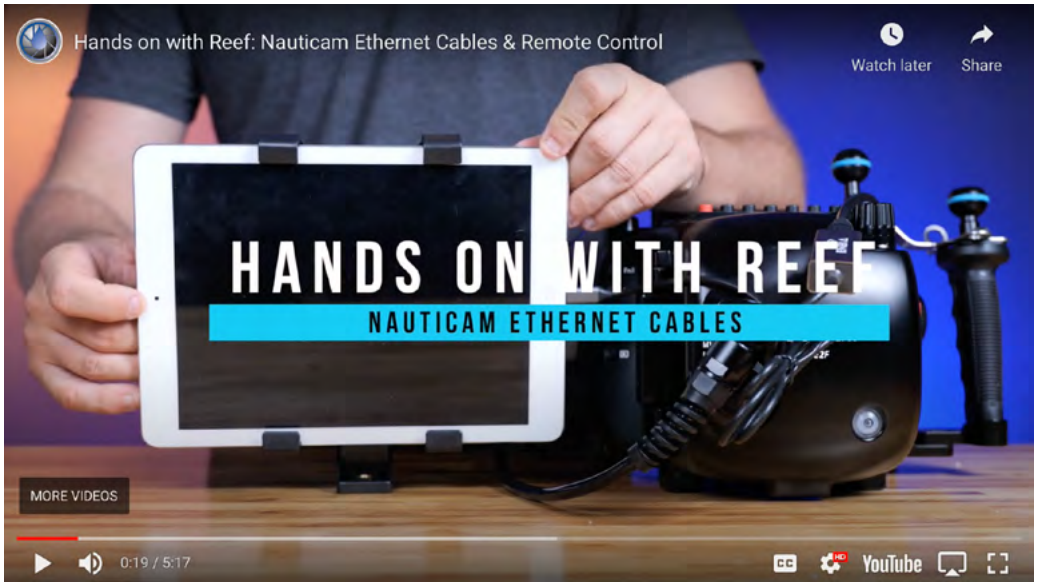
Nautismart housing's clever spring design allows it to be used with most smartphones on the market. Just download the Nautismart Pro app and align the buttons and you are ready to go. The housing is depth rated to 60m and you can do even selfies in water. An M67 lens adapter will be available soon to attach close-up and wide-angle lenses. Underwater photography has never been this easy!

- Use with IOS or Android app (Search: NautismartPro)
- App modes: Video; front and back, Photo; front and back, Review, White balance, Exposure adj, Zoom.
- Weight: 600g (in air)
- Dimensions: (approx) W: 205mm, H: 118mm, D: 70mm

Depth rated to 60m

www.mikesdivecameras.com

Remotely control your underwater camera from the surface



Imagine being able to remotely monitor and control your camera from the surface using just an ethernet cable and a mobile device… sounds way too good to be true right? Well it's not, these new Nauticam Ethernet cables come in both a 5M length and 45M length and are compatible with any ethernet capable camera. They not only allow remote surface monitoring but also full control of the camera from the surface.

Combine that with relatively compact and lightweight design of the Z-Cam cameras and Nauticam NA-E2F housing and you have a perfect raw cinema capable combo for remote underwater work that can be used in a whole variety of different shooting scenarios whether off of a polecam or for studio work.

Hugyfot Vision Xs for Hero 9/10

We are very exited to announce that the Hugyfot Vision Xs housing for the most powerful, feature-filled GoPro camera ever, the Hero 9, is completely compatible with the GoPro Hero 10.

When traveling to remote areas to capture exceptional images, leave nothing to chance what concerns your equipment. Using reliable gear is particularly important when shooting underwater photos and videos. Hugyfot products are renowned for their ergonomic, functional and innovative designs. The durable housings are CNC machined out of solid blocks of marine grade aluminum.

This housing is small, light and easy to handle, the ideal travel compagnon to record your diving adventures. Depth rating is 150m.

www.hugyfot.com

Go Ask Erin Water Replacement Starter Pack For Photoshop

Create an actual Sea Change in your Images! The Go Ask Erin Water Replacement Starter Pack provides more than 50 underwater backgrounds and 45 minutes of detailed tutorial video to help jumpstart your mastery of Photoshop's amazing Sky(aka Water) Replacement feature.

It's not Artificial Intelligence that superpowers it – it's pure badass wizardry that lets you abracadabra your less-than-stellar negative spaces into wild new worlds.

www.goaskerin.com

50 Best Dives in Hawaii

by David Fleetham and Tim Rock

The book "The 50 Best Dives in Hawaii, The Ultimate Guide to the Essential Sites" by David Fleetham and Tim Rock is available on Amazon and the Apple book store. When the travel starts again, be ready for an amazing trip to dive and explore Hawaii with this latest offering from The 50 Best Dives series.

David Fleetham and Tim Rock are lifelong photojournalists who specialize in the undersea realm. Rock lives in Guam and David lives in Maui, Hawaii. They have both been in the Pacific region for more than three decades. "We have worked on a number of projects together and one evening came up with the idea to add Hawaii to my series 'The 50 Best Dives'", said Tim. Both contribute on a monthly basis to magazines all over the world. And both have dived and snorkeled in Hawaii extensively over those years, especially Fleetham, of course, who lives there.

The Hawaiian Islands conjure up exotic visions of white sand beaches, blue waters, great scenery and a friendly and welcoming culture. As the 50th state in the USA, it is unique. And the waters below these islands are also special, with more endemic life than perhaps any dive destination in the world. In this comprehensive book, the first of its kind, we pick the 50 Best Dives in Hawaii and give you the inside information on each fascinating spot.

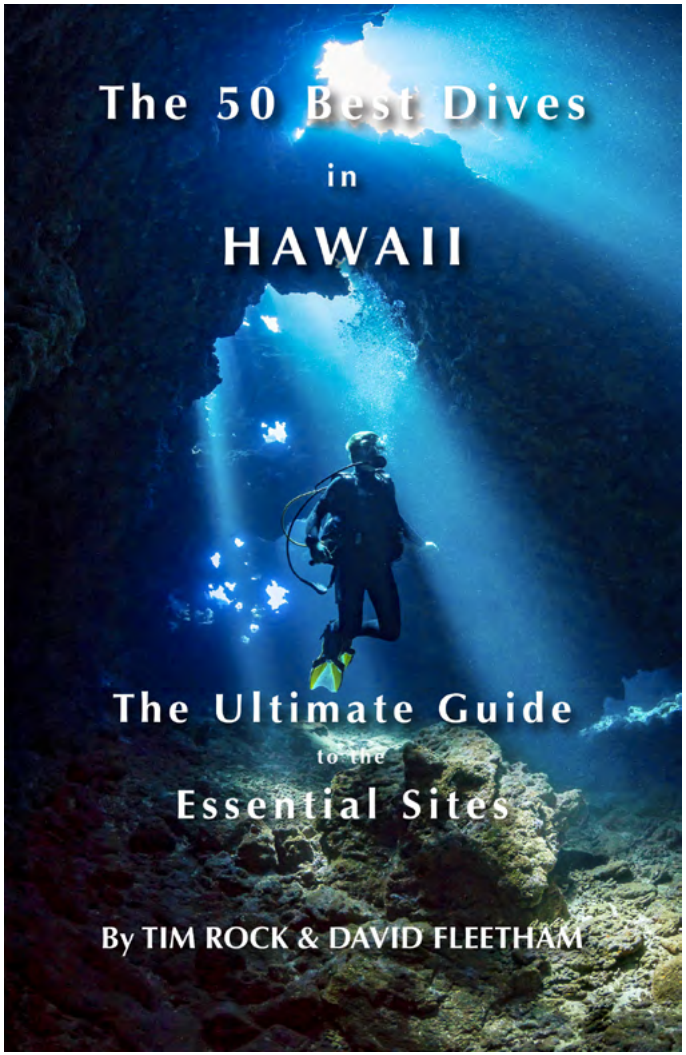
From the best places to see manta rays, sharks, fish schools and odd, rare, tiny critters to the amazing blackwater dives in the inky dark of the night, you'll travel with the pros to experience the cream of the crop in the seas off Hawaii's shores. The book has 192 full-color pages,

Authors Tim Rock and David Fleetham are internationally published photojournalists and authors, with decades of Hawaiian dive experience. Fleetham resides in Maui and works as a professional ocean photojournalist and Rock resides in the western Pacific and makes frequent trips to Hawaiian waters. Their years of experience make this one of the most informative and beautifully illustrated books ever written about Hawaii's undersea resources.

The "50 Best Dives" series is for active divers and armchair travelers alike. It takes the reader to not only the popular spots in a region but also some of the lesser dived yet most fascinating spots. This book is a veritable candy store of the finest diving and snorkeling Hawaii has to offer and gives you a great tour of the waters of this special state.

From book author Simon Pridmore: "What a welcome book! This latest addition to the "50 Best Dives" series takes us on a safari around the diving hotspots of Hawaii, a destination often overlooked by scuba divers. I had heard about the whales and the mantas but had no idea that there was so much variety here – shipwrecks, sharks, seals, critters, great reefs and a lot of endemic creatures. Hawaii is now high on my diving bucket list.

Rock and Fleetham have done a great job with this, offering fascinating background information, lots of local secrets and a selection of absolutely superb images."



www.amazon.com

Kraken Hydra 8000 WRGBU

by Phil Rudin

Weefine underwater equipment is manufactured in China that distributes worldwide. Weefine produces underwater lighting, housings, lenses, cameras, accessories and more for the retail diving market. The test equipment I used for this review was provided by Kraken Sports a Canadian company based in N. London, Ontario, Canada. Kraken distributes Weefine and Kraken branded products throughout North America. Kraken has loaned me the Hydra 8000 WRGBU light for this review.

Kraken Hydra 8000 WRGBU

The Kraken Hydra family of lights includes the Hydra 1000 Focus Edition, Hydra 1500+ WSR, Hydra 4000 WRGBU, Hydra 6000 WRGBU, Hydra 8000 WRGBU being reviewed and Hydra 15000 WRGBU.

The 1000 Focus works as a focus light and a snoot can be added. The 1500+ WSR works as a spotting light with a wrist strap, as a macro focusing light mounted to the housing or an off camera light for side lighting and back lighting.

The WRGBU lights have wide beam flood with red, green, blue, UV and a RGB adjustment that cycles through the colors like a kaleidoscope. The white light can also switch to a blinking destress signal. All of the light colors use step-less dimming of power levels by rotating the dial around the push button power on/off switch.

The Kraken Hydra 8000 is both powerful at 8000 lumens, compact and lightweight. In the burst mode which works like a flash using a fiber optic cable the power brightness is 10,000 lumens. The CRI or Color Rendering Index is a measurement of the quality of whiteness for the light which is being produced.

The Kraken LED module array provides a very natural white light at a daylight color temperature of 5000 Kelvin and a color rendering of 90 (CRI). The beam angle underwater is 100 degrees and 120 degrees above water with a depth rating of 100 meters.

The burn time at 100% power with a fully charged battery is around 58 minutes, with a recharging time of about 3.5 hours on a fully depleted battery. The 8000 uses a type-C charging cord which is provided along with a multi output USB C charging block that allows several devices to be charged at one time.

The 8000 uses a Li-Ion 14.4v DC 5000mAh battery pack that can be installed from either end of the battery into the 8000 light and includes storage caps. The battery is installed by unthreading the light head from the battery compartment which is sealed by two black O-rings.

The light also has a white O-ring on the outside at the light head and on the ball mount. These white O-rings are decretive as well as functional. When using the colored lights they are far less intense than the white light and use much less power.

On the back of the light along with the power/dimming switch and a remote port for an optional remote

Ginnie Springs Ballroom, High Springs, Florida, Sony A-1, Tamron 17-28mm F/2.8 at 17mm, Nauticam NA-A1 housing, Nauticam WACP II, Kraken Hydra 8000 on Green, ONEUW, fill light, ISO 640, F/4.5, 1/60th sec.

Ginnie Springs Ballroom, High Springs, Florida, Sony A-1, Tamron 17-28mm F/2.8 at 17mm, Nauticam NA-A1 housing, Nauticam WACP II, Kraken Hydra 8000 on Blue, ONEUW, fill light, ISO 640, F/4.5, 1/60th sec.

Redtail Parrotfish, Blue Heron Bridge, Florida, Sony A-1, Sony 90mm F/2.8 macro, Marelux MX-A1 housing, Kraken Hydra 8000 on red as spotting and focus light on night dive, two Backscatter MF-1 flashes, ISO-200, F/16, 1/250th sec.

control is a small window which displays power level information and much more.

When the 8000 is turned on the white light appears at 100%, on the display screen you see a white dot with 100% below. After about ten seconds the 100% display is replaced with the remaining battery time in minutes. If you reduce power the amount of battery time increases on the display.

Push the on button once and the light changes to red at 100%, a red dot appears on the display and the battery life increases dramatically. Again when power is reduced battery life increases. Push again for green, blue, UV and RGB that creates a multi-color effect.

My review kit included the Hydra 8000 dome which Kraken says helps maintain a smooth, even wide light spread. The dome threads onto the front of the light but does not have an O-ring so don't be alarmed if you see condensation form on the inside of the dome. The light is fully sealed without the dome.

Field testing the Hydra 8000

The Hydra 8000 is marketed as a high performance video light and would be very competitive for that use alone. While field testing the Hydra 8000 I was shooting stills and spent most of my time testing the different possibilities using the colorful lighting options.

I used the 8000 both attached to the housing and off camera on a tripod. I also used the light on mid to low power as a focusing light for night diving making 2.5 hour dives with less than 18 minutes of the total battery life being used.

Using the red light set in the mid range I was able to get within inches of animals that would otherwise have disappeared into the night if they were approached with a white light from several meters away. I also found the colored lights on high power to be well suited for shooting outward from inside a cavern while being able to balance the bright blue shallow water above.

For the cavern I used the light off camera on a tripod to allow me to move around for better shooting angles and also to mix in additional white strobe lighting. I found the UV light appeared as light purple on the cavern walls. The red light takes the highest power level followed by blue then green to achieve the same intensity of color. The revolving colors between red, green and blue seem more well suited to a video with a central subject. It is a bit difficult to overcome the colors when shooting faces as the skin tones don't render well unless you have

used a white fill flash. I have not even begun to fully explore the possibilities of the Hydra 8000 as a stills light. As a video light I am sure most will be very happy with the results.

The Hydra 8000 WRGBU is sold as a kit in a padded case with a complete set of accessories ready to use. The kit includes the 8000 light, battery with protective caps on both ends, battery charger, a YS mount, a ball mount, Allen wrench to change mounts, spare O-rings and an instruction manual.

This kit retails for $799.00 USD. My test unit also shipped with the Hydra 8000 dome which threads directly to the front of the light. This option sells for $89.99 USD and adds .1kg to the 920g dry weight of the 8000, underwater the 8000 weights 425g both weights include the battery.

Other accessories include a snoot which threads to the front of the Hydra 8000/6000 and 4000 lights. It adds 0.1kg and allows the Hydra to become a highly efficient optical snoot. The included aperture card which slides into the snoot has several round openings to adjust the size of the beam coming from the snoot. This is a very useful tool for macro as it can be mounted on or off camera for a verity of lighting angles.

The Hydra 8000 with the snoot can also be fired by a fiber optic cord like a flash with variable light duration settings. The snoot retails for $169.99 USD and a spare 8000 battery with caps is $145.00 USD.

Thanks again to krakensports.ca for loaning uwpmag.com the Hydra 8000 for this review.

Phil Rudin
Instagram

www.krakensports.ca

ONEUW ONE160x

by Phil Rudin

ONEUW is an Italian company based in Cividale del Friuli, a city in north-east Italy near the Croatian border. ONEUW is a company that set out to design a wide angle underwater flash without compromise to light quality, high efficiency, ease of use, durability or reliability. The result of this years long project is the ONE160x a remarkable tool for the creative still image maker. This flash is not a hybrid with built-in video lights or lots of add-on accessories it is a workhorse designed for photographers who demand the very best.

This flash is incredibly robust because it is built in the same way as most modern aluminum U/W housings form a single solid block of corrosion resistant aluminum. The one160x flash is tooled using an ultra-modern multi-axis CNC machining process and after a hard anodic oxidation process, it is coated with nanotech quartz making the surface hydrophobic. All of the controls shafts are double o-ring sealed stainless steel. The robustness of the strobe allows it to be used for technical diving and each flash undergoes hyperbaric testing at pressures equivalent to 200 meters (656ft) of depth.

The controls for the flash are simple, reliable, very easy to use even while wearing heavy gloves and quite clever and inventive. The flash has no

Diver Tom Entering Ginnie Springs Ballroom, Sony A1, Tamron 17-28mm F/2.8 at 17mm, Nauticam NA-A1 housing, Nauticam WACP II, two ONEUW 160x flashes, ISO-100, F/5.6, 1/100th sec

push buttons or switches and is controlled by two large levers and one large rotary control.

The red lever is marked “Main” and the black lever is marked “Input” when you pinch the two levers towards the center of the flash it turns-on, a beep is heard and the modeling light comes on briefly. Once the flash is on you will see a TTL indication and a lighting bolt indication next to the red lever. This indicates that the flash is ready to fire and that TTL can be achieved depending on your needs. Next to the black lever you will see “SYN” for synced for use.

Push the lever once and the setting moves to “OPT” for fiber optic operation. Push again and “SLV” for slave appears and the word “Full” appears in the center of the screen indicating that the flash will sync at full power. Turn the large black rotary knob counter-clockwise and the power level is reduced in half stop increments from -0.5 all the way to -6.0 or twelve separate stops of light intensity shooting in slave. Using TTL or the rotary knob controls +/-EV up to 2 stops in 1/3 stops increments.

When the flash is mounted right side up with the battery compartment at the top the letters and numbers in the display window will be facing up. If you turn the flash upside down as many do when it is attached to support arms simply pinch the two levers and the display will invert and a test flash will fire. If you turn the rotary knob the power levels will appear right side up.

The flash is shut down by pinching and holding the two control levers for about two seconds, you hear two beeps and the flash shuts down. Once the flash is on if you push the red level once the modeling or pilot light will come on at 50% power, push again and it will go to 100% power and push again to shut off. On the display you will also see “PL” inducing the pilot light is on.

Currently the ONE160x flash can be ordered with the Canon E-TTL protocol (version 160.200) built-in which will fire in TTL with both sync cables or fiber optic cables. You can also order the Nikon version (160.100) which has built-in i-TTL for Nikon, it will also fire in TTL using sync cables or fiber optic cables. This means that you don’t need to install a separate TTL-flash converter which is normally around a $450.00 additional investment. Just use a normal TTL hot shoe with S6 or Nikonos V sync cord or chose a fiber optic cord to shoot in TTL. In the event you move from Canon to Nikon or vice versa you can return the flash to ONEUW for a firmware update to the new brand.

Both versions of the flash accept the S6 to S6 sync cables or the S6 to Nikonos V sync cables and accept single or dual sync cables for two flashes. In the fiber optic mode you can also use cameras without the Canon or Nikon protocol and shoot with manual power settings. The port for the S6 end of the sync cable is on the bottom of the flash and is covered with a water tight cap when not in use. The mount for the 45 degree optical cable is between the ball mounting point and the sync cord port.

The flash is powered by a proprietary NBP-4830 NiMH battery pack which installs from the rear of the flash. The battery cap has a large flat dial that turns counter-clockwise about 1/8 of a turn to open when the red cap lock is depressed, pull up to remove the cap and insert the battery. The battery and the cap which has a

single o-ring only fit into the battery compartment turned in one direction.

My battery chargers came with the standard EU plug and I needed to use an adapter for the US outlet. The flash ships with the battery pack and neoprene battery bag, battery charger, o-ring set, user guide and a two year warranty with a one year battery pack warranty.

The specs for the flash are as follows, max energy 157 Ws (j), circular beam angle is 130 degrees, full power flashes over 250 per battery charge, 200 lm pilot light, battery type NiMH 4.8V 3050mAh, battery charging time 90 minutes, dimensions 99x200mm, in air weight with battery 1480 g, max depth 200 meters, 360 degree circular flash tube, Color temperature 4,600 degrees kelvin, GN-20 at ISO-100 at one meter. While the specs show a guide number of 20 I can assure you that the light output from this flash exceeds every light I have tested in the past even those with much higher advertised guide numbers. The beam intensity is also the most even I have seen out to the edges of the frame. While this flash is excellent for extreme wide angle even when the scene is back lit it also allows you to shoot very low ISO macro with the highest of f/numbers for greater DOF and max

Spadefish Schooling, Blue Heron Bridge, Florida, Sony A1, Sony FE 28-60mm F/4-5.6 at 28mm, Nauticam NA-A1 housing, Nauticam WWL-1B, two ONEUW 160x flashes, ISO-200, F/8, 1/250th sec

image detail.

The oneuw.com web-site is in Italian or English, in the support menu is a 50 page PDF operations manual which is extremely useful. The manual is loaded with photos and illustrations to fully explain the operation of the one160x flash.

ONEUW offers little in the way of accessories for this flash besides extra battery packs, a neoprene body cover, neoprene dome cover, one inch M6 ball adapters in straight and 45 degree angels, assorted spiral sync cords and a white diffuser that snaps over the flash and has a red center filter. The EU price including 22% VAT is €1790.00, £1550.00 including VAT in the UK and $1700.00 in the US.

Field Testing the ONE160x

I used two ONEUW160x flashes for my field testing setup using fiber optic cables with the flash set in optical which eliminates the pre-flash. I used

Florida fresh water turtle, Devil's Run, High Springs, Sony A1, Tamron 17-28mm F/2.8 at 28gmm, Nauticam NA-A1 housing, Nauticam WACP II, two ONEUW 160x flashes, ISO-200, F/8, 1/125th sec

Polka-Dot Batfish, Blue Heron Bridge, Florida, Sony A1, Sony FE 28-60mm F/4-5.6 at 60mm, Nauticam NA-A1 housing, Nauticam WWL-1B, two ONEUW 160x flashes, ISO-200, F/10, 1/200th sec

a Sony A1 camera set to manual using the fill-flash setting.

With these settings the strobe power is regulated by the rotary knob which is set to 00 when you turn the flash on. Turn the rotary knob clockwise and the power increases in +0.3 stop increments. Rotate counter-clockwise and power is reduced in -0.3 stop increments. For this review I used the Nauticam NA-A1 housing and Sony A1 camera, with the Sony FE 28-60mm F/4-5.6 and the Tamron 17-24mm F/2.8 lenses. The Sony lens was mated with the Nauticam WWL-1B wet contact lens and the Tamron lens was mated with the Nauticam WACP II wet lens.

Between the two lenses I had an effective full frame zoom range between 130 and 69 degrees with a minimum focus distance within millimeters of the port glass.

I found the recycle time for these flashes was excellent and well suited to my needs. My strobes included the Neoprene body covers that protect the finish on the outside of the strobe. While I understand why these covers are popular with many photographers I found them to be an aggravation because they do not dry quickly. I found myself having to remove the covers from the flashes after every cleaning so they could dry separately which in many cases took several days.

The consistency of light coverage over the entire frame even at 130 degrees was excellent and the quality of light was as good as I have seen in any flash at any price. If you are looking for the very best the ONEUW one160x should be at the top of your wish list.

I would like to thank Reef Photo & Video for loaning me the flashes for this review. You can consult your local authorized ONEUW dealer for further details and pricing in your area.

Phil Rudin
Instagram

www.reefphoto.com

DPG/Wetpixel Masters winners

by Adam Hanlon and Joseph Tepper

The DPG/Wetpixel Masters Underwater Imaging Competition has become the "World Championship" of international underwater imagery events. The competition celebrates the splendor of the oceans, the skill of the entrants, and the intricate and challenging art of underwater imaging.

Our esteemed panel of judges—Florian Fischer, Imran Ahmad, Jennifer Hayes, Mike Bartick and Stephen Frink—pored over hundreds of entries submitted by shooters from around the world.

Congratulations to Martin Broen, who won "Best of Show" for his 1st place image from the Black and White category, taking home the $1,000 cash prize. We would also like to congratulate the 1st place winners in the other categories: Julian Hsu (Macro Traditional), Sander van der Heijden (Macro Unrestricted), Enrico Somogyi (Wide Angle Traditional), Tom Shlesinger (Wide Angle Unrestricted) and Alex del Olmo (Video); each of them receives a cash prize of $250.

As with all Underwater Competition Series events, 15% of entry proceeds will be donated to marine conservation efforts.

www.underwatercompetition.com

(Above) Martin Broen, who won "Best of Show" for his 1st place image from the Black and White category. Bottom right) Julian Hsu (Macro Traditional), (Top right) Sander van der Heijden (Macro Unrestricted), (Below) Enrico Somogyi (Wide Angle Traditional), (Top right) Tom Shlesinger (Wide Angle Unrestricted)

Anilao Shootout winners

Amateur and professional underwater photographers, divers, and marine enthusiasts once again masterfully captured the beauty of Anilao in the entries to the 7th Anilao Underwater Shootout (AUS), recently mounted by the Department of Tourism (DOT).

Dubbed as the "World Cup of Underwater Photo Competitions," the event highlighted the town's teeming marine biodiversity, including its world-famous nudibranchs.

This year's edition garnered a total of 348 entries across the competition's 11 categories.

In the Open Class, Macro/ Supermacro category, winners are Dennis Corpuz, 1st place; Marivic Verdadero Maramot, 2nd place; and Emil Ribaya Jaranilla, 3rd place.

In the Marine Behavior category, winners are Ariel Careño Locsin, 1st place; Glenn Ian Diaz Villanueva, 2nd place; and Adrian Dan, 3rd place.

In the Nudibranch category, winners are Dennis Corpuz, 1st place; Glenn Ian Villanueva, 2nd place; Armida Esteban, 3rd place.

In the Fish Portrait category, winners are Dennis Corpuz, 1st place; Louis Myse Fae Ronquillo, 2nd place; Angelyca Paras Nery, 3rd place.

For the Compact Class, Macro/ Supermacro category, winners are: Rafael Francisco, 1st place; Jorge Ida, 2nd place; and Fr. Nemer de Castro Chua, 3rd place.

In the Marine Behavior category, winners are Regie Casia, 1st place; Lloyd Respicio, 2nd place; and Anjeanette Fuentebella, 3rd place.

In the Nudibranch category, winners are Penn De Los Santos, 1st place; Kim Morfe, 2nd place; Armando Panopio, 3rd place.

In the Fish Portrait category, winners are Teresa Sy Ortin, 1st place; Patricia Santos, 2nd place; and Ronald Amboy Dalawampo, 3rd place.

Special prizes were awarded to Dennis Corpuz in the Blackwater category and Paul Joseph Aristorenas in the Wide Angle category.

Teresa Sy Ortin and Dennis Corpuz were named DOT Photographers of the Year for the Compact and Open classes respectively.

DOT Photographer of the Year and 1st Place, Compact Class - Fish

Fish Portrait category winner Teresa Sy Ortin

Nudibranch category winner Dennis Corpuz

Special Award Blackwater Winner Dennis Corpuz

Special Award Wide Angle winner Paul Joseph Aristorenas

Compact Class Macro/Supermacro winner Rafael Francisco

Portrait Category, Teresa Sy Ortin

1st Place, Compact Class - Macro/Supermacro Category, Rafael Francisco

1st Place, Compact Class - Marine Behavior Category, Regie Casia

1st Place, Compact Class - Nudibranch Category, Penn De Los Santos

1st Place, Open Class - Fish Portrait Category, Dennis Corpuz

1st Place, Open Class - Macro/ Supermacro Category, Dennis Corpuz

1st Place, Open Class - Marine Behavior Category, Ariel Locsin

DOT Photographer of the Year and 1st Place, Open Class - Nudibranch Category, Dennis Corpuz

Winner, Special Award - Blackwater, Dennis Corpuz

Winner, Special Award - Wide Angle, Paul Joseph Aristorenas

www.facebook.com/anilaoshootout/

Meet David Fleetham

by Peter Rowlands

Canon EOS 5D Mk111, Ikelite housing, 15mm lens, Ikelite strobes, 1/125th sec @ F11 ISO 320

Did diving and underwater photography start together?

I was certified in Ontario, Canada in 1976 during my last year of High School. Once out I met my best friend in Carriacou a small island off Grenada. Before I left I knew I had to record what was underwater so I ordered an Ikelite housing for a Minolta SLR and shot what I could in the Caribbean for the next three months.

Was there a lightbulb moment when you thought 'This is for me'?

The moment I first breathed underwater I knew this was for me. And that was just in a pool!

Have you always worked or been associated with the dive business?

I moved out to the West Coast of Canada to look into becoming a marine biologist (as do all teenagers bitten by the scuba bug) and had to drive by two dive shops in Vancouver on my way to the University of British Columbia. I knocked on both doors and was hired by Gary Mallendar who now owns Oceaner Wetsuits, a manufacturer of wetsuits and drysuits in Vancouver. Just this last month I returned to Vancouver and Gary got me out on his dive boat, The Oceaner, to jump back into the chilly waters of the Pacific Northwest. I crewed on this same vessel 45 years ago and it took me from the San Juan Islands in Washington all the way up past Vancouver Island to the Queen Charlotte Islands. It was a fantastic decade for me.

What cameras have you gone through over the years?

I have stuck with Canon cameras and Ikelite housings and strobes since I started in 1976. In the film days, I had Canon F-1's and I am currently shooting Canon R5 mirrorless in Ikelite's Dry Lock housings with their DS161 strobes that utilize TTL exposure.

Was the transition to digital a no brainer or did you put it off for a while?

I was good friends with the late Jim Watt, still a well known name in our industry. I dove with him often over in Kona where he lived and also on many trips all over the world. Jim jumped right in early on and convinced me and many other photographers that this was the future. I skipped Canon's first camera and then jumped on their next model, an EOS D60 back in 2002. Eric Cheng joined us on a few excursions and so that just sealed the deal. The toughest mindset to break was going from 36 exposures to nearly unlimited. For a year I would still look at a composition and wonder if this was worth a pull on the shutter or not. Now, for the most part, I simply pull the trigger and sort through the pile at a later time.

The market for stock images must be a shadow of its former self but do you still shoot with 'stock' in mind?

I still send images out to my agents, but, as you say, that business model sinks further down as each year passes by. I have never really "shot with stock in mind". I go underwater with the idea of capturing what I can find with the system I happen to have in my clutches at the time.

Maui must be a great backyard. Are the subjects limitless and the water always clear and warm? Is that why you settled there?

Maui is a wonderful backyard. It is not always perfect. Storms come through and land lock me in my office for a week or so, but for the most part it has crystal clear blue water and a fantastic cast of characters to chase with a viewfinder. As for warm water, some may divers may have varying opinions. Water temp here is between 74 and 80F. Many dive guides wear 5mm and even 7mm suits. I find a 3mm comfortable and will put a hood on for night dives in the winter time.

(Top left) Underwater encounters with Hawaiian monk seals, Monachus schauinslandi, (endemic and endangered) are few and far between. Canon EOS 5D Mk11, Ikelite housing, 15mm lens, Ikelite strobes, 1/80th sec @ F11 ISO 320
(Above) A tufted spiny lobster, Panulirus penicillatus, walking in the open on a reef in Hawaii. Canon EOS 5D Mk11, Ikelite housing, 8-15mm lens at15mm, Ikelite strobes, 1/60th sec @ F11 ISO 320
(Right) The endemic Hawaiian pom-pom crab or boxer crab, Lybia edmondsoni. Canon EOS 5D, Ikelite housing, 60mm macro lens, Ikelite strobes, 1/80th sec @ F11 ISO 320

(Above) A close look in past the long thorny algae covered spines of the rough-spined urchin, Chondrocidaris gigantea, Hawaii. New Caladonia is the only other place in the world that this species is found. Canon EOS 5D Mk11, Ikelite housing, 70mm macro lens, Ikelite strobes, 1/125th sec @ F20 ISO 60

(Left) Humpback whale, Megaptera novaeangliae, underwater, Hawaii. Canon EOS 5D Mk11, Ikelite housing, 16-35 F4 mm lens at 16mm, Ikelite strobes, 1/125th sec @ F11 ISO 640

Do you have a go-to dive buddy?

For the last few years it has been my son, Sean. He is now 20 years old and in college in New Zealand. I loved to share the underwater world with him. He is interested in shooting video rather than stills and has opened up my eyes to new possibilities. Perhaps we will dive together again in NZ.

Corny, I know, but do you have a favourite diving movie?

The Big Blue from 1988. It had me take up freediving seriously for a few years.

Your image on the 1991 cover on Life Magazine must have been gratifying. Have you ever topped it? (also do you have a pic of it to include?)

I have done a couple of assignments for National Geographic

The Carthaginian, a Lahaina landmark, was sunk as an artifical reef off Lahaina, Maui, Hawaii in December 2005. Canon EOS 5D Mk11, Ikelite housing, 15mm lens, Ikelite strobes, 1/80th sec @ F11 ISO 320

who have used my images over the last 30 years, but I've never nailed that elusive cover shot for them. That said, I'm still very enthusiastically pleased with my LIFE cover, it has been all downhill ever since…..LOL.

Do you have any underwater subjects or techniques that are still on your list?

That is a long list. There is such a cast of subjects under our seas that it will take much more than one lifetime to be satisfied. As cameras improve I feel the need to go back and reshoot some of what I already have as well. The files coming out of my new Canon mirrorless R5 are amazing and have me rethinking what I have already captured.

I've only dabbled with blackwater diving and intend to spend much more time out in open water with what I can find drifting by.

With top end digital cameras now so capable in terms of image quality and processing speed, will you still want to upgrade to those extra megapixel new model cameras or do you think the quality/speed requirement has plateaued?

There are so few physical print sales compared to digital that megapixel size exceeds most clients needs. What I see in the new files though is an increase in dynamic range and much less noise in the darker areas of an image. The increased range also means less loss in the highlights.

The number of frames per second is also beyond belief. My Canon R5 can capture 20 frames per second in full RAW files. It is amazing for breaching whales and leaping dolphins. I'm always surprised how much a photo can change in a split second. I can't see another camera exceeding my needs beyond my current system....but I say that each time and look what happens. Never say never.

A diver (MR) and schooling orangespine unicornfish, Naso lituratus, which have long streamers coming off the tail fin, Hawaii. Canon EOS 5D Mk11, Ikelite housing, 8-15mm lens at15mm, Ikelite strobes, 1/60th sec @ F11 ISO 320

Many thanks for your inciteful responses and your images over the years.

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My Florida, My Backyard

by Jack Israel

At times during my years of diving, I've lamented the lack of biological diversity in my home state of Florida compared to other places around the world. We also dodge hurricanes in the summer and strong winds in November. But this year, during COVID, I discovered the splendor of Florida diving for the second time. I looked at it through new lenses. And what I saw made me feel thankful and blessed.

When the quarantine hit in March, I was fortunate to have a friend who lived on the beach. Kevin, a stubborn old cuss, and I often snuck across the closed beach to go shore diving on the first reef. Florida has the third largest barrier reef system in the world with three parallel reefs, which run intermittently from the Florida Keys in the south to West Palm Beach/Jupiter 160 kilometers north, the home of black water diving and shark feeding. It wasn't long before Kevin and I were up close and personal with fish cleaning and a host of critters, which actually seemed happy after not seeing divers for a while.

We dove here without trepidation for about 6 weeks until we caught the attention of the county sheriff. One day, at the speed of sound, a sheriff's deputy bore down on us in a 4-wheel drive vehicle. I chickened out and ran back to the building, but Kevin swore at the cop and ran into the water. After all, Kevin had a 120-cubic-foot tank. He could dive for 3 hours on the shallow first reef. The sheriff was not going to wait that long…but he did. He grabbed Kevin and ripped him up one side and down the

other, and that was the end of our quarantine diving.

But not long afterwards, Florida slowly opened, and we were back in business. I went to my favorite wide-angle spot, a fishing pier where the entire food chain lives, from nudibranchs and tiny blennies to barracuda and nurse sharks. Huge schools of baitfish and lookdowns (selene vomer) live under the pier, and frisky tarpon, a fisherman's delight, come to mate every year. They beat their gill plates and chase each other around in excitement, ignoring me on the bottom.

Top right. Nikon D850 in an Ikelite housing, Nikon 8-15mm F3.5/4.5 at 15mm, 2 x Inon Z330s. 1/250th @ F10. ISO400.
Right. Nikon D850 in an Ikelite housing, Nikon 105mm F2.8 and an AOI 12+ diopter, 2 x Inon Z330s. 1/200th @ F32. ISO200.

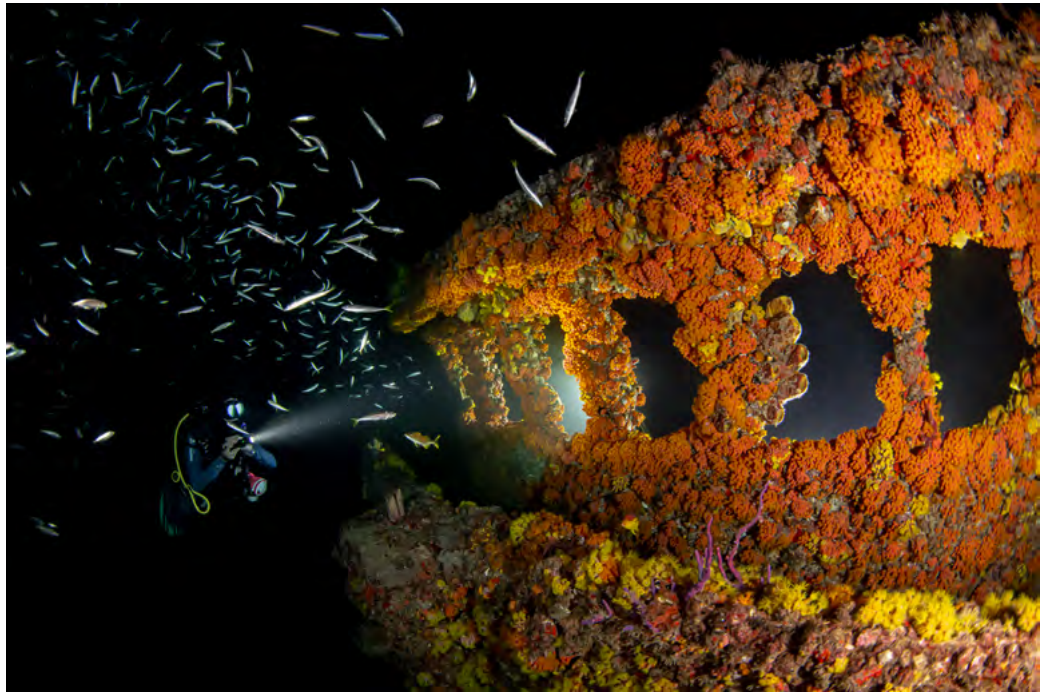
Above. Nikon D850 in an Ikelite housing, Nikon 60mm F2.8, 2 x Inon Z330s. 1/200th @ F32. ISO200.
Both left. Nikon D850 in an Ikelite housing, Nikon 105mm F2.8 and an AOI 12+ diopter, 2 x Inon Z330s. 1/200th @ F32. ISO200. Z330s. 1/250th @ F32. ISO200.

During weekdays, when there are no crowds, I would drive an hour north to Blue Heron Bridge, one of the best macro sites on the East Coast. Diving is normally an hour before and after high tide. The conditions are calm and conducive to macro, and the place is loaded with small critters. Some experienced eyes have no problem finding several nudibranchs, seahorses, colorful gobies and blennies in a single dive.

But by far, what renewed my love of Florida was diving at night, something I rarely did before. The Okinawa wreck is a large tugboat that is home to felimare pictas, a giant of nudibranchs, which graze on its hull at night. I'm curious by nature and thought to myself, how many pictas live here? Can we "fingerprint" them based on the patterns on their backs? And how long do they live?

My biologist friend and I are barely 4 months into this study, but we have found 22 unique pictas based

Nikon D850 in an Ikelite housing, Nikon 60mm F2.8, 2 x Inon Z330s. 1/125th @ F13. ISO400.



Nikon D850 in an Ikelite housing, Nikon 8-15mm F3.5/4.5 at 15mm, 2 x Inon Z330s. 1/60th @ F5. ISO2000.

on their back patterns. We've named them and now recognize them when we dive the wreck. Freckles, for example, is extraordinarily beautiful. It disappeared for a while, but two months later, it came back. But this work is full of mysteries. We have never found egg ribbons, yet they mate on the ship. Could they be "hooking up" and then returning to the reef hundreds of meters away to lay their eggs? We still have much to learn.

Creatures come out at night that we rarely see during the day. My favorite is the large crabs that cut off soft corals with their claws and carve them to fit on top of their shells. Their back legs hold this mobile camouflage on tight. Colorful cryptic teardrop crabs look like Christmas tree ornaments hanging from soft gorgonians. And sleeping fish provide a great opportunity to get up close and personal for a shot.

But without a doubt, my biggest adrenalin rush is to dive our deep wrecks at night, about 35 meters down. The captain would say to my dive buddy and me, "One, two, three, JUMP," and off we'd go into the ink. The wheelhouses are encrusted with soft cup corals, whose polyps protrude like flowers in a vase, creating a magical orange exterior on an old rusty boat. Taking pictures of the wheelhouses at night is a treat, and we got a bonus this summer when large schools of silversides were attracted to our lights. They thumped off our wetsuits and heads.

I invested in a few 15,000 lumen lights and lit up the Ancient Mariner from the inside out. It looks pretty spectacular, but what makes it more interesting is knowing that the wheelhouse is not on the shipwreck. In 2017, Hurricane Irma violently tore off the wheelhouse and tossed it in the sand. I tried my best photographically to resurrect the Mariner to its former glory.

As vaccines become available, I'm sure everyone is planning their next dive trip. I've got so many places to go, and it always seems, not enough time. But as much as I miss exotic locations, I'm always happy to come back to Florida and would love to see more of you here, too.

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Discovering Shetland

with Robert Bailey

Winning a category in the Underwater Photographer of the Year competition for British Wide Angle is a tall order, and one I'm very proud of. I won a generous prize for a trip for two to Scapa Flow aboard MV Halton (www.mvhalton.co.uk), skippered by Bob Anderson.

A vast majority of British divers would think I was mad to turn that down. A self-confessed marine life nut, photographing wrecks has never been a passion of mine. I opted for a week-long trip to Shetland aboard the newly renovated MV Clasina, hoping to photograph remote reefs in clear water.

My opinion of British wreck diving was about to change. Over the course of the week we dived on numerous wrecks, some resting on white sand where you could actually see the entire ship. A welcome change to seeing wrecks in instalments through gloomy vis at other UK sites.

The boat, the crew, the group, the diving, and the scenery were altogether a fantastic prize! Sharing that prize with close friend, and fellow photographer Charles Erb, was a bonus.

With all UK dive trips I suffer from pre-trip weather angst. This year, COVID regulations were on my mind too. The NorthLink ferry service to Shetland had been closed to all but residents and important workers up until July. Thankfully COVID-secure sailings resumed prior to our trip. The Clasina employs a comprehensive COVID checklist that you complete online before boarding.

With Storm Ellen spinning its life out at sea our trip was looking promising. We wisely decided to add a few days ahead of boarding Clasina. It is a 550 mile hack to Shetland from the Midlands. Thankfully the last 210 miles are spent relaxing overnight on the ferry. You're actually closer to Oslo than London when you reach port in Lerwick.

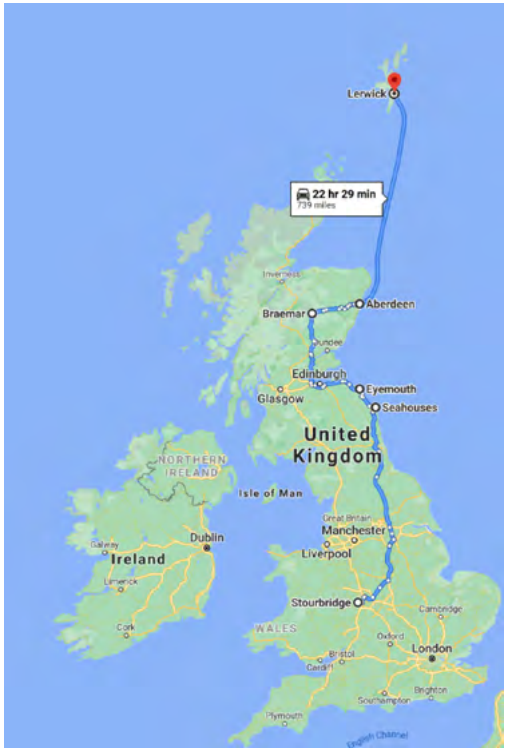
(Top) Boarding Clasina. (Above) Skipper Bob Anderson. (Top right) Deckspace aplenty. (Bottom right) Charles Erb and rainbow over St Abbs Head.

We fitted in a cheeky dive in Eyemouth at Greenend's Gully the next morning. I opted to be shore cover and ushered Charles in and out. Scattered showers in the area gave way to sun, and we enjoyed an amazing rainbow over St.Abbs head when Charles resurfaced. I considered this a good omen.

Our route took us up the A9 through the Cairngorms, which if you have not experienced is really worth a look. Cruising through silent valleys carpeted with heather was quite an epiphany for me. Yet more amazing scenery in Scotland! We overnighted in luxury, in Charles' VW campervan, and enjoyed the sunset over the River Dee. The next morning found us en route for Aberdeen. We just happened to call in at a few whiskey distilleries leaving my wallet a little lighter than it was! When in Rome, and all that.

Aberdeen was in lockdown when we arrived and strangely quiescent. We made our way to the ferry and got ourselves sorted. The ferry staff ensured that everyone maintained social distancing while onboard. After dinner we met the group who would join us on Clasina. Albeit all donning facemasks, meeting folks you're going to share a live-aboard with is a nice icebreaker, and a welcome start to our trip. Most of the group we met were from Cheshire (CSAC). They waxed lyrical about previous dive trips to Shetland, spurring our anticipation.

Cloudy skies welcomed us to Lerwick. The club spirit was pervasive with our newly met dive buddies lending a hand with our equipment down the pier to our home for the next week. Prior to boarding Clasina the crew walk you through their onboard COVID protocol; a sensible one



way system, several hand cleaning stations, the wearing of masks, leaving you feeling safe, and secure. All professional, and well-organised.

The dive briefings all began the same, with Skipper Bob scribbling www.mvhalton.co.uk on his whiteboard - a cheeky soft-sell, which prompted me to chuckle every time. The briefings were excellent with Bob explaining the shipwreck's history, the bits of interest to wreck aficionados, the marine life often seen, and most importantly where the 'money shot' was to be had. The pre-dive excitement started to well up with our first site only a few miles from port.

Fraoch Ban. Nikon D500, Sea & Sea housing, Tokina 10-17mm f8 1/40 ISO 800

Day 1

The Fraoch Ban (Gaelic for white heather) a 15 metre fishing vessel lies on its port side in 32 metres on a bed of white sand. It sank in 1999 after its cargo of sand eels shifted, causing it to capsize.

The wreck is intact, perfect for a shakedown dive, with little tide and a straightforward descent down the shot-line. I loved that you could see the entire wreck encircled by schooling fish. 'A gift' as the skipper put it in his briefing were the plaice on the bottom that came right up to you in numbers, likely attracted by the sand we were trying not to kick up.

We also spied an angler fish off the bow, octopus on the deck, and an interesting species of spiny spider crab we'd not seen previously. Certainly a dive that had something for everyone.

Dive two found us at Noss Head. A dramatic cliff face, scarred with deep clefts, and home to the largest colony of gannets in the UK, who on occasion are said to buzz divers on the surface when SMBs are up. Following the cliff face down you end up in a field of large boulders, with healthy numbers of juvenile cod hugging their outlines. Some scoured clean in places from eons of swell, while others are festooned with purple

Gully at Noss Head Nikon D500, Sea & Sea MDX-D500 Housing, 2x INON Z240 Strobes, Tokina 10-17mm lens f 11 1/100 ISO 1000

Lunakhods Nikon D500, Sea & Sea MDX-D500 Housing, 2x INON Z240 Strobes, Tokina 10-17mm lens f8 1/25 ISO 1600

encrusting sponge, dotted with dead man's fingers, sun stars, and dahlia anemones.

A couple of grey seals flew by on the dive, but retreated into the privacy of a favourite cave, not to be seen again. Dramatic views up the gullies were obscured that day by less than perfect visibility owing in part to the swell. A dive worth repeating in calmer conditions.

Day 2

Lunokods-1 a Latvian fish factory ship or Klondiker, as they are commonly referred to, succumbed to a storm back in 1993. It was driven stern first into a narrow gully below Bressay Lighthouse.

Prop from the wreck of Jane. Tokina 10-17mm lens f8 1/125 ISO 500

The stern section is still whole, and follows the slope down to 18m. The 30m bow section broke off and lies in 45m of water. The skipper described this site as being 'Shetland Deep', meaning over 40 meters but in calm, clear waters. The decent visibility allowed you to see a great deal of the site from the bottom. After leaving the shot- line, we took a few shots looking up the bow section, then followed the debris field up the slope.

There's lots of deck machinery, and the refrigeration coils are still visible and clear of silt. Mindful of deco obligations we spent the last part of our dive doing our safety stop on a colourful reef.

In the afternoon we dived a shallow reef off Out Skerries photographing dogfish, and searching for crayfish.

Day 3

Jane is a Swedish steamship that sank in 1923 after striking rocks near the island of Sound Gruney, lying port side down on a sandy bottom in 20m.

The wreck is slowly collapsing in on itself, but the propeller and rudder are still intact. A hand over hand pull down the shot-line was needed in the strong current, and brought us straight to the prop.

Plaice on Bura Ness f13 1/50 ISO 500

Diver on E49 (Charles Erb) f8 1/30 ISO 1000

We got stuck in like limpets, took several shots of the prop. I let the unrelenting current sweep me to the bow where a gaping hole could be seen in the hull, perhaps responsible for its demise. I managed a few shots of the anchor, then we drifted off in the current whilst deploying the SMB.

South of Yell we did a drift dive on a site called Burra Ness. The sea bed was reminiscent of a wind-swept desert. We found ourselves flying over furrows of maerl beds and coarse white sand watching armies of hermit crabs battle away. An uneventful dive for me up until I drifted upon the largest plaice I have ever seen. I managed to make a few pictures before it moved on, and then we drifted with the current slowly back to the surface.

Day 4

The E-49 submarine sank after hitting a mine in 1917 just outside Balta Sound. All hands perished sadly, making this a war grave.

A sobering experience diving this site, trying to imagine the terror those submariners were subjected to before being engulfed by cold Atlantic water. E49 is slowly being swallowed up by the white sand it lies in. The conning tower and periscope are still visible, as are some of the gears responsible for maintaining trim. The conditions were favourable, and we did two dives on the site. One of the few opportunities I've had to make pictures of wrecks in the UK using available light.

With two dives under our belts we bundled into a taxi at Baltasound, and headed to Hermaness bird sanctuary. A haven for thousands of seabirds, all under the watchful eye of Muckle Flugga lighthouse, the most northern point in the UK. The scenery alone is worth the price of the taxifare, which wasn't expensive anyway.

Day 5

Motoring south we stopped to dive the Gwladmina - a large Victorian steam ship which was carrying coal when it collided with another vessel in 1918. It now stands upright in 39m.

We managed a swim around the entire site. While the prop has been salvaged the shaft is still visible, as is the hardwood (lignam vitae) bearing that supports it.

The Giant's Legs at Bard Head is a stunning geological formation created by erosion. The boat drops you in close to the cliff, and after a short swim you descend onto a series

Crayfish – Out Skerries f11 1/60 ISO ISO 1250

Nudibranch (Dendronotus frondosus) on Giant's Legs f22 1/320 ISO 200

of broken steps which mirror the surface. While there were caves at the site, we settled onto one of the steps, and were so taken by the nudibranchs, and several species of shrimp that the entire dive was done in the same spot.

Day 6

Our last day found us diving the Pionersk, another factory fishing ship that went down not long after Lunakhods-1 in the 1990s.

Shallower than previous sites at 20m the visibility was challenging at 3-4m not something we'd experienced until now. Photography was limited to close up subjects. A dark and gloomy dive.

There was unanimous agreement to dive the Fraoch Ban again for our final dive. An excellent way to top off a fantastic week on the Clasina.

Getting there and away:

To dive on the MV Clasina:

www.clasina.co.uk

Factor in travel time there and back if driving.

Book your ferry tickets well in advance of your trip. Remember if you're carrying cylinders to register your hazardous cargo in advance, this will save on paper work in the queue.

www.northlinkferries.co.uk

Hermaness Bird Sanctuary on Yell – A must visit.

www.visitscotland.com/info/see-do/hermaness-national-nature-reserve-p246921

The Balta Light – UK's most northern pub

www.facebook.com/BaltaLightBar/

Robert Bailey
www.robertbaileyphotography.com

Underwater Photography and Marine Biology

by Dr Richard Smith

I began exploring the aquatic realm at sixteen, learning to dive with my father in a frigid British quarry in November with a thick frost on the ground – I saw one crayfish during four dives, but thankfully I persevered. Since then, my journey as a marine biologist and underwater photographer has given me a huge amount of insight about the many overlooked creatures of coral reefs, culminating in my book The World Beneath.

Some of the earliest images I captured were taken in the Maldives during the first global coral bleaching event that devastated many of the Indian Ocean's reefs. Although these images were decidedly average, the subject matter led to a fundamental shift in my consciousness and my aspirations of becoming a terrestrial zoologist plunged beneath the waves. I soon became interested in macro underwater photography, through trying to identify nudibranchs (sea slugs). The little sketches on my underwater slate weren't quite cutting it when faced with the hundreds of potential species, so I started to take close-up images to help. I realized how many of these tiny slugs, most measuring less than a centimeter in length, were undescribed or my sightings were adding huge extensions to their known geographic ranges.

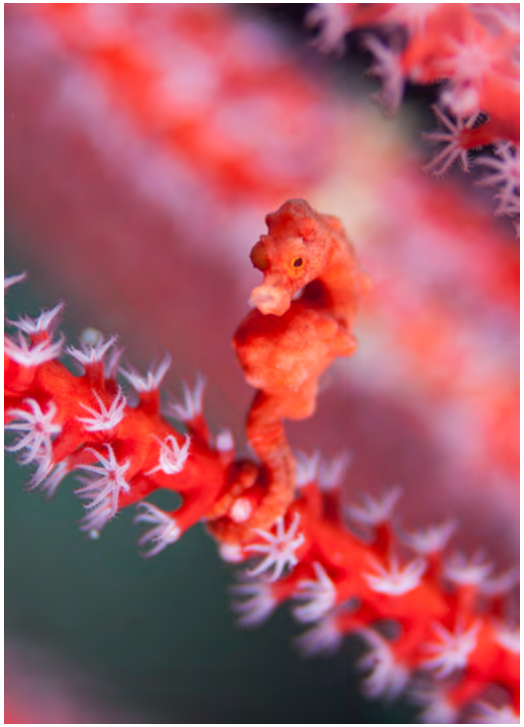
Several years later underwater photography became a vital part of my PhD research on the elusive, but charismatic, pygmy seahorses. These animals barely stretch across a dime, and the two species I studied spend their entire adult lives cryptically clinging to the surface of fan-like gorgonian corals.

Through my photography, I was able to observe and record their reproductive cycle for the first time, taking images to help sex the animals. This is only possible by taking a very close up image of the base of the trunk to show a raised circular pore in females, or a slit-like opening in males from which the young are released.

At the time of seeing my first pygmy seahorses on the coral reefs of Komodo, Indonesia in 2002, there was just one named species. Now there are seven, and I am working on describing another; the first from the Indian Ocean. Underwater photography has played an important part in this group's discovery, with many new pygmies coming to the attention of researchers through images taken by recreational divers.

In 2017, the SyngBio conference held in Tampa drew the world's seahorse and pipefish researchers

Like corals, anemones also suffer from bleaching, which puts both the anemone and their resident fishes in jeopardy. West Papua, Indonesia.



Denise's pygmy seahorse on a whip coral. Sulawesi, Indonesia.

Huge swells crashing through an overhang in West Papua, Indonesia

Male Galapagos pike blenny displaying. Galapagos Islands, Ecuador.

Giant barrel sponge, many decades old, spawning. Tubbataha Reef, Philippines

together for only the third time. I was invited to give a keynote speech one evening, and chose to speak about the huge diversity of small, newly discovered, habitat specialists I was coming across during my travels. One of the images I showed was a pygmy seahorse, measuring just 1.6 cm in length, that I had photographed a few years prior in Japan. I was sure that it was a new species, but it wasn't until chatting with syngnathid taxonomist Graham Short afterwards that his skills in taxonomy were able to realize Hippocampus japapigu as a new species in 2018.

The combination of my background in natural history observation, photography and marine biology has led me to photograph many new and undescribed species. I was diving with my friend Anna DeLoach when she spotted a stunning male flasher wrasse in a remote corner of southern Indonesia, which was named as Alfian's flasher in 2016. The rainbow of color, just a few inches long, shot around several feet above the reef showing off

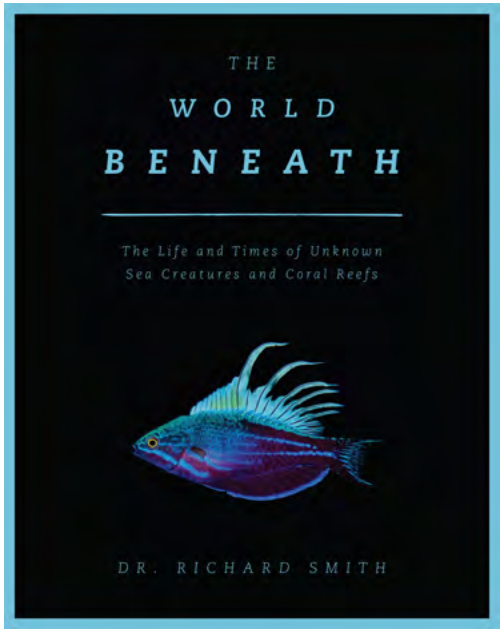
Displaying male Blue flasher wrasse, measures just two and a half inches long. West Papua, Indonesia

to a hareem of somewhat ambivalent females like a frenzied peacock. This is yet another example from the surprising number of micro-endemics that are being discovered on coral reefs, some with geographic ranges possibly only spanning just a few hundred square miles.

Through collaboration with researchers, my images of rare or previously undocumented behaviors and species have been published numerous times in the primary literature; however, I hope these images can also have a reach beyond the scientific community, sharing these wonderful animals with a wider audience. During the past twenty years, the coral reef fish identification books that I pore over have more than doubled in size with new species thanks to the combined efforts of biologists and citizen scientists alike. These days, with the fabric of coral reefs changing before our very eyes, it's both encouraging that new species continue to be discovered but wildly alarming at how quickly their homes are disappearing.

Dr Richard Smith
www.OceanRealmImages.com

Dr Richard Smith, a British marine conservationist, underwater photographer and author, aspires to promote an appreciation for the ocean's inhabitants and raise awareness of marine conservation issues through his award-winning images.
A marine biologist by training, Richard's pioneering research on the biology and conservation of pygmy seahorses, led to the first PhD on these enigmatic fishes. Richard is a member of the IUCN Seahorse, Pipefish and Seadragon Specialist Group working to conserve these fascinating fishes. He has named the two most recent pygmy seahorse discoveries from Japan, Hippocampus japapigu, and South Africa, H. nalu – the latter being the first in the Indian Ocean and, like all pygmy seahorses, is the size of a grain of rice.
He is a Fellow of The Royal Geographical Society and The Linnean Society of London. Richard's bestselling book, 'The World Beneath: The Life and Times of Unknown Sea Creatures and Coral Reefs' explores the wealth of coral reef biodiversity through his stories of adventure, discovery and many photographs.



www.amazon.com

Le Polynesien

by Alexandre Hache & Graham Owens

It has become a ritual that each day at 6pm, we gather around the laptop and deliberate over the following days program. Today, our 'young' camera operator Matt, will pick the wreck we will dive on tomorrow.

The choice in Malta is always difficult, as it has witnessed some bitter fighting during two world wars and the seabed is littered with high quality wrecks.

It is the 6th day of our "Maltese Deep Wrecks" expedition and I feel fatigue is setting in. I see in the eyes of my five comrades the desire to ease off a little. We have already amassed a total of 500m of cumulative depth and 23 hours underwater including 18 hours of decompression stops.

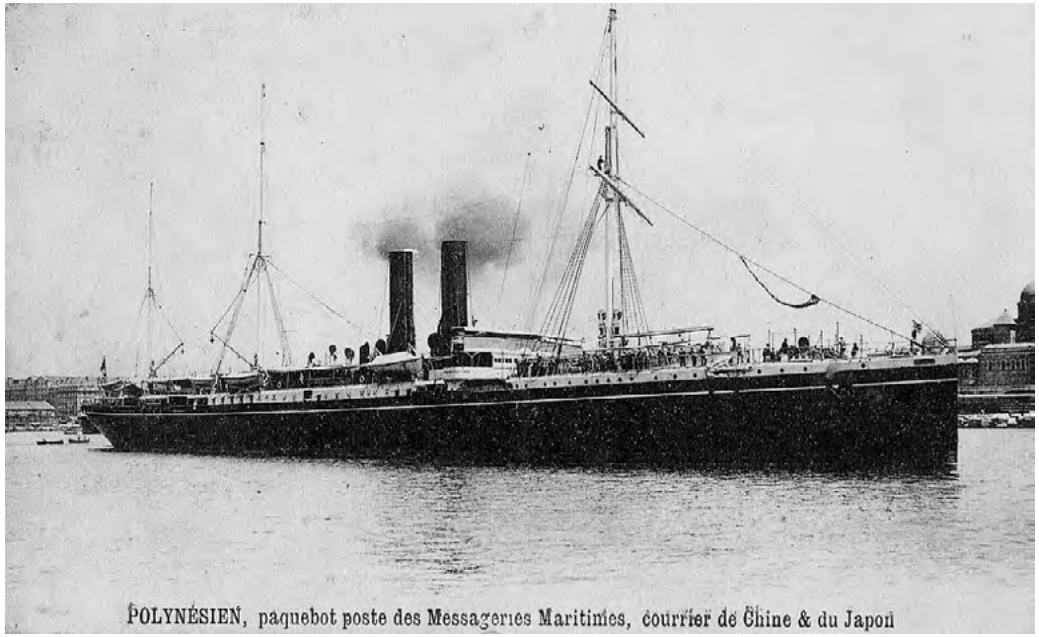
It is with some trepidation that Matt proposes the wreck of the SS Polynesien. At only 65m deep and with her mid deck at around 55m, she's accessible to experienced recreational divers and wasn't on our original 'deep' itinerary. The Polynesien was a French liner which sunk on the 10th August 1918 after being torpedoed.

We settle in to watch some videos found on the Internet and the discussion soon livens up because our original program of wrecks beyond 100m is already well loaded!

Many deep divers have told us about this wreck, describing it as a staple of a Maltese expedition. Our skipper Jason Fenech arrives late and we ask his opinion. His answer is clear: "The Poly? this is a favourite dive for the locals, you guys will have a blast!"

The following morning, at eight o'clock sharp, Jason is waiting for us aboard his boat the Delphino, moored up on the Marina dock in Valletta. We take the heavy equipment out of the vans and take advantage of the loading to analyse our Trimix 11/48 mixtures (11% oxygen, 48% helium) before setting out to sea. Morale is running high; the weather is nice and warm; it feels like a vacation! My dive buddy Philippe and I take the opportunity to launch the drone. This is the first time since the start of our stay that we have admired the citadel that our boat circumvents before setting off.

The Polynesien sank 7 miles off the coast of Valletta, so we take advantage of the thirty minutes journey for a final briefing and to



AATH tech team, Alexndre, Jason, Didier, Matt, Olivier & Nicolas , SONY A7R4 ©Philippe Clement

Jason Fenech expedition boat, "Delphino", SONY A7R4 ©Philippe Clement

get prepared. Arriving at the dive site, Jason, helped by Karsten the deckhand, positions the shot line. It is when we see the image on the sounder screen that we discover this extraordinary wreck; 153 meters long by 15 wide with a draft of 10 meters!

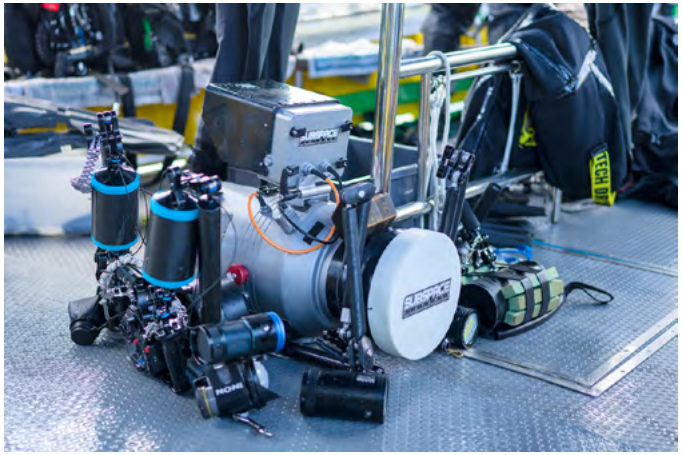
Built in the South of France in La Ciotat, the Polynesien was launched on April 18, 1890 in the presence of the President of the Republic, Sadi Carnot. Commissioned by the Compagnie des Messageries Maritimes de Marseille, it operated on the France to Australia route from 1891.

She was a fast ship and was engaged in November 1892 in a race from Adelaide with the twin propellered Orient Line's Ophir liner. Un-hampered by her single propeller, the Polynesien arrived in Marseille 22 hours ahead of the British liner.

In 1900 she took part in the war effort by transporting the troops of the China Expedition from Marseille to Colombo. Later assigned to the Far East route from 1903, she was the victim of two broken moorings in Marseille causing two strandings and some damage, fortunately without consequences for the ship.

In the midst of World War I, she once again joined the routes to Australia and New Caledonia and provided troop transportation from

Open skylight to accommodation (first class), Lumix S 1/30s F8 1600 iso ©Alexandre Hache



Video, Photo cameras and 65k lumens Bigblue lighting , SONY A7R4 ©Philippe Clement

Rear gun, 2x Bigblue 65K lumens, Lumix S 1/60 F4 1600iso ©Alexandre Hache

Indochina. Le Polynesien was torpedoed on August 10, 1918 in the Malta Channel by the German submarine type UC-22, causing the loss of twenty lives.

Our group of six divers are divided into three teams.

The first to get into the water is Matt and Olivier; long-time friends and accomplices, they will set off with the expedition main underwater camera, a Sony FX-9 which shoots 4K video to an external recorder. Mounted in an underwater housing capable of depths down to 250m it is accompanied by two 33,000 lumen Big Blue video lights each providing a phenomenal amount of light.

The launching of this bulky 35kg baby is normally a delicate operation, but today the sea is calm! Olivier will carry an additional light; this time a 65,000 lumen Big Blue to complement his 150W dual beam primary hand light.

A few minutes later, it was Didier's turn to get into the water, accompanied by Nicolas. They are equipped with a Panasonic GH5 in an Isota housing rated to a depth of 200m. More video-orientated, their configuration still allows you to take photos from time to time. The previous day, Nicolas had a leak on the inflator of his dry suit at a depth of more than 100m, depriving his team a good dive on the destroyer ORP Kujawiak, they therefore opt for a long dive today. Didier has calculated a run time of four and a half hours which gives them an effective bottom time of ninety minutes.

It's our turn now, but there's no rush. Our nearly five hours dive the day before leads us to consider something more a bit more sedate today.

Equipped, we begin our unchanging ritual

Bottles in the SS Polynesian holds, Lumix S 1/30s F6,3 400iso ©Alexandre Hache

Alexandre Hache shooting on the deckhouse, GH5S 1/128 F4 3200 iso ©Didier Sala

of the final pre-jump checks of our rebreathers, it is a key moment in diving. Isolated in our bubble, we are both focused and relaxed. I finish by checking the partial pressure of oxygen in my loop and with an "OK" sign, I indicate to the skipper that I am ready.

As the boat approaches the release point, I stand up, weighed down with my 60 kg of equipment. I remember saying to my buddy Philippe "it's light today!". We "only" have two bailouts in addition to our rebreathers, this is in contrast to the 120 kg for a more typical dive in the 100 meter zone, which would feature three or even four bail-outs.

Ready to jump, I hold on firmly to the rail while waiting for Jason to manoeuvre into the final position. I jump into the water and fin about ten meters to the buoy, Philippe joins me moments later. I unfold the arms of my camera and remove the cover protecting the dome. The water is very clear at the end of summer in Malta. The descent along the shot line is rapid and we soon see the wreckage…. it is huge!

We arrive at the mid ship and it is difficult for us to guess the wreck's orientation. With 10,300 tons of the Polynesien in front of us, everything is excessive. The boilers are impressive and the passageways offer breath-taking perspectives. We quickly understand that a single dive, however long, will not allow us to explore her properly.

I see an entrance that gives us access to the holds and this seems like a good place to start our exploration. Lit by our powerful lights, we can make out water, wine and Champagne bottles and dishes (the wreck is known locally as Tal-Platti, 'plate ship' in Maltese). Continuing our way through the maze of metal, we discover tyres of bicycles, motorcycles and suitcases. What is particularly impressive in Malta is the state of conservation of the artifacts from the wrecks. Unlike the remains of the French coast, everything is present as it was on the day of the sinking, offering divers a

SS Polynesian pergola, Lumix S 1/60s F4 700iso ©Alexandre Hache

Intact rudder & propeller, Bigblue 65k lumens, Lumix S 1/128 F4 3200iso ©Alexandre Hache

and we slowly make our way back along the hull to the shot line.

It is with some regret that we begin our ascent and the long decompression stops that follow; the sixty-five minutes bottom time has barely allowed us to touch "the Poly" as the locals affectionately call her. One thing is for sure, this wreck will be on the program of our next Maltese trip.

Alexandre Hache
& Graham Owens

Instagram

real journey back in time.

The strobes of my camera 'pop' and Philippe enjoys playing with his lighting to perfect the atmosphere. We swim through several areas, including a dining room with tables. Time passes quickly, and as we leave the holds we come across the other two divers. They approach and looking through their masks, I can see a sparkle in their eyes. With a gesture, they indicate the direction to take and we conclude that "this is where it happens"!

We relieve Olivier of his powerful 65,000 lumen 'searchlight' and make our way to what we will later know to be the stern. The superstructures are still there, in over a hundred years it has done its job. We advance towards the almost intact pergola, covered with yellow and red soft corals. It is very photogenic but time is running out and we continue our journey, passing over the skylights of the first class cabins.

A shadow in the distance slowly emerges, Wow! It is a magnificent cannon which sits on the aft platform of the ship. Quick! We position the lights and I gain height to frame this imposing piece of artillery. The visibility starts to deteriorate as the sandy bottom is disturbed by a light current. We swim around the stern to admire the rudder and single propeller below. Their size is such that our two huge lights struggle to illuminate them in their entirety. A glance at my dive computer reminds me that we are going to exceed the planned three hours of diving. I signal to Philippe

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.

www.magic-filters.com

My Shot 1 (from Shot Chat)

‘While You Sleep’

by Mark Kirkland

Mark Kirkland’s photograph of a city frog at night is one of the most impressive images we have seen lately, deservedly winning him British Underwater Photographer of the Year and Backyard Photographer of the Year in UPY 2021. Here he shares the full, gruelling story behind its creation with the Shot Chat team, and one cannot help but come away even more impressed by both the shot and the photographer behind it.

Mark is one of the brightest young talents of the British underwater photography scene (even if you would never catch this humble Scot admitting as much).

Admirably, he focusses on creating imagery close to home, and his distinctive vision, coupled with a tenacious work-rate, has yielded an impressive portfolio - showcasing life and nature that many of us overlook.

His efforts have been rewarded in multiple competitions, with the highlight being winning the British Underwater Photographer of the Year title in 2021.

Find him at www.markkirklandphotography.com and on Instagram

Conception

Is this image and composition something you planned in advance?

Mark Kirkland: Okay, so the real inception for this shot was probably towards the end of 2017. I had been shooting underwater for a few years but it had only really just started to get a real grip on my imagination.

I’m a huge admirer of the freshwater photographer David Herasimtschuk, who produces remarkable shots in the rivers and lakes of North-East America, and his most captivating works are, I think, his close focus wide-angle split shots of amphibians.

I wondered if I could find similar opportunities close to home. Frogs are common in the UK, but despite that I had no real clue about their life-cycle or where and when to see them, so I started my research. I downloaded some fairly dated research papers on the local populations, contacted countryside rangers and wrote to some conservation charities. I quickly had plenty of potential sites.

I had read that common frogs come out of hibernation when the air temperature is consistently over about 5°C. Despite my best efforts, I

spent day after day driving to different locations to find empty ponds (too early) or ponds filled with spawn but no frogs (too late). Eventually, after almost two weeks of trying, and on the day I was ready to give up, I came across this little muddy urban pond in Glasgow. I spent a full day there, lying in the mud, holding my camera in the water and snapping splits with a 14-42mm lens. One of these images (right) went on to place third in the Close-Up category of British Macro category at UPY 2018.

Split shots should bring a dimension to the underwater world

that never truly connect. You're either underwater or you're not - so they can offer a totally unique perspective. I just think they're great fun, and full of possibilities.

I'd messed around with freshwater splits for a few evenings in summer 2019 - trying to get shots of sticklebacks. But as a subject they are too small and unpredictable so you really need to find a big shoal of them. I had the most amazing sunset for this shot, but just not enough fish. It was still good practice for my froggy shoot though.

I had read the frogs are even more active at night, and I felt this site - overlooked by imposing tower blocks - had the potential to produce something different. I had already started dreaming of doing some sort of long exposure night-time splits and had toyed with jellyfish in the past with no success. I just needed the right subject and the frogs seemed ideal. I returned a year later, in March 2019, however a particularly dry year had turned to the pond to mud. It wasn't until the spring of 2020 that I got the chance to try and execute my vision.

Getting the Shot

Equipment: Olympus OMD EM5 MKii with Panasonic 8mm Fisheye and two Sea and Sea YS-110A strobes.

I had a chopped up plantpot on

Early experimentation with freshwater splits, a useful learning curve for photographing common frogs.

the one lighting the frog to try get a bit of control and atmosphere. I was using the Olympus Imageshare App on my phone as a remote trigger.

Time: Shooting started about 9pm till 1/2am. That shot was taken at 9:55pm in March.

Water conditions: I was shooting in about a foot of water with my camera resting on some rocks and mud. Vis, probably 18 inches and very easily stirred up. No idea about water temp but air temp was between 2°C and 5°C on most nights.

Other gear: Multiple cosy layers, waterproof trousers and jacket. Small

The pond in Malls Mire, Glasgow, during the day.

torch as a focus light.

Help: Most background info came from downloading old research papers.

Settings: The final shot was a 20 second exposure, f16 ISO 1000. Strobes about half power given I was shooting with such high ISO. Front sync flash. Focus - Touchscreen Spot AF using the remote app. As I was shooting long exposure, I couldn't use a focus light so used a hand-held torch to gently light the frog (trying not to scare it away), got it in focus and hit the shutter button then pulled the torchlight away just before the camera actually took the shot.

It was all about trying to strike the balance between image quality, depth of field and capturing enough light (same old story really). The EM5 MKii has been a great camera, but it doesn't too cope well with low light so even pushing it to ISO 1000 gave me a nosebleed. However, I felt I needed that as the background is plays such a huge part in the shot - I wanted to try get it sharp front to back.

Unfortunately, when your subject places itself 1cm from the dome, even at f16 only the frog and the spawn stayed relatively sharp. That left me with shutter speed to try get enough light in, and 20 seconds worked well for getting the moon and the buildings properly exposed. Thankfully, frogs do like to sit motionless so movement was only an occasional problem.

The Story

One important thing I learned about the frogs is how unpredictable their behaviour is. In wildlife photography, we all know the

importance of spending time with our subjects, getting used to their patterns so we can predict where, when and how they'll be. We also need to gain an understanding of how to adapt our own behaviours to them - what movements and noises make them retreat, and what puts them at ease. Frogs..... they just make up the rules as they go along.

When I shot them during the day in 2018, it was a simple case of spending time around them and they get used to your presence - at times they were even curious. But this time round, in the pitch black, they were much more arbitrary. So at this point I'm set up in the pitch black, my gear in the water and using a small torch as a focus light which I would then quickly switch off as I pressed the shutter.

At times, the frogs were completely comfortable with the light - even curious. They would congregate around my gear, usually at the back of my camera and I could wander around freely. Then at the drop of a hat (whatever that means), they would scarper in unison into the thick weeds.

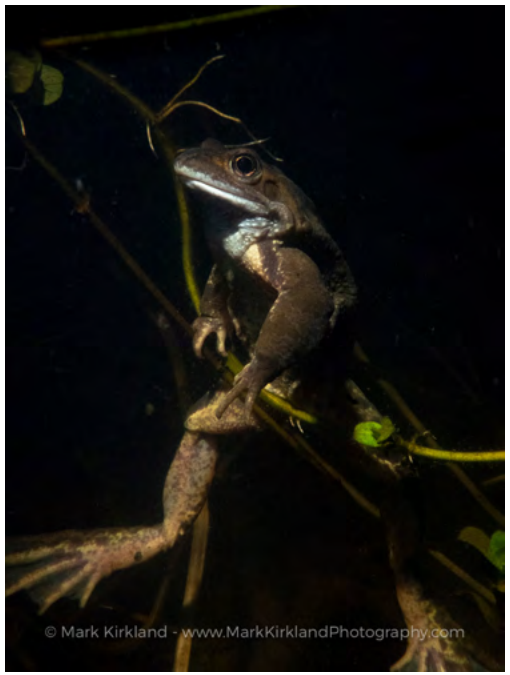
I had taken a tripod with me, but it was bigger than the water depth so the entire frog shoot was just done by carefully sitting the housing on a muddy slope of the pond. Every movement stirred up a lot of mud, so I had to try to keep that to a minimum.

I could sit in the pitch black for 45 minutes without a single frog visible. Then slowly, a crescendo of croaking would start and it would be all action for a few minutes - splashing and grabbing each other, then all of a sudden they would all stop and sit perfectly still for 20 minutes. Almost always out of frame.

I think on the first night I was still using the 14-42mm lens, and got a few okay-ish shots. Nothing special. And I was struggling with the focus so they're a bit soft. I decided to switch to the 8mm fisheye the following night.

The best place to shoot the first few nights didn't have any frogspawn, but over the nights it started filling up. So I tried positioning one of my strobes behind the frogspawn. I didn't have a remote strobe trigger so I had use a rock to weigh the fibre optic cable down and out of frame. The strobe itself I had to weigh down with a few rocks - which of course then meant a half hour wait for the silt to settle. I think that's the basics of the setup and the frogs.

The weather was the next thing - it was intermittent showers and clouds the entire time. When it rained, I had no option but to lie in the mud with my hood up, in complete darkness and wait for it to pass. The longest it rained was probably over an hour and at one point I started to question what my life was actually all about. And of course, when it stopped raining that meant trying to find a bit of fabric which wasn't completely covered in mud so I wipe droplets off the dome port (cue: frogs darting into the weeds not to be seen for another hour).



First night with the 14-42mm lens.

Keeping the dome clean was one thing. The strobes also go to sleep after a period of time, so I hadn't shot anything for a while I had to remember to fire intermittent shots just to keep them awake. If not, it was reaching back into the pond to turn them off and back on again.

With the camera on for 4-5 hours at a time, battery changes were a mess. Unfortunately, this sometimes meant getting moisture inside the housing which would show up in the shots (sometimes not noticed till I had them back on the laptop).

So inevitably, when I had a clean dome port, and the frogs were out, and the strobes are ready to fire, and the sky was clear and the moon was in position..... the connection to my phone would fail. This sometimes meant reconnecting via the phone, but often needed me to pull the camera out the water and go back through the manual connection process.

I'm wondering if it's starting to become clear why the final shot took

Can you share some other frames from these shoots? Either moments of breakthrough which led to the image we see now, or other strong frames which you considered before settling on this one as the best?

me 5 nights to finally capture.

"At around 9pm I'd start wondering what the frogs were up to. The temptation was just too much. I ended up there 5 nights in a row, often ready to chuck in the towel after a few hours but then sticking it out till 2 and 3am."

After the first night, having not gotten to bed until 3:30am and up for work at 7, I thought I'd had enough. Every single inch of me, my bag, my equipment, torches, phone, flask all came back completely covered in mud. My car was a riot after the first night. But on every following night, I'd be sitting at home like a burst couch, and at around 9pm I'd start wondering what the frogs were up to. The temptation was just too much. I ended up there 5 nights in a row, often ready to chuck in the towel after a few hours but then sticking it out till 2 and 3am.

It's also worth saying that down at the pond level it's completely pitch dark, and the entire time I have in the back of my mind the thought that a good citizen of Glasgow (I mean that with all sincerity) might come and ask me what I'm doing. Amazingly, over the 5 nights only two dog walkers passed by - one of them stopped and we chatted - he was genuinely curious about what I was up to. So that was it - just me, some frogs, a flask of tea and a sleeping city.

Oh! I was messing about with spotlighting them for a while. Nothing that really worked though. I just got lucky with the frog position in shot that won BUPY.

After the Shot

Did you know you had something special in the moment?

I think I've learned to seriously temper my expectations when it comes to what you can see in the back of the camera, but as soon as the picture came up I had that feeling that I'm sure only nature photographers understand when you think you've got a good shot. I knew it was at least the best of the week.

I was honestly just delighted that I'd manage to take an idea, get over the technical challenges and come out with a decent image. It one big experiment really, just to see if it could be done. I didn't really think far ahead into how others would react to it.

Post-processing: can you describe the programmes you used, and what you did please?

Adobe Lightroom. I'm trying to cut down spot editing as much as I can. I'm striving for 'honest' shots - as some might say - as it forces me to improve my photography technique as opposed to letting post processing correct my sloppiness. I'm not a photography purist, I just think my own images where I've had to use spot/area processing always lose something. Maybe it's just in my head, because I know the adjustments I've made, but those shots always lose some of their satisfaction.

Thankfully with this shot I had balanced the lighting okay between the two halves of the frame so I could deal with the exposure globally. That

was important to me as I really didn't want to use the adjustment brush to correct either section of the shot. Overall it was a little underexposed so I brought that up, and tweaked the highlights, shadows, whites and blacks to get the contrast right. I also tapped the saturation up a bit. The one part of the shot that really frustrates me, is water droplets on the dome. I hadn't done a very good job of wiping the dome after a brief rain shower, so you can see some in the quarter just above the water line. I did use the spot removal tool to remove a some of the more distracting ones which had really caught the light, but I decided to leave most of the less noticable ones in. It's a MAJOR frustration for me and I was actually gutted when I loaded up on lightroom and noticed the dome wasn't completely clear.

Do you think you could repeat the shot?

Could I do it again? I'm not sure - I could do something similar, but what makes the shot (for me) is the pose of the frog. I think there's a little big of magic going on there. I could set everything up identically and get lucky with the weather, but it'll be the frogs that dictate the composition and tone. That's part of why we do it though isn't it? The unpredictability - for all the months of planning and hours of trying to get the technical side right, I was still completely at the mercy of these little animals to make or break the whole thing.

What has been the 'career' of this shot: talk us through its reception, competition wins, commercial performance...

It's maybe been my most 'successful' image - I took it back in March 2020, just after the major competitions had all been and gone, and with no self-control I had to upload it to my instagram. It got a really good reception - I was quickly asked to write a blog piece on the shoot for Scottish Natural Heritage, which was reproduced (with cover shot) for Underwater Photography Magazine. I've sold a few prints which is cool.

It's currently sitting as a shortlisted image in British Photography Awards which led to Nat Geo Kids getting in touch - they've just ran a double page spread on it in their February issue which was huge for me. (As an aside - they initially asked to use it for free, but I asked for a few quid and they came back with way more than I was expecting). And of course, it got me the British Underwater Photographer of the Year, British Wide Angle and My Backyard Awards at UPY 2021. So.... pretty decent.

My initial reaction after all that is that it's all downhill from here. Genuinely - I've peaked, it's time to pack up and go home. But I'm over that now - in the last few weeks it's actually energised me to get stuck right into the next few projects I have in mind. I've got a few images in my head that I think might be impossible, but either way I'm going to absolutely love finding out.

Is there any aspect of the shot which you think could be improved? If you were trying again today, is there anything you'd do differently?

The water droplets is the one bit that can be improved. I'm not sure there's much else I could do differently, but if I could go back I'd just be a bit more careful about clearing the dome. The rest, as mentioned, is up to the frogs.

Thank you for sharing your story with the Shot Chat!

Henley Spiers

www.henleyspiers.com/shot-chat

Mark Kirkland

www.markkirklandphotography.com

My Shot 2

by Borut Furlan

Nikon D850, Seacam housing, Nikonos RS 13mm f/2.8 lens, f/9, 1/8 sec., ISO 400

Soon after Slovenia and Croatia were separated from the former Yugoslavia in 1991 diving was free and without regulations in a new country Croatia (and there were nearly no diving centres as well). Since I have my own boat and compressor, I was amongst the first Slovenian divers who dove in the island Vis after separation from Yugoslavia (diving in the island Vis was prohibited in former Yugoslavia due to military reasons).

I was based in a small fishing village named Rukavac (in 1994) on the southern coast of the island Vis. A local fisherman Mate Brajcic, a very friendly old man, told me that when he was a young boy (1944), he saw the plane (B-17) which was landing in the sea just near the coast of the island.

He explained me the position where the plane crashed in the sea and my diving friend Davorin Zupanc started to cruise in this area with his boat equipped with sonar. He soon discovered something on the sonar threw a buoy to mark the position and went diving the next day. He was alone and on air! We all dove on air in these times. The depth was 72 m and he discovered the wreck. So he was actually the first person, who dove on this wreck (in July 1994).

The next day he invited me. I didn't have problems with nitrogen narcosis, since we all did a lot of deep air dives and were used to nitrogen. And we were young... The visibility was incredible (it is still good today, but definitely not as crystal clear as in nineteen's). And there was a big grouper, hiding below the wing, which disappeared some years later. After this memorable dive I made several dives on this wreck later. The bottom times were typical 15 to 20 minutes and decompression times between 1 and 2 hours. We didn't have stages with nitrox and oxygen for faster decompression (now I dive with trimix of course).

In these times I shot several rolls of film of this wreck and in December 1998 I published a story in a Croatian magazine More (in English: "The Sea"). Immediately after my story was published, Danijel Frka, who got my contact via the chief editor of More, contacted me. We didn't know each other at the time and he asked me if I can show him the wreck. We arranged the diving in May 1999.

Danijel was extremely excited with this wreck and soon after our first dive he started to research the history behind it.

The most important dates are:

July 1994 - Discovery of the B-17 wreck by Davorin Zupanc

December 1998 - The first published story about the wreck in the Croatian magazine More (by Borut Furlan)

May 1999 - The first dive of Danijel Frka on the wreck and the beginning of his excellent research work.

Borut Furlan
www.borutfurlan.com

Marshall's Mysteries by Colin Marshall

Do you know what these animals are, or what they are doing? Answers on Page 64

A

Tulamben, Bali, Indonesia — animal about 2 cm long

B

Near Menjangan Island, Bali, Indonesia — image about 10 cm across

C

Lembeh, Sulawesi, Indonesia — normal shrimp-like size

D

Night dive, Seraya, Bali, Indonesia — about 1 cm long

In this new series for UwP, Colin Marshall invites you to identify these four subjects.

Colin has been taking pictures since around 1980, initially travel photography. He started diving in 1995 and since then has focussed on taking pictures underwater, mainly in Indonesia. Still occasionally taking some pictures on land, mainly of insects and reptiles.

Around 100 of his underwater images will be used in the soon-to-be-published new edition of the excellent 3-volume "Reef Fish of the East Indies" books and App by Gerry Allen and Mark Erdmann.

He is in the process of moving from Bali to New Zealand, to continue photographing natural history subjects there.

Guidelines for contributors

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

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

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

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

How to submit articles

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

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

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

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

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

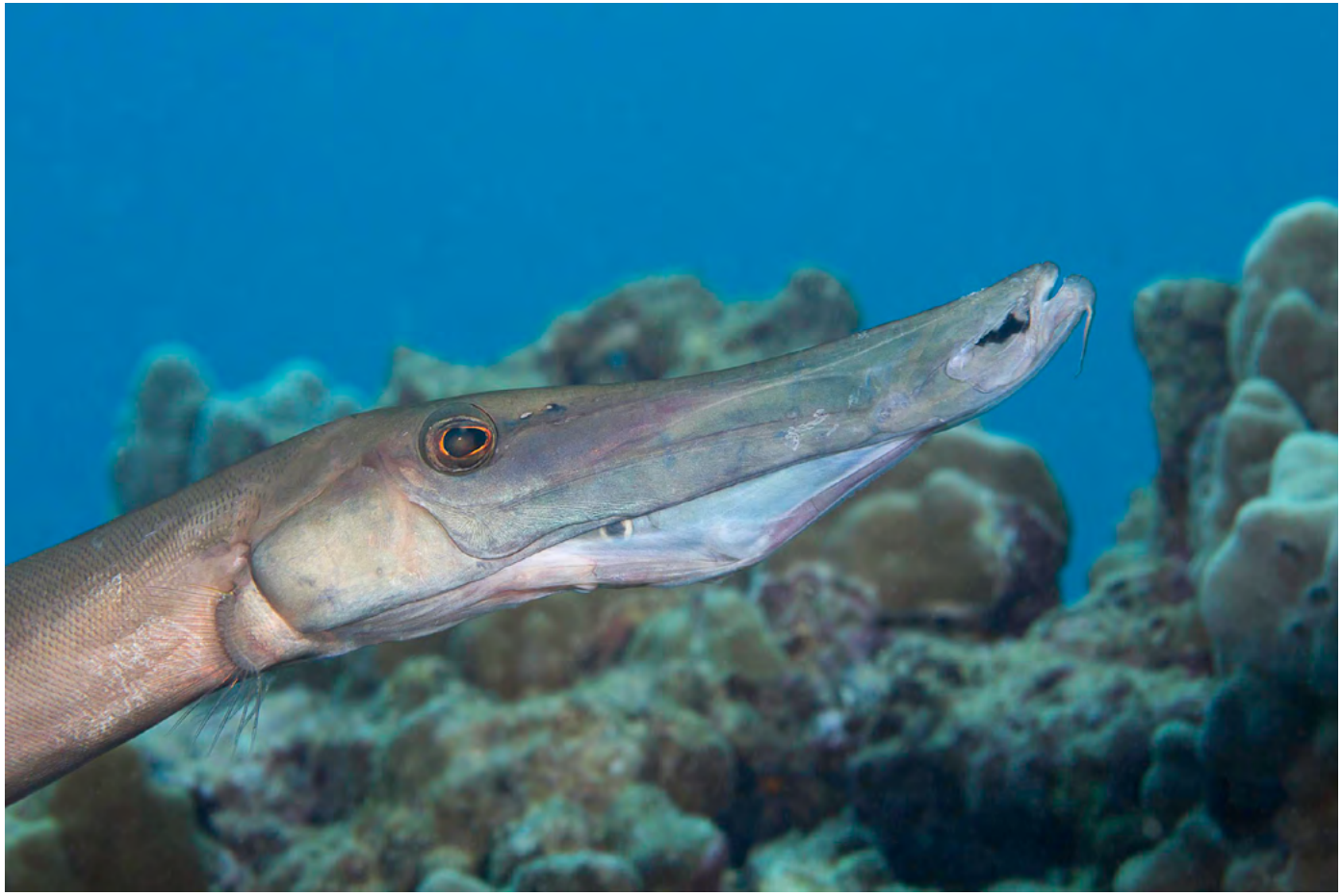
Parting Shot 1

I have yet to shoot the lizardfish with some sort of smaller individual caught in its maw. A photo many of my colleagues have displayed.

Being in the right place at the right time for predation is a combination of planetary alignment and horse shoes. So I search for fish eating fish on dives where I have the appropriate Canon 100mm macro lens or even my new found friend the Sigma 70mm ART macro.

When I am swimming about with my Canon 8-15mm fisheye zoom I try not to envision my lizardfish or the hopelessness I would feel if its mouth contained a soon to be meal.

So it was with great enthusiasm and wonder when I spied this trumpetfish, Aulostomus chinensis, off the Kona Coast dart after a small filefish. You would think that it would concentrate on the meal at hand rather than this bubble blowing twin strobed monster bearing down upon it. But no. That was not the case. And as I pursued the elongated oddity it turned briefly just before the final swallow to reveal the last view the small filefish had through the transparent trap of this cunning predator.



This trumpetfish, Aulostomus chinensis, has just captured a small filefish that can be seen through the lower portion of it's transparent jaw being consumed, Maui, Hawaii.
Canon EOS 5D, Ikelite housing and strobes, Canon EF100 F2.8 macro, 1/60th @ F11. ISO 320.

David Fleetham
www.davidfleetham.com

Do you have a shot
which has a story within a story?
If so e mail it with up to 500 words of text
and yours could be the next Parting Shot.
peter@uwpmag.com

Parting Shot 2

Labuan Bajo at the moment is growing touristically faster than any other place in Indonesia. The main attractions are the LiveAboards around the multitude of small islands in the area.

The Phinisi is the traditional boat in Indonesia and hundreds of these boats take scuba divers, freedivers, snorkelers and anyone else who wants the peace of mind of cruising this beautiful polynesia.

Among the attractions are stunning beaches, caves, mountain treks and of course great dive spots. The biomass and biodiversity in the islands around Labuan Bajo are extraordinary.

We were aboard the Maipa Deapati, a 32.5m Phinisi with 6 cabins, 12 freedivers and 4 instructors as guides. On the third day we visited the Manta point. As the name implies it is a spot that offers regular encounters with the big Mobulas.

On that day the current was strong but we were lucky because many Mantas were on the reef. We drifted a few times before finding the good spots on the reef. I waited for the current to drift me towards the point where the currents meet and dove down to meet the gentle giants. I was lucky to have 7 mantas in my frame. I have met them before but never had the opportunity to see so many at the same time.

The experience was amazing and the highlight of the trip that included encounters with sharks, turtles and even a dugong.

Samsul Rois
Instagram

The picture was shot on breath hold with Sony A6400 and a Tokina AT-X 10-17mm f/3.5-4.5 DX AF Lens For Canon with a Metabones Canon EF Lens to Sony NEX Smart Adapter (Mark IV). Sea Frogs SALTED LINE Waterproof Housing for Sony A6xxx camera series and a 6" Dry Dome Port. f/9, 1/250 sec , ISO400, A Mode.

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Parting Shot 3

Nikon D70, Subal housing, Nikkor 10.5mm F2.8 fisheye, 2 x Sea & Sea YS110 strobes, 1/60th @F7.1. ISO 200

In 2005, I went on my first Liveaboard to Raja Ampat. When we arrived in Sorong, we found that two of the other guests had been delayed by a day. As there were only 5 of us on the boat, the Captain decided to wait for the other two. To keep us amused, they suggested a few dives in Sorong Harbour. This is unusual, as usually boats leave the busy harbour as quickly as possible to the Dampier Strait, or at least to Matan Island.

So off we went. We descended and as I was getting my bearings in the relatively murky water, something in my peripheral vision caught my eye. I looked over, and to my surprise saw this chap walking on the seabed. As you can see from the image, he had little equipment, with a regulator connected to an air supply on the surface, around 10 metres above. He was holding a rock with one hand to keep himself submerged. In his other hand he was sorting through various pieces of junk on the seafloor. It seemed we had come across a fairly niche profession; Underwater Scrap Merchant.

He was friendly, gave a little wave, I waved back. I indicated that I wanted to take his picture and he put on his best pose for the image here.

Swimming away, I was left musing how much equipment he was "missing". No tank, BCD, spare regulator, wetsuit, safety sausage, booties nor fins, proper weights nor weight belt, and not even a mirror nor whistle. He did, though, have some stylish finger-less gloves.

But I did admire his freedom, and imagined that when he lay in bed that night after his hard day's work, he had a giggle about that namby-pampy tourist he saw underwater and all that junk he was burdened with.

He has a point… When I reflect on my most significant near misses that I have had underwater, I know they are all due to my stupidity and dull thinking. I have long suspected that all the gear, videos and lessons I have had gives me a false sense of security and I often fail to just ***think*** enough underwater. I suspect this chap is well aware of the consequences of dropping his rock or suddenly losing his air supply, if just because those things have happened many times – and he survived!

Colin Marshall
colintrmarshall@yahoo.com

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Marshall's Mysteries - Answers

A

Arcturid Isopod (Astacilla sp, perhaps Astacilla spinata) – one of the over 10,000 species of isopods known worldwide (relatives of woodlice).

The eye is circled in green, just below the antennae on the right.

Astacilla sp also found in deepsea environments, rarely in relatively shallow coral reefs.

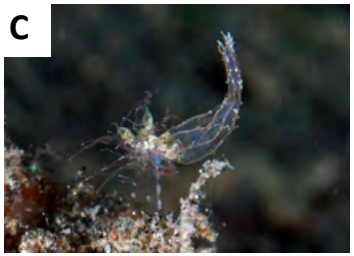
B

Juvenile Crown-of-thorns Seastar (Acanthaster planci) on coral disc (Fungia sp).

Adult urchin seen below, having a rest on the sand after devouring some coral.

From personal experience, I can testify that the spines are indeed venomous, causing pain & swelling and allegedly can even result in death by anaphylactic shock.

C



Shrimp-like lure of Spotfin Frogfish (Antennatus nummifer, previously Antennarius nummifer).

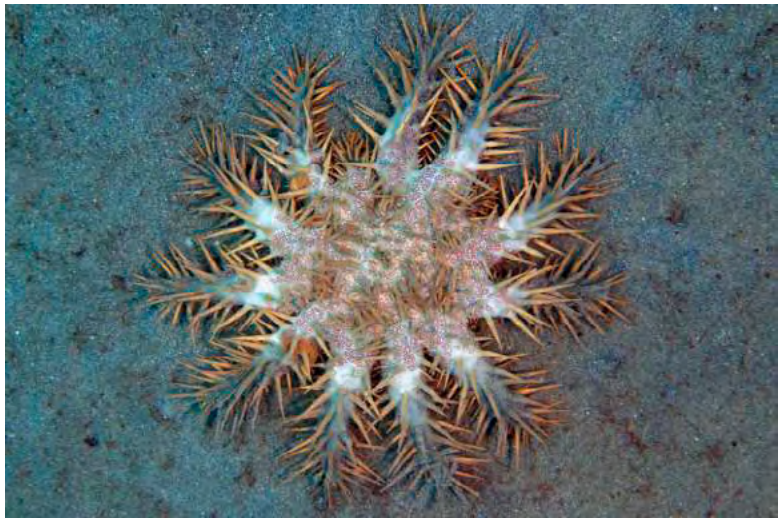
The banded "fishing rod" is called the illicium and the shrimp-like bait is the esca. Amazingly, these esca regenerate if bitten off by prey, although the frogfish may go hungry until the esca grows back.

Slightly sneaky as image was just a close-up… Full profile below :

D

Seed Shrimp (Vargula hilgendorfi), a myodocopid ostracod, ie a crustacean.

Allegedly, there are some ostracods that are bioluminescent, hence also called "Sea-fireflies", and some, when crushed, give off enough light "to read a newspaper", but let's not do that…



More detail on this Starfish can be found on page 7 of "Starfishes and Other Echinoderms of the Tropical Indo-Pacific" by Andrey Ryanskiy.

More detail on this Frogfish can be found on page 147 of Volume 1 of "Reef Fishes of the East Indies" by Gerry Allen and Mark Erdmann.

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

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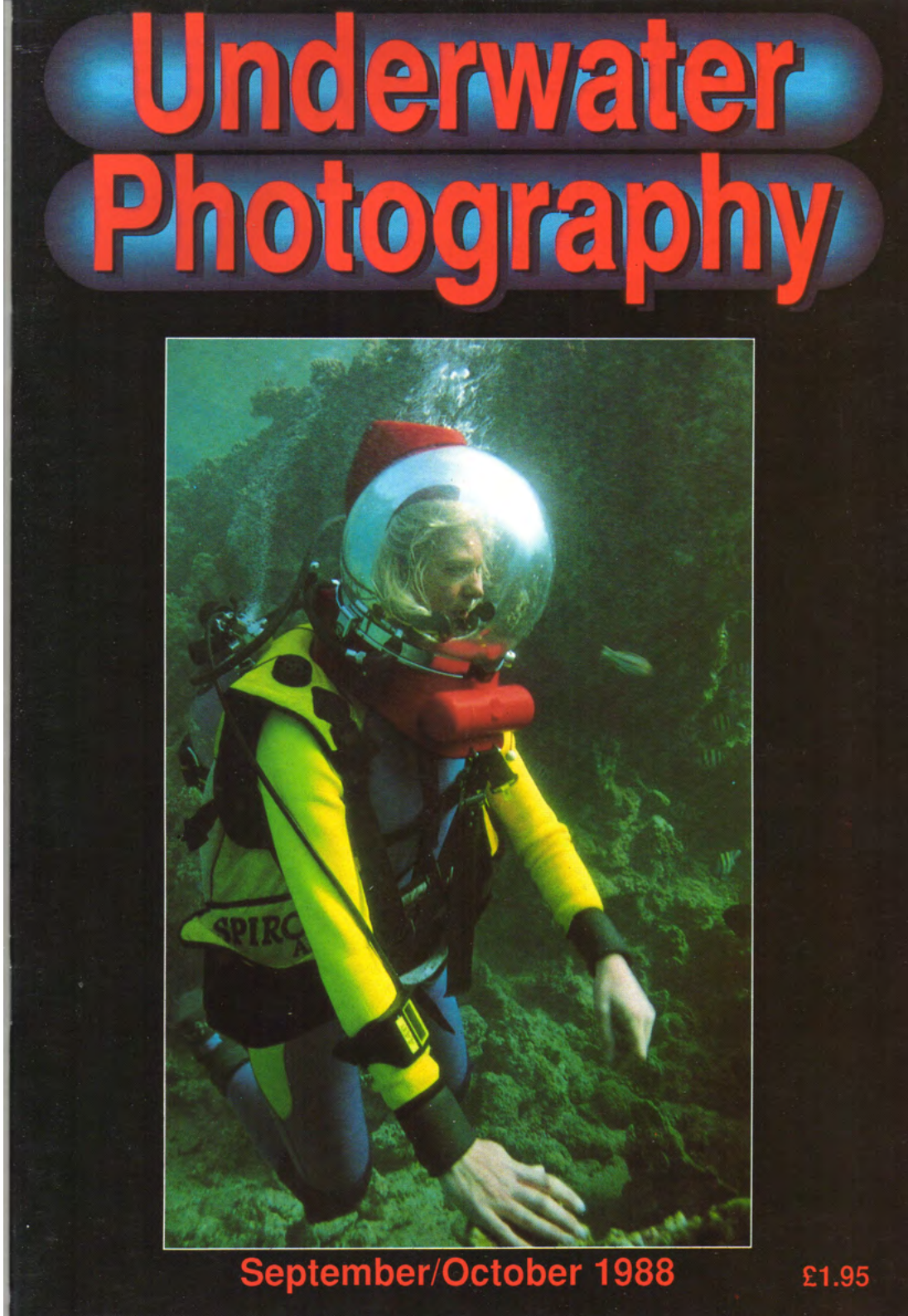

Underwater Photography Magazine

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Contents

Cover photo by Georgette Douwma

Editorial

In May this year, the BBC transmitted Reefwatch, their most ambitious live broadcast to date. It took place underwater off the coast of Eilat, Israel and was beamed across the world to an audience of millions. In the UK the viewing figures were astonishing and surpassed all the hopes of the producers.

ReefWatch was broadcast in four sections on Sunday 8th May- a short trailer in the morning, one at midday, one at 3pm and the finale at around 10pm. Such was the quality of production and the fascination of the subject that, by the time the final instalment was being broadcast, the viewing audience in the UK had swelled from 0.5 million to a staggering 10.5 million viewers - in the UK alone. In addition there is a TV measure known as the "appreciation figure" which, for Reefwatch, was in the 80's. This relates to some of the highest figures ever achieved.

The effect of this mass coverage was to establish underwater subjects as bigger box office than was previously appreciated and the result has been a mild panic to produce more underwater programmes which will be on our TV screens over the next few years.

The effort exerted prior to Reefwatch ensured a quality of reproduction which will be hard to surpass. Part of the reason for this high quality was the involvement of Peter Scoones, a name known to most for his BSoUP connection. His article in this issue about preparing and filming Reefwatch is a fascinating insight into this highly technical world. His almost unique overall knowledge of all aspects affecting underwater photography was to prove invaluable in the build-up to the event and during the live transmissions.

It is only by producing underwater work of such a highly polished nature that the underwater world will stand any chance of being taken seriously as an entertaining medium capable of attracting large audiences.

The repercussions of this immense amount of interest shown in Reefwatch can only help to redress the balance of attitude to underwater photography and all those involved in the project deserve our congratulations for a job well planned and superbly executed.

Underwater Photography is published bi-monthly by Ocean Optics Ltd

Subscriptions are available by mail order. Annual costs are £15 UK, £20 Europe and £25 Overseas.

UP and marine biology

Gordon McSkimming shoots a Lumpsucker

(Left)
This fine specimen of Cyclopterus lumpus, or Lumpsucker, most probably a male, was captured at f11 @ 1/60 second on Kodachrome 64 at a depth of only 5 metres in Loch Long, Scotland. At 30 cms the Lumpsucker is neither big or small; it can be colourful during the breading season, making it an excellent subject for photograhpy. This one was photographed with a Canon F1 fitted with a 50mm macro lens in an Ikelite housing. Light was supplied in the form of a Subatec S200 and a slave Sea and Sea YS20. Approximate reproduction rate 1:8

You are swimming along on one of those typical early spring dives, the ones where your hands tell you that the sea temperature is not far of its seasonal minimum. Like those "roughty toughty non ferrous and broken boat" divers you could wear a pair of thick neoprene gloves, but then of course, adjustment of camera controls would become a major task. Suddenly the numb hands are forgotten! What is that odd looking, oval shaped fish which is sitting bolt upright on the sea bed? If you own one of those many fish identification books available, and as a serious underwater photographer you ought to, identification will be immediate. You have just found what is variously called the lumpsucker, lumpfish, sea hen, or to be absolutely correct Cyclopterus lumpus. Why will you be able to identify it so easily? To answer that question I would challenge you to find anything in N. European waters which looks vaguely like the lumpsucker.

Naturally when writing about a photograph in a magazine such as this there is a requirement to provide technical details of how the photograph was taken. There is however another aspect of capturing images of marine life which often appears overlooked and that is a basic knowledge of the animal which you intend to photograph. Armed with this knowledge you can choose the correct equipment, the correct place and the correct time to obtain the required image. To this end the lumpsucker provides us with an excellent object lesson.

First of all the average length of the fish is 30 cm. This tells us that a macro lens on a housed camera is the best equipment option, assuming of course that the fish is to form the bulk of the image. Applying the same criteria to Nikonos users the standard 35mm lens will do the job but not with out the inherent difficulty of obtaining sharp images at minimum focus. Either of the commonly available supplementary close-up lenses fitted to the Nikonos 28mm lens would allow excellent head on shots although framers might have to be removed to cope with awkward locations. Obviously strobe lighting is required to bring out the colouration of the fish and allow a smaller aperture with close-up equipment.

In my opening paragraph I mentioned cold hands. Not without reason! It would be pointless going armed to the teeth with all the correct equipment to the comparatively warm waters of South Devon in late summer if you expect to photograph lumpsuckers. Rather I would recommend the positively frigid waters of the St. Abbs area in April. The logic is quite straight forward. Although the lumpsucker can be found as far south as Portugal it is a Northern species and hence is more common on our Northern and Eastern shores. Why then April you may ask? Well when you consult your fish identification books, purchased since reading this article first time round, they will tell you that lumpsuckers come inshore in quite large numbers during late winter and early spring. The books are all quite correct.

When diving, the specimens which you will find will almost certainly be males easily distinguishable by their bright red breeding colours. The slightly larger grey or green coloured females only remain inshore long enough to lay a mass of pink coloured eggs. In contrast the male lumpsucker is a perfect parent . Having fertilized the thousands of eggs he will stand by them until they hatch, up to two months later. During this time he will guard the eggs and continually fan them to create a flow of aerated water through the mass. Since the eggs have been laid in shallow water, usually from around 10m to about the low water mark, the male fish is frequently at risk of being cast ashore during heavy seas. To counter this the pelvic fins,(the ones nearest the front on the belly,) are modified to form an adhesive sucker. Using this appendage to clasp onto adjacent rock surfaces the male fish can remain on station by his eggs in all but the worst sea conditions. Other hazards exist especially when the eggs have been laid above the low water line where either fish or eggs may fall prey to birds or of course humans armed with a low I.Q., curiosity and a pointed stick.

After hatching, the young fish become part of the plankton and eventually appear offshore as adults. It is not however uncommon to see 2 or 3cm long replicas of the adult form close inshore during summer. The male on returning to deeper water will break a fast which began before he moved inshore to breed. So, there you have it, a little basic marine biology has told you where and when to look for your fish. When you do find him you will discover that Cyclopterus lumpus, one of our more colourful and certainly peculiar fish, is a real "sucker" for underwater photography.

Gordon McSkimming

New products

World of sport from Sony

True innovations come from Sony and the Sports camcorder is another proud first from the company which introduced the Sports Walkman. Sony previously tried a Sports Wraparound case for its revolutionary Handycam M8 but the new CCD-SP5 is a complete camcorder in its own right - complete with splash resistant case.

In common with other Sony Sports products the SP5 is bright yellow - no chance of confusing this model for something else - and its stylish design is perfect for sporting occasions. As well as being splash resistant the SP5 has a 6 times power zoom lens with macro; a variable speed digital shutter to ensure that even fast sporting action is captured cleanly; digital superimpose; noiseless frame advance; date/time insert; infra-red autofocus; edit switch; flying erase head; viewfinder; LCD display and many more features.

"With all these features at your fingertips this is an ideal camcorder for the video enthusiast. It's rugged and splashproof design means that you can take it where the action really is. This is the camcorder to complement the active lifestyle whether that be water sports; mountaineering or any kind of activity which is likely to be unforgiving on ordinary electronics equipment," says Sony Video Product Manager Jeff Taylor.

The Sony CCD SP-5 should be available from most Sony stockists from October at around £1299.95.

For further information please contact: Paul Campbell/Andrea Coppen, Sony (UK) Ltd, South Street, Staines, Middlesex (Tel. 0784 67371/67385).

New Sony Housing

Following the success of its first venture into the underwater world Sony is set to launch a second Marine Pack - sized to take no fewer than four current or imminent models.

MPK-F340 can be used with the hugely successful CCD-V90 Handycam Pro with its higher definition picture quality; the CCD-F330, and the new CCD-F340 (due September) and its Sports version, CCD-SP5 (due October).

This latest Marine Pack is similar to the original MPK-M8 in that it is simple to fit the pack and operate underwater. It is 340 x 280 x 435 mm (w/h/d) and weighs approximately 12.5 kg.

A new Marine light HVL-80DA is launched at the same time and it comes complete with battery charger. A handy maintenance kit ACC-804 is also available to keep the unit watertight. It comprises a replacement O ring, rubber packing and silicon grease in a vinyl bag. Replacement of the O ring and rubber packing annually is recommended. MPK-F340 will be available in October at around £799.95. HVL-80DA is also available in October at around £499.95. ACC-804 is available in October at around £11.95.

UP will be reviewing them in the next issue.

Amphibco Sony V90 Video housing

This Canadian firm have produced an aluminium housing for the Sony V90 video camcorder which has a built-in microphone, controls for power zoom, on/off, standby and a built-in wide angle lens adaptor to give coverage up to 100° underwater. Interchangeable bayonet ports allow macro shooting.

The design of the housing is really smooth and the quality of finish is superb. Internal electronics link to the remote socket on the camera to control all functions and the camera's zoom has two speeds to give a more controlled action. The rear of the housing incorporates an adjustable focus viewfinder magnifier which makes viewing very easy.

The two controls, start/stop and zoom, fall to hand easily and the housing with camera installed is very well balanced underwater.

UP will be doing a detailed review in the next issue. The UK price is expected to be around £890.

A choice of carrying cases from Underwater Kinetics

New for 1988/89, comes a range of equipment cases from Underwater Kinetics, available in 6 sizes and in three colours, silver, black or yellow, with either pluckout foam or padded partition; one version having a standard briefcase interior. All are air and water tight, being sealed with an O ring, they are waterproof to a depth of 33 feet, and will float if dropped overboard. They are fitted with a very necessary pressure equalization valve to allow easy opening after aircraft travel.

Constructed from strong and durable engineering grade, high impact ABS plastic, they can take rough treatment without fear of dents, chips or scratches. The hinge is of good quality being a full length 100% non-corroding stainless steel hinge pin. Other design features include a padded swinging carrying handle for comfort, and a useful locking capability provided for securing the case.

Model	Internal dimensions			Weight
No.	Length	Width	Depth	Lbs.
613	13.3	8.8	5.9	4.1
716	16.8	9.8	6.7	7.1
518	17.8	12.8	5.1	8.4
718	17.8	12.8	6.8	9.2
821	20.8	12.8	8.3	10.7
822	21.8	17.0	8.3	13.4

Dimensions are in inches
Weights in Lbs.

Cases are available from Sea & Sea, and Underwater Kinetics dealers.

UP with Reefwatch

Peter Scoones reveals the cameraman's view

(Left) *The logistics of co-ordinating three cameramen, cable attendants and presenter Martha Holmes required careful planning and split second timing for this major live broadcast.*
Pentax LX, 16mm lens, CC40 Red filter, 200asa negative film. Available light.

(Above)
Cyclops, the BBC's Natural History Unit's remotely operated vehicle took up a lot of deckspace with it's cable and, in the end, did not prove 100% successful.

(Left)
Each camera had a small black and white monitor to view the image. The control team on the surface switched from camera to camera as required but an indicator light on the camera told the cameraman when he was live. The adrenalin flows freely as you start to think of the millions of viewers watching your every camera move.

For some years the BBC Natural History Unit had been considering producing a live underwater programme, similar to the Nature-watch series of live shows already underway.

Location of a suitable site for the programme being only the first of many problems the producer needed to resolve, I was only one of the underwater "experts" consulted on this and some of the suggestions horrified me. This is not an uncommon occurance, for producers regularly send cameramen to locations that are most unsuitable, on the advice of persons who have obviously never had to produce underwater pictures.

Firstly the reef had to have its active time coinciding with the viewing audience. Next, the site should have a good variety of life at shallow depths, this allows both good colour rendering for the cameras and few problems with underwater duration for the diving team. Working within a few meters of the surface means that operations are sensitive to surface wave movement, this meant that any site considered had to be sheltered and workable under the widest variety of weather conditions. Another factor was that the shore needed to be close at hand as the Outside Broadcast Vehicles had to be physically connected to the sub-sea operation.

Given those factors the site almost selects itself. Even so, I had an uphill task to convince that Eilat should be considered for this site had already been rejected. Admittedly, in the northern end of the Red Sea there are many sites that offer more exciting diving, but I felt the technical problems that would inevitably arise with the BBC's first multi-camera, live, underwater broadcast could more easily be solved in Eilat.

Having determined the site, BBC Engineering at Bristol was given not much more than six months to provide the complete multi-camera system for the programme.

At the time no suitable equipment was available anywhere. As I was obtaining a camera for myself it seemed sense to offer this as the third camera for the programme and, as it would have to perform identically with the BBC cameras, I sat in, as a consultant, at the engineering design meetings. I am sure the engineers must have thought, "What the hell can a freelance film cameraman tell us about Underwater Telivision cameras?" Even so, with Rob Brownhill, the BBC Cameraman, I was able to advise on certain features that were adopted.

As we proceeded, the BBC's design priorities for the underwater camera diverged too far from mine. So by agreement my camera differed from the BBC units both optically and mechanically. The BBC went for the smallest practical housing configuration, with add on handles containing zoom and focus controls. Each of these substantial cables plugging into the rear mounted multi pin penetrators. The size of these handles and the radial penetrators necessary due to the diameter of the tube seemed to negate the laudable concept of a small housing.

My camera was designed to have as clean an outside as practical with controls integral with the fixed handles. A slightly larger diameter tube permitted the camera to be housed without loosing the surface capability and also gave space for the BBC to

(Left)
With space at an absolute premium, presenters Mike DeGruy, Tony Soper and Eugene Clarke squeeze onto the aft deck of the support ship Suellen with the Israeli camera crew.

(Below)
This friendly frog fish can claim to be the only one to have appeared in the living rooms of millions of people throughout the world, such is the attraction of the underwater world and the all-embracing coverage of television.
Pentax LX, 50mm macro lens, Subatec S100 flash, Fuji 100 negative film. 1/60th @ F11

fit the extra electronics needed to interface the surface system.

It was interesting to see the two different designs side by side. Naturally I prefer my approach but there are points to be made for both.

The cameras were only a small part of the total Reefwatch system. Special umbilical cables had to be designed together with surface units controling power supply, camera functions and cable length equalization. Talkback communication was a concern of mine, having experienced problems in the past with the system adopted i.e. surface to diver/cameraman. My experience being that the surface cannot know when the diver is exhaling and this can render communication unintelligible. In the event, the sound quality of the down comms was so high (BBC) that few problems occurred.

We were to carry out one week of pre-recording from Suellen - the dive boat owned by Lucky Divers in Eilat - and the first site we stopped at was the "Temple" next to Ras-um Sid. This was also the very first time any of the cameras had been used underwater. Also the first time Martha had used the bubble helmet in the real sea. So we were just going to check out everything. In the water I collected my camera from the clip and sank to the bottom some 9 meters

(Left)
High quality images require meticulous attention to all camera functions, not least being specks of dust on the optical system. Peter Scoones makes a final check before assembling the camera housing.

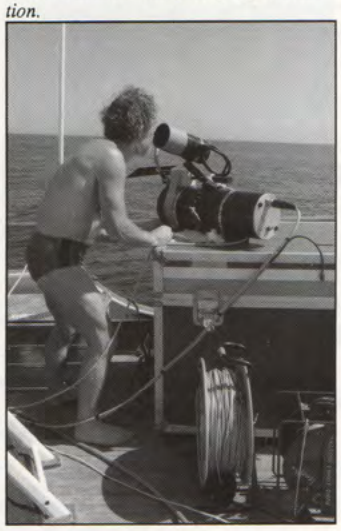
(Left)
The forward cabin of the Suellen was converted into an on-site control room. Alistair Fothergill savours one of the few quiet moments and views some of the day's sequences.

(Above)
Left to right, cameramen Andrew McClenaghan, Rob Brownhill, Simon Graham and Peter Scoones with Martha Holmes on the foredeck of the Suellen. Surface briefing was essential to the smooth running of Reefwatch even though each cameraman could talk and listen to the surface controller.

down, Robin Hellier the senior producer paying out my cable. Rob Brownhill like myself had not had his camera in the sea before. A few minutes were spent adjusting the viewfinder position, brightness and contrast. Trying out the handling, balance, focus and zoom. All seemed perfect. Then the communications sprang into life, preceded by an ear piercing whine. This is known as "Tone" and is a sound signal used by the engineers to set up the equipment levels. Then the picture in my viewfinder disappeared and the grey scale known as BARS appeared. Although the viewfinders are monochrome, bars are a setting up colour signal. I looked over to Rob, he shrugged and pointed a thumb at the surface. Alistair Fothergill's voice came down the comm's loud and very clear. "Can you hear me Rob?". "Beep".(yes - the cameras had only a beeper system for communicating with the surface, at that time a full system of beep signals had not been worked out. It was one beep for yes, two for no.) "Can you hear me Peter?" - "CAN YOU HEAR ME PETER?" - "Beep". It took me a moment to remember where my beep-button was.

"Ooo Kayeee - I see there is a Napoleon Wrasse around, I'm sending Martha down with some eggs. Can you find a good spot and wait there?" I beeped and Rob beeped. I looked around, then over to Rob and pointed to a clearish area nearby. The Napoleon Wrasse circled and came in close

(Above)
Peter Scoones looks through the monitor to check the camera port for any signs of blemishes which may appear on the screen and lower the quality of presentation.



with that "What sort of divers are these that don't have eggs?!"

Rob and I practiced with our cameras following the wrasse, zoom long to check focus, then back to wide. Pause to adjust viewfinder monitor, position, brightness and contrast. Panning with the camera in conditions of high ambient light could cause too much light to fall on the viewfinder obliterating the image.

A lot of "excited Alistair" sounds were coming down the line. Then, life as an underwater cameraman, in control of my pictures came to an end.

"Zoom in tight Peter - good, Hold that, we're recording". A red light comes on in my viewfinder. "Rob take the wide - hold that". "Follow, follow - tighten, slowly, fantastic! Keep that fish there. It's disappearing! Where the hell is Martha?" "I'm coming" puff-puff.

"Peter- Rob, keep that fish there!" "Cameras show me Martha- Martha- Go to that rock just in front of you". "Here?" "Just a bit to the right,- no, other way. Camera right". "Which camera?!"

"Martha's cable is in shot! Get it out .... Someone get that cable OUT!". No one underwater moves. "WILL SOMEONE GET THAT —— CABLE OUT, Quick the fish is back!". Sounds down the comms of quiet talk.

"Sorrreee. Martha, signal your handler to get your cable out of shot. Please". "Is that O.K.?".

What had started as a system check out for the equipment, ended out as the Napoleon Wrasse feeding sequence being transmitted during the live Reefwatch broadcasts.

The use of a multicamera set up, allows intercutting between pictures preserving the immediateness of the action in a way that is hard to capture on film.

Whilst the two camera set up is a

(Left)
Peter and his "Scoones Cam" venture out. The 'flag" over the lens provides shade and minimises flare. The umbilical carries communication and video signals to the surface.

(Left)
Mike Burgess tapes the microphone to secure it inside Martha's helmet. The combination of the mike and the bubble helmet gave a quality of sound reproduction never before achieved underwater.

(Above)
Assistant producer Alistair Fothergill and Ami Ben Zvi, owner of the Suellen and Lucky Divers, Eilat
(Below)
Despite the pressures of a live broadcast, presenters Tony Soper, Eugene Clarke and Mike DeGruy enjoy a joke off air.

minimum, addition of a third greatly extends the Director's scope. Each of the cameramen has to offer pictures that compliment those from the other cameras.

As a film cameraman I found that the disiplines required of a television cameraman needed considerable mental re-adjustment to my usual technique.

For the Reefwatch live broadcasts, my first task was to go into the water with Georgie some ten minutes ahead of the rest. This was so that we could quickly recce the site and show the Director, via the camera, what subjects were present and where. Subjects had to be selected to allow the presenter - Martha Holmes to be able to do her bit to camera in the wide and medium shots whilst close-ups of the relevant creatures were offered from the third camera. During the rehearsals we had identified a number of creatures that could be shown but it was necessary to find which of them was present at the time and the order in which they could be shown.

In the control cabin Alistair selected the subjects and I would remain in position to point out to the others the location of the subjects. It was more important than ever to avoid disturbing the bottom - it would not be truly wondrous to show millions of viewers a sand storm! With three cameramen, Martha, Georgie lighting, and four cable handlers all concentrated in a few square feet of ocean, this was no mean feat.

The first show was early in the morning when it was still dark. Once all were assembled and cameras had been lined up, the lights were doused so as not to disturb the reef. Then there were a few minutes when we all froze like dummies, waiting for transmission time. It is quite an experience to be at the bottom of the Red Sea in the pitch dark listening to all the sound traffic, as all the satellite links are made. First London would come up, shortly followed by the USA. A short count down and silence.

The opening music swells up in my ear. Pressing my return video button puts the programme title on my viewfinder screen, followed by Tony Soper as he goes into his introduction.

To my left the other cameramen. Masks only lit by the blue glow from their viewfinders.

"Stand by cameras, lights on. Wide on 5 first, 3 and 4 hold steady for opening shot".

A red light came on in my viewfinder, I suddenly have a living creature in my hands sending pictures into millions of living rooms around the world.

The underwater crew could then go on standby again for there was a few minutes introduction of Martha and the Bubble Helmet, then she had to get to the location from the boat. Martha arrived and started her presentation, describing the reef at night.

"Camera 3's sleeping fish just left. Camera 5 can you find one?".

Panic! Martha had only a few words to go before referring to "Sleeping fish". Camera 5 - ME! Look around the camera at the reef, while zooming wide. Locate an orange spot that I hoped was a sleeping Anthias. The brightly coloured fish does not show up well on the black and white viewfinder, so I can locate a recognisable shape nearby to zoom into. Pan left, Georgie re-directs the light, there focus, red light. "Thanks 5". That's when the Decorator Crab, scripted shortly, decided the light was too bright, and dropped inaccessibly out of sight. Between my shots I offered pictures of the vacant crab spot to Alistair above, with no response. Just before crab was due on, Georgie's hand appeared in front of my lens with another Decorator Crab, to place it on a convenient rock.

Alistair. "Thank you 5". The crab was quite important, being the last creature still around at that location, all others had retired thinking no doubt that dawn had arrived.

"Thank you cameras and Martha. Next location please".

Text by Peter Scoones

Photos by Peter Scoones and Georgette Douwma

UP in the UK at St Kilda

Brian Pitkin reports and illustrates

(Above)
Plumrose anemone stands out against a red encrusting sponge. NE face of Stac an Armin, Boreray. Nikonos II with 28mm lens and Nikonos close-up kit, Ikelite SS75 at 1/60th and f22 on Ektachrome 100.

St. Kilda is an imposing, remote group of four islands together with a number of smaller, equally impressive stacs lying about 100 miles west of mainland Scotland and 50 miles beyond the Outer Hebrides. Thought to be the remains of an extinct volcano, which was active about 70 million years ago, the islands are the most westerly in Britain save for Rockall. The main island of Hirta rises to a height of 426m above sea level and is separated from the smaller island of Dun in the south east by a narrow channel. Just over one mile ESE of Hirta, Levenish rises majestically out of the sea. North-west of Hirta lies the island of Soay, famous for its sheep, and about four miles from Hirta to the north-east lies the island of Boreray and its two associated large stacs, Stacs Lee (The Blue Stac) and Stac an Armin (The Warrior's Stac). Numerous further stacs occur just offshore from the vertical cliffs of the larger islands. These cliffs make access virtually impossible except at Village Bay on the south-east of Hirta.

The islands have been inhabited sporadically since the late neolithic period, although the population only ever reached a

(Below)
Soay sheep grazing the cliff tops on Hirta. Boreray with Stac Lee and Stac an Armin can be clearly seen about 4 miles across the water. Taken with a Nikkormat and 55mm macro lens at 1/125 and f11 on Fujichrome 100.

(Left)
Visibility, limited by Gannet guano showering into the water from Stac, Boreray meant concentrating on macro photography. This Sagartia anemone was taken with a Nikonos II, standard 35mm lens with an extension tube, Ikelite SS75 at 1/60th and f16 on Ektachrome 64.

peak of about 200 people. In 1930 the last of the islanders, unable to subsist in an ever changing world, were evacuated to the mainland and St. Kilda remained uninhabited until 1957, when a radar tracking station was established and persists to this day. Ownership of the islands, which can be traced back to 1373, passed through numerous hands until the Marquis of Bute bequeathed them to the National Trust for Scotland in 1956.

The islands are a must for anyone interested in wildlife, as the St. Kilda wren and St. Kilda field mouse are unique to the islands. Additionally about a million sea-birds, including the world's largest gannetry and thousands of puffins and other auks, guillemots, razorbills, great skuas, fulmars and kittiwakes, as well as large colonies of storm and Leach's petrels occur there. A population of about 400 grey seals are concentrated mainly around Soay Sound between Hirta and Soay and Glen Bay, opposite Village Bay on Hirta. Dolphins and whales are frequently sighted around the islands. Nearly 10% of the British flora have been recorded from St. Kilda's mainly grass moorland habitat. So there are plenty of interesting and challenging subjects to photograph above water (a telephoto lens would be very useful for birds).

The surrounding sea is oceanic blue and the visibility can be up to 30m. The water is cold, varying from 9.5 degrees C in May to 13 degrees in August, so a dry suit is essential if you are taking photographs. A reliable diving computer would be a very useful accessory as it is all too easy to dive deeper than you anticipate in the clear waters.

The towering cliffs continue almost vertically underwater, no longer covered with hundreds of nesting seabirds but frequently clothed in a spectacular community of marine animals, seemingly all larger and brighter than any you will encounter anywhere else in British waters. There are many underwater caves, caverns and arches, some large enough to sail a submarine through. Add to these the grey seals that will follow you mishievously, at a distance, on most dives and you have an excellent venue for some exciting underwater photography. But be warned, the seas around St. Kilda can be rough and dangerous. Despite this or perhaps because of it and the deep water, there are no diveable wrecks. There are a large number of fish in the seas around St. Kilda as the vast numbers of seabirds testify, but you are unlikely to see many whilst diving. Ballan Wrasse, Pollock, Lumpsuckers and Conger Eels are occasionally encountered.

(Above)
Diver at 30m photographing the abundant marine life in the spectacular arch which cuts through the Sgarbhstac, Boreray. The arch is 20m wide at the seabed, 50m from the surface. Taken using a Nikonos II with a 15mm lens and an Ikelite SS75 at a 1/60th and f4-2.8 on Ektachrome 64. Cropped and duplicated on Kodak duplicating film.

Your underwater photography will be concentrated on scenic shots and divers and seals, using wide-angle lenses, and macro shots of the marine life, using close-up lenses and extension tubes. And you will not be disappointed. The underwater scenery is fantastic and the numerous gullies, caves and archways provide a natural studio for diver and seal shots. The diversity and sheer vigour of the anemones, cup corals, sea firs, jelly fish, sponges, fanworms, crabs, lobsters, sea slugs, sea hares, top shells, cowries, urchins, starfish and myriads of equally fascinating creatures will overwhelm you for choice.

To dive St. Kilda is not easy as few boats go that far. Once there, the choice of the many dive sites may be limited by prevailing weather conditions, although these are probably no worse and often better than other Scottish islands. When you visit, try, if you can, to take your scenic and seal shots when the sun is on the water, as the towering cliffs cast a dark shadow. You can practically guarantee to see seals on most dives around Hirta, Soay and Dun away from Village Bay and if you have a model or co-operative buddy use the arches and cave mouths to frame him or her. Use fast film (try the new Kodachrome 200 if you haven't already) both underwater and on land if you get the opportunity to go ashore, to make the most of the available light.

Take your underwater macro shots when the cliff face is in shadow. Avoid shooting straight down, try looking at your subject from different angles, take time to compose your shots and bracket if in any doubt (dark reds in particular absorb light). If you make a night dive on the sandy bottom of the Village Bay, where your dive boat will almost certainly anchor whilst you're in St. Kilda, you should find at least one if not several, of the brightly coloured Lesser Octopuses. Try to avoid taking shots of these very active subjects with the light coloured sand as a background, get down on the bottom and attempt lateral views with the open water behind your subject, otherwise you may well overexpose your pictures. If you are using a Nikonos Close-up kit on a 28mm lens which is ideal, remove the framer to avoid antagonising your subject too much and prevent it taking over the photographic session by clinging on.

Finally take plenty of film, for use both on land and underwater, more batteries than you think you will need (although charging facilities are available on some boats), a copy of Peter Rowlands' "Underwater Photographers Handbook", in case you have any equipment faults, and a set of tools, plus at least one back-up camera and flash-gun, as you will be days away from any repair facility.

A number of dive-boats will get you from Oban to St. Kilda. I sailed on the 91 foot schooner rigged sailing yacht "Jean de la Lune" and spent a memorable two weeks visiting and diving the islands. Contact Linda Wilson, 75 Oxgangs Road, Edinburgh, EH10 7BA (Tel. 031 445 4686) for next years sailing dates and prices.

For further information about diving St. Kilda consult the excellent little publication "St. Kilda - A Submarine guide" by Gordon Ridley, obtainable from the author at 94 Brownside Road, Cambuslang, Glasgow, G72 8AG (Tel. 041 641 4200), price £2.50. This includes information on 185 sites in the archipelago, a list of very readable books about the islands, references to other diving articles and a useful checklist of the marine life. Harding, Merriman & Namcarrow's "St. Kilda - an illustrated account of the geology", published in 1984 by HMSO at £15.50, includes a very useful supplementary map (scale 1:25000) showing submarine depth contours (although the book itself is of little interest to divers).

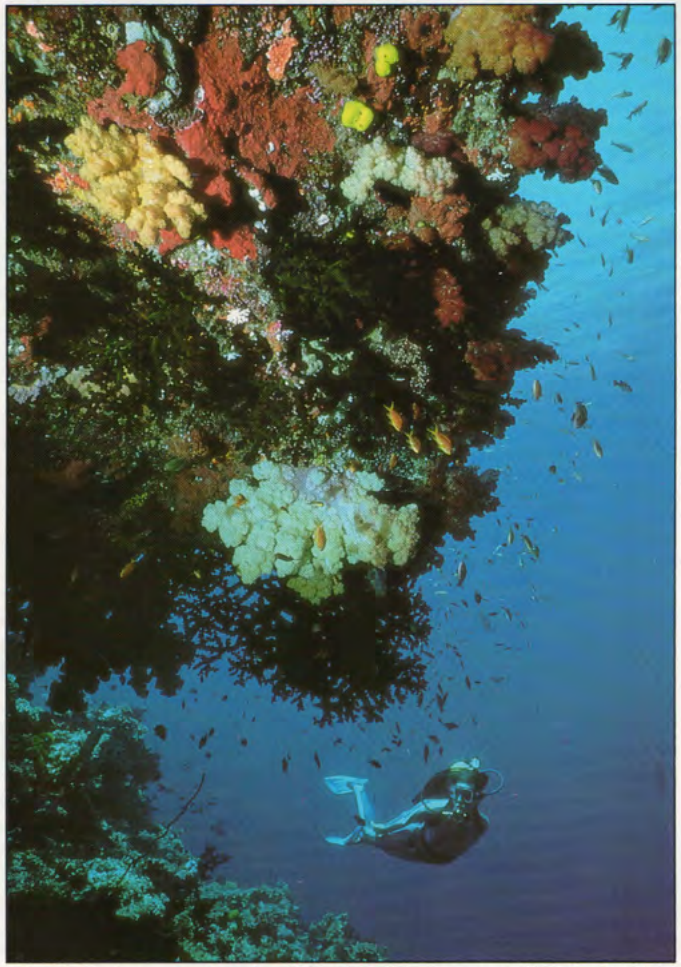
Brian Pitkin

UP Overseas in Fiji

with W.Gregory Brown

For scuba divers, the South Pacific is a dreamland destination. Simply by closing the eyes we are compelled to visualise a remote island paradise jutting out of a warm tropical sea. White, powdery sand beaches fringed with elegantly curved coconut palms are surrounded by magnificent blue lagoons. Naturally, in this dream state we envisage world class diving in unexplored waters rich with marine life. Upon returning to reality, we have only to look on the world map and find the Fiji Isalnds. It is here our dream can come true.

Fiji encompasses a group of over 500 islands, islets and tiny atolls scattered across thousands of square miles of the South Pacific in an area known as the Koro Sea. A member of the British Commonwealth, the Fiji's are situated at longitude 177 E, latitude 17 S, approximately 2200 miles east of Australia and 3100 miles southwest of Hawaii (about 12 hours flying time from Los Angeles). The Fijians are strongly pro-western making this enchanting south Pacific island nation a preferred destination of US and Canadian citizens. In fact, one of the welcoming characteristics of these islands are the Melanesian people with their friendly nature, warm smiles and special homespun charm. The major island in the Fiji group is Viti Levu. This population centre is home to the international airport at Nadi and the capital city, Suva. The majority of the dive operations are found here as well. Several excellent sites around Viti Levu are frequented by these land based operations. Bennga Atoll is but one of them. At Frigate Passage, on Bennga's northwest side, clouds of tropicals dance in the sunlit shallows. In deeper water the mighty pelagics - tuna, jacks and sharks hover adjacent to the drop off, out in the mystical blue. All along the walls of the passage, huge sea fans of various colours sway in the current giving the underwater photographer some fine wide angle opportunities.



Combining clear water and colourful corals, Fiji is a very special location in which to take underwater photographs. Taken on the Great White Wall with a Nikonos V, 15mm lens, Kodachrome 64 film and a SubSea Mk150 strobe. 1/90th @ F11

Undoubtedly, the most popular shore-base diving available in Fiji is found on the island of Taveuni. Just off the northern shore of this small, picturesque island lies the famed Great White Wall. This underwater precipice begins in 50 feet of water and drops vertically into the abyss. The scenery is nothing short of breathtaking. Soft corals adorn the face of the wall in a smorgasbord of colours. The reef community is also prolific as are the pelagic species, primarily due to the tide-driven current that continuously channels nutrients and plankton through the area. The Great White Wall is , in large part, the reason why Fiji is known as "The Soft Coral Capital of the World".

While land based diving in Fiji is typically first class, there remains several remote areas in this archipelago that can offer world class diving. A live-aboard vessel is required to access these destinations and fortunately there are several luxurious motoryachts operating out of Suva that can fit the bill.

One of the premier offshore areas for diving is Great Astrolabe Reef, an enormous reef complex bordering the deep water Kadavu Passage. Astrolabe is situated about 40 nautical miles due south of Viti Levu (6 hour boat ride from Suva). Usbourne Pass, an impressive Astrolabe site was my introduction to Fiji's magnificent underwater resources! As soon as I entered the water at Usbourne, it was appar-

(Above) *A flase skunk-striped anemone fish peaks out from it's protection to be captured by a Nikon F3 in a Tussey housing, 105mm macro lens, Kodachrome 64 film and an Ikelite 225 strobe.* (Below) *The paradise of Fiji.*

ent that this wasn't going to be an ordinary dive trip. Visibility was a full 200 feet. Healthy hard corals carpeted the bottom and colourful tropicals were literally swarming over the reef. Massive crevices separated sheer walls of living colour. Exquisite soft corals in varying shades of red, orange, pink and purple hung off the walls veritcal face. In one fin stroke I could move from 30 feet of water to 3000 feet of water. The scenery was absolutely breathtaking! North Astrolabe reef was a macro photographers paradise. On any given dive, there were at least 15 species of butterfly fish, nudibranchs, feathery crinoids and more on display. At Solo Light, on Astrolabe's northernmost tip five enormous manta rays performed an incredible underwater ballet that I shall never forget. For

(Above) *Tiera batfish hang under the boat and were taken with a Nikonos V fitted with a 15mm lens loaded with Kodachrome 64 film. A SubSea Mk150 strobe balanced the light at 1/90th @ F8*

a full twenty minutes these gentle giants graced our presence before gliding onward. Once back on the boat, we simply looked at one another, quite speechless. It was clear to us that no words could ever describe this wonderful encounter.

Whilst the diving at Astrolabe is phenomenal, the ultimate thrill has to be a dive charter into Fiji's remote Lau Group. Approximately 150 miles southeast of Viti Levu, these waters are still largely unexplored by divers. Consequently, every day is an adventure into the unknown, bringing to life that pioneering spirit that dwells within us all.

Trigger Rock in the Northern Lau Group was undoubtedly the most extraordinary dive of the trip. Prior to our first dive at Trigger Rock, no one, and I mean no one, had ever dived there before. An underwater pinnacle, the top of Trigger Rock came within fifty feet of the surface. It's diameter was 250 feet across and beyond that, the sides plummeted precipitously to 2000 feet below. Excitement and curiosity were at peak levels as we prepared to dive. Immediately after entering the water, an inquisitive school of Tiera batfish paraded by for a thorough inspection. They seemed almost tame, letting us approach at extremely close range whilst photographing them. Next, several grey reef sharks made a graceful appearance, circled once and faded into the mystical blue. In the distance I could see a school of 200 pound dogtooth tuna feasting on hordes of hapless baitfish just beneath the surface. All this and the dive was only ten minutes old! Swimming to the opposite end of Trigger Rock I spotted a hawksbill turtle contentedly feeding on some encrusting sponges. I fully expected to see this beautiful animal make a swift exit as I approached. Instead, to my amazement, the turtle swam up to me, took a long, bewildered look and continued to the surface for a breath of air. Upon returning the undaunted hawksbill swam to the exact location it had vacated, less than two feet from my camera lens. Meanwhile schooling barracuda, some 500 strong , had appeared just overhead. The sight was a visual masterpiece providing an exhilerating denouement to what was truly a fantasy dive.

Every year, for the past three years, I have returned to dive in the Fiji Islands. The haunting beauty of the Fijian reefs continues to cast its spell, calling me back again and again. Even now, as I write, I can only think of my next visit to the place where time stands still, where cerulean waters are rich with living treasures, and where diving is not just a sport, it is a dream come true - the Fiji Islands.

W.Gregory Brown

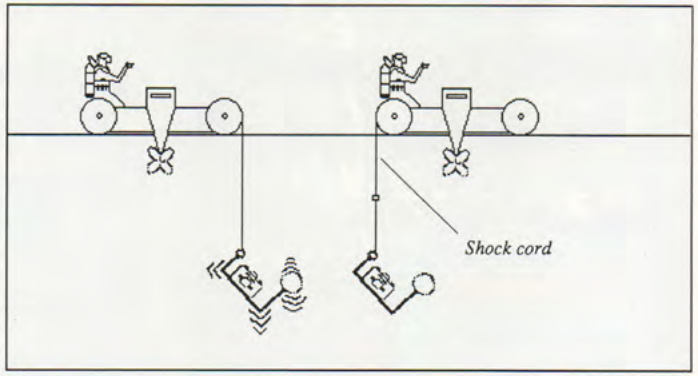
Handy hints

Jolted cameras?

Having spent a considerable amount of money on your underwater photographic equipment, you do not want to see it pulverised by air cylinders or knocked overboard.

The solution is simply to keep it out of the way by attaching a down line to your camera and hanging it over the side of the boat assuming you have faith in the line and your knots, your gear will be out of harms way whilst a boat load of divers are kitting up. This makes it mentally easier when entering and exiting the water, knowing that your gear is both safe and accessible.

Make sure though, that the down line is shorter than the water is deep - otherwise your gear may be taking a trip to the repair dept.! Also if the down line is made up of two cords: one being elasticated, the boat may ride the swell but, having a slight give in the cord, results in the camera staying steady on the down line without any serious jolting which may otherwise occur.



Changing bags

The photographer's changing bag is a surprisingly little used item, but one which is extremely handy - not only for loading your own films on to spirals for processing, but should the camera require to be opened with a film still inside, or the rewind jams, it is one of those simple bits of kit which prove invaluable - even in the field of underwater photography. It folds flat and takes up very little space.

Magnified images

Having processed the roll of E.6 film that you have just exposed, then like any discerning photographer you may desire a closer examination of grain size and sharpness of the image. No loupe or magnifying glass? Simply remove the lens from your camera - the Nikonos 35mm lens is perfect, and view the film in question through the lens - inside element towards the film. This permits a reasonable magnification and subsequent examination of your images, making it easy to ascertain sharpness, and quality. The aperture should of course be set to F2.5 for maximum brightness and coverage.

Care for your Nicads

In this age of battery power, the Nickel Cadmium, or Nicad battery is being used in more and more appliances. Being rechargeable they give a considerable saving as compared to other battery types. However, how many of us know how to look after them properly? Many people tend to use them for example in a flash unit for one roll of film and then charge them up again even though they are only half used. Under such use the cells will "remember" this cycle of charge/dicharge and the full potential of the batteries may be lost. Once a set of batteries has been used it is far better to continue using them until they start going off, say in a personal stereo - here the music will deteriorate as they run down, at which point switch off the stereo avoiding total exhaustion of the cells which is also not recommended. Then charge them up.

"R" -rewind or repair?

Anyone who owns or uses a Nikonos III, IV or V, will be familiar with the "R" setting on the camera - this of course being for rewind. In this setting a disengaging pin is held down permitting the film sprockets to free turn. It is not a good idea to leave the camera at "R", as if there is moisture present it is possible for the disengaging pin to seize in the down position which would require a major strip down of the camera. As with all repairs this may be both costly and inconvenient.

Moisture: Dome ports and housings
by Andrew Mounter

Here is a reliable way of preventing the misting up of dome ports of underwater housings. This often occurs after the back has been opened to change film etc. so letting warm moist air to enter and on cooling when later immersed in the cold sea, releasing its moisture on the dome port. I avoid this by flushing out the warm air with that from my aqualung, which is cold and dry, immediately closing the back. You have to be careful, of course, to avoid any water from wet diving gear from being blasted in as well. So it's wise to test your supply of air first away from the camera. I used to use silica gell, but this has its own problems and is not always available.

Got any handy hints?

You could win a roll of slide film.

Let us know those little tricks of the trade and we'll publish them.

A roll of slide film for every hint published.

UP meets Dr John Randall

This remarkable fish expert by Hillary Hauser

Ichthyology, or the study of fishes, can be a very slippery business. This is something I found out early in my freelance journalistic career, when I embarked on the treacherous path of writing descriptive copy for the various marine tropical fishes found around the world. I made lots of mistakes in those days - lots and lots of them.

However, it would have been even worse were it not for Dr. John E. Randall, who inevitably came to my rescue with his many publications on fishes. These books and scientific papers were liberally illustrated with useful pictures of the fishes, taken by Randall himself in a unique style he has developed over the years.

Randall, who is probably well known to many British divers for his many books and papers on fishes, has devoted his life to uncovering the mysteries of the marine fishes of the world. He is living proof that the end product of scuba diving reaches far beyond having a good look around at the bottom of the sea - it is because man can breathe underwater that scientists know much more about sea creatures than before the advent of scuba equipment.

One of Randall's important contributions to the science of fishes is his large file of fish photographs. These images are a key aid in identifying and cataloguing fishes from the tropical seas of the world. There are few books on coral reef fishes that don't have some Randall information or a Randall photograph. Randall's pictures are typicaly side profiles of fishes against either a black or green background.

Capturing an image of a dead fish that accurately reveals its live physical characteristics is a challenge, yet Randall has worked out a technique for accurate fish photography in his own, unique way. He published the technique in the scientific journal Copeia in 1961.

Basically, the key thing to photographing fish that have been removed from the water is speed. Captured fishes must be photographed soon after they are brought to land, while their colours are still close to nature's original intent.

I watched Randall undertake an unscheduled, spontaneous photographing session one evening, while I visited with him at his home in Hawaii. Marine biologist/author E. H. Chave, who also lived in Honolulu, rushed into his house with a few small fishes and a crab she had collected from a submarine in 600 feet of water that afternoon. She wanted Randall to photograph them, because the animals had never been recorded on film.

(Above)
John "Jack" Randall inspects some of the specimens in the British Natural History Museum on a rare visit to the UK.

To my untutored eye, the fishes and crab were all very dead-looking creatures, lying frozen at the bottom of an ice chest.

Randall stopped everything he was doing and went to work. He laid out each fish and the crab on a styrofoam board, pinning the fish fins and crab appendages up with tiny insect pins. Then, he painted the specimens with concentrated formalin, and in in a few moments the fins stayed erect without the pins.

Each specimen was then placed in a low-sided glass aquarium over an opening in the table. By placing the photo tank over the open space in the table top, the shadow of the fish goes through the glass. To eliminate glare from the bright metallic parts of the camera reflecting on the surface, he covered the front of the tank with black cardboard.

Below on the floor was a background of flat black for the light-colored specimens and a light flat green for the dark ones. When shooting with a green background, Randall lit the background with photofloods to remove the last vestiges of shadow.

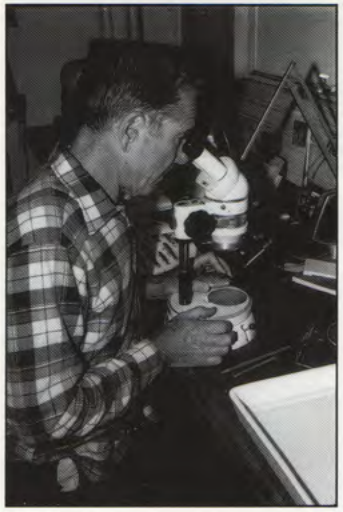
(Above)
"A dangerous profession". A small cleaning Goby (Gobiosoma randalli) cleans a Great Barracuda (Sphyraena barracuda). Ikelite housing with a Nikon F2 and 55mm macro lens with Ektachrome 64 film.

(Above)
Captured specimens are photographed as soon as possible to capture their colours before they fade. Dual 650watt lights are used to provide coloured backlight and frontal daylight.

Working with one fish at a time, Randall covered each of them with water. Then, positioning his camera directly above his subjects, he shot straight down, the 650-watt lights illuminating the subjects from each side.

Randall has used this photo technique to produce thousands of scientifically valuable photographs of fishes and invertebrates. Many of them are published and all of them are stored in four separate refrigerators at the Bishop Museum in Honolulu, where Randall is Senior Ichthyologist.

Taking underwater photographs of fishes during his collecting trips was a move Randall initially resisted. For one thing, fish collecting (important to determine things



(Above)
The job of cataloguing the fish in an area is a neverending task and requires enormous time peering down microscopes to establish exact details. The study and identification of fish has been a lifetime's work for John Randall, a rare breed of scientist who can communicate well with the layman and, despite his close association with them, still gets tempted by a tasty fish dish on any menu.

like the anatomy and diet of the fish) was not an activity that coincided well with fish photography.

For one thing, underwater camera equipment was too costly.

"For many years I resisted taking underwater photographs of fishes because I expected Nikon or Canon to come up with an S.L.R. camera that is waterproof like the Nikonos, "Randall says. "Finally, I gave up waiting and got an Ikelite housing and a Nikon F camera."

For lighting, he uses a double strobe (Vivitar 292's in housing).

"The main reason I have not gone for more expensive rigs is the cost", Randall says. "And I have been getting photographs that are acceptable, anyway. There are problems with Ikelite housings. I often have trouble. But one thing I particularly like (about them) is the clear plastic - for one can see water when it starts coming in."

Underwater photographs of fishes are important, Randall says, "because many fishes lose their life colour upon death."

"This is particularly true of iridescent colours, like the bright blue of damselfishes", he adds. "The only way to document these colours is to photograph the fishes when alive, either in the sea or an aquarium."

Another important scientific reason for taking underwater photographs of fishes is to portray the fish in its natural habitat, Randall points out. And still another is to "capture certain behavior on film such as cleaning or spawning."

Randall's underwater photographs of fishes have appeared in a series of publications issued by the British Museum called Indo-Pacific Fishes, and they are important parts of his published and proposed books on fishes of the Arabian Gulf, Hawaii, the West Indies and South Seas.

Scuba diving is a vitally important tool for today's Ichthyologist, since it gets the scientist in the very world where the fishes live. It is a fascinating and many-sided science, one which has taken many twists and turns over the years. Sometimes a fish believed to be one species has turned out to be two when something such as a different gill raker count is discovered. Or, a recently named fish will have a previous description, which means the earliest name takes precedence over subsequent ones.

Randall is an avid scuba diver. I have been diving with him, each time off Hawaii and each time with me trying to keep up with him although I am 20 years younger than he is. He moves around the reef like a shot, interested only in his fish subjects .

Randall has named over 200 species of fish, and 21 have been named randalli in his honour (as well as two genera) by other scientists. On the shelves of the fish collection of Bishop Museum are still more fishes residing in jars of alcohol, waiting to be described. Since 1965, when he joined the staff of Bishop Museum, he has raised the number of lots of specimens (one lot being those specimens of the same species taken at the same time and place) from 5,000 to nearly 32,000. While diving, he has observed intermediate individuals that linked different-named juveniles to adults, and he witnessed the courtship and spawning of different-coloured wrasses and parrotfishes previously thought to be different species but which in reality were sexual colour phases of the same species.

Randall's favourite fish families are the surgeonfishes, wrasse, parrotfishes, squirrelfishes, hawkfishes and groupers. He has concentrated on the classification of Indo-Pacific fishes - those of tropical and subtropical Indian and Central and Western Pacific oceans.

(Above)
A shoal of soldierfish (Myripristis vittata) shot in the Maldives. His next book will cover the fish of the Maldives and should be out next year.

He has many books in progress, to add to those books that have been published (Caribbean Reef Fishes, Red Sea Reef Fishes, Hawaiian Reef Fishes, and Sharks of Arabia.) We can expect books on the fishes of the Arabian Gulf, Easter Island, the Maldives, South Seas, and more on Hawaii and the West Indies.

And all of these will come with his own photos, taken in a style he has developed his own way through perseverence and hard underwater work.

Hillary Hauser

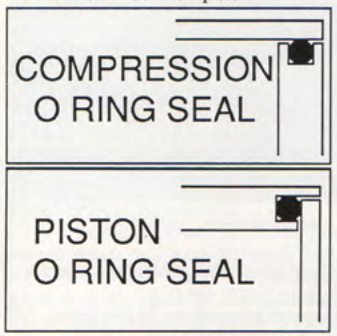
Maintaining O rings

Unlike land cameras which operate in a much more tolerant atmosphere, underwater cameras and land cameras in housings must be carefully prepared prior to each dive to ensure that all of the accessible O ring seals are correctly maintained. This doesn't take long and, if done properly, will ensure your camera doesn't flood during the dive.

Most underwater cameras and housings have several O ring seals, most of which can only be maintained by stripping the camera/housing (inaccessible O rings) and a few (accessible) O rings which the owner/operator can and must maintain prior to each dive. You do not need to worry about the inaccessible O rings on a day to day basis but these should be checked annually and replaced/regreased.

The accessible O rings are very simple to maintain and it will only take a couple of minutes to carry out.

There are two types of O ring seal - compression and piston. The main seal on a Nikonos 1Va and most housings is a compression type and that on the Nikonos 11, 111 and V and the Sea and Sea Motor-Marine 110 and 35's is a piston.



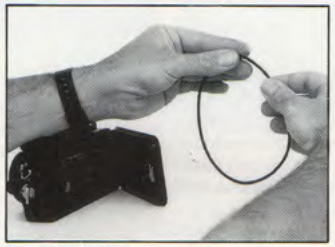
There has been a great deal of speculation about the efficiency of the compression seal following several Nikonos 1Va floodings but the compression seal is just as effective as the piston except that it requires a little more care when maintaining them.

The piston seal has a wiping action when the sealing surfaces are closed so any potentially dangerous debris such as a hair may well be wiped out of the way and not cause any problems. Such a hair across a compression seal will almost certainly cause a flood so more care is needed with compression seals. It only needs just one hair to fill a camera up with water.

Prior to a diving trip you must clean and regrease all of the accessible O rings. On the Nikonos 1, 11 and 111 these are the main body, rear lens and flashplug. On the Nikonos 1Va and V it's the same plus the battery compartment. On the Sea and Sea cameras it's just main seal.

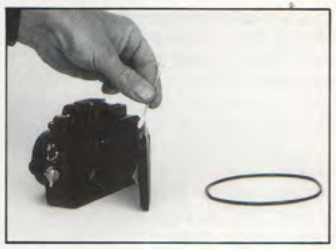
In order to carry out thorough maintenance you must remove the O ring from it's seat. This can be done without any instruments by squeezing the O ring round to form a loop which you can lift and pull it out of its groove. If this proves difficult, you could use a soft edged blunt instrument like the edge of a credit card to lever the O ring out. Please be very careful if using this method as O rings and O ring surfaces can be nicked very slightly and this could cause a flood.

Once removed, you can inspect the O ring for damage. There should be no marks on it whatsoever. If there are, it is better to change it rather than risk the camera for the sake of a low cost O ring.



O rings must be lightly greased with silicone grease. This keeps them supple, less prone to damage and easier to seat. The best time to do this when you are as stable as possible and not trying to balance on a pitching boat in the rain. The practicality of underwater photography will mean that there will be times when you need to reload on a boat so just be extra careful not to let lenses roll around and that O rings don't get placed on dirty surfaces.

Greasing the O ring is best done by squeezing a small amount of grease onto your finger and then pulling the O ring through it until it has an even coating. No excess grease should be left on the O ring whatsoever. **All those who believe that loads of grease equals a better seal are fooling themselves and it will only be a matter of time before they either have a flood or grease will ooze into the camera and affect the shutter.**



The O ring grooves/surfaces should now be inspected and wiped with a lint-free cloth or any cleaning material which will not give off any hairs/fluff. Cotton buds/ cotton wool on sticks are ideal for getting into O ring grooves but they can leave small hairs so keep a look out for these. Once cleaned and inspected, the O ring can be fitted again and, after a final check for cleanliness, the camera can be closed.

With all of the O rings maintained you can go diving as many times as you like and, as long as you rinse the camera in fresh water after salt water immersions, you should not have any problems.

To rinse your camera, it is best to fill a bowl of fresh water and put the camera system in it and work as many controls as possible. If you haven't finished the film, you won't be able to operate the shutter release or wind on but a coulpe of minutes immersion should be enough time for the freshwater to get into all those small nooks and crannies in which saltwater loves to lurk. If you have finished the film, rewind it

prior to rinsing and you will be able to operate all the controls for a very thorough rinse.

If you do not have a basin of water, a running tap will do but don't turn it on too hard as the high water pressure just might force it's way past an O ring and into the camera.

Once rinsed, the camera can be dried externally and either stored or the film re-loaded. You will need to open the camera to reload. Doing this will disturb the O ring seals and any which are disturbed must be re-maintained as before. If any of your maintained seals are not disturbed, they do not need re-maintaining.

If you follow the above procedures and keep a detailed look out for any hairs etc which may bridge the O ring seal, you should never have any floods. Have the inaccessible O rings serviced annually and your camera will keep performing without any hitches. As soon as your maintenance standards drop, the chance of a flood will increase dramatically so take just a couple of settled minutes to check and regrease the O rings and you will avoid disappointment. Most people who suffer floods either didn't do any proper maintenance or they rushed it.

Finally, just a word about the performance of O rings. These compressed neoprene marvels are retained in precisely machined smooth grooves and another smooth sealing surface is squeezed onto the exposed O ring surface. As the pressure increases so the O ring is pushed into its seat and actually takes on the shape of the groove.

The most dangerous time for an O ring seal is when you are in very shallow water with very little pressure on the O ring. The deeper you dive, the more the pressure pushes on the O ring and actually improves the seal the deeper you go. This poses design problems, especially where you have controls which you wish to rotate at depth. The pressure at depth may cause so much extra friction on the control shaft that it is difficult to operate. The compromise is to have tolerances which still allow a good seal in shallow water but which don't bind up at depth.

As a final comment, always carry a spare set of all of the accessible O rings. Their cost is negligible compared to the frustration of not having a spare on the once-in-a-lifetime trip when your main O ring rolls over the side of the boat during a routine maintenance and disappears into the deep blue fathoms.

O rings are extremely hardwearing when kept supple with silicone grease and should last years. However, heat and sunlight will eventually cause them to crack and possibly let water in. For the comparatively low cost, it is best to change them annually.

Next issue, we'll look at maintaining the other O rings and will eventually show how to strip down each model of underwater camera to gain access to all of the O rings. If you are mechanically minded and reasonably capable with your hands, there's no reason why you couldn't service these O rings yourself.

Peter Rowlands

UP in Aqaba

David Nardini reports on the Royal Blue Dolphin Competition

'The intention is not to hand over an ordinary shot but a beautiful photo of a mysterious non-common world'. These were the words which led 23 international underwater photographers from 15 countries to compete in the 1st The Royal Blue Dolphin , international underwater photo contest, held in Aqaba, Jordan.

Under the patronage of His Majesty, King Hussein, the event was organised by The Hotel Club Aquamarina, the Belgian tour-operators Marine Adventures, the Royal Jordanian Airlines, and the Flemish Underwater Commission F & F Nilos.

The Gulf of Aqaba with it's clear waters is an ideal location to hold such an event, especially with the backup and diving facilities provided by the Hotel/Club Aquamarina. The actual event was to be held over 3 days, the actual competition time being the first 3 hours of the morning. Each competitor had 3 rolls of 100 ASA slide film to expose over the total 9 hours allocated. After this period each competitor was to submit a creative and a nature portfolio, each portfolio consisting of a minimum of 5 slides.

Unfortunately, with a few remarks and complaints from competitors, this time was reduced to three 2 hour slots over a one and a half day period; ie, am, pm then the following am. This new limit, 6 hours in total, was felt to be unacceptable to produce photographs of a high calibre, however, no concessions were made and the competitors just had to squeeze it all in. The delay was mainly due to the anticipated arrival of His Majesty. Neither His Majesty or Her Highness could attend, thus the change of schedule could have been avoided. To make matters worse, the film was to be taken to Amman to be processed (E6), and returned within a 6 to 10 hours. This proved to be a time delay, making competitors impatient and uncomfortable, especially since they would not be able to view the first day's work before embarking on the last day's shooting, and by this stage blown 2/3's of their chances. I personally felt that the organizers should have set up local or on site processing.

The competitors were divided into three groups, each group visiting one of the three designated sites; all locations were to be reached by minibus. The visibility was not excellent by Red Sea standards, but certainly acceptable for the majority of shots. Generally the water could best be described as having a 'milky' quality, especially on extreme wide angle/fisheye shots. The surface of the water remained calm throughout the morning and early afternoon, with conditions becoming windier in middle to late afternoon.

(Above) *The quality of duplicates provided by the Organisers was poor and hasn't retained the original quality of this Peter Scoones' shot*

(Above) *Marc Debatty from France and* (Below) *Wilhelm Kolvoord from the Netherlands*

The three sites consisted of the Aquarium, The Wreck and the Wall. The competitors regarded The Wreck as the best of the three, closely followed by the Aquarium, and finally the Wall.

Even though The Wreck is relatively young, it provided for all aspects of photography, from close-ups to wide-angle. The ambient lighting was best in the afternoon as it illuminated the superstructure of the vessel. The hull and most of the deck are intact, with the seabed at a maximum of 35 metres.

The Aquarium, in contrast to the wreck, was quite a picturesque location, where typical Red Sea natural history subjects were in abundance. Most subjects were in the 0 to 20 metre range, and the ambient lighting proved to be good throughout the day. The Wall, as the name implies, is just that, a vertical coral wall, making interesting varied compositions impossible. Most competitors felt this site to be the most unproductive.

There was a happy balance of Nikonos and housed equipment. Most Nikonos were fitted out with 15mm lenses or close-up attachments. The housed equipment varied from commercially available units to home made ones. The same was true for flashguns.

In the afternoon of the first day a massive exodus was arranged by the organisers, where all the competitors, models, press, and television dived The Wreck. This proved useful for some people to research the site and check out any equipment before the real runs. The dive masters at the Aquamarina informed me that 80 (yes 80!) bottles were taken that afternoon; those Bauer compressors must have been busy that evening.

Dawn broke on the first day of the event, two sessions to be done and two rolls MUST be returned to the organizers by the end of the day; that's a theoretical 72 shots in 4 hours, some shooting kids ! I can imagine competitors relying on a marine animal to perform having problems with such a time constraint, unless they knew exactly were the animal was and it's temperament. Judging by the total successful nature porfolios submitted, few competitors choose this option. Some competitors

(Above) *Linda Pitkin receives her trophy and Wilhelm Kolvoord (below) from the Netherlands receives his from Ali Ghandour, President of Royal Jordanian Airlines.*

(Above) *A pleased Peter Scoones walked away with the prizes and trophy for the Creative category.* (Below) *Vincenzo Paolillo, his model, Peter Scoones and Linda Pitkin.*

opted to use props, and in some cases, all 5 shots of their portfolio were basically of the same subject/theme. So much for a balanced portfolio. The feeling at the end of the first day and 2/3's of the way in was of general discontent and of being rushed. The groups were being timed the moment they walked onto the beach, as opposed to the time they entered the water; this doesn't leave much change out of 2 hours considering kitting up time and possible decompression stops for those who decided to go in search of specific deep subjects.

The next morning, the competitors were in search of the final subjects to make up their complement of 5 slides per portfolio. Many competitors were in the unfortunate position of being unhappy with the first days efforts and were relying on this last roll. The shots were taken and the rolls handed in. The relief visible on the competitors faces was quite evident. All that was left at this stage was to sit back, enjoy the sun and down a few drinks, anticipating the courier the following morning.

Seven international judges, the majority consisting of underwater photographers, selected the winning and runner up portfolios in each category by projecting the sets and allocating marks out of ten for each individual slide. The marks were then totalled up for each portfolio. If a tie situation was encountered, the two or more portfolio's in question would be compared and the one with the greatest variety, would be the winning set. Since the slides were marked individually, if a porfolio had very similar pictures, a judge pointed out to me that the resulting totalled mark could be higher than it should. Overall, however, the marking system was found to be fair, and the bias in the marking would not have occured if the competitors submitted a true potfolio instead of a variation of a theme. Another point made by another judge, was the confusion in interpretation of 'nature' and 'creative' portfolios. Apparently very few photographers adhered to the strict definition. Perhaps a more definite definition in future events will prevent this from reoccuring.

The finalists and runner up portfolios were projected during a very pleasant dinner, closely followed by the prizes and trophies.

The event was enjoyable for competitors and all other invited guests alike. The organizers did very well considering the tight schedule. Looking forward to next years event, with a few improvements, this event should turn to be a highly regarded International Photosub.

David Nardini

Short Ends and Competitions

Underwater Photography Festival Egypt Sept 15-20 1988

FOCUS is Egypt's first underwater photography competition to take place in Hurgada between September 15th and 20th.

There are four categories - Open slides, wide angle, macro and surface slides. The four days of competition will include 8 offshore dives and entrants will be supplied with 12 litre tanks.

Two films per day will be allocated and at the end of the competition, 4 slides must be selected, one per category. Throughout the 5 days there will be seminars given by top speakers covering underwater photography and cinematography, underwater medicine and marine biology. The guest of honour will be Eugene Clarke.

The competition is open to anyone and registration costs $390 per person and six nights at the Sheraton Hotel on a half board basis is $340 per person based on a double occupancy room.

For further details please contact American Express Egypt Ltd, 17 Mahmoud [redacted] Tarek El Housseiny.

Jean and Walt Deas Underwater Photography Competition : 1988

There will be a beginner's section for those who have never won a prize before a wide-angle section for those devoted to that sort of work, a macro section, and a section for general and other methods. The prizes will be altered and the Trophy will be awarded to the persons with most points in the macro, wide-angle and general sections. Though entrants will be allowed to submit up to nine slides, no more than three will be allowed for any one section.

The competition closes on 31st december this year. Entry forms may be ob[redacted]

Travel by Design - Holidays

Tailor made diving holidays to your personal requirements. Possible destinations include; Cayman Islands, Australia, Queensland Australia, The Maldive Islands, Malta, Philippines, Thailand, The Bahamas, The Red Sea - Eilat, Israel & Aqaba, Jordan, Florida Keys, Florida, USA. Interested in a tailor made dive trip? [redacted]

1988 Southfed Photographic Competition

Open to any and all members of SOUTHFED clubs, this competition comprises of - 1)Best U.K. Slide, 2)Best Overall Slide, and 3)Best Portfolio (up to 6 slides). All photographs must have been taken in 1988, with no aquarium shots allowed; however composites are allowed, but ALL elements must have been taken underwater in 1988.

Mark the slides with name, "U.K.", if applicable, and a spot in the lower left corner. Closing date for entries is November 18th, with subsequent judging at the A.G.M. on December 4th.

[redacted]

Cocos Islands with Ocean Voyages

California based travel company Ocean Voyages are offering trips to the Cocos Islands, 300 miles off the coast of Costa Rica. They claim that this is their greatest and most unique dive destination with superb diving for experienced divers.

There is a profusion of marine life and many sharks so for those who love the underwater world, this could be a paradise. Trips are all on board the 120 foot motor yacht Okeanos and are priced at $1,695 per person.

[redacted]

Jaques Dumas Trophy of Underwater Photography

Open to all underwater photographers worldwide competitors must submit four colour photos with an exact format of 30 by 40cm, without rigid backing, and the four appropriate slides. These photos must have been taken underwater; not in an aquarium or oceanarium and must not have been already won in this Trophy (winner,or the ten selected). On the reverse side of the photos, the photographer should write - Name and first name of author, his/her complete address, location where the photo was taken, and other technical details should be indicated.

The jury will take the quality of all four photos of each competitor into consideration and not just one photo. The winner will be selected from the ten best submissions. The winner of the trophy will receive a sum the equivalent of US $1000, in addi-tion to the trophy itself. The ten best photographers will receive CMAS medals.

Closing date for submission is DECEMBER 31st, 1988. Send all entries to: CMAS / JACQUES DUMAS TRO[redacted]

SEA VIEW 1988 - The International Photo and Film Festival

Saturday, December 3rd 1988 is the date set for the biannual festival, SEAVIEW, which takes place in the Cultural Center of Berchem (Antwerp-Belgium). It will be a meeting of the world's best underwatercineasts and photographers, who will show their best productions on this festival. Shown will be principally never before projected films by Dr. Horace Dobbs, Mike Portelly, Les Kemp and Patrick Lagrou. Also included in the festival is an international underwater photo and slide contest that will be judged by an international committee of underwater photographers and/or cineasts. Categories leading to prizes of divegear, trips, famous trophies and awards are: Open slides, Macro slides, Colour prints, Black and white prints, with a place for the slide of the best Belgium competitor.

Entry forms and fees must reach SEAVIEW before the 28th of October 1988.

For further information and entry [redacted]

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