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Digital



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Example 2:

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Example 3:

A7RIV Housing for Sony A7RIV
Regular Price: \$ 2,849.00 USD
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Note: All Aquatica Housings come standard with the vacuum pump, valve and sensor



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A web magazine UWP119 Mar/Apr 2021

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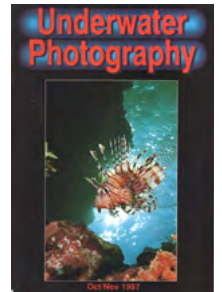
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Cover shot by Kirsty Andrews
'Grey seal gully'
Third Place
British waters wide angle Category
UPY 2021

Grey seals are wonderful to photograph but I particularly like this shot because of the background. My buddy showed me this pretty gully full of dead man's fingers and light coming down through kelp. I waited there for a little while, hoping a seal would turn up. In the end I only had one quick pass from one shy seal, but I was able to take this pleasing portrait. Farne Islands, Northumberland, UK

Nikon, D500, Nauticam NA D500, Tokina 10-17mm, iso 200, f11, 1/160, 2x Retra pro strobes

Underwater Photography 2001 - 2021
© PR Productions
Publisher/Editor Peter Rowlands
www.pr-productions.co.uk
peter@uwpmag.com

Editorial

UPY 2021

With the world seemingly falling apart, UPY 2021 decided to keep a sense of normality by not changing the categories with the one exception being a new award, rather than a Category, My Backyard.

It's aim was simple; highlight the exciting images which can be taken on your doorstep with minimal travel and energy consumption.

The entry numbers were very healthy and 46 out of the 130 images in this year's Competition were from My Backyard and this included no less than five category winners and four Award winners.

In addition I got a sense that entrants really embraced it as a way of showing how proud they are of the images they achieve so close to home.

Many have also said that, being limited, gave them more time to study and observe their local marine life and to get to know it in more detail than ever before.

Who knows? Maybe our backyards will be all that we can savour for some time to come.

Underwater photography trips

With the vaccination programmes continuing apace in most countries, you'd have to think there was enough light at the end of the tunnel to start being confident about the future and thinking about booking an underwater photography trip.

Judging by the demand for travel agent's services after the timeline to exit lockdown in the UK was announced, there are large numbers of people with exactly the same thoughts.

The travel industry must have Covid understanding contracts, perhaps vaccination passports and certainly rapid testing so that anyone who turns up positive will have to return.

Liveaboards should prove particularly attractive because, once all passengers and crew have been tested, the vessel becomes a self contained, safe bubble.

How far ahead you book and how far you plan to travel is a personal choice but one thing's for sure, you'll get a very warm welcome.

Peter Rowlands
peter@uwpmag.com



www.divephotoguide.com/world-oceans-day-photo-competition-2021

News, Travel & Events

Socorro Islands with Erin Quigley and David Serradell April 7-15, 2021

Join Adobe Lightroom expert Erin Quigley and Backscatter photo pro David Serradell on a unique photo expedition to the Socorro Islands aboard the luxury liveaboard dive boat Nautilus Explorer.

Photograph Giant Pacific manta rays, numerous species of sharks, bottlenose dolphins, schooling jacks, and more. Erin and David will be on hand to assist with UW photo techniques, offer technical support, and teach post-production workflow in Adobe Lightroom.

The Revillagigedos Archipelago, more commonly called Socorro Islands is located in the eastern Pacific Ocean approximately 250 miles south of Cabo San Lucas, Mexico – at the tip of the Baja peninsula. These islands have been compared to the Galapagos Islands in Ecuador or Cocos Island in Costa Rica because of the big animal encounters they provide. This area is famous for up close and personal encounters with Giant Pacific manta rays, which can grow to 22 feet from wingtip to wingtip.

You can see giant mantas in many places around the world. But nowhere else boasts a population of giant mantas that literally seek out interaction with divers and snorkelers. We don't know why but we LOVE it!! And the mantas clearly love us back.

A negative COVID PCR test is not required to travel to Mexico but we highly recommend that



you get tested before you leave home. The Nautilus Explorer will provide complimentary antigen tests to all guests and crew before boarding. This test is mandatory, and a negative result is required in order to board the boat. This will ensure that all guests and crew are COVID free before departure.

Guests flying back to the US from Mexico are now required to have a negative test for COVID-19. To ensure this doesn't impact your trip, we are working with the local hospital to provide testing on the boat before disembarking. We will cover the costs of this test, and results will be available within two hours, ensuring no delays in you getting home.

www.backscatter.com

Blue Heron Bridge Photo Workshops 2021 April 15-18, June 10-13 & Sept 9-12



Take advantage of one of the finest macro sites in the world, our own Blue Heron Bridge, located in West Palm Beach, FL. This 3-day clinic focuses on macro photography, and there may not be a better setting anywhere to hold this kind of class.

This protected area has a great tidal exchange, protection from two bridge structures, and an island (Phil Foster Park).

In addition to photo instruction, this class includes a dive guide for every 2-3 divers. Our guides work for local dive operators or in the Reef Photo store and are expert Blue Heron Critter Finders. Our guests can focus on taking pictures, and we'll lead you from subject to subject. No stress about dragging around a dive flag, navigation, or boat traffic; just relax and take pictures!

www.reefphoto.com

Humpback whales sighted in the Firth Of Forth

Humpback whales have been sighted recently in the Firth Of Forth, between Edinburgh and Kinghorn (Fife)

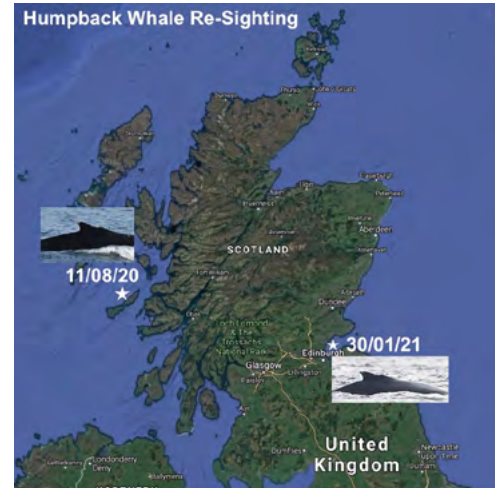
Greg Maclean, a photographer who spent the day watching them from a sailing boat, posted pictures online after a rewarding day on the water. Lyndsay McNeill, a citizen scientist who runs the Scottish Humpback ID group, jumped on the images that were posted in order to create a record of the whale. But to her surprise she noticed some familiar features that instantly made her very excited. 'The barnacle on the tip on the dorsal fin was very distinctive and I knew I had seen it recently' she said. Lyndsay set to work on Sunday evening looking back at her catalogue and then contacted Shane Wasik from Basking Shark Scotland, who had sent her whale images from their sighting in summer 2020. Along with passengers Rosie Barrett and Emma Patten, they had gathered images of both sides of the dorsal fin of the animal along the patterns on the bottom of the fluke (tail). The patterns, scratches, shape and barnacles enabled the team to compare both animals and make a match!

Shane Wasik said, 'We were all

super excited, furiously messaging each other on Sunday evening, comparing all the images to be 100% sure it was a match. It was an incredible day we spent with them last summer and to have them relighted where I grew up is even more special. We believe this is first re-sighting of humpback whale between east and west Scotland. They are a rare sighting around the Scottish coast, this was one of only 3 sighting we've ever had personally on the west coast. Having spent 18 years growing up in Kinghorn we never saw any Humpbacks there at all. Ronnie Mackie, a family friend who runs the Forth Marine Mammals facebook group has been recording the increase in sightings over the last few years. Perhaps linked to the recovery in fish stocks after previous decades of exploitation'.

Humpbacks migrate between the sub-tropics and the arctic every year between calving/mating in warmer waters and feeding in colder areas. The whale aggregate in both areas and are transient in Scottish waters, passing by on their way up and back.

www.baskingsharkscotland.co.uk



A graphic from Auden Rickarsen's research showing the Norwegian tagged whales migration path. The tag's show GPS position via satellite and show their winter feeding grounds, migration path and summer mating/calving area.

Urban Salmon Project March 4th @ 7:00pm PST



Join us on Thursday, March 4th for the premiere of our short film, and a roundtable discussion featuring: Fernando Lessa - Photographer, Urban Salmon Project Founder.

With the amazing support of Take a Stand for Conservation and Watershed Watch Salmon Society the project is producing a 12 minute documentary featuring the Salmonids in the Metro Vancouver watershed.

The Urban Salmon documentary features the story of the fish in the Urban Environment. Once abundant, this amazing fish was almost extinguished from our cityscape. Inspired by the passion and dedication from Metro Vancouver Streamkeepers, the documentary tells the story of how our urban streams were restored and salmon brought back to our backyards.

<https://linktr.ee/urbansalmonproject/>



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- Scientific Research Programme

The Digital Shootout, Little Cayman June 12-26, 2021



One week just wasn't enough for the great diving, learning, and fun at The Digital Shootout. The new two-week schedule allows us to offer 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. Classes the first week will cover the basics of underwater photography and Lightroom techniques and gradually move to more advanced topics.

There will also be more time for one-on-one help from the pros and for the using the demo gear. With

unlimited shore diving on the house reef you can set your own schedule and dive anytime you like.

Images taken on both weeks are eligible for the contest, so you have twice the time to create the winning photo or video. The awards presentation and prize raffle will be on the final night to reward all of your hard work. If you can't do both weeks you can just come for one. If you are a beginner, then you'll want to come to the first week for sure. More advanced shooters can skip the first week and come for just the second week. Space is limited though, so contact us for more details.

www.thedigitalshootout.com

www.uwpmag.com

CANON EOS R5

PICK

SONY A7S III

YOUR

NIKON Z6 II

POISON



New Products

Nauticam NA-A7C Housing for Sony a7C camera



Sony's latest full frame mirrorless camera, the a7C offers the underwater image maker one of the most compact and travel friendly full frame systems available on the market today. The a7C features Sony's latest stellar autofocus and a much improved battery life thanks to its use of the larger Z series battery. The BIONZ X processor delivers superb low-light performance and faster image processing. For video shooters, the a7C features internal UHD 4K capture in the wide-dynamic range HLG image profile at up to 30p.

Nauticam has housed more mirrorless cameras, and more Sony E Mount cameras than any other housing manufacturer. This

experience results in the most evolved housing line with the broadest range of accessories available today.

Pioneering optical accessories elevate performance to a new level. Magnifying viewfinders, the sharpest super macro accessory lenses ever made, and now the highest quality water contact wide angle lenses (the WWL-1B and WACP-1) combine with the NA-A7C housing to form a complete imaging system.

Nauticam is known for ergonomics, and an unmatched experience. Key controls are placed at the photographer's fingertips. The housing and accessories are light weight, and easy to assemble. The camera drops in without any control

presetting, and lens port changes are effortless.

NA-A7C features an integrated handle system. This ergonomic style provides exceptional control access, even with thick gloves, with ideal placement of the shutter release and a thumb-lever to actuate the AF-ON button from the right handle.

The housing is machined from a solid block of aluminum, then hard anodized making it impervious to salt water corrosion. Marine grade stainless and plastic parts complete the housing, and it is backed by a two year warranty against manufacturing defects.

www.nauticam.com

Quick-Release System



"Shoot Vertically"

"Light Evenly"



UNLOCK



LOCK

INON
Japan

EUROPE'S NR. 1
UNDERWATER CAMERA STORE



**USED
EQUIPMENT**

**3 MONTH
WARRANTY**



**Contact us if you want to
UPGRADE or TRADE-IN.**



WE ARE UNDERWATER PHOTOGRAPHERS... JUST LIKE YOU



Issue 119/10

Ikelite 200DL Housing for Canon EOS R6

The 2020 Canon EOS R6 is the very accomplished little brother of the hugely popular EOS R5 full frame mirrorless camera. It features the same 20 megapixel CMOS sensor found in the professional 1D X Mark III. The R6 is capable of capturing 4K 60p Raw video.

A Dual Pixel AF II system, great image stabilization, and burst shooting up to 20 fps make this a great choice for underwater action shooting. The 3.69 million dot OLED EVF (electronic viewfinder) is perfect for both framing and reviewing images.

This housings supports your choice of shooting manual strobes or adding TTL electronics depending on your application. The included manual hotshoe with Ikelite ICS-5 bulkhead supports manual strobe exposure with a wide variety of strobes including Ikelite, SEA&SEA, INON, and others.

Enjoy the fastest and most accurate strobe exposure on the market by adding the DL5 DS Link Canon TTL Converter and CT1 TTL Hotshoe Kit # 46075 and a compatible Ikelite DS strobe. The DS Link can be programmed to the camera's specific



TTL protocol and supports both first curtain and rear curtain sync up to the camera's maximum flash sync speed. Exposure compensation can be used added or subtracted in the camera. A push button and indicator light on the side of the converter make it simple to switch back and forth between TTL and manual exposure underwater.

Reliable locking connectors between the hotshoe and bulkhead make it easy to install the CT1 TTL Hotshoe or carry back up parts when traveling to remote locations.

www.ikelite.com



Nauticam NA-A6600 for Sony Alpha a6600



"The Best APS-C Sony Ever"

Sony has hit a home run with best-in-class AF, huge battery life, rugged build and amazing all-around performance. This is a mirrorless DSLR shooters can love; in a travel friendly size.

Installed in the new Nauticam NA-A6600, it allows ultimate versatility, lens compatibility, ergonomics and superior wet lens compatibility.

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www.uwpmag.com

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FOR INON, SEA&SEA, IKELITE,
RETRA FLASH PRO & BACKSCATTER MF-1



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Issue 119/11

Nauticam WWL-1B



The next generation of WWL-1 is here!

The WWL-1B features the same stunningly sharp optics as the WWL-1, but it now includes an integrated aluminum buoyancy collar to make it nearly neutral in water. The WWL-1 and now WWL-1B are still the highest quality wet-changeable underwater wide-angle conversion optics ever made, featuring unmatched contrast, overall sharpness, corner sharpness, and clarity. The design is truly full zoom through, allowing zoom to be used as a tool for framing, and removable in water for close-up and macro shots.

The WWL-1B is designed around the Bayonet Mount II system and is compatible with the following accessories:

83250 M67 to Bayonet Converter II
83251 M77 to Bayonet Converter II
83252 Single Bayonet Holder II for



Arms

83253 Double Bayonet Holder II for Arms

83254 Single Bayonet Holder II for Inon Arms

72234 Double Bayonet Holder II for 70mm Carbon Fiber Float Arms

72233 Single Bayonet Holder II for 70mm Carbon Fiber Float Arms

72244 Double Bayonet Holder II for 90mm Carbon Fiber Float Arms

72243 Single Bayonet Holder II for 90mm Carbon Fiber Float Arms

When using the 83250 or 83251 Bayonet Converter II, the WWL-1B shares the same wide range of compatibility at the WWL-1 and can be used interchangeably on the WWL-1 port chart.

www.nauticam.com



Nauticam NA-R5
for Canon EOS R5 Camera



“The Professional Powerhouse”

Few cameras can provide the technical prowess, for stills and video, that the Canon R5 provides.



From 8K video to 20 FPS stills this camera shines. Paired with the innovative NA-R5 housing, there are no boundaries to the creative possibilities for pro or enthusiast. Unleash your potential with the latest technology from Canon and Nauticam.

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BACKSCATTER

THE BEST BANG FOR YOUR BUCK

OLYMPUS E-PL10 UNDERWATER CAMERA REVIEW

Backscatter Color Filter System



Add a new dimension to your videos and photos with the Backscatter Color Filter System. It is compatible with the Backscatter Mini Flash MF-1, Backscatter Macro Wide 4300 Video Light, and Backscatter Optical Snoot OS-1.

The Backscatter Color Filter System can be used for front or backlighting to give a new look to familiar subjects. Combine the color filter set with regular white light, or even with multiple colors. Add other objects in the background and light those secondary subjects for a new look.

There are 2 separate color filter sets, each with 6 colors. The color filter sets are “Swiss Army” style, with 2 protective covers on the front and back. Each color can be individually rotated out for use without having to fumble with multiple loose filters on a dive. There is a metal mounting ring that can take a double-ender clip for convenient

clipping off to a D-ring on a BC when not in use.

To attach the color filter set to the light or snoot, use the filter holder. The filter holder is the same for the Backscatter Mini Flash MF-1 and the Backscatter Macro Wide 4300 Video Light. There is a separate color filter holder for the Backscatter Optical Snoot OS-1.

With 12 individual colors, the Backscatter Color Filter System has lots of possibilities for creative lighting. It’s easy to deploy and can be conveniently stored on a double-ender clip within easy reach. Compatible with Backscatter Mini Flash MF-1, Backscatter Macro Wide 4300, and Optical Snoot OS-1.

www.backscatter.com



Nauticam NA-A7RIV for Sony a7R IV



“Resolution Rethought”

Sony, has come up with yet another addition to their a7 line that is sure to impress. This fourth edition of the a7R sees the inclusion of an updated 61MP

Exmor R BSI CMOS sensor and enhanced BIONZ X image processor. Despite its high resolution, it can shoot at up to 10 frames per second with full autofocus and shoot 4K video either from the full width of its sensor or from a Super 35 crop. The NA-A7RIV underwater housing provides fingertip access to all key camera controls in a rugged and reliable aluminum underwater housing. Ergonomic camera control access is one of the defining strengths of a Nauticam housing, and the NA-7RIV continues this tradition.

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FLIP 8/9

PROFESSIONAL UNDERWATER GOPRO COLOR



COMPATIBLE WITH

GoPro 5

GoPro 6

GoPro 7

GoPro 8

GoPro 9

INON LE700 series succeeded by LE600h series



The INON LE700 series (LE700-S and LE700-W) is discontinued and will be replaced with LE600h series.

The succeeding model LE600h series (LE600h-S and LE600h-W) is equipped carefully selected LED module offering higher CRI (90 CRI) to reproduce natural color of a subject when shooting still image, video only with the LED flashlight as a primary lighting source.

The new LE600h series is designed to produce 6500K constant light to benefit not to have particular color hue when using the flashlight as a focus light for strobe photography.

Structure is identical to the robust and time-proven LE series except for enhanced surface finishing to keep original exterior appearance against rough usage in harsh underwater environment.



Beam angle for each model remains same: 30 degree with LE600h-S, 75 degree with LE600h-W.

INON "SD Mount" bayonet system



Equipped with INON "SD Mount" bayonet system with additional locking feature to support easy and speedy lens exchange as well as reliable installation of INON "UFL-G140 SD underwater semi-fisheye conversion lens" or "UCL-G165 SD underwater wide close-up lens" designed exclusively for an action camera like GoPro®.

Of course the SD Front Mask for HERO9 is usable without any attachment lens.

www.inon.jp

www.inon.jp

• SHIPPING HAS BEGUN •

17429 NA-A7C

For Sony Alpha 7C Compact full-frame camera

Full-Frame Camera in the Compact housing



MACRO, MID-RANGE, WIDE-ANGLE ON THE SAME DIVE

28-60mm kit lens system compatibility shown as below:



CMC 1/2

Max. magnification ~1x



WWL-1B

Max. FOV 130 degree
Lens Dia 156.0 x L 97.0 mm
Lens Weight in Water 0.12 kg



WACP-1

Max. FOV 130 degree
Lens Dia 166.5 x L 173.0 mm

Aquatech Axisgo 11 Pro Max Over Under Kit for iPhone 11 Pro Max / iPhone Xs Max

Our AxisGO bundles are the best way to buy all the AxisGO gear you need in one click! The AxisGO 11 Pro Max Over Under Kit was put together for those who capture a lot of underwater images, or who want to capture the Over/Under style images where you see above and below the waters surface in the same

image. Yes, it's possible to do that all from your phone! This kit also includes everything you need to look after your new gear with an AxisGo Dome Cover included as well as Novus Acrylic Polish to buff out any minor scratches you may get on the dome element. This kit will guarantee you endless enjoyment and push your iPhoneography to levels you never before thought possible.



The AxisGO 11 Pro Max Over Under Kit Includes:

- 1 x AxisGo Water Housing
- 1 x AxisGO Pistol Grip
- 1 x AxisGO Dome
- 1 x Dome Cover
- 1 x Novus Acrylic Polish
- 1 x AxisGO Protective Case

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Ikelite 200DL Housing for Nikon Z5



This is a full featured and durable waterproof housing for Nikon Z5 mirrorless digital cameras. Suitable for scuba, snorkel, surf, pool, and any application in or around the water.

Nikon's entry-level Z5 camera is the most affordable stair step from DSLR to full frame mirrorless. It features the Z lens mount for use with Nikon's newest line of lenses and also accepts an FTZ adapter to be used with legacy FX and DX lenses.

With a 24 megapixel full frame CMOS sensor and in-body 5-axis image stabilization, the Z5 is capable of stunning high resolution imaging.

This housing features our robust Dry Lock (DL) port system. "Dry Lock" refers to the placement of the o-ring on the outside of the port mount. This improves visibility and reduces the chances of water dropping onto your precious camera sensor. DL ports are the lightest on the market,

yet robust and capable of standing up to rough surf. Attachment is quick and secure. A system of extensions can accommodate a huge variety of lenses with ease.

Most popular zoom lenses and select lens focus rings can be engaged using simple gearing that puts adjustment right at your fingertips. A large, soft-touch knob on the side of the housing makes fine tuned adjustments a breeze. Zoom and focus gears differ depending on which lens you are using. Zoom gears sold separately.

The included vacuum valve allows you to pressurize the housing to check for leaks prior to putting your expensive equipment in the water. Use of the vacuum valve requires a compatible Vacuum Pump with Gauge # 47011, sold separately.



NEW - Hugyfot Vision Xs with 5" monitor for GoPro Hero 9



Nauticam NA-A7SIII housing for Sony A7 S III



NEW - Ikelite 200DL housing for Nikon Z6, Z6 II, Z7, Z7 II



250M T-housing for GoPro Hero 9 (also available for Hero 5,6,7 and 8)

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THE ULTIMATE COMPACT STROBE

Ikelite Housing for Sony Alpha a1 Mirrorless Cameras



We anticipate supporting this newly announced camera model and expect to have more information soon. If you would like to receive an email when we make an announcement about this model, please sign up for notifications below.

We've been making underwater lighting, housings, and accessories for over 50 years. Our knowledgeable and experienced staff is available to help you take your camera in the water and take your photography to the next level. Our products are designed and made in the USA.

www.ikelite.com

WeeFine WFL02 Wide angle lens M52 - 24mm



The high-quality Weefine WFL02 has up to 150 degrees wide-angle view with corner to corner sharpness. The ultra wideangle interchangeable lens is designed to be used with cameras with lenses as wide as 24mm without noticeable vignetting.

The lens is constructed from four high quality glasses and a hard coated polycarbonate dome to correct unwanted aberration. All the glass lenses have been coated with an anti-reflection coating.

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innovation underwater

THE NEW GENERATION OF WWL-1

WET WIDE LENS - 1 B

130 deg. FOV with compatible 28mm lenses

- Neutral in Water**
with integrated buoyancy collar
- Bayonet Mount II**
mounting system

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- FASTER RECYCLING TIME
- DS-TTL II WITH +/-2 EV RANGE

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AOI UH-EM5III housing for Olympus O-MD E-M5III



The underwater housing AOI E-M5 Mark III, specially designed for the OLYMPUS E-M5 Mark III, is a masterpiece of engineering. The underwater case is waterproof down to a depth of 60 meters. Thanks to the durable, high quality polycarbonate construction, the weight of the housing is reduced to a minimum, while giving you full control of all functions of the camera. You can be confident that the camera is protected from water and also knocks and bumps on land are cushioned.

Using the optical fiber cable together with the flash FL-LM3 (bundled with E-M5 Mark III) and with a dedicated underwater flash

from INON or Sea&Sea (separately available) you get all the benefits from the flash system.

Optionally there is a LED trigger available.

This housing has a built in vacuum analysis- and a wet detection system. There is also a spare M16 bulkhead.

Dimensions Approx. 206.20mm (W) x 181.70mm (H) x 113.55mm (D)
Weight Approx. 1340g
€949.00

www.uwcamerastore.com

BACKSCATTER MINI FLASH & OPTICAL SNOOT



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+
VIDEO

PALM BEACH

BLUE HERON
BRIDGE
Dates Vary



PHOTO
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heinrichs weikamp RSU (Remote Slave Unit)

The RSU (Remote Slave Unit) is a remote trigger for underwater flashes for use in creative pool, wreck and cave photography. The flash connected to the RSU is optically triggered by the flash on the camera and contributes to the illumination of the scene.

The RSU is available for Nikonos and Ikelite.

The RSU is equipped with a photocell and a highly sensitive amplifier, which reliably detects flash light even more than 25 meters under water (in clear water) and triggers the connected flash. A downstream microprocessor-controlled digital filter reliably detects the characteristic light signal of a xenon flash even under changing light conditions and reduces false triggering by sun reflexes or dive lights.

The maximum ambient brightness (continuous light) should be less than 500 lux (this corresponds to the illuminance of a normal desktop workplace), otherwise there will be no reliable triggering and the RSU will deactivate itself to protect against uncontrolled triggering. Under water, illuminance decreases sharply after



© Ortwin Khan

just a few metres.

The RSU is therefore not suitable for above-water operation in daylight. However, it is perfectly suited for speleo photography in dry caves.

www.heinrichsweikamp.com

www.uwpmag.com



Image by Alex Mustard

Image lighting with 2x Retra Flash PRO.



Retra Flash PRO:

- **150Ws** flash power
- **500 lumen** pilot light
- **4900K** flash color temperature
- Recycle time with Supercharger:
1.9s (100%) - 0.9s (50%)
- **Standard features:** Multi-level battery indicator, Leakage detector, High-Speed-Sync (HSS), Double O-Ring sealing, Bluetooth connectivity, 2 Year Warranty

Find out more and get your Retra Flash 📄 www.retra-uw.com

The Wildlife Photographer of the Year: Unforgettable Photojournalism

by Rosamund Kidman Cox

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Sony A7C and Nauticam NA-A7C housing

by Phil Rudin

During September 2020 Sony launched the A7C - a camera that combines the advantages of an advanced full frame sensor with the size advantages of a mirrorless APS-C or M4/3 camera body.

The Sony A7C is almost identical in size and weight to the Sony A6600 APS-C camera with many of the same features and noticeably smaller and lighter than the Olympus EM1-III.

The big difference is the much larger A7C sensor size of 35.6mm X 23.8mm v. 23.6mm X 15.6mm for A6600 and 17.4mm X 13mm for EM1 III. The updated 24.2 megapixel A7C sensor has the same 6000 X 4000 maximum resolution found on Sony's A7 III, Nikon's Z6 II and more than on Canon's EOS R6 20.1 megapixel 5472 X 3648 resolution bodies. Sony has also managed to incorporate its sensor based in-body image-stabilization with a CIPA rating of 5.0 stops of stabilization into this very small package.

The latest 24.2 MP Exmor R BSI CMOS sensor offers up to 15 stops of dynamic range along with UHD 4K/30 video recording using the BIONZ X image processor. The A7C shoots up to 10 FPS with mechanical shutter but has two lower speeds in around the three FPS and 5 FPS range. Set at ten FPS my Nauticam manual flash trigger was able to keep up without missing a frame. To do the same the flashes will need to be set to manual at about 1/4 power in the case of Inon Z330's to keep up.

At 10FPS the camera can buffer about 115 RAW captures and 223 JPEG captures. ISO sensitively ranges from 100 to 51200 and is

expandable to 50 and 24800. I frequently use the 50, 64 and 80 ISO end of the range but never the high end. These three low end ISO settings become most useful helping to counter the low 1/160th second maximum shutter sync speed of the A7C when shooting for dark backgrounds or in bright ambient lighting.

During my testing I found that with the Nauticam mini flash trigger I could shoot at 1/200th sec. with no issues. At 1/250th the black bar begins to enter the top of the frame and by 1/500th sec. the sensor is about half covered.

The Sony sensor also includes the fast hybrid auto focus system which uses 693 phase detection points and 425 contrast detection points for very fast and precise auto focus. The A7C has the same Real-time Eye AF, animal eye AF and Real Time Tracking AF technologies found in the Sony A7R IV. This auto focus system works so well that I have locked in a new feature for A7C and the new A-1 coming this month. I have Lock-on AF Expanded Flexible Spot (M) set to the AF-ON button activated with my thumb. This combination allows me to lock focus with a half press of the shutter and then drag the focus point around the frame while maintaining the original focus area. This means I can focus on an animals eye in the center of the frame then drag the eye around the frame for the best composition without losing the tack sharp focus on the eye. I can then trigger the shot by depressing the shutter while locked in.

Auto focus Tracking sensitivity can also be

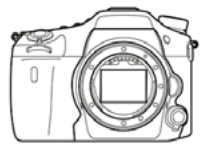


A7c with 28-60mm zoom and A7R IV with Sony FE 28-70mm zoom

set across five settings from #1 locked on and four levels of responsiveness, I am trying #4 and will tweak as required for best results. I have the focus area array to the shutter trigger in AF-S for more of a point and shoot type of a situation.

Another subtle but very useful update carried over from the A7R IV is that the focus area can be set to white or red for ease of use. For those who have used earlier versions of the A7 cameras and tried to locate the flat gray focus box underwater or in bright light I feel your pain, underwater the RED box stands out much better than the white or gray.

Many readers have ask me about the



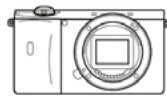
α99 II



α7 III



α7C



α6600



implementation of animal eye autofocus. With a fair amount of testing I have found the animal eye AF is more than a bit hit and miss underwater. At this time it does not work in conjunction with lock-on expanded flexible spot because the idea with eye AF is to find the animal/human eye regardless of where it is in the frame and lock onto the eye.

You can even chose between the right or left eye and select one person's eye out of a group of people in the frame. I have used the human eye AF shooting models both underwater and while doing splits and it is spot on. If you do set the camera for animal eye AF it will also lock focus on human eyes without having to switch back from animal eye AF.

For pets like cats and dogs animal eye AF works very well and bird eye AF is coming in the new Sony Alpha 1. I had great success using animal eye AF for horses, dogs and a cow but it is still not ready for prime time for most marine life. The eye AF has also been added to video and can be used with or without the touch screen.

The newest Canon mirrorless cameras have taken the lead over Sony in the Bird and animal eye AF but also don't work on marine life. For me Sony's Real Time Tracking AF technology and more precisely the Lock-on AF expanded flexible spot is still my goto AF setting. I have been using the Medium size focus area box for most precise focus lock-on.

The Sony A7C also has many of the video features most have come to expect in the non-video centric Sony cameras including the rather quick video AF capability. The A7C has 4K30p using 2.4x oversampling with HLG and S-log3 Gammas it also shoots Full HD 1080p up to 120 fps. Since my review is directed to still shooters I will leave the video features for other reviewers.

The A7C uses a less than impressive 0.39"-type XGA OLED electronic viewfinder with a 2.36m-dot resolution and 0.59x magnification offset to the left rear of the camera like the A6000 series bodies. It also features the 3.0" 921.6k-dot rear LCD with the new fully rotating, forward facing design

which You-tubers and video bloggers covet. This allows you the benefit of working from high, low, and front-facing angles. It's also a touchscreen for intuitive control on the fly and quick playback.

The LCD features are great if you are shooting above water but in a housing they are of little use and because the LCD no longer tilts out at the bottom you can't even get that extra little fifteen degree upward slant in some housings like with the older non rotating, tilting screens.

The A7C uses the same large-capacity NP-FZ100 battery found in the newer A7, A9 and now Alpha 1 lines offers approximately 740 shots per charge when working with the rear LCD or 680 shots per charge when working with the EVF. Battery specs for the A7C will far exceed these published numbers and should be better than any other camera in the Sony full frame line.

Another issue which may disturb some is the single SD memory card slot which supports UHS-II cards. While I fully understand the need

for two card slots and the expensive new Sony CF Express type A cards for high end and high speed cameras like the Sony Alpha 1 the current SD cards are more than fast enough for the A7C.

The overlooked things that will actually be more important to underwater photographers are details like the card slot being moved to the side of the camera rather than in the battery compartment. This allows those with long thin fingers to remove and reinstall the card without removing the camera from the housing. You also have the convenience of in-camera battery charging, Bluetooth connectivity for local data acquisition, built-in Wi-Fi enabling image sharing to mobile devices, a Magnesium-alloy chassis with weather sealing, support for the Sony ECM-B1M shotgun Microphone and much more.

This may be a good place to add a disclaimer regarding the use of 35mm full frame cameras both underwater and for terrestrial use. If you are thinking about making the

jump from compact, M4/3 or APS-C cameras be aware of the following.

Among the advantages of full frame cameras are greater control over depth of field, better low light performance, improved dynamic range and color depth, in many cameras higher numbers of megapixels for added ability to crop, larger files for much larger prints and more.

The disadvantages include greater expense in many cases, no crop factor v. sub full frame cameras especially relevant in macro work. Full frame cameras especially high MP ones expose flaws in lenses, focus, shallow depth of field and more. Many of the files are much larger than those from sub full frame taking up more room on computers, hard drives and flash cards. Underwater disadvantages are extended to reduced corner sharpness at like F/numbers especially when using rectilinear wide angle lenses.

Overall system weight and size compared to sub FF adds restrictions in regard to travel and more. Regarding size and weight you can exclude the A7C system if properly equipped.

Retail cost for the Sony A7C is \$1798.00 at release and \$2098.00 with the new “kit” lens. The body is available in black or black with silver trim.

The new Sony FE 28mm to 60mm F4-5.6 zoom lens

At the time Sony A7C was introduced two other new items were released that may have been overlooked by many - the tiny HVL-F28RM flash which runs on two AA-sized batteries and very much fits the small profile of the A7C camera body and the FE 28-60 F/4-5.6 “kit” zoom lens.

I didn't really give the new kit zoom lens a lot of thought other than for its very small size until Nauticam released its first port chart for the A7C. Lets face it, a smaller full frame camera doesn't really add a lot of value if you are using it underwater with the large full frame lenses and ports most of us have been using with the A7 and A9 series cameras.

The Sony mirrorless cameras, lenses, housings and ports tend to be smaller than like DSLR's as are mirrorless M4/3 equipment to the current Sony line. The A7C changes all of that - now not only do you have a smaller camera with a Nauticam housing the size of the Sony A6600 APS-C housing and noticeably smaller than the Olympus EM1 III M4/3 housing but you can also use many of the same accessories.

With the full frame A7C and the tiny 28-60 zoom you can use water contact optics normally reserved for



sub-full frame cameras. Because of the small diameter of the optics in the new 28-60 zoom you can use Nauticam's CMC 1 & 2 closeup lenses rather than needing to go to the larger and more expensive SMC-1 & 2.

With CMC-1 the maximum magnification is 1:1.1 and 1:1.4 with CMC-2 and the CMC lenses can be stacked for greater magnification. One CMC lens does not produce super macro but is not at all bad considering the lenses can be interchanged with the WWL-1 underwater just like on a compact system.

Rather than needing to go to the Nauticam WACP or WACP-2 for a full zoom through lens you can use the WWL-1/1B and get a 130 to 68 degree field of view just as you would get using WACP. If you already own WACP or SMC lenses they also work quite well with the 28-60 zoom both on A7C or on any of the other Sony full frame cameras up to the 61MP A7R IV.

Nauticam NA-A7C Housing and Ports

Like other Nauticam housings the new NA-A7C housing lives up to Nauticam's commitment to “Innovation Underwater” by creating a full frame camera housing the size of the Sony A6000 series housings and noticeably smaller than many Micro 4/3 housings.

The new NA-A7C housing retains the N100 port size used with all of the Sony full frame housings. The ergonomic handle system with stainless steel stiffening brackets and one inch ball mounts is included along with the patented port locking system unveiled on the first Nauticam DSLR housing back in 2009.

Nauticam build quality is well known by underwater photographers around the globe. The NA-A7C housing is machined from a solid block of aluminum, then hard anodized making it impervious to salt water corrosion. Marine grade



stainless and plastic parts are used to complete the housing which is then backed by a two year warranty against manufacturing defects.

The NA-A7C housing is the first Nauticam full frame “Clam Shell” style housing with the clam shell back hinged to the left hand side of the housing. The housing uses the same rotary locking system found on all Nauticam N85 mirrorless camera housing. The NA-A7C housing features a locking camera tray which keeps the camera secure and properly aligned while opening the back plate. The lever locking tray is secured to the bottom of the camera via a tripod screw and two tabs help to protect the bottom of the LCD screen.

To slide the camera tray into place inside the housing move the tray locking lever to the right, unlocked position; once the camera is installed the lever is moved back into the

locked position.

The left hand side of the housing has a rubberized zoom/focus knob which is quite smooth in use and very easy to control while holding the left hand grip.

After installing the camera and aligning all of the control levers the housing can be closed, always keep the camera turned off during the installation process. Once you cycle through this process a few times removing and reinstalling the camera becomes very easy.

The NA-A7C housing also has two fiber optic bulkheads on top for triggering up to four optically triggered flashes. Flashes like the Inon Z-330, Z-240, S-2000, D-2000, Sea & Sea YS-series, Retra, Backscatter MF-1 and more will all fire using these sync ports. Flashes can be fired in manual mode using the Nauticam Mini Flash Trigger for Sony (#26302).



Florida Red-Bellied Turtle, High Springs, Florida, Sony A7C, Sony FE 28-60mm zoom, Nauticam housing and port, at 53mm, Nauticam WWL-1, two Inon Z-330 flashes, ISO-400, F/8, 1/125th sec

After market Sony flash triggers like the S-TurtleSmart TTL trigger for Sony reviewed in back issue #110 can also provide TTL for most mainstream flashes like the Inon’s.

The upside to Nauticam’s \$267.00 US flash trigger is that it uses two CR2450 batteries which will run a very long time with the super small LED lights. The flash trigger will also work at blazing speeds easily keeping up with the 10 frames per second mechanical shutter. Flashes like the Inon Z-330 set to lower manual powers can also recycle in the 6 to

10 FPS range with quality batteries making high speed flash photography possible underwater using fiber optics, think Sailfish.

If you want to hardwire your flashes the NA-A7C housing has M14 bulkhead for Nikonos and other configurations along with the larger-bore M24 bulkhead opening that allows for the use of Nauticam HDMI 2.0 cables for connection to recorders such as the Atomos Ninja V.

The NA-A7C housing accommodates an accessory optical view finder which Nauticam offers

as an option in both 45 degree and 180 degree. The optical finders have the same diopter adjustment as the DSLR finders and the same superior optical quality however they are the MIL housing style so they can't be exchanged with other Sony full frame housings.

The NA-A7c housing also has the optical finder offset to the top left like the Sony A6000 line of housings. The A7C has a small viewfinder and without the accessory viewfinder the image in the pickup finder will be full view but quite small. I use the 45 degree finder for all my macro and super macro work especially with high power closeup lenses like the Nauticam CMC-1.

After years of use I have become spoiled and would not want to go back to the pickup finder which ships with the housing. For those who have never used a 45 degree finder expect a learning curve of 10 to 15 dives. For fast moving subjects and wide angle scenes the 180 degree finder will be the better choice if you are not using very low angles.

Nauticam has updated the optional vacuum valve to version II the new low profile valve II has a red push button to release the vacuum when you remove the cap. The M14 opening on the rear door of the housing has been tilted a few degrees towards the rear of the housing

making it much easier to mount the vacuum pump onto the smaller valve II without needing to move clamps, arms and other accessories.

The NA-A7C housing has a new blue vacuum reset button at the bottom of the port mount which allows you to reset the vacuum system without opening the rear of the housing. Once you have turned the vacuum switch on inside the housing and secured the housing back it does not need to be reopened for reset. This means that if you want to change lenses between dives you can release the vacuum by depressing the valve button, remove the port, reinstall lenses and ports then reset the vacuum system. Once you have install a new lens & port you can draw the vacuum without ever needing to open the housing back.

With housings like the NA-A7C and other full frame housing lenses like the Sony FE 12-24mm zoom, they need to be mounted from the front of the housing due to the lens & gear diameter. Having the reset button at the port opening will expedite this process, kudos Nauticam for making life a little easier.

My review of the original vacuum system is in back issue #76 at UWPMAG.com. One of the major problems with designing a housing for such a small camera is being able to place the control buttons and dials



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High Springs, Florida, Sony A7C, Sony FE 28-60mm zoom, Nauticam housing and port, at 32mm, Nauticam WACP-1, A/V light, ISO-640, F/10, 1/125th sec. When the river rises water backs up into the springs and the water level is very high covering trees and plants that are normally well above the water line

far enough apart so that you have fingertip control even while wearing heavy gloves. The button control layout for the NA-A7C housing is quite good - what Nauticam calls "Mission Control Design Philosophy" allows me to effortlessly reach all of the controls without having to look at which buttons I am about to push.

All of the current Nauticam N100 & N120 ports for Sony and after market lenses will fit the new housing along with the some of the

outstanding ZEN Underwater ports.

The Sony A7C has a very simple control layout and you have a verity of choices for customizing your control layout. Once you have customized and mastered the button layout you will not find yourself turning the camera off or hitting the video button by mistake.

I am still assigning functions but find it is a breeze to reach the controls once you have dived the system a few times. If you have ever used a housing

where the control buttons were placed directly over the ones on the camera you will appreciate the time that has been spent ergonomically designing the function buttons for this housing. The only control on the camera I found a bit annoying is the tiny dial used to adjust (+/- diopter) on the EVF which is done once and before the camera is sealed in the housing. I do everything manually in camera and found navigating ISO, shutter speed and aperture settings to be a breeze with this housing.

Field testing the Nauticam NA-A7C

For the purposes of this review I set out to only use the 28-60 “kit” lens with the Nauticam SFE2860-Z zoom gear (\$207.00) and the N100 flat port 45 with focus knob (\$491.00). This configuration allowed me to use the lens behind the flat port from 28-60mm, I was also able to add the CMC-1 and stacked CMC-1. Using two CMC-1’s you get very-very shallow depth of field and a minimum focus distance in the 8 to 10mm range. This is advanced macro work and for those new to macro you are more likely to damage or dislodge your subject than you are to get a well focused image.

With a single CMC-1 the AF worked very well with the kit lens. This lens is one of Sony’s latest lens designs and it can focus up to thirty frames per second with the new Sony A-1.

For wide angle I used Nauticam’s WWL-1 and WACP-1 Water Contact Optics. I used the WWL-1 with the Nauticam bayonet mount which interchanged with the CMC-1 bayonet mount. This makes the system much like many of the consumer compacts being used today where you can shoot from macro to whales on the same dive.



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Eel, Salt Springs, Florida, Sony A7C, Sony FE 28-60mm zoom, Nauticam housing and port, at 60mm, Nauticam WWL-1, two Inon Z-330 flashes, ISO-400, F/11, 1/200th sec

I also only used the LCD to compose and focus. Many of the wide angle shots were done like a point and shoot camera where I just let the auto focus do its thing and lock on the nearest subject or central subject in the frame. For macro I



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Pan Fish, High Springs, Florida, Sony A7C, Sony FE 28-60mm zoom, Nauticam housing and port, at 28mm, Nauticam WWL-1, two Inon Z-330 flashes, ISO-400, F/10, 1/125th sec

used the tracking and locked onto a subject or area and moved it around in the frame until I got the composition that was most pleasing. For wide angle in landscape and portrait I also locked focus on something in the foreground and chose an F/number

that would give me the depth of field I needed.

The weight difference between WWL-1 and WACP-1 is very noticeable while you are walking the rig to the water but once underwater you hardly notice any difference. If you are a pixel-peeper you will not be able to see the difference between the images taken with both wet lenses in this review. In a followup review I will try to show the differences in corner and overall image quality with a higher MP camera like Sony A7R IV or A1. I also intend to followup with lenses like the Canon 8-15mm fisheye, Rokinon 18mm and Tamron 17-28mm F/2.8 reviewed in this issue. These lenses can be used with smaller ports like the 140mm and 180mm dome port that more fit the size of the A7C housing.

I found this camera system to be very user friendly, easy to travel with and with the proper lens selections a bargain for those wanting to get into full frame. I don't consider this camera to be a gimmick just to show Sony's ability to innovate. I look at it as the beginning of a full line of downsized full frame cameras and lenses. Sony could easily equip an R version of this camera with a 50MP sensor or higher.

With the introduction of the 28-60 zoom Sony has shown that smaller lens designs for full frame

are possible. A small macro and fisheye would be nice but I am sure that will be a long way off. What is unique about this camera is that you can move up from a compact or M43/APS-C cameras or down from a DSLR and get high quality images with just the kit lens and two water contact lenses. This camera also worked very well with the smaller Backscatter MF-1's I used for macro and the Inon Z-330's I used for wide shots.

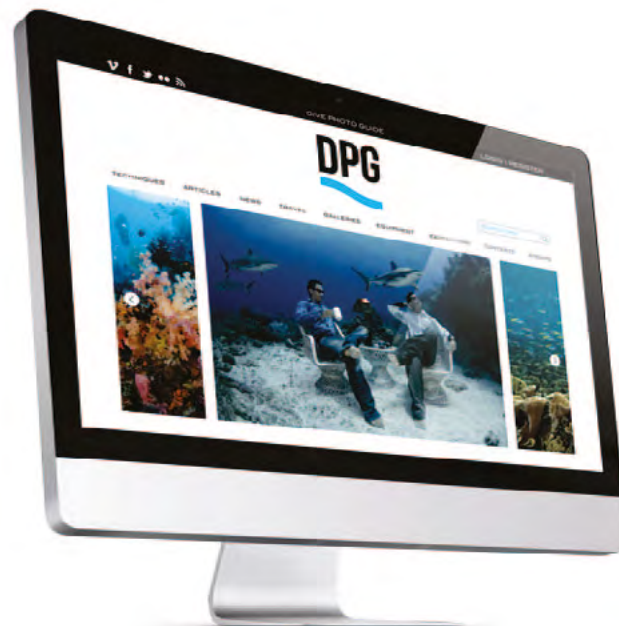
I would once again like to thank Nauticam USA for their assistance with equipment for this review.

Phil Rudin
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SeaLife SportDiver iPhone housing

by Peter Rowlands

The SeaLife SportDiver is a well built and attractively packaged iPhone housing which works with all iPhone® models 7, 7 Plus, 8, 8 Plus, X, Xr, Xs, Xs Max, 11, 11 Pro Max, SE (2nd Gen), 12, 12 Mini, 12 Pro and 12 Pro Max running iOS 13 or higher.

It is simplicity itself to set up once you have downloaded the SportDiver app. This interface enables you to capture photos and video directly to your iPhone's camera roll. The app also allows you to control advanced camera settings, like Zoom, Lens selection, Exposure, Focus, White Balance, Tint, RAW capture, Live Photo and Background Blur, as if you were using a more sophisticated underwater camera.

The iPhone is securely held in place by a sprung loaded grip and the rectangular front port is large enough to accommodate all of the lens configurations and positions. A red filter is also supplied for blue water available light images.

The housing communicates with the app via bluetooth and is powered by two AAA batteries provided. In addition there is a space for a sachet of silica gel to keep the air inside dry and so avoiding any misting up which can happen as the iPhone gets quite warm after repeated use.

There is an internal on/off switch which saves the battery life and this is quoted as up to 50 hours. NiMH rechargeable batteries can also be used.

The polycarbonate housing is a clamshell design with the hinge on the left hand side looking at it from the rear. Once closed the housing is secured by a rotating lever with a safety catch.

The next step is to operate the vacuum system with the supplied hand pump. The app has an indicator gauge to show when the vacuum is correct and then a three minute timer starts to test the integrity of the seal. Once this time has elapsed and the vacuum has held you are ready to go.

The shutter release/Video Stop/Start lever is large and well positioned ergonomically. The housing has four large and well spaced push buttons which are easily operated with bare or thick gloved hands. The on screen display gives useful 5 bar readouts for the iPhone and housing battery levels. This is especially useful for my ageing iPhone X whose battery performance is not what it used to be.

The mode button scrolls through stills, video, settings and playback and, as already mentioned, the settings available help elevate the iPhone from a simple point and shoot to a very capable camera. There is a stepped zoom button which provides up to 10x zoom but as this is merely cropping in on the sensor I limited this to 4x without any serious loss of quality so this is a very useful range.

Unfortunately due to Covid restrictions I have not had the opportunity to take it underwater but



I'm sure that when I do it will be very simple and effective to use.

One particular feature which the iPhone has on land is the Pano function for impressive panorama shots but unfortunately the SportDiver app, like all of the other iPhone housings apps is unable to access to this function. I can only think that this is a limitation which has been inflicted by the Apple software developers which is a real shame because it would enable some amazing underwater images to be shot with just the built in lens. Hey, ho.

The SeaLife SportDiver iPhone housing is depth rated to 40 metres (130 feet) and is available on its own or as a kit with a single or dual SeaDragon video light. There are six models available with differing powers and specs to suit a variety of needs. The angle of coverage of all of them is a soft edged 120° which is more than enough for the iPhone lens angle. The sturdy base tray and arm incorporates a very neat quick release mechanism for hand held lighting.

I think it's fair to say that the majority of smart phone camera users underwater are using them as point and shoot convenience cameras which are small enough to fit in a BC pocket



if not needed. With the advent of the SeaLife SportDiver iPhone housing with its SportDiver app they are able to control the camera functions much more than normal and this should bring an improvement in the quality of images you can produce.

The housing costs €299 or \$299 which considering it comes with a vacuum system and colour correcting filter is very attractively priced.

Peter Rowlands
peter@uwpmag.com

www.sealife-cameras.com



Rokinon 18mm F/2.8 Lens

by Phil Rudin

Since 1979 Samyang Optical Company LTD, the Korean based company has continued to push the boundaries for innovation and craftsmanship in the camera lens industry.

Rokinon is owned and operated by Elite Brands Inc. which is the sole provider of Rokinon, Xeen by Rokinon and Samyang branded products in North America, Central America and South America. Samyang/Rokinon lenses and accessories are distributed in over fifty countries world wide. Samyang has focused on manual focus fixed focal length camera lenses and the XEEN Cinema lens line for years.

This review will be the third in a series of lens reviews using third party "budget" lenses for high resolution cameras. The lenses I will be testing cost anywhere from one-half to one-third the price of the camera manufactures proprietary lenses. In addition to third party lenses, bargain hunters can also find many last generation camera bodies which are discounted as well.

The Sony A7R III released just over three years ago is an excellent example, discounted during frequent

sales in the US by around \$700.00 from Sony's original \$3200.00 retail price when it was first released. Canon EOS R and Nikon Z-7 have also been reduced in price now that second generation cameras like Nikon Z 7 II and EOS R5 have been released.

These reductions make many full frame mirrorless cameras very competitive with newer APS-C and even M43 cameras. Underwater housings and accessories in both the new and used market are also very competitive and often cheaper than those for full frame and APS-C DSLR cameras.

My first experience with a Rokinon lens was for a review of the Sony A7R II and Ikelite housing for UWPMAG.com May/June 2016 back issue #90 using the manual focus Rokinon 12mm F/2.8 ED AS IF NCS Fisheye. Fast forward to May 2016 to the Samyang/Rokinon announcement of their first ever auto focus lenses exclusively for Sony full frame mirrorless cameras.

The first offerings were the Samyang 50mm F/1.4 AS IF UMC and the 14mm F/2.8 ED AS IF UMC. Unlike the 12mm fisheye I tested the new 50mm F/1.4 and 14mm F/2.8



The Rokinon AF 18mm F/2.8 for Sony retail price is \$399.00 but can be found online in the \$299.00 price range.

Turtle, North Florida Springs, Sony A7R IV, Rokinon 18mm F/2.8, Nauticam housing, Nauticam 180mm optical glass dome port, Two Inon Z-330 flashes, ISO-500, F/11, 1/100th sec.



are designed for the flange distance of the Sony FE mount full frame mirrorless cameras.

The 12mm fisheye is a manual DSLR lens with an extension added to the rear of the lens replicating the distance from the rear of the lens to the sensor if a mirror box was included in the mirrorless camera body.

My Rokinon AF 14mm F/2.8 for Sony review is in back issue UWP #112. For an 18mm F/2.8 comparison you may also want to read my review of the much more expensive (\$1499.00US) Zeiss Batis 18mm F/2.8 AF for Sony FE in UWP back issue #92 from Sept/Oct 2016.

The Rokinon 18mm F/2.8 Lens

Before I jump into the body of this review I should first explain why I think an 18mm equivalent lens with a 100 degree angle of view should be in your underwater kit regardless of the sensor size of your camera.

For years I used the Nikonos 15mm and Nikonos RS Rene Aumann 18mm lenses with the Nikonos film cameras. These were my go to wide angle lens from the 1960s' until 2006 when I started shooting digital underwater.

During most of that time period more dive magazine cover shots were made with these two film lenses than just about all other lenses combined. The Nikonos 15mm F/2.8 is an all manual lens with an angle of view of 94 degrees and a minimum focus distance of 0.3m. The Nikonos 15mm is a water contact optic designed for underwater use only.

The Rene Aumann lens is an after market lens designed for the Nikonos RS auto focus camera which maintained the full 100 degree AOV. The

lens is basically an U/W housing with an eight inch dome port built around the guts of a Nikon 18mm F/2.8D AF-Nikkor lens. This lens would auto focus and could be used for shooting splits just like a housed 18mm lens.

Rene Aumann also made the TC-RS 2X teleconverter which I used for years with the Nikonos 50mm F/2.8 R-UW AF macro lens a 1:1 macro. The Nikonos RS system also included an outstanding 13mm full frame fisheye which I also used and which had the advantage of excellent image sharpness, better in the corners than the 18mm but with the same distortion associated with all fisheye lenses.

The Rokinon 18mm F/2.8 AF lens tested for this review is a wide angle prime lens with a 100.1 degree rectilinear angle of view on full frame and a 27mm 76 degree AOV with Sony APS-C. The Rokinon AF 18mm is what Full frame mirrorless users would wish for in a lens, it is compact at just 63.5 X 60.5 mm (2.5 X 2.38") and weights in at only 141g (5.12 oz.).

The lens has nine multicoated Elements in eight Groups. Eight specialized lens elements, three extra-low dispersion elements, three aspherical elements and two high refractive index elements which combine to reduce color fringing and chromatic aberration in order to produce better color rendering and greater clarity. The lens has a multi-coating to help reduction ghosting and flare.

The lens accepts 58mm filters and ships with a very small bayonet lens hood, lens caps and a zipper pouch for travel. The diameter of the lens allows it to be mounted from the rear of any Sony A7/A9/A7c series housing with 100mm or 120mm port openings.

The minimum focus distance is 25 cm (9.8")



Blue Gill, North Florida Springs, Sony A7R IV, Rokinon 18mm F/2.8, Nauticam housing, Nauticam 180mm optical glass dome port, Two Inon Z-330 flashes, ISO-160, F/14, 1/100th sec.

with a 0.09x max magnification. The aperture range is from F/2.8 to F/22 with seven diaphragm blades. The lens has an interior focus design which uses a linear STM autofocus motor that allows it to focus both fast and accurately using Sony full frame

bodies.

The Rokinin 18mm is a no frills lens with no lens stabilization, no manual aperture control, no AF-Manual focus on/off switch, no weather sealing listed on the Rokinin web site and no preset buttons for control from the lens. These are not shortcomings when using the lens in a housing. All of the Sony cameras have excellent in-body image stabilization that works well underwater.

Currently the Rokinin AF 18mm F/2.8 for Sony retail US price is \$399.00, it can be regularly found on sale in the \$299.00 price range. The only other 18mm AF lens for Sony FE is the Zeiss Batis 18mm F/2.8 which currently retails for \$1499.00 and was reviewed by me in uwpmag.com back issue #92, not a budget lens by any means.

For land photography the lens has a smooth manual focus ring which works very well for things like astro photography. I have manual focus set on my Sony bodies so that as soon as I turn the focus ring the area around the focus box is magnified about ten times in the viewfinder. Once I achieve critical focus and half press the shutter the image in the viewfinder returned to the full frame view. I also have focus peaking set to red which assists with achieving critical focus. This lens is quite robust but still has a bit of a plasticky feel.

Mounted on the camera the lens seems really small and light compared to the Zeiss 18mm. Be aware that Rokinin

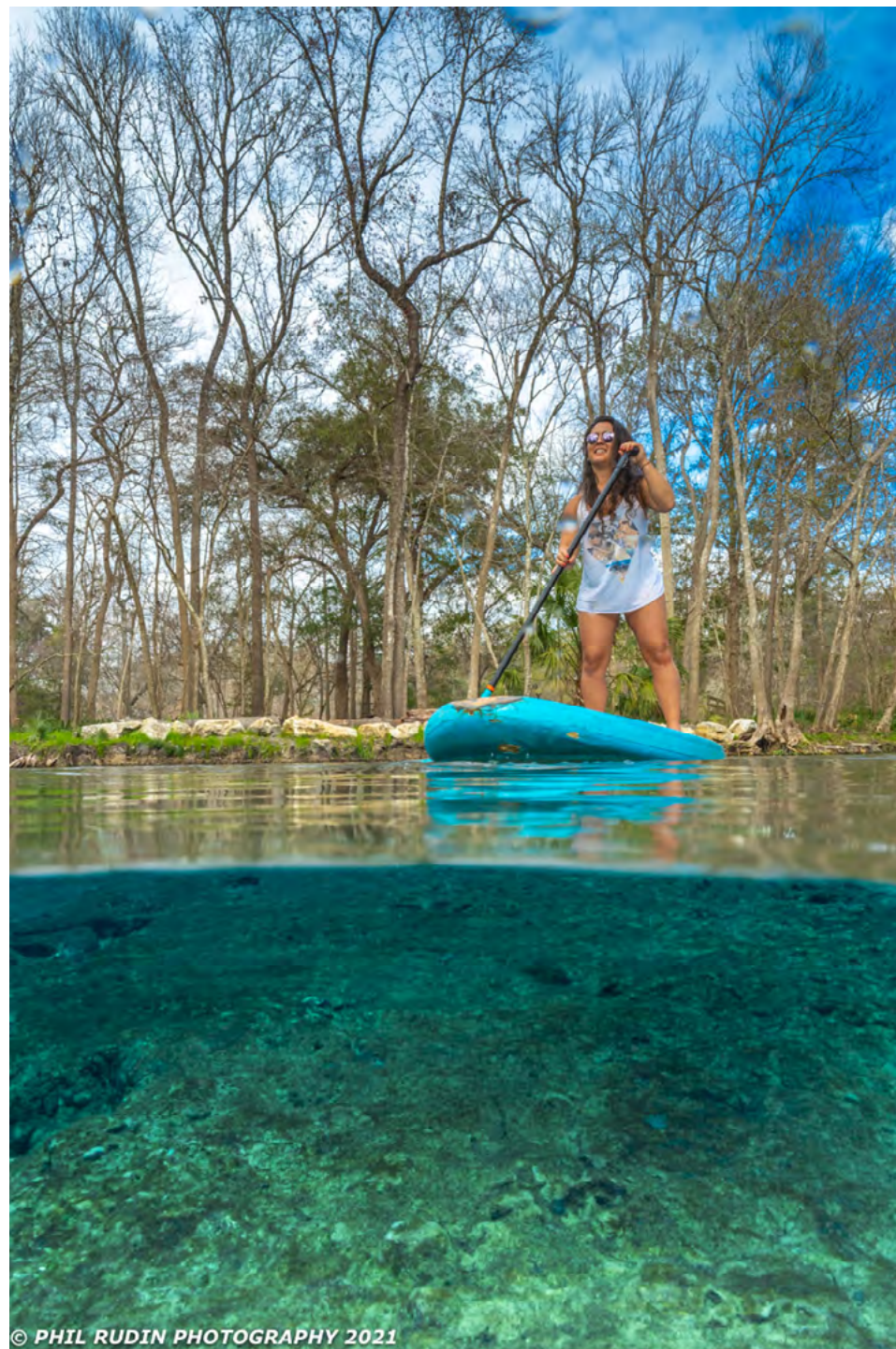


bundles a “lens station for Sony E mount” with several of the for Sony FE full frame auto focus lenses they sell including the 18mm. The lens station has the Sony E mount and is used to update firmware for the Rokinin AF lenses.

You first download the lens station software for Windows or Mac then chose the AF lens firmware you want to update using the provided mini USB cord. So far I have found seven of the nine Rokinin auto focus lenses for Sony full frame cameras offer firmware updates.

I have tested four of Rokinin’s Sony AF lenses and they all arrived factory new needing the firmware

Paddle border Split, Ginnie Springs, High Springs, Florida, Sony A7R IV, Rokinin 18mm F/2.8, Nauticam housing, Nauticam 180mm optical glass dome port, Two Inon Z-330 flashes, ISO-1400, F/14, 1/60th sec.



updates. This is a good thing for photographers because it allows new camera bodies to be added and lens quality can continually be tweaked for better results. The Rokinin lens station for Sony FE sells for around \$60.00, when bundled with a lens the cost remains about the same. Rokinin AF full frame lenses are also coming for both Canon and Nikon FF mirrorless cameras with the AF 14mm F/2.8 for Canon already hitting the market and also needing a firmware update.

Currently the Rokinin AF 18mm F/2.8 and AF 14mm F/2.8 are not included on the Sony A7-series, A9-series or A7c port charts for Aquatica, Ikelite, Isotta, Meikon/Sea Frogs, Nauticam, Sea & Sea or Subal housings. As a result I was on my own to come up with a dome port and extension combination to support the Rokinin 18mm lenses.

For the Aquatica A7rIV Pro housing review I used the Aquatica 200mm (eight inch) acrylic dome port and the 28.5mm port extension for the Rokinin 14mm F/2.8. For even better corner sharpness I would recommend the Aquatica 230mm (9.25 inch) optical glass dome port. For the Nauticam housings for A9, A7 & A7R II, III & IV and A7c with an N100 to N120 35.5mm port adapter I selected the Zen Underwater 230 mm optical glass dome port and a 20 mm port extension for the 14mm and no extension for the Rokinin 18mm. Because of the small size of the lens I don't think a port extension will be needed for the 18mm with ports in the 170mm to 230mm range. Further the smaller Zen 170mm and Nauticam 180mm ports or like options should work very well for most

situations.

Since the purpose of this review is to offer less expensive options that offer excellent high resolution image quality I would also suggest that several acrylic dome ports like the Ikelite compact eight inch port should also work well with the proper or no port extension.

Acrylic dome ports are about one-third to one half the cost of optical glass ports. You can also choose what you already own if it supports the lens. Larger acrylic ports have a tendency to turn port up putting extra strain on the wrist while the optical glass ports are much heavier but still have a large air pocket.

Weights can be added to the dome shade for acrylic ports to help offset the added port buoyancy. I prefer the optical glass ports for split images because they appear to shed water better and I see less ghosting and reflection in the images.

Field testing the Rokinin 18mm F/2.8

I tested the Rokinin 18mm F/2.8 lens with the 62MP Sony A7R IV and Nauticam NA-A7R IV housing with a borrowed Nauticam 180mm optical glass dome port and no extension. I also used two Inon Z-330 flashes using manual power settings and fired with Nauticam fiber optic cables.

I choose the Nauticam 180mm optical glass dome port because the



Pool Test with the Nauticam 180mm port, Rokinin 18mm shot with no port extension my preferred configuration for this lens. ISO-400, F/22, 1/160th sec.

Nauticam port charts recommend this port for the Zeiss 18mm with a 20mm port extension. The Nauticam 180mm port retails for \$1379.00 making the cost difference between the 180mm and the ZEN 230mm optical glass port I own \$520.00 and with the Nauticam 230mm optical glass fisheye port II \$862.00.

Since the object here is budget equipment the smaller port makes sense. Nauticam also has an N120 mount 8.5 inch acrylic dome port which lists for \$724.00 which would also be an excellent option without any port extension. Ikelite recommends the eight inch and eight inch compact ports with a 28mm extension for the Zeiss 18mm so I would test the same ports without the extension for the Rokinon 18mm.

The A7R IV camera was setup using AF-C and Lock-on AF Expand Flexible Spot, with ISO sensitivity ranging from 100 to 640 and aperture settings from F/5.6 to F/18. I first tested the lens in a swimming pool to see if my port selection was in a range where I would have sharp corners without vignetting. The 5.5 stops of image stabilization in camera allowed me to shoot at shutter speeds as slow as 1/20th of a second while maintaining excellent sharpness in the image with static subjects, anything much slower than 1/20th sec. is not very useful for most underwater work.

As you will see from the attached images I found myself using the lens in both Portrait and landscape orientation. In portrait orientation using the two Inon Z-330 flashes you need to reposition the lower flashes to avoid blowing out the lower half of the image by having the flash to close to the bottom.

Above water the Rokinon 18mm F/2.8 lens has issues with corner sharpness and vignetting from F/2.8 to F/4. With full frame underwater the rule of thumb for acceptable corner sharpness is to start in the F/13 range. I have several images attached to the review where the lens was opened wider than F/13 and I will let the reader judge the corner results. The debate over sharp corners is one of the most talked about subjects regarding lens/port choices on the net. This is a deal breaker for some and if you are not willing to shoot at higher F/ numbers perhaps a smaller sensor size would make sense.

I was easily able to lock focus with a half shutter press and drag the focus point around the frame for best composition without dropping the focus point. For humans the eye auto focus locked on even with divers wearing a black mask.

With all wide lenses flash placement is critical to avoid backscatter and like all wide lenses looking into the corners of the EVF



Tech Diver, Devils Eye Springs, High Springs, Florida, Sony A7R IV, Rokinon 18mm F/2.8, Nauticam housing, Nauticam 180mm optical glass dome port, Two Inon Z-330 flashes, ISO-500, F/11, 1/100th sec

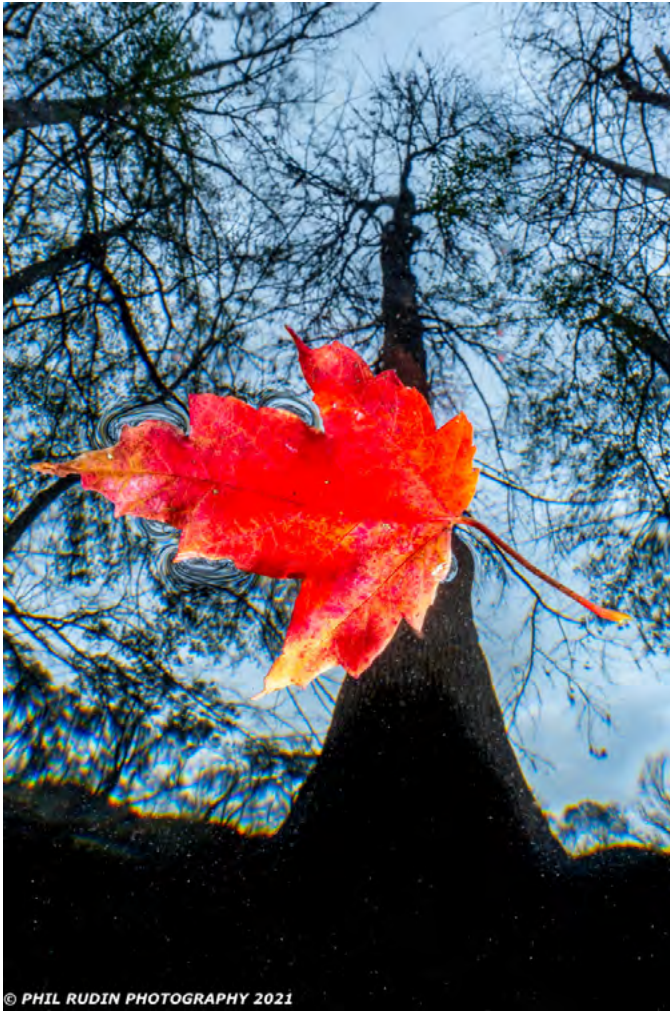
or LCD while composing the image is very important. With the 18mm's 25 cm minimum focus distance the lens focuses very close to the port glass using the 180mm dome.

With domes in the 170/180mm range the port interferes with your ability to shoot extreme CFWA without banging the dome shade on something.

While I was able to get excellent focus at close range extreme CFWA works best with fisheye lenses and a 100-140mm dome port. At the higher F/numbers (11-16) I found corner

sharpness with the Nauticam 180mm optical glass port to be acceptable for publication. I would expect similar results with the ZEN 170mm port.

The Rokinon 18mm is a niche lens for me, my go to underwater W/A lenses on any dive trip remain the Sony FE 12-24mm with the Zen 230 dome port or the Nauticam WACP and WWL-1 water contact lenses. I also use the Canon 8-15 fisheye with 140mm and larger ports but I don't relay on the fisheye nearly as much as many U/W photographers. The up sides for the Rokinon 18mm are its



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Leaf, North Florida Springs, Sony A7R IV, Rokinin 18mm F/2.8, Nauticam housing, Nauticam 180mm optical glass dome port, Two Inon Z-330 flashes, ISO-100, F/13, 1/250th sec.

wide AOV and fast F/2.8 aperture, the ability to get excellent images with a 170/180mm dome port, its smaller size as a travel package, the ability to shoot decent splits including divers and its budget price.

When the image files from the Rokinin 18mm lens are downloaded into LightRoom all of the



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Tech Diver Split shot, North Florida Springs, Sony A7R IV, Rokinin 18mm F/2.8, Nauticam housing, Nauticam 180mm optical glass dome port, Two Inon Z-330 flashes, ISO-1320, F/16, 1/250th sec.

EFIX data appears and lens profiles are accessible. In the LightRoom library the meta data always lists the lens as a Samyang 18mm while in the development module the lens profile appears as a Rokinin/Samyang 18mm.

The Rokinin/Samyang 18mm F/2.8 AF offers

outstanding performance for an under \$400.00 lens and I would highly recommend it as an entry lens for wide angle rectilinear underwater photography along with the under \$600.00 AF 14mm F/2.8. I would expect the results to be similar from the coming Canon and Nikon versions of these lenses.

As a sidebar I would like to add that Nauticam and Ikelite have both releasing housing for the new Sony A7c full frame and FE 28-60mm kit lens. Nauticam's housing is about the same size as the Sony A6600 APS-C housing but with the N100 port mount used for all Sony full frame cameras. Lenses like the Rokinin 24mm F/2.8 and 18mm F/2.8 are the perfect size for this smaller camera for both U/W and land photography. This camera has the 24MP sensor for those not needing the high res specs of the A7R IV. Another upside is that the 28-60 kit lens can be used on all Sony full frame cameras with Nauticam WWL-1, WACP-1 and the sub full frame CMC 1 & 2 closeup lenses. Looking forward to reviewing the Sony A7c soon.

I would like to thank Nauticam USA (nauticam.com) for assistance with the Nauticam 180mm dome port and the technical assistance they provided for this review.

Phil Rudin
Instagram



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.

Tamron 17-28mm F/2.8 lens

by Phil Rudin

Tamron, a Japanese company first began developing precision optical equipment over seventy years ago. In 1953 they began sales of Wide Vision Binoculars and later moved to manufacturing lenses for SLR cameras. Today they make a verity of lenses for DSLR's, Mirrorless cameras, Camcorder lenses, Surveillance camera lenses, Camera modules, Automotive camera lenses and more. Anyone who has been around the camera market is aware of the excellent reputation Tamron has had for years in the camera lens industry.

In February of 2018 Tamron announced the 28-75mm F/2.8 Di III RXD lens for Sony full frame cameras. This lens has superb optical performance, weather-sealing, is light weight, compact and competitively priced. This lens became an immediate success within the Sony Alpha community winning several design awards in its first year.

In June of 2019 Tamron followed up on the success of the 28-75mm F/2.8 by announcing the 17-28mm F/2.8 Di III RXD which is the subject of this review.

In October of 2019 Tamron

announced three fixed focus lenses for Sony full frame mirrorless cameras, the 35mm F.2.8 Di III OSM M1:2, 24mm F.2.8 Di III OSM M1:2 and 20mm F.2.8 Di III OSM M1:2. All three of these fixed lenses have a 67mm filter thread and all three focus to 1:2 or twice life size with the shortest minimum focus distance being 10.92cm (4.3 inches) for the wide 20mm lens.

I have not noticed these three lenses listed on any housing manufactures port charts to date. I suspect all three lenses would work well with dome ports in the dome 170mm to 200mm size range. Since they all focus to twice life size I suspect they may focus inside the port so that the 1:2 magnification advantage would be hard to reach without banging the port glass into the subject. I may at some point be able to test one of these lenses but as of this writing I have not yet seen these Tamron lenses.

In October of 2020 Tamron announced the Tamron 70-180mm F/2.8 Di III VXD. All six of the lenses listed above have the same 67mm filter thread, whether-sealing, excellent auto focus motors, premium



Tamron 17-28mm F/2.8 left, Sony FE 16-35mm F/4 right, both zoomed wide, both with Nauticam gears, Sony A7R IV bodies. Notice the extension at the 16mm on the Sony v. the Tamron at 17mm.

optics and excellent size and weight versus the computation.

Land photographers covet what is commonly referred to as the holy trinity of lenses. This is the 16-35mm F/2.8, 24-70mm F/2.8 and 70-200mm F/2.8. For Sony users the 16-35mm is often replaced with the 12-24mm F/2.8. I have chosen the Tamron 17-28mm F/2.8, Tamron 28-75mm F/2.8 and Tamron 70-180mm F/2.8 as my holy trinity of travel photography lenses based on size, optical performance and cost.

By losing one millimeter on the wide end and 20mm on the long end the total cost of the three lenses is about \$2977.00 US retail, versus the Sony lenses at \$6994.00 retail and \$7794.00 if you swap for the 12-24mm F/2.8.

Tamron 17-28mm F/2.8 Di III RXD

The Tamron 17-28mm F/2.8 Di III RXD is a versatile wide angle zoom for underwater photography

with a retail price of \$899.00 in the US.

The angle of view ranges between 103 to 75 degrees coverage with a 19 cm (7.48”) minimum focus distance and a max reproduction ratio of 1:5.2. By comparison the \$1349.00 Sony 16-35mm F/4 has a minimum focus distance of 28cm (11.02”) and 0.09x max magnification. The \$2198.00 Sony 16-35mm F/2.8 has the same minimum distance and magnification as the F/4 lens.

The Tamron lens has 13 elements in eleven groups with XLD and LD elements to greatly reduce color fringing, improved clarity, color accuracy and reduce chromatic aberration. Individual elements also have a Broad-Band Anti-Reflective coating to reduce ghosting, flare, and improve color fidelity when working in strong lighting conditions like shooting upward angles underwater.

The RXD in the lens description stands for Rapid eXtra-silent stepping Drive or auto focus motors that deliver quite, quick and smooth focusing performance for both stills and videos. Manual focus override is compatible with the Sony direct MF function.

The lens has nine rounded diaphragm blades which contributes to bokeh quality especially at high aperture numbers in the F/13 to F/16 range. By comparison the Sony 16-35mm F/4 has seven diaphragm blades while the Sony F/2.8 version has eleven.

The Tamron lens is 73x99mm (2.87 x 3.9”) 420 g (14.82 oz) with the 67mm filter thread while the Sony 16-35mm F/4 is 78x98.5mm (3.07x3.88”) 518 g (18.27 oz) with a 72mm filter thread. The Sony 16-35mm F/2.8 is 88.5 x 121.6mm (3.48x4.49”) 680 g (1.5 lbs) with an 82mm filter size.

**Sea & Sea
Internal
Correction Lens
left, 67mm to
77mm Step-up
lens right.**



As a footnote I would add that the Sony holy trinity uses two different filter sizes while all three of my Tamron lenses use the same 67mm thread size also used with the Tamron 35, 24 and 20mm lenses. I didn't think this was a big issue until a recent trip I made to North Carolina to photograph water falls. I had, one graduated ND filter and one circular polarizing filter plus a few other toys. The ease of switching filters between lenses and not constantly trying to find step-up/down rings was a time saver.

Sea and Sea Internal Correction Lens (now discontinued)

Lots of readers have ask me about using the SEA & SEA internal correction lenses which was available in 77 and 82 mm sizes. These lenses are “convex meniscus lenses” designed to suppress field curvature at the edges and corners of image.

We all know that very wide rectilinear lenses used behind dome ports particularly on full frame cameras result in soft corners and that the smaller the port the worse the problem becomes all else being equal.

With the internal correction lenses Sea and Sea reports effective image values of two f-stops of light. This means that if at



Abundant Aquatic Plant Life surrounding the edges of Ichetucknee Springs State Park, Fort White, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 17mm, Nauticam housing, Nauticam 230mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-400, F/11, 1/250th Sec.



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North Florida Spring Diving at it best.

17mm behind a 230mm port I am getting what I feel is adequate corner sharpness at F/13 I should be able to get exactly the same corner sharpness two stops wider open (say F/9 or F/10) using the S&S correction lens.

The S&S system chart for the correction lenses is quite short with no recent updates. The chart is confined to Canon and Nikon lenses for both FF and APS-C lenses.

The S&S correction lens was designed for the S&S fisheye dome port 240. On the S&S web site the port chart for Sony A7III/IV housings do not include the S&S correction lens

with any port configuration nor do they include the S&S Universal Dome Port 210 / AR introduced at DEMA well over a year ago. They also don't indicate if the lens will work with fixed lenses as well as zoom lenses.

The only lens I own that actually has the 77mm filter thread for the S&S ICL that I own is the Zeiss Batis 18mm F/2.8 for Sony. I have used the correction lens on the Zeiss 18mm with both 180mm and 230mm ports and I can see the improvement in the corners.

The S&S ICL should not be mistaken for the often misunderstood



addition of a closeup lens of +2 or +4 diopter to a zoom lens. The use of C/U lenses has been carried over from the film days when older zooms only focused to about 45cm (1.5 ft). The C/U lens allowed the older zoom lenses to then focus on the virtual image inside the dome port for sharp focus. The C/U lenses are still recommended for some longer lenses like a 24-70mm zoom but are of little use with wider angle zooms like 14-24, 16-35 or the Tamron 17-28mm.

Using the S&S ICL on the 67mm Tamron or Sony F/4 72mm lens requires a step-up rings while

the Sony F/2.8 lens is 82mm so it is able to use the larger 82mm S&S lens directly. Bottom line is that the S&S lens works as advertised and I got about a two stop advantage with the 230mm port and about one to one and a half stops with the 180mm port.

The S&S internal correction lens retails for \$399US in both 77mm & 82mm. Combined the Tamron 17-28mm F/2.8 lens and the 77mm S&S ICL Retail for around \$1300.00 US which is still about fifty bucks less than the Sony 16-35mm F/4. If you can find the S&S ICL new or in the used market it is a sort of poor mans Water Contact Optic for those already using the zoom lens and port combination.

The alternative to the S&S ICL are Water Contact Optics like the Nauticam WWL-1/1B, WACP and WACP-2. These optics all provide better corners with the proper camera lens. The F/stop advantage with these optics can exceed four stops or F/13 down to around F/5.6 maintaining like corners.

Field testing the Tamron 17-28mm F/2.8

During this review I used the Tamron 17-28mm F/2.8 lens with and without the S&S ICL to access its value. I also shot with the Nauticam 180mm dome port and



(Left) Red cushion sea star or West Indies sea star (Oreaster reticulatus). Spawning. Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 28mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-200, F/10, 1/125th Sec.

(Right) Adult Gray Angelfish, Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 17mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-200, F/7.1, 1/250th Sec.



Zen Underwater 230mm dome port using the N120 40mm extension for both. The Nauticam chart of course recommends the 230mm port for optimum results over the acrylic 8.5 inch and 180mm ports.

The Tamron can also be used with the WACP-2 covering the full zoom range with a FOV of 123-85 degrees on full frame. The 230mm port is a great fit and I had no issues with getting expectable corner sharpness without the S&S ICL at F/11 or higher.

With the 180mm port the S&S ICL is critical for better corners if you shoot below about F/14. All images for this review were taken with the

Sony A7r IV 61MP camera. If you are using one of the Sony cameras in the 12-24MP range results should be excellent as well except for the same corner issues.

Larger megapixel cameras like the Sony A7R IV capture lens flaws more noticeably than lower MP cameras so beware and chose wisely. I find the Tamron 17-28mm F/2.8 up to the challenge of the 61MP sensor and performance is clearly better than with the Sony FE 16-35mm F/4 that I have been using for years. I have not used the Sony FE 16-35mm F/2.8 enough to render my verdict with that lens but I suspect they are very close. I also didn't really miss the extra 1mm

on the wide end and on the short end 28mm is fine for me because I never really used the extra magnification past 28mm on the 16-35.

My test housing was the discontinued Nauticam NA-A7IV housing which I own not the newer NA-a2020 version for the A7R IV and A9 II. I also used two Nauticam 50x250mm carbon fiber arms and two 200mm double ball arms with Nauticam clamps.

For flash I used my two trusty Inon Z-330 set to manual power and fired with Nauticam fiber optic cords using the Nauticam manual flash trigger. With this configuration

the housing is a bit on the buoyant side with the 230mm port and to my liking with the 180mm port. In fresh water both systems are easy to use, in saltwater the 230 turns up a little too much for my liking and I may drop the float arms.

To test corner sharpness I used both ports with and without the S&S ICL and used apertures between F/5.6 and F/16 adjusting for proper exposure using ISO and shutter speed changes.



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Scorpionfish, Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 26mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-80, F/14, 1/250th Sec.

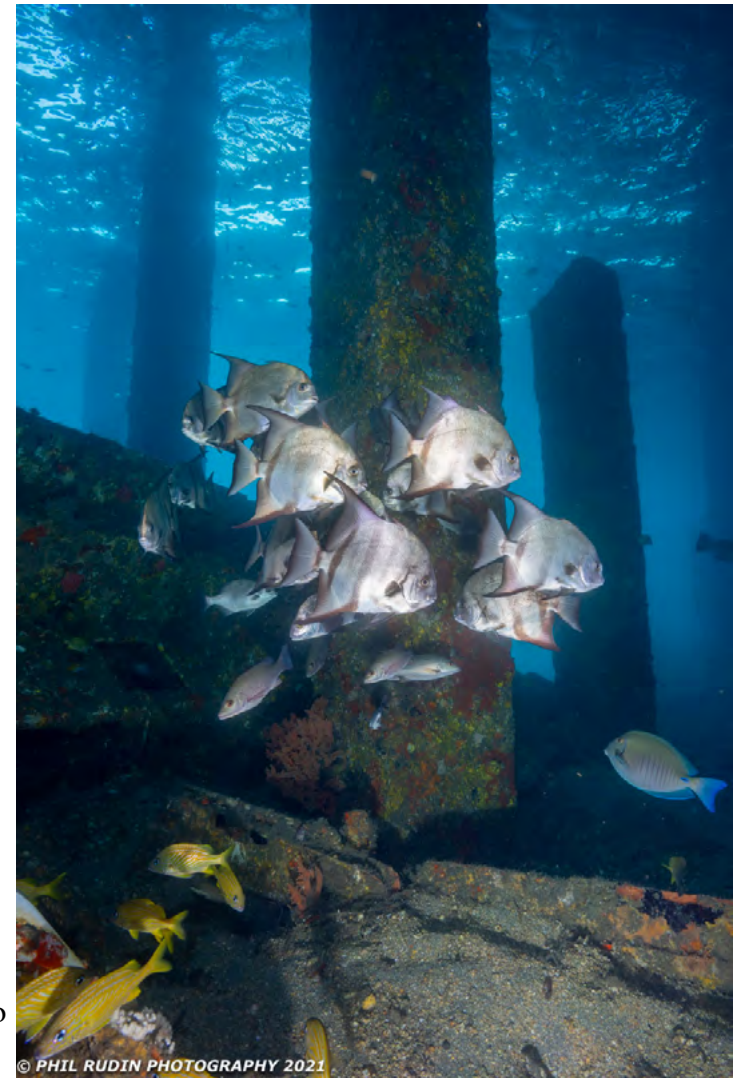
The Tamron lens has a very short zoom of less than a quarter turn from the 17mm end to the 28mm end. I found this very useful when zooming for composition and I am sure video users will also like the smooth movement through the zoom range.

I was shooting the A7R IV camera in manual mode with auto focus set to single shot in drive mode, AF-C in focus mode and tracking expanded flexible spot (medium) in focus area. I manually adjust ISO, aperture and shutter speed on the fly as I have done for decades. The better

the auto focus has gotten on the Sony cameras since my A7 II test the more I have moved between using EVF and LCD for composition.

While I love my 45 degree optical finder with the EVF for most macro the LCD has become quite accurate for wide shots particularly if I am using face and eye detection for humans. This setting is dialed into the camera after being enabled in the menu and only activates when a human is detected so you don't need to switch back and forth when shooting wide.

Atlantic Spadefish under the low Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 17mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-320, F/8, 1/125th Sec.



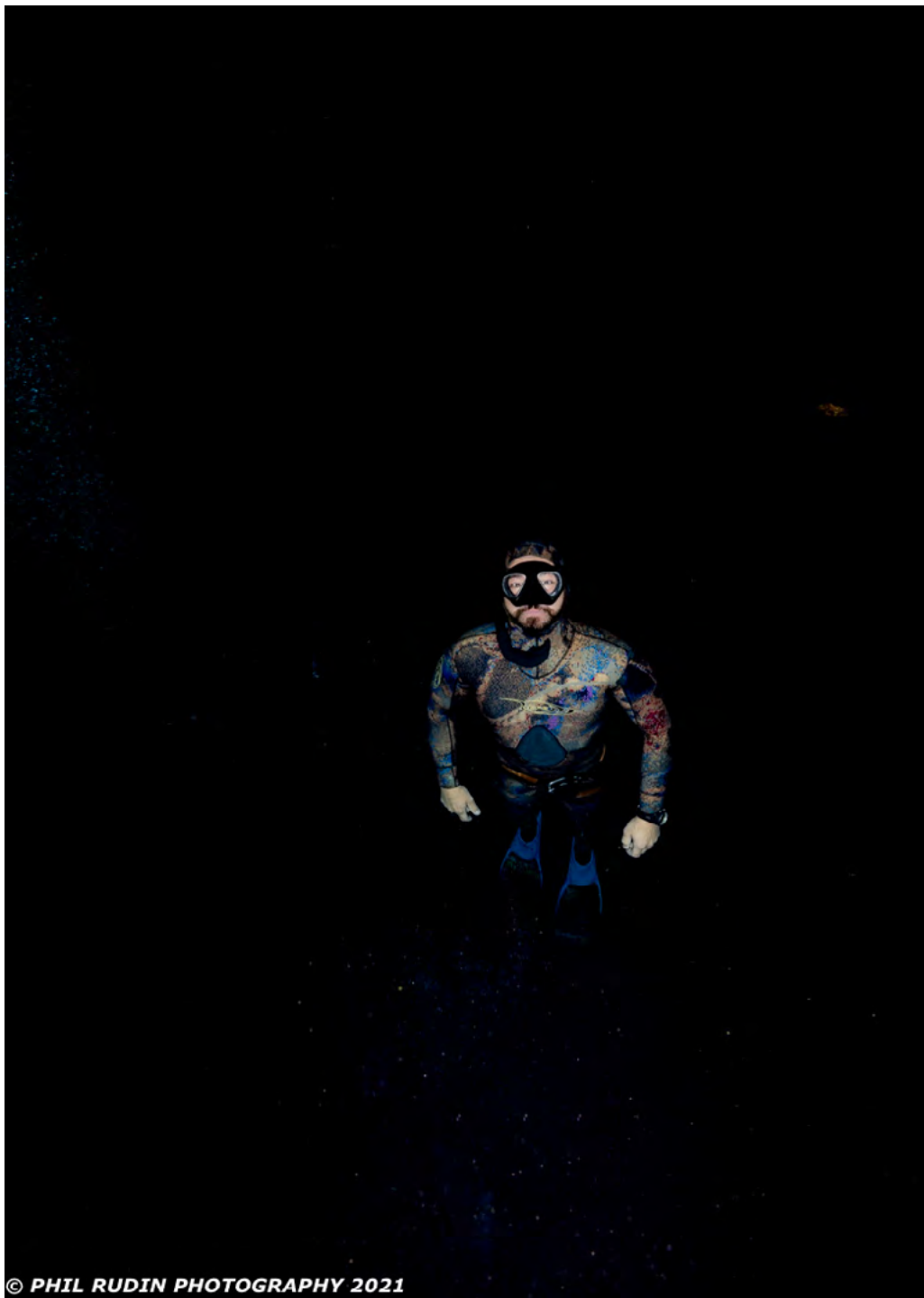
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With the Tamron 17-28mm and the 5.5 stops IBIS system you can take shots with excellent focus down to about 1/15th sec. with slow moving subjects.

Most of the time I am shooting more in the 1/30th to 1/250th range but it is nice to be able to drag the shutter from time to time and know you will be getting good results.

Auto focus speed with the Tamron lens is impressive keeping up with any of the premium Sony

wide lenses I have used. The focus tracking locks on and easily sticks to the focus point even while moving the focus point around the frame. Fast and accurate AF has been my experience with the other Tamron lenses I own as well.



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The attached photo of the free diver coming out of near zero visibility was taken using the LCD and just pointing the camera at the motion I was seeing as the diver began to emerge. The face and eye detection tracking went directly to the divers face as I depressed the shutter without me being able to assess if he was in focus. The result is a tack sharp photo taken in extremely low lighting conditions with a rapidly moving subject tracking directly at the camera.

The rendering of the many colors in the IFFE camouflage wetsuit is also remarkable and at 200% or 300% you can easily see the separation in the divers eye lashes. The Tamron 17-28mm F/2.8 is an exceptional value

at \$899.00US and a lens I can highly recommend.

Nauticam offers support for the Tamron 17-28mm with the STE1728-Z zoom gear and STE1728-F focus gear which each sell for \$207.00US. I would like to thank NauticamUSA and Zen Underwater for assisting with tech support for this review and recommend going to nauticam.com and zenunderwater.com for further information and current pricing for the equipment used in this review.

Phil Rudin
Instagram

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

1) Wide angle



The following eight images are my personal favourites from UPY 2021.

You can see all the winning images by following the link below and you can also download the Yearbook to keep on your computer as inspiration for entering next year's competition!

Peter Rowlands
peter@uwpmag.com

RUNNER UP

'Gothic Chamber'

Martin Broen (United States)

The Riviera Maya in Mexico hosts the world's largest underground river systems filled with clear water, never-ending tunnels and amazing halls with decoration that can compete with the best gothic cathedrals of the world.

The challenge of capturing this beautiful hall in cenote Monkey Dust was not only the huge dimensions but the fact that it is pitch black.

This photo is a x6 shot horizontal panorama stitching captured at 1/15 sec handheld at the usable limit of the camera ISO and diaphragm wide open to create an 86mpx panorama. My aim was to capture the scale, the tridimensionality of it, the richness of the formations and their incredible textures.

Cenote Monkey Dust, Mexico

Sony, A7RIII, Nauticam NA-A7III, Canon 8-15mm at 15mm, iso 6400, f/4.5, 1/15, Big Blue 15000 lumen

Judges comment:

The very best cenote images often catch the judges' eyes in UPY but Martin's picture raises the bar significantly both in terms of jaw dropping beauty and for its technical achievement. This is a place few humans are capable of even reaching, so to get there and then produce a such a demanding piece of photography while in the darkness, deep underground and underwater is a stunning achievement.

Alex Mustard

1) Wide angle



HIGHLY COMMENDED

‘Descending from Above’

Celia Kujala (United States)

Juvenile Steller sea lions are curious and playful. When I was diving at Norris Rocks in British Columbia, I watched large groups of them appear seemingly out of nowhere. They are good at holding their breath but still need to breathe air and would often go to the surface for a breath as a group before descending again. One day I was observing the behavior of a group in the water and I realized I might have the opportunity to capture an image that I had dreamed of. In this moment, everything came together. I took this photo directly upward as they were descending toward me and was able to capture the group inside of Snell’s window showcasing their curiosity and energy. Steller sea lions are listed as Near Threatened on the IUCN Red List. I hope this image inspires people to want to protect them.

Norris Rocks, Canada

Nikon, D500, Nauticam NA-D500 , Tokina 10-17mm Fisheye Lens , iso 500, f/11, 1/250, Sea & Sea YS-D2J

Judges comment:

Curious, mischevious, boisterous; all at once. This was a unique image this year and I never tired of looking at it. A perfectly timed image which shouts ‘The boys are back in town!’

Peter Rowlands



COMMENDED

'The Fastest Nudy'
Fabio Iardino (Italy)

Thanks to the restrictions of the Covid emergency, I was able to very well explore a dive site that many have underestimated. It is actually very interesting for underwater photography. One of the most common subjects is Felimida luteorosea. As a fan of the use of the snoot, I wanted to photograph it in a different way than usual. Using the slow sync technique, I enjoyed making a very slow animal look fast.

Sistiana (Trieste Gulf), Italy **(MBY)**

Nikon, D 850, Hugyfot HFN-D850, Micro Nikkor AFS 40mm f.2.8 + TC Kenko 1,4x, iso 200, f.29, 1/13, OneUW 160x and

Judges comment:

I was drawn to this image immediately and it never faded with repeat viewing. It's a great and very effective use of a technique to make 'a tortoise seem more like a hare!' I thought of a Formula One car when I first saw it :-)

Peter Rowlands

3) Wrecks



HIGHLY COMMENDED

‘Very Wrecked’

Pekka Tuuri (Finland)

In the murky waters of Finland it is really a struggle to find clear water to shoot wide angle. In Kaatiala Mine in wintertime, under the ice cover one can find such water. I had photographed this car wreck several times before. It is very unimpressive! I got an idea to photograph the car as if it were on fire. Lots of light and preferably lots of divers, too. I recruited volunteers and everybody said yes. We planned the photo at the surface and photographed the plan. Everybody did their part. With the help of my can-do friends an unimpressive car wreck turned into a rather impressive photo! And I will go back there. I already have a couple of new ideas

Kaatiala Mine, Finland

Canon, 5D M3, Subal, 15 mm, iso 1000, 2.8, 1/50, Ambient

Judges comment:

This was a particularly stand out image for me and more so each time it came on the screen. The lighting idea is different, graphically simple and visually direct. It makes a very ordinary subject extraordinary.

Peter Rowlands

7) Compacts



THIRD

'Pelagic stingray (Pteroplatytrygon violacea)'

Isaías Cruz (Spain)

This image was taken in summer, offshore from Bermeo, while doing a shark dive. Being surrounded by 3 blue sharks, this pelagic ray appeared to check the bait. It was a very rare encounter, this animal was not been sighted before in this waters, and I too had never seen this animal before. It was going in and out from the bait, so I tried to get close to it calmly, then it come right to my dome and I took the photo.

Basque Country, Spain **(MBY)**

Sony, RX 100 V, Nauticam NA-RX100V, Inon UWL-H100 + dome, iso 500, f/5, 1/160, x2 glowdive max lights

Judges comment:

Beautifully timed symmetry with subtle non distracting surface reflections. A big shot from a small camera.

Peter Rowlands



RUNNER UP

‘The Great Migration’

Mark Kirkland (United Kingdom)

It's the microscopic plankton which draws the massive Basking Shark up the west coast of Britain and into the narrow channel between the Isles of Coll and Tiree. While their migration is predictable, to share the water with them still requires that element of luck and to spend a late summer evening with them (in 2020 of all years) was a dream. I've photographed Basking Sharks before and never managed that classic 'head-on' shot, so decided to try for something completely different instead. With challenging lighting conditions and plankton rich waters, I wasn't sure if it could be done but after two years of planning, an experimental 19-inch dome (frame made by my brother - thanks Paul), trial and error with lenses and ND filters, and of course - the arrival of Sharks - I finally had the chance to find out.

Isle of Coll, Inner Hebrides, Scotland

Olympus, OMD Em5 MKii, Olympus PT-EP13, Olympus 9-18mm , iso 1600, f6.3, 1/200, Natural

Judges comment:

This image raises the bar for Basking Shark shots. There is so much that has to come right to get a shot like this that it might seem impossible but we now have proof. It is possible and it's absolutely awesome!

Peter Rowlands



THIRD

'Nest buddies'

Dan Bolt (United Kingdom)

The corkwing wrasse you can see in the background was actually busy building a nest under the pier. This means he was very distracted by his duties and would regularly come back to the same spot to add more gathered pieces of seaweed.

The nudibranch had been making its way along a near-by piece of kelp, and I only had to wait for a minute or two before it made its way up a seaweed stump enabling me to grab a few shots just at the moment when wrasse and nudibranch were both in frame.

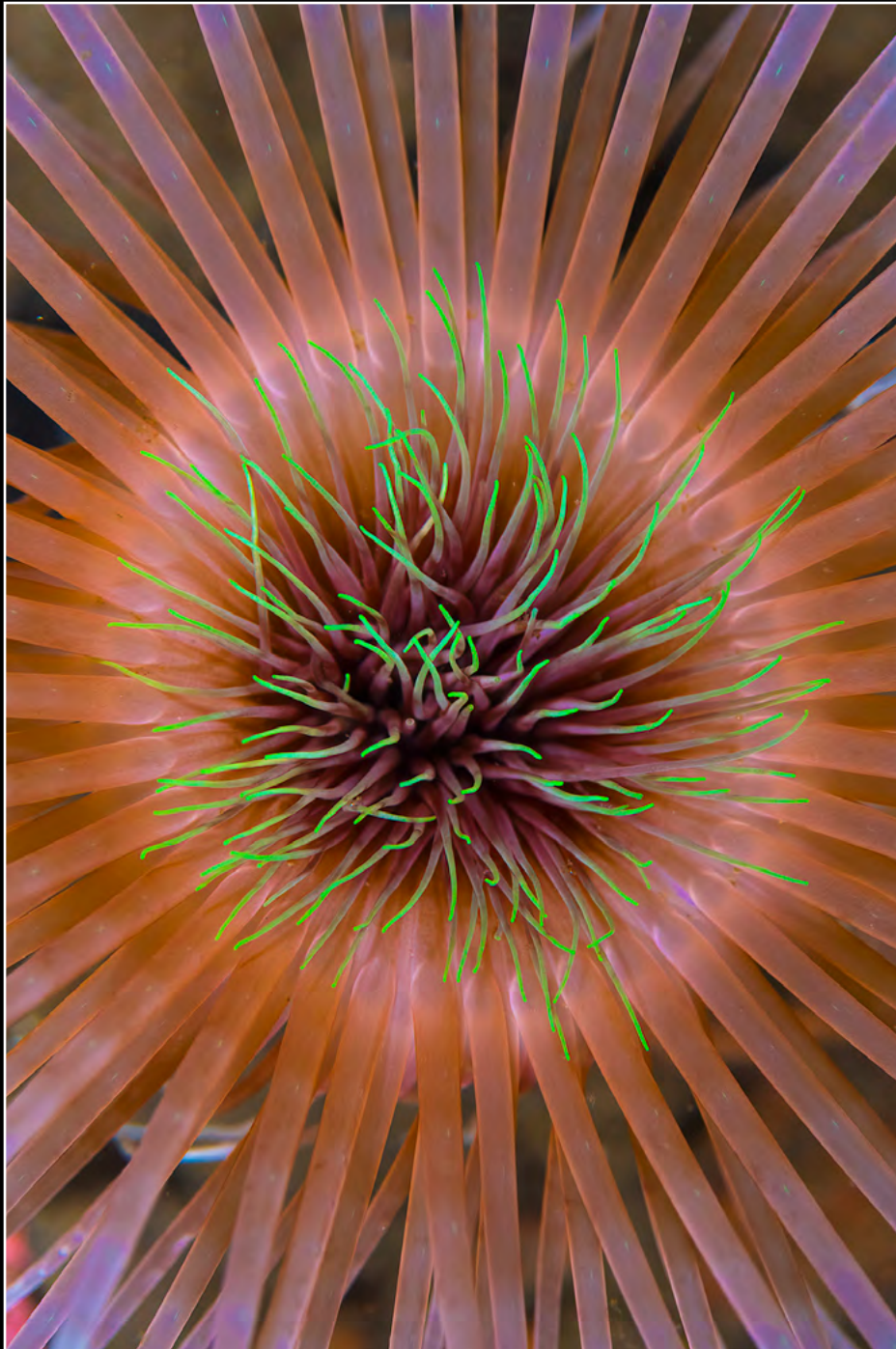
Swanage pier, UK

Olympus, OM-D E-M1, Aquatica AE-M1,
Olympus 60mm macro, iso 320, f/14, 1/250, 2
Sea & Sea YS-D1

Judges comment:

When I first saw this image I thought it was lucky to have the wrasse appear in the background but, having read the photographer's back story, I did him a disservice :-). The image was intentional, well planned, timed and positioned which makes it even more impressive.

Peter Rowlands



HIGHLY COMMENDED

'Firework Explodes'

Simon Temple (United Kingdom)

Anyone familiar with diving the sea lochs of Scotland will have encountered the Firework Anemone. Over the last few years I've tried numerous techniques to capture their image often in dark silty environments. This individual was one of only two in an area we dived repeatedly for three days. After exhausting all the wider angle options in days one and two I had started to work with other subjects and formats in the area. On the final day I was returning from shooting macro further down the loch when I paused by this anemone and wondered if it was possible to take an interesting shot of this relatively large subject with a macro lens. I doubted it was worth it but took a single top down shot anyway. I'm really glad I did.

Loch Duich, western Scotland, United Kingdom

Nikon, D500, Aquatica AD500, 85mm, iso 200, f/11, 1/250, Inon z240

Judges comment:

Such a pretty picture and one I feel is going to make Simon's unconventional lens choice one many photographers will emulate when diving for this subject.

Alex Mustard

Seychelles and the mermaid

by Michel Braunstein

Seychelles is a small and charming archipelago of 115 islands between the tropics in Southeast Africa. With a population of 90.000 inhabitants, the archipelago extends over 1.37 million sq km. Plastic bags are forbidden, and every material is recycled. While the country has an army, it has no enemies. Tourism is Its main industry. Its amazing 65 million years granite formations make it quite a unique place. The country looks like a paradise and worth the visit.

Our adventure began, about a week before our departure. There was an opportunity to fly to Seychelles, so that we got organized quickly.

This was the first time I was travelling since the beginning of the pandemic, a different experience than before. We had to undergo a PCR COVID19 test 72 hours prior to our departure and upload the results to the Seychelles tourism website.

When departing, the airport was rather empty. Oddly enough, the slow queue made me think that there may be many people in front of our group. Of course, the mask was mandatory everywhere in the airport, including during the flight.

We had all heard the not-so-great

diving stories in the Seychelles, so we didn't know exactly what to expect but we were positively surprised.

We joined the Big Blue Divers, a PADI 5 stars dive centre. Liz, the owner, is an elegant and sportive blond woman originally from the Netherlands; she was our dive guide. I am always flabbergasted to see how professional divers with thousands of dives in the area, still show the same enthusiasm during each dive, constantly filming and photographing. That's exactly what Liz is all about; she lives it, it's her passion. So, our first meeting with her was the perfect start to our diving days.

Liz made her best to bring us to the best spots. We got there without expectations, so, from there, we could only go up.

Due to global warming, coral bleaching causes the reef to die in

One of the Big Blue Divers dive boats on its way to a dive spot. Nikon D500, F22 1/200 ISO250

Biter Rock's colorful reefs. Nikon D850 + 15mm fisheye in Nauticam housing + 2 Ikelite DS125 strobes. F8 1/125 ISO200





***Our mermaid Mor free-diving to meet us at 30m depth
Nikon D850 + 15mm fisheye in Nauticam housing + 2 Ikelite DS125 strobes
F8 1/125 ISO200***

tropical waters. We all knew that. In the Seychelles, this is visible in shallower areas, or in waters depths ranging between a few meters to about 15 m. Corals have not been affected in the shallowest areas and in deeper areas below 15 meters.

The Acropora corals, or branching corals, have been severely affected whereas all the porites, or stone corals, are largely intact. Soft corals have also died but they have already grown back. Luckily, fish diversity has not been disturbed.

The Biter Reef was the first dive

spot; it was quite far away from Mahé, the main island. In general, only a few dive centres go that far. We had to navigate for about 45 minutes to get there. Our dive began at 30 meters and then, it was mostly around 20 meters. The visual was quite incredible.

Some beautiful colourful rocks were surrounded by huge schools of fishes such as yellow snappers and fusilier fishes. Small white tip sharks came to welcome us to their universe. We also watched the ballet performance of a beautiful nurse shark. Then came some grey reef sharks, and more



***Liz our divemaster diving close to Mamelle Rock
Nikon D850 + 15mm fisheye in Nauticam housing + 2 Ikelite DS125 strobes
F10 1/160 ISO200***

showed up. Stunning marbled feather tailed stingrays and other types of stingrays, could be spotted all over.

Batfishes were dancing gracefully right above our heads, in the blue, following us all the way back to the boat.

This first dive was the best. The rich life, the variety of fish species, and the beautiful red, orange, and yellow colours made it hard for me to finish the dive. I stayed until I was almost out of air! (I do not advise anyone to do this, it's really unsafe!). Liz was angry with me (for a minute);

sometimes, I tend to “get hungry” when I dive in such impressive and incredibly special dive spot. The second dive in the area was certainly not less amazing.

Our friend Mor, the group's free-diver and beautiful mermaid, “free-dived” to the depths to join us. It was such a delight to shoot pictures of this beautiful mermaid's choreography in perfect symbiosis with the incredible reefs and colourful fish schools.

We were eager to visit that site again and we did so a few days later. Unfortunately, weather conditions



*Oren my buddy shooting some yellow snappers shoals at Biter Rock
Nikon D850 + 15mm fisheye in Nauticam housing + 2 Ikelite DS125 strobes
F10 1/80 ISO200*

were not the best, the visibility was poor and the currents were strong; however, we still enjoyed the dives. Even in difficult conditions, this site's diversity offers the most incredible spectacle.

Our next stop was at the Mamelles Reef. The Seychelles used to be a French colony; therefore, most places bear French names. Then, the Seychelles became an English colony; and so, English (together with Creole) is the national language. Mamelles is the French word for "breasts", supposedly referring to the island's

double rock looking like a pair of boobs emerging out of the water.

The Mamelles reef is a shallow and friendly site. There, we saw many stingrays relaxing on the ground and many kinds of reef fishes. Lots of life!

The next day, we went to the Therese Reef. This shallow area reminds me a little of some the dive sites in Southern Egypt with their huge underwater coral heads. Next to the reef, the beautiful Therese Island was the perfect place for photo sessions.

Our last dive in the region was



*Stingray passing over a yellow snappers shoal in Biter Rock
Nikon D850 + 15mm fisheye in Nauticam housing + 2 Ikelite DS125 strobes
F10 1/80 ISO200*

in a beautiful Brissare Rocks dive site. it features a small tunnel at a depth of 8 meters. Again, conditions were rather bad that day, with lots of surge and poor visibility. It was not easy to move ahead, but we could still appreciate the wealth of life and tons of colourful fishes, turtles, octopuses and more.

On our way back to the marina, rain was pouring, then we suddenly saw a fin crossing the sea surface ...it was a whale shark dorsal fin... we put our masks and fins on to be ready to get in the water. We waited

to see the fin again and got as close as possible to the shark then jumped...I found myself face to face, eye to eye with the whale shark!!! That was so moving! But shit happens...I tried to shoot some pictures, but because of all the stress, apparently a camera setting was modified by mistake, and no image was shot...the meeting with the shark was so short, by the time I turned the camera off and on, the shark was gone...I was so upset!! One of the most amazing moments ever, but no way to shoot a picture ... at least, my friend Oren succeeded



Oren portraying a giant tortoise in La Digue - Anse Source d'Argent. Nikon D500, tF5.6 1/125 ISO100

to get a great shot. I succeeded to get probably the most amazing shot of all our stay, while our Mermaid Mor, moments after having seen the whale shark, so moved, exploded with joy in the water, that was a unique moment!

At the end of the day, we had an amazing diving experience in the Seychelles. Hopefully, we'll go back soon and dive the amazing remote Aldabra Islands. The Aldabra Island location is a bit far, but certainly worth exploring.

Some practical info
The Seychelles, are great

throughout the year. However, like in every tropical country, keep in mind that there are two monsoon seasons, one from July to September, during which, there are some precipitations, and the other from the end of November to February, during which, it rains hard.

Most of the year, people dive with full or shorty 3mm wetsuits. From July to August, people prefer wearing a full 5mm wetsuit.

If you have an option, choose a full wetsuit rather than a shorty; it will do a better job of protecting you from



Mermaid Mor on a typical Seychelles rock at sunrise Nikon D500 +Nikon SB800 Flash. F13 1/100 ISO100

the sun, your knees from the rocks and from cold currents you may cross during the dives.

In the Seychelles, the sun is always up, even when it hides behind the clouds. Make sure to protect yourself as you can get sunburned quickly without realizing it, especially when you are on a boat and with the water reflection.

At some point, when we were at the market, my friends offered to sell me as a tomato, inferring that I had taken a bit too much sun.

Some hotels are truly

unforgettable, and they add a lot to the vacation. For instance, the H Resort/Story Seychelles is a pure dream of place. We enjoyed tremendously our stay in this beautiful place located right in the middle of nature, on the beach, in the area of Beau Vallon. Can you believe that they have their own natural lake, and they recycle everything?!!!

Besides the amazing dives it offers, there are many other ways to enjoy yourself in that little paradise. For example, you can visit the beautiful beaches on the La Digue



Michel and Mermaid Mor, photo by Oren Cohen

Island with ancient typical granite blocs and green palm trees (this is a must), the huge “coco del mare” coconuts in Praslin, the giant tortoises, the creole food, and music, and much more... The Seychelles are also a great place for family holidays.

The giant tortoises are on most islands. If you go to the Curieuse Island, at 10 minutes away from La Digue, you can see the tortoises walking all over the island, completely free. Originally, the tortoises were all brought from the remote Aldabra islands.

If you speak French, sometimes you will surely smile when hearing

to the local creole language, but even more so when you read the Creole. It looks like French but written differently.

Regarding restaurant, I can recommend two amazing places that offer local creole cuisine: Marie-Antoinette and Chez Batista. In Victoria, Bravo is also delicious, it offers a more modern cuisine.

Note to Editor: “Apologies for using the word “beautiful” so many times. A month later, I am still so in awe by this unforgettable scenery”.

Michel Braunstein
www.michelbraunstein.com

The leading online resource for underwater photographers and videographers



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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



No Parting Shots were submitted for this issue :-)

**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

UP Supplement

UP6
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Underwater Photography



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SLR housing breakthrough



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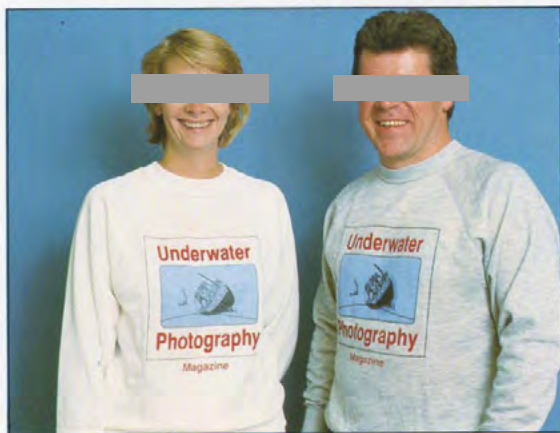
Underwater Photography Magazine

Issue No 6
Oct/Nov 1987

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UP's 'designer' sweatshirts have arrived



Stand out from the crowd in these high quality, attractive sweatshirts but be ready for those overseas assignments. Once they know you read UP, you could be on the next plane with a model at your side and a box full of Kodachrome and all for just £9.50.

Available in white and light grey, the UP sweatshirts cost just £9.50 inc postage. Please state your size when ordering.

Editorial

Brighton '87 is about to happen as I write and it is with anticipation that I am looking forward to this special weekend. The line up of speakers combines exciting newcomers with the old favourites and should provide a balanced and informative couple of days. The underwater film festival is always a well supported side to this event with entries coming in from all over the world, inspired no doubt by the possible prestige and glittering prizes. That underwater photography or photography of any kind should be judged is a bit misleading for we all have our own opinions as to what is favourite. However, that's the system and that's what we accept.

Nothing, however, is perfect and Brighton Film Festivals have been subjected to varying comments and criticisms. The trouble is that most of these take the form of conversations from one underwater photographer to another and do not find their way to the organisers. If such comments do, it is usually by way of a third party and the original comments have been either exaggerated or diluted. The result is that future events tend to repeat the same alterable hiccups because no-one bothers to write and offer helpful/informed response.

Underwater Photography Magazine would like to see the Brighton Film Festivals stay as the showpiece for underwater photography in both the UK and overseas. To do this we would like to hear from all of you who attend Brighton '87 to drop us a line, or phone us, and let us know how you think it went. We will then print the comments and pass them on to Diver Magazine so that they can receive undistorted praise/comments.

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Subscriptions are available by mail order. Annual costs are £15 UK, £18 Europe and £20 Overseas.

Misleading title?

I have read your editorial in issue No 5 and the boring details of the trickery in production of the second-placed entry in the On the Day Competition. Then on Page 25 there is a long description of the preparations for your cover shot.

Perhaps I am out of step with the aims of the magazine: I am fortunate enough to have dived in Borneo, Phuket, the Red Sea and Pennekamp and have seen some underwater wonders as nature made them. The winner of the On the Day Competition showed that the UK has it's share.

To me, it seems patronising and condescending to tell the world that 'innovative' based on 'darkroom trickery and 'manipulated images' is what underwater photography is all about and that the old faithful representation of what you see (given the licence of flash) is old hat.

I shall not be renewing my subscription to UP - had it been offered as 'Underwater Impressionism' I shouldn't have started it. I see far more merit in hours of patience stalking a fish than in arranging pop groups, a model or in taking 18 pictures of a supine scuba diver, and I shall seek a publication which recognises this. If it is boring old American, with their range of marine life, and not the avant-garde Italian, with their choking Mediterranean, I'll settle for that. I wish the publication success with it's followers.

A.Redpath, Fife

Patronising and condescending are the last things we want to be. What we are really trying to say is that all of the barriers should be lifted so that anything goes. If the judges and general public choose the conventional shots (as they did in the BSoUP/Agfa Competition) then so be it but, if we limit our horizons by limiting our techniques, don't we remain stationary?

As a final point to illustrate the dilemma, you request that the faithful representation of what you see be given the licence of flash but this is a manipulation of the natural and so shouldn't be allowed. As soon as you request just one concession, you open up the doors for more so why not open them up all the way and see what happens?

Competitions

Your Aug/Sept issue arrived and as usual I first turned to the Agfa Competition results: it was with some horror that I saw no photograph. Having read the reasoning

behind the lack of publication, I can understand and agree that only first class images should be published.

You ask for suggestions and here are a few ideas:

1. Open every competition to all photographers. If you wish to encourage British work, have a separate prize for the best UK shot and if the overall winner is British award them both prizes.
2. Have UP offer to enter the best image of the year in one of the UK's major photographic shows the next year.
3. If there are no suitable shots for printing, publish the best shot of the lot (without a name), do not award the prize but instead offer constructive criticism on why it failed to win.
4. Again if there are no high quality images, publish the best of those submitted and award say one to five rolls as a consolation - remember some of us who enter are amateurs and encouragement is always welcome.

P. Trotman, Papua New Guinea

It is always difficult for a publisher to include images which they feel aren't up to standard for the casual reader may judge the magazine on such work so I would be reluctant to publish below par material. However, I take your point about encouragement and will print the best shots with constructive comments. In order to remain in the sidelines, I will invite an eminent underwater photographer to judge the entries and pass the comments. This should all start early next year.

Competitions - An alternative view

Congratulations on your understandable pursuit of excellence in the field of underwater photography. However, lurking in the back of our communal mind is the idea that it is just this emphasis on excellence that is leading to the woeful lack of entrants in your magazine's competitions.

Forgive us, but we wonder just how many groans went up on reading how the winning shots in the BSoUP On the Day Competition were taken. Double imaging, jellyfish removed to pools, 16mm full frame fisheyes and so on. Maybe it all resolves into that old professional v amateurs debate or, as we would rather put it, into people who photograph first and dive second, and the rest.

Consider the rest, whom we must suspect form the majority of your readers. Among our circle of maybe 100 plus divers,

there are a sum total of 5 underwater cameras, all Nikonos, accompanied by an even smaller number of strobes, a couple of 20mm lenses and a solitary Subawider. We count ourselves lucky to get away to tropical waters once a year, an interval long enough to forget any of the feel for the medium that was beginning to gel in the head at the end of the last year's effort. In between we try hard to fit UK underwater photography into family life, a job, the British weather and training novices.

Frankly, we don't take pictures for competitions. We take them for a variety of reasons: to cement memories, brighten up winter evenings, help identify species, for personal pleasure and maybe to convince topside friends and relatives that we aren't completely crazy in this inconvenient hobby of ours. We are, to put it bluntly, underwater snapshotters!

We love to see the beautiful artwork that your magazine represents but in our heart of hearts we know we've got about as much chance of reproducing such pictures ourselves as developing a pair of gills. In fact all that excellence produces a sense of near defeatism that may account for the apathy of which you complain.

May we make one or two suggestions? What about a snapshotters corner? Not so much a competition, but readers sending in some of their favourites, with reasons. Yes, the standard would not be so good, and maybe printing wouldn't improve things but perhaps just a few more of us amateurs would say "Hey, maybe we can better that", instead of the perpetual "Oh, why do I bother?"

Perhaps competitions could be based on the type of camera/lenses used rather than on the subject matter. Those of us with limited budgets and basic equipment sometimes feel a little overwhelmed by the Pentax/housing, multiple strobe, costly wide angle approach.

No, this isn't aimed at a justification of inferior photography. More it is a play for some realism for those who love our hobby and would dearly like to participate in your magazine but cannot afford weeks in the sun, dozens of rolls of film and large amounts of fancy kit. Incidentally, have you seen the sun in Britain this last two or three years, let alone been around waiting for that sunburst?

Linda and Paul Dunk, New Barnet

You raise very valid and accepted points and in order to appeal to readers of all levels of photographic competence and

commitment, we will have to cater for all.

As far as an equipment limited competition, I'm not sure this could work and, to a certain extent, we already have this with macro categories.

More competitions

In reply to your comments on the AGFA Competition, here are a few points perhaps worth considering.

I was one of the six entrants whose submissions were dismissed. I knew before sending my entry that it was unlikely to win but thought I would enter into the spirit of the magazine and participate.

Why was my entry of such a low standard? Two reasons.

Firstly, the prize offered was not of sufficient attraction to warrant a special competition-orientated outing with the express purpose of taking a sunburst shot. As a result I went through my library for the best I

could find to fit into the category. Second, time was too short to be able to satisfactorily go out and get 'that' shot. I know the competition details had been published before but I had only been subscribing from the previous month.

Now some other points to ponder. In this month's magazine, there are no details of the next competition or whether it is still on. I seem to recall having difficulty finding details for the 'Sunburst' Competition. Clearer details and rules please.

Whilst I have noted your reasons for the £1.50 entry charge, I still cannot wholly agree with it. In most photographic circles an entry fee would be looked at askance, to say the least.

I am also a bit confused as to the purpose of the competition. Is it to show, in every issue, outstanding examples of photographic genius or is it a competition for the readers of the magazine to enter, with a view to seeing a chance for their level of

photography to be represented and compared with others of similar skill, regardless of level of proficiency.

I feel your comments are more likely to frighten potential competitors than encourage them. Had you printed one of the inferior entries, would not perhaps the readers reaction be "I can do better than that" which is presumably what you are trying to achieve.

The tutorial nature of the rest of the magazine seems to be at odds with what you are expecting to attract to your competition. It should ultimately be a competition for the readers of the magazine and it they are rank amateurs, so be it.

I earn most of my living from underwater photography albeit a different nature from that represented in UP and as such tend to look at the subject in a slightly mercenary light. Having said that, I shall continue to enter the competitions in the spirit of what I understand them to be - reader participation.

If you really want brilliant professional shots, the carrot has to be better to encourage readers to make that special dive or withdraw his/her shots from libraries where they are lodged. Otherwise, let's keep it to an area where even the humblest of us feels able to compete.

I hope that my criticism is taken in the spirit in which it is given - constructively - and hope that the level of entries does rise and improve.

K.Noble, King's Lynn

Many thanks for your comments, all of which are taken in the spirit.

I've reconsidered the entry fee and will remove this in favour of return postage for a revamped competition to start early next year.

This competition will never be able to justify large prizes so we must expect good entries and bad. I hope that when we revamp it in line with readers suggestions, we will arrive at a feature which will please, impress and encourage. That's all we're

trying to do.

Even more competitions

I think you should press on with it. These are still early days for the magazine which is only just beginning to be known. I've talked to several photographic diving friends who have recently discovered it and others who had never heard of it but who were very interested. Anyway, I would have thought that your audience is still growing and that entries for the competition will eventually increase.

Secondly, why not enlarge the scope of the categories a bit? How about something a bit broader like 'crabs' or 'divers in wrecks'. Later, if you are getting too many entries, you could narrow the field down by making the subject more specific.

Mia Buehr, Syresham

Two very valid points, Mia, so we'll continue it with broader categories.

Alverstone Society

Please forward the enclosed letter to Mrs Gray re the Alverstone Society of Underwater Photographers. I would be interested to meet them.

The encouragement to form such societies could become a task for your magazine with a page devoted to local society news. The alternative would be small regional groups of BSoUP as only the very keen are prepared to travel to the monthly London meetings.

There must be so many loners who would like to view others pictures and occasionally make local photographic-only dives.

J.Kentish, Southampton

What do you think?

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Konica's 3200asa colour film



News has just come in of this amazingly fast (5 stops faster than Kodacolor 100!) colour negative film. It offers an unprecedented film speed together with astonishingly fine grain and sharpness.

Konica SR-V 3200 is available in 35mm cassettes. Recommended prices are £3.99 for 24 exposures and £5.49 for a 36 exposure roll.

UP has been supplied with sample rolls and will feature shots taken by leading underwater photographers in a forthcoming issue.

Special Motormarine Package



Sea and Sea have just announced a special package deal when buying the Motormarine 35 SE, Sealoc bulkhead connector and YS 50MS flashgun. A 10% discount is allowed which amounts to a saving of £42.35. The cost is reduced from £423.50 to £381.15.

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Sea & Sea's YS 50MS and YS 50TTL Flashguns

The advent of a major new piece of equipment in the underwater photography world is a rare event but, from time to time, a product arrives which looks set to ring the changes. Such a product is the new flash from Sea and Sea which is available in two models and, we understand, a third slave-only version, is on the way.

That a flashgun should deserve such attention is a little odd for there are already a number of excellent units available but what makes the Sea and Sea models different is what they represent.

The investment in plastic injection moulds and design must have been considerable and this is for a market which is miniscule compared to land photography. The result of this time consuming and expensive research and development has produced new flashguns which not only compete well on specification but, more importantly, for the first time, seem to be offered at sensible prices. And all of this has been achieved to include a design and style which will hopefully pave the way for other manufacturers to follow (you can hardly claim that the Motormarine 35mm camera or the Morris Aquafash, for example, are inspiring works of design!).

YS 50MS

The YS 50MS is a manual unit designed mainly for use with the Motormarine 35SE. It is supplied with a Sealoc male connector but can be used with a Nikonos by adding a Sealoc to Nikonos adaptor. There is a slave facility and it is this version which, we understand, will be made available as a slave only version by removing the Sealoc cord.

The output of the YS 50MS on land is 20 (feet) with 100 asa which, underwater, should give about F5.6 @ 3 feet. Ni-cad batteries can be used to give a 3.5 sec recycle time with around 90 flashes per charge. With alkaline batteries, this increases to 5 secs and 180 flashes respectively.

The YS 50MS head measures just 163x88x113mm so it is a neat unit which won't stretch your carrying case too much. It weighs 650gms on land and is slightly negative underwater.

At £169.95, the YS 50MS is excellent value and will be a challenge to other manufacturers to produce the same quality of performance and design with such an attractive pricetag.



The YS 50MS is supplied complete with arm and baseplate. At the rear of the housing, the control switch and ready light port are situated. The battery cover needs to be pushed home firmly as a positive pressure builds up in the sealed battery compartment.



YS 50TTL

This version is available in two colours to match your Nikonos, either moss green or orange. Physically identical to the YS 50MS, the TTL version has a slightly higher output with a guide number of 24 (feet) with 100asa on land. This increased output reduces the number of flashes with ni-cads to 70 (140 with alkalines).

The Nikonos V connector has 5 connections to link in with the camera's sensing electronics. When the flash is turned on with the camera set to A, the shutter speed will be set at 1/90th and, when



the flash is ready to fire, the lightening bolt sign will light up in the camera's viewfinder.

At the rear of the flash there is an extra port indicator which shows whether the TTL functioned correctly. This lights up for about 3 seconds after the flash has fired. If not, then the flash was giving full output and there could be a possibility of underexposure. It this happens, you should open up the aperture.

The YS 50TTL is the least expensive TTL unit on the market today yet its performance is far from below par. The combination of design, performance and price



The YS 50TTL is the least expensive TTL flash currently available. The arm extends to double the flash to lens distance and a double bracket is available to mount a YS 50MS set to slave on the right of the camera.



makes the YS 50TTL well worth a look.

All models use the same main housing which is injection moulded polycarbonate with a frosted front port to give an angle of coverage of around 90° on land. Underwater, the coverage is sufficient for lenses up to 20mm.

At the rear of the housing, the battery compartment and main switch are situated. The piston sealed compartment is easy to operate and has a simple locking device for security. 4 AA batteries power the units and this compartment is sealed from the rest of the electronics so, if the batteries leak or you induce a flood, no moisture will find its way into the electronics.

The Sea and Sea YS 50 flashguns are supplied complete with a simple arm and bracket for use on either Motormarine 35 or Nikonos cameras. The flasharm has indicators to aid correct positioning for a variety of camera to subject distances and it can be easily removed for hand held shots. The flash head can tilt and the arm can be extended to double the lens to flash distance for reduced backscatter. A double bracket is available to allow two YS 50 flashes to be mounted. One should be set to slave and the other fired directly from the camera.

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Tantalising tentacles

Nancy Sefton explains

There is much, much more to a sea anemone than meets the eye. Close relatives of the corals, anemones can be a photographer's delight, not only for themselves but for the hangers-on attracted to them.

They may look like flowers, but anemones are members of the coral family, known for their cleverness in capturing prey. Imagine a fleshy, hollow sac, an opening at the top acting as both mouth and anus, surrounded by a ring of tentacles.

Anemones come in many sizes: some are dime-size, others may be three feet across; some have a single layer of tentacles, others multiple layers. Some tentacles are long and tapered while others are blunt, even spherical.

Anemones are relatively immobile (although they can creep across the bottom if pressured into a change of location). Like other reef creatures unable to hunt, they must possess the weaponry to ensnare whatever passes by. Anemones are well equipped to do just that. Their tentacles are armed with arsenals of microscopic stinging cells. It requires only the slightest stimulation, such as the touch of a drifting animal, to set things off. Zap! The hapless victim is shot, paralysed and drawn down into the gut cavity to be digested. Even small fish, gullible enough to stray within range, may be captured and devoured by this attractive carnivore of the reef.

Amazingly, some reef creatures actually find anemone tentacles tantalising rather than toxic. Almost every specimen is a small boarding house hosting a variety of fish and other reef animals immune to the lethal stinging cells of their host. This is particularly evident in tropical waters where anemones of many species are abundant. What gives the boarders their special immunity has long since puzzled scientists; however, the answers are starting to become clear.

Blossoming from the Caribbean reef like a giant white chrysanthemum, the anemone *Condylactis gigantea* is never alone; each specimen plays host to several species of shrimp, crabs and perhaps a small fish.

A glance among the swaying tentacles may reveal a dozen or more tiny teardrop-shaped shrimps (*Thor amboinensis*) and perhaps a solitary jewel-like cousin of theirs, a cleaner shrimp with blue, purple and white body markings (*Pereclimenes yucatanicus*).

Two small Caribbean fishes, the saddle and diamond blennies, often perch on their pectoral fins to one side of the anemone; if threatened, these fish jump into the tentacles and rest there until the danger has passed. Hiding near the base of the anemone is the cryptic little anemone crab with its banded legs.

The fragile looking 'corkscrew' anemone is a somewhat more discriminating landlord, its star boarder being the blue-legged Peterson's cleaning shrimp (*Pereclimenes pedersoni*) which uses its host as a home base or cleaning station. Fish afflicted with body lice are attracted by the white antennae, frantically waving among the tentacles. The shrimp dances over to the fish, pirouettes across its body consuming parasites and then returns to the refuge of the anemone.

Perhaps the most graphic illustration of the anemone partnership lies in the Indo-Pacific, home of the strikingly beautiful clown fishes. Both the 'skunk' and blackbacked clownfishes traditionally dwell with giant anemones, accompanied by other fish species immune to the host's toxin. When threatened, the fish actually burrow deeper into the tentacles, often covering themselves completely.

The Pacific clownfish ventures far from its host only to hunt for food; it may carry its groceries home to be stored right in the



throat of the anemone. To all appearances, the little fish seem to be feeding on the landlord! Later however, the clownfish retrieves its now slightly digested titbits and has a snack.

Marine biologists have discovered that these fish are stung on first contact with their host anemone. Thereafter the body mucous, or slime, is chemically altered so that the fish is eventually unaffected by the poison. Why only selected species of reef fish are privileged to become anemone boarders is one of the remaining mysteries surrounding this odd-couple reef relationship.

Anemonies and their boarders are striking examples of symbiosis (partnerships wherein one or both species benefit). If, as scientists suspect, the host anemone derives advantages from the presence of the boarder, then the relationship is a form of mutualism.

The Pacific clownfish, for instance, contributes to its host's nutritional needs by depositing its body wastes among the tentacles; the host also grabs that quick bite from the food temporarily stored by its border. Scientists are seeking to discover the other benefits to the host and will no doubt find them, in time.

Photographing anemones and their friends

Because anemones won't run away, they are as easy to photograph as corals. White anemones, such as the Caribbean's



Condylactis gigantea with its blunt-tipped tentacles (the tips are often tinted blue or green) may be accidentally overexposed. White, wherever it is found, is highly reflective and would normally call for a smaller aperture.

Since many anemones are white or nearly colourless, try to find specimens that have colour near them. Where anemones grow from niches in coral, the surrounding coral surface may be dead, hence white. 'White on white' may be fashionable in some circles

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Tantalising tentacles cont'd....

but photographically it's rather unappealing.

Contact with anemones tentacles triggers a recoiling response; some species will disappear altogether into their niche so to keep anemones looking natural, don't touch their tentacles. This usually means removing the focusing devices on close up equipment and estimating the correct focus distance.

Anemone symbiosis is one of the most engrossing photographic subjects. It's also tricky. Let's begin with the smaller boarders, the shrimps. Most can spring from tentacle to tentacle with ease, craftily avoiding a close up framer. At times, however, they will pose willingly inside a framer as small as 1:1.

The same is true of the Caribbean's anemone fish, mostly blennies. Normally they dodge into the tentacles until the danger has passed. Sometimes blennies co-operate and seem oblivious to framers; if this happens, make the most of it by shooting several exposures.

The Pacific clownfish are a different ballgame. The Nikonos Close Up Outfit with its 28mm and 35mm frame attachments does nicely despite the rather intimidating four-sided framer. The latter can be placed gently among the tentacles and partially buried in them. The clown fish seems happy to pose dead-centre.

A single reflex system in a housing eliminates framers altogether and constitutes an ideal method of capturing anemone partnerships on film.

Divers encountering sea anemones should pause to study and appreciate them, not for themselves alone, but for the menagerie of reef animals residing in, on and under those tantalising tentacles.

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UP in Ireland

Keith Wilson in the Lough Hyne Nature Reserve

Imagine a miniature ocean only one square kilometre in area.....a concentrated collection of almost all types of marine environment found in the British Isles. Lough Hyne Nature Reserve, nestling between rolling hills and jagged headlands in West Cork, southwest Ireland, is such a place.

It is all too easy to go over the top when describing a favourite place but Lough Hyne does deserve all of the superlatives which I, or anyone else, can give it.

Its importance as a marine ecosystem has long been recognised and has resulted in about 200 scientific papers including several key works on marine ecology. Lough Hyne must be the most thoroughly studied environment of its size anywhere and it is still full of surprises.

Lough Hyne is a lucky place too because in these days of depressing tales of the destruction of marine habitats, it is a conservation success story. It became Europe's first fully-statutory marine nature reserve several years ago, just in time to prevent its population of Paracentrotus sea urchins from being exploited.

Last year the 150,000 ton Kowloon Bridge ran itself aground on the nearby Stag Rocks and proceeded to spill 2000 tons of bunker fuel into the clear Atlantic waters. This oil was washed onto shores on either side of Lough Hyne but, thanks to its enclosed nature and the protective booms supplied by the Irish Government because it was a nature reserve, the Lough managed to escape the destruction of the sticky muck. This is a perfect example of the reason for bothering to turn important sites into nature reserves.

Just what makes Lough Hyne so important and what does it offer the underwater photographer?

The Lough is situated in relatively warm Atlantic water on an exposed coastline where fierce ocean swells carve sea caves out of rugged headlands and can smash the Kowloon Bridge into four pieces in just one year. This calm, warm water carries with it larval stages of Mediterranean species, many of which have become established in the Lough.

Moving from the exposed kelp beds and surge gulleys of the Atlantic coast into the nature reserve, we pass over a sheltered sandy creek. The current increases as we approach the narrow tidal rapids which give the Lough its unusual hydrographic conditions. Whistling through the two metre deep river of sea water we see four metre-long Saccorhiza kelp thrashing in the current.



Left. A group of fanworms (*Bispira volutacornis*) open up their delicate shapes to feed and are captured by a Nikonos 111 and close up lens. A bulb flash was used to add colour at F22. These subjects must be approached with caution as the slightest movement will see them retract their fans and so ruin the shot. Below. Lough Hyne from the south east. The water is protected on all sides and the tidal rapids are in the foreground.



The stones underneath are emblazoned with multi-coloured marine life. Suddenly we are in the Lough proper and the current is reduced to a more practicable level for photography as the seabed drops to form the 25 metre South Basin, lined by boulder jumbles and vertical rock cliffs.

The North and South Basins are separated by an island (complete with ruined castle) and joined by the 40-50 metre Western Trough. This unexpectedly deep trench is about 1/2 km long and stretches the length of the Lough along its western edge. So sheltered is this trough that each summer

the cold deeper water becomes separated from the sun-warmed surface waters by a thermocline at about 30 metres. Virtually no mixing occurs between May and October.

During the summer, all of the free oxygen is used up and the mud turns black with sulphides and most of the fauna in the trough dies off to be replaced again when the surface waters cool in the late autumn. In the rest of the Lough, however, the bright, clear oxygenated water allows this mini-ocean to support over 100 species of sponges, 80 species of sea-slugs and 300 species of marine algae to list but a few.

Such is the range of habitats that the Lough Hyne Nature Reserve unquestionably hosts a larger proportion of the marine flora and fauna of the British Isles than in any other area of comparable size. Where else could one go to photograph a complete range of marine environments in one dive? Here are 30 metre vertical cliffs, 50 metre shore dives, shelter every day of the year, exposed kelp beds, sunlit shallows, sea caves, tidal rapids, rare and beautiful species, good visibility (often 20-30 metres).... indeed plenty to wet the appetite of any underwater.

Lough Hyne even has its own tides. Knowledge of these will save a lot of incon-



An edible crab practices Zen Buddhism surrounded by the profuse marine life. Nikonos 111 with close up lens and bulb flash. 1/160th @ F22

venience, particularly if taking a small boat through the rapids. The flood tide at the rapids lasts 3 3/4 hours and the ebb is 8 1/2 because of the shallow sill situated above M.T.L. (outside). The tidal range outside the Lough is 3.5 metres and only 1 metre inside. The fastest currents at the rapids

occur at low water (outside) when a river of water tumbles out of the Lough, dropping 3 metres in less than 50. At this phase of the tide the rapids are only 1 to 1.5 metres deep and the current speed is FAST. I think that it touches 9 knots so do be careful with your cameras! It is, however, a spectacular place



Above. The diversity of marine life is so concentrated. There are over 20 species in the above shot. Below. Fanworm (*Bispira volutacornis*) in more detail with a 1:2 extension tube.



to take cine or video of a diver drifting (at running speed) through a river of thrashing kelp. There are even a few places where it is possible to hang on but bulky housings must be secured to a rope attached to the shore before attempting footage of this nature. Such activities are much safer during the flood tide when the water is a little deeper and a lot slower.

Before diving Lough Hyne it is necessary to obtain a permit from the department of Fisheries, Forestry and Wildlife, Leeson Lane, Dublin 4. Be aware that the taking of shellfish is definitely out! It is illegal to take shellfish by diving anywhere in the Republic of Ireland so please don't try to remove lobsters or scallops from such a special place as Lough Hyne. But you will be too busy taking underwater photographs to bother about them anyway.

Keith Wilson

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UP Overseas in Bonaire

W.Gregory Brown reports and illustrates



During the past ten years, Bonaire has become a giant among dive destinations. The perpetually calm, clear waters surrounding this friendly Antillean island, coupled with the smorgasbord of marine life, has attracted scuba enthusiasts from every corner of the globe.

Located approximately 50 miles north of Venezuela in the Netherland Antilles chain, Bonaire is a sparsely populated island bathed by the deep blue waters of the Caribbean. The climate on this friendly Dutch island is ideal. The temperature year round runs between 78-84°F with prevailing winds from the southeast. The constant wind keeps the ambient air quite comfortable but don't worry, it does not affect the

diving.

Rainfall on Bonaire is scarce, averaging 22 inches annually. The low rainfall, in conjunction with the warm temperatures and the ever-present trade wind, gives the island a dry, arid climate.

While Bonaire's climate is not particularly hospitable to many terrestrial forms of life, it is near-perfect for the growth of healthy corals and for the production of marine life. In 1979, the Bonairean Government, with the support of the Netherland Antilles National Park Foundation and with financial aid from the World Wildlife Fund, demonstrated their commitment to protect this fabulous marine environment by giving it 'Park' status.

The macro life on show during a night dive off Town Pier will keep underwater photographers happy for many rolls of film.

Housed Nikon F3 with a 55mm macro lens. Lighting was from 2 SR 2000 flashguns.

Bonaire Marine park encompasses all of the coral reefs encircling Bonaire and Klein Bonaire. (Klein Bonaire is a small, uninhabited island approximately two miles off Bonaire's west coast).

It is forbidden to spearfish or to remove any kind of marine life from these waters. The strictly enforced conservation laws have been highly instrumental in keeping the reefs free from human impact.

Surrounding both islands is a fringing reef that begins at the shoreline in several areas. A majority of the dive sites along Bonaire's west coast are clearly marked with mooring buoys and are easily accessible from the shore. This allows divers the freedom to choose when and where they dive.

Most of the diving is off the west coast, the sheltered side of the island. Surf along this coast is almost non-existent making beach entries simple. For at least 20 of the better dive sites there is a swim of less than 50 yards. The only thing which could possibly make it easier was if someone offered boat trips to these sites and it just so happens that Bonaire has several first-rate dive services to accommodate boat diving enthusiasts. In addition, they run trips to Klein Bonaire on a daily basis.

Currently, there are five dive operations to select from. Three of these operations offer full services to the underwater photographer and are located on the premises of oceanfront resorts.

The Flamingo Beach Resort, a Divi Hotel, ranks as one of the Caribbean's finest. This 110 room complex is home to Peter Hughes' Dive Bonaire. Because Flamingo Beach is attracting more divers every year, Dive Bonaire is continuously upgrading its already remarkable diving facilities. Unlimited beach diving with two optional



Above. The crystal clear Bonaire waters are very accessible from the shore and the vivid corals are visible to snorkellers and divers alike. The quality of diving is very high and the onshore dive shops cater for unlimited diving.

Right. A sea horse is captured with a housed Nikon F3 with an Ikelite 225 flashgun and a 55mm macro lens.



boat trips per day is standard and night diving is available. Centrally located in the hotel's grounds, Photo Bonaire offers same-day E6 processing, underwater video, photography instruction and equipment rental/repair. Their new expanded centre is, without question, the class of the Caribbean.

The Bonaire Beach Hotel is the largest resort on the island. This 145 room hotel has become popular with divers and non-divers alike. Among the many extras, it features spacious air-conditioned rooms, a newly renovated casino and the largest sand beach on the island's west coast. What's more it is the home of the Bonaire Scuba Centre which is equipped to handle large groups while still affording personalised service.

Bonaire cont'd... Three flat top pontoon dive boats are available to carry divers on morning, afternoon and night dives, seven days a week. Each boat takes from 12 to 24 divers in comfort. Underwater photographers will find overnight E6 processing on the premises and a selection of photo rental gear is available if required. Special dive charters to less visited dive destinations and all day trips to Klein Bonaire can be arranged with a little notice in advance.

Perhaps the nicest thing about Bonaire Scuba Centre is its proximity to some really good diving. Not more than 30 yards from the dive shop Front Porch Reef begins in 25 feet of water sloping quickly to 100 feet along the outer edge. This busy reef is alive with extremely friendly fish and small invertebrates of every size, shape and description. Macro photographers will find this site extremely interesting.

Approximately one mile north of Bonaire Beach Hotel is a unique hideaway for divers called Habitat. Divers staying at the Habitat will quickly come to understand the diving freedom concept. It's really quite simple. The Habitat's Dive Centre is set up to allow diving 24 hours a day. You dive when you feel like it! Four boats carrying up to 12 divers each leave daily for morning and afternoon dives. Night dives are scheduled on request. When boats aren't running, there is a wonderful reef starting directly beneath the Habitat's pier. The Habitat's resident photo pro, Andre Nahr, can accommodate E6 processing needs and give introductory or advanced courses.

Regardless of where the visiting diver stays, he, or she, will encounter spectacular diving. Here is an abbreviated example of what to expect.

Angel City lies 50 yards off Bonaire's west coast towards the Island's southern tip. The unusual coral formations found here rise up from the bottom like giant mushrooms, resembling hobbit homes. Fish cleaning stations are plentiful throughout the reef and, as the name implies, angelfish are a common sight.

Undoubtedly the most popular site for night diving is the Town Pier, located in Kralendijk's Harbour. The attraction of this site is the pier pilings which are covered with a wide variety of marine organisms. Bright orange tubastrea corals, colourful sponges, tiny shrimp, gorgeous anemones, Christmas tree worms, juvenile tropicals and seahorses are some of the critters encountered beneath the beach pier. All of this can be found in less than 25 feet of water giving the underwater photographer plenty of time to record some outstanding images.

Several miles north of Kralendijk, the island begins to rise well above sea level. Along this section of the west coast, fossilised



limestone cliffs drop vertically to the ocean's edge. The underwater terrain in this area changes similarly.

One of the finest dive sites in this area is called Rappel. Where ocean meets island, a splendid coloured reef plummets straight down 15 feet before leveling out onto a shallow terrace averaging depths of 20 to 30 feet. While exploring the terrace, divers are likely to find beautiful lettuce slugs, lobsters hiding in crevices and a profusion of small reef fish. Some large tiger grouper frequent this area as well.

Like Bonaire, Klein Bonaire is blessed with a number of remarkable dive sites beginning right at the shore.

Forest is an absolutely incredible reef where divers can see trees of black coral in 70 feet of water. Interspaced among black corals are the beautiful orange elephant ear sponges. The combination of these two organisms will keep the wide angle photographer busy for the duration of the dive.

One of everybody's favourite sites on Klein Bonaire is Ebo's Special (aka Jerry's Jam). From the water's surface down to 110 feet, this reef is literally carpeted with healthy hard corals. The fish life is unbelievable. Almost every species of reef fish native to Bonaire can be found here. Trumpetfish, filefish, puffers, basslets, morays, groupers, angelfish, snappers, grunts, squirrelfish and parrotfish are all inhabitants at Ebo's Special. The picturesque reef and the diversity of marine life seems to recreate scenery from some enchanted storybook land. A dive at Ebo's Special is an unforgettable experience.

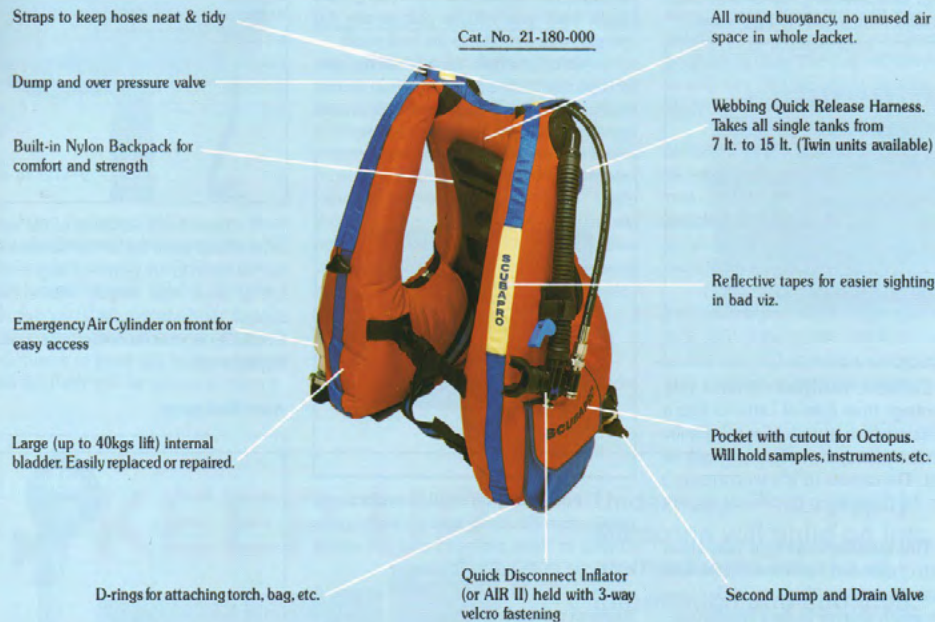
Every trip to Bonaire is a completely new adventure. Underwater photographers especially, will find this piece of paradise one of nature's finest gifts.

W.Gregory Brown



Top. Sponges at depth with silhouetted divers are made for a 15mm lens and lit with a Subsea 150 flashgun. Above. An Angelfish is just one of hundreds of species in this protected marine park. A 55mm macro lens allows shy fish to be photographed without focusing framers.

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Basic Course

Which flashgun?

To inject the most improvement into your underwater photography, the first accessory you must consider after the camera is a flashgun (Americans call them strobes). The reason why they're so important is that they put back the light and colour which the water takes away so eliminating the rather monotonous green or blue shots which result from available light shots.



Electronic flashguns convert a very small voltage from a set of batteries into a high voltage which is used to fire a flashtube and produce a very short duration flash of daylight. The camera (if it's set correctly!) triggers the flash when the shutter is fully open.

This instantaneous light lasts about 1/1000th of a second and is even faster with TTL/auto flashguns. This can make your pictures much sharper in dark conditions.

Flash exposures

In order to set the correct aperture for a perfect exposure, you must estimate the distance from your flash to the subject. The closer this distance, the smaller the aperture will have to be. To help you choose the correct aperture, all flashguns are given a guide number which is an indication of its power. The higher the number, the more powerful the flash.

A typical guide number might be 32 in feet with 100asa. You divide the flash to subject distance into the guide number to arrive at the correct aperture so at 2 feet you would set the aperture to $32 \div 2 = F16$. At 4 feet it would be $32 \div 4 = F8$.

Underwater, where the water clarity varies so much and the water absorbs light much more, you must take this into account. The simplest and most permanently effective way to establish exact underwater figures is to take a test set of exposures under-

water.

Using a subject of average reflectance, take a series of flash exposures using apertures from F2.8 to 22. Slide film is the best for this as it is more exposure-critical. Make sure the flash to subject distance is fixed and known and that you make a note of each aperture used so that when you get the results back you will be able to see the aperture which produces the best result.

Once you have established the correct aperture for one distance, repeat the test for another and so build up a set of apertures for various flash to subject distances.

ASA 40		ASA 200	
1 — 1/22 to 1/32	1 — 1/32	2 — 1/22 to 1/32	
2 — 1/16 to 1/22	2 — 1/22	3 — 1/22	
3 — 1/16	3 — 1/22	4 — 1/16	
4 — 1/11	4 — 1/16	5 — 1/8 to 1/11	5 — 1/11 to 1/16
5 — 1/8 to 1/11	5 — 1/11 to 1/16	6 — 1/5.6 to 1/8	6 — 1/11
6 — 1/5.6 to 1/8	6 — 1/11	7 — 1/4 to 1/5.6	7 — 1/8 to 1/11
7 — 1/4 to 1/5.6	7 — 1/8 to 1/11	8 — 1/4	8 — 1/8
8 — 1/4	8 — 1/8	9 — 1/3.5 to 1/4	9 — 1/5.6
9 — 1/3.5 to 1/4	9 — 1/5.6	10 — 1/3.5	10 — 1/4

ASA 35 CLOSE-UPS ONLY

Fortunately for us all, manufacturers usually provide an exposure sticker or guide to give us these settings but it is a useful exercise to do just to make sure.

There are several types of flashgun currently in production. They can be simplified into the following categories:

Manual flashguns



These are standard units which emit the same amount of light when fired. Their circuits are much simpler and should therefore be more reliable. Since the output is consistent, you alter the aperture to reflect the flash to subject distance.

Multi-power manual flashguns



These are a variation of the manual units which have the ability to reduce the output down to 1/2 power (1 stop less) and 1/4 (2 stops less) output. This ability to control the light output gives you more flexibility in your flash to subject positioning/distance.

Auto flashguns



These units have a separate sensor which reacts to the amount of light being reflected back from the subject. If this is too much, it will cut the output of the flash and so ensure no overexposure. This quenched light is then stored for future use so giving a greater number of flashes.

TTL flashguns

These units are the same as the auto units except they have a direct link to the sensor in the camera which reads the light falling on the film during the exposure. This link also takes into account the film speed and the lens aperture. The result is a very neat and accurate system which is not prone to parallax inaccuracies and which reduces

the number of linking cords and connections. They make foolproof exposures possible with your first roll of film.

Slave flashguns

These are usually normal flashguns with an extra switch setting for a sensor which reacts to the light from other flashguns. When another flash is fired, the sensor triggers the flash instantaneously. These sensors react to a rapid change of light rather than a high level of ambient light so they are more reliable when the triggering flash is as close as possible. If you are buying a flash for the first time, this facility is a red-herring (except for your buddy) as you will need another flash to trigger your slave!

Angle of coverage

Most flashguns fall into two main types - standard angle (covering up to 70° for the Nikonos 28mm) and wide angle (up to 100° for the Nikonos 15mm). To make a standard angle flash cover a wider angle, they can be spread with commercially available diffusers (a good old hanky wrapped around the flash will do almost as good a



currently available. Standard alkalines can be used only once until flat but ni-cads can be used and then recharged for future use. Most modern flashguns will take ni-cads but it is advisable to check your instruction book just in case. The surge of power which ni-cads can provide might damage certain electronic components.

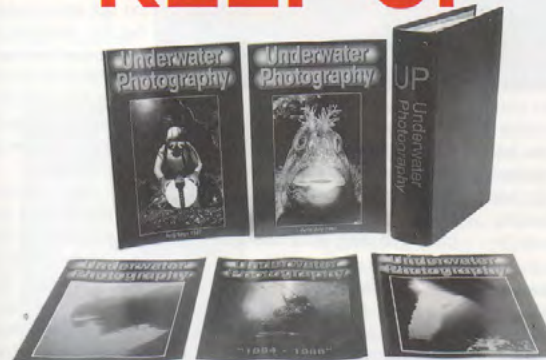
Although more expensive initially, ni-cads offer a long term saving as they can be recharged over 500 times. This major cost advantage is balanced by fewer flashes per charge. Alkaline batteries usually give up to twice as many flashes but will not recycle the flash as quickly.

As your flashgun is such an important part of your equipment, take time to look at all of the options which are available so that you end up with a unit which suits both your needs and your pocket.

Batteries

There are two main types of batteries

KEEP UP



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Georgette Douwma's upside down winner

Whenever I go away on a diving trip to take underwater photographs, I always make sure that I've got plenty of film. After all, it's the least expensive part of the overall budget when you take travel and accommodation costs into consideration. This also lets me use as much film as I feel is necessary to capture my subjects.

There are times when one or two frames can be enough to satisfy me that I have something useful but there can be others when a whole roll may be used if the variables are plenty and the subject stimulating.

The result of these trips is a pile of films which have to be processed when I get back. As I am a great believer in using colour negative film, that means hours in the darkroom processing the films and then producing colour contact sheets. Once done, though, I have a file of all of my material from which I can decide which ones to print.

My choice of colour negative film is because I like producing colour prints for competitions and personal satisfaction and because the exposure is not as critical as slide film. If I want to make slides, I can convert the negatives by copying them 1:1 using 'print' film. This is a misleading name for a film which converts colour negative shots into colour slides but that's what it does.

So as you can see, what with the processing and contact sheets and then the copying to make slides, I have my work



cut out when I get home! And it is precisely this which can make me become a bit swamped with material and work so my appreciative eye may not be fully focused when looking through all of the images in search for competition winners.

With this in mind, I tend to print those which please me straight away and then make a point of looking back through the contact sheets a few months later when I've forgotten about the physical details of the trip and can look at each frame subjectively.

The shot above is a good example of this.

In March, I went to Eilat for a couple of weeks concentrated underwater photography. On a dive towards dusk at the Lighthouse, I was in the tunnel/swim through in the middle

this stupid lionfish was upside down and wouldn't be persuaded to turn over!

That finished the session for me and when I first looked at the contact sheet, I didn't pay much attention to these shots as I remembered the circumstances and was sure that it was pointless printing an upside down lionfish shot.

It was only after a 6 month rest that I went back to the sheets from this trip and started to print a few more negatives for an overseas competition. I had forgotten all about the stubborn lionfish and instead was just looking at images. Of the 6 or so frames, this one was by far the best and I only thought about the history of the shot when I saw the fully enlarged print. By that time, it was too late and I could see that this particular shot had worked well despite the subject! If you turn it upside down, you'll notice that the surface light at the top is darker than at the bottom.

This experience has sent me back to my contact sheets in search of more material but, to date, I haven't found anything as odd as this one which has managed to work. That doesn't mean to say I won't stop looking, for tastes vary as time goes by and what may not have pleased last year could be appealing this year.

Georgette Douwma

when I saw this lionfish approaching from open water. Anyone who knows lionfish will confirm that they are reluctant posers but, since this was nearly dusk, my subject was just beginning to think about eating out and thought that there would be a suitable meal in the tunnel.

My excitement at finding a lionfish willing to pose combined with its background being the fading sunlight made my trigger finger itchy. Everything looked great with this lionfish and sunburst.

My Pentax LX in a Hugyfot housing had a 28mm lens in place and the flash was a Subatec S100. 1/90th @ F16 with 100asa Fujicolour negative film seemed right and I fired off half a dozen shots.

It was only when I took my eye from the viewfinder that I noticed that

A Guide to diving in the St Abbs & Eyemouth Voluntary Marine Reserve



This 32 page booklet covers all aspects of diving in this area at the eastern edge of the Borders region of southern Scotland. There is water information, useful local phone numbers including Coastguard, Police, Doctors, Compressors etc followed by a description of 9 dives around St Abbs, 2 at Petticowick and 7 at Eyemouth. There are useful maps and diagrams for those who are new to the area.

This booklet is available from Bob Boulton, Secretary, Berwickshire SSAC, with an A5 sae. Trade enquiries are also welcome.

Book of Fishes by Hillary Hauser



Anyone familiar with the American Skin Diver Magazine will recognise this book straight away for it is a compilation of their 'Fish of the Month' features. 192 A4 pages with a full page colour shot and another of text giving general remarks, physical characteristics and details of the fish's diet and habits.

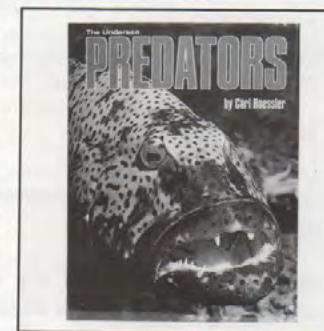
The photographs have all been taken by famous American underwater photogra-

phers and they are high quality. Their purpose is to illustrate the subject rather than be fancy but full details are given with each photo of the equipment used, the location, the film and settings. This, together with the text, combines to provide a useful, comprehensive and quality publication.

Despite being imported from the USA, the Book of Fishes costs only £14.95 which represents very good value. It is a book which will provide useful and stimulating reference both now and in the future.

The Book of Fishes is imported by Sea and Sea UK Ltd and available by mail order (add £2.50 p&p) from Ocean Optics

The Undersea Predators by Carl Roessler



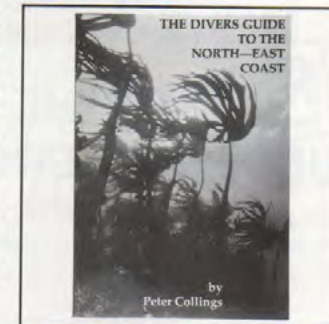
This 192 page A4 book is full of colour shots taken by the author who runs a dive travel business in the USA specialising in out of the way locations. This enviable job has taken him not only to some of the most exotic locations in the world but he has usually been there more than once!

As the preface states, "From tiny corals to enormous sharks, all creatures of the sea are predators...." so this book is a glorious excuse to publish high quality photographs and add informative text on behavioural patterns experienced by the author over the years. The text is most readable and combines scientific detail with interesting personal experiences and feels like Carl is taking you with him.

From a selfish underwater photographers point of view it would have been nice to see more details of the equipment used but the sheer blaze of colour and quality makes up for this.

The Undersea Predators is imported by Sea and Sea UK Ltd and is available by mail order (£14.95 + £2.50p&p) from

The Divers Guide to the North-East Coast by Peter Collings



This popular part of the coast is visited by thousands of divers throughout the year, attracted by above average visibility, varied and sometimes unique marine life and a host of wrecks.

This 192 page A5 softback covers 11 main areas and gives details of over 600 wrecks and what to expect on over 1000 different dive sites. Marks are given for some wrecks as well as local details of safety services and facilities.

The Divers Guide to the North-East Coast costs £7.95 and is available from

Readers Digest Guide to The Great Barrier Reef



As you would expect from this famous publisher, their Great Barrier Reef book is both excellent quality and value.

There are 384 pages packed with colour giving a comprehensive guide to this most picturesque area both above and below the waterline.

The Great Barrier Reef costs just £13.95 (add £2.50 p&p) and it is available

WIN A TRIP FOR TWO TO EGYPT IN THE EGYPTIAN RED SEA UNDERWATER PHOTOGRAPHY COMPETITION

Entries are invited for this major international competition being organised by the British Society of Underwater Photographers on behalf of the Egyptian State Tourist Office.

RULES

1. The competition is open to amateur and professional photographers from all over the world.
2. Entries must be in the form of 35mm colour slides which must have been taken underwater in the Egyptian Red Sea.
3. There will be three categories:

A. Pictures where the predominant subject is free swimming or drifting, e.g. fish (individuals or groups), Planktonic life, turtles etc.

B. Pictures where the predominant subject is static, e.g. corals, anemones, sessile fish, scenery or any other subject that is not mobile at the time of photography.

C. Pictures where the predominant subject is man in the sea, e.g. Divers and snorkellers etc.

In each of the three categories, the judges will be looking for pictures that demonstrate the attraction of the Egyptian Red Sea for its colourful marine life and diving activities. In each class, the inclusion of Man, fish or static material as well as the main subject is accepted. There is no objection to multiple exposures or other creative techniques providing the resulting picture is suitable for the promotion of the Egyptian Red Sea diving tourism.

4. Up to six slides per category can be entered to arrive no later than March 1st 1988.

PRIZES

The winner in each of the three categories will receive two tickets for a diving and sightseeing week in Egypt. The visit must take place at the time stipulated by ESTO and the winners must take part in a local reception to promote and publicise the Competition and so the tickets cannot be transferred and there can be no cash in lieu. However, in the event of one individual winning more than one award, the winner can nominate others to accompany the visit.

Full details are available from

Competitions

AGFA Competition

Following last issues' comments on this competition and competitions in general, the situation regarding this feature's future seemed uncertain and confusing. The result has been no entries so we'll let it rest and put a major new competition together for the New Year aimed to encourage material to appear for the first time.

Full details will appear in the next issue of UP.

Southfed Photographic Competition 1987

This competition will be judged by the members at the annual meeting on December 6th.

The closing date for entries, which should have been taken during 1987, is 6th November and the maximum number of entries is 6 slides per person and there will be prizes for the best UK slide, best overall slide and the best portfolio.

Each slide should be marked with the photographer's name, 'UK' if applicable and a spot in the bottom left hand corner.

Please enclose an SAE if you cannot attend the meeting to collect your entries.

BSoUP's Beginners Portfolio Competition

£50 cash prize and the Diver Trophy to be won. Closing date 17th November 1987

If you are relatively new to underwater photography, then this is the competition especially for you.

Each year the British Society of Underwater Photographers organises a National Underwater Photographic Competition for Beginners. This annual event is open to any underwater photographer who has not won a first, second or third place in a major national or International Competition such as 'Brighton' or 'Cameras beneath the waves' or the BSoUP Splash-in/On the Day.

Each entrant should submit a portfolio of six 35mm slides of their own choice, taken anywhere in the world. Aquarium shots are ineligible. All slides should be mounted in GePe glass mounts and bear the name and address of the photographer on the reverse side. A coloured spot should be placed in the bottom left hand corner when the slide is viewed the right way up and right way round. If you wish to have your six slides projected in a particular sequence, write the number of each slide on the coloured spot.

All portfolios will be projected at the November meeting of BSoUP in the Read Lecture Theatre, Level 5, Sheffield Building, Imperial College, London SW7. Entries will be judged by the audience present at the meeting and the winner will receive a cheque for £50 and the prestigious Diver Trophy donated by Bernard Eaton of Diver Magazine.

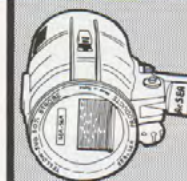
All entries should be sent to BSoUP Beginners Competition, 6QP to arrive no later than Tuesday November 17th. Please pack your slides very carefully and send them with an SAE for the return of your entry.

The organisers reserve the right to retain the winning slides for a short time for publicity and publication purposes.

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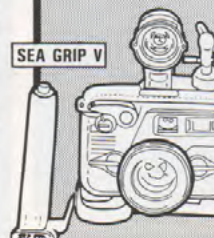
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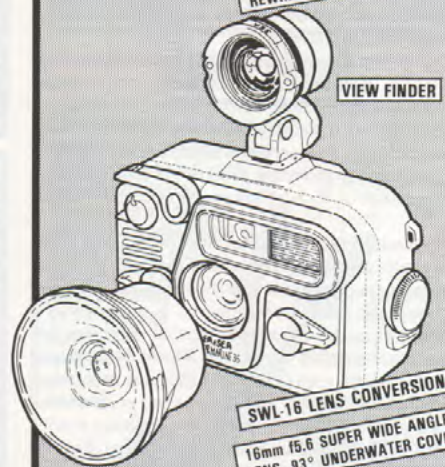
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The 2nd World Championships of underwater photography

Having had a gap of nearly 8 years since the First World Championships of Underwater Photography, Fotosub '87 came as a pleasant piece of news for such events provide a rare opportunity to mingle with some of the world's best and to see how they operate and the results they produce.

14 countries were represented - Spain, Italy, Great Britain, Germany, Switzerland, France, Holland, Ireland, Portugal, America, Yugoslavia, Hong Kong, Norway and Belgium. An obviously strong European bias but nevertheless a good cross-section of talent.

Overseen by CMAS, Fotosub '87 was organised by Fedas, the Spanish Diving Organisation and they chose the waters around Cadaques for the venue of the championships. Cadaques is a picturesque small town on the Mediterranean coast with its prominent church overlooking the red tile roofs of the traditional Spanish homes. It is hard to imagine that just a few kilometres to the south there is candy floss, Watneys Red Barrel and Package Paradises. Protected by hills on all sides, Cadaques really is a picture.

A steady wind kept the sea ruffled most of the time and the visibility underwater was no more than UK south coast on a good day i.e. around 40 foot but first impressions were of mild surprise at the seemingly barren underwater scenery which has unusually colourful and fascinating marine life. Octopus were seen on most dives as were some perfect tompot blennies, a host of fan worms, colourful coral at depth and so on. No schools of fish or large grouper though which is not surprising as spearfishing is still a highly regarded and practiced sport.

Getting 26 underwater photographers and their assistants into one place on time proved a difficult task and most timings ran about an hour late but after a while you got used to that because it was so consistent.

Each entrant is given two rolls of 36 exposure film either 100 or 200 asa. They have two days diving from a Zodiac inflatable powered by Evinrude outboards. Two tanks of air are allowed each day but if there is a model and an assistant, they were allowed a bottle each per day. The entrants must all dive within a certain zone representing about two miles of coastline. Each day consisted of 4 hours photography from about 9am to 1pm.

The resulting films would be driven to Barcelona about 2 hours south for processing. The entrants then have to choose 5 slides to enter as a portfolio of work. No more guidelines than that were given. No categories whatsoever.

With such a brief, the entrants were all wondering just which type of shots would win the day. Should they dress up models for brightness, keep shots totally natural or import man made props to catch the eye. The dilemma was evident especially as the previous British winning team had relied so heavily on artificial props and ideas and had incurred the displeasure of a wide and influential range of underwater photographers. Had their memories faded? Had underwater photographic ideas passed that point long ago or is that still the required formula?

It was an impressive sight seeing about 30 inflatables up on the beach with a gaggle of underwater photographers preparing themselves. Video cameras with sound crews appeared to give an added importance and several press photographers from the Continent were interviewing entrants and shooting stills. A quick walk around the boats revealed that the majority were using cameras in housings rather than a Nikonos. Their reasons



Kurt Amsler from Switzerland swept away with the individual prize with a well balanced portfolio.

being that composition and focus are vital to them and they must be able to control both accurately. Lenses varied little from a 50mm macro to a 20mm wide angle or a full frame fisheye. The odd 100mm macro surfaced but that was rare. Flashguns from all manufacturers were in evidence as well as several DIY'd housings. The spirit was good and the humour flowed from nationality to nationality despite our separate languages.

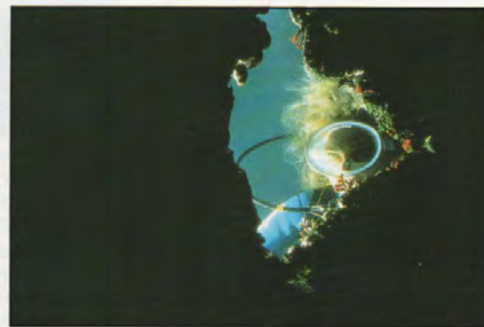
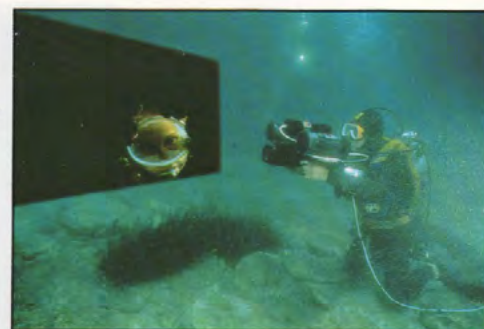
The first day saw a blustery wind produce a lumpy chop which made the journey in the inflatables a bouncy affair. Having had the pre-



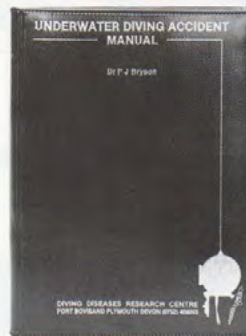
Three from Italy's Pierfranco Dilenge which helped him come second in the individual. He was also the other half of the Italian team which took first prize in the Team section.

vious day to recce the area, most entrants went to their chosen spots and worked away. The sun hardly ever broke through. Nearly all the photographers would be praying for the sun to give them that added sparkle which would lift their portfolio above the rest. They had to decide how many frames to shoot. Too many and the

conditions could be perfect tomorrow, too few and the weather may worsen. It's a dilemma with the clock ticking away. 4 hours sounds a lot but you would be in the water at least three of those four trying to achieve at least 5 different and original shots. Some would rely on a marine animal to perform in which case



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luck could give you the shots in 10 seconds or maybe 10 minutes. Others would have to arrange props and liaise with models while some would limit their time further still by deciding to go deeper for special marine growths.

The feeling at the end of the first day was generally one of discontent. No one felt confident enough to say they had had a successful day. They had all hoped for much better.

The second day dawned much calmer with a thin cloud layer which hovered infuriatingly. The calmer sea and warmer temperatures were lifting the entrants' hopes up for a better day. Once again, they returned to their locations to take their last opportunity to capture their winners.

By 1pm they were all back with broader faces holding back happy smiles for the animals had performed, the sun had come out just right and the visibility was a little better. The atmosphere was one of relieved excitement. The hard work was over with the results to look forward to. Once the films had been returned and the 5 slides marked for submission, there was little else to do but relax and soak in the atmosphere and the red wine.

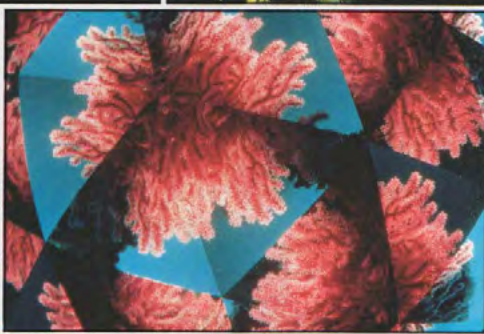
The results were announced after a grand dinner at an impressive local hotel which is located in an idyllic location a few miles out of town. The team winners were revealed as Italy with Spain second and Great Britain third. In the individual category, Switzerland's Kurt Amsler came first with Italy's Pierfranco Dilenge and Peter Scoones of Britain third.

The event was without doubt a most enjoyable experience for both photographers and onlookers and it is hoped that the 3rd World Championships will be much sooner.

Peter Rowlands



Three shots which put Peter Scoones third in the individual section.



Classifieds

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Subatec S200 TTL flashgun and telescopic arm. 10 months old. Price £480. Also for sale Nikonos Close UP outfit. 1 year old. Price £100. Telephone and ask for Ray [redacted] after 8pm.

WANTED
Calypso camera and lens in "original box" with all papers. Will trade for Nikonos V body or buy - specify. Need 2 sets. Southern [redacted]

FOR SALE
Nikonos cameras - Fully reconditioned with 1 year mechanical guarantee. Prices - US Dollars - Postage & VAT not included. Subject to availability. Camera body. 11 \$245. 111 \$295. 1Va \$245. V \$340. Lens 35mm \$85. 15mm \$800. Other items available. [redacted]

FOR SALE
Aqua F3 TTL flashgun. 12 months old. £179. Tel 01 [redacted]

FOR SALE
Oceanic OS 2000 manual flash for Nik 111. Protrip baseplate (no handle or thumb release) Arm 2000 [redacted]

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Sekonic Marine meter £115. Tel M. [redacted]

FOR SALE
Close up lenses and accessories for the Nikonos. 6", 9" and 12" subject distances. Interchangeable underwater. Send 18p stamp for specs and prices. [redacted]

FOR SALE
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We are so convinced that there's a mountain of secondhand equipment out there which needs selling that we are going to offer free classifieds to individuals from now on to encourage you to search the loft and raise some cash.

To make it even simpler, we'll accept adverts over the phone so give us a ring and let's get that gear circulating and back in use.

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To receive details of any of the products advertised in Underwater Photography Magazine, just fill in the form below and we will contact the manufacturers for you.

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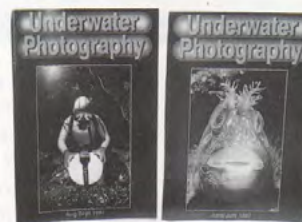
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Short Ends

Exciting holidays

Truk Lagoon March 1988

Twickenham Travel are offering a provisional date of 31st March 1988 for a special trip to this wreck divers' paradise. The 16 day trip will cost in the region of £1485 and further details are available from Twickenham Travel, [redacted]

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G.F.I International from America are offering some exotic trips to some out of the way locations. They specialise in a highly personalised and exciting selection of adventures.

As an example, Cocos Island, 300 mile of the coast of Costa Rica, is the world's largest uninhabited island. A 77 foot schooner sails from San Jose for 12 days of sailing, diving, beach combing

and exploring on an island on which very few people have ever set foot. Up to 12 people can be taken on each trip on January 12th and March 12th 1988.

For further details of this and all of their other trips, please contact G.F.I. [redacted]

The Caribbean Connection

This London based firm specialise in Caribbean holidays both on land and cruises. They have teamed up with Peter Hughes Diving to offer packages in Bonaire, Cayman Brac, Turks and Caicos and Barbados. The Divi Hotel group provides the accommodation and, at Bonaire, there are Padi and Naui courses in underwater photography and video.

For further details, please contact [redacted]

Help save the Basking Shark with the Marine Conservation Society

Off the coast of Britain, a commercial fishing industry is threatening one of the largest and most majestic animals of our seas.

Basking sharks, which get their name from their habit of cruising around the surface of the sea on hot summer days, are being harpooned, their livers cut out, their fins cut off and their carcasses, for which there is no further use, simply dumped back in the water.

MCS have launched an appeal to help start vital research and to finance a lobby of the EEC to put pressure on them to make basking sharks a protected species.

Donations are urgently needed to help the MCS so please give generously. A leaflet is available from MCS, 4 [redacted]

UP and coming

UP Reviews

Sea & Sea's JVC GRC7 video housing

UP Overseas in Oman

Ex-Pat Gordon MacSkimming takes us

UP in Scotland

Dr Mia Buehr dons her tartan wetsuit

Book Review

IMMEL's Guide to Inshore Marine life

Meet the imagemakers

UP interviews Kurt Amsler, World Champion

Plus

Classifieds, Basic Course, How was it done and much, much more.

As you may have gathered from previous issues, the content of the next issue may differ slightly. This is due to topical changes we have to make to keep the contents up to date and relevant.

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The whole trip will be for underwater photographers with as many dives as you can manage together with evenings discussing all aspects of underwater photography.

While you are underwater, we'll be processing your previous film!

Slides taken the previous day will be projected for helpful discussion so that you will be able to see your images in detail. There will even be a

competition at the end of the week to find the best slide!

The all-inclusive price is just £769. There are no hidden extras and you will return from the week with not only memories of fantastic dives but also the pictures to prove it. Bookings are being taken now so please apply soon to guarantee your place.

Further details are available from:



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