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**Note: All Aquatica Housings come standard with the vacuum pump, valve and sensor**



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# Contents

## 4 Editorial

UK tuna & UPY, My Backyard (again),  
UP the past, UPY's crunchy bits

## 5 News Travel & Events

## 10 New Products



## 24 Ikelite Canon SL3

by Phil Rudin/Roman Stockhausen



## 30 Nauticam Nikon Z5

by Tony Land



## 36 Sony RX100 VII

by Jim Decker



## 40 Rokinon 24mm F2.8

by Phil Rudin



## 46 Weird lenses

by the Backscatter team



## 49 Dive into the Pink winners

by Allison Vitsky Sallmon



# Underwater Photography

A web magazine UwP116 Sept/Oct 2020

## 53 UPY's crunchy bits

by Laura Storm & Mark Harris



## 60 WAM conversion lenses

by Mike Bartick



## 65 How to be a good model

by Tony Land



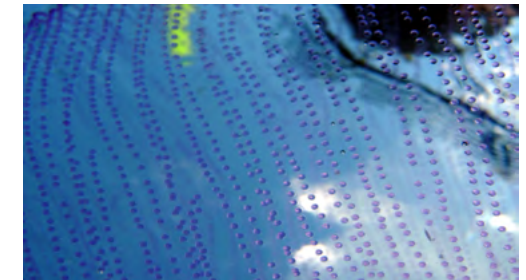
## 70 Pat Baker's uw museum

by Pat Baker



## 75 My Shots

by John Huisman



## 77 Parting Shot

by Michel Braunstein and  
Augusto Salgado

## 80 'UP3' Supplement

by Peter Rowlands

Underwater Photography 2001 - 2020

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Publisher/Editor Peter Rowlands

[www.pr-productions.co.uk](http://www.pr-productions.co.uk)

[peter@uwpmag.com](mailto:peter@uwpmag.com)

# Editorial

## UK Tuna and UPY

Believe it or not there was a healthy (?) tuna fishing hub in Scarborough on the east coast of the UK from the 1930's for three decades until the fish numbers dwindled and made it impractical.

The exact cause must surely have been overfishing of tunas food choice so it was a pleasant surprise to read that tuna sightings in the SouthWest part of the English Channel have seen a significant increase in recent years.

The Thunnus UK project is trying to find out as much as they can about why bluefin are back in our waters. Over the next two years, they'll be compiling sightings and mapping their migrations using satellite-communicating electronic tags.

And what's all this got to do with underwater photography? I can already hear you asking; well each year the amazing UPY winners have included images of some subjects which have never been photographed well underwater in UK waters so do see where I'm going?

There have been excellent images of Humpbacks, Orca, sea otters and several more so, wait for it, could be UPY 2021 be the year of the tuna image!?

## My backyard (again)

I make no apology for bringing this subject up again for three reasons.

Firstly, as I write, there have been two UK flights which have returned with positive Covid passengers who have gone on to pass it to others upon their return or caused establishments to go back into 14 day isolation.

Secondly the UK government, and other Governments, are announcing overnight that returning passengers must isolate for 14 days as the country they are coming back from has seen a rise in cases. This must cause uncertainty for future travellers.

Fortunately the thirdly is nothing but positive news, for if you follow the link below, you'll see what Basking Shark Scotland clients were privvy to earlier this year. I'll say no more. Just watch it and realise that in our backyard, and every backyard in every country throughout the world there is amazing wildlife to be encountered.

If Covid could claim to have had a positive outcome it will be a renewed appreciation of all that is in our comparatively immediate marine surroundings.

Enjoy.

<https://youtu.be/yxT0uV5vcyw>

## UP the past

The inclusion of old issues of Underwater Photography magazine at the end of each issue of UWP has brought a significant amount of feedback and all positive, thankfully.

The most inciteful was the observation "How so much has changed and yet how so little" which I thought hit it on the proverbial button and was right on the nail.

The other detail which may, or of course may not, interest you is that I decided not to scan all 12 issues at once to have them in stock for slotting into future issues; rather I only scan the issue required just prior to the imminent UWP's publication date so that I too can re-savour each issue as it comes out.

One of the downsides of producing UWP is that I know what's in it weeks before you do and I've worked with it for days laying it out but you (hopefully) get a tinge of anticipation when a new issue is available.

And that's just like I was a kid on a Monday morning when the latest Beano and Dandy comics were available in the newsagents :-)

Happy days.

## UPY's crunchy bits

One of the good things to come out of Covid is thanks to Laura Storm and Mark Harris and their amazing analysis of the UPY 2020 winning images.

Rather like the UPY Yearbook it will be an invaluable reference tool for those interested in entering future UPY competitions and I can say, but please keep it quiet, that barring any last minute lockdowns (and hopefully no Covid 20), there will be a UPY 2021 and a detailed announcement will be made in the Nov/Dec issue of UWP :-)

The data in Laura and Mark's article is absolutely fascinating, as data always is, but just because vertebrates were far more successful than invertebrates shouldn't mean that you downgrade your invertebrate shots.

Always be aware that at the end of the day, strange as it may sound, it is the image that is judged and not the subject.

Bring it on.

**Peter Rowlands**  
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[www.uwpmag.com](http://www.uwpmag.com)



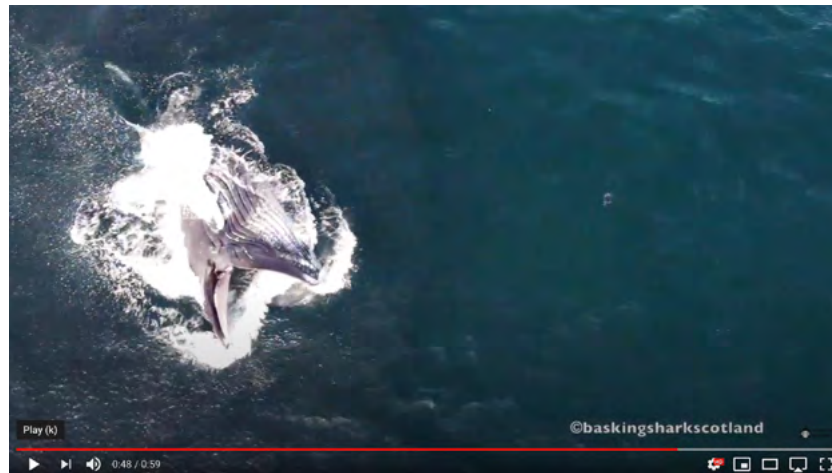
# News, Travel & Events

## Basking Sharks

2020 has been a very challenging year for us and we wondered whether we would survive as a business. Thankfully the lockdowns eased at the start of our planned peak basking shark season. Operating in the Hebrides, where they local community were largely isolated from Covid, it was a tricky balance with many people reliant on tourism but were very worried about the lack of medical facilities. However with well prepared clients and a number of measures we eased our way into our season and have been going strong since. It has turned out to be our best basking shark season to date with record breaking sightings! Not only have the sharks been great, but there seems to be an explosion of sand eels which in turn have attracted a large number of cetaceans. Our most memorable encounter was spending 6 hours with three humpbacks. Along with dozens on minke whales and common dolphins, they had all corralled a huge bait bait of sand eels which created a feeding frenzy! If you haven't seen the drone footage then check it out here -

<https://youtu.be/yxT0uV5vcyw>

We do undertake a lot of science work alongside our tours and still have some spaces to join us on our autumn research which goes through till October. However due to many reschedules



we are getting busy already with groups booking summer 2021 and 2022.

We still have some dates for individuals joining but we would encourage people to book asap to obtain the remaining spots.

[www.baskingsharkscotland.co.uk](http://www.baskingsharkscotland.co.uk)

## Sea Shepherd Attacked in Vaquita Refuge on World Wildlife Day

On the morning of March 3rd, Sea Shepherd crews were confronted by a large group of skiffs fishing illegally inside the Vaquita Refuge, a UNESCO World Heritage Site located in Mexico's Upper Gulf of California.

The incident began at approximately 08:40 AM inside the Vaquita Refuge, a federally protected region that is home to the critically endangered vaquita porpoise. Mexican authorities from the Federal Attorney for Environmental Protection (PROFEPA) and the National Commission of Fisheries and Aquaculture (CONAPESCA) on board the M/V Sharpie asked the fishermen to remove the net from the refuge. The skiffs refused.

Approximately 20-25 skiffs swarmed the Sea Shepherd vessels, throwing rocks, lead weights, and other objects at the conservation ships in an effort to force them to leave the area. Poachers on board one skiff launched a molotov cocktail at the starboard side of the M/V Sharpie but were not able to successfully hit the ship.

Sea Shepherd carried out anti-piracy procedures, including high-speed maneuvering and the defensive use of water cannons. As poachers attempted to light a second molotov cocktail, military personnel on board the M/V Sharpie fired a warning shot, at which time the skiffs disbanded and the attack ended.

[www.seashepherd.org](http://www.seashepherd.org)

## Striped Marlin Baja Mexico Dive Safari November 2020

In November 2020 Photographer Gregory Sweeney will be leading this peak season photography trip to dive and photograph the best locations in Baja, Mexico.

We start in Port San Carlos where Magdalena Bay is host to the largest striped marlin migration in the world. We will be on our own boat from 7am to 4pm looking for sea birds who will point us to the epic hunting action going on underwater. The marlins hunt the sardines as do the sharks and seals.

Under the surface will be a frenzy of action as marlin hunt in cooperation maneuvering the bait balls until one by one they attack and take their meal. We often get a static bait ball and stay in the water for over half an hour.

We transfer to La Paz where we do a dive unique to La Paz: a night dive with mobula rays. Plankton are drawn like a magnet to our lights and schools of rays come swooping in to dive down to feed in the sand. It is non-stop swirling action at night. We also dive at a sealion colony where these friendly mammals swirl around us and interact.

We end in Cabo Pulmo National



Park where protected marine habitat and pristine coral draws an enormous amount of tropical fish, seals, turtles, and more. Large schools of jacks are an awesome sight as the formation pulses and morphs before us. We do dives specifically for bull sharks who lurk and patrol on the scattered remains of ship wrecks.

This unique and action packed trip showcases the best of Baja Mexico and has plenty of marine wildlife encounters and photo opportunities.

[www.gregorysweeney.com](http://www.gregorysweeney.com)

## Tiger shark & Great Hammerhead Live Aboard

Tiger Beach, Bahamas is known as one of the best shark diving locations in the world. The encounters with large Tiger Shark, Lemon, reef, and bull sharks are up close and without the use of a cage. Our charter also dives at nearby Bimini, where migrating great hammerheads arrive to snack on stingrays while bull sharks lurk in the same waters.

Diving without a cage allows you to get up close and personal for a thrilling adventure full of action. Seeing this many species of sharks is an opportunity to appreciate and value their role in our oceans.

Join us on a 9 Day live aboard cruise to first Tiger Beach in the Bahamas for tiger, lemon, and reef shark action then down to Bimini Island for Great Hammerheads and bull sharks

Our charters are in prime shark season. We depart/return to West Palm, Beach Florida making for easy flight connections to any southeast Florida airport.

Our boat is the MV Dolphin Dream, a 86' expedition charter yacht with 5 shared cabins, diving platform, and a large galley with plenty of deck and upper deck space.



It holds 10 guests plus crew and is very stable and comfortable to ride through the Caribbean waters. Divers must be experienced: these are long and multiple dives with no cages and filled with the consuming action of sharks swirling around you.

Underwater photographer host Gregory Sweeney is your host and is available to offer photography help and tips during the trip and while preparing for travel.

[www.TigerSharkDive.com](http://www.TigerSharkDive.com)



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[www.baskingsharkscotland.co.uk](http://www.baskingsharkscotland.co.uk)



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- Based in Hebridean Isles
- Grey & Common Seals
- Whale & Dolphin Hotspot
- Puffins, Seabirds & Eagles
- Evening Photography Dives
- Stunning Scenery
- One - Seven Day Tours
- Guided by Marine Biologists
- Scientific Research Programme



## Orca Norway, November 2020

With autumn fast approaching we are thinking ahead to our Norwegian orca expedition. Although still a few months away, the current Covid crisis still creates many unknowns but we are hoping that travel within Europe may have recovered by then.

Our tour there is primarily focussed on snorkelling with orca and humpbacks, along with opportunities for evening northern lights photography.

Now in our 8th season running, we have honed our operation well to try and avoid the crowds and find our own space of fjord wilderness. Our accommodation is lodge based with single rooms, plenty of space and fully catered meals.

2019 was an incredible experience for us with our last day spent with corral feeding orca at

sunset all by ourselves!

In November the water is relatively warm (~6deg) and although not the best kit for swimming efficiency, drysuits are the best all rounder for the tour. The light levels do make it challenging for photography but it's a quest each year to perfect our setups to chase those elusive orca shots!

We run for three week long tours during November with the peak of action and light levels and have some spaces left. There is a reasonable amount of logistics with getting geared up for this expedition but please do chat to us if you are up for the challenge of the arctic!

[www.baskingsharkscotland.co.uk](http://www.baskingsharkscotland.co.uk)

[www.uwpmag.com](http://www.uwpmag.com)

# Meet the Sharks of Tiger Beach & Bimini

**March 2021**

TigerSharkDive.com Info@GregorySweeney.com

## Wetpixel Live



Powered by a huge community of enthusiasts that generously share their experiences and knowledge, Wetpixel is the world's premium source for information about everything to do with underwater imaging. To help make this information more available to all, we are proud to announce Wetpixel Live.

Hosted by Wetpixel editor Adam Hanlon, with regular contributions from Wetpixel Associate Editor and renown photographer, Alex Mustard, Wetpixel Live is a regularly refreshed series of video conversations with leading underwater image makers about topics that are of interest to all those that venture beneath the surface with a camera. It is full of hard-edged

technical information and practical advice with the goal of helping people create memorable images.

Adam says: "Wetpixel Live aims to answer some of the questions that are frequently asked on the forum and to make this amazing resource more accessible to image makers."

The first episode is now live on the Wetpixel YouTube channel. It lists and explains 5 important tips for those staring out as underwater photographers.

Please head on over and check the episode out. If you enjoy it, subscribe to the channel to receive notifications as we add more video content in future.

[https://www.youtube.com/channel/UC3Rf\\_mU-wBuXas7fBRJrMQ](https://www.youtube.com/channel/UC3Rf_mU-wBuXas7fBRJrMQ)

# Gregory Sweeney Photography Adventures

## Underwater Safari in Baja, Mexico

A Striped Marlin & Baitball Frenzy with Shark Diving and Mobula Rays

Magalena Bay in Port San Carlos, La Paz, and Cabo Pulmo

[www.GregorySweeney.com](http://www.GregorySweeney.com) November 2020 & 2021

# The 200DL Underwater Housing for Canon EOS R5 is now shipping...

- 200 ft (60m) depth rating
- Extendable trigger-style shutter release lever and AF-ON button thumb lever for back button focus
- Interchangeable Dry Lock port system including flat ports, compact and full-size 8" dome ports
- ABS-PC construction is significantly lighter than aluminum and corrosion-proof
- Clear view back with laser engraved control markings
- Ergonomic direct-drive controls with soft-touch control knobs
- Manual flash bulkhead and hotshoe with option to add TrueTTL strobe exposure via the DL5 DS Link TTL Converter
- Wi-fi transfer is possible through the housing above the surface of the water
- Built in vacuum valve
- Made in the USA



[READ MORE](#)



# New Products

## Ikelite housing for Sony ZV-1

A slide-in, front loading camera mounting tray makes this housing a breeze to set up and shoot. Controls are provided for all important camera functions including a spring loaded rear dial control. The trigger-style shutter lever makes it easy to half-depress the trigger for focusing. Rear push button controls are laser engraved for identification with a new bright red push button for the video record start/stop. Use the camera's built-in WiFi feature to download photos to another device without removing the camera from the housing. The WiFi feature is only usable above water within close proximity to the connected device.

The ZV-1 camera does not feature a built-in flash. External strobes may be electrically triggered by adding the optional C1 Hotshoe # 46071 and B1A Bulkhead # 46002.

Our 3-inch diameter ports feature a 67mm thread on the front for the easy attachment of external wide angle and macro wet lenses. Wide angle lenses make objects appear smaller, so that you can fit more into your frame underwater. Macro close-up lenses

make small objects appear larger, so that tiny creatures will fill your frame.

The WD-3 Wide Angle Dome provides mid-range angle of view with no vignetting (dark shadows in the corners of the image).

External macro lenses with 67mm threads can be attached directly to the front of the housing's port.

The DC3 6" Dome Port # 6403 offers the best of everything: wide angle, macro, and over-under all on one dive. This special dome port replaces the housing's standard port and provides sharp 24mm wide angle and is perfect for split shots (half-in, half-out of the water). Approximately 3/4 of the camera's zoom range is usable behind the dome and macro images can be captured with the dome installed.

Sony Cyber-shot RX100-series cameras are not usable in this housing



due to differences in lens and control placement. The ZV-1 cannot be used in housings designed for RX100 series cameras.

[www.ikelite.com](http://www.ikelite.com)

INON Made in Japan  
©Toru Kasuya

Close-up Lens UCL-67

©Toru Kasuya

Close-up Lens UCL-90

Made in Japan INON

**EUROPE'S NR. 1**  
UNDERWATER CAMERA STORE



## ANGLERFISH UNDERWATER FIELD MONITOR 5.7" - FULL 4K HIGH RESOLUTION



**€1545,-**

ESPECIALLY DESIGNED FOR UNDERWATER PHOTOGRAPHERS AND VIDEOGRAPHERS.

- 5.7" IPS SCREEN - FULL 4K HIGH RESOLUTION
- ULTRA THIN DESIGN, SUPER LIGHTWEIGHT
- ROBUST HDMI CABLE & CUSTOM DESIGNED BULKHEAD
- UNIVERSAL DESIGN & ADAPTERS FOR DIFFERENT HOUSINGS



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## TURTLE SMART 2020



o-TURTLE SMART TTL trigger for Olympus and Panasonic systems.

€329.00 including TAX



i-TURTLE SMART TTL trigger for Nikon systems.

€329.00 including TAX



e-TURTLE SMART TTL trigger for Canon systems.

€399.00 including TAX



s-TURTLE SMART TTL trigger for Sony systems.

€329.00 including TAX

The Turtle Smart is a small and reliable TTL trigger for Nikon, Canon, Sony, Olympus and Panasonic cameras.

It is powerful enough to handle 2000 shots on a single charge. And you can use your standard USB cable to charge it.

Should you choose cable or synchronous optical LED connections – Turtle has the connector interface to handle both options. On the rear of Turtle is a connector interface for both cable and synchronous optical LED connections.

Full TTL mode compatible with several Sea&Sea, Inon, Ikelite, Subtronic underwater strobes, you can choose between fiber optic or sync cord control. The TURTLE SMART or the Mobie fits into most of the underwater housings.

It's all up to you: switch between 1st or 2nd curtain mode for perfect rendering of motion. Also, sometimes you need flash power correction: not

a problem, Turtle handles this as well...

2020 features include:

- HSS sync speed with Nikon, Olympus, and Sony line with RETRA PRO in manual mode.

- Sea and Sea D3, RETRA PRO, ONE UW, TTL control with Nikon, Olympus and Sony line. ( i-TURTLE , s-TURTLE, o-TURTLE)

- The user can upgrade the SMART TURTLE-s via USB

- 150 candela power in the new LED-s



[www.trt-electronics.com](http://www.trt-electronics.com)



## Nauticam NA-RX100VII for Sony DSC-RX100 VII



### "The Pocket A9"

The Sony RX100 VII is the newest iteration of the popular compact rx100 series. It has a new stacked CMOS sensor created with the idea of faster, more accurate autofocus and high speed photographing without any blackout that, before now, was only offered on their high-end mirrorless cameras. The NA-RX100VII has an interchangeable m50 port system that provides the ability to utilize the RX100 VII's full 24-200mm zoom range with the standard port and various m67 accessories with the N50 short port.

[www.reefphoto.com](http://www.reefphoto.com)

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EQUIPMENT**

**3 MONTH  
WARRANTY**



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



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Issue 116/12

## Isotta housing for Nikon D780



ISOTTA is pleased to announce the launch of its new underwater housing for Nikon D780.

This high-quality housing is hand-crafted and 100% made in Italy maximizing the underwater performance of the Nikon full frame power house.

The durable, corrosion-resistant anodized aluminum body in its signature red color weighs only 2100 grams including handles. It is designed to give photographers access to all functionalities of this advanced camera.

As all Isotta housings the housing guarantees a watertight seal by having double O-rings on all buttons, dials and removable parts. But just to be sure there is a moisture alarm built in that can warn the user in the unlikely case of a leak with a red LED and an acoustic sound.

The ports of the housing have a 120mm bayonet opening that enables the use of all Nikon lenses including

larger diameter lenses.

To connect underwater strobes photographers can choose from two options – either two fiber optic connections with a LED trigger, or sync cord sockets for Nikonos or S6 sync cords. It is also possible to order the housing with both options installed.

The housings feature two M16 ports for port for installation of accessories such as sync cords and vacuum valves.

The back housing is fully detachable from the front housing. It features a large anti-scratch glass for the camera display and an optical eyepiece for the camera viewfinder.

Working depth of this housing is 100 metres.

Dimensions: 240 mm W. x 130 mm D. x 190 mm H with handles.

[www.backscatter.com](http://www.backscatter.com)



## Nauticam NA-D850 for Nikon D850



### "The Next Frontier"

Proving that speed and resolution can indeed coexist, the Nikon D850 is a multimedia DSLR that brings together robust stills capabilities along with apt movie and time-lapse recording. Revolving around a newly designed 45.7MP BSI CMOS sensor and proven EXPEED 5 image processor, the D850 is clearly distinguished by its high resolution for recording detailed imagery. Nauticam is the market leader in build quality, ergonomics, and reliability. Built on a foundation of innovative product design and modern manufacturing technology, NA-D850 is the ultimate accessory for the exciting new Nikon D850 camera.

[www.reefphoto.com](http://www.reefphoto.com)

[www.uwpmag.com](http://www.uwpmag.com)



## Light and Motion Double Dive 2X 15K Kit (Flat Port)



The professional's choice, Sola Video Pro 15000 (flat port) combines Light & Motion's 30 year pedigree as the leader in underwater imaging design with the future of lighting technology.

Featuring a glass flat port, this optic provides a 90° flood beam, ensuring full lighting coverage.

The Double Dive 2x Kit includes two Sola Video Pro 15000 lights and innovative body modules with an included soft case. This allows the shooter to quickly change out bodies to integrate a fully charged batteries – yet unlike replaceable batteries this system is reliable (eliminates flooding risks from opening the battery compartment), has enhanced safety with a sealed system, and can be swapped on the Sola lighthouse in seconds.

[www.uwimaging.com](http://www.uwimaging.com)

## UWCameraStore Fiber snoot Pro dual for Retra Flash Pro



The uwLANDsnoot Fiber snoot pro dual for the Retra Flash Pro is specially designed for macro photography. The snoot concentrates the light on a small area and allows you to emphasize a specific area or compensation and hide the background. With the correct set-up it also prevents you from backscatter.

[www.uwcamerastore.com](http://www.uwcamerastore.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.

[www.reefphoto.com](http://www.reefphoto.com)

# EMWL-1

Extended Macro Wideangle Lens  
Interchangeable Underwater

One Lens  
Any Camera  
Unique Perspectives



## INON SD Front Mask for HERO5/6/7

The SD Front Mask for HERO5/6/7 is a simple solution to add an attachment lens or arm system on GoPro® Super Suit Housing .

There is also an INON “SD Mount” bayonet system with additional locking feature to support easy and speedy 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 HERO5/6/7 is usable without any attachment lens.

SD Mount supports speedy lens exchange.

[www.inon.jp](http://www.inon.jp)



# Nauticam

Europe's Nr. 1 Nauticam expert



**Certified Service Center**  
Professional workshop with pressure tank and Nauticam trained engineers



**Super fast delivery**  
We stock all popular Nauticam products



**Repairs and overhauls**  
Your partner in Europe for in-store full overhauls and repairs



**Nauticam Weapon LT**  
for RED DSMC2



**NEW - Nauticam NA-A7SIII housing**  
for Sony A7S III



**NEW - Nauticam NA-R5 housing**  
for Canon EOS R5



**Nauticam NA-EM1III housing**  
for Olympus OM-D E-M1 Mark III

**WE ARE UNDERWATER PHOTOGRAPHERS... JUST LIKE YOU.**

## Qysea Fifish V6



The FIFISH V6 is a professional underwater drone produced by QYSEA in China.

The FIFISH V6 main features are:

**4K UHD camera:** this underwater drone delivers Ultra HD (UHD 4K) videos at 30 FPS with a 166° ultra wide angle. It is also possible to opt for 120 FPS while filming in Full HD (1080p), and even to film in 8x slow motion. The camera is equipped with image stabilization.

**Omnidirectional:** the FIFISH V6's six thrusters are able to deliver six degrees of freedom. It is able to move upwards and downwards, from side to side, forwards and backwards, and is able to tilt in various directions.

**Remote control and VR goggles:** the FIFISH V6 is easy to control and boasts an immersive experience in virtual reality. The FIFISH Smart Controller comes with various intuitive controls as well as an HDMI output for live streaming.

FIFISH mobile app (Android and iOS): enables users to edit their footage and instantly share it online.

UwP is hoping to sea trial a v6 and do a full review in UwP117.

[www.qysea.com](http://www.qysea.com)

[www.mantsbrite.com](http://www.mantsbrite.com)

[www.uwpmag.com](http://www.uwpmag.com)

**BACKSCATTER**  
**MINI FLASH**

**THE ULTIMATE COMPACT STROBE**

## Ikelite housing for Canon EOS R5



The 2020 Canon EOS R5 is one of the most hotly anticipated new camera from Canon in the past ten years. Featuring a brand new 45 megapixel CMOS sensor in a durable weather-sealed body with OLED electronic viewfinder. Videographers can shoot 8K RAW video at 30p and 24p or oversampled 4K footage at up to 120p.

Auto focus is extremely fast and accurate even in low light settings with its Dual Pixel AF II system, 1053 autofocus points, and a Deep Learning feature that allows it to track both people and animals. An image stabilization system inherited from the EOS R can reduce camera shake up to 8 stops depending on which lens is attached.

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.

The rotating controls are all operated intuitively via premium soft-touch knobs. An oversized, lobed knob puts the zoom/focus knob at your fingertips while your left hand stays on the handle. Stainless steel, direct-drive rotating controls are virtually fail-safe and user serviceable and adjustable in a pinch.

All rear camera buttons are accessible by smooth action, hard anodized aluminum push buttons for reliable performance and easy maintenance. These controls are clearly labeled by laser engraving on the back of the housing that never fades or falls off.

[www.ikelite.com](http://www.ikelite.com)

**EUROPE'S NR. 1**  
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## Subal BM4K Housing for Black Magic 4K



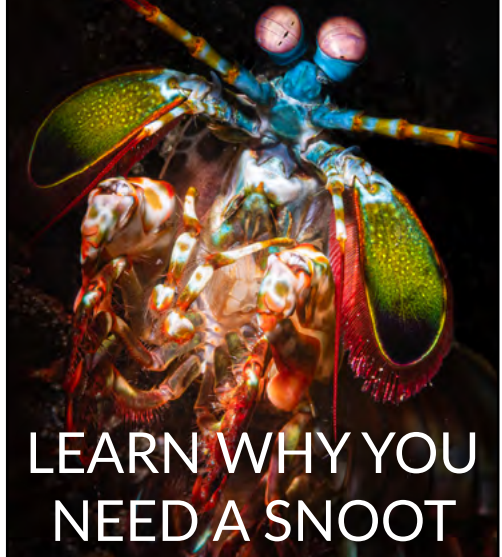
The ergonomic SUBAL design and arrangement of all important elements of the housing allows the camera easy operation without letting go of the handle. Housing has three plugs which customer can use to connect camera remote control, vacuum pump and other accessories. There are also two mounting points for lights or other equipment. SUBAL offers zoom and focus gears from 20 mm up to 95 mm.

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## Hydra-3500+S-RGB 3500 Wide, Spot, Red, Green, Blue, Mixed & UV and 4500 Lumen Burst Light



The Kraken Hydra-3500+S-RGB 3500 Wide, Spot, Red, Green, Blue, Mixed and UV has 2 buttons for ease of use, a water resistant light head for flood protection, as well as spot, flood and red beams. It features a COB LED for the best, and most uniform, flood beams for your photography and video needs.

New is the ability of the light to burst quickly to 4500 lumens when triggered by a fiber optic sync cord (not included) from your camera flash, working much like an external strobe.

This 3500+S Video Light now features RGB LED's in addition to everything else so now you have 9 different color options for creative lighting! If you're a macro shooter this is the light for you! It can be used as a regular dive light, or as a focus or video light as well. Divers who want to shoot fluorescent photography

will have a strong light source. The two button layout mean that you use one button to select the mode, and the other to select the output level. No hard-to-remember sequences on a single button. All of the lights utilize multi-cell battery packs, with quality, fast chargers. Recharge time is about 3 hours from a completely drained state. Extra battery packs are available.

The Kraken Hydra lights come in a complete set that includes ball and YS style mounts, spare orings, charger and a carrying case.

Does not come with sync cords for remote or flash! Lights use standard S&S plug style cords.

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The uwLANDsnoot Fiber snoot pro dual for the Backscatter MF-1 strobe is specially designed for macro photography. The snoot concentrates the light on a small area and allows you to emphasize a specific area or compensation and hide the background. With the correct set-up is also prevents you from backscatter.

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## Canon G7X III Camera & Ikelite 60m Housing Package



The Canon PowerShot G7X Mark III is a great choice for underwater use. The bright 24-100mm zoom lens is ideal for use with external wide angle lenses. A large 1"-type CMOS sensor, 4K UHD video resolution, manual exposure modes, and RAW image capture are key advantages when shooting underwater.

This housing is designed to use the full capabilities of the camera up to depths of 200 feet (60 meters). A perfectly clear back provides a view of the camera and o-ring seal. The back is removable, not hinged, for extra durability and easier camera

access. It attaches quickly and easily with two heavy duty stainless steel locking latches. All important camera controls are accessed via fully serviceable controls with premium soft touch control knobs. Ikelite housings are manufactured in the USA and come with an unparalleled access to support, photo advice, and service. Construction

Ikelite's Wide Angle Solutions for the Canon G7X III include Wet Lenses for removing and replacing underwater and Dry Domes for Split Shots.

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## Chasing M2 Underwater Drone / ROV



The Chasing M2 is a professional underwater Drone / ROV designed for professional users and industrial applications.

The M2 has 8 Vectored Thrusters allowing omni movement in all directions and a maximum speed of 3 Knots, as with previous models the depth is 100 meters (330 FT) and the maximum horizontal radius is 200 meters (660FT) with optional 200m reel.

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Chasing M2 offers a built in 4K/1080p and 12 megapixel EIS image stabilization camera, 4000 lumen LED lights, removable battery and now a removable SD memory card. The aluminum alloy compact body (weighs less than 4.5KG / 10lbs) allows single person operation and Quick-Deployment in 3 minutes.

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# Wakatobi - Conservation. In depth

by Wade and Robyn Hughes

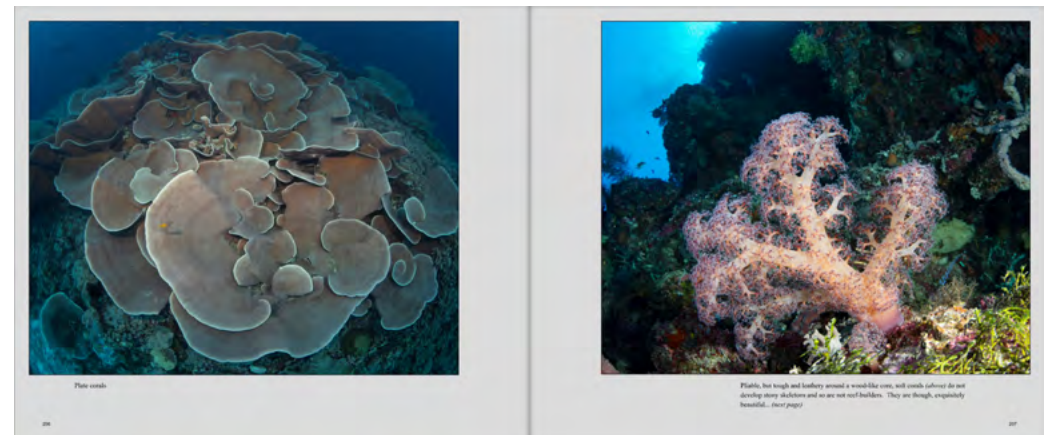
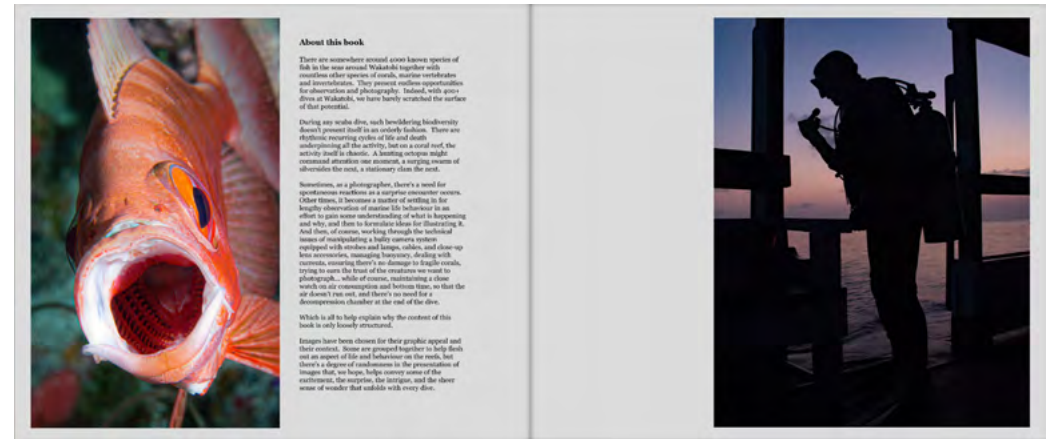
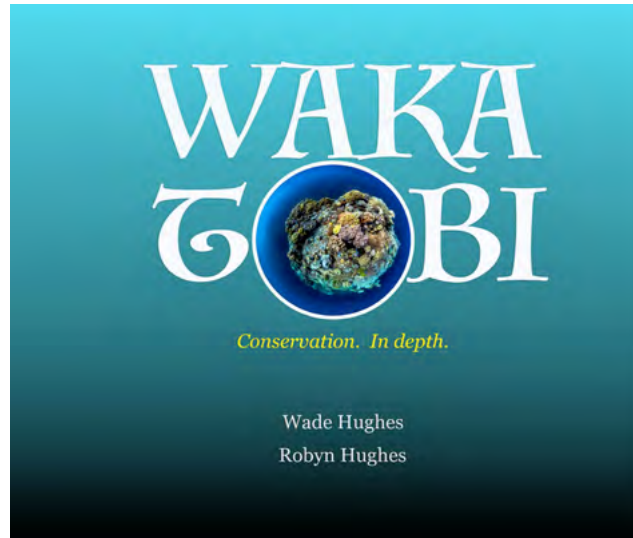
Titled, Conservation. In Depth, it's a self-published volume produced by Robyn and myself to help shine some light on the economic, social, and environmental value of Indonesia's Wakatobi National Park at local and global levels.

It seems to us that appealing from a distance for conservation based on the aesthetic value alone of reefs, forests, lakes, mountains... you name it...will never be enough to assure their long-term future when there are local people heavily dependent for their livelihood on those same natural resources.

The path to sustainable conservation, as the Wakatobi model demonstrates, lies in creating economic and social choices that enable local people to weigh the most advantageous means of managing the natural resources on which they depend.

Diving at the five-star Wakatobi resort brings more than just short-term enjoyment for visitors. It makes a significant contribution to the well-being of local communities, and helps

ensure the long-term sustainable management of the globally important coral reefs within the Park's boundaries. The book reveals the vision of the local communities, and illustrates the success of their approach with more than 200 pages of our best images, printed on superb satin-gloss paper. We decided to self-publish and print-on-demand so that we could have full control over the design and content, and avoid the sometimes years-long process of looking for a traditional publisher who would be willing to give the Wakatobi story the treatment it deserves. It can be previewed online in its entirety by using this link.



<https://au.blurb.com/bookstore/invited/8272558/da44ef2e36cc8f5315e642bf23c4d88348fca172>

# Marine Plants of Australia

By John M. Huisman

To most people, the mention of marine plants conjures up images of rotting seaweeds piled high on the beach, or slithering threateningly around bare ankles during a paddle in the shallows. Certainly, the seaweeds do not inspire the imagination or the romanticism that is usually associated with the sea. *Marine Plants of Australia* might well alter that perception.

This second edition illustrates over 600 species of Australia's underwater plant life, mostly using underwater photographs that reveal the amazing colours and intricate patterns found in this largely unknown realm of life. Imagine plants with blue foliage that turns red in the dark, or iridescent plants, or plants that look like rocks painted in shades of pink. There are seaweeds with the consistency of jelly, or with fronds that form an intricate mesh that rivals the best lace. These plants have evolved a startling myriad of shapes, colours and patterns that will impress everyone who views them — underwater, or through the pages of this book.



Praise for *Marine Plants of Australia*:

“Arguably the first scientifically rigorous “coffee-table” book devoted to a broad region’s seaweed flora. “Scientific” owing to the accuracy and detail of its descriptions, “coffee-table” because of its large format and wealth of beautiful drawings along with underwater photographs of species taken in their natural habitats.

<https://uwap.uwa.edu.au/products/marine-plants-of-australia>

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# Ikelite housing For Canon EOS Rebel SL3

Text By Phil Rudin

Photos by Phil Rudin and Roman Stockhausen

Ikelite's housing for the Canon EOS 100D SL1 made its debut at DEMA in November 2013 and was one of the smallest DSLR housing package I have ever seen.

I reviewed the system in UWP issue #79 and now I am pleased to have the opportunity to review the current successor the EOS Rebel SL3 also known as EOS 250D and EOS KissX10 depending on your location in the world.

The new Ikelite SL3 housing has the same small profile as the original SL1 housing which make for a system smaller than many of the mirrorless camera systems I have reviewed. This system ticks all the boxes for cost v performance, lens selection, ease of use, image quality and more.

The system is small, light weight and easy to pack in just about any airline carry-on bag.

I had a chance to test drive this new system in my home state of Florida, USA and I believe this is an excellent little housing system for travel, those entering underwater

photography looking for a moderately priced system, those moving from cell phones or GoPro's, rental, instruction, and for those die hard Canon DSLR fans looking for a backup system.

## The camera

The Ikelite housing is designed around the very tiny Canon EOS Rebel SL3 which is the entry level camera in the Rebel line with the Canon EOS Rebel T7i/800D currently sitting at the high end of the Rebel line. These are DSLR cameras with an optical viewfinder not mirrorless cameras.

The SL3 has an 24 megapixel APS-C sensor for still photography and 4K video over an impressive ISO range from 100 to 25600 (expandable to 51200) with quite usable image quality above 6400 ISO.

The camera ships as a "kit" with the Canon EF-S 18 to 55mm f/3.5-5.6 STM lens for \$749.00 or at \$599.00 body only. The new STM lenses are designed to provide noticeably



*Ginnie Springs Ballroom Entrance, High Springs, Florida, Canon SL3, Tokina 10-17 fisheye at 11mm, ISO-200, F/8, 1/200th sec, two Ikelite DS-160 flashes*

improved live view and full HD video shooting over past Canon "kit" lenses.

For this review I tested the camera with the Tokina 10-17mm fisheye zoom for Canon and the

Canon EF 100mm F/2.8L IS USM pro quality macro lens.

The auto focus is fast with the Tokina 10-17mm fisheye zoom but not as fast with the Canon 100mm

macro when you go beyond 1:3 magnification. Like all long macro lenses, this is a 160mm equivalent macro in 35mm using the APS-C 1.6X crop factor.

I suspect the Canon EFS 60mm macro would be the better choice for macro speed. The Canon 18 to 55mm STM zoom covers a wide range of underwater subjects and will make an excellent all purpose lens for the entry level shooter.

While the SL3 is quite small the same can't be said for several of the lens options, this is a simple matter of physics. The APS-C sensor requires larger lenses compared to lenses for smaller sensor cameras like M43 and compacts. Ikelite has negated this shortcoming with a custom dome port for the 18-55 kit and the wider 10-18 EF-S F/4.5-5.6 IS STM lenses which has the zoom control dial built into the port. This is ideal for reducing the overall size of the system.

Unlike port offerings for many kit lenses this is a dome not a flat port. The dome port allows a wider angle of view at the 18mm/10mm ends of the lenses and increases AOV at the 18/55mm end of the lenses as well.

The camera on/off switch has three settings off, on and a video icon. When the camera is turned, on a display of your shooting information appears on the LCD display. The LCD display includes the mode you are shooting in like manual and information related to that shooting mode. In manual mode shutter speed, F/stop, ISO, exposure compensation, white balance, battery power, AF points, one shot or multi shot RAW capture, number of exposures and more all appear.

To make a change like moving the ISO setting all you need to do is press the OK button, scroll to ISO using the four way arrows press OK then scroll to a higher ISO and press OK.

You can use the main command dial to change functions like shutter speed and F/stop settings. Move the switch to the video icon and you hear the mirror lock-up and the video framer appears on the LCD for video shooting. Press the OK button and now your video shooting information screen appears on the LCD. Press the four way arrows and you can make changes to things like movie recording from 4K to Full HD, white balance, AF modes and more.

In still mode push the control button to the right of the viewfinder and you will hear the mirror lock-up, you are now in live view mode and the image will appear on the LCD rather than in the viewfinder. In live view the AF speed is greatly improved over the SL1 I reviewed in 2014 and approaches the AF speed when using the optical viewfinder with wide lenses.

Low light shooting is not as much of an issue as it was with the SL1 either.

In video mode you push the same live view button to the right of the viewfinder to start and stop recording. When recording begins a red record icon appears at the top right of the LCD to indicate that you are recording. With wide lenses like the Tokina the auto focus works well as you move the camera from subject to subject while shooting video.

Once you have finished recording you can push the blue review arrow and the left/right arrows to find the clip you wish to review, then push the up arrow and OK to play.

In playback you can hear distracting noises from the auto focus using some lenses. This issue can be worked around after you have spent some time with the system.

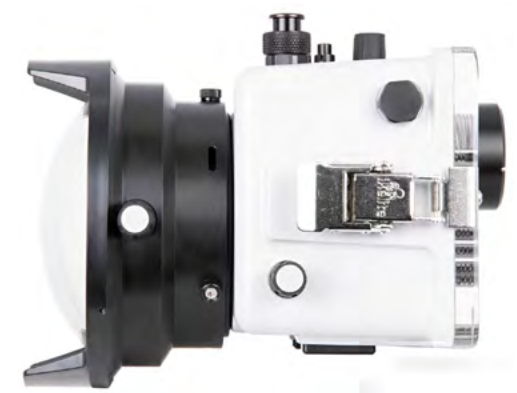
One of the things I like most about the video record controls is that it is not easy to accidentally start recording while you are shooting stills. You



*Devils Ear Spring entrance, High Springs, Florida, Canon SL3, Tokina 10-17 fisheye at 11mm, ISO-400, F/10, 1/200th sec, two Ikelite DS-160 flashes*

can't just bump a single record button and start video recording without knowing it.

When the camera is turned off the sensor cleaning icon appears on the LCD to let you know the sensor is being cleaned each time you shut the



camera down. It would make more sense for the sensor to be cleaned when the camera is turned on but that would prevent the almost instant start-up.

## The housing and port

Ikelite is a US company which has been making underwater photography equipment for over fifty years. The company has an outstanding reputation for customer service both with new equipment and aging equipment, offering upgrades and fast service turnarounds to their many loyal customers.

The Ikelite Canon SL3 housing design features the opaque light gray ABS-PC polycarbonate material for the front section of the housing with a transparent polycarbonate housing back. These polycarbonate housings provide an excellent view of the camera controls and O-rings after the

housing is sealed.

The Canon SL3 housing has four main components, the front “box” where the camera sits, a flat rear door, the removable front port and the camera tray which attaches to a tripod mounting point on the bottom of the camera.

The front part of the housing where the camera sits has a track at the bottom that the camera tray slides into. Once the camera is aligned in the housing the hotshoe for flash connection is mounted to the camera hotshoe and the housing is ready to close.

The rear door of the housing is then secured by facing the housing down and making sure that the rear door O-ring has properly seated in the front half of the housing. The two heavy duty lid snaps are then secured by pushing down, you should hear the lid snaps click into the locked position and you should not be able to lift the snaps without pushing in the snap

locking device. I like to use equal pressure on both lid snaps so that they lock simultaneously.

Once the camera is secured inside the housing you can see the housing controls and align them with the controls on the camera. The right hand side of the housing has the shutter release while the left side of the housing has the lens release control and vacuum valve. The lens release allows you to mount lenses by removing the port and not the camera from the housing. The bottom of the housing has two mounting screws for mounting a tray to the housing.

The top of the housing has the sync port for the flash cord to the left with controls for on/off/video, camera mode control, ISO settings and main control wheel to the right.

The rear door for the housing has controls for menu, info, live view/video start/stop, AF point/magnify button, AV aperture/+/-exposure compensation, up/down/left/right



setting control arrows, set/OK button, playback button and erase button.

The rear door includes an optical glass pickup finder which helps your view into the rather small optical viewfinder on this camera. Ikelite also offers 45 degree and 180 degree accessory viewfinders that greatly magnify the view into the viewfinder. The most common negative feedback among my students using the SL1 housing in 2014 was that the viewfinder was a bit small. This is a common issue with many of the smaller sensor DSLR cameras.

After the specs and product descriptions above all you really need to know is that the Canon SL3 and Ikelite housing are about as straight forward and simple as you can get.

The most useful settings all appear in large print on the three inch LCD and are accessed by using the OK and up/down arrows. This is a quick and easy way to change settings on the fly.

The Ikelite TTL is excellent and will help new photographers have immediate exposure success without the flash needing to be in manual mode. As long as you fill the frame with the main subject exposures will not be an issue in TTL. Lastly the Tokina 10-17, 18-55mm kit lens and 60mm macro are all relatively inexpensive and will cover a wide range of subjects.

My SL3 housing shipped with one of the acrylic dome ports for the Tokina 10-17mm ATX F/3.5-4.5 DX Fisheye with sun shade and left hand zoom control. I also requested a macro port to support my Canon EF 100mm F/2.8L Macro IS USM lens. The macro port includes the 67mm threads for mounting accessory closeup lenses, filters and more.

The housing sells as a “kit” for \$1895.00 and includes the Canon Rebel SL3 camera with Canon EF-S 18-55mm lens, dome port and focus gear, battery charger, USB interface and camera strap.

I would also recommend the vacuum system kit and a single or dual flash tray at a minimum. The Kit also ships with a neoprene cover to protect the dome port, waterproof bulkhead cap when not using the flash port, a main door spare O-ring, extra port screws and a one year manufacturer warranty (US).

Other SL3 kits are available with one or two Ikelite DS160 flashes, support arms, the tray, sync cords for firing the flashes, the vacuum kit and



*Orange Cup Coral, Blue Heron Bridge, Florida, Canon SL3, Canon 100mm macro, ISO-100, F/22, 1/200th sec, two Ikelite DS-160 flashes*

more. Please consult the [ikelite.com](http://ikelite.com) web site for the latest kits and sale pricing.

## The DS-160 Flash

For this review Ikelite included two of the optional DS160 flashes with Ikelite flash arms, sync cords and dual tray. This housing is compatible with a verity of optional Ikelite flashes including the DS50 (above serial# 70,000), DS51, DS125 (above serial#5000), DS160, DS161, and DS200.

The flash sync cord connects through the bulkhead on the housing and provides rich well balanced TTL exposures. The DS-160 flash includes a difuser, a rechargeable proprietary battery pack, a smart charger, a one inch ball mount, bulkhead cap, two year limited warranty (one year on the battery pack and charger) and silicone lube.

The DS-160 and DS-161 strobes flashes are very well respected in the underwater photography



*Blue Grotto, Williston, Florida, Canon SL3, Tokina 10-17 fisheye at 11mm, ISO-200, F/8, 1/100th sec, two Ikelite DS-160 flashes*

community and well worth a review on their own. I have used these flashes for a number of reviews with both Ikelite and non-Ikelite control arms and they do not disappoint. I have also used the flashes in both TTL and manual modes with outstanding results.

Ikelite flashes have one of the best TTL systems in the business and I hope to someday see them develop a new fiber optic flash built from the ground up. The 360 degree flash tube used for the DS-160/161 provides a pleasant light with a very even light pattern.

## Field Testing

When I first discussed reviewing this system with Ikelite I was assured this was about as simple a DSLR system as you will find. I viewed this statement as a challenge and told Ikelite I would be turning the SL3 system over to my fourteen year old nephew (Roman) who has no prior U/W photo experience to test drive. I gave Roman a fifteen minute session on how to turn the camera and flashes on and off, zoom the Tokina lens, release the shutter, position the flashes and playback images. Some of Romans' images are included in this review.

With the SL3 system I did most of my ISO, F/stop, shutter speed, +/-EV changes and more on the LCD even though many of these functions are supported through other controls on the camera housing.

I also shoot exclusively in RAW and process in Lightroom. For this review I relied exclusively on the excellent Ikelite TTL with a bit of EV bracketing for upward angles and subjects that were small in the frame. With the Ikelite TTL system it is easy to dial-in a shutter speed, ISO setting and F/stop then let the TTL do the exposure work.

The APS-C sensors have great depth of field so the old adage "F/8 and be there" works well with a starting ISO around 200 and a 1/60th to 1/125th shutter speed.

Once in the water I found the SL3 system to be light and easy to hold for long periods with one hand. The small dome port made the system easy to move through the water and quite nice for small spaces. The long Canon macro lens was above Romans' skill level and again I would recommend the Canon 60mm for APS-C cameras over the much more expensive 100mm macro for full frame.

The small dome port for the Tokina 10-17 is the only port that allows the lens to zoom through the entire range and between 10-12 mm it will vignette and go a bit soft at the corners. I would expect similar issues with the rectilinear Canon 10-22 F/3.5-4.6 which uses the same port.

The 18-55mm kit lens which also uses the same port should not have issues. These lenses can also be used with the large eight inch port, best for split images but without the ability to zoom. For the purpose of shooting splits I would recommend setting the lens at its widest AOV and a high F/number in the F/16-22 range. As a footnote Ikelite offers inexpensive (around \$10.00) anti-reflective rings for a verity of lenses including the 18-55 and 10-22. These anti-reflective rings are flat black tape cut to fit each lens and to cover the white lettering engraved around the front lens element. At or near the surface they reduce the reflection from the lettering back onto the image sensor associated with dome ports, particularly acrylic ports. I have the anti-reflective rings on my Zeiss Batis 18mm F/2.8 and Sony FE 16-35mm F/4 lenses which I use with a verity of ports and they defiantly help to reduce reflections.

My SL3 housing was fitted with the optional 45 degree optical viewfinder which I used during this review. Roman found it a bit difficult to master so he used the live-view feature which works much



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*Roman holding the Ikelite SL3 system, Blue Grotto, Williston, Florida.*

better than the original SL1 camera.

I found the autofocus worked very well in the low light conditions inside some of the North Florida caverns. The Ikelite TTL also worked very well in very low light separating subjects from background without overexposing the foreground subject.

*Cushion Sea Star,  
Blue Heron Bridge,  
Florida, Canon  
SL3, Canon 100mm  
macro, ISO-100,  
F/22, 1/200th sec,  
two Ikelite DS-160  
flashes*



I remain a diehard manual everything shooter but I would highly recommend the Ikelite TTL system for novice and intermediate photographers looking to reduce the learning curve.

On a personal note I see post after post on social media about the downturn in camera markets and the aging diver population. The prevailing wisdom is that only well-heeled over 40 divers can afford U/W photography equipment and travel. The inference is that underwater photography will fade because youngsters just can't afford to get involved. I call bullshit, as underwater photographers it is our responsibility to pass the torch to new generations by mentoring and educating.

Get involved, take a young person to your photo club or dive shop event. If you lend your knowledge

and your equipment we will have new generations creating art beyond our wildest imagination or we will see the oceans become vast wastelands because no-one was left to document and defend them.

Thanks again to the outstanding Ikelite.com team for their assistance and support with the underwater equipment used for this review.

**Phil Rudin**  
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Issue 116/29

# Nikon Z50 and Nauticam Housing

by Tony Land

Many years ago, I had extensively used a few mirrorless cameras - specifically a Sony NEX5 and NEX7. As a hardcore DSLR shooter, I did like these setups, but wasn't impressed enough with them to consider making the switch from my regular SLR camera. The Nikon Z50 and Nauticam NA-Z50 housing has me rethinking this.

The Nikon Z50 is the newest in Nikon's interchangeable-lens mirrorless cameras, offering an APS-C sensor, 20 megapixels stills and 30 FPS 4k video. The kit lens it comes with is a 16-50 f3.5-6.3 Z-mount.

Last week, I was fortunate enough to get my hands on one inside a brand-new Nauticam housing for a week of test-diving, courtesy of Reef Photo and Video. Over this time frame I was able to get 6 dives with it, and without further ado, here's my first impressions of it.

Like all Nauticam housings, the design is well thought out and ergonomics are superb. I particularly like how even though the playback button is located on the bottom right of the camera body, some clever control routing has this function as a lever for your left thumb - consistent with many other DSLR housings. With the exception of the ISO control (something I address later in this article) every function of the camera is easy to operate with your hands on the handles.

The muscle memory of this setup took me a



*The Nauticam NA-Z50 housing with WWL-C lens, and Inon Z330 strobes*



*NA-Z50 left rear, illustrating the playback lever.*

bit to get used to. Several dives were required just to get the camera set up to shoot in a manner I was accustomed to, but once I did, everything clicked, and I began to really enjoy it.

My loaner camera came with a standard viewfinder, however since most Nauticam housings are compatible in this regard, I immediately swapped it with my personal and beloved Nauticam 45 degree viewfinder.



*NA-Z50 housing with 45 degree viewfinder.*



Immediately I noticed it was very negative in the water for such a little camera. Dive 1 was mainly me flailing about as my muscle memory was off from the added weight. Easily resolved using some carbon buoyancy float arms. Using a pair of Nauticam 70x300 and a pair of H2O-Tools 30x300 arms made the setup just slightly negative, and far easier to handle.

## What I loved

This particular configuration came with both the Nauticam WWL-C 130 degree wide lens, and the CMC-1 macro diopter. In my former life, if you had ever asked me about doing both macro and wide angle shooting on the same dive, I'd have given you a hard "no." Wet lenses just weren't up to the task. Nauticam has changed the game here, and they claim their WWL wet lens series are "mathematically sharper" than anything else in the market. I don't doubt it. This lens surprised me in its ability to deliver sharp images corner to corner. The bayonet mounts allow for quick and easy changing from wide angle to macro and back.

The electronic viewfinder surprised me. It was sharp and easy to see corner to corner. One of the nicest things I found was the ability to check my image without removing my eye from the viewfinder after my shot. I found this particularly useful for macro photography - something you just can't do on a traditional SLR. Normally after a few shots, you need to look at your LCD screen to make sure nothing weird is happening with your strobe placement or power settings, and just to get an idea of how your shot is coming out. With macro and super macro, doing this breaks your focal plane and requires you to recompose the image and focus - something that can often be easier said than done. It also minimizes you frightening your subject, who could get spooked and disappear.

With the electronic viewfinder, you don't even need to move. The image will appear automatically or on demand without you ever needing to take your eye away, frightening the subject or moving your composition and focus. I loved this feature alone.

That said, initially I found the viewfinder too



*Top rear view of the Nauticam NA-Z50 housing*

bright - something easily corrected in the menu settings, but it also contributed to my images to be vastly underexposed. On my first few dives I had forgotten how to bring up the histogram function, so I found myself going by the light meter, and the preview shown on the viewfinder.

Determining focus, either through the e-viewfinder or the LCD is super easy using the center button in the image review. A press of the center button does a super-zoom of the shot center, allowing you to see if the image is in focus or not.

Battery life is shockingly good. In my past experiences with mirrorless cameras, I found the battery would last 2 or 3 dives if you were lucky. Out of habit I charged this battery between trips, but even after a 2-tank boat dive, I noticed the battery meter hadn't dropped even a single bar. I've since stopped charging it to see how many dives I can get out of it.

## What I didn't love

My really only complaint on this camera would be the focus. Getting sharp focus when using the



*Front view of the Nauticam NA-Z50 housing illustrating the bayonet port mount system.*



*USS Kittiwake shot with the WWL-C wide lens. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*

WWL-C wide angle was a non-issue, and otherwise flawless. It was hard to get shots that weren't in focus.

Shots in macro were far more difficult. Super macro shots using the CMC-1 were maddeningly difficult and I found myself yearning for the manual focus control of my DSLR. To be fair, I was not

using a focus light, so this could have added to my issue. Also I did manage to make the task easier by switching focus to a single point mode, and the 4-way control makes it easy to put this focus point exactly where you want, but it was more challenging than what I was used to. This is probably the worst thing I can say about this camera setup.

From looking at the lens arrangement, a manual focus control might be technically possible, but not without a major housing redesign, so that's not likely to happen.

In the grand scheme of things, this isn't that bad and I was still able to get some great super-macro shots with it.

## Minor gripes

These remaining talking points are really minor issues I noticed, but can certainly live with. They are worthy of mention, but I would certainly not rule this camera out for any of these reasons at all.

## The flash

Like most mirrorless cameras, the camera's internal strobe triggers your external flash. While there is a very innovative control on the left rear of the housing to activate and deactivate the internal flash, the flash



*Inside rear view of the NA-Z50 housing with the Nauticam optical strobe trigger board installed.*

tube itself is very tiny. As a result, shots taken in quick succession can cause it to overheat. When this happens, the camera will not allow you to take any more shots until it cools off. I was shooting in manual flash mode, using the absolute minimum power the flash allows (1/32nd of a second) and I still found it overheating with a reasonable frame rate. On 2 occasions I lost the opportunity for some good images, when I found my subject perfectly framed, yet the camera would not fire.

However, this flash issue is easily resolved using an optical trigger. The solution for me was to remove the optical flash trigger from another housing I had on loan, and install it into this NA-Z50 housing. The change took about 3 minutes to do, and worked perfectly. Anyone looking to



*Goliath Grouper, inside the USS Kittiwake. Shot with the WWL-C wide lens. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*

buy this setup will be well advised to get an optional flash trigger installed when you buy it. If you're a serious shooter, this is a must-have.

It's worth noting that Nauticam's optical flash triggers are really nice. Thin and unobtrusive in the housing, they can support both manual and TTL modes. Unfortunately you can't change between these modes underwater, but I find this a minor inconvenience. The advantage the board offers for shot-to-shot recycle time makes this a must have for any serious shooter.

## The ISO adjustment

This is kind of weird. On the camera, to change ISO you need to hold the ISO button while turning the rear command dial. Not a big deal. When in the housing, in keeping with Nauticam consistency, the ISO control is a lever on the right side of the housing, just behind the shutter release.

On my personal setup, changing the ISO requires you to push this lever with your right thumb, and turn the front command wheel with your right index finger. Again no big deal.



*A super-macro shot of a Painted Elysia, shot with the CMC-1 magnifier. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*



*Hawksbill Turtle, shot with the WWL-C wide lens. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*



*Guardian of the Reef. Shot with the WWL-C wide lens. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*

But on the Z50, you need to push the ISO control with your right thumb, leaving you with nothing to turn the rear command wheel, unless you have been equipped with an extra thumb.

What you need to do is adjust your grip so the lever can be pressed with your right index finger, while you adjust the rear command wheel with your right thumb. It's an awkward arrangement, and would be much easier if Nauticam changed this to some sort of toggle control, instead of a 'momentary on' type that they currently use. It's a minor gripe, considering I don't often adjust ISO underwater, and when I need to, I can manage it with this modified, albeit odd grip.

Note: After reading this article, Kevin Palmer of Reef Photo pointed out to me, that this issue can be mitigated with a camera setting. In the custom settings menu > controls > 'Release button to use dial' should be set to "on." When this is enabled the ISO button becomes a toggle, rather than a momentary on control, making it far easier.



*Blenny. Shot with Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*



*Cropped image of a yellow-headed jawfish. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*

## Shutter sync speed

For some reason, the maximum shutter speed when using a strobe is 1/200th of a second. A bit too slow for my taste, and I wish it could go up

to 1/250th or 1/320th like some other cameras do. Even use of the flash trigger board in manual mode keeps the shutter speed firmly capped at 1/200.

Note: this was questioned, as most Nikon cameras will allow higher shutter speeds when



*Divers on the USS Kittiwake. Shot with the WWL-C wide lens. Nikon Z50, Nauticam NA-Z50 housing, 16-50 lens, Inon Z330 strobes.*

using an electronically triggered manual flash. The reason for the 1/200 limit could have been because the optical trigger hotshoe had a 5-pin connection and the camera though ttl had been enabled by default. Unfortunately I don't have a manual hotshoe to test this theory. Once we learn more, I will update this section.

## Summary

My own personal benchmark of any camera system boils down to this: is it easy to operate and can you

get good results? The answer to both these questions is yes.

I really like this camera, and would confidently recommend this setup. It's compact and lightweight, versatile, and yields great images and video. The wet lenses yield great quality images - something I would not have dreamed of years ago. They also allow for the underwater photographer's Holy Grail - the ability to do both macro and wide angle on the same dive.

The setup as I tested it (less strobes and arms) would retail for

around \$7,500, which is expensive, however I did have a few luxury accessories like the optical trigger and 45 viewfinder.

Those looking to keep this more affordable can forgo the viewfinder, trigger, and CMC-1 lens, bringing the cost down to around \$5,500. Something that really makes it worth considering.

A comparable equipped DSLR rig would in my rough estimation cost \$2,000 more, and not have the same versatility these wet lenses offer. In addition, the more compact nature of this setup will make it travel easier than it's big brother SLR setups.

The electronic viewfinder changes the game for me when it comes to macro photography.

The downside compared to a SLR? Well I really didn't find one. I did find the focus difficult on macro and super macro, and the loss of a manual focus mechanism is somewhat frustrating, but certainly not a deal breaker for me. I was still able to get great macro shots using this setup in the limited time I played with it. I imagine when I try again with a focus light, I will have better luck. The other minor gripes I've listed were for the benefit of the reader, and are things easily addressed.

For those looking to upgrade from a point and shoot, I can confidently recommend this camera,

housing and configuration. As a SLR shooter, this would have me seriously considering making the change to mirrorless. My only reservation would be that you cannot use your existing Nikon glass with this camera. However, retaining a SLR and associated lenses for topside use while adding this as a travel and/or underwater setup would be something worth thinking about.

I've not addressed video quality at all - while I did take a few quick video clips, I didn't devote the amount of time required to give a full review just yet. As they say in Cayman - soon come.

**Tony Land**  
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# Sony RX100 VII Review

by Jim Decker

On the surface, the Sony RX100 VII looks almost identical to the previous Sony RX100 VI camera. Under the hood, however, it packs a new upgraded sensor and an improved autofocus system. The new autofocus system, in particular, is completely game changing for compact cameras. Read on to see the details on the latest updates and how the Sony RX100 VII performs underwater.

## Autofocus Tracking That Will Blow Your Mind

The biggest change to come with the Sony RX100 VII is the new autofocus system. Sony has taken the autofocus tracking from their top-of-the-line mirrorless cameras and implemented it in the Sony RX100 VII. Anyone who has ever used those focus systems can attest that it is a game changer. Simply point the focus squarely on what you want in the frame to be in focus, half-press the shutter, then the camera will track that object as it moves through the frame. The level of performance and accuracy looks to be the same as you get in the top-end mirrorless Sony a7R IV. This is great for close focus wide

angle shots where the depth of field tends to be thin or tracking a fish for a portrait-style shot.

The focus tracking is so good, it's the only autofocus setting we would use on this camera for land or underwater. This is by far the best autofocus system ever put into place for a compact camera.

The 24-200mm lens from Sony is very impressive for topside use. Having a 200mm lens camera that can fit in your pocket is pretty darn incredible. Anything needing a long zoom application such as concerts or sporting events works great at the long side of the lens, making the Sony RX100 VII the most versatile camera out of all the compact cameras in our comparison review.

Underwater, the capability of the

*The focus tracking of the Sony RX100 VII had no problem tracking this cuttlefish as it moved, even at really close distances. We were able to keep tracking until it was in the perfect position, then take the shot. Using this method will consistently produce shots with perfect focus, making soft, out-of-focus images a thing of the past.*  
**Sony RX100 VII | 1/125 | ISO 100 | f8**



©JIM DECKER | BACKSCATTER | SONY RX100 VII



*The Sony RX100 VII works really well for medium-sized macro subjects like this nudibranch. Sony RX100 VII | 1/2000 | ISO 100 | f11*

200mm creates a working distance that is further away, like an SLR, and helps to avoid spooking skittish critters.

However, there are some caveats to shooting macro with an accessory macro lens on the Sony RX100 VII. These lenses work by allowing the camera's lens to focus closer than the minimum focus, thereby allowing you to get closer, making the subject larger in the image. The more powerful the lens, the closer one can get, and the larger the object appears. The drawback to this is that the entire focusing range of the lens

is shifted closer, so the camera won't focus at far distances any longer with the macro lens installed. This can put the camera in a very narrow range of minimum and maximum focus distance, especially while using more powerful macro lenses.

In the case of the Sony RX100 VII, this is around an inch or so at 200mm with the Nauticam SMC-1. While this is great for super tiny critters, you get a "donut hole" where you can't back up anymore and be in focus for larger critters when a macro lens is in place, and when it's removed, you're not close enough.



*While the focus tracking is great for moving subjects, the shooting speed when using the flash is very slow due to a lack of manual flash control. The camera was only able to pull off 2 shots with this turtle encounter, leaving the photographer wanting a faster shooting experience in order to have more shots to choose from. Sony RX100 VII | 1/250 | ISO 100 | f8*

With a powerful macro lens, it will also have a super thin depth of field at the greatest magnification levels due to a combination of a long focal length lens, minimum lens aperture of  $f11$ , and a relatively large 1-inch sensor.

Because of the very limited focusing range of the camera, autofocus is just about useless when used with a powerful external macro lens, like those used for super macro. The working distance to the subject

is an extremely narrow range and the camera will not focus outside of that range. Manual focusing and moving the camera in and out until the subject is in focus is really the only way to shoot with a high powered macro lens. Focus peaking in manual focus mode makes this an easier task. While all this makes super macro completely possible with the Sony RX100 VII, it makes it extremely challenging to execute.

On the other hand, using this

camera with a less powerful macro lens, such as a +5, makes it really easy to do “normal” sized macro critters. The average nudibranch, cuttlefish, or fish portrait shot is actually quite easy with a +5 macro lens. The working distance from near to far is in the twelve-inch range, rather than about one inch as it is with a more powerful macro lens. The autofocus tracking works really well with a +5 macro lens as long as you stay within the focusing distance the lens is capable of.

With all of this being said, carrying around different powered macro lenses for differently sized critters is mandatory to cover the entire range of macro shooting with this camera. Novice shooters will find it much easier to shoot larger sized macro critters with something in the +5 macro lens range. Using a +10 or greater lens will be much more difficult.

## Fantastic Wide Angle Image Quality

Wide angle photography is the major reason one would take this camera underwater. The new sensor has a base ISO of 100 which is 1/3 of a stop more sensitive to light than the previous model Sony RX100 VI. This will allow the Sony RX100 VII to pick out a little bit more detail in the shadows and preserve highlights compared to the previous model. Bluewater backgrounds look great and images look sharp with good detail. Combining this camera with a high-quality wide angle lens such as the AOI UWL-09 PRO or the Nauticam WWL-1 will yield one of the best images that can be had from a compact camera for underwater wide angle photography.

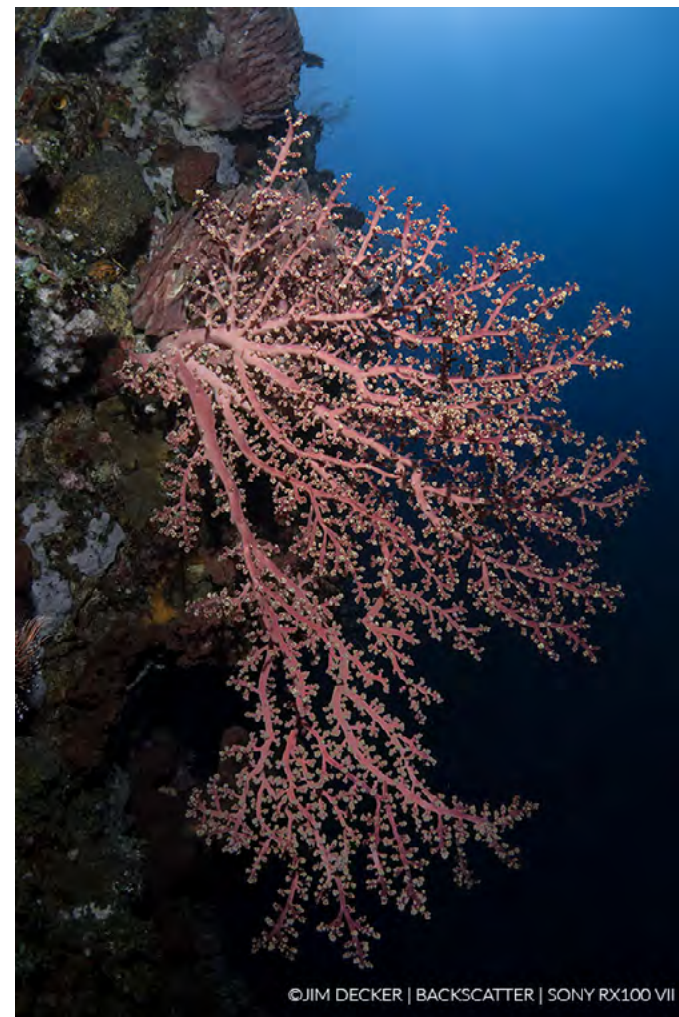
## Shooting Speed and Performance – The Good and The Bad

20 frames per second RAW shooting, continuous autofocus, no screen blackout during continuous shooting, and a 100+ shot buffer make the Sony RX100 VII the best performing compact we’ve seen yet. This crazy level of performance is on par with some of the highest performing SLR and mirrorless cameras out there today.

On paper, this sounds great and works really well for fast action with continuous or natural light. However, if you’re using strobes, this speed isn’t as relevant as the flash can’t recycle that fast. The camera’s flash is automatic only and has no provision for manual flash.

The speed of shooting and being able to pull off a lot of shots in a row is critical to successful underwater nature photography and getting “the shot” where everything is in just the right position. While automatic flash control sounds good in theory, it has a long recycle time between shots, not allowing one to pull off a rapid-fire succession of shots. With manual flash, a lower power setting can be used with a quick recycle time to trigger the external strobe. Unfortunately, a big downside for performance is no manual flash control with the Sony RX100 VII.

Trying to get a strobe-lit shot of a fast-moving subject is really difficult because there is no way to shoot in rapid-fire style. During testing, it was not uncommon to only be able to get one shot off during critical moments, which meant missing most of the action while waiting for the flash to recycle. After about 2 or 3 shots in a row, it slowed down significantly trying to recharge the flash and the recycle time became unbearable.



*The wide angle image quality is excellent, featuring great colors, sharp detail, and good dynamic range. Sony RX100 VII | 1/250 | ISO 100 | f8*

## 4K 30p and High-Speed HD Video

Video on the Sony RX100 VII continues to be top-notch. The video image quality is excellent and is taken from the full width of the sensor for both 4K and 1080 HD, unlike some other compact and



*When shot to its strengths, video from the Sony RX100 VII looks awesome.*

SLR cameras which use a cropped portion of the sensor, which limits the wide-angle capability. 4K has a maximum frame rate of 30p while 1080 HD has a frame rate up to 120p, allowing for slow-motion up to 4x. Both formats are in H.264 and have a maximum data rate of 100 Mbps, which is comparable to what you'll find in a top-end mirrorless or SLR system.

Video with lights looks great, with excellent color and contrast. Ambient light while balance looks great in the shallows but starts to fall apart at about 35 feet. Compared to Olympus, Panasonic, and Canon compact cameras it has the shallowest manual white balance capability, though the results in those shallower

depths do look particularly good.

## Conclusion

The Sony RX100 VII is the perfect example of a camera that excels massively in some areas while falling short in others. The on-land performance is crazy good with excellent image quality, extreme levels of shooting speed that is better than most pro-level SLRs, and definitely the best autofocus system out of any compact camera (by a long shot). This camera is absolutely Backscatter's #1 recommended pocket camera for any topside shooting.

The underwater strengths of the Sony RX100 VII are wide angle photos, wide angle video with lights,

wide angle video with ambient light down to about 35 feet, and medium to larger sized macro. It excels massively in these areas. It falls short in recycle time of the flash (due to a lack of manual control), super macro capability (a novice will have a much easier time shooting an SLR instead), and the relatively shallow white balance capability for wide angle ambient light video.

Whether this camera is right for you totally depends on the type of shooting that you do. If you want to own just 1 compact camera for both topside and underwater adventures, this is probably the best choice due to the range of the lens for topside and the excellent image quality it produces underwater. For those that want a small rig to push through the water chasing whales, this is at the top of the list. The speed it has when shooting without strobes makes this a top choice. Casual video clips shot in shallow water look great but would be limiting for a serious video shooter.

## Pros

- \* Maximum topside shooting power in a minimum sized body makes this our pick for Best Compact for Topside & Underwater
- \* 24-200mm lens allows super tight macro
- \* Lens zoom range is fantastic for

dual topside/underwater use, but still fits in your pocket

- \* Video quality is excellent
- \* AF speed and tracking in continuous mode rivals top-end mirrorless and SLR cameras

## Cons

- \* 24-200mm lens requires different ports for true wide angle and macro
- \* Long or multiple back to back clips in 4K video can lead to overheating
- \* Manual white balance limit is about 35 feet
- \* Built-in flash is TTL only, limiting shooting speed with a flash
- \* Versatility and compact size comes at a price that's not far off from an SLR

**Jim Decker**  
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# Rokinon/Samyang AF 24mm F/2.8 FE for Sony

By Phil Rudin

Since 1979 Samyang Optical Company LTD, a 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 second 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.

As with the lens, excellent deals can also be found on current full frame, APS-C and M43 camera bodies discounted in advance of newly released updates. The Sony A7R III released just over three years ago is now, discounted \$700.00 to \$2500.00 from original \$3200.00 retail price when first released. These reductions make many full frame mirrorless cameras very competitive with new 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

I did for the May/June 2016 issue #90 of uwpmag.com. I was using the Rokinon 12mm F/2.8 ED AS IF NCS Fisheye for Sony full frame cameras with an Ikelite focus gear using the Ikelite eight inch dome port. This is an all manual control lens I shot with both front and rear curtain shutter pre-setting the aperture in the F/8 to F/16 range. The aperture setting needed to be preset prior to entering the water because I had no aperture control once the housing was closed.

To achieve proper exposures I was using ISO values from 50 to 320 and shutter speeds from 1/15th sec to 1/250th sec. The 180 degree fisheye angle of view produced excellent sharpness with the Sony A7R II's 42.4MP CMOS sensor, with great color rendering and the build quality was excellent for such an inexpensive lens. The only real downside to the fisheye lens was the plasticky feel, lack of quality weather-sealing and connectivity for EXIF data attached to the images in post.

Fast forward from 1979 to May 2016 and Samyang's 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 in 2016 the 50mm F/1.4 and 14mm F/2.8 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.

## The Rokinon 24mm F/2.8 Lens

Before I jump into the body of this review I should first explain why I think a 24mm equivalent lens with only a 82 degree angle of view should be in your underwater kit regardless of the sensor size of your camera.

For years I used the Olympus 12mm F/2 (24mm equiv.) as my go to lens for shooting intimate people portraits both underwater and for splits. These close focusing lenses result in far less distortion, sharper corners, excellent blurred backgrounds, smaller port sizes and more. You will see in the attached images that for vertical compositions of smaller to mid-size subjects the 24mm excels at reducing unwanted distractions like divers swimming through your frame.

The other reason I love these lenses is the size and weight and value for topside travel

photography and dive boat photos. I carry the Rokinin AF 24mm and the Rokinin AF 75mm F/1.8 FE as my prime travel lenses. They take up less space and weight less than an FE 24-70 F/2.8 or Tokina 28-75mm F/2.8.

I generally shoot my travel images with the lowest MP FF camera I travel with usually in the 24MP range and the image quality for both lenses is excellent.

The Rokinin 24mm F/2.8 AF lens tested for this review is a wide angle prime lens with an 82 degree rectilinear angle of view on full frame and a 36mm equivalent with Sony APS-C. The Rokinin AF 24mm is what Full frame mirrorless users would wish for in a lens, it is compact at just 61.8 X 37 mm (2.43 X 1.46”) and weights in at only 120g (4.23 oz.).

The lens has 7 Elements in 7 Groups with three aspherical elements and two high refraction index elements to help control spherical aberration and distortion, increase image sharpness and boost resolution and clarity. A multi-coating has also been applied to several of the elements to aid in the reduction of ghosting and flare.

The lens accepts 49mm filters and ships with a very small bayonet lens hood, lens caps and a zipper travel pouch. The diameter of the lens allows it to be mounted from the rear of any Sony A7 series housing with any port size opening.

The 24mm minimum focus distance

is 24 cm (9.45”) with a 0.13x max magnification. The aperture range is from F/2.8 to F/22 with seven diaphragm blades.

Currently the Rokinin AF 24mm F/2.8 for Sony is priced at \$249.00 US down from its introductory price of \$399.00. Other 24mm lenses for Sony FE/E mount include the excellent Sony FE 24mm F/1.4 GM lens which retails for \$1398.00, the Sigma 24mm F/1.4 \$849.00 and the Tamron 24mm F/2.8 on sale for \$299.00. These are all larger and heavier lenses but I would include the Tamron in the budget class.

The Rokinin AF 24mm F/2.8 is a no frills lens that offers no in-lens image stabilization, no advanced weather-sealing and no AF-Manual focus on/off switch or focus hold button on the lens barrel, it is however internal focus.

For underwater photography with the A7R III/IV I use the lens in AF-C auto focus mode. You can switch the Sony A7-series cameras to manual focus in the super menu very quickly but since no focus gear is available for the housings I tested with the lens, this is a moot point.

For land photography the lens has a smooth manual focus ring which works

***Model, Cozumel, Mexico, Olympus EM-1, Olympus 12mm F/2 (24mm equiv.) 170mm Zen dome port, Nauticam NA-EM1 housing, A/V light, ISO-200, F/5.0, 1/2500th sec***



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very well for things like astro photography. I have manual focus set 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 peeking set to red which also 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 smaller and lighter than any full frame lens I have used to date.

Be aware that Rokinin bundles a “lens station for Sony E” with several of the for Sony FE full frame auto focus lenses they sell including the 24mm. 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. Updates can be made to the auto focus Sony FE 24mm F/2.8 using the lens station.

So far I have found firmware updates for seven of the nine Rokinin auto focus lenses for Sony full frame cameras. I have tested four of Rokinin’s Sony AF lenses and they all arrived factory new needing the firmware 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 E 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.



***Granulated Sea Star, Puerto Galera, Philippines, Sony A7R III, Rokinin 24mm F/2.8, Nauticam NA-A7RIII housing, Zen 230mm dome port, Two Inon Z330 flashes, ISO-320, F/22, 1/30th sec.***

***Soft Coral, Puerto Galera, Philippines, Sony A7R III, Rokinin 24mm F/2.8, Nauticam NA-A7RIII housing, Zen 230mm dome port, Two Inon Z330 flashes, ISO-320, F/18, 1/30th sec***

Currently the Rokinin AF 24mm F/2.8 and AF 14mm F/2.8 are not included on the Sony A7-series or A9-series 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 lenses.

For the Aquatica A7rIV Pro housing I used the Aquatica 200mm (eight inch) acrylic dome port and the 28.5mm port extension for the 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 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 24mm. Because of the small size of the lens I don’t think a port extension will be needed for the 24mm 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 many acrylic dome ports 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 or chose what you already own first if it supports the lens.

With the larger acrylic ports the dome has a tendency to turn port up putting extra strain on the right 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 24mm F/2.8

I tested the Rokinin 24mm lens with the Sony A7R III camera and Nauticam NA-A7RIII housing with the ZEN Underwater DP-230mm Fisheye II port (the only dome port I

own) with no extension and two Inon Z-330 flashes using manual power settings.

The A7R III 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/2.8 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 1/15th of a second while maintaining excellent sharpness in the image with static subjects, anything much slower than 1/15th sec. is not very useful for most underwater work. As you will see from the images I have provided I found myself using the lens in the Portrait orientation much more often than in landscape. In portrait using two flashes you need to reposition the lower or in some cases both flashes to avoid blowing out the bottom half of the image by having the flash too close to the bottom.

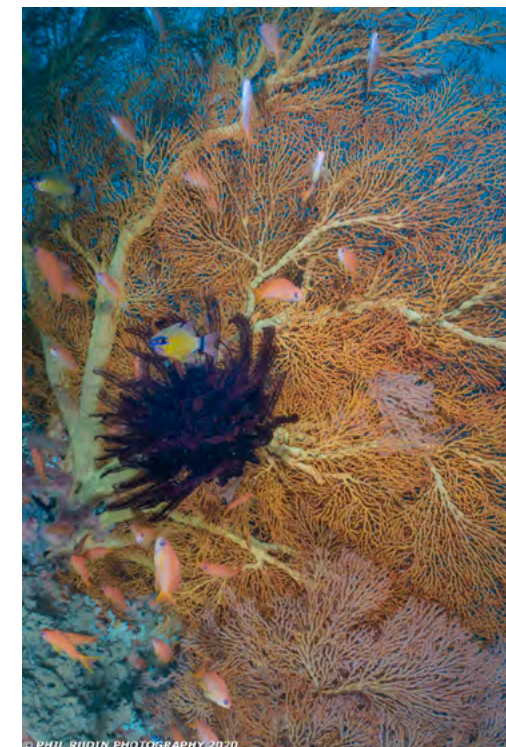
Most of the included images were shot around Puerto Galera Mindoro in the Philippines. I was able to lock focus with a half press and drag the focus point around the frame for best composition without dropping the focus point. For humans the eye auto focus locked on even with divers



*Clarks Anemone fish, Puerto Galera, Philippines, Sony A7R III, Rokinin 24mm F/2.8, Nauticam NA-A7RIII housing, Zen 230mm dome port, Two Inon Z330 flashes, ISO-320, F/22, 1/60th sec*

wearing a black mask.

With all wide lenses strobe placement is critical to avoid backscatter and like all wide lenses looking into the corners of the EVF or LCD while composing the image is very important. With a minimum focus distance of 24 cm the lens focuses all the way to the port glass



*Anthias and Ring-Tailed Cardinalfish around hard Coral, Puerto Galera, Philippines, Sony A7R III, Rokinin 24mm F/2.8, Nauticam NA-A7RIII housing, Zen 230mm dome port, Two Inon Z330 flashes, ISO-320, F/22, 1/30th sec*

with the 230mm dome but the larger port interferes with your ability to shoot CFWA without banging the dome shade on something.

Even with the Tamron 24mm which focuses to 1:2 at 11.94 cm (4.7 inches) from the sensor shooting behind even a 170mm port would put the minimum focus point inside the

port negating most of its advantage as a close focusing lens.

At the higher F/numbers (11-16) I found corner sharpness with the Zen Port 230mm optical glass port to be acceptable for publication. I would expect similar results with ports down to 170mm. Because the 24mm is not a super wide lens like lenses in the 12 to 18mm range corner sharpness is not as problematic all else being equal.

The Rokinon 24mm 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 and the Nauticam WACP. I also use the Canon 8-15 fisheye but I don't rely on the fisheye nearly as much as many U/W photographers.

I had to rethink and reconfigure my travel kit to accommodate the additional weight and size of the Zen 230mm optical glass dome port and the Nauticam WACP wet lens. I always travel with one or the other but both would be over the top for me. If my destination offers great split image opportunities I favor the dome port configuration. If I will be shooting at depth I favor the WACP and I carry the fisheye and a 140mm port to shoot splits in a pinch.

I carry both options the same way packed in bubble wrap standing upright in my ThinkTank Urban Disguise 60V2.0 shoulder bag rather than trying to fit them into

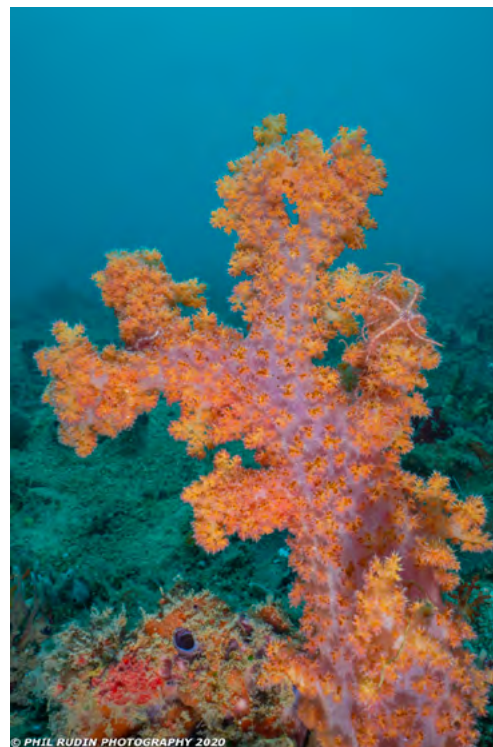
my ThinkTank Roller bag. With this configuration I still have room for several lenses and a body or two along with the port or WACP added to my shoulder bag. This configuration is frequently over the airline weight restrictions a kilo or two which is a risk I am willing to accept since my shoulder bag is weighed far less often at the airport than my roller bag.

When the image files from the Rokinon lens are downloaded into LightRoom all of the EFIX data appears and lens profiles are accessible. In the LightRoom library the meta data always lists the lens as a Samyang 24mm while in the development module the lens profile appears as a Rokinon/Samyang 24mm.

The Rokinon/Samyang 24mm F/2.8 AF offers outstanding performance for an under \$300.00 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 quite similar from the Canon and Nikon versions of these lenses.

I would like to once again thank the staff at Asia Divers and El Galleno Beach Resort for support assistance with this review. Find out more about the Rokinon product-line at Rokinon.com.



*Soft Coral, Puerto Galera, Philippines, Sony A7R III, Rokinon 24mm F/2.8, Nauticam NA-A7RIII housing, Zen 230mm dome port, Two Inon Z330 flashes, ISO-320, F/18, 1/30th sec*



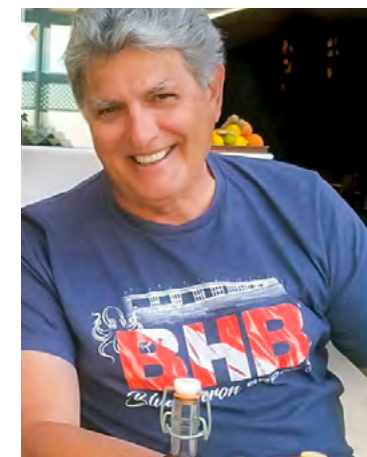
*Bubble Coral, Puerto Galera, Sony A7R III, Rokinon 24mm F/2.8, Nauticam NA-A7RIII housing, Zen 230mm dome port, Two Inon Z330 flashes, ISO-320, F/22, 1/30th sec*

**Phil Rudin**

[www.instagram.com](http://www.instagram.com)

[www.rokinon.com](http://www.rokinon.com)

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# Let's Get Weird

by The Backscatter Team

When it comes to underwater photography lenses, the best performance and most reliable results are going to come from either the ultra-wide fisheye or high-magnification macro ends of the lens spectrum.

These have long been the go-to lenses for creating classic underwater photos and with good reason. Large subjects and scenes demand a wide field of view, allowing the photographer to get close and produce better color, contrast, and clarity. Tiny macro critters need a powerful macro lens in order to appear larger than life and fill the frame. There's nothing wrong with either of these time-tested photo styles, but every now and then you may find yourself wanting to break away from the ordinary. When that creative vibe starts flowing it's time to toss convention overboard and start getting weird!

Every lens featured in this guide provides a unique and creative effect that you won't be able to replicate with more traditional lenses. Some of these lenses mount directly on the camera, whereas others are external accessory lenses designed to work with either the built-in lens of a compact camera or an interchangeable lens on mirrorless or SLR systems.

There is merit to the discussion of whether or not these lenses are 'gimmicky'. There is also a certain satisfaction that comes from capturing an image in-camera that otherwise looks like it would only be possible through Photoshop manipulation. They do provide a fun and creative outlet for experimenting with new techniques, style, and ways of capturing otherwise "boring" subjects.



*Using weird underwater lenses can change the look of the ordinary to eye-catching. There are many ways to shoot the same subject.*

*Left: Olympus TG-5 | No Accessory Lens | 1/100 | ISO 200 | f14 – Center: Olympus TG-5 | Saga Magic Ball | 1/100 | ISO 200 | f14 – Right: Olympus TG-5 | Inon ZM80 Lens | 1/80 | ISO 100 | f6.3*

## Laowa 24mm Probe Lens

“Whoa! What is that thing?!?” is the most common question you'll get when people see the Laowa Venus 24mm f14 Macro Probe Lens on my underwater camera rig. The best way to describe it is a super macro lens with a wide field of view. It has a minimum working distance of less than an inch with a 24mm lens field of view. At minimum focus, the reproduction ratio is twice life-size at 2:1, which is equivalent to using an SLR macro lens with a +10 to +12 diopter. This lens is all about serious macro capability, but with a much wider field of view. Commonly referred to as a “bug-eye” effect, it can lead to some very interesting shots.



*Sony a7R III | Laowa Probe Lens | 1/40 | ISO 3200*

## Saga Magic Ball



©JIM DECKER | BACKSCATTER | SAGA MAGIC BALL

*Nikon D850 | Nikon 60mm Lens | SAGA Magic Ball | 1/100 | ISO 1600 | f22*

A kaleidoscope, drop of water, and a lens walk into a bar...

The result is something that will open new doors for your underwater photography. The SAGA Magic Ball is possibly the most fun lens you will ever use. It produces a circular fisheye image in the center and a water drop effect on the edges. It might be a one trick pony for underwater photography contests, but it makes images that will capture the eye and it's a heck of a lot of fun!

## Saga Magic Tube



©JIM DECKER | BACKSCATTER | SAGA MAGIC TUBE

*Nikon D850 | Nikon 60mm Lens | SAGA Magic Ball | 1/200 | ISO 400 | f22*

Reflective tube for swirling the subject

A pretty simple concept, the Saga Magic Tube threads onto 67mm macro ports and uses a tube lined with reflective material to create a swirl of colors around the center of the frame. The swirly tie-dye effect is an excellent trick for commonly photographed subjects. It works with virtually any macro lens and compact camera zoom lenses, but is not compatible with additional diopters.

## Inon ZM80 Micro Fisheye Lens



©JIM DECKER | BACKSCATTER | INON SEMI-FISHEYE RELAY LENS

*Olympus TG-5 | Inon ZM80 Lens | 1/40 | ISO 100 | f11*

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

## Canon & Nikon 8-15mm Fisheye Lens



These lenses are not necessarily weird in and of themselves, as they are actually two of Backscatter's most recommended and used lenses for full frame wide angle photography. What sets these two apart from other fisheye lenses is their zoom ability and the option to



*Sony a7S | Canon 8-15mm Lens | 1/125  
| ISO 400 | f14*

shoot a full circular 180-degree image.

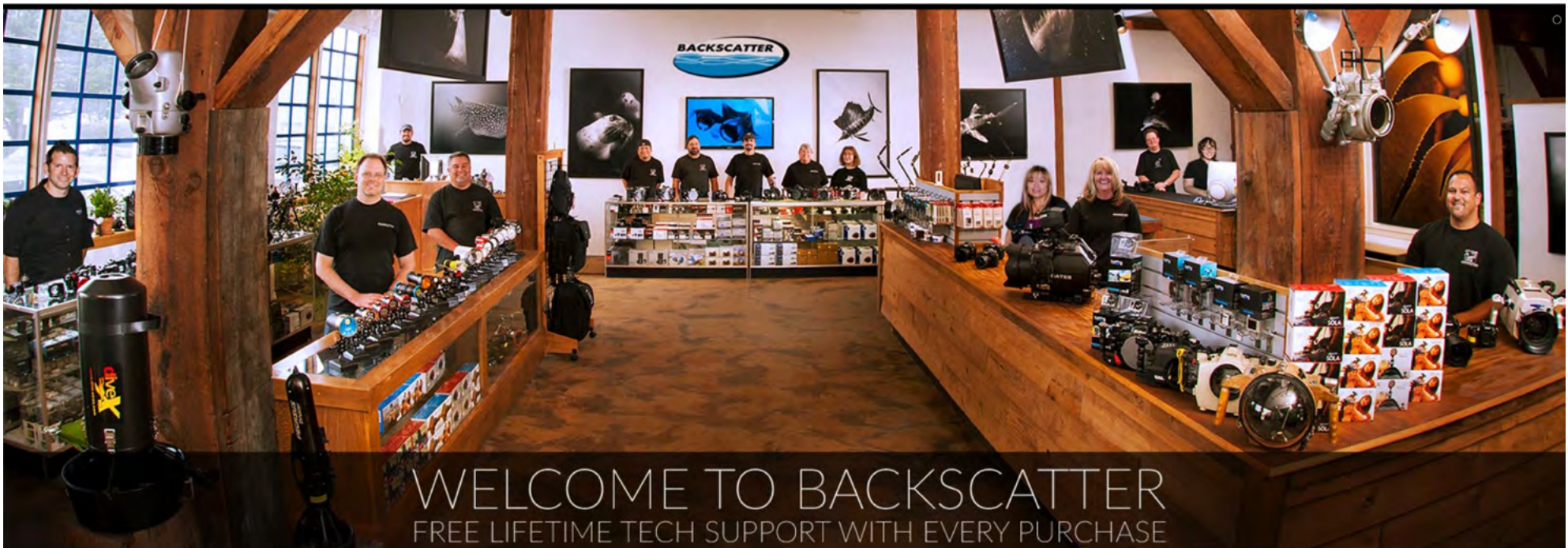
What this effectively means underwater is that you can seamlessly transition from frame-filling corner-to-corner shots at the 15mm end of the lens to an ultra-wide, heavily vignetted, stylish circular shot at the 8mm end. This effect can easily be over-done, so take it in stride, but when you need some fresh content for your square 1:1-ratio based Instagram feed, this is our favorite tool for the job.

## Conclusion

Capturing fun, creative, and outside-the-box images is easier

than ever with this array of unique lenses and optics. While some of these imaging styles might not be for everyone or every dive, they certainly are a great way to break free from the regular routine and produce some stylish shots that are sure to elicit a reaction from your audience. When you are ready to start getting weird, pick up one of these clever optics and get to work! As always, don't hesitate to reach out to the team at Backscatter for compatibility consultation and recommendations for your rig. Let's get weird!

**The Backscatter Team**  
[www.backscatter.com](http://www.backscatter.com)



# Dive into the pink ‘Share Our Air’ winners

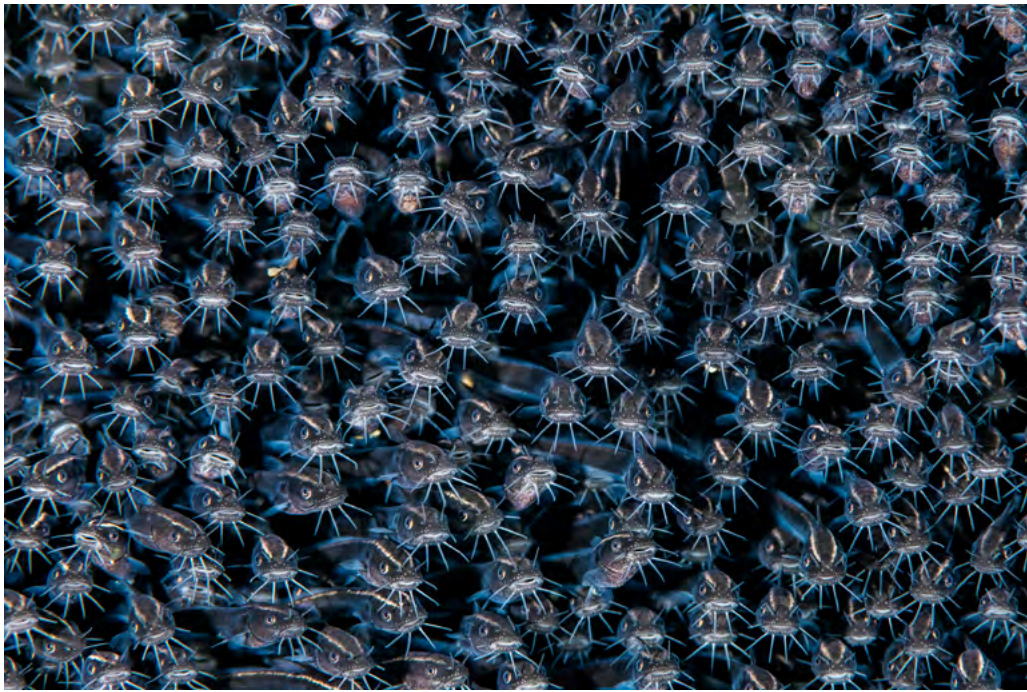
by Allison Vitsky Sallmon

Nonprofit organization Dive into the Pink is delighted to announce the winners of the Share Our Air photo competition. The competition, organized by Dive into the Pink, invited underwater photographers to submit their best images into two themed categories—Togetherness and Divers. The judging panel was composed of accomplished underwater photographers Mike Bartick, Renee Capozzola, and Tobias Friedrich. Proceeds from the contest, along with a donation drive and tee shirt sale, totaled over \$20,000, and will support a comprehensive investigation on the effect COVID-19 has on lung function in divers, to be pursued by Duke Dive Medicine and Divers Alert Network (DAN).

In the Togetherness category, Hannes Klostermann nabbed first place with his action-packed image of marlins and California sea lions corralling a large school of mackerel; he wins a week at Crystal Blue Resort in Anilao, Philippines. With the top-scoring image overall, Hannes also won a \$300 GoAskErin gift card, good for any GoAskErin On-Demand product.



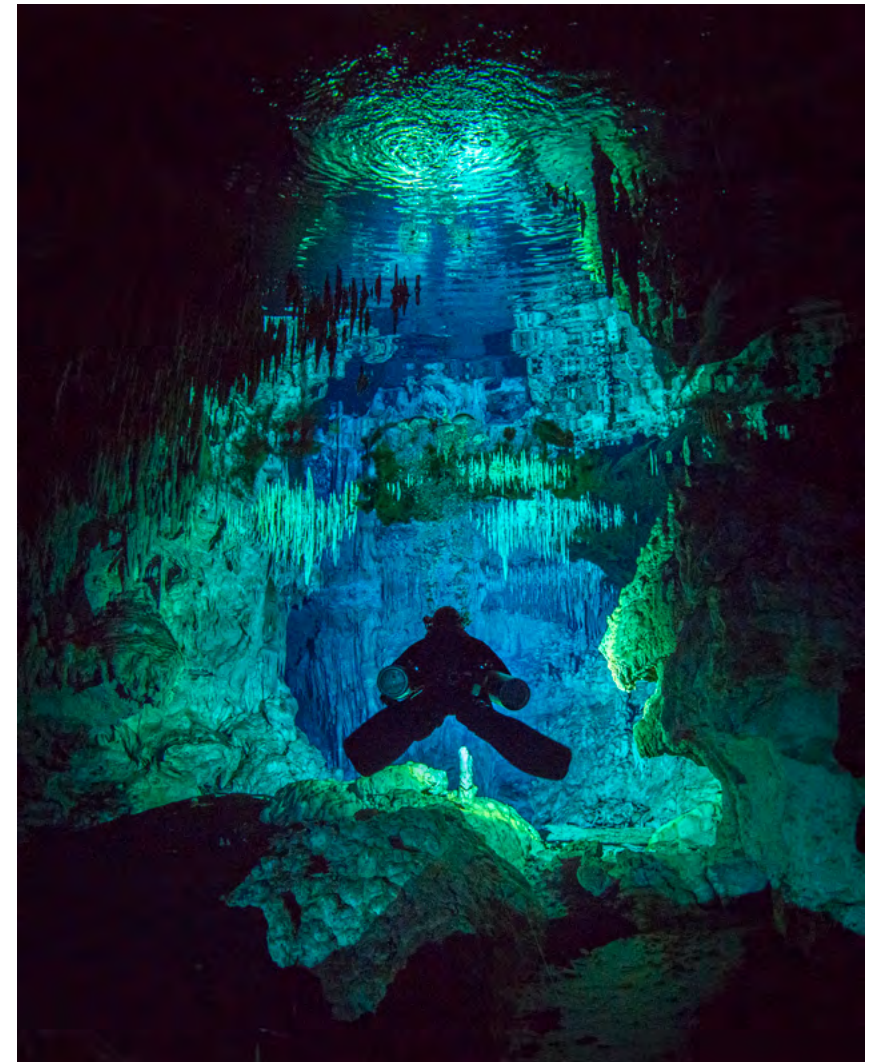
*Togetherness category winner: Hannes Klostermann*



*Togetherness category second: Alex Mustard*

Second place and a \$250 gift certificate for Ultralight Control Systems gear went to Alex Mustard, whose tightly gathered catfish school represented the ultimate in social distancing failure. Third place winner Nuno Rodrigues won \$100 cash for his gorgeous image of “yin-yang” sharks. And the judges couldn’t resist awarding an honorable mention—and a special “Share Our Air” limited edition virtual dive tee—to Wendy Austin for her colorful anemonefish pair.

In the Divers category, Ellen Cuylaerts’ spectacularly exposed first place image of a cave diver



*Divers category winner: Ellen Cuylaerts*

*Honorable mention—and a special “Share Our Air” limited edition virtual dive tee—to Wendy Austin*



*Divers category second: Ron Watkins*

gets her a future weeklong visit to Lissenung Island Resort in Kavieng, Papua New Guinea.

Ron Watkins was in second place, winning a \$250 gift certificate for Ultralight Control Systems gear for his lovely portrait of a diver approaching a pair of humpback whales.

A dynamic photo of a diver swimming through a school of baitfish won Joel Penner third place and \$100 cash. And the judges also awarded an honorable mention—plus a “Share Our Air” virtual dive tee—to Ellen Cuylaerts’ creatively depicted image of a photographer and a sperm whale.

Comment from Allison Vitsky Sallmon, Dive into the Pink founder and president:

“When we met in April to discuss our annual “Think Pink” imaging competition, which raises money to support breast cancer research, we knew that cancer fundraising (critical as it is) was not going to be at the forefront of peoples’ minds. With the SARS-CoV-2 pandemic sweeping the globe, the world had essentially ground to a halt. However, we all agreed that doing nothing was unacceptable. We decided to shift our focus for this year’s competition, thinking long and hard about how



*Divers category third: Joel Penner*

we could make a difference under these circumstances. Ultimately, we settled on funding a joint effort by Diver’s Alert Network and Duke Diving Medicine that would evaluate the long-term effects that COVID-19 would have on diver fitness, hoping that this new cause would inspire the passion, determination, and enthusiasm of our community.

The response was beyond anything we could have imagined. We were humbled and astounded by the support we received during the Share Our Air event, which raised over \$20,000 in a single month through contest entries,

donations, and tee shirt purchases. To all entrants, thank you for sharing your spectacular artistry and your kind generosity with us!”

[www.diveintothepink.org](http://www.diveintothepink.org)



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### FOR SALE – Nauticam Na-d800 Housing for Nikon D800

Nauticam Na-d800 Housing for Nikon D800 Excellent condition. Full overall by Nauticam in December 2017, not in the water since. Vacuum check; electronic monitoring circuit installed, no vacuum system. 2000 euros + shipping ... [More >](#)



### FOR SALE – Nauticam flat ports and lenses Sony 28mm and 90mm

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SEA & SEA MM2 U/W CAMERA WITH ACCESSORIES: - Yellow SUB 50 TTL strobe / arm extension - SEA & SEA 16mm Wide angle lens MM-2 - SEA & SEA Macro lens ML-2/3T plus attachments - Removable view finder - ... [More >](#)



### FOR SALE – Nikon D500 + Hugaftot D500 setup

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# UPY's Crunchy bits

by Laura Storm & Mark Harris

“Data! Data! Data! I can't make bricks without clay!”  
(Sherlock Holmes)

There it is in a sleuth's nutshell. The very best way to solve a mystery is to analyse the facts. Take what you know to be true, rearrange the details, and extract the good stuff.

Clay, in this instance, is the miniature encyclopaedia that is the Underwater Photographer of the Year's 2020 Yearbook. Its foundations are built on stunning awarded photographs from the four corners of our watery planet. But there's more - much more - concealed in the beautifully presented annual. The bricks are not what you think they are. Behind the talent and winning images lies a cookie-crum trail of evidence. Clues that reveal fascinating facts. Hidden within the captions are other stories, unusual connections, and quirky trends not immediately obvious to a casual observer - let alone the judges and entrants. So what are these mysteries and how did we get here?

## Planet Virus

With the walls closing in and a key project in lockdown-limbo,

what better way to kill time than to kick off a new venture? Something absorbing which, in the typical ebb and flow of life, wouldn't ordinarily be possible. Data crunching! Now, I know what you might be thinking but hang in there. I'm talking about gold-dust information that may just spark innovation. Valuable insights like patterns and trends – tools to predict the future. And left-of-centre observations that might help raise your game. I must admit that none of these things were on my mind when I started this information love affair. As it happens, I was hunting creative ideas for artistic assignments – a masterclass, some articles, my conservation project. Just a few specifics, nuggets rather than an entire gold mine. But as you'll discover, the more you torture the data, the more it gives.

I should also mention a hidden asset, the best partner-in-crime a fledgling detective could have, my husband, Mark. As luck would have it, Mark is adept at data analytics. So on a fine, hazy day with the world in meltdown, we set about designing



*Only the principal subject from each image is included in the Shark Cloud. If an image showed more than one subject, the relevant data (if not obvious) was determined from caption details or judging comments. There was one exception of two subjects, which were stuck together appearing as one, and both were therefore included in the cloud.*

a database. A comprehensive system that enabled us to Extract, Transform, and Load as much relevant information from the Yearbook that we could find.

Weeks of input later, the framework was ready. We began mining the data in a variety of ways, hoping to find the key to some hotly debated questions. Are some destinations or subjects more likely

to produce a winning image? Is there anything formulaic about our settings? Do we have a recognisable footprint? And if we do, will that style go in our favour or against it? Does unconscious bias play a part in selecting our submissions? What hasn't been photographed and why? How do you jump the shark? Does it matter which camera you use? All these questions and more were in the



where invertebrates are on the rise, it's vertebrates that dominated (as prime subjects). You will have noticed the subjects in the cloud are further classified by colour. Each colour represents a basic taxonomy group, a plant, something man-made, or a natural formation. Vertebrates comprise fish, reptiles, amphibians, birds, and mammals. And invertebrates include crustaceans, molluscs, cnidarians, and so on. The basic taxonomy group that prevailed in this way were fish; sharks, rays, fish, blennies, gobies, eels, seahorses.

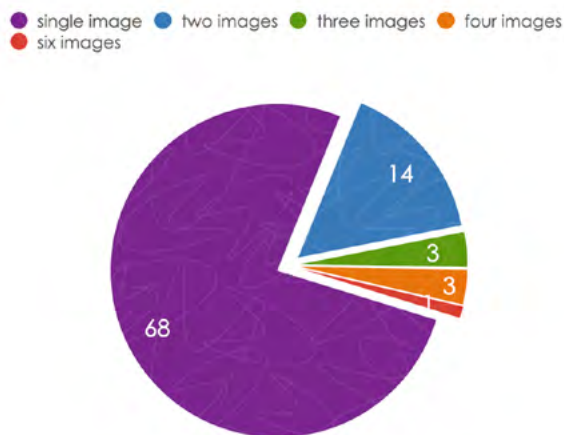
Our planet is experiencing the sixth mass extinction event, so are we consciously or unconsciously highlighting this in our images? Are we photographing charismatic animals while we can - or is it more fundamental in that they simply make for a stronger emotional connection, one that resonates with the judges?

In 2020, each of the Grand Awards featured vertebrates. 100% of the Portrait category subjects and 90% of Marine Conservation 'stories' featured backboneed animals.

Within the British categories, it's a different story. Invertebrates sneak ahead and we've shown that data numerically in this bar chart:

When we combined the international and British Waters categories, the overall trend is still clearly obvious.

Our treemap above shows that vertebrates pack a punch.



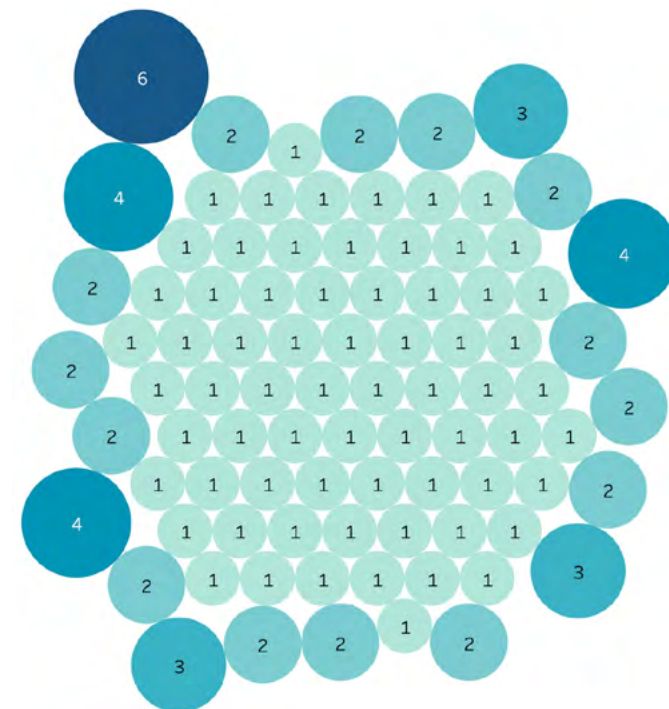
*An alternative view of the same information is shown in this bubble chart. Note that the magic number of five images has been exceeded by one photographer, but attained by no one.*

### Competitor Glow

I once read that if you win an award in a photography competition, you are statistically more likely to win again at some point in your journey (as a contestant). So, is that true?

Looking at awards picked up by each photographer, this pie chart shows all the competition entrants with their awarded image count. The range is between one and six.

An amazing 17% of entrants succeeded with more than one image in this year's awards. If you then look at the wider picture to include previous UPY winners, as well as other big-hitting events, the percentage goes up exponentially. That's not to say that every year a competing photographer does well. On the contrary, there are lean years for many. But the stars shine favourably if you have already made the grade in a high-calibre competition.



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*This map shows the country of origin for each photographer awarded in an international category. Circle size indicates the relative count of citizen shooters, based on numbers of photographers rather than a total tally of awarded images.*

## Worlds Apart, Oceans Together

Next, there are two world charts. For these, British category images have initially been disregarded, to focus on and show an accurate international view. Our first map shows the country of origin for each photographer awarded in an international category. Circle size indicates the relative count of citizen shooters, based on numbers of photographers rather than a total tally of awarded images.

This second chart indicates where images were predominantly taken i.e. the host country (rather than specifics like dive site, island, or region). Again, and for continuity, we have disregarded the British categories in the map detail.

Some interesting facts emerge when data from the two world maps are combined.

We looked at the destinations where awarded photographers had travelled to capture their images and found that fewer host countries produced photographers that captured



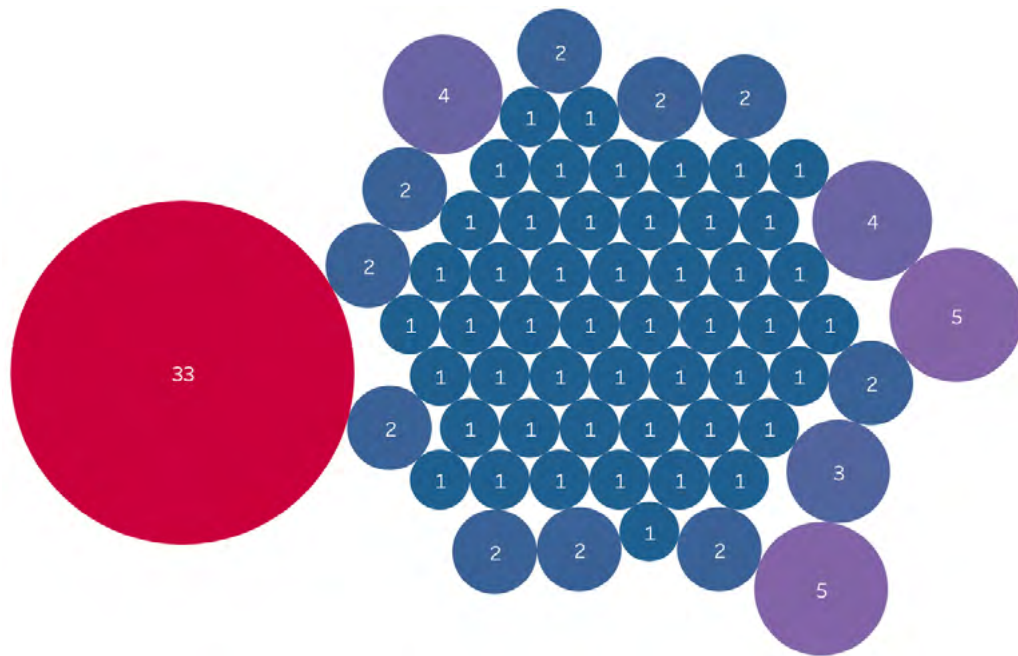
*This second chart indicates where images were predominantly taken i.e. the host country (rather than specifics like dive site, island, or region). Again, and for continuity, we have disregarded the British categories in the map detail.*

winning images in home waters. There were 11 (including now the UK) that did, which is about a third of the total. Italy had five, Australia four, and another eight countries had single images. These were Canada, China, Japan, Norway, Spain, Switzerland, Taiwan and the USA. Of this group, just Norway, Italy and the USA were destinations of choice for visiting photographers.

The maps show how we criss-cross around the globe in a peripatetic pattern, chasing dreams and wildlife encounters. It will be interesting to

see what happens next year. With so many borders still closed, and flights grounded, will the pandemic encourage a surge in home-turf entries?

The most popular international destination was Indonesia with 18 images on the leader-board, yet no Indonesian photographers succeeded this year. Medal counts amassed from other parts of the Coral Triangle, with the Philippines coming in 2nd, totalling 11 'location' awards. Altogether, our version of an Olympic style board featured 32 host



**Combining data from the two world maps revealed a balanced spread of movement - shown in this bubble chart. The exception is the big red 33, which represents British Waters.**

countries (again including the UK) and 27 nationalities. Ironically, the single awarded image taken by the photographer from the Philippines was actually captured in Indonesia. Likewise, South Africa was a winning destination, but the two South African owned images were taken in Mauritius.

Combining data from the two world maps revealed a balanced spread of movement - shown in this bubble chart. The exception is the big red 33, which represents British Waters. While British photographers travelled to other countries and

succeeded internationally, no other nationalities featured in the British Waters categories. Only UK photographers captured images in UK waters. This highlights why we initially removed that data from the world maps.

Each circle shows the one-to-one mapping of a country with either a) citizen photographers or b) visiting photographers. The numbers show an image count for each mapping. For example, if a country had two images taken by photographers from two separate countries, then it will have two bubbles of 1. Mexico

was a country that did well as a destination, producing four bubbles of photographers from four different countries. Bubbles with higher numbers are mostly from countries with home-turf, citizen photographers but not always. America did really well in our bubble scheme, scooping 12 awards from 12 different photographers, taken in 10 different countries – including territorial waters. Therefore lots of bubbles of 1 and 2 bubbles of 2 were generated.

### Third-Eye Action

If you're stuck in a perpetual, or procrastinating, upgrade loop - the one where a higher spec model forever supersedes your dream camera – this section is for you. If you hold back from submitting great work because you think your camera doesn't make the grade, then read on.

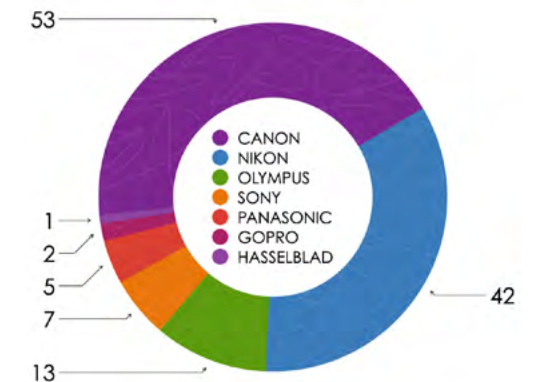
When it comes to competition images, it shouldn't matter which camera you use, it's what you do with it that counts. Artistic vision, creativity, imagination, ingenuity and innovation, a little luck, never giving up – these are just some of the traits shared by the winning photographers.

On the other hand, it is perfectly reasonable to look at the equipment in a different light, where photographers of a certain calibre (and experience), have made investment choices. This

paints an interesting picture and one worth considering rather than the optimistic view that a simple purchase of the most popular camera or housing will yield winning results in their own right.

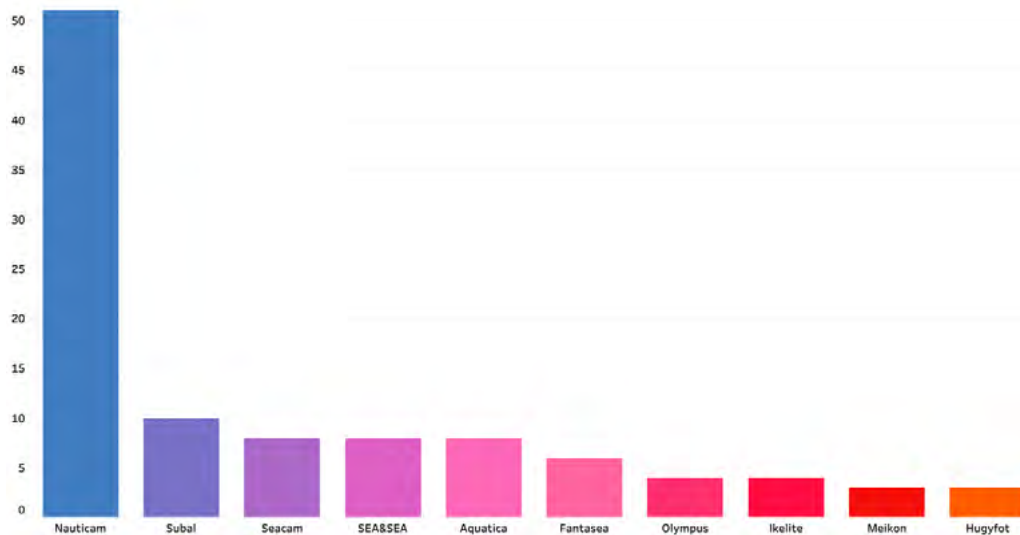
### Either way, let's ask the data!

Based on release dates, the oldest model used to capture a winning image in the UPY 2020 awards, was 12 yrs. - a Canon 5D MkII. The youngest, at 3 yrs. was a Nikon D850. Canon shooters had the widest range of models, 14 in all vs. Nikon shooters with 11.



In our doughnut above, you can see the different camera makes and their respective count for the 123 images in the Yearbook's collection.

Every now and then a particular camera breaks new ground. That translates into a high demand product



and to longevity. This became apparent by looking at the release dates of every camera used. Canon shooters on average used older cameras than Nikon. Variants of their 5D model captured 36 of the 53 Canon images. And Nikon's D500 model accounted for 14 winners, followed by the D850 with 10. In the international categories, Canon took podium place. However, the Canon vs. Nikon rivalry reverses popularity in the British categories, where Nikon emerged top with 13 images against Canon's 11. Even so, the most successful camera model amongst the Brit pack was neither a Nikon nor a DSLR, it was a Canon compact, the G7X mk2 producing 7 images from two different photographers.

We put together a Top 10 of

housings and, like a sleek greyhound, first off the starter's block and halfway round the track is Nauticam. Below, the chart shows that with housings it's a game of two halves, with the sum of the rest collectively matching the lion's share:

And finally, a little lens talk! Our avocado treetable (below) highlights a top 12, rather than 10, to be more inclusive. We haven't included unclassified or built-in lenses, because we're essentially interested in known detachable lenses.

The Tokina 10-17mm Fisheye was the 2nd favourite, it is a lens most suited to APS-C DSLRs and can be configured to mount on both Canon and Nikon. Here, for 8 out of 12 images, it was used on the Nikon D500. The only image where it was



used with a Canon was a 5D MkIII, which has a full-frame sensor.

The top 12 only accounts for 55% of the images. Not all photographers supplied the make of their lens, and there were many images captured with unique lenses or lens combinations (Super-macro / diopters and such).

### Kooky Facts, Outliers, and Microtrends

Last but not least, some interesting facts, figures, and food for thought:

- \* The two images with the slowest and fastest shutter speeds, were both made by the same photographer.
- \* Looking at apertures, the three images with the widest settings were

all captured by the same photographer.

- \* In the 'golden triangle' of ISO, shutter speed, and aperture – all three elements independently had value ranges of over 20 different settings.
- \* 95 of the 123 winning images were captured using shutter speeds of 1/100 or faster. And 87 out of the 123 photographs had an ISO setting between 100 – 400.
- \* The Male / Female split has consistently been around 80% (male) and 20% (female) over the last six years. It dipped a little last year but in 2020 the ladies inched up again to take 21% of the awards.
- \* Of UPY 2020 images, 86% were taken in saltwater, 11% fresh, and 3% out the water (with one being a hybrid).

Combining the most common

of some of the significant attributes we identified would provide a single image as follows:

A fish (other than a shark, blenny, goby, eel, or seahorse), taken with a Canon EOS 5D in a Nauticam housing, using a Canon 8-15mm fisheye lens, with natural light, at ISO 200, f/11, and 1/200.

Combining the most unique of some of the significant attributes we uncovered could provide a single image as follows:

A hippopotamus, taken with a Hasselblad X1D 50C in a custom-made housing, using a Hasselblad XCD 120mm macro lens and Scubalamp PV22 light, at ISO 219, f/2.8, and 1/640. (This example has several variations that could be substituted, and may well need to in order to produce a viable image!).



## Final Thoughts

Lockdown is easing; work and normal life beckon. Our days obsessing over Crunchy Bits have drawn to a close. We could keep going, the data still talks.

For this article, we have cherry-picked a selection of technical insights to share with you.

For those who enter competitions, we hope they're of interest. And if you've been hanging back, then maybe this will encourage you to leap into the fray, trust in the kit you know and love, buck the trends.

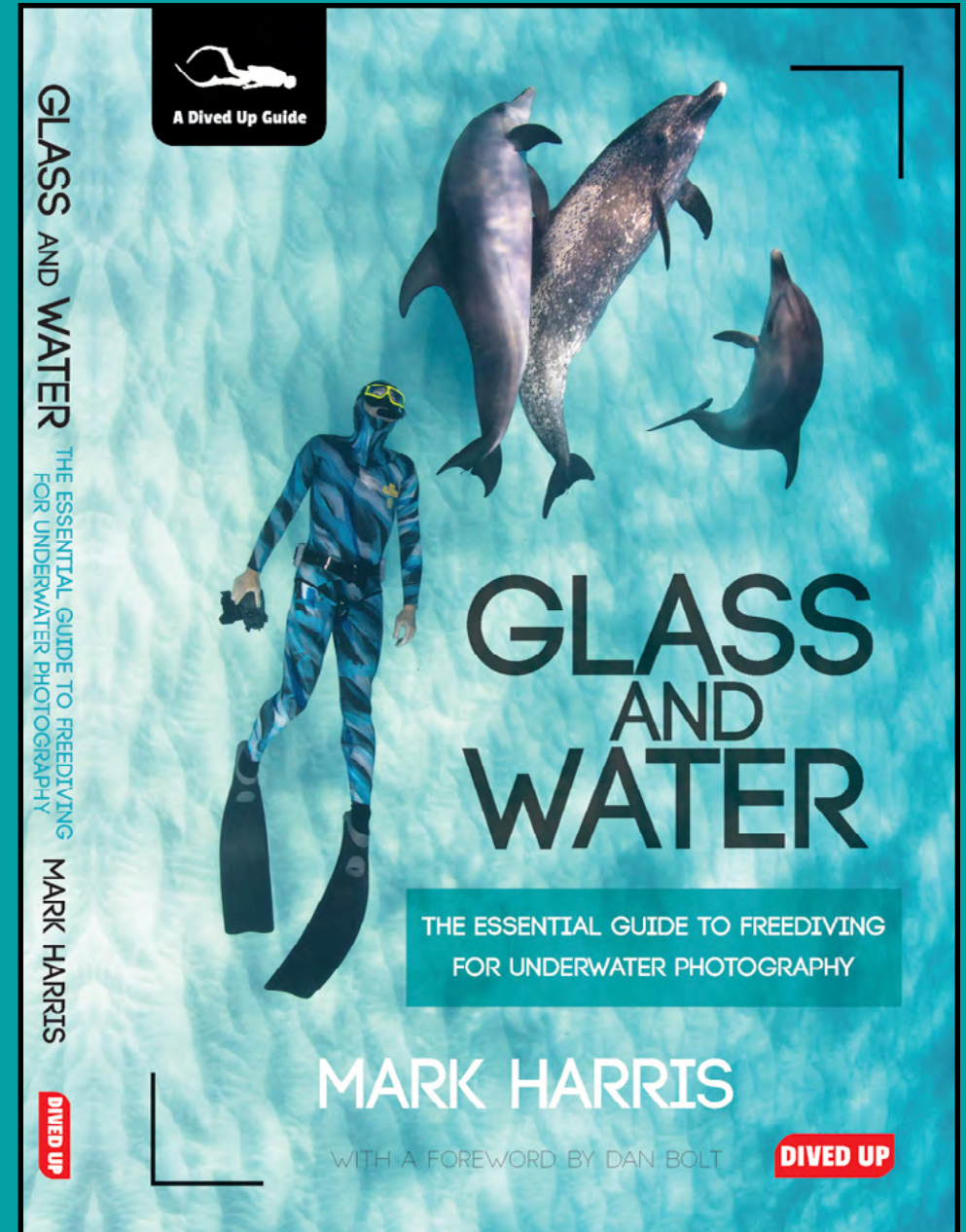
And if you can read between the lines, you'll know just how to jump the shark!

**Laura Storm  
& Mark Harris**

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# The WAM effect and conversion lenses

by Mike Bartick

Its never fails, whenever I slap on a dome port and wide angle lens, all the macro critters come out to play. It took me a long time to figure out that I shouldn't be looking down for macro subjects when I should be looking up and seeking the sun.

From packing for a day trip or preparing for a long haul, the question of whether to shoot wide or macro has always been a challenging one for underwater photographers. Fortunately for SLR shooters the harsh reality of lens choice is beginning to loosen and with some of the newly released conversion lenses entering the market, some of these lines are even beginning to blur.

Wide Angle Macro isn't a new technique but in the past it has required a dedicated setup for the best results.

The idea of shooting macro subjects with a wider angle of view is very enticing but it hasn't always been practical. This is starting a change with some newer lenses that convert a standard linear macro image into something much wider while on the fly!

Conversion lenses that enable SLR shooters to change from macro to wide and back again are beginning to grab traction as the image quality and usefulness are becoming more apparent. Of course, not all of these lenses are built the same and the price range is dramatically different but whatever your budget might be, these lenses are fun and are proving to be quite useful in different scenarios in the field.

When you see the mounted conversion lens on the camera above water it appears to be big and heavy. When flipped down the lens extends outwards but the dome portion of the lens itself is actually the size of a small zen port and allows for tight working spaces. Buoyancy collars are already built into it which makes the setup underwater very light and manageable.

This extension also helps with lighting as I can use the barrel of the lens to block some of the light while using inward lighting.

I've always gravitated to using the Tokina set up (10-17 + Zen port) for this style of shooting. Of course with every gear configuration there are challenges, but with this easy conversion lens kit some of these problems seem to vanish.



*INON bug eye/Modified Nikon 60mm lens-The older relay lenses were famous for narrow depth of field and poor optics. The lenses push the subjects back, like bug eyed vision might be, making it difficult to know if the subject is sharp when looking through the viewfinder. This image is riddled with imperfection's. I don't always count those as negatives however in this case, the optics really impacted the overall image.*



*Cinderella Nudibranch and diver. Using a diver in the rear of the frame is always a great way to add perspective and dimension to an image. It's always better to plan this kind of shot ahead of time by discussing it with your dive buddy. Trying to communicate the minutia of a shot underwater is nearly impossible.*

In 2020 B.C. (Before Covid), I acquired one of these new conversion lenses. It's a water contact lens (must be underwater to focus) that works with any 60mm macro lens behind a standard threaded flat port that allows for a flip adapter. This wet lens also has built in buoyancy in the barrel that helps to offset the weight of the optics which in turn also helps for trimming out my own buoyancy as a diver.

For the optimal result of this lens an APSC sized sensor is needed. The image results are rectilinear, very

natural and have very little in the way of ACA or vignetting.

Key ingredients to creating WAM images.

- Dimension and perspective
- Lighting
- Color
- Use of a model or sunball
- Direction of composition
- RGB+Negative space



*We didn't plan to find a Rhinopias hiding amongst these dense, colorful wire corals but when we did, my macro mind tried to take over. I really wanted to shoot a natural habitat image of this subject to show how well its camouflage works when its settled in and ready to ambush passing prey.*

*The conversion lens is small enough to get into tight spots like this one and focus nearly against the dome. Tight shooting like this can create some lighting challenges. You can actually bring the strobes very close and use outwards lighting shooting through the dome or keep your strobes out wide and use inwards lighting, which is how I shot this image as I didn't want to disturb the wire corals or the bottom.*

### **For good WAM, size matters!**

To capture strong WAM style images, subject matter is extremely important. I've found that mid sized or palm sized subjects give the strongest, front of the frame presence

and dimension. Adding some kind of model or reference in the back of the frame add's perspective, pushing the primary subject forward.

Think of the frame in a dimensional manner, including multiple elements will help to add layers and enhance the image.



standard magnification



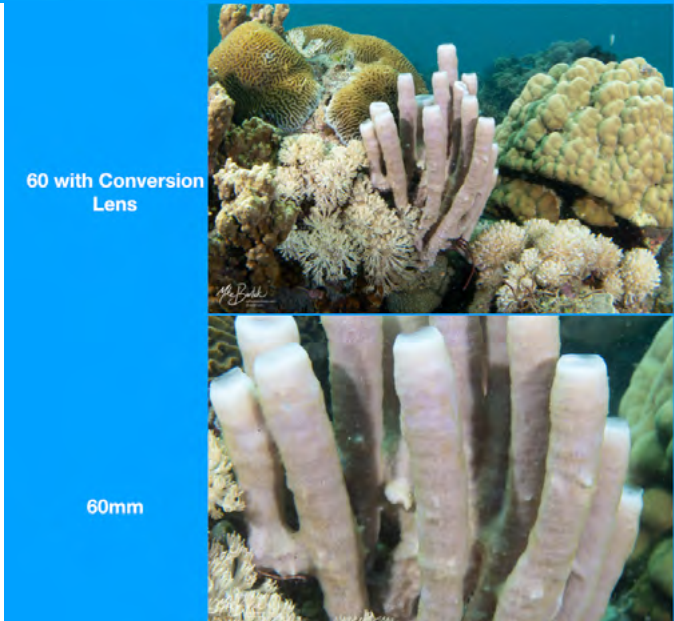
2:1 Magnification of detail

Getting close to the subject is also very important which requires care and patience. Think of the animal first.

If possible, I try to position my camera prior to looking through the viewfinder just to make sure that I don't hit the subject or stress them too much. Checking your images while shooting or "chimping" should also be done very carefully.

Not just because you might kill the frogfish but you also have a chance a scratching your new lens beyond repair.

Look for vertical relief, kelp forests, crinoids, pier or jetty structure and of course if you can include the green or blue water, it will tell the story of where the image was shot.



The depth of field will be much greater due to the nature of the optics so using open *f*-stops more frequently used for wide angle shooting are okay too which will help balance the available ambient light.

Lighting and backscatter can also



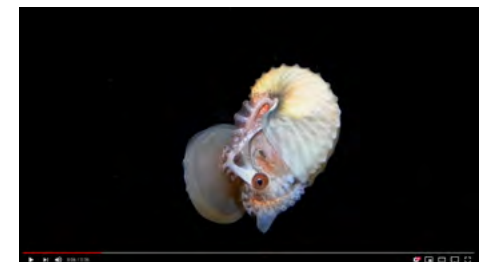
*The conversion lenses are proving to be valuable in many different scenarios including blackwater photography and video. During a recent such dive, we had an encounter with a very elegant pompano. The thread like streamers are what makes these subjects so beautiful and unique. Opting to use the wide angle option of this setup, I was able to stay close, frame the subject well and to achieve effective strobe saturation.*

*This also translates well to video capture on blackwater diving. Normally my go to lens is the 60mm for such dives however with the flip down option, I can use either angle of view. The wider angle makes framing a moving subject in open water incrementally easier than with the 60mm.*

*For BW video capture, using a higher frame rate helps to smooth the video replay. Im shooting at a resolution of 1080@120p on a Nikon D850 and using 1 3500 lumen torch clicked to full for lighting.*

*Link-*

<https://youtu.be/MBzylYyC1LM>





*Lionfish are a beautiful subject to watch and to photograph. They move gracefully but are a fierce and focused predator. Herding smaller fishes together with their elongated and colorful pennate spines, they cruise slowly over crinoids and reefs waiting for the right moment to strike.*

be a bit tricky, particularly in chunky water. Snooting also works although using a beam flash restrictor and/or diffuser gives the image a more natural feel.

Remember *f*-stop for foreground color, ISO and shutter speed to control the light in the background. For strobes, I prefer to keep them at the 10 & 2 but if the composition weighs heavier to one side or the other, I might eliminate or decrease the strobe power on the side that doesn't need strobe flash. In other words, there's

no need to flash empty water, after all it will only create backscatter which equals more work in post.

Color is an essential ingredient with any style of UW photography. In-fact that's what makes shooting underwater so special. However that color doesn't come through in our images without strobe flash. The kaleidoscope of colors that we are able to experience while diving should be included whenever and wherever we can and as much as possible.

RGB+Negative space is a



*Tokina 10-17 with the zen dome- Larger Nudibranchs make perfect subjects to start with as they don't move very quickly and will allow you to experiment at length. Shallow water also allows the light to penetrate the surface water with means stronger natural colors in the red channel*

good rule of thumb for color and composition. All three of the primary color channels diminish as you get deeper, losing the reds first. Shallow water means richer natural light. That being said, this also means you will need to use strong strobe flash to give those colors the vibrance to come through. Its counterintuitive thinking when shooting in shallow sunny environments as we're now competing with the sun. Bright colors will be pushed to the front and dull colors will be pulled to the back in

any image.

Overall, a conversion lens means more creative options underwater and less opportunities missed. As a diver with a camera, having options underwater are always a luxury and with the new lenses hitting the market opportunities abound. Soon we will all be back to traveling and doing what we enjoy the most.

**Mike Bartick**  
[www.divecbr.com](http://www.divecbr.com)



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# How to be a good model



by Tony Land



*Note how the colors on the structure of the Doc Paulson contrast nicely with the blue water. Shooting up helps simplify our background, and this tends to make for a more pleasing composition.*

Here at Divetech one of my many jobs is serving as one of our photo pros. From time to time this means I get to dive with our guests and take photos of them for social media, and for the guests themselves to have as complementary souvenirs.

There are days where this is a wonderful experience where I cannot believe I am being paid to do such a thing. There are other times where I could be paid a million dollars and I don't want to get in the water.

Aside from some of the technical failures one periodically gets when

shooting underwater, what is the variable? Most often the visibility in the Cayman Islands is amazing, and the conditions are favorable. So what's the difference between a good day and a bad day shooting divers in the water?

The diver. The subject. The person or persons I am trying to shoot. Sometimes divers just don't have a good understanding of how they can be a good subject for the photographer, and when this is the case, my job becomes very difficult. It's also hard to explain to the client

afterwards why I don't have any good shots to give them.

So with that in mind, here's my quick article with 6 easy steps on "How to be a good model."

I'll begin with the basics. If you are not an underwater photographer, allow me to explain the 3 golden rules of the sport. Even though you are not the person taking the pictures, understanding a few basics will help understand what is going through a photographers mind when shooting divers underwater.

The 3 rules of underwater

photography:

- Get close
- Get closer
- Shoot up

Of course rules are meant to be broken, but most often adhering to these principles will help yield good shots.

Get close. When you think you are too close, get closer. Photographer like myself will commonly shoot super-wide angle lenses, and this requires the subject to be almost within arm's reach of my camera.

Shoot up helps simplify our

background, and this tends to make for a more pleasing composition. More on this later.

Good photographs are simple. They draw your eye to the subject and have a simple balance of foreground and background. Often the best shots are where the subject and background are contrasting in some way. Contrast may be accomplished with depth of field, or most often with underwater photography, by contrasting colors. Do you remember your color wheel from school? Opposite sides of the color wheel contrast nicely. Caribbean water is obviously, blue. And colors such as reds, oranges and yellows contrast nicely with blue.

So without further ado, here are a few tips if you want to have some great images of yourself, and become a favorite dive buddy for your underwater photographer friends...

### Be predictable

My particular photographic style is to shoot divers, in conjunction with some of the reef elements the diver is diving amongst. The corals and sponges of the reef provide the color contrast I just spoke about, and work well when they can fit into the frame. This is all part of the composition.

To do this, while I swim with the diver(s) I am constantly looking for reef elements I can frame the diver with. I need to coordinate these spots with where I think the diver will go. So the worse thing for me is to watch a diver swimming along a straight line, for me to swim ahead and set up a shot where I think the diver will be, only for them to abruptly change directions, and swim away from me. This brings me to my next point:



*This was a test shot I dug out of the trash to illustrate a point. I had thought the divers would swim to this gap in the coral reef, which is where I took this test. After I took this shot, they turned and swam away from me.*

### Don't worry about hitting the camera

The reason most people make abrupt turns from where I want them to be, is they are worried they are going to hit my camera. Remember rules 1 & 2 I said above. I need to be close to you to get the shot. How close? Usually about 3-4 feet away.

Divers get freaked out when they are this close to an underwater camera rig. More so when they realize how much the setup costs. But I'm here to tell you not to worry. I will get out of your way at the last second.

### Swim at the camera

As I said above, when shooting photos, I constantly look for corals, sponges, or reef features that will compliment the shot. I also look for spots where I can physically fit into without disturbing the corals around me. So when I find that spot, and frame my shot, I'll need the diver to swim into a



*This diver is about 3 feet from my camera lens. Although he looks further away, this is the result of the wide angle lenses commonly used in underwater photography. Get closer!*

small range where I have composed. If you'd like a great shot of yourself underwater, swim at my lens. Don't worry about hitting me, I will get out of your way. But get close. Often the best shots are just outside of arm's length. Remember rules 1 and 2 above! Get close!

### Go slowly

There are a lot of variables involved in making a good shot. Every shot is different, depending a number of factors. Even on the same dive, differences in depth, surroundings, and most importantly, where the sun is, will all affect my camera and strobe settings for the shot. This is ok, but it does take time to get these settings correct.

Once I select my spot to shoot from, I must do the following:

- Compose, or frame the shot
- Get my exposure settings correct for the ambient



*I managed to salvage this shot using Lightroom as I didn't have enough time when I took the shot to properly expose the image, or set my strobes correctly.*

light and sun direction

- Get my strobe power settings correct
- Get my strobe placement correct
- Take a test shot to verify my settings are correct, if not, repeat steps 2-4

All of these things take time to do. Over the years I've gotten pretty proficient at getting the shot set rapidly, but I still need a few seconds to accomplish it.

I've had customers who watch me swim past them as fast as I can to give myself more setup time, only for them to swim after me just as fast. When I turn around, the subject diver is right on top of me, and I have no

time to set up the shot. Swim slowly!

### Face the camera somewhat

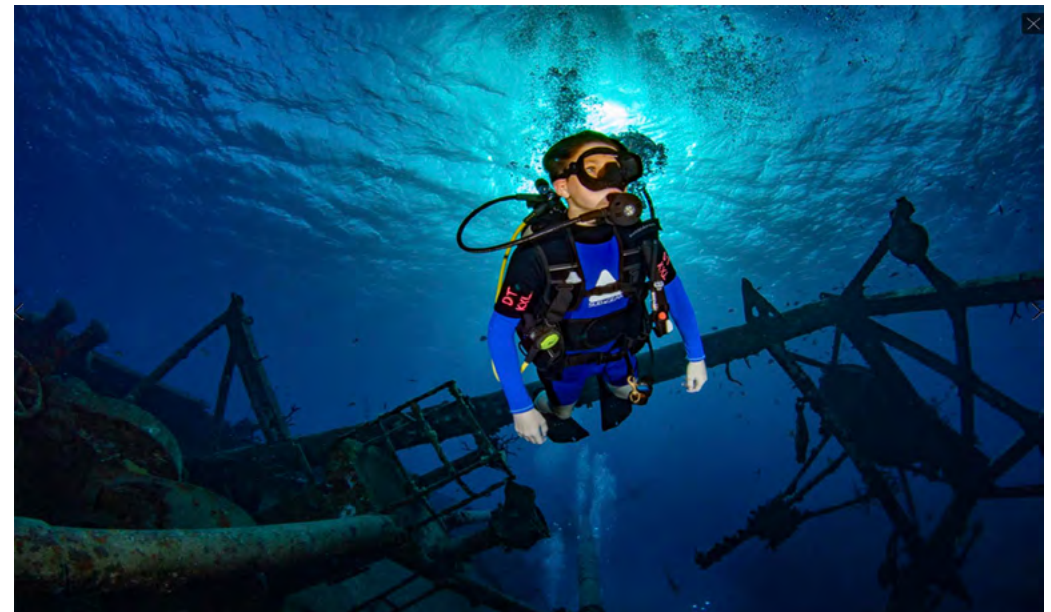
No one likes shots of peoples' asses. Well maybe some people do, but that discussion is best left for some risqué Reddit subforums. For diving, the best shots are head-on.

Years ago I dived with a co-worker who would always turn away from me as soon as I pointed the camera at him. For months I just assumed he didn't like having his picture taken, so I stopped trying. I later learned he was told by a 'photo pro' to never look at the camera, so



*Diver butt shots aren't as good.*

*Even if you aren't looking at the camera, facing it somewhat makes for a more appealing photograph.*





*Even if you aren't looking at the camera, facing it somewhat makes for a more appealing photograph.*

he diligently followed this advice for years.

In my humble opinion, this advice could not be more wrong. I'm unsure if this was the actual advice given, or if it was something misunderstood. Shots of people's backs or even sides are generally not good ones.

There's a range of angles that make for pleasing diver composition. I won't overload you with angles and details, so the simple rule of thumb is face the camera with your head, and part of your torso.

While you don't need to stare

into the lens of the camera, your face should be at such an angle that all you'd need to do to see the camera is move your eyes. If you need to move your head to see the camera, that doesn't work well for the shot. But whatever you do, please don't turn away, unless of course you just don't want your photo taken.

### Stay off the bottom

In the 3 golden rules I mentioned above, you'll note the 3rd rule is 'shoot up.' Good photos are generally simple photos. When shooting down,

a cluttered reef background can take away from your subject. Shooting up allows one to capture a water background, making for a simple composition with your subject. Of course, this cannot happen, unless the photographer can get below you to shoot up, so you need to allow him or her room to do this. Also, crawling along the bottom of the dive site gives you more opportunity to hit things unintentionally with your fins, dangling gear, or your body. Stay up and stay off the bottom of the dive site.

### Aim for good trim and posture

Good photography is all about good composition. Composition is simply defined as 'arranging the objects in your photographic frame so they have an appealing look.'

Some objects cannot be moved, such as the reef structure, or corals that live on it. Other things can be moved, and those things of course are the divers. We of course don't need to have GUE-like perfect trim and form, but having a reasonable diving posture is helpful to creating a good photograph.

### Watch your breathing

The last tip I can offer, is probably one of the most important. To watch your breathing cycle. After I've gotten my composition, test

shot, strobe placement, and exposure figured out, and the diver is actually swimming where I want them to be the last variable is their breathing pattern.

Nothing ruins a shot like a face full of exhaled bubbles, so I try to time my shot when you are inhaling. This is a complex balance between the proper distance for my composition and strobe power, so hopefully I can capture you in this narrow distance without bubbles obstructing your face. For some divers it seems like they are one big exhalation.

### Summary

Of course you are diving to have fun. Unless you are the subject of a paid photo shoot, just go dive and have fun. If I happen to be in the water with you, most often I will give you any shots I take of you, even if they don't meet my own definition of a 'great shot.' But if you want those shots to be amazing photos you can frame and hang on your wall, follow the tips I've given you above.

Have fun and safe diving!

**Tony Land**  
[www.divetech.com](http://www.divetech.com)

# 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](mailto: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.

# Pat Baker's Underwater Photography Museum & Library

**Not just a museum - an appreciation celebrating the pioneers and practitioners of photography and archaeology underwater, to be shared with all who are interested.**

Ten years old in 1954, I first “discovered” the Underwater World – not in the actual sea but via a surprisingly comprehensive diving book section of Chelsea Public Library and the gallery displays in The Natural History Museum.

These wonderful, and free, institutions were both within walking distance of my family's Chelsea home.

Additional inspiration came from knowledge of the exploits of World War II “frogmen” and, even more, Walt Disney's 1954 film interpretation of Jules Verne's Twenty Thousand Leagues Under the Sea.

Six years later came another passion, for the art, the processes and equipment of photography. This led, in 1963, to the decision to become a professional photographer, enrolling for 3 years study at The Polytechnic School of Photography (Regent Street) and qualifying in Photography

- Scientific and Technical, a good grounding, I secretly hoped, if ever I could discover just how to combine these two passions. I also was able to join the Poly's BSAC (Special) Branch No.172, at last learning to scuba dive, mostly in company with budding marine biologists, an inspiring group to share underwater experiences with .

***Pat Baker's Underwater Photography Museum & Library – Perth, Western Australia***

***Pat Baker with his “Classics” – Lewis Photo-Marines 1&2 / Hans Hass RolleiMarine / Calypso-Phot / his own pioneering, super-wide 19mm lens on Nikonos 1. He holds a 53 year-old self-portrait, taken in the photographic department of the Geological Museum, South Kensington, in 1967.***





*360° Panorama of display and library space.*



*The Largest and the Smallest – Go-Pro Hero3+ (18 gram) and Pentax 6x7 in Australian Sea-Tite housing with 8” dome for 30mm full-frame Fish-Eye (12 Kilogram).*



*The Nikon SLR housings – 21 of them, (models F to D7000, dating from c.1968 to the present).*



*The 16mm movie outfits –1965 plexi Kodak CK Special / Éclair ACL and Pat's Beaulieu 16R (both with 60metre film magazines) / Pat's CK Special / 1950s Bolex H16 (the earliest in the collection).*



*Underwater 3-D cameras, Pat's special interest.*

*(L-R) Fuji W3 Camera in 10Bar Housing with Sea&Sea (90°) Wide16Lenses/ GoPro Hero HD 3D / [above] Sony APS pair mirrorless pair split-image macro (prototype) / JVC GS-TD1 Stereo Video in converted Amphibico wide-angle-ported housing / Pair of Sony HVR-A1P Video in welded aluminium housing with Sea&Sea (90°) W16 Lenses / [below] Pair of Nikonos 3 with 15mm UW-Nikkor lenses - mounted for film-based 3D wreck site recording / Sony Alpha 6300 with Lumix macro stereo lens, for stills and 4K video / [above] Pair of Olympus Tough 8100 cameras in PT048 housings with Sea&Sea (90°) W16 Lenses - mounted for video-based 3D wreck site recording.*



*Shrine to 'Twenty Thousand Leagues Under the Sea' and the historic diving books of William Beebe, and others. Also, Pat's most recent acquisition, a 1960's HugyPhot housing for the Exa camera, a gift from a friend in Canada. For this display Pat has installed an Exacta 24mm lens (auto aperture) with optical correction wide-angle port. Inspired by Peter Scoones, Pat made this lens 40 years ago for his own Olympus SLR housing (also in the museum; fitted with fish-eye dome port).*



*The workshop; in the foreground a “work in progress” - converting a Tussey housing to take a Leica MD 35mm, with 18-28mm lens.*

From '67 to '69 I gained a great deal of work experience with the Photographic Department of the South Kensington Geological Museum, next door to my beloved British Museum of Natural History.

Enrolling in an early 1969 weekend recreational Underwater Archaeology course with the School of Nautical Archaeology Plymouth (the following year Alan Bax and Jim Gill greatly expanded S.N.A.P., this enterprise becoming the Fort Bovisand Underwater Centre) which changed my life; a realization that I might be able to specialize in Photography for Maritime Archaeology! Worldwide it seemed there were no such jobs available; there were however many underwater archaeological endeavors that I could

volunteer for.

My knowledge, skills, experience and equipment (often self-made) improved, with work in Britain, Cyprus and Sweden. In 1972 I resigned from my, now Senior, Photographer position with the Geological Survey to join a 4-month expedition to the Azores. Whilst on mid-Atlantic Terceira I received a permanent job offer from Jeremy Green at the Western Australian Museum; to be photographer for their well-staffed, funded and equipped Department of Maritime Archaeology – an offer I accepted and stayed with for the next 44 years.

Late in my career, starting with a wide range of photo equipment already owned, I began to assemble a collection of cameras; those I had,



*Pat's Historic Scuba Gear.*

over the years, owned, used...or coveted (the largest group, I admit).

When I retired from the WA Museum in 2017 I assembled the 140+ underwater cameras and extensive specialist book and movie libraries within a stone cottage, set in the lush, green garden (created by wife Brenda and her sons) of our Hamilton Hill home.

A 60” 3D TV was added. Also a well-equipped workshop, and unfinished tasks galore!

All are welcome; just phone (061 439156047) or e-mail (pebren@bigpond.com) first!



**Pat Baker**  
pebren@bigpond.com

# Don't settle for 2nd best



Film - No Filter No  
White Balance



Digital - No Filter Manual  
White Balance



Magic Filter Manual  
White Balance

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

[www.magic-filters.com](http://www.magic-filters.com)

# My Shots

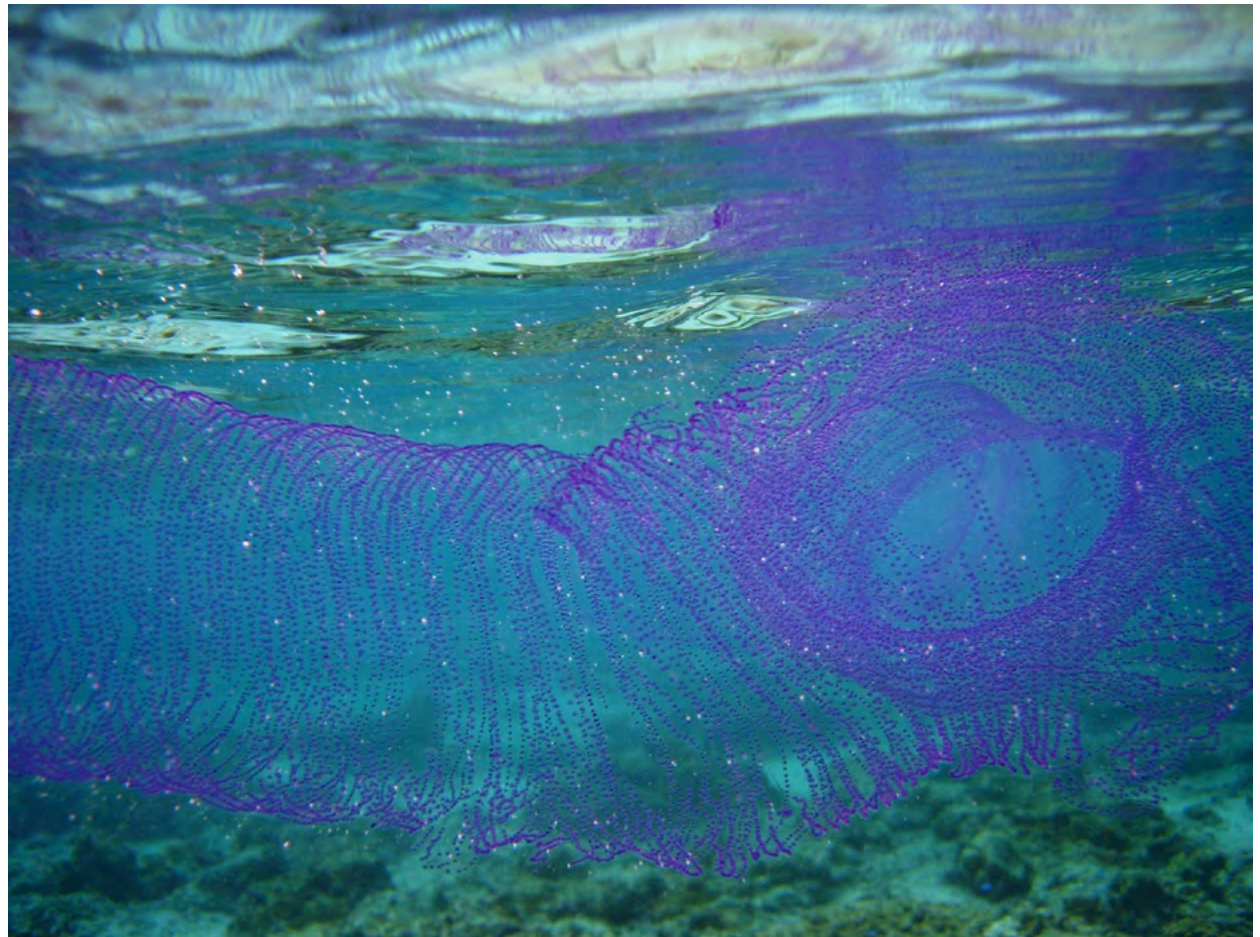
by John Huisman

A mystery, finally solved.

UwP issue 115 included an article and image in the 'Parting Shot' segment (#3) by Richard Howes, the image showing a strange spiral creature that was observed while diving off the island of Tongatapu in Tonga. It was suggested that the creature was a pyrosome, which is a free-floating colonial tunicate that can reach a remarkable size of up to 18 metres long. Richard's image jolted my memory of having seen and photographed the same species, this leading to some lengthy detective work to try and establish what it was I had encountered.

In February 2006, I was participating in a marine biology survey of Scott Reef, over 300 km off the coast of north-west Western Australia on the edge of the continental shelf. Scott Reef is massive reef system comprising two separate atolls, the horseshoe shaped South Reef and the slightly smaller, circular North Reef. Combined, the two reefs and their lagoons cover an area of approximately 250 km<sup>2</sup>; these are certainly significant structures!

Towards late afternoon I was snorkelling at high tide on the reef flat, in about 2-3 metre depth water, when I noticed an unusual spiral organism, something I had never seen before, floating just beneath the surface. Curiosity suitably aroused, I approached it slowly, taking photos on my small point'n'shoot Nikon Coolpix 4600, my first digital camera having just graduated from a Nikonos V. Close viewing didn't help me identify this strange creature, which bore a striking resemblance to a 'slinky', the children's toy that many readers will be familiar with. It was about 2 metres long, composed of a long strand, coiled into a spiral of about 15 cm diameter. I took several general shots, and then also some macro images of the structure of the strands.

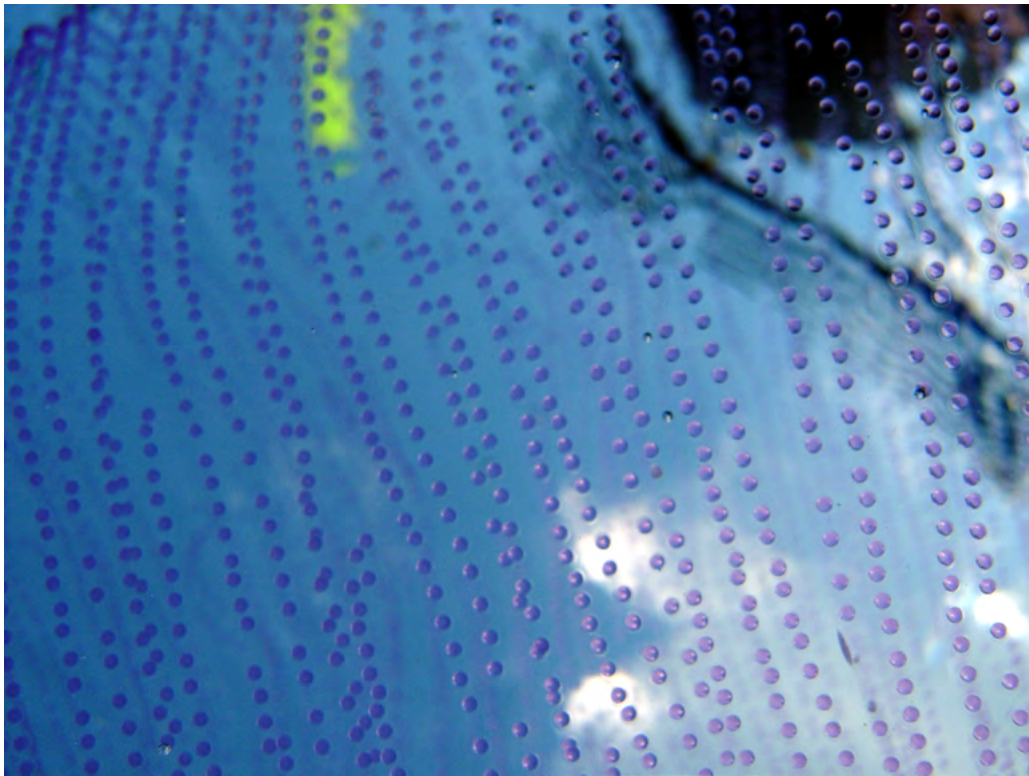


*Nikon Coolpix 4600 in a Nikon housing. Exposure details not recorded.*

Thinking that what I was seeing was so distinctive that someone will know what it is, I headed back to the boat, sure that my strange creature will be easily identified. Back on board I showed people my images, to a universal response of 'no idea'. The macro shots showed that the strands were clear (probably mucilage) and contained thousands of spherical bodies, which I guessed might be eggs. But what might have laid them? It must surely have been

something large to produce an egg mass of this size. What I did not do is to take a small sample. Being a marine biologist, I might have been able to use DNA forensics to try and identify what I had just seen, but you can't do that from a photograph so it was not an option.

Like Richard, I sought an answer on the internet. Pyrosomes did seem to be an option, but the structure was totally wrong.



I posted the images to various sites and was offered some suggestions, but eventually these also settled on eggs of an unknown source. My searching did reveal other images of the same spiralled egg mass, some with suggestions that it was a stinger to be avoided (it is not).

Seeing Richard's image in the recent UWP brought it all back and reinvigorated my search. To my surprise, this time I hit on the answer. They are the eggs of the Diamondback squid (*Thysanoteuthis rhombus*), a large squid that can grow up to one metre in length and

24 kg total body weight. These squid are found worldwide in tropical and subtropical seas. They have a unique social organisation (for squid), living throughout their life cycle in couples of similar sizes. Encountering their eggs is a rare event. One of the articles I read noted that only a couple of dozen such egg masses had been recorded worldwide. So, mystery finally solved, and Richard and I can count ourselves amongst the select few that have seen these things in the wild.

**John Huisman**



# Parting Shot 1

After reading UWP #115 and the two beautiful articles “Doing the splits” and “New models”, I had the idea to write the story behind this specific picture, which is a mix between the two.

Several years ago, we went with the family, to sail the Cyclades Islands, in Greece. We have rented a sailing yacht, together with a skipper.

This was not a diving trip but there was no reason why I would leave my underwater rig at home; after all we would be sailing on such a beautiful sea with crystal waters.

So, we arrived first in a small marina, south of Athens. We got to our yacht and met our cool skipper, Vasilis. He was a good-looking guy with an athletic body.

We started our sailing trip between all the charming islands. Every time we could, we jumped into the magnificent Aegean Sea. I shot whatever I could, splitting, trying to catch a nice top with local traditional white house or with our yacht, together with an interesting underwater subject.

It was nice, but I was looking for something special. Our skipper then asked us if it is ok for him to pick-up his girlfriend to sail with us for a few days. We agreed. I was already thinking how would look such an Apollon’s girlfriend. That could only be a good surprise. It was indeed! She looked like Aphrodite, the goddess of love!

I began my plans to shoot her in the water. I didn’t say a word about it. I wanted to see her moving in the water first. That was not quite pleasant to see...she was really not comfortable in the water, definitely not Poseidon’s girl!! She was swimming a little bit like a dog. It’s cute to

see a dog swimming, but you would not expect that from a beauty from whom you want to get a special water shot. I said to myself, hum hum, ok, let’s try it out...who knows... ?

So, I went to swim close to her and tried to shoot whatever I could. I noticed one interesting point, in all her clumsiness in the water, while she tries to free dive, she makes a nice movement with her hands wide open. I then tried to shoot her while she was free diving. I always had to move around her so that I would get a nice view of the island as well and why not, with our boat as well.

The crystal water together with a clear ground was a beautiful background.

So that’s the result of a split photo with a very newbie water model...she was very happy with the result. She was very cute and contacted me a few years later to ask me to come back to Greece for a new photo session. It didn’t happen....

I shot this picture at F16, focusing on the girl, underwater, with a Nikon 10.5mm fisheye lens and an 8” acrylic dome port. There was no water repellent on the port, so that I had a few droplets on the dry side. I have erased some of them with Photoshop.



© MichelBraunstein.com 2013

**Michel Braunstein**

**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](mailto:peter@uwpmag.com)

# Parting Shot 2

After the new Covid-19 lockdown, I was able to go, once again, to dive in Madeira Island.

As I have dived there almost every year, many times in the same sites, you would think that it would be easy to improve my underwater images, as the subjects were always the same.

This is particularly true when diving in the Garajau's Reserve area (very close to Funchal), where big groupers are always present.

However, back in 2004, using an Olympus C-4100, I was able to photograph a cleaning shrimp in the gills of a grouper.

For some reason, I always wanted to photograph this behaviour again but my "actors" never 'on the same set'. At least when I was diving there.

Fortunately, this year I was lucky and had a good lens to do it; not the best, but... my actors were together again.

When diving in Garajau, I usually use my 8 mm fisheye lens, as I enjoy doing CFWA with the groupers, or getting the action with the divers. This time I decided to take my Lumix 7-14 mm to try new angles.

With visibility in excess of 10 meters and the water at 23 degrees

with a slight current, all looked perfect.

As I descended, I located a lone grouper lying very quietly on the bottom. I approached it from the front and after taking some pictures, I decided to move around it.

There it was, with the gills all open and a cleaning shrimp doing his work.

It might have been better to have a 30 mm macro in the housing but I was still able to get close enough to get the pictures I wanted. After several shots, the grouper moved away as she felt I was too close.

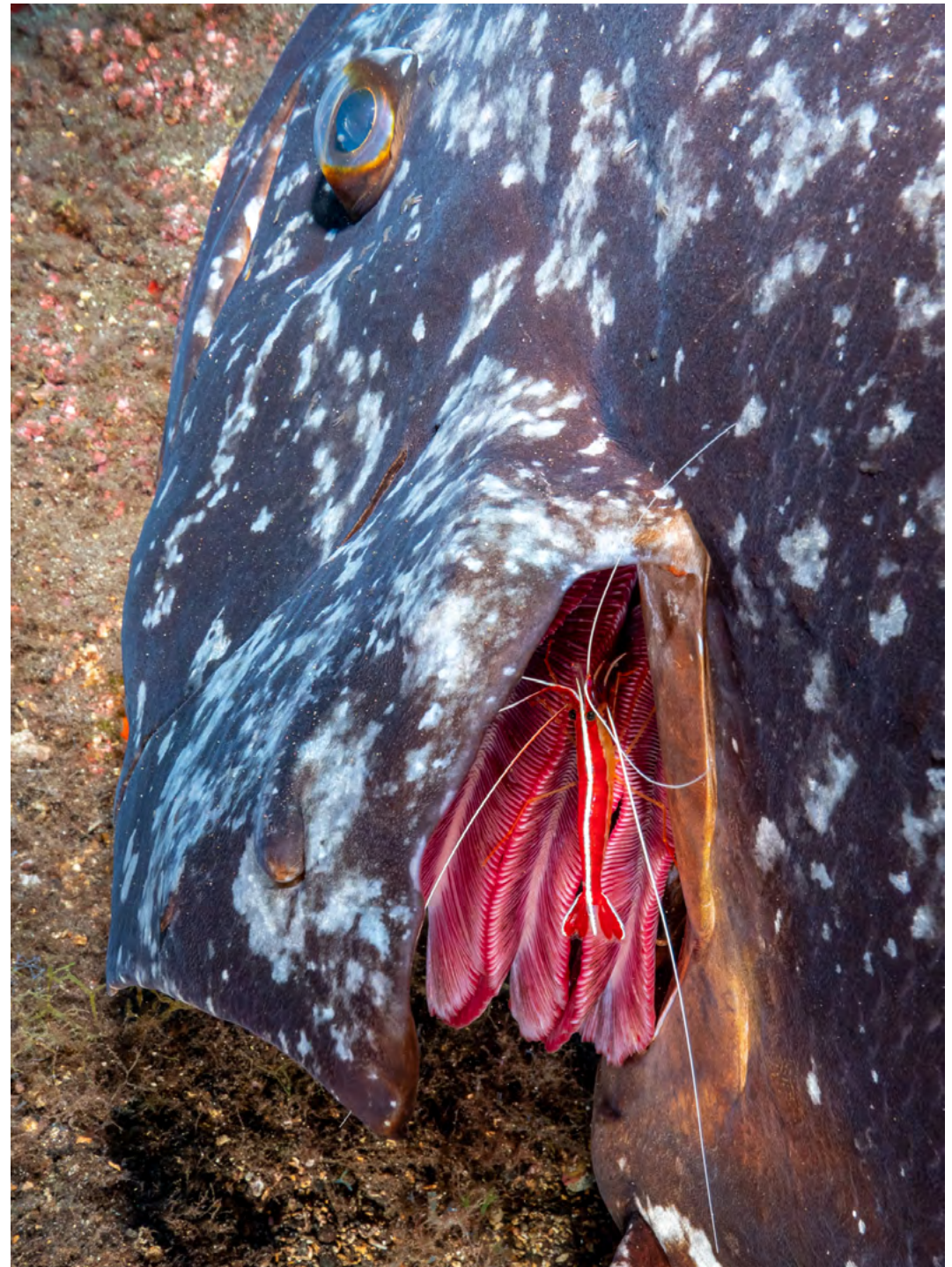
It is strange how some pictures "stay" in our minds for so long...

## Augusto Salgado

*Olympus OMD E-M1 Mk2, Lumix 7-14 mm, Nauticam housing, Zen Dome, 1/60, f10, Iso 400, two Retra Pro (manual mode)*

**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](mailto:peter@uwpmag.com)



# 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](mailto: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.

# UP Supplement

**UP3**  
**Apr/May**  
**1987**

# Underwater Photography



## CLOSE



The CU 001 Close Up lens fits over the 35 or 28mm Nikonos lens and, with the camera lens set to minimum focus, will let you take pin sharp shots just 10" from the lens.

The glass optics ensure top quality performance and the aluminium body provides rugged protection. Complete the outfit with hot dip coated stainless steel probes and you have a lens system which is built to last and which will not limit your compositions.

Its the best selling close up lens in the UK and is value for money at just £69 inc VAT. (P&P £1.50)

## WIDE



For many years, the Subawider lens has helped photographers to obtain high impact shots without having to pay the price of a Nikonos 15mm.

The lens pushes over the 35mm lens and increases its coverage from a narrow 46° to an incredible 90° capable of making murky water appear much clearer.

The results you will get are 'full frame' - that is free from circular fish-eye distortion and no exposure adjustments are needed. At only £155 inc VAT (P&P £2.50), its no wonder they are so popular.

## SPOT



There is, quite literally, nothing to touch the Mitylite in terms of performance, size and price. That's why they are so effective and widely used.

They have limitless applications but are perfect for flash aiming lights with their pencil sharp beam (the Americans say its a state of the art, high intensity, Xenon fired lamp module and dioptic computer designed reflector that's the secret). We say they're too bright to look at and will stay working when you're snorkelling to 2000 feet (as you do).

Supplied with 2xAAA batteries, the Mitylite is just £8.95 inc VAT (P&P £1.50)

## FLASH



The Nikonos V with its TTL flash metering is the most sophisticated amphibious camera around. Attach it to an Aqua F3 TTL flashgun and you have a system which will give you hassle-free exposures with your very first roll of film.

More powerful (and cheaper) than the Nikonos SB103, the F3 represents the best value TTL gun on the market today and we can't see how any other manufacturer will ever beat it.

4 AA batteries (not supplied) give a 28(m) GN with 100asa and it comes complete with a mounting arm and baseplate for just £279 inc VAT (P&P £5).

## FROM

Ocean Optics Ltd  
Worldwide Underwater  
Photography Specialists

# Underwater Photography Magazine

Issue No 3.  
Apr-May 1987

5. Video housing review. Nimar's reflex video housings reviewed
8. New Products. All that's new in cameras and accessories
10. Basic Course. What camera should I buy? UP describes the choice.
12. UP in the UK on Lundy with Brian and Linda Pitkin
16. UP Overseas on the Lady Jenny V in the Red Sea
19. Decompression meters report. Are they relevant?
20. SWL 16 lens tested. Sea and Sea's latest lens goes under UP's eye
23. Book Review. Two more beauties from IMMEL on Red Sea life and death
24. How was it done? Alex Double reveals his BBC Wildlife winner
25. AGFA Competition Results. 'Working divers' winner on show
26. BBC Wildlife Competition. Underwater entries wanted
28. Win a Canon AS-6 outfit. Answer 5 questions and you could win!
29. BSoUP-AGFA's 'On the Day' Competition by Brian Pitkin
30. Short Ends and UP and coming
31. Classifieds. Buying or selling, it's all here

## Editorial

We are a minority within a minority. Diving is a small market and underwater photography is an even smaller fraction of this. This leads to both problems and advantages. Problems because underwater photography equipment is not as sophisticated as it's land equivalent but advantages in that there is not a bewildering array to choose from. Our limited market does not attract too many large name manufacturers; Nikon being the exception and how fortunate we are that they continue to produce and update the Nikonos range. The standard of their equipment is extremely high from the design stage right through production and eventually in packaging and presentation.

Most smaller companies do not seem to pay much attention to presentation, packaging and especially to instruction manuals. They seem so pre-occupied with the product that they forget, or can't afford, to package the goods attractively and provide clear instruction books. All of the small independent manufacturers are guilty of this and, worse still, many of them release goods onto the market before they have been thoroughly tested. This results in the customers being the guinea pigs when new products arrive and this is far from ideal.

With this in mind, UP's policy is to report the facts as found when testing equipment. If we feel there are deficiencies, we will say so in the hope that the manufacturer will react and improve the product. We have no intentions of being unnecessarily harsh but hope that our constructive criticism will be of benefit to both the manufacturer and the purchaser.

Finally, your comments would also be appreciated about equipment design and performance. The more we tell the manufacturers, the better will be the eventual products.

Underwater Photography is published bi-monthly by Ocean Optics Ltd,

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

## SLR housing breakthrough

### Nimar housings from Italy.



- \* For all 35mm SLR cameras with or without winders.
- \* Includes Nikonos 3/4/5 flash connector.
- \* Aperture and focus gears for any lens included.
- \* 3 interchangeable ports for ultrawide angle and macro lenses. Dome port just £36.10!
- \* Precision injection moulded polycarbonate with 1/2" walls
- \* Depth rated to 120 metres.
- \* Accessories include flash housings, mounting arms and viewfinder magnifiers.

SLR housings are just **£225**

For further details of these remarkable housings, please contact  
Ocean Optics Ltd, [redacted]

## 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.

## UP Reviews Nimar Video 8 housings



Video camcorders (a camera and recorder all in one unit) have been available on the land market for a number of years but it is only comparatively recently that suitable waterproof housings have become available. These enable us to use these interesting new cameras underwater and seem set to open up a whole new lease of life for underwater moving images.

To design and manufacture a housing for these camcorders is a time consuming and expensive business. Because these cameras are being constantly updated, they can soon become yesterday's model and eventually disappear altogether. This spells trouble for housing manufacturers who then have a limited amount of time in which to recoup their research and development costs and to generate enough profit from sales to invest in more housing designs.

The result of this has been that only a few housings have been made; manufacturers preferring to wait until the market settles down. Those housings which have appeared have usually been made of cast aluminium as the initial cost of a pattern/mould is reasonably low. The exact cost varies with size and complexity but is usually around £2000. The limitation is

that these moulds cannot produce limitless amounts of housings but this is not a problem in the small numbers world of underwater photography equipment.

The exception to this rule has been Sony who have recently produced the Marine Pack for their 8mm Handycam camera. This is an injection moulded housing, the mould for which must have cost in excess of £40,000! You don't have to be a brilliant mathematician to see that they must sell these housings in big volume if they are to recoup their initial investment and then go into a profit. Only Sony, who have control over their camera production as well, can justify such a major investment.

That was the situation until quite recently but we now have what promises to be a major new manufacturer of injection moulded housings from Italy. Plastmeccanica produce a range of housings under the brand name 'Nimar' and after some poor early designs, they seem set to force the pace.

Top of the Nimar range is their Video 8 housing which is designed to accept the Sony V8AF and other very similar versions from Yashica, Pioneer and Avimax. We presume that Sony actually

manufacture all of these cameras and then sell some of them to other firms to put their own badge on and sell under their own name. Sony sell more cameras and the other companies get an addition to their range without costly research and development. The process is known as 'badge engineering'.

Plastmeccanica are an injection moulding company so they already have the expertise but, even for them, their Video 8 housings represent a major investment. The result of their confidence is a well designed and produced housing which is the first to allow reflex viewing with 8mm video cameras.

First impressions are that these housings are large but this is inevitable since the cameras which they house are awkward in shape and do not lend themselves to a snug housing. Secondly, the style and strength of design are impressive. They are much better in the flesh than on the page. The wall thickness is at least 1/2" which, with today's modern plastics, makes it extremely strong and must put injection moulded housings on a par with aluminium ones for strength and durability.

Loading the camera is, in common  
Underwater Photography. Page 5



Above: With the lighting pack removed, the Nimar Video 8 is much lighter and so much more buoyant in the water. Attaching a weight will help to reduce this and will make the housing much more convenient to operate.



Above: The LCD panel can be viewed through the rear of the housing to see the tape counter, battery indicator and recording status. It would be possible to fit other controls here to rewind and replay the tape underwater.



Above: The rear of the housing is held in place by three large stainless steel catches with snap-in safety locks. Tape cassettes can be loaded and removed without having to remove the camera from the housing but a battery change means total removal.

with all housings, a fiddle first time. Once you know the ropes, however, it's much, much easier.

On the model UP tested, the Sony V8AF camera was used and the viewfinder has to be removed and fitted into an auxiliary housing. This is easily done but if you want to use the camera on land in a hurry, it would be a pain having to remove the viewfinder. The solution, if you do want quick access, would be to purchase a second viewfinder and commit it to the housing.

If you do not, as yet, have a camera, the neatest viewfinder configuration is on the Pioneer. It sits on top of the camera and so doesn't have to be removed. The resulting viewing position with the Pioneer is from the rear of the housing and although we didn't try this underwater we think this will be a convenient position. On the Sony version, with the viewfinder reboxed, the viewing position is slightly more awkward, being above and to the left of the main housing but, as with all equipment, you soon get used to a housing's layout.

The controls are simple and effective, providing camera power, zoom, focus and record. A large toothed gear is attached to the focus barrel and this is the only attachment which needs to be added to the camera prior to housing it.

The lens is a 6x zoom from 12 to 72mm which is a useful range but the minimum focus, at 3 feet, is a little restricting. Wide angle adaptors and close up lenses are available to solve this and so provide a much more versatile range. For those of us who are used to still camera lenses, the F1.4 lens on the video 8 cameras makes filming in low light much more possible.

The camera mounts onto a sliding baseplate which allows the camera to slide back without removing it when changing video cassettes. The 'record' control lever has to be removed from the housing and then refitted once the camera is in place but no special tools are needed to do this. A large clear panel at the rear lets you see the LCD display which shows the tape counter and operating mode.

For the DIY enthusiasts, it would be possible to fit external controls to allow tape rewind and play controls. This would then let you view your results underwater and, if they weren't quite right, reshoot them! Video certainly seems to take all the hassle out of underwater photography.

On land, the housing and camera weigh around 10 kg but underwater the large displacement volume results in a positive buoyancy. This is preferable so that weights can be added externally to achieve neutral buoyancy in any water.

Right:  
The complete outfit with lighting array is very slightly positive in a swimming pool and is very manageable. This will increase slightly in saltwater. The position of the viewfinder is not as awkward as it may look on this the Sony version.



The addition of Nimar's lighting unit reduces the positive buoyancy considerably and makes it almost neutral. On land, this complete package weighs 16.5 kg so excess baggage could always be a problem! The lighting system consists of two battery packs and four 75 watt lights. The battery packs fit neatly under the housing while the lamp heads are mounted on the stabilising fin.

With the camera installed and the stabilising handles fitted, the controls do not fall easily to hand. The 'record' control is a bit of a stretch from the right handle

and, because the housing has a textured finish, the 'camera power' control is difficult to see and can rotate out of position. A clear panel in the latter area and moving the right handle a few centimetres in the former would improve handling considerably. Both of these can be done quite simply but that really should have been Nimar's job.

The 1" viewfinder is both large and bright but is low on contrast and black and white. You will not be able to judge the exact quality of your images until you playback through a proper monitor but

with experience, you can get a good idea of the final results.

The Nimar Video 8 housings are operational down to 60 metres and, in common with so many independent manufacturers, come with a poor set of 'Italian English' instructions. It is not so much how it is written but the fact that there are no drawings to identify the various parts on the housing. On a piece of equipment which costs well over £1000 and which houses a camera worth well over £1000, you would have thought a better set of instructions would be provided. Who knows, Nimar may be reading this and doing something about it...

The UK price for the Nimar Video 8 housing is £1255 and a complete package with the light array is £1755 inc VAT. The latest news from Plastmeccanica is that they have a new housing for other video 8 camcorders. These, once again, are almost identical units 'badge engineered' by Metz, Bauer, Olympus, Ricoh, Nikon, Pentax and Minolta. These are smaller camcorders and so should result in a smaller, lighter housing but UP will review these when they reach the UK.

Nimar products are distributed to dive shops by SOS Ltd and are also imported by Ocean Optics Ltd.

Peter Rowlands

**Seacam**  
UNDERWATER PHOTOGRAPHIC EQUIPMENT ENGLAND

## SEE SEACAM AP-W AT CRYSTAL PALACE

Come to Crystal Palace  
and see our NEW little  
beauty.  
A compact case for all  
SLR's with or without  
winder.



4th and 5th April. STAND 22.

## Ocean Optics chosen as EWA UK agents

EWA Marine products from West Germany have appointed Ocean Optics as their sole UK importer. Their range has developed to include flexible housings to allow almost any camera to be taken underwater. Disc, compact, SLR, cine and video cameras can all be accommodated for use down to as deep as 20 metres. In addition to the camera housings, EWA produce waterproof document cases in various sizes for anything from credit cards up to charts. They also have housings for hand held VHF radios, waterproof beach bags and inflatable carrying holdalls.

## 20mm Sea and Sea lens

This prime Nikonos lens should be available in May. It fits all Nikonos cameras and is compatible with the Nikonos V TTL functions. This small lens covers 79° underwater and has a maximum aperture of 3.5. Minimum focus is a useful 0.4m (1'4") and the filter size is 58mm - the same as the Nikonos 28, 35 and 80mm lenses. A depth of field scale is supplied with the lens. As yet, there is no definite price available.

## Sea and Sea 17mm lens

UP misled you in the last issue. The Sea and Sea 17mm lens is still being imported and is readily available. Our apologies to all and to Sea and Sea UK for the mix up.

## Sea and Sea YS50MS flash

Confirming Sea and Sea's dedication to underwater photography equipment, they have produced a brand new version of the existing YS50. Full details are not yet available but initial specification seems to be Guide Number 20 with a 90° coverage. 4 AA batteries will give around 130 flashes which reduces to 70 if ni-cads are used.

There is a built in slave circuit and the recycle time should be 5 seconds. A full UP review is planned but for further details, please contact Sea and Sea UK Ltd, 5

## Sea and Sea JVC GR-C7 video housing

You've got to admire Sea and Sea for their investment plans. Their latest housing is for the compact VHS-C camcorder from JVC. Its an aluminium housing with controls for focus, zoom and stop/start. A built-in microphone allows you to record underwater.

A 0.5x semi fisheye lens is incorporated in the housing but, in common with many manufacturers, no angle of coverage is quoted.

Measuring 14x7.6x7.2" and weighing just 9 oz underwater, it is small and light and has handles at either side. Price and delivery were unknown at the time of writing but we will keep you informed.

For further details, please contact Sea and Sea UK Ltd.

## Sea and Sea Cine light CL 8050

As video camera become more widely used underwater, lighting will be more in demand and Sea and Sea have produced an interesting version. The 80 watt output halogen bulb can be switched down to 50 watt when you don't want too much light (such as in close ups). This is achieved underwater and so doesn't involve changing bulbs. A fully charged ni-cad battery pack will give 50 minutes at 50w or 35m at 80w. Measuring 5" diameter x 9", the CL 8050 weighs 9 oz underwater but, as yet, no firm price has been made available.

For further details, please contact Sea and Sea UK Ltd.



## Sea and Sea wide angle adaptor

For those who use the Sea and Sea Wide angle lens with the Motormarine SE 35mm camera, they can now use it with a Nikonos by purchasing an adaptor which fits onto the 58mm screw threads on the Nikonos 35mm lens and the Wide angle lens then screws into the adaptor. When used on a Nikonos 35mm lens, the focal length is around 24mm. The UK cost of the wide angle lens is £131.80 and the adaptor is £25.16.

Further details are available from Sea and Sea UK Ltd., [redacted] Devon. Sea and Sea products are available from diving and underwater photography shops.

## Two new Subatec Movie Lights

No doubt expecting increased demand due to the arrival of video cameras and housings, Subatec, who already manufacture an extensive range of professional self-contained underwater movie lights, have announced two new lights.

The two new additions are housed in aluminium and their outputs are 80 or 100 watt respectively. Measuring 100mm diameter by 170mm long, the 80 watt version runs for 35 minutes before needing a recharge while the 100 watt version is slightly longer at 100mm diameter by 205mm long and lasts 30 minutes. A 35w bulb can be used in the 80w version and a 50w in the 100w version. These lower output bulbs increase burn time to 70 mins and 60 mins respectively.

To keep the costs down, Subatec have simplified the design without compromising on output or performance. A charger is included in the price which is £233.12 for the 80 watt and £281.12 for the 100 watt.

Readers may be confused that a mere 20 watt increase in maximum output puts the cost up so much but this is because the 80w is 6 volt and the 100w is 12 volt.

UK agents for Subatec products are Ocean Optics Ltd, [redacted]



## SubAI Miniflex housings from Austria.

To compliment today's small and sophisticated cameras such as the Minolta 7000 and Canon T70, SubAI, a long established housing manufacturer in Austria, have produced two beautiful new housings.

They are so small that they should be considered as cameras rather than housings and the standard of finish is impressively high. Interchangeable ports are available which can be fitted without special tools to make the Miniflex housings both versatile and lightweight.

A flash housing is also available for the Minolta AF 2800. No UK importers exist but you can obtain details and supply directly from SubAI [redacted]

7252 26424. SubAI is owned and run by Mr Stepanek who is very helpful and speaks English.

## Greenaway Marine deepwater tank facility installed

UK Ikelite agents Greenaway Marine Ltd have just completed installation of a 3' diameter, 6' deep tank which can test housings down to 500 feet. They already have a smaller tank and their own swimming pool on the premises and have installed the new tank to cope with the demand for pressure testing larger video, cine and industrial instrument housings. Greenaway Marine Ltd say the tank is probably the largest of its kind in Europe designed specifically for this purpose and they intend to make it available for testing housings other than those they make and market. For further details, write to Greenaway Marine Ltd, Post Office [redacted]

## Seacam AP-W housing to be unveiled at Crystal Palace

After several adverts announcing the arrival of their latest compact housing, Seacam inform us that it will be on show at the BSAC Crystal Palace exhibition. The AP-W is designed for all SLR cameras with or without their winders but no firm prices were available at the time of going to press. For full details, write to [redacted]

Seacam is the only UK firm specialising in the production of cast aluminium housings so UP hopes that a housing will be made available to us so we can commission a full review to appear in a forthcoming issue

## Back to Basics

### Which camera is best for you?

Compared to land photography, there is a much smaller choice of cameras for underwater use. They fall into three broad categories - amphibious cameras for use down to 10 metres, amphibious cameras for deeper use down to 50 metres and housings for land cameras.

#### AMPHIBIOUS CAMERAS FOR USE DOWN TO 10 METRES



The Nikon L35AW and Canon AS6 were the first 'splash' cameras from these two major manufacturers. They weren't the first and their arrival has encouraged other to introduce 'splash' models. Depth ratings range from 2 to 10 metres.

Recent years have seen a frenzy of activity in this area. 5 years ago there was really only the Minolta Weathermatic, a 110 format camera but now there are 35mm shallow water cameras available from Canon (AS6), Nikon (L35AW), Fuji (HDM). Now Vivitar and most recently Ricoh have also produced such cameras. In simple terms, all of these cameras are intended for use in the 'splash zone' and occasionally underwater. From a serious underwater photographers point of view they are not versatile enough in that their depth rating is limited and the accessories available are either very limited or non-existent.

Most have built in flashes which should really only be used on land as they are so close to the lens that they would cause extreme backscatter, even in clear water. As they are aimed at the 'point and shoot' user, these cameras tend to be fully automatic with a limited range of shutter speeds.

They are, however, great fun to use as they allow shots to be taken in what was traditionally a forbidden area. Surfing, waterfalls, skiing and even in the shower/bath are just some of the new locations where these cameras thrive.

#### AMPHIBIOUS CAMERAS FOR USE DOWN TO 50 METRES



Producing cameras for use down to 50 metres is an expensive exercise and all for a comparatively limited market. The choice of cameras is therefore very limited too. Only Nikon and Sea and Sea pamper to our whims.

Although the choice is extremely limited, this type of camera is the most widely used underwater. For serious underwater photography, the most popular is the Nikonos which is fully waterproof down to 50 metres.

For those who flinch at the latest prices, there is the Sea and Sea Motormarine 35 which has a range of accessories including close up and wide angle lenses and external flashguns. This is a motor wind and rewind 35mm camera with a 35mm fixed lens. A built in light meter indicates correct exposure settings.

Because it has been produced in various models since the late 1950's, the most popular amphibious camera is the Nikonos which has interchangeable lenses, a wide range of accessories and, with the latest version, sophisticated exposure control for both available light and electronic flash. Their availability throughout the world has established them as a standard and independent manufacturers have added to Nikon's accessories to make the Nikonos system by far and away the most comprehensive.

Nothing is perfect and amphibious cameras do have some drawbacks. The main one being that they do not allow 'reflex' viewing through the lens. This means all focusing has to be done by estimating the camera to subject distance and setting the lens accordingly. Such a limitation is not too terminal as most underwater photographers tend to be taken with close up lenses which incorporate a framing/focus device or with wide angles

which have a wide depth of field so reducing the need for ultra accurate distance estimation.

The big advantage of amphibious cameras is that they are small and easy to use. You load them just like a land camera and there are no external controls to line up when assembling the camera. Their accessory lenses are corrected for use underwater and so tend to give higher quality results.

That there are so many Nikonos's in use today is indication enough of their suitability for serious underwater photography. Like all equipment, they are not perfect but I'm sure that if we had an SLR Nikonos, we'd find some fault with it!

#### CAMERAS IN HOUSINGS

The alternative to an amphibious camera is to put your existing land camera into an underwater housing. These fall into two sections. Flexible housings for use down to 10 metres and rigid housings for use down to 100 metres.



Only one manufacturer, EWA from West Germany, produces flexible housings. It feels weird entrusting your sophisticated land camera into what seems like a heavy duty plastic bag but in practice they work well and are an inexpensive way of producing underwater photographs

The flexible housings are similar to shallow water amphibious cameras in that they are not intended for serious use but rather are ideal for using existing equipment in conditions which would ruin normal cameras. They can accommodate a wide range of cameras and there are different sizes to allow flashguns, motor drives and zoom lenses to be used. Being flexible, they are far from easy to use but do allow land cameras to go underwater at a comparatively small cost (around £55 to £70).

For more dedicated use, there are rigid housings available for most 35mm SLR and some large format cameras. The big advantage of using a land camera in a housing is being able to see what is in focus and to be able to compose accurately. In addition, you have a much wider choice of cameras available. Being able to see the focus allows you to use macro lenses which are very versatile. These are ideal lenses for nearly all forms of small marine life.



A large viewfinder SLR camera with a macro lens is an expensive combination but is one which would be hard to part with once you've sampled its delights.

Being able to compose is also a major benefit but make sure that your camera in a housing provides this benefit

as most SLR's have small eyepieces which are fine on land but when there is the wall of a housing and the displacement of a mask, your eye ends up quite a way from the viewfinder. The result is that you can only see the centre of the frame. Accessory viewfinders are available (from Ikelite and Nimar) to improve this situation and they offer an effective solution.

The top of the range alternative is to use an SLR which has a removable prism. This can be replaced with a larger prism which gives the full frame viewing from further back. Unfortunately the cameras with this facility (Nikon F/F2/F3, Canon F1/F1N and Pentax LX) are all at the top of the pricelist although secondhand prices can be a worthwhile consideration.

Compared to amphibious cameras, housings tend to be much bigger, heavier and more complicated to use. Practice does improve the situation and most people get used to their housings and their little idiosyncracies.

Rigid housings are available in two materials - aluminium and injection moulded plastic. Aluminium housings tend to be more expensive but are tougher and not prone to flexing at depth whereas plastic housings tend to be cheaper and more versatile in terms of the cameras they

will house. Cost wise, there are basic rigid housings available for just over £200 but as soon as you want them as small as possible with multiple features and interchangeable ports, the price goes up rapidly and may end up with three noughts on the end! However, the versatility and reassurance of a reflex camera in a housing is a benefit which is worth the extra financial stress.

If it's just the cost which is prohibitive for you, look out for secondhand outfits as these can be on sale at very low prices. Underwater, you don't need a particularly sophisticated camera - the fewer electronics the better, some say, so don't be put off if the camera is an older mechanical model.

The decision whether to house a land camera or use an amphibious one is not an easy one. Future 'back to basics' will explore the issue further as it is one of the major decisions which faces every underwater photographer.

There are advantages and disadvantages from both sides and this dilemma will only disappear when there is a suitable SLR amphibious camera. UP cannot envisage a specialist manufacturer producing such a special item but would love to be proved wrong....

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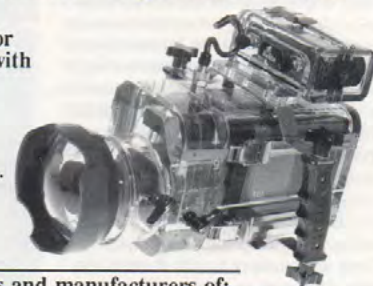
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UP

## UP in the UK on Lundy with Brian and Linda Pitkin

Lying in the Bristol Channel, 11 miles from the nearest land, at Hartland Point, North Devon, Lundy is approximately 3 1/2 miles long and just half a mile wide. Mainly comprised of granite, the island rises some 400 feet above sea level with steep cliffs on the western side and gentler cliffs and valleys on the more sheltered eastern shore. Since 1973 Lundy has been recognised as a voluntary marine reserve but in November last year the island became Britain's first statutory marine reserve, its interesting and diverse marine life being subject to legal protection. And not without good reason.

The island lies approximately north/south and prevailing winds are from the southwest. The seas can be very rough particularly in winter and numerous ships have come to grief on the jagged rocks. These include the Iona, a paddle steamer, the Kaasberg and Robert, both cargo vessels, and even a battleship, HMS Montagu. Apart from the Robert, these wrecks are mostly broken up, although still very worth diving for their photographic potential. Whatever direction the wind, there is usually somewhere sheltered to dive.

The marine fauna includes many colourful species in profusion such as bright yellow mediterranean cup coral, *Leptopsammia pruvoti*, the yellow zoanthid anemone, *Parazoanthus axinellae* and red dead man's fingers, *Alcyonium glomeratum*, normally found infrequently on the southwest coast of Britain. In addition, the undersea walls are covered with patches of jewel anemones in every conceivable colour combination. Add to this an abundance of the commoner species and occasional visitors such as thresher and basking sharks that have turned up in the normally clear waters and you have all the ingredients for an underwater photographers paradise. There are too many sites to do justice to them all in such an article so mention will be made of a few. One site which underwater photographers visit over and over again is the Knoll Pins, on the east coast. Two pinnacles of rock rise from the seabed a few metres offshore, breaking the surface at low water. Between them lies a superb gully lined with yellow cup corals, zoanthid anemones, red dead man's fingers and jewel anemones. In addition to macro photography, this is an excellent site to photograph divers swimming between the colourful walls. We have also found angler fish and dogfish among the weeds on the northerly slopes of the pinnacles and



Left: *Jewel anemones are such familiar subjects for macro photography that it is not always easy to get a fresh angle on them. The juxtaposition of two in the frame can make an interesting composition, particularly with an upright format. The non-reflex Nikonos isn't ideal for such shots so take a series to cover the angles and to give you a choice. Nikonos 11 with 1:1 extension tube, Vivitar 273 flash in Ikelite housing, Ektachrome 64. Linda Pitkin.*



Left: *A close up balanced light shot of red sea fingers. This was one of a series taken as an experiment. After taking a light reading I held my Nikonos 111 with 28mm lens (set at F5.6) with a supplementary close up lens and frame below the subject and pointed directly up towards the surface. I balanced the available light by holding my Oceanic 2000 about two feet behind and to one side of the camera. The Ektachrome 100 film was processed the same evening and provided a stimulus for further experiments. Brian Pitkin.*



Above: *Encountered at night a few yards off the beach, the slow-moving snake pipe fish is easy to approach for photography. Aligning this long thin fish and swaying weed in a satisfactory pose is more difficult but a series of attempts from different angles increases odds for a successful result. Nikonos V, 28mm lens plus close up lens and framer, Sunpak marine 32, Kodachrome 64. Linda Pitkin*



Above: *Taking macro shots at 1:1 gives the opportunity to get in close enough to concentrate on a single flower-like polyp of Parazoanthus. Approaching a subject from a low profile helps to isolate it from distracting background details. Lit with flash from below, the slender column is free from shadow while the fine translucent tentacles display a subtle glow. Nikonos 111 with 1:1 extension tube, Sunpak Marine 32, Kodachrome 64. Linda Pitkin.*



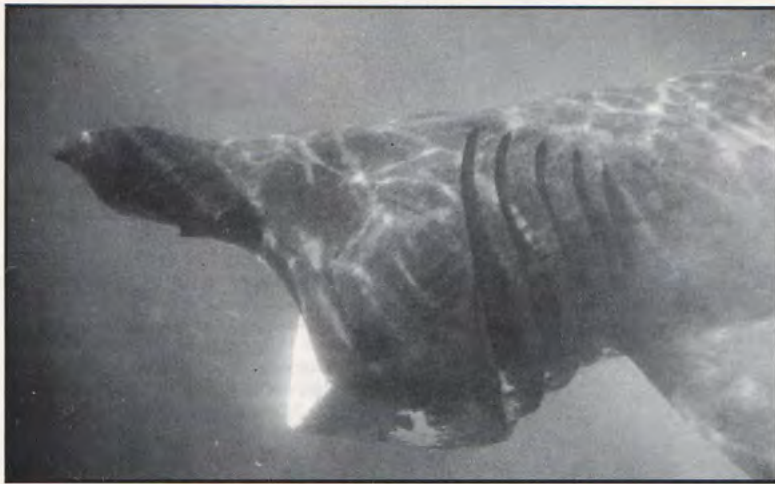
axinellid sponges, fan corals and other interesting static life on the deeper south side of the outer Knoll Pin.

The Robert, a few hundred metres offshore, is a must for anyone keen on wreck photography. She lies in 30 metres on her starboard side with much of the superstructure still intact. The hull is literally covered with plumose anemones and encrusting marine life. Shoals of young fish move gracefully among the davits and railings. Large lobsters hide in her empty cargo holds.

The humble diving beach, in the bay at the southern end of the east coast, is an ideal site to try out new equipment and ideas. Entry couldn't be simpler, it is only a few steps down the beach from the diving hut to the water's edge. At high tide, walking off the jetty is like stepping into the swimming pool. Underwater the beach slopes gently away to about five metres, with a fine selection of seaweeds. Visibility is variable but can be excellent, particularly at high water slack. Here you can relax and take your time to get the results you want. Diving is the easiest way to get to grips with your subject but snorkelling can also work well in this situation. Seaweeds can make interesting subjects for photography and natural light shots work particularly well in the shallow waters. Using the sun to backlight tall fronds of weed can produce dramatic results.

The sheltered bay has other life to catch the photographer's eye. Ballan wrasse weave their way placidly in and out of the fronds. Plankton tend to drift in towards the beach and at times you can pick and choose between various specimens of lions mane jellyfish and compass jellyfish. The inclusion of a reflection in your photograph is an effective approach that takes advantage of the jellyfish's proximity to the surface. The plankton may also lure

Left: *The lion's mane jellyfish pulsates gently to the surface then sinks a few feet before repeating the cycle. When the subject displays such predictable behaviour it gives the photographer the opportunity to plan a shot. Getting just below the jellyfish, looking upwards and waiting for it to touch the surface brings a reflection into the field of view. Using a Nikonos camera has the disadvantage of not being able to see the exact composition and parallax can be a problem when composing wide angle close ups. Taking series of photographs reduces the risk. Nikonos 111 with 15mm lens, Sunpak Marine 32, Ektachrome 100. Linda Pitkin.*



Above: A chance encounter. This basking shark came to within 10 metres of the jetty where I happened to be ready, camera loaded with Ektachrome 100 and wearing a wetsuit. I grabbed my mask and fins and slid silently into the water. Using a Sekonic lightmeter, I took a light reading of myself, set the aperture on my Nikonos 111 with 28mm lens to F5.6, the focus to 2 metres and waited whilst the shark slowly circled the bay. I took four natural light shots as it cruised past by just pointing the camera in its direction. Incredibly it returned a few minutes later and I managed a further three, again without using the viewfinder. Brian Pitkin.



Right: Late in the afternoon, misty rays of sunlight stream through the water making an ideal backdrop for a seaweed shot. Natural light is the dominant source of illumination used here to produce a partial silhouette. The addition of a low level of flash light picks out some detail on the tall fronds of the knotted wrack. Being in such shallow water it is often cumbersome to use cylinders. This shot was taken while snorkelling using a Nikonos 111 with 15mm lens, Sunpak Marine 32, Kodachrome 64, Linda Pitkin.

### Lundy...

a spectacular basking shark within camera range! At night the familiar sights of this small haven are replaced by a new set of denizens. The common edible crabs and spiny spider crabs still trundle busily to and fro. But the photographer can hope for less commonplace creatures to pose in front of the lens, such as snake pipe fish, a handsomely striped relative of the sea horse also found amongst weed. Lundy is deservedly famed for its rich walls of colourful and rare marine life and has much to offer the underwater photographer. Whatever camera system you dive with you should find many interesting subjects to photograph and enjoy. Passage to Lundy is usually on the island's own vessel, the MS Oldenberg, from Bideford, Ilfracombe or Clovelly, depending on the time of year.

Accommodation for groups of three to twelve divers is available and there is quite a choice from full board at the Millcombe House Hotel to self-catering either in one of the numerous cottages or the lighthouse and castle keeps, all a steep climb up from the beach. You may also camp if you wish. Meals are available in the island's pub, the Marisco Tavern, where you can purchase groceries. There is a compressor plus changing facilities on the beach. Advice and dive location sheets are available. You must provide all your own diving equipment, including boat. You only pay for air in addition to accommodation and carriage to the island. For further information write to The Lundy Company Ltd., Lundy, Bristol Channel via Bideford, North Devon EX39 2LY Telephone 0271 870870

Brian & Linda Pitkin

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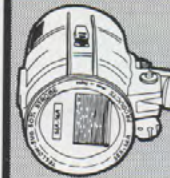
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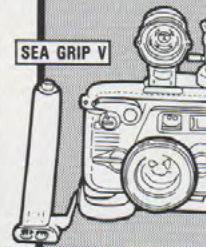
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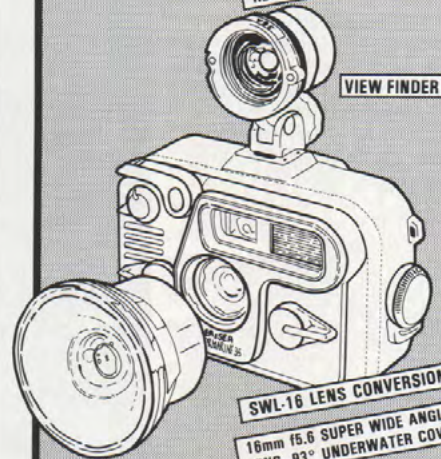
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## UP Overseas on Lady Jenny V in the Red Sea



Despite many clumsy visitors over the years, the profuse marine life regenerates in even the most frequently dived areas. A small slave flash, held by the diver, has brought out extra colour and detail in the fan coral and a narrow angle flash has retained a feel for the ambient light. Nikonos V, 15mm lens and Vivitar 283 flash. Fuji 50 slide film at 1/190th @ F8

When considering overseas locations for underwater photography, the Red Sea is one area which is referred to and recommended time and time again despite it having changed nationalities and been the subject of bitter military rivalry for many years. It is the quality of the diving which has attracted visitors from all over the world and, for those who have sampled the delights, it is an area to which all new locations are compared.

When the Sinai peninsula was under the control of the Israelis, there were several ways in which to dive the area. Safaris had you sleeping under the stars at the water's edge, Sharem offered bordello huts and large dive boats provided live on board luxury. With the handing over to Egyptian control, an agreement was signed to limit commercial development for 5 years and this led to the disappearance of safaris, the running down of Sharem facilities but not the availability of dive boats.

Being self-contained floating extensions of the country of their registration, dive boats have been able to continue operating but not without locally imposed restrictions. These have not deterred the determined operators and the

most determined of all must be the Lady Jenny V, owned by Tony Turner, a Midlands based businessman.

Originally, Tony and his firm, Red Sea Adventures, ran two boats out of Sharem - Lady Jenny 111 and V. The 111 was luxurious and far too good for divers. She was far more suited to entertaining moguls from the Mediterranean. The Lady Jenny V however has stood the test of time and has continued to provide a consistent service despite changeable local conditions (both on land and underwater).

Getting onto the Lady Jenny V is a simple task. You book through their UK agents Speedwing and everything is then laid on for you. Actually getting to the Lady Jenny V is another matter for you have to change countries, go from aeroplanes to coaches, through borders and then onto another coach. All the time, you are responsible for lifting your usually weighty camera cases. In addition, timings, completely out of the organisers control, may mean spending your first night in a hotel on land and can get your holiday off to a tiring start but these initial hours of discomfort only help to make you more appreciative when you finally step on board the Lady Jenny V.

At 96 feet long the Jenny V is capable of taking 16 guests in 2 double, 4 x 2 berths and a large 4 berth cabin. Space per person varies from cabin to cabin but there's plenty of room to work on cameras in between dives.

On-board facilities include 110 and 240 volt charging, a fully equipped darkroom whose main function is to process E6 films but Cibachrome enlargements can also be done, if required. Skipper Adrian O'Neil processes films overnight for a very reasonable cost (around \$4) and they are returned in protecting sleeves for easy handling. From the underwater photographer's point of view, this ability to see your results so soon is a major factor in making the Lady Jenny V a very productive vessel.

For video photographers, there's a VHS player and colour television for you to playback your shots instantly. There is also a library of natural history tapes for the night owls. As with all technological equipment being operated in far from ideal climates, hiccups can occur to cause local interruptions to the service but that's not the end of the world because you are floating on some of the best underwater photography sites in the world.



Above: Black coral (it's the stems which are black) is the favourite haunt of the hawkfish and there are plenty of both around Sharem. Hawkfish are easily disturbed but do tend to come back to the same spot sooner or later so hang around and you should be rewarded. Probes and frames are out so it's macro lenses in housings or remove your probe/framer and take pot luck. Pentax LX in Hugofot housing with 50mm macro lens. Subatec S100 flash at full power. Kodachrome 64 at 1/75th @ F16.

Right: This may be just another fish shot to you but it's a photoplepharon to me and it's the first shot I've ever got of one. Taken at night with the gear as above except the lens was a 100mm macro. There were hundreds of them flashing their eyes at me and when I turned on my torch they were blinded and slowed down to let me take their portrait. The 100mm lens has very shallow depth of field and a minimum focus of around 2 feet so I took several shots, some of which were sharp and some which ended up in the bin.



Restricted by a suddenly imposed Egyptian area limitation and an unusually high wind ("It's never usually like this") our trip wasn't able to sample the delights of Tiran Island or the Shadwans, but, in the Red Sea, wherever you go, your camera will not be short of subjects. In fact, the first thing to learn is not to take too many pictures too soon. The initial tendency is to fire away like a machine gun at everything that moves but it is better to relax first and soak in the underwater atmosphere and then concentrate on each frame. On Jenny V, there's plenty of time.

This initial excitement is perfectly understandable if you are used to a limited divetimes (as UK conditions usually dictate) but, on the Lady Jenny V, your diving time is virtually unlimited. Your only limitation being how much you can stand. Resident diving organisers, Alex and Tamara Double, are on hand at all times to describe new sites, calculate and log your dives and to make sure there's plenty of air. Like all good operators, their presence is unobtrusive and their delivery is amicable without being trivial. The same goes for the crew and it is this blend of calm experience which helps visitors of all standards to get the most from their time on board.

Underwater, there is little that has not been written about Red Sea diving. The profusion of glamorous soft corals and the abundance of marine life make it an idyllic location for all underwater photographers. The water clarity is nearly always good and there can be the odd surprises from turtles, manta rays and even the occasional shark. The waters are nowhere near warm enough to dispense with wet-suits and the long times spent underwater mean that a full suit with hood is the most comfortable.

As far as subjects go, they make you want to take their photographs. Most of them seem to be straight from the pages of a Hans Hass or Cousteau book and yet here are you taking their photographs. The Red Sea has a special feel which never seems to lessen, however many times you return. It is this powerful impact which must have attracted us so much and, in return for this pleasure, underwater photographs have been instrumental in the promotion of the Red Sea to other divers. Such profuse and colourful subjects in such shallow water and so accessible. The correct combination of all three is so rare.

The Red Sea has subjects of all shapes and sizes from wide angle scenery to close up marine life so be prepared for variety. Oddly enough, there seem to be very few animals whose shape and size conform to 1:1 extension tube

Right: The bows of the Yulanda are now underwater and she is slipping down the slope. Eventually, she will go all the way into the depths and could become out of reach. This was taken at 45 metres with a 16mm full frame 180° lens on a Pentax LX in a Hugyfot housing. Kodachrome 64 on auto @ F4 was giving a shutter speed of around 1/30th. The diver was hovering to instructions at around 30 metres and this is the true angle of the seabed. The bubbles to the right of the prop are mine as I couldn't hold my breath long enough for them to get out of frame. Converted to Plus X b&w film and printed onto Multigrade paper with some burning in at the top.



### Lady Jenny V...

requirements unless you use them to take detailed shots of parts of subjects. In this way you will be more concerned with patterns and texture rather than whole animals. Being on board Lady Jenny V gives you access to more open water pelagic species and you always have the feeling of being at the edge of the ocean rather than just in the sea. The difference is enormous and should show in your results

Diving from a large boat solves many traditional problems encountered by underwater photographers. The most important being the lack of sand which could stick to O rings and cause a flood. This helps keep maintenance simple and still effective. The other main advantage is that you are available on the water should anything swim into the area. Quickly kitted up with snorkelling gear could see you in the water with large marine life such as manta rays or turtles. Shore based diving can miss out on these special visits.

At just over £700, a week on the Lady Jenny V is a major expense in the annual budget but when you consider the amount of time you can spend underwater and the scenes you will see, the value for money rating is extremely high.

Peter Rowlands

## Lady Jenny V sails south

In August this year, Lady Jenny will up anchor and sail on a Voyage of Discovery down the Red Sea from Hurgada to Port Sudan, stopping en route to dive on some rarely visited reefs.

Alex and Tamara Double will lead the trip and their knowledge of the area will greatly enhance the expedition.

The trip enters its second phase when the Lady Jenny lies off the Sudan and a third on the return leg to Hurgada.

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Alex and Tamara will be on the stand at Crystal Palace on 4/5th April and happy to discuss the trip.

**TWICKERS WORLD**

## Birchley Products

### SLR CAMERA HOUSING

Another first for Birchley Products, we are pleased to announce a custom-built injection-moulded SLR camera housing. The concept is a three part injection moulded camera housing into which controls are fitted for each individual camera.

Control bearings are solvent welded and O ring sealed. Main body mouldings are also O ring sealed. The front lens through which the camera photographs is a clear acrylic disc, which is easily replaced if required.

Depth limitation on the housing is 120 feet (36m). The camera housing is sold as a basic unit, including shutter release, rewind, aperture and distance controls. Also shown is a flash housing with a built-on spotting light. The flash has a guide number of 22 in metres, 100 asa. The spotting light and flash are powered by a rechargeable ni-cad battery pack. When the light is on, the flash is activated.

Other flash configurations may be used, please check with us. The flash housing is manufactured in ABS with polycarbonate injection moulded plastic components.

Price: Camera housing £130.39 + VAT. Flash housing to include flash, spotting light, Nicad batteries, lead and arm £86.91 + VAT



## Decompression meters

### Can they take photos?

UP can hardly claim to be bang up to date in bringing you this report on decompression meters since they have been around now for several years but we thought that we would include occasional reports on specific pieces of diving equipment which we feel are relevant to underwater photographers.

Having used both the Decobrain and the Edge, we have become convinced that these luxuries of today will become tomorrow's necessities as more divers discover them and, most importantly, as the price comes down. At present, you have to consider paying between £400 and £500 but in a few months time there should be others available at between £200 and £300.

Decompression meters combine several instruments in one. They are a depth gauge with maximum depth recording, a dive timer and a decompression meter all in one. Some go even further and indicate water temperature and barometric pressure.

Most types (there are soon to be around six on the market) use solid state electronics to simulate the saturation and desaturation of nitrogen in the diver's blood. Different tissues in our bodies absorb and release nitrogen at differing rates. Some absorb and release very quickly while others are very much slower to both absorb and consequently to release. In calculating the differing rates, the more tissues a meter simulates, the more accurate it will be.

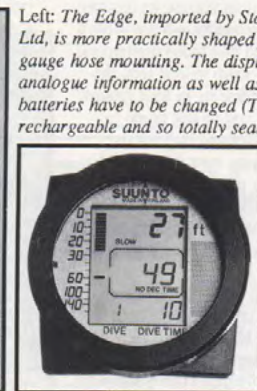
The result is an instrument which is working for you all the time, monitoring your depth and time and advising you what you can or can't do in safety. All you have to do is check your remaining dive time reading to make sure you aren't running into decompression. If you are, these meters will then tell you at what depth and for how long you must decompress before surfacing.

In two recent trips, we used both the Decobrain (kindly loaned by Spirotechnique UK Ltd) and the Edge (kindly loaned by Stoney Cove Marine Ltd) but, as was stated at the beginning, UP does not intend to review individual pieces of diving equipment but prefers to report on the overall usefulness as an underwater photography tool.

True, they don't take photos but they do allow you to forget about the tedious and usually restricting calculations. The more you dive the better these instruments become for they take



Above: The Decobrain (right) is well established and provides easily viewed and comprehensive information. Red flashing lights are included for use at night and the unit, although initially bulky, does not obstruct when strapped to your arm. The second generation meters are smaller, cheaper and have extended battery life. Their smaller size means fewer displays but that's not a significant problem. The pre-production units on the left and centre have a 5 year battery life and should cost under £250 from Spirotechnique UK Ltd.



Left: The Edge, imported by Stoney Cove Marine Ltd, is more practically shaped for arm or contents gauge hose mounting. The display has more analogue information as well as digital but batteries have to be changed (The Decobrain is rechargeable and so totally sealed).

Left: Soon to arrive from Suunto is a small unit for console or arm mounting. They should be here by late spring. Importers are Blandford SubAqua

repeat diving calculations in their stride. When you've got co-operative subjects posing down there, the last thing you want is to be calculating times and depths.

The most noticeable advantage of these sophisticated instruments is that they tend to allow you to dive for much longer than you would ever have thought possible. This isn't because they bend the rules (no pun intended), it's because they constantly monitor your depth and time.

Most photographic dives tend to cover a variety of depths during a dive and, in most cases, you may only be at your maximum depth for a fraction of the whole dive time. As soon as you go shallower, some tissues are already starting to desaturate nitrogen so the decompression meter takes this into account. The result is almost certainly an extension to your dive

times. As an example, I was able to make three dives to 45 metres on the same day and spend a total of 25 minutes at the maximum depth without running up major decompression times. This was because I took my shots at depth and then gradually worked my way into shallower water. The meter took all this safely into account whereas traditional tables would have had me twiddling my thumbs, confined to a long surface interval.

The only way to appreciate a decompression meter is to use one. I feel sure that once you have sampled their capabilities, you, like me, will consider them as essential pieces of equipment.

Peter Rowlands

Sea & Sea's SWL 16 lens

It seems to have been quite a busy time at Sea and Sea Japan. The early part of this year has seen them announce a number of interesting new products, the first of which to appear is the SWL 16 wide angle supplementary lens for the Nikonos 35mm lens.

The SWL 16 is a solidly made 'screw on' lens which is attached to the Nikonos 35mm lens by screwing it onto the 58mm diameter filter threads. This method of attaching has both advantages and disadvantages. Advantages in that, once on, it won't fall off but disadvantages in that you have to have intact filter threads on your lens. There are no disadvantages if your filter threads are OK but they are prone to getting knocked out of line. They can, however, be straightened if the damage isn't too severe.

The solid feel about the SWL 16 comes from its construction. The housing is machined aluminium and the optics are glass. The finished product is both attractively designed and looks the part.

Waterproof down to 200 feet, the lens consists of 4 elements in four groups, the front being flat and so not prone to damage even though there isn't a lens hood. The rear element is protected so that the SWL 16 can be placed on a flat surface without damaging the elements. A minor point, maybe, but very practical if you want to use your gear and keep it scratch-free.

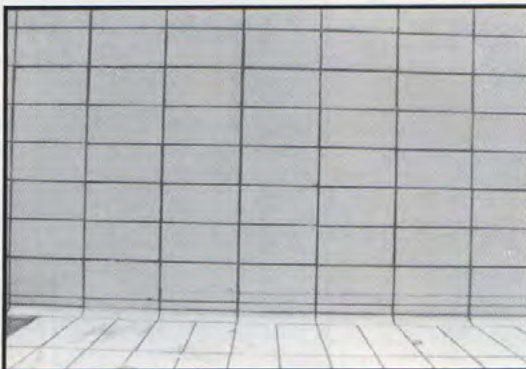
Packaging is both attractive and effective. A pouch protects the lens and both front and rear lens caps are provided. Once again, these are minor points but they do make a difference (The Subawider, a similar lens from Switzerland, comes without either lens caps or a pouch and we feel that this is an important omission. Subatec, are you listening?).

Weighing 14oz, the SWL 16 exerts a slight pull on the 35mm lens but there's nothing to worry about. The 35mm lens can't pull off altogether and can't be pulled far enough forward to unseat the O ring. At around 2" long and 3" in diameter, this lens is not ungainly and, being aluminium, will be capable of taking a few unintentional knocks.

Only designed for use underwater, it is advisable to enter the water with the lens screwed on and then remove it underwater to make sure there aren't any small bubbles sticking to either the rear element of the SWL 16 or the front of the 35mm lens. There are small slots to let water into the small space in between the SWL 16 and



Left: The Sea and Sea SWL 16 screws onto the 35mm Nikonos lens and converts it into a 91° wide angle lens. The resulting pictures are 'full frame' without the circular distortion you get with fish-eye lenses. The depth of field with wide angle lenses is extensive, even at small apertures, and reduces the need to estimate distances accurately.



Left: Taken at the recommended settings of infinity and F5.6, the SWL 16 shows excellent geometry and overall definition. Such clinical tests are slightly unnatural but if a lens passes this test (and the SWL 16 certainly does), it will perform very well in the real world.



Left: Although the instructions do not recommend using apertures wider than F5.6, we tried it and found that it still works but the edges do go a bit soft. Not enough to prove unusable though so Sea and Sea are being optically over-cautious which is admirable but ignorable.

the 35mm lens but bubbles will almost certainly stick.

Once underwater, you are ready to shoot but make sure the lens cap is off! It may sound silly advice but the Nikonos is non-reflex and the viewfinder won't tell you if the lens cap is still on!

Whilst on the subject of viewfinders, the SWL 16 is not supplied with one but you should consider buying one as they aid composition with such a wide angle of coverage. Sea and Sea make a neat one with parallax adjustment and removable masks for use with the SWL 16, 28 and 35mm lenses.

That's enough of the facts, now let's look at the results.

UP tested the SWL 16 in a swimming pool where the rectangular tiles are perfect for seeing how well lenses are performing. Care should be taken, however, not to over-react too much if slight distortion is evident for, in the real world, underwater, there aren't many straight and perpendicular lines. Having said this, our tests showed the degree of correction and geometric reproduction is very high indeed.

The SWL 16 is a true wide angle, like the Nikonos 15mm lens, and you would be hard pushed to tell the difference between the two when using apertures of

F8 and smaller. The beauty behind the 15mm lens (and the reason for its price) is that it performs equally well down to F2.8 where most other lenses suffer from loss of edge definition.

The SWL 16 is no exception. At apertures wider than F5.6, the edges are a little softer and Sea and Sea advise that the SWL 16 should not be used at apertures wider than F5.6. The impression given in the usual poor instruction sheet which comes with the lens implies that it won't work wider than F5.6. This intrigued us and we assumed that this limitation is in the interests of image quality rather than being a physical impossibility. This is in fact true, for our shots at F2.8 and 4 were fine except for soft edges but we see no reason why you can't use wider apertures, especially in low light conditions, and accept that the edges won't be pinsharp. (In low light conditions, the edges are usually in darkness anyway so its hardly a problem!).

Because the lens covers the 35mm, stickers are provided to indicate focus and apertures. These are stuck around the control knobs. A sticker is provided for focus although the instructions do state that the SWL 16 must be used with the 35mm lens set at infinity. Once again, this made us curious as it seemed to limit the

capability of the lens (some excellent shots are taken with wide angle lenses focused really close) so we tested the lens at various focus settings and found that at F2.8 with the 35mm focused at minimum (2.75ft), you are in focus extremely close. Sea and Sea should really publish depth of field tables for various apertures and focus settings; otherwise they are not publicising or encouraging the lens to be used to its full capabilities. And capable it most certainly seems to be.

Our swimming pool tests were impressive and being coated glass optics we imagine that the problems of flare should be minimal (something the Subawider is prone to). The Sea and Sea SWL 16 sells in the UK for £137.65 inc VAT and their optical viewfinder is £48.70. At these prices, the performance and value for money is excellent.

Improve the instructions, supply a depth of field chart for various focus settings and they should have a popular product.

Sea and Sea products are imported by Sea and Sea UK Ltd and are available from some diving and underwater photography shops.

Peter Rowlands

## FOR RED SEA DIVING AT ITS BEST... 1987/8

# LADY JENNY V

Price per person - £	November 4, 11	699	
May 13	755	December 2	699
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# SPEED DIVING

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**OR**

You want to attend a weekend course on underwater photography with cameras supplied or bring your own.

If you do,  
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**FORT BOVISAND UNDERWATER CENTRE**

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<p>Please send me details of diver training &amp; u/w photo courses</p>	<p>Name.....</p> <p>Address.....</p> <p>.....</p> <p>.....</p> <p>.....UP</p>
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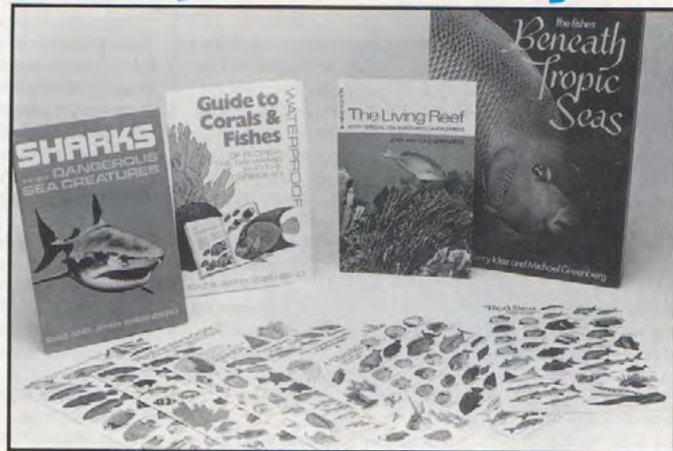
# Know your subjects

Sharks and other creatures £4.95

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Waterproof field guides to:

The Red Sea, Hawaii, Gt Barrier Reef, Shells, Reefcombers, Marine invertebrates, Fishwatchers. All £2.95 each



Underwater Photographers Handbook £9.95

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The more you know about your subjects, the better your photographs will be.

These marine identification books are available from

## Books on Marine Life

### Red Sea Reef Fishes £32

Dr. John E. Randall describes in detail 325 species of Red Sea reef fishes, enhanced by the author's own colour photographs.

### Divers' Guide to Red Sea Reef Fishes £20

Waterproof supplementary volume to the above, containing numerous colour photographs, with common and scientific names of each species.

### Sharks of Arabia £26

Just published, this is the latest addition to our knowledge of Red Sea, Indian Ocean and Arabian Gulf Sharks. Dr. Randall has combined scientific accuracy with a presentation which is of interest to the general reader and scientist alike.



To obtain: Send cheque (plus £2 p&n each book)/Access No. to

### The Red Sea £24

An informative and colourful book in which the author, Dr. Peter Vine, explores all aspects of the Red Sea with emphasis on its rich marine environment.

### New Titles

### Red Sea Safety: £16.75

Guide to Dangerous Animals  
In this book the author, Dr. Peter Vine, aims to inform divers of some of the dangers of the Red Sea's marine environment and gives advice on how to avoid accidents, or deal with them should they occur.

### Red Sea Invertebrates £39.50

In this well-researched book, Dr. Vine provides an up to date description of invertebrate species found in the Red Sea, with comprehensive checklists which will be of use to amateur and professional divers alike. Ecological notes, over 270 full colour photographs and many detailed line drawings serve to make this an attractive publication for anyone with an interest in marine life.



## Book Reviews

Two more from IMMEL's impeccable stable

### Red Sea Safety by Peter Vine

The general public has always had a morbid interest in marine creatures capable of inflicting severe pain or preferably death on their assailants. Funnily enough, for divers, the reverse seems to be true; for we are the ones who expose ourselves to these creatures which arouse so much interest.

When you bear in mind the number of dives made worldwide it is surprising that there have not been more incidents recorded where divers and marine creatures have clashed - to the detriment of the diver.

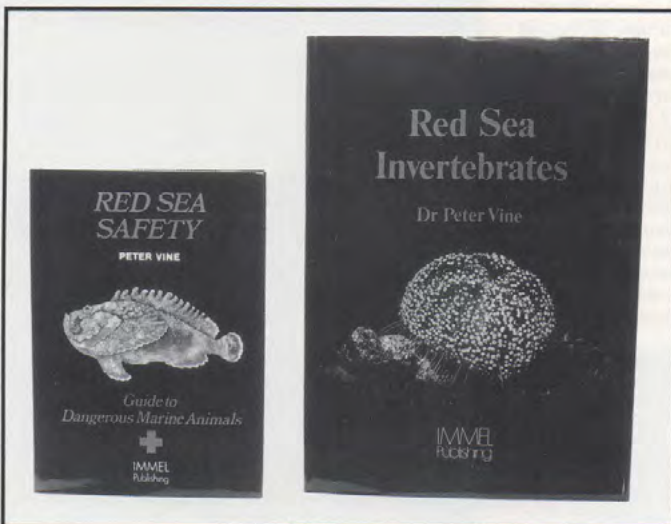
Given that this morbid fascination with death appeals to the most basic instincts, it is a pleasure to read a book which does not seek to sell by pampering to the minds of the mindless but rather presents its comprehensive detail in a matter-of-fact manner without resorting to cheap sensationalism which seems to increase sales and circulation.

It is now becoming enough to say that this is an IMMEL book for they seem to be producing marine books the consistent standard of which has never been seen before.

Red Sea Safety is 144 pages of well presented, fascinating and colourfully illustrated facts about everything you knew was dangerous together with some surprising revelations about what you thought was safe.

The delivery is well balanced in that it imparts painful facts with some degree of reassurance. For example, the effect of venom varies from person to person. In the case of the Crown of Thorns Starfish, Peter Vine confessed that, after repeated wounds over a period, he experienced mild euphoria when the spines pierced his skin but the same species caused another unfortunate sufferer to be sick for four days. Usually its the more you know, the more you've got to worry about.

Red Sea Safety identifies and illustrates the potential dangers, describes the symptoms and then prescribes a course of treatment for both divers and snorkellers, should they ever come into contact with such potentially dangerous creatures. In addition, a section deals with first aid in the marine environment to include ear infections and cuts underwater. Smaller than the usual A4 books from



IMMEL, Red Sea Safety costs £16.75 and is presumably aimed at being taken to the site and referred to as a constant source of information. Such information being presented to promote confidence rather than fear.

IMMEL books are available from the publishers direct at Elv House, 37 or from your nearest underwater photography shop.

### Red Sea Invertebrates by Dr Peter Vine

That IMMEL books are quality seems to be beyond question. Their past track record has produced books of impressive quality and full of relevant, well illustrated information. Their latest addition, 'Red Sea Invertebrates', continues in this mould. In fact, this book actually breaks that impeccable mould because it creates a new, even higher standard in photographic and information presentation.

This is a book which has to be expensive because it is so good. At £39.50 in the UK, it is both expensive (because books rarely cost £39.50) and cheap

(because so few books ever contain such confidence building information). This one seems to be a unique combination of all that is required.

224 A4 pages with colour on every spread, this book combines such attractive layouts with informative text that it must represent the very best in educationally inspiring books. For invertebrate studiers or if you are just curious, they are all here; sponges, coelenterates, worms, crustaceans, molluscs, bryozoa, echinoderms and urochordates.

If you judge a book by the length of its review, you've got this one wrong. There's no point in going on about a book which seems to be so perfectly balanced. It combines scientific information with photographic quality and presents it all in such an entertaining and yet artistic layout.

Most books can be reviewed with words but this is one which must be seen to be appreciated. Once you've seen it, all you've got to decide is whether you can afford £39.50. That depends on you and your circumstances but it's certainly not expensive for what you are getting.

Peter Rowlands

## How was it done?

### Alex Double reveals his BBC Wildlife winner

"Well, they've caught up with me at last", I thought, as I pushed the officially stamped buff envelope to the back of my mail along with a bank statement and outstanding electricity bill. It took a couple of days before I could summon up the courage to open the latest demand.

"Dear Alex Double", it began. Seems friendlier than usual so I read on. "You have won first prize in the underwater category of the BBC Wildlife Photographer of the Year Competition. We hope that you will be able to attend the prizegiving ceremony and receive your cheque for £250 at the Natural History Museum in November....."

As I picked myself up off the floor, I tried to remember just what slides I had submitted as I had entered them such a long time ago. The BBC wanted chapter and verse describing the photo and I couldn't even remember which one it was but by a process of elimination, I was able to work out just which shot it was.

This is one of a series I took using a borrowed 15mm Nikonos lens



(which subsequently flooded). The lens was fitted to a Nikonos 111 and I was diving at 10 metres off Abu Kafan, one of the spectacular reefs off Safaga on the Egyptian Red Sea coast. Loaded with Kodachrome 64 film and with an Oceanic OS 2001 flash attached, I was set at 1/60th sec at F8. The light reading for daylight was 1/60th at F5.6 so I was underexposing by one stop to achieve a good juicy blue background.

I took care not to get too close to the fish. Firstly so that they would keep their solid shape and secondly so that the flash would not overexpose the nearest fish. I kept the OS 2001 flashgun as far

away from the subject as possible to reduce its power and just add a little squirt of light to pick out the fish nearest the lens. Without this subtle addition of light, the shot would not have worked at all. I spent about two hours exposing a 36 exposure roll, concentrating on keeping the shoal looking as solid as possible as well as making use of the light coming through from the surface.

The fish were quite manoeuvrable by my breathing out suddenly or making sudden movements and fortunately these glass fish are very territorial so there was no risk of frightening them off altogether. This shoaling is a natural tendency to

make them look more dominant to approaching predators so they were quite cooperative.

I was unable to attend the prizegiving ceremony so I asked a very dear friend to stand in for me. In a later letter he described the scene to me. Everyone was there. David Attenborough, Peter Scott, David Bellamy and everyone famous connected with wildlife filming. Picture the scene. A large room full of chattering people clinking glasses and discussing their latest projects. As my friend, Don, entered the room with his girlfriend on his arm, the whole room looked at them and then went deathly quiet.

Don immediately looked down to see if his zip was undone but realised the cause of the spectacle almost immediately. Yolanda, his girlfriend, was wearing a fur coat! A rapid retreat followed by a re-entry wearing a more ecologically acceptable borrowed plastic mac solved the icy stares. I suppose not everyone knows that rabbits are an endangered species.

Alex Double

## Competition results

### 'Working divers'



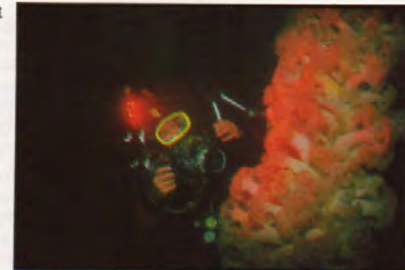
Martin Garnett of Long Eaton, Nottingham is this issue's winner with a well composed shot with plenty of action and drama. Martin took the shot in October 1986 off Dogleg Reef on the Great Barrier Reef, Australia. He was using a Nikon FG20 in a Hugyfot housing with a Sigma 24mm lens. Using Kodachrome 64 film, he was just above the divers who were at 12 metres with the camera set to auto for an available light exposure.

A total of 22 slides were submitted - not all by Martin! A large percentage had divers who were just in the frame rather than actually doing something so make sure you think about the rules and submit suitable slides. We want more entries! The more we get, the more we'll print so get UP and go.



Left: A very pleasing shot by Bill Trotman from Papua New Guinea taken in PNG but we couldn't see what was being photographed so it lost out.

Right: Steve Simpson from Liverpool sent this rich shot taken off Trefor Pier on the north Wales coast last August



## Win 10 rolls of AGFA film

### "Exciting lighting"

Next issue's competition is for shots showing exciting lighting i.e. dramatic use of natural or additional light such as backlighting or multiple flash.

There is no restriction on the type of subject just as long as its excitingly lit and the shots can be from anywhere in the world.

Entries must be 35mm slides and the entry fee is £1.50 per slide.

When sending entries through the post, you must take care to pack them well. Glass-mounted slides should be especially well packed as they are easily broken and will decimate your emulsion.

Entries should reach UP by no later than May 4th and will be returned within 3 weeks (except the winning entry).

If requested, UP will pass comment in the form of constructive criticism.

Send your entries

For details of BSouP-AGFA's 'On the Day' competition, see the BSouP column on page 29

# Underwater photographs wanted



in association with BBC WILDLIFE Magazine, the Fauna and Flora Preservation Society, and the Natural History Museum, London

The aim of this international competition, now the largest of its kind, is to reveal through the work of wildlife photographers the beauty, wonder and importance of the natural world. The judges will be looking first and foremost for aesthetic appeal, and will be placing a strong emphasis on photographs taken in wild and free conditions.

which encompasses one of the largest protected areas in North America—Wood Buffalo National Park—as well as the national parks of Banff and Jasper in the Rockies. Species to be seen include whooping cranes, wood buffalo, wolves, grizzlies, moose, mountain goats and bald eagles.

Travel Alberta will give the winner and his or her partner the wildlife holiday of a lifetime by providing whatever transport is necessary—car, helicopter, snowmobile or horse—to reach some of Alberta's remote and unspoiled wilderness areas.

## £5,250 IN CASH PRIZES . . .

Thirty cash prizes will be awarded: a first prize of £250 and a runner-up prize of £100 in each category.

## THE PRUDENTIAL AWARD . . .

The Wildlife Photographer of the Year 1987 will be the person whose photograph is judged to be the best in the competition. He or she will win the Prudential bronze trophy—a scarlet ibis, to be presented by Sir Peter Scott—and a two-week holiday in the wilderness areas of Alberta, Canada, courtesy of Travel Alberta.

## . . . AND THE HOLIDAY

This can be taken at any time in 1988, except during the Christmas period. The overall winner and partner will be flown to the province of Alberta, which stretches from the Arctic North West Territories to the US border, and

## . . . AND THE EXHIBITION

A special awards ceremony will take place at the Natural History Museum in London at the end of November, hosted by Barry Paine, to launch the opening of the 1987 exhibition of winning and commended photographs. This will run from 27 November 1987 to 31 January 1988.

## THE JUDGES

Dr Giles Clarke, head of exhibition planning, the Natural History Museum, London.  
Bruce Coleman, director of the Bruce Coleman photographic agency and adviser to FFPS.  
Pedro Silmon, art editor of *The Sunday Times Magazine*.  
Rosamund Kidman Cox, editor of BBC WILDLIFE.  
Gwen Lloyd, photographer and corporate identity manager of the public affairs department, Prudential Corporation.  
Bruce Pearson, photographer, biologist and artist.

## MAIN RULES

1. This is an international competition, open to anyone except those individuals involved in its organisation, and the employees of BBC WILDLIFE Magazine.
2. Photographers or their legal representatives must hold full copyright of all pictures entered.
3. Up to THREE photographs may be entered in EACH category, with the exception of categories 1 and 2, for which one sequence of three counts as one entry.
4. You must declare which photographs have been taken in captive or unnatural conditions, and if the animal subject of a picture has been restrained in any way, hand-reared or kept in captivity at any time.
5. Domestic animals (cats, dogs, farm breeds, etc) and cultivated plant varieties do not count as wildlife.
6. Where necessary under the Wildlife and Countryside Act or

- equivalent national or international legislation (eg. in the case of protected species) photographs must be accompanied by copies of the relevant permits.
7. Photographs that have won a prize in another competition are not eligible.
8. Entries must be transparencies (slides) only (35mm or larger), with the exception of category 15, for which unmounted monochrome prints (any size) should be submitted. Please do not send transparencies in glass mounts.
9. The photographer's name and address must be written on EACH transparency or print (or sequence of photographs, in the case of categories 1 and 2).
10. Each photograph must be placed in a separate envelope; for example, if you enter 10 photographs in four categories, you will need 10 envelopes.
11. The following details must be written on each envelope: category number, your name and address, a description of the subject of the photograph (see also rule 4) and where and when it was taken. The envelopes must not be sealed and should be mailed in one package. (No photograph may be entered in more than one category.)
12. Your entry packet must be accompanied by ONE copy of the form (see rule 11).
13. If you want your entry returned, you must enclose an a/c of suitable size.



## £1,000 IN CASH PRIZES

A first prize of £100 and a runner-up prize of £50 will be awarded in each of the five age categories: A. 8 and under; B. 9 to 11; C. 12 to 13; D. 14 to 15; E. 16 to 17.

The young person whose picture is judged to be the best in the competition will be given the title Young Wildlife Photographer of the Year 1987 and will win the Prudential Award (to be presented by Sir Peter Scott)—a bronze sculpture of an ibis, a cheque for £250 and a day on location with wildlife photographer Heather Angel.

The prizes will be presented by tv presenters Nick Davies and Su Ingle, and photographer and film-maker Simon King.

## YOUNG PHOTOGRAPHERS' RULES

1. You or your parent or guardian must read the main rules below, which, with the exception of rules 8 and 17, apply to you.
2. Your photographs can be prints (colour or black and white) or transparencies.
3. Your subjects can be any wild animals or plants, or landscapes with a 'wild' flavour.
4. You can enter up to three photographs in your age category, but each one must be placed in a separate envelope marked with your category letter, name and address, and a description of the photographs. Post your entries in one packet clearly marked with your category letter, and labelled Young Wildlife Photographer of the Year. Also include a stamped, addressed envelope and one copy of the main entry form signed by you and a parent or guardian.
5. The results of the Young Wildlife Photographer of the Year competition will be published in the November 1987 issue of BBC WILDLIFE Magazine.

6. If special postal services are required, please enclose a cheque made out to the Fauna and Flora Preservation Society; overseas photographers should enclose an international reply-paid coupon to cover postage.
7. No entries can be returned before August. Winning and highly commended photographs may be kept until the opening of the exhibition.
8. Should the quality of entries fall below the standard required, the organisers reserve the right not to award a prize in a particular category.
9. The organisers and sponsor reserve the right to free reproduction and exhibition of the prize-winning entries and those that are highly commended in connection with this contest and publicity for it.
10. The winners will be chosen by a panel of judges appointed by the organisers. The organisers' decision on all matters relating to the competition is final.
11. Results will be published in the December 1987 issue of BBC WILDLIFE. Winners will be contacted in August.
12. Photographers aged 17 or under must read the Young Photographers' Rules above.
13. Every care will be taken with photographs entered for this competition, but we cannot accept liability for loss or damage, however caused.
14. THE CLOSING DATE for entries is Saturday 27 June, 1987.

## MAIN CATEGORIES

1. **WILDLIFE IN ACTION:** Entries must illustrate either a dramatic scene showing animal movement or a dramatic moment in an animal's life. A sequence of two or three shots is eligible in this category. The prizes will be presented by Sir David Attenborough.
2. **THE WORLD IN OUR HANDS:** This is the main conservation category. Photographs should (i) be suitable for use as a poster advertising a particular conservation campaign; or (ii) illustrate or symbolise conservation in action or the destructive effects of people on the environment; or (iii) show a scene before and after the instigation of a conservation project or a damaging development. A sequence of two or three shots is eligible. The prizes will be presented by Professor David Bellamy.
3. **ENDANGERED WILDLIFE:** Photographs must illustrate species that are endangered at a national or international level (full details must be supplied). They can be taken in the wild or in captive conditions. If you need to check whether or not a species is endangered, send an a/c to the FFPS, 8-12 Camden High Street, London NW1 0JH. The prizes will be presented by Lady Philippa Scott.
4. **ANIMAL BEHAVIOUR — BIRDS:** The prizes will be presented by Tony Soper.
5. **ANIMAL BEHAVIOUR — MAMMALS:** The prizes will be presented by Dr John Sparks, head of the BBC Natural History Unit.
6. **ANIMAL BEHAVIOUR — ALL OTHER ANIMALS** (ie, other than birds and mammals): The prizes will be presented by Dr Ron Hedley, director of the Natural History Museum, London.
7. **IN PRAISE OF PLANTS:** Photographs should highlight the beauty and/or importance
8. **THE UNDERWATER WORLD:** Photographs, which must have been taken under water, can illustrate any freshwater or marine subject. The prizes will be presented by Heather Angel.
9. **HUMOROUS VIEWS:** Photographs must be capable of raising a chuckle from judges who have been shut in a darkened room for five days. They must not, however, ridicule an animal subject (humans excepted). The prizes will be presented by Bill Oddie.
10. **FROM DUSK TO DAWN:** All photographs must have been taken in the wild between dusk and dawn and must feature animals. The prizes will be presented by Eric Hosking.
11. **URBAN WILDLIFE:** Subjects must be in a truly urban setting. The prizes will be presented by Chris Baines.
12. **COMPOSITION AND FORM:** Photographs, which must illustrate a natural subject in an abstract way, will be judged on their aesthetic values alone. The prizes will be presented by Jonathan Kingdon.
13. **WILD PLACES:** Photographs must illustrate a natural habitat or an atmospheric landscape. The prizes will be presented by Julian Pettifer.
14. **ANIMAL PORTRAITS:** Subjects, which can be photographed in wild or captive conditions, must be shown in close-up. The prizes will be presented by wildlife film-maker Hugh Miles.
15. **BLACK AND WHITE PHOTOGRAPHS:** All black and white prints will be judged in this category. The choice of subject is limited to those listed above. The prizes will be presented by *The Sunday Times* photographer Sally Soames.

**ENTRY FORM** Name: .....

Address: .....

Telephone no (day): ..... (evening): .....

Number of photographs entered for each category:

A  B  C  D  E  1  2  3  4  5  6

7  8  9  10  11  12  13  14  15

Total entered:

I have read the rules of this competition and agree to abide by them.

Signed: ..... Date: .....

(In the case of young photographers, a parent or guardian must sign below.)

I can confirm that ..... understands the rules and that the photographs entered are solely his/her work.

Signed: ..... Date: .....

Entries should be sent to Helen Gilks, Competition Manager, Wildlife Photographer of the Year, Natural History Museum, Cromwell Road, London SW7 5BD.

**UP**

## Win a Canon AS 6 outfit!

Donated by Canon UK Ltd



Answer five simple questions correctly and you go into the draw to win a Canon AS-6 camera outfit. This includes the camera with built-in flash, close up lens, viewfinder, 35mm cassettes and an attractive carrying bag.

### QUESTIONS

1. What is so special about the AS6 lens underwater?
2. To what depth is the AS-6 waterproof?
3. Is the AS-6 camera positively buoyant?
4. Can the close up lens be used above and below the water?
5. List all of the auto functions of the the AS-6.



The Canon AS 6 outfit can be taken anywhere. Climb with it to the top of a mountain. Dive with it below the waves. Expose it to rain, snow, dust or sand. The AS-6 will just keep on shooting. Special moulding and sealing techniques throughout the AS-6 body, and a tough buckle clamp for the back cover, make the camera weatherproof and waterproof. The rugged housing will stand up to the toughest conditions - and can be washed in running water when it gets dirty!

Send your answers to UP to arrive no later than April 30th and you could be the lucky winner. A perfect prize to take on your summer holidays.

## BSoUP News

### AGFA sponsor the 'On the Day' competition Chairman Brian Pitkin explains

Each year, the Society organises its popular photographic competition at Fort Bovisand, Plymouth where the excellent facilities, proximity to some spectacular underwater scenery and abundant marine life subjects make it an ideal venue.

This year, the event will take place on Saturday May 30th. Major sponsorship from AGFA has provided the film and processing chemicals.

There are four classes of entry. Black and white and colour prints, which can have been taken anywhere in the world, must be entered prior to the event. These are then displayed at the Fort and the general public are invited to vote for their favourites. The maximum size is 10"x8" and there are no subdividing categories: as long as it was taken underwater, you're in with a chance.

In addition to the print sections, there is the 'on the day' competition which, when it was originally started by BSoUP, was the very first of its kind. Other countries and organisations have since

followed BSoUP's pattern (some even claiming it was their idea!).

The 'on the day' section is open to everyone. Competitors are issued with a single roll of 35mm AGFA film at 9 am and have until 4.30 pm to expose it underwater and return it for processing. The returned films (not all the films are!) are then rushed down to the darkroom where they are processed in AGFA E6 chemicals and returned to their owners as soon as possible. They then have to choose their two favourite frames to submit for judging. The judges being, once again, the general public.

There are two types of entry which can be submitted. Contrived or humorous shots are separated from the marine life/diver shots and voted for separately so entrants have a choice as to the type of shots they take. Some stick to one or the other whilst the adventurous few try to take both types and submit one of each for judging.

As you can imagine, this is an action-packed day and the organisers have

of all of the sections are then announced and the awards presented by a prominent member of the Society.

The winners in each of the four sections are presented with trophies, donated by Ocean Optics, Greenaway Marine and Aquamatic, and the winning three in each class are presented with gold, silver and bronze medals, struck especially for the Society. Some rolls of AGFA film are also presented to each of the winners.

For those who feel at a disadvantage because of lack of experience or unfamiliarity with the area, the past winners have shown that it is not always the established underwater photographers who carry off the awards. There are some of BSoUP's top members who have never won the 'on the day' whilst comparative newcomers have entered for the first time and come away with the goodies!

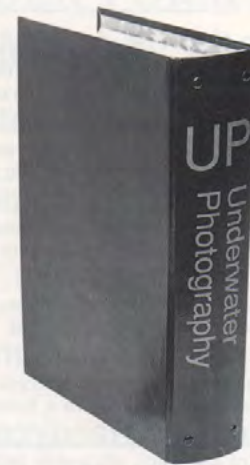
If you would like an entry form or further details, please send an SAE to Brian Pitkin, Chairman BSoUP.

## KEEP UP

Underwater Photography Magazine will build up into an invaluable source of information and stimulus. Keep your copies protected and easy to refer to in our special binders capable of holding 12 copies.

These strong binders are black with rich red lettering and will compliment any bookshelf.

To obtain your binder, just send £5.95 and yours will be sent by return.



Access and Visa most welcome. Phone with your details for same day despatch.

## Short ends

### Lady Jenny V to the rescue

After the Eilat based boat 'Fantasea' went aground during rough weather, Lady Jenny V upped anchor and went to the rescue. Skipper Adrian O'Neill towed her off the reef without any loss of life or terminal damage. It's all in a days work.... Jenny V is off for a major refit and refurb in June ready for the tempting trip to the Sudan and Sanganeb Reef. Prior to this, Anncka Rice will be on board with a trip led by Reg Vallintine and we understand she won't be arriving by helicopter...

### 'Castaway' underwater footage shot by Mike Valentine

Cinemagoers may already have seen Castaway starring Oliver Reed and Amanda Donohoe based on the book of the same name by Lucy Irvine. The underwater footage shot on location in the Seychelles by Britain's Mike Valentine.

Shot on 35mm stock using housings originally made by Al Giddings for filming 'The Deep', 'Castaway' director Nick Roeg uses the underwater environment to highlight the dangers of tropical island life and to illustrate dream sequences. Interestingly enough, the trailer for the film has a high percentage of underwater material to add to the attraction of the film while in the full length version, a little over 6 minutes was underwater. Mike is now contracted to film with Nick Roeg again on 'Track 29' in Texas in June.

### Lorn Divers photo courses in 1987

Based in Craobh Marina, Scotland's newest marina 20 miles south of Oban, Lorn Divers is run by Bruce Howard. They operate a 38' Aquastar capable of 16 knots with 12 passengers. Their 1987 brochure mentions underwater and photography and video courses which will be available. Please write for further details to Lorn Divers and Cruises, Craobh

### Leisurediver Watersports open up Los Cocoteros, Lanzarote

On April 2nd 1987, Leisurediver Watersports will open their new sports centre at Los Cocoteros in Lanzarote, Canary Islands. Situated right at the water's edge on the north east coast, the complex has 30 units varying from studios for 2 people to two-bedroomed apartments for up to six people. The idea behind the complex is to make many watersports available to visitors. For divers, there are good varied dives to be had from the shore and safaris are available to go to other sites on the island. Lindsay Warren, the London Director of Marketing, hopes underwater photographers will come to the complex and plans are afoot to organise a competition for shots taken while at the complex and, later on, to have an 'on-site' event. For further details, write to Lindsay

## UP and coming next issue

### UP in the UK on H.M.S. Royal Oak, Scapa Flow

This 600 foot battleship lies in 100 feet of dark, cold water. Although an official war grave, UP has been granted special permission to photograph this spectacular wreck.

### UP Overseas On Safari in the Red Sea

Safaris are back! Paul Langley samples these sun, sand and stars diving holidays and dips into the Red Sea to complete the package.

### Nimar SLR housings reviewed

These new injection moulded housings from Italy look like good value for money so UP will pull them to pieces and put them back together in detail.

### Special effects with 'lith' film

American Steve Rosenberg shows how to transform the ordinary into the extra-ordinary and from then on, the sky's the limit. It'll breathe life into your shots.

### Competing with composition

Composition is the key to success. Dr Mia Buehr shows how a few simple rules will improve your shots and make them a force to be reckoned with in competitions.

### Aquavision Handycam video 8 housing reviewed

This ultra compact, ultrawide angle aluminium housing from Canada seems set to break a few records. UP puts it through its paces for you.

### Basic course

Film is to an underwater photographer what canvas and oils are to an artist. UP gives full details on the best film for your needs and how to get the most from it.

**Plus:** New product news, How was it done?, AGFA competition winners, Classifieds, Short Ends and much much more. Subscribe and succeed.

## Classifieds

**FOR SALE**  
Nikonos V body, 20 mm u/w Nikkor lens and the Nikon DF12 optical viewfinder. All mint condition. Only used once. Genuine bargain at £598 inc VAT. Phone Chris

**FOR SALE**  
Nikonos 1VA, 35, 28 and 80mm lenses. Nikonos close up outfit and SB101 strobe. Excellent condition. £650. Tel 0243

**VIDEO EDITING**  
and duplication. Cut your video down to size. Aquamatic (evenings)

**FOR SALE**  
IKELITE CASE for Pentax LX and winder. Easily adapted for other SLR's. Mint condition. £235.

Duplicate transparencies. Hand produced from your original 35mm transparencies. Onto 5"x4" £15; 120/6x7 £11: Slight cropping on short side, or selective. CWO please to: Copy-Rite, 83

**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. Z&A, 52

**FOR SALE**  
VIDEO PACKAGE. JVC GRC 1 (VHS C) camcorder in Sea and Sea aluminium housing together with movie light and arm. £1500 complete. Tel David

**FOR SALE**  
Nikonos SB102 flash complete. £440. SB102 auto sensor £25. Oceanic OS 3000 TTL flash £350. Tel Ocean

**FOR SALE**  
Oceanic OS 2003 Nik 111 £220. Nikonos 15mm new style with old viewfinder £699. Oceanic Progrip 1VA £9. Tel Ocean

**FOR SALE**  
Slave adaptor for Nik 111/IV/V flashguns £40. Toshiba TM1 Nik 11 flash £60 (as seen). Nik lens filter protector £1.50. 58mm UV filter £3.

Sekonic L164 meter & bracket £95. Sekonic L164 meter £85. Sea & Sea 1:2 Macro tube £37.50. Sea & Sea 1:3 macro tube £37.50. Sea and Sea Sea arm 111 flexible £40. Sea & Sea baseplate £10. Tel Ocean

**FOR SALE**  
Minolta Weathermatic £45. Ikelite Compact housing for Konica C3 £1. Yes £1. Oceanic Nik 111 thumb release £4. Nikonos 35/80 frame finder £10. Nikonos flash bottom plug £1. Nik 1VA O ring kit £2.50. Pelican case w/o foam £40.

**A BOX SURROUND**  
makes your ad stand out from the crowd. Only £5 extra, they are worth it.

**FOR SALE**  
Nikon F2 outfit in aluminium housing. F2 body, action-finder prism, 55mm macro and 20 mm wide angle lenses. Dome port and gears. EO flash connector and carrying case. Very good value at £650. It's ready to shoot.

**FOR SALE**  
Nikonos 35mm F2.5 lens. Mint. £50. Tel Ascot

Always mention UP when answering adverts

## CLASSIFIED ADVERTISING ORDER FORM

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Phone Number \_\_\_\_\_

Classifieds only cost 25p per word but must be prepaid. Phone numbers are one word. Deadline for adverts is the 1st of the month preceding publication date. i.e. 1st May for June/July issue.

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ACCESS and VISA most welcome. Card No..... Exp date

# INDULGE IN YOUR SCUBA DIVING FANTASIES

Book a group of 12 or  
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If the vagaries of British weather are getting you down, then cast it all aside and give yourself the treat of all treats.

**Already an experienced scuba diver?** Then come to our purpose-built watersports resort and make the most of the varied and spectacular underwater scenery and abundant marine life of Lanzarote's clear warm seas. Dive till you are sated, sneak up on dozing fish, capture them on film, explore a flooded (but extinct) volcano or extend your diving abilities with our resident Scuba Diving Instructors.

**Never scuba dived before but always fancied a go?** Then you too can safely experience for yourself the fun of 'blowing bubbles' and enjoy the tranquility of gliding underwater with our expert Instructors. Now is the time to open your eyes to the beautiful sights, sounds and sensations of the underwater paradise.

**Indulge in your windsurfing fantasies.** If you already know how to windsurf, then in between dives, you can stream across the waters powered by the famous Canary Islands' NE Trade Winds or brush up on technique with our RYA Instructors.

If you have never windsurfed before but would like to, our enthusiastic Instructors are there to introduce you to the thrill of zipping over clear blue seas with the wind in your sail.

**And there's a lot more besides** such as all the facilities of our self-contained complex, the spectacularly different beauty of Lanzarote and unlike most other holidays, our standard price does not fluctuate with the season.

Tempted? Then find out more by dropping us a line or giving us a call.

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