





Seacam D4 Silver



Subal D800



Aquatica 5DMK3



Gates XA25/XA20/G30



Aquatica HD Wave



Fantasea G16



Recsea RX-100 II



Recsea G16



Sea&Sea MDX-X10/X20



Klearport



Watershot iPhone 4 & 5



ScubaCoolHoods!!!!



Inon Z-240



Seacam Seafash 150



Ikelite DS-161



Sea&Sea YS-250Pro



Fantasea Remora



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Inon S-2000



Watershot Pro iPhone 5/5C/5S



Watershot Galaxy S3/S4



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Seahorn Snoot for
ALL strobe models!



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Guido Villani

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A web magazine UwP76 Jan/Feb 2014

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Publisher/Editor Peter Rowlands
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peter@uwpmag.com

Editorial

Sinking ships

Augusto Salgado's excellent article about 4 new Portuguese shipwrecks sunk in the last couple of years is a good reminder of how sinking old ships on purpose is a win win win situation. The Government gets money back, the diving community get a lasting and very valuable asset and the marine biologists get 4 new research labs.

The driving force behind the project was Luis Sá Couto who raised 2.5 million Euro through the Ocean Revival project. "After a long road, littered with obstacles, all of the technical and bureaucratic difficulties have been overcome for the realisation of an innovative project that has never before been seen in our country".

His vision has produced an industry which will provide income not just locally but nationally. In the first 8 months when only 2 ships had been sunk over 4,000 dives were made and he anticipates that by 2020 that figure should increase to 90,000. Whatever the eventual figure is, everyone will benefit.

Here in the UK I'm ashamed to say we have sunk just one vessel - HMS Scylla in Whitsand Bay,

Cornwall and that was 10 years ago next year. Just this one wreck has brought millions in tourist money into the local dive community, hotels, B&Bs and restaurants.

A couple of years ago we had the golden opportunity to buy the aircraft carrier Ark Royal but the powers that be decided to sell it for £2.9m for the scrap metal.

Had she been sunk off the Devon coast divers from all over the world would have come to dive on her and that would have brought revenue to pay off the initial investment in just a few years.

And last year 4 frigates suffered the same fate; sold for scrap rather than to create artificial reefs and income.

Of local interest to me is HMS Plymouth which was decommissioned on 28 April 1988, and was the last Type 12 in service. She saw action in the Cod Wars between the United Kingdom and Iceland and also the Falklands War in 1982. Argentinian naval officer Alfredo Astiz - head of the South Georgia garrison - was first to surrender to the British Task Force in 1982 on HMS Plymouth

She would make a great local attraction. How cool would it be to have HMS Plymouth to dive on in Plymouth! but no, sadly, she will be sold for scrap.

Un - bloody- believable.

Dive the Philippines

Typhoon Haiyan/Yolanda brought devastation to parts of the Philippines in November this year with thousands dead and millions displaced.

Disaster appeals were set up and were well supported but what the Philippines needs is for us underwater photographers to go there and dive to support their local businesses. This was emphasised in a message from the owners of the Sogod Bay Scuba Resort as follows:

"We extend our heartfelt condolences and deepest sympathies to our neighbors in Leyte, our friends in Malapascua and throughout the region.

The Philippines are very resilient. To our customers and friends our resort is open for business. Padre Burgos, Southern Leyte sustained minimal damage from typhoon Yolanda. Our resort is powered with a backup generator until power is restored in Southern Leyte in the coming days. The biggest help to us now is your continued support - we are operational and would love to see you at our resort. At this time we are unsure of Tacloban airport. The best alternative is arriving in Cebu and traveling by ferry to Leyte. Contact us for current travel advice. Thank you for all your emails and support!"

Nudibranchs are hip

News of Dan Bolt, Terry Griffith and Bernard Picton's new iBook "Nudibranchs of the Southwest" coming out soon is welcome and helps to confirm that these gorgeous creatures are attracting cult status with dedicated trips to photograph them in such hot spots as Gulen in Norway and Anilao in the Philippines

They make great subjects; they don't move very fast and they are available in an extraordinary range of colours, shapes and sizes.

The other really good news is that they aren't, as far as I know, edible to humans although I'm sure some desperate entrepreneur has attempted to deep fry one to create that unique 'dining experience'. Fortunately such experiments have never caught on and that should ensure their survival and their continued appeal to us underwater photographers.

A good news story to come out of the sea for once.

Peter Rowlands
peter@uwpmag.com

News, Travel & Events



Wildlife Photographer of the Year Closing date 27th February 2014

For 50 years, the Wildlife Photographer of the Year competition has championed honest and ethical wildlife photography, while pushing the boundaries of artistic freedom, technical skill and narrative excellence.

Jim Brandenburg, chair of the jury, says: 'It takes courage to put your photos forward, but the rewards for those who do are enormous. When I won Wildlife Photographer of the Year 25 years ago, it opened doors for me. The publicity it generates is astonishing, so I really want to encourage every professional and

dedicated amateur to think about entering. It can be a career-defining move.'

Show us the world through your lens.

Key entry details

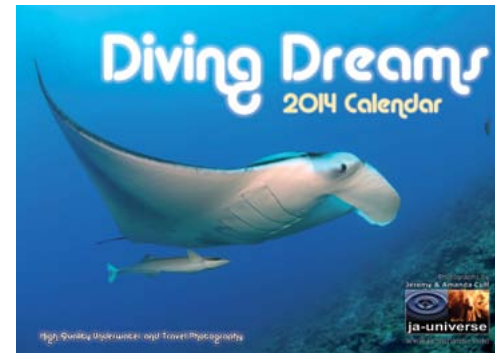
- open until 27 February 2014 12.00 GMT
- entry fee for photographers 18 and over: £30.00
- entry for photographers 17 and under: free

Enter the Wildlife Photographer of the Year 2014 competition now.

www.nhm.ac.uk/wildphoto

www.uwpmag.com

2014 Calendar "Diving Dreams"



Photographers and photojournalists Jeremy and Amanda Cuff have published a new 2014 Calendar titled "Diving Dreams".

Jeremy said, "The Diving

Dreams 2014 Calendar features a variety of images, mostly from our dive travels over recent times, and includes destinations such as Galapagos, Bali, Egypt and the Maldives."

The 2014 Calendar can be obtained from Jeremy & Amanda at a cost of £9.00 including postage (within the UK).

Their website features a wide selection of photography and articles with particular emphasis on scuba diving and travel, although other topics such as abstracts and black and white photography are also included.

www.ja-universe.com

Swim with Whale Sharks

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The gentle giants of Rurutu with Charles Hood 14th - 21st September 2014

There is nothing in the world like being in the water with a Humpback Whale. People everywhere have fallen in love with whales through watching them on documentaries and doing whale watching trips in known hotspots like Australia and the Americas. Close encounters with some of the largest creatures in the ocean often leave people with memories that last a lifetime.

Getting in the water with them, however, is an entirely different dimension. All of a sudden the concept of you watching them from your world changes to you actually becoming a part of their world.

Every year from May to October, Southern Humpback whales migrate to the tropical waters of the Pacific to breed. Heavily pregnant females from the previous winter usually lead their pods, followed by younger females being pursued by males. When they reach places like French Polynesia, they give birth and engage in elaborate courtships which may see the females already returning to the Antarctic summer pregnant again.



In September 2014, renowned British underwater photographer Charles Hood will be leading a small group of people to Rurutu in French Polynesia to swim with the Humpback whales for a week. During this time, any of the situations above might occur. Rurutu is a whale lover's paradise that can provide you with an unrivalled opportunity to be in the water with Southern Humpback whales. On a private vessel for the group, you can photograph them, video them or simply commune with these gentle giants on the grandest of scales.

www.divequest-diving-holidays.co.uk

www.uwpmag.com

**Douglas Hoffman 2014
Fiji Workshop**
S/Y Fiji Siren
19th -26th May 2014



Douglas is a Master Photographer that leads groups on international trips three times a year. With well over 10,000 hours in the water he has specialised in the coral reefs in Fiji.

Douglas will host a 7-night Fiji Liveaboard Safari, with an optional extension at the Volivoli Beach Resort. During the trip he will give presentations and provide guidance to all guests, ensuring you come away with additional photographic knowledge as well as a deeper understanding of the Fijian waters.

www.sirenfleet.com



**Boston Sea Rovers
2014 Clinic and
Film Festival**
March 7th - 9th

The Boston Sea Rovers are proud to announce that we'll be hosting their full weekend 2014 Clinic at the DoubleTree by Hilton Hotel Boston North Shore in Danvers MA, on March 7th – 9th.

The jewel of each annual Clinic is our Saturday Evening Film Festival. The Sea Rovers take pride in the fact that they have continuously blazed the trail in the underwater world, premiering more speakers and presentations from their stages than any other show.

The 2014 Saturday Evening Film Festival Master of Ceremonies will be Brian Skerry.

Additional presenters will be added to the site as they get final confirmation, so please check back again soon to see the spectacular list of filmmakers.

www.bostonsearovers.com

**Irish Underwater Council's two-day
Underwater Photography seminar**
1st & 2nd March 2014

In recent years, underwater photography in Ireland has been growing at a tremendous rate. The rise of digital imaging and compatible housings has led to a surge in divers carrying a camera of some description on dives. The increase is helped by the fact that the governing body for scuba diving in Ireland, the Irish Underwater Council, has developed a course on the subject and also that some of the people charged with running the organisation are themselves avid underwater photographers.

The Irish Underwater Council hosts a dive show, Dive Ireland, and this year it will be held in Kilkenny city in the south east of the country. As well as mainstream dive talks and equipment sales, the dive show will include a separate underwater photography section.

For 2014, organisers have another interesting line up of talks that will cover everything from beginner to advanced photography. There will be a presentation by Joe Hyland on what those starting out need to know about underwater photography, a talk by Damien McGuirk for those wishing to

improve their skills and a presentation by underwater videographer Christian O'Brien.

In addition, the show will feature some international keynote speakers including Andy Torbet who worked on Channel 5's recent Diving Mysteries and Brian McAllister, the dive supervisor on the Costa Concordia project. Nigel Motyer will speak about his trip to photograph Hammerhead sharks. Michael Griffin will speak about cave diving in Florida while speakers from the Irish Whale and Dolphin group will also be attendance.

The event is open to everyone and you will not get better value than the €8 daily entrance to the entire event.

More details from the website or on the CFT Underwater Photography Facebook page.

www.diving.ie



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2014



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HERE

Joe Romeiro in Palau 11th - 18th October 2014 S/Y Palau Siren



Growing up in and around the water, Joe Romeiro developed a love for the ocean at a young age. After seeing his first shark when he was just 5 years old, he has been captivated by them ever since. A self-taught filmmaker, he founded 333 Productions in 2007 with shark conservationist Bill Fisher.

Teaming up with Blue Water Divers, Joe will bring his knowledge and expertise to Siren Fleet guests, bringing to light little known shark actions and activities that can astound divers, during this 7-night liveaboard safari in Palau.

www.sirenfleet.com

Basking Shark Scotland News



It's been a really busy period and gearing up for next year with final touches going on the 2014 calendar. We're getting a number of group bookings and weekends are at a premium so if you are looking to organise a group (and take advantage of the cheaper prices) then it would be best to get in touch sooner rather than later!

We have a number of 3 day trips planned and our week long adventure only has 3 spaces left already

Have you seen our 2013 season video yet? It looks amazing, we're really stoked about all the fun we had this year! See it via youtube here or our website and it would be great if you could share it round your buddies.

www.baskingsharkscotland.co.uk

www.uwpmag.com

Lembah Macro Magic with Graham Abbott 4th - 14th November 2014

We have arranged for a unique Critter Quest at the Black Sand Dive Retreat in The Lembah Straits. We will be focusing on Graham's all time favourite sites and the aspect of Black Sand Dive Retreat that he loves the most; the 'super hot' (as Graham likes to refer to it!) house reef!

Also present will be Bruce Moore, one of the longest standing Lembah divers and critter enthusiasts of the Lembah Strait. After management roles in other resorts, Bruce decided he wanted to create his own haven for divers with an emphasis on personal service with what could be the best house reef in the whole of Lembah! If you think you have done the Lembah Strait, then think again! If you have never been to this 'must visit' dive location, then there is no better way to start your muck diving adventures than here and no better person to guide you than Graham Abbott!

He first started diving in the Asia-Pacific in 1997 and has been non-stop diving ever since. It quickly became apparent to Graham that Indonesia was the richest place for



© Shannon Conway

underwater life and he wanted to be based in and explore the area to the maximum. Diving 4 Images was born out of demand for high-end, specialist dive guiding services within Indonesia.

Since 2002 he has managed to guide and work with an 'A list' of diving's greatest names including Alex Mustard, Peter Rowlands, Norbert Wu, Eric Cheng, Peter Scoones and David Doubilet. Graham has also been brought in as a consultant by Howard Hall and his IMAX team. He also directs expeditions for Conservation International with Gerry Allen and Mark Erdmann. His spotting abilities have led to a new species of mantis shrimp named *Lysiosquilloides hiltonabbotti*. His true passion lies in showing photographers, film makers and marine life enthusiasts the joys and wonders of this underwater world in his 'back garden'.

www.divequest-diving-holidays.co.uk

Truk: The Art of Underwater Photography with Shannon Conway 4-11th May 2014
Gentle Giants of Rurutu: Humpback Whale encounters with Charles Hood September 2014
Lembah: Critters of the Black Sand with Graham Abbott 4-14 November 2014
Raja Ampat: Including the Blue Water Mangroves with Graham Abbott and Shannon Conway 14-25 November 2014 (FULLY BOOKED)
Treasures of Manado: Underwater and Topside with Nick and Caroline Robertson-Brown 6-16 September 2015

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New Products

Ikelite Fiber Optic housing for Canon Powershot G16



The Ikelite housing for the Canon Powershot G16 camera is just-right-sized for carefree travel and a comfortable hold with or without a thick glove. All important camera functions are at your finger tips using a series of heavy duty, custom made mechanical controls. With a camera installed, the housing's buoyancy is near-neutral for comfortable handling and rock steady HD video.

The optional WD-4 Wide Angle Dome corrects for refraction to provide the camera's widest angle of coverage with virtually none of the corner softness typically associated with underwater wide angle lenses. There's no need to limit yourself to wide angle for an entire dive, as the dome can be easily removed and replaced underwater. If you're interested in close-up photography,

opt for the Macro Adapter and attach any macro lens with a standard 67mm thread.

Ikelite also make a Canon G16 housing with conventional TTL circuitry. TTL or "Through-The-Lens" flash metering means the camera controls flash duration to properly expose an image.

The Ikelite housing for the Canon Powershot G16 includes built-in proprietary circuitry which tells your camera that a TTL external flash is attached, allowing the camera to adjust exposure more accurately. Spend more time showing off great photos, and less time tinkering in Photoshop.

www.ikelite.com

www.uwpmag.com

Acquapazza APSG-DPM housing is now available

Japanese housing manufacturer Acquapazza has announced that their APSG-DPM housing for the Sigma DP Merrill is now available. The DP3 is the latest camera in this line and it has a 50mm macro lens which is ideal for underwater macro photographers. The APSG-DPM housing provides all the controls for you to produce your best. Just imagine the quality which will come out of the Foveon X3 sensor. It will repay all your hard work.

Also Acquapazza have announced that they will be producing a housing for the Sony A7R and the next in the Sony NEX series which should be released in February. The A7R has a small body with many controls. Would underwater photographers want to use the Sony strobe? Also would they like to use Sony A mount lenses? Acquapazza would be happy to discuss these questions.

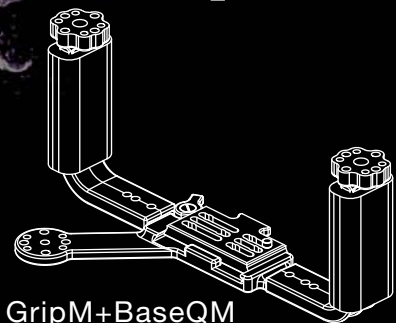


www.acquapazza.jp/en

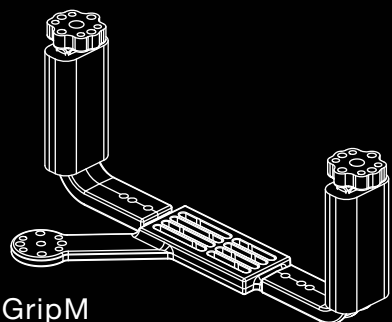
Issue 76/11



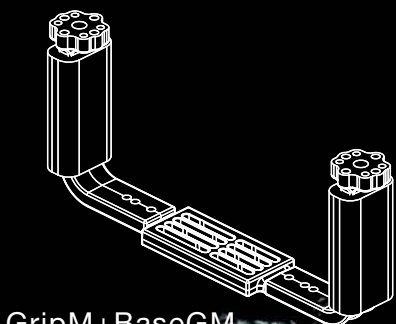
ACQUAPAZZA GripBase



GripM+BaseQM
+ Quick shoe M



GripM
+BaseGTM (With a mount base)



GripM+BaseGM
(General purpose)

<http://acquapazza.jp/en>

Aquatica A70D housing for the Canon 70D



Aquatica, the only established manufacturer of aluminum DSLR housings in North America, announced today the release of the A70D housing for the Canon 70D.

Ergonomic comfort does matter and Aquatica has, yet again, lifted the bar higher in this sense with the release of their A70D housing. Our innovative design team has conceived a precise, under your fingertips, housing that does away with confusing and cluttered controls area.

Aquatica has developed a new atmospheric pressure sensitive circuitry that will allow the user to confirm water tight integrity before the dive. This new system will give the user additional peace of mind,

knowing their expensive camera equipment will stay dry.

Understandably, the ports system of any housing system is the key to optical performance, the Aquatica system is composed of four hemispherical dome ports, the 4" mini dome, the 6" dome, the 8" dome and the 9.25" Megadome. Three flat ports are available and nine ports extensions ring ensure that you can take full advantage from one of the largest range of supported lens for underwater photography.

The housing is priced competitively at a price point of USD \$2,699.

www.aquatica.ca



Not a Digital SLR,
not a film SLR,
but with a picture quality
that exceed the two!

APSG-DPM

Underwater Camera Housing for SIGMA DP1 Merrill
DP2 Merrill
DP3 Merrill



<http://acquapazza.jp/en>

Sea Dragon 2000 Photo/ Video/Dive Light



For a constant, ultra-bright source of light for photos and videos - or just to brighten your dive - the compact Sea Dragon 2000 uses the latest in LED technology and packs 2000 true lumens of brightness.

Powered by a rechargeable lithium ion battery, the light burns for a full hour at 100% power with constant brightness.

Featuring a wide, 100-degree beam angle that's perfect for cameras with a wide field of view, the light operates with only a single button, quickly adjusts between 3 power levels, and is depth rated to 200 feet/60 meters.

A removable Li-Ion battery provides enough charge for 60



minutes at full power and Auto Flash Detect Mode turns the light off for 2 seconds when external flash is detected.

Quickly and easily expand Sea Dragon lighting with Flex-Connect - add grips, Flex Arms, trays and other accessories with just a "click!" Flex-Connect allows you to transform your camera set from compact to full-featured in just seconds, providing a quick way to adjust to any dive environment.

www.sealife-cameras.com

QuikPods



The QuikPod is the first patented extendable monopod for all camera types (DSLR, Digital, Helmet/ Action Cameras, Camcorders and Smart Phones) including the Go Pro. It allows the photographer to be included in photos.

There are 2 new models; the Quik Pod Explorer 3 and the Quik Pod DSLR/POV. They both have a new enhanced rubber grip to hold on to, as well as some enhanced internal features.

The Explorer 3 will retail for \$59.99 online. Fully extended it is 40 inches long and weighs 6oz.

The DSLR/POV will retail for \$69.99 online. Fully extended it is

53 inches long and weighs 10 oz.

All of our Quik Pod's come with built in self-image mirrors, which is one of our stand out features. This mirror allows you to align yourself up with your camera lens/GoPro before your getting ready to take your footage. The mirror gives the photographer guidance as to whether they are in their footage or not.

www.quikpod.com



Housing for Olympus OM-D E-M1



New features:

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www.nauticam.com

Gallery: www.nauticam.smugmug.com

Epoque EL-1000L HP LED light



The Epoque EL-1000L HP LED light has a max output of 2,500 lumen at 6,000K and a 65° beam angle

The Lithium Ion battery pack lasts for 60 minutes at full power and there are 4 power settings

The multi-volt charger (100-240v) charges the battery in 5 hours and the Epoque EL-1000L HP LED light is rated to 100m.

www.epoque-japan.com

Light & Motion move to larger headquarters

Light & Motion has announced it will move its vertically integrated manufacturing company to a larger newly renovated facility next month. The new headquarters, located in Marina, California just 10 miles from its current home, will double the company's footprint to 30,000 sq. feet. The building, "Hanger 535", is an old military helicopter repair depot that Light & Motion has refurbished.

www.lightandmotion.com

INON INC. accessories for the Canon S120 camera and the WP-DC51 housing



INON INC. is pleased to announce new accessories for the Canon S120 camera and their WP-DC51 housing.

The 28LD Mount Base DC51 enables you to install the INON 28LD Mount series attachment lens such as UWL-H100 28LD wide conversion lens and its super wide option Dome Lens Unit II for UWL-H100 as well as the UCL-165LD and UCL-100LD for macro.

External strobes can be triggered by Optical D Cables and mounted on INON ball joint and bouyancy arms.

www.inon.jp

www.uwpmag.com

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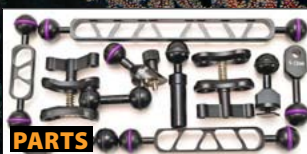
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Nauticam NA-S120 for Canon S120



Nauticam is famous for its ergonomic innovation, and NA-S120 continues this tradition.

Every button and control is clearly labeled and easy to access – even with gloves on. This housing is designed and field tested to capitalize on every ounce of potential from both camera and photographer alike. Front and Rear command dials are readily available to forefinger and thumb while never releasing grip.

Manual aperture and shutter speed adjustment is a breeze and the front command dial can be programmed for other functions when not shooting full manual. Video functions are easily engaged and performance is particularly impressive when utilizing a quality wide angle wet lens.

www.nauticamusa.com

Ikelite Housing for Leica C



The Ikelite housing for the Leica C camera is just-right-sized for carefree travel and a comfortable hold with or without a thick glove. All important camera functions are at your finger tips using a series of heavy duty, custom made mechanical controls. With a camera installed, the housing's buoyancy is near-neutral for comfortable handling and rock steady HD video.

Special polycarbonate blends allow us to create an extremely strong yet clear and lightweight enclosure. We believe there's no substitute for inspecting the actual o-ring seal once your housing is closed. Our 100% clear back lets you see that the housing is watertight and dry before you enter the water, and provides full view of the camera while you're diving.

www.ikelite.com

ACQUAPAZZA

NEW TYPE

High definition in the palm of your hand.

APSO-RX1002

Underwater Camera Housing for SONY RX100 II



<http://acquapazza.jp/en>

BS Kinetics Leica S housing



This BS Kinetics housing was developed for the Leica S-Series. It is built using carbon fibre and epoxy resin, along with stainless steel, POM and aluminium. These components can be used to make very light waterproof housing which can be used at a diving depth of up to 160m.

The controls of the camera are easily manageable. Everything is reduced to the essential and there are no unnecessary functions. Shutter release, mode dial, and shutter speed are controlled by the right hand. The aperture on the back of the housing is also controlled by the right hand via a wheel.

The flash synchro works manually via Nikonos V.

BS Kinetics supplies ports suitable for all types of lenses with its underwater housing.

www.bskinetix.com

10 Bar Panasonic GH-3 Housing



10 Bar is pleased to announce the launch of Panasonic GH-3 housing.

The housings are machined from a solid block of aluminium with a clear acrylic back cover which allows easy checking on the rear LCD monitor of the camera.

It employs a double o-ring system and stainless steel locking latches for enhanced security.

It has levers and buttons accessing all controls on the Lumix GH-3 camera.

The fiber optic port provides TTL flash exposure with Inon/Sea & Sea strobes.

The housings are individually pressure tested to 90m.

Overall size is 192 x 186 x 162 mm (L x W x H) with a weight of 12.3 kg with 12-35 zoom lens port.

www.10bar.com

Nauticam
innovation underwater

NA-S120 housing for Canon PowerShot S120 camera




NA-G16 housing for Canon PowerShot G16 camera




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www.nauticam.cn

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FLIPFILTERS.COM

BS Kinetics housing for Canon EOS 6D

Like all BS Kinetics camera housing, it is built using carbon fibre and epoxy resin, along with stainless steel, POM and saltwater-proof aluminium. These components can be used to make a very light waterproof housing which can be used at a diving depth of up to 160m.

Ergonomics is of utmost importance to BS Kinetics in their underwater housing. For this reason, the shutter, the rear adjust dial and the Rec button can all be operated using the right hand without letting go of the casing. The desired image is selected using the zoom, which is operated with the left hand. All other operations are carried out using buttons or triggers on the back or top of the housing.

The housing has a LiveView-Finder. It allows a free insight on the screen of the camera. It is attached to the posterior side of the housing. A soft, silicon O-Ring with an advantageously thick cross section operates as the housing's main sealing mechanism.

An elevated bridge at the anterior side positions the two halves of the housing securely, preventing water



from dripping in when it is opened. It is fastened using a secure quickrelease function. BS Kinetics supplies ports suitable for all types of lenses with its underwater housing.

The ports are fastened by means of a bayonet mount and are available in different sizes: Standard port, macro port, dome port, fish-eye and super fish-eye port. The camera is secured onto a stage and inserted into the underwater housing.

The flash signal is transmitted by using optical fibres. If desired, an electronic flash connector can be built into the housing. Black fibre flocking on the interior walls guards against flare. This flocking may also absorb any condensation or small leakages that may occur due to individual sand grains on the O-ring.

www.bskinetix.com

Nauticam
USA

Nauticam NA-EM5 Olympus OM-D E-M5



"Full HD and 16mp"

The NA-EM5 housing from Nauticam delivers the advanced features of the OM-D E-M5 in style and with the superb ergonomics that people have come to expect from Nauticam. This is a very compact and rugged housing, with most of the E-M5 camera controls accessible from the ergonomic grip sculpted into the side of the housing. The excellent Olympus EVF is easily available with a flick of the switch. A choice of hand strap and tray options allows customizing to a shooter's specific needs. Depth Rating: 100m
Dimensions: 185mm x 152mm x 105mm Weight: 1.1kg (2.4 lbs.)

www.nauticamusa.com

Gates Sony Z100 4K housing



In the workhorse tradition of the EX1 and PMW-200 housings, the Gates Z100 Housing raises the bar to 4K resolution. Like its predecessors, the Z100 embraces features for discerning professionals: adjustable weight system for perfect balance and trim: SWP44C Super Wide Port resolving to 4K full zoom through performance; HD-SDI surface feed for topside DP monitoring; and of course durable “bulletproof” machined aluminum, 100% reliable mechanical controls and 2 year renewable warranty. Reaching the far corners of the world, Gates housings are tasked with demanding projects extending from marine research and military to television and cinema productions. Experts know that failure is not an option, so they never take a chance.... they take a Gates!

www.gateshousings.com

SEALUX HFS700 housing for Sony NEX FS700

The SEALUX HFS700 housing is for the professional high-definition NEX FS700 camcorder made by Sony. It fits the camcorder like a glove and even so, allows the use of the adjustable viewfinder, plus there is enough space for a NANOflash Recorder and the large SWIT rechargeable battery for its power supply.

Both the LA-EA2 adapter for SONY Alpha lenses and the METABONES adapter for Canon lenses can be used. The mix of electronic and mechanical controls ensures perfect operability in every situation. In the event of an electronics failure you can carry on filming using the mechanical controls. In this case, most functions would continue to be available.

To accommodate the large number of lenses available, the large tried and tested bayonet mount fitted in Sealux DSLR photo housings is used. This, in combination with the existing dome ports, flat ports and adapter rings, presents a solution for almost all lenses.

The grips are ergonomically adjustable and detachable for transport in the carry case and the solid carrying handle is detachable to minimize



packing size.

For comfortable viewing, the viewfinder eyepiece is fitted at a 20° tilt relative to the swimming plane. Using the Sony viewfinder magnifier you can totally enjoy your images in shallow waters, too, in a comfortable swimming position. An unscrewable sunshade completes the comfort features.

As an alternative, you can connect our Sealux WM-5 HDMI monitor.

Two moisture alarms monitor the well-being of your camcorder, with an acoustic warning signal at the front and an acoustic and optical warning signal at the back.

www.sealux.de

Nauticam
USA

Nauticam NA RX100
Sony DSC RX100



“Simply Awesome”

With 20mp, this camera and Housing package offers the complete control and image quality of an SLR system with the size and convenience of a compact system. Controls are simple, but well thought out with easy to access push buttons. Dual command dials immediately access frequently used manual settings like manual focus, F-Stop, and Shutter Speed. Full 1080P HD video performance and excellent wet lens options makes for one powerfully small package.

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Nauticam NA-BMPCC Housing for Blackmagic Pocket Cinema Camera



The Blackmagic Pocket Cinema Camera brings offers raw video at an affordable price point that is reachable for any video enthusiast, in a system that is a breeze for travel.

Over the past year, Nauticam has built a comprehensive line of digital film making tools, embraced by professionals around the globe.

This experience is clearly evident in the NA-BMPCC housing. Key camera controls for record, focus, and lens control are placed at the grips for stable operation while filming. A tactile trigger mechanism activates record, and is easy to operate by feel even with thick gloves. A rubberized lens control knob, operating either zoom or focus depending upon the lens used, is placed at the left handle for fingertip control.

Integrated rubberized grips

provide a comfortable, stable platform for shooting. Handle brackets eliminate any flex when heavy video lights are used, and the handles are angled forward 15 degrees for comfortable use in the prone swimming position.

Understanding that professional film makers will use this system in a variety of shooting scenarios, Nauticam has integrated a number of mounting possibilities. A cheese plate is incorporated in the top of the housing for pole or jib mounting. Dual tripod screws on the bottom of the housing allow ease mounting to a tripod or quick release plate. Handles are supplied as standard equipment, but can be removed for mounting in a shoulder rig while retaining full operational functionality.

www.nauticamusa.com

INON INC. accessories for the Canon G16 camera and the WP-DC52 housing



INON INC. is pleased to announce new accessories for the Canon G16 camera and their WP-DC51 housing.

The 28LD Mount Base DC52 enables you to install the INON 28LD Mount series attachment lens such as UWL-H100 28LD wide conversion lens and its super wide option Dome Lens Unit II for UWL-H100 as well as the UCL-165LD and UCL-100LD for macro.

External strobes can be triggered by Optical D Cables and mounted on INON ball joint and bouyancy arms.

www.inon.jp

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Aditech MANGROVE video light MVS-8L12



Mangrove's new line of LED lights is an industry breakthrough. The MVS-8L12 is specially designed for underwater video and photo is supplied with one Solid-State LED module emitting a staggering 9120 lumens.

Featuring two output levels, the 80W light can dim from high to medium power output levels allowing you to dim lighting for a quick exposure adjustment. Sun-similar light in 16:9 illuminating with approx. 130° reflected beam angle and approx. 270 W (halogen).

Near daylight 5000° K colour temperature ensures the most true, natural tones especially when combined with ambient light in seascapes.

A separate state of the art Lithium-Mn-Co battery pack mounts on the bottom of the housing for better weight distribution and improved handling underwater.

Mounting hardware is provided to attach the battery pack to Mangrove video housings

Additional battery packs may be purchased separately to quickly exchange for a fully charged pack and keep shooting.

The Smart Charger provides complete recharging, automatic trickle maintenance and conditioning to prolong battery life. Auto adjusts to any input voltage from 100 to 240V. Interchangeable UK, Australian and European AC adapters for worldwide use are available.

www.aditech-uw.com


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<http://acquapazza.jp/en>

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THE UNDERWATER IMAGING COMPANY

Nauticam NA-EM1 housing for Olympus OM-D E-M1



Nauticam announces the release of the NA-EM1, the latest in its acclaimed line of precision crafted underwater camera housings. Nauticam has trail-blazed the path in mirrorless housings and is pleased to announce an exceptional housing for the best mirrorless camera to date, the Olympus OM-D E-M1. While this housing incorporates some of the best features of the Nauticam housing for the E-M5, the NA-EM1 is a new design, pushing the boundary further towards the ideal human-machine interface.

The NA-EM1 takes advantage of the E-M1's extensive control set and huge lens selection and brings them into the underwater realm in the most innovative, best engineered, and most ergonomic camera housing available.

Nauticam is simply not content to rest on previous successes like the renowned NA-EM5. Given the large number of densely packed controls on the camera, the E-M1 housing presented a challenge in itself. The



designers and engineers at Nauticam sought to not only meet this challenge, but take the human-machine interface a step further and keep the focus not on making it easier to make the housing, but to make the housing easier to use. An example is the new integrated handle system; with the pro shooter in mind, this housing is designed for use with the hand on the handle in a manner reminiscent of Nauticam SLR housings. The result is a housing that is easier to hold and is more stable, and is easier to shoot.

The NA-EM1 ships with Nauticam's new vacuum system with integrated electronic vacuum and leak detection monitoring system for extra piece of mind. A simple coded LED lighting system lets the user know that the watertight integrity is solid. The NA-EM1 ships with a bulkhead port for installing the optional vacuum valves.

www.nauticamusa.com

Nauticam USA

Nauticam NA-NEX5N Sony NEX-5N housing



"Back to the future"

The Sony NEX-5N provides DSLR image quality with the full HD video of a camcorder in a compact size.

The Nauticam NA-NEX5N extends that capability with a form fitting aluminium housing and a full range of ports from fisheye to macro.

But the most innovative twist is a port adaptor to use Nikonos lenses from the pin sharp 15mm UW Nikkor to the super macro combination of 35mm and extension tubes.

For decades the Nikonos range of lenses were world leaders but the advent of digital saw them put on the shelf. Now we can use them all over again to benefit from the past with a camera for the future.

www.nauticamusa.com

Sea & Sea MDX-70D housing for EOS 70D

SEA&SEA, a leading manufacturer of underwater housings, is proud to introduce the new MDX-70D underwater housing, designed for the Canon EOS 70D Digital SLR Camera. Bringing 41 years of precision engineering to the table, the MDX-70D is designed to utilize all features of Canon EOS 70D with accuracy and ease, making it the housing of choice for the avid underwater photographer.

The housing is constructed with a quick control multi-function button allowing for full use of the camera and its functions. Furthermore, this control button is located closer to the right hand side of the rear case, bringing it closer to the grip and making it easier to access. In addition to these ergonomic considerations, the lens can be changed externally with the provided external port lock and lens lock release button.

Always keeping security in mind, the MDX-70D underwater housing is equipped with a built-in leak sensor that notifies the diver of the slightest leak via a light signal. Assessing



each protective detail, sacrificial zinc diodes are offered to prevent electrolysis damage.

www.sea-sea.net

Nauticam NA-G16 Housing for Canon Powershot G16



Nauticam is proud to introduce the NA-G16 aluminum camera housing for the latest version of Canon's iconic G series of compact cameras: The Canon Powershot G16.

Once again, Nauticam brings the power of professional quality engineering and cutting edge design to those who enjoy the attributes of compact imaging systems.

The NA-G16 should prove to be the ultimate housing for fans of Canon's compact G16 camera. Both camera and housing are loaded with heavyweight features packaged in a lightweight, rugged and easy to operate system.

www.nauticamusa.com

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- More ergonomic than using an external YS Converter.
- Risk of water-ingress and flooding via bulkhead is eliminated.
- The camera's battery will last longer.
- Strobes fire to their quickest recycle time.
- No inner reflections from camera's built-in flash.
- Achieves far greater TTL exposure accuracy than slave TTL.
- Compatible with SLR cameras that do not have a built-in flash.

WWW.SEA-SEA.COM **SEA&SEA**
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Nauticam NA-BMCC Housing for Blackmagic Cinema and Production 4K Cameras



Nauticam pioneered numerous engineering breakthroughs in previous housings that now come standard on the NA-BMCC.

Controls for record, iris open (skip forward), iris close (skip back), playback, and stop are brought out to the grips with easy to access levers. Oversized control dials for mechanical zoom and focus are placed underneath the left handle for fingertip control. The “focus” and “iris” commands are conveniently placed for thumb access at each handle.

Touch screen controls provide menu access to key camera and exposure settings, and retract out of the way to avoid obscuring the camera’s large 5” LCD. All exposure related settings are available with this touch screen system, and the

An optional accessory power pack mounts on top of the camera and accepts four protected 18650 lithium ion batteries. The power pack provides up to 3 1/2 hours total run time.

HDMI monitoring is supported via a bracket for the Atomos Connect HD-SDI to HDMI converter feeding either SmallHD DP4 or Atomos Ninja monitors in external Nauticam housings. An accessory LCD Shade allows the camera’s 5” LCD monitor to be used in bright light.

Nauticam’s new integrated electronic vacuum and leak detection monitoring system is included with NA-BMCC as standard equipment.

www.nauticamusa.com

Sealux housing for Canon XA20/XA25

Sealux has announced their new housing for the Canon HF G30, XA20 and XA25 cameras.

The housing is made of seawater-resistant aluminium. It is CNC milled out of a monoblock, then anodized and covered with a special powder coating. The camcorder is precision-guided along a special slide and fitted inside the front part of the housing, thereby excluding any fitting errors.

The housing has a 4.3” rear mounted monitor and push buttons



controlling all available camera options. It is supplied with a built-in close-up lens and color correction filter.

www.sealux.de

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Orcalight Seawolf A-2260 divelight

Orcalight Limited, a manufacturer and seller of dive lights for the professional and recreational underwater diver is pleased to announce the launch of its 22,000 lumen Seawolf A-2260 divelight – what we believe to be the world's most powerful battery-powered LED divelight.

The Seawolf A-2260 divelight is aimed at the professional and serious recreational diver. A full technical specification is contained at the bottom of this release. This product is the first collaboration between Doug Anderson, the Emmy and BAFTA award-winning underwater cameraman, with BBC series such as Blue planet to his credit. Driven by a desire to create the best possible images Doug works with the latest technologies finding solutions in the most challenging situations.

Doug said "Orcalight is pushing the boundaries of underwater lighting, and the Seawolf A-2260 represents a step-change in the power of battery-powered LED divelights.. The A-2260 has been designed to meet the



exacting standards of the professional diver, but recreational divers will find it easy to use "

Orcalight was founded in 2013 to meet the demands of both professional and recreational divers looking for a step change in their underwater lighting capability, and particular for underwater exploration, photography and videography.

Shane Newman, the founder and CEO of Orcalight said "the Seawolf A-2260 is the first of a series of powerful divelights based on our patent-pending technologies and know-how. We are planning further product releases in 2014."

www.orcalight.co.uk

www.uwpmag.com

Rollei Actioncam S-50



Rollei launched its new Actioncam S-50 in time for Christmas. and it contains almost everything divers need.

The Standard Edition comes with 2 power packs including a charging station, integrated LCD-Display, waterproof housing up to 60m and umpteen adhesive stickers and pads. A unique special is the additional Download-Link for Corel VideoStudio X6 for free.

You can choose a real wide angle of 175° by setting the solution to “20M(16:9)” or shoot normal pictures with “14M”. There a few different modes for the white balance and a “natural” colour mode as well as a “strong” colour mode which you can use for taking videos too. Wifi is also on board.

www.magic-filter.de got a sample to adapt the Auto-Magic filters onto

www.uwpmag.com



the new Rollei S-50 and to check its power during a two-week-liveaboard in Egypt. On this tour the Actioncam demonstrated its ability to keep up with the GoPro Hero 3. Now in combination with the AutoMagic filter every diver can bring home the beauty of underwater life.

You can find the videos taken on the Youtube-Channel “Divecooky” as well as you can find more photos taken with the new Rollei S-50 at:

www.divecookys-tauchblog.de

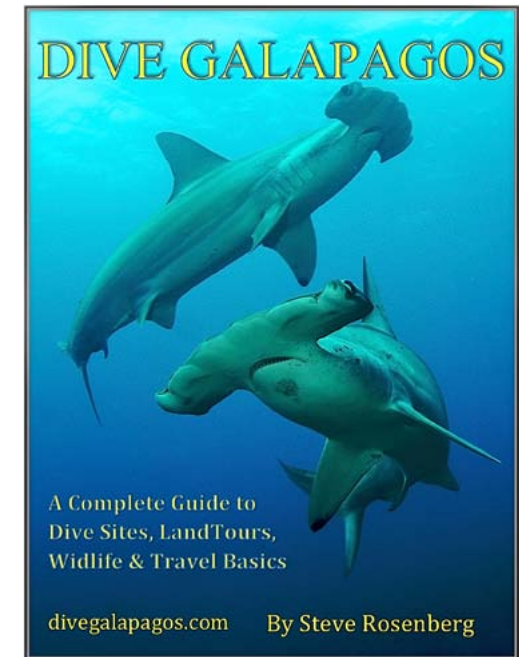
Dive Galapagos e book

“Dive Galapagos” is an informative new eBook by Steve Rosenberg with detailed descriptions of all of the dive sites in the Galapagos, as well as lots of information about land tours, the wildlife and practical advice for planning a dive trip.

The book features over 250 images and a selection of maps, and is a must have for anyone who is planning to dive in the Galapagos.

The eBook is available from Apple iBooks, the Google play store, and Kindle/Amazon. Go to divegalapagos.com or email info@divegalapagos.com for more information. The user will find that it can be used as an interactive dive log on location. Notes and comments can easily be saved and then shared through Facebook and twitter, in addition to email, where ever there is internet connectivity.

Steve Rosenberg has been a professional underwater photographer and photojournalist since 1980, and is an active member of the Society of American Travel Writers SATW. He has produced 18 books, including “Diving the Galapagos Islands” published in 2004. He has written



hundreds articles for various U.S. and International publications. Thousands of his images have appeared in books and magazines worldwide. He has also won more than 250 awards for his photography in international competitions.

Steve’s experience in the Galápagos goes back to the early 1990’s. Since that time he has made regular trips taking photography, doing research, and leading dive tours.

www.divegalapagos.com

<https://itunes.apple.com/us/book/dive-galapagos/id736537978?mt=11&uo=4>

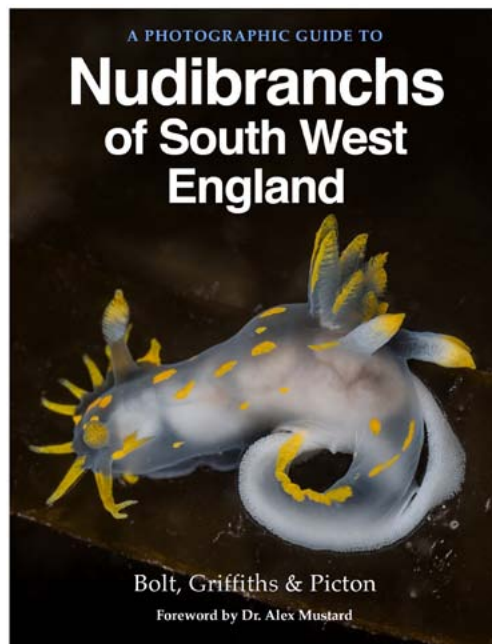
'A Photographic Guide to Nudibranchs of South West England' iBook

'A Photographic Guide to Nudibranchs of South West England' is a new electronic book in Apple's iBook format due for publication in the spring of 2014.

The title brings together more than 500 images to detail nearly 70 species of nudibranch found around the south west coast of the UK. From the most common species found in their hundreds, to the very rare and some potentially newly identified species, this ID guide will be useful to both hardened nudibranch fans as well as the everyday diver wishing to learn more about these enigmatic, colourful little creatures.

Combining over 50 years of diving in the South West with the very latest thinking in the scientific-world about species identification, this book will make for a unique and completely new reading experience for all. The iBook format brings many interactive elements to the experience of 'reading' a book, all of which are used to help the reader understand more about the lifestyle, anatomy and location of our sea-slugs.

This completely new publication, with a foreword by Dr. Alex Mustard has been compiled by local nudibranch enthusiasts, and award



winning underwater photographers, Dan Bolt and Terry Griffiths in collaboration with one of Europe's foremost nudibranch experts, and Curator of Marine Invertebrates at National Museums Northern Ireland, Bernard Picton.

For more information about the title, a mailing list to be the first to know the publication date, and a blog of how progress is coming along:

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Reef Fishes of Oman

Reef Fishes of Oman is a photographic reference guide to identification of the most frequently seen reef fishes in the Gulf of Oman and the Arabian Sea (and around the Musandam peninsula into the Arabian Gulf).

Published as an ebook, designed for the travelling diver or snorkeler with a portable device, it contains over 500 photographs representing 385 species. All the photographs were taken by the author or his immediate family (except one, ironically, of *Chromis fieldi*, which is a species recently named after the author).

Most of the photographs were taken using a Nikon F90X in an Aquatica housing. Latterly, the author has been using an Olympus PEN E-PL1 in an Olympus housing, PT-EP01.



The ebook, in PDF format is downloadable as a 30Mb file. It will be periodically updated (a simple, easy process with ebooks !) to reflect the frequent name changes, newly named species and changes in distribution.

The fish fauna along the extensive coasts of Oman is poorly documented, particularly the southern Arabian Sea coast. This ebook contains a number of new distribution records of present species.

The ebook is downloadable and priced at £6.95.

www.marinefisharabia.com

Hidden Treasures, Guam's Marine Preserves Second Edition by Tim Rock

More photos and more pages showcasing Guam and it's marine world. Introduction by National Geographic's David Doubilet. Inside this 236-page (20 more pages than the first edition) book find more than 440 full color images, maps, descriptions and insights into this special Pacific marine world. The small but scenic island of Guam in Western Micronesia is blessed with one of the world's richest coral reef marine environments. It thrives with more than 1000 fish species and over 400 kinds of hard and soft corals, 1,600 mollusk species and a dozen different marine mammals.

The betterment of Guam's diverse underwater world has been the thrust behind a series of nature preserves set up around the island in the last decade. What these areas do is allow breeding stocks to prosper to make more fish and allow corals to grow without stress. In a far-sighted move, the island was studied and

Hidden Treasures Guam's Marine Preserves



some small but very important areas were set aside to help replenish the reefs. They encompass small reef areas and bays from north to south.

They are starting to ensure a resurgence of reef health on this diverse western Pacific gem. This Second Edition is a visual record of the Guam marine preserves by Lonely Planet author and Getty Lonely Planet Images photojournalist Tim Rock, who is a Guam resident. The preserves are now at an important stage in their young development. Enjoy this trip through the preserves. The book also features parks, conservation and historical sites and popular underwater venues found on tropical Guam.

This book is now available worldwide through Amazon.

www.amazon.com/gp/product/0983896275

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Ocean Art Underwater Photo Contest Winners

The prestigious Ocean Art Underwater Photo Competition, organized by the Underwater Photography Guide, has announced the 2013 winners. This year's Ocean Art Competition attracted a very high caliber of photos, representing entrants from over 50 countries.

Over \$80,000 of prizes will be awarded to 64 underwater photographers. This year's judges included prestigious underwater photographers Tony Wu, Martin Edge, Marty Snyderman and Todd Winner.

The best of show was a stunning wide-angle photo shot under the ice by Victor Lyagushkin in Russia. Other outstanding images include a freediver swimming into a massive bait ball, the crisp details of a hairy shrimp, a dugong grazing, a pelagic octopus, remarkable nudibranchs and a hunting sailfish. Thousands of entries were viewed by the judges before the final set of amazing images were selected and deemed some of the best underwater photos in the world.

Congratulations to all the winners."

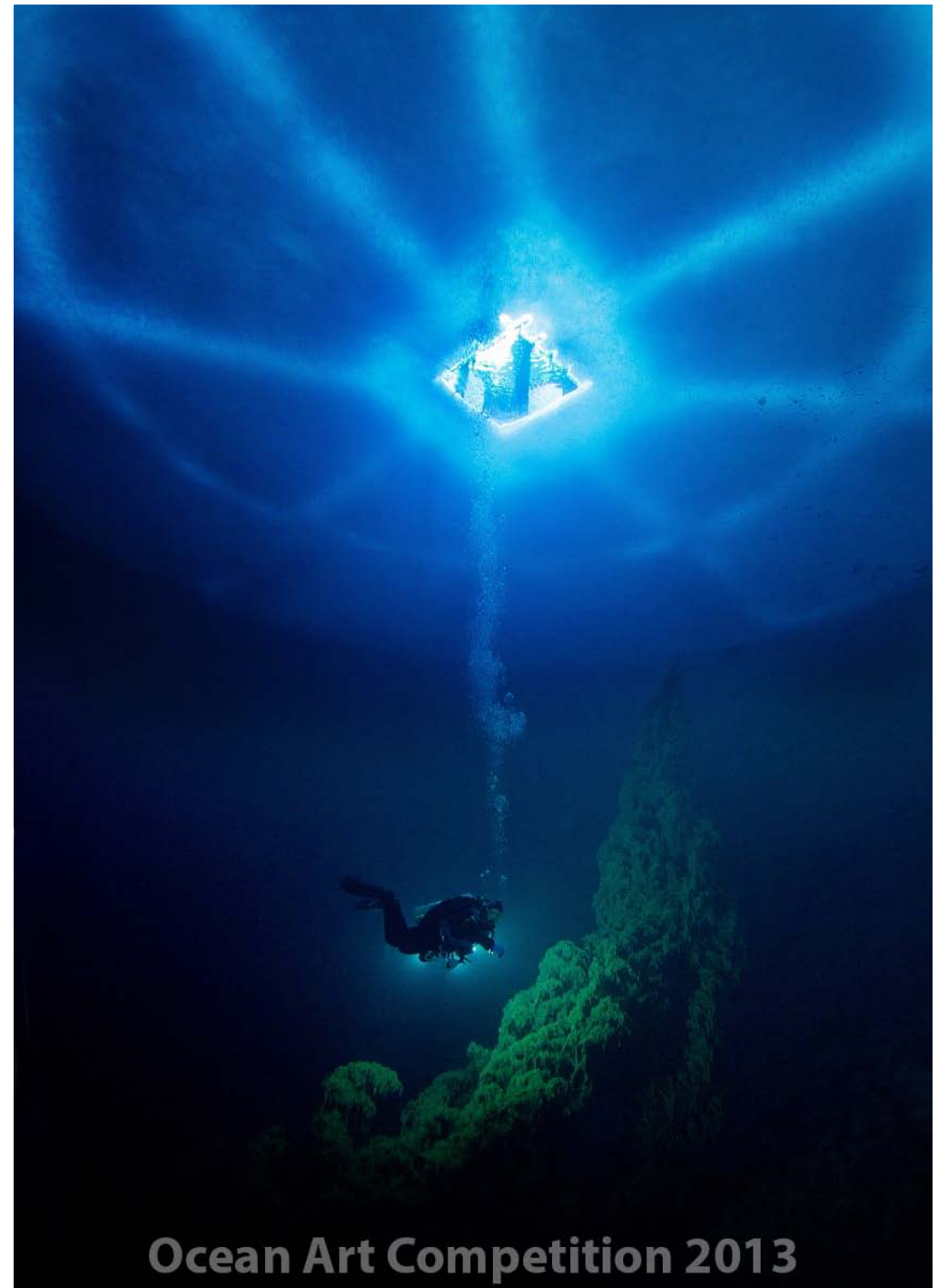
www.uwphotographyguide.com/2013-ocean-art-contest-winners

Best of Show, 1st Place Cold Water

Viktor Lyagushkin - Diver under the ice in Russia

"The photograph was taken near Ekaterinburg, Russia. Lazurny is an old neglected quarry, totally filled with ground waters. Pine trees and bushes on its bottom remain green for many years underwater. In winter the quarry is covered with thick ice and snow. The circles and rays on ice "sky" are manmade. According to Russian ice diving standards the snow should be removed from the ice in such strange manner to let divers orientate themselves beneath the ice and easily find their way back."

Canon 7D, Canon 10-22mm lens @11mm F4, ISO 200m 1/30th



Ocean Art Competition 2013



Ocean Art Competition 2013

1st Place Wide-Angle

Francis Perez - Freediver and bait ball

"I got this picture last may, in Tenerife, Canary Islands. It was in the afternoon, I was with a group of friends and my girlfriend taking pictures of pilot whales.

We saw in the distance, there was forming a big group of shearwaters and seagulls, countless in numbers. Underwater there were many spotted dolphins. The baitball would spin and spin but not move apart, all the time changing its shape. Dolphins, shearwaters, and seagulls attacked the group of fish, and it changed shape .

When the scene was quiet, my friends and myself tried to get pictures and video of the movement. My girlfriend is an excellent swimmer and freediver and I told her to dive near the ball. It was my chance to get this picture.

Canon 5D; EF 15mm f/2.8 fisheye lens; F6, 1/80th, ISO 400



1st Place Macro

Jeffrey Milisen - Pelagic octopus in Kona, Hawaii

"I was five miles off the coast of the Big Island of Hawaii at night where even a vivid imagination couldn't dream up the body plans that appear from the depths.

The pelagic plankton community abounds with species never before described by science, such as this 4-inch long cephalopod. The tiny octopus stopped in my lights, intently studying me as I studied it, and then began to expressively posture and react to my every move.

The cephalopod would move into position then freeze for a few seconds before adjusting its exaggeratedly long arms again. It went through probably a dozen different poses before moving on and into far deeper water than my comparably feeble physiology would allow."

Canon T1i, Canon 60mm, 1/160th F10, ISO 400



Ocean Art Competition 2013

1st Place Behavior

Jorgen Rasmussen - Sailfish eating a fish separated from the bait ball

Sailfish are the world's fastest fish and swim as fast as cheetahs run.

The hunt starts by chasing the sardines from the deep to the surface and forming a ball. To achieve this, they work in large groups. They change their pale body color to dark brown with electric blue and purple patterns. By raising their sail-like dorsal fin they block the escape routes when rounding up the sardines and chase them to the surface.

While some of the group blocks escape routes, others start feeding. They use their long bill not as a spear but more like a knife. With precision, they pick out a sardine from the ball. With a quick head flick, they injure the sardine badly. All left to do is to pick up the injured fish. Truly amazing!

Nikon D800E, Nikon 14-24mm lens @14mm F7, 1/250th, ISO 320, Ikelite DS-161 strobe



Ocean Art Competition 2013

1st Place Portrait

Montse Grillo - Green sea turtle and sunrays

"For me underwater photography is much more than taking a picture of a beautiful animal. I try to show all the beauty that involves it.

That requires spending much time and dedication to each picture, and a great passion for the underwater world. This turtle was coming from the surface with the sun behind it, and the sunrays surrounding it gave it a special majesty.

I have a great passion for turtles, and I spend many hours with the green turtles" Shot in Tenerife (Canary Islands)

Canon 7D, F22, 1/160th, ISO 200

www.uwphotographyguide.com/2013-ocean-art-contest-winners



1st Place Compact Behaviour

Laura Dinraths - Dugong feeding

I have worked in NGOs to conserve this endangered species but never approached one myself before! And we nearly missed it!

I eventually get lucky and there it is, the Dugong! What a peaceful creature who gave me 30 minutes of incredible encounter and underwater photography!

Canon G11 F8, 1/250th, ISO 80

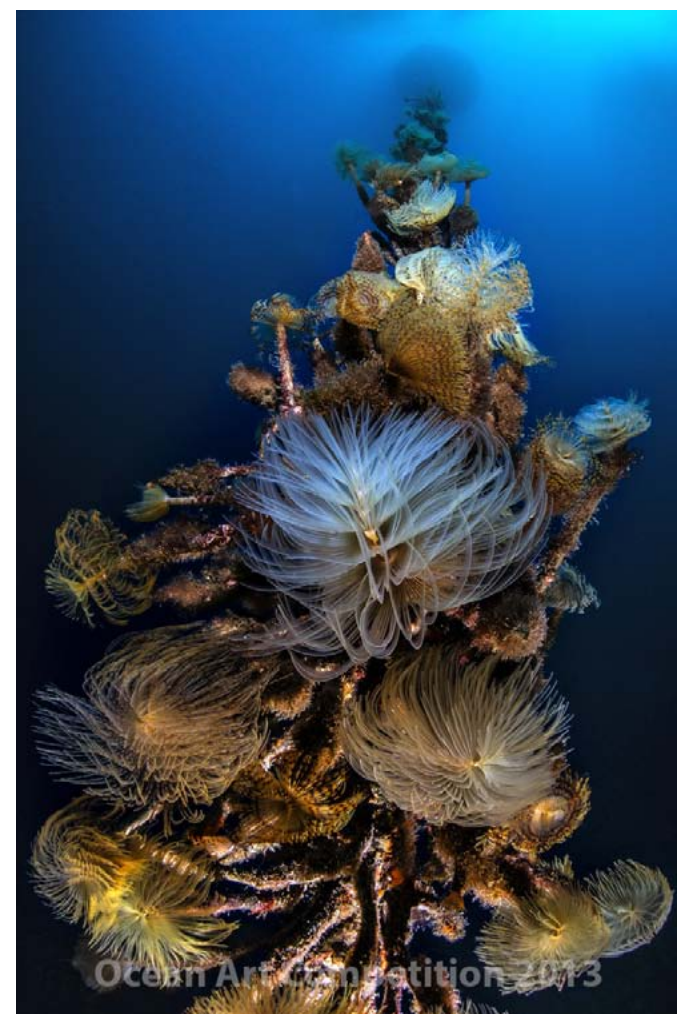


1st Place Compact Wide-Angle

Marcus Commodore - Silhouetted boatman

The seaweed farms on Nusa Lembongan, Bali, churn out tons of seaweed for use in cosmetics in Asian markets.

I took a series of shots in October 2013 one beautiful evening and was lucky enough to catch the silhouette of a farmer returning to shore with a boat load of seaweed at the end of her working day.



2nd Place Wide-Angle

Domenico Roscigno - Feather duster worms

I knew that a big mooring line in the port of Sorrento, Italy had been completely colonized by feather duster worms of every color and size. I spent more than an hour to take a lot of photos. I was waiting a lot of the time, because when the worms reopened their corollas, I had the impression that the line had been animated!

Underwater.kr Lembeh Shootout results

From the 2-9 December 2013 the Underwater.kr Lembeh Shootout was held for the second time at NAD-Lembeh Resort in North Sulawesi. The contestants competed in two categories: "Single Entries" and "Themed Portfolio". Attractive prizes like Nauticam Housings, Dive Travels, Cash Vouchers and lots of other photo Equipment like the new Nauticam SMC waited for the lucky winners. As in the previous

year the contestants came up with many outstanding images and lots of different camera housings, strobes and other gear were around – so lots of topics to discuss in between dives. In the evening some slide show lectures were available for those who were interested and/or not too busy with selecting photos, editing and setting up the camera. One week in heaven for UW-Photo Geeks!



Best Single Image 1st Place - DongHyun Kim



Best Single Image 2nd Place - Christian Jansen



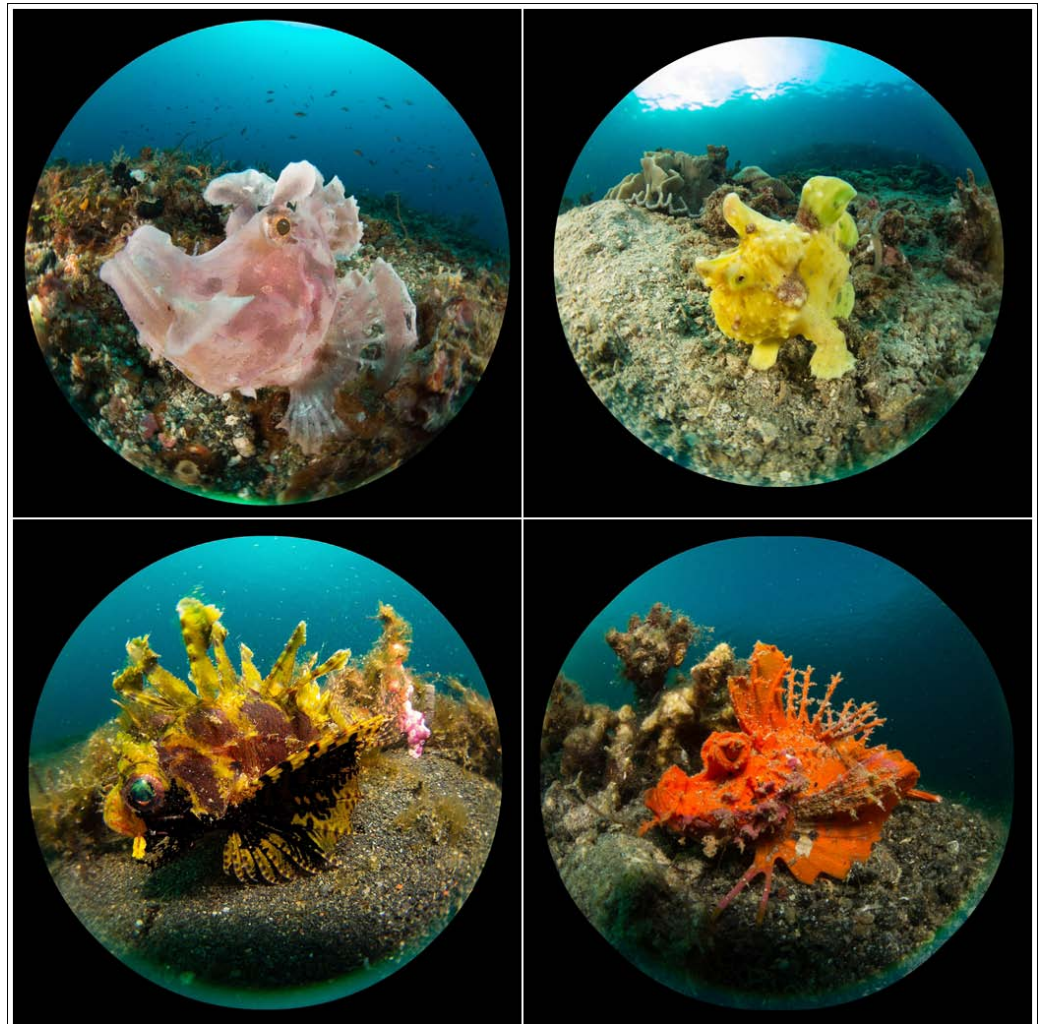
Best Single Image 3rd Place - Kang Pil Sun



Theme portfolio 1st Place - Jonghan Uhm



Honorable mention - Kyudong Lim



Theme portfolio 3rd Place - Priscilla Ang

<http://underwater.kr/shootout/gallery/lembeh-shootout-2013/>

Keldan Luna video lights

by Phil Rudin

DEMA, (The Dive Equipment & Marketing Association) show was held once again during November in Orlando, Florida USA. Every November dive equipment manufactures from around the globe meet for the United States largest diving event. Included in the show is a large image resource center dedicated to the art of underwater photography and videography. Once again the Keldan line of video lights and accessories generated a great deal of interest among video enthusiasts.

First shown at DEMA in 2009 Keldan video lighting products have become a widely sought after line of equipment by both Professional videographers and enthusiast. Daniel Keller is the driving force behind Keldan Advanced Lighting Technology.

Daniel is an electrical engineer and alumni of the Swiss Federal Institute of Technology. Daniel is also an experienced and enthusiastic diver/videographer, his impressive line of lighting products are manufactured in Switzerland and regularly tested around Europe. Being a diver Daniel is constantly striving to produce products that meet the demanding

needs of both the recreational and professional diving community.

Keldan's top of the line video lighting products include the Keldan Luna 8 CRI 4500 lumen, the Keldan Luna 8 Flux 6000 lumen Video lights and the Keldan Luna 4 4000 lumen Video light a compact yet very powerful light source. All three video lights use a modular Li-ion interchangeable battery pack as a constant power source. The battery pack has an integrated power consumption array consisting of eight small LED lights which glow through the clear cap which seals the back of the light.

As the power from a fully charged battery is consumed these small lights turn off one at a time allowing you to see how much power remains in the battery pack. This is a simple and reliable solution for monitoring battery power which works very well during the day or night.

The rechargeable Li-Ion battery packs offer much higher density with less weight compared to conventional NiMH battery packs and offer much better cold water performance.

The Keldan modular battery



pack can easily removed and reinstalled in a matter of seconds by simply unscrewing the rear cap for access. The battery pack is equipped with an integrated pull which when reversed can be used to push out the LED module when changing to another style.

The modular battery pack is included with Luna 8 and 4 video lights plus a matching wall plug adapter which accepts 110v to 240v AC power for use worldwide with exchangeable plug adapters. The Luna 8 CRI is both powerful at 4500 lumen, lightweight and small.

The CRI or Color Rendering



Index is a measurement of the quality of whiteness for the light which is being produced. The Keldan proprietary LED module array provides a very natural white light at a daylight color temperature of 5000 Kelvin and a color rendering of 95

(Ra). The light also has a five stop variable power range from 20-80 watts. The Li-Ion battery pack provides a burn time of 50-200 minutes depending on the power output selected.

Because the Luna line of video lights are a modular design several different types of LED lighting modules can be interchanged. The Luna 8 line of video lights comes with a removable ninety degree wide beam diffuser that provides very soft speckle free light both on land and underwater.

There are no hot spots across the beam and the edges of the light are very soft. Because the ninety degree diffuser is modular and removable an accessory fifty degree diffusing reflector can be interchanged for shooting distant subjects or even macro. The LED modules are easily removable by taking the diffuser off and pushing the LED out with the reversed battery pack. Other LED modules like the high color temperature 80 watt cyan module, the royal blue 450 nm LED module, the UV fluorescence module and more can then be installed.

These LED modules will not break and have an almost unlimited lifespan when used properly. The Luna 8 CRI 4500 and Flex 6000 are very light at only 1.1 kg dry and 0.14 kg in the water when equipped with the 90 degree reflector.

The Luna line of lights also have overheating protection so they can be used as a lighting source above water. In the off position the on/off switch is locked so the light can not be turned on accidentally. To test the battery power you depress the locking button on the collar ring and turn the ring counter clockwise to view the glowing LED display on the rear of the battery pack.

To turn the light on simply depress the locking ring button then turn the collar clockwise until the light turns on. The further you turn the collar ring



the greater the intensity of light between 20 and 80 watts. Turning the collar ring counter clockwise to the off position will lock the spring loaded button back into place. All of the Luna lights also come with a mounting collar for the Sea & Sea YS-style mount that can be integrated into almost any arm system that uses a standard mounting ball or the Sea & Sea head.

The Keldan Luna 8 Flex 6000 lumen LED video light has many of the same features described above for the Luna 8 CRI. This light comes with a 6000 lumen, 5000 kelvin LED module. The ninety degree head has the same speckle free, soft beam pattern and a burn time of 50-200 minutes. It uses the same interchangeable battery pack and has the same interchangeable LED module capability.

The Keldan Luna 4 4000 lumen video light is about half the size of the Luna 8 video lights and has a very bright LED for its size with a 5000 kelvin color temperature. This light has a five power range from 11-45 watts and used the same on/off locking collar ring as the Luna 8 series. The Luna 4 has



a very soft speckle free 85 degree beam angle in water and a 110 degree beam in air. No other light on the market at this time is as powerful, small and light as the Luna 4.

At 0.7 kg air and 0.22 kg in water this is indeed a small package. The Luna 4 uses a smaller battery pack with the same power monitoring design as the Luna 8 lights. There are also accessory handle kit for Luna video lights so they can be used as a diving torch.

All of the Keldan video lights are made from hard anodized aluminum and come in the distinctive fuchsia color that has become synonymous with the Keldan brand of video lights.

The Luna 8 CRI 4500 lumen video light is \$2,199.95. The Luna 8 Flux 6000 lumen video light is \$2099.95. The Luna 4 4000 lumen video light is \$1399.95. The Keldan Luna 8 and Luna 4 line of video light are widely available through your local authorized Keldan dealer.

Phil Rudin

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Lightroom for the Underwater Photographer

by Doug and Lorenza Sloss

Review by Peter Rowlands

Starting to use a heavyweight programme such as Adobe Lightroom can be a daunting task especially when there are no printed manuals any more so, as a Lightroom virgin I was delighted to be offered a review copy of Doug and Lorenza Sloss's 'Lightroom 4/5 for the Underwater Photographer'. It's available as a digital download and the iBook format works on desktops, laptops and most usefully, iPads so long flight times can now be spent learning rather than playing Solitaire :-)

Up until now I have used iPhoto mainly and Aperture occasionally and was looking at alternatives because they have an annoying and an increasingly Apple attitude of having to do it their way. For instance once you have imported your images it is actually quite difficult to find the original files because they are kept in a folder which you can only open if you know how to! Lightroom and I got off to a very good start when Doug told me that I can store my images where I want them and Lightroom only refers to them rather than imprisons them.

The second good start was just a few minutes into Doug's presentation when he encouraged me to consider using an external hard drive so that I could easily switch from my desktop to my laptop and still have access to my complete library. At present the photo libraries on my desktop and laptop are not the

same because I use the laptop while travelling and desktop while at home. I'm sure there's a way of syncing them but I like Doug's suggestion because it makes me feel more in control.

Having learnt how to set up your files and scheduled a simple virtually foolproof back up system and imported your first batch of images it's time to move on to the 'Development' stage where Lightroom offers you the most amazing array of controls which, if Doug wasn't with you, could be way over the top. Fortunately Doug's calm presentation is paced just right to give you information you can remember without overload.

As a Photoshop user I'm fairly comfortable working with colour correction and enhancement but I still learnt a lot of new stuff watching the explanation of the multiple slider settings but it was in the Capture and Creative Sharpening that this app really shone out because it has always been a bit of a dark art to me and I have never really taken time to study it. Fortunately Doug was there to walk me through it and enlighten me about Sharpening, Radius, Detail and Masking followed by very useful guidance on how to reduce noise both colour and luminance. By the end of this 17 minute section I had had a whole new world opened up to me.

The beauty about this sort of presentation is that after such a full on learning curve you can



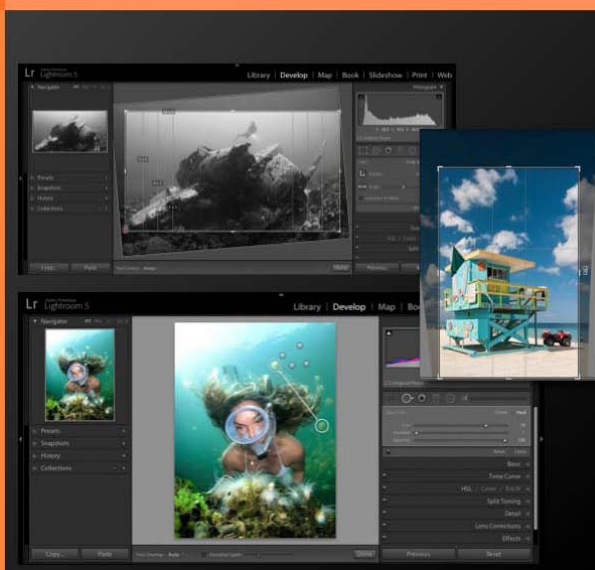
pause to make a cup of tea or do something else until you feel ready to learn more.

By the time I had got to the end of the Development Section I had been shown how to manipulate my images in any way whatsoever, should I want or need to. Even at this stage I felt that it was already worth the full asking price of \$108 (£66) (€79). (There is currently a Seasonal offer on but it may have expired by the time you read this). My confidence in how to achieve improvements quickly and efficiently was growing as was my enthusiasm to do so but I wasn't even half way through yet!

The best way I found to work with Doug's presentations was to have my trial version of Lightroom open so I could pause Doug and produce the same effect he had been talking about on one of my own images. This helped me get to know my way around Lightroom and it worked well for me.

The Develop Module

1. The Basic Panel
2. The Tone Curve
3. Hue, Saturation and Luminance
4. Creating Black and Whites
5. Split Toning Images
6. Capture and Creative Sharpening
7. Noise Reduction
8. The Lens Correction Panel
9. The Effects Panel
10. Cropping Images



Once you've produced your final images you need to know how to export them because Lightroom, unlike Photoshop, does not save your images, just your adjustments. Doug goes through every type of export requirement possible including watermarking and publishing to social media such as Facebook and Flickr.

Following this there is a section about working with Photoshop but by this time I had already come to the conclusion that Lightroom would be my one stop source for my images and anyway my version of Photoshop is old (CS4) and I begrudge being forced into subscription payment software

so this section didn't apply to me. However if it is anything like the Develop tutorials up Photoshop users will have another excellent resource to learn from.

Following this is a section on outputting your material (as opposed to exporting images) and this covers making on screen books, print blurb, com books, create and export a slideshow as well as printing images getting the right ICC profile for great looking prints. The final presentation in this section is how to create great web modules and Doug showed how easy it was by changing styles and content to produce beautiful

3. The Develop Module

Movie 3.1 The Basic Panel



White balance, exposure and other global adjustments set the foundation for an optimized image. Learn it all here.

Movie 3.3 Hue Saturation and Luminance



Optimize water, sky and other areas by finessing individual color tones using the HSL sliders.

Movie 3.5 Split Toning Images



Color tone your black and whites with creative split toning techniques.

Movie 3.7 Noise Reduction



Eliminate unwanted noise and learn how the same controls can be used for creative effects.

Movie 3.2 The Tone Curve



Slider adjustments make finessing contrast in specific tonal ranges easier than ever.

Movie 3.4 Creating Black and Whites



Generate high contrast black and whites that carry local zing! Experiment freely with virtual copies and snapshots.

Movie 3.6 Capture and Creative Sharpening



Restore image sharpness lost during the capture stage, then locally brush in more for added impact.

Movie 3.8 The Lens Correction Panel



Correct distortion, chromatic aberration and problematic lens vignetting with custom lens profiles and advanced sliders controls.

web galleries. I look at a lot of UwP readers websites and in the past I have been very impressed by the attractiveness and performance of their galleries. I'm not as impressed now; now that Doug has shown me how easy it is in Lightroom!

Listening to and watching Doug's presentations has done 2 things for me; I have learnt a great deal about Lightroom which I don't think I would have learnt from a book and I have also found out how excellent Lightroom is. As a result I have bought Lightroom and ditched

iPhoto and Aperture.

Finally Doug's iBook will always be on my iPad so when I'm travelling with time on my hands I will relish this to brush up on my Lightroom knowledge watching Doug's excellent presentations.

If I was one of those magazines that insist on rating everything, Lightroom for the Underwater Photographer would get 5 stars.

Peter Rowlands
peter@uwpmag.com

www.underwaterlightroom.com

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Aquatica AD7100

Nikon 7100 housing

by Tim Rock

I had a busy couple of months planned starting in late August and ending well into October. It would include traveling to Yap in Micronesia for the annual Manta Fest shootout at Manta Ray Bay Hotel. Yap is not only great for it's famous mantas but has a superb shark venue, lot of big fish schools, dropoffs and some fine macro sites. Then it was on to the South Pacific to spend nearly three weeks on a catamaran with the main focus being humpback whales but we would free dive reefs, snorkel with mantas and also see some other big marine mammals like false orcas.

And I had a couple of new cameras, Nikon D7100s, to play with. So I gave the folks at Aquatica a call to see how the AD7100 housing production was coming. I was told with a little luck and help from FedEx I could get the first one off the line. I got it with two days to spare, gave it a quick test in my home waters of Guam at the Tumon Bay Marine Preserve and then it was off to Yap.

Now I must tell you that I am a DX fan. But I have been waiting for the mythical "Nikon D400" for too many years now. I waited and waited and used all the other Nikon DXs... the D200, D300, D90 and D7000. The "D400" was supposedly going to come out and put the DX world on its ear in September 2012. After that month came and went, I knew I had to start moving on. So after a lot of gnashing of teeth about going full frame to the Nikon D800E, I opted for what is the new DX

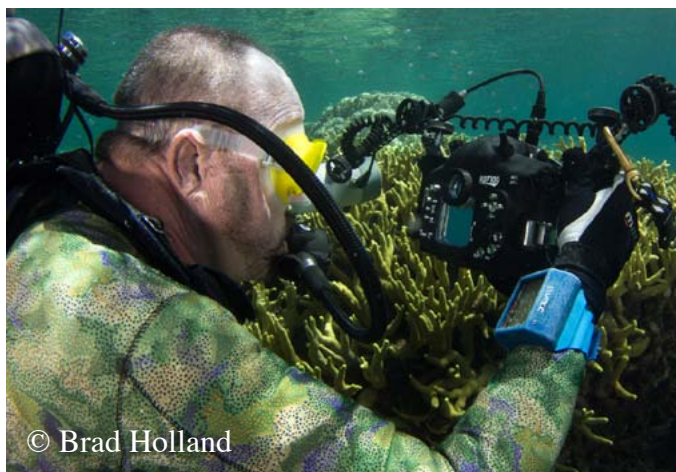
Nikon flagship camera, the Nikon D7100. To be honest, I was a bit taken aback at the small buffer of the D7100. Didn't seem like much of a flagship with only a second or two of high speed shooting before the buffer stuffed up.

But it does have a 24MP sensor and Nikon did a few other things like add 1080P video, extraordinary low light performance and ability to render highlights with excellent detail. Coupled with the excellent range of optics it uses (that I already had in my camera bag) plus the affordable price (I can buy 2 bodies and still have change as opposed to buying just one D800E body). And I shoot a lot of land images and the extra focal length you get with a telephoto lens and the crop sensor has always appealed to me, especially for African safaris and leaping whales.

So in the end, I went with it. I did some reading online. The folks at Nikonians.com are always a responsive bunch and some nature and sports shooters told me the buffer size problem was tackled best by investing in some high speed SD cards. So I got a 128G card with a 95MB write speed and a couple of 64G cards with 95MB write speeds. These have made a world of difference. On



Consecutive Low I can click away at 3-4 FPS for quite a while. And even on high it shoots and writes quickly. Of course, underwater with big marine creatures, the camera is only really reading black, white and blue so the camera's buffer handles free



diving situations and shallow diving quite well.

I frequently read Thom Hogan. His take on DX vs. FX is pretty much mine, that is, manufacturers make more money selling full frame bodies so they promote them more. Thus, they push them as being better in quality. As Hogan says, “Basically what’s happening right now is that camera makers are preying on your “wants” and not your “needs.” Put another way, if everyone wasn’t so lusting over full frame bodies Nikon would have had to have come out with the crop sensor D400 and some more DX lenses by now.” I have a pretty full range of lenses that work fine, especially underwater, with DX including the Sigma 8-16, Nikkor 10.5mm and 14-24, Tokina 10-17, Sigma 8mm full frame fisheye, A Nikon 10-24 and a few others. With a wide array like that to choose from, FX looked too limiting for my underwater needs. (... and as I write, Nikon has announced yet another new FX-format DSLR called the Nikon Df DSLR... I rest my case.)

So with DX D7100 cameras in hands, it was time to set up the underwater housing. As I said,



my go-to wides are the Nikkor 14-24mm and also Tokina 10-17 and Sigma 8-16mm and for macro I like the Sigma 50mm macro and Tokina 100mm macro. I also use the new Aquatica close-up kit a lot. It has been invaluable in shooting macro life around Guam for my new book about the island’s marine preserves.

The Aquatica AD7100 housing is a good looking housing, a bit larger than the AD7000. I like this extra room as, among other things, I can put my car key inside when I go beach diving or snorkeling in Guam. I also like the fact that at night, with Aquatica large macro ports, the Nikon modeling light lets me shoot critters that are shy of a modeling by using the camera’s on board focusing light. Aquatica also coats the housings with a baked on, tough as nails, powder coating. I can tell you my AD7100 housing is a jet black and way cool.

Aquatica has always had a high standard of quality. This translates into a housing that goes much deeper than I do. It has a depth rating



of 300ft/90 meters, and the AD7100 and others are upgradeable to 425ft/130m. Since I figured the deepest I would be going in the next two months was 30m, I was covered well in the depth department. It also seems a bit heavier, like a D200 housing, which I like for shooting video. Makes it a bit easier to steady the shot.

I’ve been using Aquatica gear for a long time. Thus, I can use every current port I own, so no extra accessory expense is incurred in updating a



housing body. Aquatica gets input from underwater photographers, the ultimate end users, and actually puts that feedback into their products. As a result, this housing was thoughtfully designed with a lot of great ideas that I could see immediately while taking it out of the box and unwrapping the swaddling paper. The shooting right side was uncluttered with some redesign that allows very quick and easy access to the controls with a lot of one and two finger controls functions. Large buttons for important functions and different-sized playback and function buttons highlight the right side keys.

The rear button array on the left hand side is angled at 15 degrees for ease of access, and the Multi Controller assembly has been redesigned to feel more natural. This very important control is accessed via 5 individual buttons on the camera body, giving the user an intuitive feel when going through menus or when reviewing images. Frontal controls benefit from newly designed 3 spring arrays, ensuring smooth precise operation of the crucial shutter release, as well as nearby video record and exposure compensation levers. Transmission of the aperture value is now through

an accurate belt system.

I liked the larger body for one reason especially, the use of the 8" dome is now possible without an extension ring. The AD7000 required a small extension. And on the AD7000, the dome lock release was very hard to get to. Not so on the AD7100. Changing ports is simple and they lock quickly and securely into place. I had to make a quick adjustment on the steps of the whale boat and was able to do this without climbing back on board for a lengthy procedure.

I found my favourite workhorse lens, the Tokina 10-17mm, will fare very well without the 18456 extension. This made for easy handling and nice CFWA images. It helps to be stopped down (f/8 or smaller) to get the corners in line.

Yap's great Vertigo shark dive sometimes requires some fast exposure changes. You shoot into blue water, into the reef and into the sun depending on how you have positioned yourself. And there are lots of grey reef and blacktip sharks that swim by you, around you and over you. With the AD7100, functions are clearly identified with permanent pad printed paint for quick visual identification.



This also eliminates the frustration of searching for relocated controls. I was able to go from shooting into the sun to shooting 6 stops difference at the reef in a couple of finger moves without even moving my eye from the viewfinder. Very handy for these kinds of fast action situations.

Dual optical strobe connectors come standard with the housing, and can fit the popular optical cords available on the market. For the classic strobe connectivity that I prefer with my trusty Ikelites, or those that prefer electrically connected TTL



converters, the housing can have a classic Nikonos or Ikelite type connector.

Truth be told, I normally use my housing like a Nikonos, with everything set on manual. So this allowed me to set things up for macro at Yap's Slow & Easy dive site for nudibranchs, leaf fish and wire coral gobies. The housing body has an extra mounting point on top for a focus or video light (or other accessories). I used my L&M Sola for spotting. There are three additional mounting points underneath for various brackets or for attaching a tripod for vids.

Aquatica housings have been available with a lens release for a long time now and there is also a moveable focus knob to move the focus gear away from the lens gear. For something like the monster 14-24, this allows removal of the lens through the front of the housing. But, for the handy 10-17, the controls provide a quick extract of the camera from the rear without removal of the lens.

Viewing on the Aquatica AD7100 is through a Galileo type eyepiece and this was great not only for macro, but also for viewing whales. On one session trying to snorkel like a mad person



while trying to keep up with a mother whale and her frolicking, breaching calf, I was able to easily look in to change the F-stop and grab a shot from surface level of the calf just leaving the water. When shooting the big cetaceans, you sometimes have to quickly look away to make sure you're not getting too close to the whales and then look back to compose. The housing can come with the Aqua Viewfinder as well.

I tried shooting some shark video in Yap as well as my first whale video in Tonga. I managed to get a small speck of dust on my lens for the whales so the video isn't perfect, but I had fun with it anyway. (see Vimeo: <https://vimeo.com/78398214>) I worked in TV news for many years shooting video



and the new 1080P video makes this camera a real tool. I am excited to try more.

I think this may be the best designed housing Aquatica has come up with in recent editions. How they keep up with all the various cameras, I don't know. But this one is truly a winner.

Tim Rock

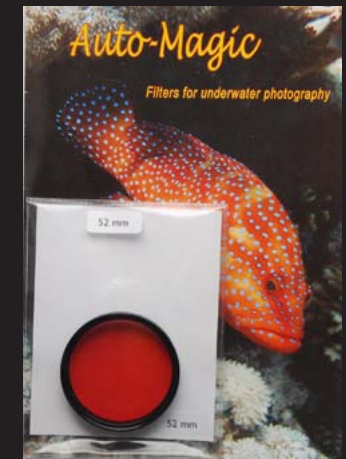
See a gallery of images from Yap and Tonga all shot with Nikon D7100 camera and Aquatica AD7100

<http://timrock.photoshelter.com/gallery/AD7100-Images-Tonga-Yap/G0000wi0ll6f23GU>

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

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Nauticam vacuum check and leak detection system

by Phil Rudin

DEMA, (The Dive Equipment & Marketing Association) show was held once again during November in Orlando, Florida USA. Every November dive equipment manufactures from around the globe meet for the United States largest diving event. Included in the show is a large image resource center dedicated to the art of underwater photography and videography. This years show much like past shows debuted many new and interesting products for underwater photographers & videographers including the new Nauticam Vacuum Check and Leak Detection System.

Most camera housing floods occur as a result of total pilot error and are therefore very much preventable when you are using proper techniques while assembling housing components. These floods can occur with both experienced and novice photographers especially if you are in a rush, experiencing jet lag, in unfavorable lighting, not well rested, have had a few to many mojitos or any combination of these and other contributing factors.

The Nauticam vacuum check and leak detection system is a simple and comprehensive system that confirms the watertight integrity of your Nauticam housing before entering the water. Vacuum systems are not new to the underwater photography world but have just recently begun to gain some traction among the mainstream. In the past most underwater photographers have relied on a sound maintenance program and a proper insurance policy to cover loss as a result of flooding. No vacuum system can replace proper maintenance and I myself have lost far more equipment to theft around the world than to floods so I would not suggest it replaces a need for insurance.

What the vacuum system will do is provide additional peace of mind by confirming that you have in fact properly assembled your equipment prior to entering the water thus avoiding lost dive time as a result of minor equipment malfunctions.

The Nauticam vacuum check system has three basic parts, the electronic monitoring circuitry with warning lights, the one way vacuum



valve and a simple light weight pump. The electronic monitoring circuitry looks very much like the leak detection circuitry which has come in all of the past Nauticam housings. The new vacuum system uses the same type of warning light and audible alarm found in all current Nauticam housings. The noticeable difference is the new on and off switch now located inside the housing.

The sophisticated new circuitry is very compact and integrated into the leak detection and warning light system. The advanced circuitry includes temperature compensation capability which will prevent false positive alarms as a result of temperature



changes within the housing which may be caused by heat from running cameras. The on/off switch is used to disable the system while not in use and conserve battery power provided



by the 3 volt CR2450 battery. This is a common battery that is easily located in most areas of the world. The electronic monitoring circuitry is built into the rear half of the Nauticam housing and connected to the LED warning light on the outside rear of the housing. When the housing is open or at an ambient pressure and the on/off switch is in the on position the LED will slowly blink with a blue light.

When a vacuum is achieved the LED will change to a solid green which indicates the system is sealed and ready to dive. If you have not properly assembled the housing system for any reason the vacuum will be lost and the LED will start to flash yellow. This is the first indication that a problem exists and that the housing should not go into the water until the problem has been resolved. This is the point at which any pilot error can be resolved by simply reassembling the system while looking for the source of the leak. This loss of vacuum should occur in plenty of time to avoid a flood and you should always check for the solid green light prior to entering the water. If you have entered the water and a loss of vacuum begins to occur it will be



detected and a change from green to flashing yellow LED may give you the needed time to get out of the water.

If water intrusion into the housing is detected the LED will flash in red and the audible alarm will start to sound. This is the last line of defense against a total flood and may still allow time to exit the water and salvage your equipment from loss. Most leaks through the small captured O-rings like the ones in the control buttons and dials are slow drips not the more catastrophic type of leak associated with main door and dome port O-rings.

Nauticam has a large selection of one way vacuum valves to meet most any need and these are all user installable. A spanner tool is included with every valve so no extra tools are required for installation. These valves are designed to support various housing configurations. The vacuum release is integrated into each valve so there is no need to install a pump or pressure gauge to release the vacuum and no tool is required to open the housing after the vacuum has been released. A simple knurled nut is all that needs to be turned to release the vacuum. Turn clockwise to seal and counter



clockwise to release.

The release nut sits under a threaded cap to protect it from damage and to provide a redundant seal for the vacuum valve. The valves are not only made in a verity of thread sizes but some are also have integrated electronic bulkheads so that you have both the vacuum valve and electronic bulkhead in one unit for hard wiring strobes, video monitors, remote triggers and more using the same installation opening in the housing. These valves are used for housings with single accessory holes or for multiple bulkhead installations.

The selected valve includes the small and light weight vacuum pump which has a rubber top that is pushed over the knurled nut and then pumped to create the vacuum. No gauge, tubes or other attachments are required making this a very simple and easy system to use. Just a few pumps and the



LED turns from the slow flashing blue to solid green indicated the housing is sealed and ready to use. A dual activation valve which accepts the low pressure BCD inflator hose quick disconnect is also available. This uses tank pressure to create a venturi effect to pull the vacuum. Be aware that not all BCD inflator hoses are the same size so check the size compatibility before ordering this valve.

Beginning with the release of the new Nauticam NA-70D housing for the Canon 70D and the new Nauticam NA-EM1 for the Olympus EM-1, all new DSLR and mirror less interchangeable lens camera housings will ship with the electronic monitoring circuitry installed as standard equipment. The vacuum valves are sold as optional equipment allowing the user to customize the accessory configuration as needed.

The vacuum valves start at \$220.00 USD and include the pump and installation tool.

Now with just a glance at the housing LED you can be assured that watertight integrity is being maintained. Like the cell phone I think that the Nauticam vacuum check system will be something we felt we could live without until you actually have one and see how much more secure you feel diving with it.

Retrofits for many existing Nauticam housings are available at your local authorized Nauticam dealer.

Phil Rudin

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Subal D7100

by Mark Webster

My workhorse camera for several years now has been the D300 in a Subal ND20 housing that was converted to accommodate the D300. It has been a fantastic camera which has never missed a beat and I was somewhat surprised to find that it has exposed nearly 54 thousand frames when I sold it!

Until now, like many other underwater photographers, I have been resisting the urge to migrate to a full frame camera on the expectation that Nikon would eventually produce the D400 which has been the subject of many long standing rumours. Well we are still waiting for that mythical beast, but early in 2013 Nikon did upgrade the D7000 to the D7100 which for me includes most of the features that I would have expected in the D400. OK, so it is not a designated pro body and therefore the body is smaller and the build is lighter than the D300 and certain features on the top plate controls are perhaps aimed more at the serious amateur user, but once it is in a housing then these differences evaporate for me.

The D7000 and D7100 at first glance look very similar, but there are subtle differences in the

dimensions and location of major controls so existing D7000 housings are not compatible. So having decided to proceed with this long awaited upgrade now I needed a housing for the beast!

Housing manufacturers have a tough time keeping pace with the market with so many upgrades and changes to existing models that quickly makes a housing design obsolete. Some manufacturers react more quickly than others, but having been a long term Subal user I was determined to wait until their offering hit the market. Subal were a few months behind some of the others and I briefly considered a Nauticam due to the port and viewfinder adaptors (for Subal), but, although these are very fine housings, the familiarity and my own experience of durability of the Subal helped me resist. There is a

The sTTL system copes very well with a fish eye lens at a stand off of say 60cm producing a near perfect foreground exposure with balanced back ground lighting. Nikon D7100, Subal D7100, 10-17mm FE zoom. Inon Z240 flash guns, ISO 400, f9 1/50.



price difference to be considered as well, but when you add up the cost of the extra adaptors and add a couple of gears the difference narrows and for me it was worth the extra to stay in my comfort zone and avoid what would have been a compromise for me.

They say that familiarity breeds contempt, but this statement positively could not have come from a Subal owner. Since the F100 and F5 housings the design and positioning of the main controls has remained a constant so that whenever you handle a new Subal housing it immediately feels familiar. There are of course extra function buttons and some new positions for existing ones as a result of camera body design, but maintaining the familiarity and excellent ergonomics of the major controls means that you can start shooting immediately in the primary modes leaving you more time to ponder on which of the D7100's many improved functions will suit or enhance your shooting style.

The housing has a deep front section that accommodates most of the camera and is very compact but taller than the ND20 to accommodate the pop up flash and optical connector sockets. Loading the camera and tray is easy, you just need to remember to turn on the camera and align the on/off switch and retract the Auto/Man focus switch (note the setting on the camera to engage this once installed) and then you are ready to go. The camera tray seats on two sprung pips and is retained by a small sprung hook on the left hand side, so there is a positive lock as you fully seat the camera tray. The back plate also closes positively with the now familiar Subal quarter turn latches which will not connect if the large diameter O ring is displaced. There is a leak detector fitted as standard with an audible and visible alarm and you can also install a vacuum system if desired dependant on how you

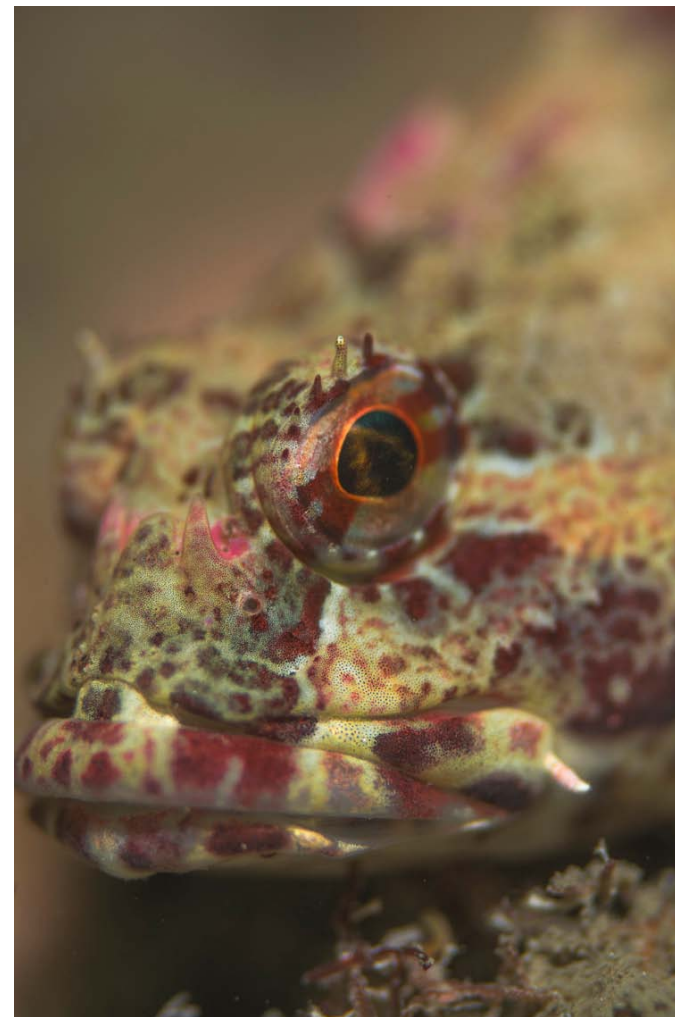


Subal D7100 dressed for wide angle action with an Inon Z240 flash guns and fibre optic sync cords. I have been pleasantly surprised at the performance of the sTTL in wide angle so far.

choose to use the additional penetrations on the housing.

The base of the housing has four rubber capped feet and a number of M6 tappings for a tripod or additional brackets. I always use two of these to attach a rubber coated flat aluminium plate to improve stability and also protect the bottom of the housing from bumps and scrapes when beach diving.

Ergonomics – the major controls on the right and left hand side of the housing and are easily accessed if your hands are not too small or too large. I normally reverse my main command dials on the camera so that I have the aperture on the back plate dial under my thumb and the shutter speed under my second or ring finger at the front. This of course is all down to personal preference,



We use wide apertures in macro to soften and diffuse the background, so called bokeh images. Until now that has meant adjusting the flash power until I had the correct exposure, but in this case I simply focussed on the eye of the scorpion fish, opened the aperture to f5.6 and let the camera and flash guns do the work. Nikon D7100, Subal D7100, 105mm micro, Inon Z240 flash guns, ISO 100 f5.6 1/200.



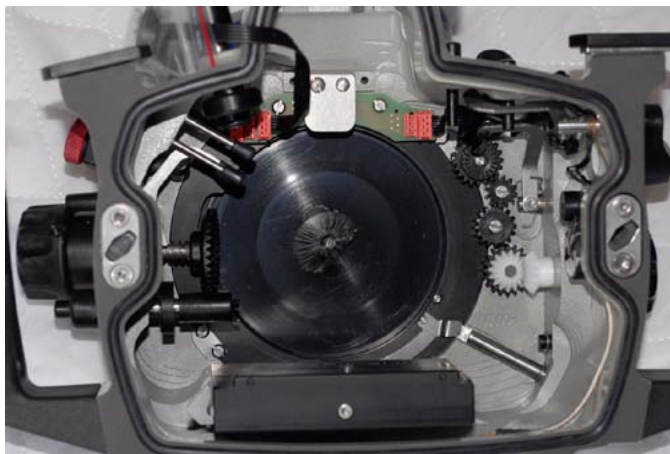
Subal D7100 back plate - elegant simplicity in the design and function of the controls.

but there are a number of changes you can make to the main controls and pre-sets on the camera.

All the push button controls have a good feel to them and operate the camera positively. There are controls for practically everything, and you will soon develop a routine for changing settings and reviewing which suits your shooting style etc. The buttons for the multi control pad are on a slightly raised contour angled towards the right hand side which makes a surprising difference when operating them with your thumb whilst gripping the handle. There are additional controls for the video and live view functions, but only time will tell how much I use these.

I had hoped that the housing would provide a control for the function button as Subal had done for the D4 housing. This can be assigned to a number of different options, but only for land use for now!

One feature to be aware of is that the diameter of the zoom and/or manual focus gears has increased for this latest generation of housings.



Subal D7100 front half of the housing - simple design with the minimum of linkages and gearing.

This also applies to the type 4 port bayonet and is to accommodate the increased girth of later generation lenses now popular with underwater photographers. So, if like me you have a selection of the older ports, you must remember to specify the type 3 bayonet and also purchase the larger diameter zoom gears for your lenses. The housing also includes the addition of a port locking system operated by a neat quarter turn lever below the shutter release and front command dial control which extends or retracts a pin in the bayonet groove. However, this will only work with the latest generation of ports but I should add that all my type 3 ports (both Subal and bespoke engineered) are a very tight fit and there is no danger of a port accidentally rotating.

Viewfinder – The housing comes with the standard Galileo optic which works well but does of course reduce the size of the image you are seeing. There are two versions of magnifying viewfinder to choose from, the 180 degree and 45 degree, which are an expensive addition but worth every penny in



A wider reefscape with fish eye lens and a splash of colour provided by jewel anemones still produces very good results in sTTL with very good foreground exposures. Nikon D7100, Subal D7100, 10-17mm FE zoom. Inon Z240 flash guns, ISO 400, f9 1/60.

my opinion. If like me you are upgrading and have one of these viewfinders from a previous housing then it is a straight swap and takes only a couple of minutes.

Mine is the 180 degree and in fitting it I discovered that the rubber eye cup was beginning to split away from the screw mount, but it has seen quite a few dives. You can buy a genuine Subal replacement or as I did use a 37mm retractable rubber lens hood which is close enough to the original and significantly cheaper!

There is also the option of the new prism viewfinder which offers a life size view of the LCD screen at a 45 degree angle. This option replaces the whole of the perspex panel on the back plate of the housing and is best suited to video shooting using the live view mode on the camera. This is quite a specialised piece of kit and would not appeal to me for everyday shooting, but if you plan to make movies rather than the occasional piece of video then this may be a good choice for you.

Flash synchronisation – this housing accommodates the pop up flash of the D7100 and comes equipped with twin fibre optic connector sockets which are compatible with Sea and Sea end plugs. So if you are using suitable strobes you will be able to have full sTTL or you can fire your strobes in manual mode setting the camera flash to low power to speed recycling and save camera battery power. There is also a separate release and close function for the pop up flash on the

top of the housing, which means you can quickly turn your flashes off from the housing for silhouettes etc. by simply closing the pop up flash. You may also select the option to have additional Nikonos V (or S6) sockets added as I did so that you can also use older strobes that do not have fibre optic sensors. If you take this option you must remember to either remove the hot shoe and lead when using the fibre optic system, or secure it out of the way in the housing so as not to foul the pop up flash.

Having TTL flash again has been a bit of a revelation. If you are a mature underwater photographer like me then you may well recall the first introduction of TTL for film cameras and the first Nikonos V flash guns. By the time we had TTL compatible flash guns for housed film SLR's the exposures had become pretty reliable and you could leave most of the work to the camera and flash. Since the arrival of DSLR's most of us have been shooting with manual flash power adjustment, which is not so much of a chore with instant review, but it has been very pleasant to shoot macro again in sTTL and I have been very pleasantly surprised with the accuracy of the exposures. I am using Inon Z240's in sTTL pre-flash mode and have found the exposures to be largely perfect throughout a range of apertures from f4 to f32 with a 60mm



Jewel anemones have lots of fine detail, deep colours and highlights in the tips which the sTTL has exposed perfectly. Nikon D7100, Subal D7100, 105mm micro, Inon Z240 flash guns, ISO 400 f29 1/200.

and 105mm micro lens. However, I did find that when working very close to the subject with a +10 wet lens that the flash was unable to quench fast enough and over exposed a little. So in this case just dialling in some flash compensation on the camera (-0.7 mostly) provided the correct exposure.

I have had limited opportunity to try the TTL with a wide angle lens in the British winter, but the couple of dives I have managed have surprised me a little. If you used TTL with ultra wide and fish eye lenses on film you

will no doubt recall that results were less than reliable due to the centre weighted metering. I had expected the same with the D7100 but have been surprised to find that the results have been almost as reliable as the macro images. I have yet to challenge the system with a wide dynamic range of sunbursts in clear tropical waters but so far the sTTL system has coped very well with wide reefscapes, divers shots, close balanced light compositions and wide macro compositions. Perhaps my older cable

synced flash guns are destined to gather dust in a cupboard?

The default maximum sync speed for the D7100 is 1/250s but you can also use a higher sync of up to 1/320s via the menu system. It seems that to achieve this faster speed the camera flash will fire at a shorter duration so should work well in macro at close range to create dark backgrounds with higher ISO's. I will have to experiment with my Inon flash guns to see if this works in practice.

Buoyancy – this will be dependant on your lens and port selection but the housing is advertised as slightly negative in the water. Using my standard port, flash and buoyancy configurations I found the system to be slightly lighter in water than the ND20 which I assume is due to the lighter camera body and the extra volume and air space to accommodate the pop up flash. Long ports, extensions and heavy flash guns will make the rig negatively buoyant and the same applies with some of the big glass fish eye domes – if you are using heavy strobes and accessories then you may want to add some buoyancy to trim the rig. Try the UCLS or Inon buoyancy arms, Styx foam, cork mats or fishing net floats.

D7100 Performance – This is not intended as a D7100 review, however camera itself is everything I expected it to be and I am now pleased that I

resisted the temptation to upgrade to the D800, which is a fantastic camera, but a much more expensive package when you also factor in the cost of new FX lenses and additional computing power and storage required for those larger files.

Focusing – One of the most noticeable improvements over the D300 is the speed and accuracy of auto focus, even with the older macro lenses, and the impressive low light performance. On my first test dives I deliberately focussed without lights and found that for subjects I could barely see through the viewfinder the camera could still cope and produced perfect focus. There are many subjects that don't like the glare of a focus light so this will make a big difference to my photography. There are a number of focus mode options to be experimented with ranging from single point to dynamic area and 3D tracking with further additional options in each mode. Some are better suited to underwater photography than others but you need to experiment for work out what is best for you.

Images – I shoot mostly in RAW format for the flexibility it offers in post processing. You can also shoot in JPEG or combine JPEG with a raw file and save them separately to the two SD cards which can be very handy if you need to use images quickly.



A classic stand off composition of a diver using sTTL produces very good skin tones and exposure of both the seabed and the white flash gun diffusers. Nikon D7100, Subal D7100, 10-17mm FE zoom. Inon Z240 flash guns, ISO 400, f9 1/40.

The camera itself has a large number of new and improved functions which will take time to learn and apply if they are suited to underwater photography. I did not buy the camera for the video and live view function, and who knows I may try this one day, but many photographers will love this combined ability.

Living by the coast I was eager and able to get in to the water soon after collecting my new housing. This was a day or so after the well advertised typhoon storm had passed

over the UK, so I expected poor visibility and low light conditions. In that respect I got exactly what I expected, but I was also very pleased with both the performance of the housing and the camera which handled the low light conditions with no effort. I was able to follow up with a couple of dives after more stable weather conditions and use a wide angle lens and begin to see the real potential of this combination.

So in summary, whilst I will continue to familiarise myself with



I also tried a couple of wide macro compositions at the 17mm end of my fish eye zoom with an adult whelk. The white mantle, pale gravel seabed and dark purple shell proved no challenge to the sTTL which produced perfect exposures. Nikon D7100, Subal D7100, 10-17mm FE zoom. Inon Z240 flash guns, ISO 400, f10 1/20.

the new partnership of housing and camera, the Subal D7100 is all I expected in terms of design, function and quality. A new housing is a big investment for most people and so you should think long and hard and make as many physical comparisons as possible between the various options. This is best done by visiting one of the

major trade shows and being prepared to wait for all the options from the different manufacturers to become available. As they say, patience is a virtue and in my case I think it has been worthwhile.

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Saga Achromatic Close Up lenses

by Phil Rudin

Saga Diving Technology (Sagadive.com) is located in Barcelona Spain where they manufacture and sell underwater photography products. The products manufactured by SAGA Diving Technology are well crafted and often highly specialized pieces of photography equipment.

This year SAGA offers three new Achromatic close-up lenses to go along with SAGA's highly respected line of flip adapters which I reviewed for UWPMAG.com in Issue#68. These achromatic wet close-up lenses come in +5 +10 and +15 diopter versions. All three lenses are made with an 40 microns hard anodized aluminum hard body with two flat BK7 anti-scratch and anti-glare glass lenses.

The +15 lens has 3 groups of 2 element lenses, the +10 has 2 groups of 2 element lenses and the +5 has one lens group of 2 element lenses. All three close-up lenses have the M-67 threads at the base of the lens for wet mounting and a final diameter of 61 mm at the business end of the lens. The +15 is 50 mm in length, the +10 is 38.3 mm and the +5 is 26.5 mm in length. These lenses

are compact compared to many wet lenses of the same power. The 61 mm diameter allows strobes and focusing lights to do a bit better job in tight spaces.

The SAGA lenses weight in at 300gr, 230gr. and 160gr. These close-up lenses are achromatic which means they have been designed to limit the effects of chromatic and spherical aberration when in use.

Wet close-up lenses are quite popular with macro photographers for obtaining images with magnification beyond the 1:1 magnification produced by most of the modern macro lenses sold these days.

To understand how wet close-up lenses will work with your macro photography equipment you must first have a starting point of reference for the equipment you are shooting with. Not all image sensors or film sizes are the same and as a result the size of the images captured with a macro lens set

Nudibranch, Olympus EM-5, Olympus 60mm macro at 1:1, Nauticam NA-EM-5 housing, ISO-200, 1/250th, F/9, SAGA +15 Closeup lens.





Stareye Hermit Crab, Olympus EM-5, Olympus 60mm macro at 1:1, Nauticam NAEM-5 housing, ISO-200, 1/250th, F/7.1.

at 1:1 will not all be the same image size.

So how do we define what is a 1:1 or “life size” photograph or video capture. The term 1:1 or “life size” represents a reproduction ratio where the subject you are photographing is the same size on the image sensor as it is in real life. So if you have set your macro lens to 1:1 and you take a sharp photo of a subject which is 20 mm in length then it should take up the same

20 mm’s on the image sensor or film.

If you are using a camera with a 35 mm “full frame” sensor like the Nikon D-800 where the sensor size is 35.9 X 24 mm your subject should have about 8 mm of negative spare on each side if the subject is centered and on a flat plane in the frame. With a 1.5X “cropped” sensor like the one in the Nikon D7100 the sensor size is 23.5 X 15.6 mm so at 1:1 the 20 mm subject would have about 1.75 mm on



Stareye Hermit Crab Eye Detail, Olympus EM-5, Olympus 60mm macro at 1:1, Nauticam NA-EM-5 housing, ISO-200, 1/250th, F/9, SAGA +15 Closeup lens.

each side when centered.

With a Micro 4/3 camera like the Olympus OMD E-M1 the image sensor is 17.3 X 13 mm and in this case the 20 mm subject would be cut off by 1.35 mm on each side. So the smaller the sensor the smaller the subject that will fully fill the frame with a macro lens set at 1:1. Smaller sensors also increase depth on field for a given angle of view for like F/ stops. So a lens with a 24 degree angle

of view on a 35 mm sensor at say F/11 will have less depth of field than a lens with a 24 degree angle of view on a M43 camera at F/11.

Bottom line is that everything in photography is a tradeoff. Better overall image quality with a larger image sensor verses a much smaller critter filling the frame with a small sensor camera.

When you add the SAGA close-up lens into the equation nothing

changes regarding the physics of the sensor size. With a +5 wet lens on a 100 mm macro lens at 1:1 on full frame the reproduction ratio becomes 1.5:1, at +10 2:1 and at +15 3:1 give or take a small amount. The reproduction ratio remains the same for every sensor size. If you were to compare actual image sizes using the 35 mm 36 X 24 mm sensor as the base line and the smaller M43 sensor with a +15 close-up, with the macro lens at 1:1. The 3:1 or three times life size the same image on the M43 sensor would be a subject size of about 6:1 or six times life size on the 35 mm sensor quite a difference.

For my in water testing I used the SAGA PRO +15 Extreme with my SAGA flip adapter. This lens can also be mounted directly to a macro port with 67 mm threads. To get the very smallest of subjects I used the Olympus E-M5 M43 camera with the Olympus 60 mm macro lens which has an angle of view of twenty degrees (120 mm equivalent in 35 mm) in a Nauticam NA-EM5 housing with two Inon Z-240 strobes set to manual. The EM-5 camera was set for manual focus and the 60 mm macro lens was racked out to the 1:1 mark on the lens.

Once in the housing the lens would remain at 1:1 during the entire dives unless I was reset the camera to auto focus. I did this so that I would know for sure that the images were always being taken at 1:1 and not effected by the auto focus moving me off the 1:1 mark. I rely heavily on auto focus when shooting macro and I have observed that all of my students doing the same. As a result we have all auto focused the macro lens in the 1:2 or even 1:3 range thinking we were at 1:1 then introduce the close-up lens to try to increase magnification with less than stellar results.

Until the macro lens is set at 1:1 the wet lens



Shortfin Pipefish, Olympus EM-5, Olympus 60mm macro at 1:1, Nauticam NA-EM-5 housing, ISO-200, 1/250th, F/7.1.

only acts as a placebo and does not really increase magnification beyond what the 1:1 macro lens can do on its own. As you use close-up lenses with greater and greater powers like the SAGA +15 the need to have the macro lens as close to 1:1 as possible to get the most magnification out of the close-up lens you are using. This is why it is so important to know what your personal equipment can achieve when it comes to macro.

With the SAGA +15 wet lens mounted to the port a less than 10 mm long subject fills the entire M43 frame when the housing is moved in to achieve sharp focus. Since I am not using AF I need to move the lens towards the subject until the subject comes into sharp focus. With the +15 lens this is easier said than done and a high quality accessory view finder like the Nauticam 45 degree finder I use helps tremendously in obtaining sharp focus.

You must first find the subject, then get it



Shortfin Pipefish, Olympus EM-5, Olympus 60mm macro at 1:1, Nauticam NA-EM-5 housing, ISO-200, 1/250th, F/7.1, SAGA +15 Closeup lens.

centered in the lens, then get close enough for sharp focus while allowing the strobe light to reach the subject. For maximum depth of field I shot many of the images for this review in the F/16 to F/22 range. Depth of field with a +15 close-up lens is very shallow even on a small sensor camera. When sharp focus is reached with the +15 lens you are within about 10 mm of your subject so proper subject selection becomes half of the battle. No need to try this lens on a skittish fish or other fast moving subject because you just won't get close enough for a well focused image.

The +15 close-up lens is a unique lens for a very select group of very small subjects. It is for the more advanced macro photographer and I would not recommend the lens for those just moving into macro photography. I would instead suggest that they start with the SAGA +5 and work up to lenses with greater magnifications like the SAGA +15 Pro



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Cushion Sea Star Detail, Olympus EM-5, Olympus 60mm macro at 1:1, Nauticam NAEM-5 housing, ISO-200, 1/250th, F/7.1, SAGA +15 Closeup lens.

lens if really small critter photography becomes their thing. I would also stick to the +5 (or more advanced +10 at most) for Kit lenses like the Sony 18 to 55 mm zoom for the NEX cameras or 12-50 mm & 14-42 mm zooms for M43 cameras. Corner sharpness with the SAGA +15 is quite good on the small sensor cameras and I would expect to see it fall off just a bit going to full frame although I have not yet tested that theory. I would also expect to see the same excellent image

quality from the +5 and +10 offerings as well.

The SAGA achromatic wet close-up lenses can be found at your local SAGA retailer or by going to the sagadive.com web site. The SAGA lenses retail as follows.

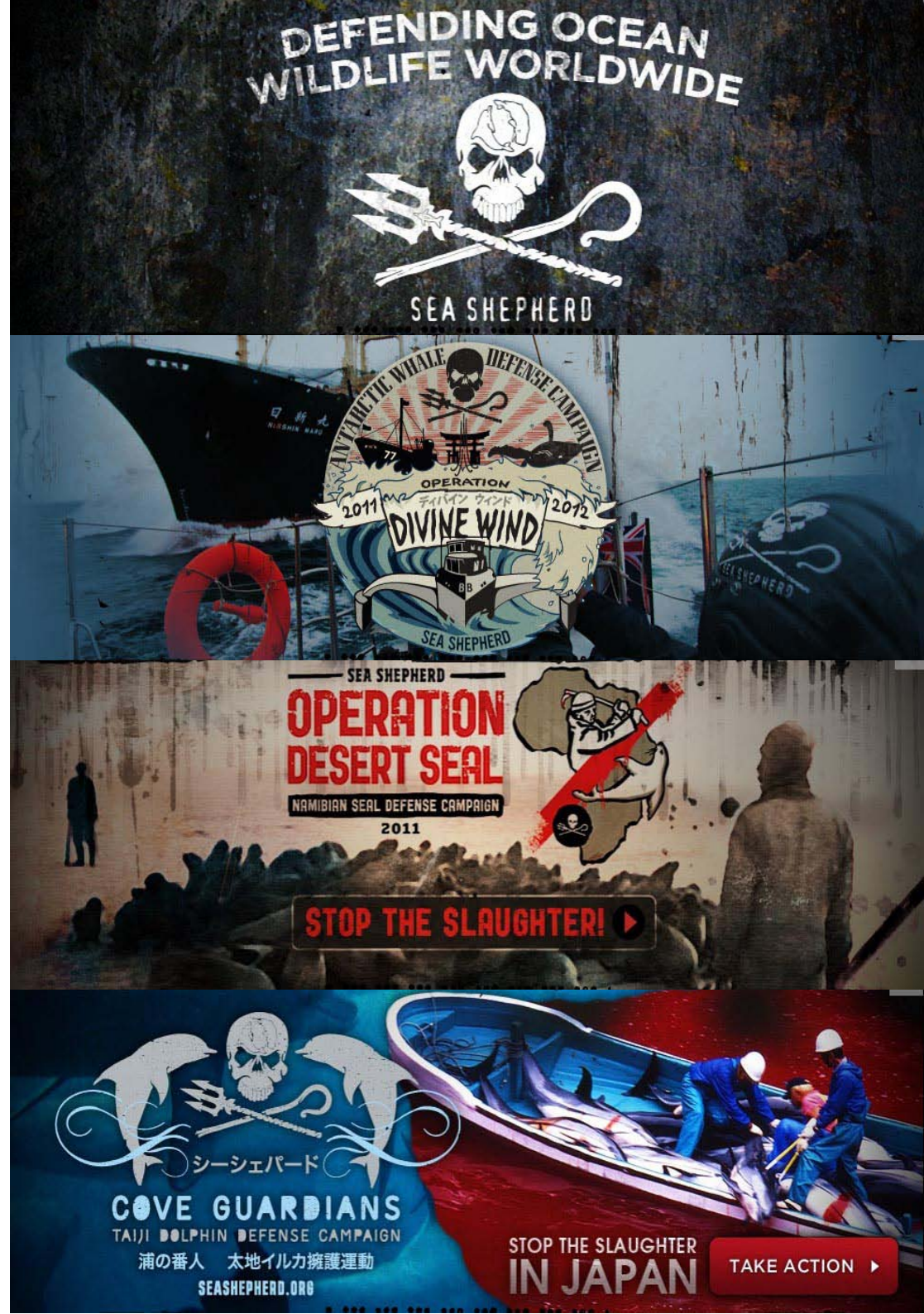
+5 lens, 160.00€ \$250.00

+10 lens, 195.00€ \$300.00

+15 lens, 255.00€ \$410.00

Phil Rudin

www.uwpmag.com



Panasonic GX7 (and Nauticam NA-GX7)

by Peter Rowlands

I thought you might be interested in my experience of the Panasonic GX7 - a camera which I, personally, have eagerly awaited.

In terms of categorisation the GX7 is a 4/3rds interchangeable lens camera with a 16mp Live MOS sensor, a 3" tilting LCD and a built-in flip up 1024 x 768 pixel electronic viewfinder. It has front and rear control wheels like an SLR and a built-in flash so it provides everything needed in a comparatively compact body which is similar in size to the Olympus PEN E-P5 and the Sony NEX-6. What sets the GX7 apart is the quality of both the still images and the video footage as well as the ability to customise it in many, very useful ways.

Earlier models on the GX and GH series of Panasonic cameras excelled at video but were decidedly ordinary for still images. In general terms the reverse is true with the Olympus Pen and EM-5 where the stills quality was excellent but the video footage lacked biting resolution. The Sony NEX cameras produce good stills and video but the manual white balance performance and menu system lets them down so the Panasonic GX7 ticked most of my boxes.

The GX7 has a newly developed sensor which it is claimed improves colour saturation and sensitivity by approx 10% with a S/N ratio improvement of around 25%. All I can say is that the stills and video footage are very impressive indeed and on an equal footing to the GH3 but without the higher data rate and frame speed options. Since the GH3 is the standard by which a lot of SLRs are judged for video performance that



The Panasonic GX7 in the Nauticam NA-GX7 housing with a Panasonic 8mm fisheye lens is a very compact outfit. 1/320th @ F5.6. ISO 1600



puts the GX7 on a high pedestal and all this in a sub \$1000 body. The final icing on the cake for me was being able to record .mov video files rather than AVHCD which I always had to convert before editing.

For me, as a mainly video shooter, the final attraction is the tilting LCD screen (rather than articulated as on the GH3 and GH3S). This allows the camera to be held in a much more ergonomic way with your elbows tucked in rather than at arms length which is rather like shooting with a 2 legged tripod. In addition, for land use there is a built in tiltable electronic viewfinder which is useful in bright sunlight but, to be quite honest, it's fine for composition but not for judging focus. I usually let the autofocus perform better than I can but a nice touch with manual focus is an enlarged centre section to assess critical focus as well as focus peaking indication which is really useful. Speaking of built in things there's also a built in pop up flash which is ideal for triggering external strobes and the manual power can be reduced to 1/128th power for fast frame rates. It's just nice to have everything built in unlike the early Sony NEX and Olympus Pens with their add on viewfinders and flashes.

Time lapse and stop frame animation shooters



are catered for as well as multi exposures so you see we have a camera that provides almost every function you need in a small, light footprint ideal for stress free travel and with a wide range of lenses from both Panasonic and Olympus as well as an increasing number of 3rd party lenses.

The other major attraction from such a small camera is its high ISO performance. You can get up to 25,600 if you want but the image quality is far from ideal. My rule of thumb is to come down 2 stops from the maximum ISO to get acceptable results so with the GX7 that, for me, means 6400. That's for stills but, for some reason, Panasonic limit the maximum ISO to 3200 when shooting video and I don't know why.

There is also a little heralded feature aimed mainly at video shooters called 'Extra tele conversion'. This takes the centre 2 megapixel section of the chip which still gives full HD output but effectively increases the focal length by a factor of 2.4 with Full HD (this does vary with the aspect ratio you use). On land it is a very useful



feature indeed - for example the reasonable sized 14-140mm F4-5.8 Panasonic lens is effectively a 28-280mm because of the sensor size but when you switch to Ext Tele Conv it becomes a 67-672mm without any loss of aperture! For video shooters underwater the 8mm fisheye would become a 38mm with very close focus capability and the excellent Olympus 12-50mm would become a close focus 57 - 240mm!

So all in all I think we have a very special camera here and I had the privilege of test driving it in the new Nauticam housing whilst snorkelling with manatees at Crystal River. I'm not going to go into too much detail about the housing because it was a pre production prototype and as such may be modified slightly for full production. Suffice it to say I think it is a lovely housing which handles very well ergonomically with a right hand strap and a left hand handle. I used the 8mm fisheye which seems to go round corners it's so wide! Size wise it is smaller than their GH3 housing yet there is still room for a leak detector/vacuum system (more on that later)



and a most ingenious control to raise and lower the built in flash. The person who designed it should be applauded for their ingenuity.

The other amazing fact is that this housing was produced in just 2 weeks from the date the camera was purchased. Add another 2 weeks for me to attend DEMA and use the housing for a couple of days and another few days to produce this review and you have what must surely be the fastest produced equipment review on record!

I am hoping to get one of the first production housings and will report

in much more detail when they are finalised and I have been on a dive trip.

Nauticam Vacuum check and leak detection system

I also had a chance to use this system which, despite the compact size of the housing, fits in the Nauticam GX7 housing. It is very easy to set up and very reassuring throughout the dive.

Having switched the unit on and closed the housing the cap is removed from the bulkhead connector



and a small vacuum pump (similar to wine bottle pumps) is placed over it and pumped a few times. At ambient pressure, the LED slowly blinks blue. When a solid vacuum is achieved, the LED changes to a solid green, indicating system integrity. If the vacuum starts to degrade, the LED begins to flash yellow, and if water intrusion is detected, the LED flashes red, and the audible alarm is sounded. The whole setting up process takes literally seconds and then the bulkhead cap is reattached.

The appearance of that reassuring green light on the rear of the housing was a real breakthrough for me. I have dived for literally decades without a major flood so I've obviously been

doing something right but having used this system for just a couple of days I would be loath to dive without one from now on.

Peter Rowlands
peter@uwpmag.com



Supermacro and the Nauticam SMC

by Alex Mustard

The Wetpixel/Dive Photo Guide/Our World Underwater Photography Contest has arguably become the pinnacle of underwater photography competitions over the last decade. With a huge roster of prizes it attracts both the best amateur shooters and also many leading professionals, which allows it to stand out in a chock-a-block calendar of international UW photo contests. The competition receives many thousands of entries each year, but it was only a handful of years ago that it launched a new super macro category, which in the first year received so few high quality entries that we did not award all the prizes.

How times change. I have just returned from Bali, where I was judging the inaugural Indonesia World Underwater Photography Contest, helping to dish out an incredible 200,000 USD of cash prizes, and the macro categories were dominated by super macro images. As Peter Rowlands recently said to me “supermacro has become the new shark photography”.

I believe the popularity of super

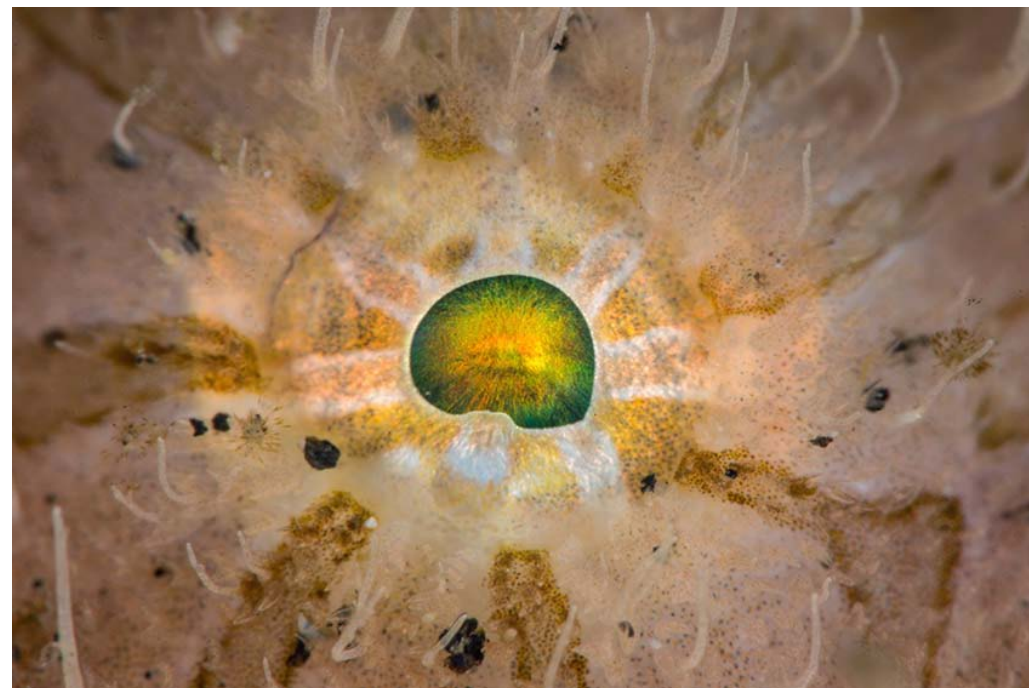
macro has been driven by a number of factors. First is the quest for new subjects. Standards in underwater photography have never been higher, and we photographers have discovered a host of new critters in this size range to make our shots stand out. We're also aware of how familiar subjects are transformed when we can focus on their tiniest details. Second, and perhaps more important, is that when working at such high magnifications depth of field is miniscule. While this adds to the challenge of getting the subject sharp, it means that almost whatever direction we aim the camera, the background is rendered as a complimentary, non-distracting bokeh blur. Achieving a pleasing background is often more important to the success of a macro photograph than the subject. In super macro the narrow depth of field gives us great backgrounds without trying. Third super macro can be very difficult when people first try it, but with regular practice and good technique it is actually quite easy.

Another important factor has



The Nauticam Super Macro Converter (known to its friends as SMC).

Supermacro is currently going through a boom in underwater photography, made possible by a host of new accessories. Hairy frogfish eye, note that all photos are uncropped to show SMC performance. Subal Nikon D4, 105mm VR, 1.7x teleconverter. 2 x Inon Z240 strobes. Nauticam SMC. 1/250th @ f/51. ISO 100.



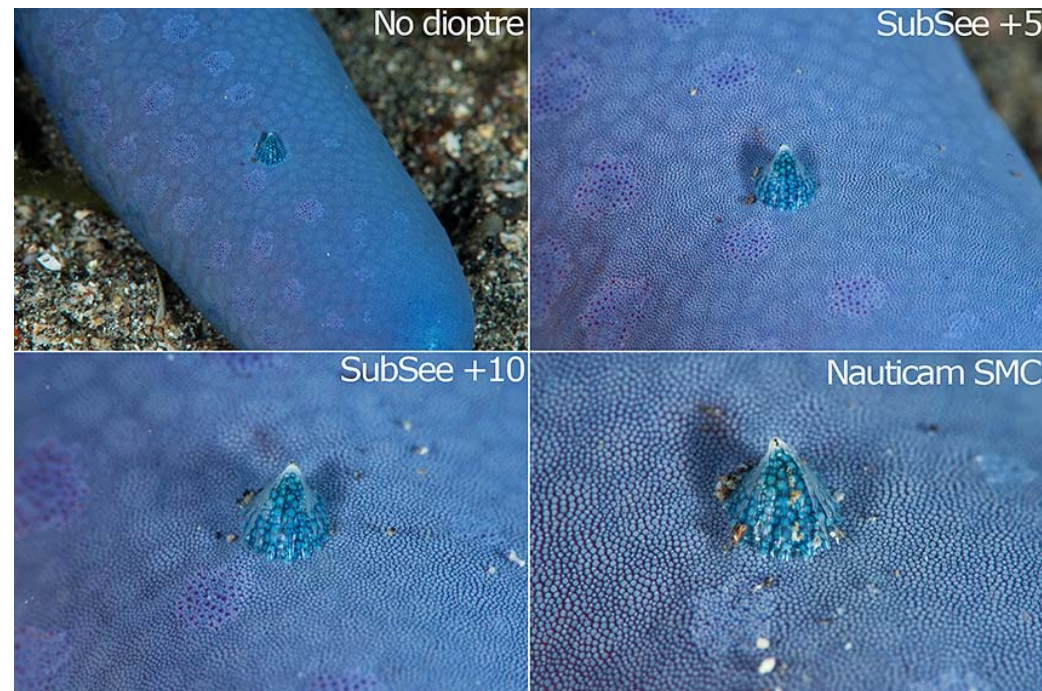


The SMC gives excellent image quality right across the frame despite achieving very high magnification. This Nembrotha nudibranch was a small individual. Nikon D4, 105mm VR. Subal ND4 housing, 2 x Inon Z240 strobes. Nauticam SMC. 1/250th @ f/40. ISO 200.

has undoubtedly already grabbed the attention of the underwater photography community. The SMC is named to remind us that it is not just a simple dioptre, but a converter lens, designed to work specifically underwater, with the optical elements optimised to account for the water in contact with both the front and rear elements, and also the camera's lens and the glass of the port.

The result of this detailed development is that the SMC is

strongest close up lens that I have ever tried, but also the one that delivers the best image quality. Which is no mean feat, as winding up the lens power makes it harder, not easier to deliver good image quality. The image quality is excellent right to the corners of the image and the lens controls the fringing, caused by chromatic aberrations, very well, to the benefit of both the image quality and also the smoothness of the out of focus "bokeh". The image contrast



A comparison of the magnification possible with different wet close up lenses, shot on fixed focus. The SubSee +5 already gives a lot of additional magnification over the straight macro lens, and you should note that many wet lenses on the market are not as strong as the SubSee +5. The SMC gives a similar jump over the SubSee +10, as the +10 gives over the +5. This tests suggests the SMC is about +15.

through the lens is so good that, despite the power, I was able to shoot comfortably with autofocus through the SMC, something that is usually a frustrating waste of time with strong dioptres.

The final standout design feature is that Nauticam have worked to maintain as great a working distance as possible. This is still super macro and that means the point of focus is

still very close to the camera, but it is not as close to the lens as you would expect for the magnification. And these few extra centimetres make a big difference both in not disturbing some subjects and for lighting them well.

You are probably waiting for the but, and for me there are two caveats. The first is that the SMC is expensive. I believe it is priced fairly



The SMC with the SMC Multiplier attached via a flip hinge.

for a bespoke product that definitely pushes back imaging boundaries underwater. But the pricing means this is an item for the serious shooter. The second is that it is very powerful. For both reasons, I don't recommend the SMC as your first experience of supermacro.

Whenever I speak to underwater photography retailers or dioptre manufacturers they tell me that strong dioptres always sell better than weaker ones. I think this is simply because people think a 10 must be better than a 5. But in theory and in the field the truth comes out. As I mentioned earlier, it is harder to design a good strong 'un, than a good weak 'un. Stronger dioptres will either be more expensive or suffer optically! Also I have run many workshops



Although expensive, the SMC justifies its price with its performance, raising the bar in the world of supermacro shooting. If you are new to supermacro, I'd recommend starting somewhere less powerful and less expensive. But if you are already in to supermacro then the SMC is strongly recommended.

where I have taken along a batch of dioptres for the photographers to use. Each time, at the start of the week, everybody wants the strongest ones, but by the end of the workshop it is the less powerful ones that are in demand because people simply find them more useful. In short, don't fall for thinking that creating great super macro images is all about magnification. It is the image that matters, nothing else. Even in Lembeh I struggled to find subjects that truly

suited the SMC.

Back to the SMC, although it is designed and made by Nauticam, it comes with a standard 67mm thread, and can be used on any housing system or adaptor that accepts such filters. The rear element of the lens sticks out noticeably behind this rear filter thread and Nauticam provide a spacer ring for mounting it on their ports. Although I don't need to use this on the Dyron adaptor I use my Subal ports.



SMC



SMC + Multiplier



These sacoglossan sap-sucking slugs are very tiny. Less than 0.5cm. The top photo is with the D7100 with a straight 105mm. The middle photo shows the bug jump in magnification possible with the SMC and the final photo shows the frankly ridiculous magnification possible with the SMC and SMC Multiplier.

Nauticam say the SMC was designed to work on 60mm and 100/105mm lenses. In Lembah in October, I shot it on my full frame Nikon D4 with a straight 105mm and also 105mm with 1.7x teleconverter. In Bali in December, I shot it on my cropped sensor Nikon D7100, with the 60mm and 105mm. The image quality was excellent on all. But I found it much more useful on the longer macro lenses (105mm and 105mm with teleconverter), it didn't add much to the 60mm lens, which already focuses very close.

Since testing the SMC and sharing results on my Facebook page I have had plenty of emails asking me how it compares to existing dioptres "how strong is it? Which should I buy? SubSee or SMC?" I chose to test it against the SubSee +5 and +10 dioptres because I own and use these dioptres and they are deservedly some of the most popular on the market. They were also ideal for the tests as their quoted powers represent their performance underwater, unlike some brands that quote similar numbers for their power in air, and then shed close to half their magnification when used in the medium they were designed for. It has always seemed crazy to me that all manufacturers don't quote the underwater dioptre power of their underwater wet lenses.

In terms of power the SMC is considerably stronger. The jump between the SubSee +5 and +10 seems similar to the jump between the SubSee +10 and the Nauticam SMC. So I would guestimate the SMC at about +15 on the 105mm from my tests. It is worth mentioning that if you already own a SubSee +10, you can get a greater magnification than the SMC by adding the Nikon 1.7x teleconverter to your lens and SubSee +10. Of course, you can use the SMC with the teleconverter

The high image quality (as well as the high magnification) of the SMC helps produce attractive bokeh backgrounds, making subjects pop out. Nikon D4, 105mm VR. Subal ND4 housing, 2 x Inon Z240 strobes. Nauticam SMC. 1/250th @ f/32. ISO 200.

too! The SMC is ahead of the SubSees on image quality. It is not a night and day difference, it is a comparison of very good and excellent. And since having the SMC, I've continued to use the SubSee lenses for my work.

Finally, in Bali, I also had the chance to test the SMC Multiplier, an add-on lens for the SMC that makes it even stronger still. Even Nauticam intend the multiplier as a niche product aimed at those after extreme results (and with a masochistic streak), so I'll only mention it in passing. In short it adds a significant amount of magnification, but definitely at the cost of some of the SMC's superior image quality. The results are still useable, but these extremes of magnification, very close working distance and the tip of the razor thin depth of field make this an accessory only for very specific uses.

The SMC is an exciting new product for underwater photographers, both increasing our reach into super macro shooting and improving the quality of our images. The question that has my inbox buzzing is SubSee or SMC? But for me the answer isn't about or, but and. The SubSee +5 and +10 are not as powerful as the SMC and each is suited to different subject matter and I have continued to dive with all three in my pockets since trying the SMC.

In conclusion, if you are new to supermacro I strongly suggest starting with a weaker close up lens than the SMC. Indeed, I suggest most people



follow a progression from the +5, only buying the next one when you feel limited by your current setup. Furthermore, there are cheaper ways to find out if you like super macro than with the SMC. However, if you are already like supermacro then, like me, you will love the SMC.

Alex Mustard
www.amustard.com

Don't settle for 2nd best



Film - No Filter
No White Balance



Digital - No Filter
Manual WB



Magic Filter
Manual WB

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

Available colour

by David Colyn

The nutrient rich Benguela current that flows up the West coast of South Africa is a blessing to underwater photographers. It sustains invertebrate life with stunning colors and thus provides plenty of photo opportunities. However, these same cold nutrient rich waters can also be a curse to underwater photographers. When the wind and swell eventually dies down in this area which Portuguese explorers called the Cape of storms, you have a limited time of good 10 to 15 meter visibility before the sun produces an algae bloom which turns the clear blue water into green pea soup with visibility down to 2 meters or less. Even when the visibility is at the average 6 meters there are always enough particles in the water to absorb most of the ambient light, giving photos an emerald green tint and backscatter that resembles a sandstorm in a desert. This backscatter problem is so severe that it makes underwater photography with a compact camera and internal flash almost impossible. If you decided to wait for good diving days that have little swell, mild wind and 15 meter visibility your camera would be obsolete before you took a 100 photographs.

Like most I started my underwater photography with such a compact camera and relied on the camera flash only. The backscatter problem frustrated me so much that I ended up asking a local underwater photographer for advice. He taught me the secret to beat the backscatter problem and the day I added the Inon Z240 strobe to my 4megapixel compact camera it transformed the capability of my



(Above) First dive making use of strobe light as normal and the result is dull orange tentacles and a brown center.

(Right) This is the first image taken with the strobes turned OFF to serve as a before/after comparison. Had to add 1.83 f stops of light in Canon DPP and correct white balance with click white balance function

underwater photography equipment. I was now able to take decent macro photos even when visibility was down to 2 meters. As long as I aimed the strobe at the correct angle the backscatter was minor and the STTL mode automatically took care of the flash exposure. The strobe addition worked so well that I added a second strobe to fill in the shadows and by the time I upgraded to a DSLR I never even considered doing macro photography with ambient light. The high shutter speed and small aperture required to freeze movement and maximize depth of field always required more light than was generally available. I just blasted every subject with strobe light and in return I got vivid colors.

All that changed on a dive in September 2012 when I saw this amazing anemone with shining



orange tentacles. It was sitting at a depth of 5 meters in the shadow of a kelp forest. The tentacles seemed to be glowing as if they had neon lights in them. I was so eager to capture this surreal scene that I took a couple of pictures before I even realized that something was wrong. The colors of the image on the camera's LCD screen seemed washed out. The vivid orange, almost red, tentacles were now a dull orange and the dark green center was a brown color on the camera screen.

At home I tried some post-processing tweaks

to recover the colors that I had seen underwater. I quickly realized that this was not a simple white balance problem. I use only Canon DPP software for post processing because sometimes the colors of the subjects that I photograph are so unbelievable that I have been accused of “manufacturing” them digitally with color saturation in the past. After that reality check I decided to restrict post processing to a minimum. In a way the progress of digital editing software has tainted the credibility of photography.

That failed editing attempt set me on a mission to see if I could capture the image in camera just as I had seen it underwater. After describing the problem to my “strobe mentor” he pointed out the root cause with a simple science lesson. Underwater colors disappear in the order ROYGBV (red, orange, yellow, green indigo, blue, violet). Thus at 5 meters underwater the red light has all been filtered out. By adding strobe light I have recovered some of the lost red light and the washed out colors that I saw on the camera screen was thus the “true color”.

Now I had a scientific explanation but still no photographic evidence of this magnificent underwater scene. In order to capture this photo I would have to turn off the strobes completely and learn how to get proper exposure by relying on Shutter speed, Aperture and ISO settings only. This was a real challenging prospect for me since I was so spoiled by strobes that automatically took care of the exposure. Luckily anemones do not travel often and this one was situated on a very unique rock face that I could find again so 3 months later I had a weather window and a second chance to get this shot right. I took the first picture with both strobes turned on as a control test and then another with the same settings and strobes turned off. Although the absence of the strobe light caused the second

image to be underexposed it was not so bad that a brightness adjustment of 1.83 stops in Canon DPP could not recover the detail in the image. The color improvement was immediately visible.

At this stage I have to admit that the color of the second image is not totally untouched. I had to correct the white balancing because I had changed the camera white balance setting to “Custom” in an effort to rule out white balance as possible cause of the problem, but then I forgot to calibrate the custom white balance underwater. Luckily the anemone had some white parts in its mouth and I used it for the “Click white balance” function. Even though I still had to do some degree of post processing the lost color riddle was solved and it was clear that I had to re-evaluate my lazy habit of just blasting everything with strobe light.

For my next shot I tried to get the whole anemone in the frame, meaning I had to back off a couple of inches due to the narrow field of view of the 60mm macro lens. This resulted in more underexposure which I tried to fix by increasing the ISO setting to 400. This was another first for me as I never used ISO settings above 200 before for fear of digital noise. What I learned here was that ISO 400 worked just fine on my camera and digital noise was not a problem. The one thing that I could



The dive site with tide coming in – Cape Columbine nature reserve West Coast South Africa.

not fix in camera was the light diffusion caused by particles in the water which added a hazy effect to the image. In an effort to avoid this problem I planned to use a close focus wide angle setup next time so that I can frame the whole image while remaining closer to the subject.

This whole experience taught me the true meaning of what David Doublet was saying in an article that I read. The author interviewed a couple of world famous underwater photographers and asked them what advice they would give to new underwater photographers. There was the usual “get closer” and “shoot up” advice but when it was David Doublet’s turn he said: “know the controls of your camera like you know your car”. If you think about it, by the time you are competent enough



Some months later – blue water dive with Cape fur seals. Wide angle shot with no foreground to light so strobes are turned OFF.

to take your car on the freeway you know from muscle memory where each gear is, where the indicator light switch is and at what speed you can safely go around a corner. The lessons I learned about my camera's performance came in very handy one month later when I was presented with a rare 15 meter visibility blue water dive and my first real wide angle scene. Since the fast swimming Cape fur seals kept to a safe distance where my strobes were useless anyway, I had only ambient light to rely on. Thanks to the lessons I learned I knew I could

get the shot without strobe light and now I have a keepsake of the moment on my screensaver at work to brighten up my non diving days.

David Colyn



Issue 76/68

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So far, SoGod

by Dr Alex Tattersall

Southern Leyte and specifically the town of Padre Burgos at the southernmost tip of Sogod Bay has not been on the diving map for long, but is establishing itself as a must-visit destination for divers travelling in and around the Philippines. I first visited Sogod Bay 6 years ago staying at the Sogod Bay Scuba Resort, nine months before my son was born (!) so this magical place has special meaning to me.

I was delighted to go back in April this year, bringing with me a group of twelve enthusiastic underwater photographers. We chose this time hoping to catch the end of the four-month whale shark season and because conditions above and below water were expected to be approaching their optimum.

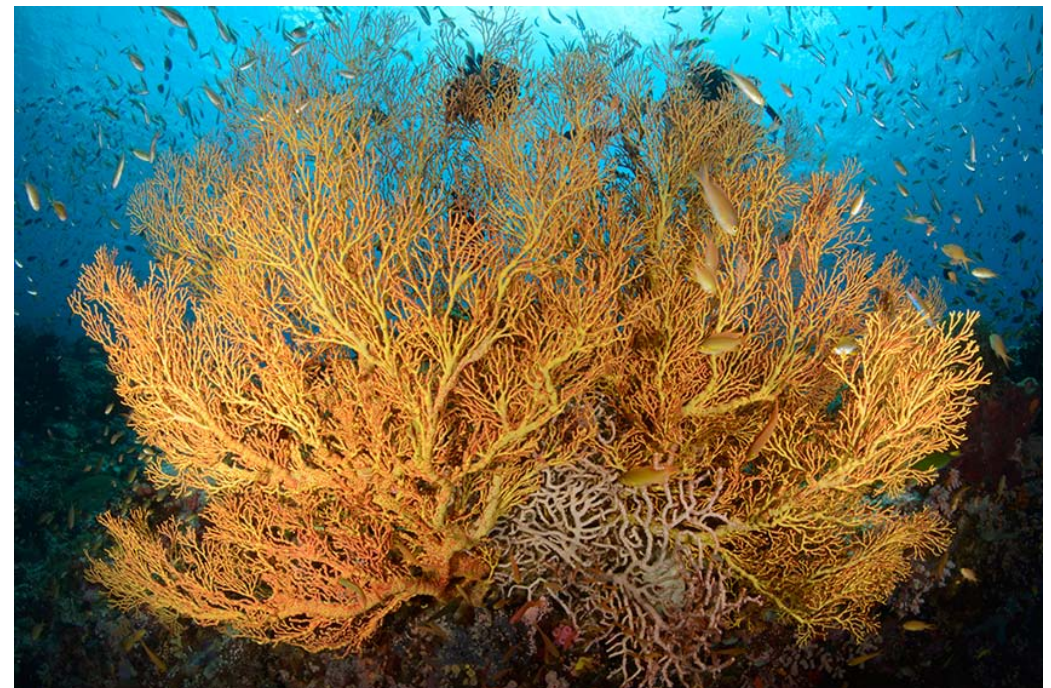
The enchanting Philippines lies in the heart of the 'Coral Triangle', an imaginary area covering the Coral and South China Seas, from Papua New Guinea, across Indonesia and Borneo and to the Northern tip of the Philippines. The 'Coral Triangle' is widely regarded as having the highest diversity of marine species anywhere on the Planet. There are 7,107 islands in the Philippines, and Leyte, situated

in the east of the central Visayas region, is one of the largest. Although it is a little more off the tourist beaten track, the southern province and the reefs surrounding the horseshoe shaped Sogod Bay attract many hardened dive tourists. They have become regarded as some of the most pristine in the country, as dive resorts and dive operations are limited to just a handful centred around the area of Padre Burgos, a small town on the south-western tip of the island.

Padre Burgos has demonstrated that it is a town committed to an investment in sustainable dive tourism activity looking towards the long-term future. Its council is working with the dive resorts and specifically the British N.G.O., Coral Cay Conservation, to secure numerous Marine Protected Areas (M.P.A.s), wherein fishing practices are banned

Sogod Bay Scuba Resort, everything you need for a wonderful dive trip.

Breathtaking scenery as far as the eye can see at Napantao MPA – Nikon D7100, Nauticam housing, 10-17mm Tokina Fisheye INON strobes





Crab Eye Gobies, Olly's Wall dive site, Nikon D7100, Nauticam housing, 60mm macro INON strobes



Underneath the banca, another long, long dive nearly over – Nikon D7100, Nauticam housing, 10-17mm Tokina Fisheye INON strobes

and boat activity limited, thus giving the reef and its inhabitants a chance to grow and flourish. It is also home to an active pier which despite its precarious entry and exit route is recognised as one of the best night critter dives in the region. Offering shallow and benign water and an outstanding richness of subjects, it is an underwater macro photographer's paradise.

Sogod Bay is particularly interesting in that the region has an assortment of different dive sites. Generally, the sites facing southwest

are predominantly covered in hard corals due to exposure to the strong summer winds and waves of the 'Habagat' season. Inside the bay the reefs have a higher cover of soft corals and sponges and other organisms that cannot tolerate the increased wave action. Furthermore, coral expert, Dr. Douglas Fenner, wrote that the reefs around Southern Leyte, housed vertebrate and invertebrate species numbering far above average for the Philippine surveys he had conducted.

Southern Leyte is not just for those divers looking for an array of

coral colours, but is also great for those looking for exceptional macro life. Ranging from the tiny Pygmy Seahorse, *Hippocampus bargibanti*, to nudibranchs, which scatter the bay in weird and wonderful variations, small, curious critters at newly discovered sites such as 'Little Lembeh' are just waiting to be spotted by the keen macro eye. From the tiny to the enormous, the largest fish in the sea, the Whale Shark, *Rhincodon typus*, visits Sogod Bay, arriving in numbers in December as sea temperatures drop, staying feeding on the numerous

plankton blooms, through to April when they move on North towards Taiwan.

This period, December through April is considered the 'high season' as tourists come to see the Whale Sharks, however, the weather at this time is not always favourable, with 'Amihan' season bringing rains from the northeast. The visibility increases up to 30m or more over the spring as temperatures rise and plankton decreases, with April – June offering near perfect diving conditions. The 'Habagat' season runs through



August and September, with occasional strong south-westerly winds when diving is confined to the inner, calmer waters of Sogod Bay. This is generally marketed as the Philippines ‘Typhoon Season’, however typhoons are extremely rare in this area, as Southern Leyte and the Visayas are south of the typhoon belt, which passes through Manila and Northern Luzon. The Autumn months of October and November can offer some lovely, sunny conditions for diving with moderate sea temperatures.

Unfortunately for the region, three years ago a relentless invasion of uncountable numbers of highly destructive crown of thorns starfish arrived in droves, feeding on hard corals and all but wiping out several of the previously pristine dive sites. Fortunately the local dive centres and marine park rangers came together and actively hunted the crown of thorns, injecting them with a diluted vinegar solution, and saving many key dive sites from the vicious onslaught.

Local dive guide Pedro Batestil, was visibly close to tears as he recounted seeing some of the

(Top left) Nudibranchs in many wonderful forms are commonplace in the bay, Buluarte dive site, Nikon D7100, Nauticam housing, 105mm VR macro, FIT +5 and +8. INON strobes

(Top centre)

Look on the numerous fire urchins for the very photogenic Coleman’s shrimp, Little Lembeh dive site, Nikon D7100, Nauticam housing, 105mm VR macro, FIT +5 and +8. INON strobes

(Top right) Juvenile flamboyant cuttlefish, spectacular and fascinating, brave and bold. Little Lembeh dive site, Nikon D7100, Nauticam housing, 60mm macro



Anemones and anemonefish appear throughout the region in all their variance and splendour. This one was at Olly’s Wall dive site. Nikon D7100, Nauticam housing, 105mm macro. INON strobes

reefs he had grown up with being decimated by the crown of thorns attack. More philosophical, seeing this as a natural phenomenon and an opportunity for the reef to regenerate, Sogod Bay Scuba Resort’s owner, Phil McGuire, who was a key player in the fight to save the region’s corals, has now instigated a coral regrowth programme, planting primarily branching corals throughout the bay. He is planning to offer an interesting opportunity to divers to become involved in the implementation of this

programme. Another positive result of the invasion is that local dive companies have begun exploring sites further afield with some very pleasing results.

The bay offers 20+ dive sites but here I have listed four which our photographic group found to be the most outstanding.



Turtles are often seen feeding on the lush soft corals at Napantao MPA. Olympus EPL5, Nauticam housing, 8mm Panasonic fisheye. INON strobes

Napantao MPA

This dive site, for good reason, is seen as the jewel in Southern Leyte's crown. It is one of the longest established MPA's in the province and its clever and strict policy of no fishing rules have allowed this area to truly flourish.

The MPA covers a large area with two full dive sites both with deep vertical walls dropping into the blue abyss. It is a fabulous wide-angle dive with millions of orange and yellow anthias swarming around large green tree corals (*Tubastrea Micrantha*)

synchronised swimming into the often-strong current. The wall is home to an amazing array of large sea fans, corals, whips and sponges and closer inspection can turn up hidden gems such as the fascinatingly ugly giant frogfish.

On top of the wall is a 9m large basin which is known as the 'Fish Bowl' where thousands upon thousands of small reef fish gather with schools of Unicornfish, Chub, Mullet and Surgeonfish among many, many others. Turtles are regular visitors to the fish bowl and are



Feeding porcelain crab on a night dive on Max Climax house reef, Nikon D7100, Nauticam housing, 105mm VR macro, FIT +5 and +8. INON strobes

unphased by approaching divers. Our group found this site so conducive to photographic opportunities that we visited several times over the ten days that we were there.

Padre Burgos Pier

For the macro photographer, this site is quite simply outstanding. When we first went to the area several years ago, there was tension between the divers and the fishermen and I heard tale of bricks and other debris being thrown onto divers, easily identifiable by their strong torches. Now though, a

timeshare system has been instigated with divers only permitted to use the pier on Monday, Wednesday and Friday, the remainder of the time it being used by the local fishermen.

It is truly a muck dive with debris discarded from the town forming perfect homes for an abundance of weird and wonderful marine life. Seahorses, stargazers, nudibranchs, basket stars, cup corals, octopus, cuttlefish, frogfish, decorator crabs, razorfish, pipefish, reptilian snake eels, the list goes on. We spent many happy hours under the pier in



Giant Frogfish (spot the pink one in the background!) nestle among the hard corals on Napantao MPA – Nikon D7100, Nauticam housing, 10-17mm Tokina Fisheye, 1.4x Kenko teleconverter. INON strobes

among such a rich diversity of species and photographic subjects.

Little Lembeh

Little Lembeh is one of the sites which has been discovered recently following the crown of thorns invasion. The site is a muck diver's heaven with black sand much like its namesake, Lembeh in Indonesia. This is an excellent site for practicing photographic techniques with numerous encounters with some wonderful critters. Examples that we saw are the stunning fire urchin with resident Coleman's shrimp and zebra crab, tiger shrimp, sea moth, mimic octopus, seahorses, porcelain crab in their anemone homes, flamboyant cuttlefish, the list goes on. As this is a gentle slope, dive times for our group exceeded 100 minutes each time we visited this excellent site.

Lungsoda'an MPA

This is Sogod Bay Scuba Resort's house reef and, whilst having been a partial victim of the crown of thorns still provides subject rich

encounters at all depths. There are regularly frogfish found here, hiding in sponges, pygmy seahorses are found on the gorgonians, hairy squat lobsters hide in the enormous barrel sponges, ornate ghost pipefish, whip shrimp, nudibranchs, xeno crabs, and even large schools of sweetlips. The site is also used for night dives when the Padre Burgos pier is off limits and provides excellent opportunities to see feeding porcelain crabs, hunting octopi and even the occasional sleepy turtle.

Thanks to Olly Wood for his contribution to this article and local knowledge of the Sogod Bay area.

Dr Alex Tattersall

Dr Alex Tattersall will be running another underwater photographic trip to another region of the Philippines, Puerto Galera, in March 2014. Bookings through Oonas Divers

www.oonasdivers.com

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Algarve's Ocean Revival Project

by Augustus Salgado

Just five minutes before two o'clock in the afternoon on the 21st last September, the fourth and last ex-Portuguese Navy ships – the hydrographic research ship Almeida Carvalho – started her controlled dive to the ocean's floor, by the expert hand of the Canadian Artificial Reef Consulting (CARC).

This ship joined three other ex-Portuguese Navy ships – the Zambeze (44 meters ocean patrol boat), the Oliveira e Carmo (85 meters corvette) and the Hermenegildo Capelo (102 meters frigate) – all sunk 1,5 nautical mile from Alvor beach, in the Algarve, creating one unique underwater park. All these ships, with a common background, create the largest single artificial reef structure in the world, freely accessible to all.

With the sea bed around 30 meters, the upper structures of the ships are at a depth around 15 meters and the main decks around 20 meters, making them accessible to all levels of divers. The ships were fully cleaned of all hazardous materials, and openings were made all around the ships' structures, so that a diver once

inside a compartment will always see a way out in front of him. Also the ships' bridges have openings on top, allowing even Open Water divers to enter them.

But the project doesn't have only recreation objectives, as the new wrecks will also be closely followed by biologists that will monitor the marine life grow in the new underwater structures.

Although some believe that this project started only one year before when, for the first time, the patrol boat Zambeze and the corvette O. Carmo were sunk on the same day – 30th October 2012 - it really started in 2006, by the hand of its promoter, Luis Sá Couto.

Even though the Portuguese Navy didn't take long to see the potential of the project, Luis had to

Inside the main engine room of the ex-Portuguese Navy corvette Oliveira e Carmo. Nikon D300, SEALUX Housing, Tokina 10-17 mm, at 10 mm, f.6.3, 1/30, iso 200, one Inon Z-240 on housing, one Inon Z-240 remote triggered by Tigerfish slave sensor.





The ex-Portuguese Navy corvette Oliveira e Carmo, seconds before she disappears from the surface. Nikon D300, Sigma 70-300mm, f.9, 1/640, iso 200.

struggle against all kind of difficulties and lack of vision by both civilian and governmental entities.

His persistence was finally rewarded 6 years later, when Almeida Carvalho, was finally sunk. With all the ships sitting in the bottom in the upright position, after a security verification by the Portuguese Navy divers, the ships were opened to recreational divers, on the same day they were sunk.

So far the project has cost 2.5 million Euros, but Sá Couto believes that the investment will be regained in

short time. With direct flights to Faro (40 minutes drive to Portimão) from Northern Europe - especially from England and Germany -, he expects to reach 90,000 dives yearly, by 2020. Just in the first 8 months and with only two ships sunk, more than 4,000 dives were made, which represents an increase of over 40% in comparison with previous years.

To complement the underwater park, the project also includes:

An Exhibition Centre on land, where the history of the sunken fleet is documented with drawings, photos



The main gun director of the ex-Portuguese Navy frigate Hermenegildo Capelo. Nikon D300, SEALUX Housing, Tokina 10-17 mm, at 10 mm, f.10, 1/100, iso 200, one Inon Z-240 on housing, one Inon Z-240 remote triggered by Tigerfish slave sensor.

and films of the ships, the chronology of his career and documents about its historical context;

A hyperbaric chamber, located in Portimão, at the service of the local community and available to any and unlikely emergency dive;

Other routes underwater, including the identification, cataloging and dissemination of other dive sites, demarcated and protected, allowing divers to safely explore the many sights of the region.

With good diving conditions 300 days yearly, and with water temperatures ranging from 14° to 22° C, the dive centres in the Algarve usually conduct two dives on each trip, usually in the morning. In the summer months, however, they normally do two trips daily, being the morning dives the most pleasant, because of the strong breeze that arrives early in the afternoon.

Portimão is the closest town near the underwater park, and it has plenty



Minutes before the sinking of the ex-Portuguese Navy frigate Hermenegildo Capelo. Nikon D300, Sigma 70-300mm, f.18, 1/200, iso 200.

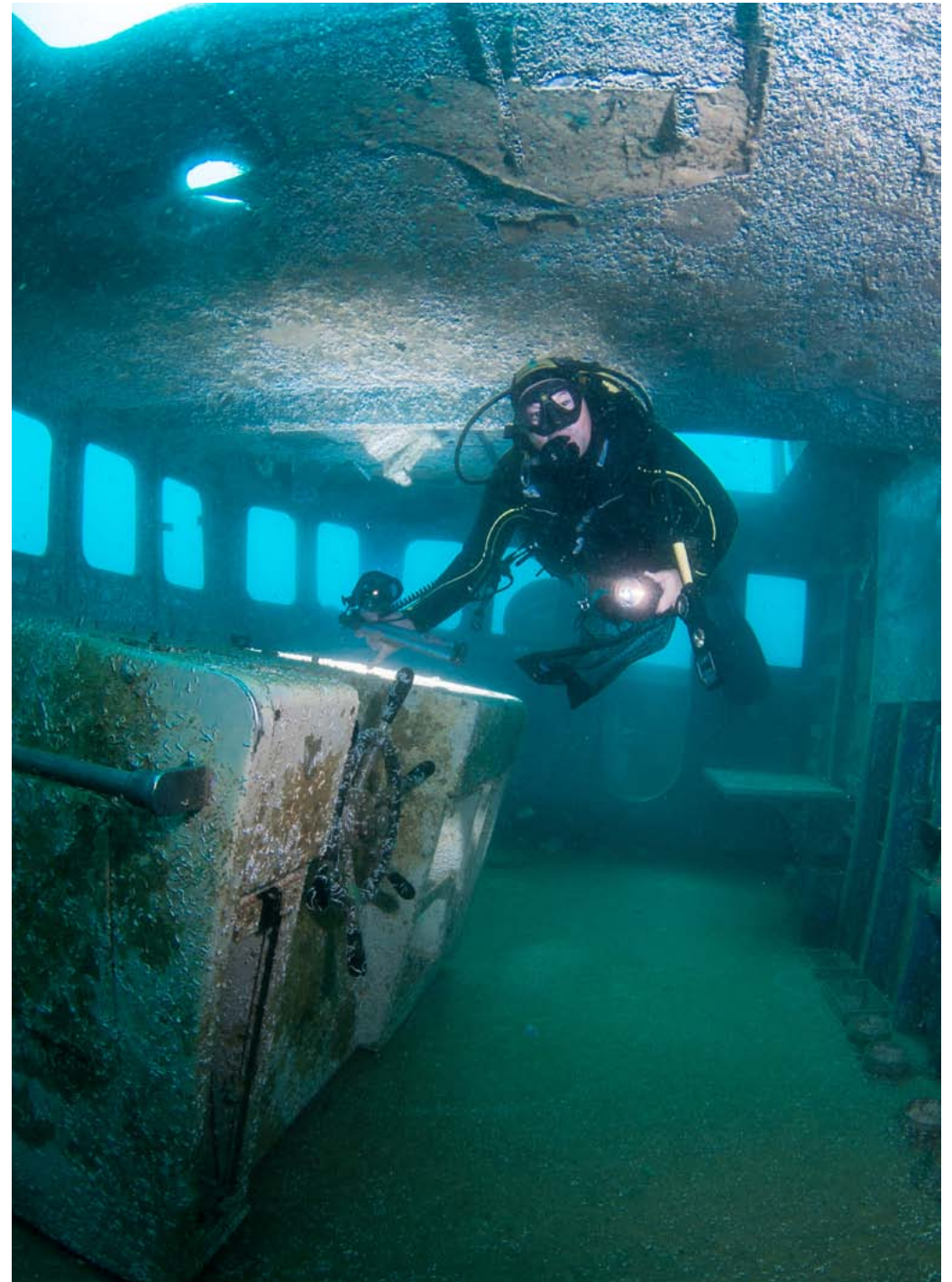
offers of accommodation ashore and restaurants, and although the Ocean Revival project came from Luis Sá Couto, the owner of the SUBNAUTA diving centre (Portimão), all the nearby dive centres can and are diving in the park.

Using the SUBNAUTA as an example, divers are asked to get to the dive centre around 0800, in order to get their diving equipment ready and checked. In this centre, you just need to bring your diving certifications, as the dive package includes all the diving equipment that is well

organized by types and sizes.

Having your equipment ready and checked, your gear is then taken to one of the three SUBNAUTA's dive boats – a 10 meter RIB, with two 90 HP outboards; a 12 meters RIB with two inboard Diesel engines 270 HP

The ex-Portuguese Navy corvette Oliveira e Carmo's bridge. Nikon D300, SEALUX Housing, Tokina 10-17 mm, at 10 mm, f.7.1, 1/50, iso 200, one Inon Z-240 on housing, one Inon Z-240 remote triggered by Tigerfish slave sensor.





A sponge at the ex-Portuguese Navy corvette Oliveira e Carmo's just after 10 months. Nikon D300, SEALUX Housing, Tokina 10-17 mm, at 11 mm, f.9, 1/60, iso 200, two Inon Z-240.

(Left) Going down the chimney of the ex-Portuguese Navy corvette Oliveira e Carmo. Nikon D300, SEALUX Housing, Tokina 10-17 mm, at 10 mm, f.8, 1/60, iso 200, one Inon Z-240 on housing, one Inon Z-240 remote triggered by Tigerfish slave sensor.

and a 18 meter multi-hull ship, for live aboard – that you were assigned to, so that your gear is already on board you arrive.

Meanwhile, the divers are getting into your dive suits and having the diving briefing, all in the centre's excellent installations.

You are then taken to the

Portimão's marina, by golf cars, to your assign diving boat but, before o step in, you will have a small briefing about your specific boat.

As the underwater park is just 3 miles from where the boats are, the ride takes just 10 minutes until the boat is moored to the chosen wreck's bow buoy. In the summer, it's not

uncommon to see all the buoys occupied, and some with more than one dive boat on each.

With high expectations of what lays bellow, people start to gear up, quickly jumping into the water with their assigned buddies and their dive guide. As the divers start their descend, the shape of the ship starts to get bigger and bigger as the 20 meters from the surface are covered.

Reaching the main deck, groups split up and start to explore the ships, according to pre-dive briefings, entering a new realm to most of them. The first thing a diver notices is the amount of life that the “older” wrecks already have after only some months underwater.

Although torches are carried by all, once inside the wrecks, and after the divers’ eyes adapt themselves to the low light, the extra light is only needed to check for details. The several openings along the structures, allow enough light to enter the wreck for a safe navigation between the corridors and rooms inside the hulls and, in case of emergency, they are wide enough to let a diver pass to the outside.

Even diving with Nitrox, with depths inside the wrecks raging between 15 and 30 meters, the bottom time is around 40 minutes that allows divers only to complete one of the several different tours that can be made on each wreck. This diversity of routes reduces the chance of meeting the other group from your boat, or even from other boats. Also, you’ll want to dive several times in the same wreck, as other divers start telling what you missed, by not going the other route.

On returning to the surface, and as experiences are exchanged between the groups, a light snack is served while the crew change our tanks and move the RIB to the second dive spot of the trip.



The ex-Portuguese Navy corvette Oliveira e Carmo's ship galley. Nikon D300, SEALUX Housing, Tokina 10-17 mm, at 10 mm, f.3.5, 1/15, iso 200, one Inon Z-240 on housing, one Inon Z-240 remote triggered by Tigerfish slave sensor.

On completion of the second dive, the boat just takes another short 10 minute ride back to the marina and all the process is then repeated in reverse. Divers are ferried on the same gulf cars back to the dive centre, while their dive gear is taken cared again by the staff.

Although there are several different dive sites to dive in Algarve – including several older wrecks

and places full of marine life – since October last year, most of the dive trips the centres around the underwater park go to is for this unique underwater park and its four ex-Portuguese Navy ships.

Augusto Salgado
www.subnauta.pt

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As you know, the current issue of Underwater Photography is free to download but all of the previous issues, going right back to Issue 1, are still available to download for just 99p per issue. It's a fantastic reference library chronicling all that has happened in underwater photography over the past 10 years.

Turks & Caicos

by Simon Higton

The Turks & Caicos islands pride themselves with the beautiful surroundings they have to offer to the outside world. “Beautiful By Nature” is the slogan they use in their official advertising campaigns with “Clean by Choice” being the tag line. If you visit the main Island of Providenciales then this soon becomes apparent as you walk the length of its award winning grace bay beach. When the sun sets to the west it creates the classic Caribbean image with a long clean sandy beach, lazy palm trees, crystal turquoise water and the sun drops in at the end of the bay, almost as if it was engineered to be perfect.

The islands continue to show off their colours as you drop beneath the surface. The majority of dive sites around the islands are designated marine parks and have permanent moorings in place for boats to tie to. Most of my diving life has been spent diving the northern Red Sea, which has a fantastic array of hard corals. When I started to work here in the TCI I was blown away by the variety of soft corals I was presented with.

The islands all sit on top of a large lime stone plateau fringed with coral reef and sandy Cays. Off to the east the capital Grand Turk serves as a hub for passing cruise ships and has some great dive operations to accommodate. Throughout the middle islands there are some scattered named dive sites including its very own ocean blue hole. The main hub for diving though is based in Providenciales, which boasts a number of land based operations and sustains two live-aboard vessels! North west



The colours available from the reef are truly breathtaking and offer great opportunities to frame the sea life. Nikon D600, Tokina 17-35mm, Hugyfot Housing, Fisheye Dome, 2x Inon 240z Strobes. ISO 320 1/80th f16

point is often the first port of call but is the least glamorous of offerings around the islands. A number of big wall sites are available and an old steel structure by the name of “The Thunder Dome” offers protection for an array of schooling grunts and jacks alike.

West Caicos is possibly the most famous area to dive and offers divers protection from the consistent easterly winds, which enables calm

diving all day long. With just over 2 miles of wall diving you can spend a while exploring this island. This area in particular is known for its gully’s, coral outcrops and tame encounters with the local reef sharks.

French Cay is the final stop for most dive operations and sits right on the southern edge of the Caicos bank. It’s a small sandy outcrop but the reef alongside stretches for miles. The few named



*The lionfish population has made its way down here but unlike some Caribbean islands they are not actively hunted due to the shark population
Nikon D600, Tokina 17-35mm, Hugyfot Housing With Fisheye Dome, 2x Inon 240z Strobes. ISO 320 f18 Shutter 60*

sites available offer the best of the islands diving with dramatic walls but fantastic top reef to compliment it. This combination attracts a number of nurse sharks to the area along with other large pelagic animals such as eagle rays and Caribbean reef sharks.

The reason the Turks & Caicos appeals to so many people around the world and the reason they book to come back to these islands year on year is that there is always a wide range of diversity guaranteed when

you get below the waves. Throughout the year the western fringing reef of the Caicos bank offers divers, and specifically photographers, the opportunity to see large pelagic animals, macro creatures and a healthy backdrop of coral reef in the same dive. West Caicos, for example, has a shark population that has become rather comfortable with the divers visiting their habitat and will allow photographers to spend some intimate time getting the perfect wide-



*The sea life are used to having divers take their picture and will often behave by facing in the right direction.
Nikon D600, Tokina 17-35mm, Hugyfot Housing With Fisheye Dome, 2x Inon 240z Strobes. ISO 400 f20 Shutter 60*

angle shot. Down towards French Cay there are often sightings of Eagle rays that are spotted out in the blue but also fly over the top reef of the named dive sites. From late December through to early April there is also a chance of having an encounter with a passing Humpback whale on its migration to and from its breeding grounds in the southern Caribbean.

For something a little easier to capture, the colourful reefs of the islands are breathtaking and allow

the aspiring photographer a chance to practice framing shots and playing with a rich background to frame the fish life against. The rich corals play host to a strong display of Caribbean Macro life. Spider crabs are abundant here along with a strong range of decorator crabs, cleaning shrimps and banded coral shrimp to name a few. As the seasons change we often see an increase in Nudibranch with the White Patch Long Horn being very common, Leach Head Sea Slugs and even the



Turtles often feed in front of the camera and allow divers to spend great amounts of time getting the picture just right.

Nikon D600, Tokina 17-35mm, Hugyfot Housing With Fisheye Dome, 2x Inon 240z Strobes. ISO 320 f20 Shutter 125

rarely found Painted Elysia being spotted.

There are not many wrecks to be found on SCUBA here but there are a number of old grounded ships which offer a home to sea birds and can be snorkelled on a calm day. Beneath the sea there are a few tales of history to be found. Possibly the most famous is The Thunder Dome found at North West Point. Once home to a free diving French reality TV show

(See Youtube for the trailer),

it now lays dormant in thirty feet of water. Hurricanes have since broken it into pieces but it offers refuge for large schools of posing Grunts and a hotel for turtles to spend their evenings undisturbed, that is until the night dive begins. One of the oldest features to be found is the Spanish anchor at West Caicos, found on a dive site of the same name. Suspended at the end of a small gully on the reef wall it has been wedged in place since the 1600's, they say, and is



The sharks are relatively docile but take interest in divers, often getting close enough for some practice with the wide angle.

Nikon D600, Tokina 17-35mm, Hugyfot Housing With Fisheye Dome, 2x Inon 240z Strobes. ISO 320 f18 Shutter 125

now home to a variety of corals and sponges. Now a feature of the area it offers a great opportunity for divers to get their photo taken with a famous feature of history. All in all the Turks & Caicos offers a great variety of sea life and the conditions allow an aspiring photographer to practice a full range of techniques in relatively consistent conditions.

During my time living here in the Islands I have only just begun to scratch the surface of the photographic

opportunities here and the possibilities truly are endless. The only real variation in conditions is when the eminent threat of the hurricane season is upon us. If you time it right then being here during the stormy season can work in your favour as people reduce their prices and very often the dive operations are naturally a little quieter. The sea temperature only fluctuates by a couple of degrees centigrade throughout the year but I just dive a 5mm wetsuit year round



*Practicing framing is a lot easier when the subject is stationary.
Nikon D600, Tokina 17-35mm, Hugyfot Housing With Fisheye Dome, 2x Inon
240z Strobes. ISO 320 f20 Shutter 100*

and it keeps me warm. The air temperature fluctuates very little with highs of thirty two and lows of twenty five centigrade, but being a Caribbean island there is often a consistent breeze from the east.

There are a large number of named dive sites here on the islands and there are a lot more being added over the coming months too. The REEF foundation, www.tcreef.org, have been working to not only maintain present moorings but also to install new ones. The moorings

get damaged by the boats that use them, some times they get damaged by accident and some times it's from natural wear. A quick email to REEF and the majority of the time the mooring is fixed on the following weeks visit. Their aim is to protect the wonderful environment on offer and by installing new moorings is one way to achieve it. They use what is known as a sand screw, rather self explanatory, and then attach a line and buoy with a breaking strain to hold anything from day boats to live-

aboard's. Diving new sites is always exciting and can bring up some fantastic surprises. It also ignites that sense of exploration that is naturally found in any diver.

People have been diving here for many years and with the support of such foundations they will be here for many years to come. I think the main attraction of the islands is its consistency to deliver an all round diving experience. From all the photographers I have met here, who come back for that reason, they tell me that the results are always good. If your just a beginner, like myself, or an established professional then there is always something here to keep

you interested. Not only that but its in a consistently warm and relaxing environment.

Simon Highton



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

Uw photo techniques - Balanced light, composition, etc

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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.
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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 144dpi

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

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

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

Parting Shot 1

Sometimes your most popular diving photo can come when you least expect it, and to your surprise may not even be taken underwater.

Back in July 2013, hundreds of divers descended on the southeast coast of Ireland to attend a dive rally where divers camped beside and visited some of the best underwater sites in Ireland. After the first day's dives were over, myself and my dive buddy Balazs Bauer were soaking up the sun's rays, when itchy feet brought an end to our laziness and we decided to take a walk along the coast.

We came to a shore dive site called Solomon's Hole, an area I hadn't dived in years, but which I had been anxious to get back to. The site is an archway over a gully leading out to the sea. On that day, the glorious weather, calm seas and emerald green water was a magnet to us and we were compelled to go back and get our gear, and return to try a photo shoot.

I entered the water on snorkel gear and had the camera handed to me. I watched Balazs shuffle towards the edge of the rock and fired a test shot. The second shot I took was the one showing Balazs frozen in mid air over the water. And before anyone says it, I know he should probably have been holding his mask as per training, but what can you do? It was a once only shot. We continued the shoot for the next hour and got some nice images.

The light was wonderful, bringing an emerald colour to the water. Reviewing the images after the weekend, this one jumped out at me as a possible cover shot. Coincidentally, the bumper 50th anniversary edition of the Irish dive magazine "Subsea" was about to be published and as luck

would have it, this photograph was picked by the Editor to be on the cover.

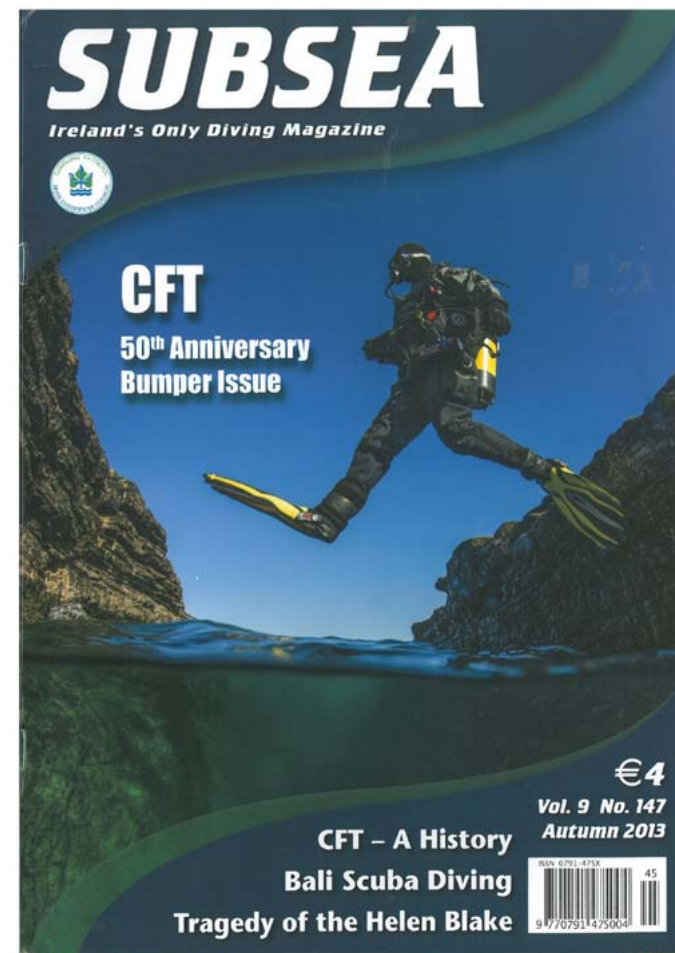
I suppose from their viewpoint, it represents the person breaking the boundary between land and sea. Subsea magazine can be viewed for free at <http://diving.ie/subsea/subsea-online/>

The thing to remember with any image you take is that if it contains a diver, particularly someone who poses for you, then you are not the only one who has a stake hold in the image. The diver in your image will likely have posed for you numerous times, waited patiently while you changed your settings, cursed silently behind their regulator while you indicated "just one more shot, one more.....".

So, while I take a lot of satisfaction from a picture that pleases me, I understand that more often that not I am only half of the package and I'm always grateful for their help. A willing dive buddy is more important than any piece of equipment, so treat them well.

Image taken using a Canon 550D with Aquatica T2i housing. Twin Inon z-240 strobes. Tokina 10-17 lens. 1/200 f8 ISO 100

Ivan Donoghue



Do you have an image which has a 'story within a story'? If so we'd love to hear from you. E mail us and yours could be the next "Parting shot". peter@uwpmag.com

Parting Shots 2

Of all the fish we see around our coast the Tompot Blennies are definitely our favourites; their cute dorky looking bug eyed and rubber lipped faces staring out at us never cease to be a highlight of the dive.

For some two years we have been visiting a dive site that is populated by a fair amount of Tompots, and as luck would have it one particularly photogenic guy is easy to observe and always in the same crevice so the decision to chose him as the focus (pun intended) of our attention was an easy one.

At first he was quite shy, then as the weeks went by the shyness dissipated and he began to gain confidence and after a while the gold veined orange smiling face now greeted us to pose on every dive.

This continued for some time then one day he made a brief foray out from his home, and a few weeks later he was getting braver still resting on an outstretch hand.

Many more visits later and to our amazement he started to settle on us, at first swimming along the arm before finding a safe place to hide amongst the regs or bcd.

The first time this happened we were so surprised we didn't take photos and thinking this would not

happen again thought we had missed the chance of getting pictures, then the next time the same thing occurred we were ready

Brilliant we got our pictures, this behaviour has continued with the Tompot sometimes resting on our 2nd stage with the bubbles flowing over him.

With many dives and a lot of patience it appears we have gained the trust of our friendly Tompot which has not only rewarded us with an unforgettable experience but left us wondering if he will be there to greet us when we return next year.

Gary Carpenter
www.fireflies.org

*Olympus OM-D E-M5, Nauticam
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