Underwater Photography

a web magazine
Issue 44
Sept/Oct 2008

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A web magazine UwP44 Sept/Oct 2008

Cover photo
by
Brooke Mayo

Underwater Photography
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Publisher/Editor Peter Rowlands
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Editorial

High ISO performance

The latest cameras from Nikon, the D3 and D700, mark a significant step forward for underwater photography. Not because they are Nikon's first 'full frame' cameras but because of their high ISO capability.

Charles Hood's article in this Issue shows three examples taken with the D3 at 6400, 12800 and 25600 ISO and I can assure you that I have not mistakenly added a '0' to each figure. In the good old film days, 400 ISO (whatever happened to good old ASA?) was a fast film which produced noticeable, but artistic grain. Use Agfa 1000asa slide film and the grain was the size of golf balls, well certainly small golf balls.

With these new Nikons we can now shoot at 6400 and hardly notice any image degradation. Step it up to 12800 and 25600 and, yes, there is some digital noise but if you are up against it light-wise you will still get a perfectly useable image. These are levels unheard of previously and will allow us to capture better images at depth by available light which is exciting news for my type of photography.

Dear Santa, This year I would.....

News, Travel & Events

North Sea Film Festival

Museon The Hague Netherlands
November 7, 8 and 9 2008

After a first successful edition it did not take long before it was decided this would be the start of a long tradition! The festival will feature 2 categories; a category for professional production bureaus and a category for independent producers.

Each day some 20 films will be shown in 2 hour film blocks. In Q&A sessions filmmakers will answer questions from the audience.

Like last year presentations and workshops will be an integral part of the festival. Planned subjects will be on filming whales and dolphins, but also on underwater filming equipment.

The winners will be awarded The Wave, specially designed by ceramist Edith Madou, but also dive cruises to exotic destinations

The Dutch Underwater Sports Association will be the main sponsor of the North Sea Film Festival, but supported balso comes from the Submarines foundation, the Museon and Panasonic.

Reservations for festival passes can be made on the website through the on-line ticket reservation system. During the festival the Museon hosts the Deep Sea exhibition; the entry for festival visitors is free of charge.

www.northseafilmfestival.com

1st HUGYCUP underwater foto & video competition

Join us and participate in the 1st Hugycup International underwater photo- & video competition with over 16000 Euro in prizes to be won.

The competition takes place at Lembeh strait - North Sulawesi - Indonesia at the Diver's Lodge Resort from 12th of July 2009 till 9th of September 2009. Anyone can attend.

Join workshops and learn more in practice from international award winning Marine Wildlife Videographer Danny Van Belle who will be present during the whole competition

Prizes include a Hugyfot underwater photo camera housing (of the winner's choice) Value : 2499 Euro

Green Force HID 150 light set includes 2 Lightheads - 2 batterypacks Flexi HC - 2 Battery chargers. Value : 2869 Euro

Green Force HID 50 light set includes 2 Lightheads - 2 batterypacks Flexi II - 2 Battery chargers Value : 1719 Euro

SMY Ondina - Liveaboard trip Indonesia. Value : 2750 Euro

S/Y Philippine Siren - Liveaboard trip Philippines. Value : 2400 Euro

3 x Green Force divelight Tristar plus lighthead - Battery Flexi II - Battery charger. Value : 532 Euro each

SEAKING Divers Phuket - Thailand. 4d/4n Liveaboard trip to the Similans. Value : 460 Euro

Gates tripod for underwater videography. Value : 390 Euro

'Onderwaterhuis.nl' gift voucher. Value : 350 Euro

Ikelite divelight (Onderwaterhuis.nl) Value : 100 Euro

www.hugycup.com

NCUPS 44th Annual International Uw photo Competition

The Northern California Underwater Photographic Society proudly presents the 44th Annual SEA International Underwater Photographic Competition.

This "mail-in" underwater digital still and print photography, and underwater videography competition is open to amateur photographers and videographers from around the world. with prizes totaling in the tens of thousands of dollars.The SEA 2008 underwater photographic competition will issue awards for the best work in categories including Macro, Wide Angle, Underwater California, and Marine Conservation; a traditional print category; creative categories in print and digital; and a video category. In the creative categories entrants are encouraged to use any and all tools available to express their individual creativity.

Entries will be accepted beginning in August 2008 with all entries due by October 10, 2008. Winning entries will be announced on the NCUPS website in November 2008.

www.ncups.org.




DIVEQUEST

presents

Explore the Caribbean's barrier reef

Sam Bean is an up and coming talent in underwater photography. Her focus and determination enable her to capture and present award winning images.
This trip to Roatan is a fantastic opportunity to learn how to achieve your photographic best whilst diving on some of the Caribbean's most stunning barrier reef sites.
Sam will be there to support and help you to develop your existing photographic expertise, to work with the strengths of your own photographic system and to explore your creative ideas.
For further details, contact Divequest.

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e-mail divers@divequest.co.uk website: www.divequest.co.uk

EuroTek 08

ICC Birmingham, England
Nov 15th &16th 2008

Organised by divers for divers, the EuroTek.08 Conference and Dive Exhibition will offer unique insights into the world of advanced diving by encouraging a better understanding of emerging technologies.

EuroTek.08 will include some of the most prominent world leaders in their particular fields of expertise; dedicated divers whose wealth of knowledge is second to none,divers who have been instrumental in helping to shape the future growth and development of diving exploration. With a full focus of attention on a wide spectrum of advanced underwater activities: technical, commercial, military, cave, wreck and scientific as well as conservation issues, this two-day EuroTek.08 Conference & Dive Exhibition will merge all facets of diving into one event aimed at promoting the exhilaration and adventure of diving to an enthusiastic audience.

www.eurotek.uk.com

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www.reefphoto.com

Explore the Caribbean's barrier reef with Sam Bean

22nd - 31st May 2009

This trip is a fantastic opportunity to learn how to achieve your photographic best whilst diving on some of the Caribbean's most stunning barrier reef sites.

Sam will be there to support and help you to develop your existing photographic expertise, to work with the strengths of your own photographic system and to explore creative new ideas for photography.

Both experienced photographers and new photographers starting out on the exciting journey of image capture are welcome to join our group. During the trip there will be a number of optional workshops to cover a range of photographic concepts and stimulate ideas for your following dives.

Why not join Sam in the Bay Islands and improve your own photography, whether you hope to enter competitions or simply enjoy capturing those special images for friends and family?

www.divequest.co.uk

Eco Divers Digital Photo Shoot-out 2008

Kungkungan Bay Resort, North Sulawesi, is proud to have been selected by Scuba Diver Australasia Magazine as host resort for its Digital Download photo shoot-out event 2008.

The shoot-out is in a 5-night format between 26 November and 01 December. All are welcome to join irrespective of level of experience, with the emphasis firmly on having fun and learning. There is no entrance fee to pay – all you need to do to join this exciting event is make a normal booking on those dates and let Eco Divers know you would like to join the event.

Prizes will be in three categories: Macro Behaviour, Portrait and Portfolio. The first prize in each category is a Canon EOS 450D camera!

Judging the event will be three very well known personalities from the world of scuba diving and underwater photography; William Tan, Simon Buxton and Mike Veitch.

www.eco-divers.com

Sea turtle hunt in diver's paradise

The Indonesian archipelago is home to six out of seven still-living species of sea turtle worldwide. According to Act No. 1 from 1990 and Act No. 7 of 1999, sea turtles are protected nationwide and the trade with whole animals or parts of them is forbidden.

It has been known for a long time that these regulations have neither been adhered to nor have malfeasances been punished. In Bali alone, 25,000 turtles have been slaughtered most brutally in the last 10 years, with the knowledge of the public as well as the police.

The turtles being processed in Bali have not been caught on the spot - because sea turtles simply don't exist there anymore. They are being delivered from all over the place, but primarily from south-east Sulawesi, a region considered to be one of the best diving spots in the world.

PROFAUNA has been investigating for months and is now able to supply evidence with numbers and names of dealers. Detailed information is at www.sos-seaturtles.ch

About 600 of a total of 1,115 sea turtles from south-east Sulawesi have been caught at WAKATOBI National Park.

The area of Wakatobi is situated between the Banda- and Flores Sea and, at 1.39 million hectares, is the second largest National Park in Indonesia. The impression of tranquility given to visitors is misleading, because the park is where not only sea turtles, but also sharks, napoleonfish and jewfish, are being caught there for the Asian market. The problem is not lack of money – each tourist and diver has to pay. The problem is corruption, centralised bad planning, disinterest, cultural disparity, bureaucracy and lack of motivation.

Here we are not only talking about the protection of a species, we're also talking about animal welfare: the suffering of each individual disembowelled alive.

The animals are being caught with nets, weirs or harpoons or captured when they come ashore to nest. With no food, they are put into small pools filled with brackwater, mostly not deep enough for them to cool down or get protection from the sun, and they sometimes have to wait there for months until a boat will ship them to Bali. We have seen horrible injuries and skin lesions.

Their front legs are pierced and tied up and they are laid on top of each other, and they are then shipped in the hull, with neither food nor water - for weeks. Their lives of suffering then come to a horrifying end in Bali.

PROFAUNA and SOS-SEATURTLES now want to put an end to the sea turtle trade once and for all. The point is to put pressure on authorities as well as organising activities for the public.

This strategies did work very well on the island of Bali where the Turtle trade decreased 90% !!

Police must attend to their duties in south-east Sulawesi, especially in WAKATOBI National Park. PROFAUNA is going to use its contacts among high-ranked government officials. SOS SEATURTLES – as usual - is going to act as a mouthpiece outside Indonesia to spread the word to media organisations throughout the world. This gives everyone interested the opportunity to take part and support petitions and protest letters worldwide.

Of course all these campaigns and activities cost money. SOS-SEATURTLES is a not-for-profit organisation and all donations will be used 100 per cent for the sea turtle conservation projects. Besides private donors we have also been getting support from the dive- and travel industries. All supporters are acknowledged on the SOS-SEATURTLES website www.seaturtles.ch.

Kurt Amsler
www.seaturtles.ch

Discover UNDERWATER Photography

SLR-DC Housings

The Ikelite SLR-DC housing takes full advantage of the digital SLR camera's innovative features. The housing is injection molded of clear, lightweight polycarbonate for strength, visual access to the camera, LCD screens and camera controls. The housing provides controls for most camera functions. Most Ikelite SLR-DC housings include conversion circuitry that provide TTL compatibility with the latest Ikelite DS Substrobes. Many housings also include a Flash Compensation Module which provides over and under-exposure compensation in the TTL mode and easily allow you to switch to Manual Exposure Mode which provides eight power settings. All exposure compensation is done on the back of the housing. There is no need to access complicated camera menus.

Canon
EOS 5D
EOS 20D
EOS 30D
EOS 40D
EOS 350D, Rebel XT
EOS 400D, Rebel XTi
EOS 450D, Rebel XSi

Fuji
S-5 Pro

Nikon
D40, D40x
D50
D60
D70, 70s
D80
D200
D300

Olympus
E-330
E-410, 410
E-510, 520
E-3

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A-200
A-300
A-350
A-700

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Substrobe DS160

From its first introduction in 2001, the Substrobe DS125 became the overwhelming choice of professionals and discerning photographers the world-over. Now the best is even better. Introducing the new and improved Substrobe DS160.

The Substrobe DS160 is compatible with all Ikelite TTL systems and current digital cameras, as well as all older TTL film cameras including the Nikonos system. A variety of sync cords, sensors, and TTL adapters are available to connect to almost any camera system currently on the market.

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Ikelite offers housings for more than fifty different digital still camera models to meet the diverse demands of the underwater photographic community. Ikelite's Compact and ULTRAcompact Digital Still Housings are molded of clear polycarbonate. Dive while knowing your system is safe and have complete visual access to the camera, LCD, monitor and control functions. Most housings are rated to 60m (200').

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New Products

SeaLife DC800

SeaLife has introduced its most advanced digital camera. Sleek, modern design meets high-tech functionality in SeaLife´s new DC800 8-megapixel camera.

With 5 new dive-specific color correction modes, the DC800 makes it easier than ever to take sharp, colorful underwater pictures. Set the camera to Sea mode to restore lost colors typical for underwater pictures.

Easily expand the camera with one or two SeaLife external flash accessories. Quick shutter response for fast action photography. Long lasting lithium battery for all day of diving. Automatic focus from 2" to infinity. Large format continuous video recording with sound.

Depth tested to 200ft the DC800 is fully rubber armored for shock protection. 1-year warranty covers the underwater housing and camera.

www.sealife-cameras.com

Ikelite Housing for Olympus Stylus 1030 (mju 1030)

Ikelite Housing for Olympus Stylus 1030 (mju 1030) The Ikelite Ultra compact digital housing for the Olympus Stylus 1030 really delivers when performance and durability matter. The ULTRAcompact housing is high quality, built to last, and backed by Ikelite's long-standing reputation for excellence.

All camera controls are fully functional through the housing and depth rated to 200ft (60m). Easy open latch and drop in camera loading make set-up a breeze.

Housing measures 6" (15.2cm) wide; 4.4" (11cm) high including controls; 3.4" (8.6cm) deep including port. The housing weighs just 1 lb (0.45kg) above water and is nearly neutral underwater with camera installed.

Includes a 1cc tube of silicone lubricant, vinyl lanyard, flash diffuser, and flash deflector.

www.ikelite.com

Sealux housing for the Sony PWM-EX1

The SEALUX HEDX1 housing represents a reliable, tailor-made housing for the professional High-Definition Camcorder made by Sony. It is the smallest and lightest aluminium underwater housing for the EX1 available on the market. The detachable wide-angle lens ports stand out for the highest degree of flexibility and optical quality possible. The ease of both electronic and mechanical operation guarantees perfect operability in any situation.

L x W x H = 363 mm x 220 mm x 203 mm

Weight with flat port: 9,000 g

Buoyancy of housing with flat port and camcorder: 0.8 kg

Depth rated to 90 metres.

www.sealux.de

Sea & Sea
YS110 alpha strobe

The YS-110α introduces numerous new exciting functions. For example, by connecting it to digital cameras with pre-flash function using a fiber-optic cable, the YS-110α can be used in the fully automatic DS-TTL adjustment mode (Digital Slave TTL).

The DS-TTL adjustment function is also available using the light level control dial for fine control of the light amount when taking pictures in DS-TTL mode. You can also choose from 13 levels of manual control.

The coverage is 105° beam angle (with diffuser), achieved by the balanced positioning of the 3 flash tubes, and the power has a Guide Number of 22.

www.seaandsea.com

Fantasea FSD-770

Fantasea Line announces the release of a new housing specifically designed for the Canon PowerShot SD770 IS / IXUS 85 IS and SD1100 IS / IXUS 80 IS digital cameras.

www.fantasea.com

Ikelite Olympus E-510/520 housing

Introducing a full-featured and affordable underwater housing for the Olympus E-510 & E-520 Digital SLR Cameras.

The compact, clear polycarbonate case provides visibility of its o-ring seals and corrosion-free performance up to a depth of 200ft (60m). Controls are provided for every camera function and kept water-tight with Ikelite pioneered Quad-Ring seal glands--proven to be the most reliable method of sealing controls.

The housing size and weight provide near-neutral buoyancy and superb handling underwater. The included tray with quick release handles allows convenient attachment and removal of Substrobe mounting arms at the touch of a button. The handle assembly itself detaches with the removal of just two screws for traveling. Addition of the #9571.3 1" (2.5 cm) ball at release handle provides an attachment point for most non-Ikelite arm systems.

Built-in conversion circuitry for true Olympus TTL puts perfect exposure at your fingertips. The TTL mode provides four 1/3 f/stop increments over or under flash compensation that is added to or subtracted from any compensation entered into the camera. Seven manual power settings in half-stop increments allow for complete creative control. All choices are obtained by simply rotating a knob on the housing back.

The special TTL conversion circuitry operates perfectly with current model Ikelite DS digital SubStrobes.

www.ikelite.com

L&M Bluefin SR12

Light & Motion is pleased to announce that the Bluefin SR12 video housing is now shipping!

The Bluefin SR12 ($3,799) is a fully featured, enthusiast level, high-definition video camera. Simply put, the Bluefin makes capturing underwater video footage a breeze. With non-penetrating electronic controls there is virtually no risk of the housing leaks typical with mechanical through-hole designs. The 3.5" high-resolution monitor back gives an easy view of your subject and is included with the Bluefin SR12 housing as a standard feature! Whether you're shooting with the standard lens or one of Light & Motion's new Fathom wide-angle lenses, you'll get rich color and deep contrast. The Bluefin SR12 will enable you to create HD footage that you'll be proud to view and share.

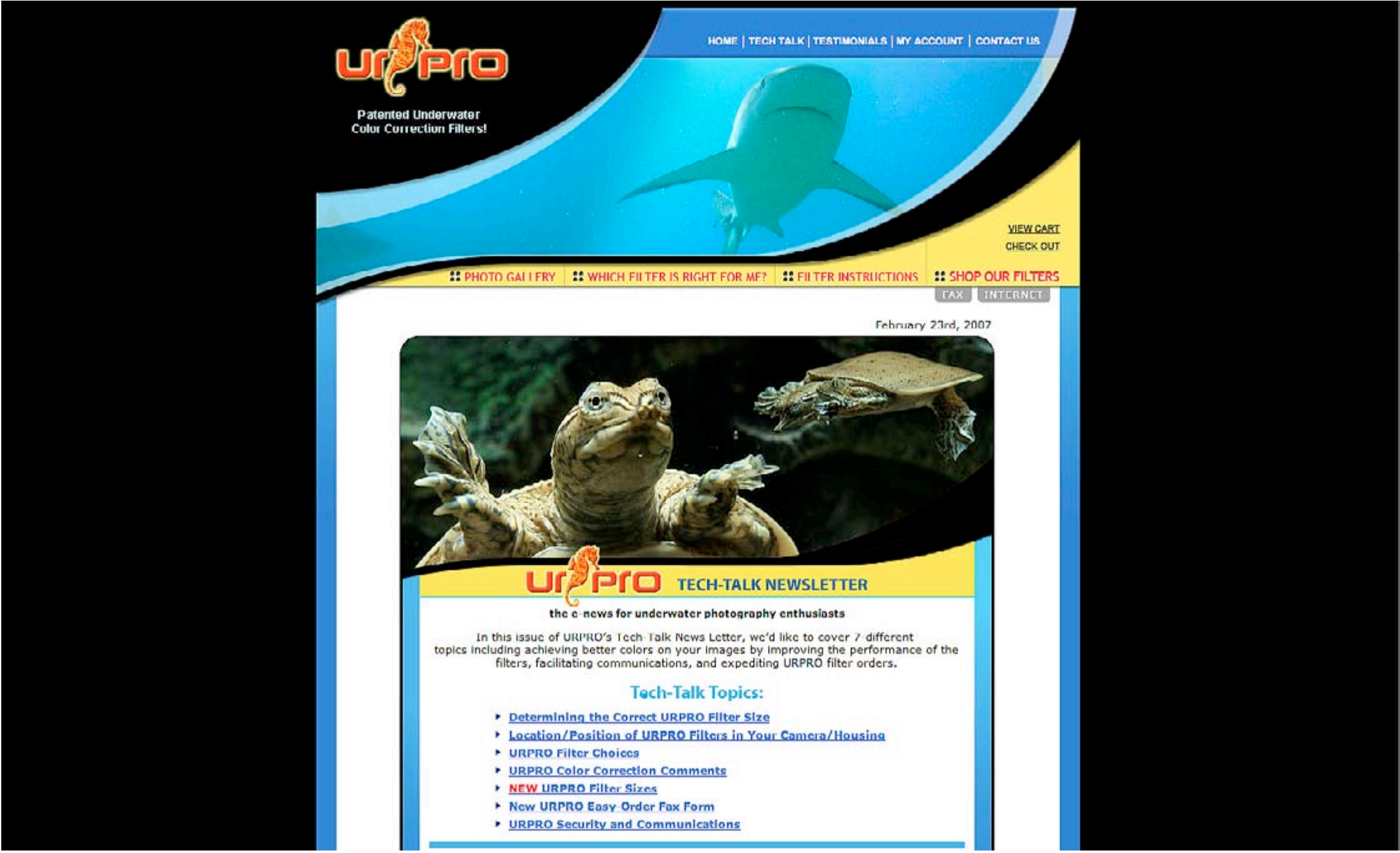
ww.uwimaging.com

INON S-2000 strobe

Inon have announced a new strobe.

The new S-2000 is with dimensions of 64x83.2x106.2mm significantly smaller than its bigger brother, the D-2000. But at the same time it shall almost deliver the same power. The possibilities for adjustments are smaller though and there will be no focuslight – but there will be S-TTL and manual control. The S-2000 will be probably released in summer 2008 – a good option for compact users.

www.inon.co.jp



Click on the link below to go to the Tech-Talk Newsletter

www.urprofilters.com

Nikon D3 & Aquatica Housing

By Charles Hood

One of the issues in this digital age of imaging is that there are a lot of so-called experts out there, all with different views, trying to convince us by using buzz words that their product is the best on the market. Technology per se is generally difficult for the layman to fully comprehend so the boffins rely on the marketing guys to create the spin and put this techno gobbldeegook into what I call gizmo speak, so the end user is convinced that a certain feature is crucial to producing better images than his fellow snappers.

Let me give you a simple analogy. My Landcruiser has a 4.2 litre engine, a Porsche Boxer by comparison has only a mere 2.7 litre engine, both deliver around 240 horse power so which one is quicker? We all know the answer but perhaps to someone who knows nothing about cars given only the engine size as information they would probably pick the vehicle with the larger engine. So to some extent features and specifications need further investigation. Yes, you have to be somewhere in the right area with pixel count, high quality sensor and good quality glass, but at the end of the day it is how the image looks that is of the utmost importance. The quality of light capture, processing of the resulting electronic bits and bytes and final output is what counts.

When Nikon decided to go 'full frame' they made a big deal out of the whole issue. But what they did was concentrate on showing their potential punters the images the D3 produced rather than on hyping up the bells and whistles. Technology was largely left to one side, instead their website was full of high resolution images that one could download and feast one's pork pies on at home on one's computer. The results were simply outstanding. With the camera set at high ISO's, which would be simply not useable on previous cameras, the D3 was razor sharp with not a hint of grain. This single feature alone convinced me the D2x had to go (which successfully sold through UWP magazine) to be replaced by the D3.

At this stage let me point out some of the downsides of using full frame. For those reading who used to shoot on 35mm film you'll be familiar with some of these issues

but for those who have only known digital they may come as a good reason to remain with smaller sensors. Full frame reduces depth of field, so for macro photography it's back to using f22 or even higher. Also a much greater accuracy from the housing manufacturers is required, particularly with domes. If you try to simply insert a spacer – that happens to be physically about the right size, so you can use a wide-angle zoom with a conventional port, it will result in blurred edges and at certain focal lengths a soft image.

Finally lenses are what they say they are and not 1.5x longer, this again will mainly affects slug shooters, their 90mm (effective) macro lens returns to being a 60mm (true) macro. But for me all these issues are largely irrelevant and I could return to using my Nikkor 16mm fullframe fisheye. The DX 10.5mm fisheye is good, but the legendry 16mm is in a league of its own. Also for diver shots my old Nikkor 20mm was dusted off and brought out of retirement, as too was the incredibly sharp (abnormally so) Nikkor 28mm for diver portraits. It is like going back in time, I can now use all my good old-fashioned optics that I know gave me superb results using film but now with digital. The downside is that now I have no excuses!

I'll elaborate a bit more later on about some of the D3's features that clearly put it in the premier league but before I do, a bit about the Aquatica housing. For me the choice of housing was relatively straight forward, I already had a D2x Aquatica housing, I liked it, knew all the quirky adjustments you have to make to it and I could retain the same ports.

When the new D3 housing eventually arrived, Aquatica can be a bit over optimistic with their delivery schedule, it looked quite similar to the old D2x housing. All the controls are roughly laid out the same with a few additions. Yes additions – I thought the old housing had too many controls! However, you do need more to drive the D3. The most important of which is the twin dials that let you change from single to continuous shooting – hardly important you may think, but if you keep rotating it gets you into 'Live View' (see on). Another extra feature added is a lever on the lower front of the housing that locks the port in position. This is a bit fiddly to use – especially with the large dome as it covers the button, but it does mean there is no way the port can be accidentally removed.

With a touch of a single button all the shooting information can be displayed on the rear view screen

All other controls work well, including the focus select lever – I could never get it to work consistently with the old D2x housing. Disappointingly the top viewing window, although large and in the only position I could think of putting it, isn't great. It is virtually impossible see the shooting mode as it's right in the corner. Fortunately Nikon have the solution to this irritation. With a touch of a single button all the shooting information can be displayed on the rear view screen – this is a feature to die for, especially when shooting in dark and/or deep conditions, furthermore the display is backlit and the digits quite large making it easy to read at arms length.

Externally the housing has a tough and scratch resistant black coating contrary to the silver one pictured on their website, and at the back and underneath are two sacrificial anodes that reduce the chance of corrosion in other areas. All buttons have large drain holes either side of them allowing easy access for fresh water in the rinse tank and quick drying.

Underwater it felt very similar to the D2x variant and it took me a

ISO 6400

ISO 12800

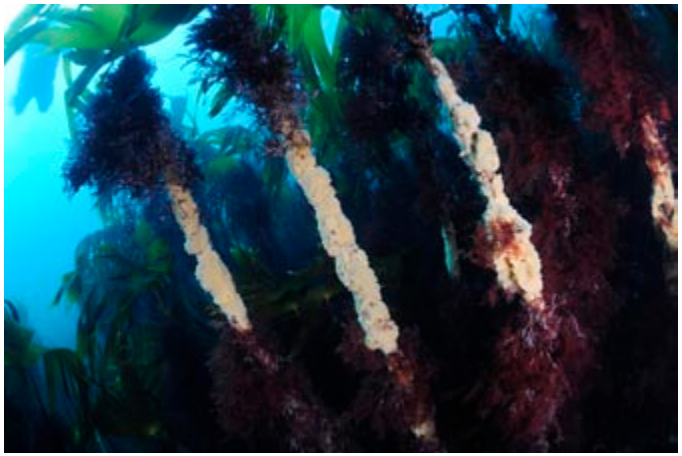
ISO 25600

matter of seconds to get to grips with it. The single feature I found most useful is the one mentioned above, that is camera's shooting details being displayed in the rear screen. As I shoot mainly in manual mode it's fantastic to have all this information at your fingertips rather than having to peer into the top window at the very small icons and numbers. The light meter is simply huge and allows you to accurately determine what exposure to use very quickly. But the big question is how was it at high ISO?

In a single word, as I'm not sure the editor would publish my expletives, stunning. At 800 ISO you just cannot tell the difference between 200 ISO. So for the macro shooters depth of field is back again by simply turning up the ISO enabling you to shoot at f22 or above, as I did after a disappointing macro dive using f11, an aperture that was OK when I previously used with the D2x. And what about higher? At ISO 1600 & 3200 there is very little noise, if shooting wrecks or larger animals it would be very difficult to detect. At a whopping ISO 6400 noise is still perfectly acceptable for similar types of subjects. Hi1 and Hi2 are effectively 12800 and 25600 ISO respectively and yes noise is certainly detectable but perfectly useable if that was the only way of getting an image – I've seen a lot worse images printed in newspapers!

So how does the D3 do it, what's its secret? First of all, the Teflon-heads back in Japan developed a new CMOS (Complimentary Meta-Oxide Semiconductor) sensor with new optical low-pass filters (OLPF). These OLPFs are the key. On the D3's sensor there is an innovative twin-layer mechanism. Just above the Bayer pattern filter are two layers of micro-lenses. The upper ones are physically larger than the pixels below leaving virtually no gaps between it and its neighbours. In any normal camera this would be good enough, however, not good enough for Nikon. They decided that due to circuitry that runs between the pixels, they needed to add a second layer of micro-lens that capture any light that would have otherwise not hit a pixel, ie. Landing on the circuitry instead (note this twin-layer system is not available on the D300). Once virtually every last photon has been collected these are then processed by the D3's new single ASIC (application specific integrated circuit) greatly speeding up processing power (the D2x has two ASICs making it far slower) but more importantly giving extra grunt for more tasks to be completed.

Nikon claim that the D3 has a 1.4 times improvement in dynamic range over the D2x helped by what this extra processing capacity can handle. In a nutshell once all the light is initially processed the D3's ASIC is put to work automatically correcting for lateral chromatic aberration and the effects of vignetting. Nikon have further dispensed with the old optimised image controls and colour mode options, and replaced them with a much more comprehensive Picture Control System giving you complete control over, contrast, brightness, saturation, hue and sharpness. And there's more.



f8 1/60 400ISO 16mm good dynamic range

f8 1/20s 200ISO 16mm very low edge distortion

The rear display is massive.

In situations where the image has highlights as well as very dark patches the Active D-lighting can be put to use. What this effectively does is to automatically adjust the exposure across the frame reducing highlights and bringing up the shadows. This last feature can be very useful when shooting underwater where light can vary as much as ten stops. In practice it works well and certainly gave me images I wouldn't have managed to capture with previous cameras.

The only disappointment I could find is the area of the matrix focussing display. Due to the larger frame size it is considerably smaller when compared to the area of the D2x and D300. If you generally keep the main point of interest in the centre third of the frame then this shouldn't be a problem, but you can't ask it to focus near the edges. For me, shooting mainly with wide-angle lenses, I only use the viewfinder for general aiming, although if you can get close enough the D3 actually gives 100% viewing of the image. If I require more accurate framing then I switch to 'Live View' mode. Similar to compact digital cameras the D3's rear screen can be used to view the frame before exposure. There is a drawback though to using Live View. The camera needs the mirror to be down in order to use its super fast phase-detection auto-focus. That is, it can't focus on-the-fly with the mirror up. Thus you have to slightly depress the shutter, wait until it focuses (the mirror drops) and then depress full way down to take the image. Here again if using wide-angle lenses it isn't an issue but for macro it's virtually useless, unless the subject is static. Staying with the rear display, it has to said, it's massive. Being a gigantic 3-inch 920,000 dot TFT LCD monitor it gives true VGA (640x980) resolution and can be viewed at up to around 170 degrees. It is also considerably brighter and clearer than older Nikon DSLRs.

My final useful feature that I found is that the D3 can take two compact flash cards. This means you can simply carry double the amount of memory or use the second card for either back-up (for ultra mission critical shoots) or you can store RAW files

The D3 can take two compact flash cards.

f16 1/100s ISO800 105mm- pin sharp

on one card and JPEGs on the other. The last feature is great if you are shooting for a client onsite. You can quickly drop the low resolution JPEG card out and download the images for instant review on a relatively low powered machine.

In conclusion the D3 delivers virtually exactly what I need, Nikon have decided to go for quality rather than pure pixel count, and providing you are using the optics to match super sharp prints that would supersede that of tradition medium format are simply not a problem. The low light capabilities and wider dynamic range of the D3 over its predecessors makes it perfect for underwater use. The Aquatica housing for me is a workhorse. It works when the going gets tough. Sometimes on a rolling hardboat it's inevitably going to slide around and take the odd knock. Also I don't particularly take good care of it, yes I protect the port as much as I can but at the end of the day its there to do a job and not look pretty on the mantle-piece. Aquatica housings appear to cope well with the abuse I give them. The controls on the D3 version I suspect have improved over the old generations, they feel a little more positive in their action. Cost wise, don't try and justify the purchase it's simply insane – I've just put off buying a new car for another five years!

Charles Hood
charles@dive.uk.com

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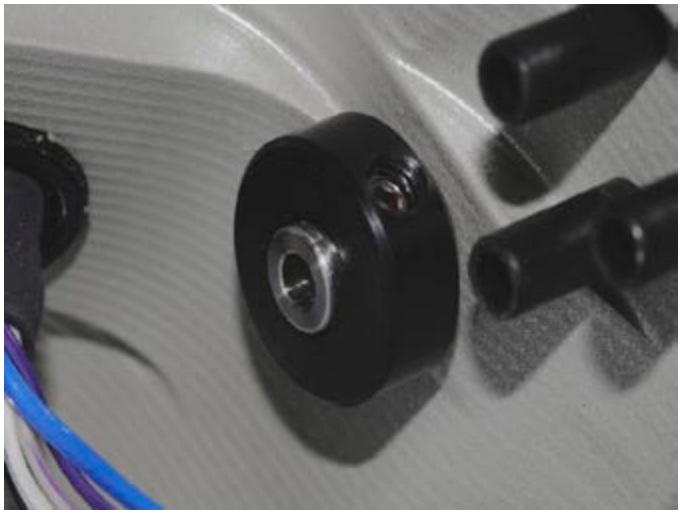
3 into 2 Will Go

by Mark Webster

Nikon have a habit it seems of sneaking up behind unwary underwater photographers and surprising if not shocking us with the announcement of new cameras and lenses. The last ten months have been no exception with the arrival of the D3 and D300 together and most recently the D700. Although we had all anticipated a FX (full frame) chip in a small body following the D3 announcement, many in the industry were surprised at how soon it hit the market. If you have bought a D3 look out for the D3X rumoured to arrive before the end of the year!

If you are a serious or professional land photographer with the need or desire to upgrade regularly to the latest model then the expense is considerable. But for underwater photographers the expense can be terminal! Not only do you have the cost of the camera, but also the even greater cost of a housing and you will have the nagging doubt that by the time the housing manufacturers come to market the next upgrade is almost on us! You also realise that when you try to sell your current kit that the used value will have crashed spectacularly from the original purchase price. Another consideration is computing power and storage – more megapixels means bigger files so upgrading your laptop etc. may also have to be added to the equation. So, many who have just invested in the D300 and a housing in the last few months may be feeling a little bewildered and no doubt frustrated with the temptation of the D700 now dangled like the proverbial carrot in front of them.

Re-designed D300 base plate and the original D200 base plate side by side with D300 in background.



Replacement of shutter mode release/lock control with new shorter control (i.e. for selecting single frame, continuous)

It seems no time at all since I invested in a brace of D200's and a Subal ND20 - in fact it is more than two years which in the digital race seems like several millennia – and I was resisting the temptation to upgrade to the D300 with the logic that skipping a generation would be less expensive in the long run. This was until I spotted an interesting post on Wetpixel by a gentleman named Sam Chae who was busy proving that you could use a D300 in a D200 housing with some very minor modifications. Suddenly the cost of upgrading plummeted to the price difference between selling a used D200 and the cost of a D300, which was already falling! With my interest rekindled I re-evaluated the upgrade advantages of the D300 and contacted Sam to see if he would make additional conversion kits for sale.

The body of the D300 varies very little in size from the D200 and many of the key controls and buttons are in the same place. The larger review screen has moved some buttons a little to the left and the camera body is a fraction deeper, but essentially it will line up with the majority of controls. At the heart of the Subal ND20 conversion kit (Sam has also converted Nexus and Sea & Sea) is a new base plate which shifts the position of the D300 a fraction to line up with all the controls in the front half of the housing. There is also a shorter shutter mode release/lock control (i.e. for selecting single frame, continuous etc.) and for the back plate some small extensions are needed to the existing push buttons to extend and line up with those on the camera and then you are ready to go. The added advantage is that these additions can be removed in a few minutes for use with the D200, so I kept one body as a back up.

I have been using this set up for several months now without problem and the drawbacks of not having a 'real' D300 housing are few. You do lose a little of the viewing area of the screen,

D300 mounted in the ND20 housing.

Extension required for multi selector control buttons – these are M3 stainless washers.

Push on extension pegs for buttons on left hand side of D300 review screen.

but I normally only use this for a quick check of exposure so has not been an issue for me. The only controls that you do lack over the ND30 are the new flash compensation control and the centre button for the multi selector, otherwise everything else is available. The advantages for me in upgrading to the D300 are the improvements in the auto focus system, particularly its speed, accuracy and low light performance. The larger CMOS sensor gives you a little extra resolution and also improved performance at higher ISO speeds plus some improvement in dynamic range which means sunbursts are looking better. You also have small improvements like the 100% viewfinder, the vibrating dust removal tool for the sensor and the ability to display the camera settings on the review screen, which I find very useful, particularly in low light. So the upgrade over the D200 is arguably not huge but if you can do it economically then for me it has been well worth it.

Why you may ask, if this is possible, don't the housing manufacturers offer an upgrade option? There were rumours that Subal would offer a revised back plate and base plate for the ND20, but so far I think only Aquatica has actually done this and they are also considering a dual D700/D300 design. But you can see that it's really not in their interest to concentrate too hard on this as it will inevitably kill some sales of the housings for the new model. Having a larger more universal housing with remote control over the camera via USB is another alternative, but only Light and Motion have done this so far for the D200 but they say there will be no conversion kit for the D300.

You may now be wondering if the D700 can be shoehorned into a D200 or D300 housing? I seems that it might be possible in a Nexus which has a perspex insert in the back plate, but the difference in prism height and viewfinder position will preclude Subal and other brands. If only Nikon and Canon would provide clues to future upgrades and ergonomics of the camera then housing manufacturers could respond and increase the life of a design over two or more models. But sadly we are a tiny consideration in a large market (one of the reasons Nikon abandoned the Nikonos line) and the race to constantly produce cameras with higher specifications is not going to end in the foreseeable future.

To upgrade or not is a difficult question. If you are a fan of the latest greatest kit and simply must have it (and have deep pockets!) or you are a professional who can justify the cost via income generated then the decision may be easy. For those who need a more gentle upgrade path you need to carefully consider the end use of your images and you may find that the quality of image that your current system produces will be more than adequate for quite some time.

Mark Webster
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Reefmote Control

Testing Aquatica's New Remote Device

Story and Photos by Tim Rock

When the folks at Aquatica contacted me and told me they had developed a new remote control that worked with virtually all of its housings, I begged them to let me give it a try. "Jean, let me be the Pacific guinea pig," I begged. After promising not to bug him again until 2010 and buying Blake ringside tickets to a Habs game, they cheerfully relented.

I have a Guam-based marine photo gallery and gift shop that's part of an undersea observatory. Part of what we do is wild spinner dolphin tours three times daily. I thought I could rig a pole cam and get some great dolphin shots. That turned into a bit of a fiasco but every other thing I tried turned out great. Here's all the news that's fit to print.

The unit showed up just in time for my departure for Manta Mania in Yap! So I rigged it up. I then ambushed the wife a couple of times as she came into the house, strobes ablaze, to ensure it worked from distances great and small and then packed it up again and headed for Yap. I waved good-bye to her but she didn't see me.

Upon arrival Bill Acker, the founder of Yap Divers and Manta Ray Bay Hotel, greeted me. He told me something to the effect that the boat leaves in a half hour! We would do a manta dive and then a shark feed! Yikes, baptism by fire.

I studiously assembled the unit and in what was closer to 45 minutes I managed to show at the dock and off we went across the broad aqua lagoon toward Gofnuw Channel. Bill and I discussed good spots for placement at the various cleaning stations found in Gofnuw. Each of about 5 sites has some areas of rock or dead coral where a unit could be placed, I could skitter away with a 20 foot cord and hide and wait for a manta to approach. So there I sat, hoping I had the right angle.

Now using a 10-17 Tokina zoom on my D200 inside the Aquatica housing with an 8" dome port turned out to be a pretty good selection. Except that the unit is pretty close to neutral and the dome actually made the camera point upwards or straight

up. Note to self: Get a 2 lb. Weight from shop manager Jan Sledsens,

So after a bit of jockeying, I managed to get a crack at three different mantas. All were totally unprovoked by the fact that there was a housing sitting next to their favorite blue-stripe wrasse. I had the Ikelite DS125 strobes on 1/8 power just for fill and the exposure set for pretty much what I could get from the natural light 50 feet down. The channel is made of lots of white sand bottom and some big cabbage-type corals so its pretty reflective. The lens was set at 10mm on auto-focus.

The first manta opened wide and I got one of those rare down-the-gullet cleaning shots that you rarely see, even when you aren't in camera range. They normally aren't that relaxed with someone around. It was totally relaxed and I was able to snap a half dozen frames before it went gliding past. As luck would have it, it actually following the strobe cord to my hiding place and went right over my head. Note to self: Bring a second camera for the occasional smartass manta belly shots.

At another cleaning station, a beautiful female had a legion of tiny pilotfish riding the bow wave of its gaping mouth. This manta also soared right over the dome and I nailed it with the remote as well.

OK, so it seems to work well with slow, coasting mantas. Now, how would it do with frenzied reef sharks?

Yap Divers puts a small bait basket under a coral head just out of the reach of the curious reef sharks that live at the stunning Vertigo Reef. The reef isn't that eye-popping really but the setting is. Vertigo slopes gently to about 50 feet and then takes a vertical plunge. Rocks and hard corals cover the top and everywhere the water is crystal clear. It ranges from a nice turquoise in the shallows to a deep cobalt blue in the depths. It is from this abyss the sharks rise.

Now Bill had a new manager with him named Andrew Sweeney. This new manager was also a student of Bill's and this dive would be his fourth open water dive. Andrew loved diving but was quite fearful of sharks. Thus, we decided to withold a

bit of small (albeit) key information about this dive. It was going to be a shark feed!!!

So it was all I could do to set up the remote as close to the bait basket as possible without laughing. As Andrew's eyes stuck to his mask and his air stream was incredibly constant, I could see this was a dive for him like no other.

Me too!

The sharks were getting bolder and bolder as they tried to get at the tuna heads inside the bait basket. The housing was sitting atop a coral rock quite near the bait but also quit near the dropoff. When a shark was unable to get at the bait, its interest would turn to my Aquatica. A couple rubbed their rough skins over the dome, another bit it and many came close. I fired away at will, capturing as many as four coming right at the dome at one time.

And to top it off, a giant grouper wandered up from the depths. This living ecosystem had a nose full of pilotfish, a following of rainbow runners and the respect of the wary sharks. But it didn't quite get close enough for a photo op.

On the way back we reviewed the shots. The boatload of divers was impressed.Manta expert Andrea Marshall said she thought the remote gizmo should also be good for getting those hard to get macro shots like bulldozer shrimps and garden eels. Now, its one thing to remote focus on a two-ton manta with a 10mm fisheye lens. But to nail a reclusive shrimp or goby might be a stretch.

I wouldn't know until I tried. So off I went to "Slow and Easy", the diverse little macro bank in the Yap main channel. You can find lots of things here like sea moths, leaf fish and a gazillion types of nudibranchs. A good portion of the sandy slopes is home to sentinel gobies and bulldozer shrimp guarding their lairs.

So I found a likely active hole and set up the camera, focused on the hole and took a couple of test shots. So far, so good. A moved far away but still close enough to see the action. After a while, out came the goby. A minute later the industrious bulldozer shrimps were piling rubble. It became obvious to me that I probably would get the entire goby in the shot even with my 50mm Sigma Macro. But the bonus was since I was shooting from shrimp level, I would get a perspective on the bulldozer shrimp that you usually don't get. To my amazement, some shots came out sharp as a tack and with a very pleasant new angle.

Back in Guam, I decided to try some close-focus medium perspective. In Guam's Tumon Bay we have some nice anemone colonies and a profusion of light blue chromis. Here I set the D200 up with the 10-20 Sigma lens set at 20mm. So it was essentially a 28mm or so. I then backed off and let the chromis, damsels and other reef fish do their thing during a minus tide in the shallow bay. As the popped into

the water column for food, I was able to many time fill the frame. Had I been nearer, they would have retreated into the confines of the staghorn and finger corals.

As you can see, the uses for this little gizmo are many and pretty much up to the creative spirit of the photographer.

I did try to pole cam it in Guam as well. I have a business that is attached to a dolphin tours operation. On a good day, they come right up to the swimstep aft or hang at the bow. A trip to Home depot and I was in the Erector Set business.

Off I headed but I forgot it was June. In Guam, there are pilot whales and sometimes bottlenose schools and even whales around. This makes the poor spinners rather skittish and not much fun. The days I was able to go the sun hid and the wind kicked up. We tried a lot to get a decent pole came dolphin shot but the few that did turn out looked tiny or I just got bubble photos. Not to self: Forget this (at least until January).

But on scuba it was a snap. I rigged mine so that I could swim with it and use the camera normally to take advantage of anything I came across or that came across me. If a remote opportunity presented itself, like shooting a cleaning manta or even a shoal of goatfish at my deco stop, I could quickly uncoil the cord and snap away for three minutes.

I am sure a much better planned use for this remote could also be created using a tripod and rebreathers, etc. It can go from being as simple or as complicated as the situation allows and dictates. It can also be used to safely take images where safety might be in question, like the shark feed extreme close-ups. So many uses, so little time. But I can highly recommend this being part of one's arsenal.

Its fun and the images are certainly different.

Note to self: Pack it for that next trip!

The remote is pretty simple to use. Those who remember the Old Nikon RS remote will find this similar. On a D200 and on most of the new D Nikons, all of the connectors are located on the left side of the body (from the rear). On the front of the camera is the 10-pin remote terminal, on the side the Flash PC Sync terminal (normally protected by screw caps).

A dual bulkhead Aquatica housing lets you use a dual strobe set-up and the remote. All you do take a wire provide by Aquatica and run it from the 10-pin remote to the right housing terminal (as you look at the housing from the back). Then run the remote cord from the right bulkhead to the remote button. You can vary cord lengths according to the project. I had one that ran about 20 feet underwater. I used one of my Think Tank cable wraps to attach it to my TLC arm and that was about it.

The strobe with a dual Ikelte cable runs out

of the left bulkhead into dual DS 125s. I attached a 2 LB weight to the base of the housing to keep it from floating up due to the dome. It wasn't art but it worked. We stayed in Yap for 10 diving days and I used the housing like this every day. There were no technical glitches, nothing hard or no high maintenance. It was pretty much a snap.

Tim Rock
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Sony HDR-SR8 and Ikelite housing

By Karin Brussaard

Sony go back a long time in producing video cameras. The last series of models have been equipped with the possibility to capture in High Definition (HD), and for storage possibilities there is a choice between the internal drive and tape. This is also the case with the Sony HDR-SR8; it is capable of capturing in High Definition as well as in Standard Definition. The camera has an internal hard drive with an impressive 100GB of memory. This allows for capturing 13 hours of HD full-motion movie in the highest quality. Besides that the camera features a card slot for a memory card (Memory Stick (PRO) Duo). In addition to capturing full-motion videos, and even during the capturing of these videos, the also camera allows for capturing still pictures, and storing these on the memory card. The pictures taken while capturing a video at the same time have a resolution of 4.3 Megapixels and taking still pictures only they will have a resolution of 6.1 Megapixels. The LCD monitor has a width of 2.7 inch and a wide screen format monitor of 16:9. The camera lets you set various functions manually. Such as: focus, adjusting the white balance and under- or overexposure.

Ikelite is an American company which has been manufacturing underwater housings and flashlights since 1962. Ikelite uses transparent polycarbonate for their underwater housings. Ikelite's two trump cards are the relatively low costs of and the large maximum depth for the housings. Ikelite has a number of basic housings that vary in size. This means new cameras from well-known brands usually fit into existing houses. It's only a matter of mounting the operating buttons on the right spot for operating the camera. This is, of course, a lot cheaper than creating an underwater housing for every type of camera from a block of aluminum. The underwater housings are tested at a depth of 60 meters, which is deeper than most other plastic housings can take.

The Ikelite model # 6038.92 can take both the Sony HDR-SR7 and the Sony HDR-SR8. The housing's dimensions including the handles are: 11x8x8 inches. The underwater housing comes with a base, two handles and a tray. This tray can be placed underneath the camera's base in order to put the camera down straight, for example when assembling the set, or during transportation. Inside the tray there is a piece of led to keep the camera steady underwater.

Instead of the tray, a battery for a video-light can be mounted. The underwater housing has been equipped with a flat port. It is not possible to swap this port for a wide angle port. The housing port is threaded allowing the use of optional external 67mm threaded wide-angle conversion lenses. Also included is a ring that is slightly bigger than the camera's lens and prevents the silver-coloured ending of the lens from reflecting in the port. Without this ring you might find a silver-coloured reflection in the captured movie. In addition a UR/Pro red filter is standard delivered.

The Pro Video Lite 3 includes a Video Lite Head, Mounting Arm, Battery Pack with Pouch and Mounting Hardware, Cable with In-Line Switch and Pro/Spd Charger. The lamp can be used to a depth of 90 meters and weighs 2.4 kilos. The lamp head contains two halogen lamps, one offering 50 watt and the other 20 watt. The real video lamp is 50 watt and has a 100 degrees angle. Thanks to this the light

coverage is even. The 20 watt lamp can be used as a diving lamp and as a focus lamp. This enhances the battery-life. Used with full power the battery lasts for 55 minutes. The halogen lamp produces such a significant amount of heat, that it is allowed for use underwater only.

Assembling the lamp speaks for itself. First you attach the pouch with two screws to the base of the underwater housing. The battery slides easily into this pouch. I would then mount the arm with the light head to the left handle and the switch to the right handle. If you are left-handed, you may want to swap the lamp and switch. Finally, I would connect one cable to the battery and the other to the light head. The battery has two connections. You can therefore connect two light heads to one battery. The battery-life will then be cut in half of course. If you want to be able to use the full battery-life of 55 minutes, you can opt to mount a second battery underneath the housing.

The back of the underwater housing has a lid that is closed with 2 stainless steel snaps. Attached to this lid there is a slide for the camera to be screwed onto. You don't need a screwdriver to do it; a coin will do the trick. A number of buttons from the underwater housing have to be pulled outside before sliding the camera into the housing. If you don't pull these buttons out, they are in the way when you slide the camera inside. It is important to keep the buttons in the correct mode when you pull them out and not turn them. If you turn the buttons and slide the camera inside, you will not be able to operate certain functions. The camera or other buttons stop you from being able to turn the turned button into the correct position.

The camera's handgrip can only be loosened on one side. You cannot remove it entirely from the camera unless you use scissors. I think this housing was built for a camera without a handgrip, because it was rather difficult to get the camera into the housing with its handgrip. The housing is of sufficient size to be able to contain larger battery types. The Sony NP-FH40, FH50, FH60 and FH70 all fit into the housing.

It's time to take the camera with me on a dive. First thing that strikes me is the weight. The combination of the underwater housing and the lamp makes a rather heavy load and it has a negative floatability. To put it in other words; it will sink if I let go of it. To prevent the camera from disappearing into the depths, I attached the underwater housing to my wrist using a wrist strap. I have to hold the camera with two hands during diving because it is too heavy and too big to keep it dangling from

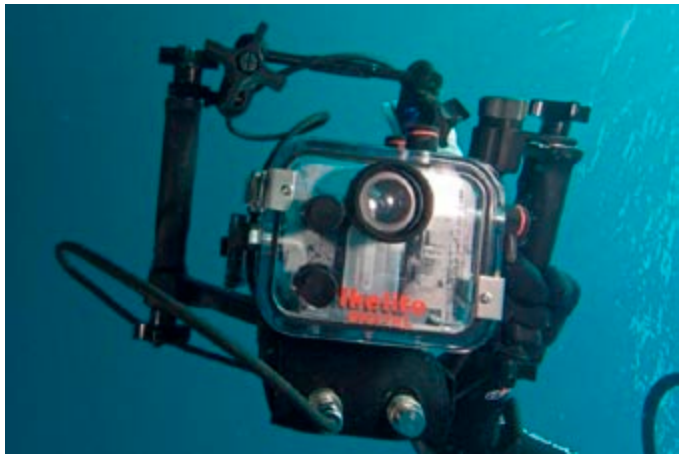
my wrist. Swimming around I look for nice objects to capture. Fish do tend to swim away from you, not towards you, so you end up capturing their tail. So much for fish as a suitable object. I start concentrating on objects that stick around for a while and don't swim away speedily.

The camera has been equipped with an electronic viewfinder as well as an LCD monitor. The viewfinder is on the small side, which is why I automatically used the monitor to decide the composition on land. The housing doesn't offer room to work with the monitor folded open. It is possible though to open the LCD monitor, turn it 180 degrees and flip it back onto the camera so the monitor is upside down, as it were. Ikelite has placed a fold-in mirror on the left side of the housing so you can still work with the LCD monitor. To prevent you from having to watch a reversed image on the LCD monitor, Ikelite built in some electronics that turn round the image again. It requires attaching a cable to the camera. If you choose to use this electronic possibility, you will lose the option of capturing sound with your movie. I found that the mirror doesn't work as good in practice as it sounds in theory. The mirror is very small and I had difficulties deciding the composition through it. Moreover, you can't hold

the camera straight ahead of you but it has to be tilted to the right somewhat. I found that a rather unnatural position. For these reasons I mainly used the common viewfinder.

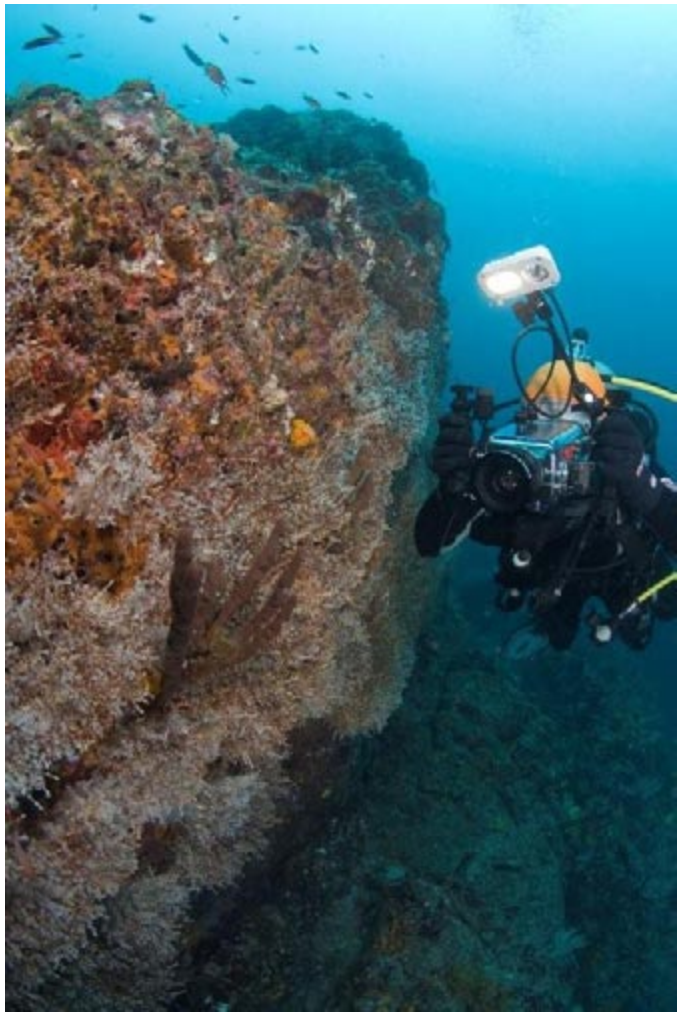
Around Coiba the water temperature during some dives drops from 28 to 16 degrees Celsius at times. The temperature in the housing was always at a minimum of 32 degrees. That was the temperature on land, and thus the temperature in which I would open the housing to install the camera. The temperature inside the housing could even rise since the underwater housing was sometimes lying in the boat in the sunshine. Even though I did cover it up with a towel, it could still be very hot underneath. During one of the dives when the temperature had dropped many degrees, I wanted to capture a yellow anglerfish. I looked through the viewfinder but saw the fish in a haze. At first I thought my glasses had steamed up but that wasn't the case. When I looked directly at the anglerfish, I could see it clearly. Startled I checked to see if the camera was accidentally set to manual focus but that wasn't the case either. Finally the quarter dropped and I realized that the lens was steamed up. Due to the temperature drop, the air inside the housing condensed and I hadn't placed a silica sack in the housing. Nor was there one on board of the boat and we'd planned to take another dive in one hour. To be able to shoot during the next dive, I put a tampon inside the underwater housing, and I must say: it did the job!

All functions of the camera are operable yet not all quite as easy. Especially operating the touchscreen is difficult because you have to turn the underwater housing one quarter and let go of it with one hand. The on/off button and the record button are in a logical spot and are easy to find and operate



even blindfolded. The camera offers the possibility to swap over to photo mode. To switch over, you have to move the on/off button to the left. However, I was so desperately focussed on recording a full-motion video and searching for suitable fish and compositions, that I completely forgot to take pictures. The lamp's switch is simply mounted to the handle of the underwater housing. Activating and deactivating the light happens smoothly by turning the button. I was able to do it immediately without having to let go of the handle.

The Sony HDR-SR8 has a Carl Zeiss lens with a focal distance of 40-400 mm for the 16:9 format. These 40mm don't offer a lot of wide angle. If you want to capture large objects such as sharks, manta rays or corals underwater, you have to keep your distance to capture your object fully. Often it turned out I was still too far away to correctly expose the object with the video lamp which results in videos with a very low amount of colouring in them. I was hugely disappointed after my first dive because of the lack of colours in my video. The dives after that, I tried out various possibilities to obtain more colour in my movies. First I used the red filter that was



included in the set. This filter is made for use in blue water. Unfortunately the waters around Coiba are not of a clear blue colour but have a greenish shade. That's why the red filter did not work at its utmost.

The second option was to manually set the white balance. For this you have to operate the touchscreen using the buttons on the outside of the underwater housing. This is not easy, because I had to turn the underwater housing a quarter towards myself and let go of the left handle. Due to the

camera (40mm) is rather limited for wide angle possibilities. It is nice to see a red filter included with the underwater housing. Every camera function can be operated under water, though not all of them with equal ease. The battery of the Pro Video Lite 3 is a beautiful but heavy combination with the underwater housing. The set has a considerable negative floatability and it is hard to stabilize it. The mirror on the outside of the underwater housing is a nice invention but it doesn't work as good as directly looking at the LCD monitor.

Karin Brussaard
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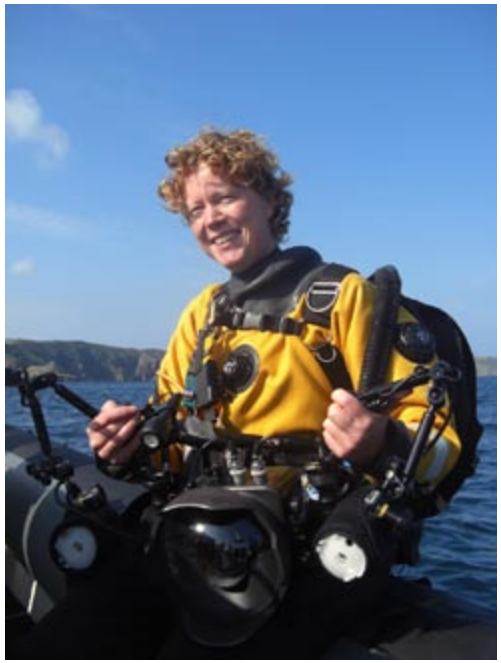

heavy weight of the camera and the strong current, it was not easy to hold the camera with only one hand. The easiest way of catching some colour in the movie is mounting a wide angle lens. The housing is threaded so it offers the possibility of using optional external 67mm threaded wide-angle conversion lenses. This increases your angle of view so you can capture your object from closer up.

The Sony HDR-SR8 is a camera that allows for video capture in High Definition as well as Standard Definition. The hard drive of 100GB ensures hours of video-recording also in HD. The angle of view of the

See us at DIVE 2008
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Photo: Simon Rogerson

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Olympus E-420 and modified PT-E03

by Rob Spray

It seems only yesterday that we took the E-410 to Plymouth for its first outing underwater at the end of last year. We've since given it a real workout in Indonesia (results to follow) but already there's an upgrade - the E-420. It's an evolution and incorporates some worthwhile developments. The E-420 takes the compact body from the E-400, Liveview from the E-410 and adds all kinds of goodies - it has a new sensor (10 Megapixel) like the top flight E-3, a bigger 2.7" LCD screen, contrast detect AF (more on that later), new tidier menus and a baby 'grip' - for those big people who had trouble holding the E-410! Although the E-420 is bigger than the E-410 (by 5 grams!) it takes over as the smallest SLR by replacing it.

Each E-4xx evolution has made worthwhile improvements, the latest seems faster in most ways and the menu tidy has made life easier. Some entry level SLRs aren't really part of their family but this one is - it's just small :-) One of the joys of keeping the same shape (form factor to product engineers) is that many accessories can carry over. Cards, batteries, flashes and lenses (of course) all work but what about the underwater case? Product planners don't often look back and there was concern that the 'grip' would make the body too deep for the PT-E03 case. It didn't. Other details were no problem at all; the control dial changed but worked fine and the larger screen overlaps the window by only by 2mm. But that luck was undone by fashion, minor changes to the mode dial stopped that working and that blocked the power switch too :-(

With a day to go I had to decide if I'd go without a power switch or sort it out properly. In the end it was a simple modification with my favourite fix-it-all - Polymorph - plastic you can mould in hot water. I moulded a stepped disc by pressing Polymorph into some washers. Result: full control and no outward sign that I had a new companion in the case, 400, 410 or 420 who could tell? I thought I could, everything was just that bit better; faster and more decisive. In the PT-E03 it remains one of the few underwater SLRs you can use single handed. The E-420 doesn't really need a grip but the PT-E03 has a good one which allows the index finger to be free for the shutter while the rest grip the case well enough for your left hand to be free for other stuff... buoyancy, DSMBs, adjusting foliage or maybe steadying yourself. This is possible because the camera is small and the slight lip at the top of

Dawn amongst the thong weed of Firestone Bay, a shallow shot with low afternoon sun.....it's only British sun though so it was pretty chilly.

the grip fits most hands just so. At the same time the control dial falls nicely to thumb so shutter or aperture adjustments don't need your hand to move at all.

It goes without saying that the E-420 can use the full range of 4/3 lenses made by Olympus, Leica, Panasonic and Sigma... It should, but that's not true of some entry level SLRs in other ranges where there are lenses you can't use. I talked about the kit lenses in the E-410 article so I thought this one should cover some new ground, we used the 7-14mm and 50mm Macro lenses on our return to Plymouth, both are among the best and unlikely to colour any results. One makes the most of bad vis and the other is great for detailed studies - just the tool for our participation in a Marine Biology course.

This selection of three nudibranches shows how well the spot metering keeps the highlights of these ultra white little beasts properly exposed under TTL control. A long macro lens makes this easier as they occupy more of the frame.

Lens performance is 'diffraction limited' - beyond a certain aperture setting results soften as the iris starts to act as a light grating rather than a simple pinhole. The point when this happens is theoretically proportional to sensor size. As Olympus uses a smaller sensor than other SLRs this could be a pitfall, but it doesn't seem to be. The very thorough tests on SLRGear.com show that the Olympus Zuiko lenses resist this as well or better than others so as well as being sharp wide open they stay sharp until f16 just as lenses on larger sensors should theoretically – their performance varies.

The 7-14mm focuses fast, mainly because the depth of field is huge and it doesn't have much to do. The angle of view is vast making it likely that you'll get both sky and deep shadow in the picture – a good test of dynamic range. My trip was to Devon not Raja Ampat, but the range in some shallow seabed to surface shots was still a cruel test. The E-420 has a new sensor very similar to the one in the heavyweight E-3, which is said to improve dynamic range.

I'd have to concede that lack of DR didn't figure in my concerns about the E-410 and so any comment here would be rather nebulous. Suffice it to say that careful exposure always gives you better pictures. Some sensors (notably the Fuji Super HR types) are very tolerant of overload but at the end of the day my usual problem is underexposure - when my strobes have missed the target or are obscured by weed. New latitude to avoid cock-ups is to be welcomed but the primary protection is to keep an eye on your results and correct mistakes at source... I'll let you know when I find a camera which taps me on the shoulder and asks 'did you really mean to take those all at f2?'. The full frame metering can keep the exposure under control but the histogram is a useful guide in spot and manual modes. In Liveview you can view a live histogram and exposure preview which is a boon when you have time to fine tune and there's even a multi-screen exposure guide which shows previews in in fractions of a stop. The depth of field preview works in liveview too – with true

The filaments of this white bi-spiral fanworm are a great test of high brightness detail and lens quality - no problem there then!

Plenty of detail in this high-key macro shot of lightbulb tunicates

exposure rather than the darkened version through the optical viewfinder of this or any other SLR. I'm not sure a grizzled snapper would make use of these options but they are there if you need them and they're a great tool for illustrating these properties to newbies who may enjoy a live demonstration rather than a lecture on on optical theory.

Normally the E-420 retains the same 3 point system as all Olympus SLRs, apart from the E-3, and as usual the first thing I did was to turn the outer ones off.I hate having to guess what the camera is most interested in. If you use Liveview then you have other options and can use 11 focus points for contrast detect (CD) AF to focus. You can opt for pure CD AF, the conventional system which needs a flip of the mirror or a combination of both – called Hybrid AF.

Even if you're not familiar with the term 'contrast detection' you'll have used it with camcorders or compact cameras. The theory is simple, the camera looks at the picture and adjusts the lens back and forth until the details are sharp... that's why they focus faster in good light on objects with strong markings – more contrast to detect. This trick is still rare, appearing on only the biggest new Nikons for example, so as a freebie on the baby of the range it's a bonus. None of these options give true SLR focus in liveview like the E-330 had but adding the hybrid mode which enables the full AF to fine tune it makes the work round that bit better.

My own preference underwater, even as an ex-compact user, is to use the optical viewfinder – steadying against your head and fast focus is a godsend - and hold the option of Liveview as a trump card for those shots where it's just not possible to have your head behind the camera or where a better overall view of the scene is required – marshalling friends with lights or strobes for example.

Another new feature (across the Olympus SLR range and ultrazoom compacts too) is wireless strobe control. This studio type technology is a surprise arrival at the 'bottom' of the market and it isn't just slave strobing it's a multi-channel system with full control. Three channels of numerous (I don't know if there's a limit) flashes can be controlled, the power and mode of each varied from the camera. Normally optical TTL slaving is restricted to the sync speed of the pop-up flash but here it just acts as the controller. An array of dedicated flashes can operate at shutter speeds up to 1/4000th. It adds great potential for creativity and since the optical signals can relayed by fibre it'll hit sales of flooded strobe cables too! I didn't exercise this opportunity underwater but I'm saving up to take a night shot of the Thistlegorm lit with chains of remotely controlled strobes!

Our trips to Plymouth and Holland gave ample opportunity to test the camera and considering we didn't have tropical conditions the results were great. In these latitudes the main genre is macro and we found plenty of nudibranches to play with. They're tough to photograph as they're often very white against dark backgrounds but the spot metering kept them nicely exposed and TTL flash was able to do its job properly. The chief adjustment was of aperture to control light and depth of field as for the most part I used the top sync speed of the Sea and Sea setup of 1/250th. My strobe setup used a OLY-TTL adaptor from Matthias Heinrich which allows TTL in manual. It can't do TTL in other modes because my poor old YS-60s can't recover from the pre-flash, but there's no pre-flash in manual mode. I used it in manual all weekend - so my hard work on the dial was wasted :-) Everything else was as per the E-410. Perhaps the

This Flabellina pedata from Norfolk keeps it's delicate colour and the white tips to its dreadlocks

only thing I'd really like to change is the exposure adjustment button, which switches dial control between shutter and aperture in Manual, might work better if it toggled between the two rather than needing to be held down. At least it's ideally placed beside the shutter lever and you can choose whether you want to alter shutter or aperture without the button held down. In A or S modes, of course, it needs no 'shift' button.

With the E-410 I gratefully accepted review advice to turn off noise reduction which was a little heavy handed. This is sorted for the E-420 and the only tweaks for my taste were to boost the sharpness (I like my macro shots crisp) and turn off Auto graduation. Auto graduation is one of the DR boosting functions - which opens up shadow detail – great on land but I prefer deep blacks for my macro shots. These parameters only affect JPEGs so if you shot RAW at the same time you can always change your mind. With the E-420 you can choose to shoot any size of JPEG along side losslessly compressed RAW – I do this as JPEGs are easy to handle but the RAW offers protection from inevitable mistakes :-) Interestingly Olympus have revamped their JPEG compression naming and it's now much more similar to others – named by size and quality. Large, Medium or Small plus Fine or Normal etc. The Fine JPEGs are unusually large (compared with Canon for example) with files up to 7MB – very close to the lossless RAW which are around 9MB.

If you liked the idea of a small SLR when the E-400 was released and hankered again when the E-410 replaced it then the E-420 is the travel SLR you wanted. It does what it does really well and won't cramp your style by running out of steam when you want to upgrade or get creative. It's size may be one of the biggest points against it, there's no boat cred in having the smallest rig and the camera was often mistaken for a compact. There's a kind of inverted snobbery in that and we enjoyed this 'stealth SLR' while others arranged much larger, heavier outfits. The PT-E03 case is as compact as it could reasonably be and works very well. The only serious criticism you could level at it is that it's nominal rating is to 'only' 40m and that a new version for the E-420 shouldn't really have been necessary with a little fore thought. Hopefully the very minor changes needed to make it work with the E-420 can be made ASAP – as they were to the PT-020 for the C-5060 to produce the PT-027 for the C-7070.

The E-4xx series is still the cheapest way to take an SLR underwater and the latest is the best of the bunch, sure the case isn't ready for it yet – and may not be – but its not a tough modification and I'm sure there'll be nicely made kits before you can say 'PT-E03 Mk2 anyone?'

The strongest argument against may be that its big brother, the E-520, now has the PT-E05 housing. Adding image stabilisation and more features for quite a similar price it's not grossly bigger and perhaps this is a market where some visible presence may help sales? I've yet to try a stabilised camera underwater but having used its big brother the E-3 on land I can vouch for its effectiveness there.

More and more the results from digital SLRs are becoming so good that there's little to separate them on technical grounds and the most important factor is the way your chosen system matches your particular preferences. This set-up ticks a lot of the wish list boxes for most divers. We had interest on the boats both from divers who had considered an SLR too big and also those already using SLRs who wanted something lighter for travel. The results are excellent and affected far more by the operator than camera size – in fact much the same sensor is used on the whole Olympus range so the underlying image quality is near identical - you just get more bells and whistle with the bigger bodies.

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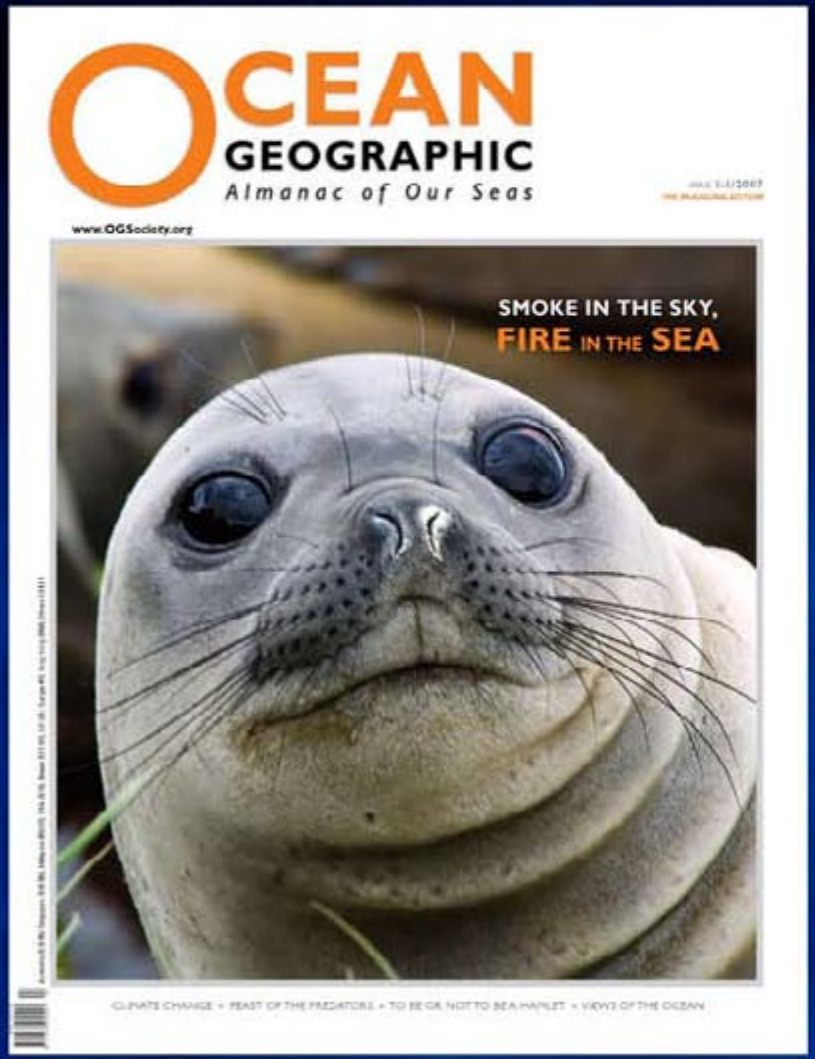

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My Underwater Dogs

by Brooke Mayo

You could say my career as a photographer started with dogs. I've actually had an interest in dogs longer than photography, but a series of dog portraits from my uncle really piqued my interested in capturing dog's moments with a camera.

After studying photography at Appalachian State University and The University of Western Sydney in Australia, I worked with Joyce Tenneson and Lois Greenfield in New York City. Traveling to some of the most fascinating places on earth allowed me to gain experience and solidify my love of photography. During this time, I also realized my childhood home was a place I wanted to call "home" again, and I moved to the Outer Banks in 2003.

A major part of my photography business in North Carolina is weddings, but it's my "Underwater Dogs" project that truly captures my heart. I consider my style to be sassy and fun, silly and unexpected. I approach my compositions in most cases as a silent observer of life's simple nuances.

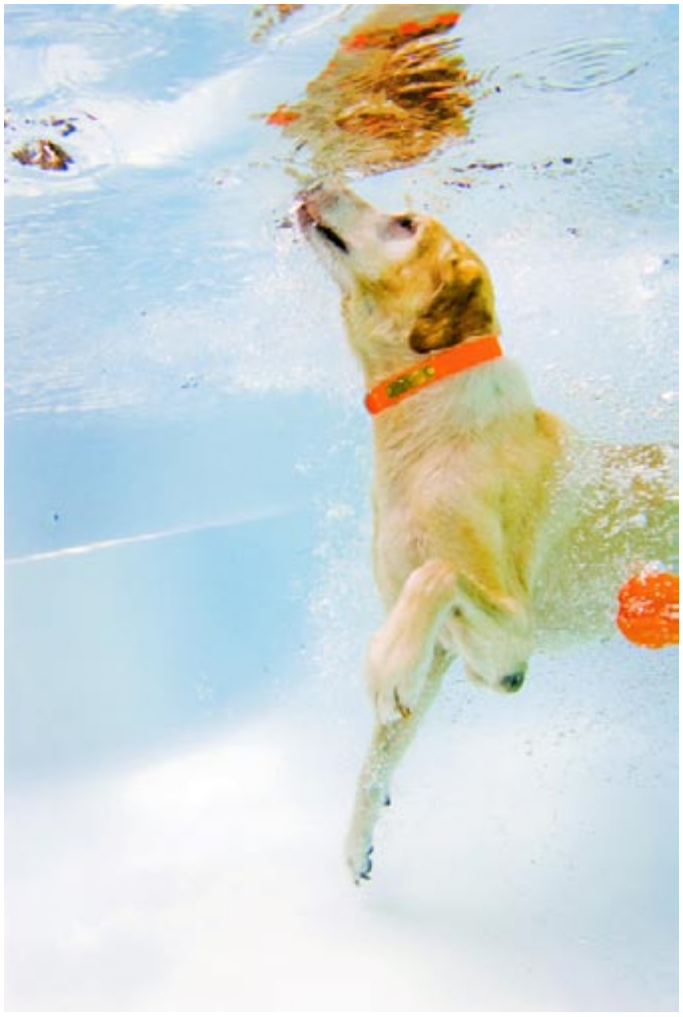
I have a love and admiration for the unconditional acceptance that a dog can share with its owner, or "doggie friend" as I like to call them. I enjoy playing with my own dogs and discovered how their personalities served as entertaining and heart-warming subjects, but it was while my dogs were splashing through the water that the true spirit and freedom of being a dog was apparent.

I thrive on the unseen moments underwater – those few precious seconds that are missed observing playtime above water. I discovered that taking my camera below the surface of the water allowed me to explore another world that created so much joy for dogs.

I have always known how happy it makes my dogs to jump in the water after a toy, but I never viewed their expressions and the diligence they use to retrieve something for me. Not only do they love it, but they enjoy it even more because it makes me happy. Dogs want to please, so while diving to the bottom of a pool is super fun for them, they thrive on us being excited when they bring their toy back.

Most of the dogs I've worked with are quite comfortable in the water, and when they're diving they're so graceful and overjoyed. You can see it in their faces – the way they jump carefree into the pool and dive with their eyes wide open searching for their toy. I love seeing their "jubblies" fly back to reveal their teeth as their tongue curls in the bottom of their mouth.

To capture dogs underwater, I submerge myself with scuba weights and wait for a toy to be thrown in front of the camera. I will start in the shallow end (3-5 feet) and then move



deeper as they get more excited. Sometimes the dogs will do paw-stands on the bottom of the pool completely upside down, it's amazing to watch!!

I set the camera to multiple shots/second and as soon as the dog enters the water, I begin capturing images, 4-5 frames/jump. After several leaps they let me know when it's a wrap. I use a Nikon D200 with an Ikelite housing and one off camera strobe.

I am currently producing an underwater art book called, H2Arf!-Underwater Dogs, which documents "diving dogs" at play, from the bottom of the pool or ocean floor and offering destination doggie shoots, traveling around the country photographing all types of dogs at play and underwater.

Combining the best of both worlds, photography and dogs, has allowed me to grow as an artist. Dogs are the best subjects to work with, because they don't hold their emotions; they let you know how they feel. There is a phrase, "To wear your heart on your sleeve," and it's usually reserved for people, but I can't help but feel that all dogs are able to display that better than us. We should consider that one of their greater traits.

Brooke Mayo

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Brooke Mayo has been photographing weddings, portraits and dogs for more than six years and is recognized as one of the Outer Banks' leading photojournalists. She is a recipient of The Bride's Book 2008 Readers Choice Award and an award-winning member of WPJA. Brooke Mayo Photography, Inc. has been featured in top wedding publications such as Grace Ormonde's Wedding Style, BRIDES, The Bride's Book, The Knot, Destination Weddings and Honeymoons and Vow.

Mayo lives in North Carolina's Outer Banks with her husband and winemaker John Wright and her dogs Weebler and Biskers.

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Behind the Shot

with Martin Edge

Luck, instinct, creative or chance? I'm not sure if any apply to this month's 'behind the shot' but one thing I do know is that it's unlike any I have taken before and I cannot foresee an opportunity for repeating it in the future!

I had just finished a dive on the wreck of the Giannis D at Abu Nuhas in the Egyptian Red Sea. Our boatman was manoeuvring our small inflatable to pick up other photographers. With one hand on the tiller, he turned in a slow but sharp 180-degree direction. As he did so I noticed how this particular movement of the boat had 'slicked' the surface of the water. For a moment the water was glass calm and the sight of a huge portion of the wreck came into view. Whilst I had witnessed this phenomenon countless times before, I must have failed to notice the potential to make an unusual picture. I reacted quickly but instinctively. I grabbed the nearest facemask to hand, reached for my housing, turned my flashguns to 'off', and for the very first time in my life, set my camera exposure mode to 'P' Program.

"Someone grab my legs?" I leant over the side with just my face in the water and took about five shots looking down on the wreck. Within seconds the slick effect of the water surface diminished and the normal surface chop returned. Feet first, I was hauled back into the boat, eager to shield from the sun the LCD screen on the back of my housing to see what I had produced. I was hopeful! But had my choice of Program mode captured the shot in my minds eye? Back on our live-aboard I could view the results in comfort. I was pleased. I felt that I had captured a unique angle on of the Giannis D, which I had not previously seen before. And whilst many of you may have tried this technique before, I had never given it a second thought.

Giannis D at Abu Nuhas . 250th sec F3.3 with a 10.5mm fisheye lens on 200 ISO .
As I was leaning over the side of the inflatable a member of the group grabbed the nearest camera available and snapped my antics. Notice the housing is only a few cm below the surface.

What have I learnt from this opportunity? Without doubt to act on instinct and reaction, no matter how barmy an idea might seem. Trust your judgement, your gut feeling and most of all, your eye. An opportunity does not present itself until

you recognise it as just that! An opportunity. Now I am much more likely to act on instinct than I have ever done in the past.

Martin Edge
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Photo: Martin Edge

Brothers in Arms

by Mark Webster

The Red Sea remains a very attractive destination for underwater photographers for many reasons, not least for its spectacular big name sites. Famous dives like Tiran, Ras Mohamed, Abu Nuhas, the Thistlegorm or Elphinstone can be reached by day boats as well as live aboards but the more remote site of the Brothers islands is a different prospect. These two little rocky islands break the surface in the centre of the Red Sea in an exposed location too far from land for the day boats. So this is live aboard territory only and even then you need good conditions to make the crossing and dive safely here. It is this very remoteness which makes the Brothers so attractive to both marine life and the diver and also makes it worth the effort of booking a trip dedicated to reaching this unique location.

The Brothers, or El Akhawein, are two small islands which were stranded in the centre of the great rift valley when it opened and flooded to form the Red Sea. The islands are in fact the tips of two submerged sea mounts which have a shallow reef top reef system and almost shear walls that tumble to depths beyond normal diving ranges. They are washed by often strong nutrient rich currents and this combined with their isolated location in deep water means that they are a magnet for almost the whole of the Red Sea marine ecosystem. On Big Brother and Little Brother island are magnificent drop offs, dazzling colours in the hard and soft corals, the chance to see big fish and shark action and even a couple of wrecks thrown in for good measure. On past trips here we have seen schools

(Above) The main deck and walkways of the Numidia have been engulfed by the reef. Nikon D300, Subal ND20, Tokina 10-17mm zoom, Subtronic Minis, ISO100, f11 1/125.
(Top left) The shear walls of both islands provide endless opportunities for classic compositions of soft corals and approaching diver. Nikon D200, Subal ND20, Tokina 10-17mm zoom, Subtronic Minis, ISO100, f11 1/125.
(Left) Double mooring is often necessary at Big Brother Island to get the best shelter from wind

In the summer months it is not unusual to find schools of masked butterfly fish which have gathered to spawn. Nikon D300, Subal ND20, Tokina 10-17mm zoom, Subtronic Minis, ISO100, f8 1/80.

Sometimes the weather is calm here which offers the opportunity to shoot with filters at the reef top in shallow water. Nikon D200, Subal ND20, Tokina 10-17mm zoom, Magic Filter, ISO100, f11 1/60.

Inevitably the wreck has become an extension of the reef and with that come all the usual suspects which of course includes clown fish. Nikon D300, Subal ND20, Tokina 10-17mm zoom, Subtronic Minis, ISO100, f16 1/125.

of grey reefs, hammerheads and even a thresher shark amongst many other pelagics and reef fish. Some live aboards do make the trip here throughout the year if the weather is calm enough, but the most reliable months to plan a visit are between June and August. Later in the year there is a greater risk of high winds from the prevailing north east direction which can increase very quickly. There is no shelter here and so the transit back to the mainland can be uncomfortable.

As you approach the islands the first visible feature will be the lighthouse on the larger Big Brother which is a legacy of British influence in the region and dates from Victorian times. There is a jetty that runs out to the edge of the reef table and the lighthouse keeper welcomes visitors. It is worth stretching your legs here and climbing the lighthouse – inevitably there is also a T shirt to buy as a memento of your visit. Many of the boats make the crossing to the islands at night to maximise available dive time here. If you are lucky then the crossing will be calm and you will enjoy a good night's sleep. If the crossing is rough you may not be so well rested, but the excitement of arrival here at dawn and prospect of diving is normally enough to produce a small adrenalin surge to wake you up.

If you are a photographer then the first thing to do will be to confirm that your camera housing has not been rolling about the deck overnight and then make a function check and a quick dip in the rinse tank. Next comes the first dive briefing which

Including a photographer with this shoal of scad gives a good sense of scale as well as communicating an event with the image. Nikon D300, Subal ND20, Tokina 10-17mm zoom, Subtronic Minis, ISO100, f11 1/80.

On early morning dives you will often encounter lion fish still out in open water hunting sometimes struggling to hold station in the current. Nikon D200, Subal ND20, Tokina 10-17mm zoom, Subtronic Minis, ISO100, f11 1/60.

is most important as diving here can be hazardous unless you understand what the currents are doing and the pick up procedures after the dive. If you get carried away by the current then you are likely to travel a long way in open ocean, not a pleasant prospect. All this may sound alarming, but most of the guides working on the boats that come here are experienced and knowledgeable and if you follow advice and procedure you will be safe even when the weather is less than perfect. But remember to bring your flag and safety sausage!

The prevailing current here is generally from the north to north east, although it does shift, and will vary in strength dependant on the time of day and the month. This current splits at the northern end of both islands and dependant on where you start your dive will dictate whether you move down the east or west face of the island, although you can drop in and find no current at all at certain times of day, but this is difficult to predict. On Big Brother this split generally occurs right over the wreck of the Numidia which can create a 'dead zone' conveniently on the wreck which gives you the opportunity to explore here before riding the current for the remainder of the dive.

Big Brother

Big Brother offers several dives which are enough to keep a keen photographer busy for days. Dives starting on the northern end of the island often commence on the Numidia which is a splendid wreck, still quite intact and covered in soft corals and open enough for safe penetration. Despite the presence of the lighthouse this ship struck the island in 1901 and eventually sank on the sloping northern plateau after efforts to refloat her failed. Most of her cargo was salvaged, but you will still find rolling stock wheels in the shallows around the broken remains of the bow in around 10m. Dependant on conditions, you generally start the dive on the eastern side of the wreck

Fish eyes with a strong surrounding pattern make for great slightly 'abstarct' compositions. Nikon D200, Subal ND20, 105mm micro, Inon Quad flash, ISO100, f16 1/125.

Bat fish can be a co-operative subject and have an appealing face for a tight portrait with a macro lens. Nikon D200, Subal ND20, 105mm micro, Inon Quad flash, ISO100, f11 1/125.

and make a short swim west to her remains, often against the current. Once you reach the wreck the current abates as it is splitting around the reef at this point so you can enjoy this part of your dive here with little effort down to a maximum depth of 40m or so at the stern. If the current is strong the fun starts when you leave the wreck either on the east or west side when you will be carried along the reef towards the southern end of the island.

If you are on the western side you will soon pass over the remains of the second wreck here of the Aida, which is considerably deeper starting at 30m. This ship sank in 1957 when transporting troops to the island and can be more of a challenging dive as it is more exposed to the current and deeper than you may want to go so far from the nearest decompression chamber.

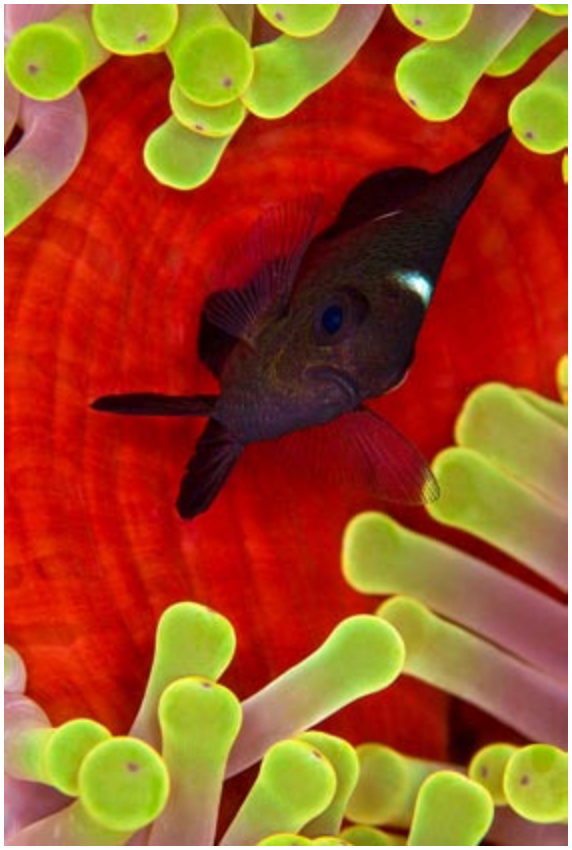
Even when the current is strong you can find shelter on your way on the reef wall behind numerous indentations and overhangs on both sides of the island. On the west side the current normally becomes completely slack as you approach the jetty area which offers some excellent shallow diving at the reef top with plenty of macro opportunities. We normally dive here later in the day when the sun is on this side of the reef. On the eastern side the current will generally take you almost to the southern tip before it abates due to the orientation and configuration of the island. This area is marked by a collection of large gorgonian sea fans and continuing around the southern tip will bring you to the southern plateau which starts at around 20m at the base of the steep reef slope. This plateau is often visited by sharks and pelagics cruising out of the blue on the currents and there are also a couple of resident turtles. You might also be lucky enough to see dolphins here as they are often attracted by the diver activity around the island.

The condition of the corals on both sides of the island is stunning and all the usual reef species are here. But if you have an interest in sharks then keep an eye on the blue especially on the early morning dives as they will often come in quickly for a look at you. If the current is not too strong then your guide may lead you out into the blue if you wish for a better chance of a closer encounter with Mr. Big.

Little Brother

Little Brother offers something in the way of a contrast to the larger neighbour. The island is much smaller of course and the reef wall tends to be steeper, but the most overwhelming memory will be the colour. Little Brother's reefs are engulfed by soft corals wherever you look with the most amazing variety of colours and shapes. At the top of the walls the anthias school in their thousands and make a very striking contrast with the blue open water and vivid hues of the soft corals.

There are no wrecks on this island but the currents behave in a similar fashion to Big Brother. Being much smaller you will find that the ride from north to south can be quick when the current is running hard and there is little shelter from it until you reach the southern side of the reef. However, if you make three or four dives in a day here you will hit the period of slack water which will allow you to circumnavigate the



The scarlet colour of carpet anemones always makes a striking contrast with the domino fish which often share them with the classic clown fish inhabitant. Nikon D200, Subal ND20, 105mm micro, Inon Quad flash, ISO100, f11 1/125.

reef if you have the energy. For me these quiet periods are best spent in a small area where the light is good and you can work on composing the dazzling soft corals and profuse reef life. Although Little Brother is smaller it is still worthy of at least a couple of days diving if your boat is spending several days at the Brothers.

The larger and pelagic marine life on both islands changes with the seasons. If you dive here in the spring and autumn months you may see larger schools of snappers, jacks, barracuda and groups of big tuna. In June and July many of these fish head north to join the breeding shoals in areas like Ras Mohamed, but there are still plenty of schooling fish to be seen. On my most recent trip we encountered a very co-operative school of scad which stayed in the same location on Big Brother for several days. Later in the year around the month of November the shark population increases as they come together to breed in the cooler waters but weather conditions are much less predictable.

The question of which lens to use often arises on arrival at the Brothers. It is primarily a wide angle location for the wrecks, schooling fish and stunning corals. But do bring your macro lens as well as diving on the sheltered locations of Big Brother in particular is very productive and the jetty area is certainly worth more than one visit.

Getting to the Brothers even at the optimal time of the year can be unpredictable and the diving can be challenging but once below the water it is all worth it. This location is deservedly a Red Sea classic and should not be missed.

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Marion Reef - Coral Kingdom

By Nigel Marsh

Flying over the Great Barrier Reef is one of life's great experiences. The endless maze of reefs, the brilliant blue of the water and the intricate shapes of each reef are a sensational sight from the air. But we were going beyond the reef and heading out to more unexplored and interesting territory, the Coral Sea, 400km off the Queensland coast. After an hour and half our goal was in sight, Marion Reef, and I was arriving in style - on a seaplane.

Over the last twenty years I have been very fortunate to dive many of Australia's remote Coral Sea reefs. All offer fantastic visibility (generally 40m to 60m), pelagic fish, lots of sharks, a great diversity of reef fish, wonderful invertebrates species and some amazing corals. Everything is generally bigger and better in the Coral Sea.

Marion Reef is one of the most isolated of the Coral Sea reefs. The reef is 40km long by 20km wide and is rarely visited by charter boats. But one charter boat that does go there is Odyssey, run by Dive Nomad (www.divenomad.com).

All previous trips I have done to the Coral Sea reefs have involved long, and generally rough, ocean crossings, with many passengers getting very seasick. However, Dive Nomad have a better way to dive the Coral Sea, they take Odyssey out to Marion Reef for four weeks at a time and then fly out guests in a seaplane. The seaplane experience was brilliant, departing from Hamilton Island, in the Whitsunday Group, before we knew it we were landing in the lagoon at Marion Reef.

There is one slight problem with the seaplane, a weight limit of 20kg each, very restrictive for most underwater photographers. Between my wife, Helen, and I, we were just over 40kg with two camera systems and a limited amount of dive gear. Dive gear is available onboard, so we left the regs and BCDs at home.

Odyssey is a 24m long catamaran that caters for 16 passengers in five comfortable cabins. The vessel has a large lounge/dining room, a roomy back deck, a bar and a spacious upper deck. We did find it is not really set-up for underwater photographers, with no camera table and only a small camera washtub, but we managed. But there are plenty of points for charging, Australian three pin plugs, and the crew were very helpful with any request.

Odyssey operates both diving and game fishing trips to the Great Barrier Reef and Coral Sea. Our trip was actually a game fishing trip, but we had been invited to join the trip by Dive Manager Julieanne Gregory to find new dive sites and promote future dive trips to Marion Reef that will commence in June 2009.

As I had to pack light I only carried two main lens for underwater use, the old faithful Nikkor 60mm and my new Tokina 10-17mm. I

(Top) Odyssey at anchor at Marion Reef, Nikon D50, 18-55mm lens, 1/400, f10, ISO 200.

(Right) Helen photographs a giant moray eel, a common species at Marion Reef, Nikon D50, Ikelite Housing, Tokina 10-17mm lens, 1/100, f13, ISO 200 and twin Inon Z240 strobes.

had purchased the Tokina six months previously, but hadn't had a chance to use it underwater, due to being landlocked in India for work. I also packed my Nikkor 10.5mm, just in case the Tokina didn't stack up to all the hype.

Marion Reef has a smorgasbord of dive sites and the reef is largely unexplored. In the lagoon are thousands of bommies, some the size of office blocks and rising from 60m to the surface. There are also numerous channels cutting between the lagoon and the outer edge of the reef, which are great for drift dives. While the outer edge of the reef varies, flat in some parts from pounding seas, there are also walls, canyons and caves to explore.

Our first dive was on a bommie called Stone Henge. This lagoon bommie was huge, with gutters, ledges and walls to 35m to investigate. Within seconds of entering the water I found a turtle-headed sea snake. Sea snakes are a feature of Marion Reef and on every dive we were to see up to a dozen. With my 60mm on I had the perfect set-up for photos of this marine serpent. Turtle-headed sea snakes, like all sea snakes, are very docile, this species is also non-venomous as they eat only fish eggs. I took quite a few photos of this wonderful creature, the flash didn't seem to bother it, and after a while it noticed its reflection in the port so came out to investigate.

Other features of this dive site were the abundant reef fish, a cave filled with gorgonians, several more sea snakes and a pair of reef-top pipefish. We were diving in June, wintertime in Australia, but the water was still a comfortable 23C degrees, about as cold as it gets here, and also

The seaplane touches down in the Marion Reef lagoon, Nikon D50, 18-55mm lens, 1/400, f10, ISO 200.

(Top right) The cute face of a turtle-headed sea snake, this species is non-venomous and eats only fish eggs, Nikon D50, Ikelite Housing, 60mm lens, 1/125, f22, ISO 200 and single Inon Z240 strobe.

(Right) Helen with a lovely patch of whip coral, Nikon D50, Ikelite Housing, Tokina 10-17mm lens, 1/100, f8, ISO 200 and twin Inon Z240

enjoyed 20m to 50m visibility.

Over the week we explored a number of new bommies in the lagoon. The ones in the shallows were great for macro subjects. Only 5m to 8m deep, we found moray eels, dragonet, gobies, blennies, shrimps, crabs, nudibranchs, anemonefish and lots of sea snakes.

One of the best bommies we dived we called Goat Mountain. This bommie rises from 30m to 4m and was packed with life. Swimming around the bommie were reef sharks, Maori wrasse, coral trout, fusiliers and sweetlip. We found several moray eels; Helen was photographing one hanging out of a hole that suddenly disappeared when an olive sea snake came in for a closer look. This site was a great place to test out the Tokina 10-17mm as there was a huge patch of cabbage coral swarming with hundreds of yellow-finned goatfish. I enjoyed being able to zoom the lens, the wide end great to show the expanse of fish and coral, the other end better for shots of just the fish.

Another wonderful bommie we called Big Eye Bommie, after the schools of big eye trevally cruising around. At this bommie there are several huge gorgonians, 3m wide, at 30m and some great soft corals. I had the 60mm lens on, so of course got buzzed by a grey reef shark. It was great to see so many sharks still in residence at Marion Reef, but they tended to be shy, staying out of camera range most of the time. Also at this site were the usual reef fish, dogtooth tuna and some wonderful spondylus clams.

Some of the best diving we did at Marion Reef was in the channels that cut between the lagoon and the outside of the reef. At the Southern Channel we found a 2m long tawny nurse shark, while at the Northern Channel were quite a few giant moray eels in the ledges here. At both sites we also saw numerous reef sharks and the usual sea snakes.

The Tokina 10-17mm got its best workout at Groper Channel. This narrow channel, 25m deep and 60m wide, was a sensational drift dive. We jumped in and descended right onto a small bommie completely covered in colourful spikey soft corals. From here we drifted along seeing schools of big eye trevally, dogtooth tuna, red bass, fusiliers, silver drummer, parrotfish and grey reef sharks. The fish life was just magic. We then came across a wall lined with rows of yellow gorgonians, then found a cave packed with multi-coloured gorgonians. I didn't know which way to point the camera, the fish, the coral, or both.

While we were diving the fishermen were out all day having a great time. Odyssey fishing trips

Colourful feather stars decorate the coral at Marion Reef, Nikon D50, Ikelite Housing, Tokina 10-17mm lens, 1/100, f14, ISO 200 and twin Inon Z240 strobes.

are catch and release, with a limited number of fish kept for the nightly meal, the meals were superb. The fishermen were after GT's and doggies (giant trevally and dogtooth tuna) good fighting fish, and they lost more than they landed, including a few to the sharks. We were a little worried about joining a fishing trip, but found the blokes to be great company. Many of them also dive and were just as concerned as we were about preserving the reef and its fish stocks.

The outside of Marion Reef offers some very exciting diving. At Southern Wall we cruised through canyons lined with wonderful hard and soft corals. During the dive we saw batfish, stripey snapper, coral trout, Maori wrasse, jobfish and a white tip reef shark. A highlight here was numerous anemones filled with a variety of anemonefish.

The eastern side of the reef suffers from the full force of ocean swells and the coral is rather flat and plain. Julieanne told us of a dive they did here where the bottom was quite barren, but the divers hardly noticed, as they were too busy watching an endless procession of pelagic fish and

A massive school of yellow finned goatfish, a highlight at Goat Mountain, Nikon D50, Ikelite Housing, Tokina 10-17mm lens, 1/100, f10, ISO 200 and twin Inon Z240 strobes.

sharks cruise by. She named this site The Cinema.

With southerly winds blowing we got the chance to do some exploratory dives at the northern end of Marion Reef. One dive was a bit dull on dead coral, though we did see a large school of squid, but all the other dives we did here were great. The best was on a series of coral ridges in 20m to 30m of water. Swimming from ridge to ridge we saw reef sharks, a giant trevally, gorgonian lined caves, the ever-present sea snakes, schools of pyramid butterflyfish and a large black-blotched stingray. The highlight was finding a 10m high bommie that was swarming with stripey snapper and fusiliers. The top of this bommie was encrusted with lovely corals while the underside was cut with ledges lined with sea whips, soft corals and gorgonians.

While exploring this bommie we were surrounded by a massive school of chevron barracuda. Several hundred of these impressive fish circled us of five minutes. My Tokina 10-17mm got a good workout on these amazing fish and I was very impressed with the lens performance, the poor 10.5mm didn't even get a look in.

Our week of diving Marion Reef ended all too quickly and before I knew it we were loading the gear on the seaplane for the return trip to civilisation. But flying over the endless bommies that are yet to be explored at this incredible reef I knew I would return to enjoy more spectacular Coral Sea diving.

Nigel Marsh
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Guidelines for contributors

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

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

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

If you have an idea for an article, contact me first before putting pen to paper.

E mail peter@uwpmag.com

How to submit articles

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

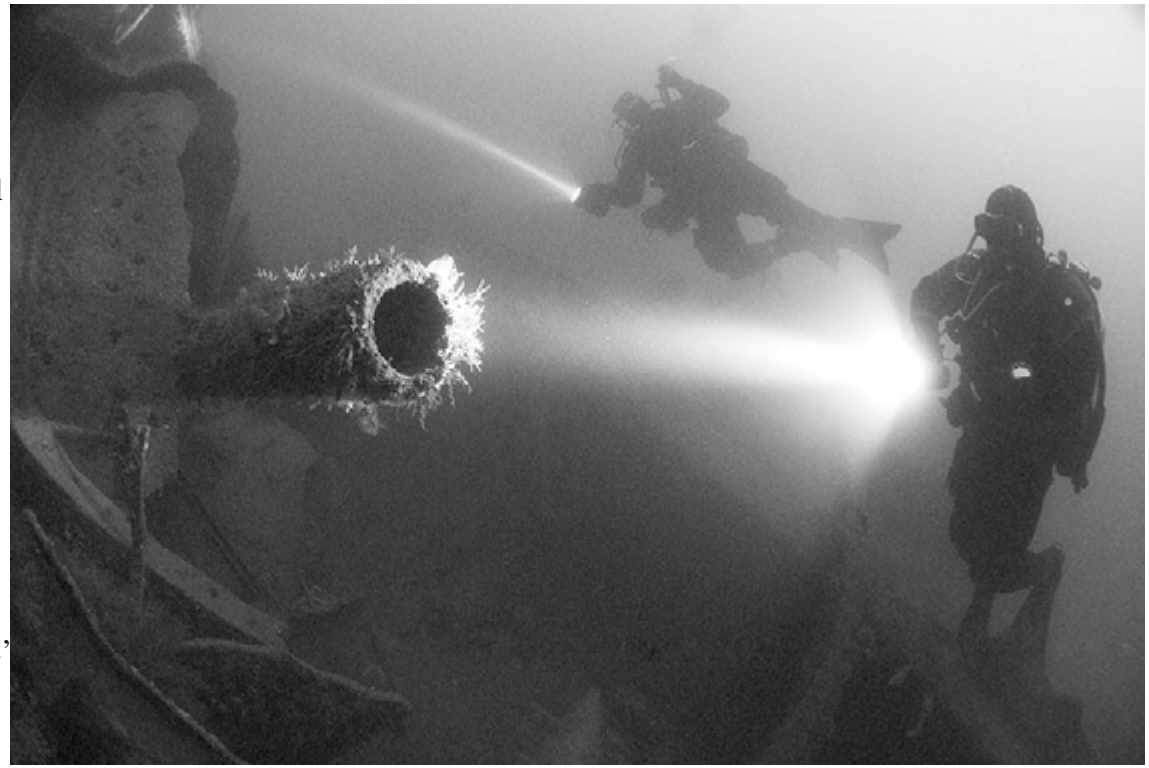
1. The text should be saved as a TEXT file and attached to the e mail
2. Images must be attached to the e mail and they need to be 144dpi

Size - Maximum length 15cm i.e. horizontal pictures would be 15 cm wide and verticals would be 15cm.

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 events conspire to work against you and make life harder than it should be. Cameras and housings are not immune to this, and non-photographers would say that by carrying underwater camera gear you are heading for a diving life full of frustration and disappointment.

Sometimes it's a self-induced error like forgetting to take off the lens cap before jumping in, but other times the camera or housing refuses to cooperate and the pre-dive photo planning is binned. Or is it?

This black and white image of my buddy shining his torch on one of the casement guns of the Markgraf certainly would not have existed if the dive had gone to plan.

For those who have never heard of Scapa Flow, the Markgraf is just one of three examples First World War vintage German battleships. The wreck is big, inverted and sitting in 44 meters of water - a wreck diver's personal nirvana. As she sank she rolled over and embedded her superstructure in the seabed, so if you want to see anything other than acres of hull the dive plan calls for a visit to the seabed. This is where things went wrong.

The casement gun would make a good subject and off came the dome port cover, flash guns fired up and aperture set to F4.5 with a shutter speed of 1/20th. Even at these wide open slow speeds the settings still yielded a black image, so I pressed the ISO button and selected 400. From this point on, neither aperture or shutter speed could be changed - the ISO button had jammed down.

From a depth of 44 meters 'just popping back to the surface' to sort the problem out was not an option. The lens would focus and the camera take a picture, but there was no preview available (just like film - remember that?) and no other settings (except the ISO value) could be changed.

I can't imagine that the Nikon engineers had the foresight to imagine the scenario I now found myself in but the camera could still work at a very basic level and take a picture. Narcosis slowed the thought process but a plan was formed; turn off the strobes, bracket every frame on the ISO value and shoot as many frames as possible.

Both the light meter and image preview were not working so I had no idea what ISO value worked but given the depth overexposure was unlikely so I shot every composition at ISO 400, 800, 1600 and the 'Hi' setting on the D200 (equal to ISO 2000). The post dive review revealed the higher ISO values did the trick.

The image is hardly perfect - grainy and laden with noise but it converts to a moody black and white shot quite well and has been published a couple of times in the dive press. So it's better than no image at all.

D200 in a Subal housing, 10.5mm fisheye. F4.5 at 1/20th

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Do you have a nice shot with a short story behind it?
If so e mail me and yours could be the next "Parting shot".
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Parting Shot 2

One of the best places to observe these monster fish is off the Australian state of Queensland, especially where I live, Brisbane. Over the years I have regularly seen Queensland gropers on the local reefs and wrecks and have had some memorable encounters. On one dive on the wrecks at Curtin Artificial Reef I was inside a ship when I saw a 2m long groper, but this was nothing, as right behind it was a groper almost twice the size - as large as a family car. While at Shag Rock I once observed over a dozen Queensland gropers milling around the reef, possibly a breeding aggregation.

But the most common element of these encounters has been no good photos, as these massive fish are very camera shy, fleeing from divers when they get too close, memories of when they were hunted by spearfishermen.

On a recent dive at Flat Rock I was after images of the critically endangered grey nurse shark, which visit a number of reefs off Brisbane in winter and spring. I didn't want to go too wide so set my Nikon D50 up with the 18-55mm lens. I have really been surprised at how good this kit lens is for a shooting medium size subjects like fish, turtles and sharks.

Within minutes of getting in the water my buddy, Peter, and I had encountered a school of mobula rays and cownose rays mixed together, several wobbegong sharks, an abundance of reef fish and a large brown spotted rock cod. As we moved along the reef we also encountered three grey nurse sharks, including a pregnant female, but none of the sharks came within camera range. Towards the end of the dive we came over a ridge to see a large Queensland groper hovering in a gutter.

I slowly moved closer to the huge fish, expecting it to zoom off at any moment, but to my surprise it remained where it was allowing me to get very close for some wonderful portrait shots. As I shot image after image I couldn't believe my luck that this 2m long fish was happy to just stare at me. A few times it slowly cruised up and down the gutter, followed by a group of juvenile silver trevally. I had never seen such a bold Queensland groper before and knew I had finally got the portrait shot I had always desired of one of these monster fish.

The giant or Queensland groper (Epinephelus lanceolatus) is the largest of all the groper species. This uncommon fish is found throughout the Indo-Pacific region and can reach a length of 2.7m and weigh close to a ton.
Nikon D50, Ikelite housing, 18-55mm lens at 26mm, 1/80, f11, ISO 200, twin Inon Z240 strobes.

After five minutes with the groper it was still hovering in the gutter with us, but unfortunately we had to depart, our air was getting low and our computers were telling us it was time to ascend from a very memorable dive.

By Nigel Marsh
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