Underwater Photography

a web magazine
Issue 46
Jan/Feb 2009

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 5D MKII
EOS 20D
EOS 30D
EOS 40D
EOS 50D
EOS 350D, Rebel XT
EOS 400D, Rebel XTi
EOS 450D, Rebel XSi
EOS 1000D Rebel XS

Nikon
D40, D40x
D60
D70, 70s
D80
D90
D200
D300
D700

Olympus
E3
E330
E-400, E410
E420
E510, E520

Sony
A-100
A-200
A-300
A-350
A-700

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.

Compact Digital Housings for

• Canon • Fuji • Nikon
• Olympus • Sony

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').

ikelite USA
Underwater Systems • 50 W. 33rd. Street • Indianapolis, IN • 46208 • **317-923-4523** **www.ikelite.com**

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Cover photo by Andre Seale

Underwater Photography
2001 - 2009 © PR Productions
Publisher/Editor Peter Rowlands
www.pr-productions.co.uk
peter@uwpmag.com

Editorial

Dumb BBC

We've had a couple of underwater series on BBC TV recently - "Oceans" and "Pacific Abyss" and (in my humble opinion!) they represent a new low point in underwater television production and I'll admit I offer you this viewpoint after having not being able to watch an entire programme from either series. My wife then forbade me from watching them anymore for fear that my blood pressure would blow my head clean off.

Like it or not (and I'll probably lose our Australian circulation for this) but I blame the Steve Irwin delivery for this sad demise. The premise that interaction is entertaining and educational just doesn't cut it with me. It's dumb and it's cheap sensationalism which produces trash television aimed at a very low level.

The whole presenter led delivery combined with an intent to dramatise the dangers of diving is becoming increasingly common and incredibly irritating. I just don't see why a presenter has to be filmed talking underwater when properly shot footage of interesting behaviour with illuminating yet unobtrusive narration would be much more educational and easier on the eye.

Having just lost our Ozzie readership I'm now about to lose our American brethren by daring to suggest that it is co-productions with dollar driven channels such as Discovery which are also at fault as they bring with it an overbearing control to produce something popular rather than good and nearly always with an American angle or presenter.

Why, like the Hollywood animation movie industry, can't these young upstarts of producers have the basic intelligence to understand that the animals are the real stars. All you need is a competent cameraman with a knowledge and empathy for the marine world put in the right location to record their daily lives. They write the story for us.

I don't want to see millions being spent on what were basically bloated over produced 'what we did on our dive trip' videos. I want to see and be informed about this incredible environment and its inhabitants in a respectful, quality way.

The main trouble behind this is that all policeman, bank managers and other authority figures are now so much younger than me.

Peter Rowlands
peter@uwpmag.com

News, Travel & Events

Gt White Sharks and Kelp Forests with Maria Munn

10-20 September 2009

Maria has been following her passion for photographing whales, dolphins and sharks for 11 years, with 8 years experience in underwater photography in Belize, Alaska, Mexico, Costa Rica, Thailand, Hawaii, The Cayman Islands and The Philippines to name but a few. She is passionate about sharing the wealth of her knowledge and experience with her guests in making the most of their digital compact cameras. She is the first person to design structured tailor-made courses for both beginners and advanced guests with digital compact cameras and launched the first PADI Digital Underwater Photo Speciality Course in Egypt.

Her overseas courses are tailor-made and specifically structured to help guests, particularly beginners, to become really creative with their image making, whatever their level of experience or make of camera. Individual requirements and goals are carefully considered. Personal one-to-one dives are included, as well as daily individual sessions and group feedback throughout the duration of the course.

Guests are asked to attend one of Maria's courses first to help them make the most of the forthcoming trips. Please visit www.oceanvisions.co.uk for full details.

Guadalupe Island lies 354 kilometres to the south of San Diego, California, off the coast of Baja California, and is Mexican territory. The island is home to colonies of Northern Elephant Seals, California Sealions and endemic Guadalupe Fur Seals.

Nautilus Explorer has four large cages which were professionally designed and built with full engineering certification. Two cages are 3 metres in length and rectangular in shape. The other two are square, 1.8 metres on each side. Each cage offers space for 3 divers. Each cage has wraparound bi-level viewing ports set up to allow photographers unobstructed views (without corner posts) while either standing up or kneeling on the cage bottom. Two cages will float behind the boat and two will be attached to booms on either side of the boat offering 360° views of the shark action. An unlimited supply of surface air is available (by hookah system) which means that you don't have to be a certified diver to enjoy the shark encounters!

www.oceanvisions.co.uk
www.divequest.co.uk

Beneath Cornish Seas

by Mark Webster

This is a new book by Mark Webster to be published in February 2009.

It will be predominantly a pictorial presentation of the colourful and varied marine life to be found below the temperate waters surrounding the south western peninsula of Cornwall in the United Kingdom. The book will be of interest to snorkellers, divers, underwater photographers and anyone with a passion for marine life and natural history. Price only £10.95

www.alison-hodge.co.uk
www.photec.co.uk

Fiji's first Shark Photo and Video Shootout

April 16-25, 2009

Wetpixel has partnered with Aqua-Trek to bring you the most energized shark shootout anywhere in the world!

Capture Eight Species of Sharks in one location! join industry pros DAVID FLEETHAM and SHAWN HEINRICHS for a photo and video shootout at "the most energized shark dive in the world" in one of the world's top dive destinations – the Fiji Islands!

Aqua-Trek's Ultimate Shark Encounter™ provides a stage for success for those once in a lifetime SHARK images and videos. Nurse sharks, lemon sharks, silvertip, whitetip, blacktip, grey reef, huge bull sharks and enormous tiger sharks all frequent this amazing dive.

We only take 10 divers providing each attendee with optimal opportunities to score that amazing award winning image. You will have an incredible time diving with peers and spending one-on-one time with top industry professionals improving your underwater photo and video skills and learning techniques on how to capture that perfect shark image.

www.aquatrek.com

Dive Nomad Marion Reef 2009

In June 2009 Queensland based liveaboard Dive Nomad will launch the Ultimate in Adventure Diving at Marion Reef in the outer Coral Sea. Dive Nomad has spent the last 2 years exploring the Coral Sea in search of some of the most extraordinary reef systems available. From 2009 Dive Nomad will be able to share one of these amazing destinations with those seeking a new and exhilarating dive location.

Marion Reef was once the most popular of the Coral Sea reefs in the 70s and 80s, but for the last two decades has rarely been visited by divers due to limited access. Dive Nomad's vessel 'Odyssey' is the only dive liveaboard purpose built to access this remote location. Using floatplanes, divers can enjoy an easy 1_ hour plane ride to the outer reaches of Australia's territorial waters – a much more comfortable way to travel than the 30 or more hours required to get there by boat!

This is your opportunity to be amongst the first to explore an untouched, pristine and simply amazing dive destination. The dive site are countless, both discovered and not yet discovered.

www.divenomad.com

SDUPS Festival and Competition

The San Diego Underwater Photographic Society (SDUPS) is proud to announce that its 40th Annual Film Festival will be held April 25, 2009 in San Diego, CA.

This year's film festival will feature a "headliner" film from Steve Drogin as well as a worldwide contest. The winner of the film contest, as determined by the audience, will be awarded a cash prize of $500. Additionally, there will be a reception honoring many of San Diego scuba diving pioneers with a special emphasis for those that lead the way in underwater photography and cinematography.

This competition is open to any underwater film maker. The winner will be determined by audience vote on April 25, 2009 during SDUPS's 40th Film Festival. The event will be held in San Diego, California at Qualcomm Hall which features a state-of-the-art high definition projection system.

The films are limited in time to 5 minutes and must contain at least 70% underwater content.

Deadline for entries is February 13, 2009.

www.sdupsfilm.com

British Underwater Image Festival 2009

The British Underwater Image Festival (BUIF) 2009 sponsored by Canon and Cameras Underwater is now officially open to entries from underwater photographers and film-makers throughout the world.

Thousands of pounds worth of prizes will be available to winners and runners-up across the underwater stills and video photography categories. For the first time, the prestigious competition has introduced a stills and video category dedicated to British waters. DIVE editor Simon Rogerson said: 'It is only right that BUIF should have a dedicated section for underwater photography taken in British waters. Last year, we received a lot of high-quality entries taken in Britain, so creating a special section of the festival was a natural step.'

All shortlisted images and videos will be showcased at the DIVE FEST in Cornwall on 15-17 May 2009, while prints will go on a month-long public display at the National Marine Aquarium in Plymouth in the summer. Confirmed prize sponsors include Mares, Apeks, Sea & Sea, Scuba Travel and PADI.

The 2009 BUIF competition will also include another first: an on-the-day shootout in the waters of Cornwall. Underwater photographers from across the UK will be battling it out to be named the British Underwater Image Festival Splash-In Champion at the UK's new dive beach festival in May 2009. Hundreds of pounds' worth of prizes will be up for grabs to winners of the shootout in the three categories of Wide-angle, Macro and Fish Portrait.

The deadline for entries for BUIF 2009 is 31 March 2009.

www.divemagazine.co.uk

New Products

Ikelite Canon 5D Mark II housing

This heavy-duty clear polycarbonate case is contoured to the camera, durable, and completely corrosion free. Unlike aluminum housings there is a clear view of the main o-ring seal, port o-ring seal, camera controls, and dry inside. Mechanical controls are The housing is fully functional to a depth rating of 200 feet (60m). The housing is only slightly negative in salt water depending on choice of lens port.

The Super-Eye magnifier comes standard and offers enhanced visibility of the camera's viewfinder while wearing a diving mask. The camera's large LCD screen can be clearly viewed through the back of the housing. The live preview feature of the Canon 50D model is accessible for framing your photos using the camera's LCD screen.

Controls are provided through the housing for every camera function except the multi-controller and kept water-tight with Ikelite pioneered Quad-Ring seal glands—proven to be the most reliable method of sealing controls. A large zoom control knob can be comfortably reached without removing your hand from the handle.

A full range of optical grade dome and flat ports accommodate most macro, wide angle and zoom lenses. The standard port line offers compact and affordable options without sacrificing image quality. The modular port system offers maximum versatility and performance with interchangeable 8" dome and flat port assemblies. Port attachment is quick and easy with a simple locking system and the port o-ring seal is clearly viewed through the housing. Lens ports sold separately.

The dSLR housing measures 9.5" (24cm) wide including knobs; or 13.25" (33cm) wide with tray & handles. It is 6.75" (17cm) high; or 8" (20cm) high with tray & handles and 6.5" (16.5cm) deep including knobs and port lock assemblies.

The housing complete with removable handle and tray assembly weighs 7.15 pounds (3.24kg) without port.

www.ikelite.com

FIX G10 Housing for Canon Powershot G10

FIX (Fisheye Japan) is one of the most innovative producers in the industry and the demonstrated that again with their new housing for the Canon G10. The compact form factor combined with extreme versatility from a singe port configuration make this housing a great contender for the popular G10.

Adapters for the popular 67mm wet mount macro lenses or Inon AD mount macro lenses add even more versatility, or go really wide with the Fisheye FIX 15mm Wide Angle Converter Lens.

An ergonomic shutter release, easy access to all camera controls, and a comfortable grip make this housing a pleasure to use. The housing zoom control features a unique 'screw-down' limiter to prevent accidentally

zooming the camera when using the wide angle converter.

The flash window on the front of the FIX G10 is molded to accept Sea & Seay style fiber optic cables for use with either Sea & Sea or Inon fiber optically triggered strobes, allowing optical TTL strobe control and trouble-free strobe connection.optical TTL strobe control and trouble-free strobe connection.

www.reefphoto.com

INON Float Arms

The INON Float Arm uses weather-resistant ABS material for its component arm body to lighten total weight creating extraordinary buoyancy together with its hollow arm body design comparing to existing solid arm type float system. The hollow arm body enables not only helping weight trimming but also provide extra buoyancy.

The Float Arm system has 5 different models.; 'Float Arm' series of standard ϕ52mm/2inch with three different lengths and 'Mega Float Arm' series of ϕ97mm/3.8inch with two different lengths.

www.inon.co.jp

REEF PHOTO & VIDEO

Seatool Sony HDR-SR11/12

The Seatool SR11/SR12 underwater housing for the Sony HDV Handycam HDR-SR11/SR12 is one of the smallest, lightest underwater video housings ever produced.

At just 1.5kg it's small and light enough to hand carry on aircraft and because the housing body conforms so closely to the camera, the housing attains nearly neutral buoyancy (slightly negative) for effortless handling underwater.

The housing utilizes a flip out mirror & lcd reversing circuit, allowing the user to take advantage of the camera's LCD Screen for composition. Optional 3" external monitor now available.

www.reefphoto.com
www.seatoolusa.com

Top Dawg 11 video housing

The new Top Dawg II underwater video housings are the most versatile housings on the market. Not only will they fit well over one hundred cameras, they also feature the ability to shoot digital stills. Depth rating 200 fsw.

The housing weighs 6.5 lbs and includes an integrated weight bracket.

Dimensions: - Length: 10.75 in Width: 11.25 in. (with handles) Height: 5.75 in.

Controls - True non-penetrating electromagnetic controls

- Easily removed for cleaning.

- Mode photo/video, Start/stop Record & Photo,

Power on/off, Zoom tele/wide, Momentary Auto Focus, Fulltime Auto Focus, Manual Focus near/far

A scratch resistant flat glass port provides wide angle and good macro capabilities.

www. topdawgvideo.com

Olympus PT-044 housing

When the action moves from the beach to the water, your Olympus digital camera needn't be left behind. The PT-044 underwater case has been specially customised for the FE-360 camera and is waterproof up to a water pressure equivalent to a depth of 40 metres. This case is perfect for fascinating underwater photography or capturing the thrill of water sports and activities. With its durable, high quality polycarbonate construction, it protects the camera from water while also cushioning it from knocks and bumps on land. Complete control of photo functions, such as zoom and flash mode, is also permitted.

www.olympus.co.uk

10Bar housing for Panasonic LX3

Made of aluminum, it is a sturdy choice for the LX3 camera. For those who favor small cameras, it is the ideal housing to suit their needs.

It is equipped with full-function control buttons. The Acrylic back cover allows taking pictures and checking on the camera much easier. Its key hole lock design provides ease of use and added security to prevent from leaking. Now you can use small cameras with the feeling and function of professional camera housings.

Overall Size 134 x 152 x 112mm (LxWxH) Total Weight Approx. 920g (Housing only)

Buoyancy (with camera) Slightly negative in salt water

www.10bar.com

Epoque Canon Rebel housing

The camera is fast, easy to use and delivers perfect photos. It features a 10.1-megapixel CMOS Sensor, Canon DIGIC III processor, a bright 2.5-inch LCD monitor, and Live-View Function, in a compact design. The Rebel XS is a powerful image tool that is simple to use.

The Epoque ERX-C1010 housing will operate most of the functions on the Canon Rebel XS/ EOS 1010 under water. There are five interchangeable ports available for using the most popular lenses. A Zoom-port, two Macro-ports for the EF 50mm and EF 100mm macro lenses and two Dome-ports for wide angle and fisheye lenses, will be available to for capturing every type of underwater subject and scene.

www.epoque-japan.com

Gimme a hug DVD

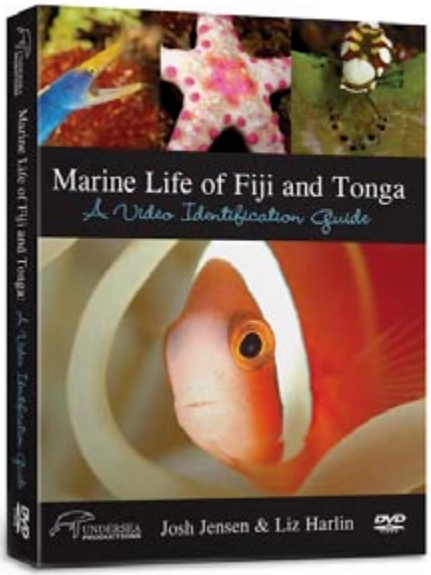
This short documentary shows one of the most mysterious phenomena in the animal world; Tonic Immobility, amazing animals showing a totally different behaviour than most people would expect. It shows not only how beautiful and graceful those animals are, but also reveal surprising insights into their behaviour.

With his films, filmmaker Geert Droppers, wants to give the viewer a more genuine picture of an animal that, naturally, must be handled with care and respect, but that is certainly not the monstrous 'killing-machine'.

This documentary is produced by the PROTECT THE SHARKS FOUNDATION, a Dutch NGO, working on projects to create awareness and a better understanding for this important animal that is threatened with extinction by over fishing and finning of sharks.

www.protect-the-sharks.org

Marine Life of Fiji & Tonga DVD

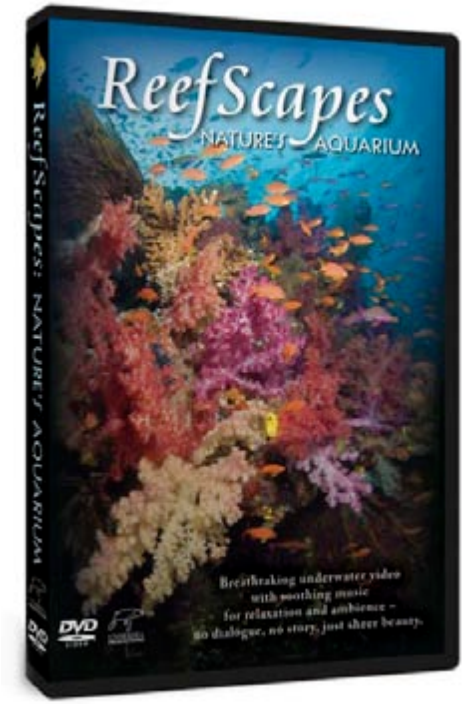


This "V.I.D." Guide (Video ID) covers the incredible marine biodiversity of this fantastic corner of the South Pacific. It's an comprehensive identification guide to 1272 animal and plant species — except that instead of being a book full of pictures, it's a video with gorgeous real-life footage of each species, and each of the 1739 video clips is labelled with the common and scientific names of each species.

Beautifully filmed and visually engaging, Marine Life of Fiji & Tonga contains pretty much every species you are likely to see, catch or hear about when getting wet in this part of the world. Three years and more than 3000 dives in the making, this is both an essential tool and exotic entertainment.

www.underseaproductions.com

Reefscapes: Nature's Aquarium DVD



Filmed the clear blue waters of the Fiji Islands, Reefscapes: Nature's Aquarium is a remarkable hour-long collection of 137 seamlessly unfolding ocean scenes. Magnificent corals serve as a natural backdrop to the reef's innumerable colourful fish as they swim in and out of this unique tropical marine stage. The camera documents the dynamic and very real scenes of untamed coral reefs - and the action unfolds not within the confines of a fish tank, but in the South Pacific's limitless blue.

With high-end optics and super-wide lenses for outstanding picture clarity, Nature's Aquarium singularly captures the unsurpassed beauty and glory of the vast underwater world.

There is also a bonus feature Reefscapes: A Closer Look — enjoy a 20-minute undersea journey and delight in meeting the colourful cast and characters of Fiji's tropical reefs. There are butterflyfish, shrimps, angelfish, turtles, sea stars, parrotfish, anemones... A Closer Look is an enchanting virtual dive into the realm of a vibrant coral reef, and even includes optional subtitles that identify each critter for you.

Award-winning composer Bjorn Lynne's serene soundtracks are featured on Reefscapes: Nature's Aquarium and Reefscapes: A Closer Look, and both videos can be looped for continuous playback.

www.underseaproductions.com

Nikon D3x Underwater Housing Test Fit

By Berkley White

Nikon D3x in a Subal ND3

D3x in a Sea & Sea MDX-D3

Recently one lone Nikon D3x made its way from headquarters to the west coast. This camera was an early production model and unauthorized for public image samples. All initial reports had confirmed that the Nikon D3x was the exact same body as the NikonD3. However, we were concerned something as simple as a camera strap mount change might require housing modifications.

We are happy to confirm that the Nikon D3x does indeed fit the Sea & Sea MDX-D3 and Subal ND3 housings like a glove. We were temporarily out of stock on the Aquatica D3, but based on our measurements we are 99.9% confident the Nikon D3x will drop in the Aquatica D3 housing as well.

www.backscatter.com

Philippines 'The Heart of the Ocean

Philippines - 'The Heart of the Ocean is one of the finest book of the ocean; the first in the world to illustrate and celebrate the richness of life in both shallow and deep water of the South East Asia Seas. In Its true intend, the volume evolved as an accolade for the Earth richest marine biodiversity province. This high quality 7 colour production pictorial almanac encapsulates the richness and beauty of what lies beneath the heart of the Philippine Sea into one exquisite volume; it is designed to raise the standard for all books of the sea, a hallmark for underwater imageries production. Celebrating the arts of nature and the wonders of biological science this production reveal the usual suspects of coral reefs, the pelagic zone, inshore and fringing reefs, and the oceanic atolls and well as several deep sea critters from the heart of the tropical ocean seen for the very first time.

Available at all good bookshops from mid January 2009 - author autographed limited edition copy can be order from one@oneocean.com USD100 freight included. Part of the Proceeds of the limited edition is designated for OceanNEnvironment's "SAVE OUR SEAS" fund to support research and conservation projects in the Asia Pacific. The limited edition production is endorsed by President Gloria Arroyo and supported by the Department of Tourism Philippines.

www.MichaelAW.com

Backscatter And Underwater Photo-Tech Have Merged!

Long term friends Berkley White of Backscatter and Fred Dion of Underwater Photo-Tech have merged their businesses to create Backscatter East in Derry, New Hampshire. “I am thrilled to work more closely with Fred Dion” says Berkley White. “We have shared the same business values for over 20 years. We both believe the customer comes first and only sell products that we would dive ourselves.”

Fred Dion and the Underwater Photo-Tech crew have serviced the underwater imaging community for 25 years. We are excited that Fred will add his wisdom to the Backscatter experience. Fred will manage Backscatter East and will be available to clients via phone and email daily. Please stop by our new east coast showroom to see the latest in imaging equipment and receive hands-on help from Fred and the crew.

Coast to coast or international, we have you covered! We now offer extended work hours for all time zones. Our west coast shipping hub offers the latest shipping times in the US and our extended hours will give you easy access to the best technical phone support in the industry.

www.uwphoto.com

Cameras Underwater Express new web shop

Previously at Cameras Underwater we've always debated whether we should be selling our products over the net due to their complicated nature. We feel it's really important to make sure that our customers are buying the right equipment for them, rather than just what happens to be on the market. We also like to teach people how to use the important features of their cameras, which makes underwater photography much easier. Well, after countless requests from our customers to be able to buy online we've decided to make it possible with a limited selection of what we sell. We're trying to include as much useful information as possible so that people do make the right choices. However for the best service, we still recommend that you speak to us, either over the phone or by popping into one of our two branches, located in London and Devon.

www.camerasunderwater.co.uk/store

FX for Nikonians

By Alexander Mustard

This time 13 months ago, Nikon did not sell any cameras with full frame (i.e. the same frame size as 35mm film) digital sensors. Much has changed. Nikon now has three. The 12MP D3 went on sale in December 2007, the 12MP D700 was released in August 2008 and, most recently, the 24MP D3X arrived in December 2008. All, it could be argued, are class leaders. They have also attracted lots of attention from housing manufacturers: options for the D3 appeared from March, for the D700 from October and because the D3X is externally identical to the D3, well there was no wait at all.

All these cameras are packed with the latest technology, and have the full might of Nikon's marketing department behind them! We're made to think we couldn't possibly take a picture without one. But for Nikon users shooting with DX sensors underwater are they worth the upgrade? In this article I'll will try and answer that question by sharing some of my experiences shooting both the D3 and more recently the D700, underwater, in environments as diverse as the waters off Vancouver Island and the Red Sea. I have yet to use the D3X underwater, but being identical to use to the D3, I'll comment on its potential.

Theoretical Advantages

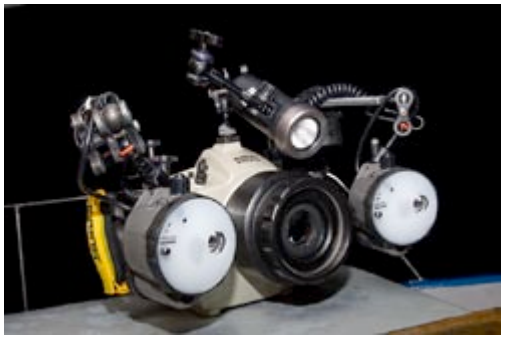
The meat of the issue is that larger sensors have three theoretical advantages underwater. First each photosite (what becomes a pixel) is larger, so it collects more light. This improves the signal to noise ratio, allowing the D3 and D700 to be leaders in low light (high ISO) image quality. Useful, for example, for available light wrecks. Second, another positive of large pixels is that they reduce diffraction, theoretically capturing more detail at smaller apertures. Useful for macro. The third advantage of a big sensor is that you can squeeze more megapixels on them, while not compromising the quality of each pixel too much, and not pushing the resolving power of your lenses to the limit. The D3 and D700 don't do this, but the D3X does. There are disadvantages too compared with DX sensors. The most obvious being the extra expense.

Large sensors, with less densely packed and larger pixels allow us to shoot at higher ISO, without encountering noise. In Canada, I found plenty of uses for ISO 800 and some for ISO 1600. In tropical conditions it was much harder to find justifiable uses for this capability. Nikon D3 + Sigma 15mm. Subal housing. Inon Z240 strobes. F10 @ 1/60th. ISO 800.

Transition To FX

For those thinking of the "upgrade" I can reassure you that the transition is painless. The cameras feel and function just like the DX ones. The viewfinders are improved and the lenses change a little. Focal lengths you have got used to on DX are now wider, and some lenses like the 16mm fisheye are not quite as good as you remember them being on film. If focal lengths concern you, just look through

Is big best? The FX or full frame sensor from Nikon's D3 and D700 cameras. Photo: Nikon Inc.



The Subal ND3. Although bigger and considerably more expensive than the Subal ND700, the housing is closer to neutral in the water and has excellent ergonomics. It takes both the D3 and D3X.

The consistency of Subal's controls between their housings makes adapting to using any of these cameras very simple for existing Subal users. Shutter release, AF-lock, Aperture and Shutter Speed controls all fall easily to fingers. Photo: Peter Rowlands.

The Subal ND700, is a compact, but fully featured housing. Photo: Peter Rowlands.

(Right) The 60mm is restored to its full coverage and becomes quite a wide macro lens well suited to larger macro subjects. The 105mm is the more versatile all rounder on FX cameras. Nikon D3 + 60 mm. Subal housing. Inon Z240 strobes. F18 @ 1/160th. ISO 200.

the lens (rather than at the numbers on it) what you see is what you get. You soon adapt. Changing from DX to FX is much simpler than changing from film to FX would be. The FX format may be the same size as slides, but the way the sensors respond to light is quite different. The size is where the similarity ends.

I am a Subal user and I borrowed Subal housings for both the D3 and D700 (many thanks to Ryan Canon of Reef Photo, Craig Jones and Peter Rowlands for their generosity). The consistency in Subal's ergonomics made the transitions simple. Subal's controls are so similar between their Nikon housings that it makes adjusting to a new camera easier underwater than on land. All the housings performed faultlessly and I was happy with the images I was able to produce from my first dive with each. The fact I don't have much to say about them, speaks volumes for their instant useability.

Shooting Macro and Auto-Focus

For macro FX has some advantages and some disadvantages compared with a DX format camera, but the differences are smaller than I expected. On FX I found I needed to use more macro lenses to really cover all the subjects, there seemed to be less flexibility with each than with DX. With an FX system I would expect to travel with Nikon's 60mm and 105mm and Sigma's excellent F2.8 150mm macro lens on most shoots.

On FX the 60mm returns to its full angle of view, which is wider than I remember! A weakness of DX for macro is that the 60mm is a bit long for some subjects and quite a few of us have experimented with other lenses (such as Tokina 35mm, Sigma 17-70mm etc) to plug this gap. That said, on DX, the 60mm is definitely the go-to focal length for macro flexibility. However on FX, despite being able to focus to 1:1, it is not as flexible a lens because lighting becomes compromised at the short working distances.

The 105mm VR is the go-to macro lens on FX, I particularly like it when paired with a 5T dioptre. This weak dioptre shortens the minimum focus distance of the lens should you need to get closer than 1:1, without restricting the maximum focal distance too much. In fact the 5T would be a great teaching aid. If something is too far away with the 5T it is probably not worth shooting. Annoyingly the standard Subal

The 105mm is the most versatile macro lens on FX; covering subjects from fish portraits to nudibranchs. Note as how the camera has coped well with framing against the sun. Nikon D700 + 105 mm. Subal housing. Subtronic Alpha strobes. F11 @ 1/60th. ISO 200.

105mm VR port does not provide room for this useful supplementary lens.

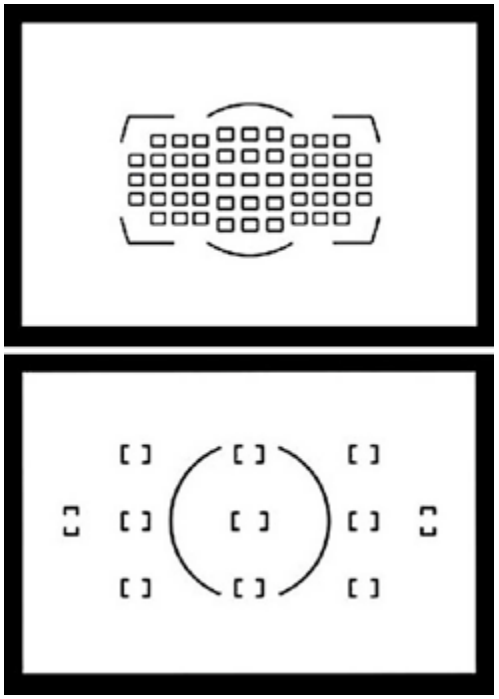
The Sigma 150mm performs like the 105mm on DX, providing an angle of view that many DX shooters have found ideal. On DX the 150mm is a niche lens, and is difficult to aim (with a film equivalent focal length of 225mm) on FX it is a mainstream choice. One downside of the 150mm is that it made both Subal housings negative and nose heavy.

A common argument in favour of 12MP FX sensor over a 12MP DX sensor for macro underwater photography is diffraction at smaller apertures. In studio tests its possible to show that the more densely spaced the photosites on a sensor the more diffraction will occur reducing the detail captured at smaller apertures. While I do not doubt diffraction occurs in our underwater photos, I feel

To cut the coverage of the fisheye, but to exploit its excellent optical performance, I mounted it on a 1.5x teleconverter. This was a good solution of wide angle shots of smaller subjects. Nikon D700 + 16 mm + 1.5x TC. Subal housing. Subtronic Alpha strobes. F10 @ 1/125th. ISO 200.

that in the real world there is so much else going on that influences sharpness (not least of which is shooting through murky seawater) that I don't think we should be overly concerned with it.

I use auto-focus for almost every underwater photograph I take and I value AF performance above many other factors, when selecting a camera. All of Nikon's FX cameras share the same AF system and it is fast and accurate. It acquires focus faster and tracks subjects better than my D2X. My main criticism is that the frame coverage of the sensors is lacking compared with Nikon's DX cameras, such as the D300 and D2X. But I should comment that the AF coverage of the D700



A comparison of the AF sensor frame coverage of the FX Nikons (D3, D700 and D3X, top) with the DX sensor D2X. The FX cameras lag behind the older Nikon.

compares favourably to Canon's full-frame cameras.

Nikon's FX cameras have three AF Area Modes. I found that Auto-Area AF worked very well on every subject I shot with wide angle. Perhaps, only when shooting strongly backlit (into the sun) compositions might you need to switch to Single-Area AF. I also found that Auto-Area AF worked very well for many macro subjects too. For macro, though, I generally shot single area AF or Dynamic-Area AF, which I used with all 51 points activated and 3D tracking switched on. The tracking works underwater, but not if subjects are moving fast. I found it more use to keep subjects in focus when the camera moved slightly (at high

magnifications) or when I purposely recomposed.

When shooting macro with an FX camera, the depth of field will be less than with a DX camera, with the same framing at the same aperture. It is therefore important to focus accurately. These cameras do not endure sloppy technique. Of course the shallower depth of field can be used creatively to isolate subjects against busy backgrounds. I found the Sigma 150mm particularly effective for this, when opened up to F4.5-F6.3.

Shooting Wide Angle and High ISO

The FX sensor has two potential downsides for wide angle. First there is no fisheye zoom, and second we know from the experience of Canon full frame shooters that getting sharp corners can be hard with rectilinear wide angles.

It is curiously how quickly goalposts move. There was no such thing as a fisheye zoom for DX Nikon's until 2007, but now the lack of an equivalent to the popular Tokina 10-17mm is the most widely quoted reason for rejecting FX. Prime fisheyes (15mm and 16mm) perform very well on the FX cameras. I have shot both the Nikon 16mm and Sigma 15mm, favouring the Sigma for its closer focus and more modern, and I feel marginally sharper, optics. Both, though, are very strong performers. I also found it useful to shoot these lenses with a 1.5x teleconverter, which provides a pleasing angle of view, cutting the fisheye coverage from 180˚ to about 100˚. The optical performance remains good.

Some have suggested that rectilinear wide angles on FX are an alternative to the Tokina, but it is easy to forget how wide it is. On DX it covers 180˚ to 100˚ corner to corner. Compare this to the 14-24mm and 17-35mm on FX, which give 114˚ and 104˚ at their widest, respectively, and you see that there is relatively little overlap in their angles of view. Furthermore, the FX options are both rectilinear lenses, which are harder to optimise behind domes.

Ultra-wide angle rectilinear lenses have always been troublesome underwater because a dome port, in water, acts as a negative lens creating a virtual image that we must focus on. The virtual image is both closer to the camera than the true subject and curved. Land lenses are designed to produce flat images of flat planes of focus. The curved focal plane created by the dome has corners that are closer to the camera than the centre. Typically, we focus on the centre of the image and rely on depth of field to keep the corners in focus. FX cameras have narrower depth of field, at a given focal length and aperture, so we struggle more to keep those curvy corners sharp.

Fisheye lenses perform very well on FX cameras. But the lack of an equivalent to a fisheye zoom (like the Tokina 10-17mm) is one disadvantage. Nikon D3 + Sigma 15mm. Subal housing. Inon Z240 strobes. F13 @ 1/50th. ISO 800.

To cut the coverage of the fisheye, but to exploit its excellent optical performance, I mounted it on a 1.5x teleconverter. This was a good solution of wide angle shots of smaller subjects. Nikon D700 + 16 mm + 1.5x TC. Subal housing. Subtronic Alpha strobes. F10 @ 1/125th. ISO 200.

Dioptres are useful here for two reasons. First, they help the camera focus on the virtual image, which is surprisingly close to the camera (about 50cm). And secondly, and rather fortuitously, single element dioptres actually introduce a bit of field curvature, which helps offset some of the curved focal plane created by the dome. Nikon's new 14-24mm wide angle lens cannot take a dioptre, and for this reason, is likely to be troublesome underwater. I have not tested it. I favoured 17-35mm, which does take a dioptre, although given

time constraints I did not experiment much with different set ups.

That said, my first attempts produced perfectly useable results (and better than many I had seen from Canon FF cameras) at apertures of F8 or more, even with subjects that I thought would highlight corner sharpness problems (I used the lens at the widest zoom setting, choosing subject matter close to the camera and lighting the entire frame, to reveal detail in the corner of the frame). My tests do reveal that this lens (or at least my port setup for it) is prone to chromatic aberrations on areas of high contrast (this can be corrected in the RAW converter). I will not hesitate to use the 17-35mm.

Since digital cameras have superseded slide film for underwater photography, many have lamented their inferior ability to record sunbursts. Slide film's non-linear rendering of highlight detail meant that it was naturally predisposed for capturing the sunballs and shafts of light that are so evocative of the atmosphere of the underwater world. Shooting digital we had to adapt our techniques for capturing this light with our digital sensors. Frame and expose carefully and this wonderful submarine light can be recorded effectively in pixels. But for Nikon users the FX cameras (and D300) offer new tech, in the form of the 14-bit Analogue to Digital conversion and therefore 14-bit per channel RAW files that have the potential to expand dynamic range and help in this area. In my shots I found the advantage over older Nikon's is not massive, but it is clearly there. These cameras do offer a step forward for digital dynamic range.

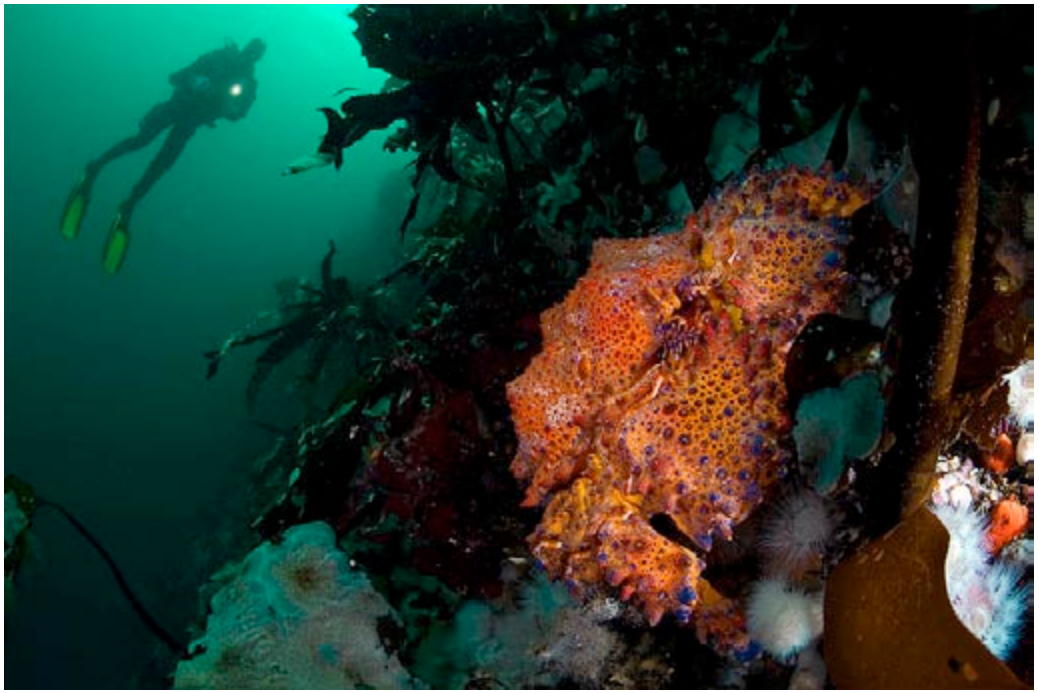
Probably the key strength of the D3/D700 sensor is its phenomenal ability to produce clean images in low light, at high ISO. In Canada, shooting wide angle I certainly got images that I felt would have been impossible with older cameras. But in the clear, blue waters of the Red Sea, more typical of the conditions that most underwater photographs are taken, I had to search pretty hard to find chances to exploit this advantage in normal diving conditions. At ISO 400 many of the other cameras we had on board, like the D300, 40D and 5D, were capable of producing comparable results. Finding justifiable uses for ISO 800 and above is not as easy as it sounds. If the high ISO performance of FX is the feature you are most focussed on, make sure that there is a real need for it in your underwater photography.

Decisions, decisions

There are no simple conclusions here, because we have three different cameras, at three very diverse price points. Whether any of them is right for you will depend on your budget, what system you already own and what and where you intend to photograph.

The 14-Bit A:D converter on the FX Nikons (and also D300) does seem to benefit capturing sunbursts and sunrays. Nikon D3 + Sigma 15mm. Subal housing. Inon Z240 strobes. F8 @ 1/100th. ISO 200.

The D3 and D700 were both a pleasure to use underwater, and adapting to FX is not a big issue. Choosing between them is fairly simple. They both have identical imaging systems: the same 12 MP sensor, 14-bit A:D Converter and Multi-Cam 3500FX auto-focus system. The D700 is clearly more attractive to the underwater photographer because it houses almost identical internals in a smaller, lighter and less expensive body. The bottom line is system costs because D700 housings are considerably cheaper: a D700 and Subal housing costs about 65% of the price of a D3 and Subal. The D700 also has a built in flash, for those who like to run their TTL the fibre optic way. Although the Subal ND700 negates this positive without room to pop up the flash.



The 12MP FX cameras do offer new capabilities to the Nikon shooter at high ISO, but not everyone's photography will exploit this. In most situations a D300 would match their performance for a lower price. Nikon D3 + Sigma 15mm. Subal housing. Inon Z240 strobes. F14 @ 1/25th. ISO 800.

The D3 counters with a better viewfinder that shows 100% of the scene, versus 95%, and, to me, its responses feel slightly sharper. Other D3 specs such as dual card slots, higher frame rate and extra battery life are not really significant underwater. Neither is the D700's anti-dust vibrating sensor likely to be a deal breaker.

The extra size of D3 housings means that they are close neutral in the water. D700 owners, like those with D200s and D300s, will get used to adding buoyancy. The other big positive of D3 housings is that they take the take the D3X! Nikon had the D3's sensor in the D700 and in the shops in a little over 6 months after the D3 went on sale. It seems inevitable that the D3X's sensor will also soon become a hand-me-down. Although there is no guarantee that a D700 housing will fit a "D700x" when it arrives.

Compared to many older DX Nikons's (e.g. D70, D200, D2X) the 14 bit per channel RAW files FX cameras do seem to improve the handling of dynamic range, helping resolve detail in contrasty subjects and holding highlight detail in sunbursts. But they are not the only ones. The 12 MP DX D300 is significantly cheaper than even the D700, and also produces 14 bit RAWs. It is a great all rounder – it has better AF frame coverage, a 100% viewfinder , it is good at high ISO, and takes the addictive Tokina 10-17mm.

From an objective standpoint, I would conclude that the D300 is the better underwater camera. The D700 and D3 are not inferior to the D300, just a more expensive way to do the same thing much of the time. They do have some advantages, but unless you have a truly justifiable need for high ISO, choosing them will probably be a decision from partly the heart, rather than just the head. But both are such delightful cameras that you would not regret your decision for a heartbeat. I haven't!

The D3X makes quite a different case. It clearly outperforms Nikon's DX range significantly both in terms of resolution and noise, and its strengths are well aligned to the needs of underwater photography. Armed with 24MP, the D3X will create much debate as to whether the extra resolution is really needed. And certainly at typical magazine and book reproduction sizes, its output would be hard to distinguish on the printed page from Nikon's 12MP FX and DX cameras. Of course those extra pixels give more room for manoeuvre, and open up some markets less accessible to other Nikons. The only technical drawbacks I see is a lack of a fisheye zoom and poor AF sensor frame coverage (although the same as the D3/D700, and comparable with Canon's FF DSLRs).

The main obstacle for the D3X is its price. Some could never contemplate risking something so expensive in an environment where it could be rendered valueless in seconds. D3 owners, for one, will see it as excellent value, since there is no need to buy an expensive housing. Adding a D3X to their system will be considerable cheaper than their original D3 and housing purchase, and they will have a new camera that currently remains unmatched in the Nikon range. It is an attractive package.

Alexander Mustard
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Canon Ixus 980IS

by Dan Bolt

Recently arrived on the ultra-compact digital market is the top-of-the-range Canon Ixus 980IS (or SD990 in America). It's headline grabbing 14 megapixels alone are enough to tempt most non-diving folk, but there are a few more changes over the traditional Ixus setup that suddenly makes it worth a second look for us underwater-types.

Firstly, and at long last, Canon have added a Manual mode to the Ixus suite of gadgets - thank you Canon! So if you are looking for a little more control over your imagery you can now play with f-stops and fractions of a second to your heart's content. The brain of the camera has had an upgrade too, the Digic IV chip now shoots movies in .MOV mode which means you can cram 50% more video per Gb of SD memory than before and for no real loss of quality from what I've seen.

If you're like me and have over-sized hands and fingers, these small cameras can be quite fiddly to access all the buttons and controls dotted around the body. Happily though, putting it into Canon's own WP-DC27 housing (rated to 40m) and the larger buttons become a joy to use.

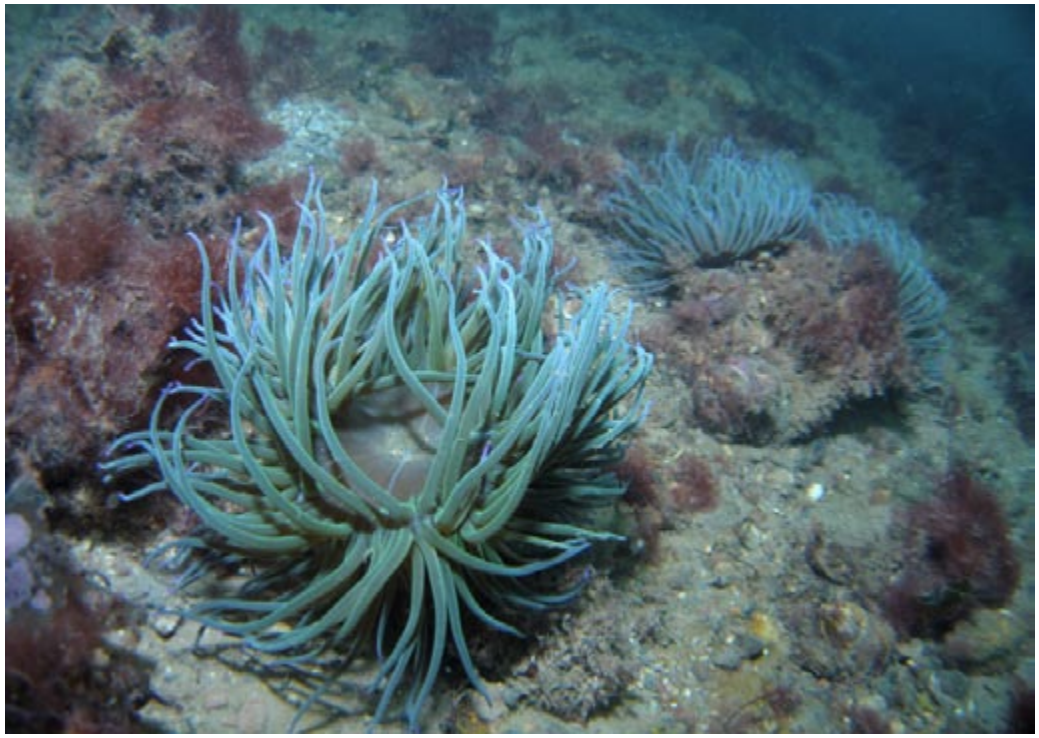
Here are my observations from the half-a-dozen dives I've done with it already;

Pros

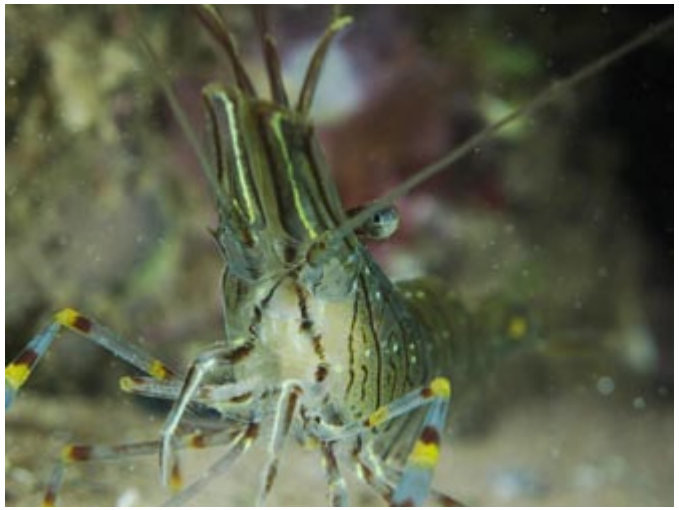
- 14Mpix sensor is no noisier than earlier models & provides plenty of cropping potential
- Face Detect focusing works with fish!
- Servo-AF great for macro work
- Canons awesome image stabilisation allows low-light shots using low ISOs
- Focuses well (and quickly) both in low light and at full zoom (133mm)
- Support for Inon AD lenses
- Maual White Balance function (though I'd still like to see 2 custom settings)
- Turning down the Flash Exposure Compensation means you can get many more shots from the battery

Cons

- The lens is only 36mm at widest
- Manual mode only gives you 2 f-stops; fully open (f2.8 wide/f5.8



1/30th, f2.8, ISO100, Manual Exposure, Auto White Balance, Inon Fisheye Lens, 2 x YS-27DX



1/100th, f16, ISO100, Manual Exposure, Auto White Balance, Inon Macro Lens, 2 x YS-27DX

1/500th, f/14,Manual Exposure Mode, Manual WB, 2x Inon UCL lenses, 1x YS-27DS strobe with snoot

zoom) or fully closed (f8 wide/f16 zoom). Though fiddling with zoom & adding lenses you can still get the results and f-stops you want, it would have been nice to mention this in the user manual

- The 'shift' function you have to use on the housing where you would be rotating the selection bezel is an awkward 2-handed job

- You must align the camera & housing 'Mode Dial' switches before you dive or you will not be able to use all the modes

- If you hold the camera with your right hand it is very easy to accidentally switch Modes with your thumb

- The camera generates lots of heat from the battery (especially with heavy flash use) which can lead to condensation in the housing

- Auto White Balance still has Canon's usual warm feel to it (though you may be able to counter this with the 'Custom Color' function)

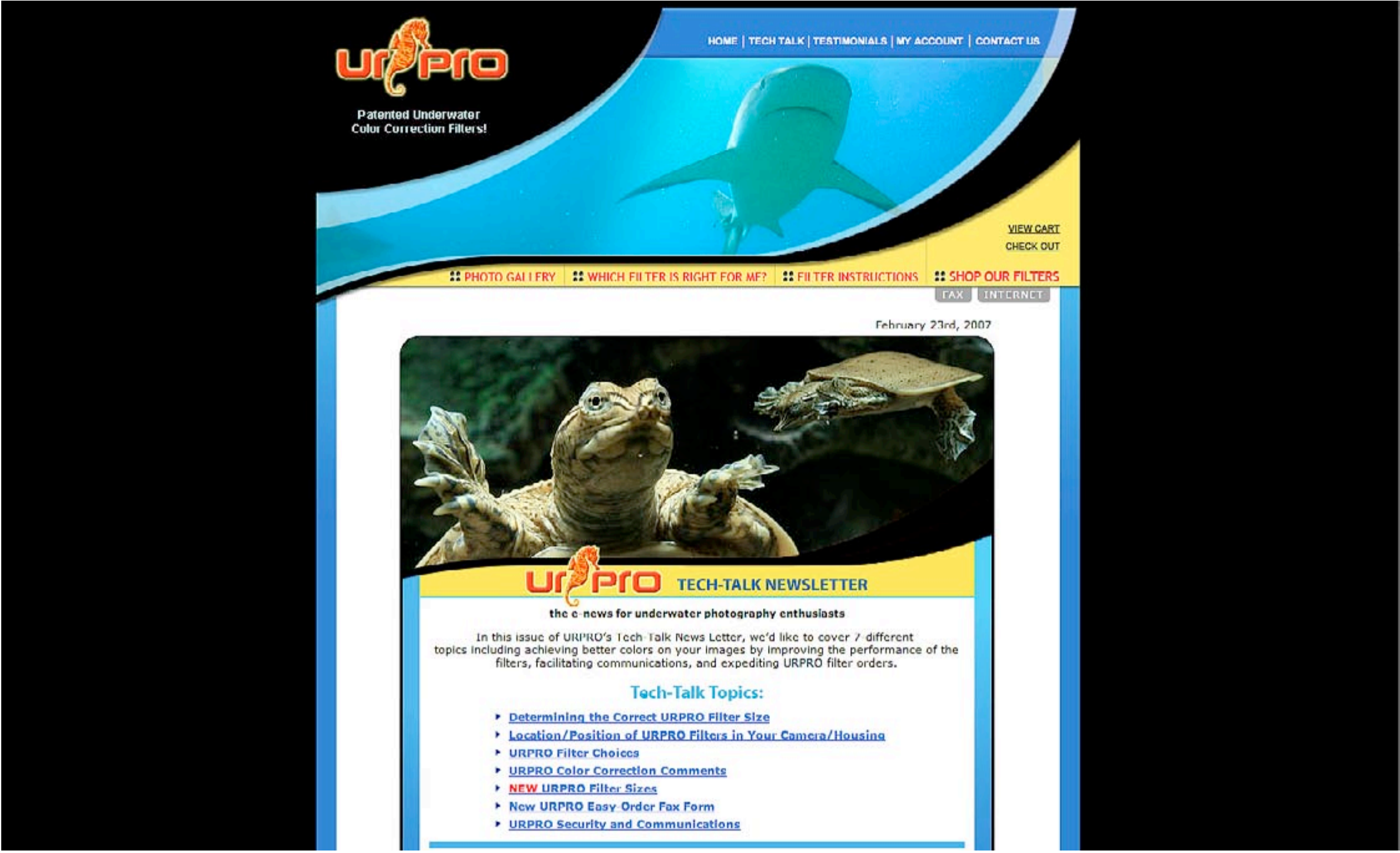
- Flash synchronization is still only possible up to 1/500th sec

With the debacle over the daft, wide lens barrel used on the G9 (and other) housings not taking any supplimentary lenses, it's nice to know that Inon have made an adaptor for their AD series of lenses. I've got the full range of the AD lenses (fisheye, wide-angle and 2 x macro) and apart from a slight softness to the corners can confirm they all work very well indeed.

I've teamed my Ixus up with a couple of Sea&Sea YS-27DX strobes which makes for a small and light rig with great potential for some creativity, and having had the use of mine for a while... I'm keeping it!

Thanks to Cameras Underwater for getting the new kit to me so quickly.

Dan Bolt
www.underwaterpics.co.uk



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

www.urprofilters.com

Tamron 70-200mm Macro Lens

by James Wiseman

Ever since I first purchased a Canon back in 2005 I've been looking for a replacement for the excellent Nikkor 70-180 macro zoon. The Nikkor is fantastic on a DX cropped camera, zooming from around 1:3 to 1:1. I purchased the Tamron lens for use on my FF canon camera, and took it on the 2 week Wetpixel Staff Trip to the Philippines back in May. Hopefully this review will be handy for folks looking for an excellent macro zoom lens.

To see how the lens fares as compared to other popular 70-200 zooms, check out the review at DPreview.com:

http://www.dpreview.com/lensreviews/tamron_70-200_2p8_c16/

I agree with the conclusions for topsides use. To summarize:

The pros: lightweight, solidly built, and excellent optical quality.

The cons: slow autofocus (no USM), clunky focus clutch mechanism

Underwater performance is also very good when used behind a flat port. Chromatic aberration was minimal and not noticeable more than I get from the 100mm or 150mm macro lenses.

Minimum Focus Distance: without a diopter, the minimum focus distance is 1 meter, or about 38 inches from the focal plane. Because the lens is so long, that is about 30" from the lens tip. When used with the 500D, the minimum focus distance is much reduced. Closest focus is about 12" from the lens tip. Of course, minimum focus could be better

Sigma 150mm, Tamron 70-200mm, Canon 100mm

- and you will find yourself underwater wanting to move in more – but is very respectable.

Port/Zoom/Focus Gears: I was able to easily set this lens up for my Seacam housing because I have a variety of macro ports and extensions. I even have a multi-port extension which has a zoom/focus knob on it – that can be placed into the mix to allow for even more flexibility. I started off using the multi-port as I thought I'd want to use the lens by focusing manually. The lens is so fat at the tip

Seacam Housing with Required Macro Port Length – it's a beast! With the Seacam housing, approximately 205mm of extension is needed. The combination of rings that I used resulted in 210mm of extension which left a bit of air between the 500D diopter and the port.

that I was not able to use a focus gear, but I used a trick I learned from Ryan Canon of www.reefphoto.com – using a piece of Velcro wrapped around the focus ring to give the focus knob/gear something to "bite" on. For a zoom gear, I found that the Seacam 100mm macro lens gear worked almost perfectly. I needed to put some <1mm thick rubber shims under where the gear grips the focus ring and voila! I did my first dives with the multi-port and the lens set in manual focus, then did my next dives using the lens in autofocus with the focus control on the * button. After those first few dives, I never went back to manual focus with this lens again, so I switched over to a straight flat port setup.

Underwater Handling: Because the lens is long, the port is huge – and this has some pros and cons. On the plus side, the port traps a lot of air – which

128mm 1/160th @ f16

really helps by adding buoyancy. I added two of my "patented" foam buoyancy rings around the port base and the buoyancy/handling were just about perfect. The downside of the long port is that it requires you to push your strobes out in front considerably if you want to use creative and side lighting. This can contribute to the housing tilting forward if you have heavy strobe arms or strobes.

Overall Assessment: I would not hesitate to recommend this lens to anyone who is looking for a macro zoom – regardless of mount. Because of the focal range and internal focusing system, the lens essentially offers a 50mm and a 100mm macro on the same dive. With a faster f2.8 aperture when compared to the Nikkor 70-180mm, this lens is a good AF performer.

The 70-200mm zoom range of the Tamron also means it's a "standard" topsides lens – meaning you'll have a very respectable mid-range telephoto lens to use on your dive trip.

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FIX LED1000DX light review

This small crab under a snakelock anemone was shot using the FIX LED1000DX as the total light source on auto white balance using a Nikon D700 in a Subal housing with 60mm micro Nikkor. Admittedly it was 800 ISO but the exposiue time using aperture priority was 1/160th @ F11

LED technology has come a long way in recent years and, with the advent of the FIX LED1000DX, it can now claim to compete head on with HID lighting and even beat it hands down on several levels.

The FIX LED1000DX is an aluminium bodied light incorporating 9 LEDs each with it's own reflector to give an even coverage of about 80°. It is self contained and powered by an 11 volt 2ah battery which will give about 80 minutes on a full charge. The unit is rated to 75 metres (250 ft). It is 150mm long and 7cm in diameter and weighs just 600gms on land becoming slightly negative in saltwater.

At full output this light is as bright as my Kowalski Xenon HID light but with slightly less coverage and with LEDS being basically daylight balanced here we have a triple, no, a quadruple use light. It can be a standard dive torch, a focusing light which, if you are worried about it being too bright, can be steplessly dimmed to whatever level of intensity you want, it works superbly as a video

light for close up work and can even be used as a still photography light source, especially with the Nikon D3 and D700 which can be used at 800 ISO without any discernable loss of quality. You could argue that it has a fifth use as there is an SOS setting in case you've been down so long enjoying using it that the liveaboard got fed up and steamed off.

Unlike an HID light with its delicate, expensive bulbs the LED1000DX bulbs are virtually indestructible and more importantly can be turned on and off at will as well as dimmed.

The housing incorporates a YS fitting shoe and is available with a pistol handgrip or this can be removed to allow other mounting systems to be used.

I've had a couple of prototype units on loan for a couple of months now and they have become an integrated part of my equipment case both stills and video. The charging system, with its cradle design is a joy to use with green LEDs indicating battery charge state on both the charger and the light so you know exactly what you've got left to play with. If I have one criticism it is that the on/off/lock/dimmer rotating switch is a bit fiddly but that is such a minor point I regret mentioning it now.

The FIX LED1000DX costs around $599 or £410 at current

exchange rates. Whether that is expensive or not depends on your finances but with virtually zero running costs compared to HID ($100 for a new bulb?!) and with such excellent performance from such a small aluminium package you have a very versatile unit which will give many years of use, and, for me so far, a great deal of practical pleasure.

Welcome to the new kid on the block.

www.reefphoto.com

aunoc 1CR LED light

The aunoc 1CR LED light incorporates a single high Power LED powered by a 3 volt CR123 lithium battery in an aluminium alloy 6061 HA III Mil-Spec body. Equivalent rechargeable 600 mAh li-Ion batteries are available for more environmentally friendly use.

Just 78mm / 3.07" long with a diameter of 24mm / 0.940", it is about the size of an AA battery on mild steroids. It weighs just 71 g / 2.5 oz on land, has a run Time of 4.5 hours and if you were so inclined you could use it down to 240 metres / 787 feet.

From an underwater photography point of view it is an ideal spotting/ focus light whose light weight and small size wouldn't strain a housing mounting plate. The screw down on/ off action is positive and sealed by a single O ring for simple maintenance.

The output is amazingly bright and would enable autofocus systems to zip into position at instant speeds making it ideal for precise macro work. As a plain dive light it will survive happily in a small BC pocket and the body construction is incredibly robust and very reassuring.

At $98 it is not cheap but I have flooded so many plastic bodied lights that this one would pay for itself in no time.

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Silver Efex Pro software review

by Peter Rowlands

If there is one aspect of the film days that I miss it is black and white imaging. Hours spent in the darkroom sploshing about in trays of developer and fixer watching in anticipation as the black and white image appeared on the paper under the red safe light. It was magical stuff with chemical names like Microdol X, Tri X, Neopan and Delta Pro.

In addition to the variations of black and white film there was also different grades of paper to enhance contrast. It was like a little bit of wizardry but, to be honest, I don't really miss the sploshing about bit, it was more about the eventual image with its rich blacks and smoothe tonal range. In addition black and white simplified the image and made you concentrate much more on composition and form.

Never having been much of a dab hand with Photoshop other than a bit of retouching and resizing of images I was always disappointed with the 'desaturate' facility to convert a colour image into a black and white one. I'm sure the controls are in there somewhere but it's not a process I find interesting (or appear to be capable of).

As a result I'd put black and white on the back burner and even avoided using images in UwP so I was excited to learn about Silver Efex Pro, plug in filter software for both Photoshop and Apple's Aperture. The kind people at Nik Software e mailed

The slightly gritty grain and increased contrast of the Kodak TriX 400 preset have converted the colour image into one with much more impact and evocative emphasis.

me a review copy and very quickly I found myself excited at the prospect of producing black and white all over again but without the sploshing about.

The beauty of Silver Efex from my point of view is that they have done all the hard work and research for me and produced a series of effects which emulate the film days of old at the click of a mouse. Firstly you open up your colour image in Photoshop or Aperture and then open up the Silver Efex filter which loads up a whole new page with the image basically converted to black and white.

The 'High structure' style improves the suns rays and increases the atmosphere of the image. Simplifying the tonal range to black and white clarifies the composition and emphasises that feeling of the image being a moment in time.

There are then 2 columns left and right full of additional settings to work on the image.

On the left there are settings with thumbnails showing variations in exposure, emulations of push and pull processing as well as various types of







Silver Efex Pro has 6 colour filter settings (including no filter). From left to right the original colour image then unfiltered, red, orange, yellow, then on the lower line green and blue. I like the orange filter best but to each their own!

processing such as sepia and cyanotype and many more. This alone was pretty exciting for me until I discovered on the right hand side, five settings for differing colour filters followed by the piece de la resistance, a pop down menu of presets for 18 types of traditional film from the fine grained Kodak ISO 32 Pantomatic right up to the golf ball grain of P3200 Tmax Pro. Roll your mouse over the links and the image changes to emulate the traditional emulsion. Included in the list was my old favourite Kodak Tri X 400 and when I clicked the link I was taken back in time to evocative images with pure blacks and a smooth tonal range with a gritty but atmospheric grain.

For the tinkerer in you there are additional controls for the tonal range including grain and sensitivity but I was more than happy with the film presets. I am sure experienced Photoshop manipulators could get close but I do believe Nik Software when they say "Featuring Nik Software's patented U Point® technology to selectively control the tonality and contrast of the image, Silver Efex Pro includes advanced imaging algorithms to protect against unwanted artifacts, a comprehensive collection of emulated black and white film types, a variable toning selector for adding traditional toning techniques, over 20 one-click preset styles, and a state-of-the-art grain reproduction engine that help produce the highest quality black and white images possible from your color images while providing more freedom to experiment"

If, like me, you have missed black and white in the digital age I would highly recommend Silver Efex Pro as software that will rekindle your enthusiasm and will have you shooting with black and white in mind all over again.

At €200 Silver Efex is an investment but I think if you like black and white the images and the enjoyment it will give you will be priceless.

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www.niksoftware.com

Bali Photo Course

by Gerald Rambert

About an hour on a small plane from Bali, we landed at the Bima national airport, where the team of Worldwide Dive and Sail were waiting for us. Sam, our dive leader was trying to get us out of the airport, through all the harassing luggage carriers, which I still can't get used to.

We then headed to the luxury sailing boat the "Sampai Jumpa Lagi" for an amazing 10 forthcoming days around the Komodo national park, known for both it's land and underwater wildlife. Kitty Jempson, was helping me conduct this underwater photography workshop, opened to both compacts and slr users. It was going to be very interesting to observe and compare how the 2 different users were going to get the best out of their underwater cameras. A little competition was then launched, and a free trip back to the Komodo was offered, to spice up a bit the atmosphere.

The boat was specially set up to welcome underwater photographers and huge rinsing tanks and preparation table were installed. Every single room had their own computer with the ability to load slideshows on the large screen display inside the living room. These technologies for sure made our life easier in teaching underwater photography, and conducting evening theory classes.

After the first dive, Kitty and I have already spotted the ones who already had a little knowledge about underwater photography so we decided to split the groups into the slr's and compacts mounted with flashes and the others who were using mainly fisheye lenses.

Garden of corals - Nikon D300 in Seacam housing – 10.5 mm – 2 Inon Z240 – F14@1/320

Hawkbill turtle – Nikon D300 in Seacam housing – 12-24 mm – 2 Inon Z240 – F5.6@1/160

Some underwater photography shops have given different recommendations regarding the choice of cameras and all the bits and bobs that goes with it. Some would say: Get the fisheye first, others would recommend to buy the flash first. Here was a chance to see what was the best choice.

The Sampai Jumpa Lagi

Scorpionfish shot by Edoardo spacca with a canon powershot A570 is with a pair of Inon Z240. F5@1/125

The fisheye users started taking nice shots, using manual white balance to get some of the red back. The results were pretty surprising, but still the true colours didn't appear. The blue was a bit faded and the there was a lack of contrast and the shots were slightly washed out. Seascape and field of corals close to the surface, where there was a lot of

light, were looking not bad at all though.

The zero cm focus point of the INON fisheye was letting some space for creativity, but one problem arose. Everything was perfectly arranged in the shot apart that there was no external source of light to get back the colours of the main subject in the first plan of the picture. The fisheye lens was blocking the use of the camera's internal flash and all the main subjects were coming out completely dark. Not only were the photographers were limited on their composition side, but also when a nice fish was passing by or if they found a nice nudibranch, they could not use their internal flash either, unless unscrewing the whole adaptor blocking partly the light, and loosing some screws in the process. Pretty frustrating and already their progress was limited due to the choice of equipment.

In the second group, the one who were using an external flash were facing a great challenge. They first had to solve out the problem of slave and optical fibre and if their flash was suited or not for their kit. We had to figure out which mode the photographer was using the most, to be able to use the flashes properly on slave mode.

On the Canon Powershots for instance, if you shoot AV mode, the internal flash goes TTL and there is preflash. The external flash had to be set up accordingly. On the other hand, if the user decided to switch to M mode, then the camera goes into manual flash mode and there is no preflash. So the external flash had to be set up in a way that it fires the desired amount when the internal flash of the camera goes off once.

Some had to start using the full manual mode or the aperture priority mode for the first time as well, that was totally new to their world.

Flash position was another issue and Kitty and

Sam with a cuttlefish - Nikon D300 in Seacam housing – 12-24 mm – 2 Inon Z240 – F6.3@1/250

School of Batfish - Edoardo Spacca – Sea & Sea DX-1G with with 2 inon Z240. F8.1@1/200

I spent hours feeding them with the techniques of light balancing underwater and all the theory that goes with it.

It was surprising to see how many more possibilities were offered to them. They could shoot small animals, and portraits of nice fish without any problem. They had full manual control, use smaller apertures and learnt how to play with shutter speed. Wide angle with no more backscatter and the colours were finally the real ones and the compositions much better.

Some had the chance to add an external fisheye onto their system, which was the case of Edoardo Spacca, the winner of the competition. He started with a Sea&Sea DX-1G that he drowned within the first days. I lent him my Canon Powershot A570is with a fisheye lens and he was not disappointed. He was using a pair of Inon Z240 as well.

The second place was taken by Kathryn Prince using also a small Sea & Sea compact camera with an external strobe. And in third position, was Kathy White using a Nikon D300 in a Subal housing with 2 Inon strobes. It was surprising to see how compacts did better than Slrs.

Komodo is so diverse in wildlife that a compact camera mounted with fisheye and external flashes is maybe one of the best compromises. It gives you the chance of shooting wide angle and macro on the same dive without going up to the surface again, and still the image quality is fairly good nowadays.

I wish I could change my lenses underwater, on what I thought was the best dive of the trip. Castle Rock is a huge pinnacle that we reached on the third day of diving. Each time, I was staying up to the limit of my air and I wanted more. There was everything on that dive: Sharks, turtles, giant trevallys, school of kingfishes, napoleon wrasse, giant moray eels, barracuda, tuna, clouds of fusiliers and much more. If you felt like you had too much of the big stuff, than you just needed to tilt you head down into the corals and the sea fans and you

Manta Ray on Manta Alley - Nikon D300 in Seacam housing – 10.5 mm – 2 Inon Z240 – F9@1/320

can find pigmy seahorse, loads of angelfishes, and all the creepers of the perfect healthy reef. Apparently, dolphins can be seen often hunting the school of fishes. Hunting chase and strikes were often taking place on the exposed part of reef into the current. On the sheltered part, a pristine garden of corals and barrel sponges was offering great opportunities to composition.

Further south, where the Indian Ocean brings its colder water, the temperature drops to 21 degrees. Manta Halley was the highlight! I counted 10 at once and their gracious movement always please my 10.5 mm fisheye lens.

Barrel Sponge with our Model Estee. Shot by Edoardo Spacca. Canon powershot A570is with 2 inon Z240 and a inon fisheye. F5@1/200

We then moored in the south of Rinca island, next to Cannibal Rock, where Komodo Dragons have been seen eating each others. Funny to see them walking up and down the beach, drooling, with the smell of breakfast. Wild boar and deer can also seen on the beach early in the morning.

Underwater, an amazing macro life was covering the reef, and I found myself spending a good 50 minutes on a few metres square most of the time. This rich environment was probably due to the green water, full of plankton and nutrients.

Komodo certainly didn't fail to its reputation of having strong currents. On the way back to Bima, we experienced one of the funniest drift dives ever. It was like running underwater and the sand had formed dunes where turtles, sharks and cuttlefish were present. But taking pictures in these currents was another story.

Rollercoaster was another amazing drift dive. The turbulence at the surface of the water was an indication of how strong the current was. We back rolled next to a tip of an island where the current speeds up at the point. A washing machine, but great fun! The dive finishes in a sheltered place at around 10 meters on the most beautiful hard coral and barrel sponge garden of the trip, where Edoardo took his wonderful shot of Estee, our model, with the barrel sponges.

Komodo is certainly one of the greatest dive destinations there is, with a wide diversity and loads of picture opportunities. We were invited, with pleasure, to renew this experience in September 2009, where Kitty and I will be leading another 2 photo workshop with the "worldwide dive and sail" team. Please do not hesitate to visit the website www.worldwidediveandsail.com for more information about next year expedition and feel free to check the latest news on mine

Gerald Rambert
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The Underwater "Golden Hour"

by Don Silcock

The "golden hour" is that time of the day when the best outdoor photos are usually said to be taken and landscape photographers wax lyrically about its effect!

What they are referring to is the first & last hour of sunlight each day when the sun is low in the sky and rather than shining straight down, as it does during the brightest part of the day, it's rays are traveling obliquely through the atmosphere.

The sun's position near the horizon, and the distance traveled, means that the light during the golden hour produces a wonderful softening & warming effect as it strikes objects at an angle compared to the harsh effect created by an overhead sun. The result is that the brightest parts of the image are much less likely to be overexposed, the shadows are much softer and the warming light enhances the colors to make the overall image "pop"…

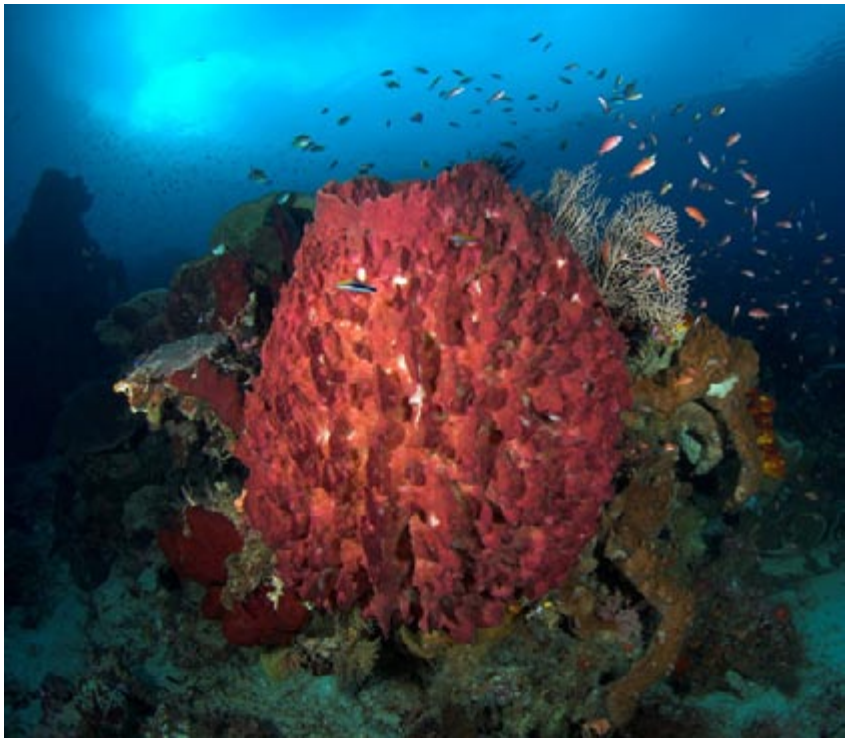
Underwater however, the golden hour does not really apply, because that warming & softening effect cannot penetrate more than a few feet below the surface.

So my usual approach to the first dive of the day when I am on a dive trip is to go for macro photography as I figure that at this time of the day it will still be relatively dark underwater and the best images would be of fish & critters emerging from their overnight sleeping hideaways and looking for breakfast!

However on a recent trip I decided to try something different and rather than starting the first dive with a critter hunt I went into the water with a wide-angle lens on my camera.

The spot we were diving that morning was the Procco Channel in the Patintie Straits between Halmahera & Bacan Island in the "far north" of Indonesia. The dive tenders dropped us the edge of a channel in an area rich in large soft corals & gorgonian fans and I was with the first

Both shots. Nikon D200, Tokina 10-17 @ 12mm, Inon 240 strobes, manual, ISO 200, f13 @ 1/250



Nikon D200, Tokina 10-17 @ 10mm, Inon 240 strobes, manual, ISO 200, f11 @ 1/60

group of divers to enter the water.

However, rather than following the group down into the channel where the "action" was supposed to be with schooling pelagics and cruising reef sharks, I stopped & looked back and knew I was onto something quite special!

The water was so calm on the surface and the angle of the sun was such that a superb example of Snell's Window had been created that provided the perfect backdrop to frame the beautiful fans & soft corals.

Snell's Window is a function of the refraction that occurs as light passes from air into water and is easy to see when the sea is calm by just looking upwards to the surface when underwater. What you will observe is a bright circle of light surrounded by darker water and it can add a very interesting dimension to a photograph.

The effect that morning was quite profound and I realized that I really was in the underwater golden hour, but I knew it would not last 60 minutes and I better move fast if I wanted to capture the moment!

I actually had about 20 minutes of this superb light and moved around the soft corals & gorgonian fans looking for the best compositions that I could set against Snell's Window with the maximum impact.

To further enhance the impact of the light, I set the shutter speed to 1/250 which "freezes" the sun rays and took great care to position my strobes to illuminate just the fans & soft corals to make them stand out against the darker water outside of Snell's Window.

I learnt a lot that morning and in the future will always be on the look-out for the right conditions for the underwater golden hour!

Don Silcock
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Snell's Window

Snell's Window is named after the 17th century Dutch mathematician Willebrond Snellius, who fully quantified the mathematics around the phenomena first detailed by Ibn Sahl of Baghdad in 984.

Snell's Law states that the ratio of the sines of incidence and of refraction is a constant that depends on the media. The Reader's Digest version of this is that rays of light are "bent" to a different angle as they pass from air into water and is best illustrated by a chopstick placed in a glass of water - it appears to be broken when in fact it is perfectly straight.

A good description of Snell's Window, that explains it technically, can be found on the following link to Dave Read's website:

http://www.daveread.com/uw-photo/comp101/snells_window.html

What Snell's Window means for underwater photographers is that at certain times of the early morning and late afternoon, when strong rays of sunlight hit the surface of calm water at an oblique angle, it creates a circle of light surrounded by darker waters that can be used to dramatic effect.

Don't settle for 2nd best

Film - No Filter
No White Balance

Digital - No Filter
Manual WB

Magic Filter
Manual WB

Digital cameras have opened up new possibilities to underwater photographers. For available light photography manual white balance is an invaluable tool for restoring colours. But when you use it without a filter you are not making the most of the technique. You're doing all the hard work without reaping the full rewards.

These three photos are all taken of the same wreck in the Red Sea. The left hand image was taken on slide film, which rendered the scene completely blue. The middle image is taken with a digital SLR without a filter, using manual white balance. The white balance has brought out some of the colour of the wreck, but it has also sucked all the blue out of the water behind the wreck, making it almost grey. The right hand image is taken with the same digital camera and lens, but this time using an original Magic Filter. The filter attenuates blue light meaning that the colours of the wreck are brought out and it stands out from the background water, which is recorded as an accurate blue.

www.magic-filters.com

Life in the middle of the Atlantic

by Andre Seale

The long journey over deep ocean seems to never end. At 6 knots, the Transmar, a small commercial fishing boat, cuts through waves, prompting flyingfish to glide away from the wake. The confinement of the tiny bunk-beds combined with the 82-85 hr long haul in open ocean produce an even greater expectation of the remote destination to come.

In the far reaches of the Equatorial Atlantic Ocean, rising up 4,000 meters from the sea floor, the Saint Peter and Saint Paul Islets or Rocks (ASPSP, the acronym for the official name in Portuguese, Arquipélago de São Pedro e São Paulo) emerge tenuously between sky and deep ocean. The islets, 1,010 Km away from the Brazilian coastal city of Natal, had been visited by adventurous sailors and explorers for centuries, including Charles Darwin who described them in his field annotations from aboard the Beagle in 1832:

"The rocks of St. Paul appear from a distance of a brilliantly white colour. (...)

We only observed two kinds of birds—the booby and the noddy. The former is a species of gannet, and the latter a tern. Both are of a tame and stupid disposition, and are so unaccustomed to visitors, that I could have killed any number of them with my geological hammer."

The ASPSP are part of Brazil's territory but remained unmanaged for a long time, and tales of shipwrecks, sailing voyages and unchecked fishing from various nations abound. Over the last decade the islets attracted the interest of the government, since properly managing them secures 200 mile radius of exclusive economic zone, which include extensive

(Top) Split image of rocks and Green algae, Caulerpa racemosa. Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 12-24mm Nikkor @ 12mm, 1/100th sec @ F13. ISO 200
(Right) Skiff confronts large swells at the cove in front of Belmonte Islet Nikon D100, 28-300mm @82mm, 1/60th @ F36. ISO 200

and productive fisheries grounds, especially for tuna. In 1995, the old lightouse was rebuilt, and in 1998 a field research station was assembled. Since then, periodic expeditions organized by SECIRM, the Office for the Inter-Ministry Commission for Maritime Resources (the navy's division responsible for managing the nation's oceanic outposts), allow researchers of different backgrounds to study the natural resources on site. Securing this outpost brought a formidable opportunity for fostering studies of the region. Navy-sponsored expeditions to the islands are carried out on small commercial fishing boats, which provide logistical

(Above) Brown booby, Sula leucogaster, foraging underwater in shallow tide pool
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 28-105mm @ 48mm, 1/80th @ F4.5
(Top right) Schooling mobula rays, Mobula tarapacana, in open ocean
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 12-24mm Nikkor @ 14mm, 1/60th @ F9. ISO 200
(Right) Moray eels, Muraena pavonina, at the cove
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 12-24mm Nikkor @ 14mm, 1/60th @ F9. ISO 200

Rare white morphotype of the queen angelfish, Holacanthus ciliaris
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 28-105mm @ 70mm, 1/60th @ F5.6, ISO 200

Black durgon, Melichthys niger, schooling
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 12-24mm @ 15mm, 1/160th @ F6.3, ISO 200

St. Paul's butterflyfish, Prognathodes obliquus, endemic deep water reef fish
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 28-105mm @ 98mm, 1/80th @ F5, ISO 200

support to the research team, and are allowed to fish in the adjacent areas. The stay at ASPSP lasts 15 days and is available for 3-4 scientific researchers at a time. Researchers must be affiliated to Brazilian Institutions and have been awarded grants for projects that are of interest to the area.

Due to its unique formation, location and biodiversity, the cluster of 10 islets attracts mostly the interests of geologists, oceanographers and biologists. Geologically, these islets, which are not of volcanic origin, sit on the top of a mid Atlantic mountain ridge, at the oceanic plate boundary, and were formed by means of gradual tectonic expansion resulting in a structure termed megamullion. The ASPSP is the only megamullion in the world to expose abyssal mantle above sea level. The exposed surface covers roughly a hectare and the size of the largest and only inhabitable Islet (Belmonte) is 5,380 m2. Due to this nature, earthquakes can be frequent and for this reason the research station has been especially built over concrete dampers designed to withstand geological and weather adversities.

Aside from the temporary human visitors, red rock crabs (Grapsus grapsus), brown boobies (Sula leucogaster) and noddies (Anous stolidus) permanently inhabit the exposed surface of ASPSP. The sea bird population is dense and crowded next to the field station. Many of the rocks have a permanent white layer of guano on the surface. Researchers who visit the islets and settle into the 2 bunk beds of the northeast facing bedroom must quickly acclimate to the quacking sounds and pungent scents that are generated a few meters away. Among other maintenance tasks, the routine at the field station involves climbing up to the roof every 2 days and hosing down the bird droppings from the solar panels. These panels provide the necessary power to charge batteries that run the station's appliances, but in the case of it running out, or when the main seawater tank needs to be refilled, a diesel generator is available. Exploring the whole of Belmonte islet takes less than 1/2 hour and the main land-based "attraction" besides the small field station is the lighthouse, about 100 yards away, but in practice much further, due to the numerous nesting grounds and defensive boobies aiming their sharp beaks at your shin.

The limited available dry land quickly invites one to explore the depths of the surrounding blue waters and to admire and study the intricacies of life of such an inhospitable oceanic outpost.

A short boardwalk connects the field station to the small pier assembled in the least exposed portion of Belmonte Islet, forming a small cove with neighboring islets. Jumping off the pier with SCUBA gear sets you at 4 to 5 m deep over a sandy ravine bordered by large rocky boulders encrusted with zoanthids (Palythoa caribaeorum), extensive mats of green Caulerpa algae, and a variety of smaller invertebrates including sponges and ascidians. The depth gradually increases to 10-12 m towards the entrance of the cove, where it finally reaches a spectacular drop-off that will set you face to face with the depths of the Atlantic Ocean in hues that vary from dark blue to almost purple. The combination of crystal-clear visibility and spectacular pelagic marine life in a seemingly bottomless ocean makes this a truly astonishing site.

The boulders, cracks and crevices of the cove are home to an apparently disproportionate number of moray eels (there are 6 species, of which the most abundant is Muraena pavonina) and spiny lobsters, which are easily seen crawling under the rocks. Wrasses and damselfishes (mainly the St. Paul's Gregory , the sergeant major and the brown chromis) are also very common in the shallower depths, but the single most visually abundant fish appears to be the black durgon (Melichthys niger), which can be found aggregating by the thousands in mid water on the outer sides of the islets. From the steep drop-offs it is possible to see schooling blue runners, rainbow runners, black jacks, barracudas, large groups of Mobula rays, and with some luck a whale shark or two, all of which become attracted to plankton brought in by the strong currents. Green and hawksbill turtles are also often seen in the cove and around the islets, even though their nearest available nesting beach is 610 Km away

Split image of rocks and underwater substrate near drop -off
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 12-24mm @ 12mm, 1/125th @ F10, ISO 200

Rocks encrusted with sponges , corals and ascidians
Nikon D100, Nexus Master Housing, dual Sea & Sea YS-90DX strobes. 12-24mm @ 12mm, 1/60th @ F9, ISO 200

in the islands of Fernando de Noronha, which also reminds people that stay in the islet how important it is to be extra careful with safety - the minimum evacuation time in the case of emergency is 2 days.

The isolation of ASPSP is believed to have prevented the settlement of many species (there are 75 recorded species of fish there, of which 58 are reef-associated) but favored endemism in the ones that made it, such as St. Paul's butterflyfish (Prognathodes obliquus), which can only be found at the drop offs bellow 35 m, and the rare blue and white morphotypes of the queen angelfish (Holacanthus ciliaris). Other new species of fish and invertebrates have been described in recent years which help fuel the ongoing research efforts in the region.

Due to the treacherous sea conditions and unpredictable currents, diving there is restricted to those with advanced diving certifications and a pre-planned conservative diving schedule. All scientists that intend to go are subjected to a complete medical examination and must take a week long survival course at the Navy base in Natal tailored to the harsh environment of ASPSP and which includes, amongst other skills, unflipping a capsized rubber skiff. The lack of a safe mooring site next to the main islet means that all food supplies, water, fuel and equipment must be brought from the support vessel to land on a small inflatable skiff over often tricky surface conditions, that only the most experienced fishermen can cope. Sometimes, incoming expeditions must wait a day or two for conditions to settle before unloading. Independent live aboard vessels that intend to visit the ASPSP must have a special clearance by the Brazilian navy to approach the islets and to conduct diving

Field research station at St. Peter at St. Paul's Islets
Nikon D100, 12-24mm @ 12mm, 1/4 sec @ F4, ISO 200

activities, which are restricted to offshore sites. Visitors are not allowed to disembark or visit the field station, unless in the case of emergency.

Although the islets are themselves an environmental protection area, where taking of any marine life is prohibited, a variety of pelagic species are exploited by commercial fisheries in nearby waters, especially yellowfin tuna, which are caught by attracting flying fish to the boat with strong lights at night. Other pelagic species such as wahoo, are caught by line trawl during the day, attracting false killer whales and bottlenose dolphins from nearby waters. Occasionally, great hammerhead sharks can be seen foraging near the outer rocks, but unfortunately this has become an increasingly rare sight, since some commercial fishing vessels began setting long lines a few miles away from ASPSP to take everything they can.

On a brighter side, a variety of biological studies, from behavioral ecology to population genetics and microbiology, are now in place at ASPSP to understand the unique assemblage of marine organisms that populate the Islets. These studies have been providing novel insights into the marine life's behavior, physiology and adaptation, as well as guidelines for its conservation and sustainable management of the nearby fisheries.

Andre Seale
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More Images can be found in the newly released book "Over/Under: Saint Peter and Saint Paul Islets" by Andre Seale available at http://artesub.com

The New North

Exploring Palau by Open Road

Story and Photos by Tim Rock

Drive and Dive in Palau? There's a new road on the second largest island in Micronesia and with it is a new path to possibilities. Caribbean isles like Bonaire are popular places for divers to get in a car or truck and head to the dive or snorkel spot. While Palau's extensive reef may preclude this, it is possible to now get to places that were difficult at best prior to the new highway that spans the island of Babeldaob.

The Palau islands are without a doubt one of the prettiest places on Earth. Spanning more than one-hundred miles from one tip of the archipelago to the other, this region features an amazingly beautiful atoll, a high island that is second only to Guam in Micronesia landmass, 700 Rock Islands and two southern limestone islands.

Babeldaob holds what many feel are the unexplored attractions in Palau both on land and along the outer reefs. With the new 53-miles of "Compact Road" it now vies for attention from the south.

The south holds the famous dropoffs and has been widely dived. There is a world class dive site called Blue Corner. This is considered one of the world's best boat dives. The south also has German Channel, which is favorite spot to watch manta rays feed and big schools of jacks and snapper congregate. Plus, there's the Rock Islands, one of the most beautiful natural formations in the world. Can the North compete?

Well, many feel the answer is yes. One of the most beautiful atolls in the world and one of the most photographed is Kyangel in northern Palau. It is the quintessential Pacific atoll, with a school of spinner dolphins living at the entrance channel mouth. This is still a boat ride. But by car, the entire rest of the north is now open.

We hopped in a car and in less than a half hour found ourselves at the newly developed parking area for the spectacular central waterfalls. The drive itself is pleasant as the highway rolls over high vistas and down into deep island valleys. This road is a great bike ride as well. Traffic is

minimal so far and the beauty of this island, which had only coral and mud roads in the past, can now be easily appreciated. The jungles hold fruit bats, small wood owls, lots of different birds and some odd insects like walking stocks.

The hike to the Ngardmau Falls used to run up a river along a canopied jungle path. Now its all down hill. You can grab a hiking stick at the path entrance and trudge on. We hiked past the remnants of the pre-WWII bauxite mining area. Rails for the trains run through the jungle along steep valleys. An experienced guide may even be able to show you one or two of the trains that hauled the ore. We had possibly the most experienced in Palau. Francis Toribiong is the founder of Fish N Fins and found and explored the reefs, wrecks and land sites here starting in the late '60s. He joined us and led us through a heavily overgrown ridgeline and rail track that ended with two locomotives greeting us. We marveled at these blasts from the past that have been sitting in jungle for over 60 years.

There's an overlook where the falls is clearly visible down in the jungle. A steep trail heads down toward the falls. Along the way a feeder river flows across a broad rocky area where you can jump in and cool off as smaller falls and deep pools. Tiny fish and freshwater shrimp scurry through here.

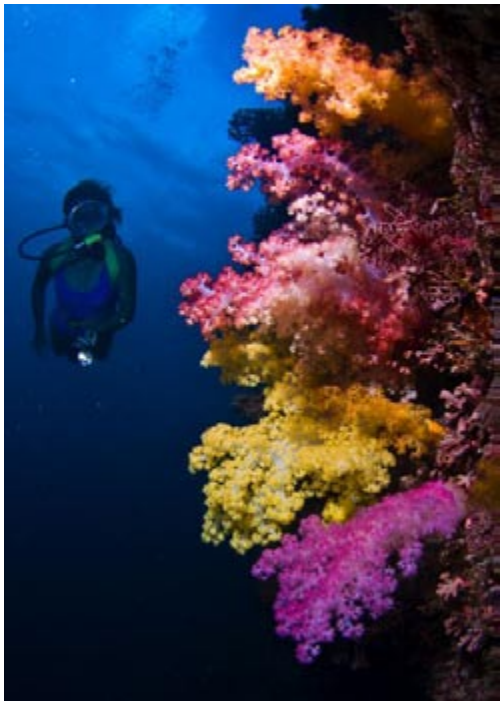
With the exception of a few ropes strung to make the descent along this part of the river safer, the river and falls area is left pretty much to nature. Some steps and a few shelters are found near the falls so it not a simple trek but better developed now. There's still a swatch of trail that can only be described as "Chocolate Avenue" where zori-sucking mud is a fact of life.

The last leg is across a knee deep river and over to the falls. They flow from Palau's tallest peak, 713-foot-high Mount Ngerchelechuus. The falls are at their best after a rain and the hiking is the coolest when it is raining, so moisture from the sky shouldn't deter the eager hiker. The falls can massage you, refresh you and amaze you. We ran through the spray and got behind the falls. Its for a natural atrium and is truly one of the Pacific's best attractions. Relax, cool off and store up some energy. Bring plenty of water as the hike back up is all uphill.

There are also other falls on this island, like the popular Ngatpang Waterfall. There's also a freshwater lake yet to be explored rumored to be chock full of crocodiles.

Out on the reef, the Devilfish City at Ngardmau Channel is an intriguing dive site. It channel diving with some visits to some cleaning stations that are frequented by oceangoing manta rays. Again we decided to use the road to enhance the experience. We wanted to dive at dawn so we arranged for a boat to be left at the Nagrdmau village pier.

We drove through the hills as the sun rose and got to the pier at sunrise. The way to the reef is down a river. Birds flew overhead and we looked at stingrays resting near the river mouth. The river was clear and the water at the mangroves was glassy smooth. Instead of taking an hour-long boat ride, we were at the site in five minutes and happily watching mantas ten minutes after that. The channel is like most that lead from mangrove to the sea in that visibility shifts with the tide changes. A high, slack tide will see the least current, best visibility



and probably a good congregation of mantas.

There is one large coral head in the channel and another set of sea fan adorned coral heads in a flats area above the channel. At the far coral head in about 45 feet of water (15m), the mantas come in to clean. The diver can see this easily as there are hundreds of copper sweeper baitfish in the coral head and it is adorned with both gorgonians and soft corals.

We saw one manta that had a mandible missing. It probably got caught in a fishing line or net. Our guide Yoko Higashide said she knew this manta and that it cleaned here a lot. It probably used this station to clean and heal its wound and, now healed, has become attached to the site. Four other rays joined at various times, including one with a snow white belly.

As the current increased, we saw rays chasing around and cleaning. It was a great way to start the day. We had finished diving twice by nine when most dive boats were just heading out. So we took the opportunity to see what the river holds. Gnarly roots and an overhead canopy make this winding route fascinating. Snorkeling, we saw archerfish and odd root formations. Flowers also floated down the stream as we snorkeled past. The upper part of the water is fresh and clear but below there's a halocline of sea water. It strange to look through and at fascinating habitat.

Back on land, you can drive all the way up to Ollei to some famous ancient monoliths. The Badrulchau Stone Monoliths sit way up north on the grassy flats along the eastern coastline of Ngarchelong. There are 37 ancient stone monoliths here, origin unknown. According to one version, the pillars are actually the foundation of a Bai meeting house that was being built by the gods.

Heading back to central Babeldaob, take a boat or kayak out from Ngeremlengui village. The Ngermeskang River is a unspoiled beauty. Ranging in habitat from a mangrove forest at its mouth to a dense jungle farther inland, this river is wonderful for nature lovers and adventure seekers alike. Here we jumped out of the boat and swam to shore. We hiked up the banks and found the remnants of the Japanese pineapple cannery. Wild pineapples still grow there. This is where kayakers can sneak up on saltwater crocodiles.

Another great northern dive rarely done in Palau is that of Ngeremlengui Channel or The West Passage off West-Central Babeldaob. This has been the only place that a

mesekiu, or Palauan dugong, has been photographed underwater.

The north also has some other great cultural and historical sites. The Ancient Ruins of Imeungs are found on a hill embraced by a ridge of mountains, There are stone pathways, stone foundations and a natural amphitheater where young warriors once tested their mettle by trying to leap a meter-high stone.

At the Metuker ra Bisech, a short climb into the rock islands of Babeldaob come to quarry Yapese stone money. These wheel-like pieces of stone sometimes measured more than a meter in diameter. Some still sit in the jungle.

Nearby the war past comes into play again and we spent a lazy afternoon exploring the final resting sites of Jake-Aichi floatplanes. They sit barely sit beneath the water on the Babeldaob side of the new bridge. One of the Jakes sits near the cave where the last crocodile to kill a man in Palau was hunted down. The plane is scattered but the prop and engine are visible.

We ended our week of northern exploration with painted legends and a glimpse into the past. Meeting houses were once extremely common and found in every village and community. The Arai Bai is the last remaining Bai from the period when the traditional political system was still in effect. Both have painted gables tell of past glories and sometimes poke they even fun at other villages.

Most of the major tour and dive operations now offer various forms of land tour to the north. Diving here and snorkeling is bound to also increase as an alternative to the popular southern dive sites. But the beauty of the place is that its still largely untouched and the exploration is in its infancy.

In the evenings the last call of native birds echoes down the valleys. Clouds hang low over the jungle and they glow with the warm gold of the sunset. We sat high on a hill and listened to the breeze blow over the northern hills. “Palau is full of surprises,” Toribiong told me. The north will surely produce more of them as the years go by.

Tim Rock
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Horseshoes and Dragons

by Mark Webster

Rinca Island recently featured in the international and diving press as the landfall for a group of divers who had been swept away by strong currents following a dive in the Komodo National Park. Much was made of the wild nature of the island and the danger of the local population of Komodo dragons which the survivors apparently had to fend off. However, Rinca Island has built a reputation amongst underwater photographers in the know for very different reasons – the defining feature of this island is Horseshoe bay which has perhaps the finest selection of dive sites in the Komodo National Park.

The Komodo National Park is so unique that UNESCO declared it a World Heritage Site in 1989. Non divers will certainly have heard of the fabled Komodo Dragon and the majority of the visitors to the park are intent on seeing them and the other prolific wildlife. But many of them do not realise that Komodo's richest treasures lie below the surface of the surrounding seas.

The unique qualities of this area were first recorded by Alfred Wallace, a 19th century naturalist who developed the theory of evolution along with Charles Darwin. He spent over ten years exploring the archipelago and discovered that Indonesia is the location where two bio-geographic zones meet, the Oriental and Australian, which played a pivotal role in planetary evolution. This conjunction became known as the Wallace Line and the division runs north to south between Borneo and Sulawesi and then to Bali and Lombok. The Indian and Pacific

(Top) Komodo dragon on Rinca Island. Nikon F90X, 28-200mm zoom, Ektachrome Elite 100, f11 1/160
(Right) The backdrop to Horseshoe Bay is impressive and dominated by evidence of volcanic activity. Nikon D100, 28-200mm zoom, ISO 200, f11 1/125

(Far right) There are striking combinations of colours where soft corals and sea fans compete for space on the reef walls. Nikon D100, Light and Motion Titan housing, 10.5mm FE, Sea & Sea ys120 + Isotecnic 33TTL, ISO 200, f11 1/60

oceans meet at this point and the confluence results in perhaps the richest marine biodiversity on the planet. The Komodo National Park lies just three hundred miles east of the Wallace Line which has led to the development of the most diverse reef systems which have to be seen to be appreciated.

There are often strong currents in the area and oceanographic studies have revealed that there is a difference in sea level between the Pacific and Indian Ocean sides of these islands. This amounts to only 20-35cm (eight to fifteen inches), but it is more than enough to generate a 'downhill' flow into the Indian Ocean. The islands strung along this area, including Rinca, are in fact acting like a dam blocking the warmer Pacific waters. This results in large volumes of water being squeezed between the islands creating strong surface currents running south which in turn suck up the relatively colder waters from the Indian Ocean which propagates constant phytoplankton blooms and it is this of course which supports the marine eco system.

This oceanic activity also has other side effects, perhaps less welcome to the visiting diver. The sea temperatures on the north side of the islands is invariably warm at 27° to 30°C (78°-82°F) and the visibility good, but just a few miles away on the southern side you can encounter visibility more like the UK and chilly up-wellings and thermoclines are common. This is dependant also on the season – the warmest time to visit, with potentially the best visibility, is between November and March, but the wise diver will pack an extra neoprene vest and a hood just in case, although many of the boats carry these to keep their clients comfortable.

Horseshoe Bay on the south side of Rinca Island a short transit from Komodo Island itself.

(Far left) Some of the larger residents are also extremely well camouflaged like this mated pair of giant frog fish. Nikon D100, Light and Motion Titan housing, 10.5mm FE, Sea & Sea YS120 + Isotecnic 33TTL, ISO 200, f11 1/60
(Centre) Cannibal Rock is a pinnacle dive and your first impression at the top of the reef is one of constant movement and schools of snappers, surgeon fish, goat fish and fusiliers part before you. Nikon D100, Light and Motion Titan housing, 10.5mm FE, Sea & Sea YS120 + Isotecnic 33TTL, ISO 200, f8 1/60
(Above) The corals throughout the bay are in impressive condition. Large table corals are found in abundance in shallow water. Nikon D100, Light and Motion Titan housing, 10.5mm FE, Sea & Sea YS120 + Isotecnic 33TTL, ISO 200, f11 1/60

This bay provides an idyllic setting with a sheltered anchorage behind the island of Nusa Kode which sits smack in the middle of the horseshoe – which is all that remains of a volcanic cone and flooded crater. The island has steep slopes with dense foliage which tumble to a shoreline fringed with pale sandy beaches often patrolled by the dreaded

Harlequin shrimps tend to be territorial and will haul back a starfish meal to their lair which may keep them fed for several days. Nikon D200, Subal ND20, 105mm micro, Inon Quad flash, Inon wet lens, f11 1/125.

There are literally thousands of feather stars in every hue imaginable to be seen on each dive. Look closer for those hidden residents to be captured with a macro lens. Nikon D100, Light and Motion Titan housing, 10.5mm FE, Sea & Sea YS120 + Isotecnic 33TTL, ISO 200, f11 1/60

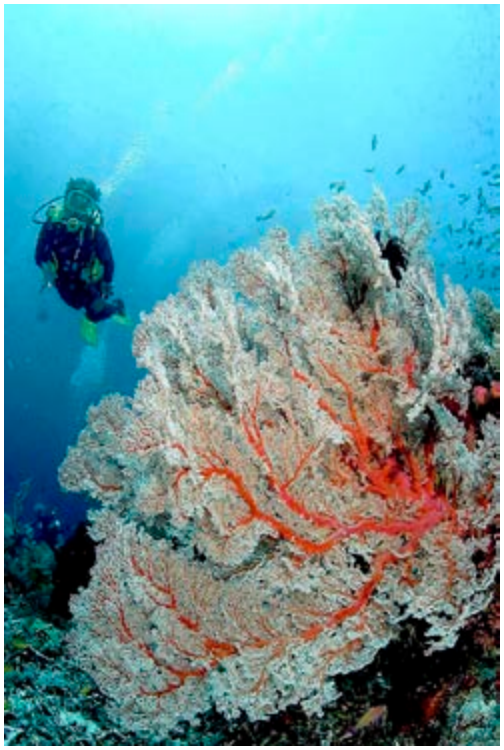
As the sun goes down a number of species will emerge to forage for food. This little decorator crab is scaling a sponge in search of a meal, neatly protected by his collection of stinging polyps. Nikon D100, Light and Motion Titan housing, 105mm micro, Inon Quad flash, ISO 200 f16 1/125.

Komodo dragons.

There are several fantastic dives within the shelter of the bay with some interesting names including Cannibal Rock, Yellow Wall of Texas, Grandma Bangs Bommies, Banana Reef and Torpedo Alley and most live aboard trips to this area will dedicate several days of the schedule to this one location. All these are within a 5 minute boat ride from the mooring so the diving could not be easier.

Your first dives here are a little overwhelming – you suffer a visual overload and your guide will be constantly banging his tank to show you the next remarkable or unusual creature. As photographer you barely have time to set up for each subject if you try to keep up, so you have to discipline yourself not to move on too quickly – the subjects will still be there on the next dive. There are numerous 'stand alone' species – frog fish, ghost pipe fish, blennies, mantis shrimps, leaf scorpion fish, morays, ribbon eels and so many species of nudibranchs it is difficult to keep count – and then there are the symbiotic species, in fact almost everything has a partner species.

It is worth checking everything from anemones to sponges, sea squirts, feather stars, sea urchins, sea fans, starfish and even the nudibranchs for symbiotic shrimps, crabs, squat lobsters cling fish and tiny isopods that look just like lady birds. There are some rare species here as well which include the glorious but tiny Coleman shrimps which only live on one species of fire urchin, sometimes



There are some impressive seafans to be see throughout Horseshoe Bay which are fed by the sometimes brisk nutrient laden currents. Nikon D100, Light and Motion Titan housing, 10.5mm FE, Sea & Sea YS120 + Isotecnic 33TTL, ISO 200, f11 1/60

A rarer find on the abundant fire urchins are pairs of Coleman shrimps. These are usually found at the top of the urchin where they have picked out a few spines to make a home. Nikon D100, Light and Motion Titan housing, 105mm micro, Inon Quad flash, Inon Wet lens, ISO 200 f16 1/125.

accompanied by zebra crabs which are equally unusual. Another tiny commensal species are the pygmy seahorses which are found on certain sea fans – even when your guide points these out to you they are very difficult to spot and even more difficult to photograph well at the high magnifications required.

With such prolific macro life it is very tempting never to look behind you into open water and miss some of the larger action. At the deeper elevations of the reef you will often see eagle rays and torpedo rays cruising by and reef sharks are common but often missed. In fact during my last visit I was informed that the week before a whale shark spent several hours hoovering up the plankton soup around the bay – why is it always the week before?? I salved my disappointment with the fact that I would have had a macro lens on anyway!

My favourite dive here is Cannibal rock, which is a wide ridge of coral that rises from 35-40m to just break surface on low spring tides and is classic multi level dive. If there is some current running here it is simply a matter of choosing the protected side, but it is often worth the effort of exploring into the current to see what the bigger pelagic fish are doing. The top of the reef is draped with dozens of huge carpet anemones each with a seemingly different species of clown fish – up to eight different species have been recorded here. The shallow area is full of ledges, small walls and overhangs and swim throughs decorated with colourful corals and some amazing seafans in only a few meters of water. Going deeper you will find that there is a mixture of steep coral slopes and drop offs before you reach a gently shelving seabed at the base of the reef. Throughout any dive here the most overwhelming feature is the sheer density of the coral and invertebrate cover, there is not an inch to spare!

Night diving here is equally spectacular and should not be missed. The favourite site for this is Torpedo Alley (named for its numerous small electric rays) where armies of decorator crabs emerge, some so burdened with their lumps of sponge, anemones or hydroids that they can barely drag themselves over the reef in search of dinner. Dozens of sea pens rise from the dark sand slopes and spread their arms to gather plankton and it takes a keen eye to spot the tiny porcelain crabs, shrimps and gobies that blend with the colour of their host. Snake eels peek out of the sand when you least expect it and minuscule bobtail squid frantically try to bury themselves when you play your torch light on them. Lion fish and dwarf lion fish shadow you waiting for the torch to reveal and freeze an easy meal – you must also be cautious with all these distractions as stone fish and Inimicus scorpion fish are also common and very difficult to spot.

Between dives relax and absorb the spectacular volcanic scenery, watch sea eagles gliding effortlessly on the thermals before plummeting on some hapless fish and of course observe the march of the Komodo dragons along the water's edge looking for an easy meal or maybe even considering each other for dinner!

Rinca Island and the Komodo

(Above) Some nudibranchs have striking patterns which is this case contrasts well with a tiny symbiotic imperial shrimp. Nikon D100, Light and Motion Titan housing, 105mm micro, Inon Quad flash, Inon Wet lens, ISO 200 f16 1/125.
(Left) There are some impressive seafans to be see throughout Horseshoe Bay which are fed by the sometimes brisk nutrient laden currents. Nikon F90X, Subal Housing, 16mm FE, Sea & Sea YS120 & YS30, Ektachrome Elite 100, f11 1/60

area can be dived year round but perhaps the best time to visit is between the monsoon seasons – the wet monsoon season ends around April and the following dry monsoon finishes in November when the best visibility and warmest water conditions dominate.

There area not many live aboards operating in this area, and you can spend a whole week without seeing another boat. One of the established departure points is Bali, although other boats originate in Flores or Sumbawa and various itineraries may see you board or disembark on another island and then return to your departure point via a local flight. Komodo has been discovered but it is a long way from being developed – go now and discover this unique wilderness and astonishing marine life.

Mark Webster
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Kona - The Big Island

by Michael Wicks

Just mention Hawaii to any diver and their first query will be, “did you do the Manta night dive?” Although the Manta dive can be the highlight of any trip to the Hawaiian Islands it definitely isn’t the end all of diving. At least not for this diver.

The itinerary for our trip was set. We were to fly out Wednesday night, arrive in Kona at 9 PM, check in and get settled that night, start diving Thursday, Friday and Saturday and use Sunday to recoup, decompress and fly out on a red eye that night back to Los Angeles.

My previous dives in Hawaii had taken place off Oahu because I was working there. Oahu is known for many choice wreck dives including a 1942 Corsair plane and the abundance of Giant Sea Turtles. But this trip was to go to the Big Island for pleasure and to dive off Kona. Our dives were scheduled through Bottom Time, and our stay was at the Outrigger Keauhou Beach Resort. Since our trip was scheduled during the off peak season, many amenities were not available. Fully served lunches and breakfasts were lacking. Buffet breakfasts were the only option in the morning. And pre-wrapped sandwiches were the only things available for lunch. You also have to be wary of the “Ocean View” suites. Our suite had an ocean view, which meant to see the ocean you had to walk out on to the balcony and turn right. The best “amenity” of the hotel, by far, was the turtles. During mid-afternoon, the turtles would come and play in the small inlet right next to the hotel. A few of us photographed and watched them for hours. Since hotels are really only a place to rest your head and assemble your camera equipment, we overlooked these deficiencies and moved on to the diving.

As stated above, our dive operator was Bottom Time. Their shop is located in the hotel so pick up in the morning was quite effortless. The crew on the Bottom Time boat were excellent, knowledgeable, and

Waterfall at Rainbow Falls
Canon xTI dSLR ISO 100 1/200 F/4.5
17-85mm lens
Volcanic Cloud with Helicopter
Canon xTI dSLR ISO 100 1/1250 F/4.0
70-200mm lens
Orange Bush at Lava Flow
Canon xTI dSLR ISO 100 1/400 F/5.6
17-85 mm lens

Swim Through Lava Tube
Canon xTI DSLR, Ikelite Housing and port, dual DS51 Strobes. ISO 100 1/200 F/4.0 17-85mm lens

Feeding Frenzy Canon xTI DSLR, Ikelite Housing and port, dual DS51 Strobes. ISO 100 1/200 F/5.6 17-85mm lens

FrogFish Canon xTI DSLR, Ikelite Housing and port, dual DS51 Strobes.ISO 100 1/200 F/5.6 17-85mm Lens

fun. They were very attentive to what we wanted to do and see and were truly great dive leaders and fun to be around. The owner of Bottom Time was a bit overbearing and condescending at times, but luckily most of the time was spent with the professional staff on the boat. As a catamaran motor boat, the vessel was quite stable and adequate, although the camera table was a little small for those of us with full dSLR housings.

The first dive of the trip was to Golden Arches. Named for the massive number of golden yellow fish that used to reside here, they made the water looked golden from the air. Unfortunately they have all but been fished out, however this site still has amazing coral reef and a large arch that are definitely worth the trip.

Other dive sites on the first day were Crestwood Bay and the Manta Night Dive. Yes we did the Manta dive on our first day. As with most trips to Kona the Manta Dive is to be the apex of all the dives. Of course since we decided to do our Manta dive on the first day I was simply hoping it would be the kickoff for a great few days of diving. We had been told that no less than 14 Manta Rays were seen the night before. Needless to say our whole group was quite excited for the dive. The area of the dive is called Manta Haven, aptly named and all the dive operators moor to each other in this area. A set of lights are set up in milk crates aimed directly up to lure in the plankton for feeding.

We started the evening with a dusk dive. This was in Eel Garden Cove. There was still enough light that a dive light is only needed for crevices and towards the end of the dive. We explored the Garden Eels for some time as they wavered above their holes searching and waiting for food. As each diver approached the eels would retreat making the scene look like ground hogs popping up and down out of the ground. Our group surfaced for our topside interval and to get a full briefing on what to expect for the manta dive.

Our dive leader Danny gave us explicit instructions on how to conduct ourselves and how to surface amongst possible dozens of Mantas. He also explained that there is a huge eel named Frank who likes to hang around the lights searching for the other small fish lured there by the lights and plankton as dinner. Frank tends to wrap himself around divers thinking they're rocks. Good safety tip Danny. We descended to the area of the dive and waited expectantly. Whilst we waited for the first ray to show, Frank the eel made his appearance. Luckily he swam between my dive buddy and me for a full on show. By far, the largest eel in girth size that I had ever seen.

The first Manta Ray showed shortly after Frank arrived. With a wingspan of about 4 meters it hovered like a glider over us Unfortunately for

African Tree Transplant Canon xTI dSLR ISO 100 1/800 F/7.1 17-85mm Lens

Spotted Jack Canon xTI DSLR, Ikelite Housing and port, dual DS51 Strobes.ISO 100 1/125 F/2.8 100mm macro lens

me he swooped down on the far side of the lights opposite of where I was kneeling, completely out of range from my camera and strobes. The 2nd and 3rd Rays followed suit and stayed for a minute or two. After about 5 minutes of empty water space our dive leader decided to take us off on a hunt for other night creatures. During this swim we experienced many night creatures including a free roaming octopus.

We continued our dive trip the next day at sites called 2 Arches and Henry's Reef. Here I was exposed to something that for the first time actually made me as giddy as a young boy. We finned over to a spot that was inundated with Milletseed Butterfly fish. As we swam closer to them they started to surround us, darting in and out and around our group. I likened it to be just like standing in a fresh snowfall where the flakes are as large as your thumb and you can put your hand out and catch them as they fall.

The final dive was spent swimming through lava tubes and photographing frog fish. At one point we came up in a cavern inlet and as we swam back out the surge was so strong that my dive buddy and I used all our strength to hang on to some submarine rocks so we could line up our shots. Unfortunately this surge was so strong that we both had to ditch our hand holds and continue on our dives.

Our final day was spent as a non-diving day due to our flights. With a whole day at our disposal we decided to venture to the volcanoes near Hilo. This area is a national volcano park and about 4 hours away from Kona. Six of us loaded into a van where Danny, our dive guide, traded his underwater compass for a land compass to be our chauffeur for the day. We drove our way to the volcano via 2 waterfalls. At the 2nd waterfall, Rainbow Falls, we had the opportunity to swim in the pools of water that form the falls along with experiencing cliff diving Hawaii style with some locals. The trip in the van to and from the volcanoes was long and grueling and on the way back through the mountain pass we were riddled with fog thick as pea soup but it was thoroughly worth it. We all just wished we could have ventured there in the evening to see the red lava play out against the night sky. Next time….

Over all, the entire dive trip was quite enjoyable. There are a few other dive operations on Kona and on my return I'll be sure to try them out as well. Diving the Hawaiian Islands is always an amazing adventure and to be only a 4 hour flight from the Los Angeles makes it a perfect 4 or 5 day weekend trip.

Michael Wicks

Doggone Dugong

by Mark Webster

Dugongs are a threatened species world wide and, although certain individuals are now being seen regularly in the Red Sea, they are still quite rare there it seems. After many years of diving in the southern Red Sea and searching for them in the appropriate places I have had only two encounters.

One particular Dugong at Marsa Abbu Dabbab, close to Marsa Alam, has become quite a celebrity over the past few years, but unfortunately the bay was closed to dive boats in 2007. Now the access to the bay is restricted to residents of a hotel on the shore or via the dive centre operated by that hotel. Having dived with this particular dugong in 2006 (after several fruitless previous visits looking for it!), I consequently thought that the chances of seeing another were pretty slim. However, there are several other bays between this location and Port Galib to the north that offer the same topography and seabed conditions which we knew would be attractive to Dugongs. Dugongs, along with green turtles, eat sea grass and so it seemed logical that if we could find the sea grass and turtles then there was a good chance that a dugong may also be resident, somewhere…..!

Dugongs (Dugong dugon) are the smallest members of the order Sirenia (commonly called sea cows) and are relatively rare world wide. As adults they are rarely more than 3m in length weighing in at up to 400kg and in protected habitats they can apparently live for 50 years or more. They are also listed as an endangered species by the Conservation of International Trade in Endangered Species (CITES) and the Convention on Migratory Species (CMS) amongst others. Their natural predators in the Red Sea are sharks but they are probably at most risk from inshore boating activities and changes to their habitat due to coastal development.

Dugongs will swim for the surface to breath with very little warning. Being aware of this will give you the chance to ascend with your subject (somewhat swiftly!) and get some head on and side portrait images. Nikon D300, Subal ND20, 10-17mm FE zoom, Subtronic Mini flash guns, ISO 200 f8 1/80.

The dugong seems totally unconcerned with the attentions of a group of photographers as this shot demonstrates. They are very territorial and will return to the same area each day to feed despite a human presence. Nikon D300, Subal ND20, 10-17mm FE zoom, Subtronic Mini flash guns, ISO 200 f8 1/50.

Swimming with the dugong close to the surface provides an opportunity to capture the whole animal in clear water with a hint of Snell's window if you are lucky. Nikon D300, Subal ND20, 10-17mm FE zoom, Subtronic Mini flash guns, ISO 200 f11 1/125.

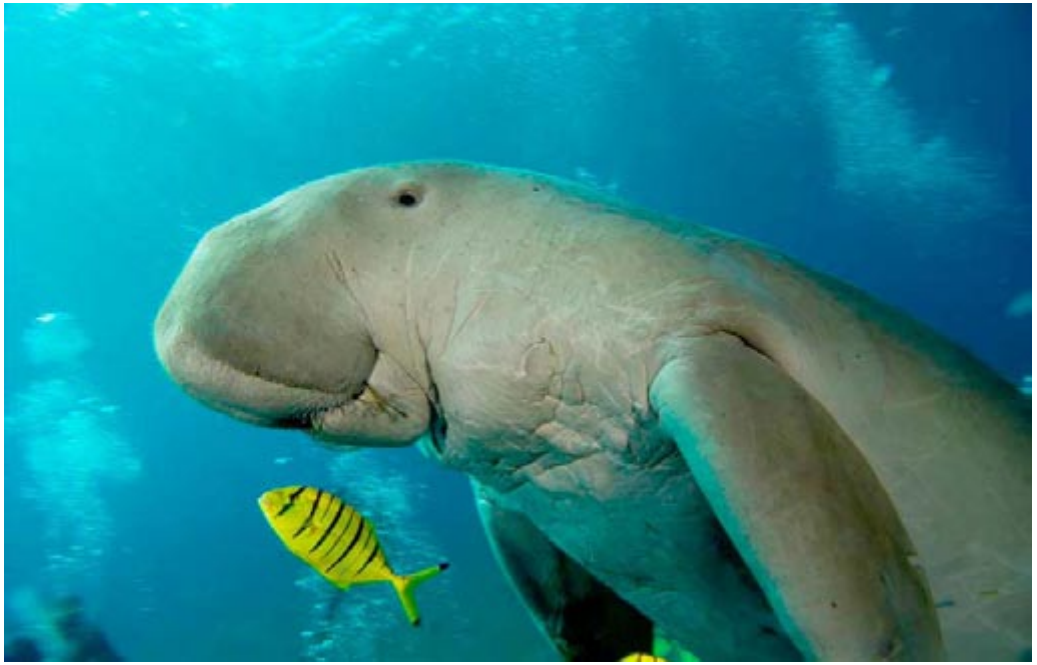
When the dugong returns to the seabed it will resume feeding immediately and there will be only a few moments before other divers arrive. Nikon 200, Subal ND20, 12-24mm zoom, Subtronic Mini flash guns, ISO 100 f8 1/60.

The name dugong appears to have originated from the Malay word duyung which means lady of the sea or mermaid, and of course sea cows in general are the stuff of seafaring legends created by amorous or frustrated sailors after long voyages in the days of sail. Although some may regard these mammals as attractive, I think that these sailors must have been particularly desperate to consider dugongs for anything other than an easy source of food – and they were often hunted as a result. Females are also seen suckling their young at the surface from teats close to their flippers, which is also a source of the mermaid myth.

I regularly use the Blue Planet fleet of live aboards for my photo workshops and have developed a good rapport with our usual dive guide Ashraf who generously undertook the search whilst guiding other groups. When we returned in October this year he had struck gold, but of course with something a fickle as a wild mammal there would be no guarantees of a successful encounter. As our target bay was on the return route to Port Galib we had to wait until the end of the week before we could investigate, but in fact this was no hardship considering all that the Red Sea has to offer a photographer.

We arrived on location very early in the morning and had the luxury of being the only boat there. Several of us were standing on the upper deck whilst the boat moored when one of the group remarked there seemed to be a large shark swimming by just under the surface a few metres from the stern – that's no shark that's a dugong! Our arrival had obviously disturbed the dugong, perhaps from her slumbers, and now she seemed to be heading from the shallows towards the centre of the bay hopefully, we thought, to feed on the sea grass.

Our established leisurely routine of tea and biscuits before the first



Swimming with the dugong towards the surface allows you to get a closer more intimate view and capture the endearing expression of these animals. Nikon D200, Subal ND20, 12-24mm zoom, Subtronic Mini flash guns, ISO 100 f11 1/80.

Once the dugong resumes feeding the visibility will begin to degrade and the arrival of other divers with cameras will add to the problem. Nikon D300, Subal ND20, 10-17mm FE zoom, Subtronic Mini flash guns, ISO 200 f8 1/80.

dive of the day was discarded and there was a mad scramble to get ready for the dive. Perhaps half the group elected to search the sea grass for the dugong whilst the rest headed for the reef. Even though the dugong is a large beast it is still like looking for a needle in a haystack and for accurate location you need to be lucky enough to spot her coming to the surface for air to give you a general location to start. We were not this fortunate and so spent a fruitless 80 minutes searching in vain, although we did encounter several green turtles munching contentedly on the sea grass and the occasional guitar shark in the distance. There is also some excellent macro life in the sea grass including seahorses, sail fin blennies and muck type critters such as dwarf lion fish, hermit crabs and even mimic octopus - but these have to be ignored for the sake of the search.

So having returned to the boat dejected we were still more distressed to see the arrival of several other live aboard boats for their final dives before returning to port – did they also know of this dugong? For the second dive we decided to take the RIB to the farthest edge of the sea grass beds to start our search. As we approached the general area there was some discussion as to where we should start the dive when amazingly the dugong broke surface just 20m away to take air which prompted an immediate SBS style entry complete with cameras to ensure we did not lose sight of her (I am assuming throughout that the dugong is indeed female, better educated divers may be able to recognise the gender).

There she was below us in 15m or so happily feeding on the eel grass and accompanied by up to 12 remora and several pilot fish. To begin with our small group was able to enjoy this magnificent creature undisturbed, but our frantic entry into had attracted the attention of the other boats and it was not long before two more RIBS arrived and deposited their divers on our location.

When the dugong is feeding there are only so many compositions available to you with or without a diver in the scene. In order to obtain a variety of compositions you need

to be aware of dugong behaviour and to have a certain level of fitness! In my limited experience the dugong is able to feed on the seabed for between 10-15 minutes before heading for the surface to breath. There is normally very little warning of this departure, but once the beast rises and begins to swim with its broad tail fluke then things begin to happen very quickly. So, as this happens there is an opportunity to shoot the dugong head on and perhaps a head and shoulders portrait from the side and then you have to decide whether you are going to try and stay with your subject as it heads for the surface.

If you obediently follow the warnings given by your computer then you probably won't like this bit and should skip to the next paragraph. Staying with the dugong requires some fast swimming and a reasonably fast ascent, but it will give you the opportunity to shoot some full body portraits from the side and below in open water. The attendant remoras and pilot fish all add to the scene and, if it is early in the morning, there is the chance of a portion of Snell's window around your subject as well. Hopefully not too many other divers are following below as the bubbles do detract from the scene!

Once the dugong reaches the surface she will swim for a few minutes whilst breathing, maintaining quite a fast pace. This is an opportunity to get below the subject and shoot a few silhouettes – you need to be quite familiar with your camera settings for these exposures and your housing controls to change settings quickly, but these techniques can be practised before such an opportunity arises. Eventually the dugong will begin to dive on quite a shallow trajectory and you may be tempted to give up at this point, but if you have the energy then try to stay with your subject because when she reaches the seabed then this will be your best opportunity to get some shots with minimal suspension in the water. Once the dugong begins to feed again in earnest then the visibility will degrade quickly and the arrival of other divers will exacerbate the problem.

These tiny sail fin blennies are abundant in the sea grass but very difficult to spot due to their excellent camouflage. Nikon D200, Subal ND20, 105mm micro, Inon Quad flash, ISO 100 f16 1/80.
On the edge of the sea grass beds a muck style environment dominates. Here a juvenile dwarf lion fish is hiding itself on the shaft of a tube anemone. Nikon D300, Subal ND20, 10-17mm FE zoom, Subtronic Mini flash guns, ISO 200 f16 1/50.

Lens choice for these encounters has to be wide. A 12-24mm or 10-17mm on DX and 14-24mm, 17-35mm on FX are good choices or perhaps the 10.5mm (DX) and 15/16mm (FX) fish eyes. Sometimes the fish eye is just a little too wide although it would be the preferred choice for those shots closer to the surface to capture any available Snell's window. You will need suitably wide beam angle strobes for these lenses to add some fill light, but strobe positioning can become a challenge to avoid backscatter once the seabed is disturbed. If you do not intend to head for the surface then filters and natural light could work well and will cut the

By moving under the dugong you can position the sun behind the subject and capture a silhouette to inject some variety into the image sequence. This does require some nifty exposure changes whilst swimming pretty hard though! Nikon D300, Subal ND20, 10-17mm FE zoom, ISO 200 f16 1/250.

risk of backscatter, although you may want to increase the ISO a stop or two to allow a faster shutter speed to freeze the action.

There has of course been some concerns over the amount of attention that these dugongs receive, in some cases on a daily basis. But they seem to be unperturbed and continue to inhabit and feed in the same area and just ignore the intrusion from divers and, in Marsa Abu Dabbab, hordes of daily snorkellers. My feeling is that, just like the green turtles which regard us with total disdain, the dugong does not see us as a threat or predator and not even, it seems, as a competitor to its food source. Most likely the intrusion is now just something to be endured for a few hours in the morning before the boats depart for port once again. Getting close to a big creature in the water is always a thrill, but there is something even more appealing about these gentle and benign 'sea cows' which makes this experience and capturing good images truly memorable.

Mark Webster
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Mantas of the Maldives

by Julian Cohen

Sharks, Whale Sharks, Mantas. These animals are right at the top of many divers' list of "things to see underwater before I die". For me it has always been Manta Rays. There is something fascinating about an animal that compared to humans is so massive, that moves in such a fluid, balletic style and that you know is not going to harm you in any way.

Before I went to the Maldives I had been to some of the prime Manta spots in Asia with very limited success. Nothing at Hin Daeng and Hin Muang; a fleeting glimpse of a black outline in the distance at Koh Bon; forty five minutes in the cold cold water at Manta Point in Bali trying to peer into the blue for the distinctive profile that would never appear. I had one magical experience last year with my good friend and dive instructor Alex Mahoney at a secret spot he knows off Phuket. Three Mantas came and swam with us for ten minutes. We were the only ones at the site and I watched captivated as a giant female swam right up to Alex's face and then performed a graceful barrel roll right in front of him. It was lucky I didn't have my camera with me or the Mantas would never have turned up!

So when I decided to go to The Maldives it was with the express intention of photographing Mantas. I packed my 12-24mm and my 10.5mm lenses and didn't bother with the macro at all. If it wasn't big, I wasn't going to photograph it.

The Manta Ray (Manta birostris), is the largest of the rays, and has been measured as large as 7.6 m across, with a weight of about 2,300 kg. It ranges throughout all the tropical waters of the world, typically around coral reefs. Mantas are most commonly black on the top and white underneath, but some are black all over. A Manta's eyes are located at the base of the cephalic lobes or "horns", on each side of the head. These horns have given rise to the common name Devil Ray and are used to direct food to the Manta's mouth and the Manta can curl them while swimming. Like other rays, the Manta has five pairs of gills on the underside of its body. Mantas are filter feeders: they feed on plankton and fish larvae, which are passively filtered from the water passing through their gills as they swim.

This shot at Kani Corner was one of the first I took that week and was taken with ambient light only in about fifteen meters of water. 1/80 sec at f8 with the 12-24mm at 24mm, the Manta was swimming about 10 meters below me as I hovered on a safety stop. I adjusted the white balance by using the preset white balance feature on my D200 and took the test shot of my hand to set it, pointing the camera down towards the Manta so that the light would be the same as the actual shot I was intending to take.
1/80th sec at f 8, 12-24 mm F4 @ 24mm ISO 200 NIKON D200 Subal housing Spot-Meter Mode

The first dive was at a site in North Male Atoll called The Aquarium, for what became obvious reasons. As we approached the drop point the boat boys pointed out a Manta feeding at the surface. My heart took a leap as I realised this was going to be a special trip for me. That first day I saw ten or fifteen Mantas on three different dive sites. Every day after that was the same, and it never got boring for me. At Langkan Reef, also named Manta Point which is usually a promising sign, there was a cleaning station and if you stay low

1/50 sec at f5.6, 10.5 mm f2.8@10.5 mm, ISO 100, NIKON D200
Subal housing, Spot-Meter Mode

1/125 sec at f7.1, 10.5 mm f-2.8@10.5 mm, ISO 100, NIKON D200
Subal housing, Spot-Meter Mode

the Mantas will come in and swoop around your head as they line up to be cleaned. Because of its proximity to a lot of the major five star hotels, Langkan was always quite a busy site.

The water at North Male Atoll was clear with about twenty meters visibility and so I shot primarily with the Magic Filter. The Maldives has an abundance of sunshine and the water can be clear with good visibility. I was planning to do most of my diving around ten to fifteen meters and so conditions seemed perfect for the Magic Filter. (www.magic-filters.com)

I kept my strobes attached to my rig so that I could use them if I saw the need, but the Magic Filter is designed to be used without strobes and I used it that way most of the time. If I did shoot with the strobes, often to get some fill flash on the underside of a Manta as I was shooting upwards, then I corrected for the red shift in Lightroom. I found that with the Filters on the colours were brought back beautifully.

When using the Magic Filter it is important to remember to take the test shot to set the white balance in the same light as the subject. Because you have to reset the white balance every two meters or so of depth, it is easy to forget that when shooting upwards or downwards, the white balance setting will be different than shooting horizontally for the same depth.

I primarily meter for the surrounding blue water when shooting wide angle. I always set the meter system to spot metering and find a patch of blue in the same direction and light as the subject and then meter off that. When I am shooting close focus wide angle, I use the exposure compensation to underexpose by anywhere from 2/3rds of a stop to sometimes 2 stops, depending upon the lighting conditions. When shooting like this in full manual mode, the exposure compensation will control the flash output when the flash is set to TTL. You may ask why I don't shoot in manual flash mode in the first place? I learnt that way initially, but when I switched to TTL I found that it became one less thing that I had to think about and I could concentrate more on composing the scene in front of me. Each to his own is my motto.

When shooting general wide angle scenes, as I was doing in the Maldives, I meter for the blue water

1/160th sec at f5.6, 10.5 mm f2.8@10.5 mm, ISO 100, NIKON D200 Subal housing, Spot-Meter Mode

1/100th sec at f5.6, 10.5 mm f-2.8@10.5 mm, ISO 100, NIKON D200 Subal housing, Spot-Meter Mode

in the same way, but underexpose manually, generally by a stop, in order to achieve the deep blue colour of the water. I leave the flash on TTL and forget about it. The Ikelite TTL works so brilliantly with the Nikon system that I rarely think about the flash output for wide angle, unless I am shooting close focus.

It was when we got to Hani Faru in Baa Atoll that my dreams became a reality. Hundreds of Mantas feeding at the surface, swooping and performing synchronised barrel rolls like fighter planes, and no one else for miles around. They call this Manta soup. Normally there are Whale Sharks here to add to the excitement but that is where my luck ran out. I wasn't complaining.

At Hani Faru in about six to eight meters of water the Mantas were feeding in large numbers. I went down on scuba and mainly shot them as they swooped around above my head. At the time I thought that by being lower than them and shooting upwards I would get the shots that I wanted, that thick of the action being surrounded by Mantas kind of shot. Later I tried snorkelling with them at Helengeli Thila. We had just come up from a dive and there were twenty or thirty Mantas feeding in the murky water so I dropped the scuba tanks and jumped back in. The feeling of being at the surface with them was totally different, as it was here that they had their mouths wide open to feed, and my photos now had the look I was after.

Of course Mantas that are feeding means water with suspended particles and less visibility. I shot with strobes and pointed them out at an angle away from the lens to catch the Mantas at the edges of the light. This helped to cut down on the backscatter. I also converted many of the photos to black and white. There were two reasons for this. Aesthetically I think the Manta is perfect for black and white shots, as these are their predominant colours anyway, and I wanted to get more of a reportage feel to my photos. Secondly, I feel that when converted to black and white a lot of the suspended particles are not as apparent in the photo. They are still there, but to my eyes don't jump out at you and interfere with the subject as much as when the shot is in colour.

My favourite site in the Maldives is a cluster of three rocks at eighteen

1/50th sec at f5.6, 10.5 mm f2.8@10.5 mm, ISO 100, NIKON D200, Subal housing, Spot-Meter Mode

meters surrounded by sand, called Sunlight. This forms a natural cleaning station for the Mantas and every time I went we were the only boat on the site. When the sun is shining the ambient light in the shallow water is spectacular. Here I took black and white again and shot from above looking down with my favourite lens, the Nikon 10.5mm. I love the barrel effect and the way it bends perspective, especially when you are close to the subject and shoot straight down. A three meter Manta Ray and its surroundings are all in view from less than two meters away.

As I am writing this article I keep gazing out of the window and wishing I were back in the Maldives again. Time to stop dreaming about it and get on the phone to the travel agent!

Julian Cohen

The Sarangani Bay Reef Dome Project

Story and Photos by Stan de la Cruz

The Sarangani Bay reef dome project was conceived by two scuba diving friends, Chris Dearne (a British expat) and John Heitz (an American expat), who while having a drink one afternoon, were lamenting the state of local coral reefs and it's lack of protection. For a region that pride's itself as the Tuna Capital of the Philippines, and with the bay noted for being home to some rare and exotic creatures, this was a sad state of affairs indeed. A few bottles of San Miguel later it was decided that if anything was going to be done to restore and improve the local marine environment, the private sector (meaning Chris and John), would have to be the ones to take the lead. A few more bottles of San Miguel later they remembered a discarded cement hollow block in one of their dive sites that had sprouted some coral, and from this they drew inspiration.

Research turned up a diverse set of ideas being tried out. Ceramic "snowflake" reef modules were being used in a bid to stabilize the substrate, provide instant shelter for marine life, and promote recovery of the reef . "Biorock", using metal structures connected to an electrical supply powered by solar panels, was being used to accelerate growth of corals and supposedly make them resistant to bleaching. In Thailand, "Reefballs" made of a special cement mixture poured into fiberglass molds, were being used. A giant spider like structure dubbed the "Acanthasia" project was also being tried out. The Nature Conservancy (TNC) had a low-cost reef rehabilitation initiative using piles of rocks to stabilize rubble fields and provide substrate for new coral growth in Komodo, Indonesia.

A transplanted coral with cementing "growth" ring

The prohibitive cost, scarcity of materials, lack of local technical help, and the research/experimental nature of the above mentioned projects, prompted the design team to think of a different approach. The artificial reefs had to be constructed of readily available materials; heavy enough not to be blown away by currents; light enough to be manhandled by divers; large enough to stabilize the substrate they were placed on; must provide room to be used as shelter by marine creatures; must be of a profile that approximates the reef formations in the area; and had to be cheap enough so that plenty of units could be fabricated to be spread over the damaged areas of the bay. Over the next few weeks, the domes were designed and constructed at the Cambridge Farm Hotel, using funds from Chris and John's own pockets. Materials used were cement, sand, bamboo, and a couple of tubs made

Nemo's new home

The concrete block that started it all

Newly deployed domes

from industrial plastic to serve as molds. Total cost for a reef dome module came out to PhP 200.00 (roughly equivalent to the cost of a bag of cement or a t-shirt) on the average! The first domes were deployed 17th of April 2005, with the volunteer help of the Tuna City Scuba Diving Club.

Nearing the target of 5000 reef dome units deployed after 3 years, I was invited by Chris and John to see for myself how the project was progressing. The promise of exotic creatures, tons of tuna, and contributing toward a better environment proved too much to resist. Being an active diver for more than a decade, I decided it was time to give something back.

What I saw was quite astonishing. The vast majority of the domes had successfully been encrusted by corals, sponges, barnacles, tunicates, bryozoans and algae; although a few domes didn't have a speck of life attached to them. Juvenile reef fish hid within the structures. Crinoids and

Colorful encrustation captured with the help of a Magic filter

sea stars (I refuse to call them starfish as they are not fish) crawl over them and even the bigger fish graze on the algae cover. According to experts and textbooks, hard corals take many years to grow. It was therefore notable that a large number of natural accretions of hard corals could be seen growing on the reef domes. Transplanted corals also showed vigorous growth by spreading out and cementing their positions as shown by "growth rings" around their bases. Fish and other marine creatures now inhabit areas where there have been none for a long time.

Posing a big danger to the success of the reef dome project are destructive fishing methods, especially fine mesh nets. It was noted that new coral growths and transplants had been ripped up and destroyed by people fishing with nets. Domes had even been upended by spear fishermen wanting to get to their prey. There are laws in place which prohibit net fishing with mesh smaller than 3 cms. knot to knot; and even laws which state that fishing methods which cause damage to corals are totally illegal. Enforcement of these laws is, however, an altogether different matter ['nuff said].

As of this writing, there are now 4,850 reef dome units deployed in the waters of Sarangani Bay, over 14 different areas. It is probably the largest, fastest growing, and most cost-effective project of its kind in the country. It is hoped that the continued success of this project will help ensure that there will be coral reefs for our future generations to see and enjoy. According to Chris and John, all they could hope for is to be able to show that such an ambitious project can be done even with limited resources, and they look forward to the time when other coastal communities take a proactive stance and start their own artificial reef programs.

If you want to donate and or volunteer for this worthwhile project, log on to www.tunadive.com or e-mail dvgensan@yahoo.com.ph.

Stan de la Cruz

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

My annual liveaboard holiday had started on a real high note - the check dive was on a cleaning station and the mantas were there in numbers. At one time we had 10 in sight and there were others we saw during the dive. During that first dive I took over 160 pictures - I still wonder how Iíd ever managed with my old Motormarine II - even though a good number were later discarded.

The rest of the week didn't disappoint. We snorkelled with two whale sharks, saw good numbers of white tip reef sharks, got close to a number of turtles most of whom ignored us, and saw loads of small critters.

But my favourite photo was taken on the last day before flying home after all the diving was finished. We'd done one last dive on the cleaning station but the mantas had been scarce and only paid a fleeting visit. As a last opportunity to get wet a few of us took the opportunity to snorkel at Bandos house reef. I'd been there before and knew that black tip reef sharks were around as well as many of the regular reef fish. The weather was awful that day and it rained most of the time.

I left the camera on manual white balance and took a few shots of the fish and reef whilst diving down a few metres. I rested at the surface for a few seconds to get my breath back and check my bearings and then looked down again for my next subject. A 2.5 to 3 metre manta had appeared below me and was moving slowly parallel to the drop off. I finned after it taking a few shots while I did. Then it turned upwards and starting beating its wings really fast. Realising it was about to jump, I lifted my head and camera, pointed it in the right direction and grabbed the shot - I didn't even look at the screen as there wasn't time.

I checked the shot while at the surface and it looked OK, but when I looked properly back on the boat (that's the Sea Spirit in the left of the shot) - I saw that I'd managed to get the manta in mid air.

The camera is a Canon Ixus 75 in a Canon housing and I had an Inon wide angle lens on. The camera was set to Manual for the white balance but I had not changed anything else. Looking back it was 1/100 at F8. The curves adjustment feature has been used in Photoshop and the image has been cropped.

Peter Bambrough

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".
peter@uwpmag.com