

Underwater Photography

Mar/Apr 2010





50 years ago underwater photography was something of a dark art practised by a handful of pioneers. Fast forward to today and thankfully things have changed. Now you can capture your adventures in vivid colour with a compact and easy to use outfit that won't cost you a kidney. Where can I get such a wonder? Cameras Underwater of course, we'll even show you how to get the best out of it.

TODAY... ANYONE CAN DO IT



Underwater cameras



Lighting systems



Underwater video

WHAT BAGGAGE
ALLOWANCE?

Thank you: The Underwater Studio and Steve Warren

Cameras Underwater Ltd. Specialist equipment for scuba diving, snorkelling, surfing, skiing, water sports, hiking and all wet and demanding conditions.
www.camerasunderwater.co.uk. Phone: 01404 812277 / 020 7839 1991. Email: sales@camerasunderwater.co.uk

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Underwater Photography
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Publisher/Editor Peter Rowlands
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Underwater Photography

A web magazine UwP53 Mar/Apr 2010

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Pete Atkinson & Alex Mustard

Cover shot by
Don Silcock

Editorial

The End of the Line?

I was recently sent the DVD “The End of the line” to review (see page 64) and watching it filled me with equal parts of admiration and trepidation - admiration for the quality of production which deals with such evocative facts in a calm and positive way and trepidation for the undeniable message it imparts.

Having dived consistently in the waters around Plymouth here in the UK for over 30 years I have definitely noticed a deterioration in the amount and quality of the marine life. True, we have local influences such as the inconsiderate (actually illegal) dumping of dredged material from the approaches to Devonport Dockyard which has affected visibility and smothered marine life in Whitsand Bay but I can't help but feel that large fishing boats offshore have taken so much from the local waters that the balance of the marine life has been affected.

“The End of the Line” DVD points out that there are no longer any commercially viable stocks of cod in Newfoundland yet they had sustained local livelihoods and fed a nation for thousands of years. Now they have

been fished literally to extinction – a point at which there is no possibility of the species in that area ever recovering i.e. they have disappeared forever.

Closer to home, when I visited the local maritime museum in Polperro just a few miles down the coast in Cornwall, I saw old photographs of the conger eel catches which took place on a daily basis about 100 years ago. There were photographs of mounds of them, literally mounds. Now I don't know about you but I am always a bit wary when I stumble across a conger eel underwater so it's just as well Cousteau and his aqualung came along when it did for, if it was a century earlier, the underwater world would perhaps not have seemed quite so enticing but I digress.

Man has the capability to catch almost every large fish in the ocean and he is merrily doing so but to the general public there is no tangible visual evidence of this happening. Nothing to see of the scale of change and perhaps it is us, the underwater photographers and cameramen, who are partly to blame.

We are able to create images which, in certain circumstances, distort the truth and leave a message of contentment. For example we can photograph the one remaining small coral head in a desert of sand which was once a vibrant reef, get the sun behind the one remaining piece of colourful soft coral, light it with a twinkle of fill in flash and we have a beautiful but unrepresentative image.

Now I'm not suggesting for a moment that competitions add a new category “Worst seabed shots” but it is only when public perception is made to realise that time really is running out for the fish and eventually the life in our oceans.

If we can change that perception there is a chance, a slight chance, that we may be able to put the brakes on, enough to avert a terminal, man-made disaster.

Peter Rowlands
peter@uwpmag.com

Something for everyone...



Advanced Compact
Fisheye FIX Canon G11



Digital SLR
Aquatica Canon 7D

See our review of the 7D with pictures and HD video shot with this camera at:
www.backscatter.com/7d



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*We dive, shoot and service
everything we sell!*

www.backscatter.com

News, Travel & Events

'The Red Sea in focus'



Scuba diving tour operator blue o two and specialist photography retailer Cameras Underwater have teamed up to provide week long photography workshops in the Red Sea... 'The Red Sea in focus'.

blue o two will be hosting the trips on their fleet of luxury liveaboards and Cameras Underwater will be onboard to run the photography workshops. The focus will be on compact camera photography and will be open to all regardless of standard and experience; there will even be cameras to rent if you don't have your own!

Operations Manager of Cameras Underwater, Dave Glanfield said; "More and more divers are taking up

underwater photography and we are always on the lookout for new ways to help them learn and improve. Joining forces with blue o two gives us the opportunity to run our workshops over an extended period and add a more practical element; the warm waters of the Red Sea also provide the perfect practice environment."

The itinerary will follow a Northern Red Sea route, allowing divers the opportunity to capture a wide variety of subjects, including reefs, wrecks, corals and marine species. The Northern region is also known for more favourable weather conditions, beneficial for successful photography.

Company Director of blue o

two, Jason Strickland commented; "Being able to offer our clients the expert knowledge of Cameras Underwater onboard our vessels is fantastic. Cameras Underwater are the best in the industry and I think this partnership has all the right elements to be a great success!"

If you are interested in beginning or extending your skills in underwater photography, blue o two and Cameras Underwater currently have two trips scheduled for 2010 with more to be announced.

02 - 09 JULY 2010: M/Y blue Melody - £1049.00

19 - 26 NOVEMBER 2010: M/Y blue Horizon - £1149.00

You can call the blue o two sales team on 01752 480808 or visit their website. Bookings can also be made through Cameras Underwater.

www.blueotwo.com

www.camerasunderwater.co.uk

Shark Diving Expedition In the Bahamas on a Live Aboard



Our comfortable 26 meter vessel leaves from West Palm Beach Florida

Scuba with Tiger, Lemon, & Hammerhead Sharks without a cage

Join professional photographers Gregory Sweeney & Takaji Ochi on this thrilling adventure photographing predators

Amazing Photography!

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2010 Departures still available!
For Information and Pricing
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www.ex-ex.co.za
Group discounts available



Worldwide Dive and Sail Photo Courses

Worldwide Dive and Sail have always been supporters of divers who enjoy underwater photography, and the facilities on all our yachts allow photographers the support needed to get the most out of their time underwater.

In 2010 we are hosting an amazing six underwater photography workshops / expeditions.

Most workshops are for ten nights in length, however we also have two five night workshops. The trips are open to both complete beginners and those with more

experience and even those who regard themselves as established. The professionals leading the workshop are eager to pass on their knowledge in a fun and relaxed manner in a backdrop of amazing diving in South East Asia.

Whether using a compact digital camera or a high end SLR in a similar high end housing the trips are open to all. With numbers reduced from the normal 16 guests to 12 or 14, you are sure to gain much from any of the workshops.

ANDY SALLMON - 31st May to 10th June 2010 - South Visayas
AARON WONG - 14th - 19th July 2010 & 19th - 24th July 2010 South Visayas
GERALD NOWAK - 7th to 17th Sept 2010 - South Visayas
GERALD RAMBERT & KITTY JEMPSON - 29th Sept to 9th Oct 2010
KEES OPSTAL - 21st to 31st Dec 2010 - Borocay to Coron
FRANCO BANFI - 30th Aug to 9th Sept 2011 - Komodo

www.worldwidediveandsail.com

www.uwpmag.com

Amazing Seas Book Event



The Amazing Seas Book Event is a unique festival spanning the globe for underwater photographers. The idea is simple; we get together with good friends, travel to the best SCUBA diving destinations in the world, stay at exotic resorts, dive amazing reefs and photograph the definitive hard cover, coffee table book for that area.

Using your best images, we will be working with a professional publisher for layout, design and printing of the book and everybody gets a copy. We take care of the complete production and shipping,

The first book will be photographed at Sipadan & Mabul Borneo Oct 15 - 22, Oct 22 -29 and Oct 29 - Nov 5 2011. We have

reserved the best critter finding divemasters and private boats. All the details are taken care of. Just show up for the fun and adventure.

During the week, you are invited to shoot and learn with world renowned underwater photographers including Mauricio Handler whose work has been featured by National Geographic (www.handlerphoto.com). We get together every night to have fun, share our shots and on Friday have a competition for the book cover! On publishing, we will be presenting the book, as a gift, to the Prime Minister of Malaysia.

Don't miss the fun and hope to see you in the book!

www.AmazingSeas.com

www.uwpmag.com

WETPIXEL

QUARTERLY



Issue #7 available soon!

Dear UwP Readers:

Now on its **7th Issue**, *Wetpixel Quarterly* brings you the best in underwater imagery in a collectible, coffee-table-worthy publication.



Order issues #1-4 in the Year 1 Collector's Edition while still available!

Subscribe and order back issues online:
www.wetpixelquarterly.com

Komodo and Rinca with Alex Mustard

17th September - 2nd October 2011

The exotic islands of Komodo and Rinca offer some of the world's most spectacular underwater sights, in a remote region of Indonesia where the words, sometimes printed on ancient maps, 'Here Be Dragons' really are appropriate! We will make a land excursion to see the famous and impressive Komodo Dragons at this World Heritage Site, but the focus of our trip will of course be underwater.

We have selected the luxury liveaboard boat, Siren, that specializes in trips for underwater photographers. Siren provides superb accommodation and diving management along with excellent facilities for the underwater photographer, such as dedicated preparation areas, plenty of charge points, storage areas, dedicated rinse tanks, computers in every cabin to allow you to download and edit your day's work and a large plasma screen in the saloon to view and share your days pictures with your fellow underwater photographers. Our 12 nights charter has been designed to meet the needs of this specific group and will visit dive sites not available on standard Komodo cruises.

Underwater photographer and marine biologist, Dr Alex Mustard will lead this trip, drawing on his



Bargibanti seahorse (Alex Mustard)

extensive experience across Indonesia. There will be no formal photographic teaching during this trip, but Alex will always be on hand to give informal advice on underwater photography techniques and information on the marine life.

www.divequest.co.uk

DiveQuest

THE ULTIMATE IN DIVING HOLIDAYS

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Martin Edge: Raja Ampat, Sulawesi and Mexican Cenotes

Alex Mustard: Sea of Cortez & Komodo and Rinca

Charles Hood: Great White Sharks of Guadalupe

Shannon Conway: Art of U/W Photography in Bali & Raja Ampat



Photo: Shannon Conway

www.divequest.co.uk
01254 826322

Dive the Best of Both Worlds: Bunaken and Lembeh with Eco Divers



Dive the teeming coral walls of Bunaken National Marine Park's warm waters or explore the world's best critter diving in the Lembeh Strait. North Sulawesi has it all. There are more marine species here than even on the Great Barrier Reef. And both worlds can be reached from Kima Bajo Resort & Spa, situated a short transfer from Manado Airport, with Eco Divers amazing value All Inclusive Dive Packages. Or stay in our new Lembeh Cottages and be right on site with Eco Divers.

We are a PADI 5 Star IDC Centre offering a full range of diving services from day and night dives to PADI courses, Nitrox courses and photo and video services. Our guided dive groups are tiny – guaranteed to never be more than four guests for each guide – in contrast to our large, purpose-built boats that only ever take a maximum of eight diving guests on board. There are always at least five PADI Divemasters, Instructors or crew on each boat because we want you to feel relaxed and pampered on your dive holiday. You don't even have to carry heavy dive equipment.

www.eco-divers.com

www.uwpmag.com

Underwater Images 2010 Entries now being accepted!

April 1, 2010 is the deadline for entries in the 13th annual Underwater Images Photo/Video Competition. The competition is open internationally to amateur

underwater photographers and videographers. Prizes include worldwide dive travel, dive equipment, and much more.

Contest Categories for 2010

1. Conservation-Videos
2. Video
3. Shipwrecks
4. Wide Angle (Novice)
5. Wide Angle (Open)
6. Macro/Close Up (Novice)
7. Macro/Close Up (Open)
8. Majestic
9. Togetherness
10. Divers and Marine Life

The Underwater Images competition is a non-profit corporation registered in the State of Ohio, U.S.A., with all proceeds from this competition going to marine conservation, educational, and scholarship purposes.



www.uwimages.org

DivePhotoGuide Tutorials



DivePhotoGuide.com has launched a highly anticipated free series of comprehensive underwater photography tutorials and guides to help the world learn underwater photography.

Never before has there been such a growing interest in underwater photography. Affordable digital cameras have made underwater photography more accessible, and social media has made it easier than ever to share photos with your friends, family and the world.

The tutorials are written by professional underwater photographer Jason Heller and DivePhotoGuide.com editor Matt Weiss, along with contributions from several world renowned professional and award winning underwater photographers, such as National Geographic photographer David Doubilet, Martin Edge, and Alex Mustard. Each tutorial includes beautiful underwater photos and equipment set-up shots that illustrate each technique.

www.divephotoguide.com



UWPhotographyGuide.com The first free online guide

UWPhotographyGuide.com is proud to be the first free comprehensive online guide to underwater photography to assist divers and photographers in learning this difficult art.

UWPhotographyGuide.com has been in beta for several months already, with articles on theory, technique and equipment being added every week. Many award-winning amateur and professional underwater photographers worldwide have contributed to the Underwater Photography Guide. Reaction to this resource by industry professionals has been overwhelmingly positive.

Well-known professional underwater photographer Alex Mustard says "The Underwater Photography Guide is an excellent and free resource that every underwater photographer who wants to improve their photos should bookmark".

Owner and Editor of UWPhotographyGuide.com Scott

Gietler says "Underwater photography can be very daunting the first time it is attempted. After 1,000 dives with a camera, I am still learning. My passion is not just photography, but sharing with others how to get more out of it. And at the end of the day, if more people are taking photos that they want to share, it's going to also drive interest in scuba diving and preserving our world's oceans."

In addition to photography theory and technique, the Underwater Photography Guide also has articles on the natural history and behavior of marine life, and unbiased, informative articles about dive destinations around the world that offer underwater photography opportunities.

www.UWPhotographyGuide.com

New underwater category for Environmental Photographer of the Year 2010

CIWEM's Environmental Photographer of the Year is calling for entries that deal with some of the most important issues of our time.

Now in its fourth year, CIWEM's Environmental Photographer of the Year is one of the fastest growing photographic competitions in the world, with 2,500 pictures entered in 2009 from over 60 countries.

EPOTY is open to international photographers of any age and encourages entries that are

contemporary, creative, resonant, original and beautiful. This year's categories are Mott MacDonald's Changing Climates; The Natural World; Quality of Life; Innovation in the Environment (New for 2010); The Underwater World (New for 2010); A View From the Western World (New for 2010); and CIWEM's Young Environmental Photographer of the Year (Under 16 & Under 21).

www.ciwem.org

They come in **breath-catching colours**; in **shifting shapes**; in **astounding disguises**; **tinchy tiny** or really **rather grand...** and always there is more to **dive** and to **enchant**

Dive North Sulawesi – Bunaken, Bangka & Lembeh

Kima Bajo Resort & Spa is an idyllic setting with a range of villas to suit most budgets. Eco Divers' large, comfortable, fast boats take you to over 30 dive sites with special trips to Lembeh & Bangka also in the frame!

Small dive groups, big experience, warm welcome

Kima Bajo Resort & Spa, Manado
www.kimabajo.com
diving@kimabajo.com

www.ECO-DIVERS.com



Papua New Guinea: Underwater Photo & Video Festival 2010

October 3 - 24, 2010

We are pleased to announce a special DPG Expedition to some of the best reefs of Papua New Guinea. Join DPG publisher Jason Heller in this underwater photographer or videographer paradise.

This adventure to Papua New Guinea will focus on getting you to some of the richest coral reefs in the world. If you've never been on a DPG Expedition, our trips are well organized, laid back and enjoyable, and designed to help you progress your photography and video by immersing you among other photographers in productive destinations. If requested, Jason often provides mini-workshops and is always on hand to help answer

questions about equipment or techniques.

We have set-up the logistics of the trip in a modular fashion, so you can combine the benefits of both liveaboard and resort diving. Additionally, we have scheduled the expedition to coincide with the Morobe Show, a gathering that unites a variety of different tribes and clans together into an exciting cultural event. You can participate on one leg or all three components of the expedition.

www.divephotoguide.com

www.uwpmag.com



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info@indocruises.com

Raja Ampat | Triton Bay | Banda Sea | Komodo

PAIN^TING with LIGHT



NEW

DS161 **Movie Substrobe**

For over 30 years Ikelite has been the leader of innovation of underwater strobe lighting. We are proud to introduce the first strobe that meets the challenge presented by today's sophisticated "hybrid" cameras.

The DS161 Movie Substrobe combines all of the functionality of our renowned DS160 with a powerful 500 lumen LED video light. This strobe is everything you need for stunning photos and video from the newest ViDSLr cameras.

Specifications

Battery Pack..... NiMH module
Weight..... 1.3 kg (2.75 lb)
Size..... 9.6 cm dia x 17.9 cm
3.75" dia x 7"
Depth Rating..... 90m - 300 feet

Strobe

Energy Rating..... 160 watt-sec
Recycle Time..... 1.5 sec
Angle of Coverage..... 90 degrees
100 degrees with diffuser
Guide # (ISO 100) feet..... 76 surface - 38 underwater
Guide # meters..... 24 surface - 12 underwater
Color Temperature..... 4800 degrees Kelvin
Full Power Flashes..... 225 flashes per full charge
Firing Modes..... TTL, Full, 9 fractional powers

Movie

Movie Light..... 15-watt LED
Angle of Coverage..... 45 degrees
Brightness..... 500 lumens
Color Temperature..... 5000-5500K
Burn Time..... 5 hours at max intensity
Power Settings..... Full, 9 fractional powers, SOS



Underwater Systems • 50 W. 33rd. Street • Indianapolis, IN • 46208 • 317-923-4523

www.ikelite.com

New Products

Diveross DSLR housings



Diveross is a new housing manufacturer committed to affordable, yet high quality underwater housings for almost all Japanese brands of DSLR and video cameras!

Designed and produced in Italy according to the high ECE norm, these housings are made of the best and lightest material available. All DSLR housing controls are mechanical to ensure 100% full control.

Housings and ports are made of the best industrial polycarbonate which enables superior optical control. Interchangeable ports, extension rings and zoom gears are available for most popular lenses used for underwater photography. A Nikonos V bulkhead and detachable handles are included in each housing.

www.uwpmag.com

Unique to these housings is the motorized zoom/ focus gear instead of the traditional zoom knob. Operated by 2 push buttons located on the bottom right of the housing back, users are now able to zoom without taking their hands off the handle!

For DSLR, 2 models are available, DRP 100 and DRP 200 to accommodate the various DSLR camera body sizes.

www.diveross.com
www.scubasympphony.com

Ikelite Kodak Zi8 Camcorder housing



Dive into underwater videography with this incredibly compact and simple to use combination. The Compact Video housing is high quality, built to last, and backed by Ikelite's long-standing reputation for excellence. A full line of accessories allows you to really get creative with your underwater video.

This is as easy as it gets—choose your recording quality and start shooting video. Power on/off and record start/stop controls are accessible through the housing. Easy open latch and drop in camera loading make set-up a breeze.

The camera's zoom feature is not functional through the housing. As the Zi8 is solely digital zoom, better image quality is achieved by cropping the video post production.

Size 5.5" wide x 4.25" high x 3.0" deep (including controls and lens port). 14cm x 11cm x 7.6cm.

Weight. Less than 1lb (0.45kg) above water.

Neutrally buoyant underwater.

www.ikelite.com

Fisheye filter holder



Fisheye have announced a twin filter attachment for their popular FIX LED 500/1000 DX lights.

They come with 2 colour correction filters, 4500k and 6000k and an optional red filter is available.

Only 2 filters can be mounted at the same time, just flip in the one needed.

www.scubasympphony.com

INON 28AD DC35

The INON 28AD Mount Base DC35 attaches to the Canon S90 housing to take INON conversion lenses, strobes and lighting arms.

The 28AD Mount Base DC35 is equipped with an accessory shoe to hold INON lighting equipment via INON Shoe Base to provide a compact lighting system.

www.inon.co.jp

Zen Underwater DP-100 100mm Fisheye Dome Port for Subal Type 3



So you think you need a huge dome port to take advantage of your fisheye lens? Think again!

Zen Underwater has developed a 100mm (4") dome port that produces stunning wide angle results with the Nikkor 10.5mm and the ever popular Tokina 10-17mm.

Affordable, light weight (.5kg - 1.1lb), and travel friendly, we feel that the Zen Underwater DP-100 port will revolutionize wide angle underwater photography.

Also available for Nauticam and Sea & Sea housings. Other mounts are in development.

www.reefphoto.com

Sea & Sea YS-01 strobe



The Sea & Sea YS-01 strobe is a compact DS-TTL and manual strobe with built-in target light.

With a circular beam angle up to 100° and a guide number of 20 the YS-01 is a new compact slave strobe that can be used for all underwater applications. You can switch between DS-TTL and the ten-step manual control function to enable fine adjustment of the light output level.

Power comes from four AA batteries and the recycle time is 1.9 seconds when using nickel-metal hydride batteries (2700 mAh) for stress-free continuous shooting. The YS-01 has a white LED target light (1W).

Suggested retail prices; £344.95 inc VAT.

www.sea-sea.net

Nauticam
USA

Nauticam NA-D90 Nikon D90 housing



"It's the future"

- Excellent ergonomics.
- Designed by underwater photographers.
- Patented Locking Port Release Lever.
- Patented Expanded Viewfinder.
- Port Adapters for Other Housings
- Optical Flash Connectors for Nikon CLS, Inon S-TTL, and Sea & Sea DS-TTL.
- Rubberized Ergonomic Handles.
- Proven Construction Materials.

www.nauticamusa.com

SEA&SEA

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Quality Camera Gear for all underwater photographers



Image © Russell Grant



RDX - Polycarbonate DSLR Housings



MDX & MDX PRO
Machined Aluminium DSLR Housings

www.sea-sea.net

01803 663012 info@sea-sea.com



Leak Insure's Ultra Absorbent Sachets

Leak Insure absorbent sachets have been designed to absorb leaks in underwater camera housings and other underwater equipment. The sachets contain fast acting highly absorbent granules that can absorb 400 times their own weight in water.

When placed in your underwater housing before a dive, Leak Insure Sachets can buy valuable time to get to the surface and save your camera if it starts to leak.

Not only do they absorb water from leaks but they also absorb moisture from the air in your camera housing. This stops condensation forming on the walls of the housing and more importantly on the camera, lens and housing port. Leak Insure Sachets can be re-used if they are dry after the dive.

www.leakinsure.co.uk

INON Panasonic M67 Adapter



INON INC. are developing new M67 Lens Adapter for Panasonic LUMIX series which have not received existing INON Mount Base product support. The M67 Lens Adapter is an adapter to attach INON UCL-330 or UCL-165M67 Close-up Lens on an underwater housing. The M67 Lens Adapter is equipped with a base plate to enforce reliable hold of compatible attachment lens even you use multiple lenses for ultra macro shooting. The base plate is jointed with optional Grip Base D4 with two screws to support easy yet reliable upgrading to use INON lighting system. It is easy to dismount the lens adapter to switch to non-macro shooting simply by loosening two screws on the adapter. The M67 Lens Adapter will support Panasonic LUMIX TZ10, TZ7/TZ5 and ZX3/ZX1 at this stage.

www.inon.co.jp

Nauticam
USA

Nauticam Universal optical viewfinder



"Clearly better"

- Available for the following SLR housings:
- Ikelite, Sea & Sea, Aquatica, Subal and Nexus
- 1:1 reproduction
- No color bias
- Low distortion
- Low color fringing.
- It's bright!
- Flexible eyepoint viewing
- External diopter adjustment
- Multicoated glass optics

www.nauticamusa.com

Nauticam arrives in the UK



UnderWaterVisions (www.uwvisions.com) are pleased to announce the official UK launch of the new, innovative, ergonomically masterful Nauticam housing range. Nauticam housings have been causing quite a stir around the world since their recent showcasing in the US and Asia and are attracting the attention of many discerning underwater photographers, amateurs and professionals alike.

The Nauticam product range puts ease of use and practicality at the forefront of its stylish and innovative design. Housings, port systems and accessories are now available in the UK for the Nikon D90, D300s, D300, D700 and the Canon 7D. Highlights of the range include: port adapters for

many other housing manufacturers (Sea and Sea, Subal, Aquatica, Nexus and Ikelite), acclaimed, patented port locking system, all important camera functions available without having to remove hands from the ergonomic grips and a white balance dome port, the first of its kind, which provides an easy and convenient way to calibrate white balance settings underwater.

UnderWaterVisions will also be officially launching Nauticam UK at the London International Dive Show, 27-28 March 2010, where we will be showcasing our product range. Come along and witness first hand the future of DSLR underwater photography.

www.uwvisions.com

INON MRS100 Port UIII



The INON MRS100 Port UIII is for the Canon EF100mm f/2.8L Macro IS USM with the INON X-1 / X-2 housing.

The lens is the latest “L” series lens to incorporate Canon’s new Hybrid Image Stabilization Technology to enhance users’ creativity on photography and supports users to enjoy macro photography more easily.

The INON MRS system uses magnet attraction power and enables to smoothly operate focusing by turning lens barrel without mechanical gear even using underwater.

M67 series mount compatible. UCL-330 Close-up Lens which is same optical performance as current option Close-up Lens No.3 or UCL-165M67 Close-up Lens for higher magnification, is directly attached.

www.inon.co.jp



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for Nikon D300s
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**June 28 - July 5, 2011
and July 5 - 12, 2011**

Come join IKELITE at Wakatobi Dive Resort in 2011. This is a unique opportunity to work on your photography in one of the most pristine underwater environments on Earth.

In between dives enjoy fun and informative workshops on Ikelite systems, underwater photography, and editing techniques.

The Ikelite Photo School is offered exclusively through supporting Ikelite Imaging Partners. For information on how to sign up please contact one of the Ikelite representatives listed below.

Limited spaces are available for each of the two trips so sign up today! Please click the links to e-mail or call one of the following Ikelite representatives:



*Underwater Image © 2009
Steven Miller*



Frank Owens
Phone 513.262.4906

Steve Miller
Phone 513.553.6235

www.ikelite.com



- 5** important reasons to make Reef Photo and Video your choice for underwater photo and video
- 1** **We are divers and photographers**
Everyone on our friendly staff is an underwater photographer. We use the gear that we sell, and we keep up with the latest imaging products for both underwater and topside.
- 2** **U/W photography is our only business**
We're not a dive shop and we're more than a camera store. We concentrate all of our energy on the constantly changing world of underwater imaging.
- 3** **Selection and Inventory**
Our huge inventory from over 58 manufacturers means that we probably have what you need in stock. Orders for in-stock items placed by 4pm EST ship the same day!
- 4** **Service After the Sale**
Our in-house technicians are experts in repair and service of your equipment. In addition, our custom shop can fabricate those 'outside-the-box' parts that you may require.
- 5** **Free Ground Shipping!**
Orders over \$200 qualify for **FREE** domestic Ground shipping via UPS!

www.reefphoto.com

FinePix F80EXR and WPFX-F80 housing



Fujifilm is pleased to announce the FinePix F80EXR, an updated 'F' series model with a new high resolution 12 megapixel Super CCD EXR sensor, 720p high definition video capture, exciting new features and a larger high contrast LCD screen.

Based on the same award-winning Super CCD EXR switchable sensor technology as its predecessor, the FinePix F80EXR delivers quality images in a wide variety of shooting conditions. Housed in Fujifilm's WPFX-F80 underwater housing, the FinePix F80EXR can be taken to depths of 40m to record the underwater world in breathtaking detail.

Key features at a glance:

NEW Super CCD EXR 1/2"
12 Megapixel switchable sensor,
EXR Priority Modes and EXR Auto
Modes, Fujinon 10x optical zoom
(27mm - 270mm), NEW 3.0", 230k
dots LCD Monitor, NEW HD Movie
Mode (720p), Super Intelligent Flash,

Underwater mode, Manual white
balance control, Ultra High sensitivity
(up to ISO 12800 at 3 MP Resolution),
Up to 800% Wide Dynamic Range,
Pro Focus Mode / Pro Low light
Mode, Tracking Auto Focus, Dual
Image Stabilisation (ISO and CCD
Shift), 5 Film Simulation Modes, Face
Detection with Automatic Red-eye
Removal, NEW Face Recognition
and Image search features, NEW
Auto Picture Rotation, High Speed
Continuous Shooting of 4.2 fps up to
23 frames (3 MP resolution), 230 shot
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D80



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INON X-2 for Panasonic GF1



The INON X-2 for GF1 is finely designed for micro four-thirds DSLR Panasonic LUMIX GF1 with compact corrosion-resistant cast aluminum.

The X-2 for GF1 is equipped with control dials to access to almost every control buttons/dials of the camera including pop-up/retract the built-in flash.

Optical connection with an INON strobe via fiber optics cable supports highly accurate S-TTL auto exposure control. INON INC. plans to support 45mm macro, 14- 45mm, 7 -14mm and 8mm fisheye lenses with INON unique MRS system using magnet attraction power to control lens barrel when zooming/focusing where user can operate like operating the camera on land.

www.inon.co.jp

Ultima Digital Hasselblad H2D II housing



The Ultima Hasselblad H2D housing is made from cast aluminium with CNC machining. 2 ports are available: 9.25" glass dome port with correction lenses for 28mm, 35mm, 50mm and 80mm lens and a flatport for HC 120 macro

The housing is 340mm x 1220mm x h 220mm and weighs 6400g without camera, slightly negative underwater (depending on lens and port). It is depth rated to 60m/200ft.

The price for the housing without ports - Euro 5800.00

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Sea & Sea MDX-D300s housing



The Sea & Sea MDX-D300s housing for the Nikon D300s camera is shipping now.

All the usual Sea&Sea refinements are standard such as a built-in leak detector, camera mounting tray, port lock and locking latches. The housing measures 339x185x122.6mm (WxHxD), weighs approx. 2,500g (housing only) and is depth rating to 60m.

The Sea & Sea MDX-D300s housing now features a tripod socket on the underside of the main body. Removal of the attached grips means that the optional quick-release Grip-Stay L can be used instead.

Every detail of the housing is precision machined from a solid aluminium block to achieve a high-quality texture and design. All edges

have been polished carefully for safety.

The housing is protected by a highly corrosion resistant, anodized coating. The coating protects the housing from environmental corrosion and abrasions.

It features a slanted rear command dial control on the rear for easy adjustment.

The Sea & Sea MDX-D300s housing comes standard with two bulkhead connectors: one type-N connector (2-pin wired for manual) and one 5-pin wired connector (for dedicated TTL).

Suggested retail price: £2,976.95 inc. VAT

www.sea-sea.net

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Canon 7D Housing Review

By Berkley White

Having spent months underwater with the full frame Canon 5D mark II, I was very eager to try out the crop sensor Canon 7D. I personally shifted my packed bags from Nikon to Canon last year due to the Canon 5D Mark II's ability to shoot broadcast quality video. I primarily shoot stills, but I'm inspired by the ability of these cameras to also shoot pro quality video and create more content to share. Sometimes video is just a better media to capture the moment and better conveys the feeling of being there.

The Canon 7D is quite possibly the best of both worlds for underwater photographers with an interest in video. This crop sensor camera allows use of the Tokina 10-17mm lens which is arguably the greatest wide angle lens ever made for underwater photography. The Canon 7D is not only priced well below \$2000, it also features a pop-up flash and other features that make it a great all around camera for topside use. I made it my primary camera on a recent dive trip to Wakatobi and was very impressed by its performance. Please read on for full details.

Aquatica 7D

The new Aquatica 7D for the Canon 7D digital SLR shares many of the improved features found in the Aquatica 5D Mark II and even a few refinements. Now armed with a 5 axis machine center, Aquatica was able to lighten its housing weight with thinner walls and create a more rounded



The team at Aquatica burned the midnight oil and sent me a prototype housing just in time for our group trip to Wakatobi. The housing ergonomics were impressive, but its small size and lightweight design was a big surprise.

and attractive design. Eliminating the window on top of the housing allowed a further reduction in size. At first I was a little skeptical of this growing trend in housing design, but the large LCD info display is much easier to read at distance and within a few days, I didn't miss the top display panel. Mostly, I was impressed at how small and light this housing is for air travel, when in use underwater and when lugging the camera to the dive site. In an age of increasingly difficult air travel, small and light are the new keywords and Aquatica did a great job at meeting these goals.

Camera Installation and Removal:

Easy camera installation and removal makes your first assembly stress free and is even more important when you're rushed to change camera batteries and flash media between dives. With the Aquatica 7D, camera installation is simple with only



In Photo Mode, the Canon 7D produced beautiful images at ISOs up to 400 and very usable images at ISO 800. I was also impressed by its ability to capture highlights and its very zippy auto focus.

a few housing controls requiring alignment prior to closure. The most troublesome control for me on the Aquatica was the lens release lever. However, Aquatica responded quickly to feedback and all production housings will feature a new design that makes camera removal easier for the user. The prototype design required the lens release lever to be rotated in place while the camera was installed. The new design will allow the user to fully seat the camera and then flip in the lens release. It's difficult for housing manufacturers to make changes when metal is flying on the mill, but it's nice to know Aquatica is willing to listen to users and make small changes that ultimately make our experience more enjoyable.

Ergonomics:

The Canon 7D camera body features new Liveview and On and Off lever placements and the

Aquatica 7D housing features two oversized levers that make it very easy to operate these frequently used controls even with thick cold water diving gloves. However, it's important to align both of these levers prior to sealing the rear housing plate to insure full function and smooth action.

Overall ergonomics on the housing are excellent and I really enjoy the solid grip of the Aquatica handles. All standard controls for photo are within easy reach of the right handle. On the production model housing the set button is being moved closer to the right handle, allowing an easier reach to this often used control. A dual function sliding thumb lever gives easy access to (*) and AF-ON controls and the angled menu and play buttons are a soft touch from the left side. As with all housings, I would prefer larger rotating knobs. I really like the aftermarket XIT404 knobs for focus and zoom. This was the first accessory I added to this test housing as they allow me to rotate a knob with just one finger and are an essential accessory for any diver with gloves.

Viewfinder Selection:

As with all stock housing viewfinders, the Aquatica stock finder allows you to see shooting info and compose the shot, but not easily. A serious shooter will upgrade to the much larger Aquatica Aqua View or another aftermarket viewfinder. When shooting wide angle reef photography or split images, I use the Inon 45 degree viewfinder. This angled viewfinder allows you to keep the camera pointed up without straining your neck and provides a large sharp image. For fast action photography like sharks or dolphins, I prefer a straight viewfinder like the Aquatica Aqua View or the Inon Straight viewfinder. Most of my diving in Wakatobi was



A fast frame rate helps you capture the water line at a preferred position. The 7D offers twice the frame rate of the 5D Mark II which makes a difference when a tenth of a second will hide or show your subjects.

focused on reef scenes, thus I stuck with the Inon 45 for most dives. When shooting video, I usually re-install the stock Aquatica viewfinder as its small size doesn't block the LCD when viewing your composition at arms reach.

Photo Quality and ISO Noise:

The Canon 7D is a very impressive camera. Over the course of my week at Wakatobi, I never felt like the 7D was holding me back. The 5D Mark II does provide much smoother blue water backgrounds above ISO 400, but the 7D is equally as smooth in extreme highlights like water surface or sunballs. The 5D Mark II wins in overall low noise, but the 7D can also capture beautiful contrast in bright light.

Fast Action Shooting and Split Images:

My test dives were mostly focused on reef



Shallow water sunball. f22 | 1/250 | ISO 100 | Full Strobe

scenics, thus I didn't fully utilize the Canon 7D's 8 frames per second potential, but I would have enjoyed such a frame rate for fast action work. The 5D Mark II's 3.9 frames per second feels very slow when the action heats up. I mostly noticed the 7D's fast performance when shooting splits (above / below images). When shooting splits, a fast frame rate allows you more chances at getting the water line to be in the right place. It's much like shooting craps, keep throwing the dice and you'll eventually end up with a scene that best displays both land and sea subjects.

It was great to once again shoot the Tokina 10-17mm lens for split images. At aperture settings of f11 and higher, this lens can provide reasonable focus on both underwater and land objects throughout its 180 - 100 degree zoom range. The Tokina 10-17mm zoom lens allows the flexibility to do a dive and shoot split images while waiting

for the boat to pick you up, but is only compatible with crop sensor Nikon or Canon cameras. If you're primarily a still photographer with an eye for shallow water, the crop sensor Canon 7D armed with the Tokina 10-17 delivers great resolution and flexibility and might be the only system you need for many years to come.

I was very impressed with the Canon 7D's ability to reproduce sharp sunballs free from ugly color banding. In my tests, not all sunballs were perfect, but I believe the Canon color engine and their latest imaging sensors are very forgiving for underwater photography. A few years ago, I much preferred the more punchy colors from Nikon cameras, but the Canon 5D Mark II and now the Canon 7D are less likely to produce harsh banding around the sun and are more forgiving when the sun leaks into the corner of the frame.

If you're interested in shooting sunballs with any digital SLR, it's important to use manual exposure mode and settings close to f22 and 1/250 of a second with the brightest strobes in your arsenal. I did appreciate that the Canon 7D allows for a 1/250th shutter speed when shooting strobes over the Canon 5D Mark II's 1/200th limit. A micro second of difference can actually make a difference. I also found that the Canon 7D was more forgiving in deep water sunballs. When shooting towards the sun at depths below 30 feet, most cameras tend to reproduce the sun with harsh blue bands.

Pop-up Flash and Optical TTL

The prototype Aquatica 7D housing I used was not outfitted for fiber optic TTL, but I did test this optical TTL system on a prototype Nauticam D90 housing with surprisingly accurate results. Unfortunately, the recycle time of the pop-up flash



Sunball. f18 | 1/250 | ISO 200 | Full Strobe

can be as long as 3 seconds which can feel like an eternity for an advanced shooter, but the ease of use and accuracy of optical TTL is a godsend for new or more casual underwater photographers. Thus, a pop-up flash of the Canon 7D is not only convenient for land, but also offers an inexpensive TTL option for underwater use.

Focus in Video Mode

Traditional video cameras can perform autofocus while shooting, but with DSLRs you must set a focus lock prior to hitting record. Video of macro subjects is difficult to perform without a tripod. As tripods are frowned upon at Wakatobi, on this trip I found it most productive to focus on wide angle video. The autofocus system of the Canon 7D is much improved and feels zippy in comparison to the 5D Mark II. The new LCD also seems a touch sharper, but both cameras give good focus confirmation if you use the zoom button to enlarge image detail a few clicks.



Back view of the Aquatica 7D with stock viewfinder installed.



Aquatica 7D housing with the rear plate open and the optional XIT404 Knob.

Video Quality and ISO Noise

The noise or grain produced by high ISO settings is most detrimental to video quality in DSLRs. Unlike still images shot in raw mode, video frames are highly compressed and thus more likely to emphasize blotches and banding in dark tones. In bright underwater conditions, I've found the 5D Mark II to produce clean images up to ISO 800 and the 7D to be limited to ISO 400. In dark underwater conditions such as poor vis or deep reefs, the 5D Mark II is best limited to ISO 400 and the 7D to ISO 200.

As underwater shooters, we frequently use color correction filters such as Magic Filters which cut out two full stops of light. Thus, in video mode we need higher ISO's and the Canon 7D is easily pushed to the limits. Due to the file compression, it's very critical to properly expose DSLR video. If you accidentally underexpose the 7D and have to brighten the footage in post, the noise becomes even more apparent. If you're primarily a video shooter, the Canon 5D Mark II is more forgiving, but even the Canon 7D shoots better image quality than the best prosumer video cameras on the market and even many pro level broadcast rigs.

Frame Rates: 60p / 30p / 24p

Many of our pro video customers are interested in the additional frame rates available on the Canon 7D. These new frame rates offer increased flexibility when blending DSLR footage with more traditional video cameras. Probably the most exciting is the option to shoot the 7D at 60 frames per second and then play it back at 30 frames per second for a slow motion effect. While I tried this setting, I was not presented with good fast action underwater subjects on this trip and will need to test this technique on a future dive. 60p is unfortunately only available at the lower resolution of 720p on the Canon

7D. NOTE: In 2010, Canon will release new firmware that will provide increased frame rate control on the 5D Mark II.

Choose the Canon 7D if...



I'd recommend the Canon 7D if you're primarily a still photographer or a new underwater photographer looking to add a little HD video to your library. The low light abilities are more limited, but the 7D is a true professional grade photo device with impressive HD video capture. The 7D records highlights in brilliant detail and at 8 frames per second it will keep pace with extreme underwater photo action. The pop-up flash is a handy back-up when you're packing light and minimizes the cost of automatic (TTL) underwater strobe functionality. The crop sensor compatibility with the Tokina 10-17mm lens will seal the deal for most underwater photographers, but its capabilities at

such a low price will likely be the most attractive feature.

Choose the Canon 5d Mark II if...



If you're primarily a video shooter, the low noise Canon 5D Mark II is the clear choice. If you're a pixel perfectionist photographer that always checks image results at 100% zoom and make a great effort to capture the best image quality, the 5D Mark II is the best choice. With its low noise full frame sensor, the 5D Mark II still offers the best image quality on the extremes of low light video and photo. The 3.9 frames per second is tough for high action and overall the 5D Mark II feels a little sluggish, but when image quality is the goal, these limitations are easily overcome.

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Canon 7D, Aquatica A7D and Fibre Optics

by Glenn Lawyer

Gear lust. The enemy of dive budgets everywhere. A new dSLR and housing easily cost more than an exotic dive vacation. But double the AF, double the ISO, double the frame rate, double the processors, double the rear display, and OMG video! I didn't need the dpreview.com review. Even my amateur hands could tell that Canon's 7D is a formidable beast.

A new camera means a new housing. The choice is now more than brand (Aquatica, see Bruce Yate's review in UWP 49 to know why). The new question is electric or optical strobe control. Optical cords are lighter yet more rugged, don't flood, easier to connect, and support TTL. On the other hand, "better the devil we know." Optics rely on the camera's pop-up flash, which heats the housing and drains the battery. Low batteries mean slow recycle times. Plus, TTL is for lazy photographers. Real pros prefer TTB (through the brain). Right?

It was a pro who convinced me. Mark Webster said that optics are the future, a sentiment echoed by Peter Rowlands. Optics it would be.

My fears about the recycle time weren't eased, however, when Backscatter posted their review of the Aquatica/7D combination (<http://www.backscatter.com/learn/article/article.php?ID=66>) two days after I gave them my order. Berkley White timed the Canon's pop-up recycle time at 3 seconds.

I did my own test. With the battery under 10% remaining charge, lens cap on, E-TTL took 3-4 seconds to recycle. Rats! The 7D, however, offers manual flash control. I set the flash to 1/128th power and triggered the low-speed autodrive. Three frames per second, all with flash. High-speed autodrive. Faster than the low-speed, but slower than its rated 8 frames/second. Call it 4 frames/second. In comparison, my Inons recycle in 1.6 seconds. Conclusion? TTL is slow when the battery is low, but TTB can trigger the strobes 5 times faster than they recycle. Another fear demolished.

The experiment drove home a further point. Modern cameras offer fantastic lighting control. See, for example, Don Silcock's article on the



Nikon Creative Lighting System (UWP issue 52). Fiber optics echo anything the pop-up flash does to your big guns. The 7D offers flash exposure lock (the tool Don tested so thoroughly in his article) and +/-3 stops flash exposure compensation.

One anxiety remained. Would Aquatica get the unit produced, and would Backscatter get it shipped before I left on my trip? Backscatter understood the concern, and sent me near-daily emails on the current status (Thanks, Dave!). In the mean time, I was setting the 7D's custom modes to my underwater preferences. Autofocus on the star button instead

of the shutter release, custom white balance to match my strobes, pictures saved as raw... all those small settings and changes you mean to make before you put your camera in the housing.

A badly dented dive budget had dictated a Ryan Air flight to Lanzarote. Housing in hand (backpack, actually) and smiles all around we jetted off for a week of surf and sun. Sun turned out to be in short supply. We arrived at the start of Lanzarote's one rainy week of the year. Surf there was aplenty — winds were gusting up to 70 km/hour most of the week. Only one location was divable. Charco del Palo is a sheltered



Charco del Palo. Diveable in all weather. f16.0 at 1/250 and ISO 400 shot with shutter speed priority. Tokina 10-17 at 17mm

cove lying 3/4 of the way up the east side. On the plus side, if you are only going to dive one spot all week, this would be the place. Lava flows have created many caves and crevasses to explore. Spurs of lava provide bountiful habitat for wall- and hole-loving critters, interspaced by sand beds where angel sharks and rays come to feed and rest. No matter if you have macro or wide angle, you are guaranteed the wrong lens for half the shots you want to take.

It is difficult to review fiber optics and TTL. Neither are new; both are wonderful. They are, however, new to me. TTL allowed me to get images in half the time that TTB would have taken, or with half the effort. For many subjects, like the light-shy shrimp hiding in the grottos, or the skittish stingrays, TTL made the difference. And the fiber optics? I hardly thought about them. They were just there, and they just worked. No fidgety set-up, no wondering if a grain of sand or loose hair was going to flood a bulkhead or ruin a strobe, no remembering that Nikonos connections need to be

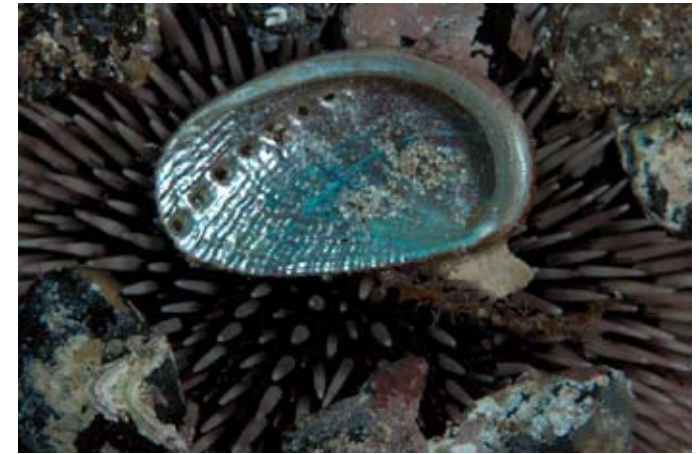


Canary stingrays don't like being flashed. f11.3 at 1/60 and ISO 100 shot with manual exposure. Canon 100mm macro

held upside down when disconnecting...

Some people complain that TTL doesn't give them proper exposure control. No longer true. If flash exposure compensation isn't enough, flash exposure lock (FEL) allows spot-metering TTL exposure. FEL solves another downside to TTL. TTL introduces shutter delay. With FEL, the pre-flash and metering happen when you press the FEL button. Shutter release is instant. I used it on some white sand gobies. I reasoned that a highly reflective white fish sitting on white sand could confuse the meter. Also, the fish continuously raises and lowers its dorsal fin. I needed instant shutter response to time the shot.

The one downside to FEL with the Aquatica housing is that the FEL button is about the only control which you cannot reach with your hands on the handles. Otherwise the housing is a dream. I can echo the enthusiasm in the two reviews referenced earlier, and am looking forward to a long and happy



FEL allowed me to spot-meter the abalone shell which the urchin was using to hide itself with f16.0 at 1/180 and ISO 160 shot with manual exposure Canon 100mm macro



f19.0 at 1/180 and ISO 100 shot with manual exposure, Canon 100mm macro



f19.0 at 1/125 and ISO 160 shot with manual exposure, Canon 100mm macro



(Left to right) Laurent , Peter and Simon, from Calipso Diving in Costa Teguise, Lanzarote

relationship with my new rig. This also means that a well-loved 20D + housing are now for sale (see the accompanying ad or the classifieds). I'll include two free electric sync cords if you buy the whole system. Don't worry, I won't be needing them.

All diving was with Calipso Diving in Costa Teguise. Peter, Simon, and Laurent arranged things as best as possible to allow me to dive independently. In fact, three of the six dives I managed during my stay were private dives. These aren't exactly moneymakers for the dive center. It helped that I had called ahead to discuss my requirements with them, and that it was low season.

Two people need to be acknowledged. First is Ann-Charlotte, my glorious, loving wife. She doesn't understand why diving means so much to me, but she accepts and

supports it. Thank you, sweetheart! Second, I wouldn't have received the housing in time without assistance from my mom, who is also glorious, loving, and supporting. What can I say? I'm a lucky guy.

Glenn Lawyer



For Sale



Canon EOS20D camera and Aquatica digital housing with 8" dome and macro port

For sale is the housing, 8" dome port w/shade, macro port, and camera. All ports come with neoprene covers. Both ports have some small scratches on the outside of the acrylic. I will include a free sync cord with each port.

The housing has never flooded and comes with its instruction manual and I will also provide tips & setup advice (if wanted).

Prices are as follows:

Full set (includes camera): 1750EUR

Full set (without camera): 1650EUR

Housing: 950EUR

8" Dome port w/shade: 400 EUR

Macro port: 350 EUR

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Glenn Lawyer

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Olympus E-620 SLR, PT-E06 housing and UFL-2 strobe

by Rob Spray

Hats off to Olympus, for a relatively small corporation they stream out interesting things at an impressive rate. The E-620 pitches up, the offspring of the tiny E-450 and the muscular E-3, retaining almost all the features of its larger parent while barely bigger than the smallest SLR available. It creates a new niche – a very compact enthusiast SLR and the worlds smallest with in-body image stabilisation

The depth of configuration is striking. There's a wealth of unexpected extras like battery warning levels, separate exposure offsets on all modes and even per point fine tuning of focus. Some review sites have taken exception to this, whining that it's just too much, but you never need enter the menu system if you don't want to. Olympus SLRs have a 'Super Control Panel' which gives display and control over a set of the most used parameters. It's a very natural way to set the camera, although you have to lift your eyes from the viewfinder.

The tilting 2.7" screen is one of the few I've used which can actually hold its own in bright sunlight. Another useful LCD option is to turn inward for protection. If you feel nostalgic looking at the blank back after doing this, why not try playing 'film camera'. See how long you can stand it!

The best 'surprise and delight' feature shows up after dusk; the control button cluster lights up. It's surprising how much this helps, whether to use the super control panel via the cursor pad or go straight to ISO, metering, AF or white balance you



can simply see the buttons you need. The glow also highlights review, live view and IS controls. What a great idea!

Wide Boy

Along with the E-620 a new lens arrived, a 9-18mm wideangle. I've used the fantastic 7-14mm lots, but it isn't light, cheap or easy to hide. For all the difference in cost, it's the contrast in size which hits home most. Little larger than the kit lenses - themselves very small - it hardly extends either. Unlike other 'budget' range lenses it has a metal mount and unlike the 7-14mm it can use filters, 72mm. Olympus should give it nicer control rings to show that it costs more than its range mates. Its crisp and distortion free at all apertures and fits nicely behind the Olympus dome. The dome is an



investment but I've found it very flexible, mine has been used with 5 different cameras and 6 different lenses. Time after time I've been very glad that it was glass... Coming in from from a shore dive in heavy surf I was knocked down repeatedly. Although the camera and I were rolled in the gravel I was able to hose the sand and stones off the housing without any problem. Try that with an

acrylic port, especially one which is secured with plastic clips! The PT housings are tougher than they look, diving alongside a pro in Borneo his big case looked the part until it started shipping water. The generic ‘pro’ case had cracked on the flat faces between buttons and the port was riddled with stress fractures. On PT cases curved faces avoid the localised stresses that cause that kind of damage and the port fixing is a heavy gauge metal thread. My buddy was also stunned that I could happily pick up the whole rig by the port... big isn’t better :-)

What do points make?

Before the E-3 arrived, Olympus SLRs had just three focus points (nothing I ever found a problem, I use the centre). The E-620 has 7 rather than 11 the E-3 has. Five are fully biaxial - 4 sensors at each crosspoint. Much to my surprise, I soon found a use for them; shooting fish with a macro lens, the wider net of points gave more warning of subjects in its wafer thin depth of field and boosted lens ballistics (nerdspeak translation – it was faster). With static macro I prefer to choose the focus point myself.

If you read reviews you’ll see that the E-620 is rated ahead or on par with its competitors in all respects bar one – faint praise if you compare the build quality and feature set which

are markedly better. There’s only one aspect where it trails, lack of video recording which is creeping into SLRs– although rarely full rate and clunky to say the least. It has a lot in common with the reservations about liveview and it seems that the new Micro Four Thirds cameras are the ones which have done it right from the outset. It may be that Olympus is trying not to muddy the waters with a half baked option, but given their lead in liveview, the omission is odd. Olympus introduced SLR liveview back in 2007; their pioneer E-330 used an extra sensor which worked better than the system on this and pretty much every new SLR now. SLRs now lock the mirror up to expose the sensor and relay its view to the screen. While in liveview all the camera can do is focus like a compact, only when the mirror drops can it use its fast AF. The E-620 can use a hybrid of both methods to refine liveview focus, but isn’t as fast as direct view and phase detection alone. It certainly wouldn’t hurt to have the contrast detect algorithms from the cute mirrorless Micro Four Thirds cameras.

PT-E06 - case for the defence

In the flesh this new case is an impressive upgrade. Where the case for the E-330 was over butch with a few design eccentricities and the



© Karin Brussaard
www.divephotoguide.com

minimalist model for the E-400 series perhaps looked a little effete – now the PT-E06 looks just right. While handling it I noticed myriad design tweaks which showed it had been thoroughly re-thought.

The highlights are:

- Black front section, two fibre ports and one wired strobe connector
- Labelled buttons - no more peering at transparent, moulded letters
- Outer ‘O’ ring now captive piston type - door doesn’t have to be tight to seal
- Inner ‘O’ ring is now captive and easy to inspect.
- Single large locking wheel - instead of fingernail breaking catches
- Zoom control gear now has smooth teeth – a huge improvement

I had precisely no trouble with my PT-E03 (for the E-400/410, and 420 when modded), but there were



Nerd detail! The inner O ring is a captive gasket, the outer is a piston type

people who blamed the bump over the flash for allowing the case to flex – it seemed to me that the zig-zag path the ‘O’ ring followed was vulnerable to fitting error. The PT-E06 has buttresses each side of the flash so the ‘O’ rings follow a smooth path. The whole back door looks to have been reworked by the people responsible for the little Fujis – models of tough common sense. The 40m rating looks very conservative. The opaque front half of the case is very black ops cool but rather than macho the black is to stop scatter when using the pop up flash to trigger strobes.

Extra toughness has made the PT-E06 thicker than the PT-E03, a shame as the older housing was comfortably small enough to use single handed – very useful if you want to dismount a strobe to change the mood of your lighting.

The makeover extends to the buttons; they've been spread out and enlarged slightly. To do that the 'OK' has moved out from the centre of the cursor pad which is less intuitive, but as they're better spaced out the furthest ones don't need to be so tall.

Olympus UFL-2 Strobe

In a funny way, the camera wasn't the biggest news in the E-620 test bundle. The unassuming, though admittedly cobby, UFL-2 has been something I and a lot of other nerds have been waiting for. It's nothing more or less than the first completely dedicated digital flash for diving. You can house every land flash under the sun but I don't think anyone else has done the job this way - properly. The very idea of a zoom headed flash is something I haven't even heard discussed. The UFL-2 picks up its rich feature set for free because it is, actually, Olympus' FL-36 mid range flash made watertight. The style suggests Sea and Sea made the case, no shame in that! I guess the zoom head dictated the chunky outline but despite the plump body, they didn't



© Karin Brussaard
www.divephotoguide.com

find space for more batteries. It takes two AA's but it should have been trivial to fit four in.

Unusually for a strobe the UFL-2 has a display, and lots of controls, lifted from the FL-36. Apart from Power, there's Mode, Zoom and Backlight – for the display – as well as a dial. It needs the display because it can be configured quite extensively. The mode button is the key to setting the strobe, cycling through its modes; Manual, Auto, TTL Auto, FP TTL Auto, FP Manual, Slave Auto



The UFL-2 is an incredibly light and compact TTL underwater flash that is waterproof to 60 metres.

and Slave Manual. Some are only available with a cable connection - as there's a dialogue through the hotshoe. Not as complicated as it sounds, but in reality you choose a mode and use it. It's just that unlike a normal strobe, there are more than two choices.

Zoom zoom

Strobes traditionally major on their wide angle coverage, to suit ultra wide lenses (and make aim easy) so a zoom head is a novelty. The head follows the lens and provides matched



Kate meets a lobster and the UFL-2 lights a wide angle scene

coverage from 12mm to 42mm (8mm with diffuser). Although the UFL-2 is comparatively small, its 'zoomed in' guide number of 36m sounds impressive. Power falls as the beam spreads and drops to 20 at its widest. The coverage is tighter and more rectangular than most strobes. The narrow beam is more efficient but harder to aim, though even '42mm' is much wider than the macro set up I normally use (70mm 4/3 format, 140mm film equivalent).



Remotely interested

The strobe has the Olympus 5 pin bulkhead connector, a simple, hardy set up, which isn't mentioned anywhere. Possibly moot anyway as the UFL-2 can also be controlled optically. Olympus SLRs have offered full wireless for a while and both UFL-2 and PT-E06 have fibre ports. The camera uses flash bursts to signal its intentions and once set to RC mode the system works as though it's wired, except that strobe control is brought onto the back of the camera. It's pretty cool; from the camera you can select any of the modes and control 3 channels of apparently unlimited flashes. It opens up the option of some very complicated multi-strobe lighting. In RC mode the UFL-2 can trigger third party strobes, but you can't use the second port on the PT-E06 for this - the control pulses would false trigger.

The wireless system even adds control options over the equivalent wired, housed FL-36 and there's no difference in exposure or flash performance at all. The optical RC flash mode is extremely



straightforward. The fibre connections are much smaller than wired so it's another way to save bulk, weight, vulnerability and complication. The PT-E06 and UFL-2 work very well together, nicely balanced, easy to handle and well integrated. Two UFL-2s would be so easy to use that they would be the obvious choice for a simple, light travel set up. While the UFL-2 is a great macro strobe it needs back up to light big scenes - if a strobe version of the FL-50R becomes available it would answer that need completely. As the wireless system brings all the control to the back of the camera it would be very easy to work with an asymmetric pair. For



wide angle the wireless mode offers potentially mind numbing possibilities, but actually simplifies the addition and use of extra strobes. Housing the FL-36 properly has made it much more pleasant to use - a land flash with the form factor of a strobe. Although the wired connector could be positioned better and it's not cheap.

The deep buttresses either side of the flash bump do make access to the flash connector and the mode dial a little cramped. Stuff which sticks out is vulnerable and on balance it's much better to have a housing which still works. Not all boats have spacious camera tables and when cameras mix with



dive gear it's rarely the dive gear which suffers. On top there's a cold shoe for focus lights.

Photo finish

During macro and wide angle sessions off North Norfolk I had a great time; first capturing tiny wildlife and then taking in the scenery. I felt the image stabilisation of the E-620 helped but IS shouldn't work close up so it was probably just a placebo. The IS is driven by the same technology as the dust buster which keeps the sensor clean. Although almost every SLR has one now it's the only system which has worked in independent

testing. Dust isn't a big deal for Olympus shooters, but there's no point tempting fate. The E-620 made a little dip off the beach one of the most rewarding dives of the year as my friend Kate and I found the chalk reefs of Sheringham in fine form. Even the lobsters were cooperative! Up North in the Farnes the seals enjoyed us as much as I enjoyed shooting them. Noise reduction and noise filtering can be adjusted on all Olympus SLRs so you can play with the balance of noise/grain and the softening filtering causes. The default is balanced towards detail and a filmic grain, not a super clean, cold digital look.

Conclusion

From a standing start in 2005 the PT-E series has made continual strides and Olympus is still the only manufacturer to have a complete underwater DSLR system. The relative 'mass' production of their housings allows a depth of design absent from more generic alternatives – producing some of the smallest on the market.

The E-620 is small, feature packed and gives nothing away to its rivals photographically. The PT-E06 is tough, well thought out and a pleasure to use with numerous improvements over previous PTs. The UFL-2 isn't the most powerful strobe but it has superb finesse, you can light subjects actually

resting on the burner!

If you've read this far you won't be surprised that I liked this rig. It's a build improvement over my current set up; while not as comfortable it's a better working tool. I'd be happier handing this package into the care of a 'helper' than my previous toys!

Rob Spray

www.1townhouses.co.uk



Memory Kick review

By Alex Mustard

It is a truism of technology that products continue to appear, which at first glance seem to do a job that doesn't need doing, yet once you try them you scratch your head and wonder how you ever coped without them. The MemoryKick media centre fell into this category for me.

The MemoryKick is a combined (deep-breath-in) portable hard drive/photo-video backup/photo viewer/card reader/video player/MP3 player. This being Underwater Photography Magazine, my interest was in its primary function for downloading, reviewing and storing images, which is something I can already do with my laptop, card reader and external hard drive. So I approached the MemoryKick with some scepticism as it aims to replace the last two of these, making its case by conveniently combining the tech into one package, providing a screen for reviewing images and, not least, for the speed at which it operates.

I collected two MemoryKick units from Cathy Church's underwater photography shop in Grand Cayman, with a plan to put them through their paces under intensive shooting conditions during the two photo

workshops I was running on the island. I used one unit and lent the other around the guys on the workshops. I also hung on to one of the units for a continuation trip to photograph manatees, as the long hours in the water with Florida's finest usually mean my SanDisks are fit to burst. I wanted to see how the unit fitted in with a typical underwater shoot and evaluate it against what most of us are currently using (laptop, card reader & ext hdd).

First, the MemoryKick is no luggage burden. It is just 4.9" x 3" x .9" (125mm x 75mm x 24mm) and weighs just 9.87 oz (280g). The hand sized unit takes up no more space than the combination of external hard drive and card reader you already have (although you will have to pack a small charger).

Cost depends on the amount of storage, B&H lists them at starting at \$290 USD for a 120GB one and going up to \$430 for a 500GB (Cathy's prices were cheaper!). The same shop lists a simple portable 500GB hard drive for \$100-150 and card reader for \$10-30, so you are looking at spending another \$150-250 for the speed and extra features.



The MemoryKick media centre. The screen is large, detailed and bright and the controls are straightforward. Note that the underwater image in this picture is super-imposed.

The download speed is astounding. A completely full 8GB CF card takes more than 20 minutes to download into my laptop via my USB-2 card reader. The same card on the MemoryKick took less than 3 minutes and then just another further 3 minutes to copy onto my laptop and read into Lightroom. Typical dives downloaded often in less than 1 minute. The manufacturer claims it is the world's fastest, but I did not have any other brand to verify this

claim. But there is no doubt that speed is increasing desirable not only as megapixels and bit depth increase, but also with cameras now capable of shooting hi-def video we have even more ways to fill our cards.

The units are very intuitive to use. I tried them on the first day without even reading the instructions. Downloading and then copying the images across to my laptop was completely logical. The unit is compatible with all the standard



The MemoryKick is just slightly bigger than most portable hard drives. This image (which is unadjusted) shows how clearly the screen can be seen, even outside.

memory cards, CF, SD, SDHC, XD etc, and naturally can read RAW files. Free user downloadable updates allow you to read the latest camera RAW files. The unit can download up to 4 cards or devices simultaneously although there is only one slot for each type of card.

The 3.5" (90mm) screen is



The unit is compatible with all the standard memory cards, CF, SD, SDHC, XD and many more.

larger than any existing SLR and bright enough to be visible outside (see the image from Crystal River). It is possible to zoom in on images, although I found that the large screen already gave me a good idea of sharpness, and to display EXIF and histograms. One criticism I have is that I found the unit was quite slow to browse through large folders of RAW files. Possibly this is because of the large size of the 14-bit RAW files from my D700?

The units handled everything we threw at them, including some intensive photography days when I took over 1000 images. It was a significant benefit to be able to download bulging cards into both



16:9 images or video footage can be viewed by rotating the Memory Kick using 'G - Sensor Automatic Image Orientation'.

the MemoryKick and laptop without wasting any significant time in an otherwise busy day. I had one small problem with the units I tested. In mine one of the pins in the CF card reader came loose, which obviously stopped me downloading other cards. The other unit was fine, I concluded this was a one-off.

I see the MemoryKick fitting into the modus operandi for most underwater photographers in two ways. First, on shorter day or weekend trips closer to home, I would take the MemoryKick and leave my laptop behind. Not only lightening the load, but also lessening the valuables left in the car. On a weekend trip I would be happy checking my images on the

3.5" screen. Second, and probably the main way I would use it, is to provide a much faster way of downloading images into the laptop on a longer trip. I would still favour the laptop for browsing images, not least because it gives options for processing and sharing them through the web. The MemoryKick would be downloader and backup. Actually, I can see myself travelling with a MemoryKick and a external hard drive! Two copies good, three copies better.

I started out with a pretty unconvinced mindset towards the MemoryKick, since I already have a card reader, laptop and external hard drive that combine to do its job. But now I have given it back, I feel like I have stepped back in time. Downloading now seems to take an age. I am planning to buy my own one in the next few days and I know a number of the guys who tried it on the Cayman workshop have already done so.

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www.memorykickusa.com

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Lightzone Software

By Peter Rowlands

To my mind good software should be intuitive and logical so that it can be opened and used without the need to refer to meaty instruction books. As a result the first 30 minutes for me are crucial and Lightzone had me hooked from the start.

Lightzone is a standalone image manipulation programme rather than a Photoshop plug in and versions are available for both Mac and PC (Windows XP or Vista). It has a look like Apple's Aperture which strangely I've not got on with but Lightzone is somehow more obvious.

Open up the software and by default there is a list of your files on the left. Select the folder with the images you want to view and thumbnails then appear at the bottom of the page with the first image selected and shown in the large centre frame. The metadata is shown top right which is very useful when you need to check camera settings.

Click the "Edit" icon in the bottom right of the main image (or simply double click the thumbnail image) and you are taken to the next layout which is where the fun begins. The selected image is centre screen and on the left of your screen are a wide variety of "Styles". Run your cursor over each style name and the modified image is shown top left and if you then click again, the main image will be converted. It is a very fast and effective way of seeing what the results will be.

On the right hand side are the icons for



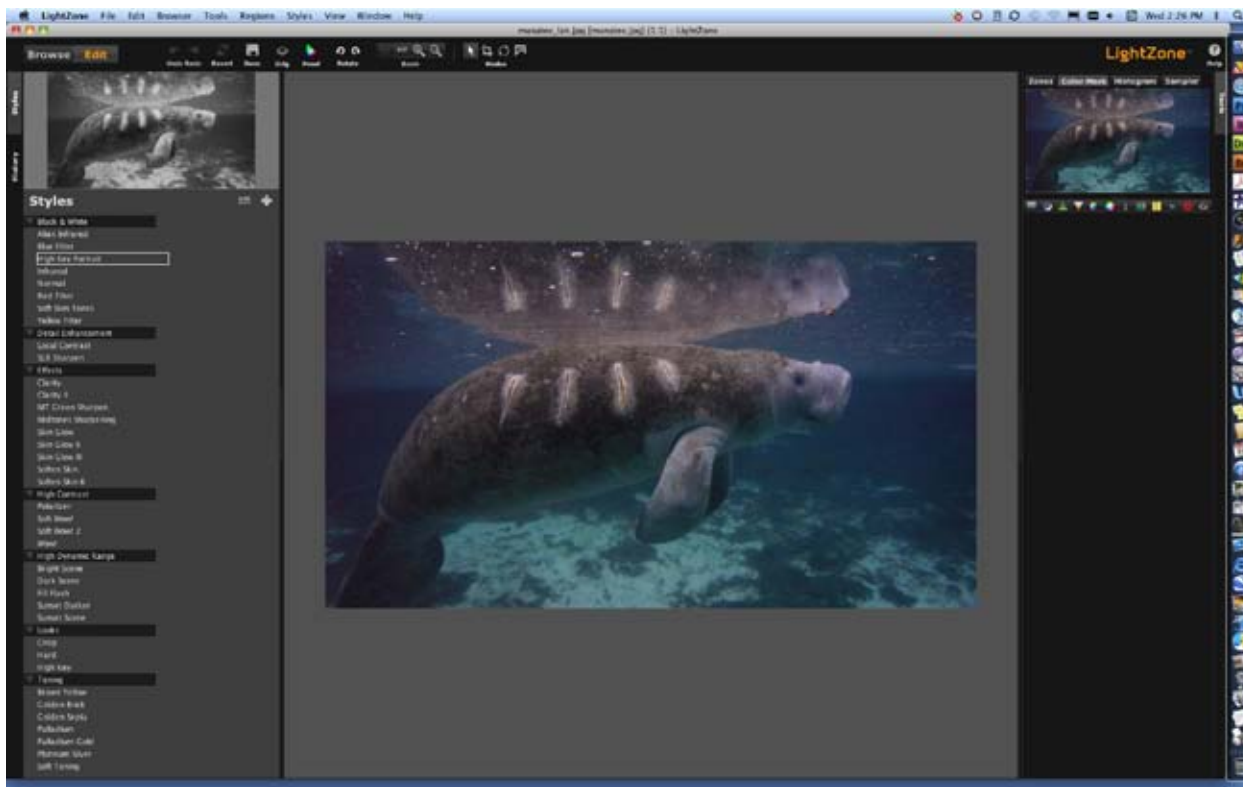
Open up the software and by default there is a list of your files on the left. Select the folder with the images you want to view and thumbnails then appear at the bottom of the page with the first image selected and shown in the large centre frame. The metadata is shown top right which is very useful when you need to check what camera settings were used.

Relight, Gaussian Blur, Hue/Saturation, Colour balance, White balance, Black & White, Noise reduction, Clone, Spot and Red Eye all of which are self explanatory.

The most useful for me was 'Relight' which brightened up the image (I tend to shoot slightly underexposed) and gave it more sparkle. Now I know that this can also be done fiddling about

with brightness and contrast but having the ability to have it done at the click of a button really suits me. If, however, you are not happy with the result, the popup window gives you many more manual controls than just brightness and contrast so you can quickly achieve the image/effect you want.

If you then return to the 'Browse' mode you will see that another image has appeared next to

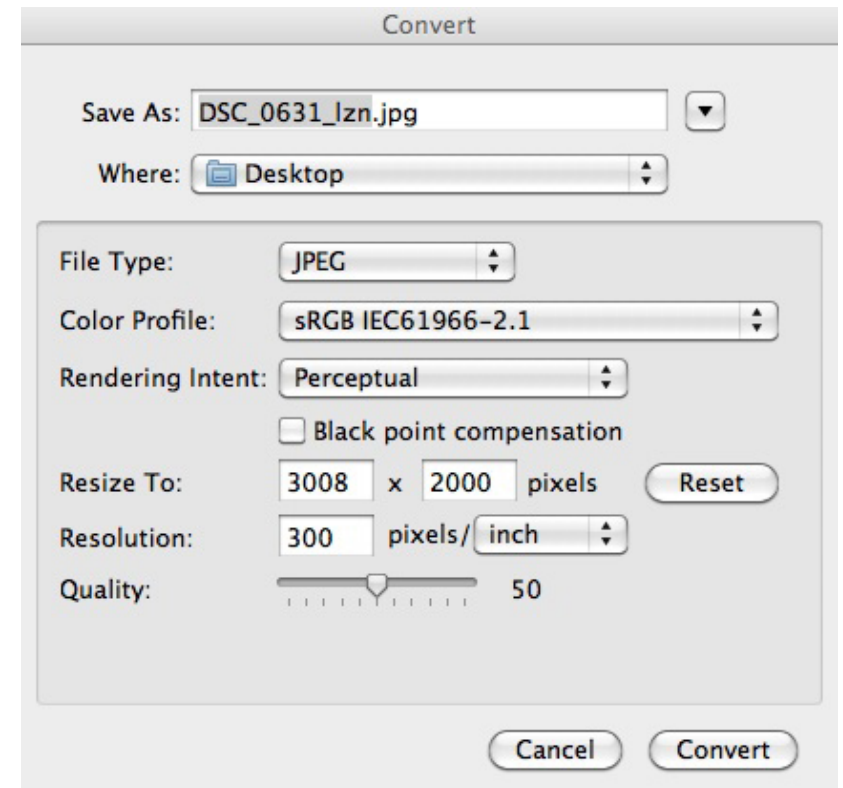


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the thumbnail you selected. This has the suffix _LZN after the filename to indicate that it has been edited. In the meantime your original image has not been altered.

Another nice feature for me was the ‘Convert’ facility (top right). Judging by the variety of sizes and

resolutions of images which are sent to me I would hazard a guess that a large number of people are not fully conversant with the relationship between image size and resolution. I blame Photoshop for this as I find the ‘Image size’ function to complicated and I much prefer the Lightzone



Another nice feature for me was the ‘Convert’ facility

method.

I am still very much a novice with a new toy but for the capabilities I have found so far (and I am sure there will be many more pleasant surprises along the way) I think the \$99.95 (approx £65) is extremely good value.

www.lightcrafts.com

Peter Rowlands
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Photographing the Great White Shark

By Don Silcock

Very few creatures are as firmly embedded into the public's psyche as *Carcharodon carcharias* - the Great White Shark. It's reputation as a ruthless killing machine, prowling the depths waiting to pounce on unsuspecting surfers, swimmers and in fact anybody foolish enough to enter the water, is hard-wired into most people's mind.

The movie *Jaws* was largely responsible for the initial perception, but the sensationalist treatment of shark attacks by the news media have firmly entrenched it.

The reality is rather different as a quick look at the available statistics show – just 244 of the 1563 unprovoked shark attacks recorded on humans in the last 100 years are credited to the Great White Shark, according to the International Shark Attack File (<http://www.flmnh.ufl.edu/fish/Sharks/ISAF/ISAF.htm>)

Great Whites are indeed the apex predator - to use that rather clichéd phrase - but to appreciate what that really means and understand the extent to which they have mastered their environment, you have to see

them in it.

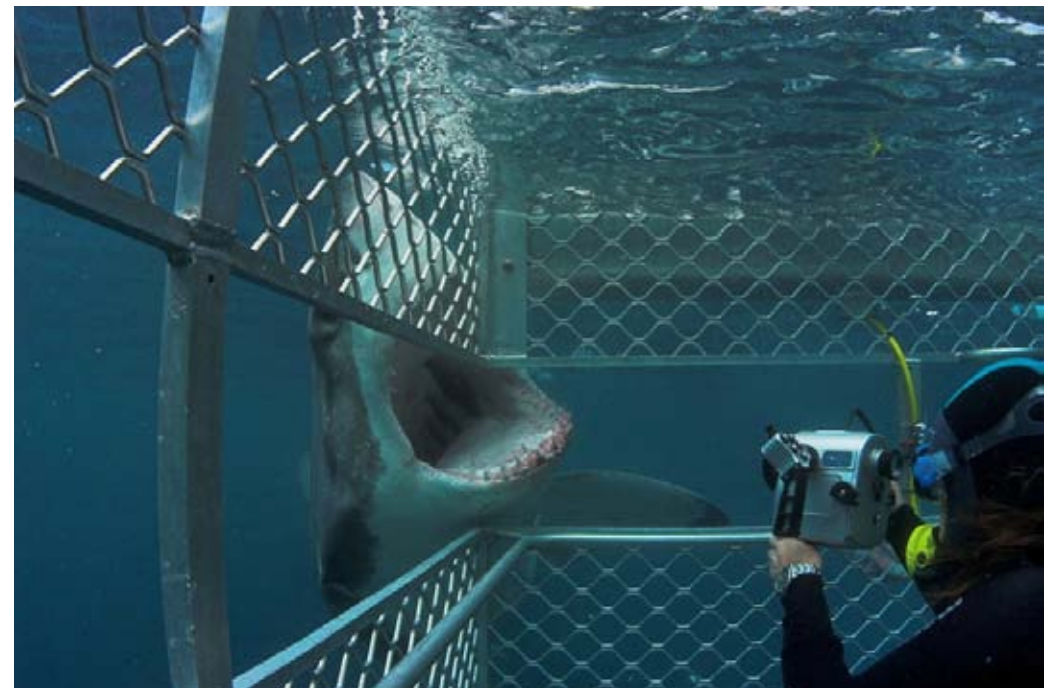
To photograph these magnificent creatures is, in my opinion, a “must do” experience for an underwater photographer.

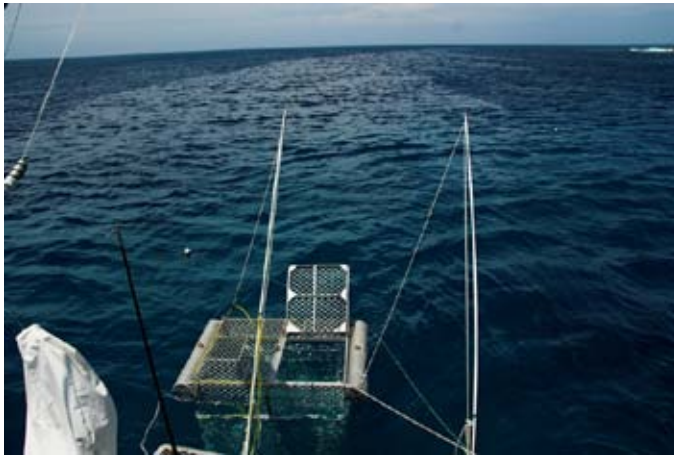
Great White “Hot Spots”

Great Whites inhabit all the temperate marine waters of the world but given their relatively small & declining global population, and the sheer size of the ocean, the chances of actually seeing one is extremely small. Add to that the fact that if you did see one in the open, you would probably be more concerned with survival than photography, the probability of obtaining a great image diminishes to almost zero...

(Top) D100, Subal housing, 15mm Sigma, shutter priority -1/180 @ f9.5; The apex predator

(Right) D100, Subal housing, 15mm Sigma, shutter priority -1/125 @ f9.5; Great White in a bad mood!





Which means that to photograph a Great White, you have to go them and there are currently three main locations where it is possible (albeit from the safety of a cage) to see Great Whites in the natural environment – the Neptune Islands off South Australia, Dyer Island southeast of Capetown in South Africa and the Mexican island of Guadalupe Island off from Baja California.

All three locations support a large resident colony of seals, the high fat food of choice for Great Whites... They also support a number of companies who offer expeditions to cage dive with the sharks that gather there - a methodology first developed by the Australian husband & wife team of Ron & Valerie Taylor back in the late 1960's.

My experience is limited to South Australia, but I have done several trips over the last 13 years and enjoyed every one – even the ones where we saw no sharks, because the whole deal is such a unique experience!

The Technique

In South Australia a combination of tricks



are used to bring the sharks into the boat and the first one involves tuna oil, which is used to entice the sharks into the general area. The tuna oil is contained in a plastic bag, one of which is suspended over each side of the boat so that it just floats on the surface and the bags are pinpricked so that the tuna oil leaks out and forms a slick on the surface.

When viewed at sunset, it's very clear why the oil works so well – the slick literally stretches for as far as the eye can see and if there are Great Whites in the area their ultra sensitive olfactory sense will pick it up and their innate predatory instinct draws them to the source.

The next trick is liberal doses of a special burley brew thrown into the water at the back of the boat. This gruesome concoction is a mixture of minced tuna gills & lips and tuna blood, which looks, smells and tastes (yes, tastes...) absolutely awful!

The final parts of the trilogy are large chunks of tuna suspended on floats about 10m behind the boat and when one these baits is taken everybody knows the guest of honor has arrived. It's also the



(Left) D200, 18-200 Nikon, shutter priority - 1/320 @ f8; Tuna oil “power slick”

(Centre) D100, Subal housing, 12-24 Nikon, shutter priority - 1/125 @ f4.8; Great White Shark lunch...

(Right) D100, Subal housing, 15mm Sigma, shutter priority - 1/125 @ f4; Great White in full attack mode...

signal to get geared up and in the cage, ready and waiting at the back of the boat, having been lowered in the water soon after arrival.

In The Cage

The shark cage consists of two large sealed stainless steel tubes to provide flotation and then a box, large enough for four large people & constructed of the aluminum mesh normally used for house window screens. It has two viewing areas going right round the cage - one is at head height and the other at knee height. These viewing areas are about 10” wide, which is enough to poke your camera through, but only big enough for a shark to

get it's snout in but not its lower jaw – so it can't bite, which I considered a fundamentally good design concept!

To use the cage, each of the occupants must be heavily weighed down so that you can stand on the cage floor and either special weight harnesses or multiple weight belts are used. The harnesses tend to concentrate the effect of the heavy weights on your shoulders and quickly become uncomfortable, so I always opt for the multiple weight belts.

If there is any real danger associated with cage diving, it's the excessive weighting that creates it and the entry & exit from the cage is in reality as dangerous as it gets. Two things could go wrong; either you slip & fall into the water, not a good idea as all the weight you are carrying would send you to the bottom before a shark could get you.... Or a shark breaches onto the cage as you are entering or exiting – neither of which has ever happened by the way...

Scuba is not used, instead there is a hookah system from the boat which supplies four regulators with long hoses in the cage.

Entering the cage for the first time is an experience you will never forget and is mixture of sensations consisting of fear & excitement, queasiness from the smell of the burley - combined with its taste once you are in the water! Then the cold water starts to chill you as you struggle to get in position at the viewing window, remembering the instructions to keep your head & arms inside the cage, while realizing that the choppy seas are the reason you are bouncing about so much.

But all these feelings are disappear in the first burst of adrenalin when first shark appears at the viewing window!

Simply stated, being in the water (albeit from



D100, Subal housing, 15mm Sigma, shutter priority - 1/180 @ f9.5; Got those arms in the cage?

the safety of the cage) with a Great White shark is one of the most exciting big animal adventures you can possibly have. It's only when you see them in their own environment that you can fully appreciate how much they have mastered it and truly become the "apex predator".

Their two-tone coloration makes them very difficult to see when viewed either from above or below, but when you do see them it's clear to see the sheer brute force they possess. They seem to move through the water as if self-propelled, almost like a submarine, but when alarmed or excited a flick of their powerful tail thrusts the large streamlined body forward at quite amazing speed.

The Sharks

It's a commonly held belief that all that is required to turn a shark into a frenzied & pitiless killing machine is some blood in the water. Combine this with the fact that sharks have a highly



D200, 18-200 Nikon, shutter priority - 1/125 @ f14; Cage flotation chambers showing Great White Shark wear & tear!

developed sense of smell, and the perception is created that a minor cut underwater is an instant death warrant!

However, when you see the great white in the presence of blood, burley and large chunks of "free" tuna, it makes you realize that they are really the apex hunter rather than a crazed killing machine! The larger & older sharks are actually very cautious in their approach and will cruise past the tuna multiple times before they will actually go for it. It soon becomes obvious that they are looking for potential danger and whether they go for the bait seems to be a function of how hungry they are.

White sharks are believed to go for days, possibly weeks, without feeding – mainly because when they do feed, it's on high fat creatures such as seals that provide a tremendous source of sustaining energy. Therefore, whilst their innate predatory senses bring them towards the source of the tuna oil slick, whether they actually take the tuna baits seems to be a function of when they last fed.

If it was long enough ago the shark's hunger overcomes its caution and it will take the bait. If not, the shark's appear to cruise the area till they have assessed the situation and then continue their journey – where to, nobody really knows...

The younger sharks are definitely more aggressive & willing to take a risk and are also the ones that can provide the biggest surprise as they often approach the cage from below, where you are least expecting them to come from and the main reason it is drilled into you that you must keep your arms inside the cage if you want to go home with them!

Getting the Images

So there you are in the cage and finally face to face with the main attraction, surely it's now just a case of point & shoot and the next stop is the front cover of National Geographic - right?

Well, as I came to appreciate, it's not that easy and there were a combination of psychological, physical and technical challenges to overcome.

Technically it's a combination of dealing with a fairly fast moving subject in changing ambient light as the shark maneuvers around the cage. Even when the Great Whites are moving slowly, their pace through the



F100, Subal housing, 15mm Sigma, shutter priority, - 1/250 & f5.6; Great White in full attack mode...

water is still quite rapid and so a high shutter speed is required to freeze that motion and get sharp results.

It's difficult to use a strobe in the cage because you need to be able to poke the housing through the viewing area when the moment is right, but quickly & easily retract it should one of the sharks get too close... With all the blood & burley in the water, to use a strobe effectively it would really need to be extended well away from the housing to avoid a lot of backscatter, which would prove to

be very cumbersome and difficult to maneuver.

What I found worked the best was to set my camera for shutter priority metering mode, with a shutter speed of 1/250 of a second, and allow the camera to set the aperture automatically. A second or third generation DSLR, such as a Nikon D300 or equivalent, with a 5 FPS frame rate or a film SLR with a built in motor drive like the F100 is the best choice of camera – for reasons I will explain.



D100, 12-24 Nikon, shutter priority - 1/125 @ f11; Great White Shark lunch, maybe...

The lenses I have used most were the Nikon 10.5mm fish-eye on a DSLR and the Sigma 15mm fish-eye on the F100, because when the sharks come in they come close and they are big - so you need a really wide lens to get all of their body in the frame.

The average great white you will see there in South Australia is 3-4m in length, and the biggest I have personally seen was a 5m monster – so the fish-eye really is needed!

Composition

I was really disappointed with the film images from my first trip to South Australia as I had repeatedly cut-off half the shark's body out of the overall image. But it was not until I did a trip with a DSLR, and was able to review my images while in the cage, that I realized what was wrong.

Underwater, the eyes of a Great White appear to be a black & featureless void which draws you to it automatically, and I realized that I was aiming the camera straight at it and cutting off the body of the shark every time. It's almost as if the shark is hypnotizing you, so magnetic is the pull of the eye and I had to force myself to concentrate on getting the complete shark in the frame whenever possible.

Physically the challenge is to somehow wedge yourself in position so that you can hold your camera properly whilst keeping your arms & elbows inside the cage. Easier said than done when the cage is bobbing about in the chop, but it's extremely difficult to compose and get a good shot unless you can master this. I found the most "comfortable" position was in the corner of the cage with my elbow wedged down inside the grab rails on the inside of the cage.

The most dramatic shots of the Great White is probably when it's going for the bait and has switched into it's "full attack mode", with it's snout up, lower jaw depressed & upper jaw extended to expose it's teeth & gums in a hideous fashion – all to achieve the maximum opening of it's mouth, so it can seize it's prey. This sequence of events has actually been timed at between 0.75 and 1.78 seconds, which combined with the fact that the shark is moving like a speeding train will explain why a camera with 5 FPS frame rate and fast auto-



D100, Subal housing, 15mm Sigma, shutter priority - 1/180 @f8; The apex predator

focus is needed.

The key to getting good images is a combination of the technique described above, being in the right position in the cage and a good shark wrangler on the back of the boat!

A good wrangler will know exactly how to give photographers the show they are looking for, with the tricky part getting a Great White to cooperate! What happens is that the tuna bait hang on a float, attached to a rope, and when the shark makes a move towards the bait the wrangler on the boat pulls it towards the cage and the waiting photographers.

Sometimes the shark will lazily pursue the bait with mouth half open, looking like it's considering a quick snack, but if you are lucky a hungry shark will decide that it's mealtime and really go for it. Often the shark will get the bait before it reaches the cage, which means the bait is in the image – OK, but not as good as the image without the bait...

If you are really lucky, the shark will go in



D100, 12-24 Nikon, shutter priority - 1/180 @f9.5; Sydney photographer & all round good guy Brent Hedges climbing out of the cage.

full attack as the bait is pulled in to your corner of the cage so that you can capture the shark really close but without the bait in the image because the wrangler has just pulled it out of the water over the top of the cage.

This is basically as close as you could possibly get to a Great White in full attack mode and live to tell the tale – a truly adrenalin intensive experience! But there is even more to come, as the shark will often vent its frustration on the cage by biting it and shaking it from side to side.

When that happens you truly understand the sheer force these incredible creatures posses and why they truly are the apex predator!

Don Silcock

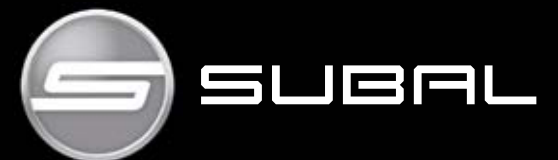
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The Aquarium Diver

by Marcelo Mariozi

When I started diving (and I won't tell you how long ago that was) to be called an "aquarium diver" wasn't the best of the compliments. It was only directed at very short divers or the ones whose skills (or "manhood") were only compatible with the best of the circumstances. Surfing since the age of 6 I was fairly OK aquatically speaking, and at 5'9" I was safely outside the height zone for the adjective. I would never have imagined that after becoming a father I would be called an "aquarium diver" and would receive that with great pride.

Little more than a year ago a new aquarium was opened here in Dubai. It's one of the best looking aquariums I have ever seen. Inside the trendiest shopping mall (and to be the trendiest in Dubai is no small achievement), and the biggest mall in the World, right on the foot stones of the Burj Khalifa - the recently inaugurated tallest man-made structure on Earth - on an amazing complex right in the very middle of town.

The Dubai Aquarium is not one that would be easily missed inside all the grandeur that surrounds it. Its main window measuring 32.88m wide, 8.53m high, and 75cm thick, holds the Guinness Book of Records mark for the largest acrylic panel in the World. It is also the largest suspended aquarium in the World (as it does not sit on "ground floor" and there are shops and facilities underneath it) with a 10 mi. litre



Dubai Aquarium & Discovery Center in The Dubai Mall has clinched the Guinness World Record for the 'World's Largest Acrylic Panel'. With one of the largest tanks in the world at 51 meters by 20 meters by 11 metres, the aquarium features the world's largest viewing panel, which will be 32.8 meters wide, 8.3 metres high, 750 mm thick and weighing 245,614 kg.

Sand Tiger Shark (Carcharias taurus) This shot was taken on my very first dive in Dubai Aquarium. I was standing with my arms extended and the dome really close to the shark's belly (this is a fisheye lens) and you can see both the several light sources (reflected on the acrylic) and a bit of the shopping background. This exposes another problem,

when you're inside an aquarium and close to the windows it is very hard if not impossible to actually see where the window is!!!

All you see is a perfectly round Snell's Window but you don't really know how far it is, and you need to be careful. Nikon D300 with Nikon 10.5mm/2.8 Fisheye, in Sea&Sea MDX-D300 housing with 2 YS110 in Manual, 1/30s@f/8 ISO1600





*The main window, wider than a B737 earlier version wingspan, it is the Guinness Book of Records largest acrylic panel in the World and is 75 cm thick!
Nikon D700 with Nikon 14-24mm/2.8 @10mm in M mode, 1/25s@f/5.6 ISO400.
This image was taken one day when a film crew had extra-powerful light cannons on top of the aquarium, hence the “low” ISO.*

tank of 51m x 21m and 11m deep. Inside it one could count more than 33.000 specimens (all kept within rigid ethic standards of WAZA - World Association of Zoos and Aquariums and CITES - Convention on International Trade of Endangered Species of Wild Fauna and Flora) and more than 200 sharks (when grouped together with their cousin rays), included in this number is the biggest

population of Sand Tiger Sharks in any aquarium, 32 specimens.

Right in the middle of the mall it is not something easily missed, it recreates a marine environment with a shark cave, pier, volcanic rocks, corals and kelp forest. And I can't deny, since the very first moment I saw it, and the biologists diving in it, I wanted to be there. And to shoot it. So when I got an approval from a



Diver heading to the cage for the shark's feeding session, surrounded by Giant Trevally (Caranx ignobilis). You can have an idea of how limited was the light levels, even a relatively slow moving target (human) was fast enough to be blurred and require some panning.

Nikon D300 with Nikon 10-24mm/3.5-4.5 @10mm in A mode, in Sea&Sea MDX-D300 housing with 2 YS110 in Manual, 1/13s@f/6.3 ISO800

Brazilian magazine for an article on the aquarium I jumped on it.

Living in Dubai, I help the local association (EDA - Emirates Diving Association) in developing underwater photography locally with contests, events and courses. Most of my “photographic” time is spend teaching underwater photo, and although I love it, it doesn't represent much in terms of artistic challenge.

This “job” proved very challenging, maybe more than my rusty skills would allow, and certainly much more than I expected. But going through with it was very rewarding and put me back on track with my search for an underwater photo language or style, something that was stalled for a few years.

The facilities of the Dubai Aquarium are state-of-the-art, and

diving there (after strolling on flip-flops with my bags past stores like Prada, Cartier and Rolex...) looks like diving in a futuristic movie set. But I was thrown back in real-life the moment I hit the water. Not only by the fact that I was diving with 100+ sharks in a constrained environment, but by the sheer terror when I firstly measured the light in the tank which fluctuates around EV 5-7 for ISO100... Light levels are kept that low in order to avoid an algae bloom.

Aquariums that choose to use natural light as their light source are normally very simple in design putting their emphasis more on the animals displayed, but the complex scenery and niches of the Dubai Aquarium required very low lighting levels in order not to become completely green covered by algae, there was simply no asking for them to turn on more lights.

It was the first time shooting underwater that I wished I had better high-ISO performance camera. I shoot with a D300 which I think is the best option overall for underwater photo. Let me explain a bit before I get stoned, I started shooting underwater with film, and I never used anything past ISO400 underwater, I never needed, and I really appreciate the size of the D300(or it's "s" version) - the smaller all-metal sealed body - and it's lens choices. But I found

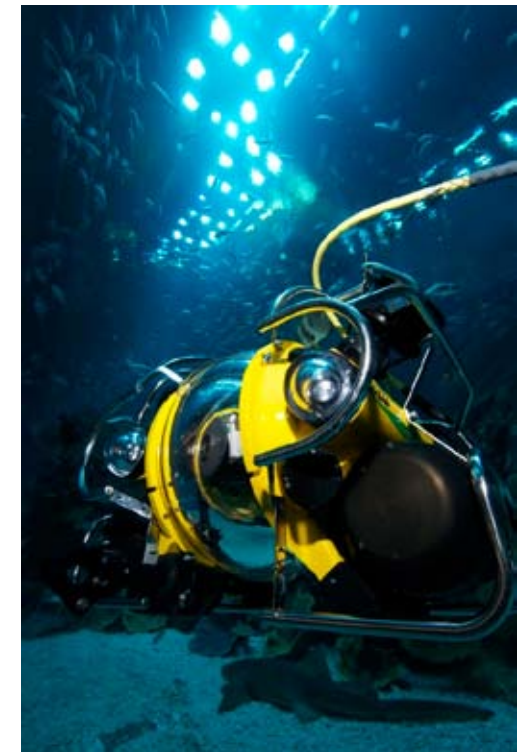


Sand Tiger Shark (Carcharias taurus) are definitely the stars of the show in Dubai, but no matter how much I click them it is always weird to look through the viewfinder (or later on the LCD) and see them with such a cosmopolitan and urban background... Nikon D300 with Nikon 10-24mm/3.5-4.5 @10mm in M mode, in Sea&Sea MDX- D300 housing with 2 YS110 in Manual, 1/15s@f/5.6 ISO800

myself with unfaithful thoughts over a D700 while diving there. But there was no turn-back, no time to buy a D700 and a new housing, I started pumping up my ISO until I got "shootable" speeds and apertures, adjust the high-ISO noise reduction, and then pray.

At first I was very worried, but as I started shooting it started to get interesting. I always liked action unconventional shots, and with such

a high level of big fish activity in a relatively small space, while stuck at 1/30s or slower shutter speed, after the first clicks I found myself back on my own track to find my "style". Underexposing a bit, panning my housing with a 10.5mm fisheye lens centimeters away from a 2.5 meter Sand Tiger Shark, clicking and hoping the strobe would somehow freeze the subject. Intense, very intense 45 minutes.



The ever cooperative aquarium's ROV (Technologies submarinus). Nikon D300 with Nikon 10-24mm/3.5-4.5 @10mm in A mode, in Sea&Sea MDX- D300 housing with 2 YS110 in Manual, 1/25s@f/6.3 ISO800

I had all the images for my article on that single dive, but I wanted more... I approached the aquarium curator and he liked the images, they needed images for marketing and I needed more dives there, perfect marriage and I ended up doing more jobs there.

I was glad I shot RAW, instead

of the JPGs I am used to shoot for competitions. The WB in the tank is another big challenge I did not know about, I only got that when I checked the images at home on my MacBook calibrated screen... It was simply all over the place, like I was drunk!!! Together with the light levels they keep the color temperature slightly cooler than the “bluest” ocean at something like 12-14 thousand Kelvin, again to keep algae levels under control. It also varies during the day on a lunar cycle for the fishes and, in a clear try to make me insane, they have light shows every now and then when lights can go from green to purple... God Save RAW.

Another “challenge” is that every time I pointed my camera up, remember the famous words “shoot up, shoot up...” I was completely knocked out by a ceiling full of light spots. Like I was being punished by some sort of Photo God of my sins of complaining about the sun and it’s dreaded sunballs since I went digital. Believe me, I will never complain about sunballs in my pictures ever again. The 50- something Suns I had in the aquarium not only were hard to tame but also drove my light measuring nuts!!! You can have an idea by looking at some of these images I remember flinching when I sometimes pointed the camera up while looking through the viewfinder... God Save M Mode as well.

I was very pleased with the first results, the action shots looked OK and I specially liked the darker fringe in front of the moving subjects, created by their body obscuring the ambient light after the flash pop. It created a “definition” boundary in the right area, closer to the “face” or head of the fishes. Had I gone rear sync I might have gotten pretty sharper tails instead. Of course this new (new to me at least!!!) approach produces

a lot of images inside my computer’s trash bin, but the keepers are really worth it.

There were some interesting experiences as well, like shooting an ROV they keep for technology demonstration for the public. I would signal for the ROV operator to move it around or turn on the lights etc... and guess what? It would just do as I told it to! It is so funny or unusual for an almost-exclusive underwater photog to control their models (mainly fish) that I found myself laughing while the ROV followed my instructions, wishing fish would behave like that sometimes. That was easy... but remember never to look to it when it is pointed at you with lights on, or you will feel like I think the fish feel when we shoot them, believe me.

The action inside the tank is another story. I was shooting the fishes and I wanted a shot of the action that occurs during the general feeding when divers go down with a big bucket of food. I am talking about a lot of fish. After briefing with the feeders we would kneel on the sand and they would feed the smaller fishes while coming towards us. Easier said than done. The action got really intense when they got closer. At one point the ROV, which was about 2m from us, was completely knocked out, rolled over and it’s operator had to pull it up out of the mess. I was insistently trying to shoot the action while my strobes, housing, arms, hands, mask, got hit by tails of all kinds of fish and smaller sharks. I noticed my buddy was also being beat when a big ray sat over me sucking over my head, the sound was like being inside a washing machine, and I knew my bodyguard-buddy was probably needing a bodyguard himself. We were literally ran over by fish. Nothing we could do, the camera could rarely find focus, strobes were blocked by



Sand Tiger Shark (Carcharias taurus) This was during a shark feeding session, you can see the different colors of the light sources during a “blue” phase of the light show.

Nikon D300 with Nikon 10-24mm/3.5-4.5 @10mm in A mode, in Sea&Sea MDX- D300 housing with 2 YS110 in Manual, 1/20s@f/6.3 ISO800

fish most of the time, snapped 5 shots at most and we had to go up a few meters to escape the massacre. We met above the cloud of fish, it was the end of the dive and I remember laughing it out all the way...

I am still doing some shots in there, there are a few angles and opportunities to be explored and the aquarium is about to receive some Scalloping Hammerheads Sharks that I want portrayed. An aquarium dive is something not to be missed, but it is so much enjoyable when you are prepared for it. If you ever have the chance to do such a dive take a bit of time to think about the factors I exposed here, I wished I had someone to talk about it before. For the next dives I just got myself a TTL converter, even though since going digital I never missed TTL, I want to be able to shoot the smaller fish and to do some portraits of the bigger ones with better productivity, because the opportunities to dive in such a place are not to be missed.

I was really happy and proud I was invited to do this job, that ended up putting me back on my own photographic tracks while helping spread the word on our Oceans. It is estimated that more than 25 million people have seen the main window for free in it's first year of operation, and the Dubai Aquarium like all good aquariums, helps to take

environmental causes into urban areas where most agencies struggle to penetrate.

While I was shooting there I never had so many people shooting me, it was impressive. And to be able to show my 3 yo. son what his father does underwater was specially nice... I remember once, as soon as I popped my head out of the water, the first thing I said to my dedicated DM and bodyguard was "I don't want to dive in the Ocean ever again, it's like hunting for food against a walk in the supermarket!".

Nah!!! Not really :o)

Marcelo Mariozi
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How can you be so happy when your photos suck?

by Craig Reynolds

The learning curve for underwater photography has been steep ... and I'm still on the up-slope. Last weekend I took a Dhow up the eastern side of the Musandam peninsula with a semi-regular dive buddy Juraj for a 2 dive day. This is the second outing for my newly purchased Fantasea Remora flash and I was hoping to try out some techniques I'd been reading about.

I used the strobe for the 1st time on our last dives and, frankly, the results were very disappointing, not because the Remora is lacking in any way (from my limited knowledge of these things it seems a good unit) but because I didn't actually know what I was doing.

So, having sifted through the badly exposed, out-of-focus, disappearing-fish-ass dross I produced last time, I realised I needed a serious dose of RTFM and spent the next few weeks with my nose buried in an UW-how-to photo book, combing the net and also time on the marvelous UWP magazine site. All my reading showed just how little I was prepared for this underwater malarky, but it gave me a set of objectives for the day's diving:

1. Manual everything - As far as possible I would use only manual settings, bearing in mind that I don't use an SLR but a compact so some things are auto whether I like it or not. My Nikon P5100 and Fantasea housing allows me to set shutter speed, aperture and white balance manually, but focus is auto-only.

2. Balanced Exposure - I wanted to learn to adjust the shutter, aperture and flash output so that the main subject and background are similarly

exposed. There are times when you want the foreground to stand out (or even the background) but I was aiming to understand the interplay between the flash power settings and the aperture, especially where the subject is much closer than the surroundings.

3. More Time - I wanted to take my time on a subject, the temptation to rush about and fire away at everything is great. I would focus my attention on a particular subject and methodically work the scene. As Mies van der Rohe said 'Less is more'.

3. Review and Correct - Previously I didn't take advantage of that big LCD panel to review what I had just shot and then to correct settings accordingly. This was intensely stupid of me as the ability to review your photos on-the-spot underwater, rather than hours later back on land, is probably one of the biggest advantages of the advent of digital cameras (an UW photographer I once met who, at the time, had just taken the digital plunge reckoned the biggest advantage was the ability to "run out of air before running out of 'film'!")

So, after all this mental preparation, how did things turn out?

Well erm ... very sucky to be honest!

However, in my defence the water was very dirty, algae green and with a lot of suspended matter and even shooting without the flash produced a snowstorm look, as you can see in the photo right.

But I managed to achieve the things I set out to do, so all in all I'm pleased with the results, even though the pictures are pretty horrible from all the



floating crud.

Let's have a look at three images from this trip and what I've learnt from them:

The first image (Above) is a bed of coral:

I'm not really sure what the yellow thingy is, but I liked the splash of yellow amongst the more monochromatic bed of coral, so I placed it in the foreground, used it as the focus point and attempted to illuminate it with the flash while ensuring the



background isn't too dark. I placed the strobe off to one side, but even so the vast amount of floating crud has peppered the image, too slow a shutter speed has resulted in backscatter streaks. Also, to the left of the yellow thingy (sorry, I'll find the correct Latin name and edit this some time) are some anemones that have been totally blown out. Tsk, tsk ... I didn't review it in the LCD as I should have!

Lessons Learnt: Composition is okay, exposure is reasonably balanced but watch the flash position and keep reviewing the images, depth of field could be better and a faster shutter would have helped with the surge.

The second images (Above and Centre) are of a dead Red Snapper:

At first glance this dead fish being consumed by hermit crabs is a technically appalling picture, probably on subsequent glances too, but I really liked the gloomy mood. I'd shot a few images before reviewing, when I realised things weren't right, only to discover that the synch-cord had come loose from the housing and so the strobe



had not been firing. As I rectified this, some other divers swam by and stirred up even more debris. Generally I'd give up at this point but it was a good opportunity to try the exposure thing again as I was quite deep and the light had faded a lot. A few shots more and all I had to show was a few flash-lit, but technically appalling, shots.

I also discovered that my Fantasea Nano focus light was off, it works by turning the head as if you are unscrewing it and I guess that as I descended the pressure increase caused it to switch off. Combining depth and murky water meant that all the reds had been attenuated, so there is little I could do about the green cast in either shot and as I said before, white balance correction was not a priority at this time.

Lessons Learnt: Check your gear regularly and make sure everything is connected. Make sure your focus light is on, the first image is not sharp at all, the second is a bit better but still way off. Fin carefully to avoid stirring up sediment.

The final image is an interesting sea urchin bedecked with empty shells:



The sea urchin shot is much better. The subject is sharp and the lighting has improved a lot, the urchin stands out but the background isn't obscure black. But the floating bits are still very prevalent and no amount of side-lighting by the flash could hide this. In fact the flash is a bit too far to the left so that side of the urchin is a touch overexposed, while the light falls off quickly to the right. The overexposure was not obvious in the LCD and my camera does not seem to have a histogram (perhaps another RTFM session is called for, it could be I just missed it.)

Lessons learnt: Review your exposure carefully and check the histogram if you have one. Be careful of having the flash at extreme angles, maybe I'll invest in a second unit for more even lighting once I get the hang of things. A smaller aperture would have given a bit more depth-of-field, so the rear of the urchin would be in better focus. Overall I'm quite pleased with this one, ignoring the speckles, it's a passable shot if not a great one.

So, can I be happy even though my photos suck?

Actually, yes ... a definite yes!

I have learnt more about the strobe, aperture and shutter speed interplay in two dives than I thought possible and have seen how applying the techniques I've read about have generally improved my results.

I've got better ones from before the Remora on my website, honest gov!

Now let's hope for some clear water!

Craig Reynolds

Craig Reynolds is generally sunburnt and often in need of a shave and has been diving on and off since the last of the Horse Collar BCs (remember them?) Although having long time passion for photography he has only recently started underwater photography, he considers it the hardest style of photography he's tried. You can see more of his images, both underwater and otherwise, on

www.sunburntandinneedofashave.com

and his blog is

www.sunburntandinneedofashave.blogspot.com



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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.

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Summer and Autumn

by Mark Webster

As a follow up to my earlier article on spring time diving in the south west of the UK, our revered editor suggested I should also pen something on summer, autumn and winter to complete the series. I thought this should not present too much of a problem, particularly as our Met office was predicting a long hot lazy summer which some would say is a benefit of global warming.

The reality has been a little different, with the wettest and windiest summer months on record which destroyed many of my planned diving days. Dive excursions had to be planned between advancing or retreating low pressure systems and as a result conditions were less than perfect and before I knew it the autumn months had arrived, so it made sense to actually combine the two seasons for this article as they have been almost seamless this year!

Despite the sometimes miserable and cool summer weather, we did manage some good diving when the windows of opportunity presented themselves. The water temperatures in the south west still continued to rise as the season progressed, no doubt helped by the Gulf Stream bringing

warmer water from the south.

These higher temperatures attract the occasional sub tropical visitor ranging from sunfish to leatherback turtles and even great white sharks according to some claims. For the first time this year I actually saw a sunfish underwater on a reef close to Land's End. We normally only see these fish on the surface and they quickly disappear if you enter the water. This one circled me a few times but sadly would not get close enough for a clear shot. This particular reef area is a cleaning station for several species and I wonder if the sunfish had been visiting for that reason.

Another species which has been seen at the same location in increasing numbers in recent years is the Atlantic or grey trigger fish (Balistes carolinensis). This fish is also appears in several other areas all along the south and west coasts of the UK in late summer. If, like me, your most memorable encounters with tropical trigger fish involve some nifty defensive swimming and repeated chewing of your fins by angry titan trigger fish, you might be less than delighted with the prospect of meeting a related species in our home waters.



Grey Atlantic trigger fish – this species comes into UK waters in late summer and early autumn when the water is at its warmest. It looks very similar to the tropical species of trigger fish, but thankfully does not have the temperament of a Titan trigger fish! Nikon F90X, Subal housing, Nikkor 18-35mm zoom, Sea & Sea YS120 and YS30 flash, Fuji Velvia 50, f8 1/30.

Rhizostoma jelly fish – these are the largest jelly fish that you will encounter, but surprisingly have no sting. They are sometimes seen in vast number for a few days with the late summer plankton bloom. Nikon F90X, Subal housing, 16mm FE, Sea & Sea YS120 and YS30 flash, Fuji Velvia 50, f16 1/125.



Atlantic trigger fish had been considered a rarity in our waters until recently, although reports do date back to the late 1890's along the south coast of England and Wales and as far north as Nova Scotia on the other side of the pond. Over the last ten years sightings and catches by both amateur and commercial fishermen have increased and it seems that our warmer summer waters now encourage a regular migration from semi-tropical waters.

They have normally been seen in small groups in shallow water around wreckage or piers and jetty's although there are several reports of schools of several hundred gathering off the south west coast of Wales in late autumn. These concentrations appear to be in preparation for a migration back to warmer southern waters as our own begin to cool off. When the autumn gales begin later in the year it is common to find dead fish on beaches, who have obviously left it too late, particularly on north facing coasts.

We have been seeing small groups of trigger fish on this reef schooling with bass and grey mullet. They can be seen feeding on mollusks amongst the kelp and also waiting for the ministrations of a group of rock cook cleaner wrasse – one end of this reef is the temperate equivalent of a cleaning station, more common in

tropical locations, and possibly the main attraction for the trigger fish here.

The trigger fish are cautious at first and we would normally see between four and six at a distance, but after 15-20 minutes they would cautiously come back individually onto the reef to feed off mollusks on the kelp or search in amongst the nooks and crannies in the reef for small crustaceans. Eventually they will begin ignore you will make a few inquisitive passes in front of the camera which give the best opportunities to shoot them with some natural light at the top of the kelp canopy. These trigger fish are obviously very happy with their temporary environment, although I am not sure why they swim with the other fish. Whether this behaviour is for protection or amusement is difficult to tell, but with the exception of anglers I cannot imagine what would predate on the trigger fish here.

Depending on how water temperatures vary we sometimes experience a second major plankton bloom in the south west in July or August. Whilst this does spoil visibility for a while it also often provides a second opportunity to see basking sharks which normally begin their migration up the west coast towards the Isle of Man and Scotland at this time. The plankton attracts



Basking shark – a late plankton bloom can also herald the return of the basking sharks providing us with a second opportunity to get close to these magnificent fish. Nikon D200, Subal ND2 housing, 12-24mm zoom, f8 1/30

them back to Sennen and Porthcurno coves where the plankton is held captive by the tide.

The plankton may also be accompanied by an increase in the number of jelly fish particularly the Rhyzostoma and Lions Mane species. Both of these are often accompanied by juvenile scad in their canopies which dart in and out to feed on the plankton. Mackerel are another species attracted by the plankton often in large shoals. It is very difficult to

encounter these fish underwater even when you see the surface of the water boiling with feeding activity. The best you can hope for is a fleeting glimpse in the water although watching from the surface further offshore may include the treat of seeing an attack by a pod of common dolphins, also notoriously camera shy under the water!

One of my favourite summer dives is the infamous Manacles Reef close to Lizard Point. The whole of

Manacles area offers excellent diving comprising a series of granite peaks and ledges rising sharply from depths of 60-70m to break the surface or lurk just 2m or 3m below the water. Many ships have met their fate here travelling to or from the port of Falmouth or simply hugging the coastline too closely when making for the Lizard peninsula. One of the best known wrecks here is the SS Mohegan - she was a 7000t liner which struck the Outer Voices rock on 14th October 1898 on only her second voyage to New York.

Although these reefs are spectacular they are also potentially hazardous and should only be dived when the conditions are right. Strong tides of up to 5 knots are experienced here with the current often continues to run during “slack” periods on a big spring tide, and sadly there have been several diving tragedies in the area. Much of the reef system is not surface breaking, so it is important to go with a boatman who knows the area and tides and has the right equipment to identify the sites

My personal favourite is Raglans Reef which is found on the eastern side of the Manacles and is therefore more exposed to the tide which produces a density of marine life that is often quite staggering.

The first indication of the topography is the impressive trace



Corkring wrasse are amongst the most colourful fish in the UK. They are easily found and approached around shallow reefs where you can watch them busily sifting the sand and gravel for food. D300, Subal ND2 housing, 105mm micro, Inon Quad flash, ISO100, f16 1/125

on the echo sounder as the reef rises sheer from a depth of 50-60m, like a church spire, to within 3-4m of the surface. The shallows have a heavy growth of kelp with widely spaced stypes which are ideal for exploration at the end of your dive when you are decompressing or making a safety



Jewel anemones – offshore reefs like the Manacles are swathed in beds of jewel anemones in many vibrant colours. These make good close focus wide angle compositions. Nikon D200, Subal ND2 housing, 10-17mm FE zoom, Subtronic Mini strobes, ISO100, f11 1/60

stop. My preferred route is to follow the series of vertical rock faces on the north east side of the pinnacle which are carpeted with sea fans, soft corals and plumose anemones in a variety of colours. Follow the wall to your target depth but bear in mind that you can easily find yourself in



Plumose anemones – you need to dive at the beginning or end of a tide to see them extended to feed. Nikon D100, Light and Motion Titan housing, Nikkor 10.5mm FE, Subtronic Mini strobes, ISO200, f11 1/60

45m to 50m depth before you see the surrounding seabed. If you start your dive just before full slack you can shelter behind promontories on the wall and watch schools of bass and pollack holding station and feeding in the current.

At depth you can choose to swim



Salp or comb jelly – when the jelly fish arrive with the second plankton bloom they are often accompanied by huge numbers of salps or comb jellies in various shapes. Whilst the jelly fish may remain for days or weeks, the salps disappear quite rapidly. D300, Subal ND2 housing, 105mm micro, Inon Quad flash, ISO100, f11 1/60

around the pinnacle either west or east dependant on which way any current may be flowing. As you make your way around towards the south face, gradually decreasing your depth, you will find that the shear rock faces



Kelp and sea squirts – if the fish and critters fail to perform then turn your attention to the reef. The kelp itself may look dull to begin with but there is often a lot of colourful life either on the stypes or around the hold fasts. Nikon D100, Light and Motion Titan housing, Nikkor 10.5mm FE, Subtronic Mini strobes, ISO200, f11 1/60

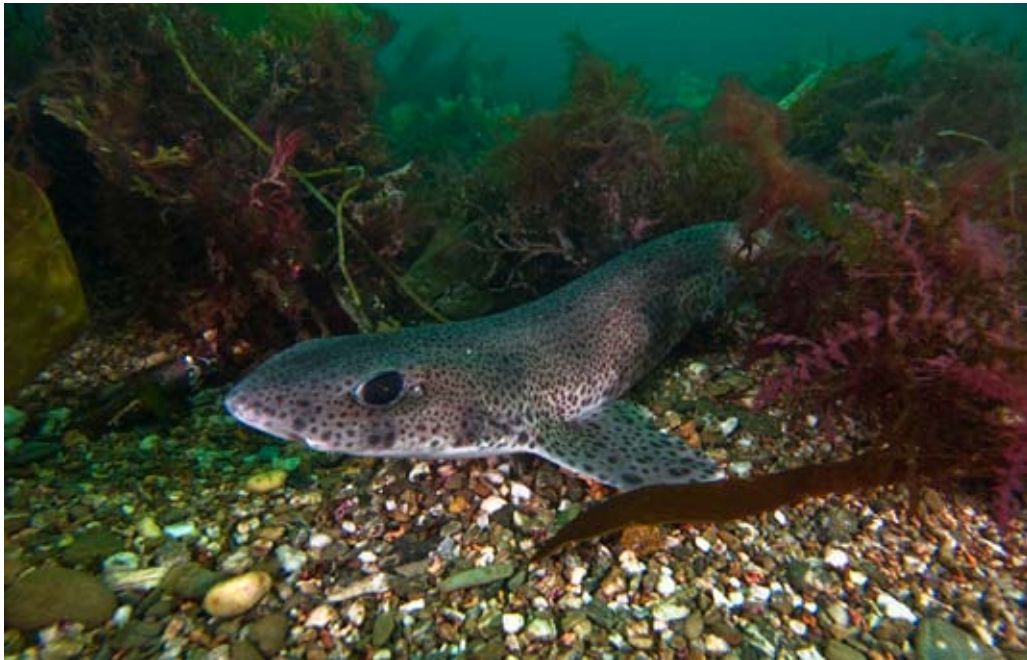
change to a series of large ledges and boulders with small sandy patches collected in the hollows. Stop and inspect these as you will often find large angler fish, dog fish or tope resting here. The decreasing depth will



Sea bass – they are often found on shallow reefs and the best approach is to stay still and let them come to you, although every shot is likely to be fleeting. Nikon D100, Light and Motion Titan housing, Nikkor 12-24mm zoom, Subtronic Mini strobes, ISO200, f11 1/60

(Right) Flabellina nudibranch – There are many nudibranch species to be found feeding on kelp, bryozoans and hydroids even in late summer and early autumn. Although smaller than tropical species, some are equally colourful. D300, Subal ND2 housing, 10-17mm FE zoom + 2X teleconverter, Subtronic Mini strobes, ISO100, f16 1/30





Dog fish – although dog fish are seen year round, during October and November they are seen in much larger numbers in sheltered shallow waters when the breeding season starts. This year there were large populations in Falmouth Bay and in the Helford river estuary. Nikon D200, Subal ND2 housing, 12-24mm zoom, Subtronic Mini strobes, ISO100, f8 1/60

also reveal more reef fish activity with ballan wrasse, goldsinney wrasse and the very bold and inquisitive cuckoo and corkwing wrasse approaching you to investigate. The rock surfaces just below the kelp line are swathed in iridescent jewel anemones in a variety of colours amongst beds of hydroids, masses of brittle stars and clouds of juvenile fish shoaling together to avoid the hunting scad and pollack. You can finish your dive with a safety stop investigating life in the kelp and

watch out for passing jellyfish and bass. If the tide is running as you leave the reef to surface then you will move quickly away into open water and it is important to be wary of boat traffic as you surface.

As the autumn progresses the kelp around the coast begins to look tired and starts dying off. Even so, it is worth checking the fronds for areas of sea mat and hydroids as some nudibranch species survive surprisingly well into September

and October and can still be found feeding. As the water temperature cools during October and November we normally see larger numbers of dog fish appear in shallow waters as they come inshore to mate. They normally head for sheltered waters and this year there have been numerous congregations of them in the eel grass beds of the Helford river and in the more sheltered coves. These small sharks are easily approached and are largely tolerant of photographers who may need time to perfect their exposure and composition!

With the first of the autumn equinox gales the kelp will be ripped

off the reef and deposited on the beaches and the reefs begin to look a little different between the storms. As the water begins to cool the visibility will also improve so it is worth getting in the water with a wide angle lens after a couple of calm days following a storm. Although the reefs and surrounding seabed begin to change with the approach of winter it is still worth diving even though the weather may offer fewer opportunities, but that will be the subject of the next article in this series.

Mark Webster
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**Underwater Photography Workshops
with Mark Webster 2010**

A photograph of a diver underwater next to a large fish. The diver is on the right, wearing a black wetsuit and a large camera. The fish is on the left, large and light-colored with a dark eye. The background is blue water.

Red Sea 1-8 October 2010
See website for details: www.photec.co.uk
E-mail: markwebster@photec.co.uk

The Sunken Goose

By Joseph C. Dovala

The sun was still high in the California sky as the Grumman Goose Flying Boat revved up for take-off. Onboard were four men, three passengers and the pilot, heading back to the mainland from Avalon, Catalina Island, on September 17, 1979. Conditions were calm, but as the old workhorse reached take-off speed, something gave way and they lost all power. The plane quickly turned upside down and plunged heavily back into the cold Pacific. The Goose nearly broke in two, yet amazingly, no one died initially from the impact.

In a matter of seconds, Larry Gilman, a 27 year old construction worker, pulled his 52 year old father O. T. Gilman from the tangled wreckage. Larry then went back in to yank out the unconscious pilot, Vern McGee, 54, from what was left of the cockpit. Larry then went in a third time to locate the last man in the snarled passenger compartment but was unsuccessful. Both he and his father O. T. then began administering first aid to the badly injured McGee on the amphibian's wing. It was plain to see the mangled former Flying Boat was going down to the bottom quite soon. A private motor yacht sped up to the scene and the three shook up men transferred over just as the plane was swallowed up by the sea. The pilot was airlifted to the mainland and the father/son, who refused medical check ups, retired to a bar in Avalon. A Sheriff's deputy finally found them hours later and "convinced" them to go to the Avalon hospital for a check up.

Only a couple of hours after the crash, divers made the 225 foot plunge to the Goose's remains



Tailplane. Nikon D700, Aquatica Housing, Sigma 15mm FE, f/11, 1/60sec, ISO 2500, Ikelite DS-125 strobes @ full power (Inset) The Goose in her former days

but did not find the other 33 year old passenger. He was never found. Soon after this tragedy, which was the second fatal crash in less than a year, Catalina Airlines folded up shop and the Grumman Goose Flying Boat era to Catalina Island came to an end. Few people knew about the wreckage, and fewer still, knew exactly where it was.

My connections with the old Goose started

with a charter group who wanted to find the plane's whereabouts. As in many places, California is no exception, GPS numbers can be "worth their weight in gold." Some folks had a general idea where it was but the depth made casual searching impractical. Members of the SoCal TecDiver's Club chartered the dive boat Seabass out of San Pedro. They use this tech friendly boat quite often.



The wing and part of the cabin windows. Nikon D700, Aquatica Housing, Sigma 15mm FE, f/9, 1/15sec, ISO 2500, Ikelite DS-125 strobes @ full power.



Both engines. 01- Nikon D700, Aquatica Housing, Sigma 15mm FE, f/9, 1/15sec, ISO 2500, Ikelite DS-125 strobes @ full power

The skipper had a general idea where the plane might lie but not specifics. With the more or less known depth, search teams used a simple depth contour search and within 20 minutes discovered the Goose's resting place.

With the GPS numbers now in hand it was an easy jaunt at will to the site. For a deeper dive off California you couldn't ask for a better location. It's very close to shore and just east of Avalon Harbor, next to the heliport. In fact, you can count on a Bell jet turbine helicopter making a

loud low pass right over you during their landing. The water conditions are almost always outstanding. Good visibility at depth; maybe dark because of plankton in the surface layers but clear water on the bottom. Currents can be a problem, as well as a fair amount of boat traffic, so getting blown off and having to do a free wheeling deco isn't the best idea in these parts. Nevertheless, I've always had very good diving here.

When the Goose materializes out of the blue-green murk, my first

thought is, no way could anyone have survived this crash. The passenger compartment is completely folded over back on itself. It looks like an angry child grabbed his model fore and aft and then broke it in two. Even with helium it takes awhile before you mentally can straighten out the tortured aircraft. Though separated from the fuselage, the wing is somewhat intact with the propellers unbent - proving they weren't spinning. Many of the surfaces still have red and blue paint on them. The

tires are still recognizable, as are some of the stabilizer control surfaces. Airplane parts are scattered to and fro, and there's a small section of fuselage off the main wreckage that could've been part of the cockpit.

It generally takes two dives to fully explore the crash site. While on a sandy bottom, the few rocks and plane components now provide substrate for kelps, especially Laminaria. These large bladed algae can partially obscure the radial engines depending on bottom currents. Other detritus



Topside support checks divers. Nikon D700, Aquatica Housing, Sigma 15mm FE, f/13, 1/250sec, ISO 400, Ikelite DS-125 strobes @ half power.

builds up periodically against other sections as well. Photographically, she's a tough one. Other than the propellers, there isn't much that looks "aircrafty." The fuselage is so badly twisted that only a very small angle looks like she once belonged in the air. Even though the water is usually clear, the darkness makes for considerable difficulty to get anything other than strobe-lighted-black-background "night" pics. Long exposures and the new high ISO cameras rule on this one.

As underwater photographers

we have little time to set up shots; on these extra deep immersions the clock is ticking even faster. Any work with a model has to be talked out in detail before the dive. You also don't get much of a chance to mess around with camera settings. I try to anticipate f-stops and shutter speed on the surface. Admittedly, this takes experience but with digital the learning curve is less steep. It took three dives on this flying boat to get several shots I liked. Much of the effort was trying to get clear images without the night background look.

The other issue was primarily dialing in the right amount of ISO. While the high ISO cameras do extremely well in air, water physics throws a lot of curves at you; so it isn't just a matter of cranking up the sensitivity. Image noise is a function of many variables underwater besides available light. Type of suspended particles, temperature, and "color" of the water all seem to play a role.

Whenever I dive on "artificial reefs," even small ones like this, it always amazes me how many marine critters are cruising around. The wreckage is now home to blacksmith, rockfish, and lingcod. None of the fish are that big so hopefully the clowns with the spear guns will stay away.

Due to the depth, this old air jalopy enjoys a fair amount of anonymity. It's quite fragile though, and can be heavily damaged by careless or greedy individuals. There's no need to dig around as nothing remains to salvage. One also has to be careful when anchoring or dropping a down line. The old Goose does make a fine extended range dive. The relatively easy diving conditions along with a bit of colorful history make it well worth the gas.

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Purveyor of fine underwater imagery

&

Multimedia Production



Imagine an ocean without fish.
Imagine your meals without seafood.
Imagine the global consequences...
no fish in the sea by 2050,

unless we do something about it now.

THE END OF THE LINE

DVD release



The End of the Line was released on DVD on 1st February 2010 and is available now to purchase from www.endoftheline.com at a special promotional price of £10 compared to the RRP £14.99. It is also available from select stores as well as online retailers

The End of the Line, is the world's first major feature documentary about the devastating impact over fishing has had and is having on our oceans. Based on the book by former Telegraph journalist Charles Clover and filmed over two years, The End of the Line provides a dramatic expose of those in power who are taking advantage of the seas with catastrophic consequences on the world's fish supplies.

During the film we see firsthand the effects of our global love affair with fish as food. The film examines the imminent extinction of blue fin tuna, brought on by increasing western demand for sushi;

the impact on marine life resulting in huge overpopulation of jellyfish; and the profound implications of a future world with no fish, which would bring certain mass starvation.

Throughout the film we follow Charles Clover as he confronts politicians and celebrity restaurateurs, who exhibit little regard for the damage they are doing to the oceans. One of his allies is the former tuna fisherman turned whistleblower Roberto Mielgo – on the trail of those destroying the world's magnificent blue fin tuna population. Filmed around the world – from the Straits of Gibraltar to the coasts of

Senegal and Alaska to the Tokyo fish market – featuring top scientists, indigenous fishermen and fisheries enforcement officials, The End of the Line is a wake-up call to the world. It is however a wake-up call which demonstrates the simple changes people can make to reverse the current predicament facing everyone.

Directed by Rupert Murray, the film was officially selected for the 2009 Sundance Film Festival. Film funding came from a variety of sources including private foundations, private donations and equity investment. Strong alliances have been built with NGOs around the world including Greenpeace, WWF, Oceana and the Marine Conservation Society.

www.endoftheline.com

Review

The End of the Line DVD
Filmed and Directed by
Rupert Murray

As the quote on the cover states "Everyone should watch this film" (The Times) and I think that really sums it up.

This is a frighteningly real account of what we have done to the sea and it is presented without hysteria which makes it all the more poignant when fact after fact start to sink in - we have the capability to

catch literally every big fish in the sea and if politicians, big business and the majority of fisherman are allowed to, that is exactly what they will do.

It has already happened. There are no more cod in Newfoundland and, based on what we now know, it is about to happen to blue fin tuna in 2012 and there are so many other consequences pointed out. It is not just about the fish, it's about the effect on local communities who for centuries have earned a sustainable living from the sea but factory ships have hoovered their waters and now they face starvation or becoming economic migrants. Then there's the effect of removing whole species from the food chain which creates a natural imbalance which if allowed to continue could lead to stagnation.

But for all its bleak message there is hope but we really have to start now to have any chance of slowing down the inevitable.

A good start would be to watch this DVD.

Peter Rowlands
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Guidelines for contributors

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

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

Uw photo techniques - Balanced light, composition, etc

Locations - Photo friendly dive sites, countries or liveaboards

Subjects - Anything from whale sharks to nudibranchs in full detail

Equipment reviews - Detailed appraisals of the latest equipment

Personalities - Interviews/features about leading underwater photographers

**If you have an idea for an article,
contact me first before putting pen to paper.
E mail peter@uwpmag.com**

How to submit articles

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

1. The text should be saved as a TEXT file and attached to the e mail

2. Images must be attached to the e mail and they need to be 144dpi

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

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

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

Parting Shot 1

A compulsive desire to shoot some pictures after six months indolence in the flesh-pots of Whangarei, New Zealand, drove me north to Tutukaka with a couple of girls on board Vigia. Photographer Tobi Bernhard was up there on Nexus, working hard, diving at the Poor Knights as often as conditions would allow. Sometimes it's better to be lucky than to work hard.

Nearing Tutukaka as the light was fading, Anna Cherry spotted a commotion in the water. Dolphins or a sunfish I thought. We closed in and could see it was a 7m whale shark feeding in a huge windrow of zooplankton. I had never heard of whale sharks in New Zealand waters, nor seen one in 20 years in the Pacific. It was curious about Vigia and came right alongside so we could shoot some pictures, but at 7pm it was too dark to try to do anything in the water.

Fortunately, having some low res digital pictures was enough to convince Tobi about what we had seen.

We motored offshore the following day looking for more whale sharks, but saw nothing apart from makos, a hammerhead and common dolphins until almost home. About three miles off Tutukaka were the same undulating fields of plankton with a whale shark and a Bryde's whale making hay with the last of the sun.

The girls dropped me off and I snorkelled over with a Nikonos 3, 15mm lens and light meter, but there was very little light. I shot some pictures at my default f5.6 at 1/125th, and then measured the light. With the lens fully open, a shutter speed I thought



Nikonos 3, 15mm lens. f5.6, 1/125th second, Velvia 100 pushed two stops. Scanned and lightened two stops by Tobi Bernhard.

might just hold things (1/60th) the lab would have to push the Velvia 100 two stops. I did what I could, the visibility varied from a metre in the plankton to 15m outside. The female whale shark was oblivious, simply intent on ingesting as much plankton as possible, only objecting with a shudder when I hung onto its dorsal briefly. As we left this animal, we saw a second whale shark as we neared the coast.

Tobi scanned the underexposed first frames,

boosted the exposure and the first of these ran on the cover of the local newspaper, page two of the NZ Herald, and on a TV3 news segment. Of all the 36 sightings recorded in the previous 20 years in New Zealand, none had been photographed underwater.

Pete Atkinson

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Parting Shot 2

Brighton, on the south coast of England, has a famous history in underwater photography, but it is not a location where you expect to find a tropical shark dive! My friends Rob and Jonny, who run the Brighton Shark Dive invited me along to meet their buddies at the Brighton Sealife Centre, the oldest working aquarium in the world. By the way, their buddies include a large nurse shark, sandbar sharks, black-tip reef sharks, a leopard shark, a green turtle and pictured here a loggerhead turtle.

I am happy to admit that I underestimated the photographic challenge involved. My idea that it would be as easy as shooting fish in a barrel was quickly proved wrong. First, in the limited space the subjects are not always that cooperative. They are very sensitive to your movements and it is best to stay as still as possible.

But the big challenge is that the Sealife centres in the UK have a no-flash policy. This didn't bother me initially as I knew it would be shallow, however, I had not realised how dark a large indoor aquarium is. When you go there and look through the glass, and your eyes are used to the dark, you see fine. But point a camera and you get a shock. Mine reported that at F8 and ISO 100 I would need a 1 second exposure. Houston we have a problem!

Flash would easily overcome all these problems and I would have tried to talk the aquarium round if it was a pro-shoot for them. But I was just here for fun. I had to work within the rules. So I used my FIX LED 500 as an on camera light source, which worked surprisingly well. However it is still important to keep shutter speeds as high as

possible, because with continuous lighting moving subjects will easily blur. It is better to open the aperture up a bit, although this means you have to make sure the focus is spot on.

My favourite images were ones with people looking in through the windows. These required quite a bit of luck, because I was relying on kids passing by to be interested enough to hang around until a critter came close, which didn't happen much!

But it was a fun morning. Encouraged by the shots I want to go back. I have learned a lot about such an unusual lighting challenge, and think I should be able to get something even stronger. Key will be a slighting better on camera lighting set up and some dedicated friends to pose behind the glass!

Alex Mustard
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Nikon D700 + 17-35mm @ 17mm (with +3 dioptr). Subal housing. ISO 1600, 1/80th @ f/5. No flash! Light on turtle from FIX LED500 torch. Light on kids from lamps inside the tunnel.



**Do you have an interesting shot
with a short story behind it?**

**If so e mail us
and yours could be the next "Parting shot".
peter@uwpmag.com**