

# Underwater Photography

Jan/Feb 2017  
Issue 94

The magazine that doesn't  
have to say anything here





## An experience without equal

At Wakatobi, you don't compromise on comfort to get away from it all. Our private air charter brings you directly to this luxuriously remote island, where all the indulgences of a five-star resort and luxury liveaboard await. Our dive team and private guides ensure your in-water experiences are perfectly matched to your abilities and interests. Your underwater encounters will create lasting memories that will remain vivid and rewarding long after the visit to Wakatobi is concluded. While at the resort, or on board the dive yacht Pelagian, you need only ask and we will gladly provide any service or facility within our power. This unmatched combination of world-renowned reefs and first-class luxuries put Wakatobi in a category all its own.



*"After years of travelling to the best dive sites in the world and often experiencing poor conditions, we found Wakatobi Dive Resort. They have a perfect balance of luxury with outstanding diving."*

~ Kate Pagdget-Koh



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

# Contents

- 3 Editorial
- 4 News Travel & Events
- 14 New Products



- 30 Canon 1Dx MK11 review  
by Backscatter staff



- 34 Fantasea revisited  
by Jussi Hokkanen



- 37 Less is more  
by Mike Ross



- 41 Freshwater Fishes  
by Jack Perks



- 47 Poor Knights, NZ  
by Alex Stammers



# Underwater Photography

A web magazine Uwp94 Jan/Feb 2017

- 54 Palm Beach, Florida  
by Walt Stearns



- 68 Parting Shots  
by Alex Mustard and Dan Bolt



- 66 My Shot  
by Charlotte Sams



Cover shot by  
Alex Mustard

Underwater Photography 2001 - 2017  
© PR Productions  
Publisher/Editor Peter Rowlands  
[www.pr-productions.co.uk](http://www.pr-productions.co.uk)  
[peter@uwpmag.com](mailto:peter@uwpmag.com)

## Trident Open ROV

You may (or probably may not) remember my Editorial piece in UwP90 about the Trident Open ROV Kickstarter project. Well I have an update for you.

I pledged my money in November 2015 and was well down the list of initial investors in the queue so the campaign had started a lot earlier in 2015. My credit card was duly charged with a promise of November 2016 delivery.

In October 2016 an e mail came through in couched words intimating that delivery would be delayed. I wasn't surprised.

Coincidentally when I attended the DEMA Show in Las Vegas in November 2016 Trident OpenROV had a stand there and I was able to speak to those involved in the project. We discussed the reasons for the delayed delivery and was given several reasons why. I responded that I understood the problems with getting a new product off the ground and I left reassured that I would get my ROV but not just yet.

And then I started to think about things overnight and went back the next day to talk about the product they had on display. "After 18 months development is this a working prototype?" I asked. "Yes" came the

# Editorial

reassuring reply. "Great" I said. "Let's see it in action". "Ah, well" came the reply. "It'll take us at least 30 minutes to get it up and running." 18 months in the development and they still need an extra 30 minutes to get one working!

That was it for me and when I got back to the UK I e mailed for a refund. To their credit, I got a reply the same day and a full refund was made to my credit card the next day.

I take no pleasure in reporting this because I still don't have an ROV that I would like to use but the only positive to come out of this, for me personally, is that because of the exchange rate fluctuations between when I pledged and when I was refunded, I'd made just over £100 profit!

But I'd much rather have a working ROV.

## Jack Perks' book

Later in this issue you can read news of an excellent new book "Freshwater Fishes of Britain" by Jack Perks and an illustrated article by the man himself about how the images in the book were achieved.

I accept that we tend to be totally

focused (pun intended) on saltwater marine life and could be accused of thinking that our freshwater counterpart is decidedly lacking in subject material but Jack's book is an excellent reminder of what great fishlife we have in our rivers and lakes.

The other thing that impressed me was that, when I contacted him for details of the equipment he used and in particular the lighting, he replied that almost all of the shots were taken by available light only.

Congratulations on an excellent book, Jack.

## Envy

Writing this, as I am, on New Year's Eve in the middle of a damp but mild winter here in the UK, I can't help but feel envious of those who live near and dive The Poor Knights Islands in New Zealand not just because it's great diving but also because it summertime there! Alex Stammers' excellent article brought back fond memories for me as I visited and dived 'The Knights' 3 years running in the late 80's. New Zealand has a great range of diving from tropical north to glacial south.

Then there's Walt Stearn's comprehensive coverage of the diving to be had off Palm Beach, Florida. I sampled a short taste of it after DEMA 2015 with UwP's Seasoned Reviewer Phil Rudin and Nauticam UK's Alex Tattersall.

We were there at the wrong time of the year for the Goliath Grouper spawning but I did get a couple of special encounters with individual groupers which was impressive enough but Walt's powerful images of a spawning aggregation capture the majestic scale of the event and it is a credit to those involved who brought these amazing creatures back from the clutches of the fishing fraternity to such great effect.

As if this spectacle wasn't enough, there's wrecks, turtles, sharks and drifts as well as the 'awesome' Blue Heron Bridge.

DEMA is in Orlando once again this year and I think I might just extend my trip to have another sampling.

Finally, I'd like to wish you all best wishes for 2017 and may your visibility be good and your image taking enjoyable.

**Peter Rowlands**  
[peter@uwpmag.com](mailto:peter@uwpmag.com)

# News, Travel & Events

## American Crocodiles at Banco Chinchorro Mexico July 2017

Chinchorro Atoll (Banco Chinchorro Biosphere Reserve) is the best place in the world to get close to American crocodiles. Located south of Cancun, Mexico and near the Belize border. The Banco Chinchorro Biosphere Reserve is the largest stand – alone reef in the Northern hemisphere and one of the healthiest. Fewer than one thousand divers get to see these remote and unspoiled dive sites per year. It is home to the largest population of American crocodiles found in the Americas.

This July, photographer host Gregory Sweeney and 6 guests will travel on a unique adventure to see American Crocodiles and dive these beautiful and remote reefs.

This is a safe encounter with guides who have done years of experimentation and careful planning to make this safe. Our outfitter and guide in Xcalak was the first operator to organize croc encounters in Chinchorro and they remain the only dive operator with an official concession. They are committed to sustainable tourism and conservation.

On the Chinchorro Banks, we stay in utilitarian fishing shacks on



stilts over the shallow waters: 36 nautical miles off shore and across from Xcalak, Mexico.

Each morning we dive to take in the pristine reefs and marine life while also hunting lionfish. There is a duo purpose in this; to help eliminate the invasive lionfish population and to get food to attract the crocs. In the afternoons we photograph the crocs in the 1.2m deep water around our huts. We are able to maintain a level of safety even when we are getting up close due a safety diver nearby with a pole to ward off any advances from

excited crocodiles.

When in Xcalak we have a chance to enjoy some diving on excellent reefs in the shallows and some deep walls covered in healthy sponges and stands of black coral.

Sometimes manatees are spotted on these reefs and there are several wrecks and plenty of large and small fish species. If ancient reptiles and remote adventure is calling to you, get more information on price and availability from Gregory Sweeney.

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

**Siren Fleet**

Dive in Fiji & Immerse yourself amidst a kaleidoscope of colourful soft corals & schooling pelagies

**Specialists in Underwater Photography**

Contact us for further information  
[info@sirenfleet.com](mailto:info@sirenfleet.com)  
[www.sirenfleet.com](http://www.sirenfleet.com)

## Digital Shootout in Bonaire

WARM UP WEEK: June 10-17, 2017

EVENT WEEK: June 17-24, 2017

DIVE INTO THE BEST DEMO GEAR STAFF IN THE INDUSTRY



Take it seriously or take it slow, the Digital Shootout is an underwater photography/videography vacation designed to take the shooter in the group to the next level. If you're a new or an intermediate shooter, the Digital Shootout is our fast-track to better underwater imaging. In six days of seminars and diving, the Digital Shootout team will help dial in your underwater system and shooting techniques. Enter your best images in the final contest to win trips, gear, and

more from our great sponsors.

The Divi Flamingo Beach Resort & Casino is ideally located along the west coast of Bonaire just steps from the capital city of Kralendijk. Guests may enjoy an easy 10 minute walk to the restaurants, bars, and shops of Bonaire's charming capital.

The Divi Flamingo is beachfront, and approximately 20 yards from the Calabas Reef, making shore diving easy and convenient.

[www.backscatter.com/learn/trips-and-classes/trips.php?ID=278](http://www.backscatter.com/learn/trips-and-classes/trips.php?ID=278)

## Manta Fest 2017

Aug 26th-Sept 10th, 2017

Come learn from the top underwater shooters in the world, experience great diving and have lots of fun! Ambassadors Steve Miller and David Fleetham will be there along with experienced Ikelite pros Ray Bullion, Tim Rock, and Brad Holland, plus Frank Scheider of Tauchen magazine and Andy Schumacher of Schumacher Films.

Manta Ray Bay Resort & Yap Divers are one of our favorite operations in the world- not just for the wake-up, to-your-room coffee service, but for the fantastic diving



© Steve Miller

too! If you haven't been, this is a MUST GO... if you've already gone you know you need to go back!

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

**BASKING SHARK SCOTLAND**

Join us for your 2017 adventure  
400+ sharks in 2016 our season  
Peak tour season July-August  
Our brand new website is now live  
[www.baskingsharkscotland.co.uk](http://www.baskingsharkscotland.co.uk)

# Halmahera 2017



## Great Hammerheads, Tiger Sharks & Dolphins Bahamas

April 17 - April 25,  
2017

Join us for one of the best shark experiences any where in the world. We will be diving with and photographing tiger sharks, reef sharks, lemon sharks, great hammerhead sharks, and atlantic spotted dolphins trekking from Grand Bahamas to Bimini.

We will be diving with Blue Iguana Charters and will be accompanied by shark wranglers Jamin Martinelli and Mike Black—the best shark people I’ve ever worked with. You are **GUARANTEED** great shark encounters and photos on this trip.

We still embark and disembark out of Freeport International Airport on Grand Bahama Island. Boarding will begin on the 17th at around 4PM, and will finish the trip on the 25th sometime mid-day.

Trip open to photographers and non-photographers alike



[WWW.SEAHORSELIVEBOARD.COM](http://WWW.SEAHORSELIVEBOARD.COM)  
[INFO@SEAHORSELIVEBOARD.COM](mailto:INFO@SEAHORSELIVEBOARD.COM)



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

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

# WETPIXEL



# THE SOURCE

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

## Jason deCaires Taylor's Underwater Sculptures



Jason deCaires Taylor is an internationally acclaimed sculptor who creates underwater living installations, offering viewers mysterious, ephemeral encounters and fleeting glimmers of another world where art develops from the effects of nature on the efforts of man. His site-specific, permanent works are designed to act as artificial reefs, attracting corals, increasing marine biomass and aggregating fish species, while crucially diverting tourists away from fragile natural reefs and thus providing space for natural rejuvenation. Subject to the abstract

metamorphosis of the underwater environment, his works symbolize a striking symbiosis between man and nature, balancing messages of hope and loss.

Taylor's sculptures change over time with the effects of their environment. These factors create a living aspect to the works, which would be impossible to reproduce artificially. As time passes and the works develop biological growth, they redefine the underwater landscape, evolving within the narrative of nature.

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

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

# scubadiveasia

## The Best Dive Resorts

## Worldwide

scubadiveasia.com

## Moorea Ocean Adventures



From \$610 USD for Up to 6 guests

Whale and  
Dolphin Swim



From \$610 USD for Up to 6 guests

Shark and Ray  
Swim



From \$610 USD for Up to 6 guests

Big Blue  
Discovery



From \$610 USD for Up to 6 guests

Reef Snorkeling



From \$610 USD for Up to 6 guests

Underwater  
Flying



Please contact us for a quote

Charter  
Expeditions

GregorySweeney.com *Photography Adventures*

*Scuba with Sea Lions*  
April 2017

*Crocodiles in Mexico*  
July 2017

British Columbia

After being involved in marine conservation and ecotourism in French Polynesia for years, Matthieu Petit and Trevor Orth are glad to present you the 1st company of private boat tours entirely dedicated to the observation and the encounters with the marine wildlife of Moorea : Moorea Ocean Adventures.

We specialize in offering adventure tours and experiences beyond the ordinary to swim with the amazing variety of whales, dolphins, sharks, rays, turtles,... that inhabit the reefs and seas around the tropical paradise island of Moorea in French Polynesia.

We are a small company dedicated to fun, personal and informative adventure tours . Our customizable private tours are led by our staff marine biologist, Matthieu Petit, and cameraman, Trevor Orth. We propose unique experience escaping the crowded commercial tours to join private activities suitable for up to 8 guests. The best way to encounter wild marine animals in their environment with maximum safety and comfort but also a minimum impact on animals' behaviour.

[www.moorea-ocean-adventures.com](http://www.moorea-ocean-adventures.com)



**THE SARDINE RUN**  
Shark & Shoal Diving Adventures

*2017 bookings  
now open*

*Poseidon Rebreathers &  
courses available*

[www.thesardinerun.co.za](http://www.thesardinerun.co.za)

## Scuba Videos



We love diving and we love underwater videos. Good underwater videos. Too much of what is published on the Internet is simply too shaky or too blurry.

There are, however, many fantastic videos that don't get the attention they deserve. So we realized that there was a need for a filter. Something that gives you a chance to find all the hidden gems out there.

Most of the videos that we link to are made by amateurs and some by professionals but they will all give you a moment of underwater magic.

Please let us know of any video that you think qualifies to be on Scubavideos.

Enjoy the site!

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

## Solitary Islands, NSW March 2017



Well, downunderpix is going again to the beautiful Solitary Islands on the 26th March to the 2nd April 2017. The cost of \$990 per person includes 7 nights at Mullaway, 12 dives with Dive Quest, tanks/weights/airfills, return airport transfers (if required).

Underwater photographers Paul Macdonald and Elizabeth Solich will lead the trip and all divers are welcome to attend, whether or not they are photographers. If taking pictures underwater is your thing, it will be an ideal opportunity to continue to develop your underwater photography skills and Paul and Elizabeth will be on hand for help and advice if required. Use your frequent flyers, arrange your own flights or take your car.

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

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



BEHIND EVERY MARINE SHOW  
DRAMA UNFOLDS.

NANUQ WAS RIPPED FROM HIS FAMILY  
MEMBERS AND FORCED TO LIVE IN  
A TANK WITH TWO CAPTIVE-BORN BELUGAS  
WHOM HE DID NOT KNOW.  
IN FEBRUARY 2015, NANUQ WAS ATTACKED  
BY THESE TWO BELUGAS.  
TRAPPED AND UNABLE TO ESCAPE,  
NANUQ DIED A SLOW DEATH  
FROM HIS INJURIES.

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



CAPTIVITY KILLS. STOP SUPPORTING MARINE PARKS.

## Gerald Rambert workshop in Raja Ampat Indo Siren: 26th April - 6th May 2017

The Siren Fleet is a keen supporter of underwater photography and each of our yachts is designed to accommodate the underwater photographer's needs. Throughout the whole year they have a wide selection of escorted underwater photography workshops, hosted by well-known underwater photographers and videographers who provide our guests with the opportunity to develop and improve their photography skills in a variety of destinations.

Gerald will accompany guests on board to be on hand to give advice on macro, wide angle, compact and SLR photography. Recognising that each person's camera is a different make and model the first two days of the trip are spent assisting each guest with camera set up, fine tuning the settings and finding the best compromise for achieving optimum results. In between dives Gerald sits with guests to review photos and discuss techniques for improvements on an individual or group basis depending on the group and camera types involved.

Gerald will accompany each individual underwater to develop



technique and also show how they approach a subject and would set the camera. This allows for development at an individual pace and for him to tailor learning to individual needs. He learned by doing and watching others and feels this is the best approach to running the workshop.

During the afternoon, typically after the third day dive, a presentation will be given on the following subjects: Terms and photo language, the light, the use of flashes, framing and composition, wide angle photography, macro photography and Photoshop.

Limited spaces!

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

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

# BOSTON SEA ROVERS

EDUCATION, EXPLORATION & CONSERVATION

- FREE EXHIBIT HALL WITH SCUBA EQUIPMENT,  
DIVE TRAVEL & MORE
  - FREE PARKING
  - FREE DISCOVER SCUBA DIVING
  - UNDERWATER FILM FESTIVAL
- PRESENTATIONS • KIDS ACTIVITIES
  - WORKSHOPS
  - ARTIFACT EXHIBIT
- MARINE SCIENCE & CONSERVATION  
PUBLIC FORUM

**2-DAY EVENT**

**MARCH  
11 & 12, 2017**

DoubleTree by Hilton Hotel  
Boston North Shore  
50 Ferncroft Road  
Danvers, Massachusetts

For more information on Tickets, Speakers,  
Workshops, Exhibitors, Location and more:

[BostonSeaRovers.com](http://BostonSeaRovers.com)

photo: © Becky Kagan Schott



Find an Authorized Ikelite Dealer at [Ikelite.com](http://Ikelite.com).

# The Revolution is Now

And it starts with the **Nikon D500**

## Choice of Port System:

- New Dry Lock (DL) port system for maximum flexibility, improved security, and expanded support of popular larger diameter lenses
- Four Lock (FL) port system model for legacy users who want to use their older Ikelite lens ports

## Choice of Flash Options:

- Pre-installed manual electrical flash bulkhead and hotshoe for the fastest and most reliable triggering with most popular underwater strobes
- Optional TTL hotshoe and Nikon TTL Converter provide true strobe communication between the camera and Ikelite DS strobes
- Optional remote strobe triggering via extension cord or optical slave sensor; third party accessory support for triggering via Pocket Wizard transceivers

## Choice of Depth Rating:

- 50' (15m) back for shallow water, pool and surf use makes the system lighter and easier to handle at the surface of the water
- 200' (60m) back provides access to almost every function and withstands daily use up to recreational dive depths
- Enjoy the best of both worlds; backs are available for purchase separately to mix and match

## Standard Features:

- Vacuum valve standard on DL models; optional on FL model
- Supremely functional control layout with access to all important camera features
- ABC-PC and Lexan construction is strong and fundamentally corrosion resistant
- Balanced aluminum base with left-hand quick release handle
- Made in the USA

# New Products

## Nauticam NA-H4D Hasselblad H4D/H3D systems

Nauticam sets new standards for underwater image quality by introducing our NA-H4D housing for Hasselblad H4D/H3D systems.

Sensors used in H System backs are approximately twice the size possible with 35 mm digital SLRs, featuring more pixels than 35 mm digital systems and providing better resolution and clarity. The pixels in H System backs are also larger, which means less noise in your images and better dynamic range with clearly improved detail. Hasselblad digital backs on H cameras also allow the exploitation of powerful features such as IAA (Instant Approval Architecture), DAC (Digital color aberration and distortion correction), HB RGB and 3F RAW for unique natural color solution, lifting the combination above and beyond the norm and well into the leading position of medium format digital photography.

The H System's central lens shutter allows flash sync at all shutter speeds, enabling use of flash in all lighting conditions. H cameras' contemporary design and intuitive operation provide simple and convenient handling and the



programmable interface allows you to customize the camera according to your particular desires or working styles.

The NA-H4D housing allows convenient access to all functions of the camera, maximizing the exploitation of this superior system underwater and making sure that all important moments are captured without hassle. The housing is also extremely well balanced; its thoughtfully designed profile means that when the camera is placed within, the system is almost buoyant underwater.

Both front and rear control wheels are within easy reach by the right thumb and middle finger; with



the extra large knobs, settings can be adjusted effortlessly. Shutter release is activated via a lever, by the right index finger; the 2-stage lever mechanism is designed to increase the tactility by improving the feedback from the camera's shutter button, hence eliminating accidental release while focusing. Moreover, the lever located close to the right handle can be customized to reach either the AEL or the true focus functions of the camera; while a circular multi-directional pad, within comfortable reach by the left thumb allows smooth and swift photo browsing and navigation through the menu.

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

**ACQUAPAZZA**

**NEW TYPE**

Underwater Housing for the Sony  $\alpha$  6300

**APSO-A6300**

ZEISS 50mm Macro, 12mm Wide and 16-70mm that are suitable for high image camera were added.

<http://acquapazza.jp/en>

**Nauticam**  
innovation underwater



## Compact Macro Converter 2

>>>>>>>>>

*CMC-2 is a new macro lens designed to stand alongside the previous CMC-1, offering a less powerful lens choice for "larger" macro subjects that is noticeably easier to use*

**Nauticam** 蓝天海

www.nauticam.cn

## This is iBubble



iBubble is the first autonomous diving drone that follows you and captures beautiful footage, hands-free.

We're underwater world lovers. What we enjoy most is exploring the underwater world, taking in the beauty of the oceans. If you're like us, you know how cool it is to share your diving experiences with people on land. But you also know how complicated filming can be, how it limits your freedom underwater – and freedom is why we dive in the first place.

With iBubble, we're designing the first intelligent, user-friendly and completely autonomous diving drone. It gives you unprecedented possibilities to create underwater

movies with your GoPro®. From scuba divers to free divers, but also recreational snorkelers and spear fishers, everyone can enjoy iBubble!

Thanks to our patented underwater localization technology, iBubble follows you and films entire diving sessions – without you having to do anything. It's your own pilot fish, but with a camera and smarter.

A version will also be available with a 100 metre tether and surface control with a video link.

[www.ibubble.camera](http://www.ibubble.camera)



**ACQUAPAZZA**



## APSO-A72D

Underwater Housing for the Sony ILCE-7M2/7RM2  
**Go to the depth 200m!  
656ft!**



<http://acquapazza.jp/en>

# NEW MIDX HOUSINGS



**NIKON MDX-D500**



**CANON MDX-80D**



**SONY MDX-α6300**

WWW.SEA-SEA.COM  
**SEA&SEA**  
THE UNDERWATER IMAGING COMPANY

## Ikelite Vacuum Kit for 3/8 Inch Holes



Vacuum valve fitting for older housings without a spare 1/2" diameter accessory port. This valve can be installed in place of an unwanted control knob. Easy installation into the gland hole with a low profile to avoid interference with control operation. The included waterproof plug is secured to the fitting to prevent accidental loss.

Includes vacuum pump with gauge. Included are Vacuum Valve for 3/8 Inch Holes # 47001, Vacuum Pump with Gauge # 47011 and Vacuum Pump Tubing Insert # 47005 MSRP \$185

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

## 360Abyss™ v4



Over the course of the past 3 years, 360RIZE underwater spherical video technology has helped hundreds of filmmakers, oceanographers and educators document and share our planet's aquatic environments.

The 360Abyss™ v4 is a professional underwater 360 video camera system. With an output resolution of 8K (8,000 x 4,000 pixels) and a 1,000 meter crush depth rating.

The 360Abyss™ v4 positions six GoPro™ HERO3, HERO3+, or HERO4 cameras in a spherical orientation to capture fully spherical 360 x 180 degree 360 video content. The individual videos from each camera can then be stitched together using post production software to create 360° videos.

[www.360rize.com](http://www.360rize.com)



## Nauticam NA-RX100IV for Sony RX100 IV



### "Amazing 4K Compact"

With the ability to shoot stunning 4K video and 20mp stills, this camera and housing package offers image quality approaching that of an SLR system with the size and convenience of a compact. Controls are simple, but well thought out with easy to access push buttons. Dual command dials immediately access frequently used manual settings like Manual Focus, F-Stop, and Shutter Speed. The addition of excellent wet lens options make for one versatile, powerful, compact package.

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

PROFESSIONAL FILTERS FOR GOPRO

# FLIP5

**MACHINED ALUMINUM  
FUMBLE-FREE FLIP DESIGN  
PERFECT UNDERWATER COLOR  
PROFESSIONAL +15 MACRO LENS**



COMPATIBLE WITH:



**BACKSCATTER**  
**WWW.FLIPFILTERS.COM**

## Fantasea Housing For Sony RX100 V



Fantasea proudly announces that the FRX100 IV HOUSING (including all related accessories) is fully compatible with the brand new Sony RX100 V, which was released only a few weeks ago.

The FRX100 IV Housing provides the most compact, sturdy and ergonomic waterproof housing for this camera. A complete accessory system is available, including wide angle and macro lenses, filters, lighting sets and more.

FRX100 IV is also fully compatible with the Sony RX100 III and RX100 IV cameras.

Current suggested retail price of the FRX100 IV Housing in the USA is \$400.

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

## MPAC Dive



mpac+ Dive products allow you to use a smartphone freely in water. Since the MPAC Dive products enable to touch the screen of a smartphone in water, you can use many features of the smartphone such as taking photos, recording videos, using compass, listening to music and using GPS.

Only MPAC Plus can produce a waterproof pouch by using urethane whose tensile strength is 8 times as high as that of others. Products made of urethane (TPU) can withstand high or low temperature, and its provides that Crystal clear case allows for photos and video.

Certification of waterproof depth down to 200 Meter

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



## Nauticam NA-D500 for Nikon D500



### "A New Era"

With 153 focus points and 10 fps continuous shooting, there has never been a Nikon DX camera with the level of autofocus and continuous shooting capability as the Nikon D500—not to mention the revolutionary addition of 4K UHD video. This extraordinary camera demands an equally impressive housing, and the Nauticam design team has left no detail overlooked. In addition to the superior ergonomics for which Nauticam is renowned, each NA-D500 comes with an installed manual optical flash trigger—standard!

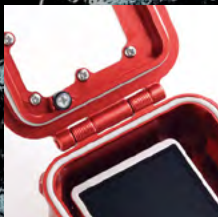
[www.reefphoto.com](http://www.reefphoto.com)



Underwater Camera Housing for SONY RX100 M4

# APSO-RX100M4D

A compact digital camera also go to the depth 200m 656 ft!



<http://acquapazza.jp/en>

## Two new upgraded Keldan lights

KELDAN stands for compact lights that are not only extremely bright, but offer the best beam and colors for specialty applications such as underwater videos

KELDAN is continuously working on the improvement of their product line and have made an upgrade of the VIDEO 4X FLUX and Video 8X FLUX.

The 2017 version of these two new lights includes a very wide power range with 9 power levels. We have also been able to increase the output from 7000 lumen to 8000 lumen (for the Video 4X ) and from 12000 lumen to 13000 lumen for the Video 8X.

Both lights have a high color rendering index of CRI82 to ensure that colors are correct and natural.

The lights are now shipped with a ball mount instead of the YS-Adapter.

The new lights have a new model name: VIDEO 4X 8000lm CRI82 (Item No. 1094) and VIDEO 8X 13000lm CRI82 (Item No. 1071).

Keldan's lights have a new driver that offers a seamless intensity



control over 9 steps from 2.5% output. Each step is 50% greater than the previous, giving a logarithmic smooth adjustment. There is also an off position on the switch which is separate from the travel position, allowing the light to be adjusted with one hand.

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

## FROM POINT & SHOOT TO PROFESSIONAL



**BACKSCATTER**  
UNDERWATER VIDEO & PHOTO

We Dive, Shoot and Service Everything We Sell

Free Lifetime Tech Support!

USA West HQ  
+1 831-645-1082

[Backscatter\\_West](#)

USA East  
+1 603-432-1997

[Backscatter\\_East](#)

**BACKSCATTER.COM**

## THE OLYMPUS TG-4 AMAZING SUPER MACRO



Now Shooting In RAW

**BACKSCATTER**  
UNDERWATER VIDEO & PHOTO

USA West HQ  
+1 831-645-1082

USA East  
+1 603-432-1997

Backscatter\_West

Backscatter\_East

**BACKSCATTER.COM**

## BS Kinetics universal video housing



BS Kinetics has developed the “Gobi” as an universal underwater housing. With camcorders continuously shrinking in size, the rapid model changes and the stringent air traffic rules are cause for new approaches for underwater casings. These approaches relating to size, weight, universal use, special adaptations to the cameras and customer requests are implemented with this underwater casing. Current cameras like the Canon HF G30 or the Sony PJ810 are suitable. For the Sony models from 2013 an additional cable VMC-AVM1 is needed because these cameras have a new multi connector.

The carbon casing has a net weight of 2.6 kg and a size of 14x15x31 cm. It will hold cameras up to 17 cm long. The composite material of carbon fibre and epoxy resin, well-known from formula one racing and light aircrafts, is as hard as steel while offering the benefits of a synthetic

material. It is rot-proof, long-lasting and not affected by salt water or UV rays.

The camcorder is controlled via a cable or infrared remote control inside the casing. It is offered for camcorders by Sony, Panasonic, Canon and JVC. This flexibility allows all camcorders to be operated. After switching cameras updating/exchanging the control will set it up for the new camcorder, if necessary. Recordings can be viewed with a 3.6” TFT colour monitor. It is powered via rechargeable battery and features a run time of 8 hours. LEDs indicate the battery charge level, reminding the user to recharge in due time. A 3.5” high resolution TFT is optionally available. This monitor captivates with a greater viewing angle and non-reflective images in the sun.

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

THE NEXT GENERATION

# YS-D2

Underwater Strobe



**READY & TTL  
AUDIBLE CONFIRMATION**

**DUAL POWERED  
MODELLING LIGHT**

**ILLUMINATED REAR  
CONTROLS (BACKLIT)**

**FASTER RECYCLING TIME**

**WIDER EV RANGE  
AND MORE...**



[WWW.SEA-SEA.COM](http://WWW.SEA-SEA.COM)

**SEA&SEA**  
THE UNDERWATER IMAGING COMPANY

# WEEFINE

THE ULTIMATE TOOL FOR UNDERWATER  
MACRO PHOTO AND VIDEO!



**WEEFINE RING LIGHT**

Maximum power of 1000 lumens and can be easily mounted on a 67mm port or macrolens

4 DIFFERENT LIGHTS IN ONE SMALL  
PACKAGE (WHITE, RED, UV AND AUTO OFF)



**WEEFINE SMART FOCUS 2300**

It's a Video light, red light, UV light and automatic focus light - all in one!  
Maximum power: 2300 lumens.



UWCamerastore is WeeFine distributor for Europe.

## Sea & Sea MDX-5D Mark IV for Canon EOS 5D Mark IV



The MDX-5D Mark III and the MDX-5D Mark III ver. 2 housings can be converted to accommodate both the EOS 5D Mark IV and the EOS 5D Mark III (fees apply).

Important controls can be operated whilst holding the grips. Frequently-used buttons such as ISO, AF Point Selection and Multi-function Selection buttons are operated by external levers, allowing quick and accurate operation.

The Port Lock prevents the port from turning or loosening and the Port Lock lever is specifically located to avoid being unlocked accidentally.

The housing is equipped with a lens-lock release button which makes it possible to change lenses easily, without opening the housing.

The camera's diopter adjustment dial can be operated from outside the housing. This feature is useful when two or more people with different eyesight use the housing.

Pulling out the Focus/Zoom Dial gives sufficient room inside the



housing to easily accommodate larger diameter lenses.

All controls have luminescence stickers which glow in dark environment.

Equipped with the Optical Viewfinder 0.5x as standard. Other optional viewfinders such as the VF180 1.2x, VF45 1.2x and Optical Viewfinder 0.8x can be used.

Sync Cord 2-pin Connector enables use of conventional hardwired Sync cable (Manual mode only).

Accessory port enables use of Leak Sentinel (vacuum sensor).

Built-in leak sensor immediately alerts you to water ingress.

Equipped with two sacrificial zinc diodes (one on the front case and the other on the rear) to prevent electrolysis damage.

Tripod screw mount is located on the centre underside of the housing.

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



## Nauticam NA-A6300 for Sony A6300



**"Versatility & Power"**

The Sony A6300 is blurring the lines between compact camera, DSLR, and video powerhouse with its 24.2MP APS-C sensor and 4K UHD shooting capability. An ever-expanding selection of lenses allows your pick of the right lens for the job. The 16-50mm PZ kit lens is easily and comfortably controlled in the Nauticam A6300 housing and is expertly complemented by the Nauticam Wet Wide Lens (WWL-1) or Compact Macro Converter (CMC-1) for the ultimate in versatility—all in one dive!

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

# KELDAN<sup>+</sup>

Advanced Lighting Technology



**VIDEO 4X 8000lm CRI82**

Variable output 200 - 8000 lumen

9 power settings

Color rendering index CRI82

110° coverage in water

For Professionals Who Know The Difference

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

**Cameras UNDERWATER** [WWW.CAMERASUNDERWATER.CO.UK](http://WWW.CAMERASUNDERWATER.CO.UK)  
TEL: 01404812277

**AQUATICA HOUSING FOR THE CANON EOS 5D MK IV**

## Aquatica Canon 5DMk IV housing



Aquatica is proud to introduce to you the new Aquatica A5DMkIV housing for Canon's latest evolution to the 5D family, the 5D Mk IV. Our housing is scheduled for shipping around the end of November 2016.

Our design engineers were happy to find out that the 5DMk IV was very similar to the cameras that came before it, the 5DMkIII and the 5DS/R, therefore they only had to make small changes to this new housing and also made a few controls more ergonomic.

With very low R&D costs, we are pleased to announce a retail price of \$2,795.00 USD. This will be by far the best aluminum housing option on the market.

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

## Ikelite 200FL TTL Housing for Nikon D3300, D3400 DSLR Cameras



We extend the ergonomics of your camera underwater, providing larger controls and push buttons which are easy to access even with thick gloves. Whenever possible, controls are located in the same configuration as on the camera to replicate the muscle memory and familiarity you've developed with your camera on the surface. Control symbols laser engraved into the back of the housing will never peel off or fade even with years of use. The camera's large, super-bright LCD screen is viewable edge-to-edge through the back of the housing.

The front-loading camera mounting system makes installation and removal a breeze. The camera mounting plate allows ready access to the battery and memory card.

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

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



## NA-5DIV Housing for Canon 5DIV Camera



## Introducing Bonex Scooters & DPVs



Manufactured in Germany, Bonex offer a range of underwater scooters that are the result of years of intensive development.

Their products stand for compactness, high performance and reliability. Bonex underwater scooters are the most compact professional scooters world-wide with an unbeatable performance/weight ratio. They are a perfect combination of low weight and long runtimes!

Powered by Bonex, the compact, travel-friendly Aquaprop is extremely lightweight at only 6kg. This makes it ideal for everybody and can be used in a wide range of locations, such as swimming pools, lakes and the sea. Fun for everyone who loves the water!

The Universal and Performance ranges offer transport solutions for technical divers wanting to explore deeper and further.

Universal models (Ecos/Ecos+/Ecos S) use modern and reliable servo motor technology, powered by Lithium-ion batteries. Because they are lightweight, at only 15kg, they can easily be transported for ocean, wreck and cave diving.

Performance models (Reference RS/Discovery RS/Infinity RS) are more capable and designed for use in more challenging conditions, like strong currents, and for divers loaded with extensive gear or covering greater distances.

Available to order from Sea & Sea Ltd stockists.



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

# APSG-dpQ

Underwater Camera Housing for  
SIGMA dp00, dp10, dp20, dp30



<http://acquapazza.jp/en>

## Orcatorch Dive Lights



This is a range of well priced, precision machined aluminium dive lights that are compact and light to handle but bright and powerful to use.

Orcatorch Technology Ltd is an integrated company specializing in the R&D, manufacture, sales and marketing of high performance LED flashlights for scuba diving, outdoor adventure, the police and military. This is all done in-house with their own R&D centre, CNC machines, product assembly lines and testing labs.

The range of dive lights includes compact backup lights, primary dive lights, umbilical canister lights and video lights. Accessories such as the hand/wrist mounts along with the

D560 mask mount makes the Orca range extremely versatile.

Utilising Cree LEDs and high-efficiency constant current circuitry to maximise the conversion of power to light, Orcatorch lights keep a high brightness until the battery is totally spent.

To ensure an even and efficient beam, aluminium alloy reflectors are used along with toughened, scratch-resistant glass (coated on both sides).

Robust construction in hard-anodised finish aluminium ensures the units are lightweight with good heat dissipation and every ORCA dive light has to pass a 150mt water pressure test.

[www.sea-sea.com/brands/orca-torch](http://www.sea-sea.com/brands/orca-torch)

# ADVICE FROM THE UNDERWATER PHOTOGRAPHERS THEMSELVES!



**WEEFINE RING LIGHT**

THE ULTIMATE TOOL FOR UNDERWATER MACRO PHOTO AND VIDEO!



**DOME DIFFUSER PRO**

FOR INON Z240/D2000, IKELITE DS125/160/161 SEA&SEA YS-D1/D2 AND YS-01/02/03



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

Recsea RX100 system with strobe, Video Light, and Fisheye Lens



**Cameras UNDERWATER**

+44(0)1404 812277  
 SALES@CAMERASUNDERWATER.CO.UK  
 WWW.CAMERASUNDERWATER.CO.UK

## Backscatter Flip 5

Backscatter is pleased to announce the latest generation of their Flip Filter line with the arrival of Flip 5.

The Flip 5 is designed to be compatible with the new Hero 5 Super Suit Housing, and also the Hero 3, 3+, and Hero 4 housings. This can be achieved with the included plastic spacer to fit seamlessly with the front port on each housing.

Backscatter makes three different filters for perfect color at any depth, and the Flip system can support one or two filters on the same dive. These filters are optical-quality acrylic and are virtually unbreakable. They offer specifically calibrated filters for different depths, like the Shallow Filter for 5-20ft, Dive Filter for 20-50ft, and Deep Filter for anything below 50ft.

In addition to the standard filters, there is a broad range of filters and lenses for specialty work and environments, like the Greenwater filter, +15 MacroMate Lens, +10 Close-focus Lens, Nightsea/Fluorescence filters, and for topside there are polarizers and graduated neutral density filters.

A new feature of the Flip 5 is an



included Lens Removal Tool. This tool was developed to assist with removing the lens on your Hero 5 camera. The lens must be removed before installing the camera in the housing, and testing has found it can be a little tricky sometimes. With the inclusion of the new Lens Removal Tool you can now easily twist for simple lens removal.

The Flip 5 is available for pre-order now, and will begin shipping in January 2017.

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

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

## Acquapazza housing for the Sigma sd Quattro and sd Quattro H



Japanese housing manufacturer Acquapazza are developing a housing for the Sigma sd Quattro and sd Quattro H.

The Sigma sd Quattro H uses a 26.6x17.9mm Foveon sensor that the company says offers resolution on a par with a 51MP sensor of traditional design. The sensor actually uses 25.5 million pixels, but due to the unique layout of the sensor Sigma claims it can record twice the detail of standard models.

Acquapazza have enlarged a photograph taken with the original dp Quattro with 29 megapixel to A0 size without any significant loss of quality.

Acquapazza feel that the performance of this camera is more like medium format but in a much smaller physical size.

They are excited at the prospect of being able to capture such quality underwater.

[www.acquapazza.jp/en](http://www.acquapazza.jp/en)

## Weefine ring light

Perfect macro images or videos with the new Weefine ring light. This was one of the biggest innovations at the Dema show in 2016!

The ring light gives you 1000 lumens (continuesly) with 4 different power levels (100%, 75%, 50% and 25%) and can be easily mounted on any 67mm port or adapter. The burn time is around 1 hour at the highest power level. The power comes from one 18650 battery or three AAA batteries. The battery is already supplied in the package and it comes with a small and easy to use



charger. The Weefine ring light will be available mid January 2017.

Price: €249,-

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

**Cameras UNDERWATER** [WWW.CAMERASUNDERWATER.CO.UK](http://WWW.CAMERASUNDERWATER.CO.UK)  
TEL: 01404812277

**IKELITE HOUSING FOR THE PANASONIC LUMIX GX85**

## SAGA Trio lens

Saga Dive announces the release of its new macro lens: Trio.

This revolutionary lens is the most advanced wet magnification systems available at the moment. The patented two lever system makes it possible for the photographer to easily change magnification, even while they are looking through the viewfinder, enabling switching between differing magnification ratios in the minimum time possible but with the maximum optical quality.

The new lens, Trio, is designed to be used with macro lenses as the Canon 100mm or the Nikon 105mm but it can also be used with some other lenses, such as the canon or Nikon 60mm macro lenses. It has been tested with the Sigma 150mm and Canon 180mm too.

Manufactured from hard anodized machined aluminum, the Trio has two groups of lenses inside: One with a +5 diopter and the other with a +10. These two groups can be moved independently, allowing 4 possible levels of magnification. With the the two levers in their upper position, there is no magnification, which gives infinite focus without any vignetting.

The lens is attached to the port via a 67mm thread. If your port doesn't have a 67mm, Saga Dive have an adaptor for any type of macro port.

Once attached, the lens can be rotated in order to place the lens in any preferred position and to allow proble free strobe positioning.

The lens will be shipping from mid January.



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

# WORKSHOPS

BLUE HERON BRIDGE  
Year-Round

## PALM BEACH



PHOTO  
/ INTENSIVE

ANILAO  
April 1-8  
2017

## PHILIPPINES



PHOTO  
+ VIDEO

LIGHTROOM™  
Year-Round

## FT. LAUDERDALE



WORKFLOW  
/ PROCESSING

**CB70 SQUARE GROUPE**  
**UNDERWATER HOUSING  
 TRANSPORT & RINSE TANK**

visit us  
 DEMA BOOTH  
 #8205

\* SHOWN WITH  
 NAUTICAM 1DX  
 HOUSING  
 ULCS ARMS  
 SEA&SEA STROBES  
 FOR SIZE  
 REFERENCE  
 ONLY

**CINEBAGS**

**FOLDED FOR TRANSPORT**

**CINEBAGSUNDERWATER.COM**

## Supernova video light

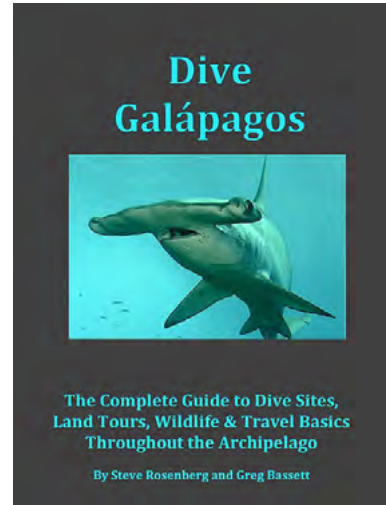
Probably the most powerful video dive light in the world! Turn darkness into daylight with this light, producing more than 32,000 lumens. Light can be equipped with E/O cords or with more rugged bulkhead / locking sleeve type connectors. Light has two power settings, 100% and 50%. Burntime more than an hour at full brightness.

Canister diameter is 98 mm and length 30 cm. Battery capacity is 450 Wh. Price includes charger that charges the battery in less than 3 hours.



[www.northernlightscuba.fi](http://www.northernlightscuba.fi)

## Dive Galapagos 2nd Edition



Dive Galapagos 2nd Edition is now available from iBooks (iTunes), Kindle (Amazon) and Google Play. It is the definitive guide to diving and visiting the Galapagos. This interactive eBook includes detailed information on 46 of the most popular dive sites and dozens of land tours, marine life, above-water activities, travel, accommodations, shopping, sight-seeing, history and much more.

As with all of this series of dive guides, it includes stunning photography and now embedded video content. The book can also be used as a dive log and has useful social media components, as well as a digital table of contents and term search features. Suggested Retail Price US\$14.99.

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

## Deadly Oceans By Nick & Caroline Robertson-Brown



Divers and wildlife photographers, Nick and Caroline Robertson-Brown tour the world's oceans in search of the deadliest sea creatures. Divided into four sections, Deadly Oceans covers an array of venomous and toxic marine critters such as jellyfish, sea snakes, blue-ringed octopuses, lionfish, pufferfish, stingrays and cone shells, together with apex predators such as leopard seals, orcas, crocodiles and, of course, a whole range of sharks.

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

## Underwater Photography Masterclass Ebook

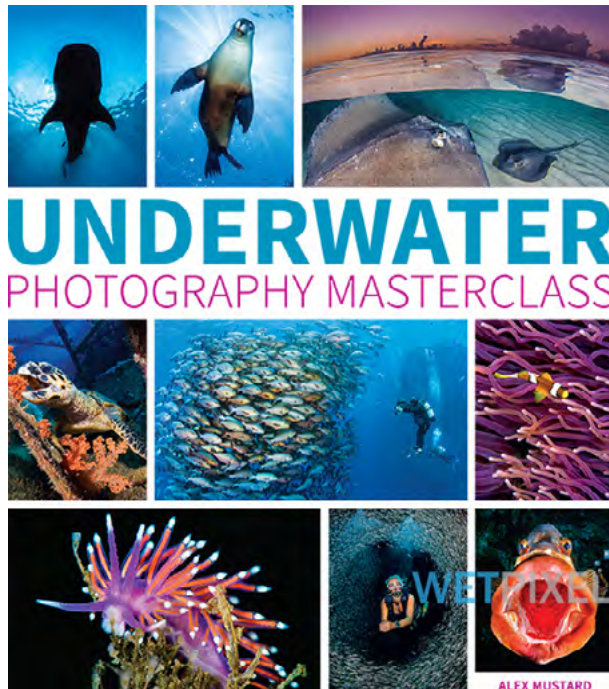
by Alex Mustard

This book is available for download with iBooks on your Mac or iOS device, and with iTunes on your computer. Books can be read with iBooks on your Mac or iOS device.

It is an interactive guide with over 40 video lessons and 100 bonus images.

Discover the wonders of underwater photography with one of the masters of the art in an animated Ebook that features nearly 50 instructional videos as well as a collection of stunning bonus images. With marine biologist and award-winning photographer Dr Alex Mustard as your guide, you will learn the diving techniques necessary to explore the extraordinary creatures and landscapes that lie beneath the surface, as well as the photographic techniques required to portray them in all their glory.

From information about diving equipment and cameras, to crucial advice on understanding and controlling light, the fully searchable content provides everything you need to elevate your underwater photography to professional levels.



Topics covered include wide-angle light, macro lighting, ambient light and macro techniques – all illustrated with stunning images of the weird and wonderful flora and fauna Alex has encountered beneath the waves.

\$19.99 or £16.99

Available on iPhone, iPad, iPod touch, and Mac.

[Apple iTunes](#)

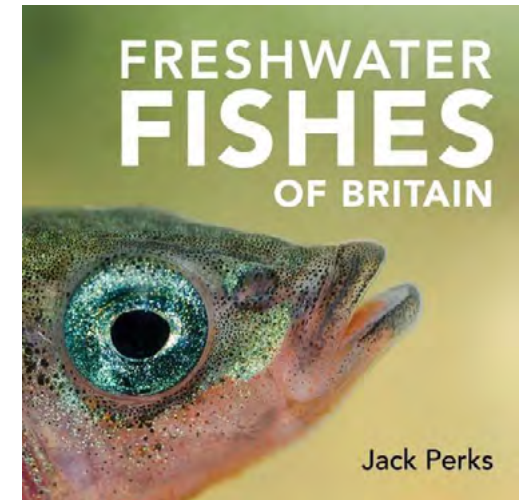
## Freshwater Fishes of Britain

by Jack Perks

Freshwater Fishes of Britain is illustrated with at least one photograph of each species, from the predatory Pike to the graceful Grayling and is accompanied by a brief description of the fish, including details of their distinguishing features, habitat, breeding and much more.

Jack Perks uses specialist underwater photography methods involving long and super macro lenses to showcase images of freshwater fish in a new light. Jack's innovative photographic techniques provide a fascinating insight into the world of Freshwater Fishes of Britain.

Jack includes photographs for all the fish featured in his book, from the Thick-lipped Grey Mullet, 'the largest mullet species found in British waters and also the most common', and the Three-spined Stickleback, 'a voracious predator, engulfing anything that will fit inside its mouth', to the Atlantic Salmon, known as the 'king of fish', which undertakes huge migrations from the Arctic Ocean back to the river they were born in order to spawn, and the Brown Trout, recently voted the UK's National



Fish and probably Britain's most widespread freshwater fish, found from Cornwall to the Shetland Islands and everywhere in between.

With facts throughout, such as why the Tench is sometimes called the 'doctor fish' or why Bitterling lay their eggs inside a living Swan Mussel, Freshwater Fishes of Britain by Jack Perks covers almost every British species and is sure to appeal to both naturalists and anglers across the country.

Published by Reed New Holland at £16.99 and available from all good bookshops or online via [www.amazon.co.uk](http://www.amazon.co.uk) or call 01206-255777.

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

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

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

# ULTRALIGHT

CONTROL SYSTEMS



We manufacture trays for your digital camera & video housings and arms to add a strobe or light.



Special  
GoPro  
mounts



21 years in business.

100% customer satisfaction guaranteed.

“Do not be fooled by all the copy cat brands that look like ours. Ask for genuine ULCS parts made in the USA”

## The original arms with the O-ring in the ball.

QUALITY AND CUSTOMER SERVICE ARE OUR #1 PRIORITIES.  
ALL PARTS ARE MACHINED (NOT MOLDED) FROM THE HIGHEST GRADE  
ALUMINUM AND HARD ANODIZED. OTHER PARTS ARE STAINLESS STEEL.



Made in  
the USA

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

“Often copied,  
never equaled”

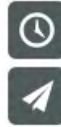
# Canon 1Dx Mark II Review

By Backscatter Staff

First Look at the Canon 1DX II DSLR 4K Camera

from Backscatter

## CANON 1DX II DSLR CAMERA



First Look & Details

03:49

HD :: vimeo

<https://vimeo.com/176336470>

Backscatter is fortunate to have a large customer base of professional underwater filmmakers. This year our conversations on 4K cinema have revolved around three cameras: Red Weapon/EPIC Dragon, Sony a7R Mark II, and the new Canon 1DX II. We've spent many hours underwater with each of these cameras and this article compiles our Canon 1DX II tests from four uniquely skilled underwater professionals.

### Who is this camera for?

If you're both an underwater photographer and filmmaker, our test results confirm the Canon 1DX II is hands down the greatest camera we've tested to date. It's a no compromise professional photography camera capable of shooting both 20MP stills at 14fps and 4K 60p video in incredibly low light. While it doesn't offer the raw video and flexibility of a RED, it shoots broadcast quality 4K motion at a fraction of the size and cost and out performs favorites such as the Sony A7 series in low



*Canon 1Dx Mark II housing system configured for wide angle. Nauticam NA-1DXII Housing, Nauticam 8.5 inch Dome Port, Keldan 8,000 Lumen Video Lights, Canon 1Dx Mark II Camera, Canon 8-15mm Fisheye Lens.*

noise when tasked with the extreme requirements of underwater white balance.

### High ISO Review

The high ISO and high bit rate of the Canon 1Dx II combine to make smooth blue water transitions without banding or red channel noise even at extreme underwater white balance settings of 50,000K+. This video was shot with Canon 1DX II,

Canon 8-15mm lens, and ISO settings from 320-6400. Select HD playback of 4K for full experience. Video by Backscatter staff Berkley White.



<https://vimeo.com/174126029>

## Real world underwater low light performance

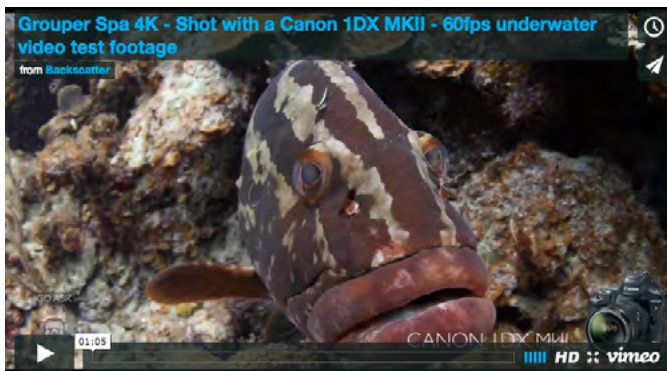
ISO performance results can vary greatly between underwater and land environments. Underwater we are forced to use extreme white balance settings of 30,000K - 50,000K or swim around with 10,000 Lumen lights just to illuminate a subject 3 feet from the camera. These underwater requirements can turn land camera test results upside down.

Our previous tests showed the Canon 1Dc was a top performer with a maximum of ISO 1250 for images in blue water and a maximum of ISO 2500 when shooting in high contrast or artificial light. The new Canon 1DX MK II now opens up blue water scenes to ISO 2500 and high contrast shots such as caves or wrecks in ambient light up to ISO 6400 even at extreme white balance settings.

White balance is less of an issue for underwater photography as raw files are easily corrected in post. For this application we do agree that cameras such as the Sony A7 series and Nikon D810 offer better low light performance, but we found the Canon 1DX II's combination of great white balance capabilities, high bit rate video, and great ISO performance make it the best performing camera for photographer / videographer professionals.

### Canon 1DX MKII Video by Erin Quigley

This video was shot at 50 feet underwater with only a manual white balance and no artificial light. Canon remains king when it comes to nailing color underwater with a manual white balance. The live autofocus of the Canon 1DX II was able to stay focused on this grouper, even at lips to lens distances with thin depth of field. Shot with



<https://vimeo.com/173983428>

Canon 1DX II and Canon 8-15mm lens. Select HD playback of 4K for full experience. Video by Backscatter Pro Team member Erin Quigley.

### The simplicity of underwater white balance - without filters or lights

Most underwater videographers have preferred Canon cameras for a good reason. Red light is lost within the first 10 feet underwater and you're quickly left with nothing but the blues. To make whites appear white in ambient light, you'll need an extreme white balance setting of 30,000K - 50,000K or more. Currently only Canon DSLRs offer this extreme white balance range to produce brilliant underwater color in-camera. As our previous testing shows, Sony cameras such as the entire A7 series are unable to white balance below 10 feet without a red filter on the lens as it is limited to 9,900K. Required filter use makes shooting in mixed lighting difficult or logistically impossible underwater. Our latest tests with the new Nikon D500 revealed it to be the best Nikon to date, but it often takes 10 to 20 attempts to register an underwater white balance at depth. RED cameras can white balance without a filter, but even modified with a H2O ELPF can't

match the rich blues that are so easily produced with Canon cameras.

When performed correctly underwater, a manual white balance with the Canon 1DX II will almost eliminate the need for color correction in post and not burden the underwater videographer with filter maintenance or the requirement to always keep subjects within 3 feet of even the brightest underwater lights. If you want to keep it simple underwater, nothing beats a camera that produces great underwater color with a manual white balance.

### Canon 1DX MKII Video by Rusty Sanoian



<https://vimeo.com/170235390>

While Canon's new autofocus system stunned us in wide angle and on-land tracking tests, it's still not quite there for real world underwater macro without further experimentation. Stay tuned for our new tests. Video by Backscatter staff Rusty Sanoian.

### Autofocus with underwater cinema? - Almost!

Canon's new Dual Pixel Autofocus performed incredibly well on land and we were excited to put it to the test underwater. This new Movie Servo AF system includes Flexizone Mode which offers a

manually positioned zone at any point on the screen while the new AF Tracking Mode allows the focus zone to follow a moving subject across the frame. Experienced underwater videographers know that autofocus has only spelled certain death with all large sensor cameras to date. Thus, we were stunned to discover that Flexizone AF Mode was not only fast but extremely accurate in underwater wide angle scenes.

For example, Erin Quigley's video of the grouper was shot in Movie Servo AF even at close focus and low depth of field. Rusty Sanoian's Monterey video includes a tuna crab clip where Movie Servo AF performs flawlessly as the camera pushes forward and almost touches the crab. The Flexizone AF option for Movie Servo AF was the most accurate and responsive system we've seen for underwater wide angle.

We hoped AF Tracking Mode would shine with the razor thin depth of field in underwater macro scenes. This mode worked surprisingly well on land, but was not a slam dunk underwater. First, underwater housings don't yet offer the ability to use the touchscreen to select focus points and require the user to position the focus zone with the joystick and activate with the set button. Secondly, water motion and passing particles seemed to cause the focus to hunt enough that we preferred to set and lock focus for most macro subjects. While some of Rusty Sanoian's Monterey macro video used AF Tracking Mode, the majority was captured by locking focus before each shot. We are currently testing lowering the secondary menu options that Canon has cryptically named "When Active" and "AF Speed" to see if we can make AF Tracking a reliable function for underwater macro.

Experienced underwater videographers should



***Canon 1DX Mark II underwater housing configured for macro.***

***Nauticam NA-1DXII Underwater Housing, Nauticam Flat Port, Nauticam SMC Macro Lens, Dive & See 5 inch Monitor, Light & Motion Sola Video 2500 Lumen Lights, XIT404 Tripod Plate, XIT404 Tripod Legs, Canon 1DX Mark II Camera, Canon 100 IS Macro Lens.***

also note that the Canon 1DX Mark II default setting is for Movie Servo AF to be enabled and thus the camera will AF continuously even when not recording. We recommend modifying the custom controls menu to reprogram the Set or the front Function button to Pause Movie Servo AF and always monitor the LCD to verify AF is paused during low contrast pans. Further, it's important to note that Pause Movie Servo AF will sometimes turn off after the camera goes to sleep or is cycled on and off causing unwanted AF activation. Underwater camera operators might find it best to

turn Movie Servo AF off when shooting a full dive in very low contrast conditions.

### Canon 1DX MKII Video by Dustin Adamson



<https://vimeo.com/169020213>

Videos shot at 60p then slowed down to 30p has the effect of adding more drama to the image. More importantly, underwater shooters can't always set up a tripod on a pristine reef and slow motion helps us eliminate camera shake for hand held sequences. Video by Backscatter Pro Team member Dustin Adamson.

### Why is 4k 60fps amazing for underwater video? - Stability!

We've all fallen in love with slow motion videos and the hidden world that is exposed when we slow down real time. The Canon 1DX II would not be considered a slow motion camera on land, but 60fps and 120fps video is about all we need in the fluid underwater environment. On land it may be easy to mount a camera to a tripod for rock steady footage, but we can't always drop a tripod on a pristine reef. Slowing down reality helps us add stability to our shots. Maybe that clip of the mother humpback with her calf caught you unexpectedly and you had some camera shake? Slowing your

<https://vimeo.com/178632898>

# NAUTICAM NA-1DXII HOUSING



## First Look & Details



60fps video to 30fps will double your clip length and smooth out your camera wobbles. Maybe you were fighting your tripod when a tiny jaw fish was aerating his eggs? Playback your video at 30fps to get 2x the time on a great macro behavior shot with less camera shake. You'll pay a price on hard drives when shooting higher frame rates, but you'll double your chances to get the shot.

### Lexar Vs. Delkin CFast Cards

The Canon 1DX II is outfitted with (1) CF and (1) CFast card slot. All 4K 60P recording longer than 10 seconds must be recorded to the new CFast card. At a blistering 6GB per minute, you'll need to buy 256GB CFast cards to get roughly 40 minutes of recording time per dive. New

comers to low compression 4K will also need to upgrade their portable and home hard disks in a major way. Hard drives are inexpensive these days, but CFast cards are bleeding edge and still demand a premium price.

Canon recently issued a firmware update to fix issues with Sandisk CFast cards. Our test pilots didn't experience any of these Sandisk issues, but one had a catastrophic issue with a Lexar 256GB card that was unrecoverable. Currently Backscatter is only recommending Delkin 256GB CFast cards as they have been the only cards without reported issues. Stay tuned for more feedback from the field.

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

# CRAZY ABOUT UNDERWATER PHOTOGRAPHY?



## SO ARE WE...

**LIKE DIVING?  
LIKE PHOTOGRAPHY?  
YOU'LL LOVE US**



London's premier underwater camera store

Ocean Leisure Cameras is the one-stop central London underwater photography specialist store.

Address:  
11-14 Northumberland Ave  
London, WC2N 5AQ  
Underground: Embankment

Contact:  
Phone: 020 7930 5051  
info@oceanleisurecameras.com  
www.oceanleisurecameras.com

Open 7 days a week

**CAMERAS**

**HOUSINGS**

**LIGHTS**

**LENSES**

**KNOWLEDGE**

# Fantasea Housings Revisited

by Jussi Hokkanen

Some years ago I reviewed a Fantasea housing that was made to fit a hopelessly out of date Nikon bridge camera. There was really nothing wrong with the housing itself but at that time it was just the wrong choice of an overpriced camera. This was compounded by the fact that the Fantasea housing was also at least twice the price of anything similar on the market. Four to five years ago we lived in the “golden age” of affordable high-quality underwater compact cameras. There was so much to choose from that small companies, like Fantasea, were left fighting for the scraps that the big boys leftover.

Today however things have changed. Almost all camera manufacturers have stopped producing their basic digital compact cameras. Some companies, like Fuji, have decided not to produce any more compact cameras at all. The remaining manufacturers have also decided to massively reduce the range of underwater housings they offer. Today there are simply not many compact camera + housing packages to choose from. At this point in time

none of these few remaining cameras are readily available, which further compounds the problem. Why is this?

A Sony factory that produced most of the sensors for a significant number of current compact cameras from Olympus to Canon was shut down due to an earthquake and has led to a global shortage of core camera parts leaving many manufacturers struggling.

Suddenly we find ourselves in a situation where Fantasea has become a major player in the field of underwater photography by being among the last remaining companies to offer a good range of housings for compact cameras (and I’m not comparing them to the likes of Nauticam who offer a decent range at a 1000 quid each but something more affordable).

There is now a nice variety of Fantasea housings available for both the Sony RX and the Canon G series. All these cameras are the pick of the crop of the current large 1” sensor compacts. The company has finally in



my opinion selected the right cameras for their housings.

The most affordable of these cameras is the small Canon G9X camera, which is the kid brother of the G7X / G7XII. The G9X has mostly the same innards as its bigger brothers but comes with slightly smaller lens and a large touch screen.

The next step is the Canon G7XII which is more expensive due to its faster and larger lens but this does not always mean it is better for underwater photography (more about this later).

Then there is the Sony RX100 MK III, MK IV and the brand new MK V which will all fit into the same Fantasea housing and are somewhat more expensive than the Canons. This especially goes for the later MK IV and the MK V versions, which at the time of writing start about £850.

The Fantasea housings are

actually made by a company called AOI. AOI are a design and production agency who are probably responsible for 50% of all underwater camera products out there, including brands like Olympus, Canon, Fujifilm... etc. They also produce ports and underwater lenses with their own AOI name and are also behind a high quality video light company called RGBLue, whose products I have reviewed here on several occasions.

Generally speaking AOI make good quality products and the Fantasea/AOI housing range is no exception. The housings are designed with divers in mind. They all come with clearly marked buttons, port threads, flash up-down levers, and screen hoods etc. all essential stuff for the underwater photographer.

## Fantasea FG9X Housing



The Fantasea FG9X housing for the Canon G9X camera is an interesting choice for an underwater photography as it comes with only a few physical buttons. Most settings, especially ones that are deeper in the menus are supposed to be accessed by poking the touch screen. This has usually meant that the housing for such a camera has very limited access to many important functions.

Luckily this is not the case with the FG9X housing. 98% of the camera functions can be set due to a clever housing design that allows the user to press the right side of the touch screen with a row of small buttons.

The camera's main touch menu can be organised by the photographer so that the really important settings like flash, aperture, shutter speed, ISO, etc. are reachable through the housing. The main menus can also be browsed with the zoom and

ring function levers so only few unimportant settings are not available when underwater.

Furthermore, the physical "record video" button can be programmed to do different things under different modes and unquestionably the most important of them is the one touch custom white balance function, which now makes its return with the G9X.

I have to give full marks to the Fantasea user manuals, which are very thorough and in the FG9X's case explain well the needed initial settings to get the best out of the combo.

The FG9X housing comes with a 67mm port thread that accepts pretty much all 67mm wet wide-angle and macro lenses on the market. The shorter and smaller than average lens of the Canon G9X makes the camera-housing combo one of the most flexible compact camera kits out there at the moment. Be it a fisheye lens, normal wide-angle or a macro... with this housing it is all possible.

All Fantasea compact housings including the G9X come with a surprisingly comfortable hand strap that once attached and adjusted properly will make the housing extremely nice to hold. Be it portrait or landscape orientation the housing stays firmly near your fingers without desperately grasping for it.

It's worth remembering that the

lack of Canon's own housing for the G9X makes the Fantasea housing the cheapest decent offering out there.

## Fantasea FG7XII



Although priced the same as the rest of the Fantasea housings, at around £500, the G7XII housing is the largest of the lot. The large and fast lens of the Canon G7X MK II camera ensures the housing port is also oversized. Similar to Canon's own WP-DC55 housing, the large port of the FG7X II, although coming with M67 thread, is bad news when it comes to lens choices.

The traditional wide-angle and fisheye lenses, like the i-Divesite UWL-04 and the Inon UWL-H100 lenses will not work. There is of course the Inon "zoomy" UWL-S100 ZM80 lens that will work but this type of lens is quite a bit more difficult to use underwater and will seriously limit your available aperture.

With the new super large diameter lenses like the Nauticam WWL-1 and the i-Divesite UWL-09 you have a better chance as you will not have to zoom too much to

get a proper view through the lenses. But these lenses are massive and expensive, for example the Nauticam WWL-1 lens now costs over a grand!

On the upside the G7X MK II camera has a traditional user interface with old-school buttons so using the camera is simple underwater. The FG7XII housing comes with a dual flash sync-plate, which has options for bare cable ends or the standard Sea&Sea style cable plugs. A nice touch with all Fantasea housings is the dual O-ring construction, which at least in theory should better keep the water away from sensitive parts. Did I mention also that all Fantasea housings come with a pre-installed moisture alarm that will sound a warning if drops of water gather at the bottom of the housing.

## Fantasea FRX100 IV/V



With the Fantasea housing for the Sony RX range all mentioned above is valid except that the company have, for some strange reason, instead of

the standard 67mm chosen a 55mm port thread for the housing. This is extremely frustrating as there are simply no good underwater wide-angle lenses available in this size. The Fantasea offers a 55mm Dyron lens as an alternative option. Unfortunately I have had rather bad experiences with these lenses and could not really recommend them.

You do get a 55-67 step-up ring with the housing but this will only work properly with close-up lenses, which are more forgiving when it comes to the lens positioning. Smaller diameter wide-angles like the UWL-04 will not work as you will have to zoom too much to get rid of the vignetting. According to my test you can however use the Inon UWL-H100 reasonably well with the step-up as the amount of zooming that's needed stays under the "do not bother" line. But as always with any traditional underwater lens the more you zoom into them the worse the image quality gets. Not ideal.

The good news is that the Fantasea RX100 housing will also work with the latest Sony MKV camera and if you happen to have the earlier MK3 model you only need to add a small washer inside the main jog wheel control lever to make the housing compatible with this model also.

It will be interesting to see what

the future for the Fantasea company hold. The rumour is that there are new housings on the way for mirrorless cameras. The AOI UWL-09 wide-angle lens and the AOI close-up lenses will also be available as re-branded Fantasea lenses. These lenses are all 67mm threaded so let's hope all Fantasea housings in the future will also come with the right size port thread.

I still think that the Fantasea housings are still somewhat overpriced. Sure they are an upgrade when compared to Canon housings, which come without port threads or screen hoods and few other bits and bobs but do these few extras really merit double the price?

I'd be more comfortable if the prices would be around £400 and not the £500. However as many companies are not anymore interested of making underwater housings for their cameras it could well be that the sub £600 underwater camera package is history. There are almost none left anymore. Soon Fantasea might be your only choice.

**Jussi Hokkanen**  
[www.deepshots.co.uk](http://www.deepshots.co.uk)

## THE ORANGE REALLY SUITS YOU SIR



Affordable 3D printed lens gears for Olympus and Nauticam housings.

Do they come in black?  
- YES they do!

I have a lens that nobody makes gears for. Can you help?  
- YES we can!

# Less is more

by Mike Ross

During the mid to late eighties I was living and working out of Dubai in the Middle East, at the time this was, and no doubt still is, the central hub for commercial diving companies servicing the offshore oil and Gas industry in and around the Middle East and India. My introduction to the Scoones housed camera systems started with a project run by one of the larger oilfield diving companies in Dubai of that time 'Oceanearing'

I had been hired previously as a diver/photo-tech with Fraser diving out of their Singapore division, that particular project was based off of Labuan in Borneo. Their choice of weapon primarily being the Nikonos cameras and strobes combined with C-4 print process.

As I was also a keen amateur fish photographer and owned my own Nikonos V (c/w various strobes & lenses) the arrangement was that I would start as diver/photo-tech until the 'real photo-tech' turned up a week later. As it transpired I was really pleased to see him as was the rest of the team as my inexperience was beginning to show and I was falling behind with intense work-load. Setting up and generally looking after the camera gear was simple enough, however processing often hundreds of negatives per day along with contact sheets for each roll of film plus a certain amount of full sized prints was a full time job in itself and of course every image had to be documented or logged as to its precise location, time, date, etc, no metadata or GPS options back in the good old days.

So it came as a welcome relief to slip back into the totally irresponsible life style of an ordinary



*All of the underwater images were taken with my home-built housing pictured. I either attach the housing to one of the subs or dangle it from a rope while the fish are feeding near the surface. The housing is built from an 8" ID marine ali tube (ex ROV ballast tank) it's extremely rugged & weighs 18 kg!! I have a Mk II almost finished but still 8 kg+*

*Click [HERE](#) to go to a clip shot with a GoPro attached to the ROV*

deep sea diver again, sitting in the standby chair with my headset on, tending hose, swimming around for a living, sheer luxury. We actually had a lot of fun on that job, good camaraderie with a mixed team of Brits and Americans most of whom lived in South East Asia. The water conditions were calm and fantastically clear with abundant marine life and some of the largest and most fearsome looking Barracuda I have ever





seen. Labuan was a good run ashore too, the locals were friendly and accommodating and we were always welcome at the Relax Lounge in the centre of town. On the outskirts of Labuan there's also a huge and beautifully manicured tropical garden that is the war memorial for the allied troops killed during the Japanese invasion of 1945, there are a few Victoria cross hero's but mostly unmarked headstones of soldiers "known only to God"

It would have been sometime

in 1986 by the time I had moved onto the Oceaneering job and by this time I had a better idea of what I was letting myself in for. The job at hand was fairly routine, mainly CVI (close visual inspection) photography of a designated number of the sub-sea welded 'Nodes'. These Nodes are the junction points of the large tubular steel members that make up the structure of the offshore 'fixed jackets or platforms' (fixed meaning piled into the seabed). This was a common part of the routine annual or



biannual survey ensuring the integrity of the structures mainly for insurance purposes. The survey would also record the density and type of marine growth and condition of the subsea cathodic protection system, in this case the large ingots of zinc alloy 'Anodes' that were attached to the various steel tubular 'members' that made up the platform.

We would have been in UAE waters which generally had good visibility and rarely got any deeper than around 180 feet, I do remember having to come back into Sharjah port as we had a fire on-board requiring some repairs. This job was fairly typical with around 20 divers split between two shifts for 24 hour operations. Roughly half of the divers

were classified as construction types who did most of the hard graft high pressure water blasting of the marine growth, followed by the grit blasting of the designated weld and HAZ (heat affected zone) to around 100 mm either side of the weld. The rest of the team were qualified underwater inspection divers CSWIP (certification scheme for welding Inspection Personnel) who would work with not only the sub-sea cameras but also the MPI (Magnetic Particle Inspection) gear and the digital UT (Ultrasonic Thickness) equipment.

On this project we had two other guys working back to back as designated data recorders or inspection co-ordinators, it was their job to make sure we were surveying

the correct weld, anode, marine growth at a specific location on a given platform. They would also be responsible for logging and organizing all of the information, including video, stills, UT measurements, MPI data ..... on & on to present to the client as our end product. So this was good for the photo-techs, as all we had to do was look after the cameras and process the film ..... with a bit of underwater swimming thrown in for good measure.

While we did have a couple of Nikonos cameras as emergency back up our main work horse was the Scoones housed Olympus OM-1. This was my first experience with this system but straight away I could see by it's rugged, black hard anodized design that it was built for commercial divers. And perhaps best of all there was only one external control, the shutter release so once the optimal settings for a given situation were locked in there was absolutely zero opportunity for accidental (or intentional) interference possible. As an added bonus after hundreds of hours logged working with these housings I never once had to deal with the much dreaded watery surprise when opening the lid.

There was actually a single bulkhead penetrator that was used to pair the system with a strobe, this had the industry standard connector of the

time a single pin, two way Impulse or EO connector. The camera also came with a pair of stainless steel rods or stand-off probes that screwed into either side of the front port retainer used for close up work to assist with depth of field issues.

While the Scoones housed OM-1 was the go to camera for most general photo survey work, and we had four of them on this project we also had a number of purpose built close up cameras. These were bulk spool (200 frames plus) outfits mounted in a narrow (100 mm ish OD) black, anodised, alloy tubular housing. The flat port had a ring flash mounted internally while externally there was a handy pistol grip complete with trigger. I vaguely remember them being called 'Hydroscans' but I may be getting mixed up with another unit.

This camera was strictly for close up work and had two stainless rods mounted permanently at the front end and was used to produce 'weld mosaics'. Once the weld had been cleared of marine growth and then grit blasted back to 'bright shiny' metal the inspection diver would attach a purpose built magnetic backed measuring tape adjacent to the full length or circumference of the designated weld.

Then the diver would photograph the entire weld using the spread of the probes (roughly 6 inches) on the





tape measure also ensuring a 50% overlap of each frame. So once the allotted ID of the weld had been recorded with the first two frames the first picture of the weld would start with the right hand probe at 3 inches on the tape measure, then 6, then 9 and so on. Having 200 frames capability was the real strength of this outfit plus, as with the Scoones unit, it was pretty much bullet proof.

The film used on most of these projects around this time was 35 mm E-6 processed Ektachrome 64

ISO and we had complete photographic dark rooms with rotary tub chemical baths, enclosed heated drying racks, light boxes, with those one piece magnifying glass tube thingos that would glide across your newly processed slides ..... all the cool stuff!

That particular Oceaneering project was a big success with the camera gear performing practically without fault and as it was a lump sum project brought in early we all received \$1000 bonus which was a lot of money in those days, even for us deep sea divers on rock star wages.

The follow-up project with the same company didn't fare so well photographically speaking. Within the first week both Scoones housed cameras were cast into Davey Jones Locker, lost forever as the work basket containing them was up-ended as it became snagged on the down line on the way to surface (and yes they did have lanyards with Carabinas) ..... the boys hadn't thought to clip them into the basket.

I had to make the call to the office to explain the situation; fortunately the photographic side of this project was minimal. So as a make shift solution they sent out a single Nikonos V. As the water depth was in excess of the cameras recommended parameters I sent it into the fellows in the Saturation chamber via the med lock with the back of the camera and strobe left open to equalize them closer to the working depth. The following morning I was told there were yet more camera related issues and promptly made my way to the photo-shack to confronted with the sad remains.

The night shift supervisor in his wisdom had instructed the fellows to send the Nikonos up from seabed in the work basket, of course both camera and strobe exploded and with such force

that neither unit could be salvaged not to mention being completely flooded. "Yeah hello, yes it's me again the photo tech ... ermmm you know that brand new Nikonos gear you sent out just yesterday .... well"

Some thirty years on I'm still in the industry with a sudden renewed interest in underwater photography and have recently even built a few experimental SLR housings of my own. It's funny all these years down the track I also have a renewed appreciation and respect for the true engineering genius of the Scoones design ..... It's all about taking care of business with the minimum amount of fuss, simplicity in itself. In this case, and in my humble opinion, less really is more.

**Mike Ross**

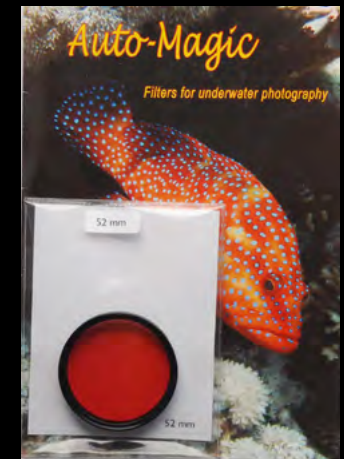
*Commercial Oilfield Diver (Mixed Gas & Saturation)  
1983 -1998*

*ROV (Remote Operated Vehicle) Operator  
1998 - present*

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



# We've got you covered!



Magic filters are now available in 3 options. Original Magic for use in blue water with DSLR and compact cameras with Manual White Balance, Auto-Magic for compact cameras in automatic point and shoot mode. GreenWater Magic for use in green water with DSLR and compact cameras with Manual White Balance. Prices start at just £22.

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

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

# Freshwater Fishes of Britain

by Jack Perks

I suppose when most underwater photographers think of freshwater photography in the UK, they instantly think of Stoney Cove, Leicestershire, with its leviathans like pike and bold perch. Some may even venture to Capernwray, Lancaster, with huge shoals of stocked trout and sturgeon hugging the lakebed. There's a whole host of species present in the British Isles, from tiny loach to huge catfish. It's been a great pleasure to try to film and photograph all 56 of them. I started off as an angler and naturalist, with photography coming much later to me. I was always mesmerised by watching fish from the bank but now I barely ever pick up a rod. I noticed, compared to bird photography, there were very few fish photographers (probably a reason for that!) but admired the work of such photographers as Trevor Rees, Michel Roggo and Rob Cuss who has become a good friend and funnily enough lives quite close to me!

Freshwater fish can be found in all manner of habitats, from the industrial canals that create ideal homes for Perch and Gudgeon to large torrent-filled rivers full of Atlantic Salmon and Grayling. They are an integral part of the ecosystem for many creatures as a food source but are much more than that and hold many fantastic behaviours and stories. Chub are a greedy river fish that will eat anything from beetles, small fish, mice and even fruit, with the chub hanging around under the bushes in the



**Rainbow Trout *Oncorhynchus mykiss*. Max length 120cm (47.2in). Max weight 27.2kg (60lb)**

***Another American species imported for sport fishing, Rainbow Trout are found all over the British Isles. They seldom breed in our climate, although exceptions include a notable population in the Derbyshire Wye.***

***HABITAT: Prefers fast-flowing rivers and streams but equally at home in large lakes and reservoirs.***

***Nikon D7000, Ikelite housing, Tokina 10-17mm, 1/400th @ F7.1. 800 ISO***

autumn waiting for a snack. They are the origin for the word chubby. Bitterling are a small fish that were accidentally introduced to the UK. They don't cause any major issues but have a fascinating way of breeding: in the spring, the female deposits eggs into a live swan mussel then the male fertilizes them. It's thought they do this to protect the young -

though it's not clear what the mussel gets out of this arrangement.

The book is designed as an easy guide to view every one of the 56 species of freshwater fish we presently have in the UK, including non-native species and marine species that will penetrate up river. It's a very visual ideal for children and anyone



***Minnow Phoxinus phoxinus. Max length 14cm (5.5in). Max weight 20g (0.7oz)***  
*The staple diet of many river predators, Minnows rely on numbers and quick reflexes in order to escape. They are one of the few native fish that can do well in aquariums.*

***HABITAT: Rivers from the upper reaches right down to tidal areas.***  
*Nikon D7000, Ikelite housing, 100mm, 1/80th @ F11. 125 ISO*

else who wants to get a glimpse into the underwater world of freshwater fish. It includes chapters on how to spot and find fish which is harder than most would think; looking down from a bridge, they can all look the same, but scan them closer and you'll see subtle differences such as the broad back of a chub or slim shape of a

bleam. We have some real oddities turn up from time to time as well like albinos, deformities, hybrids and the unknown fish!

I go into detail about how I capture the underwater images, from scuba to wellies and everything in-between. Though I do scuba dive sometimes, for some of the deeper



***Three-spined Stickleback Gasterosteus aculeatus. Max length 11cm (4.3in) Max weight 20g (0.7oz)***

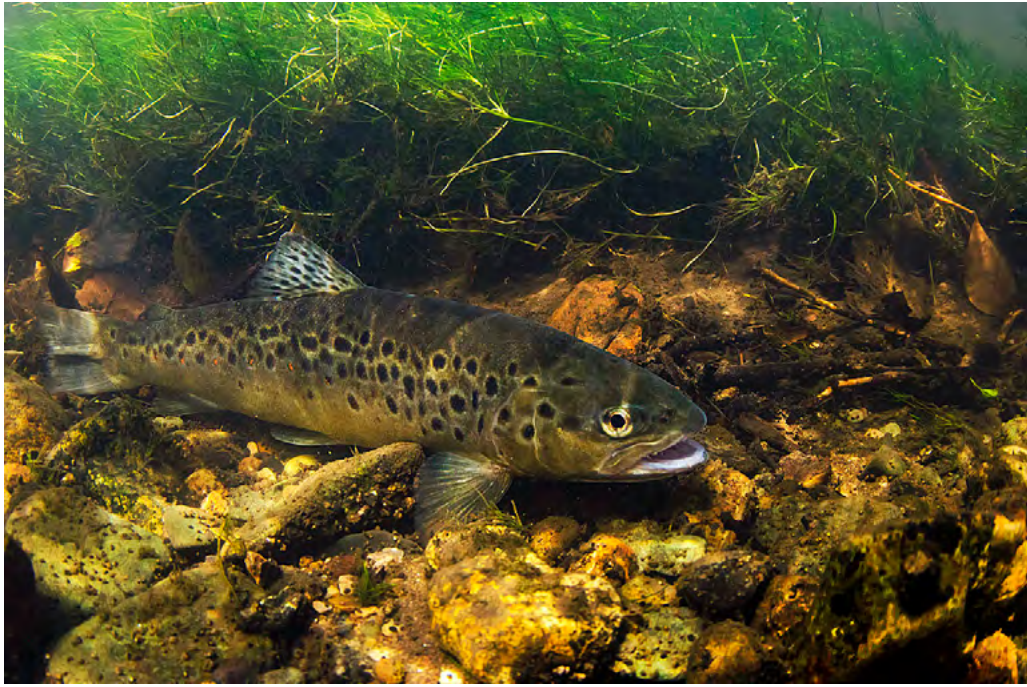
*Despite its size the Three-spined Stickleback is a voracious predator, engulfing anything that will fit inside its mouth. When protecting its nest it will attack much larger fish in order to defend its young. Sticklebacks are fairly short-lived with three years being the normal lifespan.*

***HABITAT: The most adaptable fish in the UK. It will inhabit most bodies of water, from silty ditches only inches deep to saline rockpools.***

***Nikon D7000, Ikelite housing, Tokina 10-17mm, 1/500th @ F5. 200 ISO***

dwelling species and different perspectives it offers, I mostly use other techniques for my freshwater fish photography because most are found in fairly shallow water and, more often than not, rivers. The large quarries that we often dive in are biologically poor. Freshwater photography is not an easy task,

to say the least. Most fish are very skittish, though it varies from species to species and even in individuals some are more bold than others. I've had grayling hit me in the face when snorkelling one day and another day I struggle to get within 10 feet of them. Then there are the conditions: it's often cold and hazardous and



**Brown Trout *Salmo trutta*. Max length 140cm (55in). Max weight 30kg (66lb)**  
*Probably Britain's most widespread freshwater fish, the Brown Trout is found from Cornwall to the Shetland Islands and everywhere in between. 'Sea Trout' is the anadromous form of Brown Trout and has been known to hybridise with Atlantic Salmon. Brown Trout which are landlocked in large lakes and lochs can reach huge sizes by eating Arctic Charr or even other Brown Trout. These are sometimes known as 'Ferox Trout' and they are considered by some to represent a separate species ('*Salmo ferox*').*

**HABITAT:** *More often associated with chalk streams and highland burns, they are very adaptable and are found in most types of waterways providing the water is clean enough.*

*Nikon D7000, Ikelite housing, Tokina 10-17mm, 1/500th @ F8. 100 ISO*

the many diseases you can catch are always in the back of my mind (I figure I must have built up a tolerance by now with the amount of rivers I've been in). Weather is key as even the

slightest rain will colour the water, particularly for lowland rivers, while spate rivers will clear up faster and they still flow at a high rate.

Freshwater fish conservation



**Ruffe *Gymnocephalus cernua*. Max length 20cm (7.9in). Max weight 170g (6oz)**  
*Locally common, Ruffe tend to hang around in large shoals. They have a liking for fish eggs and fry, and this has caused problems in the Scottish Highlands where they eat the eggs of rare fish such as Arctic Charr and Powan in glacial lakes. Like their larger cousin, the Zander, Ruffe prefer murky water or live deep down due to their photophobic eyes.*

**HABITAT:** *Murky canals and rivers or deep lakes.*

*Nikon D7000, Ikelite housing, 60mm, 1/250th @ F7.1. 250 ISO*

is something I hold very dear to me and although there's no specific organisation just for freshwater fish in the UK there are plenty that help them. The Wildlife Trusts manage

hundreds of reserves, many of which hold bodies of water, and fish can often go unnoticed. My local patch is Attenborough Nature Reserve, which is a 226-hectare wetland area and a



**Arctic Charr *Salvelinus alpinus*. Max length 107cm (42.1in). Max weight 15kg (33lb)**

*There are around 340 separate populations in the British Isles. They arrived as sea-run charr, and then subsequently lost their sea-migratory tendencies and become freshwater resident populations, occupying mainly the deep lakes of Scotland, Ireland, north Wales and the Lake District of north-west England.*

**HABITAT:** Exclusively found in large lakes and lochs, mostly in Scotland and the Lake District.

*Nikon D7000, Ikelite housing, Tokina 10-17mm, 1/200th @ F4.5. 800 ISO*

magnet for birdlife and other species. When doing a survey, I asked how many fish species they have recorded over the 50 years that the site had been open - to which they replied, 'Two!' I picked a net up myself and added six new tiddlers to the list. Putting in reedbeds allows a home and nursery for many species and cleaning gravels allows spawning habitat for

many species. Eels have declined by 95% in the last 50 years or so due to barriers, parasites and habitat loss while rivers are still in a bad way with pollutants entering them, though they have improved somewhat. The book is an easy read full of facts, figures and of course plenty of underwater pictures of species that



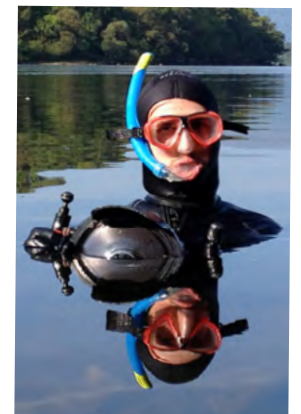
**Pike *Esox lucius*. Max length 130cm (51in). Max weight 23kg (50lb)**  
*The Pike is the largest native predatory fish. It has hundreds of serrated teeth which are coated in anticoagulants, so that when prey is bitten it won't stop bleeding and the Pike can follow the scent trail to claim its prize. As well as small fish, Pike will take frogs, small mammals and ducklings with ease.*

**HABITAT:** Preferring clear, oxygenated water, Pike do well in both lakes and rivers.

*Nikon D7000, Ikelite housing, Tokina 10-17mm, 1/100th @ F7.1. 800 ISO*

many people just don't come into contact with. It can be read in one go or easily dipped in and out of. It's the culmination of years of research and hard work, which I'm immensely proud of. My work to try and help protect freshwater fish with photography continues with future projects in the pipeline.

**Jack Perks**  
[www.jackperksphotography.com](http://www.jackperksphotography.com)



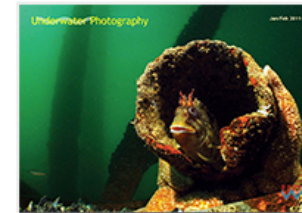
[www.uwpmag.com](http://www.uwpmag.com)

### Back issues



99p per issue or buy the complete set of 94 issues for just £19.95 (That's about 21p per issue!) Yours to keep forever.

As you know, the current issue of Underwater Photography is free to download but all of the previous issues, going right back to Issue 1, are still available to download for just 99p per issue. It's a fantastic reference library chronicling all that has happened in underwater photography over the past 15 years.



Add UWP58 to cart

UWP58 — Jan/Feb 2011, 76 pages.

[Click to show or hide issue contents](#)



Add UWP57 to cart

UWP57 — Nov/Dec 2010, 85 pages.

[Click to show or hide issue contents](#)



Add UWP56 to cart

UWP56 — Sept/Oct 2010, 90 pages.

[Click to show or hide issue contents](#)



Add UWP55 to cart

UWP55 — July/Aug 2010, 75 pages.

[Click to show or hide issue contents](#)

Buy back issues here

# New Zealand's Poor Knights

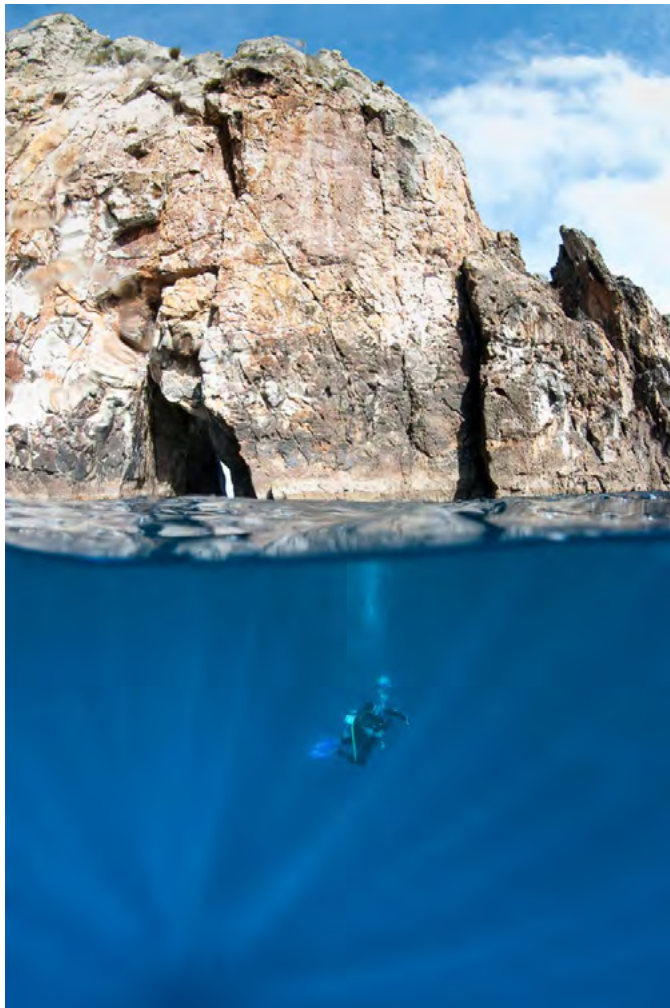
by Alex Stammers

At the bottom of the South Pacific lies a group of Islands that have been 4 million years in the making, they have resulted in the perfect dive site for underwater photographers and divers to explore and enjoy.

The Poor Knight Islands Marine Reserve lies 23 kilometers off the North Eastern coast of New Zealand. It has been a Marine Reserve since 1981 and fully protected since 1998. Diving pioneer Wade Doak, who spent years exploring these Islands and naming the dive sites, recently stated that there is now more fish life at the Knights than when he first started diving them in the 1960's and 70s.

He also quoted that you just don't dive the Poor Knights you dive in them. This becomes apparent as you approach the Islands. The high cliffs of volcanic rock descend vertically into the deep blue of the Pacific Ocean. Having been exposed to the open ocean over millennias, the constant battering and gentle sculpting from wave action, has carved out numerous caves, tunnels and archways throughout the islands, making the famous dive sites that the Knights are known for.

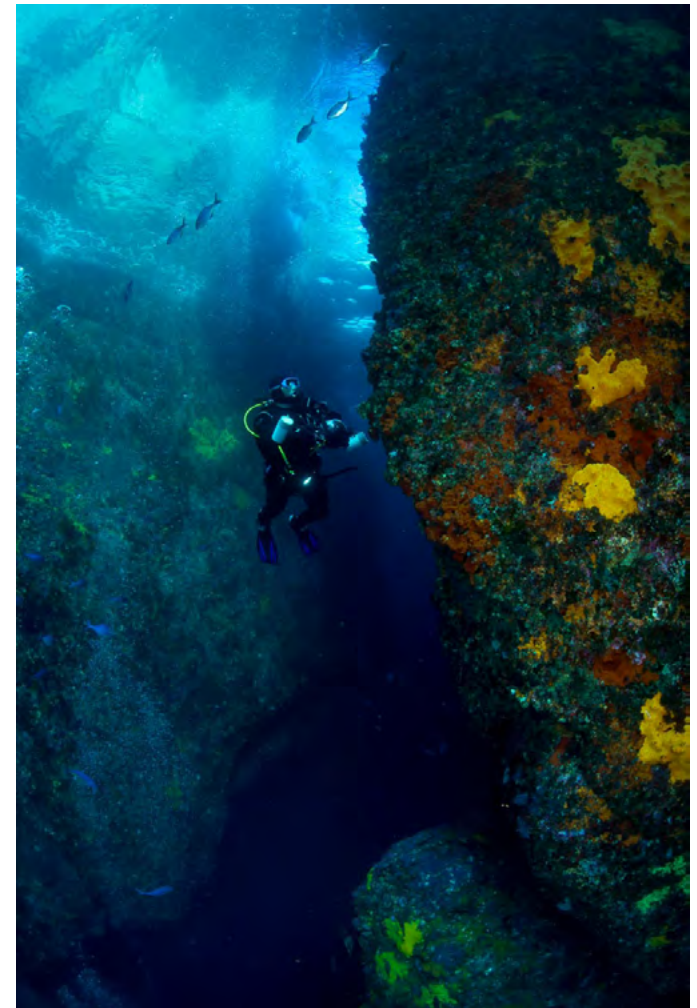
The Islands have been enjoyed by many famous underwater photographers and diving pioneers. David Doubilet and Brian Skerry have both dived these islands for National Geographic, and succeeded in taking away from them amazing, award winning images. In the 1980s Jacques-Yves



*Diver surfacing from a dive at Northern Arch Poor Knights. . Nikon D200 Ikelite Housing Tokina 10-17mm at 10mm 2x Ikelite 125 strobes f11 1/60th sec ISO200*

Cousteau dived and filmed the Knights and rated them one of his Top Ten dive sites in the world.

Being a fully protected Marine Reserve the main draw for divers is the marine life; fish by the thousands use the caves and archways to feed, rest and spawn. Blue and Pink Maomao inter mingle



*Diver Photographing in Northern Arch Poor Knights. Nikon D800 Nauticam Housing Sigma 15mm 2.8 2x Ikelite 125 strobes f10 1/100th sec ISO500*

together forming large schools for protection from roaming predators, while Twin Spot Desmoiselles weave through them. Nooks and crevices that line the walls hide an array of Moray and Conger eels that snake their heads out to inspect the passing diver. Scorpion fish seem to be everywhere along



*Crayfish/Spiny Lobster Northern Arch Poor Knights, Nikon D800 Nauticam Housing Nikon 105mm VR 2.8 2x Inon S2000 f22 1/125th sec ISO200*

*Diver in Air Bubble Cave Poor Knights Nikon D800 Nauticam Housing Sigma 15mm 2x Ikelite 125 strobes f11 1/50th sec ISO500*

the walls, hiding amongst the sponges and seaweed.

Due to being swept and nurtured by the Pacific Ocean currents, the walls and sea floor are smothered in a rich colouring of sponge and invertebrate life easily matching some of the colorful coral reefs of nearby tropical destinations. This splash of colour allows for some beautiful background that make your macro subjects stand out.

Looking closely at the walls and reef reveals an array of life just waiting to be explored with a macro lens. Jewel anemones of pink and purples

cover the walls feeding on the current while Nudibranches in an array of colours and shapes can be found feeding and mating. Triplefins hop around the reef. The Blue-Eyed Triplefin and their electric blue eyes candy-coloured red and white-striped bodies standing out from the rest. Shy Blennies poke their heads out from their home within and orange or yellow sponge making for a perfect framed subject to photograph. Shrimps, crabs and Spiny lobsters hide amongst the reef. Within the depths of caves and arches species usually found at deeper depths can be discovered.

In mid water and out into the blue, schools of Trevally and Kawahi group together to feed on the rich planktonic life. They intern, are hunted by large Yellow Tail Kingfish that power through the schools sending them scattering in panic. Kingfish are inquisitive and will often sweep in alone or in groups to inspect a diver. Large King fish can get over two meters in length.

If you're lucky, Bronze Whaler sharks can be seen regularly - sometimes alone or in groups. Other shark species pass through the islands; Mako, Blue sharks and Hammerheads are sometimes seen on



*Three Large Yellow Tail Kingfish hunt Blue Mao mao in Tie Dye Arch Poor Knights. Nikon D200 Ikelite Housing Tokina 10-17mm at 14mm 2x Ikelite 125 strobes f6.3 1/80th sec ISO400*



*Blue Eye Triplefin Northern Arch Poor Knights, Nikon D800 Nauticam Housing Nikon 105mm VR 2.8 2x Inon S2000 f22 1/160th sec ISO200*

the more open ocean sites during the summer months.

With-in the Islands sheltered shallow dive sites, offer different topography with gardens of kelp forests and sand flats. These tend to be where the most approachable and friendly fish can be found. Sandager Wrasse and Pink Pig fish approach and follow divers around and are often interested in their reflections in the domeport of the camera.

Eagle rays and Stingrays are also found resting on the sand flats between the reefs and unlike the

rays on the coast tend to be more approachable.

Each Season brings with it something different to the Islands the summer months from December to April bring in clear warm blue water from the East Australian Current. The water temperature in Summer is usually around 19-21 degrees - this brings the pelagic visitors like Manta Rays, Sun Fish, Turtles, Marlin and Mako Sharks past the islands. It is also the season where the Large Southern Stingrays choose the archways to mate. Towards the end of

January large mature stingrays can be found hovering within the archways during the day, while they wait for dusk to begin their mating courtships.

Another summer visitor is the Starry Toad Puffer fish These pelagic fish usually only found in the open ocean unfortunately find their way swept in by the Easterly winds. Puffed up at the surface and clinging together in tight schools as the islands resident snapper population attack and devour them from below.

In the autumn and winter months the sea cools down to around 15-12

degrees. The cooler water reduces the plankton blooms and the visibility can sometimes be an outstanding 60 meters plus. The shorter days of winter bring lower sun angles that penetrate the archways giving a dappled light into the depths of caves and arches allowing for some creative photo opportunities.

It is around this time that Seals make their appearance arriving up from the south to hunt the local fish schools. Usually found swimming close to the islands at the surface or lounging on some rocky outcrops



*Large Southern Stingray in Tie Dye Arch Poor Knights. Nikon D200 Ikelite Housing STokina 10-17mm at 10mm 2x Ikelite 125 strobes f8 1/125th sec ISO400*

on several spots around the islands. These playful animals can show up when you least expect it, to literally swim circles around you.

Springtime is usually when the plankton blooms begin the islands exploded in a soup of life. Vast amounts of salps appear, feeding on the plankton making it feel like diving in jelly. However, with the lower vis this is when the macro life is at its most colorful. Nudibranchs pair up to mate laying their spiral egg cases. Jewel anemones spread out to feed on the current and reef fish population

feed relentlessly on the salps.

Several dive sites stand out amongst many that have become popular with underwater photographers.

Northern Arch at the top of the Islands is a narrow archway that cuts through an outcrop of the island only about 10 meters wide at the surface as it drops down to 40 meters to the bottom before sloping off to the depths. Its vertical walls are carpeted with an array of colorful sponge and anemones life that is swept by the current. Mating stingrays and



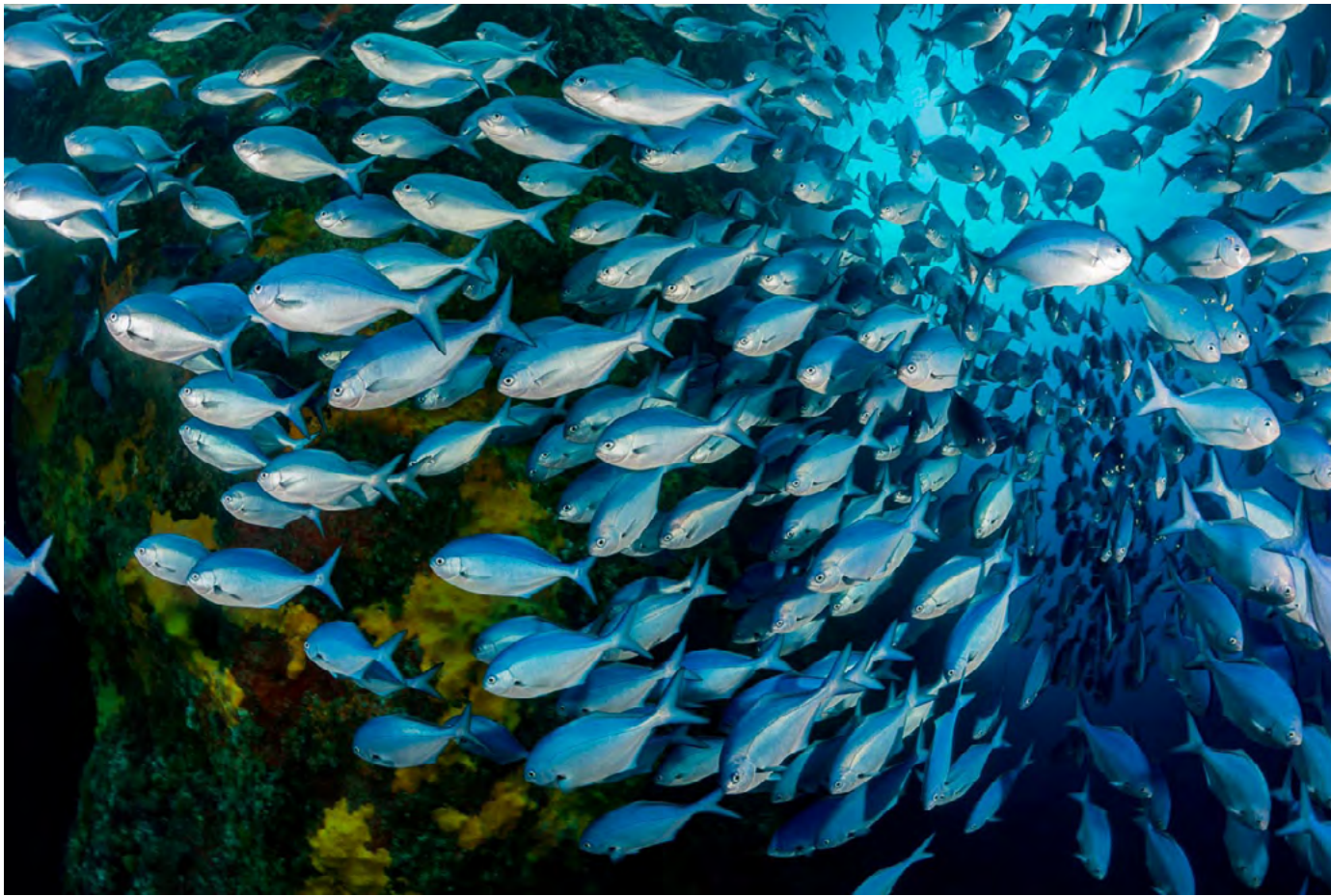
*Clown Nudibranchs mating, Middle Arch Poor Knights. Nikon D800 Nauticam Housing Nikon 105mm VR 2.8 2x Inon S2000 f22 1/100th sec ISO100*

schooling fish shelter with the arch. The hardest part of photographing this site is deciding to go Wide angle or Macro as both will produce some great photographs.

Tie Dye arch is located at the pinnacles, it is a group of exposed rugged islands and rocks several kilometers south from the main Island group. An enormous archway with three enormous entranceways is invisible from the surface and only revealing its self as you descend. The Arch gets its name from the Tie Dye of colour of sponges and anemones

that covers the walls and bottom. Mating stingrays, large schools of fish huge kingfish and Bronze Whaler sharks make this an exciting site.

Blue Maomao Arch is famous for its schools of Blue Moamoa fish that hide in the shadows and line the wall from one end of the arch to the other. A natural window halfway through the arch allows light to stream in on the school making for great photographs. It's a shallow dive site so allows for plenty of bottom time. Very large football size scorpion fish lay on the bottom of the arch while in the kelp,



*School of Blue Mao mao Middle Arch Poor Knights Nikon D800 Nauticam Housing Sigma 15mm 2x Ikelite 125 strobes f8 1/50th sec ISO500*

outside the arch Eagle and String rays can be found resting.

Meditation Wall is a Macro Photographer's dream, named because divers looking for macro life just hover staring at the wall as if they are meditating! The wall is plastered in marine life; Nudibranches abound and Blennies and Triplefins live and feed amongst the sponge life. This is also a shallow site located in an area called The Gardens where there is lots of friendly fish to photograph.

Visibility and condition can change by the season ask the local dive shop about conditions as I have taken a wide angle set up and found the water to be salp soup.

The archways are the most impressive to photograph look for the sun and which way the schools of fish are facing. The walls of the arch are usually covered in colour, so try and balance the lighting from your strobes to light this without blowing out the schooling fish.



*Crested Blenny living in Orange Sponge, Nikon D200 Ikelite Housing Nikon 60mm D 2x Ikelite 125 strobes f16 1/60th sec ISO200*

Dive sites like The Gardens, Meditation Wall, Blue Moamoia arch host an array of friendly fish like Sandagger wrasse Pink Pig Fish and Snapper they will come right up to the camera so you don't need to chase them.

Blue Moamoia fish have a deep blue colouring



*Tambja Verconis Nudibranch North Arch Poor Knight, Nikon D200 Ikelite Housing Nikon 60mm D 2.8 2x Ikelite 125 strobes f16 1/80th sec ISO200*

Adventures.

The Poor Knights is often overlooked by passing photographers heading to more tropical destinations nearby. However, to the underwater photographer looking for a new destination and something completely unique to photograph, it is worth the time and effort to explore - you won't be disappointed!

Lower the power of your strobes when photographing them as they can reflect light and blow out the colour.

Look around sponges for blennies and triplefins living within it makes a more pleasing background than the rock face.

There are plenty of moray eels around the Knights. The mosaic moray is the most impressive with its toothy mouth and mottled patterned skin. Keep an eye out for the grey moray that is found out in the open or hiding above the seafloor in the kelp fronds.

Stingrays are a very common sight at the Knights, and it's very rare to not see any on a dive. You will often find them resting on the bottom or swimming across the vast forests of kelp just use common sense when approaching.

Several operators run day trips and overnight live-aboards to the Poor Knights. Check out Dive Tutakaka, Yukon Charters and Ocean Blue.

## Alex Stammers



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

# The leading online resource for underwater photographers and videographers



### TECHNIQUES

Learn the fundamentals of underwater photography and progress to the latest, most innovative techniques taught by the top pros in the industry.

### TRAVEL

Read about the experiences of accomplished shooters as they visit the world's most iconic dive spots, and get inside tips on maximizing your dive vacation.

### ARTICLES

Discover the world of underwater imaging through compelling features from photographers, filmmakers, ocean scientists, industry experts, and more.

### NEWS

Keep up to date with everything that matters to underwater photographers, from the latest gear and gadgets to the newest developments in marine research.

### GALLERIES

Browse the portfolios of the industry's biggest names in underwater photography and share your own work online with like-minded members.

### EXPEDITIONS

Journey with us to the hottest dive destinations on the planet and learn better technique from the most talented image makers in the scubaverse.

## DIVE PHOTO GUIDE

[www.divephotoguide.com](http://www.divephotoguide.com) · [contact@divephotoguide.com](mailto:contact@divephotoguide.com)

# *Don't settle for 2nd best*



Film - No Filter No  
White Balance



Digital - No Filter Manual  
White Balance



Magic Filter Manual  
White Balance

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

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

# Palm Beach, Florida

By Walt Stearns

When divers think of big animal destinations their minds often turn to distant corners of the world such as the Galapagos, Azores, Silver Banks or Cocos Island. But there's another location that, while not as exotic, is rapidly gaining recognition as a mecca for big animal encounters. I know this place well, because I call these waters home.

Florida's Palm Beach County is best known as a winter home of the mega-rich. But just offshore of the beachside mansions, another world awaits, and it is populated by an impressive cast of outsized marine life. Those with only a passing knowledge of the diving scene may make statements such as "Oh yeah, you do a lot of drift diving there." But while the technique of drift diving is certainly the means by which area reefs and wrecks are explored, it is not by any means the primary attraction.

What makes the Palm Beach area so compelling is the marine life. I am not talking about profusions of pretty little reef fish, although they are here. I'm referring to the wide cast of big-ticket showoffs that can make the heart skip a beat when they appear suddenly out of the blue. The list of

heavy hitters that call Palm Beach home is both long and distinguished, including some of the largest groupers in the world, all five species of sea turtles native to the Atlantic, and more than a dozen species of shark, including lemon, bull, reef, sandbar, silky, dusky, tiger and greater hammerhead. And although rare, encounters with both whale sharks and great whites have taken place here.

## Diving with the Ancient Mariners

Sea turtles have long been a familiar part of the Palm Beach Florida diving scene. Coming face to face with these non-threatening and often quite large marine reptiles is so common that if you see fewer than two during a course of dive, it's considered a really slow day. That's because this 45-mile stretch of coastline is one of the few places where all five of the Atlantic species of sea turtles - Loggerhead, Hawksbill, Green, Leatherback and Kemp's Ridley - are known to converge.

The smallest member of this group is the Kemp's Ridley



*Baby leatherback sea turtle rests up before making a dive into the depths of the Gulf Stream of Palm Beach, FL. Canon 7DmkII inside a Nauticam housing shot in manual at 1/160 sec at f/11, ISO 200 with a Tokina 10-17mm lens at 17mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/8 power from less than a foot away.*

(*Lepidochelys kempii*), which may reach 36 inches / 90 cm in length as an adult, averaging around 100 lbs. / 45 kgs. They are easily mistaken for a young loggerhead, with the most telltale difference being the carapace (shell), which on a Kemp is both slightly flatter and rounder. Although found predominantly in the Gulf of Mexico, there is a small population of Kemp's that live off Florida's eastern coast between the state's northern border and the northernmost end of

the Palm Beaches in Jupiter. So far, I have come across only three in all my years of diving off Jupiter.

Another rare sighting for divers is the giant Leatherback (*Dermochelys coriacea*), a turtle which at full maturity can measure over 6 ft. / 1.9 m in length, and weigh up to 1,100 lbs. / 500 kgs. The largest leatherback recorded was 6.5 ft. / 1.98 m in length, and tipped the scales at 2,019 lbs. / 915 kgs.), making it a colossus in the world of living sea turtles. While in-



*Mating season can make for some peculiar scenes off Palm Beach, FL, when loggerheads get a bit too amorous. Nikon D200 inside a Subal housing shot in manual at 1/80 sec at f/8, ISO 125 with a Tokina 10-17mm lens at 15mm. Additional lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/4 power.*

water encounters with leatherbacks are fairly rare, meetings do take place. When they do, there is no mistaking this creature, which has a predominantly black body with white markings and a teardrop-shaped leathery carapace instead of a hard shell. The best time to look for one is from early March through June, as this is this turtle's nesting season.

Palm Beach area is a major breeding and nesting ground not only for the giant Leatherback, but also two other primary species, the green and the loggerhead. When nesting season reaches its peak in May and July, this coastline plays host to more sea turtles per acre than anywhere in the Southeastern U.S. or Caribbean. According to data compiled each year by the Loggerhead Marinelife Center, which records and monitors 9.5 miles of beach in Northern Palm Beach County, this area alone often sees more than 10,000 turtle nests per



*Hawksbill turtles are common sights year round in the waters of Palm Beach, FL. Nikon D300 inside a Subal housing shot in manual at 1/80 sec at f/7.1, ISO 200 with a Tokina 10-17mm lens at 14mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/3 power.*

season. 2015 was a banner year with more than 9,700 recorded loggerhead nests, 3,616 green turtle nests, and 213 Leatherback nests tallied through the month of July.

For the most part Greens (*Chelonia mydas*) are highly transient and only converge in numbers during their nesting season, which runs from May through September. Easily identified by their smooth, olive-brown carapace (shell) marked with darker streaks and/or spots, and an equally smooth bullet shaped head, greens are large, averaging 240 lbs. / 190 kgs., and the males can get quite amorous. Often times their quest to mate can get so heated that they will pursue the wrong species, giving resident Loggerheads and Hawksbills a fit, while at the same time providing a show for divers.

The Loggerhead (*Caretta caretta*) nesting season pretty much overlaps that of every other



*Count on seeing lots of sea turtles during the spring and summer months off Palm Beach, Florida; this pair of greens is doing a fly by, while a large loggerhead leaves the scene. Canon 7DmkII inside a Nauticam housing shot in manual at 1/160 sec at f/9, ISO 200 with a Tokina 10-17mm lens at 17mm. with a little bit of front lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/3 power.*

turtle, beginning as early as March and ending as late as August. And they can be found in Palm Beach waters at most times of the year. That is because there is very large resident population to begin with, a feature which has made them a signature attraction of the local diving scene. When it comes to looks, these darlings of the reef may not win any beauty contests. They have thick, rough-textured shells and large blunt, heads, which looks like the end of a log; hence the name. They are the second largest turtle found in Palm Beach waters, with a carapace length around 4 feet / 1.2 meters. A mature female will average between 350 - 450 lbs. / 158 - 204 kgs in weight.

Diving the reefs in the 50 - 80 feet / 15 - 24 meter range during the height of nesting season



*During the winter season the local population of lemon sharks jumps up by a factor of 10 in the waters off Jupiter, FL. Nikon D300 inside a Subal housing shot in manual at 1/90 sec at f/4.8, ISO 280 with a Tokina 12-24mm lens at 22mm.*

(late May – June), it is not unheard of to count as many as 20 to 30 adult loggerheads scattered about the bottom during the course of one dive. Most will be females, recovering from the physical expense of hauling their large bodies out of the water and up a sandy slope in the night. Once ashore, they must dig a hole deep enough to bury the 100-plus eggs they lay, then drag themselves back to the sea to repeat the ritual 10 days later. The most telling evidence of recent nesting is when a big female is so bugged out from exhaustion that she

will barely make it to the reef before falling asleep in her tracks. Even more comical are the ones that conceal their heads under a small overhang while leaving the rest of their massive body exposed to the world—it's a bit like a poor attempt at parking a large truck in small tool shed.

Another highly abundant species of sea turtles found along the Palm Beach Coast is the Atlantic hawksbill (*Eretmochelys imbricata*). Next to a Loggerhead they are a smaller and more agile species, identifiable by the ornate coloration of their shell, and



*Winter brings sharks to Palm Beach County, FL, and Jupiter is the place to see a great variety like this sandbar shark. Nikon D300, Subal housing shot in manual, ambient light at 1/160 sec at f/9, ISO 320 with a Tokina 10-17mm lens at 17mm.*

the protruding upper jaw, which bears a strong resemblance to a hawk's beak. Often times, divers will come upon one of these turtles using that specially designed beak to dig in and tear small chunks off a sponge. In fact, sponges form a primary part of the hawksbill's diet, which explains why they are a common feature on the sponge-rich reefs of Palm Beach. One thing I find interesting is that, unlike leatherbacks, greens and loggerheads, hawksbills rarely nest here, as most of these turtles encountered are largely adolescent individuals measuring less

than 24 inches / 60 cm in length. Once in a while I will come across a fully mature turtle in the 36 inch / 91 cm range, but these I tend to write off as transient turtles just passing through.

### **Shark Alley**

Seeing a large shark can add excitement to any dive. And in Palm Beach waters, things can certainly get exciting. The members of the shark family you are most likely to see here are the nurse, Atlantic reef, lemon and bull—in that order. Several reefs up between Jupiter and



*Sometimes peering under a ledge on the reefs off Jupiter, FL can present an interesting surprise like this Atlantic Reef Shark quietly napping. Nikon D300 inside a Subal housing shot in manual at 1/125 sec at f/8, ISO 250 with a Tokina 10-17mm lens at 17mm.*

North Palm Beach, including Shark Canyon and Tunnels, are regular stomping grounds for Atlantic reef sharks (*Carcharhinus perezii*). Dive charters do not feed these sharks, as this practice is not allowed in Florida State waters. But even without additional enticements, the sharks are at times inquisitive, granting a lucky a photographer a good photo opportunity. One of the interesting behaviors I have seen reef sharks exhibit from time to time is their habit of taking a nap beneath the overhangs provided by the edge of the reef.

My personal favorite is the lemon shark (*Negaprion brevirostris*), which often cruise the primary reef systems that run parallel to the coast at depths between 45-60 feet/ 14-18 meters, and at 70-100 feet/ 21-30 meters. Measuring up to 8 feet/2.5 meters long, and weighing as much as 300 lbs./140 kgs, these big brawny fellows (actually most are females) have all the bearings and looks of a pretty



*Bimini is not the only place Greater hammerhead sharks like to visit during the months of winter and early spring; they also favor Jupiter, Florida. Canon 7DmkII, Nauticam housing, manual at 1/125 sec at f/8, ISO 320 with a Tokina 10-17mm lens at 17mm. Sea & Sea YS-250 strobes set at 1/3 power.*

serious customer. Yet, comparing them to species like the Atlantic reef (the shark common to most shark dives in the Bahamas) they are not highly excitable, rather coming across as better behaved. Which is a good thing, because they are the least bashful about coming in real close to photographers.

I got to know the lemon shark back in January 2001 when I came upon something I had never seen before – over 40 of these sharks, all adult size, resting on the bottom in formation like cars in a parking lot. Contacting Dr. Samuel Gruber, one of the world's most renowned experts on lemon sharks, confirmed that this particular aggregation behavior was one of a kind, not known anywhere else in the world. This finding set in motion a highly extensive study under the auspices of Doc Gruber's Bimini Shark Lab. Information gained from the Jupiter Lemon Shark Project was able to fill in new



*Winter brings sharks to the waters of Palm Beach County, and Jupiter is the place to see a great variety such as this tiger shark. Canon 7D, Nauticam housing shot in manual at 1/125 sec at f/6.7, ISO 200, Tokina 10-17mm lens at 17mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/3 power.*

chapters about this shark's natural history that were previously unknown.

In 2010, findings from Dr. Gruber's research played an instrumental part in the State of Florida passing into law and granting complete protective status for lemon sharks in state waters. The reasoning for this action was based the shark's slow-growth rate, which makes them extremely vulnerable to overfishing. Lemons reach sexual maturity at 12-15 years of age, and reproduction takes place every second or third year at most, with the number of pups in a litter averaging between 6 and 18. Add to that a juvenile mortality rate of 40-60 percent the first years of development and you have a very low recruitment rate for the species.

The lemon shark aggregating behavior I first witnessed back in 2001 is not the only massing of sharks that takes place in Palm Beach waters.

*Between late fall and late spring, large bull sharks are frequently seen around the outer reefs and wrecks of the Palm Beach, FL coast. Canon 7DmkII inside a Nauticam housing shot in manual at 1/125 sec at f/5.6, ISO 250 with a Tokina 11-16mm lens at 16mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/3 power*

One of the most dramatic is the annual migration of a variety of blacktip shark known as the spinner (*Carcharhinus brevipinna*) – so named for their tendency to spin as they jump into the air. These sharks work their way down the North American coastline for the same reason birds fly for winter – to keep warm. By the end of December, schools of the relatively small sharks (average length 4 feet / 1.5 meters) numbering into the hundreds converge on the warm near-shore waters of the Palm Beaches.

To document spinner populations, Florida Atlantic University (FAU) Associate Professor Stephen Kajiura, uses aerial photography, as the sharks are clearly visible in the clear shallows when viewed from the air. His flyovers allowed Dr. Kajiura to determine that between the months from January to the end of April, there can be as many as 500 sharks per square kilometer from the surf line out to half a mile offshore.

The reason so many sharks end up here is based on two related factors. The first is the unique nature of the Palm Beach Coast's underwater topography, which features the narrowest continental shelf anywhere along North America's East Coast. Offshore of the City of West Palm Beach, the shelf reached its narrowest point, spanning less than 3 miles / 4.8 Kilometers in width. Adding to this is the fact that this section of coastline happens to be the easternmost point of



land in all of Florida, which places it squarely in the path of the north-flowing Gulf Stream current. So when sharks move up or down the coast, the narrow shelf acts a little bit like a bottleneck, causing them to concentrate in greater numbers where water temps are most desirable.

While some dive operators would rather their guests aren't exposed to sharks, others promote these interactions. IF you are the type that likes to dive with sharks, it can certainly be arranged. Most of these dives are conducted near or over the edge of the shelf, 4-7.miles .6.5-11 kilometers

offshore of North Palm Beach County, in the Jupiter/Juno Beach area. I would not recommend such encounters for beginners, as bottom depths run between 90 ft / 27 m and 120 ft / 36 m plus, so half of the time you are in the water, the bottom can be pretty far below you. But out in this zone, the cast of players can be as numerous as they are varied, with lemons, bulls and silkys making up the core candidates, usually followed by duskys, sandbars, tigers and greater hammerheads making their special appearances.



*During spawning season, Goliath grouper gather in large numbers around a number of sites off the Palm Beach coast. This group on the Zion train was captured primarily with ambient light only with a Nikon D300 inside a Subal housing with a Tokina 10-17mm fisheye zoom; camera was set to 1/90 sec at f/5.6, ISO 280 with the lens at 17mm.*

## Goliaths

In recent years, Palm Beach has seen the return of the giants. A full-grown goliath grouper can exceed 500 lbs. / 220 kgs in weight, and measure up to 7 ft. / 2.1 m in length, easily making them the largest tropical reef dwelling boney fish in the world. When confronted by one, they will command your attention. Yet despite their formidable size and somewhat dense demeanor, goliaths are not the ferocious brutes some spear-fishermen

would like you to believe. For the most part, they can be big babies, with most habitually retreating to a safer distance or disappearing down into hole on a wreck the moment they feel threatened. Now and then, a bolder fish might sound off with a short series of loud booms, but that behavior is typically all bark and no bite.

Now and then you may find a fish that swims out from cover and seems indifferent to the presence of divers. Local underwater photographers refer



*In the waters of Jupiter, large Goliath groupers and sharks are common prospects for photographers. Nikon D300 inside a Subal housing shot in manual at 1/60 sec at f/5.6, ISO 280 with a Tokina 10-17mm lens at 17mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/4 power.*

to these more inquisitive and social fish as the “super models,” eager to pucker for the camera while the diver fires off shot after shot. Where the fish are this compliant, you can do almost anything short of giving it a bear hug. If you happen to meet one of these fish, remember there are a few simple rules to follow: Keep your movements slow and deliberate, as they also don’t like being surprised. Don’t put your hands in front of its face as it could result in the fish biting you. Don’t

chase the fish. Your best results will come by following rule number one and moving slow.

Over the course of the past five years, diving with Goliath Groupers have grown to become such a signature trait to Florida’s entire Palm Beach region that they just about eclipse all other attractions. Finding one is pretty much guaranteed at most wrecks, along with a few stretches of reefs that have a permanent resident population. Drop in on wrecks like the



*As the spawning season comes closer to its end, a group of Goliath groupers gather around the stern section of the Castor Wreck. Canon 7D inside a Nauticam housing shot in manual working only with ambient light in the 100-foot depths at 1/125 sec at f/4, ISO 200 with a Tokina 10-17mm lens at 12mm.*

Zion Train or MG-111 off Jupiter, or the Castor wreck south of Boynton Beach, and you should find no less than 8 to 12 of the barrow shape behemoths milling about. In similar fashion, the Mizpah or Danny Wrecks off West Palm Beach will have at least 4 to 5 big fish present most of time.

When things really start to get exciting is towards the end of July, as the late summer months of August and September are this fish's spawning season. At this time, the fish come together in aggregations that are found

nowhere else in the world. These gatherings can draw 90 or more fish to five specific sites, each of which is within easy reach of dive charters between Jupiter and Boca Raton. The first four I already mentioned; MG-111, Zion Train Wrecks and Mizpah (all three sit in depths of 90 ft / 27 m or less), the Castor Wreck off Boynton Beach which sits in 110 ft / 34 m. The fifth site, called Hole-in-the-wall, sits off Jupiter and is a bit deeper, with a profile of 120 – 140 ft / 36-42 meters.

In comparison to most other



*A small broken up barge off Palm Beach, FL provides a haven for large schools of grunts. Canon 7D inside a Nauticam housing shot in manual at 1/90 sec at f/5.6, ISO 200 with a Tokina 10-17mm lens at 10mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/2 power.*

species of grouper, the goliath's path to romance is more marathon than sprint, with some making the journey from considerable distances as far away as 350 miles/560 kilometers. Once in Palm Beach waters their spawning season will take up the entire months of August and September. This provides divers with a unique opportunity to get incredibly close to the entire spawning aggregation of a critically endangered species in one of the most accessible places in the world, where underwater

visibly can go from good to exceptional (60-100 ft / 18-30 m. Not only is it a spectacle that sometimes defies words, it also makes for one hell of a photo opportunity.

Back to the question what is there to experience in Palm Beach? I would think you will find more than "Oh yeah, you do a lot of drift diving there."



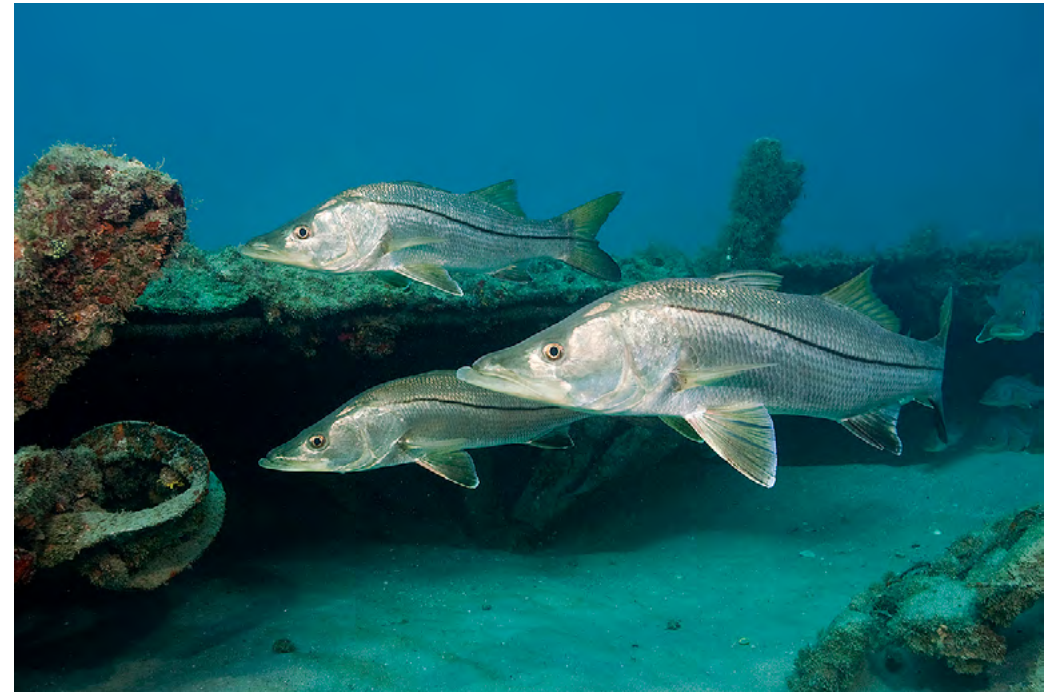
*It's not only about large animal life around the reefs and wrecks off the Palm Beach coastline, it's also about the fish life, some of which is pretty colourful. Canon 5D, Subal housing shot in manual at 1/80 sec at f/10, ISO 250 with a Canon 17-40mm lens. Sea & Sea YS-250 strobes set at 1/3 power.*

## Gulf Stream Effect

The Palm Beach Coast differs from the Florida Keys in the variety and nature of its coral reefs. Instead of the shallow spur and groove fringing reef formations typical of the Keys, bottom contours along Palm Beach take the shape of elongated limestone ridges formed in an earlier millennia when sea levels were 30 to 140 ft / 9 to 42 meters lower than they are today. Varying in height from 3 to as much as 18 feet (1 to 6 meters) above the sand, these elongated limestone

escarpments are far from featureless, which brings us to the Gulf Stream.

This mighty “river within the sea” is the second largest oceanic current on the planet that begins down the western Caribbean with a pathway that takes it up and around South Florida, up the U.S. East Coast and on into the North Atlantic all the way to the British Isles. This massive flow of clear, tropical water tracks closer to shore along Palm Beach County than anywhere else along the North American Continent. This provides



*3 Snooks. Canon 5D inside a Subal housing shot in manual at 1/80 sec at f/8, ISO 200 with a Canon 15mm. Lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/4 power*

the clearest waters divers will encounter in Florida, with underwater visibility reaching up into the 24 to 30-meter range.

The proximity of the Gulf Stream does far more than provide divers with inviting water clarity and warmer temperatures in the winter. The Stream's constant flow enlivens area reefs, bringing the nutrition needed for corals, sponges and bottom fish life to thrive. Evidence can be seen most readily on the outlying reefs and wrecks in the 45-90 feet / 14-28

meter depth range, where the presence of colonial sponges, gorgonians, and hydra-corals are highly abundant and most varied. This covers reefs in splashes of color, from orange elephant ear sponges and deeper-hued orange and red tree sponges to my favorite of the bunch, the red polyp octocorals, with their eye-popping vibrant red to iridescent orange hues. But all that is mere garnishing on the plate when you see what the main entrée is often comprised of.

Between these two adjoining



*The wreckage of a World War II era SB2C Helldiver torpedo bomber laying upside down in 168 feet of water was a surprise find off Jupiter, FL. How it got there ... nobody knows. Nikon D300 inside a Subal housing shot in manual working only with ambient light in the 168-foot depths at 1/45 sec at f/4, ISO 400 with a Tokina 10-17mm lens at 13mm.*

factors (width of the shelf and presence of the Gulf Stream) coastal waters of Palm Beach serves as an oceanic highway for a multitude of open ocean and migratory species of marine life from sharks to jacks, mackerel, tuna, billfish and sea turtles, to the less expected like large Mola Molans (ocean sunfish), passing humpback and Northern Right Whales.

### Wreck Diving

Just about every coastal region of Florida has a few wrecks to dive. Where Palm Beach differs from the rest is that there are a number of sites where divers can explore two to four wrecks during a single submersion. That is because many of these sunken vessels were purposely concentrated together in a linear progression south to north to take advantage of the Gulf Stream's directional flow.

Two prime examples of this are



*Stern section belonging to one the four freighters sunk to create the Governor's Riverwalk Wreck Trek off Palm Beach, FL. Canon 7DmkII inside a Nauticam housing shot in manual at 1/160 sec at f/7.1, ISO 320 with a Tokina 10-17mm lens at 10mm. with a little bit of front lighting provided by a pair of Sea & Sea YS-250 strobes set at 1/2 power.*

the Mizpah Corridor and Governor's Riverwalk Wreck Trek, both a short boat ride from the Lake Worth Inlet. The Mizpah Corridor begins with its namesake ship, a former 160-foot / 48 meter steel-hull ship sunk in 85 feet / 25 meters of water. It is joined by the broken up remains of the PC-1174, a former 150 feet / 45 meter Navy Patrol craft. Both were sunk in 1968 and support an amazing amount of marine growth and fish life. Just beyond the two hulks lies a third

wreck known as the Amaryllis, with nothing remaining but the hull of a 450 feet / 138 meter freighter. Should you still have enough air, you will likely make it to the fourth wreck on the list, the China Barge. This small wreck usually has a lot fish life around it. From start to end, the Mizpah Corridor is a 1,700 ft / 518 m long drift dive.

Like the Mizpah Corridor, Governor's Riverwalk is comprised of four large coastal freighters in the



*In the shadows of a site named Tunnels, a large school of porkfish gather adding a striking amount of gold against the shadows created by the reef's swim-throughs. Canon 5D inside a Subal housing shot in manual at 1/80 sec at f/8, ISO 200 with a Canon 15mm fisheye lens. Lighting provided by a pair of Sea & Sea YS-250 strobes set down around 1/3 power.*

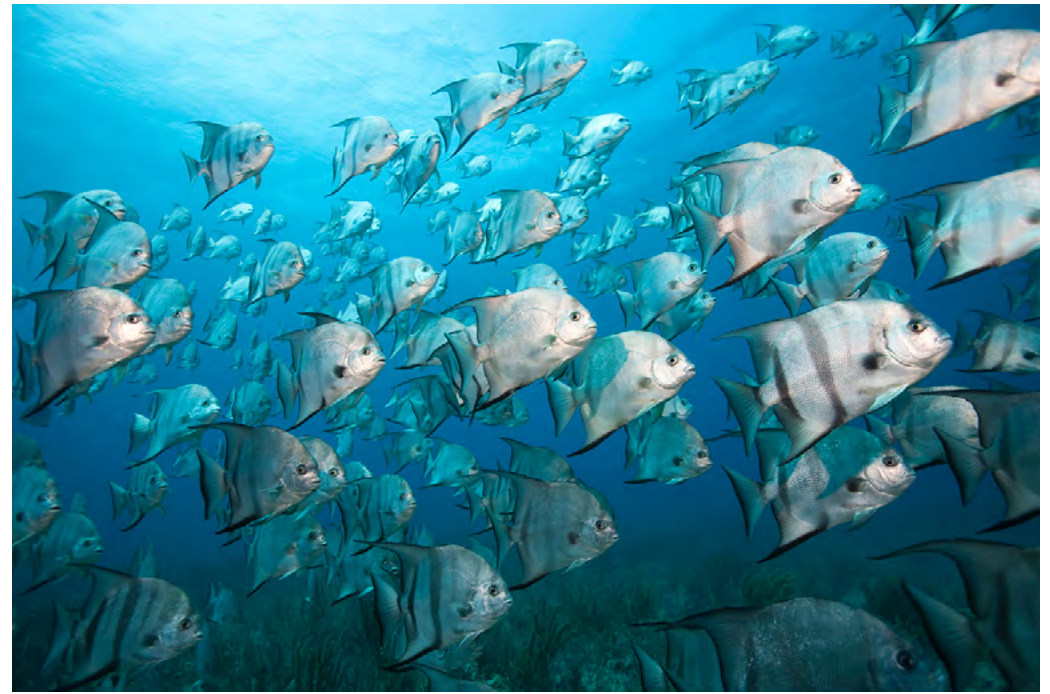
175 feet / 53 meter range. As part of Palm Beach County's 2002 Artificial Reef Program the first three in the collection; the Shasha Boekanier, St. Jacques and Gilbert Sea were put down in consecutive in 90 feet / 27 meters of water. Nine months later, a fourth vessel, the Thozina (measuring 174 feet / 53 meters), was added to the group. Landing directly behind the Gilbert Sea and expanding Governor's to a spectacular artificial reef system, the group can be covered entirely in one dive.

While tropical storms and time have broken many of these ships apart, they are nothing short of amazing when you see the amount of sea life they

attract, making them some of the fishiest wrecks on the Florida coast. But when diving them, be prepared to sometimes fly like superman during the dive, as these sites are often washed by healthy currents from the Gulf Stream.

### Drift Diving

The Gulf Stream influences almost every aspect of diving along the Palm Beach Coast, from what you see to how you actually dive it. The primary practice here is the "Live Boat" method in which the boat, between deployment and recovery of divers, follows the divers overhead while they



*Shooting subjects like this large school of passing spadefish in the depths can present some challenges such as their darn reflectiveness. Canon 5D inside a Subal housing shot in manual at 1/125 sec at f/7.1, ISO 200 with a Canon 17-40mm wide-angle zoom. Lighting provided by a pair of Sea & Sea YS-250 strobes set down around 1/4 power.*

travel with the current, exploring the reef or wrecks. Here's how it works: As the boat gets close to the intended dive site, divers are given a 10-minute warning to gear up. At the site, the captain lines up the boat a short distance up current of the intended reef tract or wreck. Once in position, the boat is put in neutral and a jumpmaster-style type command of "Dive, Dive, Dive" is issued. The dive group steps overboard and begins their descent. At this point, they will not feel any affects of the current, because both they and the boat are moving with the flowing water. It is only as they approach the bottom, they will begin to notice that they seem to be flying

over the ground, at speeds that could range from barely describable to brisk, depending on the location and the nature of the currents on that particular day.

Once settled in near the bottom, divers can relax and allow the current to do most of the work, while staying in visual range of the divemaster and/or group leader who carries a tethered surface float. This style of diving actually requires less exertion than diving on a reef or wreck with no current, and divers are able to cover long distances following the reef contours and increasing their odds of seeing the region's big-ticket items. At the end of the dive there is no need to fight the current to get back to the anchor line, or remember where the boat is. Instead, the group simply heads for the surface, performing a safety stop along the way, and the boat comes to them for re-boarding. The process is surprisingly simple, convenient, and most of all, a lot of fun!

## Where To Dive

### Palm Beach Coast Departure Points

Palm Beach County's 45-mile long coastline is cut by four inlets, each of which provides local dive charters with access a large number of sites within a few miles of their corresponding inlet. Starting at the southern most end of the county, the

four inlets are located as follows:

**Boca Raton Inlet** – Situated on the southern most point of Palm Beach County, dive operations have the unique advantage of not only addressing many of the same wrecks and reefs that sit within reach of the Boynton and Delray Beach area, but also several of Broward County's famed collection of wrecks off shore of Pompano Beach.

**Boynton Inlet** – Also called South Lake Worth Inlet, this inlet provides access to the southern half of Palm Beach County with its own collection of reefs and wrecks for divers to explore off Boynton Beach, from Lantana south to Delray Beach.

**Lake Worth Inlet** – located nearest to the City of West Palm Beach, this large inlet cuts between Singer Island and Palm Beach Island, providing access to a large reach of both Northern and Central Palm Beach County's reefs and wrecks.

**Jupiter Inlet** – This inlet is located at the most northern end of Palm Beach County, providing direct access to both Jupiter and Juno Beach's prime collection of wrecks and reefs.

Walt Stearns

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



# Discover Palm Beach Florida

## And Dive Our Big Three!



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

### Small ads



#### **SOLD! – Ikelite housing for a Canon 5D MKII**

Ikelite housing for a Canon 5D MKII, Ikelite 8" dome port (no scratches) for a Canon fish eye lens, Ikelite ports Canon 17-40mm and a macro 100mm IS lens. I am based in Scarborough, U.K. £1100 [ovnorooaminrobin@hotmail.com](mailto:ovnorooaminrobin@hotmail.com)

Your advert could be [here](#) instead for just £5.00



#### **For sale – extrem'vision(up to 100 m!!) and video camera sony vx 2000**

I'm selling a fantastic underwater housing extrem'vision(up to 100 m!!) and video camera sony vx 2000 in really good condition!!!coming with a pelican case!!!!The underwater housing is coming with :- 2 lenses ( 1 macro and 1 wide angle) - 1 red filter. - 2 set of o'rings - Sillicon for the o'rings. - Digital screen.The sony camera vx 2000 is coming with : - A set of batteries ( 2 large,i medium,1 small) - 5 new dv tapes. - 2 cleaning tapes.Extrem'vision is a French Brand known worldwide.it's strong,reliable and easyto repair if any problems....REALLY GOOD CONDITION!!!2000 euros!!!!!!fabien mouret

Email: [maddox666@gmail.com](mailto:maddox666@gmail.com) [Ref:c147]



#### **SOLD! – Subtronic Nova analog version no ttl converter**

Subtronic Nova analog version no ttl converter

The strobe is 3 years old in good condition

All sockets in S6

800-€

Rudolf Sellböck

Ref C146

Your advert could be [here](#) instead for just £5.00



#### **For sale – Aquatica housing 5D, 8 inch dome, dome shade and canon 5D body**

Aquatica housing 5D, 8 inch dome, dome shade and canon 5D body including 2 spare batteries and spare charger for sale £1600 + p&p.Housing:Aquatica 5D housing - good to 90m, 8" optical acrylic dome port – some minor scratches but not visible in photos, 8" dome shade / guard, for wide angle lenses, Spare O ringCameraCanon 5D, 3 Batteries, 2 Chargers, StrapAll for £1600+ p&p, will accept paypal, or cashPlease feel free to ask any questionThe equipment has not been used for a while but I have just upgraded to a canon 5D mark II package so have this for sale.I am based in London and if you wish to come round and have a look/examine the equipment prior to parting with your money we can arrange that.

Email: [martin.abela@hotmail.co.uk](mailto:martin.abela@hotmail.co.uk) [Ref:c145]

**Sell your stuff** You'll be amazed at just how quickly your unwanted underwater photography kit could be converted into hard cash with a UwP small ad. You can have your own UwP small ad for just £5.00 and it can have one photo as well as up to 100 words.

Check out small ads  
here

Buy your small ad  
here

# My Shot

Last year I was fortunate to take a dive trip to Indonesia, deciding last minute to also spend time in the macro capital of Lembeh's waters.

Having never dived in Asia this whole journey was an incredible experience; with the most colourful reefs I've ever witnessed and bursting with life.

One of the best moments however, was my last dive of the week, a muck dive in the shallows not far from shore.

Starting off in a group of about 6 or 7 divers, we gradually split off finding our own subjects to photograph. Someone then pointed out this Wunderpus octopus (Wunderpus photogenicus), and a few of us gathered to take in turns to watch or document this beautiful cephalopod. As the others trailed off to look for more species, I stuck with the Wunderpus; shooting and readjusting strobes to try create the ideal image. Suddenly, I started. Looking through my viewfinder there were two octopuses! Focusing on the scene unfolding in front of me, I began to observe these two octopuses gliding around one another, and then extremely quickly, they began to mate. I stayed shooting, trying to capture this tangle of tentacles as best as possible, though it was hard to see what was going on at points. Being on a muck dive I was shooting with my Nikon 105mm macro lens, and using this lens meant I could keep some distance from the animals yet still capture the whole scene and fill the frame.

After what felt like only a few seconds, the octopuses parted, and swiftly disappeared off on their separate ways. Finally looking around, I



*Nikon D800, Nikon 105mm macro lens, Nauticam housing, Sea&Sea YSD1 strobes, 1/80 sec; f/20; ISO 200*

discovered I was the only one of my group to have stayed and witnessed the whole ritual. The feeling of not simply being privileged to see this amazing behaviour, but also managing to capture it in an image is something I will always remember, and a great finale to this expedition.

**Charlotte Sams**  
[www.charlottesams.com](http://www.charlottesams.com)

*“My Shot” can be a particular favourite of yours or one which brings back special memories and deserves to be appreciated by a wider audience. Images need to be 150dpi, longest length (horizontal or vertical) 20cm saved as medium compression jpeg format, and sent with around 300 words of explanation together with camera details and settings. E mail them and you could be in the next issue of UwP.*

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

# Guidelines for contributors

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

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

**Uw photo techniques** - Balanced light, composition, etc

**Locations** - Photo friendly dive sites, countries or liveaboards,

**Subjects** -, Anything from whale sharks to nudibranchs in full detail

**Equipment reviews** - Detailed appraisals of the latest equipment

**Personalities** - Interviews/features about leading underwater photographers

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

**[E mail peter@uwpmag.com](mailto:peter@uwpmag.com)**

## **How to submit articles**

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

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

2. Images must be attached to the e mail and they need to be 150dpi

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

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

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

# Parting Shot 1

Babies are a popular subject for underwater photography. Many photographers earn good money shooting baby swimming lessons in the pool, in fact, it has long been recognised as one of few profitable avenues in our field.

By far the best known water baby photo is on the cover of Nirvana's seminal album *Nevermind*, certainly amongst 40 somethings now, who were full of teen spirit at the time of its release. Although, I suspect most underwater shooters wouldn't be able to name the photographer (Kirk Weddle) who took that classic image, I know I can't without the help of Google.

My daughter Isabella was born in June and we have been doing baby swimming lessons with her in the pool in England. These are mainly aimed at teaching the parents how to introduce babies to the water in a safe way, as well as having a qualified teacher check her submergence reflex before we start dipping her. Like most babies, she's taken to the water instantly.

While I had already photographed her in the pool, I was really keen to take a picture of her in the place I love, the ocean. And the opportunity came in December with a trip to Grand Cayman, when she was 5 months old. She did underwater "swims" every day in the pool, and on our penultimate day we got up early and headed to the calm, pampering waters of Seven Mile Beach to let her swim in the sea before the sun got too strong.

In the pool, I shot her with a rectilinear lens behind my Carl Zeiss underwater corrector port, but in the sea, I wanted the photo to place her in the



*Nikon D5 and Nikonos 13mm fisheye. Subal ND5 housing. 2 x Inon Z240 strobes. 1/320th @ f/16. ISO 320.*

wider scene, so switched over to a fisheye. She did two submergences in the sea, each lasting about two seconds (felt like two minutes to the parents) and came up smiling away. I engaged the motordrive on my D5 and blasted off a series of frames so we could pick the best facial expression and pose.

This photo is not the most creative, nor the most graphically strong I have taken in 2016. But it will be the one that I am sure I will look at for the rest of my life. It is already on the wall of both

her grandfathers' houses! It is a reminder for me that while we strive for artistic significance in our images, sometimes capturing those personal memories of a beautiful reef, the thrill of a shark encounter or, in my case, Isabella's first dip into the Silent World, can be a far more important use of our cameras.

**Alex Mustard**  
[www.amustard.com](http://www.amustard.com)

## Parting Shot 2

No winter blues for me! Winter in many parts of the UK is often a damp, overcast and relatively mild affair with just the odd day of cold, still, sunny weather to stop us all getting depressed and longing for the summer.

Photographically it can be tough to produce worth-while images. Many marine creatures have left the coastal waters for safer deep water wintering grounds and the water clarity is very often sub-optimal as winter storms batter the coastline.

For the nudibranch enthusiast (like yours-truly) these dark winter months can actually be quite rewarding. A number of species hatch in the early winter and spend the next few months munching on hydroids and visibly growing on a weekly basis.

An added bonus of the drop in water temperature and clarity is the beautiful green colouration our waters can sometimes take on during the winter months.

On a dive at the end of last winter when a favourite slug-hunting spot was beginning to produce some superb specimens, we had the most amazing emerald-green colour in the water. The combination of poor visibility and the low angle of the sun



*Olympus O-MD E-M1 in Aquatica AE-M1. Olympus 12-50mm at 28mm. Subsee +10. Sea & Sea YS-D1 + snoot. 1/100th, f/7.1, iso200*

brought an eerie-green glow to the ambient light at about 10m.

I was fortunate to find a subject that made it possible to shoot upwards and take advantage of this gift of colour. It took some care to balance the low ambient-light levels with my

single, snooted, flash but the result was one of my favourite images of 2016 :)

**Dan Bolt**

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

**Do you have a shot which has a story within a story? If so e mail it with up to 500 words of text and yours could be the next Parting Shot.**