Underwater Photography

a web magazine

Dec/Jan
2002/3

Nikkor 18-35mm

Light & Motion Tetra 5000

Gates TRV950/PDX10

Ikelite TRV950/PDX10

Jervis Bay winner

Pro shooting

Dive Loloata

Octopus & cuttlefish

Cave diving

Model behaviour

St Abbs Splash In

Classified ads

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Underwater Photography

a web magazine
Dec/Jan 2002/3
e mail uwp@uwpmag.co.uk

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Editorial

The future

The sad demise of SkinDiver is a stark reminder of the precarious nature of specialist publishing - even in a country such as the USA with a huge diving fraternity.

The events of September 11th 2001 have affected us all but no more so than the travel industry and especially dive travel. Magazines rely primarily upon advertising revenue and the effect of 9/11 has seen a dramatic downturn in the advertising dollar.

The concept of UwP uses the world wide web to dramatically reduce costs by eliminating printing and postage yet be able to be distributed internationaly for free. I believe that being free is the future for I am certain that the readership of UwP would tumble dramatically if a subscription fee, however small, were introduced.

To remain free and in 'production' UwP needs support in two main ways - advertising revenue is obvious and we are working on that slowly but the main support must come from you, the reader. We need you to spread the word, put links onto your web sites and tell as many people about us as you can. This will require virtually no financial input on your part but will ensure that UwP remains free.

If UwP cannot remain free I think it will flounder so I hope you appreciate UwP enough to link to us from your sites and promote us for I don't have the budget to do that through external advertising.

As someone very wisely said "There no such thing as a free lunch" so, if you want UwP to remain free, do something about it and make your contribution by linking and promoting.

Feedback

It never ceases to amaze me that UwP, which is downloaded over 20,000 times per issue worldwide, receives virtually no feedback.

Either we are doing what you want or, because it's free, you don't think you have a right to offer constructive criticism. Well free it may be but we want to make sure we offer what you want so don't hesitate to tell us what you like and dislike and, if we agree, we'll do something about it. Whatever you suggest, we will always listen.

Peter Rowlands

Travel & events

Macro Photography Tours
St. Vincent, West Indies
July-August 2003 and 2004

Deb Fugitt of City Seahorse, Inc. will escort her 8th annual St. Vincent Underwater Photography tours to the Caribbean Island of St. Vincent in July and August 2003.

Pro photographers rate St. Vincent with Kungkungan Bay, Indonesia and Anilao, Philippines as one of the top three macro photography destinations in the world. The tours, limited to 10 photographers, are specially arranged and provide 3 or 4 in-water divemasters on each dive to assist with critter spotting as well as safety. Photographers are given the necessary freedoms to produce award winning photos. The spacious custom-built dive boat is perfect to support photographers and the itinerary is set daily according to the wishes of the group and to maximize photo opportunities. Additional dates may be added for your dive club, agency or centre.

Details on these affordable tour packages which include hotel, dives and all meals are at http://www.dive-st-vincent-scuba-diving.com or email tours@scubasvg.com or call USA (817) 626-0636.

http://www.dive-st-vincent-scuba-diving.com

John Boyle video trip May 2003

John Boyle will be hosting a video diving trip from Bali to Komodo on Kararu next year. The dates are May 12-19 and May 21-June 1 2003.

The first is a 7 night and the second an eleven night package

Apart from being an intriguing area to dive, John will be giving illustrated talks and film shows in the evenings, and will also be offering help and advice either in workshops or informally to anyone else who is working with underwater video.

There is an extra bonus as the boat has just installed a new computer with video editing functions, an 80gb hard-drive, 1.7mhz processor, cd, burner etc that will be available to anyone who wants to do some on-board editing.

The boat is gorgeous, the diving should be great, the entertainment should be good! - and there are of course the dragons!

For further information contact John at www.sharkbayfilms.com or travel agents Divequest at www.divequest.co.uk

Skeligs and Aran Isles trips with Paul Kay

Skelligss, Kerry, Ireland
May 18th -25th 2003
14th - 21st September 2003

1 week hardboat diving on superb sites including some newly discovered. Superb underwater scenery ranging from walls to deep narrow gullies (similar to Kilda) and bedrock valleys.Very colourful and plentiful marine life and potentially superb vis. of up to 20m.

Aran Isles, County Galway, Ireland.
Monday June 9th to Sat June 16th 2003

A formal, structured underwater photography course. 1 week hardboat diving based ON one of the Islands. Limestone cliffs provide superb scenery and many crevices and caves. Vis. can be 30m+! Scenic and beautiful. Life is very abundant.

For fuller details including dates, costs, experience levels, please contact Paul Kay

(01248) 681361 or (07702) 411614
e mail **paul@marinewildlife.co.uk**

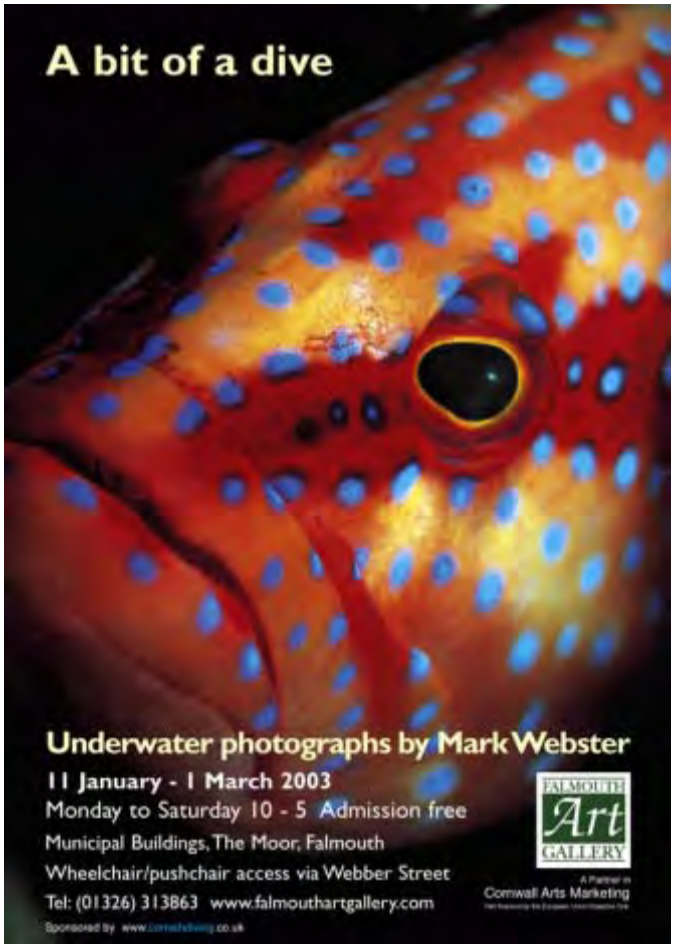
Beneath The Sea 2003 Inaugural Underwater Digital Photo Competition

Beneath the Sea 2003 is proud to announce their First International Underwater Digital Photo Competition.

Recognizing the growing impact of digital photography, member photographers of Beneath the Sea have created this First International Underwater Digital Photo Competition.

The entry must be digital, but the original may be film that has been scanned. Two digital categories are to be judged: Open Digital: The only adjustments allowed are those that can also be done in a darkroom; and Creative Digital: These images must have a basic underwater theme incorporating divers, wrecks, reefs, fish and/or marine life, after that - anything goes!

But act quickly - the contest deadline is December 31st, 2002. For contest rules and an entry blank visit Beneath the Sea at their Internet site today: **http://www.BeneaththeSea.org**



What links these sites?

OCEAN LEISURE

London's premier watersports centre
11 - 14 Northumberland Avenue
London, WC2N 5AQ
Tel: 020 7930 5050
Fax: 020 7930 3032
email:info@oceanleisure.co.uk

New products

Gates TRV950 / TRV940 / PDX10 Housings

Durable, "Bulletproof" machined aluminum, black type II 'hard' anodize finish, and sealed with a nickel-acetate process. Reliable Mechanical Controls means no sticky buttons or faulty electronic controls. No batteries required!

Professional Controls like White Balance, Exposure, Shutter Speed and Manual Focus.Quality Optics means clarity, sharpness and no vignetting (cutoff dark corners) to spoil your images.

Positive Lock stainless steel latches confirm your housing is sealed and secure.2-Year Warranty. Only Gates offers a 2-year renewable warranty on all housings.

Only with Gates can you switch to 'Memory" mode and capture full 1.3 Megapixel still photos to a Memory Stick.Accommodates all Camcorder Battery Sizes for maximum shooting between re-charges.

Reversible Handles let you find the best balance and position for your hands on the controls. Remove them for stowage and travel.

Bayonet Port Mount for quick, easy change between Standard, Wide Angle and wet-connect Multi Ports.

www.gateshousings.com

Remote Optical Controller (ROC) from Light & Motion

ROC is a revolutionary new strobe controller that is built into the Tetra 5000 housing. ROC enables the user to shoot in several modes, Digital TTL, Manual bracketing based on TTL feedback and full Manual. All modes and strobe output levels are relayed to the user through a bank of LED's located on the back of the housing.

Digital TTL

With Digital TTL you eliminate the guesswork and let the camera and strobe set the appropriate exposure. When shooting in the TTL mode, the ROC LED panel will provide feedback that shows at what level the strobes were fired.

Manual bracketing (TTL based)

ROC allows you to take it a step further and use the TTL information and then manually bracket above and below the previous setting. For example, shoot your subject in TTL (as above). Then you can adjust the strobe power up and down to fine tune the exposure.

Manual

If you want to shoot in full Manual, ROC will allow you to manually adjust most TTL compatible strobes up or down in 12 half stop increments. The LED panel provides constant feedback as to what level the strobes are set.

Combine these exclusive ROC features along with the instant feedback of digital photography and getting that perfect shot is made easy.

www.uwimaging.com

Ikelite housing for SONY TRV-950, PDX-10

Ultra compact new housing is molded of corrosion free clear polycarbonate and operates safely to 200 feet. Removable base allows attachment of our video lights. Weight complete is less than 9 pounds.

An external mirror is included that provides viewing of the color monitor through the clear housing. Viewfinder magnifier offers enhanced viewing while wearing a diving mask.

HOUSING FEATURES

*Power on / off / memory *Recording start / stop *Zoom *Exposure *Photo Button *White Balance *Shutter speed *Menu Dial *Manual and Auto Focus *Glass lens port *.5x Wide Angle Lens *Viewfinder magnification *Color monitor can be viewed *External mirror for monitor *Removable external UR/Pro Filter *Accepts NP-FM30, 50, 70 batteries

The basic housing measures only 4.75" wide x 6" high x 11" long with port. Total width is 12" with removable handle bar attached, and 8" high with the removable base.

www.ikelite.com

Stop press news from Japan

Olympus have just announced the PT014 and PT015 housings for their digital cameras X-1/2 and C5050. They are depth rated to 40 metres.

Sea & Sea have announced their housing for the Coolpix 5000 which should be available in January 2003.

Full details will be in UwP11.

NIKKOR 18-35mm LENS
By Neil Vincent

"A poor tradesman blames his tools" Does anyone remember having this drummed into them as they grew up?

I remember and I still continued to blame my tools as an underwater photographer. I began with Nikonos cameras and framers and it seemed to me that every time I found the perfect subject I had the wrong framers on. I even tried only looking for the right subjects but this just never worked the best subjects just didn't fit.

To solve this problem I changed to a housing and prime lenses. This worked well for macro with the Nikkor 105mm Micro. I could photograph from 1:1 through to theoretically through to infinity, in reality about 1:4. When targeting larger fish the Nikkor 60mm Micro lens achieved the same great results.

On the shipwrecks or in underwater caves, the lens of choice for me is my ultra wide Sigma 14mm Rectilinear lens which allows me to get really close to big subjects and fill the frame without barrel distortion. Or if I felt that that some distortion would add to the photograph then I use the Nikkor 16mm Fisheye lens.

My dilemma for many years has been what to use in between these sets of lenses. For example when diving a location which is new where I wasn't sure what I would see or what to use, wide angle or macro. I had an old Nikkor 24mm wide angle lens which I added to my underwater arsenal. It was good and for a while filled this gap. With this lens I could photograph larger fish, head and shoulders of a diver, a Cuttlefish or a seal. For a while I was satisfied.

I had never used a zoom lens underwater but I became aware of other photographers who were beginning to use them. They were using lenses in the 28mm-100mm range and this did not interest me. My interest in zoom lenses changed following a discussion with Fred Bavendam (National Geographic Photographer) who was using the new Nikkor 17-35mm lens. I was excited about the versatility of the range which this lens seemed to offer, I quickly lost interest when I asked the price. This a fast zoom lens with a minimum aperture of

f2.8, unfortunately this special professional quality does not come cheaply so the price was high, too high for me to justify. So I went back to the 24mm.

Mr Nikon must have read my thoughts as not long after feeling and coveting Fred's lens, Nikon released the Nikkor 18-35mm f3.5-4.5 D IF lens. Not as fast as the 17-35mm f2.8 but who uses f2.8 underwater and at one third the cost this lens sounded great. To replace this lens with prime lenses would meaning owning a 18mm, 20mm, 24mm, 28mm and 35mm lens and I would be back to having the wrong lens on the camera again.

My next question was, would the lens fit inside my Subal F4 housing and what else did I need the make the system work. I rang David Hill at Sea Optics, Australia. David had the answers, as Sea optics is both a Subal and a Nikon dealer.

I would need a 150mm dome port DPSWB (which I already had) or a Fisheye dome DPFE, a 40mm extension ring EXR40 to go between the dome and the housing, a plus 4 diopter and some gears. The aperture gear required is the same as that for the Nikkor 105mm, Subal did make a zoom gear for the lens but Subal did not make a manual focus gear, which meant the lens would have to be used in auto focus mode.

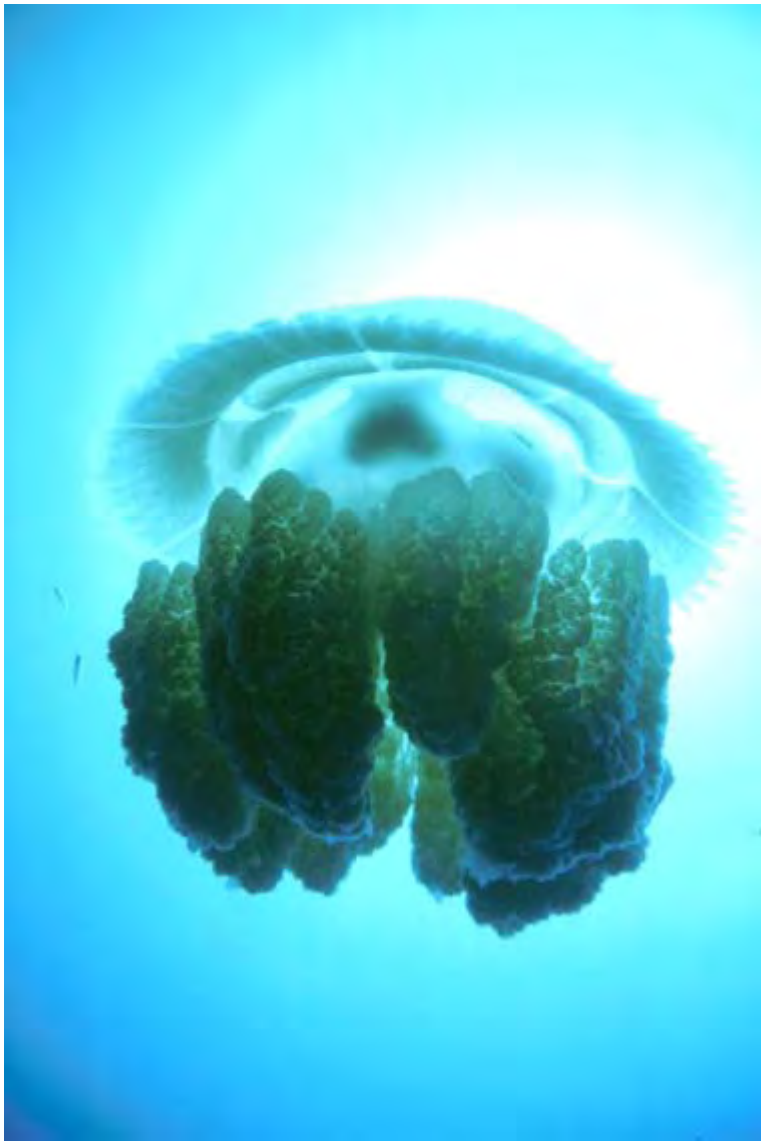
Being old and still coming to grips with the metric system, auto focus was not something that I personally have felt comfortable with. I obtained the physical sizes of the lens, using these dimensions and my engineering skills I designed a gear that would fit and work within the housing. Once I had convinced myself that I could make it manual focus, I ordered the lens.

On land the lens is very versatile, with an angle of view from 100(to 62(. It is quite light for a lens with 11 elements which makes it ideal for travelling or bushwalking. It has internal focus making it much more usable in a housing as it it's length doesn't increase when focusing in close. And it does focus close, 0.33 metres.

When it arrived I checked the fit in the housing and decided to have the gear made. (After going to all of this trouble of designing a focus gear David now tells me that Sea Optics are making the manual focus gear for the lens. This is no consolation to me but it does make it easy for future buyers.)

I fitted the gear only two days before the Jervis Bay Shootout on board Ocean Trek. Very bravely I chose to use the lens in the Shootout and my confidence in the lens was rewarded. It performed perfectly, I could full frame Blue Wrasse, Indian fish showing some of it's habitat, big jellyfish, big jellyfish with a diver and a wide angle cave photo with a diver, her reflection in the air pocket on the ceiling, all of these situations with one lens!!! For the Shootout it was ideal as you have a set time and a limited amount of film to use in the competition. I believe the lens played a big part in me receiving second place. It was very stiff competition with Nigel Motyer, one of Europe's well known photographers winning and Robb Westerdyk from the Central Coast a very close third. I think it was this lens that gave me the edge.

Later in the Year I won the Open section of the South Pacific Divers Underwater Photographer of the Year, three slides of my winning five slide portfolio were taken with this new lens.



In this time of automatic everything, I still choose to do some things manually. I don't use program mode underwater because the camera cannot understand that someone actually has taken it underwater. It becomes confused. I use manual or in special situations like fast moving seals I will choose Speed Priority, making it easy for the camera leaving it only to calculate the ideal aperture. Since the Shootout I have established that underwater the 18-35 lens works best with apertures greater than f8 so I rarely go wider. Using this and the configuration described above, I have had corner to corner sharpness.

One word of warning. I recently came close to a group seals sitting on rocks near the waters edge, I surfaced very close to them, lifted the housing from the water and tried to focus. It won't!!! With the +4 diopter, it's like the Nikonos 15mm lens, it only works underwater. The seals remained and posed beautifully, knowing full well that the lens would not focus.

My ranting here may appear to be a great big advertisement for Nikon and Sea Optics. It certainly is an endorsement of the two companies that have contributed to the biggest leap forward in my photography in the past ten years. In the past I have bought new housings, changed lenses and camera bodies but since changing from manual flash to TTL, this lens has provided me with the next biggest advantage.

Don't get me wrong this lens is not going to make you a better photographer, that's something that you gain through experience. What this lens has allowed me to do is to take better advantage of the subjects and opportunities that present themselves underwater. In other words I won't be able to blame my tools in the future.

Neil Vincent
neilv@ozemail.com.au

Light & Motion Tetra 5000 housing review

By M. Westermeier

The ability to get instant feedback is just one of the many attractions of using digital cameras underwater. When coupled with being able to take hundreds of images on a single dive and image quality that is starting to rival film, underwater digital makes sense.

The Nikon Coolpix 5000 with its 5.0 megapixel effective CCD and 28-85mm zoom lens lends itself as an ideal digital camera for underwater use. And by expanding the basic camera with an auxiliary macro or wide-angle lens adapter this is one camera that can do it all from fish portraits, 1:1 macro, or dramatic wide-angle shots. When coupled with the Light and Motion Tetra 5000 underwater housing you have a system that is unbeatable for the versatility, price, ease of use and quality of images that you get.

The Light and Motion Tetra 5000 housing for the Nikon CP5000, which only started shipping in mid August this year, is a superb piece of engineering and craftsmanship. Constructed of black anodized cast aluminum and coated with a silver metallic powder it provides for virtually full camera control, double seals on the back plate and lens port, and is lightweight and undemanding to handle underwater. The buttons and controls are easy to use, very responsive, and located in virtually the same location as on the camera. Overall it is a compact, rugged, lightweight and easy to use housing.

The Tetra incorporates what Light and Motion terms the revolutionary **ROC** (Remote Optical Controller) strobe controller. The **ROC** enables the user to shoot using Digital TTL, Manual bracketing based on TTL feedback and full Manual with the ability to adjust in 12 half-stop increments with any TTL compatible strobe.

The unit I used had a Nikonos bulkhead installed, but a Wetlink bulkhead is also available as well as one for a Sea & Sea strobe. I also had the Light and Motion Wetmate lens installed and a macro lens for 1:1 imaging, which can be installed and removed while underwater. A Wetmate wide-angle lens is also available for this unit.

Assembly and Pool Testing:

The camera and housing went together very smoothly with clear and easy to understand assembly instructions provided by the owner's manual. The CP5000 camera rests snugly in the housing making it all but impossible to improperly install it. The "O" rings are easy to clean and install and the latching system on the back plate is both easy and foolproof to use.

My first test of the unit was in an outdoor pool, using a Nikon SB105 strobe for lighting and a wetmate macro lens for 1:1 reproduction. Within seconds I came upon a problem; because of the bright sunlight I could not see anything in the LCD viewfinder. The unit only provides the LCD screen as the viewfinder and it is all but impossible to see

in bright light. I adjusted the viewfinder for an optimum level so that I could see an image and noted that my eyes seemed to adjust better to the washed out image in a matter of a few minutes, which allowed me to start testing the unit. The viewfinder brightness is adjustable using the camera menu controls, which can be accomplished while underwater.

Using various objects such as plastic fish, camera parts etc.; I familiarized myself with the feel of the camera and its operating controls. As I came to trust the auto focus more and became familiar with the controls of the housing, the quality of the images improved dramatically. You can use manual focus, but you need to be able to clearly see the subject, in bright light conditions auto-focus is a much better approach. After testing the ROC in TTL, I determined that using the manual adjustment of the strobe was the only way to go. The ROC consistently overexposed the image in the TTL auto mode when shooting objects within 12 inches or so. However, by using the ROC in manual, and utilizing the digital camera feature of being able to instantly view your results, I was able to fine-tune the strobe output for perfect exposures in just a few minutes. I ended up taking a little over 500 pool images during a 2-day period and felt very comfortable with the camera finding that the fine adjustments allowed by the ROC are a real enhancement to getting perfect exposures.

Bonaire Ocean Trials:

Primarily due to its compact size and weight, I decided to pack the Tetra in my carry on bag while packing for a dive trip to Bonaire. This later proved to be a brilliant decision, as most all my other equipment did not make the flight connections. Having the Tetra with me I was in the water and taking pictures more than a day before the rest of my equipment arrived.

My first test of the Tetra was a shore dive and once I settled in at 20 feet I quickly found that my pool experiences were repeated, the sunlight so

overpowered the LCD, I could not see much detail through the viewfinder. As I moved to deeper water the situation greatly improved and as I spent more time underwater I became accustomed to the LCD screen in the shallower water. A simple flexible shade would dramatically help overcome this problem.

As in the pool the ROC overexposed the close shots when in auto TTL, so I opted for manual control of the SB105 strobe. This worked very well and allowed for very fine adjustments of the lighting. All the housing controls operated smoothly and precisely with hardly any noticeable difference than one would find without the housing. The pool practice really paid off and the transition to ocean diving was seamless.

The unit is compact enough that it was effortless hauling it around for shore dives and even more so on boat dives. It is very easy to compose with and shoot with only one hand on the housing. I found the housing especially enjoyable to use at a depth of 35 feet to around 90 feet. That depth range allowed enough light for the camera to quickly auto focus with a minimum of shutter lag and the sunlight was subdued enough that the viewfinder image was bright and easy to see. Because of the LCD viewfinder, I found at times it was easiest to hold the camera at arms length to get a picture. By holding the camera in that way the viewfinder is still easily seen and you can get closer to some animals than by holding the camera closer to your body.

Night Diving:

The perfect time for use of the Tetra system in shallow water is at twilight, the bright LCD viewfinder and soft lighting of the reef is magical, offering great control of all camera and strobe functions with a minimum of effort. However, once the sun actually sets and all becomes dark underwater so does the viewfinder! I used the Tetra modeling light (model 854.0051) and all it did was create a bright spot on the LCD screen, with a little effort I came up with a combination of flash lights that allowed me to see the complete scene in the viewfinder. The camera shutter lag, which had been a minor distraction during the day, became absolutely infuriating at night. However with use of a low power wide beam light both these problems can be quite easily overcome. The camera is sensitive enough that it really doesn't need a huge amount of light to focus, but a narrow beam that doesn't illuminate the complete scene tends to confuse the camera and slow down the shutter response.

Summary:

During the next 4 days of use, I mastered the strobe settings under varying lighting conditions and became very adept at interpreting the LCD viewfinder, but shutter lag continued to be a persistent problem at times. It was offset somewhat with the ability to pan with a fish so that when the shutter did respond, you still got the shot, just a slightly different composition.

All in all I ended up taking the camera on 17 dives, which were a mixture of boat, shore, night, twilight and daytime dives, which ranged from 20 to 90 feet. Using a digital system does take some getting used to especially the viewfinder in bright light. However, once mastered it provides for consistent good quality images dive after dive. And since you can view the images while still underwater it is easy to make adjustments during the dive, insuring that you don't miss any photo opportunities.

The folks at Light and Motion have done an

excellent job of providing the photographer with an underwater interface for the Nikon Coolpix 5000 camera that is very easy and intuitive to use. The Tetra 5000 system offers an amazing versatility of lens ranges, lighting adjustments, and instant feedback to help you get that picture of a lifetime. In an instant you can go from shooting an anemone shrimp to capturing a whale shark, all with one camera setup.

Pricing:

The Tetra 5000 basic housing has a retail price of $1499.00; a Nikonos style bulkhead is an additional $125 and the Sea & Sea Wetmate bulkhead is $160.00. The housing can accommodate 2 strobe bulkheads, pricing stated is for one bulkhead. A spare housing "O" ring kit is $20.00. Additional information and pricing may be found at the Light and Motion website http://www.uwimaging.com. Information on the Nikon Coolpix 5000 can be found at the Nikon website: Http://www.nikonusa.com.

Technical Specifications:

Dimensions 6.0" l x 4.5" w x 5.2"d
Weight: 3lbs. 7 oz. - housing w/camera (dry)
Construction Pressure Hull: 356-T6 cast aluminum, Rear Plates: 6061-T6 machined aluminum, Hardware: 18-8 stainless steel and 316 stainless steel, Ports: Optic Glass, O-rings: Buna-70, Other: Various injection molded plastics,

Finish: Silver metallic powder coat over black anodize, Rear Plate Attachment System: Dual self-locking rotary latches
Seals, Rear plate: One radial bore seal, one face seal, Rear Viewing Port: Double bore seals, Bayonet Optical Ports: One radial bore seal, one face seal, Buttons: Dynamic bore seals, Control knobs: Dynamic bore seals
Depth Rating Designed for use to 300 ft. Moisture Alarm - Visual indicator from ROC panel is standard

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www.mwestermeier.com

The Jervis Bay Underwater Photographic Shoot-out 2002

By Nigel Motyer.

Without doubt the greatest con ever perpetrated in diving has been the Australians convincing the rest of the world that the Great Barrier Reef is the must visit site for that continent. I first dived it about ten years ago and found it a huge disappointment. However around that time I also did a little diving well south of the GBR about 4 hours drive north of Sydney from a little town called Forster, in New South Wales. Here I found truly outstanding temperate water diving with amazing deep water sponge gardens and high concentrations of fish life. I always had it on my list of "gotta get back there" sites.

I was going to be taking some extended leave in April and May of this year so I was going to combine some diving with a family holiday . We had plenty of time so I had hoped to get in a few days on a liveaboard while my wife and daughter caught up with some relatives in Sydney. I remembered hearing that there was a liveaboard operating in the Jervis Bay area a few hours south of Sydney but I didn't know much about the place except that David Doubilet had covered the bay for National Geographic back in the mid eighties and by all accounts there were some good critters there. Good enough for Dave, then

Giant Cuttlefish
Nikon F801, 16mm fisheye, Subal Housing, Single Ikelite 150nicad flash. Fuji sensia 100 asa. 60th @ F8
These are amazing creatures and I was lucky to find this one out from under a ledge. The advantage of the 16mm is that you can get really close and still get that blue water in the background. I took six or seven shots here some with a passing diver overhead in silhoutte but the divers lines were not clean and although you loose the sense of scale I preferred the "diver free" image.

Goby on Sea Tulip
Nikon F90x, 60mm macro, Subal Housing, Ikelite 200nicad flash with an MV flash as fill in. Fuji Velvia 50 asa. 125th @ F22
I had been checking all the Sea Tulip heads looking for the small cling fish that sometimes are found there. (Doubilet has a great shot of one in his Light in the Sea book) Anyway I never found the cling fish but I did find these small gobies on occasion. I shot half a roll on this fish being very creative with slow synch, back lighting and all that good stuff but in the end I preferred the bog standard, side on, no imagination shot.

General Reef Shot.
Nikon F801, 16mm fisheye, Subal Housing, Single Ikelite 150nicad flash. Fuji sensia 100 asa. 60th @ F5.6
The first shot on the first roll of film on the first dive. I had come hoping to see Sea Tulips but it was only as I settled on the bottom to take this photo that I realised they were everywhere. I took two shots but the school of fish had passed by on the second shot so this one had the edge.

Red Goat Fish
Nikon F90x, 60mm macro, Subal Housing, Ikelite 200nicad flash with an MV flash as fill in. Fuji Velvia 50 asa. 125th @ F 8
I was once told by a very well known photographer that if you are enetering a photo competition then use any colour you like as long as its Red. I found this goat fish and managed two shots before it took off. The first one has a slightly better exposure but the fish moved slightly allowing me get lower and set the Red against a black background - Red against black always works.

good enough for me.

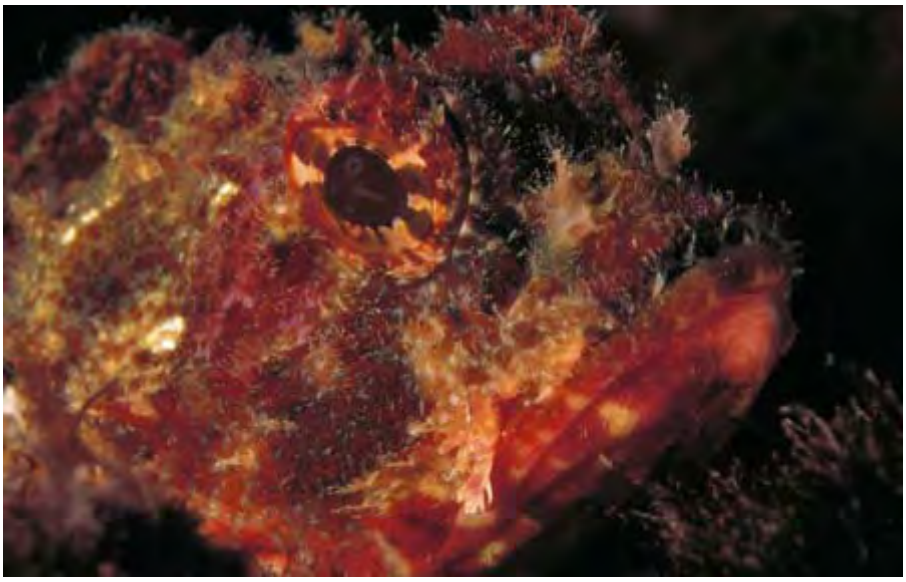
Having had no joy in locating local dive operators on the Internet I got a friend living in Sydney to get me some website contacts out of a local dive magazine and I sent off some e-mail enquiries. The first reply was from Lynn at Ocean Trek, a company operating an 18meter liveaboard catamaran in Jervis Bay which sounded just what I was looking for. Lynn offered several two day trips that would have suited my schedule but I wanted something a little longer. The only trip they had that offered 4 days of diving during my visit was the annual Jervis Bay Shoot-out competition. Although I was a little hesitant about getting involved in a competition, it did sound like the best option and it would be good to meet up with the local photographers so I booked it. The competition itself has been running now for five years and has been growing each year. The list of sponsorship is impressive and in the last few years the number of photographers wishing to enter has exceeded the amount of space on the boat so they have had to hold a draw for the places. As it turned out I was lucky enough to get one of those places. Once on the list, the organisation of the event was great. I got regular e-mails both from Lynn and also Mike Cufer, the competition organiser keeping me up to date with arrangements and even arranging a lift for me to the boat from Sydney.

So eighteen photographers gathered in Huskinson on Wednesday night, the 24th April to pick up the Ocean Trek and meet Mick and Lynn who run the

boat. I have to say the atmosphere during the competition was just so laid back. There was a huge sense of fun from all the competitors who have developed good friendships over the five years that the competition has been running. They did think I was just a little daft to travel all the way from Ireland to sample what was for them back yard diving but I would have to say that I thought the diving in Jervis bay to be just spectacular in terms of life and water clarity. This is temperate water diving, I used a 6mm wetsuit with a hood which was just right for me with a water temperature in the low twenties.

I had come with a wish list hoping to see a few of the local inhabitants, Sea Tulips, Weedy Sea Dragons and one of the famous three foot giant Jervis Bay Cuttle fish. As it turned out, that's a bit like turning up for a dive here hoping to see Kelp and a wrasse. My wish list was ticked off after the first ten minutes of the first dive and over the next few days I added to that Red Indian Fish, Blue Ringed Octopus, Blue Grouper and Sea Horses...the list goes on. The great advantage of it all was that all of these animals were completely new to me. I would get back on the boat raving about some wildly exotic critter only to point it out in the ID books and be told they were common as muck.

The competition itself was run over two days, Thursday and Friday with four dives each day. We each were given four rolls of Fuji Sensia to produce a portfolio of six images, two for each category, Macro, Wide Angle and Marine Life. At the end of each day a boat came out



Tight shead shot of a Scorpian fish
Nikon F90x, 60mm macro, Subal Housing, Ikelite 200nicad flash with an MV flash as fill in. Fuji Velvia 50 asa. 125th @ F16
There were lots of different scorpian fish in Jarvis Bay - I found this one and scanning it with a torch I could see the amazing reds in its head and eye colour. I also liked the texture in the head in this slide although if I was doing it again I would not be go tight in the frame.

to our anchorage to collect the completed films from that days shooting. They were then developed overnight and given back to you at breakfast the following morning so you could see how you were getting on. For those of you who know the area the diving was concentrated on two locations in the Bay. The first day we stayed at the Docks - a great site out on the northern mouth of the bay with some lovely caves and a rocky bottom tumbling down to sand in about twenty eight meters. On the second day, Friday, we moved to Bowen Island on the Southern entrance to the Bay and dived several sites there with spectacular visibility of well over thirty meters in beautiful blue water. These two sites are less than two miles apart but provided totally different diving in terms of underwater topography. On the seaward side of Bowen Island we dived steep rocky drop offs down to over thirty meters while the lee side of the reef there had calm sheltered rocky outcrops and large patches of eel grass that provided a treasure hunt for night divers.

Saturday morning we had an hour or two to compile our submissions and then Mike was joined by Kevin and Cherie Deacon to make up the judging panel. They locked themselves into a cabin for the day while we knocked up three more dives (isn't it always the dives you do after the competition that give you the best images ?). On the Saturday night after dinner there was an open air slide show out on deck of all the images from each category. This was a great way of seeing how eighteen different photographers had approached the same subjects and there were some really fabulous images. In keeping with tradition the winners were announced in reverse order

Sea Horse on Sea Tulip
Nikon F90x, 60mm macro, Subal Housing, Ikelite 200nicad flash with an MV flash as fill in. Fuji Velvia 50 asa. 125th @ F11
I had never seen a seahorse and when I said that on the boat one of the fellow competitors said he'd show me one he'd found on an earlier dive, how unselfish is that ?!. It took us a while to find it again though and I ran into all sorts of decompression taking half a roll but it was well worth it from my perspective.

leaving me completely gobsmacked to pick up the top prise. Never mind winning the event but the first prise was a little bit special too, a dive trip to the Solomon Islands no less. In fact all the prises were quite impressive. I think I'm right in saying that anyone who came 7th or higher won a prise of greater value than the actual cost of entering the competition. Its no wonder its so well subscribed.

No better nation than the Australians to party into the small hours. So Sunday morning was a little subdued but we still managed to get in two more dives before we steamed back to Huskinson, disembarked and headed back to Sydney.

Looking back at the event now what strikes me most about it was that whilst on the boat there was no hint that a competition was going on.. People openly shared photographic ideas, hints and tips. On one occasion a photographer Gray McNeill, had found a seahorse. On the boat afterwards I mentioned that I had never seen one so on the next dive he went out of his way to bring me to that part of the reef so I could get the shot. Another competitor, Rob Westerdyk noticed that none of my shots had divers in them (the perils of travelling alone) and volunteered to model for me for a few dives. I got some great diver shots as a result. Interesting subjects were shared and I got a real sense that everybody wanted all the other competitors to do well. I thought that quite a unique and refreshing atmosphere in competitive underwater photography. I couldn't praise Lynn, Mick and Mike highly enough for the help they gave me in getting to the event and the way they ran the boat during the competition. They had a complete understanding of the way underwater photographers want to dive and were always on had to help out when needed.

So I am already planning my next dive trip to New South Wales - the Guys on the boat gave me great tips of places to visit and I only got to a few of those in the weeks after to competition. I terms of diving there is just so much of interest there for underwater photographers so yes my "Gotta get back there" list of dive sites just got longer.

For more details of the boat or a look at more images from the 2002 shootout check out the Ocean Trek website at www.oceantrek.com.au or e-mail at dive@oceantrek.com.au

Nigel Motyer

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It should be pointed out that Nigel learned everything he knows on an underwater photography course given by Peter Rowlands in the Red Sea in the 1980's

First Impressions of PNG – Loloata Island

By Andy & Angela Heath

I don't know about you, but all conversations with fellow divers eventually get around to the locations you've dived. As soon as it's mentioned you're a keen photographer the response is "so you've dived PNG then?", to which I normally, rather sheepishly, mumble something along the lines of "no, not yet". Then tactfully change the subject. OK, maybe all this diver peer pressure is in my mind. But we've wanted to visit New Guinea for such a long time now, only the small (small??) matters of time and money preventing us.

However, having had a hard time working in Australia for close to a year, we decided to throw caution, and our finances, to the wind. After all, we'd probably never live nearer to this supposed dive Mecca. A little research later and we'd booked a liveaboard to Milne bay and, what will be the focus of this article, a preceding week at Loloata island resort in Port Moresby.

Only once we reached the waters edge in Port Moresby could we appreciate the beauty of the landscape in Bootless bay, where Loloata is one of a number of islands. Looking back toward the mainland we were surrounded by a rolling landscape of hills with a mountainous backdrop, clouds draped over much of it obscuring any idea of the true height. Quite stunning.

The adverts for Loloata emphasise the proximity to the airport and the short transfer. And we can vouch that's quite true. The boat transfer took ten minutes across a calm afternoon sea. By the time we arrived it was late afternoon and we were quite content to check into our room and take a wander around the resort checking out the resident wildlife. Our diving would start the next day. We did get a chance to introduce ourselves to the couple who had only recently taken over the running of the dive centre, Sharon & Carl. A list of the critters they'd seen in the last few days got my shutter finger

Dwarf Lionfish were literally everywhere. This is one of the dozen or so that insisted getting in the way as we were trying to photograph the Harlequin shrimp.
Nikon F90X in Nexus housing, 105mm, twin YS30 strobes on TTL, Velvia. Manual mode, 1/125th @ f16.

Exiting one of the gullies at Di's Delight. Nikon F90X in Nexus housing, 16mm fisheye, twin YS120 strobes on Manual, Velvia.
Manual mode, 1/30th @ f8.

Pygmy seahorse. OK, so it's not a unique picture but it was the first time we'd seen a pygmy seahorse. We found three in total on two fans but the depth and amount of photographers were the limiting factors here! Nikon F90X in Nexus housing, 105mm + external diopter, twin YS30 on TTL, Velvia. Manual mode, 1/250th @ f16.

twitching almost immediately.

Loloata's owner, Dik Knight, joined us at the dinner table that night and together with a mix of guests and ex-pat's, we sat down to a hearty dinner and a few (surprisingly good) local beers. Just enough time after that to prep the camera ready for the next day and grab an early night.

After an early breakfast we wandered to the dive centre and unpacked our dive gear. An unexpected calm morning called for a last minute change in dive plan. From a perhaps more suitable check out dive to that of a deeper outer reef dive on the wreck of a fishing trawler, the MV Pai. This didn't bode well for either Angela or myself – no time to change to wide-angle for me - though as it turned out, not that it would matter. Typical of the outer reef divesites, the transfer took around forty-five minutes. Once we entered and descended to the bow of the Pai at 90' Angela signaled me that something wasn't right with her ears. A quick glimpse at the coral encrusted bow and deck was all we afforded before heading over to the adjacent sloping reef and commenced a slow ascent. The ear problem abated around 60', so we spent the remainder of the dive bumbling around the reef. We were fortunate that the conditions of negligible current and visibility of 60' hadn't made the situation worse. But the reef that we now found ourselves investigating was none too impressive. We found a general scene of dead coral interspersed with large algae patches. Ironically, it was only when we got shallower that fish life and coral improved. To put it into perspective, it took some hunting to find suitable subjects for my 60mm lens and it was only a family of false clown anemone fish and a huge sand anemone that saved

Nikon F90X in Nexus housing, 16mm fisheye, twin YS120 strobes on Manual, Velvia. Manual mode, 1/60th @ f5..6.

the day. We finished the dive after an hour and I'd be understating it if I said we were disappointed!

As with the typical routine at Loloata, a second dive takes place before returning to the resort for lunch. After the Pai, we headed and moored up at Lillians reef for our surface interval and a light snack. An obligatory sixty minutes later we were descending onto Lillians, a small patch reef that had been known to harbor one of PNG's signature fish (and one that we were looking forward to finding), Marletts scorpionfish, otherwise known as Rhinopias. Expecting to encounter some current we were as disconcerted as the marine life to find there was none at all. The reef, though pretty enough with patches of whip corals and some large mushroom corals hosting interesting shrimp, was too quiet. It seemed as though everything was waiting for the tide to change to come alive. Our search for a Rhinopias proved fruitless as well. Although we stayed relatively shallow, skirting the small reef at 55' or so, we should have hit the top of the reef sooner. Although there were extensive patches of dead staghorn coral, there were a number of scorpionfish hiding amongst it along with pairs of flitting fire gobies. A curious cuttlefish also allowed quite a close approach though as it was, our air dictated that we were to watch the little guy hunt amongst the reef top from our safety stop, some 10' above.

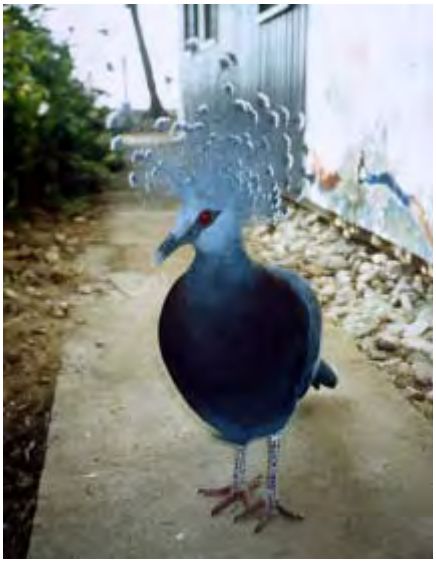
Heading back to the resort for lunch we reflected on an unimpressive couple of dives. Angela still had ear problems so headed straight to our room for a rest while I rinsed the camera and hit the lunch table. As it turned out, we skipped the diving for the rest of the day. Angela recuperating whilst I continued to explore the island a little more.

Coral tyre. Nikon F90X in Nexus housing, 16mm fisheye, twin YS120 strobes on Manual, Velvia. Manual mode, 1/60th @ f8

Obviously, this trip hadn't gotten off to a good start. It wasn't looking to improve too quickly either with the next morning's announcement of another relatively deep wreck for the first dive. Although Angela felt better, we had hoped for a potentially easier start to the day. However, the diving gods were starting to smile upon us. At least this time I'd had enough notice to put my fisheye lens on.

The Pacific Gas is a 60 meter long vessel that was sunk in the mid 80's for divers. Also lying on the outer reefs it took around the same time to reach as the Pai. Conditions were fine once more with minimal chop on the surface. After starting our descent we were immediately struck by the good visibility. Approaching 100', it was more than enough to appreciate both the size of the ship and the prolific coral growth. A school of batfish swam up to greet us midwater, following us all the way

Arrow crab. Night dives were alive with crabs and other crustacea This rather large arrow crab seemed to think we couldn't see him. Nikon F90X in Nexus housing, 60mm, twin YS30 strobes on TTL, Velvia. Manual mode, 1/250th @ f11.



This was one of the pair of giant pigeons that wandered around the resort. If you got too close they had a habit of cracking your shins with their wings. Apparently it hurt too!

One of the pair of Harlequin shrimp that were resident at lion Island. They tended to be quite shy, staying at the back of a cluster of coral and closely guarding the starfish that was their food source.
Nikon F90X in Nexus housing, 105mm, twin YS30 strobes on TTL, Velvia. Manual mode, 1/250th @ f16.

back down. Angela appeared to be doing fine this time so we headed directly to the Tubastrea covered bow to capture some shots of the rest of the groups descent. Whilst they headed toward the deeper stern end, we poked around the upper deck areas. The mooring line was attached to a tyre that was just covered in brightly coloured sponges and bryozoans. In fact there didn't appear to be any areas that weren't covered in growth of one sort or another. Hiding amongst a particularly concentrated patch of corals sat a small brown leaf fish, secure in the knowledge that with a fisheye lens on I posed no threat! Hawkfish, anthias, predatory grouper and lionfish abounded around the decks. Swimming across the open hold and looking in I could see a few dense schools of baitfish milling around. But by this time my camera had run out of film and our computers showed no more bottom time. Ascending up the coral encrusted mask I realised why I should have saved some film. Looking down the mast with swarms of anthias swirling around was memorably beautiful. I hoped we'd get a chance to revisit this site before the end of the week.

Our second dive was spent at Di's Delight. A well known site and home to an absolutely huge sea fan that must have

reached 20' across! On the way to the fan we passed a small patrolling white tip and dogtooth puffer nearly as big! The huge bommie that made up the reef had two or three large cracks running through the middle, which made for dramatic swim throughs. Each were crammed with gorgonians and fans, many with resident long nosed hawkfish. As we headed back along one of them, making toward the top of the reef, we startled a large Napoleon wrasse. Back on the reef top at 35', Carl gestured wildly at us. There in the middle of a large plate coral sat a black Rhinopias! Whilst we took turns to have a close look, the Rhinopias stood his ground the way most of his scorpionfish cousins do. Meanwhile, Carl had found another one, this time a juvenile grey individual sitting amongst a patch of staghorn. I continued to lament my fisheye lens choice, at least happy in the fact that we'd seen them.

Our day just got better after that. As we were to find that week, the weather deteriorated a little in the afternoons so third and fourth dives tended to take place at nearby, and sheltered, Lion island. Three small wrecks had been purposely scuttled for divers there, each attracting a fair amount of small marine life. We heard that a mimic octopus had been spotted recently so our hopes were high for something special. Visibility was somewhat worse due to the mainly sandy substrate but that didn't really matter. We were led almost at once to a pair of Harlequin shrimp content on munching away on a starfish arm whilst posing for photographers. All around them, dwarf lionfish were so thick on the ground that they

This pair of anemone shrimp were quite at home in the mushroom coral. Nikon F90X in Nexus housing, 105mm, twin YS30 strobes on TTL, Velvia. Manual mode, 1/125th @ f16.

We were lucky enough to find four Rhinopias during our dives at loloata. Unfortunately they were mostly very darkly coloured and difficult to photograph well. But our quest to see them paid off handsomely. Nikon F90X in Nexus housing, 60mm, twin YS30 strobes on TTL, Velvia. Manual mode, 1/125th @ f16.

persistently got in the way of the shrimp! I've never had to shoo away so many fish before - we were rapt! – Rhinopias and Harlequin shrimp on the same day! Excited fins in the group kicked up the sand a little too much so we headed off a little deeper to the small wreck of the Godfrey, sitting on the sandy slope at 70'. This wreck concentrated the marine life to a dramatic extent. The deck was covered with more ringed and double-ended pipefish, cleaner shrimp and hinge beak shrimp than I've ever seen in one place. In the middle of all this had been built a veritable castle by a mantis shrimp with big ideas.

A silhouette of the huge sea fan found at Di's delight. Nikon F90X in Nexus housing, 16mm fisheye, ambient light, Velvia. Manual mode, 1/30th @ f8.

This large squat lobster was sitting amidst his feather star every time we dived the Lady Jules wreck at Lion Island. Unfortunately of all the shots I took I never managed to get both his pincers and eyes in focus! Nikon F90X in Nexus housing, 105mm, twin YS30 strobes on TTL, Velvia. Manual mode, 1/250th @ f16.

However, his caution in peaking out of this huge burrow outlasted our air and, antennae twitching, he watched us head back up the reef to the mooring line.

Due to the favourable conditions, most night dives also take place at Lion Island. So once the sun had set that evening, that's where we headed once again. Proceeding straight to the harlequin shrimp, our task was hindered by the 'soup' of plankton and other animals that swarmed in front of our torches and focus lights. We soon moved on, this time further along to the shallower and smaller, wreck of the Lady Jules. Another concentration of life flourished here. We spotted a number of nudibranchs both in the sand around the hull and on the hull itself as well as a large brown hexabranch moving quite fast, shying away from all the lights. The boats' railings were covered in colourful dendrenopthya bushes, one of which on closer inspection concealed a pair of soft coral cowries. In the midst of one of the many feeding feather stars a large squat lobster sat ignorant to our fascination. Heading back to the mooring line a green seasnake, some five foot long, swam quickly past us and away into the night. Just as we neared the mooring line I spotted a small squid. Shining my light on him he immediately changed colour, but apart from fleeing, seemed to follow the light beam around staying right in the middle of it. Whether that was wishful thinking I don't know. As I struggled to focus on him whilst pointing the torch, a fruitless task, the other divers left the water. I soon gave up and bid my little cephalopod friend goodbye lest the other divers should commandeer the boat and head back for dinner without me!

What a difference a day makes! The remainder of the trip continued in the same vein. Apart from some unsettled weather causing the visibility to drop, we never had so disappointing dives as those on the first day. We managed to find more Rhinopias as well as find our other signature species for the area, pygmy seahorses! Our first ones made the trip all the more worthwhile. Even more so after our ten-days in Milne bay would fail to turn up any! We never did get to see the mimic octopus at Lion Island, even though we returned there a

From the top of Loloata Island, looking out across Bootless bay.

number of times. Neither did we get good enough conditions to return to the Pacific Gas. We did manage to squeeze a few dives in on Loloatas' small house reef though. The shallow aspect and sandy substrate didn't make for ideal conditions and visibility was down to 10' at times, but the marine life there was interesting enough. Indeed, directly under the jetty we found a number of dwarf and zebra lionfish, pipefish and a rotten tree stump that housed a family of fang tooth blennys. What had started out as a somewhat dubious experience had turned into one of our favourite trips! What more could we ask than that?

Info. and general advice

Though popular with photographers, we were disappointed to find no real set up for cameras. Even rinsing was a somewhat dubious affair. However, we were informed that special rinse tanks were soon to be built. Otherwise camera maintenance was a strictly back to the room affair - not always easy at night due to the poor lighting in the rooms. A limited number of sockets were available in the rooms so bring an extension block. Power is 240v with Australian style sockets.

The boats provided no special rinse or storage facilities. A small space was available in the cabin for changing films but was only big enough for one at a time.

Even though mosquitoes didn't bother us whilst we were there, anti-malarials are recommended. Rooms had adequate mesh over windows and openings but no nets were provided as standard. Both aircon and fan only rooms were available.

The resort could also arrange short land based trips to Port Moresby's Botanical gardens, Parliament building and PNG artifacts (a warehouse full of PNG souvenirs). We spent a half-day doing this, including a side trip to the yacht club for lunch, enjoying it immensely. Make sure you take adequate bug precautions if you visit the gardens though!

Diving is considered year round at Loloata though there are a number of seasons. Generally there's reckoned to always be sheltered spots available though transfers may be more difficult and outer reef sites not diveable at these times.

Andy & Angela Heath

Sony TRV900 housing system for sale

This housing is sefl designed and professionally machined from aluminium.

All of the controls are mechanical for reliability yet they are positioned ergonomically for ease of use.

There is an external 5" colour LCD viewfinder which allows you to compose your shots from almost any angle.

The battery pods in the base provide power for the monitor and for an external light such an an HID.

There are two internal flip filters - colour correction and close up lenses and the camera is secured on a baseplate which holds it within the housing extremely accurately.

There are controls for stop start, zoom, manual focus, autofocus, white balance, exposure, shutter speed and aperture.

The system comes in a fitted Sealtight case and includes housing, Sony TRV900 camera with two batteries, colour monitor (with spare LCD panel worth £250), 4 x battery packs for lighting and monitor power

The system is for sale complete and cannot be broken up for it is designed to provide the highest quality results from a small neat package.

The system is for sale at £2500 inc VAT and UK postage.

(An overseas buyer would not have to pay 17.5% VAT).

Light & Motion SunRay Pro HID lighting system for sale having seen little use. Includes 5 batteries and a 110/240v charger. All cables and arms included. Price new approx £2200. This sytem is for sale at £1250 inc VAT with free shipping within the UK. (An overseas buyer would not have to pay 17.5% VAT)

For further details about these systems please contact Peter Rowlands. Tel 00 44 (0)20 8399 5709 or e mail peter@uwpmag.co.uk

The rough side of commercial underwater photography!

By Paul Kay

This (not far off 2m long) animal was absolutely fascinated by its own reflection in the big dome port. It slowly came out from its hole from under the carefully constructed small wooden wreck, until it bumped its snout on the glass. Nikon F100 in Subal housing with the superb 17~35 AFS Nikkor

In the UK we currently have some of the most draconian legislation covering diving for profit. The emphasis on safety has taken many twists and turns and has resulted in a myriad of strange, sometimes contradictory, difficult to implement and often worrying rules. Indeed there are many who believe that the regulations now governing commercial diving simply work on the premise that divers are safest not going in the water!

A typical example of the 'overkill' required under the current legislation is shown by an assignment that I recently undertook. This was to provide publicity photographs for Exploris, an aquarium and seal sanctuary run by County Down Council in Northern Ireland. Apart from anything else, this was an interesting job because the vast majority of photographs were taken using the Nikon D1x camera which produced images of appropriate quality, and which could easily be utilised by the staff who needed the pictures for a variety of differing purposes.

One part of the assignment called for underwater photography to be undertaken within the largest display tank in the aquarium - some 3m deep and something around 10m x 10m in area. This obviously entailed the use of scuba gear, and so an appropriate dive team was put together using the local commercial diving firm. This is the firm which also supplies divers to clean the insides of the large transparent acrylic or perspex sheets through which the public view the creatures inside.

These divers are more used to operating in atrocious visibility in the local dockyards, harbours and other similarly miserable places, so diving in an aquarium is a somewhat different and, one would think, more pleasant experience for them. I too felt that this would be rather different from my normal diving, but I was in for a few surprises.

I had assumed that, being indoors, the water in the tank would be warm, so I didn't bother putting gloves on. Wrong! Had I realised that the water was put through chillers before it entered the tank then I would probably have acted differently. It was freezing and I would not have liked to have been in anything other than my drysuit with its many layers of undersuit and thermals!

I had also thought that it would be easy enough to get close to the often very large fish (cod, bass, mullet, hake - some up to1m long) in the relatively confined space. But no, although not panicked, the free-swimming fish simply avoided me, leisurely moving off whenever approached, and preferred to move into the darker corners out of my way. I did manage some decent pictures but far fewer than I would have liked.

Not having a housed digital camera meant that this part of the assignment had to be shot on film, and to do so I used a Nikon F100 in Subal housing with the

The rays in the tank were very accommodating, and basically ignored our presence completely.

superb 17~35 AFS Nikkor (with +4 dioptre close-up lens fitted) behind Subal's largest (fisheye) dome mounted on a 33mm extender tube (as per Subal's recommendation).

For additional illumination I used two Nikon SB105 strobes fitted with diffusers with the second, or slave unit, operating through an Inon ttl sensor fitted into the flash lead socket. This is a very effective system whether using ttl or not and reduces the need for a second lead (or socket on my other housings). Stobe arms were a mixture of Ultralight and TLC parts which are highly interchangeable and were fitted in a 4" 8" 8" 4" configuration to both strobes.

The complete housing, dome and twin flash units is a bit of a beast (I usually add a Kowalski on top as a spotting light too!), and is very cumbersome above water. Below the surface it remains slightly negatively buoyant but is very easy to operate

The light levels in this tank were deceptive. From the outside viewing areas the tank, which is lit from above, appears to be very bright and well illuminated. But this is to eyes that have accustomed themselves to the lowish light levels in the preceding parts of the aquarium. In fact the

The pup was very dark in colour and was paddling about in a few inches of water over a glossy white surface. This is a very difficult high contrast scene to photograph, not in terms of exposure (it needed compensation of +1 stop dialled in) but because the contrast when shot with flash is so high. I doubt whether film could have coped as well as digital capture did.

meter readings showed exposures of around 1/2s at f/11~16 using Fuji Provia III at its normal ISO 100 rating. Some use of available light was essential in order to convey the scale of the tank, so I simply resigned myself to operating at such settings and adding flash.

From all the photographs taken in the tank there was one notable and very much appreciated (by the client) success - a shot of a very large conger. This (not far off 2m long) animal was absolutely fascinated by its own reflection in the big dome port. It slowly came out from its hole from under the carefully constructed small wooden wreck, until it bumped its snout on the glass. Not just once but many times. Best of all, from my point of view at least, was that having started to do this it then the emboldened conger also started to peer closely at my 'buddy'!

Having photographed congers many times, I am convinced that they are much maligned creatures and are generally somewhat timid but curious. I have very rarely heard of anyone being bitten and when I have, it is usually as a result of feeding the animal or inadvertently putting a hand in its crevice. Fortunately, nobody seemed to have said this to my 'in-water standby', commercial diving friend!

I am still unsure whether his face with popping eyes was simply good acting for the camera, or perhaps sheer terror. No, I am sure that having worked in harbours in appalling visibility, he must have been surrounded by many congers this size in the past. But of course he may not have realised it in the murk!

The rays and flatfish in the tank proved to be very accommodating, and basically ignored our presence completely. Other free-swimming fish were awkward to photograph and often remained just out of range. Interestingly the 'rock' surfaces within the tank are slowly being colonised with even anemones starting to appear, presumably out of the plankton.

After about an hour it was time to leave - as the fish are confined it is necessary not to cause any overdue stress. The trickiest part of the dive was inevitably getting out up a ladder lowered into the tank, as it involved handing up a heavy camera housing which is far too easy to grab by the numerous arms, and which could so easily have swung into the concrete 'rock'.

Having clambered up the ladder, it quickly became apparent that visitors had been both intrigued and entertained by the newest exhibits in the aquarium - two divers clowning around with a camera and friendly conger.

Photographically, the results were intriguing. I scanned them to the same size as the tiff files produced by the D1x and supplied them in identical fashion to a satisfied client. It would of course be good to be able to shoot such material direct on digital, but although there are a few high-end cameras now being housed, there are still many hurdles to be overcome before these become a real viability for underwater use. The current Nikon digital SLRs don't support multi flash in ttl mode

For additional illumination I used two Nikon SB105 strobes fitted with diffusers with the second, or slave unit, operating through an Inon ttl sensor fitted into the flash lead socket. Nikon F100 in Subal housing with the superb 17~35 AFS Nikkor

This (not far off 2m long) animal was absolutely fascinated by its own reflection in the big dome port. It slowly came out from its hole from under the carefully constructed small wooden wreck, until it bumped its snout on the glass.
Nikon F100 in Subal housing with the superb 17~35 AFS Nikkor

and so would have to be used with manual flash control. Not a drastic problem, but then the small lcd 'reviewfinders' can only give an approximation of the final image, and so aren't a terrible efficient way of reviewing the quality of images shot on the camera. No doubt both these aspects of digital cameras will change though.

The assignment did prove interesting in some aspects of digital photography though. One of the most effective images was of a young rescued seal pup. Taken from above it showed another creature totally fascinated by the camera, looking straight up into the lens.

The pup was very dark in colour and was paddling about in a few inches of water over a glossy white surface. This is a very difficult high contrast scene to photograph, not in terms of exposure (it needed compensation of +1 stop dialled in) but because the contrast when shot with flash is so high. I doubt whether film could have coped as well as digital capture did.

The image is tonally superb and would probably have been far too contrasty to have been captured on transparency or even negative films. This in itself is food for thought and a reminder that digital has possibilities which may expand photography beyond the boundaries dictated by today's conventional materials.

Paul Kay BSc FRPS

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Octopus and Cuttle Fish

by Mark Webster

What has two hearts, blue blood, a huge brain, no bones, eight arms, amazing eyesight and a water jet propulsion system ? It's Octopus vulgaris (the common octopus), who inhabits all the oceans of the globe and also appears to be making some what of a come back in British waters this year along with it's close ten armed cousin the cuttlefish. Octopus and its relatives are from the Phylum Mollusca - molluscs are invertebrates whose soft bodies are usually covered with hard shells - however, the octopus is in the separate class of Cephalopoda which also includes the squid, cuttlefish, and chambered nautilus, the latter being the only one to retain its shell completely. Unlike molluscs which have one muscular foot the cephalopods have at least eight arms projecting from the head region which is the scientific derivation of the name "cephalopods" meaning "head-footed".

Both octopus and cuttlefish are past masters at disguise and hide and seek. Whilst cuttlefish are often found in open water or buried just below the sand, the octopus is much more shy and will spend much of the day time hiding in small caves and crevices or perhaps in wrecks. Aside from the lack of protective shell cephalopods are able to change the colour and texture of their skin so that it blends in with the surroundings. They are also able to squirt a potential predator with a cloud of "ink" and escape

Sometimes you will encounter an octopus that simply wants attention and will follow you along the reef. Perhaps they are interested in us or hoping that we will disturb soething worth eating, who knows? Nikon F90X, Subal housing, 16mm fish eye, YS120 & YS30 flash, Elitechrome 100, f8 @ 1/60

Courting cuttle fish - cuttle fish are often seen in small groups particularly during the mating season. One paired off the male will indulge in some serious foreplay before fertilising the eggs. Nikon F801, Subal housing, 20mm, YS120 flash, Elitechrome 100, f8 @ 1/60

Flamboyant cuttle fish - one of the smallest cuttle fish is also the most colourful. The flamboyant cuttle fish is a popular muck diving subject which poses well for the camera. They spend their time strolling on the sea bed and use the colourful pattern to advertise their venomous qualities. Nikon F90X, Subal housing, 105mm, Inon Quad flash, Elitechrome EBX 100, f11 @ 1/125

Octopus hunting - Octopus generally come out at night to hunt and you will often see them using this method of blanketing an area of reef whilst they tease out potential prey. Nikon F801, Subal housing, 20mm, YS120 flash, Elitechrome 100, f8 @ 1/60

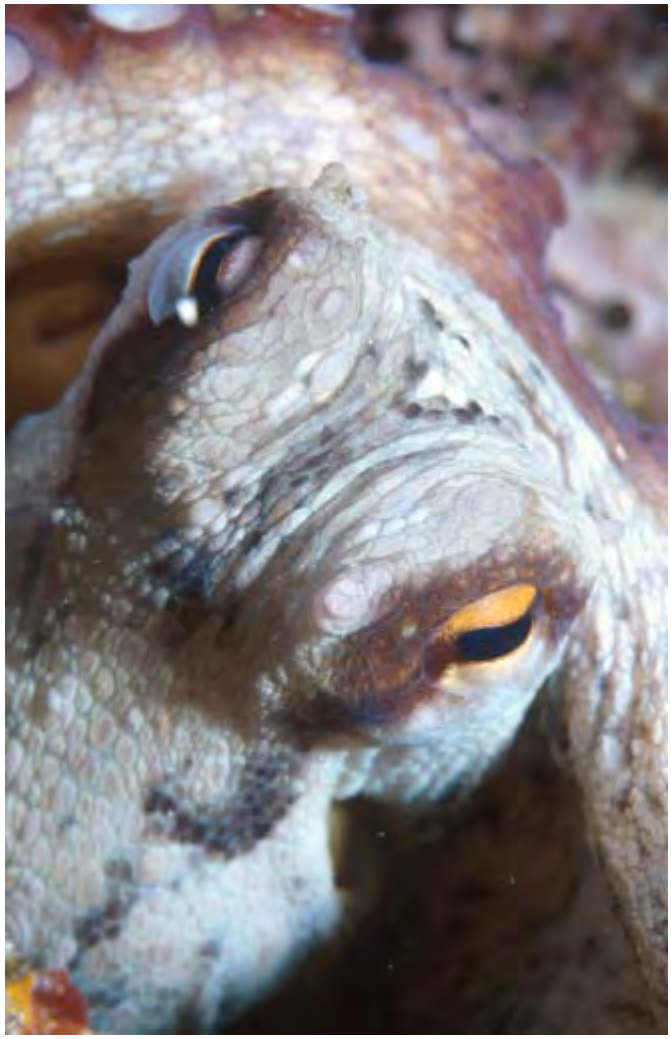
behind it by forcing water from a siphon near the head rather like jet propulsion. Cephalopod eyes are much more developed than other invertebrates and in fact are more similar to vertebrate eyes as their construction includes a cornea, lens, and retina. So Cephalopods can see very clearly, an ability that is not found in other molluscs.

Octopus

There are around 200 known species of octopus and they range in size from a few centimetres to an amazing 3.5 m (12 ft)in the cold waters of the Pacific on the west coast of the USA and Canada. Octopus are normally solitary creatures only coming together to mate, a strange affair using a specially adapted arm. After mating the female is left on her own once again to brood her eggs for up to several weeks. These are normally laid in strings at the entrance to her cave, up to 50,000 at a time, and she will spend most of her time oxygenating them by circulating water around them using her siphon. During this period the female does not hunt and it is therefore normally her last act as she will literally die from exhaustion and starvation when the eggs hatch.

Whichever sex you have discovered, once outside the den the octopus can normally be relied upon to demonstrate its aquatic camouflage techniques by dramatic changes of colour and texture. Some of these displays may be defensive or a warning - I am told that when they turn white it is with rage! - however if the octopus feels threatened it is quite capable of a quick escape jetting away with its water siphon and normally leaving behind a cloud of dark ink, which is intended to distract a predator. If you are both lucky and patient the octopus may stay to investigate you more closely

Octopus are quite common in the Mediterranean and during the day this may be all that you see of them, peering at you from their lairs. Nikon F801, Subal housing, 60mm, YS50 flash, Elitechrome 100, f11 @ 1/60



using some of its five hundred or more suckers which is a both a strange sensation and fascinating to be the attention of such an admittedly odd but obviously extremely intelligent creature and you may begin to wonder just who is investigating who! I have had several experiences of being followed by an octopus along the reef after an initial encounter for almost the entire dive.

Octopus are also ingenious home makers. If there are no suitable openings in the reef they will utilise whatever happens to be handy. There are a number of 'muck diving' locations in the Far East which have healthy octopus populations and here you will find them using man's debris for shelter. Paint cans, bottles and plastic containers are all put to good use and if these are not available then coconut or discarded mollusc shells will do just as well.

So in order to spot either species it helps to have some idea of their habits and the evidence to watch out for. If you are hunting for octopus the first indications are likely to be the remains of past meals outside their current residence. Look for piles of crab carapaces and empty shells which will literally have been sucked clean. Although the octopus will use its arms to catch prey it will use its 'beak' to crush the shells of crabs and lobsters, which are the octopus' favourite food. The beak looks very much like a parrot's beak and once it has pierced the prey, a poison is injected into its body which paralyses the victim and liquefies the meat so that the octopus can suck all of the flesh into its small mouth. In this way, it devours everything but the shell. Octopus are also immensely intelligent and have been the subject of many scientific studies which have proved that they can solve many simple problems, so prepare to be outwitted!

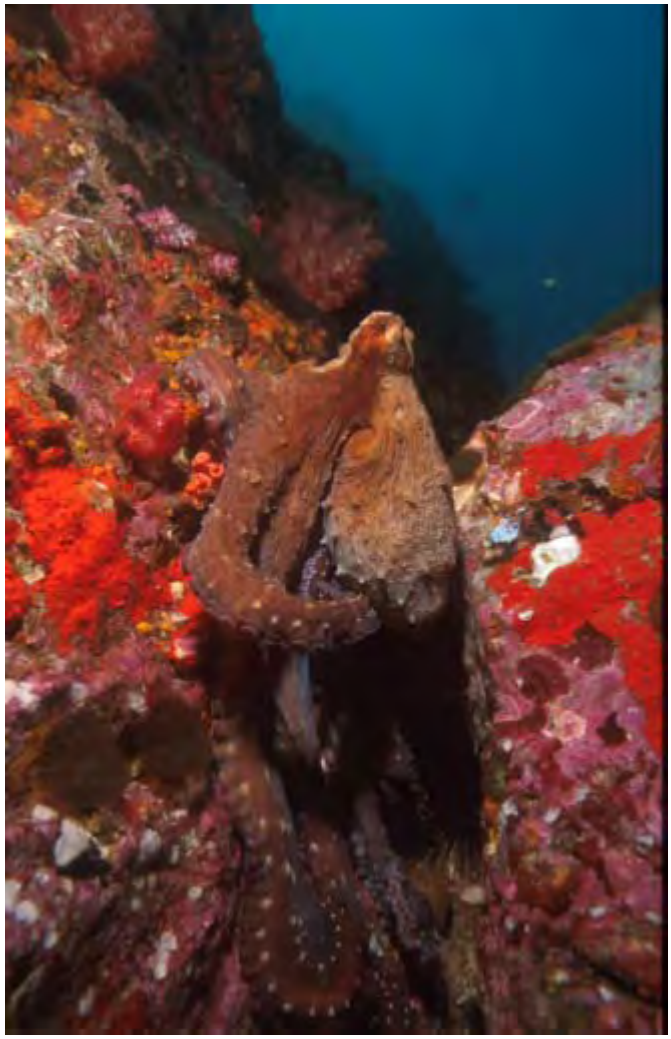
Cuttle Fish

Although cuttlefish (Sepia officinalis) are very closely related to the octopus, the most obvious difference between them is that the cuttlefish has maintained more of its mollusc ancestry with its substantial internal 'shell'. This is the cuttlebone which are often found washed up on the beach and used as a source of calcium carbonate for caged birds. The 'bone' is in fact a mass of porous cells which enables the cuttlefish to control its buoyancy without having to swim actively - rather like the buoyancy tanks of a submarine!

This makes the cuttlefish a more efficient swimmer than the octopus using a combination of its siphon, skirt like fins and adjustable buoyancy. They prey on small crabs, prawns and fish and have two additional long tentacles with sucker pads on their ends which are shot out to snatch their prey. They also have remarkable eyesight and in fact can see both backwards and forwards, useful for hunting and avoiding predators. There are some 80 species of cuttle fish to be found around the world and they are much more readily encountered than the more elusive octopus although they will depart rapidly unless you make a cautious approach.

Once again the cuttlefish is predominantly a night hunter and will mostly spend daylight hours partially buried in the sand. However, during

Cuttle fish will often adopt this pose when they first see you. You can often encourage them to do this by holding out your hand and wiggling your fingers, however I am not sure what you might be saying! Nikon F801, Subal housing, 60mm, YS120 flash, Elitechrome 100, f8 @ 1/60



Octopus are sometimes encountered out on the reef during the day and will often put on a fine display once they realise they have been seen. Nikon F801, Subal housing, 16mm fish eye, YS120 flash, Elitechrome 100, f8 @ 1/60

spring breeding cuttlefish are found together in groups 'courting' before mating. When they are engrossed in this, a very close, but cautious, approach can often be made to watch the males changing colour and pattern to attract a potential mate. Once a mate has been chosen the male is very attentive and can be seen indulging in a bit of foreplay, stroking the female before fertilising the eggs, however he is also very aware of competition and is prepared to chase off any other potential suitor. Like the octopus a specially designed tentacle is used during mating, the eggs are then laid in clusters attached to seaweed or in crevices in the reef - these are sometimes referred to as 'sea raisins' due to their shape and dark colour. Cuttlefish are most often found in spring and early summer in British waters on shallow reef areas where there are fine sand patches, or close to river estuaries where there may be sea grass beds. Once found their behaviour is difficult to predict. Some are very inquisitive and will emerge from a sandy burrow to touch and explore an extended hand whilst others will jet off immediately in a cloud of ink.

The common cuttle fish found around our own coast normally reaches about 30cm (12in) in length, so I was surprised to hear reports of 'giant' cuttle fish in the shallow waters of Mounts Bay in Cornwall in early spring a couple of years ago. A hundred metres or so offshore in 6-8m depth are banks of eel grass, which is ideal breeding ground for cuttle fish and you will often find their eggs attached to the blades of grass. Our initial searches were not productive, but within a few days the

Giant cuttle fish caught in net - Very large cuttle fish are not common in UK waters. These were breeding in eel grass beds in Mounts Bay until the local fishermen got to hear. They continued mating despite being caught and sadly it was almost impossible to disentangle them from the nets. Nikon F801, Subal housing, 20mm, YS120 flash, Elitechrome 100, f8 @ 1/60

Trapped giant cuttle fish signalling - even when fatally caught in the nets the females would continue to signal frantically for a mate. This of course attracted even more to the same sad fate. Nikon F801,

local fishermen had also heard and more than one monofiliment net was deployed across the area. Diving along the nets we encountered many of the 'giants', some of which were more than 60cm (2ft) long, but sadly many were caught in the nets. This was mating season, and perhaps most distressing was the strong desire of males to mate with trapped females at all costs. We observed ensnared females frantically signalling to several males who would come in to mate and sadly get entangled themselves. Despite our efforts to free as many as possible it was a losing battle as for each one freed there were two or three more getting caught - there were hundreds of cuttle fish here and along the length of the nets it was like a London smog with gallons of cuttle ink in suspension with the fine sand stirred up by their frantic efforts to escape. Within a few days it was over, the nets had been pulled and the cuttle fish were gone to some fish market in Spain or Portugal. Sadly we have not seen such numbers since this locally unique incident.

Even larger giant cuttle fish can be commonly encountered in the temperate waters of Australia, but one of the most distinctive and diminutive species of cuttle fish also has the most elaborate defensive display. This is the flamboyant cuttle fish found throughout the Far East and is no more than 50mm or so in length. This little character is in fact a very inefficient swimmer and spends most of its time 'walking' on the bottom using modified fins on its mantle. When first encountered they are very dark in colour but coming closer prompts a vivid display of colour and pattern which is a warning to predators that this little cuttle fish carries a potent venom.

To capture these cephalopods on film almost any lens is suitable if you can get close enough, but perhaps the best choice is a 60mm macro or a short range zoom, perhaps an 18-35mm or 28-80mm which will allow you to fill the frame and take detail shots. If you are patient with your quarry these almost alien looking creatures will respond with increasing confidence and allow you to capture some stunning images.

Mark Webster

Mark hosts underwater photography workshops aboard the MY Coral Queen and in Indonesia. He is also the author of 'The Art and Technique of Underwater Photography' .
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Model Behaviour

by Alexander Mustard and Kathryn Westaway

Imagine if your best friend went to their local branch of Toys "R" Us and bought a set of wax crayons and a colouring book! Stranger still when they got home they proceeded to fill in the pages, exactly as instructed. Always using the right colour, never crossing the lines. They claim they have produced a masterpiece, but are they really exercising their artistic creativity? It is safe to say that Vincent Van Gough has little to worry about.

Now imagine that your friend is into SCUBA. They have bought an underwater camera and a strobe. They have been on an uw-photo course. They want to photograph a diver. So they give their buddy a torch, find a bit of red coral and position their buddy in front of the sun. Just as they have been taught. They press the shutter. They have done everything right. Electronics motors wurr, computer chips do their magic: TTL quenches the strobe and the shutter snaps shut. The image is stunning. Dramatic. Polished. But is it artistic?

In this article we hope to convince you that the art of photographing people underwater is still largely unexploited and to encourage (and provoke) all of us to try to break new ground with our people pictures. "Wait a minute" we're sure you're saying, "People? Unexploited? I think not! What about the millions of pictures of divers?" Divers are indeed well photographed, but they remain an underused subject because we keep photographing them in the same way: never crossing the lines of our colouring books, always using the correct colours.

Noah, Waterbaby. Black and white film will solve colour balance problems in the pool. Stopping down and using flash will remove the pool from your pool shots.Canon EOS 500, 28-70mm. (KW).

It seems that underwater photography has an unwritten rule that states we are only allowed to take two types of diver images. The first is with the diver as a secondary subject, usually a silhouette: you know, quite small in the frame accompanied by the partners in creative crime, the torch and the sunburst. The second type is with

Mask reflections. Everyday diving equipment can be used in different ways in photos. Nikon F100, 17-35mm, 2 subtronic flashes aimed at crinoid not at diver, f8 on aperture priority. (AM)

the model as a complementary subject, lit from the front, mask facing the camera but eyes looking at the main subject, thus ensuring that their expression is illuminated (often through a large oval mask that would be the prized possession of the Historical Diving Society). These are undoubtedly strong, well liked images but much of the underwater world is well photographed these days, and such images are no longer bursting at the seams with artistic creativity.

The main limitation of photographing divers is that we areSˇ well, photographing divers! Put more plainly there isn't much human left once we have added facemasks, regulators, wetsuits, hoods, jackets, cylinders and fins. Individuality, personality, identity are masked by diving equipment. Why should such characteristically human attributes be left out of underwater images? Being able to see the model's facial features means that we can get back to photographing individual people, not just the generic "diver".

So if divers lack personality, who else can we point our lenses at? Well, there

Skydiver. Taking a different viewpoint of a swimmer can create an abstract image that does not have to be underwater. Nikonos V, 15mm, f11 at 1/60th. (AM)

are lots of other people who get wet, what about snorkellers, surfers, sailors and swimmers? Down at the local pool there are high dives, races and a range of sports such as water polo, synchronised swimming, octopush (underwater hockey) and even canoeing.

It can be hard to get permission to enter the local pool with monstrous amounts of underwater camera gear, but it's all a matter of approach. Ask to photograph in a public session and be prepared to have the leisure centre doors slammed in your face, but find a local club using the pool and they will often be queuing up for your lens. Homo sapiens is a pretty vane species when indulged in its hobbies; almost any group using the pool will usually be thrilled to get some shots of themselves. Just ask!

Swimming pools are great places to experiment and play with ideas, but the pool also throws up a new set of problems to overcome. Most pools have mixed lighting - sodium,

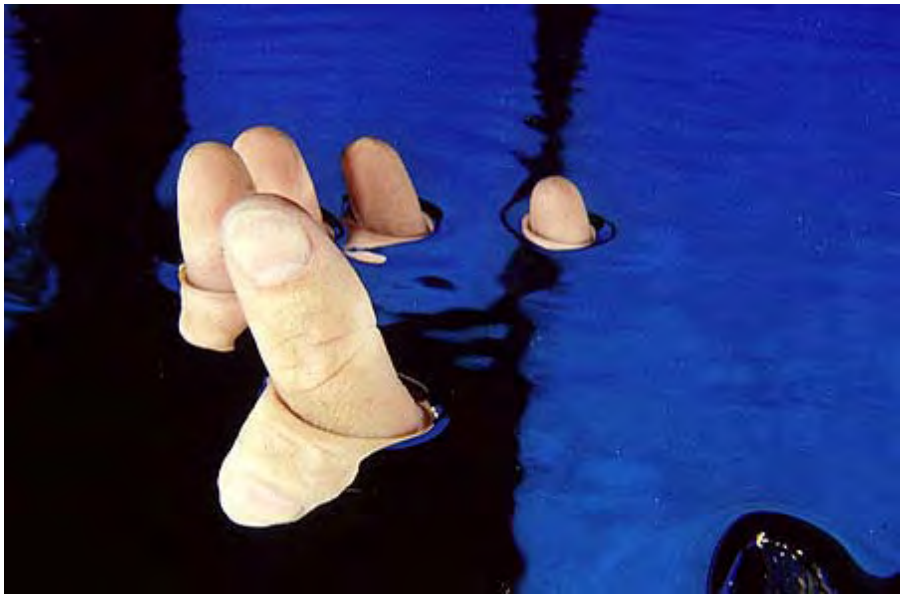
Synchronised. A more abstract view with a long exposure means that the colour balance of pool lighting adds pleasing warmth to this shot. Canon EOS 500, 28-70mm. (KW)

tungsten throw in some flash for good measure and the colour balance becomes a printers nightmare. Without unrealistic solutions, such as adding masses of studio lights, this jumble of colour temperatures is something we have to work with. Either we can go for black and white or be positive and use the warm colours for a creative effect. The white balance control of digital cameras is a real advantage in these situations.

Props are something else we can introduce in the pool. Props can look out of place with natural history subjects: a silk scarf would look a slightly strange with a shark, but can add appeal to a person pic. Fabrics and clothing take on a new character in the water. Water frees clothes from gravity transforming a boring white shirt into a diaphanous swirl around the model. Coloured material adds both vibrancy and texture to our pool shots. Seeing the effect of water on everyday items, such as clothing, is an subtle way of communicating the underwater world in our pictures.

The ocean shouldn't really be any different. However, when most of us get to a great dive site with a camera we want results. The fear of failure looms so large, that we lock our creativity away and will not break from our tried and tested techniques. It is quite common to hear photographers (including the authors) say that they are going on a "creative dive". Do we really need an excuse; surely every photographic dive should be creative? We should be constantly looking for new ways to photograph our fellow divers, investigating different interpretations of the underwater experience. A simple example is that at the correct angle the plain of glass in a facemask will act as a mirror. As we look at and light subjects in different ways we will produce fresh images.

Two of the biggest draws to photography underwater should be the chance to create images that we could not get on land and the opportunity to capture the essence of the underwater world. And this doesn't mean just photographing fish! The way that water effects skin, hair, clothing, light etc are things that we should endeavour to record to communicate wateriness in our images. We can take advantage of the fact that our audience are



Getting in touch with the Ocean. Fingers point down from an air pocket in a wreck shown upside down. We are all familiar with the human body, and we should take advantage and photograph people in more abstract ways. Nikon F100, 17-35mm, 2 subtronic flashes f6.7 on aperture priority. (AM).

very familiar with the human body, concentrating on abstract compositions and form, and not the underwater equivalent of passport photos. When we are underwater both the photographer and model are free from gravity. What an advantage we have over land based photographers!

When you think about it, it is a crime that people are such an underused photographic subject. People are pretty straightforward to find in the water and they are a lot easier to get to pose than fish are! Unless we are unfortunate enough to be on a contract photographing for a diving magazine, we really have no excuse for bottling up our creativity and sticking to formulaic people pictures. We hope that this article has encouraged you to use the wrong colours from time to time and stray over the lines in your colouring books!

Alexander Mustard and Kathryn Westaway

Alex and Kate are both members of the Young Underwater Photographer's Group (www.yup.org.uk)

Cave diving photography

By Neil Vincent

Before attempting Cave Diving photography, divers should be trained, certified and experienced to the level of the cave being attempted.

Taking photos in cave presents a number of problems that are specific to caves. I will attempt to address some of these and explain how I have overcome or minimised their effect.

ASSISTANTS AND MODELS

Cave Diving photos benefit from having a person included in the photo to give the scene a sense of scale. Lighting large passages, again to show the size of the caves requires multiple strobes and multiple people to hold or position them.

Having other people in the water is necessary, however it may cause great complication to the dive if planning and familiarity with what is required is not discussed and understood before the dive. Each divers' role and position in relation to the photographer should be established prior to the dive. Common hand and light signals should be known and understood by all.

Using an assistant to reel out guideline, thereby leaving the photographer's hands and mind free to concentrate on photography is useful. Assistants may also carry additional remote strobes which may be used to backlight features within the cave or other divers. Ideally work with the bare minimum of other divers in the water, as confusion and silting of the water is directly proportional to numbers.

Caves are dark!! There is no light in a cave other than what we divers bring with us. In the Australian cave diving community it is common practice is to wear helmet-mounted low wattage lights as secondary lights. I have found this a good practice as it leaves my hands free for photography. It's major drawback though, is that it may blind other divers with whom you are trying to convey directions. To overcome this situation, I turn my lights off when I am giving directions and taking a photo. The model's lights remain on and are usually pointed towards me but not directly at me, now they can clearly see my hand signals without my lights in their eyes.

To photograph this area required light painting. Onto a bracket I attached two Ikelite SS200 strobes fitted with remote sensors and a Nikonos 105 strobe. The Nikonos strobe was the trigger strobe. The camera was fitted to a tripod and set up on a ledge. A guideline was placed to allow me to move between the formations without doing damage to myself or the cave. A chemical light was set behind the camera so I always could relate to it. My eyes actually became adjusted to this light and I could see around the cave, until I fired the first strobe flash. After that the image of the cave was burnt onto my retina and I closed my eyes for the rest of the dive. I fired the strobes from behind the formations so that the camera did not "see" the strobe. About thirty separate flashed were required to make the photo.
Nikonos 5 camera, 15mm lens, Velvia 50 ISO film. Ikelite SS200 strobes, Nikonos 105 strobe.

Using only the light from the torches because of the disturbed silt in this very low cave. The fossil bone is the subject and the diver is made of graphic shapes created by the reflected light. This is one of my favourite photos.
Nikonos 4, Nikkor 15mm lens, Ektachrome 100 ASA film

The water in this photo is quite dark, the dark wetsuit of the diver would have been lost if a remote strobe had bot been used to back light. The diver and the formation have been lit by the strobes on the camera.
Subal Housing, Nikon F4 camera, Sigma 14mm Rectilinear lens, Kodachrome 200 ASA film, Ikelite SS200 strobes, Aquasea 140 Remote strobe.

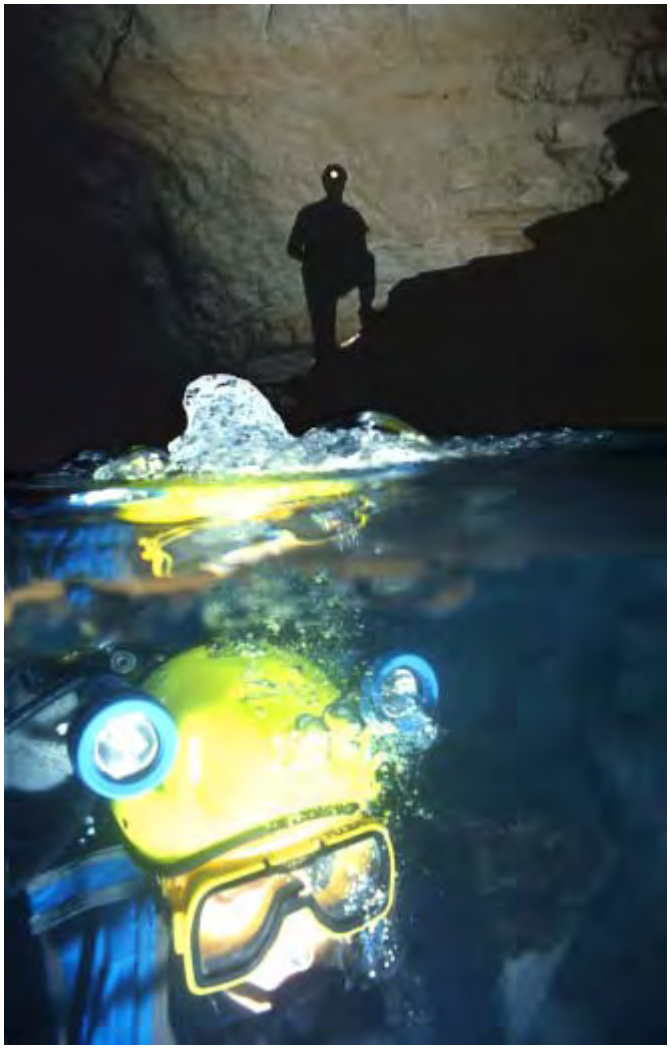
FOCUS

My favourite lens for Cave Diving photography is a Sigma 14mm rectilinear lens. It allows me to be very close to the subject without the barrel distortion of a full fisheye lens.

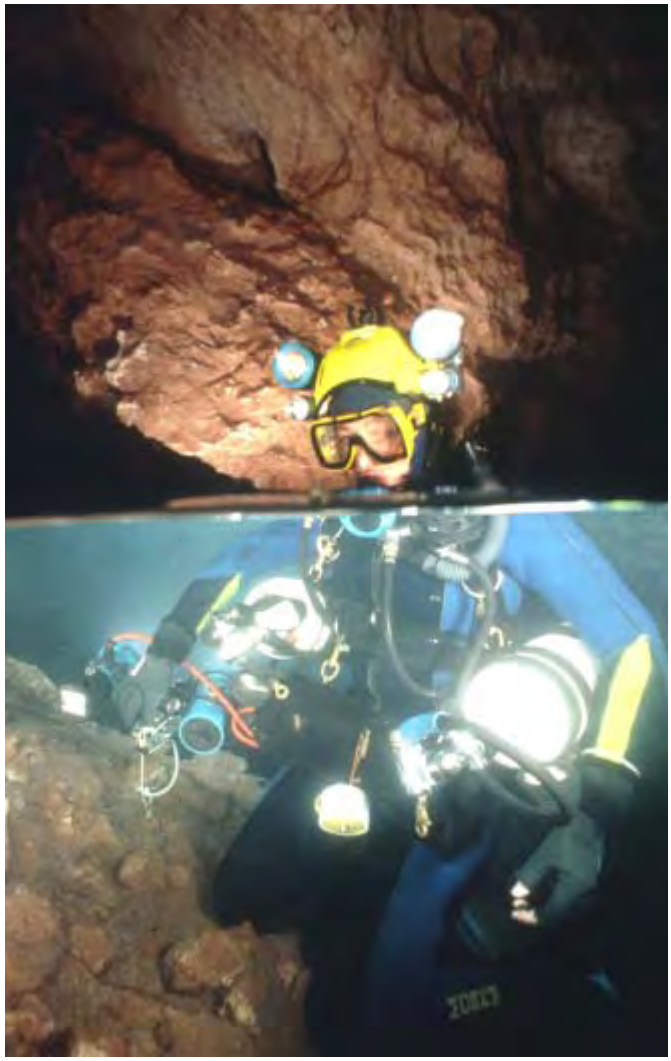
Auto focus underwater in a cave does not work and manual focus while possible, is difficult to impossible due to the extremes of lighting within the viewfinder.

To overcome this problem I developed a simplified manual focus system with only three positions. As three quarters of a full turn on the control knob is all that is required to go from minimum to maximum focus, I marked the control knob with these two positions, MIN, MAX and another halfway between called MID. Using these positions I went into a swimming pool to establish the depth of focus for each position at every aperture. I did this by setting the camera on the bottom with a tape measure leading away from the lens. At regular intervals I placed coloured children's blocks near the tape. I shot one roll of film at all apertures on each of the three focus positions. After studying the results, I tabulated the depth of focus for each aperture/ position as read from the tape measure.

Using a laminated copy of



The lens has a +2 diopter which has been ground in half fitted to the lower half to reduce the focus allowing both the diver and the caver to be in focus. I am standing on the bottom which makes holding the heavy housing half out of the water much easier. The caver has a remote strobe pointed at the rock wall to silhouette himself.
Aquatica Housing, Nikon F3 camera, Nikkor 24mm lens, Aquasea 140 strobes, Ektachrome 100 ASA film



The depth of focus is great enough with the 14mm lens to allow focus both above and below water without a diopter. A strobe was held above the water to light the rock. Holding the weight of the strobe and half the housing was very difficult.
Subal Housing, Nikon F4 camera, Sigma 14mm Rectilinear lens, Kodachrome 200 ASA film, Ikelite SS200 strobes.

this tabulation underwater allows me to set the focus using only aperture and one of three positions then to concentrate all my efforts on composing the image in the viewfinder. For example at F8 on MID I know that a range from 200mm to infinity will be in focus.

EXPOSURE

Again I keep this simple. I know that f8 gives me good depth of focus so I use this as my prime aperture, I then adjust the speed knowing that the lights my models are using give good results at 1/15 and 1/30 second. Ikelite SS200 strobes are set on TTL and I compensate on the camera plus or minus depending on my feeling for the walls of the cave. ie if the walls are white or black.

REMOTE LIGHTING

Caves can be big and quite often strobes mounted on cameras don't provide enough light to illuminate the whole scene, this is where remote strobes can assist. These strobes may be connected to the camera with long cable or triggered by light sensors attached to the remote strobe.

Using two, twenty metre

A "standard" photo with some additional light being provided by hand held remote strobe being held by the diver.
Subal Housing, Nikon F4 camera, Sigma 14mm Rectilinear lens, Kodachrome 200 ASA film, Ikelite SS200 strobes, Aquasea 140 remote strobe

This photo may feel odd and it was meant to. I wanted to use the air pocket to reflect but from the bottom. This photo is upside down to how it was taken. It took a great deal of control by the diver to swim upside down for several minutes. I had to wait until all of the bubbles had cleared before pressing the shutter.
Subal Housing, Nikon F4 camera, Sigma 14mm Rectilinear lens, Kodachrome 200 ASA film, Ikelite SS200 strobes.

Using only the available light. I chose to do this because there was lots of beautiful light streaming through the entrance and I had disturbed the silt from the bottom. This would have ruined the photos if I had used flash but the silt has actually enhanced the light from the torch.
Nikonos 4, 15mm lens, Ektachrome 100 ASA film

Photos to complete the story are always a good idea. This one shows how easy it is for a diver to enter McCavity Cave. In order to allow the light from the torches to show the strobe was set to rear curtain sync and the camera speed to 1/15 second. This means the shutter opened for 1/15 second before the strobe fired as the shutter closed. Nikon F4, Tokina 28 - 70mm lens, Nikon SB24 strobe

A "strobe on camera" photo but one which tells a story about getting into the cave. This is also the way my camera had to come in so think about protecting your equipment for lowering and travel into the cave. Subal Housing, Nikon F4 camera, Sigma 14mm Rectilinear lens, Kodachrome 200 ASA film, Ikelite SS200 strobes.

long cables in a cave once resulted in a massive tangle, a cave full of black spaghetti, of which we were part. Following this interesting learning curve, I have rarely use hard wired remote strobes since.

Good quality remote sensors, such as those made by Ikelite, are a very good alternative to cables. The sensor plugs into the strobe where the cable from the camera would normally be. A pulse of light from another strobe triggers the remote strobe, this allows greater lighting freedom and the ability to light larger sections of cave.

If assistants are positioned along a passage, each with a remote strobe pointing away from the camera toward the next diver, when the camera strobe fires, it in turn fires each of the remote strobes like a daisy chain, lighting the whole passage and each of the divers.

I was shown a photo of a diver with a black mask, black BC, black drysuit, black tanks and black fins in a black cave, he blended in well but it made a poor photo. Have your model where suitably colored equipment to enhance the photo. Another method to separate the diver from the darkness is to use a remote strobe pointed towards the camera but behind the model to rim light the model. This can also be done with features within the cave. It is a very effective technique.

LIGHT PAINTING

Remote strobes can also be used for "light painting" inside large passages or rooms. The camera must be held still, usually on a tripod, as a long time

A remote strobe with a sensor was positioned behind the formation to back light it. The strobes lighting the foreground and the diver were angled to avoid lighting the front of the formation. Subal Housing, Nikon F4 camera, Sigma 14mm Rectilinear lens, Kodachrome 200 ASA film, Ikelite SS200 strobes, Aquasea 140 Remote strobe.

This is my most published slide. The camera was set to "B" on a tripod and held open with an elastic band. I swam along the wall firing both strobes so that my body was silhouetted. The streak of light was from my helmet light which I thought the camera would not see. Nikonos 4, Nikkor 15mm lens, Aquasea 140 strobes, Ektachrome 100 ASA

exposure is used. The camera shutter is locked open using the "B" setting. My aim is to evenly "paint" the inside of the cave with flashes of light. Some strobes have a test switch built in, unfortunately these usually fire at 1/16 power. To harness the maximum amount of light I have combined three strobes onto a bracket, two have remote sensors while the third has a test switch. It fires the other two at full power.

During set up I place a chemical light just behind the camera on the tripod, this enables me to always know where the camera is when I am painting. By looking through the viewfinder I establish where the edges of my photo are going to be. I then run a guideline along the path I am going to take to make the photo. All lights must be turned off or they will register on the film. Tape the ready light on the strobe as it will leave a red streak across the photo. Locate positions in the cave where the strobe may be "hidden" from the camera, behind a formation or a rock. Never point the strobe at the camera. Methodically move around the area to be lit ensuring that it is all evenly painted.

Use a guide line. Not using a guideline once resulted in me swimming into a passage which I didn't know existed. By the time I realized I could not see the camera light, it was too late. My assistant at the camera didn't turn on the lights for quite some time for fear of ruining the shot.

As this method is so slow it may be necessary to install the

This surface shot shows another perspective. The camera was on a tripod and the shutter on "B". The caver used a strobe to silhouette himself while another floated around the lake on a Lilo firing underwater strobes. The Lilo flasher moved from one lake to another so I covered the lens to let him to use a torch to see his way. Nikon F3 camera, 24mm lens, Aquasea 140 strobes, Ektachrome 100

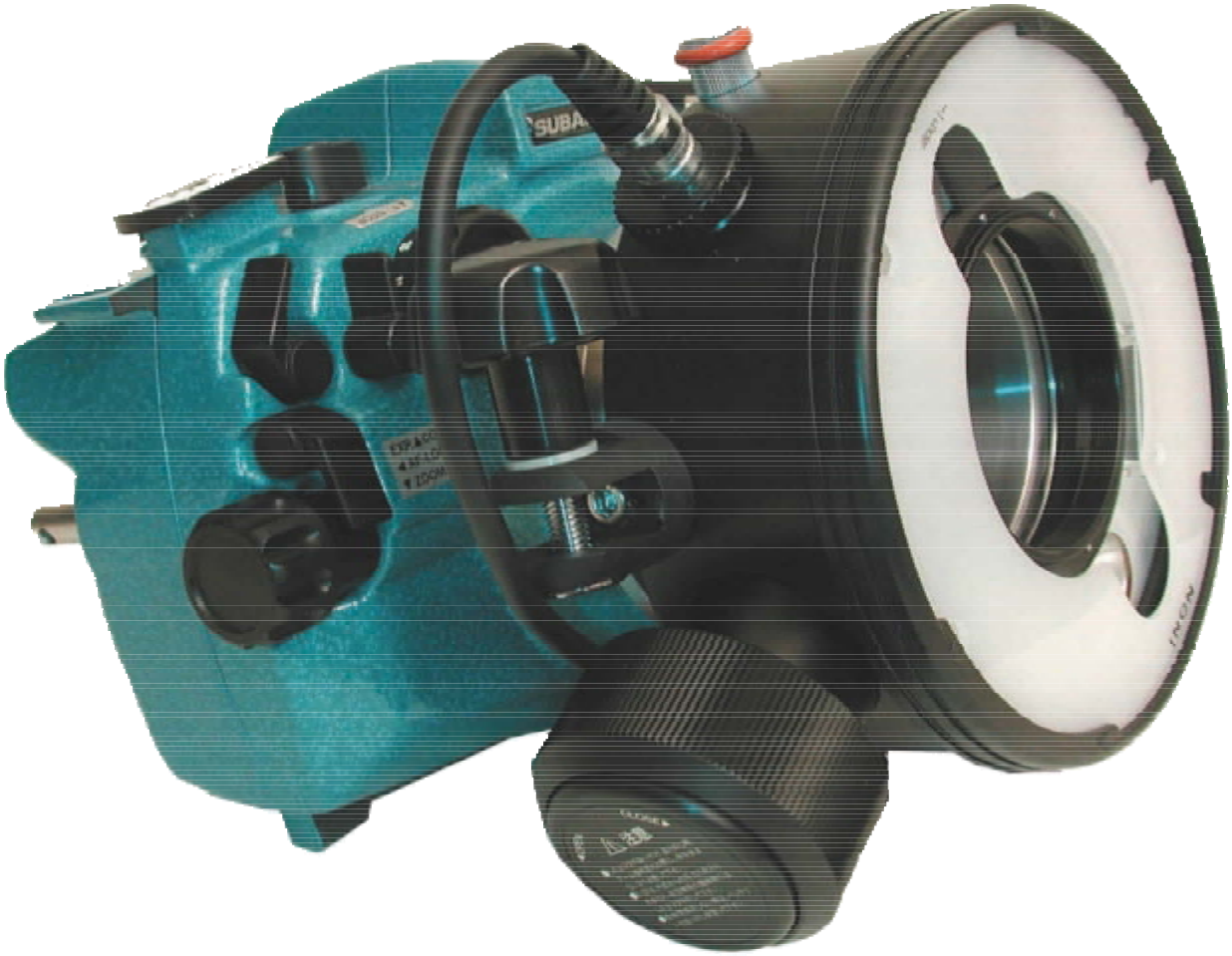
camera, take the photos and remove the camera over a series of dives. Bracketing a lot helps. Start with an aperture of f8.

SAFETY

Cave photography has a high level of risk. Know your limits. Make safety of yourself and your dive buddies at the head of you list of priorities and the safety of the cave as second, only then can you consider your photo. Take even more care when a cave has formations, decorations or virgin passage where even the silt floor is undisturbed. These have taken hundreds perhaps thousands of years to form and you can destroy them with one lapse in buoyancy.

Neil Vincent
neilv@ozemail.com.au

Ring of Bright Water



Inon's Quad Flash is one of the most innovative tools ever made available to underwater photographers. The four reflectors provide shadowless lighting with an ethereal quality all of it's own. The compact size is less intrusive than conventional strobes and makes animals much more approachable.

The Quad is packed with useful features such as an automatically activated modeling light to assist autofocusing and Nikon compatible TTL. To get creative there are three manual powers and a built in shade lets you block off two of the reflectors.

Available with ports to suit both Subal and Sea and Sea SLR housings. Quad from £995.00. Ports from £299.00. For a full review by award winning photographer, author and underwater photography coach Mark Webster see UwP Issue 2 at http://www.uwpmag.co.uk

St. Abbs and Eyemouth Voluntary Marine Reserve 'Splash In 2002' Aug 24/5th

The competition was under threat from earlier in the week. The weather did not look promising on the previous Thursday, with big swells and windy conditions. Friday the sea started to calm down and low and behold, Saturday was calm enough to dive! The day started with overcast conditions and drizzle, but no one was complaining as long as they could get in the water!

The films were handed out at 8am on the Saturday morning and the photographers then set out to capture the Marine Reserve in all its wonders and delights. The conditions were OK for close up macro lenses, but with the overcast conditions wide angle shots suffered from lack of natural light. Typically, as the deadline arrived at 2pm for handing the films back the sun came out and the afternoon was a scorcher!

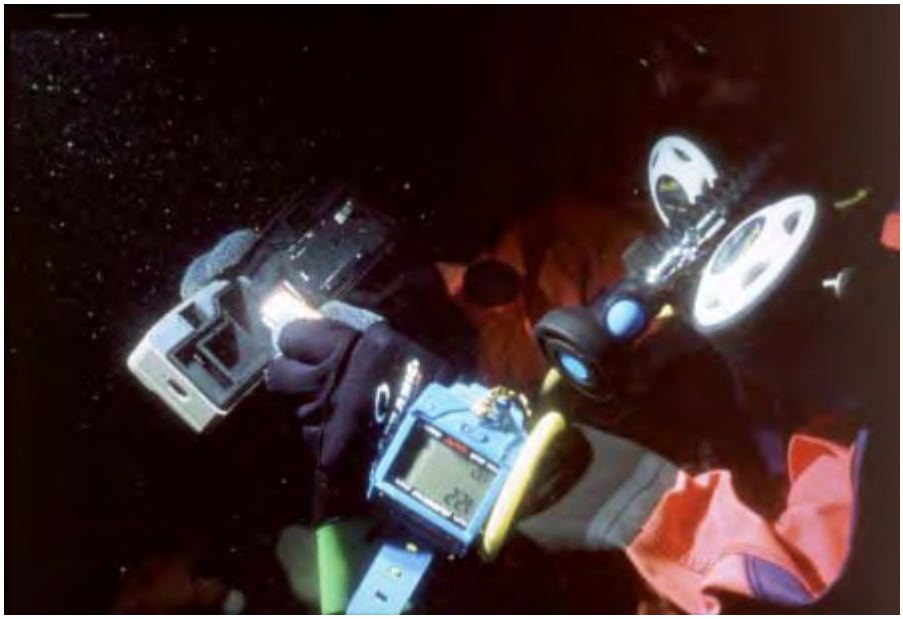
The Marine Life was the most popular category ranging from small sea gooseberries up to speedy squid and imposing jellyfish.

Fewer entries were in the Diver Scenic and Reserve Atmospheric due to the weather conditions. Nevertheless these two categories still managed to portray the Voluntary Marine Reserve in all its glory!

The John Goldie Most Humorous Shot' in memory of a local diver and photographer John Goldie had an increase in entrants from last year. A lot of thought and planning had gone into this category and produced some hilarity throughout the slide show audience.

Jason Gregory won the Marine Life Portrait section and was also the Overall winner.

Paul Taylor won the Humourous section with this shot entitled "I knew I'd forgotten something"



It was good to see a substantial number of beginners enter the competition. This is a promising sign, and lightens the competitive nature of the competition, as in the end it's all meant to be a bit of fun and joining in is what it's all about!

The slide show on the Sunday evening was extremely well attended with over 100 locals, visitors and divers alike voting with enthusiasm.

After the voting had taken place, light refreshments were served in the Marine Reserve Visitor Centre at the Old School, St. Abbs with a new display of underwater photographs and an

Bert Lee's shot won the Reserve Atmospheric section

array of seashore creepy crawlies in the tanks.

Once the votes had been counted up, the winners were stated. The overall winner was voted from all the category winners by a count of hands. It was close but Jason Gregory's octopus made a worthy winner.

Splash In 2002 raised about £200 for the Voluntary Marine Reserve, and also raised the profile of the VMR with divers, locals and visitors alike, all appreciating the stunning photographs taken within the Reserve.

I would like to thank all sponsors and a special mention to Scoutscroft Dive Centre for their invaluable help and finally to UwP for publishing this!.

Sarah Bowe

Winners:

Marine Life Portrait – Category A

1st Jason Gregory Octopus (MLP1) - Beaver Dive Bag

2nd John Naylor Jellyfish (MLP2) - Oceanic Dive Bag

3rd Len Deeley Anglerfish (MLP3) – Oceanic Cap and Mug, Dive St. Abbs guide.

Diver Scenic – Category B

1st Brian Jubb Diver/ Kelp (DS1) – B&B and 2 boat dives for 2 people from Rock House Dive centre, St. Abbs and Billy Aitchison.

2nd Len Deeley Diver/ Brittlestar Bed (DS2) – 2 boat dives for 2 people from Peter Gibson and the Selkie and a Beaver Polo Shirt.

3rd John Naylor Diver/ Wall of Dead Man's Fingers (DS3)-
Oceanic Cap and Mug, Dive St. Abbs guide.

Reserve Atmospheric – Category C

1st Bert Lee Surface shot of the Blue Shark (RA1)- safety equipment from the St. Abbs Dive Centre.

2nd Edward Bower Kelp (RA2) – 2 boat dives for 2 people from Alistair Crowe and the Lazy G Diver, Otter dive bag from Divers Warehouse.

3rd Paul Bury Balan Wrasse and Dead Man's Fingers (RA3) - Oceanic Cap and Mug, Dive St. Abbs guide.

John Goldie Most Humorous shot– Category D

1st Paul Taylor I knew I had forgotten something! (HUM1) - £50 cash kindly donated in memory of John Goldie.

2nd Keith Pritchard Cathedral Rock (HUM2) - £25 gift voucher from Divers Warehouse.

3rd Len Deeley Where am I? (HUM3) – cap from Scoutscroft Dive Centre.

Overall Winner Jason Gregory - The John Goldie Quaich and a weekends accommodation at Scoutscroft for 6 people from Scoutscroft Dive Centre.

Best Beginner Keith Pritchard – a Citizen Dive Watch from Deep Blue Dive Centre, Tynemouth.

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Rock House Dive Centre, 018907 71288
Peter Gibson and the Selkie, 018907 71681
Alistair Crowe and the Lazy G Diver, 018907 71412

Underwater Photography

a web magazine

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!

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

Uw photo techniques -

Balanced light, composition, wreck photography 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 with leading underwater photographers

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

My e mail is peter@uwpmag.co.uk

How to submit articles

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

1. The text for the article 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:

Resolution - 144dpi

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

File type - Save your image as a JPG file and set the compression to "Medium" quality

This should result in images no larger than about 120k which can be transmitted quickly. If we want larger sizes we will contact you.

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

We pay a flat fee of £50 (+VAT if invoiced).

I look forward to hearing from you.

Peter Rowlands

Classifieds

For sale

Nikonos V (Orange; 35mm Lens), SB-102 flash and Close up kit (plus original cases), Sea & Sea 20mm wide angle lens with Nikonos 20mm/28mm u/w viewfinder. All in excellent condition and living in the North West. Offers considered in the order of £1500. E mail Peter.Gilbert@Man.ac.uk or Tel 0161-275-2361

For sale

NIMAR polycarbonate housing with handle, flash arm & Mecablitz 30B3 flash + cable, 3 ports - 2 flat, 1 dome, eye piece, spares inc. O-rings, focus rings, clips.Offers please to 01752 880400 (Plymouth) after 6 pm or peter@pmessenger.freeserve.co.uk

For Sale

Sea & Sea MX10 complete with YS40A strobe, 20mm wide angle lens, lens holder and macro lens, all in flight case and with original boxes. £350. Olympus C920 Zoom 1.3 megapixel digital camera, 8mB and 16mB Smartmedia cards and Olympus PT-003 underwater housing (rated to 30m) in soft case and with original boxes. £250. Contact Dave Cooper on 01442 826344 or 07768 208182 or e-mail divers@go-scuba.co.uk

For Sale

Subal Housing for Nikon F5 with Actionfinder. Excellent condition. With handle, two flash plugs (for Nikon SB28)and spare 'O' rings. No ports. Owner converting to digital. £1,250.00 ono. Phone Peter Rattey 013398 85640 after 18:00.
Free shipping.

For Sale

Nimar SLR housing with standard port and wide angle glass dome port. Will fit most SLRs. Manual controls. Original cost of housing with spares £450. Housing for sale with Pentax MG SLR, 50 mm lens and plastic carry case @ bargain £295. Tel. Paul 01595 890371 prfisher@lineone.net

For Sale

SeaCam Pro housing Canon EOS5, double strobe connection, moisture detector, SeaCam SeaFlash 350TTL, all connectors, gears, arm, chargers, cleaning kit, spares; 3 dome ports, carry case. SLR available if required £1,999. Contact: julie.howell@hp.com

For Sale

Ikelite F90X housing, port and gears £450, Seacam housing, F801s, 28-80 lens, flat port and gears £750, Nikonos V + 35MM £400, Extension tubes £25 each, Nikonos dual sync lead £90, Strobe sets: Nikonos SB105(NEW) £400, Ikelite 200 £650, Sea&Sea YS60 £230, YS50 £180, Bendy arm £50, Flightcase £45 &75,
TEL: 07900-586-986
edwardmanning738@hotmail.com

For Sale

Nikonos V with 35mm lens, box, manuals, lens caps and straps. Absolutely immaculate, even includes original advice tags and questionnaire. Never flooded, one minute scratch. £500 + postage/insurance.. Contact Simon Buxton e mail Simon.Buxton1@virgin.net

For Sale

Sea & Sea MMII UW camera c/w macro lens, 16mm uw lens & YS50TTL II strobe
> All of the above items are stowed in a Kinetics dry case. All items are in fantastic condition. One careful lady owner. Bargain £550 ONO. Tel 01706 871170 Hme 01706 227758

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Located in Pittsburgh PA
John Rangos Jr. jgrjr@bellatlantic.net

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Contact Peter Rowlands
020 8399 5709 (UK) or e mail
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Wanted

Subal N99 Housing for Nikon F90x with 2 flash synch ports in good condition. Please contact Mario Micallef on email mmmicallef@hotmail.com

Wanted

Housing for Sony PD150. Must be capable of conversion to 100 degree lens. Also looking for lighting system and external monitor. Light and Motion housing preferred but will consider any type.
Contact Louise - Email: louise@louisemurray.com. London based.

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