

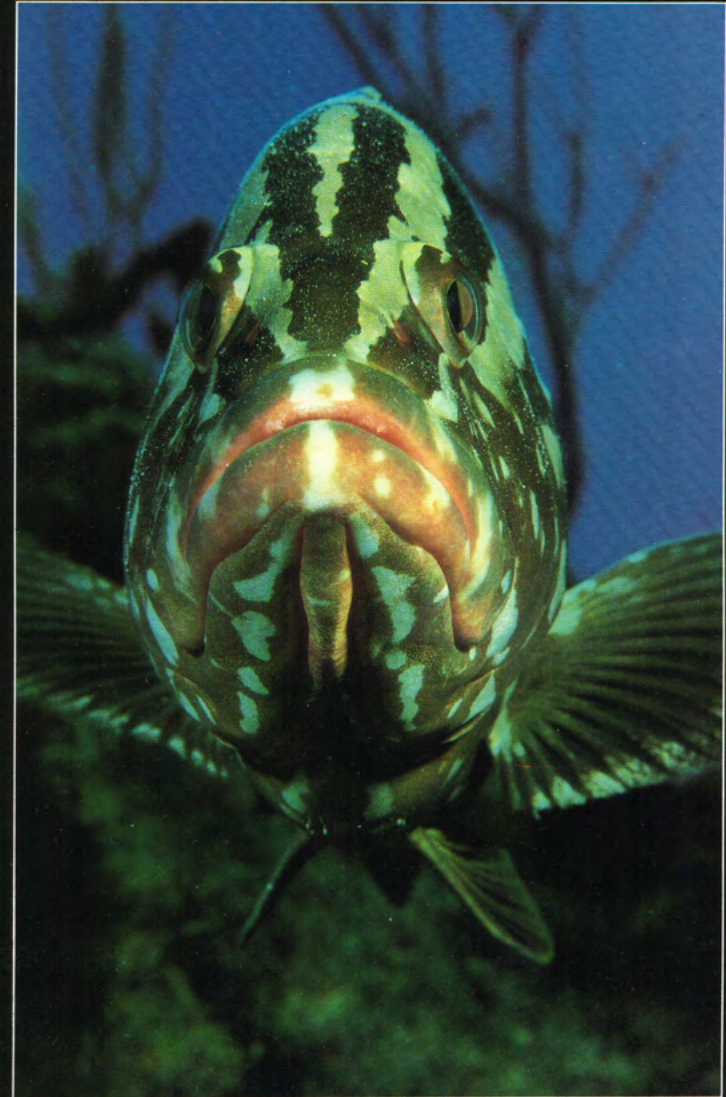
UP Supplement

UP12
Nov/Dec
1988



Issue 125/62

Underwater Photography



November/December 1988

£1.95

CLOSER



The CU 001 Close Up Lens fits over the 35 or 28mm Nikonos lens and, with the camera set to minimum focus, will let you take pin sharp shots just 10" from the lens.

The glass optics ensure top quality performance and the aluminium body provides rugged protection. Complete the outfit with hot dip coated stainless steel probes and you have a lens system which is built to last and which will not limit your compositions.

It's the best selling close up lens in the UK and is value for money at just £69 inc VAT. (P&P £2.50)

WIDER



For many years, the Subawider lens has helped photographers to obtain high impact shots without having to pay the price of a Nikonos 15mm lens.

The lens screws onto the 35mm lens and increases it's coverage from a narrow 46° to an incredible 90° capable of making murky water appear much clearer.

The results you will get are 'full frame' - that is free from circular fish-eye distortion and no exposure adjustments are needed. At only £164 (P&P £5), it's no wonder why they are so popular.

SPOTTER



There is, quite literally, nothing to touch the Mitylite in terms of performance, size and price. That's why they are so effective and so widely used.

They have limitless applications but are perfect for flash aiming lights with their pencil-sharp beam (the Americans say it's a state of the art, high intensity, Xenon fired lamp module and dioptic computer designed reflector that's the secret). We say they're too bright to look at and will stay working when you're snorkelling to 2000ft (as you do).

Supplied with 2xAAA batteries, the Mitylite is just £8.95 inc VAT (P&P 1.50)

FLASHER



The Nikonos V with it's TTL flash metering is the most sophisticated amphibious camera around. Attach it to an Aqua F3 TTL flashgun and you have a system which will give you hassle-free exposures with your very first roll of film.

More powerful (and cheaper) than the Nikonos SB103, the F3 represents the best value TTL gun on the market today and we can't see how any other manufacturer can beat it.

4 AA batteries (not supplied) give a 28(m) GN with 100asa and it comes complete with mounting arm and baseplate for just £279 inc VAT (P&P £5)

FROM

Ocean Optics Ltd

Underwater Photography Magazine

Issue No 12
November/December 1988

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Editorial

The likelihood of Underwater Photography Magazine being able to justify itself financially was always going to be an uphill struggle and, even though the hill hasn't been too steep, the costs of producing such a limited circulation magazine are beginning to get out of all proportion to the income. That's the bad news but, fortunately, there is also some good news.

The good news is that, in order to continue and to expand, we're incorporating Underwater Photography into SportDiver Magazine, Britain's brand new and first independent diving magazine for many years, due to be launched in January 1989.

The number of SportDiver pages will be at least double that of UP and you can rest assured that the underwater photography content will not diminish. In addition, the UK subscription rate will not increase so you will be getting even better value for money. The Europe and Overseas rates will have to increase to reflect the cost of postage.

SportDiver will be a bi-monthly magazine available on direct subscription, from UK dive shops and, hopefully, from a wide range of W.H. Smith newsagents.

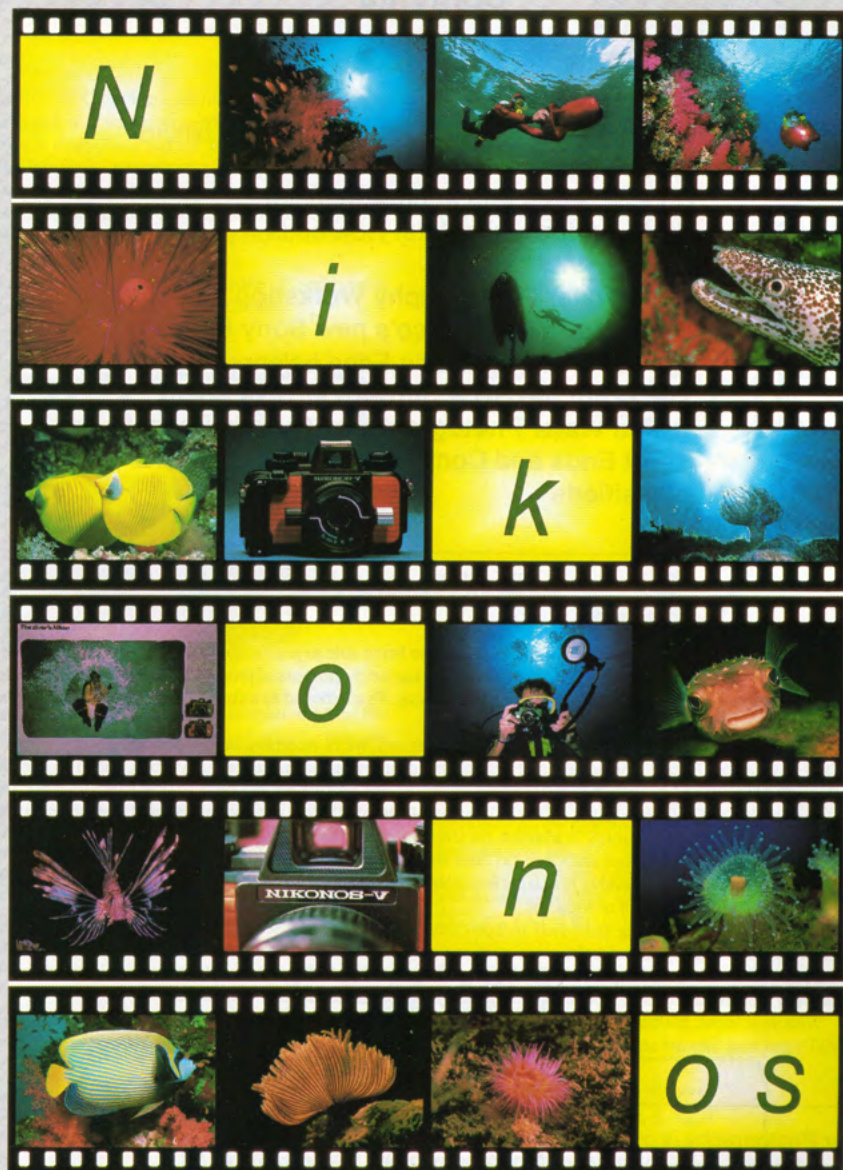
Since SportDiver is being published independently of any diving association/organisation, we can offer a different view on diving topics and techniques, keeping you informed on all aspects from all angles. And that's where you come in. We can't hope to keep in touch with everyone in the diving world and we will need you to let us know what you and your club are doing and, more especially, what you would like to see in SportDiver.

With your input, it's our chance to produce exactly what's required for the UK diving world as it prepares for the 1990's and then into the next century.

Underwater Photography is published bi-monthly by Ocean Optics Ltd

Subscriptions are available by mail order. Annual costs are £15 UK, £20 Europe and £25 Overseas.

CAPTURE YOUR IMAGINATION



Nikon

New Products from Photokina and elsewhere

Sea and Sea 15mm Nikonos lens



Sea & Sea are proud to announce the release of another Nikonos compatible prime lens - the wide lens 15mm F3.5 with a new optical viewfinder. Rated to depths of 60 metres (200 ft), with a stated angle of coverage of 96 degrees, which is slightly wider than the Nikonos 15mm, it permits a close focus of 0.3 metres (1 ft) to infinity, with a range of apertures of F3.5 to F22.

Construction is aluminium, 80mm D x 64mm L x 98mm W, it is relatively light at only 365 grams. The optics are corrected for use in water for optimum edge to edge sharpness free from distortion. It could prove to be a very popular alternative to the already well proven Nikonos 15mm lens since initial costings for the lens and viewfinder are around £499 including VAT.

A full review of this lens is included on page 6.

Amphibico Sony Housing



The F400 is Amphibico's latest version for Sony's new range of 8mm camcorders. The design is very similar to their existing V90 housing with built-in wide angle optics, interchangeable ports and an adjustable focus viewfinder.

No prices are available as yet but a full review of their V90 housing is on page 22.

Denz Betacam and Nikon 250 exp housing

For budding broadcast quality videographers, Denz of West Germany have

produced a self-contained housing for the Sony Betacam video.



Constructed from cast aluminium, the housing is very robust and has controls for all the required functions. A separate housing is provided for a monitor.

Also on show at Photokina on the Denz stand was a cast aluminium housing for Nikon F2 cameras with their 250 exposure back.

Prices were not available but further details can be obtained from Denz, Fer-

Canon EOS housing from Subal



This well respected Austrian firm announced their housing for the Canon EOS camera.

In keeping with previous Subal designs, the housing is a glove fit and extremely small with interchangeable ports and controls for all functions.

The Austrian price is 9800 Austrian Schillings and further details are available

Sea and Sea YS 200 flashgun

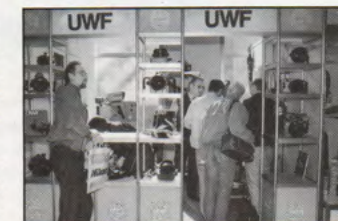
Another new product from Sea & Sea is the YS200 strobe which replaces the YS150.

Smaller and lighter than the YS150, the YS200 offers a higher guide number in both its full and half powers with approximately twice the number of flashes along with a faster recycle time. The slave func-

tion is still available but with an increased G.N. of 30 and a lower price (which could not be verified at the time of going to press), the YS 200 looks like a value for money improvement.

A full review will be included in the next issue.

Hugyfot Nikon F3 TTL



The Hugyfot stand at Photokina was kept busy with customers looking at the new Nikon F3 housing which has been updated to provide TTL flash facilities. In addition, the JetMarine range with built-in viewfinder magnifiers was on show. These housings are for cameras such as the Nikon F301 and the like, all of which have built-in winders.

EWA Marine Video cape



The EWA Marine video cape was finally unveiled at Photokina with deliveries expected in December.

Designed to keep video camcorders safe in the rain, the cape has an optical front port for top quality and under access for your hand to operate all of the controls.

UK price is expected to be around £45. For further details, please contact the

Sea & Sea's 15mm Lens

Ever since the arrival of the Nikonos 15mm F2.8 lens in the early 1970's, it has held the number one position in terms of desirability and performance and could well claim to have revolutionised the quality of underwater photographs. Such brilliance does not, however, come cheap for with a 15mm lens costing £1125 in the UK and the optical viewfinder being £189, this perfectionist's package takes some justifying.

This quality of performance had looked to be permanently unassailable since the costs of developing such a specialist lens (which can only be used underwater) are very high compared to the returns from such a small level of potential sales. That's one reason why the Nikonos 15mm lens is so expensive.

Enter Sea and Sea. A small, enthusiastic Japanese company who have, over the past decade, devoted the whole of their business to developments in underwater photography. Their first few products were aimed at the widest possible market with a manual flashgun, some extension tubes and a small range of Nikonos accessories. The investment needed to produce these was small and the returns turned out to be comparatively rapid. The profits were ploughed back into the company until it was able to invest in the design of a 15mm lens of its own and so complete its range of Nikonos lenses. Their prime lenses are now the 20mm and 15mm as well as the supplementary SWL16, designed for use with the 35mm lens. Outside of Nikon, the Sea and Sea range of Nikonos lenses is the most comprehensive.

And yet even before we look at the lens and optical viewfinder, there is one major point on which the Sea and Sea will have a big advantage and that is the price. The UK importers inform us that the retail price will be just £499 inc VAT. Now that is still a big lump of money but it is also a huge saving on the Nikon price so let's see if there is a compromise in performance.

Sea and Sea WL15

The Sea and Sea WL15 is a compact 15mm F3.5 lens with an angle of coverage of 96° underwater. This is very, very slightly wider than the Nikonos 15mm but the difference is so slight it will be unnoticeable in practice. Optically there are 10 elements in 8 groups with a shallow domed front port. This low profile front element does not protrude and is well shaded by the



(Above) The WL15 with its viewfinder NVF15 is a smaller package than the Nikonos 15mm yet it performs equally well and costs much, much less. At £499 in the UK for the lens and viewfinder, the WL15 and NVF15 are 62% cheaper than the Nikonos 15mm and optical viewfinder!

front of the lens with its 77mm diameter filter threads. The housing is black anodised aluminium so it will take the inevitable knocks and be fully operational down to 60 metres (200 ft).

Weighing 365 gms and measuring 80x64x98mm, the WL15 is a compact lens with controls for aperture and focus at 3 and 9 o'clock. The focus range is from 1 foot (0.3m) to infinity and the apertures are from F3.5 to 22. The Nikonos 15mm does have a maximum aperture of F2.8 which is just under a stop faster than the WL15 but, with the non-reflex Nikonos, this is not a noticeable limitation except if you regularly work in low light at full apertures and need the faster lens to reduce exposure times.

A small depth of field sticker is provided on the lens to give a few basic ranges for apertures F3.5, 8 and 16 at focus distances of 0.4m, 1m and ∞(infinity). A comprehensive chart is printed in the instruction sheet supplied with the lens. It is the wide depth of field which is so attractive

with this angle of lens for, focused at 1m with F8, you will be sharp from 0.5m to ∞! That virtually eliminates the need to focus but, for top sharpness, you should always focus on the subject.

The WL15 will fit on all Nikonos models and is fully compatible so it will not affect the available light metering on the Nikonos 1Va and the TTL metering on the Nikonos V.

The Nikonos bayonet mount is naturally compatible with the Nikonos but there is a difference in design in this area. In order to ensure exact focus at all depths, the Nikonos 15mm and all of their other lenses are sprungloaded so that the lens elements are always in exactly the same position in relation to the film plane, regardless of the pressure on the camera which may, at depth, flex slightly. The Sea and Sea WL15 does not incorporate this design so the lens position might change a fraction and alter the focus slightly but the depth of field should accommodate this possible movement. The



(Above) The viewfinder only indicates 90% of the area covered by the lens which is not ideal. The NVF15 slots into the camera's accessory shoe and is secured with the large knurled knob.



(Above) The depth of field sticker shows some of the combinations but a full chart is included with the instruction sheet.

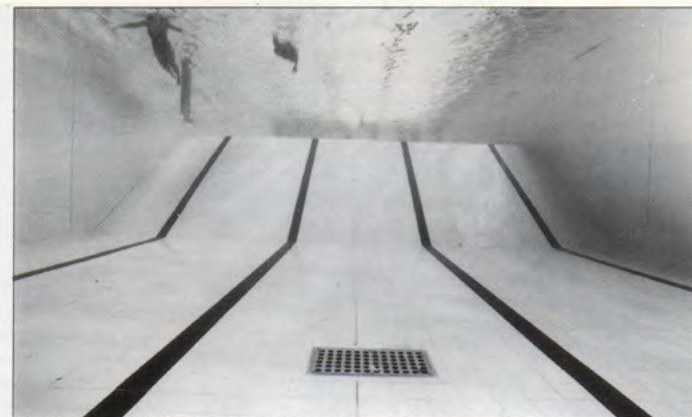
(Below) The lens elements are not sprungloaded so their position in relation to the film may vary very slightly if the camera body alters under pressure. This is a very slight possibility and the depth of field will probably cover any small focus changes.



likelihood of this happening is very slim at the depths to which the Nikonos is operative but this is a classic illustration of the Nikon design being expensive perfection whereas the Sea and Sea solution is perfectly practical and results in a considerable saving.

NVF15 Optical viewfinder

To complement the WL15, Sea and Sea have produced an aluminium housed optical viewfinder, the NVF15,



(Above) Swimming pools provide ideal locations for testing wide angle lenses. Their tiles are a perfect test chart for geometric and distortion performance and, being a consistent size, calculations can be made to establish angles of coverage. The Sea and Sea WL15 performed extremely well, even at wide apertures, with minimal distortion.

which slides onto the camera's accessory shoe and is secured with a large knurled locking knob. It is very bright and clear with 3 glass elements in a 3 group design which covers 90% of the scene you will get on the image. That's quite a loss of coverage but will mean you should never have the subject too large in the frame. It would surely have been better to design the viewfinder to give exactly the same coverage as the lens.

The fixed design viewfinder is parallax correct at 1.5 metres so that if you are shooting subjects closer than that you must tilt the camera up slightly to compensate. As there are no parallax marks in the viewfinder, it will have to be a bit of trial and error for these shots. The broad base of the viewfinder is strong and also serves to protect the locking knob but this does get in the way of the film rewind crank and make it fiddly to rewind the film. Fortunately the viewfinder is very easy to remove and refit.

Since the price of the WL15 and NVF15 are such good value at £499, it would have been nice to see a more dedicated viewfinder with 100% coverage and parallax correction, even if it added £50 to the overall price. This wouldn't diminish its value for money and would make a much better combination.

Performance

When put to the test in a swimming pool, the 15mm lens performed very well indeed. The degree of geometric correction was very high and it reproduced the rigid pattern of square tiles without any significant barrel or pincushion distortion. This is one of the big advantages of having de-

signed a lens from scratch and dedicated it for underwater use. Whilst a swimming pool is the ideal environment to test the general and geometric performance of a lens it is not the best of tests for flare but, with the modern glass optics and the shallow profile front dome port and lenshood design, there should be no significant flare with the WL15 in open water with potentially extreme highlights from surface lighting.

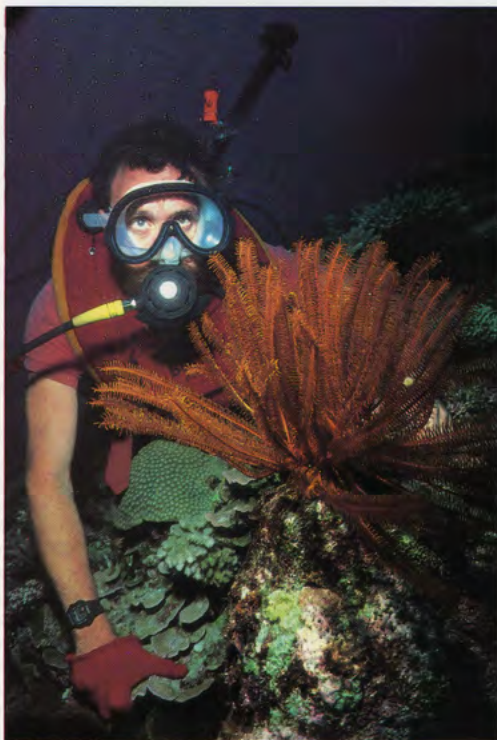
The obvious question which now must be answered is "Is it better than the 15mm Nikonos lens?" and the answer is that optically it performs to the same high level. Mechanically, the 15mm Nikonos lens wins with its depth of field indicators and sprungloading design but the positioning of the aperture and focus controls together with their large size make them very vulnerable. The Sea and Sea WL15 on the other hand is much more compact and the controls are better positioned and more protected. If the two lenses were identical in price then the Nikonos 15mm would have the edge but since the performances are so similar and the price differential is so wide (the WL15 is 62% cheaper!), the Sea and Sea WL15 should prove to be a best seller despite being let down a bit by the viewfinder.

It seems that, in the past, we had to pay for such dedication of design and construction but, with the advent of the Sea and Sea WL15, we now have a lens that equals the performance of the Nikonos 15mm at a fraction of the price.

Peter Rowlands

A Testing Time on Mana Island

Paddy Ryan explains



(Above) Companionable companion and dive buddy, Phil Jones takes a closer look at Mana's marine life. Due to misbehaving equipment, this was the only "useable" photo from the whole 12 days diving. Nikonos V, SB-102, F8 and Subawider.

You've all met the type. The sort of fellow who makes jokes at the Christmas social. Our one, with the enormous originality of the small-brained, called himself Nostradamus. Damn Nostradamus, he did more than make the Christmas social amusing, he put a lasting curse on my underwater photographic activities.

There I was on a magnificent tropical island (Mana Island, Fiji), equipped with 50 rolls of Kodachrome 64, six battery chargers, a small Zodiac boat with 6 hp outboard, unlimited air courtesy of Mana Divers and a place to stay courtesy of a friend. To make sure that my stay was pleasant I took along some companionable companions (some of whom doubled as dive buddies) and 13 cases of Stubbies.

The trip started in fine style, I got sick the first night and steadily worse during the next day. My erstwhile dive buddies, Derek Eamus and Phil Jones, took advantage of my absence to patch up the Zodiac and get in two pleasant dives. The following morning I was sufficiently recovered to attempt a dive but found while putting together my Ikelite housing that a vital piece of equipment,

the camera mounting tray, was back in Suva, (Fiji's capital, a boat ride and a 120 mile drive away.) I put the Nikonos V and SB-102 flash together and headed out with this. The day was idyllic, not a breath of wind and super visibility. Half way out to the reef, Derek (who likes playing boy racers) hit a small coral head. It was a mild thump but sufficient to break the pin. Needless to say there was no spare and even if there had been, we had no way to remove the split pin as we had no tools. Lesson one learned.

The trudge back to shore towing the Zodiac was pleasant, but didn't make up for the missing dive. Did this daunt our gallant hero? Not a bit of it. He hopped onto the boat, back to the mainland and into the trusty Suzuki for a quick ride back to Suva. The missing part was right where he remembered it. At 5.40 the next morning the unmasked marauder was on the road back to Nadi where, after a frustrating 20 minute wait at the local dealers, he picked up several spare pins for the outboard. At 11.30 am he was back in the Villa supping on a well earned stubby.

After this interlude I was sure that all would go well. My optimism was totally misplaced. Our night dive was a disaster. My companionable companions did not relish the thought of sitting in a bucking Zodiac for 45 minutes while the three divers investigated the photographic potential of the area. The end result was a split dive with each of us taking a spell in the Zodiac. Phil and I piled into the water, Derek having drawn the short straw. To ensure that we could detect any drift I used a rubber band to attach a Cyalume light stick to some coral, a procedure I can highly recommend. Not only did it reassure the boatman that the anchor was holding, but it also gave us the homing light at the end of the dive.

As you might have guessed this dive too was a disaster. In the dark we missed the drop-off and after 15 minutes energetic finning into the teeth of a howling current still didn't find it. The photographic opportunities were minimal, a rather disgruntled porcupine fish which was too damn lethargic to even erect his spines, but nothing else. When we got back to the boat Derek was looking extremely green around the gills. In the interests of scientific accuracy I must report that we didn't actually see any colour in the dark, it was surmised from the retching sounds. At this point I aborted the dive and we headed back for a well deserved stubby.

The dive the following morning was superb. The outboard ran like it knew it was flat calm and sunny, the Zodiac didn't leak as much as usual and our hero had his sights set on two rolls of film. Two rolls of film? Such confidence. First into the water and straight to the bottom, adrenalin surging as he investigated the housing for signs of leaks. Panic, bubbles everywhere. Relief as he realises it is the reflection of his exhaust port. Focuses on a handy coral head. Gently squeezes the tit. The shutter works. The autowinder audibly hums as it advances to the next frame. The flash doesn't fire. Six shots later the Ikelite and homemade flash housing are swapped for the more reliable Nikonos V, SB-102, Subawider combination.

The first priority is to get some photos that can be used for postcards, an obligation to a major sponsor, the one responsible for



(Left)
This magnificent goby *Nemateleotris magnifica* posed with fins erect for the camera. Taken with a Pentax LX fitted with 100 mm macro lens at F8, AF-400T flash

the fifty rolls of Kodachrome 64. Visibility is not good (less than 100 feet) so our hero opts for close-ups. Hirsute Phil, considered slightly more photogenic than hirsute Derek is called in to act as model. Whiskers almost in the feather-star he intermittently holds his breath as our ace underwater photographer rattles off almost a dozen shots. Our hero works on the assumption that if you take enough, some of them will come out. One shot in the can, the trio move off along the reef, huddled into a coral head is a very photogenic yellow puffer. Focus, frame and fire. No flash! It talks to itself, the aiming light works but it refuses to fire. Discreet hammering against coral blocks and threatening it with instant death by drowning do not work. Flash remains obdurate. Dive finishes and we return for a well earned stubby.

On shore said Nikonos SB-102 is dissected and given a precautionary squirt of CRC, there is no evidence of flooding, just a few beads of water that probably entered when it was opened. Flash sulks, refuses to work and is dishonourably discharged (literally!). Thrown back on the Ikelite and homemade combination our hero works diligently. At last success beckons as the powerful Pentax flash fires every time. A well deserved stubby is consumed.

The following morning dawned bright and clear, at last so we are told. Our hero and dive buddy are still asleep, emerging bleary eyed at around 9 am for a ten o' clock dive. The camera gear, set up from the night before is tested one last time and works perfectly, TTL flash and all. Once in the water our hero heads to the bottom focuses on a handy coral head and gently squeezes the tit. The shutter works. The autowinder hums as it advances to the next frame. The flash does not fire. Philosophical, as always, our hero surfaces and places the housing back in the Zodiac, dive proves extremely interesting.

Once back on the surface things become exciting. The tide has gone out, exposing some rather nasty coral blocks. Discretion seems the better part of valour. Rather than motor over the small breakers we opt to walk the Zodiac over the danger area. Our hero, the only one with shoes, takes the anchor line while buddy and boat handler remain in boat. The exercise seems simple, 30 cm of water and 45 cm of waves, keeping the bow of the boat into the waves is not difficult. Not difficult that is until a totally unexpected 1 metre



(Below)
What do you do when all else fails? This aquarium shot of a Squat Lobster on a crinoid was taken with a Pentax LX fitted with extension tubes and 100 mm macro

wave comes out of nowhere, knocks over the anchorman and flips the Zodiac. Possibly because the camera gear is out of favour our hero looks for the rest of the party. Both are found intact apart from some interesting coral cuts on feet and hands. Gear is all located, the Zodiac righted and an even longer trudge than the previous effort ensues. The motor is overhauled by Mana Resort and is back in operation the next day.

The score so far is eight dive days, one roll of film exposed underwater. Does our hero give up? Not a bit of it. For the next four days he painstakingly cleans and assembles all photographic gear, each day it works perfectly above water and each day it fails as soon as it smells the sea. Nothing daunted our hero decides to fall back on the only working gear. The Nikonos V. The visibility and light are good enough to take flashless shots in just a few feet of water and with the ultra wide-angle lens these should provide a postcard or two. With this in mind the Nikonos is loaded with fresh Kodachrome and the shutter advanced to the first frame. At this point our hero loses his presence of mind. The Nikonos is jammed solid. No sign of leakage anywhere.

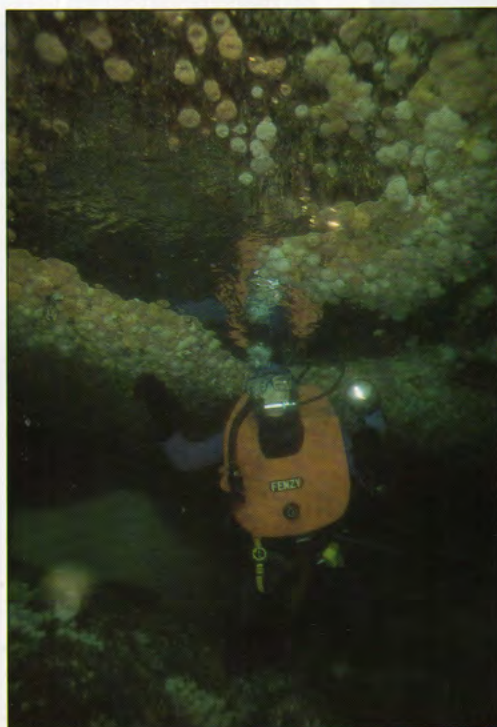
Paddy Ryan

Dive St. Abbs

with Andrew Mounter



(Above)
Dead Man's Fingers play host to several small Brittle Stars, possibly *Ophiothrix fragilis* making a reasonable fore-ground subject. The typical open water green-blue colour helps in giving a sense of depth to the image. Technically and subjectively an interesting image.



(Left)
Combine the mercuric appearance of air trapped in the upper arch of the rock, and the golden cast produced by the tungsten torch light, the result is worth the struggle keeping in mid-water. Ektachrome 100, Olympus OM2 and 21mm lens in a home made housing.

The sea was calm, the sky only half covered by light clouds and the tide well out as my dive partner, Kevin McDermott and I sought out the only one remaining parking space in St. Abbs harbour. It was to be my third visit to one of the best dive sites of mainland Britain and I had looked forward to it for some time. On the way up, we had discussed ideas for the photographs I was to take and we eagerly set about preparing ourselves for the dive. My first thoughts were, of course to be certain that the camera was going to work properly. I always check that the flashes fire before entering the water and this was where we had our first setback; they didn't! After a frantic few minutes trying various camera modes, I managed to find one where the flash did fire, and soon we were making our way around the harbour to the entry point.

The tide had dropped still further by now and it looked a bit of a scramble down the rocks to the water's edge. Once over the kelp and into open water it was an easy snorkel over to Cathedral Rock, which was just exposed above the water. Dropping down into 15 metres, we hit the bottom a little way off and made our way over rather ordinary terrain until we came up to the magnificent double arch that makes the rock famous. Coupled with the masses of Plumose Anemones and Dead Man's Fingers, the sight is awe inspiring to say the least! But we had work to do, and after a brief rest taking in the splendour of our surroundings, we moved over to where I had previously found an anemone in just the right place to make a dramatic photo. Hardly surprising, really, it was busy digesting a meal and had reduced itself to a totally unphotogenic lump! Notwithstanding, I took some shots, though not as close up as I had intended!

By now, about 7 or 8 large Ballan Wrasse had made themselves present and we began feeding them, as good a substitute for the anemone as I could wish for. Now I was finding it difficult to get a low enough position so that I could get the background position light in shot, which would have separated the subjects from their surroundings and made a much better picture. What did help was my drysuit because in dumping all the air from it I could sit firmly in one place on the sea bed even with a gentle current flowing past.

Leaving the fish to finish off their



(Above) Simplicity is often very effective as this shot of sea urchins illustrates. A natural congregation or deliberately set-up, either way it is a fairly successful shot, for which two strobes were used.



(Above)
Many large Wrasse were sighted during the dive which later had disappeared - only to reappear in a diver's goody-bag!

meal, I wrote out my directions to Kevin on a formica slate I carry with me, something I would say is absolutely essential to any serious underwater photographer; the only way to make complex instructions on site.

We took position in the upper arch of the rock where, over the months, diver's air had accumulated and formed an air pocket. The anemones still manage to poke their tentacles through it into the water and I wanted to catch the reflection of light around them. The powerful torch that I had lent Kevin made this possible, but I was pleasantly surprised on viewing the slides later to find I had caught the reflection of the anemones below as well as above which gave a sparkling golden tint to them. It was quite a struggle keeping position in midwater to

take these shots, and I gratefully sank down to the sea-bed to rest when I'd used up all the film.

We still had about ten minutes left of the dive (to enjoy, rather than work), before we returned to shore. There we planned the second dive of the day whilst waiting for our cylinders to be filled and extending our surface interval. I wanted to repeat the shots I'd already taken "just in case" and it's to Kevin's credit that he readily agreed. In fact I can only claim for half of the success of the day since we both dived specifically to take the photographs and had little time for much else. Some of the repeat shots on the second dive turned out to be the better ones, thus showing one can never take enough of one subject. Bracketing also played an essential role, and although some frames were badly under or overexposed, I had a large proportion of acceptable shots.

Unfortunately, I must end on a sour note. On the first dive, we caught sight of a pair of divers, one with a speargun, the other with a goody-bag stretched to capacity! On the second dive, there were only two of those friendly Ballan Wrasse left. I am annoyed with myself for not being able to do anything about it there and then, and also for not taking their pictures for later identification. If anyone else knows of this and who may know the persons concerned, please try to persuade them to leave the site alone. Here is definitely a case of a couple of divers spoiling it for literally hundreds of others.

Andrew Mounter

RAS MOHAMED

- The Red Sea -

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FOR DETAILS CONTACT

UP in Antibes with Peter Rowlands

The 15th International Festival of Underwater Photography took place in Antibes, France from October 12th to 16th and once again proved to be a major and successful attraction to divers from all over Europe. It's continued success ensures that this festival must be regarded as the largest of it's kind in the world and is one which looks set to continue both in terms of attendance and standard.

Although it is still very much a French-influenced event, Antibes attracts entries from all over the world and is gaining a reputation as the event at which careers can be launched and promoted as well as providing a pleasant meeting place for like-minded people.

In the competition side of the festival there are categories for black and white and colour prints, colour slides (portfolio of 10), audio visuals, professional and amateur video, TV productions and Super 8 and 16mm films. In addition, there are categories for music/soundtracks and a newly introduced one for books. The latter was restricted to French books but next year should see this excellent category being expanded to cover all European languages.

From a British point of view, we did rather well with Benny Sutton taking the Gold for his black and white print shown here, Kevin Cullimore just being pipped (by 1 point!) into the Silver for his Colour print shown here (the winner was a computer generated/enhanced image from Japanese photographer Hokazono Tsutomo which would cause a few tongues to wag over here but was not available for printing) and Michael Wong winning a Bronze for his slide portfolio. In fact in the slide portfolio, which must be considered a severe and sensible test, we had 3 out of the first 6 for just behind Mike was Benny Sutton and in 6th place was Linda Pitkin. Bearing in mind that very few British photographers entered, this was a good result.

Andy Belcher from New Zealand won the Gold in the slides category and his shot of a diadema urchin (which did well at Brighton '87) was highlighted as the single most impressive slide in the competition.

President of the Jury for still images (this includes audio visuals as well) was Gillian Lythgoe, Director of UK's Planet Earth Pictures and she told Underwater Photography "I thought the overall standard was good this year with a reassuring variety of images. It is always a daunting task to try and judge such entries but we gave each



(Above) Kevin Cullimore's Silver medal winner in the colour print category was a double exposure of fish and coral with a black background but, since the prints are not available for printing, a triple exposure version is printed here with a third exposure adding a blue background.

(Below) Daniel Mercier finds time to pose for the cameras. It is his continued enthusiasm which gives this major international event its stability.



(Below) The main reception area on a quiet day. At it's peak, this area was awash with visitors from all nationalities drawn to underwater photography.

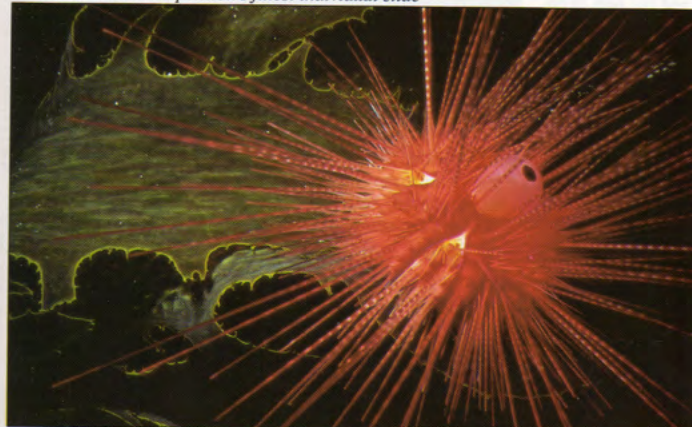


(Above) Manatees shot by R. Braunschweig whose entry was 12th overall.

(Below) Michael Wong came 3rd in the slide portfolio. 10 shots per portfolio had to be entered.



(Below) Andy Belcher's entry came 1st and this shot (which did well at Brighton 87) was voted as the competition's finest individual slide



(Above) A double exposure from Vic Verlinden's portfolio

COVER PHOTO

This issue's excellent cover was shot by Ernst Voellm from Switzerland. His entry came 7th overall. This was shot on a 6x4.5cm format camera in an aluminium housing. This reproduction is cropped from the centre of the frame which is one of the advantages of the larger format.

print points out of ten and then added up the total. The slides were points out of five. With the AV's we gave points for the idea, the music/commentary mix, picture and sound quality and finally, the effectiveness of the fades. The standard of the AV's varied considerably but the winner received a unanimous vote."

"Some photographers wonder about the sense in not having separate categories which results in fish competing with divers etc but, from a judging point of view, it all comes down to the image and although a fancy computer generated image won the colour prints, it is usually those shots, like Kevin Cullimore's Silver winner, having the strong simplicity which appeals to a judges eye."

In the audio visuals, Michael Wong was the only British flag flyer out of 22 entries but this category went to Giovanni Evalli from Italy for his "Dream Concert", a three projector show with well shot sympathetic images and effective fades on the well worn theme of a dreaming mind wandering underwater and back.

To see the mountain of equipment needed to cater for all the entrants' technical needs was a telling sight to behold and



(Above) Benny Sutton won 1st prize in the Black and white print section with this menacing shot of a Wolf Fish.

(Top right) D. Torckler's fine shot looks equally impressive in black and white or colour.

(Right) Children's art adorned every available space.



their views to help improve the event which were noted by the organisers and should be implemented in the years to come.

The 5 day event is a true festival with most of the services being provided by volunteers with finances stretched considerably. It is a tribute to the organisers, Mr and Mrs Mercier and their small team of part-time helpers, that they continue to generate the enthusiasm which results in this high point in the underwater photography calendar.

Peter Rowlands

Are you "SAFE"?

It had been an uneventful flight home. My three passengers were staring out of the windows, bored. The engine purred at idle speed as I made my turn for the final approach to the airstrip when suddenly the droning noise from the engine compartment stopped and the throttle went dead in my hand. I knew instantly what had happened; My God, I had forgotten to switch tanks! I've let a fuel tank run dry! The propeller kept spinning impotently, driven by the wind rushing past it. I eased the nose down to maintain airspeed and, trying to appear calm, reached down for the fuel tank selector lever and flipped it over. Eyes front again, my heart slamming against my ribs as I watched the trees rise up towards us, the runway impossibly distant, the prop windmilling uselessly. Come on! COME ON! My knuckles were turning white on the controls when suddenly the gentle roar started up again. A wave of relief spread over me as the throttle came back to life, responding smoothly as I eased it forward. I glanced over my shoulder. My passengers were still staring out of the windows; they had no idea what had just happened! But I certainly did, and after we landed I spent a good long time sitting in the parked aircraft, amazed that I could have made the inexcusable mistake of neglecting the pre-landing checklist with near-disastrous results.

I relate this little confession from my days as a commercial bush pilot because of the double lesson that was driven home to me that day:

(a) Always use a checklist, and (b) physically check each item on it. This lesson isn't just for pilots. It can benefit anyone who deals with complex equipment or situations and underwater photographers stand to gain a great deal by paying heed to it.

As a diver, I've probably come back with as many overexposed, underexposed, half-frame, out-of-focus and just plain blank rolls of film as the next fool, but once I began to apply the great lesson of the checklist I experienced a real drop in the kind of bone-headed mistakes that can turn a photo dive into a photo fiasco.

Now, when I say "checklist" don't worry. I don't mean a cumbersome slate dangling from your wrist and wrapping itself around your contents gauge. What I'm talking about is a quick and easy mental memory-jogger that you can run through briefly just before entering the water.

Any such list has to be simple be-

Handy hints

cause if it isn't, chances are you won't use it or you'll forget part of it and leave out the one item that Sod's law says you shouldn't have forgotten. The one I've adopted is both simple and comprehensive, covering as it does the four areas of operator blunder that are most apt to lead to a completely ruined roll of film if left unchecked. Like most good mental checklists it is an acronym and consists in this case of the letters that make up the word, "safe". Here's how it works:

S

"Shutter Speed" Is it set at the flash synch speed? Had you intended to set a slower speed to lighten up the backgrounds? Did you blow it and leave it on the "rewind" setting? Older Nikonos cameras left on "R" will appear to function normally (even firing the flash) but alas, the film won't be moving through the camera. I know. I've done it.

A

"Aperture" Is it set for the expected flash strength and subject distance? Will you be able to snap a grab shot of that whale shark that appears out of nowhere as soon as you hit the water? Will you fry a whole roll of macro shots with the aperture set at F3.5 instead of F22?

F

"Focus" Take a look at the lens. All extension tubes and most accessory lenses require specific distance settings in order to perform properly, thus providing a wonderful opportunity to lose a whole roll of close-ups due to an incorrect focus setting. If using a wide-angle optic, have you set the near and far depth of field limits to cover the subject distances you anticipate?

E

"Electrical" Flash turned on? Auto/manual/TTL switch in the correct position? Appropriate manual power setting selected? Synch cord screwed in at both ends? (Don't laugh. I could let a tale unfold). Light meter switched on and set to the correct ISO rating for the film being used?

Adapt each letter group to suit your own equipment then go over this brief list just before the camera gets wet. If you do it back in the room or before kitting up on the boat it's possible that something will get switched off or moved out of adjustment before you enter the water. Be sure to physically check each item, taking nothing for granted. After all, taking things for granted is what creates the need for checklists in the first place.

As you stand there awaiting your turn to go over the side or as you wade out from the shore, pause and ask yourself, "Am I 'SAFE'?" and tick off the items on this little checklist. It only takes seconds and if you're at all like I am then you'll be surprised at how often you catch that one little mistake that would have become a dive-wrecking monster if you hadn't been clever enough to spot it.

by Steven Reilly

Lost Leaders?

How often do you rewind your film cassette too far and lose the leader resulting in either a darkroom job or a rummage around in a changing bag. Most photographers must have done so at some time possibly in preparation for double exposing the film. There is a simple but ingenious tool called a "Leader Retriever" consisting of two very thin plates of metal which may be safely inserted through the light trap. Manipulation of this tool permits the leader to be caught between these plates and withdrawn easily. These Leader Retrievers may be purchased at most photography shops.

Got any handy hints?

You could win a roll of slide film.

Let us know those little tricks of the trade and we'll publish them.

A roll of slide film for every hint published.

Underwater Photography Workshops

Salcombe, Devon with Sophie Antipas

Bill and Mary Bunting have been running Kingsbridge Watersports in Devon for six years. Bill started taking underwater photographs several years ago and recognising the growth of the sport and the fact that it is not always compatible with traditional diving activities Bill and Mary ran two Underwater Photography workshops over the summer offering 4 and 5 days of diving respectively from MV Likely Lad.

I attended the five day workshop presented by Les Kemp. Les has been taking underwater photographs for some ten years and has earned admiration for his award winning audio-visual shows. The workshop began on Sunday evening giving everyone the opportunity to meet one another and for Les to check that we had all arrived with basic equipment and E6 compatible slide film.

There were eight people on the course but only seven photographers. A Swiss couple, Bruno and Ursula from Zurich dived as a team where Ursula acted as an occasional model or just enjoyed the diving. The experience of the party varied from beginners to proficient photographers. Mark and Bruno had many years of underwater photography experience behind them but were attracted, as were we all, by the opportunity to spend a week taking photos and studying the results day by day. I was among the least experienced, having spent a week earlier in the summer in Majorca getting acquainted with the equipment, and a further weekend in Plymouth vomiting over the side of a rolling boat! The others in the party had anything up to a few years experience of underwater photography and were aiming to sharpen their technique.

We spent all day on the "Likely Lad" and made two dives per trip although there was no restriction as to how many dives you could have, dependent naturally on the air available to each diver. The "Likely Lad" can take 10 divers at a time but for underwater photography bookings Bill restricts the numbers to eight to allow for the extra equipment. The weather was on the whole fantastic - blue sky and sunshine, the wave-capped Atlantic swell was persistent but in sheltered coves the water was tranquil, emerald and inviting. Pairings were decided on the first day but as the week progressed and the weather proved fine these were not strictly adhered to and it was left to each individual to decide how s/he wanted to dive.

During our stay the visibility ranged between two and ten metres allowing for both macro and wide-angle work. On clear days there were plenty of opportunities for capturing the sun-burst effect a factor of particular use to Mark who concentrated on the double exposure technique throughout the week, with enviable results.

Bill Bunting has a very thorough and accurate knowledge of this part of the south coast and we were fortunate in being able to dive on several different sites during the week. The Herzegon Cecille lying in nine metres of water at slack tide was a regular stop. Her bulkheads were encrusted in jewel anemones and Sagartia elegans, a tompot blenny was discovered challenging allcomers from his niche, battling with gloved fingers and posing on his ledge. Visiting the wreck more than once one could plan potential shots in advance and so use equipment to better effect.

The East Ruts - a pinnacle rising from the seabed its apex lying some 17m from the surface at slack water - provided weed covered walls below a kelp forest. Inquisitive cuckoo wrasse and large ballan wrasse were notable subjects, but a group of striking finger sponges and gorgonians were too deep to be photographed by the time I saw them.



(Above) Mark Webster's shot, winning the "competition" was this candid study of a very territorial Tompot Blenny. Complete with comical face and enough bravado to gaze into a close-up lens they can make excellent subjects for the camera. Taken with a Nikon F3 fitted with a 55mm Macro lens in an Ikelite housing.

In Eleanor Cove very close to the rocky shore the seabed consisted of uneven ridges with fairly dense kelp on top. Macro life included the leopard spotted blenny and the fan worm *Bispira volutacornis*. The only animal of note which I spotted was a pipe fish (*Entelurus aequoreus*) which reared inquisitively out of the kelp and miraculously swam in between the probes of my close-up lens, it stayed for a few seconds before gliding back into the weed where it became indistinguishable from the kelp stalks.

Off Bigbury Bay we dived in a moderate swell onto a fairly clear rock bed with both shallow and deep gullies. Even at 20m the effect of the swell was considerable and it was difficult to keep station. Together with poor visibility the conditions were uninspiring. However it was a useful opportunity to experiment with different flash angles to find the best position for the subject whilst minimizing the impact of the sediment in the water.

In the evenings Les processed our films. Up to 16 films could be processed at once. Once the film had dried the results were examined on a light table and the best results from each person's films were projected for further comment and appreciation. On the penultimate evening a lighthearted competition was held to vote for

the best slides of the week and the winning slide can be seen printed here.

Les was always available to give advice and suggestions - even below the water on occasion! Some had hoped that lectures would be given on photographic technique. However, with two dives per day followed by processing in the evenings and examination of the results, there would have been little time for theory unless dive time had been cut which would have been very frustrating. In addition the wide ranging experience of the people on the course would have made structured lectures difficult. But as a work-shop the main emphasis was on diving and taking photographs, thereby learning from experience.

It was a very enjoyable week and for a potentially solitary sport it proved a very sociable experience. For those daunted by diving alone it is comforting to see or at least know that other divers are nearby. The main advantage and attraction of such a workshop is the opportunity to concentrate on underwater photography over several days seeing the results as you go whilst having an experienced photographer at hand with whom to discuss technique.

Kingsbridge Watersports lies on a hill in the heart of Kingsbridge town. The accommodation is behind and above the shop and is warm and comfortable. The compressor room and an area for washing salty equipment are at the back of the building. These facilities and the living area are connected to the high street by a passageway so that gear can be swiftly loaded into waiting cars (speed was essential as the traffic wardens were insatiable following a new one-way system and parking restrictions).

Mary and Bill were very hospitable and welcoming throughout our stay and are planning two more underwater photographic weeks next summer in June and September, as well as a further workshop. The five day workshop that I was on, cost 159.00 pounds inclusive of breakfast and one fill of air/per day. For further information the address for Kingsbridge Watersports is: 39 Fore Street, Kingsbridge, Devon. Tel: 0548 2934.

Sophie Antipas

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UP Reviews

Amphibico's Sony Video V90 Housing

Having been a very keen audio visual producer for a long time, I had been keeping one eye on the video world as it developed from an expensive gimmick into a cost effective medium for producing underwater films. I held back when the first Sony Handycam M8 with it's Marine Pack arrived because, as an underwater stills photographer, I saw the need for wide angle optics being just as essential for video.

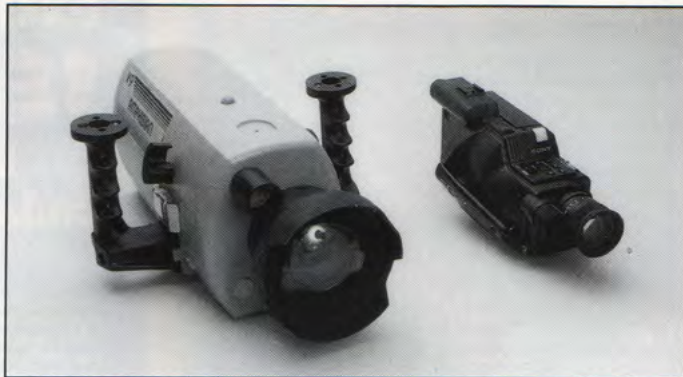
When the reflex Sony V30 arrived, I plunged headlong into the world of video and had a perspex housing made by Peter Scoones which incorporated wide angle optics. The results were way above my expectations and helped me shoot some excellent footage of HMS Royal Oak in 1987. In depths up to 100 feet with very low light levels, the Sony V30 performed fantastically but gradually I began to feel a few limitations with the camera; the first being the lack of a frame counter, the second being the lack of macro capability and the third being the worry of a potentially fragile perspex housing.

The solution to all of these problems arrived with the Sony V90 and Amphibico's aluminium housing. I'd seen the Hypertech tubular housing and was impressed with the simplicity and the price but felt happier with the extruded aluminium of the Amphibico, even though there was a substantial price difference. My experience with still camera housings has always led me to believe that, if you are keen, buy the most robust gear you can and it will be a good investment in terms of performance and eventually value for money.

The V90 camcorder has been described in the May/June 1988 issue so needs no further introduction but the Amphibico housing is a new product from a new manufacturer and needs some research.

The Amphibico V9 housing is made in Canada from extruded aluminium with welded endcaps. It is the smallest housing available for this camera and being aluminium is quite heavy (5 1/2 kg or 12 lbs) but this combination of weight and size does result in neutral buoyancy. Buoyancy is much more important with video housings as it affects the handling properties considerably.

Two standard overcentre catches hold the two halves of the housing together and provide good compression on the main O ring. There are external controls for zoom and on/off/record with these two controls being well positioned ergonomically. There



(Above) The Sony V90 is one of the market leaders in the highly competitive camcorder world. It's 8mm format, high performance image sensing chip and high specification together with it's small size have proved popular. The Amphibico housing from Canada is a complement to the features of the camera and the combination of the two must be considered to be the best available today.



(Left) All of the camera controls are operated via the remote socket on the camera. This makes setting the camera up very simple. The viewfinder eyepiece must be removed prior to assembly of the housing

The standard battery and the double capacity NP77 can be used.

are handles at either side of the housing onto which light-mounting arms can be attached. Amphibico are not into producing lights and supply mounting shoes compatible with both Sea and Sea and Oceanic shoe fittings.

The wide angle optics are achieved by mounting a X.42 adaptor behind a dome port. This gives a coverage of at least 100° with the camera lens set to 12 focal length. This coverage is great for British waters and, although I have yet to try it overseas, should produce superb clarity in clear water.

With the rear half of the housing removed, there is very little preparation needed to install the camera but it is best to make a check list to make sure you don't forget. The focus must be set at 4.5 feet and the autofocus must be disengaged to give fixed focus. (It is possible to fit a +1 dioptre lens to the camera and the auto focus will work underwater but I prefer to fix the focus and know it will be sharp). The wide angle optics make most subjects sharp from a few inches in front of the dome to infinity. There is an external microphone which is con-

nected to the camera's socket just prior to loading the camera. The camera must be set to "Camera" and there is a lead from the housing to the remote socket on the camera.

All of the on/off/record functions are controlled via this remote socket which is linked to the control on the right hand side of the housing. Pulling the control back turns the camera on and holding the lever back starts recording. This stops as soon as the control is released. If you want to continue filming without having to hold onto the control, push it forward and the recording will be continuous until it is pushed forward again. All of these operations are very simple and take very little time to get used to.

For those who just wish to shoot wide angle, I suggest you don't fit the small O ring supplied which disengages the zoom to macro button on the camera. If fitted, it will allow you to zoom into the macro setting by mistake and the shot will go totally out of focus! For macro shots, it is best to consider the flat macro port.

(Right) The viewfinder position is fixed on the V90 and, when housed, is easy and bright to view. There are times, however, when it would be ideal to be able to alter the viewfinder angle but the camera dictates that this is not possible.

The zoom control is on the left and the On/Off/Record on the right.

The viewfinder is at the rear of the camera and the built-in magnifier gives a bright and large image. The positioning is a bit awkward at times for I found that, with wide angles, I liked to look over the top of the housing at the general scene and would have liked a different viewfinder position which allowed me to do this and check the viewfinder at the same time. This is a limitation of the camera and not the housing and is something I got used to as the dives progressed.

As an external signal to both the cameraman and the model, there's a red light on the top of the housing which flashes when the camera is recording. This is a very useful facility which I don't think is included on any other housing.

In use, I found the viewfinder too small to see if all was in focus, especially in low lighting and I had a few anxious dives



wondering if the results would be sharp. They were sharp but I did have to have some tweaking done to the optics by the UK importers since the positioning of the wide angle adaptors in relation to the camera is very critical. I suspect that there may be slight variations from housing to housing and I would recommend that you buy a housing that has had the optics checked.

The macro port was not available to test but is just a flat port for use with the macro facility on the camera. A small O ring

is fitted to the zoom control to allow access to the macro facility and you can then focus right down to the front port by operating the zoom. The zoom control has five small steps before giving a smooth slowed down zoom. This is designed to let you have more control in the macro mode where a small turn of the zoom will take the focus from about 4 feet down to a couple of inches. These five small steps give you much more control in this area.

Filters are available to reduce the usual underwater colour casts but I was perfectly happy with the UK shots without a filter and especially impressed with the camera's ability to balance the available light with the tungsten video lights I used for lighting the foreground.

At £949 in the UK, the Amphibico housing is much more expensive than the competition but it does provide a very high quality of finish with controls not currently available on the others so there are good reasons for the price differential and you do definitely get more for your money.

The housings are imported into the UK by Ocean Optics Ltd, 4 Greyhound Road, London W6 8NX. Tel 01 381 6108.

Steve Birchall

Back issues?



All of the previous 6 issues of UP are still available to complete your set and provide an invaluable source of information in the future. Individual copies cost just £1.95 (+ 30p p&p) and are available from Underwater Photography

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Favourite shots

Martin Edge balances light

The sun, bursting through the surface, pierces a royal blue sea. A diver hangs in the blue void above and a spray of vivid colour dominates the foreground.

One can be forgiven for thinking that this type of image is old hat. But even with the advent of the popular double image, it has stood the test of time. Admired by divers and non-divers alike, they adorn the walls of thousands of homes, offices and dive shops all over the world. I'm sure we've all gazed at such an image at some time during our life and wondered, where was it taken and with what equipment?

This photograph remains a firm favourite of my own work for a number of reasons. I enjoy, most of all, to work with a model in capturing this type of shot. The result was what I had envisaged in my mind's eye in terms of artificial lighting balanced with the existing natural light. It's a shot where I often find myself explaining to a novice the lens required and the limitations of the Nikonos 35mm lens. This usually results in a deep conversation relating to underwater photography and we both depart happy.

This shot was taken during a trip to the Maldives in 1986. I used a Nikonos 111, 15mm wide angle lens, Oceanic OS 2003 flash on low power and Ektachrome 64 film. The aperture was either F11 or F16 at 1/60th of a second. The flash to subject distance was bracketed between 1 and 2 feet.

We were diving a reef during the late afternoon. The depth was 14 metres sloping down gradually to 30 metres. The visibility was around 25 metres and there was a slight current running along the reef in a westerly direction towards the face of the setting sun. My buddy, Bob Wrobel, was also looking for pictures but I knew he would be available to act as a model, should the need arise.

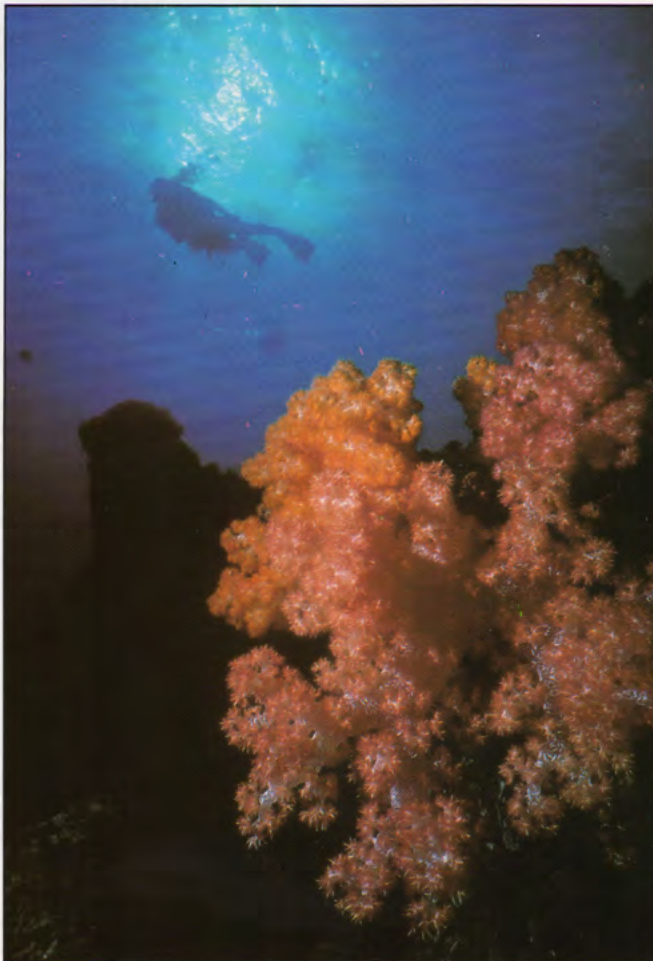
There was a profusion of fish on the reef. By dropping behind whilst Bob swam ahead and hugging the reef, I was able to capture the shoals framed against the blue water and as Bob descended it became easier to separate his shape instead of framing him against the cluttered background of the reef.

Underwater photographers are forever being reminded that the best time of day is between 12 midday and 2pm when the sun is at its highest. But for me the best photos/dives are when the sun sinks to the horizon. The combination of surface conditions and sunlight can produce spectacular effects.

We swam over an area rich with soft corals growing vertically from the reef. Settling down and examining one such specimen, I could see that the sun was backlighting it.

It's pertinent to mention that during 1986 I was influenced by the double image technique produced by several BSoUP members. Isolating the main subject on a dark background is so effective in providing impact to an image. I was experimenting at the time with composing a foreground subject against a reef or coral outcrop which I would purposely underexpose either by aperture control or flash to subject distance.

So with this thought uppermost in my mind, I scoured the reef for the correct sized specimen of soft coral situated with a certain sized coral head behind it. I found what I was looking for quite quickly. The background element was in the form of a large stump of brain coral and the sun was bursting through the surface behind that. I took a light reading towards the surface which indicated an aperture of F16. I knew this would underexpose any detail on the reef by as much as three stops. I indicated to Bob and invited him to view the scene from my position to give him an idea of what I had in mind. I took out my



regulator and blew out profusely. He then knew that I wanted bubbles - and lots of them. The overall scene looked good. If I could get Bob into the correct position it would be even better.

The biggest problem was to be composition. My Nikonos was placed on the sand pointing towards subject, diver, surface and sunburst at an angle of 45°. I couldn't get myself into the space to see what was actually in the viewfinder so I had two choices. Either I could move on to another location or I could shoot 'from the hip'. I decided to shoot from the hip and fixed my eye as close to the camera lens as I could. The camera to subject distance was about 9" to 12" and I chose to side light the coral and accentuate the soft coral at the back.

My model swam back and forth through the sunburst and against the current at least a dozen times which was hard work for him but an advantage to me in being able to get plenty of bubbles, a sense of movement and time for my flash and my thoughts to recycle.

I shot off about twelve frames before I sighted two white tip sharks cruising the reef slope so I decided to give them my undivided attention for the next fifteen minutes.

I felt the dive and my endeavours had gone well. I was eager to process film on my return home and on removing it from the developing tank my initial reaction was optimistic. I had about twelve shots with a correctly exposed blue water background and sunburst which is the benefit of using an accurate and correctly calibrated Sekonic exposure meter. The soft coral was well lit in almost every frame which is the advantage of being totally familiar with the power and limitations of my flash. However, the stump of brain coral behind had not entirely surrounded the foreground subject. The composition between the diver and the subject was good but the position and shape of his silhouette gave the appearance in several frames of having either one leg or one fin.

Three frames worked well. The position of the diver and his bubbles in the picture evoke a greater feeling of movement and are slightly better than the other two.

If I had to do the shot again I would spend longer searching for the subject which not only was correct in terms of size, colour and position but was in such a location that I could actually compose through the viewfinder and adjust parallax in my own way.

These types of images can be taken just as efficiently in UK waters but do spend time in choosing the foreground subject instead of using the first one you see.

A necessity is a wide angle lens or supplementary lens. The standard 35mm or 28mm Nikonos lens will not produce the desired effect.

Martin Edge

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by Dr Mia Buehr



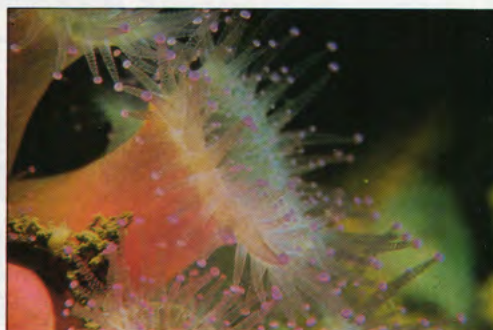
Turbid Water Photography

by Quentin M. Bennett



(Left) Diver Jon Bennett on the wreck of the "South Sea" in 20 metres of water, Wellington Harbour, New Zealand. Nikonos III with 15mm lens and single handheld wide-angle strobe in visibility of 2 metres. Ektachrome 64. This demonstrates both the effect of shielding the strobe and careful framing to give the illusionary effect of natural light.

(Below) Jewel Anemone, *Corynactis haddoni*, in 17 metres at North Reef, Hawke Bay, New Zealand. Nikon F2 with 105mm Micro/Nikkor and tube 1:1 in visibility of 1 metre. Handlamp plus strobe illumination on Fujichrome 50.



Many photographers give up when water visibility is a couple of metres or less. On the other hand some of us rarely dive in better conditions so to be able to pursue our interest in underwater photography we have to be able to get results in this turbid water. Three basic requirements for underwater photography are: Get very close to the subject, control lighting very carefully, and focus accurately.

In turbid water these requirements become critical to obtaining results. Remember that even the best conditions underwater for a land photographer would be like working in a pea-soup fog.

The less water between the subject and the camera lens, the better. If the water is coloured or full of suspended matter, getting close to the subject is the main factor in greatly reducing this colour or fog and getting a sharp successful photograph.

A close focusing wide angle lens is ideal for turbid water photography, but it is expensive. The wide angle extender is another useful lens in these conditions, is far cheaper to purchase, but cannot offer quite the same quality.

Even if your equipment does not include either of these, using close-up lenses or tubes will allow you to get near to small subjects and to continue to photograph even when visibility is reduced. Your subjects, of course, will depend on the photographic equipment you have available.

In turbid waters a self contained camera such as the Nikonos is generally superior to a reflex camera for several reasons. The low visibility will mean that a reflex viewfinder will be both very dark and of very low contrast. It will be very difficult both to define and to focus. With some of the better quality optical viewfinders for the Nikonos, such as that with the 15mm U/W Nikkor, the photographer can possibly see subjects in the viewfinder that he/she otherwise couldn't see. The small manageable lack of bulk of a Nikonos is likely to be a great advantage in the type of conditions often present when visibility is poor.

On the other hand, in some conditions the use of a full frame fish eye lens can successfully utilise a reflex camera. The depth of field of such a lens can almost render focus adjustment unnecessary and its 180 degree diagonal field of view makes it an amazing tool. However the subject distortion calls for care by the photographer in

order to prevent extremely weird effects.

Do remember that diving in turbid water requires far greater underwater skills than diving in clear water. Involving oneself in such a technically challenging task as photography in these difficult conditions therefore demands adept "seat of the trouser" diving ability. The additional complication of photography is a test that, frankly shouldn't be contemplated unless the diver is totally in control and at ease with the conditions.

Two metres or less of visibility carried on down to only ten metres or so depth translates to being very dark, and a considerable test of diving ability. The task should be treated with the necessary care and caution. In these conditions the photographer must be able to maintain buoyancy control and sense of direction, because, of course, he is not just taking photographs, but also carrying out a dive. Careful buoyancy control, in addition to safe diving practise, becomes vital if the bottom is soft or muddy in order to prevent disturbance and the consequent fog. The diver must be totally familiar with all his equipment operations and camera controls and be able to operate them in low light levels. I wear a small light on my hood, miners' fashion, that can be used for both gauges and camera controls.

Equipment may need to be modified so that it can be operated whilst wearing gloves. Before entering the water all



(Above) Commercial diver John "Legs" Diamond cuts a wharf pile in Napier Harbour, New Zealand. Diamond was the cutter in the H.M.S. Edinburgh salvage in the Barent Sea. Nikonos III with 15mm lens and single handheld wide-angle strobe on a very long arm. Visibility approximately 0.75 metres. Fujicolor 100 printed and then copied with reversal film Fujichrome 50.

camera controls are adjusted to the most likely settings. These may have to be readjusted, but it does mean a start and often doesn't require much altering. When possible, rather than bracketing exposures, move the strobe closer and further from the subject to give different exposure values. In a working situation working quickly is often important, and this is much faster than altering controls. Purposely move the strobe to give different lighting angles; normally working with the camera in the right hand and the strobe arm, which is one-piece, straight, and quite long, in the left hand. The use of a movie light instead of a strobe is another lighting technique that gives the photographer greater control. He can easily ascertain the effects of flare and differing lighting positions.

In water with visibility that is poor because of suspended particulate matter, it is so important to minimise lighting anything but the subject. Lighting the water between the camera lens and the subject will only create a fog and "snow". The wideangle strobe that is really necessary for use with a very wideangle lens almost becomes a liability in these conditions and needs to be used with great care and thought. In some situations such as in a shipwreck or in some harbour tasks, a beam or superstructure can be used to shield the strobe light such as in the illustrating photograph. The important thing is to endeavour to light only the subject and not the water between it and your camera. Again if you are successfully managing to get really close to the subject the water between the camera and subject may be irrelevant.

Under the low light conditions prevalent with poor visibility, it is so important that instrument and camera controls are easy and clear to understand and operate. Detailed ergonomic design of diving equipment is at its infancy and the practical underwater photographer is at an advantage if he can design and alter his equipment to make it easier and quicker to operate.

In the very worst conditions where a static object has to be photographed, a tent of heavy clear plastic film can be constructed over the subject. Clear water can be pumped down into this tent. In a harbour fresh water from a hose will often do the job. I have worked in water where the surface visibility was very good, but the bottom visibility non-existent. Using a fire-fighting pump and hose to simply pump clear water down to the bottom without using a tent worked most successfully in creating photographable conditions.

For entering and exiting the water, it is wise that the strobe attaches to the camera so that they can be handled as one manage-

able piece. This is a protection in the rough and difficult entries often associated with poor visibility.

Sharp focus is always important, but in poor visibility contrast is less and the focus essential. If you are using a wideangle lens and strobe and are close to the subject, and therefore at a small aperture, focus might not be quite so critical because of depth of field. Artificial lighting is virtually essential in conditions with very poor visibility and therefore fast film is not necessary. The conditions of especially low visibility are the only time that I sometimes stray from the use of Kodachrome colour reversal film. In these conditions I have found that the latitude of colour negative film and the ability to make adjustments during printing can save the day. If transparencies are required, the print can be duplicated with transparency film, understanding the consequent minor loss of quality copying always brings.

With visibility of a couple of metres or less, however, any photographs are a miracle and quality becomes something beyond miracles. Photographs that are taken very close up, as turbid water shots must be, can have quite a punch to them. Peasoup photographs can be very dramatic and excitingly different. The diving involved in taking them can also be very exciting.

Photography in conditions of very poor visibility can only be indulged in by particularly skilled photographers; who are also very capable divers. Turbid water photography becomes almost an artform of its own. I believe strongly that many of the pictures in "UP" that were taken in British waters are taken by far more skilled photographers than many of the glamorous tropical shots we drool over in adverts and the like.

Quentin M. Bennett

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