

Photographing Shipwrecks around the British Isles

by Rick Ayrton

I had been asked to give a talk about U/W photography at Guz Tec, a new technical diving conference based in Plymouth UK, its aim is to promote tech diving with an emphasis on UK based explorations.

As an underwater photographer I was very much aware I would be speaking to a mixed audience with a good number of non-photographers. For the talk it had to be interesting to all, stories of how the wrecks were located & dived with a sprinkling of technical photographic information.

Peter Rowlands who attended the conference subsequently asked me to write this article based on the talk. I can expand the technical side since I know that the readers of this article have self-selected and will hopefully understand the more geeky aspects!

By way of introduction this report is only about photographing UK shipwrecks, this in itself is a challenging undertaking since visibility is not one of the well-known aspects of UK diving. Being able to successfully take UK wreck shots makes the transition to clear blue

water so much easier and therefore as UK based photographers it is worth spending time to master the skills required.

Obviously finding the best UK viz you can is important, you can rarely get good images during plankton blooms or after extended periods of wind or heavy rain. Unfortunately for predictably good viz around the UK you have to go a long way offshore and by association end up getting to the deeper tech diving depths. Occasionally the stars align and good viz makes it all worth-while.

My talk was about my development as a photographer as well as how camera development has impacted on the pursuit of the perfect wreck image. I had used film SLR's topside, underwater I started with video before moving over to stills, a Canon compact started my journey but for this report we will start in 2007 when I purchased a 10MP Nikon D200 & a Sea & Sea housing & strobes. My wreck photography is all done with fisheye lenses, for the purposes of this report nothing more is to be said about lens choice.



Giannis D Red Sea 25m, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, ambient light, f2.8, 1/60, iso200

One of the first trips I did in 2007 with the D200 was to the Red Sea and I was pleased to have captured this shot of the Giannis D, at the time I thought I'd got it all sorted and was looking forward to replicating the shot in the UK - little did I know!

In the UK I was tech diving, depths meant little light was available so the addition of strobe light was required. In 2008 I captured this shot (right) on an unknown wreck South of Plymouth in about 65m of water, Strobes light the scene nicely but the view is not balanced with the more distant areas of water just appearing very dark.



For the first few years I was very much learning the ropes but it all came together in 2010. I was on a trip to Orkney, looking at wrecks outside Scapa Flow and I found the holy grail, clear water & ambient light (even at



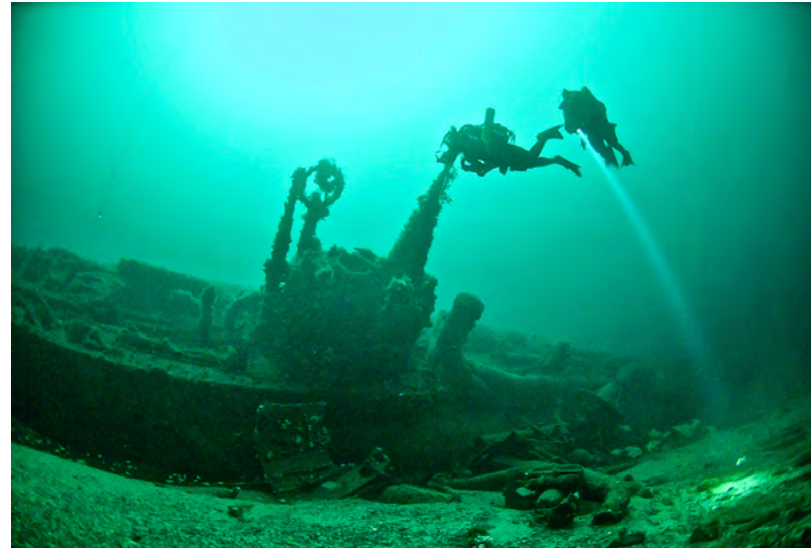
80m). The U102 submarine was lost in September 1918 with all hands as a result of hitting a mine of the Northern barrage, East of Orkney. I would be with one of the first groups to dive her. I recall seeing the whole wreck laid out in front of me and spent time kneeling on the sea bed to brace myself as I was using a long exposure 1/3 second but just ambient light.

This was one of the first UK images I managed to get that came close to the Red Sea image, I was to get another opportunity later in the year. This time diving off North Cornwall on another submarine, the WW2 U1021, this was a type VII

boat again sunk by a mine in 1945, but only in 55m. Once again good viz, ambient light and gradually increasing the iso of the D200. I was at this time still influenced by the reasoning that you should keep the iso as low as practical, keeping grain & noise to a minimum.

On the same dive I took this rather more intimate shot of the periscope lens,

What is interesting is the significant crop shows the excellent quality of the D200, especially when it is fed strobe light, the details visible are truly amazing, being able to zoom in on the intricate cogs that work the periscope, a testament



(Far left) U102 80m, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, ambient light, f2.8, 1/3, iso800

(Left) U1021 55m, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, ambient light, f2.8, 1/25, iso500

(Bottom left) U1021 periscope, Nikon D200, 10.5mm Nikkor, Sea&Sea housing, strobe lit, f2.8, 1/25, iso800

(Below) Periscope crop



to the engineering in both the camera(only 10 MP) and the periscope which has remained(and still is) water tight since 1945.

In the years after I never had such good conditions

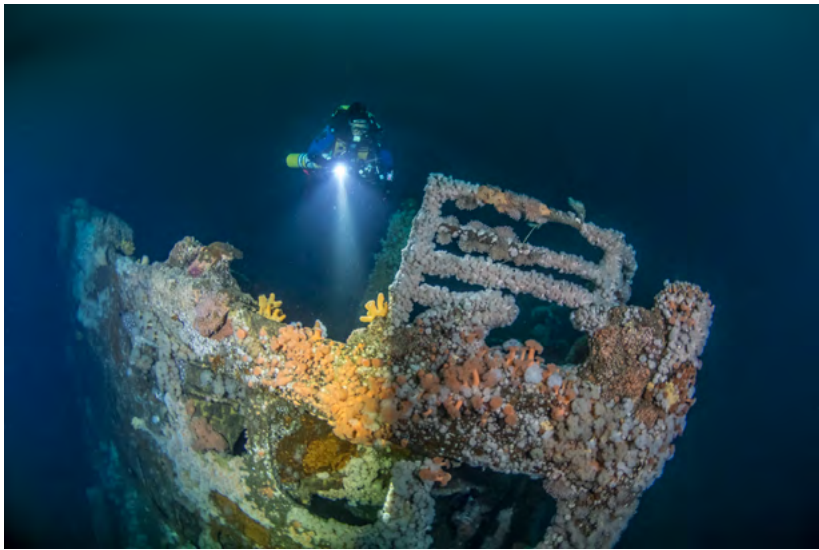
for the D200 in the UK, it was retired in 2013 when I changed to the Full Frame 24 MP D610, also changing to Nauticam housings.

I can't say that the D610 was a favoured tool it's



autofocus was not a great improvement over the D200 but I was able to nudge the Full frame sensor up to iso2500 with little grain & noise in evidence.

The Flagship DX format 24MP D500 was released in 2016 and I decided to move back to cropped sensor, also changing to Inon Z240 strobes



RMS Justicia 70m, Nikon D500, Tokina 10-17 at 10mm, Nauticam housing, D500, strobe lit, f3.5, 1/60, iso3200

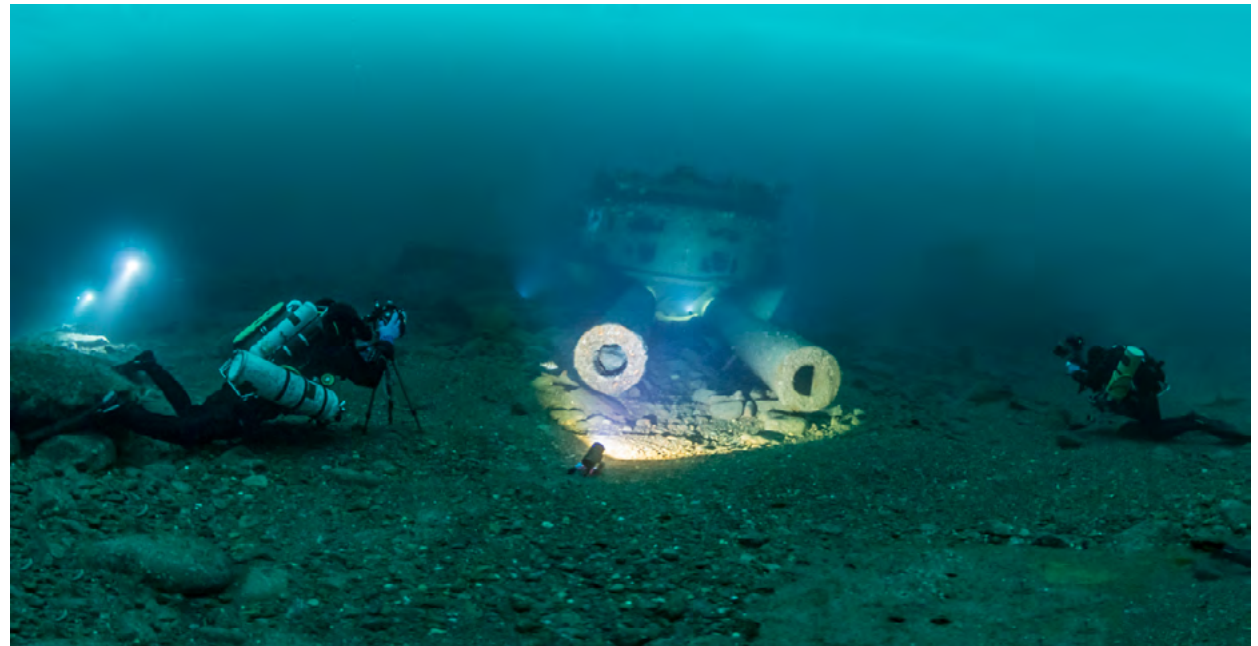
since the Sea& Sea strobes would not fire consistently from the LED flash trigger.

In 2017 I returned to Malin Head, probably the region of the British Isles with the most reliable good visibility, prior visits had been with video and I was looking forward to using the D500 in the clear Atlantic viz.

Torpedoed in 1918 the ocean liner Justicia is one of the classic Malin Head wrecks, lying in 70m she is a spectacular wreck. The D500 was allowing the iso to go up to 3200 but strobe artifacts were beginning to become intrusive, note the flares of

light each side of the frame, aperture & speed are already fairly low (arguably the speed could drop) but using strobe on minimum power at high iso was becoming a problem. I started experimenting with LED powered video lights available on Amazon for little cost for off & onboard lighting, opening up a whole new way of shooting deep wrecks.

I returned to Malin the following year on a trip organised by Irish Tech diver & photographer Barry McGill and with Danish u/w photographer Rene Andersen and others attending, it was



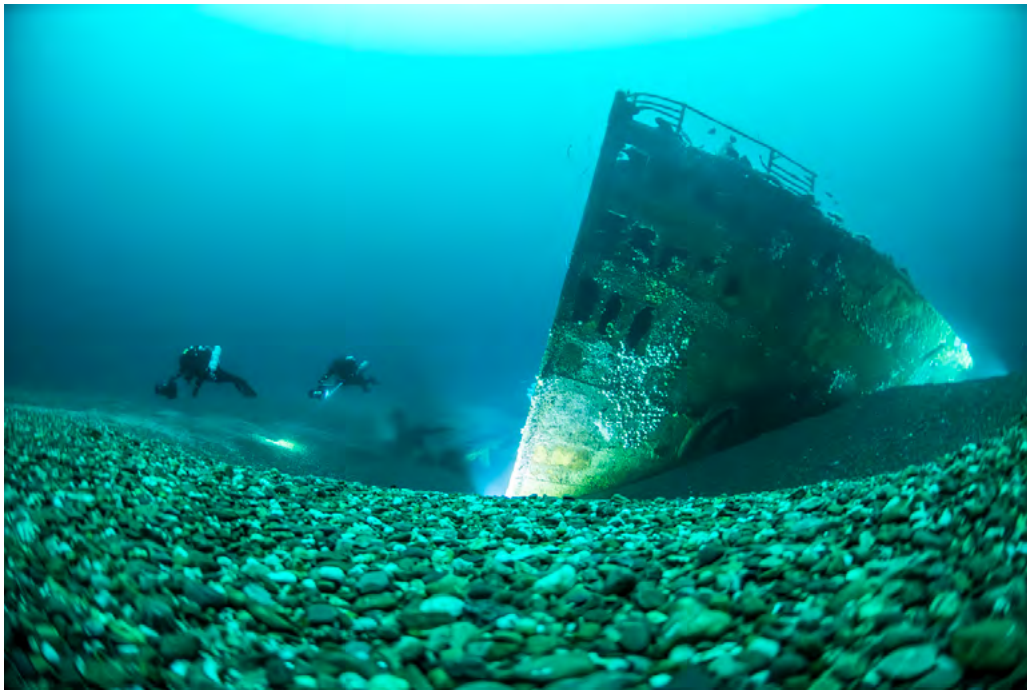
HMS Audacious 63m, Nikon D500, Tokina 10-17 at 10mm, Nauticam housing, Ambient & off board lights, f7.1, 1/30, iso4000 (3 image panorama)

an intensive week of wreck photography brainstorming. Rene introduced me to tripod use and we all discussed how far the iso could be pushed – 6400 seemed to be the answer in 2018 & the use of dedicated models.

Another Malin Classic the Empire Heritage was carrying a cargo of Sherman tanks, here the scene was discussed and planned before the dive, the diver holding the main video light was able to stay in place until we had all taken the shots we wanted.



Empire Heritage 68m, Nikon D500, Tokina 10-17 at 10mm, Nauticam housing, Ambient & off board light, f5.6, 1/40, iso6400



RMS Justicia 70m wide view, D500, Ambient & off board light, f2.8, 1/50, iso6400

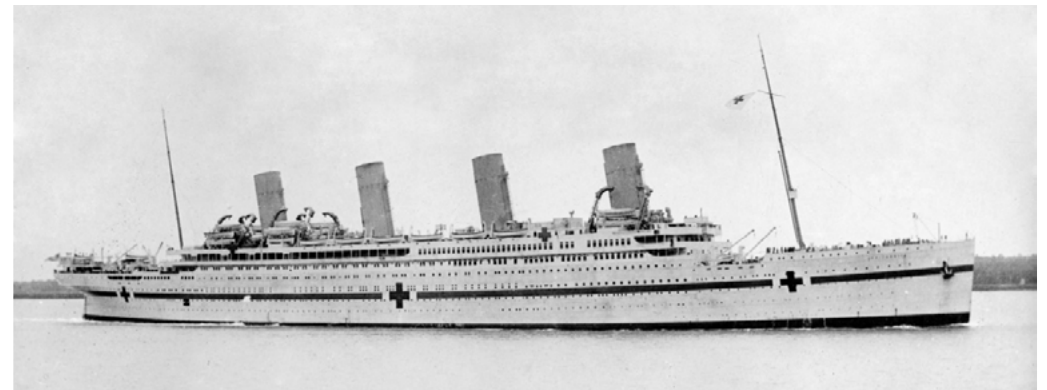
I was very pleased to get this wide view of the Justicia (above) with 2 divers scooting past, combined with last years closer view of the point of the bow and other views allows a portfolio of shots of this magnificent wreck to be built up.

In 2019 I had a trip to dive the 120m deep HMHS Britannic, I was concerned my D500 housing was only rated to 100m and could potentially fail, there were various options(including risking it) but I decided to get the newly released mirrorless 24MP Nikon Z6 with a 150m rated Nauticam housing.

I chose the Z6 because of

its alleged excellent low light performance. What I found was that iso could be elevated significantly. Using continuous light instead of strobes meant that the Auto iso settings could be usefully used on the camera, to begin with 100 – 10,000 range.

Many of my Britannic shots were taken at iso 10000 but I found later I could take it even further- up to iso20000. The Aperture & Shutter speed were generally dialled in before the dive and the auto iso facility would adjust to the correct exposure, ideal when you need to be concentrating on staying alive on a sub 100m wreck!



HMHS Britannic is the Sister ship of Titanic & lies in the Aegean south of the Greek mainland and off the island of Kea. First dived by Cousteau's team in 1975.



Britannic stern, 110m, Nikon Z6, 8-15 @15mm, f5.6, 1/30, iso 10000



SS East Point 64m, Nikon Z6, Nikon 8-15 at 15mm (on FTZ), Nauticam housing, Ambient & off board light, f6.3, 1/40, iso16,000

This wreck, (above) is the East Point, lying south of Plymouth in approx. 70m. It's a clean image with not much noise or grain at iso16,000.

The Z6 was very capable, its low light performance was excellent, it was let down a little by it's autofocus although I learnt to live with that.

When Nikon released the 47MP Z9 flagship full frame mirrorless camera I decided that I would make the change, in addition I also purchased some Weefine smart focus 10,000 video lights, their main benefit being adjustable intensity from 0 – 100% in 10% increments,

with deep wreck diving they will be mainly set at just 10% (they also have a strobe function which I am currently experimenting with).

I made the change mainly because of the improved autofocus and accepted low light performance may not be as good as the Z6. I have found vastly improved autofocus and low light performance virtually the same as the Z6.

This next shot (above right) was taken on the historic wreck of HMS Victory (the one before the Victory in Portsmouth harbour). Lost in a storm in 1744 over 1,000 sailors perished in



HMS Victory(1744) 80m, Nikon Z9, Nikon 8-15 at 15mm (on FTZ), On & off board lights, f5.6, 1/25, iso1600

the disaster.

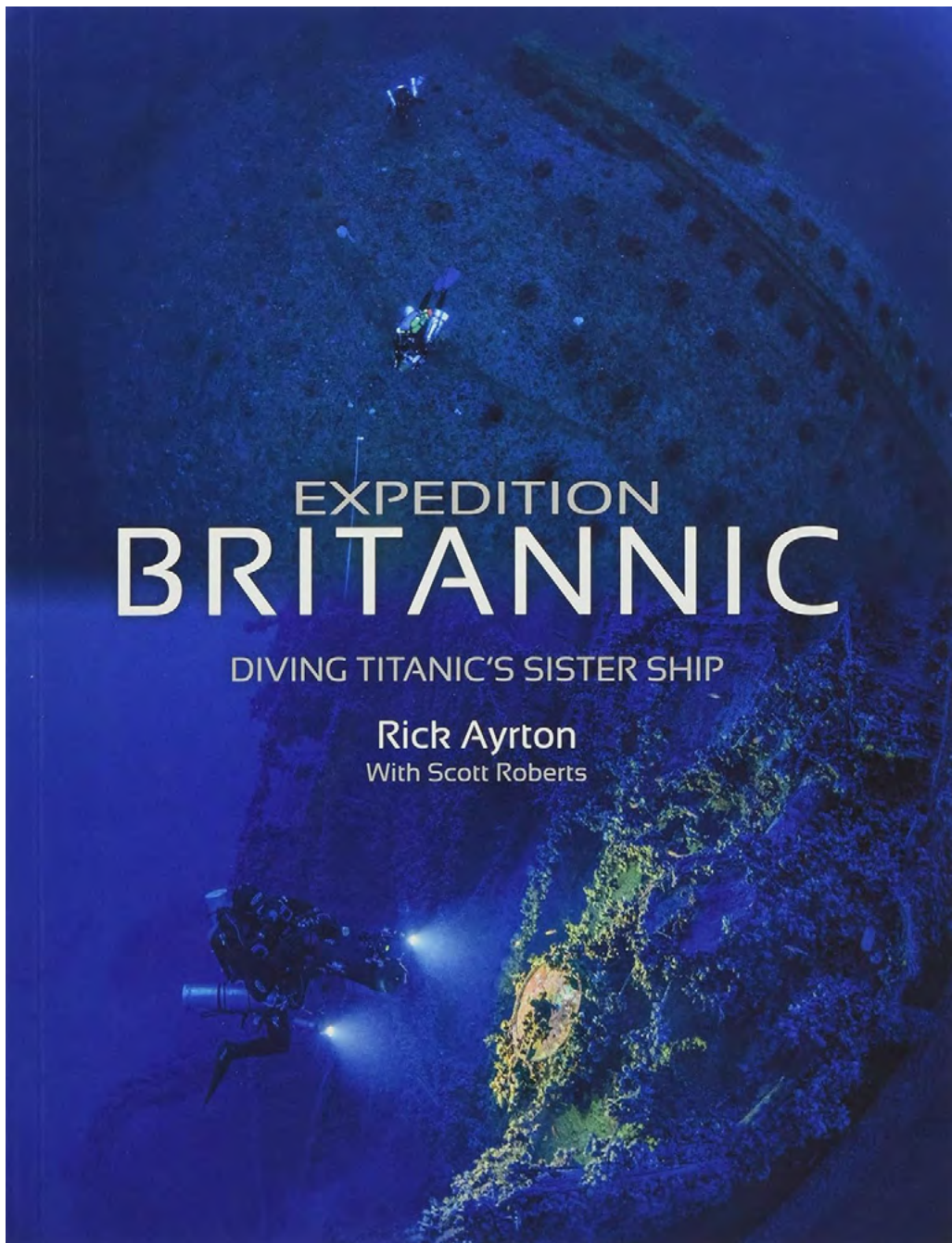
I feel this shot illustrates the benefits of the Z9, an illuminated foreground from the Weefine video lights, a buddy modelling and pointing a torch where it is needed and a further diver in the distant background giving the image depth.

I actually think the shutter speed was a bit slow on this one, this frame is sharp but others in the series show motion blur, there is no need as the iso could have compensated for any elevated shutter speed.

It was taken on a calm day in nearly 80m, dropping through a murky



layer near the surface, I knew it was going to be dark on the wreck but the camera nails focus and the sensor captures the scene.



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You are looking at 12 years of camera development when comparing these images.



U1021, 55m, Nikon Z9, Nauticam housing, 8-15mm lens at 15mm, f8, 1/30, iso5000

2010

Obviously, I cannot say the conditions were exactly the same but they must have been pretty close.



U1021, 55m, D200, ambient light, f2.8, 1/25, iso500

www.uwpmag.com

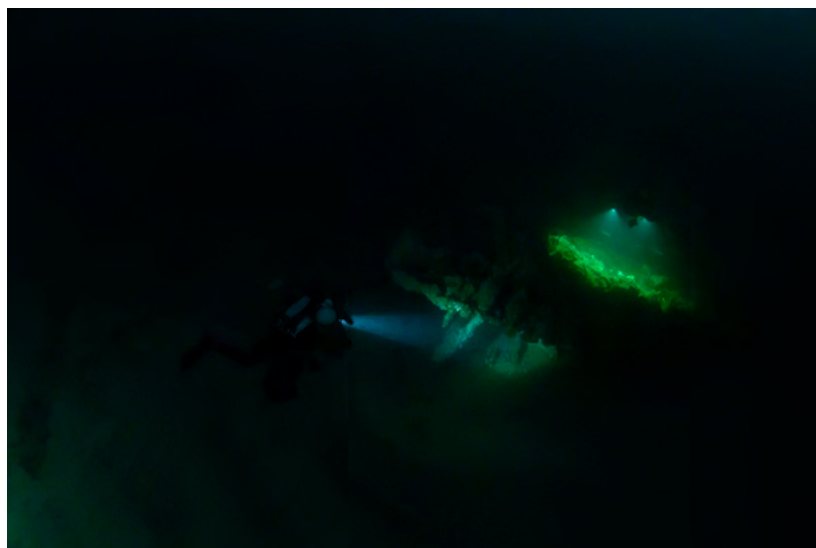
Finally, a couple of images that show the unsung hero of deep UK wreck photography – Post processing.

This image was taken after I had switched off my own lights as I was returning to the shot line. HMS Negro is in 2 parts and here a diver is swimming across the sand to the stern section,

The sensor is maxed out at iso20,000, f8, 1/40, I could perhaps have opened the aperture a little more, nevertheless, the frame is very dark but image data is present and can be recovered

Modern sensors have moved on greatly from 2005 when the D200 was released, I am now using a camera with a full frame sensor of nearly 50MP, the additional pixels allow large size prints to be made and cropping gives additional flexibility without degrading the image significantly.

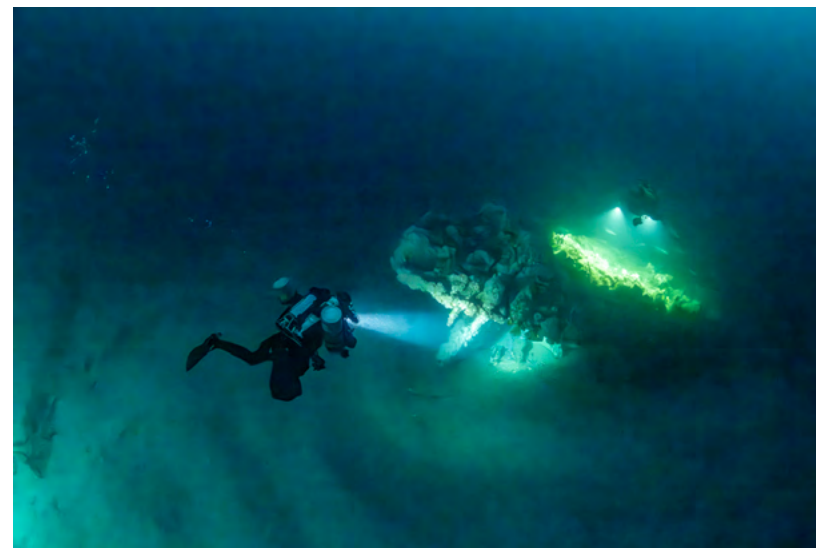
Newer sensors feature much improved low light performance in challenging conditions, the dynamic range of the modern sensor surpasses that of the older cameras significantly.



HMS Negro 102m, Nikon Z9, Nauticam housing, 8-15mm lens, Ambient light, f8, 1/40, iso20,000

Autofocus technology has improved as well with my current Z9 able to resolve and focus well in -7EV (D500/D850 = -4EV).

Whether the newer sensors make a difference does depend on use. Shooting with strobes on stationary or slow moving subjects, there is not much to be gained. For example I tried to replicate the close up of the periscope lens with the Z9 but the glass had some hard marine deposits I couldn't remove, so the best shot I have remains that taken on the D200.



Same image processed in Lightroom

Onboard Clasina with the Nikon Z9 housing mounted on a Dive X Piranha Scooter

When there is some ambient light and visibility everything changes, the power of these modern cameras can be unleashed.

I suspect the same conclusions will apply to all camera manufacturers. Having a number of competing manufacturers does make continued improvement likely from which we as end users ultimately benefit even if our pockets take a hammering!

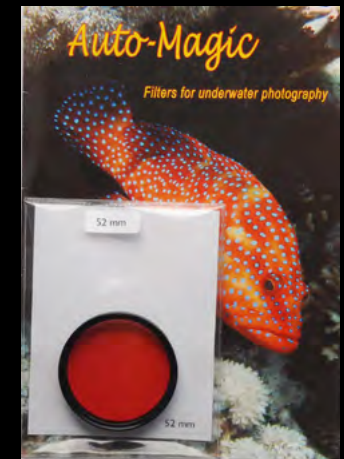
Around the UK water clarity and ambient light are fickle but can occasionally be very good.

Capturing images of UK shipwrecks is challenging but when it comes together it is very rewarding.



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Magic filters are now available in 3 options. Original Magic for use in blue water with DSLR and compact cameras with Manual White Balance, Auto-Magic for compact cameras in automatic point and shoot mode. GreenWater Magic for use in green water with DSLR and compact cameras with Manual White Balance. Prices start at just £25.

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