

Stuck in the middle?

by Alex Mustard

It is no great revelation that the lenses we use for underwater photography tend to come from two extremes: wide angle and macro. It is with good reason: both focus close, allowing us to shoot through as little water as possible and get the best quality image. But are we held back by adhering to the dogma of this great divide? Shouldn't we be searching for a middle ground?

The bipolar division between wide angle and macro runs deep through underwater photography. It is ubiquitous: dive guides categorise dive sites this way, most photographic competitions pigeonhole entries using it and some underwater photographers even describe themselves as one or the other. The suggestion is that no middle ground exists. In this article I want to discuss the lenses that prove otherwise: the mid-range zooms.

Mid-range or standard zooms have been around in underwater photography for many years, but recently they have attracted renewed interest for two reasons. First the likes of Canon and Nikon are giving them away almost free as kit lenses with the most popular models of their DSLRs. And second the small sensors of

many DSLR cameras have made the venerable and flexible 60mm macro lens a little too long, and we are looking to zooms to fill the void.

Our first decision is which of the many lenses on the market should we choose. For many this decision is already made because the lens came with the camera, but for the rest of us, if we don't already have a lens there are a few considerations. First we must decide on budget. Mid range zooms usually fall into two categories: expensive, fixed aperture (usually F2.8) lenses and cheaper, slower, variable aperture zooms. If the lens is only going to see occasional use, then a cheaper model might well suffice; there is no point spending over \$1000 USD on a lens that is going to spend most of its life in a camera bag. It is well worth looking at third party lenses. I am a particularly big fan of Sigma lenses, which are usually able to focus closer than their counterparts from camera manufacturers.

Most of the other considerations are related to using the lens in the housing. First, it is important not to get too greedy with zoom range. Zooms that travel more than 50mm are usually difficult to



Mid-range zooms provide with a perspective that is not offered by either the more traditional wide angle or macro lenses. Nikon D2X + 28-70mm @ 34mm. Subal housing. Flat port. Subtronic strobes. 1/125th @ F6.3.

Zooms are often referred to as fish lenses because they are so well suited to shooting our piscine friends either alone or in groups. Nikon D2X + 17-35mm @ 17mm.

Subal housing. Dome port + dioptr. Subtronic strobes. 1/100th @ F6.3.





Behaviour photography is a challenge because it can be hard to predict how close we will be able to approach our subjects without disturbing them. Zooms offer excellent flexibility for this type of photography. Nikon D2X + 28-70mm @ 55mm. Subal housing. Flat port. Subtronic strobes. 1/250th @ F4.5.

house, vignetting at their widest focal length. Most of the more expensive lenses have internal zooming, i.e. the length of the lens barrel does not change during zooming, which is advantageous when housing them. Some lenses, such as my favoured Sigma 28-70mm (F2.8), actually get physically longer at shorter focal lengths, making them ideal for avoiding port vignetting.

Physical size can be a fundamental concern, especially as high quality lenses seem to be growing ever larger (while cameras seem to be getting ever smaller). The girth of these new lenses can make them a real squeeze in the ports of some housings. My Subal took some persuading to accept the two zooms (Nikon 17-55mm and Sigma 28-70) that I favour. And with lenses seemingly swelling incessantly these problems are likely to get worse in



Zooms are well suited to larger marine life, allowing us to shoot both whole animal and detail shots during the same encounter. Nikon D2X + 28-70mm @ 40mm. Subal housing. Flat port. Sea & Sea strobes. 1/60th @ F10.

the future. Another practicality is the position of the zoom ring in the barrel, where the zoom gear will be attached. As a general rule it is better to have this close to the camera (and behind any large switches) for ease of access from the housing. Although this is dependant on the housing brand and how its zoom gear works.

The final consideration is what zoom range to choose. Partly this will be driven by what we want to shoot, but it is also important to think about whether we will house the lens behind a flat port or a dome port. Opinions vary on the focal length at which we must use a dome port. My rule of thumb, derived from what I have deemed acceptable in my photos, is to use domes when the zoom range includes focal lengths wider than 24mm on APS-C sensors and 35mm on full frame. For me, this means



I use zooms with a minimum focal length wider than 24mm of APS-C and 35mm on full frame with dome ports. This photo taken at 28mm on full frame is getting a little naughty in the corners. Nikon F100 + 28-70mm @ 28mm. Subal housing. Flat port.

that for one of my mid-range zooms, the 17-55mm, I use it with a dioptré and dome, and the other, 28-70mm, I use it with a flat port on my D2X (with its APS-C sized sensor). Mid-range zooms rarely get as much work as our wide angle or macro lenses,



On shark feeds we can be assured of close encounters, but on other dives a zoom lens is a bonus for filling the frame with the subject. Nikon D2X + 28-70mm @ 36mm. Subal housing. Flat port. Subtronic strobes. 1/80th @ F4.5.

and therefore it is best if they fit in one of our existing ports to save excess baggage and extra expense.

When I started working on this article I tried to draw up a list of all the potential mid-range zooms suitable for underwater photography. But the list soon got out of hand. There are many suitable lenses, and your choice will depend on the various factors above. I fully recommend the two lenses I use. The Nikon AFS 17-55mm F2.8 is excellent,

although expensive and not full frame future proof! And I really like my Sigma 28-70mm F2.8, which is optically very good and much cheaper and lighter than Nikon's mammoth 28-70mm F2.8. At the cheaper end the Sigma 17-70mm F2.8-4.5 is also popular although it's longer zoom range may make it harder to house.

As with any underwater photography set up, correct subject selection is a key element of success. Mid-range zooms are often



Longer focal lengths can create different diver shots, with more eye contact. Nikon D2X + 28-70mm @ 42mm. Subal housing. Flat port. Subtronic strobes. 1/60th @ F7.1.

referred to as fish lenses and are certainly ideal for shooting fish, both singly and in small schools. I have also enjoyed using them to shoot detail shots of large schools, especially when I have had several repeat dives to try different lenses. Behaviour photography is a challenging discipline because it is usually hard to predict how close we will be able to approach without disturbing the very thing we are hoping to capture. Zooms give us flexibility to frame accurately

without unsettling subjects.

These lenses are also particularly well suited to photographing larger marine life, such as sharks, dolphins, turtles etc, especially when we are unsure how close the encounter will be. In some destinations we can be certain that creatures will be right on the dome, but when we're not a zoom is a powerful ally. Even when a large subject is approachable the mid range offers the chance for different types of images, shooting the whole subject or cropping in

to show details.

From a creative viewpoint mid-range lenses offer an alternative perspective for traditional wide angle subject matter, such as reef scenics or diver photographs. Ultra-wide angle lenses create dramatic forced perspectives and excellent subject separation, but a longer mid-range lens allows us to shoot a subject in its environment. Tightly framed diver shots capture far more human personality than wide angle photographs, which helps them connect to a non-diving audience.

A common pitfall when using a zoom is to get stuck shooting only at its two focal length extremes and missing out on the middle. Also we must be careful that zooms don't make us lazy when it comes to stalking our subjects. The best way to use a zoom underwater is to leave it on its widest setting and then endeavour to get as close to the subject as possible, only then zooming in to fill the frame as desired. This also ensures we make the most of all the focal lengths available.



I would usually shoot a reef scenic with a wide angle lens, but a mid-range zoom allowed me to photograph this soft coral with a different perspective that let me capture its reflected background. Nikon D2X + 17-55mm @ 24mm. Subal housing. Dome port + dioptre. Subtronic strobes. 1/30th @ F9.

Another mistake we can make with zooms is to get overwhelmed by subject greed. With wide angle or macro lenses we are fairly restricted with what we can shoot, and therefore spend more time optimising lighting, settings etc for specific subjects.

Zooms open up far more potential subjects per dive and this can encourage us to rush from one to the next without making the most of each opportunity, both technically and artistically. When shooting a zoom we need the same discipline as with other lenses.

In conclusion, the strength of the mid range zooms is filling in the gap in the bipolar world of underwater photographic lens choice. They can often be bought cheaply, and if we can fit them in our existing ports, they really extend our capabilities. They are particularly useful for mid sized subjects and are great lenses for fish and larger marine life. And if you regularly give talks or AVs they add considerable visual variety to these larger collections of images, breaking up the repetitive perspective of macro and wide angle photos.

The middle ground of underwater photography lens selection is never going to compete with macro or wide angle for popularity, productivity or for making eye-popping photos. But mid-range zooms add flexibility and possibilities to our arsenal, and I find there are plenty of dives when they seem bespoke for the job.

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