

Zoom blurring underwater

By Alexander Mustard

Underwater photographers are often accused of being too conservative in their picture taking. But we do have some good excuses: first we are already adventurers in an alien environment, where recording clear, sharp and well exposed images is fraught with technical difficulties. In addition, many of our subjects are unfamiliar to our audience, so it makes sense to capture this other world as clearly as possible. Consequently, underwater photographers tend to stick to tried and tested techniques and as a result many underwater photographs look rather alike, with differences in subject matter but not in photographic interpretation.

But as more and more photographs are taken underwater, photographers are increasingly looking for a fresh take on familiar subjects. Land photographers have been doing this for years, and underwater we can take a shortcut to original and effective images by borrowing techniques that are widely used on land. In this article I will relate my experiences of one such technique: zoom blurring.

Zoom blurring is a simple technique that is produced by zooming a lens while the camera's shutter is open. The resulting abstract image is blurred with lines radiating from the centre of the photograph, produced as the zooming alters the size of the subject in the frame.

When used effectively the technique conveys movement and impact, focusing the viewers attention on the centre of the image.

In order to have long enough to zoom the lens it is clear that an exposure time of greater than 1/4 - 1/2 second is needed. Therefore the camera must be kept still during the exposure - either using a tripod or by bracing the camera against a



An acroporid coral and anthias in The Alternatives, Sinai, Egypt. Nikon F100, 17-35 mm Nikkor (zoomed through full range), 50CC Red filter (depth = 5.0 m). On f22, aperture priority - exposure time approx. 1/2 to 1 sec. Kodak Elitechrome Extra Colour 100.

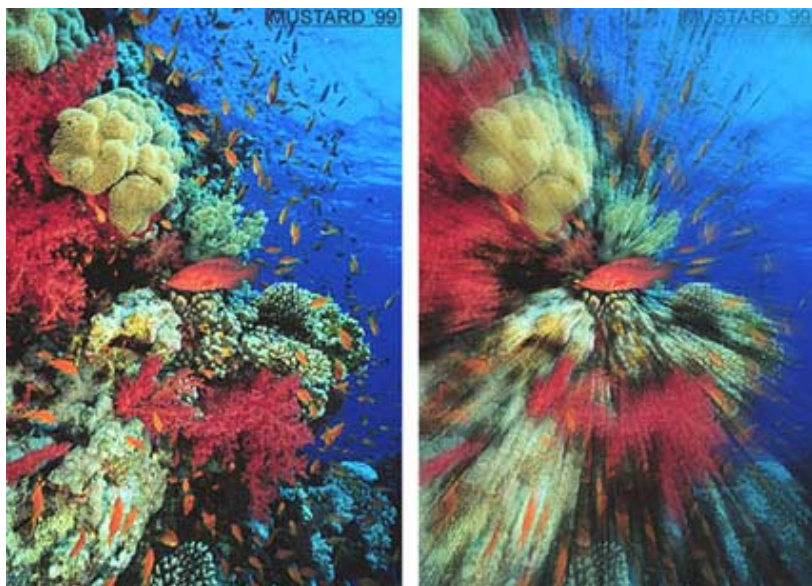
solid object. For this reason wrecks can be particularly suitable for this technique.

The second consequence of long exposures is with the use of flash. A flash is beneficial because it adds a sharp portion to the blurred image. A potential problem is that the trails produced by zooming will be a different colour to the sharp section illuminated by the flash. This is because the trails will be produced by ambient (blue) light and the result may or may not be pleasing. I would recommend using front curtain flash when zooming from wide to tight, remembering to set exposure manually rather than with aperture priority (as this will default to a faster shutter speed, typically 1/60th on Nikon cameras). Shooting in this way will produce a clear wide angle view of a subject with trails radiating out from it.

For zoom blur pictures I favour an alternative method of getting colour. By using a filter instead of a flash I get consistent colour throughout the zoom range.

Both these images have been taken with a 50CC red gel filter mounted on the rear of my zoom lens, (the correct amount of filtration in blue waters can be estimated using the formula 4CC units per foot of light path). When using a colour correction filter on an SLR it is important to trust in the equation and not in your eyes! This is because your eyes will adapt to the in situ light spectrum, in the same way that they do in Tungsten lighting in your house.

Flash could be used in these pictures, but would need to be filtered so that it is spectrally balanced with the ambient light (so in my case I would need a 50CC cyan flash filter). This would have the advantage of making both the frozen image and the trails spectrally balanced, although I am sure that my flash is not powerful enough to get enough light to the film at f22 via two opposing filters. As an aside this filter combination would also benefit underwater rear curtain synch images by balancing



Cinnamon coral trout on reef, Sha'ab Abu Nuhas, Egypt. Nikonos V, 15 mm UW-Nikkor. Sea and Sea YS120 flash gun. On f8 aperture priority (1/60th) TTL. Zoom effect added in Photoshop to right hand image Filter: Blur: Radial Blur.



Fire coral and anthias in The Alternatives, Sinai, Egypt. Nikon F100, 17-35 mm Nikkor (zoomed through full range), 50CC Red filter (depth = 4.1 m). On f22, aperture priority - exposure time approx. 1/4 to 1/2 sec. Kodak Elitechrome Extra Colour 100.

the colour spectrum of sharp and blurred aspects of those images.

In terms of lens choice I would recommend using as wide a zoom as possible. Ideally the Nikon/Sigma lenses in the range 17/18/20-35 mm, but 24-50 mm will also be fine. It is a bonus to have a lens with a fixed aperture throughout the zoom range so that the intensity of the trails does not change, although again this is not essential.

Generally I have got my best results when I leave the camera at the wide end for a few moments to record a clear image before starting to zoom to longer focal lengths. I have also found that this technique is most successful when used on contrasting subject matter (e.g. light coral in of dark water) because the juxtaposition of light and dark produces the clearest trails. Solid blocks of colour such as blue water do not produce trails which can be used in the composition to frame the main subject and trails with “negative space” (sorry, I had to get that Tiptonism in).

But before rushing out to give zoom blurring a try I feel I should also let you know that this effect can easily be imitated using the wonders of Photoshop! Zoom blur can be added to any image by using the zoom function of radial blur (Filter: Blur: Radial blur). It is worth noting that the computer has several advantages over the camera as well as meaning you don't have to get wet. First you can select any photograph, including colourful flash lit images, from macro to wide angle and even fisheye. Also the extent of zoom blur is precisely user defined, and the origin of the blur can be set anywhere within the image. When the technique is produced in camera the origin is always in the centre of the image.

This image of similar subject matter to the in camera shots shows the before and after effect of a single application of radial zoom blur in Photoshop.

But for me the pleasure has been in the trials and the errors, the hit and miss of attempting zoom blur in camera. So next time you can only find rocks on a dive give zoom blurring a try and enjoy some creative freedom from those tried and tested techniques.

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