Doing the Splits

by Martin Stevens

Some of the most frequently asked questions I receive relate to taking split shots or over-under photos. These are probably my favourite types of image to capture, and when executed well, they can offer a unique perspective. Of the photos I've had recognised in competitions, probably half of them have been split shots, so they certainly can have a broad appeal. Here's a few tips and tricks that I've used over the years.

The key to a compelling split shot is that it should be visually appealing both above and below the water. If either part of the image is dull, the overall composition will likely fall flat and raises the question of whether a split shot was needed in the first place. Ultimately, a split shot should tell a story that neither part of the image alone could convey. It could be a mysterious jellyfish just beneath the surface with landscape or human life above, a beautiful sunrise with marine life below, or a scene from a low spring tide on the rocky shore, combined with a glimpse into a rock pool world below.

The most crucial piece of equipment for taking a split shot is a dome port in front of the camera lens. In most cases, a bigger dome (6 or 8 inches or larger) is preferable. Larger domes push the water further away from the lens, providing you with more control and flexibility in composing the shot. Smaller dome ports can also be used, and I've taken many over-under shots with even a mini dome, but it can be more challenging and the image quality may not always be as good. However, there are times when a smaller dome is better. For instance, when taking split shots in rock pools (a favourite of mine), the water can sometimes be so shallow that a large dome port wouldn't get into the water far enough. Alternatively, if you want to get very close to small subjects, a larger dome port may not be helpful. Otherwise, you generally want the widest lens possible, ideally a fisheye or at least an ultrawide rectilinear lens that's capable of close focussing. Fisheyes are usually essential if you're using a mini dome.

It's entirely possible to take split shots with smartphones and action cameras too. For example,

Mauve stinger jellyfish in a rock pool. Olympus OM5, Olympus 7-14mm Pro, Isotta housing, Two Sea and Sea YS-D3 MII strobes. Aperture: f/13, Shutter: 1/200, ISO: 400

A compass jellyfish at sunrise during the summer. Olympus OM5, Olympus 8mm fisheye, Isotta housing. Two Sea and Sea YS-D3 MII strobes, f/13, 1/200, ISO: 200

An in-camera double exposure combining a macro shot of a rainbow sea slug with a split shot of the kelp environment where it was found
Olympus EM5 MIII, Olympus 60mm macro and Olympus 8mm fisheye. Isotta housing. Two Sea and Sea YS-D3 MII strobes. Aperture: f/9, Shutter: 1/250, ISO: 200 (for the macro photo)

Spiny starfish in a rock pool. Canon compact G9X MKII, Fantasea FG9X, Weefine WFL-02 lens. Natural light. Aperture: f/11, Shutter: 1/60, ISO: 160

DiveVolk makes a small dome port that clips onto the housing and can be used with the phone's ultra-wide-angle lens. While it's a bit of a faff to attach the dome properly, it works very well once it's on. GoPros also have a wide range of dome ports available, often at a very low cost, which can be a fun way to experiment with these photos.

Technically, split shots aren't particularly difficult, but they do come with a few additional challenges. The main one is perhaps getting the exposure right in both parts of the image and balancing the lighting effectively. When relying on natural light, they're most effective when the sun is behind you and high in the sky, so you're not facing directly into the harsh sun above. This allows the bright light from behind to penetrate the water below. However, shooting into the sun or when the sun is low makes it much harder to balance exposure.

That said, some of the most compelling photos are taken at sunrise or sunset with very dark water. In these situations, it really helps (in fact, it's almost essential if it's very early or late) to use some additional lighting. Most often, this will be strobe flash, which allows you to expose for the scene above and then use the flash to illuminate the scene below the water. Changing the strobe settings and diffusing the beams helps to avoid making the light too harsh. Video lights are also an option (and the only option for smartphones or action cameras), but they don't put out as much light as strobes, so there's more of a trade-off with balancing exposure with the scene above.

Falmouth and the underwater gardens beneath the surface Olympus OM5, Olympus 8mm fisheye, Isotta housing, Two Sea and Sea YS-D3 MII strobes. Aperture: f/11, Shutter: 1/100, ISO: 200

Most split shots benefit from a relatively closed aperture to ensure the scene is as in focus as possible. They work best when focussing on the subject below the water, as this is usually the key focal point and closest to the camera.

There are a few tricks to help take the shot. I often focus on the subject below and then slowly bring the camera up to compose at the desired level before taking the shot. Alternatively, I use back button autofocus to focus where I want, then lock the exposure, allowing me to take multiple shots and compose as I like without needing to refocus.

Another common issue is avoiding water droplets on the lens. There's no perfect solution, but as gross as it sounds, I (and many people) spit on the dome and wipe it over the surface before dunking it in the water (don't wipe it off). This creates a film that doesn't affect the photo but prevents droplets from forming. Some people say that rubbing a potato over the dome works, though I've never tried this myself. Another simple solution is to dunk the whole dome underwater and then bring it up quickly when taking the shot, before droplets have a chance to form. This can work well when combined with focussing on a subject beneath the water. But the only foolproof solution is to avoid getting the top half of the dome wet!

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