



# Mirrorless & Macro

Text and photos by Don Silcock

In this article, the fourth in the series on mirrorless cameras, we will look at the potential of these cameras for macro underwater photography.

Underwater photography is undoubtedly a journey and one where the destination always seems to be just around the corner. For no sooner does it seem you may have finally mastered the art, than some new technology or concept appears, effectively moving that destination around the next corner!

Most underwater photographers start their personal journey with some form of macro set-up because it offers the cheapest and easiest way to achieve consistent results that are both sharp and properly exposed with vibrant eye-catching colors—which is usually when the bug really starts to bite.

Consistent results open the door to the finer points of underwater photography such as composition and isolating the subject, which

really are the difference between a good photograph and a stunning one.

## Defining macro

Macro means anything large in scale, scope or capability, but in the world of imaging, macro photography refers to extreme close-up photography, usually of very small subjects, in which the size of the subject in the photograph is equal to or greater than life size.

Life size means a ratio of 1:1 between the actual subject and how it appears in the image. It is this high magnification, combined with the minimal amount of light-absorbing water between the subject and the camera, which produces visually stunning images.

Some of the most vibrant colors to be observed underwater are found in macro photography, due

to the dual effects of strong flash illumination and marginal color filtration.

In addition, a good macro lens will reveal details that are simply not visible to the naked eye, but are recorded on the image, adding to the overall visual impact.

Many underwater photographers never move past macro. Quite content searching dive sites for little critters, they are usually looking down, as that whale shark passes overhead.



However, that bug bites deep. Over time, “gear lust” often sets in, resulting in a migration to a DSLR with a macro lens and a desire to create the professional quality images that the technology is capable of making.

Therein lies the problem; the compact camera was nice and small, but you want truly professional results. To get them, you have to use something that appears massive and unwieldy.

What if you had the potential for professional results, but it all came in a mid-sized package? Enter mirrorless cameras and housings.

## The Golden Rule

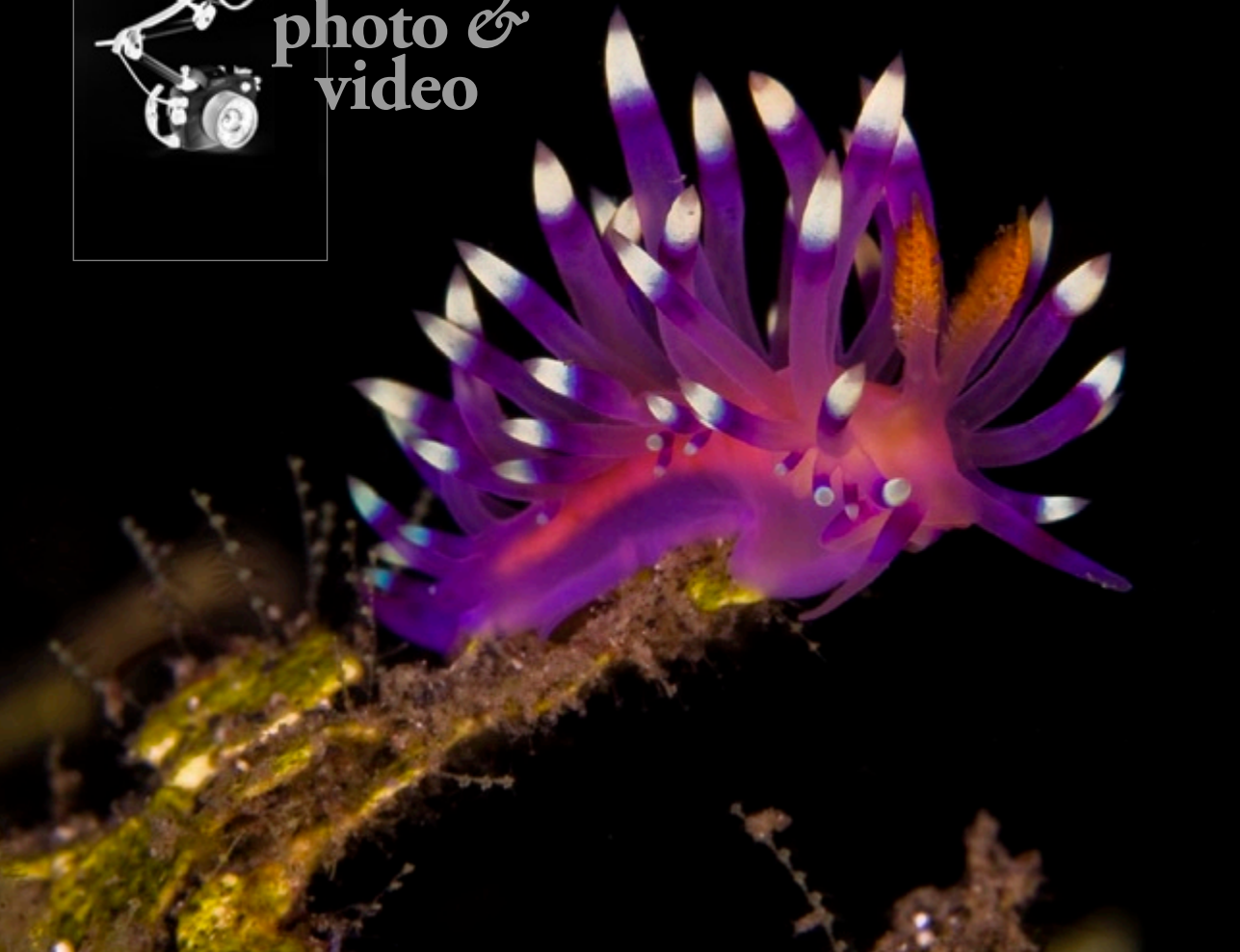
Get close and then get closer is the oft-repeated mantra of macro photography. Doing so fills the frame and minimizes the

## Where to start?

High-end compact cameras such as Canon's S100/110 and Sony's RX100 in an underwater housing

offer an excellent entry point into macro photography and quickly achieve results that will soon be hanging on your wall.





Macro shot of nudibranch

7.4 inches for the 60mm.

It was the availability of these two lenses that convinced me to opt for the Micro Four Thirds standard when I was deciding which mirrorless system to use underwater.

### Assembling a mirrorless macro system

My decision to “invest” in a mirrorless system was driven by wanting to have a second camera rig dedicated to macro photography, which could also serve as an emergency back up for my new D800 DSLR based wide-angle rig.

For me there was only one real choice—the Olympus OMD complete with the Olympus 60mm and the Panasonic 8mm fish-eye lens for wide-angle back up. Unfortunately, my budget would not stretch to include the Panasonic-Leica 45mm macro lens, but it is the next cab off the rank when my bank balance is restored.

To house the camera, there was also only one real choice with Nauticam’s OMD housing, ticking all the right boxes with its small form factor, excellent functionality and, most importantly, a dedicated



SONY

Sony 30mm lens

port for the Panasonic 45mm that can also be used with the Olympus 60mm by adding a 20mm extension ring.

In another nice touch, the port features a 67mm thread, allowing external wet diopters to be screwed directly on to the port’s end without having to use an adaptor.

One of the apparent advantages of mirrorless cameras for underwater photography is the ability to use their large LCD display to compose the image. I was personally undecided about this, as I am a firm believer in using a 45 degree viewfinder so that the image can be composed from the lowest possible per-

amount of water between the subject and camera.

To do so effectively requires a good macro lens. By far, the most popular ones are around the 100mm focal length, such as the Nikon 105mm and the Canon 100mm. Both are of stellar quality and coupled with a high end DSLR, produce stunning images.

However, the price you pay for that capability is a bulky housing that often intimidates both subject matter and user alike.

As we consider the much smaller mirrorless cameras and their excellent functionality, the real question to be answered is the availability of lenses to match the performance of the Nikon and Canon flagships.

### Mirrorless macro lenses

As explained in previous articles, there are currently only two real choices when considering a mirrorless camera for

underwater photography: the Sony NEX range or the Micro Four Thirds format from the Panasonic and Olympus alliance.

Sony is presently limited to one true macro lens: the 30mm f3.5, which is equivalent to a full-frame focal length of 48mm. Although its minimum focus distance is just 3.74 inches (9.5cm), it is not really the best choice for underwater macro photography, as it is too wide.

Sony’s 18-55mm (27-82.5mm equivalent) kit-lens has a close-focus distance of 9.8 inches and is used by many NEX owners for their macro needs.

Over in the Micro Four Thirds stable, there are two excellent choices with the Panasonic-Leica 45mm (90mm equivalent) and the Olympus 60mm (120mm equivalent). Both lenses offer true macro capability with 1:1 reproduction ratios, bright f2.8 maximum apertures, high quality glass and excellent close-focus distances of 6 inches for the 45mm and



Olympus OMD with 60mm macro lens



ema of dream







Macro shot of crab



Lure, full frame, Olympus 60

spective and you “shoot upwards” to isolate the main subject as much as possible.

So, I decided on installing Nauticam’s excellent 45-degree viewfinder, which added significantly to the overall cost but I considered it justified. Time will tell if it was the right decision.

The Nauticam housing uses fibre-optic strobe cables, which requires the small external Olympus flash supplied with the OMD to be installed on the camera to trigger the strobes. This meant that I was able to use my Inon 240 strobe and its STTL capability.

### Underwater testing

To say that I was keen to try out the new macro rig would be somewhat of an understatement. I had planned to spend a weekend up on the north coast of Bali, where I now live, testing it at the Puri Jati and Secret Bay critter sites.

The plan was to get some real

world macro and super-macro images for inclusion with this article, but that was before the “gentleman” in the seat behind me on the flight from Singapore dropped his duty free on my head, keeping me out of the water for three to four weeks on doctor’s orders.

Magazine deadlines must be met, so as a

again the 60mm focused quickly and accurately and the STTL exposure was perfect.

Then, I noticed the tiny bug in an equally small bubble of air on the lure, and I moved in to the minimum focus distance of the 60mm to record it—again fast focus and perfect exposure.

### Conclusion

Although I have yet to fully test my new macro rig, my initial impressions from the pool testing are very

positive. The auto-focus of the Olympus OMD and the 60mm macro lens is fast and accurate, the lens is tack sharp, and the STTL of the Inon 240 strobe is first class.

You will have

to wait for my head to heal and the next installment of *X-Ray Mag* to see the real-world examples, but they are definitely coming! ■

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Lure, close up, Olympus 60

substitute, I visited the local fishing tackle shop and purchased a nice, bright 4-inch-long lure to test the macro rig in the pool.

The exercise proved interesting, as it allowed me to back off and fill the frame to test both the 60mm lens and the STTL capability, both of which performed superbly on the very first shot. Then I moved in for a close-up of the lure’s head and

Lure, close up, Olympus 60

FAR RIGHT: Nauticam OMD macro rig







photo & video

## Aquatica AD4 Housing

Canadian housing manufacturer Aquatica has announced the specifications and renderings of their new housing for the flagship Nikon D4 DSLR. The new AD4 housing has access to both the Fn and Pv buttons that are situated on the front of the camera body, a new smoother operating lens gear, a new camera tray that indexes with a push-tab and a left-hand lever that adjusts the camera's ISO. Aquatica has not provided any shipping dates for the AD4 as yet, but have confirmed a retail price of US\$4,590.



## 10Bar Olympus EPL-5 Housing

Hong Kong based manufacturer 10Bar has announced the release of their new housing for the Olympus EPL-5 mirrorless camera. The new housing features all the usual 10Bar functionality and is priced at US\$850, complete with a 17mm lens flat port. The semi-dome zoom port version of the housing retails for US\$1,000.



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## Nauticam Canon EOS-M Housing

Nauticam has announced the release of their housing for the Canon EOS-M mirrorless camera. The Canon EOS-M uses a DSLR sensor which, with the soon-to-be-released adapter, allows the use of SF and EF-S lenses in addition to the dedicated EF-M lenses. The EOS-M's hybrid sensor allows for phase detection AF while video shooting, which enables live autofocus while recording—a huge bonus for underwater shooters. The Nauticam housing is designed so that Canon's Speedlite90EX flash can be mounted on the EOS-M's hotshoe and used to optically trigger strobes. In a nice touch, Nauticam has designed a port and focus gear that allow Canon's EF-S 60mm macro lens to be used with the EOS-M housing.

**Mocean Armor**

**Capture the Amazing iSea4**  
 Professional Cinematographers housing for the iPhone 4 - 4S - 5





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## Gates Canon HF G-20 Camcorder Housing

Gates has announced its new housing for the Canon HF G20 consumer camcorder. The new housing supports the Canon Vixia HF G20, HF G10, XA10 and Legria HF G25 camcorders. A significant feature of the new housing is the large window that allows use of the built-in LCD monitor at wide viewing angles. The housing uses Gates' non-vignetting ports and an internal flip filter for natural light shooting color correction. It also allows all available battery sizes for the Canon camcorders to be used, which means less battery changes are required—reducing the number of times the housing has to be opened. The Gates HF G20 Housing is available now for US\$3,170, which includes the housing and the GP32A Wide Angle Port.



## Gates Sony F55 Housing

Gates has announced their new F55 housing for the Sony F5 and F55 CineAlta cameras. The new housing is machined from aluminum and supports a wide variety of Canon and PL mount lenses, plus it uses Gates Precision Ports, which provide vignette-free shooting. The Gates F55 housing, like all Gates Pro housings, feature the SealCheck system to ensure seal integrity before entering the water. The new housing will also support the integrated RAW recorder or Sony, the AXSR5 and access to all camera functions. The F55 housing will be available from June 1 at US\$18,000 for the housing, port and port rings.

Vacuum system to ensure seal integrity before entering the water. The new housing will also support the integrated RAW recorder or Sony, the AXSR5 and access to all camera functions. The F55 housing will be available from June 1 at US\$18,000 for the housing, port and port rings.



## Canon EOS 100D/Rebel SL1

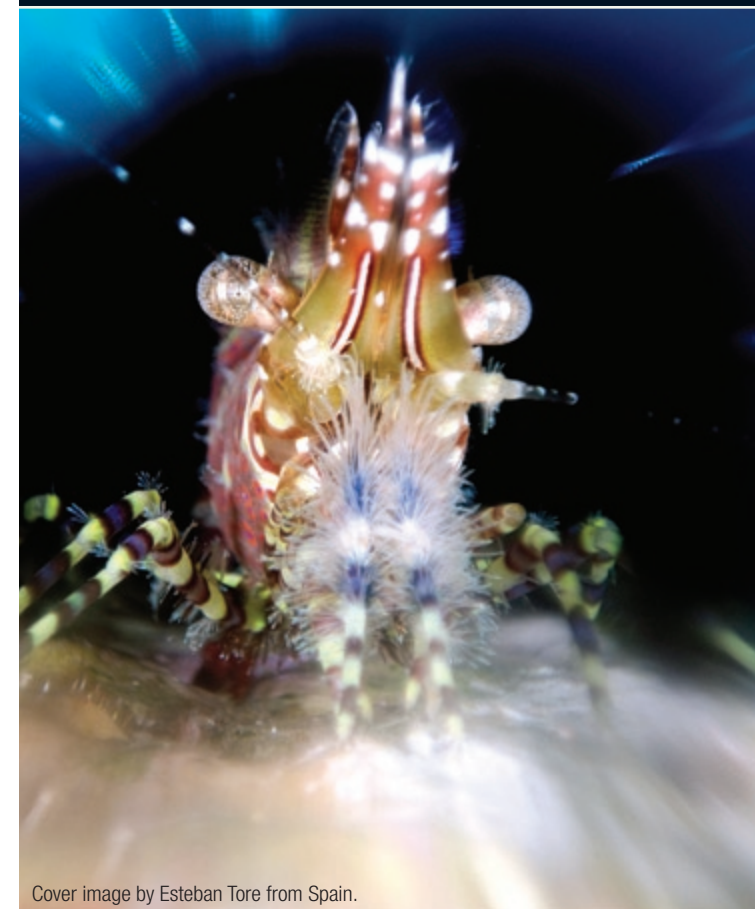
Canon has announced the world's smallest, lightest DSLR—the EOS 100D/Rebel SL1. The SL1 shares the 18MP resolution, DIGIC 5 processor, 3-inch touchscreen and 1080p30 video capability of the EOS M, Canon's belated entry into the mirrorless camera space. The really small form factor of the SL1 is clearly designed to create a wedge between the burgeoning mirrorless cameras and DSLR's. Mirrorless cameras key selling point to date has been functionality close to that of a DSLR but without the size and weight. Now Canon has created a DSLR that is only slightly bigger than a mirrorless camera. Canon's engineers appear to have done a tremendous job shrinking all the internal components like the shutter mechanism, sensor modules and circuit boards, without impacting any of the DSLR functionality or quality. The EOS 100D/Rebel SL1 has a recommended price of US\$799.99.



## Amphibico Genesis FS700 Housing

Canadian video housing manufacturer Amphibico has announced the release of its Genesis housing for the Sony NEX-FS700 camera. Image monitoring is available through the top-mounted window, and the Genesis FS700 housing will be compatible with a wide variety of Sony E-mount lenses. The housing also features a bayonet port lock system that is compatible with Aquatica ports. Amphibico states that the Genesis FS700 housing will be available in April at a U.S. retail price of \$6,395.

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Cover image by Esteban Tore from Spain.

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