

Canon R7 & Nauticam housing:

Maybe the perfect compact rig for underwater imaging?

By Kevin Palmer

The last several years have been a boom time in digital camera products. Mirrorless cameras are taking over the market while DSLRs are quietly being discontinued. Sensors keep getting bigger and resolutions have been heading through the stratosphere. Video continues on the same trajectory with very high frame rates and up to 8K resolution. And while enthusiasts eagerly scoop up the latest and greatest cameras on release, there is the majority of the underwater photography market that really just wants great imaging results in the easiest and most fun way possible. If you are in this category, the Canon R7 may just be your answer.

The old Canon 7D MkII was a legendary APS-C performer in a bulky DSLR camera body. The new R7 is the spiritual successor to that camera, but in a svelte mirrorless body that outperforms the old 7D in everyway while being much more travel friendly.

Specs

This Canon has just about anything anyone could ask for in a camera and they even fixed some long stranding complaints we UW photographers have had.

32mp This is really enough for even the most demanding underwater image makers. Water



softens our UW images with every inch of the wet stuff we shoot through. More resolution does not really improve that and definitely eats up more storage.

4K 60P This is the standard that most of us want to be able to shoot video at and Canon has proven to have the best UW white balance for video in the industry.

1/320 Sync Speed - Hooray! Finally Canon gives us the kind of sync speed UW photographers really love for capturing sunrises and darkening backgrounds.

Continuous shooting at 15-30 FPS This is fast enough for anything you will discover in the aquatic world... and if not, you probably don't want to be in the water with it.

Dual UHSII SD Card Slots Two slots are great and UHSII cards are by far the most speed for the buck. They are plenty fast enough for 4K 60p, so why get more expensive and exotic?

Near Telepathic AF The 7D MkII was one of our all time favorite cameras for fast accurate auto-focus. The R7 is better in most regards - enough said.



Sounds great, though we need to get the usual questions out of the way.

But Won't Full Frame Cameras Give Me Better Photos?

Epic resolution and Full Frame sensors are usually what most customers ask us for when shopping for a new underwater camera. It is what the media and their photography buddies have told them and in some instances it might be true. Shooting a bald eagle at dusk with a 600mm lens at a shutter speed of 1/1200 and ISO 3200 may benefit from these things. Shooting underwater macro in Lembeh or whale sharks in Mexico, not so much.

"But I really like super high resolution so I can crop my images"

An APS-C camera will offer you 50% more magnification when shooting macro with the same

lens as a full frame camera. So, when you want to fill the frame, you can do it more easily. Since you will have more depth of field at any given angle of coverage, the odds of your subject being in focus also increases substantially. In other words, your “keeper rate” may be higher than with a full frame camera.

“But won’t full frame cameras give me wider angle coverage when I need it?”

This is partially true, but like many things, shooting underwater is different. APS-C cameras use shorter focal lengths to achieve the same wide angle coverage as full frame cameras, but with greater depth of field at any given aperture. This means that APS-C wide angle is often sharper at the same angle of coverage as a full frame cameras when shooting wide angle behind a dome. Also of note; there are several excellent fisheye zooms that offer lots of flexibility on a crop sensor camera, but only a fixed 180 degree coverage lens option on full frame.

OK, with that out of the way, let’s look at what makes the R7 in particular a great underwater set up.



For those who love full fisheye, you can shoot Canon’s superb 8-15mm fisheye zoom and take advantage of everything from 10mm 180 degree fisheye to a tighter 130 degree FOV at 15mm.

NA-R7 Housing

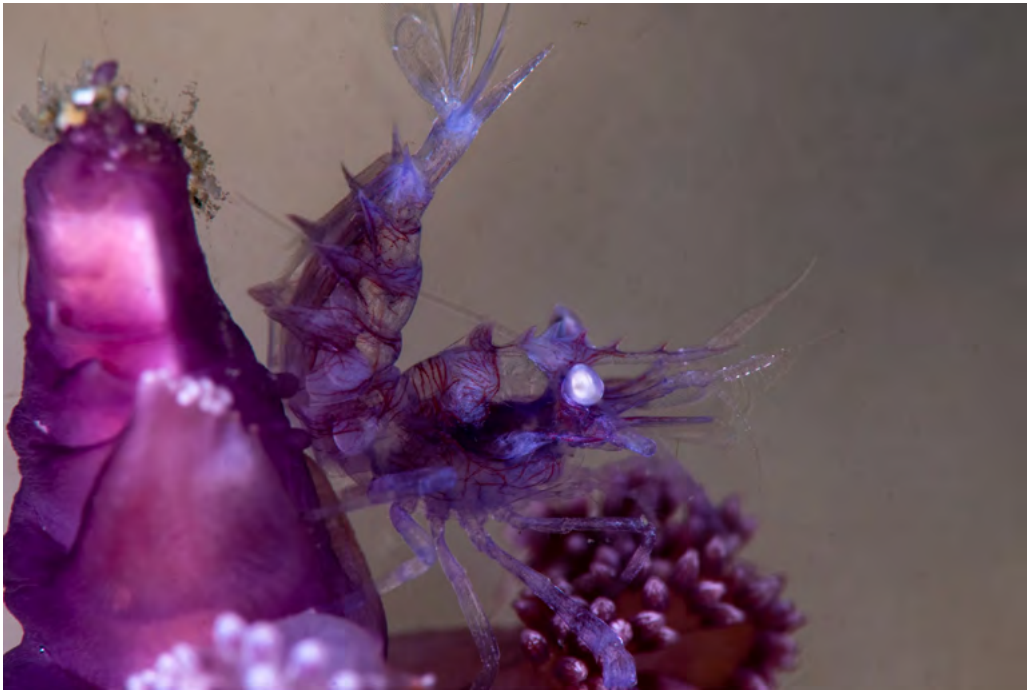
Clearly the R7 has the chops to outperform what most of us UW image makers are capable of asking of the camera, but there are a couple of secret ingredients that make this system so appealing to the traveling photographer. First is the housing; much like the popular Sony A7C Nauticam housing, Nauticam has focused on making the housing as small as humanly possible without giving up their famous ergonomics. Compared to Nauticam’s housing for the aforementioned Canon 7D MkII,

the NA-R7 is no more than half its size. Yes, really!

The second secret ingredient is from Canon. The Canon RF-S 18-45mm f/4.5-6.3 IS STM Lens. This compact “kit lens” from Canon is a gem and happens to be a design that works perfectly with certain Nauticam water contact lenses. Combined with a Nauticam WWL-1B or WWL-C, a shooter can have near fisheye angle



of coverage down to fish portrait capability on the same dive with tack-sharp results in a compact package. Add a CMC wet macro lens and you can have a true “do everything” rig without ever removing a lens from your camera or changing ports. Your



And super macro? Nothing quite matches what you can achieve with a long macro lens and powerful close-focus wet lens on an APS-C sensor. The shots above were taken with the RF 100mm and Nauticam SMC.

entire system can travel in your carry on. No more overweight fees!

For Crispy detailed wide angle, the WWL-1 and WWL-C excel. The WWL-1 offers 130-degree angle of coverage with full zoom through in a modest size package. The WWL-C offers 116-degree coverage and a little more zoom reach with stunning sharpness and an even smaller form factor.

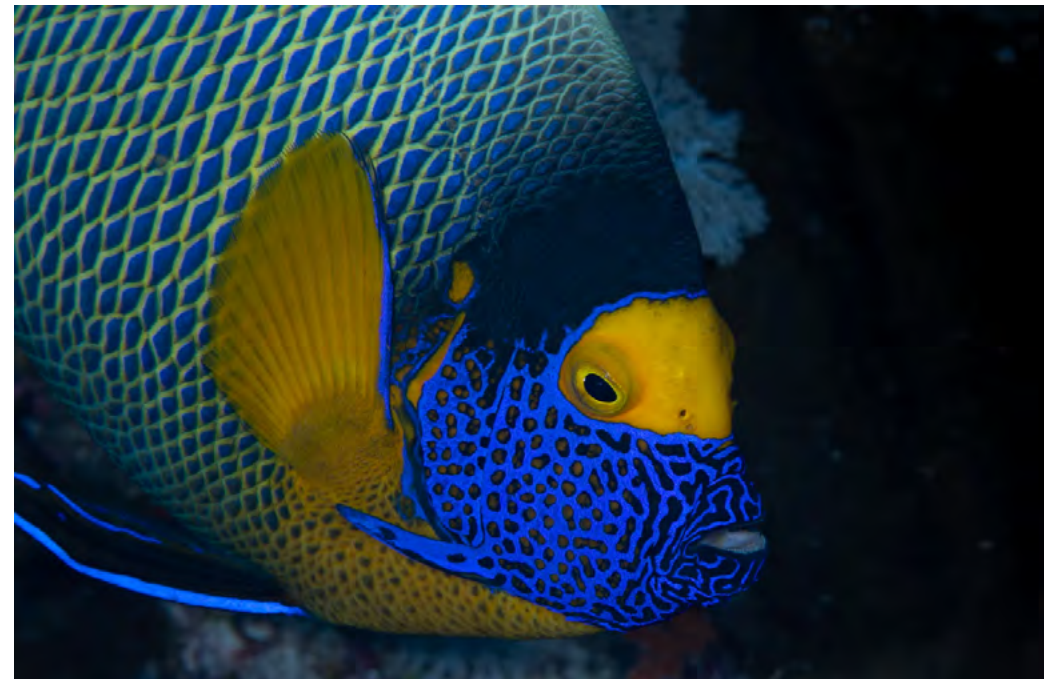
For an all-in-one-dive experience, the CMC-1 (or CMC-2) can be used with the Canon 18-45 lens for extremely sharp macro options when one exchanges the Wet Wide Lens for a Compact Macro Converter

underwater.

Of course, the whole banquet of RF lenses Canon makes as well as EF lens favorites can be used on the R7. All of which is great if you have a special mission in mind, but for some, the above combination may be all you ever want to shoot and results will be outstanding.

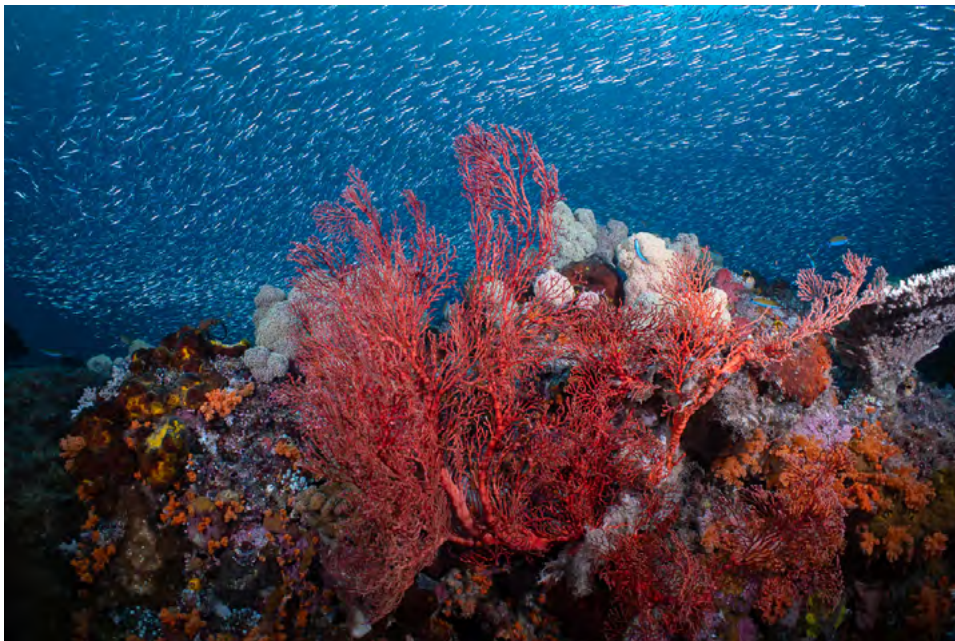
All that said, serious macro shooters sometimes want a bit more, and for those folks, the R7 delivers

The WWL is also great zoomed in for close focus wide fish portraits, or shoot the 18-45 with no wet lens.





Even with a long macro lens like the RF 100mm, the R7 focused fast enough to capture some of the most difficult subjects I go after, like the infamous Flasher Wrasses of Indonesia.



The WWL-C offers 116-degree coverage and a little more zoom reach with stunning sharpness and an even smaller form factor. It was used for the image bottom left.



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with options including the traditional Canon EFS 60mm, EF 100mm, the newer RF 35mm Macro and RF 100mm Macro.

FINAL THOUGHTS

There is no one perfect system for everyone. But for many years we have been hearing from underwater photographers that they really want a bit smaller, easy to travel with system that is friendly, but doesn't give up performance in any

particular category. In the past we have often had to say you can't always have your cake and eat it too. But the R7 brings that possibility closer than any mirrorless camera we have gotten a chance to use lately.

Kevin Palmer

www.reefphoto.com

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