

The WAM effect and conversion lenses

by Mike Bartick

Its never fails, whenever I slap on a dome port and wide angle lens, all the macro critters come out to play. It took me a long time to figure out that I shouldn't be looking down for macro subjects when I should be looking up and seeking the sun.

From packing for a day trip or preparing for a long haul, the question of whether to shoot wide or macro has always been a challenging one for underwater photographers. Fortunately for SLR shooters the harsh reality of lens choice is beginning to loosen and with some of the newly released conversion lenses entering the market, some of these lines are even beginning to blur.

Wide Angle Macro isn't a new technique but in the past it has required a dedicated setup for the best results.

The idea of shooting macro subjects with a wider angle of view is very enticing but it hasn't always been practical. This is starting a change with some newer lenses that convert a standard linear macro image into something much wider while on the fly!

Conversion lenses that enable SLR shooters to change from macro to wide and back again are beginning to grab traction as the image quality and usefulness are becoming more apparent. Of course, not all of these lenses are built the same and the price range is dramatically different but whatever your budget might be, these lenses are fun and are proving to be quite useful in different scenarios in the field.

When you see the mounted conversion lens on the camera above water it appears to be big and heavy. When flipped down the lens extends outwards but the dome portion of the lens itself is actually the size of a small zen port and allows for tight working spaces. Buoyancy collars are already built into it which makes the setup underwater very light and manageable.

This extension also helps with lighting as I can use the barrel of the lens to block some of the light while using inward lighting.

I've always gravitated to using the Tokina set up (10-17 + Zen port) for this style of shooting. Of course with every gear configuration there are challenges, but with this easy conversion lens kit some of these problems seem to vanish.



INON bug eye/Modified Nikon 60mm lens-The older relay lenses were famous for narrow depth of field and poor optics. The lenses push the subjects back, like bug eyed vision might be, making it difficult to know if the subject is sharp when looking through the viewfinder. This image is riddled with imperfection's. I don't always count those as negatives however in this case, the optics really impacted the overall image.



Cinderella Nudibranch and diver. Using a diver in the rear of the frame is always a great way to add perspective and dimension to an image. It's always better to plan this kind of shot ahead of time by discussing it with your dive buddy. Trying to communicate the minutia of a shot underwater is nearly impossible.

In 2020 B.C. (Before Covid), I acquired one of these new conversion lenses. It's a water contact lens (must be underwater to focus) that works with any 60mm macro lens behind a standard threaded flat port that allows for a flip adapter. This wet lens also has built in buoyancy in the barrel that helps to offset the weight of the optics which in turn also helps for trimming out my own buoyancy as a diver.

For the optimal result of this lens an APSC sized sensor is needed. The image results are rectilinear, very

natural and have very little in the way of ACA or vignetting.

Key ingredients to creating WAM images.

- Dimension and perspective
- Lighting
- Color
- Use of a model or sunball
- Direction of composition
- RGB+Negative space



We didn't plan to find a Rhinopias hiding amongst these dense, colorful wire corals but when we did, my macro mind tried to take over. I really wanted to shoot a natural habitat image of this subject to show how well its camouflage works when it's settled in and ready to ambush passing prey.

The conversion lens is small enough to get into tight spots like this one and focus nearly against the dome. Tight shooting like this can create some lighting challenges. You can actually bring the strobes very close and use outwards lighting, shooting through the dome or keep your strobes out wide and use inwards lighting, which is how I shot this image as I didn't want to disturb the wire corals or the bottom.

For good WAM, size matters!

To capture strong WAM style images, subject matter is extremely important. I've found that mid sized or palm sized subjects give the strongest, front of the frame presence

and dimension. Adding some kind of model or reference in the back of the frame adds perspective, pushing the primary subject forward.

Think of the frame in a dimensional manner, including multiple elements will help to add layers and enhance the image.



standard magnification

2:1 Magnification of detail

Getting close to the subject is also very important which requires care and patience. Think of the animal first.

If possible, I try to position my camera prior to looking through the viewfinder just to make sure that I don't hit the subject or stress them too much. Checking your images while shooting or "chimping" should also be done very carefully.

Not just because you might kill the frogfish but you also have a chance a scratching your new lens beyond repair.

Look for vertical relief, kelp forests, crinoids, pier or jetty structure and of course if you can include the green or blue water, it will tell the story of where the image was shot.

60 with Conversion Lens



60mm



The depth of field will be much greater due to the nature of the optics so using open *f*-stops more frequently used for wide angle shooting are okay too which will help balance the available ambient light.

Lighting and backscatter can also



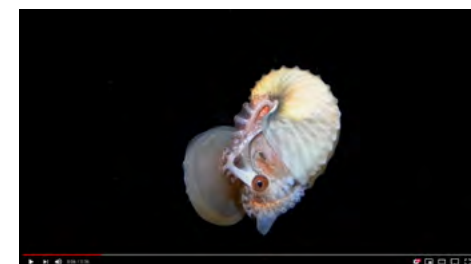
The conversion lenses are proving to be valuable in many different scenarios including blackwater photography and video. During a recent such dive, we had an encounter with a very elegant pompano. The thread like streamers are what makes these subjects so beautiful and unique. Opting to use the wide angle option of this setup, I was able to stay close, frame the subject well and to achieve effective strobe saturation.

This also translates well to video capture on blackwater diving. Normally my go to lens is the 60mm for such dives however with the flip down option, I can use either angle of view. The wider angle makes framing a moving subject in open water incrementally easier than with the 60mm.

For BW video capture, using a higher frame rate helps to smooth the video replay. Im shooting at a resolution of 1080@120p on a Nikon D850 and using 1 3500 lumen torch clicked to full for lighting.

Link-

<https://youtu.be/MBzylYyC1LM>





Lionfish are a beautiful subject to watch and to photograph. They move gracefully but are a fierce and focused predator. Herding smaller fishes together with their elongated and colorful pennate spines, they cruise slowly over crinoids and reefs waiting for the right moment to strike.

be a bit tricky, particularly in chunky water. Snooting also works although using a beam flash restrictor and/or diffuser gives the image a more natural feel.

Remember *f*-stop for foreground color, ISO and shutter speed to control the light in the background. For strobes, I prefer to keep them at the 10 & 2 but if the composition weighs heavier to one side or the other, I might eliminate or decrease the strobe power on the side that doesn't need strobe flash. In other words, there's

no need to flash empty water, after all it will only create backscatter which equals more work in post.

Color is an essential ingredient with any style of UW photography. In-fact that's what makes shooting underwater so special. However that color doesn't come through in our images without strobe flash. The kaleidoscope of colors that we are able to experience while diving should be included whenever and wherever we can and as much as possible.

RGB+Negative space is a



Tokina 10-17 with the zen dome- Larger Nudibranchs make perfect subjects to start with as they don't move very quickly and will allow you to experiment at length. Shallow water also allows the light to penetrate the surface water with means stronger natural colors in the red channel

good rule of thumb for color and composition. All three of the primary color channels diminish as you get deeper, losing the reds first. Shallow water means richer natural light. That being said, this also means you will need to use strong strobe flash to give those colors the vibrance to come through. Its counterintuitive thinking when shooting in shallow sunny environments as we're now competing with the sun. Bright colors will be pushed to the front and dull colors will be pulled to the back in

any image.

Overall, a conversion lens means more creative options underwater and less opportunities missed. As a diver with a camera, having options underwater are always a luxury and with the new lenses hitting the market opportunities abound. Soon we will all be back to traveling and doing what we enjoy the most.

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