

# Supermacro and the Nauticam SMC

by Alex Mustard

The Wetpixel/Dive Photo Guide/Our World Underwater Photography Contest has arguably become the pinnacle of underwater photography competitions over the last decade. With a huge roster of prizes it attracts both the best amateur shooters and also many leading professionals, which allows it to stand out in a chock-a-block calendar of international UW photo contests. The competition receives many thousands of entries each year, but it was only a handful of years ago that it launched a new super macro category, which in the first year received so few high quality entries that we did not award all the prizes.

How times change. I have just returned from Bali, where I was judging the inaugural Indonesia World Underwater Photography Contest, helping to dish out an incredible 200,000 USD of cash prizes, and the macro categories were dominated by super macro images. As Peter Rowlands recently said to me “supermacro has become the new shark photography”.

I believe the popularity of super

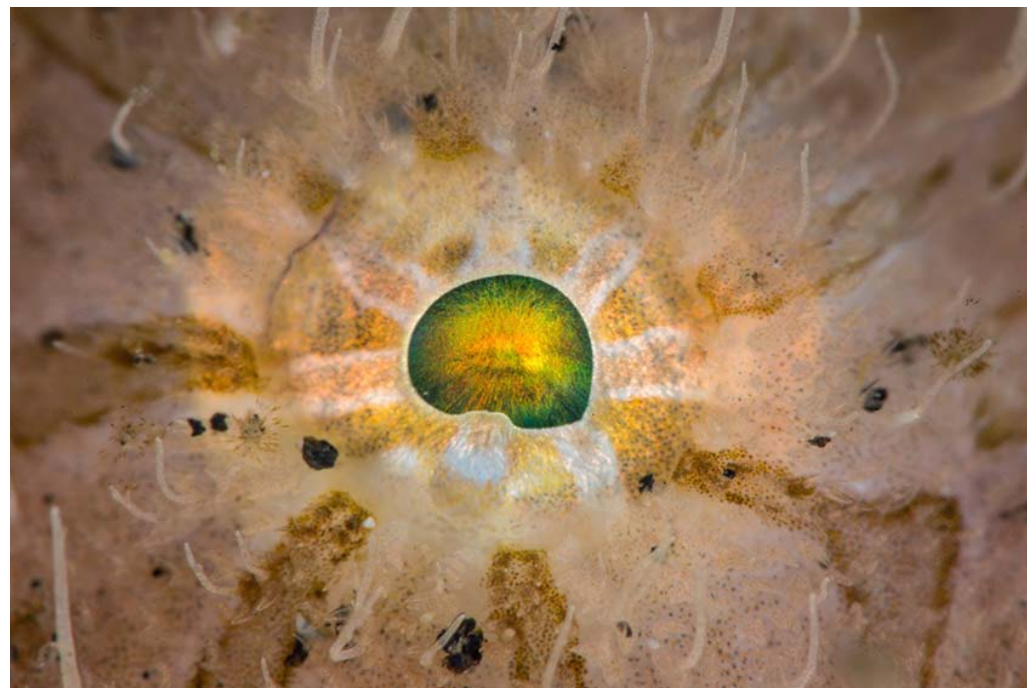
macro has been driven by a number of factors. First is the quest for new subjects. Standards in underwater photography have never been higher, and we photographers have discovered a host of new critters in this size range to make our shots stand out. We're also aware of how familiar subjects are transformed when we can focus on their tiniest details. Second, and perhaps more important, is that when working at such high magnifications depth of field is miniscule. While this adds to the challenge of getting the subject sharp, it means that almost whatever direction we aim the camera, the background is rendered as a complimentary, non-distracting bokeh blur. Achieving a pleasing background is often more important to the success of a macro photograph than the subject. In super macro the narrow depth of field gives us great backgrounds without trying. Third super macro can be very difficult when people first try it, but with regular practice and good technique it is actually quite easy.

Another important factor has



*The Nauticam Super Macro Converter (known to its friends as SMC).*

*Supermacro is currently going through a boom in underwater photography, made possible by a host of new accessories. Hairy frogfish eye, note that all photos are uncropped to show SMC performance. Subal Nikon D4, 105mm VR, 1.7x teleconverter. 2 x Inon Z240 strobes. Nauticam SMC. 1/250th @ f/51. ISO 100.*



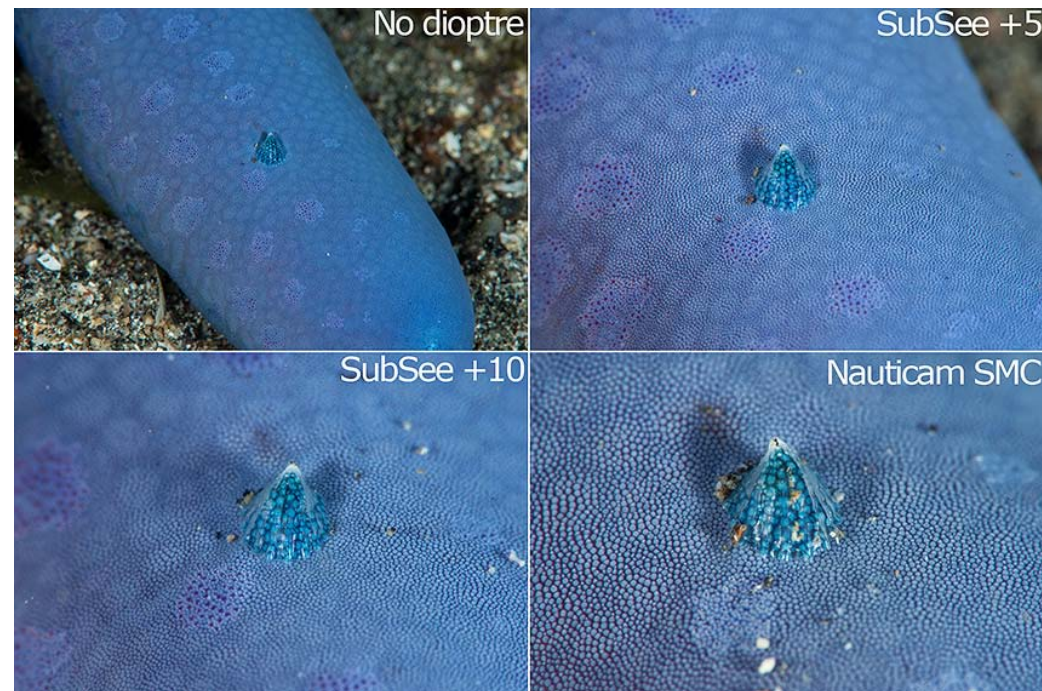


*The SMC gives excellent image quality right across the frame despite achieving very high magnification. This Nembrotha nudibranch was a small individual. Nikon D4, 105mm VR. Subal ND4 housing, 2 x Inon Z240 strobes. Nauticam SMC. 1/250th @ f/40. ISO 200.*

has undoubtedly already grabbed the attention of the underwater photography community. The SMC is named to remind us that it is not just a simple dioptre, but a converter lens, designed to work specifically underwater, with the optical elements optimised to account for the water in contact with both the front and rear elements, and also the camera's lens and the glass of the port.

The result of this detailed development is that the SMC is

strongest close up lens that I have ever tried, but also the one that delivers the best image quality. Which is no mean feat, as winding up the lens power makes it harder, not easier to deliver good image quality. The image quality is excellent right to the corners of the image and the lens controls the fringing, caused by chromatic aberrations, very well, to the benefit of both the image quality and also the smoothness of the out of focus "bokeh". The image contrast



*A comparison of the magnification possible with different wet close up lenses, shot on fixed focus. The SubSee +5 already gives a lot of additional magnification over the straight macro lens, and you should note that many wet lenses on the market are not as strong as the SubSee +5. The SMC gives a similar jump over the SubSee +10, as the +10 gives over the +5. This tests suggests the SMC is about +15.*

through the lens is so good that, despite the power, I was able to shoot comfortably with autofocus through the SMC, something that is usually a frustrating waste of time with strong dioptres.

The final standout design feature is that Nauticam have worked to maintain as great a working distance as possible. This is still super macro and that means the point of focus is

still very close to the camera, but it is not as close to the lens as you would expect for the magnification. And these few extra centimetres make a big difference both in not disturbing some subjects and for lighting them well.

You are probably waiting for the but, and for me there are two caveats. The first is that the SMC is expensive. I believe it is priced fairly



*The SMC with the SMC Multiplier attached via a flip hinge.*

for a bespoke product that definitely pushes back imaging boundaries underwater. But the pricing means this is an item for the serious shooter. The second is that it is very powerful. For both reasons, I don't recommend the SMC as your first experience of supermacro.

Whenever I speak to underwater photography retailers or dioptre manufacturers they tell me that strong dioptres always sell better than weaker ones. I think this is simply because people think a 10 must be better than a 5. But in theory and in the field the truth comes out. As I mentioned earlier, it is harder to design a good strong 'un, than a good weak 'un. Stronger dioptres will either be more expensive or suffer optically! Also I have run many workshops



*Although expensive, the SMC justifies its price with its performance, raising the bar in the world of supermacro shooting. If you are new to supermacro, I'd recommend starting somewhere less powerful and less expensive. But if you are already in to supermacro then the SMC is strongly recommended.*

where I have taken along a batch of dioptres for the photographers to use. Each time, at the start of the week, everybody wants the strongest ones, but by the end of the workshop it is the less powerful ones that are in demand because people simply find them more useful. In short, don't fall for thinking that creating great super macro images is all about magnification. It is the image that matters, nothing else. Even in Lembeh I struggled to find subjects that truly

suited the SMC.

Back to the SMC, although it is designed and made by Nauticam, it comes with a standard 67mm thread, and can be used on any housing system or adaptor that accepts such filters. The rear element of the lens sticks out noticeably behind this rear filter thread and Nauticam provide a spacer ring for mounting it on their ports. Although I don't need to use this on the Dyron adaptor I use my Subal ports.



SMC



SMC + Multiplier



*These sacoglossan sap-sucking slugs are very tiny. Less than 0.5cm. The top photo is with the D7100 with a straight 105mm. The middle photo shows the bug jump in magnification possible with the SMC and the final photo shows the frankly ridiculous magnification possible with the SMC and SMC Multiplier.*

Nauticam say the SMC was designed to work on 60mm and 100/105mm lenses. In Lembah in October, I shot it on my full frame Nikon D4 with a straight 105mm and also 105mm with 1.7x teleconverter. In Bali in December, I shot it on my cropped sensor Nikon D7100, with the 60mm and 105mm. The image quality was excellent on all. But I found it much more useful on the longer macro lenses (105mm and 105mm with teleconverter), it didn't add much to the 60mm lens, which already focuses very close.

Since testing the SMC and sharing results on my Facebook page I have had plenty of emails asking me how it compares to existing dioptres "how strong is it? Which should I buy? SubSee or SMC?" I chose to test it against the SubSee +5 and +10 dioptres because I own and use these dioptres and they are deservedly some of the most popular on the market. They were also ideal for the tests as their quoted powers represent their performance underwater, unlike some brands that quote similar numbers for their power in air, and then shed close to half their magnification when used in the medium they were designed for. It has always seemed crazy to me that all manufacturers don't quote the underwater dioptre power of their underwater wet lenses.

In terms of power the SMC is considerably stronger. The jump between the SubSee +5 and +10 seems similar to the jump between the SubSee +10 and the Nauticam SMC. So I would guestimate the SMC at about +15 on the 105mm from my tests. It is worth mentioning that if you already own a SubSee +10, you can get a greater magnification than the SMC by adding the Nikon 1.7x teleconverter to your lens and SubSee +10. Of course, you can use the SMC with the teleconverter

*The high image quality (as well as the high magnification) of the SMC helps produce attractive bokeh backgrounds, making subjects pop out. Nikon D4, 105mm VR. Subal ND4 housing, 2 x Inon Z240 strobes. Nauticam SMC. 1/250th @ f/32. ISO 200.*

too! The SMC is ahead of the SubSees on image quality. It is not a night and day difference, it is a comparison of very good and excellent. And since having the SMC, I've continued to use the SubSee lenses for my work.

Finally, in Bali, I also had the chance to test the SMC Multiplier, an add-on lens for the SMC that makes it even stronger still. Even Nauticam intend the multiplier as a niche product aimed at those after extreme results (and with a masochistic streak), so I'll only mention it in passing. In short it adds a significant amount of magnification, but definitely at the cost of some of the SMC's superior image quality. The results are still useable, but these extremes of magnification, very close working distance and the tip of the razor thin depth of field make this an accessory only for very specific uses.

The SMC is an exciting new product for underwater photographers, both increasing our reach into super macro shooting and improving the quality of our images. The question that has my inbox buzzing is SubSee or SMC? But for me the answer isn't about or, but and. The SubSee +5 and +10 are not as powerful as the SMC and each is suited to different subject matter and I have continued to dive with all three in my pockets since trying the SMC.

In conclusion, if you are new to supermacro I strongly suggest starting with a weaker close up lens than the SMC. Indeed, I suggest most people



follow a progression from the +5, only buying the next one when you feel limited by your current setup. Furthermore, there are cheaper ways to find out if you like super macro than with the SMC. However, if you are already like supermacro then, like me, you will love the SMC.

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*Don't settle for 2nd best*



Film - No Filter  
No White Balance



Digital - No Filter  
Manual WB



Magic Filter  
Manual WB

Digital cameras have opened up new possibilities to underwater photographers. For available light photography manual white balance is an invaluable tool for restoring colours. But when you use it without a filter you are not making the most of the technique. You're doing all the hard work without reaping the full rewards. These three photos are all taken of the same wreck in the Red Sea. The left hand image was taken on slide film, which rendered the scene completely blue. The middle image is taken with a digital SLR without a filter; using manual white balance. The white balance has brought out some of the colour of the wreck, but it has also sucked all the blue out of the water behind the wreck, making it almost grey. The right hand image is taken with the same digital camera and lens, but this time using an original Magic Filter. The filter attenuates blue light meaning that the colours of the wreck are brought out and it stands out from the background water, which is recorded as an accurate blue.

*[www.magic-filters.com](http://www.magic-filters.com)*