Shark Movement

By Alexander Mustard

Underwater photographers are a fashion conscious bunch. A quick glance around any dive boat will tell you who is in and who is out. The latest and greatest camera and housing will always attract envious glances, but being cool has always been about appearing not to care. So you will always get far more kudos if you strut on board with a Calypsophot slung jauntily around your neck!

The other area we see strong fashions is in the places we choose to take our pictures. Five to ten years ago, the trend was for the tiny, resulting in photographers searching critter capitols like Lembeh, PNG and Mabul for the increasingly weird and miniscule. Of course, these places still remain popular, but the 'in crowd' has now moved on. These days the fashion conscious among you will know that big is the new small.

For the last couple of years sharks have been in and the bigger the better. Photographers have been flocking to fashionable locales like Guadalupe Island, Gansbaai and the Northern Bahamas to shoot large species including the great white shark (although cool folk drop the great), the tiger shark and the great hammerhead. Less than 10 years ago photos of these species were rare, but these days it seems everyone has done the trip, got the T-Shirt and got the shots.

This was a cause of concern for me because I hadn't. Clearly I had to get a bit more fashion-conscious. But being a bit behind the times I find that by the time I finally get to one of these locations all the shots have already been taken!

The advantage of front curtain is that it allows you to accurately compose your subject because you know exactly where it will be in the frame when the flash fires. Nikon D2X + 17-35mm @ 22mm. Subal. 1/15th @ F10. Aperture priority, compensated –1.0. 2 x Subtronic Alphas fired on front curtain.

Been there, got the shots and T-shirt. Big sharks are definitely en vogue for underwater photographers, as this Guadalupe garment snapped on my Bahamian shark trip attests! Nikon D2X + 17-35mm. 1/125th @ F4.

This problem became a reality for me once again in March when I got my first taste of big shark diving on Wetpixel's shark trip to the Bahamas with Jim Abernethy's Scuba Adventures. My solution was to spend the week trying all sorts of in-camera trickery to create some images that may not be any better than those that have already been taken but hopefully offer something a little different. I tried many techniques during the week, but the ones I want to write about here are long exposures.

OK, long exposures with sharks aren't that original these days - my inspiration for this approach came from, UwP contributor, Tobi Bernhard's movement blurred reef shark shot that was the overall winner of the Wildlife Photographer of the Year Competition in 2001. I believe that movement helps shark images for two reasons: first it creates a dramatic atmosphere, which compliments the exciting subject matter, and second the interesting movement patterns add interesting texture to the image, which given the subject matter can often lack in the colour department. To create movement I used three approaches: rear curtain flash, front curtain flash with panning and also long exposures without flash, using filters. All have their advantages and their place…

Rear Curtain

This is the traditional approach with moving subjects and long exposures. Rear or second curtain flash synch basically means that our strobes fire at the end of the exposure.

To understand why rear curtain flash is effective at creating movement it can be helpful to visualise the process of taking the image. Imagine a shark is swimming past. We press the shutter and keep the camera still, the shark moves across the frame, creating a blurry trail, and then at the end of the exposure our strobe fires creating a sharp image of the shark on the same frame. Rear curtain synch ensures that the sharp image of the shark is in front of the blurred image creating a sense of movement – showing where the shark has just been. Front curtain synch does not work in this case because the sharp flash-lit image of the shark is created first – so the blur extends in front of the shark – making it look as if it was swimming backwards!

Slow shutter speeds are crucial in creating pleasing movement blur in rear curtain images and I find the best results come with shutter speeds between 1/30th sec down to 1/10th sec, although you can go slower still – the tiger shark image featured in this article was taken at 1/4 sec. The exact shutter speed you will need depends on the amount of blurring you want (more blur requires longer exposures), the lens you are using (wider lenses need longer exposures) and the speed the subject is moving (fast moving subjects need shorter exposures). Framing the subject at exposures greater than 1/8th sec does start to become something of a lottery because once you have pressed the shutter the subject may move considerably before it is frozen by the strobe.

The sense of movement adds a bit of drama to an otherwise standard Lemon Shark image. Nikon D2X + 10.5mm. Subal. 1/15th @ F20. Aperture priority, compensated –0.7. 2 x Subtronic Alphas fired on rear curtain.

One of the major obstacles of getting effective rear curtain shots is in bright tropical waters is being able to use such slow shutter speeds without overexposing the image. You can help matters by waiting for overcast conditions to shoot long exposures, or shooting early in the morning or late in the day. I often find that I still need to use very small apertures to achieve pleasing results (many of the shots here were taken at F16-F22). As a consequence you will need quite powerful strobes to achieve adequate flash fill, or at least a cooperative subject that will come close to the lens!

Front Curtain

The main reason I use front curtain (or first curtain) synch for long exposures is that it allows me to compose images very accurately as the strobe-lit sharp portion of the exposure is produced immediately after the shutter

The streaking bubbles created by the bait that this Tiger Shark was chasing add an unusual texture to this image. Nikon D2X + 10.5mm. Subal. 1/4 @ F20. Aperture priority, compensated –0.7. 2 x Subtronic Alphas fired on rear curtain.

This image was shot without blur and then the blur added in Photoshop (using Filter>Blur>Motion_Blur). In terms of the end result, blur is much more easily controlled with this method, but I feel the images lack that organic feel of doing it for real. But can you really tell? Nikon D2X + 10.5mm. Subal. 1/40th @ F14. Aperture priority, compensated –1.3. 2 x Subtronic Alphas.

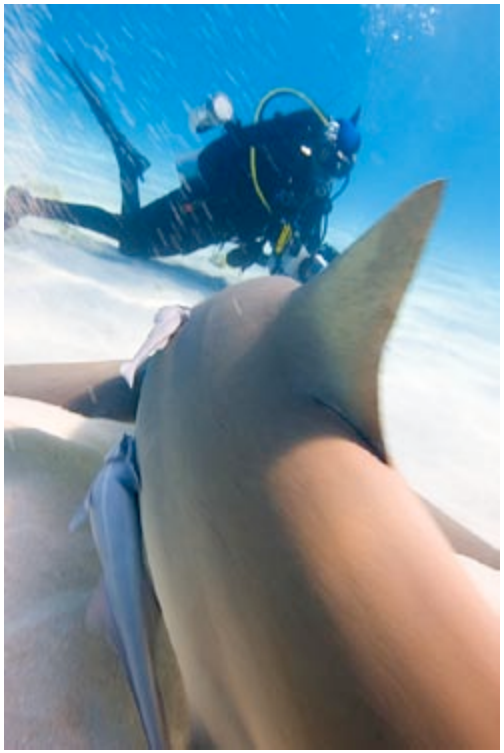
is pressed. So it looks exactly as it did through the viewfinder. The problem with front curtain is that it has the effect of making the subject look like it is swimming backwards – because the blur extends forward from the sharp portion of the image. To overcome this problem we need to use panning.

I favour two techniques – one is to try to pan exactly with the subject – so it remains sharp and the background blurs. The type of background makes a big difference to the success of this type of shot. The background needs to have quite a bit of detail in order to show the blur. Open water and featureless sand are not suited to this technique. The second approach is to pan faster than the subject. This produces a similar looking effect to rear curtain synch – where the subject blur extends backwards from the subject.

The accelerated panning technique is probably my favourite way to shoot blurred subjects for three reasons. First front curtain synch means I can compose the image exactly as I want. Second because of the faster panning, blur can be created at faster shutter speeds, which means less of need for small apertures and high power strobes. And finally this technique can be used with slow moving and even static subjects!

Filters

The final technique I tried for creating blurred shark images in the Bahamas was just shooting long exposures without flash (using a filter to restore the colour). This technique actually requires much shorter exposures than the strobe techniques, because without the strobe light there is no sharp element to provide a focal point amongst the blur, and generally I got the best results between 1/45th and 1/20th sec. I also think that blurred images taken with filters are generally less effective than strobe lit shots for the same reason.



Filters create a different effect because without flash there is no sharp element in the exposure. Here I was trying to create an image that captured the drama of diver encountering a shark. I think that the movement helps generate this feeling. Nikon D2X + 12-24mm @ 17mm. Subal. 1/30th @ F8. Aperture priority. Magic Filter.

Conclusion

I think that the obvious question on many of your minds is why bother with these in camera techniques at all, when blur can be added so easily to an image in Photoshop. It is a good question and one that is hard to counter. One point is that you don't get the fun of achieving it in camera. And the other is that there is something more organic, more realistic (but at the same time pretty intangible) about the slightly rough edges that come from creating the blur in camera. But these are hardly definitive arguments.

In summary I'd say that the different techniques are different tools and give different looks. With rear curtain if you don't pan you get a non-blurred background and trail from the shark. If you do pan with the shark you get blured background and no trails (and this is the same on both front and rear curtain). On front curtain to get trails going backwards if you don't pan, so you have to pan faster than the subject. As a result you get a blurred background too – unlike standard rear curtain.

In conclusion I certainly feel that movement blur is a very suitable technique for shark photography and it is well worth experimenting with both the standard rear curtain and the front curtain accelerated panning techniques during a couple of (cloudy weather) dives on any fashionable shark trip.

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