

SHOOTING IN TOUGH SITUATIONS

Recently I was in a rather typical problematic photographic situation. I was knee deep in snow up the side of a mountain, peering up the side of a cyprus pine with a very large adult cougar staring down at me, snarling. It was pretty annoyed.

Well, that wasn't the typical part. Not for a diver, anyway. The part that's all too common was that I was having trouble keeping the camera steady. I'd come down fast with a vicious chest cold which had reduced my lung capacity to that of a 90 year old asthmatic. Having just ploughed up the side of Mt Everest (or it sure felt like it) through dense forest over criss-crossed rotting trunks, branches and deep, clingy fresh snow, all the while floundering forever upwards (why can't they go downhill, dammit) with a 15kg backpack and a tripod that seemed to catch on every stray branch and twig.

Now I was right under my subject, perilously propped up on a near vertical slope with slimy moss under a mass of fluffy snow crystals that offered no traction. My long lens wobbled and wavered, jiggled and juggled, the intense stare of a premier predator whipping in and out of frame.

Each rasping painful burning breath translated into a lens wobbling event, much like some sort of wand waving in a Harry Potter movie, my feet slipping and sliding not helping in any way. Add to that a heavy cloud cover while under a dense canopy of foliage. Shutter speeds had to drop to useless numbers, even when I cranked up the ISO to an electronic noise inducing super high setting.

This sort of situation is very common for an underwater shooter. We may not labour for breath from the flu (no diving when sporting such a nasty embolism inducing condition, right?) but taking our air from a regulator and lumbering scuba tank makes breath control a little harder, especially with a

cheapie reg or during a strenuous swim. Add a strong current and it's like you're on a mossy slope lubricated with a sheet of ice. Throw in some ground swell and you're floundering



A day without direct sun, strong current, some strong swimming, a bit of ground swell and you will be sliding around in the gloom like our 90 year old asthmatic (top). Much better to get yourself firmly set and propped on the sea bed (bottom), using as many points as possible, such as fins, knees, hips, hands and elbows. Even one or two contact points will help you keep steady.

about like our 90 year old asthmatic on a slalom slope. You'd better be using a high shutter speed!

And we all know when underwater, that even on the brightest day with the clearest water, our light levels are always marginal. With bad light and dirty water conditions, we can get close to dusk light levels, so we cling to every fraction of a second we can coax out of our cameras.

In my situation, the solution was clear. Get out the tripod, set it up nice and solid, bolt on the camera and use a reduced shutter speed. My subject wasn't leaping about so I could get away with a fairly slow speed. But in my haste I'd ditched my backpack and tripod about 10 metres away and I didn't want to give my big pussycat a chance to slip away. I wanted it to stay fixated on me with that hungry look in it's eye for as long as possible.

My ninja solution? Become the tripod. I dug my heels into the crumbling snow bank, leaned back against the near vertical slope, let my butt slide down till I was almost curled into a ball so that I could prop my elbows on my knees as I pressed the camera hard into my face. I managed a few raspy painful breaths, emptied my lungs, squeezed tight and took a few steady frames at a low shutter speed before my burning lungs demanded some attention.

Underwater, when the chips are down, you have to use whatever stable item you have to help steady the camera. This starts with anchoring yourself to the reef or seabed. On sand, that means kneeling or lying prone. In addition you may dig one

hand into the sand to form an anchor. So if you are right handed, you may have your left arm across your chest and your left hand buried in the sand. When you're steady and propped, lower the camera onto your arm.

Don't just rest it there. Push the camera down onto your arm so that it does not waft about. Really dig it in and make it

and breaking up the reef, something that others may not appreciate.

Speaking of breath control, the act of breathing in or out will cause movement of the camera via your diaphragm and the resulting flex which affects most of your body. Like a hunter with a rifle, let your air out, hold your breath for a moment just before you press the button.

1/15th of a second down to 1 second exposures.

What makes this all work is having your strobe provide the main exposure and the shutter speed 'filling in' the background. We've previously discussed how to balance exposures with long shutter speeds, and shorter ones as well. The important thing to remember is that



Here, the diver has settled in on knees and fins on the sand next to the reef. After the initial exposures, he was able to get lower and settle on his elbows to steady the camera even more and get a little more background light from the upward angle. With all shots, the camera was buried hard against his mask to add another steadying point. Despite the gloom and slow shutter speed, the shots came out a treat.



In open water with a wide angle lens, open the aperture completely then close it down one f-stop. Two if you can get away with it. That will give you sharp images with as fast a shutter speed as your ISO setting will provide. Some gentle panning will also help along with some breath control, if on scuba, and stopping all finning motion to still your body.

all tight. Push with your knees and dig in your feet/fins to provide a solid platform for your camera. Finally, push your face up hard against the housing. If you are using a point and shoot which forces you to use the LCD screen, you obviously will skip that last step, otherwise you won't be able to see your composition.

On rocky reef you can place yourself nice and firmly, but on fragile hard corals or soft sponge beds and similar, you'd want to take great care to only touch down on bare areas. It may take a little time but you will find spots that you can handle or touch without breaking or damaging reef life. Even a single fingertip and breath control can help you form a steady platform for your camera. The more points you have touching, the more stable you'll be. Often I just prop the camera on the seabed and fire away.

Again, don't trash the reef. It might be able to recover just fine (reefs can cope with all sorts of 'natural' damage) but it's not a good look to be thumping about

It all helps to keep things steady.

With a little practice, you'll find you can use fairly slow shutter speeds. In the past we've used examples where anything up to 8 seconds have been used successfully, depending on the amount of available light you incorporate. If you can get into a good steady position, you should have no problem, with a bit of practice, to get down to 1/30th or 1/15th of a second exposures. In dark temperate waters I often use between

you can obtain sharp, shake-free images with just a little effort.

Only rarely have I used a traditional tripod underwater. After just a few dives with a camera, you soon realise that carrying anything more complex than a positive attitude can quickly become a burden and detract from your dive. Even pulling out a torch from a BC pocket can cause all sorts of irritation, particularly in cold water with thick gloves and a restrictive thick wetsuit or drysuit. In fact,

Kelvin Aitken is a Melbourne-based professional photographer and diver who's passionate about the big blue and the big sea creatures to be found out there. He's dived from the Arctic to the extremes of the South Pacific and if there's a new marine dive adventure to be experienced or invented, he's always the first to put up his hand. He's also dived the southeastern Australian continental shelf and photographed shark species nobody knew would be found out there. Kelvin is a BBC Wildlife Photographer of the Year marine category winner and his unique work is on www.marinethemes.com



DIGITAL PHOTOGRAPHY

Kelvin Aitken's unique and comprehensive how-to guide

I find anything beyond just falling off the boat had better be pretty important to justify all that effort within an alien marine environment. I've sat at my kitchen table and made all sorts of plans and rigs to take on my next dive. Once I get into the water, I usually pull the plug fairly quickly. In most cases, it's too hard.

So dragging a tripod along on your next dive just won't work, particularly in the long term. You may want to try some super long exposures as an experiment, maybe at night with torches lighting your subject, but don't expect to be doing it every dive, every day. The fun factor evaporates pretty quickly. Practice your propping and breath control and you won't need one.

One factor that makes stabilising your camera easier is the support you get from the ocean water itself. Unless you have a brick strapped to the bottom of your camera, chances are your unit will be neutrally buoyant, or not far from it. So, not only is the weight a lesser factor (try holding a 4kg weight at chest height and see how uncomfortable it can be after 5 minutes, if you last that long), but you also receive 'cushioning'.

Wave your Harry Potter wand about in the kitchen and it's easy as pie. Use it to stir honey and suddenly your arm gets pretty tired. Similarly, the density of sea water causes drag and friction, supporting you in your endeavours to keep your camera steady. You lose some on the swings, then pick up some on the slides.

If you're shooting a fast moving subject in open water with no reef to prop on, you have no choice but to bump up your ISO to give you the extra speed needed to freeze your subject. You can also get back some speed by not using a small shutter aperture. If, for example, you're using a wide angle lens with a maximum aperture of f4, then close it down just one f-stop to f5.6. Don't bother with smaller apertures as they're unnecessary for a sharp image with a wide angle lens. Freezing the movement is more important than having massive depth of field.

The short focal length of wide angle lenses allows the use of slower shutter speeds and wider apertures while keeping the subject sharp. The longer the lens, the higher the shutter speed you need to keep things sharp. So, if you're using a zoom lens, use it at its widest zoom setting and get closer to fill the frame. It will give you a little more buffer to play with.

With modern digital cameras, there's no need to drop lower than 100 ISO with 200 ISO being a good quality standard setting for almost all your image captures. 400 ISO is still quite useable and 800 ISO at a pinch. Just don't leave it there if you want prints that don't struggle with digital noise. Beyond 800, unless you have forked out the same amount as the cost of a small car for a medium format digital camera, you'll start to run into electronic noise problems on every image.

In any case, ceasing your fin thrashing and calming your breathing will help as much as an ISO bump up to give you sharper images. Slowly panning with your subject will add a little more. It's like those stabilised lenses you can buy today. They don't cure 'stupid' but they do give you a little margin to play with. Add each small factor together along with good technique and you can pull out great images where everyone else has bombed.

As mentioned, there's a good chance that you're using strobe light to illuminate the majority of your image, with the shutter speed setting set to balance the background light with the foreground. It's normal to want as much depth of field as possible, so we tend to use our strobes on full power in order to use a small diameter f-stop, such as f16 or f22. The



You don't need f-22 to get a useful image. If you need to pull in some background light, make it easier on yourself and use a wider aperture. As long as the eye of your subject (if it has one) is tack sharp, the rest of the image does not matter. Select an appropriate auto focus point and place it on the eye of your subject. Squeeze the shutter to initiate focus, recompose if need be then fire the shutter. Our baby shark barely has its nostrils in focus, but the eye is sharp so the viewer is content with the focus.

down side of that approach is that in most dive situations your shutter speed will need to be very, very slow to pull in the background.

Let's say that you're photographing a fish that fills the frame at about 40cm from the camera. You crank up your strobe and from experience (and maybe an aperture/distance guide stuck on the side of your strobe) you know that you'll have an aperture of f11 (or whatever your set-up provides). Under normal tropical midday conditions you may need a shutter speed of 1/30th or less to pull in the background. Getting lower and aiming up will increase the amount of surface light in your image, reducing your shutter speed. But it's still marginal.

Using our set-up and propping advice, you probably will get the job done. But there may be reasons why you want a faster shutter speed. Schooling fish in the background which you want to freeze, your buddy who does not understand the command to stay still, an extra strong current or ground swell making things difficult.

Without having to resort to a noise



You don't need to use your strobe on full blast all the time. This nifty strobe has 4 manual settings (plus TTL) and a diffuser to cut back the light even more. In these dull conditions, a slow shutter speed and wide aperture will help keep balance in the exposure while freezing any motion.

creating high ISO setting, try turning down your strobe. A strobe built into the camera usually has a way to change the power output, often by dialling in some negative strobe compensation. Your manual will help you find that setting. One of my camera bodies has a built in strobe (which I normally never use) with a function which allows me to easily dial back the power.

An auxiliary or external strobe will usually have manual settings to give you 1/2, 1/4 and maybe even 1/8 or 1/16 power settings. Or there's a compensation dial if used on auto. Or, if it's a dedicated strobe (matching your camera model's technical specs for strobe use and has a connector that enables that function) you can control the

strobe output from the camera. Either way, dropping the power of the strobe back will drop your f-stop down to a wider aperture, allowing a correct exposure with less light. Yes, your depth of field will 'suffer'. I prefer to think of it as being 'different'. In most cases, if the main point of interest in your image is sharp, you can get away with blue murder with the rest of the frame. If your subject is an animal or person, if the eyes are tack sharp then it's almost irrelevant

how the rest of the image appears.

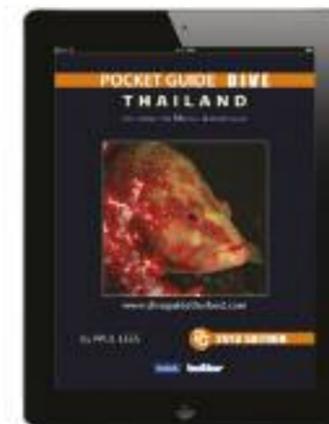
Our f-11 exposure may now be f5.6 or f4 with the shutter speed now being in a much healthier zone. As long as the eyes of our subject are sharp, you can get away with the loss of focus depth. If you need less light than your controls can deal with, just slip a finger or two over the strobe, cutting back the light. Or if it's an external strobe, move it back from the subject to drop the light level.

As a general rule, close down your lens at least 1 f-stop from the maximum diameter f-stop, as only the super expensive lenses are designed to operate properly with fully opened apertures.

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