

Muck Diving Sydney style

by Klaus Stiefel

I love Sydney, Australia, it's such a friendly and multi-cultural city! And it's a nature enthusiasts' city: the trees are teeming with chattering parakeets, and only 30 minutes by car from the city center there is some great diving in Chowder Bay in the suburb of Mossman. Sydney is located along a large natural inlet, called Sydney Harbor or Port Jackson, and Chowder Bay is located on its Northern shore. It's a popular, but not too crowded weekend destination for the Sydneysiders, and a dive shop, Plunge Diving, is located in a historic building (in Australia that means it's from the mid-1800s) right on Chowder Bay. From there it's only a short walk along a jetty to reach the entry point to a dive site featuring some fascinating Southern-hemisphere temperate marine life.

It's a real 'muck' dive site - not necessarily that exciting on first sight. There are no imposing multi-colored walls of corals like in the ads for the tropical diving destinations, and sometimes the visibility is not that great, but for the patient underwater naturalist and photographer, some true gems lie in wait: Seahorses holding on to sunken wire-mashes,

male cuttlefish fighting over a ten-armed lady, fishes such as gurnards, frogfish, pipefish, morwongs and groups of dancing hulla-fish, as well as curiosities such as a blenny making his home in a discarded bottle. Two wrecks of small sail-boats, the posts of the jetty and some smaller sunken man-made structures act as marine life magnets. Some of the fish found in Chowder Bay, while also found in other spots along the East coast of Australia, were very exciting for me to see since they are endemic to that part of the world. Examples are the old wife (*Enlopus armatus*; the whole family, the Enlopidae, is endemic to Australia) or the Port Jackson shark (*Heterodontus portjacksoni*). To top things off, Chowder Bay features nice invertebrates, such as several species of nudibranchs and bright red sponges which often make a nice background for photographs.

As I mentioned above, the conditions for photography are not always ideal in Chowder Bay. Low visibility, a silty bottom which can worsen the viz even more after a few careless fin-kicks, and small, well hidden marine organisms are a challenge to the uw-photographer.



The Sydney opera house, one of many attractions of this cosmopolitan city. In the waters around it, just across Sydney Harbor in Mossman, lurk many photo-worthy marine organisms.

Canon 5D II, Canon L 17-40 mm at 40 mm, pol filter, f9, 1/125

However, there is so much fascinating marine life to photograph! What were the tricks which helped me to nevertheless take good pictures there? It turned out that a few things, while always useful in underwater photography, took on special importance. They were subject/lens



*Eastern Spiny Gurnard (*Lepidorigla pleuracanthica*). What a beautiful little fish!*

Canon 5D II, Canon USM 100 mm, f11, 1/200 s, ISO 320

selection, good buoyancy and finning technique, a good local guide, strobe placement, shooting against a surface, and post-processing.

A site like Chowder Bay will mostly lend itself to macro photography. This usually makes the lens of choice something like the



Port Jackson Shark (Heterodontus portjacksoni).
This is a juvenile. These guys are docile and not easily scared. To feed, they crush echinoderms with their mouth plates. Note the parasitic isopod crustaceans on the shark's head, even on its eye. Ouch.
Canon 5D II, Canon USM 100 mm, f20, 1/200 s, ISO 320.

Canon USM 100 mm which I used. Alternatively, however, a wide angle lens can be used for 'wide angle macro', the technique of capturing a medium sized fish very close to a lens with a large field of view. In my two visits to Chowder bay I always chose the Canon 100 mm macro lens as the piece of glass to submerge with me.

Once this lens of choice was mounted, the camera screwed into its housing and I myself was sucking compressed air, a number of things turned out helpful in my quest for good muck-photography. While in other locations it is sometimes an option to lay down in denser sand to shoot marine life close to the bottom, the fine silt in Chowder Bay gets stirred up too easily to allow that technique. Instead, I needed to hover in place even when taking



Close up of the same blenny. This individual was highly curious and alternated between hiding in its bottle and posing vertically in front of it in what I believe was a territorial or mating display.
Canon 5D II, Canon USM 100 mm, f18, 1/200 s, ISO 320.

pictures of bottom dwelling marine life. Good fining techniques also go a long way in keeping the viz photographer-friendly. The frog-kick or modified frog-kick, also used in cave-diving for the purpose of minimizing the silting of the water-column, often works better than the conventional alternating kick. In caves, avoiding a silt-out goes a long way in preventing a panicky death while running out of air in zero-viz! It is slightly less crucial than meeting such an end, but still important, to take pictures without too much suspended particles between lens and fish. So, practice your buoyancy and fining!

When not familiar with the marine life in an area, a good local guide is always a great asset to any photographer. This is especially the case since the inhabitants of that corner of the great



Old Wife (Enlopus armatus). Who comes up with these common names? Supposedly these fishes are named like that because they make a grunting noise when removed from the water. Aussie humor? Ichthyologists' effort at being funny? Shot against one of the small wrecks in Chowder Bay to avoid distracting back-scatter.
Canon 5D II, Canon USM 100 mm, f11, 1/200 s, ISO 320.

Pacific ocean are small and well-hidden. Naturally, someone who has done hundreds of dives at a site will know very well where the interesting fish and invertebrates can probably be found. A novice to the area, even with excellent eyes for marine life, will never do as well. I want to thank my guide Martin for pointing out a lot of interesting organisms to me! I tried, however, not to be a complete 'tourist', and to spot things myself as well; This always works better when reading up on the expected marine life. I always see more if I know what I am looking for. For this purpose I spent an evening with Rudie Kuiter's 'Guide to Sea Fishes of Australia'.

Every experienced under-water photographer



***Stripey (Microcanthus strigatus). A much better common name. Yes, this is a fish with stripes.
Canon 5D II, Canon USM 100 mm, f14, 1/200 s, ISO 320.***



***Fan-belly leatherjacket (Monacanthus chinensis). I cleaned out the back-scatter in this picture in the post processing stage.
Canon 5D II, Canon USM 100 mm, f18, 1/200 s, ISO 320.***

knows that skilled strobe-placement goes a long way in keeping one's pictures free of back-scatter. What I had to avoid is to illuminate the suspended particles between the lens and the object. Normally, this is less of an issue in macro photography, where the distance between lens and object is small. But with the amount of particle in a site like Chowder Bay,

it becomes a bigger deal. An indirect angle, aiming the strobes from a side-ways angle, but not frontally at the subject, can help to avoid unsightly 'snow'.

Another good trick in conditions with lots of suspended particles is to shoot against a surface, such as a rock or the side wall of a wreck.

In this way, the 'snow' will stand out less than when in front of blue or black water in the background. This of course does not substitute for taking care to reduce suspended particles or their illumination, but it can significantly reduce the impact of back-scatter. I learned this trick from uw-photography legend Marty Snyderman.

Finally, you can do some things to improve your photos when your dive gear is already dry. Good post-processing is an even more powerful tool with pictures taken in 'muck' sites than normally. With little natural light and murky water absorbing more of one's strobe light than in the tropics, color correction often restores shots which looked drab coming directly out of the camera. And, post-processing is also the last chance to combat our recurrent enemy, the back-scatter. Removing it with the 'smudge' tool or selectively activating the background (with the 'lasso' tool) and applying a 'Gaussian blur' filter in your image processing software of choice (in my case the shareware program Gimp) can save otherwise successful shots. Another alternative is to crop away regions of your shot strongly affected by evil back-scatter. I always try to get things right when pressing the shutter, but in difficult conditions I have to resort more frequently to software-aided

image improvement. When applying a manipulation which affects only a part of an image (such as back-scatter removal via Gaussian blur in the background only), I always state that manipulation when putting the shot on my website or publishing them otherwise.

With these tricks you'll be able to get some good shots and be able to enjoy viewing the fascinating marine life found in a 'muck' dive site later on dry land, and possibly at a high magnification - often a chance to discover detail unseen during the dive, such as the parasites on the Port Jackson shark I shot. I hope I have convinced you that on your next visit to Sydney you will not only enjoy the topside attractions this city is famous for, such as the nightlife, the zoo and the cool scene in Bondi Beach, but will also get wet with your camera. G'day and fairdinkum diving!

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I am originally from Vienna, Austria, and have also lived in Frankfurt, Germany and San Diego, California. I currently reside in Okinawa, Japan, where I am, when not under water, a neurobiologist. I use a Canon 5D II in a Hugyfot housing with two Inon Z-240 strobes.

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