

Night Muck Diving at Porteau Cove, BC

by Lee Newman

There are places in the world, Lembeh Strait in Indonesia for example, that are absolutely famous for muck diving - exploring soft-bottom habitats home to some of the most bizarre and fascinating animals on the planet. While these famous muck diving sites tend to be located in the tropics, and are sometimes difficult to get to, there's one, albeit maybe not so famous, just a short 40-minute drive from downtown Vancouver, British Columbia.

Porteau Cove Provincial Park, located on the eastern shore of Howe Sound between Lion's Bay and Squamish, is a popular local dive site for both beginners and the more experienced. While the main attractions are the artificial reef structures that have been placed in the shallow bay directly beside the highway, there's also a great muck dive just a few fin-kicks from the concrete stairs that lead into the water.

To the uninitiated, the term muck diving doesn't exactly conjure up images of a great diving experience - probably more like groping around in the mud and silt looking for your

dive buddy! However, to those more familiar, it's like a visit to a marine-themed curiosity shop!

Common to all muck diving sites, and where the name comes from, is a soft-bottom that's usually composed of fine particles of silt, sand and detritus - organic material in the process of decomposition. The exact composition of the substratum, or bottom material, is of course dependant on the proximal geology and topography, but human activities can also add to the mix. At Porteau

Porteau from the breakwater: The muck dive starts at the first white marker and heads in the direction of the first yellow marker. Canon 30D, manual exposure, 17-40/4 (set at 17mm), 1/80th, f10, ISO 100, soft 2-stop GND filter.

Striped nudibranchs plow through the soft bottom material in search of their primary prey, sea pens. Canon 7D, manual exposure, Aquatica A7D, 100/2.8 macro, 1/125th, f16, ISO 100, two Ikelite strobes.





The Sailfin sculpin swims by holding its body stiff and alternately undulating the dorsal and anal fins. It is also rarely seen during the day. Canon 7D, manual exposure, Aquatica A7D, 50/1.4 with a +2 diopter, 1/80th, f14, ISO 100, two Ikelite DS-160 strobes.

Cove, the bottom material is mostly a mixture of silt, sand and detritus, but there are also a lot of small wood chips - the result of industry around the Sound.

Diving over muck can be a bit more challenging than making your way over a hard rock bottom scoured clean by current. One finger placed in the muck, intended to steady yourself, can ruin the visibility for you, your camera and your dive buddy! In order to get the most from a muck dive, careful and precise control over your

buoyancy is absolutely essential. Quick or sudden movements that can send water towards the bottom should also be avoided. Slow and deliberate movements, including hand-signals between buddies, will help to minimize disturbances to the fine particles of the soft bottom, and the animals you hope to find. It goes without saying - but it is worth mentioning, that dangling equipment, such as an octopus regulator or pressure gauge, is best tucked up and secured if you're to get the most from



Red flabellina nudibranch: Easily the most common nudibranch at the site, red flabellina can reliably be seen at Porteau all year round. Canon 7D, manual exposure, Aquatica A7D, 100/2.8 macro, 1/125th, f14, ISO 100, two Ikelite DS-160 strobes.

a muck dive.

Porteau Cove has many of the amenities and activities one would expect of a provincial park - camping, electrical hook-ups, drinking water and a boat launch. Facilities for divers include a large parking lot close to the water, a Diver's Building just inside the park entrance with bathrooms and changing rooms, a freshwater shower

for rinsing and a set of concrete stairs which provides easy, and safe, access to the water. On high tides, the bottom few steps of the stairs are often underwater making the entry about as easy as it gets! On low tides, the stairs are often completely exposed, as is a stretch of the pebbly beach at the shoreline. From the bottom of the stairs it's either a short swim, or

a walk and even shorter swim, to the end of the breakwater that separates the diving area from the boat launch.

As with any site in Howe Sound with a northern exposure, it's important check the marine forecast as part of the planning. Northern Outflows are common in Howe Sound and strong winds blowing directly into the bay can make the entry and dive anywhere from unpleasant to potentially dangerous. Luckily, the breakwater largely protects the diving area during southerly inflows. While tidal currents are not usually an issue at Porteau, it just makes good sense to know what's going on with the tides on the day of your dive.

In terms of equipment, drysuits are the norm in the Pacific Northwest given the temperature of the water. In winter the water temperature dips into single digits - 6-8° C, in summer it is much more pleasant, but still a chilly 10-12° C under the warmer surface layer. Given the speed at which most photographers move, there's no such thing as too much fleece!

From the end of the breakwater, heading north-west, the sandy bottom slopes gently downwards and at about 20-25 feet gives way to the soft bottom mix of silt, detritus and wood chips. If you continue north-west, at 30-35 feet deep, you 'll come to a fire-hose lying on the bottom. The fire-hose can be used as a navigational aid leading you from just in front of the breakwater over to a collection of artificial reef structures that include a tire reef, a block reef, the jungle gym, and three small vessels - a 50 ' ferrocement sailboat hull, the Centennial III, a 35 ' steel dredger, and the Granthall, a 60 ' steel-hulled Canadian Pacific Railway tugboat. The depth along the fire-hose varies a little, but if you stay within sight of it, even on days with good visibility,



Clown nudibranch: While not the most common of the nudibranchs at Porteau Cove, this one was found out in the open and only inches from the fire hose. Canon 7D, manual exposure, Aquatica A7D, 100/2.8 macro, 1/160th, f13, ISO 100, two Ikelite DS-160 strobes.

you'd be hard-pressed to exceed 45 feet, depending on the prevailing tide of course.

While the muck dive can start anytime once you reach the soft bottom, the real excitement often lays a few feet either side of the fire-hose as you work your way along from where you pick it up towards the first artificial reef structure.

The muck dive at Porteau Cove can be done

anytime, assuming wind and tidal conditions are good, but the best time to see more of the charismatic micro-fauna is in winter, and at night! Many of the animals that make a living in, and on, the soft bottom in this area are usually more active at night - preferring to stay hidden in the muck until they can use the cover of darkness to reduce their chances of being spotted by a predator.



Stubby squid are easily one of the most sought-after charismatic micro-fauna in the Pacific Northwest. Luckily, a night dive on the muck in winter is an easy way to find at least one! Canon 7D, manual exposure, Aquatica A7D, 50/1.4 with a +2 diopter, 1/50th, f11, ISO 100, two Ikelite strobes.

Unfortunately for some, there are also active predator species out and about on the muck at night. For divers, this often means that as well as seeing the animals, one can also observe some interesting behaviours up close!

Perhaps the most famous of muck creatures at Porteau Cove is the stubby squid (*Rossia pacifica*). It encompasses all the colour-changing drama of its larger cousins in a much cuter, 15 cm package! Stubby squid are often found either partially buried

in the muck or moving purposely along the bottom on their tentacles. Luckily, they seem to tolerate slow and deliberate divers, but tend to get a little shy - by either leaving the scene or digging in, when the camera and strobes start firing. It's best to take a few shots and then move on. There have been reports of as many as five stubby squid on a single dive, so there's no reason to over-stay your welcome with any one individual.

Speaking of larger cousins,



While most divers tend to focus their attention on finding the larger specimens, juvenile giant Pacific octopus can be very common, and out in the open, at night on the muck. Canon 7D, manual exposure, Aquatica A7D, 100/2.8 macro, 1/125th, f14, ISO 100, two Ikelite DS-160 strobes.

juvenile giant Pacific octopus (*Enteroctopus dofleini*) are also somewhat common on the muck at night. Some individuals tend to flee at first glance, while others sometimes hang around for a little while. The trick again, is to not over-stay your welcome. Once in a while, Pacific red octopus (*Octopus rubescens*) can also be seen out exploring the muck at night. Distinguished by the presence of three little flaps under each eye and a generally duller red colour, it

is much rarer to see one than either the stubby squid or the giant Pacific octopus.

Typically associated with muck dives in the tropics, nudibranchs are also common on the muck at Porteau Cove. The most abundant nudibranch at Porteau is the red flabellina (*Flabellina triophina*), but numerous other species, such as the clown nudibranch (*Triopha catalinae*) and the striped nudibranch (*Armina californica*), can also be found moving



Normally found in much deeper water, in the winter black belly eelpouts can be found in shallow water at night. Canon 7D on manual mode, Aquatica A7D, 50/1.4 with a +2 diopter, 1/80th, f14, ISO 100, two Ikelite DS-160 strobes.

over the muck.

The muck is also home to a large number of fishes. During the day blackeye gobies (*Rhinogobiops nicholsii*) and northern ronquils (*Ronquilus jordani*) can be seen perched near the openings to their hidey-holes, while longfin gunnels (*Pholis clemensi*) peer out from under cover. At night, the sandy slope down to the muck seems alive with Pacific snake pricklebacks (*Lumpenus sagitta*) and bay gobies (*Lepidogobius lepidus*). A little deeper on the muck is

where the sinister-looking roughback sculpins (*Chitonotus pugetensis*) spend the night terrorizing the abundant small shrimp that retreat in pulses of a hundred in front of you as you swim close to the bottom.

Perhaps the highlight in terms of fishes, particularly on a winter night dive, is the blackbelly eelpout (*Lycodopsis pacifica*). Blackbelly eelpouts move into shallower water in the winter to spawn, and being a deeper water species, they tend to be more active at night. There are

numerous species of eelpout, but this is the only one encountered at depths accessible by divers.

Active, and abundant, on the muck during the day and night are blackeyed hermit crabs (*Pagurus armatus*) and graceful decorator crabs (*Oregonia gracilis*) festooned with algae and detritus in nature 's perfect ghillie suit! Both species have a tendency to run from the light, but a careful approach and a focus light set on a low setting often works for getting into range for close examination or a photograph.

For most of the muck-associated animals, a dedicated macro set up usually works best in terms of framing - at least for the smaller species. A mid-range zoom lens, with a focal range of 28 to 105mm for example, can also be useful with the larger species. One also has to be mindful of the working distance involved, in terms of keeping the camera and diver a little further away from the easily stirred up bottom. Two strobes are common in macro set ups, and often needed with the dark bottom material. Two bright strobes also allow the use of small apertures which means more of the subject will be in focus.

Given the fact that underwater photography uses up a diver's 'bandwidth', narrowing perception and decreasing awareness, it is all the more important that buoyancy

skills be good enough to 'run in the background'. If you're still fine-tuning buoyancy skills, leave the camera behind for the first few muck dives in order to properly assess your ability to not disturb the muck - you 'll get better images once you do take a camera along, and you'll have dive buddies willing to brave the cold winter water to spot critters for you while swimming over the muck!

There's no surprise that places like Lembeh Strait are famous for muck dives - the bizarre and fascinating animals there seem to defy the logic of evolution and adaptation. However, consider a muck dive at Porteau Cove, it's very likely you'll see animals there you've never seen before!

Lee Newman



© Lisa Newman

Back issues



99p per issue or buy
the complete set for
just £19.95 for all
74 issues (That's less
than 30p per issue!)

Yours to keep
forever.

As you know, the current issue of Underwater Photography is free to download but all of the previous issues, going right back to Issue 1, are still available to download for just 99p per issue.

It's a fantastic reference library chronicling all that has happened in underwater photography over the past 10 years.



Add UwP58 to cart

UwP58 — Jan/Feb 2011, 76 pages.

[Click to show or hide issue contents](#)



Add UwP57 to cart

UwP57 — Nov/Dec 2010, 85 pages.

[Click to show or hide issue contents](#)



Add UwP56 to cart

UwP56 — Sept/Oct 2010, 90 pages.

[Click to show or hide issue contents](#)



Add UwP55 to cart

UwP55 — July/Aug 2010, 75 pages.

[Click to show or hide issue contents](#)

Buy back issues
here