

Sharks in Vancouver Harbour

By Glen Dennison



Infrequently, divers in Howe Sound were reporting encounters with the Bluntnose Sixgill Shark (*Hexanchus griseus*). Several of our dive team members had seen one. So, the question kept coming up, were these transient sharks transiting from Puget Sound? We understood that studies from the Seattle Aquarium had found that these sharks migrate to the north end of the Salish Sea and back, but why did we keep finding them in Howe Sound? Hence the question: Do we have a local, year-round population of Sixgill Sharks?

It was a big question and one I pondered for a while. We needed partners, and to that end I reached out to one of our industrial partners, Aquatica Submarines, but we still needed a shark expert to help us. For our second partner I asked international shark expert, Professor Dr. Chris Harvey-Clark from the east coast at Dalhousie University in Halifax. Now, Dr. Harvey-Clark relishes these types of expeditions and when I asked him if he would like to come out and dive in a submersible looking for sharks, he was 'in' immediately.

The plan was then formulated by the team: we would mark an area near Passage Island in about 375ft of ocean water, drop a marker float and go to work. Next, we set out pieces of chum to bait the water for several days, then prepared and took the 'Stingray' submersible into the depths starting late in the afternoon. To document part of the dive, four members from our SCUBA photo team dropped down to 70ft before the submersible descended and filmed the sub falling into the dark depths. This was the first time I put my divers into the local waters with a concern about sharks and diver safety. Down the Stingray sub went, right to the bottom, stopping very carefully on a gently sloping sandy/muddy bottom. And there we waited.

To our delight we had an endless procession of marine life parade past our upper-world bubble. Squid by the thousand, Spiny Dogfish sharks and rattfish, roamed the depths. Baby octopuses were so curious that they attached themselves to the acrylic bubble giving us an aquarium-type

view, except this time we were in the tank looking out. The hours paced by with light chatter amongst us and an entertaining commentary on the sea life by Dr. Harvey-Clark. The wee hours of the morning were close. Topside both the Aquatica support vessel and the Skyliner lay tethered to the bottom by a deep-water mooring and were closely monitoring us.

Back at the bottom, a hitch-hiking Quillback Rockfish (*Sebastes maliger*) dropped in for a visit and prostrated himself in the carrier basket near the back of the upper section of the pressure hull. Looking in at us, he was near eye-level and close enough we could have touched him, except for the hull barrier between us. Hours later, the submarine lurched a few times, with bumps coming from the stern. Having no direct view or cameras back there, the cause was a mystery. Again, hours went by and I was becoming slightly drowsy. I wondered if we had missed a puzzle piece in finding sharks. It was about that time, with my head in my hand, near the clear bubble, that I noticed a moving grey wall right next to me. It was a large shark right outside the hull - inches from my head. That definitely woke me up! We did it! We had sharks outside the hull. This shark swam away without much fanfare, but we had more excitement to come. Shortly, a second, small juvenile appeared out of the darkness and into our lights. This was an important encounter and observation as this shark was too small to have transited into the area all the way from Puget Sound. It must have been locally born.

Next, we had a small male shark drop in for an extended visit, fully displaying himself with multiple swim-pasts and investigations into the lower rigging of the sub. Our shark-search project was a success! Dawn was coming soon, and nine hours after locking down the hatch, we headed for the surface.

Our experiment demonstrated that it was possible to discovery Sixgill Shark in our coastal waters. Our prize-in-hand was hours of video from the depths of Howe Sound - a world very few get to see - and even fewer who get to spend a long night in complete darkness. We had drawn in the Sixgill Shark almost on demand and had proven, without a doubt, that the animal was present in Vancouver waters. Many more questions have been generated by this project, but now the door is open for further research into this reclusive and mysterious shark.

As a result of this expedition, a joint-authored paper was generated in Sea Technology magazine: <https://mlssbc.files.wordpress.com/2021/03/theurbanshark-by-chris-harvey-clark-and-glen-dennison.pdf>

Watch the exciting Sixgill shark video footage below:

<https://www.youtube.com/watch?v=07OGqhCxasc&t=28s>

What are Sixgill sharks? <https://www.seattleaquarium.org/blog/what-are-sixgill-sharks>