

NEWS FROM THE SFU MARINE RESEARCH LAB

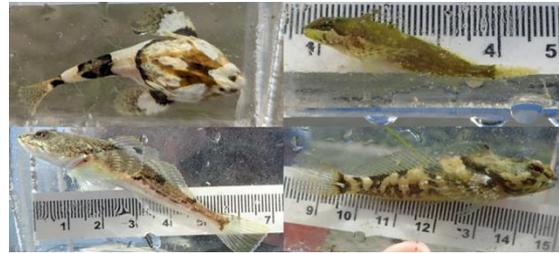


Beach seining near Reed Point Marina.

Simon Fraser University graduate student Joseph Cormier is suiting up in chest waders this summer to see if there are changes in 'what swims beneath' following the closures of the Burrard Thermal Plant and the Flavelle Sawmill along Port Moody's shoreline. Joseph is following in the footsteps of a group of local scientists that created the first inventory of fish at five intertidal sites in the Port Moody Arm. They called their survey 'What Swims Beneath'.

Joseph is setting his seine net over the same clam beds and mollusc-covered rocks sampled in 2010 to compare the intertidal fish community's abundance and diversity.

Joseph is joined by staff and volunteers from the City of Port Moody, Dept of Fisheries & Oceans, Burrard Inlet Marine Enhancement Society, and the Pacific Wildlife Foundation. At most sites, the team can depend on catching gobies, sticklebacks, a diverse set of sculpins, and usually a few pipefish, a beautiful fish that resembles a straightened-out seahorse. The nearest sampling site to the marina docks is just east at Reed Point. With only 8 species found here between May and July 2010, Joseph has more than doubled that number this year with 17 species over the same three months. With still a month left of beach seining, Joseph has lots of results still being extracted from his nets and notebooks.



'A diverse set of sculpins' found at Reed Point: Buffalo Sculpin (top left), Pacific Staghorn Sculpin (bottom left), Sharpnose Sculpin (top right), and Tidepool Sculpin (bottom right).



Bridge view at dusk from the Medusa2

One familiar yet fierce predator of fish is the Double-crested Cormorant. This ancient looking seabird is often seen flying low past Reed Point Marina with its distinguishable shape and wingbeat. Here in Burrard Inlet, they have broken their tradition of nesting on sea cliffs by joining the Pelagic Cormorants on the Iron Workers Memorial Bridge. The bridge has become the largest nesting ground for the Double-crested Cormorant in BC, with an estimated 500 nests this summer.

Not much is known why the provincial population declined by 70% in the early 2000s and remain 'vulnerable to extinction' by provincial definitions. Rachel Stapleton, a graduate student in

SFU's Ecological Restoration program, set out to answer questions about foraging and reproductive success, and explain why the bridge is so productive a colony. After a reconnaissance mission at dusk aboard the Medusa 2 with Captain Rod McVicar, it became clear the Double-crested Cormorants could outsmart the capture methods used in Oregon for attaching GPS tracking tags! In the meantime, Rachel has taken on the task of tracking reproductive success at the bridge and at two sea cliff colonies in Georgia Strait using a time series of high-resolution photos. Rachel is breaking new ground by linking state-of-the-art photogrammetry with machine learning, outsmarting the 'old' methods of manual nest counts.



Some of the 500 Double-crested Cormorant nests on the Iron Workers Memorial Bridge