MARINE EDUCATION CENTRE… AKA THE NEW SFU MARINE RESEARCH LAB

This Spring saw the start of a new chapter in the story of the Marine Education Centre. Indeed, Reed Point Marina graciously agreed for Simon Fraser University to take over the use of the famous blue floating building, formalising a relationship that goes back more than a decade. The space will continue to be shared with the Pacific Wildlife Foundation, a local conservation NGO. But changes are afoot, starting with a new sign that will soon grace the renamed 'Marine Research Lab'.

Dr Isabelle Côté, SFU Professor of Marine Ecology

New research has already started, even as the space is being renovated. This summer, under my guidance, three SFU undergraduates – Kiara, Katrina and Amanda - are taking part in a study of Japanese mud snails. These small snails from the western Pacific were inadvertently brought to BC with oysters destined for aquaculture, and they have now taken over entire beaches on our southern coast. As this is a new study system for me, this summer is an exciting exercise in discovery. The 'snail team' has collected snails from Crescent Beach, where they are super abundant, and learned to identify the parasitic flukes that came over with the introduced snails. We are now planning experiments to see how native barnacles, which often settle on the invasive snails, might slow down snail growth. We also hope to tackle the question of how the snails modify the beaches where they occur in huge numbers. Watch this space for the results! As Japanese mud snails have not reached Burrard Inlet or Indian Arm yet, we are careful to only bring dead snails to the lab and to dispose of the dissected remains away from the sea. It's easy to introduce new marine species to a place where they don't belong, but much harder to get rid of them!

A Japanese mud snail

Invasive mud snails at Crescent Beach

Katrina dissecting a mud snail

Another project on invasive marine species that has just started focuses on introduced fouling tunicates. Some tunicates, also called sea squirts, are major invaders around the world. They love submerged human-made structures like pilings, buoys, ropes and docks, and boat hulls too, which gives them a great means to get around. They compete with native species for tiny planktonic food that they filter out of the water. An even larger problem is that they grow fast, monopolise space, and can overgrow and smother native species like mussels.

Golden-star tunicates, native from the Mediterranean Sea, have made Reed Point Marina their home for many years, offering an unfortunately great opportunity to study their ecology. These invaders readily settle on PVC plates, so the SFU team deployed 60 plates from various marina walkways at the beginning of May.

Golden-star tunicate at Reed Point Marina.

Invertebrate settlement plates hanging from a walkway

The team will be photographing the plates every two weeks to have a record of how the fouling community develops. In September, they will start experiments to understand why some golden-star tunicates are golden while others are grey, green, purple or brown.

Fun fact: Tunicates might look like jelly blobs but they are our closest relatives among invertebrates!! Scientists know this because early in development, tunicates have a structure that is similar to what becomes a vertebrate backbone. Theirs is eventually lost as the animal grows, but that’s an important enough evolutionary similarity to make them closer to us than to other animals without a backbone.