

Wonders of the Salish Sea/Nature Vancouver Intertidal Beach Exploration
Saturday, April 18, 2026

Location	Figurehead Point, Stanley Park
Weather	A sunny spring Saturday
Guides	Rebecca Henson, Sheila Byers, Sharon Adelman
Host organizations	Nature Vancouver and the Wonders of the Salish Sea program, hosted by Georgia Strait Alliance
Attendees	19 (Guides Rebecca, Sharon and myself, Sheila, and WSS Coordinator Deborah, were delighted to introduce people to intertidal exploration—nearly half of those who attended were first-timers—and to share the afternoon with such an eager group of marine enthusiasts)
Resources	<i>Explore the Rocky Shore at Stanley Park</i> field guide
Tidal state	Low tide elevation of 0.44 m at 13:22 PDT

This joint Nature Vancouver and Wonders of the Salish Sea field trip to Stanley Park is now in its 10th year. Over that time, we’ve seen many changes in this very special intertidal environment. In some years, blue mussels were abundant; in others, there were only a few. We witnessed the devastating effects of sea star wasting disease (SSWD)—mostly on ochre and mottled sea stars—and, happily, their gradual return to the rocky point area. The biodiversity of this mini, mostly rocky shore ecosystem, always provokes a sense of wonder especially when associated with the intertidal stressors that affect fauna and flora that live there. This year was no exception.

THE BIG PICTURE: Intertidal Diversity and Stressors

As in 2025, the common acorn barnacle, *Balanus glandula*, population continued to dominate the coverage of boulders, rocks and seawall off Figurehead Point in February and March of 2026. But by April the scene had changed. The adult barnacles were absent, at first in small, isolated sections, and then completely, leaving behind their indicative white calcareous-based scars. Young, barely visible brownish barnacles were occupying most of the rock surfaces, attracted by the chemosensory cues of the white scars. Juvenile barnacles are a good sign; barnacles are important filter-feeders and food for limpets, sea stars and fishes.



Seawall

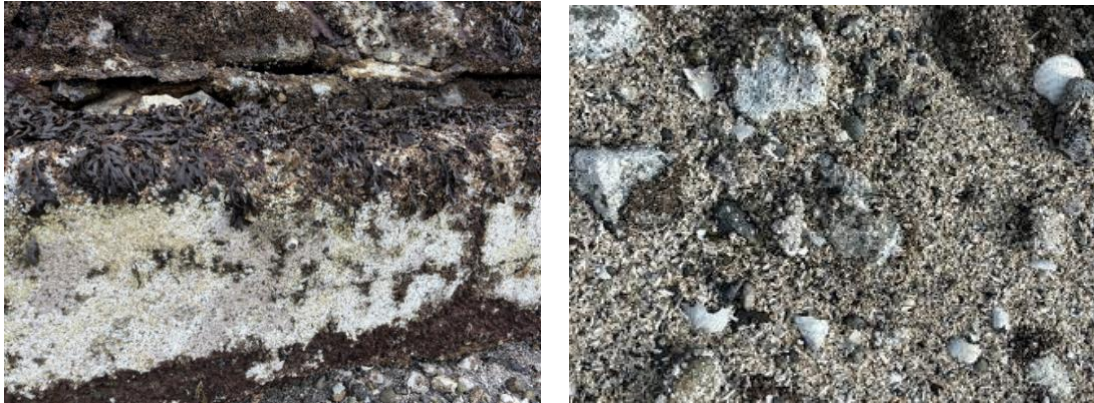
Green sea lettuce

Young brownish common barnacles

Small white scar patches of acorn barnacle calcareous bases

Young blue mussels amongst red seaweeds, e.g., Turkish washcloth
Photo by Sheila Byers March 23, 2026

Compare the above image with small losses of barnacles (white scar patches) to the large areas of white scars (below left), accompanied by the adjacent intertidal floor covered with broken up barnacles, called shell hash (below right).



Photos: Sheila Byers, Feb 22 and March 23, 2026

More dramatically, however, was the notable absence of adult barnacles! What could have caused this sudden loss within a 2-month period?

Considerations:

- 1/ Did the bulk of the adult barnacles die off naturally due to old age (life span about 10 years)?
- 2/ Did the rainy spring weather dilute the salinity of the surface waters sufficiently, and for a long enough time, to stress the barnacle tolerance levels and prevent feeding?
- 3/ Did early, warmer spring temperatures impact the barnacles and the mussels? Are either or both of these intertidal species adapted to, and able to tolerate, the increasing warmer temperatures? As demonstrated by the Blob 'heat dome' over BC from June 25 to July 1, 2021, literally baked both barnacles and mussels on the rocks during an extensive daytime hot and very low spring tide. [The massive marine heatwave still persists in the Pacific Ocean]
- 4/ Did some random piece of wood, log or rock get smashed against the seawall by turbulent waves, causing the barnacles to dislodge? Or,
- 5/ Did the predation of the purple and mottled sea stars, following their recovery from SSWD, continue their role of consuming barnacles or mussels? Small patches of absent barnacles could be attributed to hungry individual purple stars, especially with their mobility and access to higher intertidal areas during the spring tides. But it seems unlikely that entire areas on boulders and the seawall could be impacted by just a few individuals. Or does it?



Purple or ochre sea star and leather star. Photo: Patrick Lambros, April 18, 2026

Life in the intertidal area is complicated and all the species that live between the tides have their own unique adaptations to their habitat (or home), and their environment. The bigger picture climate changes associated with salinity and temperature are two such stressors that

determine the composition of an intertidal community and the interactions of species therein. Recent research (Coyle *et al.*, 2025) identifies salinity as a major factor in controlling a community structure and species interactions.



Pacific oyster attached to a rock (left). Note white barnacle scars on both oyster and rock surfaces. Large, thatched barnacle (right blue arrow). Photos: Sheila Byers, March 23, 2026

Clusters of the Pacific oyster, *Magallana gigas* (AIS), on the seawall over the past few years are now scattered over the sandy beach. [AIS: alien invasive species]

The thatched barnacle, *Semibalanus cariosus*, previously sparse on the rocky point boulders, have now spread westward onto the seawall and increased in abundance.

More Wonderful Discoveries:

Briefly, a few Seaweeds from high to low intertidal: rockweed, *Fucus distichus*; green rope, *Acrosiphonia coalita*; nori, *Pyropia* spp.; red filaments, *Sargassum robusta*; Turkish washcloth, *Mastocarpus papillatus*; green lettuce, *Ulva* spp.; Turkish towel, *Chondracanthus* sp.; splendid iridescent seaweed, *Mazzaella splendens*; wireweed, *Sargassum muticum* (AIS); five-ribbed or seersucker kelp, *Costaria costata*; winged kelp, *Alaria marginata*; sugar wrack, *Saccharina latissima*; and bull kelp, *Nereocystis luetkeana*.

More information about red, brown and green seaweeds: <https://linktr.ee/seaweedteaching>

Apart from the Pacific oysters, a diversity of other Molluscs inhabited this intertidal area. Mask limpets, *Lottia persona*, were prolific on the sea wall and in crevices above the rockweed. A variety of limpets—the ribbed limpet, *Lottia digitalis*, shield limpet, *Lottia pelta* and plate limpet, *Lottia scutum*, were firmly attached on rocks mostly in the mid intertidal area.

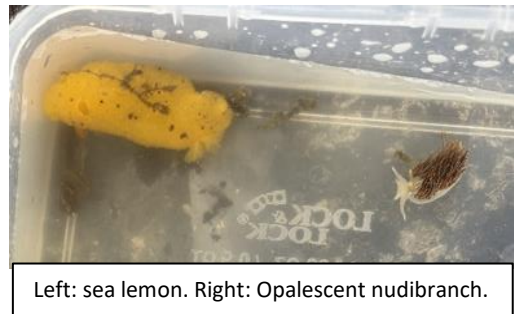
The underside of rocks can be a safe haven for many species, especially juveniles. Under or on other rocks, there were two eight-plated chitons: the lined chiton, *Tonicella lineata* and hairy chiton, *Molpalia kennerleyi*.



Lined chiton above a juvenile mottled sea star. Photo: Sheila Byers. Mossy chiton photo: Harvey Dueck.
Both photos taken April 18, 2026

The striking opalescent (aeolid) nudibranch, *Hermisenda crassicornis*, is often seen at Figurehead Point, but the presence of two other sea slugs or nudibranchs offered great surprises.

The Monterey sea lemon, *Doris montereyensis*, with black-tipped tubercles was stunning. The most challenging find, however, was a colour variant of the Nanaimo nudibranch, *Acanthodoris nanaimoensis*. With yellow tips of tiny papillae and narrow yellow rim of mantle, the Nanaimo dorid has a grey phase with an interesting dorsal pattern, as well as maroon tipped gills and sensory organs (rhinophores).



Left: sea lemon. Right: Opalescent nudibranch.



Nanaimo dorid with grey pattern phase (dorsum); thin yellow rim of mantle (ventrum).
Nudibranch photos: Sheila Byers, April 18, 2026

The most prevalent clams included the butter clam, *Saxidomus gigantea*; fat gaper, *Tresus capax*; Nuttall's cockle, *Clinocardium nuttallii*; bent-nose macoma, *Macoma nasuta*; softshell clam, *Mya arenaria* (AIS), and the purple mahogany clam, *Nuttallia obscurata* (AIS).

Becoming more prolific over the past few years, the frilled dogwinkle, *Nucella lamellosa*, was in prime mating mode for the April field trip. The cluster of snails surround its fertilized characteristic, straw-coloured egg sacs. Do the snails feast on barnacles; or, are their radula (teeth-like structure) strong enough to bore through the thick shells of the Pacific oyster?



The tiny, checkered periwinkles, *Littorina scutulata*, were abundant everywhere, especially amongst the seaweed and in crevices of the seawall. Although buried beneath the sediment surface, the presence of bivalve species was evident by their empty shells scattered amongst the rocks. In recognition of your presence, perhaps you were already surprised by a squirt of water as the clam burrowed deeper into the sediment!

Besides the barnacles noted earlier, other Crustacea were abundant in this ecosystem. The green or hairy shore crab, *Hemigrapsus oregonensis*, hermit crabs, and the red rock crab, *Cancer productus*, and exoskeletons of the Dungeness crab, *Metacarcinus magister* were scattered throughout the rocky and sandy intertidal areas.



Red rock crab. Photo: Harvey Dueck. Northern kelp crab pair and stout coastal shrimp. Photos: Sheila Byers.
All photos April 18, 2026

Especially interesting were the mating pair of the Northern kelp crab, *Pugettia producta*. The male had a walking appendage snagged beneath a heavy rock when the rock was turned on its side to view the underside. The walking leg was released and with luck, the pair are free to mate. Other crustaceans hiding amongst the rocks included several shrimps, possibly the stout coastal shrimp, *Heptacarpus brevirostris*.

The underside of rocks is also popular for protecting juveniles of the spiny-skinned Echinoderms, such as the mottled star, *Evasterias troschelii*, the purple star, *Pisaster orchaceus*, and juvenile sea urchins, *Strongylocentrotus* spp.



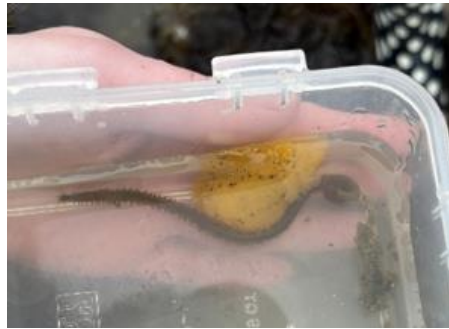
Adults of the red or orange sea cucumber are often seen with their colourful feeding tentacles reaching out from beneath the rocks to feed. But an unexpected occurrence and rarely seen surprise was the giant California sea cucumber, *Apostichopus californicus*, thanks to the great low spring tide.

Photo: Patrick Lambros, April 18, 2026.

Last but not least are the Worms!! Three bristleworms or polychaetes were observed: likely the fragile ruffled scaleworm, *Arctone fragilis*, on the underside of the mottled sea star, a banner sea nymph, *Nereis vexillosa* hugging the Monterey sea lemon, and an unknown bloodworm species of the family Glyceridae. Bristleworms have ring-like segments, parapodia or feet protruding from each segment and they don't like being exposed to light!



Polychaetes: scale worm

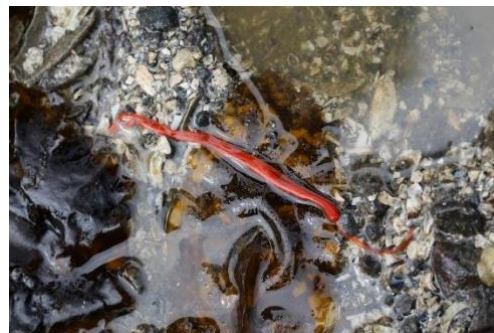


banner sea nymph



bloodworm

Several specimens of the purple-backed ribbon worm, *Paranemertes peregrina*, and the orange ribbon worm, *Tubulanus polymorphus*, were seen stretching their long flat ribbon-like bodies across the substrate. Ribbon worms differ from bristleworms in lacking segments and bristles.



Purple-backed ribbon worm (with pink bloodworm) and orange ribbon worm.
Photo by Sheila Byers (left) and Harvey Dueck (right). Both taken April 18, 2026.

While exploring the intertidal area, care must always be taken to prevent damage to the flora and fauna during any of our activities. We are treading on their habitats, their homes, so please tread carefully. In particular, when lifting rocks to examine the undersurface be aware of the many juveniles that seek refuge there, whether the tide is in or out. Once an undersurface is examined, please carefully return the rock to its original position so as not to crush or damage the juvenile inhabitants.

Imagine and experience how lucky we are to enjoy so much biodiversity in this small intertidal ecosystem at Stanley Park, inside Vancouver harbour!! The more we learn the more we appreciate the food web interactions and dependencies, and the need to protect the individual habitats and larger ecosystem communities!

Sheila Byers, June 1, 2026



Figurehead Point, Vancouver Harbour. Photo: Harvey Dueck, April 18, 2026