Photos of wave-exposed rocky intertidal locations along the Atlantic coast of Nova Scotia, Canada

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This article shows pictures of 9 wave-exposed rocky intertidal locations spanning 415 km of the Atlantic coast of mainland Nova Scotia, Canada. These locations face the open Atlantic Ocean. A map indicating their position and the corresponding geographic coordinates are given in the next page. The pictures were taken at low tide between 2013 and 2021. These pictures illustrate the habitats and organisms (algae and invertebrates) that were studied at mid-to-high intertidal elevations at these locations. These elevations are indicated in some pictures by plastic mesh scourers, temperature loggers, and PVC plates attached to the rocky substrate and by experimental substrate clearings.

As of August 2022, the following publications have used data collected in those habitats:

Scrosati, R.A. & J.K. Holt (2021). Recruitment and post-recruitment dynamics of the barnacle *Semibalanus balanoides* on a wave-exposed headland in Atlantic Canada. **Frontiers in Marine Science** 8: article 799514.

Scrosati, R.A., M.J. Freeman & J.A. Ellrich (2020). The subhabitat dependence of biogeographic pattern. **Frontiers in Ecology and Evolution** 8: article 550612.

Scrosati, R.A., J.A. Ellrich & M.J. Freeman (2020). Half-hourly changes in intertidal temperature at nine wave-exposed locations along the Atlantic Canadian coast: a 5.5-year study. **Earth System Science Data** 12: 2695-2703.

Scrosati, R.A. & J.A. Ellrich (2020). Latitudinal and seasonal changes in intertidal sea surface temperature along the Atlantic coast of Nova Scotia, Canada. **Frontiers in Marine Science** 7: article 592.

Scrosati, R.A. & J.A. Ellrich (2020). Marked contrast in wind-driven upwelling on the southeastern Nova Scotia coast in July of two years differing in ENSO conditions. **Oceanological and Hydrobiological Studies** 49: 81-87.

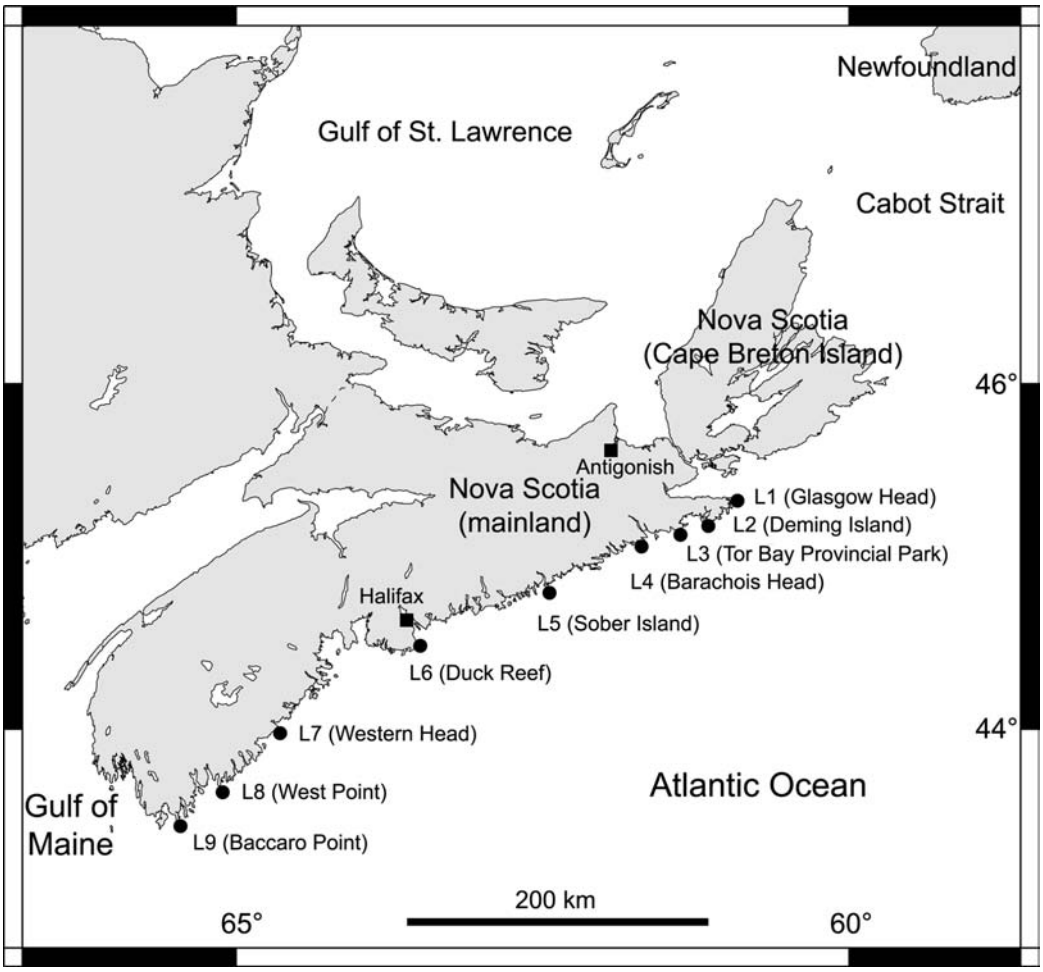
Scrosati, R.A. (2020). Upwelling spike and marked SST drop after the arrival of cyclone Dorian to the Atlantic Canadian coast. **Journal of Sea Research** 159: article 101888.

Scrosati, R.A. (2020). Effects of intertidal elevation on barnacle recruit density and size in wave-exposed habitats on the Atlantic Canadian coast. **Northeastern Naturalist** 27: 186-194.

Scrosati, R.A. (2020). Cyclone-driven coastal upwelling and cooling depend on location relative to the cyclone's path: Evidence from Dorian's arrival to Atlantic Canada. **Frontiers in Marine Science** 7: article 651.

Scrosati, R.A. & J.A. Ellrich (2019). A 5-year study (2014-2018) of the relationship between coastal phytoplankton abundance and intertidal barnacle size along the Atlantic Canadian coast. **PeerJ** 7: article e6892.

Scrosati, R.A. & J.A. Ellrich (2018). Benthic-pelagic coupling and bottom-up forcing in rocky intertidal communities along the Atlantic Canadian coast. **Ecosphere** 9: article e02229.



Code	Location name (geographic coordinates)
L1	Glasgow Head (45.3203, -60.9592)
L2	Deming Island (45.2121, -61.1738)
L3	Tor Bay Provincial Park (45.1823, -61.3553)
L4	Barachois Head (45.0890, -61.6933)
L5	Sober Island (44.8223, -62.4573)
L6	Duck Reef (44.4913, -63.5270)
L7	Western Head (43.9896, -64.6607)
L8	West Point (43.6533, -65.1309)
L9	Baccaro Point (43.4496, -65.4697)


Canso Islands
National
Historic Site
Tittle Road
Canso
Three Mile Lake
16
Durells Island
Chapel Gully Trail
L1
Hazel Hill
Andrew Island
Little Dover
Map
Black Duck Cove
Provincial Park
Google
Imagery ©2021 CNES / Airbus, Landsat / Copernicus, Maxar Technologies, Map data ©2021 Google
Canada
Terms


Union St
Sign in
Union St
Union St
L1 - surveyed areas
Map
Google
Imagery ©2021 CNES / Airbus, Maxar Technologies, Map data ©2021
Canada
Terms
Send feedback
50 m


Sign in
Lower Whitehead
Pond Cove
Doliver Cove
Rocky Lake
Back Cove
Bread Cove
Deming Island
Charlies Island
Whale Cove
Sand Cove
The Gap
Turtle Rock
Inner Gull Ledge
Three Top Island
L2
Net Rock
Map
Google
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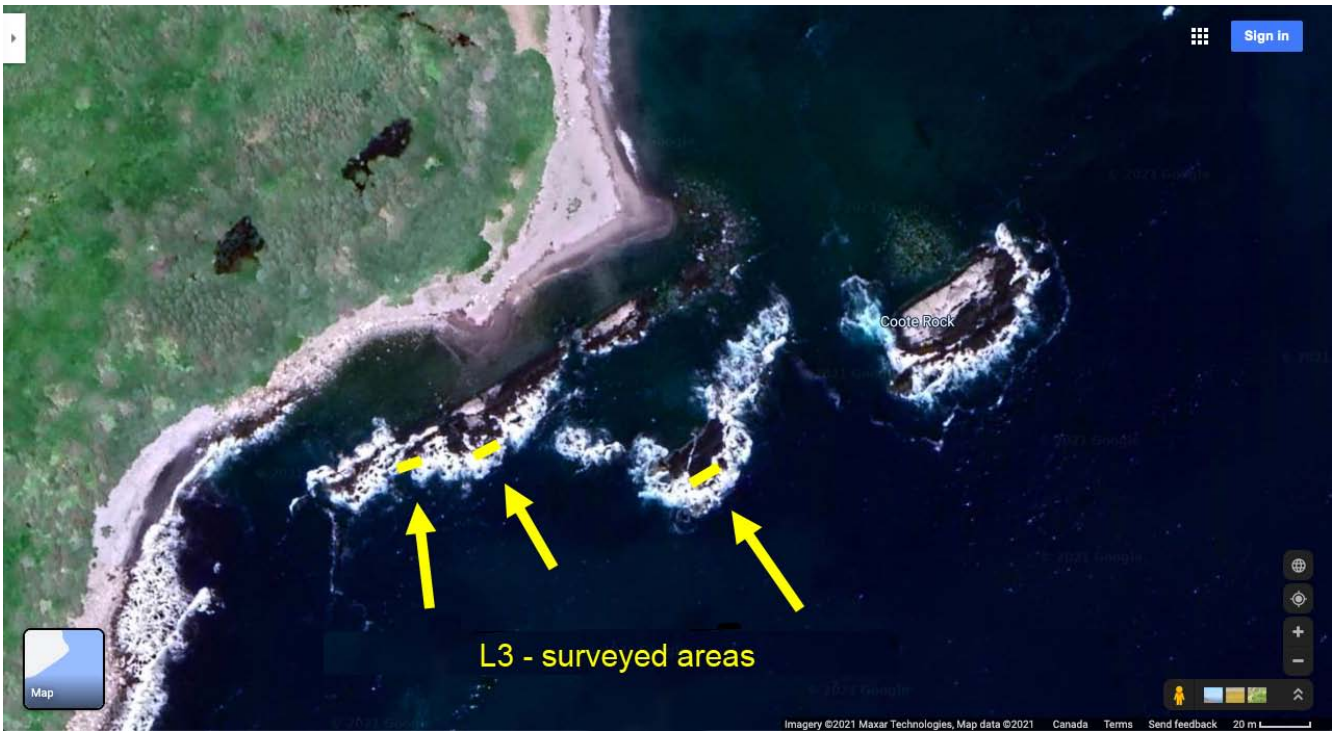
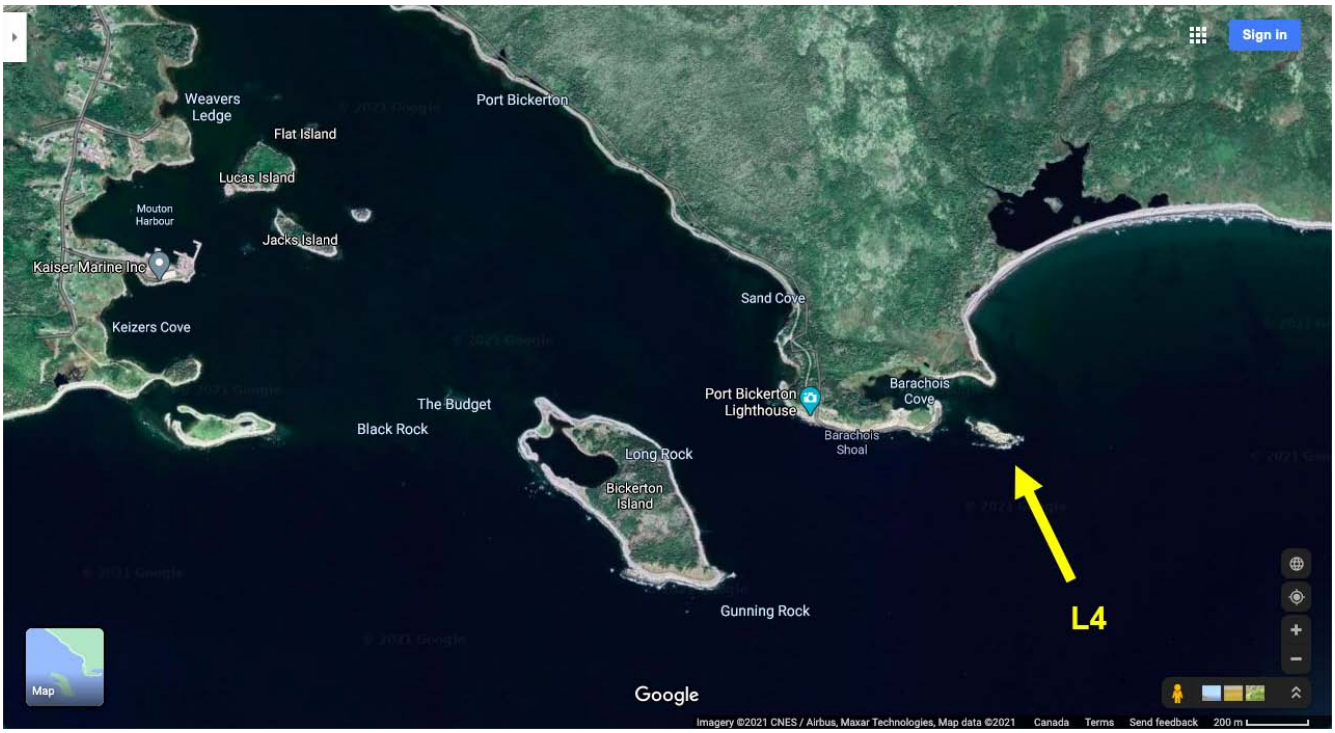
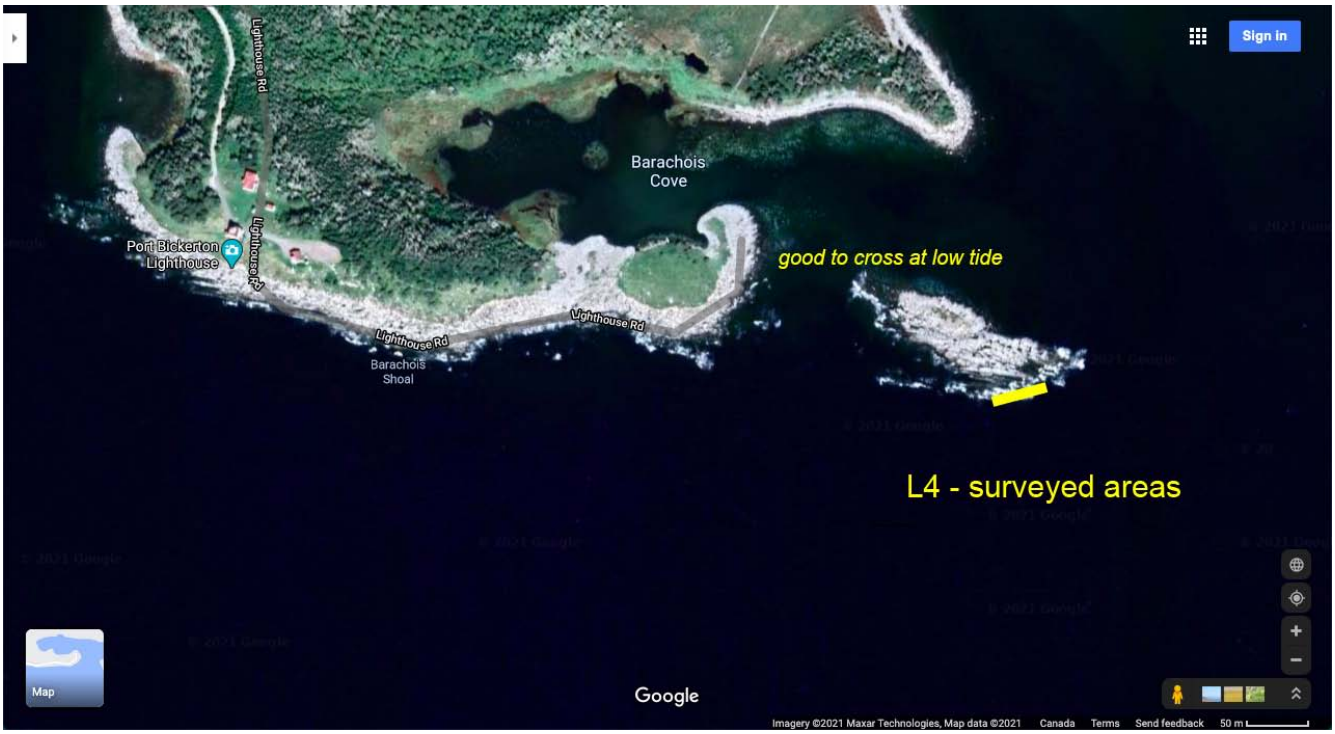
Sign in
Whitehead Rd
Deming Island
L2 - surveyed areas
Map
Google
Imagery ©2021 Maxar Technologies, Map data ©2021 Canada Terms Send feedback 50 m


Tor Bay
Sign in
Little Lake
Tor Bay Fisheries
Webber Cove
Tor Bay Provincial Park
Gull Island Cove
Long Ledge
Jarvis Ledge
Gull Island
Round Rock
Bones Ledge
Coote Rock
L3
Map
Imagery ©2021 CNES / Airbus, Maxar Technologies, Map data ©2021 Canada Terms Send feedback 200 m


Sign in
Coote Rock
L3 - surveyed areas
Map
Imagery ©2021 Maxar Technologies, Map data ©2021 Canada Terms Send feedback 20 m


Sign in
Weavers Ledge
Port Bickerton
Flat Island
Lucas Island
Mouton Harbour
Jacks Island
Kaiser Marine Inc
Sand Cove
Keizers Cove
The Budget
Black Rock
Port Bickerton Lighthouse
Barachois Cove
Barachois Shoal
Long Rock
Bickerton Island
Gunning Rock
L4
Map
Google
Imagery ©2021 CNES / Airbus, Maxar Technologies, Map data ©2021 Canada Terms Send feedback 200 m


Sign in
Lighthouse Rd
Barachois Cove
Port Bickerton Lighthouse
Lighthouse Rd
good to cross at low tide
Lighthouse Rd
Lighthouse Rd
Barachois Shoal
L4 - surveyed areas
Map
Google
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Sign in
Marine Dr
Nova Scotia Trunk Hwy 7
Sheet Harbour Passage
Mushaboom
Taylor Head Provincial Park
7
Sober Island
Marine Dr
Spry Bay
Taylors Head
Map
Google
L5
Imagery ©2021 CNES / Airbus, Landsat / Copernicus, Maxar Technologies, Map data ©2021 Google Canada Terms Send feedback 1 km


Sign in
Geddes Cove
Fishery Island
Map
L5 - surveyed areas
Google
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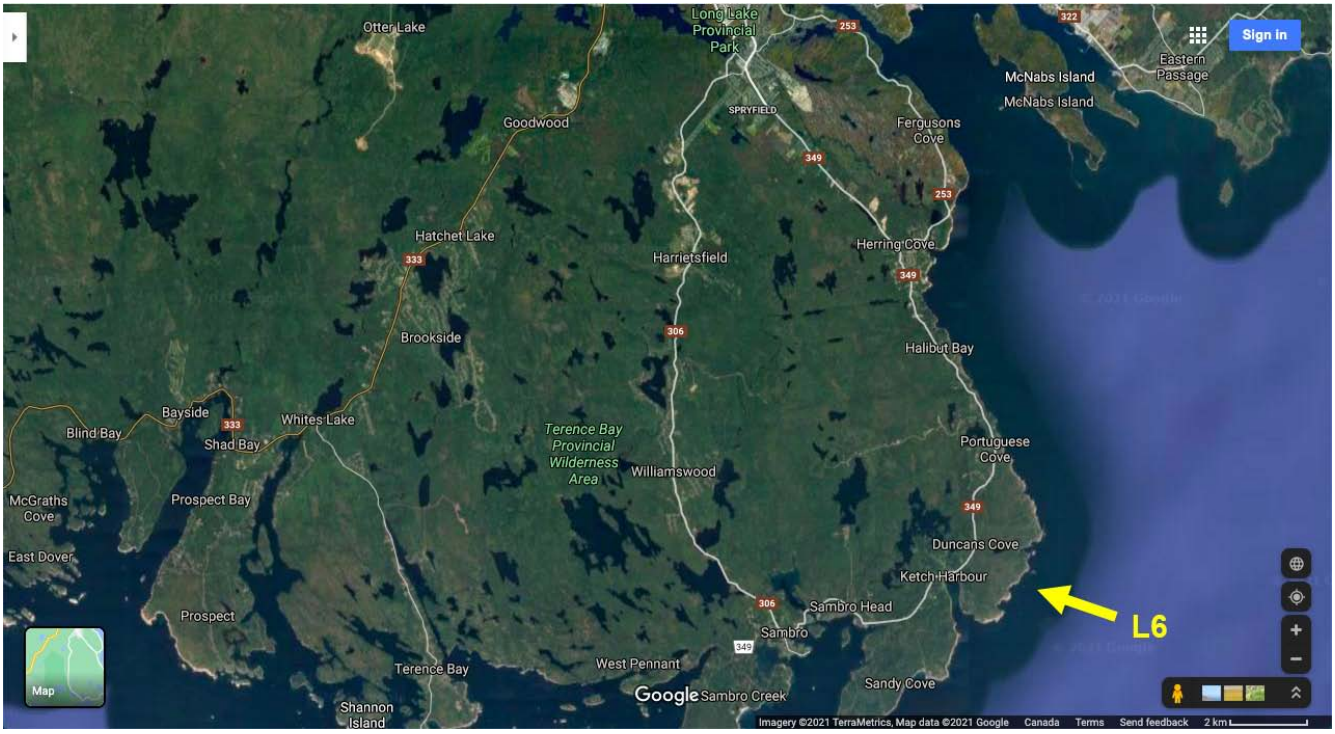
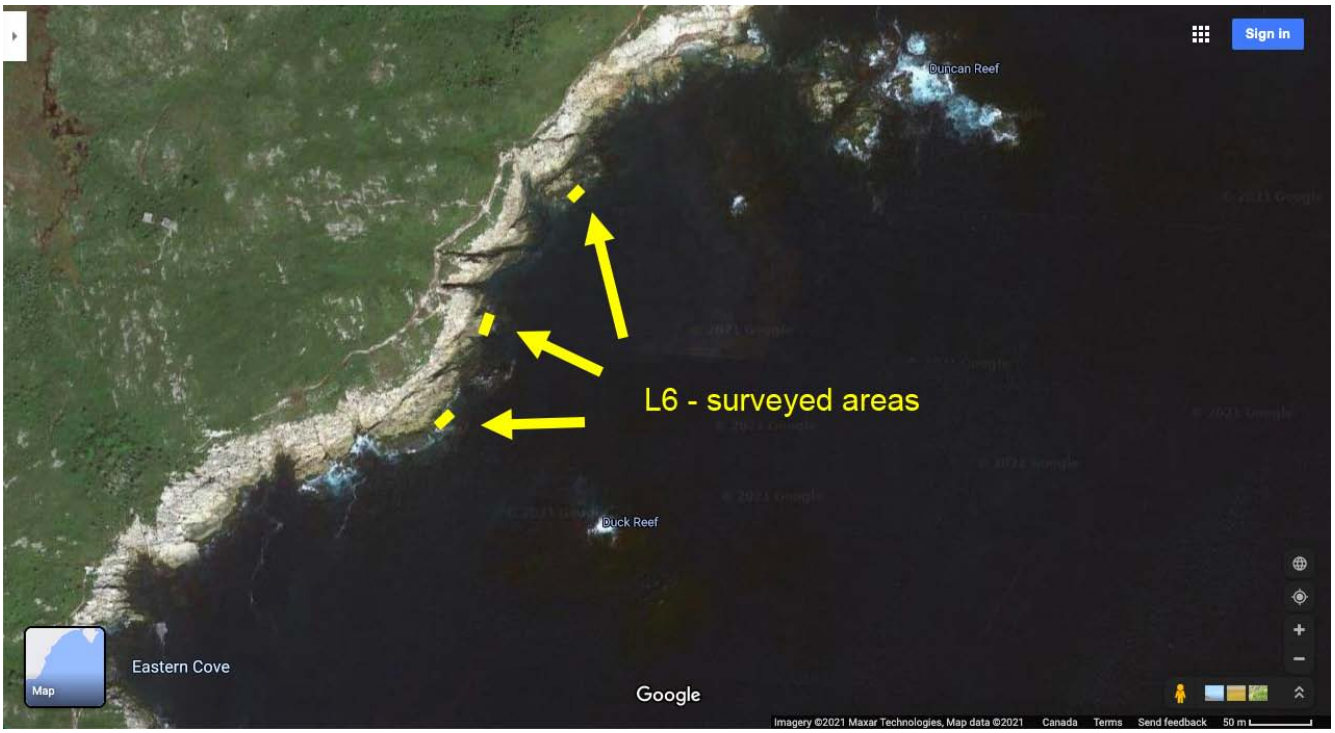

Otter Lake
Long Lake Provincial Park
253
322
Sign in
Eastern Passage
McNabs Island
McNabs Island
SPRYFIELD
Goodwood
Fergusons Cove
349
253
Hatchet Lake
333
Harrietsfield
Herring Cove
349
306
Brookside
Halibut Bay
Bayside
Blind Bay
333
Shad Bay
Whites Lake
Terence Bay Provincial Wilderness Area
Williamswood
Portuguese Cove
McGraths Cove
Prospect Bay
349
East Dover
Duncans Cove
Ketch Harbour
306
Sambro Head
L6
Prospect
Sambro
349
Terence Bay
West Pennant
Sandy Cove
Map
Google
Sambro Creek
Shannon Island
Imagery ©2021 TerraMetrics, Map data ©2021 Google
Canada
Terms
Send feedback
2 km


Sign in
Duncan Reef
L6 - surveyed areas
Duck Reef
Eastern Cove
Map
Google
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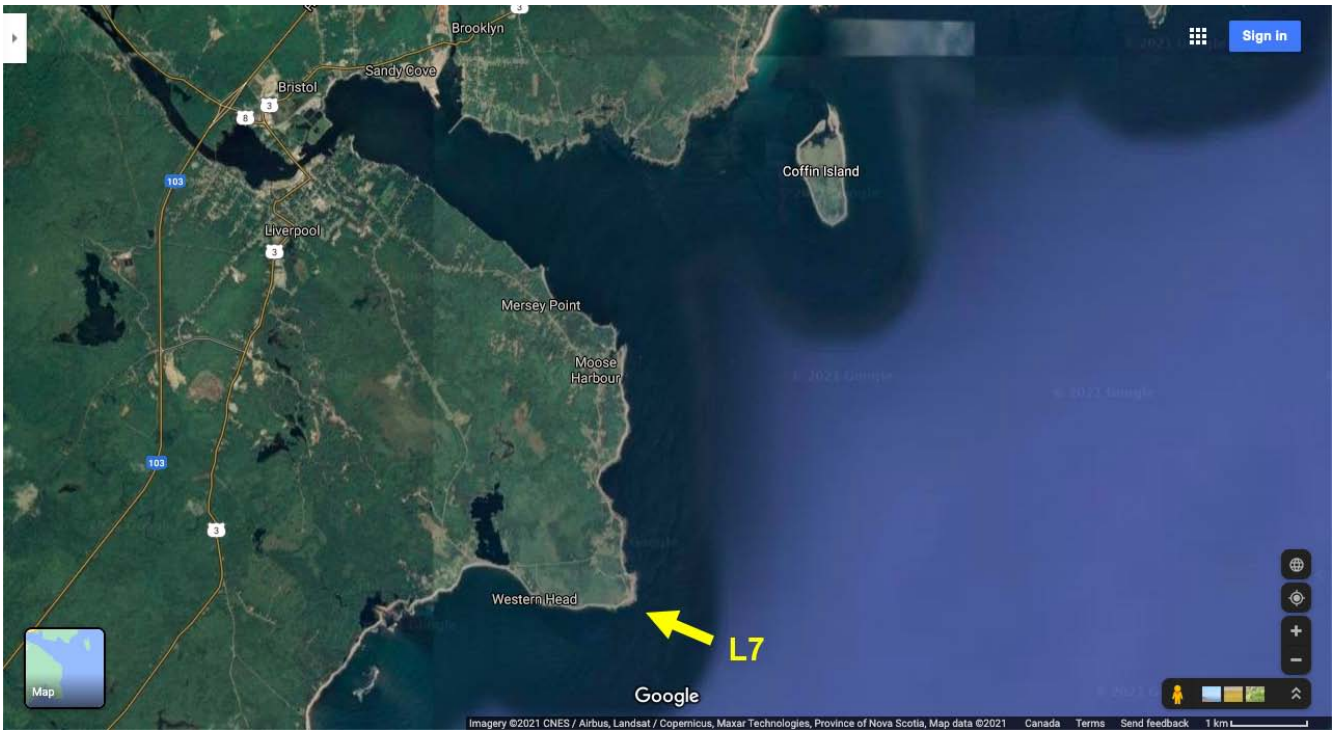
Canada
Terms
Send feedback
50 m


Brooklyn
Sandy Cove
Bristol
Coffin Island
Liverpool
Mersey Point
Moose Harbour
Western Head
L7
Sign in
Map
Google
Imagery ©2021 CNES / Airbus, Landsat / Copernicus, Maxar Technologies, Province of Nova Scotia, Map data ©2021 Canada Terms Send feedback 1 km


Breakwater Rd
Breakwater Rd
Western Head Lighthouse
L7 - surveyed areas
Sign in
Map
Google
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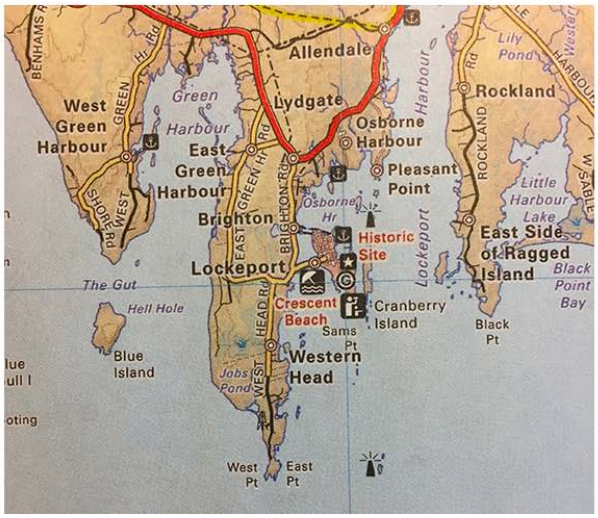
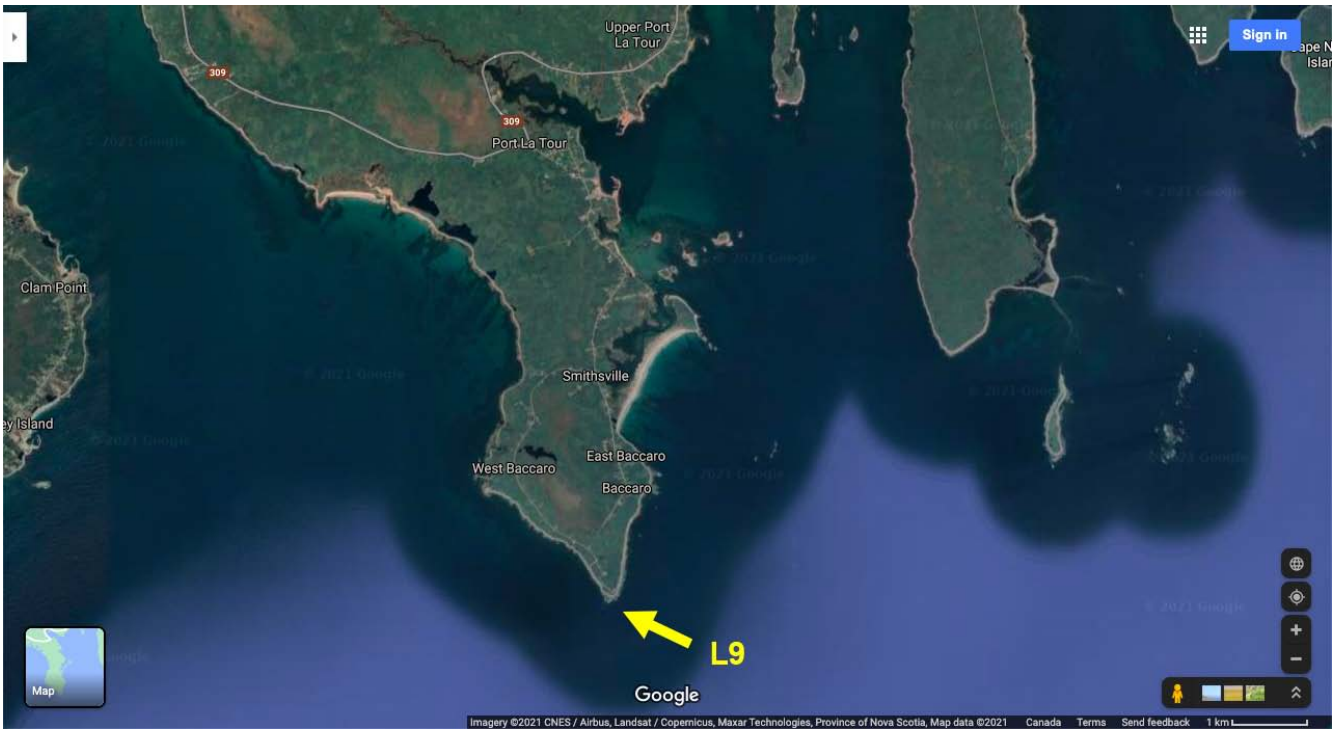
Sign in
Jordan Bay
Lockeport
Matthews Lake
Arnold
Lower
Jordan Bay
Western Head
misleading name - ignore it!
L8
Google
Map
Imagery ©2021 CNES / Airbus, Landsat / Copernicus, Maxar Technologies, Province of Nova Scotia, Map data ©2021
Canada
Terms
Send feedback
1 km


misleading name - ignore it
Western Head
Roaches Cove
Sign in
L8 - surveyed areas
Myrtle Cove
East Point
Map
see the name "West Point"
used in the map below
Google
Imagery ©2021 Maxar Technologies, Province of Nova Scotia, Map data ©2021
Canada
Terms
Send feedback
100 m


Allendale
Lydgate
West Green Harbour
East Green Harbour
Brighton
Lockeport
Osborne Harbour
Pleasant Point
Rockland
Lily Pond
Little Harbour Lake
East Side of Ragged Island
Black Point Bay
Historic Site
Crescent Beach
Sams Pt
Cranberry Island
Black Pt
Western Head
Jobs Pond
Blue Island
The Gut
Hell Hole
West Pt
East Pt


Upper Port
La Tour
309
309
Port La Tour
Clam Point
Smithsville
East Baccaro
West Baccaro
Baccaro
L9
Google
Map
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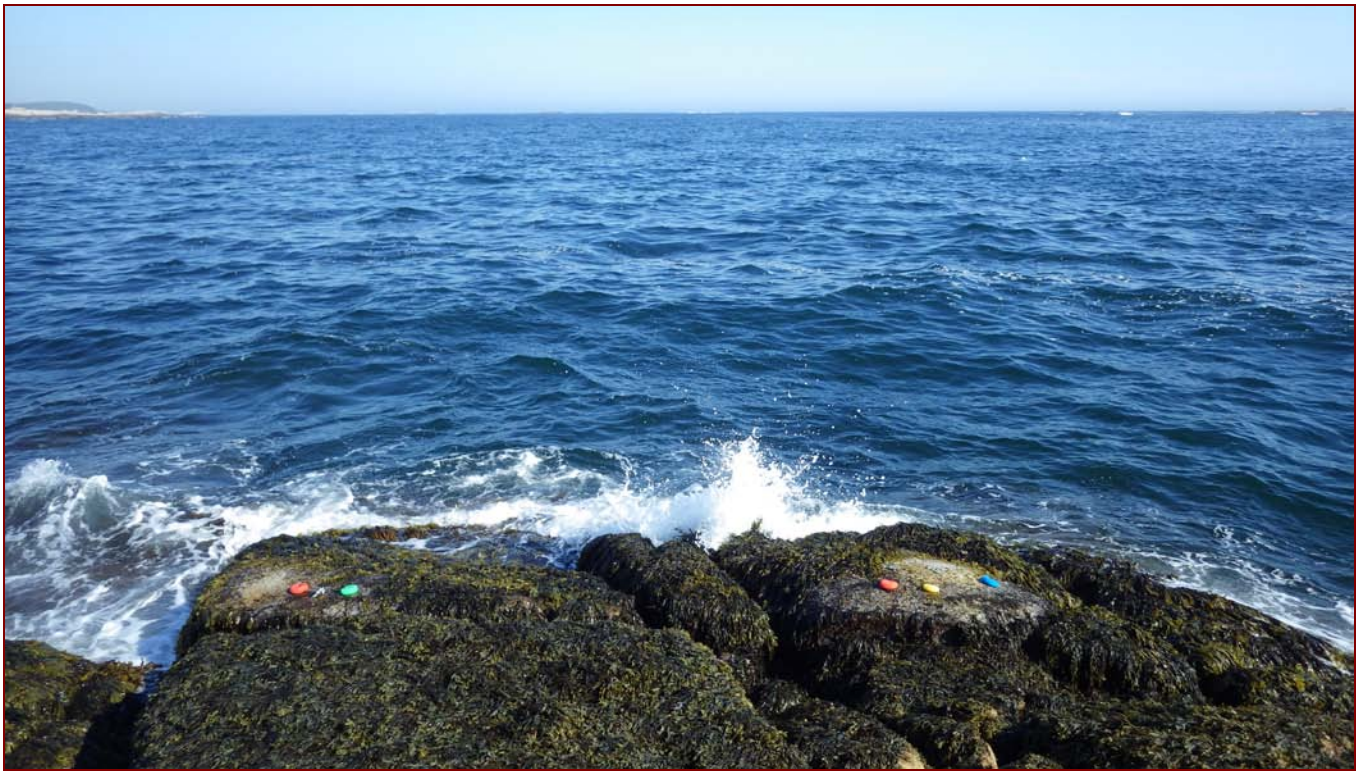
Imagery ©2021 CNES / Airbus, Landsat / Copernicus, Maxar Technologies, Province of Nova Scotia, Map data ©2021 Canada Terms Send feedback 1 km


4/2011
Baccaro Point
lighthouse
L9 - surveyed areas
Image © 2021 Province of Nova Scotia
Google Earth
1985
43°27'01.47" N 65°28'15.37" W elev 2 m eye alt 317 m

L1 (Glasgow Head). The plastic mesh scourers shown in the picture were attached to the mid-to-high intertidal zone to measure mussel recruitment. A temperature logger is also shown attached to the substrate. The rocky substrate also had extensive clearings to measure barnacle recruitment.

L1 (Glasgow Head). View after the barnacle recruitment season, which spans May–June every year. The plastic mesh scourers and experimental substrate clearings indicate the mid-to-high intertidal zone.

L2 (Deming Island). Typical view of the intertidal zone, normally covered by an abundant canopy of the seaweed *Fucus* (except when intense scour by drift sea ice occurs at the end of the cold season, which occurs only in some years - see the next photos).



L2 (Deming Island). View towards the sea, showing mussel recruit collectors (plastic mesh scourers) and a temperature logger at the mid-to-high intertidal zone.

L2 (Deming Island). Arrival of drift sea ice (coming from the Gulf of St. Lawrence, where it had formed during the winter) on 3 April 2014. The intertidal zone is seen in this photo still covered extensively by the alga *Fucus*.

L2 (Deming Island). Drift sea ice (coming from the Gulf of St. Lawrence, where it had formed during the winter) as seen reaching the coast of L2 on 3 April 2014. The intertidal zone is seen in this photo still covered extensively by the alga *Fucus*.

L2 (Deming Island). Remains of drift sea ice (10 April 2014).

L2 (Deming Island). Widespread intertidal disturbance as seen on 30 April 2014 caused by drift sea ice in early April 2014. The small PVC plates were attached to the mid-to-high intertidal zone.

L2 (Deming Island). Recolonization by barnacles (*Semibalanus balanoides*) as seen on 15 July 2014 after the widespread disturbance caused by drift sea ice in early April 2014. The plastic mesh scourers (mussel recruit collectors) shown in the picture indicate the mid-to-high intertidal zone.

L2 (Deming Island). Widespread recolonization by canopies of the alga *Fucus* as seen on 5 November 2014 after the extensive intertidal disturbance caused by drift sea ice in early April 2014.

L2 (Deming Island). Widespread recolonization by canopies of the alga *Fucus* as seen on 24 March 2015 after the extensive intertidal disturbance caused by drift sea ice in early April 2014.

L2 (Deming Island) as seen on 26 June 2015, exhibiting abundant canopies of the alga *Fucus*. The individual is standing at the high intertidal boundary.

L2 (Deming Island). Abundant *Fucus* canopies covering the intertidal zone on 12 April 2017.

L2 (Deming Island). Canopies of the alga *Fucus vesiculosus* covering the intertidal substrate. The inner frame of the PVC quadrat measures 10 cm x 10 cm.

L3 (Tor Bay Provincial Park)

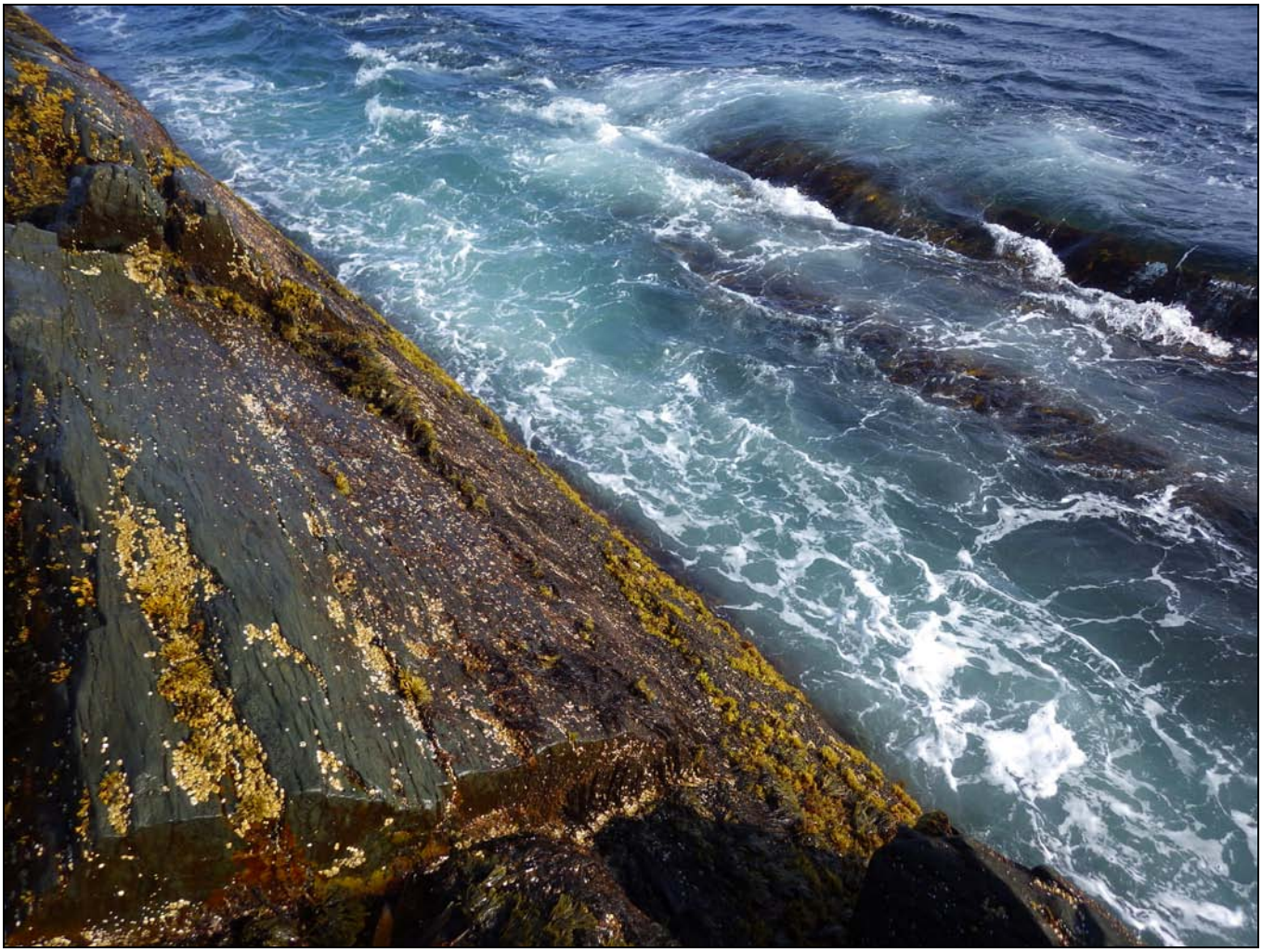
L3 (Tor Bay Provincial Park). Typical wave-exposed intertidal areas.

L3 (Tor Bay Provincial Park). Extensive intertidal disturbance (evident given the almost absence of macroalgae) as seen on 23 June 2014 caused by drift ice in early April 2014. The plastic mesh scourers and the PVC plates indicate the mid-to-high intertidal zone.

L3 (Tor Bay Provincial Park). Wave approaching intertidal areas.

L3 (Tor Bay Provincial Park). Wave hitting the shore by the sampling sites, making it impossible to work at the intertidal zone on that day (spring 2014).

L4 (Barachois Head). Mussel recruit collectors (plastic mesh scourers), substrate clearings to measure barnacle recruitment, and a temperature logger established at the mid-to-high intertidal zone.



L4 (Barachois Head). Vertical intertidal gradient from high to low elevations.

L4 (Barachois Head). Day with strong wave action. The plastic mesh scourers (mussel recruit collectors) indicate the mid-to-high intertidal zone.

L4 (Barachois Head). Wave hitting the shore. The plastic mesh scourers (mussel recruit collectors) indicate the mid-to-high intertidal zone.

L5 (Sober Island). Plastic mesh scourers to measure mussel recruitment, PVC plates covered with Safety-Walk tape to measure barnacle recruitment, and substrate clearings to measure barnacle recruitment established at the mid-to-high intertidal zone.

L5 (Sober Island). Plastic mesh scourers to measure mussel recruitment, PVC plates with Safety-Walk tape to measure barnacle recruitment, substrate clearings to measure barnacle recruitment, and a temperature logger established at the mid-to-high intertidal zone.

L6 (Duck Reef)

L6 (Duck Reef)

L6 (Duck Reef). Blue mussels (*Mytilus* spp.), barnacles (*Semibalanus balanoides*), and the alga *Fucus distichus edentatus*.

L7 (Western Head)

L7 (Western Head). Wave crashing on the shore.

L7 (Western Head)

L7 (Western Head). Patches dominated by barnacles (*Semibalanus balanoides*) in natural and experimentally cleared areas of the substrate seen among substrate areas dominated by the alga *Fucus* and blue mussels, *Mytilus* spp. The PVC quadrat indicates the mid-to-high intertidal zone.

L7 (Western Head). Substrate areas dominated by canopies of the alga *Fucus distichus edentatus*. The experimental substrate clearings and PVC plates indicate the mid-to-high intertidal zone.

L7 (Western Head). The alga *Fucus distichus edentatus*.

L7 (Western Head). Blue mussels (*Mytilus* spp.), barnacles (*Semibalanus balanoides*), and the alga *Fucus distichus edentatus*. The inner frame of the PVC quadrat measures 10 cm x 10 cm.

L7 (Western Head). Blue mussels (*Mytilus* spp.).

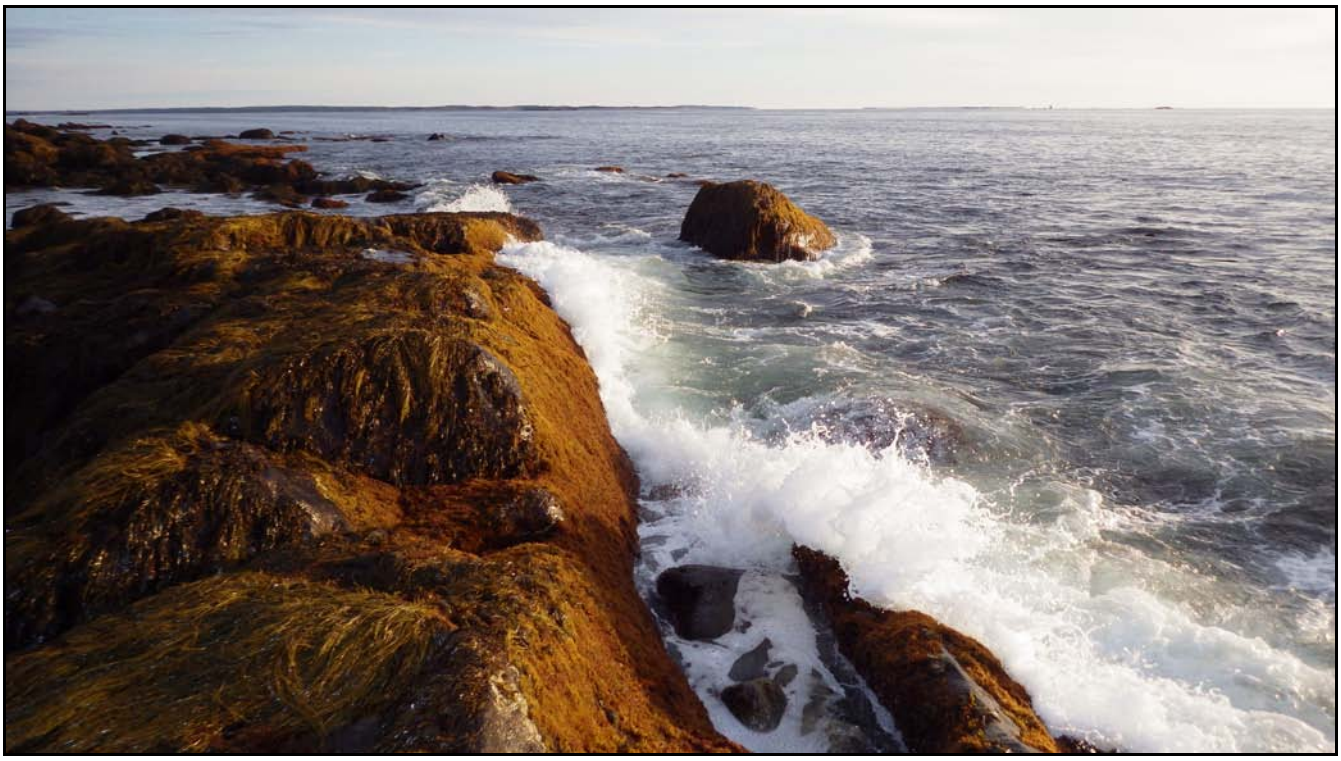
L7 (Western Head). Dogwhelks (*Nucella lapillus*) feeding on barnacles (*Semibalanus balanoides*). The inner frame of the PVC quadrat measures 10 cm x 10 cm.

L8 (West Point). Plastic mesh scourers (mussel recruit collectors), temperature loggers, and experimental substrate clearings indicating the mid-to-high intertidal zone.

L8 (West Point). View towards the open ocean. Plastic mesh scourers (mussel recruit collectors), temperature loggers, and experimental substrate clearings indicate the mid-to-high intertidal zone.

L8 (West Point). Wave hitting the shore.

L9 (Baccaro Point). Views of the intertidal zone during very low tides. Plastic mesh scourers (mussel recruit collectors) and experimental substrate clearings indicate the mid-to-high intertidal zone.



L9 (Baccaro Point)

L9 (Baccaro Point). Waves during a storm.