

A Mother Lode!

by Bill Merilees

When you are into taking scrapings¹, every sample is a 'grab bag'! Sometimes you come up with very little, and sometimes it is a treasure trove! Scraping 2018-#55 was one of the latter, one for the record books - and - the 'best' of nine scrapings taken this day! Here are the details of the results as they appear in the author's records.

1 – A scraping being **all** the material removed (scraped) from an intertidal substrate, most often from bedrock or a boulder, usually during the lowest tides. The location, details of the substrate, tide level, and area (size) sampled are recorded.

Scraping 2018-#55 July 15, 2018; 2 ft tide level (Canadian); False Narrows reef, Gabriola Island; 12 x 12"; off smooth sandstone face with a layer of shell fragments

Bivalves:

<i>Mytilus trossulus</i> 450	<i>Modiolus modiolus</i> 14	<i>Saxidomus gigantea</i> 24	<i>Hiatella arctica</i> 26
* <i>Crenella decussata</i> 1	<i>Kellia suborbicularis</i> 2	<i>Gari californica</i> 3	* <i>Entodesma navicula</i> 2
* <i>Musculus taylori</i> 3	<i>Kurtiella tumida</i> 4	<i>Tresus capax</i> 3	
* <i>Adula</i> sp. nov? 1	<i>Leukoma staminea</i> 7	<i>Mya arenaria</i> 9	

Number of bivalve species: 14 No. Individuals: 569

Gastropods:

<i>Margarites pupillus</i> 1	<i>Lacuna</i> sp. 75	Rissoiidae sp. 1	<i>Granulina margaritula</i> 14
<i>Lirularia lirulata</i> 11	<i>Barleeia</i> sp. 20	<i>Crepidatella lingulata</i> 2	<i>Alia carinata</i> 67
<i>Calliostoma ligatum</i> 1	* <i>Alvania compacta</i> 372	<i>Cerithiopsis</i> sp. 1	' <i>Odostomia</i> ' sp. 1
<i>Neostylidium eschrichtii</i> 20	<i>Onoba carpenteri</i> 80	<i>Ceratostoma foliatum</i> 2	<i>Diaphana minuta</i> 1

Number of gastropod species: 16 No. Individuals: 669

* species of particular interest!

Total Species: 30 Total Individuals: 1,238 No. Individuals per M² = 13,414 +/-

Note: The largest specimens taken in this sample were 7-8 mm (1/3 in.)

False Narrows is a shallow tidal channel between Gabriola and Mudge Island, south east of Nanaimo, B.C. Mid channel there is a long sandstone ridge (reef) that is exposed at low tide. The area west of this reef (Mudge Island side) dries at low tide while to the east a shallow, but navigable passage to small vessels, ebbs and flows like a reversing river. The tidal currents generated by the tides are considerable. Speeds of 4 to 5 knots are not unusual, generating a rich environment for a diversity of marine organisms.



Left photo: False Narrows showing the exposed reef. The view is looking south with Mudge Island to the right. **Right photo:** Gabriola Island at the top. Sample 2018-55 came from the lower right corner of this photo. Note sandstone strata - great Piddock habitat!

In addition to 2018-55, eight additional scrapings were made at this site between the 1 ft. and 4 ft. tide levels.

Comments:

To find 30 species (14 bivalves and 16 gastropods) in one scraping is **not** typical for the Nanaimo area. Compared to 55 previous samples from six nearby locations, (Stephenson's Point, Newcastle Island, the Flat Top Islands, Drumbeg Park, Degnen Bay and Coffin Island) these averaged only eleven species per scraping.



1 *Entodesma navicula* – top 6.0 mm, bottom left 4.4 mm, bottom right 3.3 mm 2 *Musculus taylori* – top left 3.1 mm, bottom left 2.6 mm, bottom right 5.1 mm 3 *Adula* sp. – 1.6 to 13mm 4 *Alvania compacta* - 2.2 to 2.5 mm 5 *Modiolus modiolus* - 1.8 to 2.3 mm 6 *Crenella decussata* – left 2.3 mm, right 1.3 mm

All photos by Rick Harbo, from the Merilees Collection



In the 2018-55 sample, the presence of *Musculus taylori* and the *Adula* sp. are species seldom recorded for the Salish Sea. The identity of the *Adula* is still unresolved. At first the author considered it to be a juvenile *Modiolus rectus*. Rather than burrow, as is the habit with *Adula*, this species appears only to 'nestle' in the substrate. *Crenella decussata* is frequently dredged subtidally and never, until this year, have I found it the intertidal zone.

The high numbers of juvenile *Entodesma navicula* (56) and *Modiolus modiolus* (62) from the nine False Narrow scrapings are numbers unlike anything I have recorded over the past 20+ years. Ideal spawning conditions are suspected.

Alvania compacta, a small snail only about 2 mm in length, is ubiquitous in the Salish Sea. It was recorded in 46 of the 55 neighbouring samples, with the average number being 30.3. With 372 in sample 2018-55, this extrapolates to approximately 4,030 individuals per square metre!

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