

## Observations of *Hiatella* of the NE Pacific- B.C. Canada and Washington State, U.S.A. Nestlers and Hole-Huggers

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Family Hiatellidae (Etymology: hiatus= opening, aperture, gap)

The family Hiatellidae includes the well-known Geoduck, *Panopea generosa*, and the common nestling and hole-hugging clams, *Hiatella arctica* (Linnaeus, 1767). *H. arctica* is considered to be a complex made up of several species. The shell is elongated, the ligament is external, and the interior is “porcelaneous”, with the pallial line typically broken into patches.

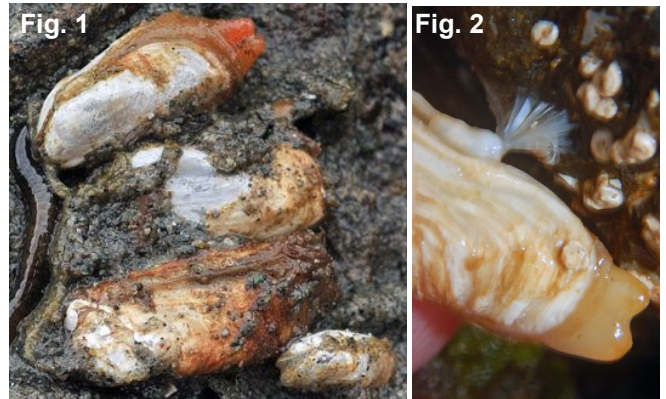
Coan et al. (2000) outlined the many features that support possible multiple species of *Hiatella* on the shores of Western North America:

- Different spawning times, eggs of two different colours (red and pinkish cream)
- Two post-larval forms- oval and triangular
- Juvenile shells with and without spinose external radial ridges
- Animal with and without byssus
- Different positions of the adductor muscles and their scars relative to the dorsal margin
- Siphon tips of two colors, red and white.

Further genetic studies by Layton et. al. (2014 and 2015) confirms that the *H. arctica* complex, in Canada, contains at least four species. In the northeastern Pacific, there were 3 species found (Layton 2015).

Two species of *Hiatella*, to about 30 mm, are commonly found under rocks “nestling” by attachment of a bundle of filaments, the byssus. In inside waters it appears that the *Hiatella* have red-tipped siphons, **Fig. 1**. On the west coast of Vancouver Island, there are red-tipped *Hiatella* and a second set of *Hiatella* nestlers, with pale or white siphons, **Fig.2**, (note the byssal attachment). I was able to observe and photograph the white-siphons of live *Hiatella* in tanks at the Ucluelet Aquarium. I am always excited to see the diverse marine life collected at Ucluelet and displayed at the aquarium, a “must” destination if you are visiting the west coast of Vancouver Island.

Larger forms of *Hiatella*, to 78 mm and more, appear to be unique to the NE Pacific. They are found in holes, are without a byssus, and can likely bore. I have found these in rock at False Narrows, Gabriola Island, **Figs. 3**, where underwater images of the siphons, **Fig. 4**, were taken by Pauline Ridings. I have also found specimens that appear to be boring, at Valdes Island, **Fig. 5**, and in clay at the Pender Islands, **Fig. 6**.



Specimens of free-living *Hiatella*, to 23 mm, with spinose ridges, **Fig. 7**, have been collected from inside waters and on the outer coast of Vancouver Island (Merilees date). Further observations, collections and molecular studies are needed to resolve the identity of our many *Hiatella* forms.

#### Acknowledgements

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