



These remote islands off Cape Saint James are part of Gwaii Haanas National Park Reserve in Haida Gwaii, British Columbia. Here divers and biologists Neil McDaniel and Douglas Swanston found and collected the **Varnished mussel**, *Vilasina vernicosa* (Middendorff, 1849), and established a new southern range extension for the species.

Discovery and collection of the Varnished Mussel, Vilasina vernicosa, at the Kerouard Islands, Cape Saint James, Haida Gwaii. August 07, 2003 - A southern range extension and a new Canadian record.

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Neil McDaniel photo

Divers and biologists Neil McDaniel and Douglas Swanston photographed and collected a unique mussel species from the Kerouard Islands, Cape Saint James, Haida Gwaii, on August 07, 2003. The coordinates of the site where the mussels were spotted during the dive were estimated at 51.5°N 130.6 °W, making this a new southern range extension for the **Varnished mussel, *Vilasina vernicosa*** (Middendorff, 1849). Coan et al. (2000) described the southern limit as Forrester Island, Alaska (54.8° N). A



Vilasina vernicosa (Middendorff, 1849) Kerouard Islands, Cape St. James, Haida Gwaii, August 07, 2003 (Doug Swanston photo).



Vilasina vernicosa, Kerouard Islands, B.C. (Rick Harbo photo)

second English common name for this species, the “**Varnished kelp mussel**”, describes well its favored habitat. .

Samples have been deposited at the Royal B.C. Museum and the Canadian Museum of Nature. André Martel, at the Canadian Museum of Nature, examined the specimens of *Vilasina vernicosa* from the Kerouard Islands, B.C., and compared them with specimens from

Alaska from the Los Angeles County Museum. Although there were slight differences in shell coloration and contour, it was concluded that the Kerouard Islands specimens do belong to that species. Moreover, a close examination of the prodissoconch region of the Kerouard Islands specimens, using a high resolution stereomicroscope, indicated that this species would lack a planktotrophic larval stage, and instead would brood its embryos and release them as crawl-away juveniles – although no embryos or eggs were found inside the eight specimens examined from Kerouard Islands. Brooding is a widespread mode of development among crenellinae subfamily – this subfamily of the Mytilidae typically includes small-bodied brooding species, such as in species of the genus *Crenella*.



?*Vilasina vernicosa*, Keku Straits, Alaska (Dave Harris, photo). Samples of the mussels with pink-purple coloration and masses of white byssal threads are required to confirm their identity.



Vilasina vernicosa, 3 to 5 m depth, Kerouard Islands, Cape St. James, Haida Gwaii (Neil McDaniel photo, August 2003)

VARNISHED MUSSEL

Vilasina vernicosa (Middendorff, 1849)

Synonyms: *Modiolaria vernicosa*; *Musculus vernicosus*; Varnished Crenella, Varnished Kelp Crenella; not *Musculus discors*

Etymology: *vernix*=varnish; *crenella*= notched, toothed.

Size: To 24 mm (1 in.) shell length.

Range: Pribilof Islands to Kerouard Islands*, Cape St. James, Haida Gwaii (*51.5° N, a southern range extension and a new Canadian record).

Habitat: Attached to tunicates, hydroids and stipes and blades of kelp; 3* to 80 m (15-265 ft.) in sheltered to exposed waters. (*shallows- Doug Swanston, Neil McDaniel, Scott Walker)

Description: Oval, plump, inflated. Thin shell is glossy and rather thin, possibly purple-pink * to chocolate brown, sometimes olive yellow. Radial sculpture on both ends difficult to see externally, but shows as fine and distinct crenulations on inner surface. Interior nacreous purple.

Comments: Common in the Aleutians (Roger Clark, pers. comm.) and SE Alaska (Scott Walker, ADFG). This is a small mussel that has occasionally been misidentified as *Musculus discors*. Several divers contacted in the Prince Rupert and Port Hardy regions report that they have not observed the Varnished Kelp Mussel. *Further samples of the pink-purple colored shells are required.

References

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