

## Gigantism in the Micro Gastropod – *Alvania compacta* (Carpenter, 1864)

Family Rissoidae

by Bill Merilees

The 'Compact *Alvania*' – *Alvania compacta* (aka *Actonia compacta* to some) undoubtedly is the most ubiquitous intertidal gastropod encountered along our British Columbia coast line (Fig. 1). The type specimen was collected in Puget Sound.

From more than 500 samples, taken as scrapings, this species has occurred in more than 75% with the average number of individuals per scraping averaging about 25. In one 15.24 X 15.24 cm. (6"x 6") sample the population density was calculated to equal about 8,451 per square meter!

Adults have a shallow suture, narrow low axial ribs and generally range in size from about 2.1 to 2.5 mm. (McLean, 2007). On occasion, 'super' large individuals, 3-4+ mm in length, (photo) are found. These giants were initially described as a separate species, *Alvania filosa* (Carpenter, 1864), the type being collected at Neah Bay, WA. McLean mused on this question (pers. com.) wondering if these giants could be *Alvania compacta* with the growth of an additional whorl? I agreed with him on this possibility and WoRMS (2018) (World Register of Marine Species) concurs, now listing *Alvania filosa* as a synonym.

From nine samples, taken at five locations, (three on Haida Gwaii; Old Masset, Skidigate Inlet and Balance Rock) and two sites on Vancouver Island; Ucluelet and Tofino), 25 'giants' were collected from among 818 individuals. Whorl counts for 'giants' appear to support McLean's contention; 6 whorls for the once named *A. filosa* individuals, versus 5 for *A. compacta*. Other features distinguishing these giants include the final, or 6th whorl, often being slightly 'out of line' to the preceding 5 - and - while the sculpture on whorls 3, 4 and 5 of both is cancellate, that on whorl 6 of the 'giants' is faint or almost lacking, replaced by 8-10 fine spiral ridges .

When compared to the many sites sampled over the past ten years (N= 500+) the Haida Gwaii and Western Vancouver locations are characterised by the presence of moderate to strong tidal currents associated with inlets. The significance of this environmental situation to gigantism in *Alvania compacta* is speculative.

### Acknowledgements:

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### References:

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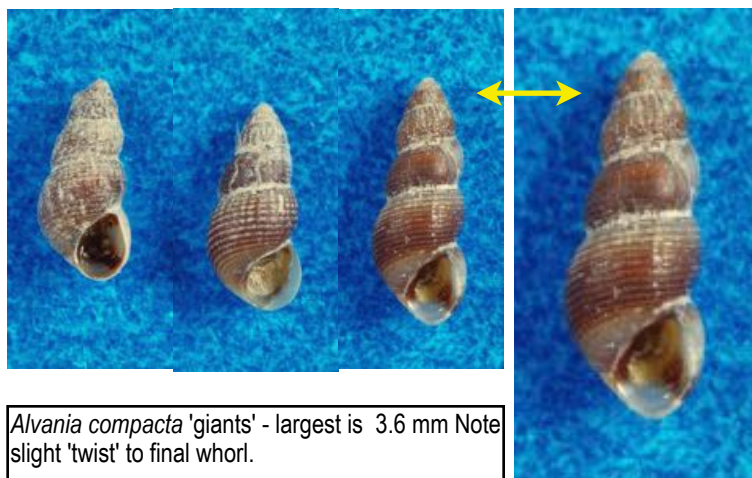
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Rick Harbo photos

*Alvania compacta* size range 2.3 mm to 2.6 mm.



*Alvania compacta* 'giants' - largest is 3.6 mm Note slight 'twist' to final whorl.