

Antiquity of the substrate choice among acmaeid limpets from Late Cretaceous chemosynthesis-based communities

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Two Campanian methane seep sites in the Nakagawa area of Hokkaido (northern Japan) yield fossils of the limpet genera *Serradonta* and *Bathyacmaea* that appear to have had the same substrate preference as do their modern counterparts. *Serradonta* cf. *vestimentifericola* was a species having an elongated and strongly compressed shell adapted to living on vestimentiferan tubes, like its modern relatives. *Bathyacmaea* cf. *subnipponica* was an acmaeid with a relatively elongated shell but with a more rounded aperture than *Serradonta* and thus apparently attached to small hard objects other than worm tubes. One *Bathyacmaea* specimen was found attached *in situ* to an ataphrid gastropod shell. The restricted present-day distribution of *Serradonta* possibly reflects its spreading route exclusively through the hot vent and cold seep communities settled by vestimentiferans.

Key words: Gastropoda, paleoecology, chemosynthetic community, methane-seep, Cretaceous, Hokkaido, Japan.

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