

***Penitella* Piddocks in Peat and Petrified Wood**
by Bill Merilees



British Columbia timber, especially old-growth timber, is famous throughout the world for its quality. This rock boring piddock, *Penitella penita*, from Haida Gwaii, must also appreciate fine quality, as it has chosen a piece of petrified wood that is 11 - 17 million years old in which to make its home. **See article on page 3.**

Along the east and west coast beaches of northern Graham Island, Haida Gwaii, slabs of peat regularly wash ashore (**left photo**). Often they contain shells of the flap-tipped piddock *Penitella penita* and occasionally the boring softshell clam, *Platyodon cancellatus*. When wet, this peat is quite soft and friable but once it has dried it becomes hard as a rock – the early step in the formation of lignite coal. Also along the western side of Graham Island, at Skonun Point, in the geologic sequence appropriately known as the Skonun Formation, (Mathewes, 1989) there are a number of intertidal fossil tree trunks. These too are riddled with burrows of *Penitella penita*. (**photo page 1**). Both these observations are unusual substrates for these species.



Bill Merilees photo

Turner (1954), stated that piddocks (also collectively known as pholads), “are a family of highly specialized bivalve mollusks adapted for boring into wood, soft rock, shell, peat, hard clay and mud.” Eventually their boring activity imprisons them in flask shape burrows. For our west coast *Penitella* species the substrates in which they have been recorded as inhabiting reads almost like an elementary geology lesson: shale, siliceous chert, clay, sandstone, and siltstone (Coan et al, 2000). Peat and petrified wood can now be added to this list.

On December 3, 1961, it was Peter Henson, of Masset, who dug out a number of *Penitella* from a large slab of “tightly compressed peat” that had drifted ashore at Yakan Point, Haida Gwaii. While many species of pholads are known to burrow into peat, Peter’s observation is the first recorded for a *Penitella*. These he identified as *Penitella gabbi* (Henson Collection, #1870). Samples sent

to Dr. Ruth Turner were acknowledged as this species, but due to their large size she found them “most interesting” (Turner, 1962). Five years later they were re-examined and described as *Penitella turnerae*, Evans & Fisher, 1966. (**right photo**). *Penitella gabbi* is now known to be a Japanese species not recorded from the eastern Pacific. (Kennedy, 1989).



Rick Harbo photo

This presence of *P. turnerae*, north from Gray’s Harbour, Washington, at Yakan Point, Haida Gwaii, was ‘missed’ by Coan et al. (2000). Rick Harbo has since found this species at a number of locations in the Canadian portion of the Salish Sea.

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