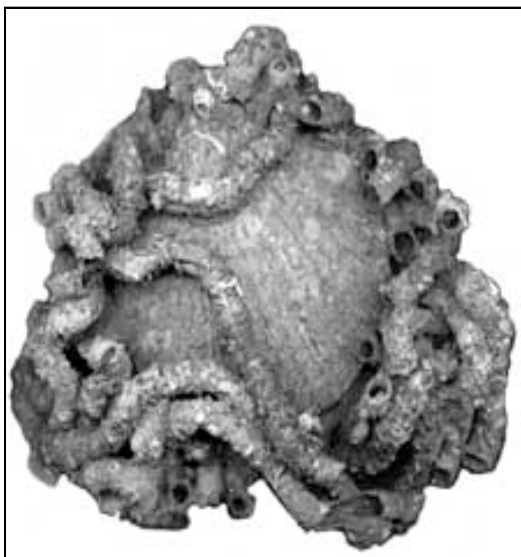


Dead Pecten And Russian Nesting Dolls

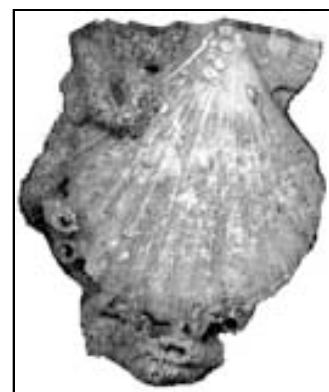
by George P. Holm

In the 1980's I participated in several club field trips to the Friday Harbor Laboratories on San Juan Island where the highlight for all who went was participating in the dredging trips on board the lab's research vessel, the Nugget.

Those were exciting moments when successive dredges were hauled aboard and their contents deposited on the sorting table around which we all quickly found places. The dredged material was brought up from depths of 16 to 40 fathoms where Trophon, Calliostoma, Neptunea, Pecten, Glycemeris and a myriad other "deeper" water shells were possible with each haul. We all eagerly set to the task of sorting in hopes that a rare treasure would be hiding just under the next rock or dead bivalve. The rule was that all the dredged material had to be sorted before another dredge haul would be made. Shells and other interesting specimens were deposited in our collecting buckets and the unwanted grunge consisting of rocks, broken shells, crabs, sponges and such was thrown back overboard.



Dead bivalves in the hauls were very common and in particular were the shells of Pecten. Most of these shells were single valves, but now and again a dead specimen with both valves attached was found. Most of the paired valves I found were held together by hard encrusting tubes of a marine worm called a shell binder worm, *Thelepus crispus*. I found these tube worm entwined valves both fascinating and beautiful and brought a few home with me. It is two of these specimens that this writing is about.



The pectens, are *Chlamys hastata* (G. B. Sowerby II, 1842). The larger shell is 80 mm. and the smaller is 65 mm.. Both specimens are heavily encrusted on the outside with worm tubes which contain fragments of stone, shell and other detritus. These tubes can grow to be a meter or more in length and 6 mm. wide. When looking at the twisting

worm tubes it is easy to imagine their length. The pecten shells were gaping after the animals had died and the worms found them an ideal place on which to live. Twisting tubes wrapped around the shells and ensured that the valves remained permanently open.

After the shells were brought home and cleaned of loose material, I saw that each of them had another smaller pecten inside. Not only that, but the larger specimen had two pectens inside, one inside the other. In looking at them I was reminded of Russian nesting dolls where a series of like shaped wooden dolls are fitted one inside the other.



Nature can be unforgiving and life and death struggles are commonplace; one only has to look around to see them. With these two specimens, when the animals in the larger outer shells died, their empty shells settled on the bottom where the worms found them and began attaching their hard twisted tubes to their outsides. The valves were

gaping and held in that position by the worm tubes, thus allowing young pectens to swim inside, perhaps to escape from predators. Finding safety, the young clam grew within their protective environments, perhaps not realizing that the worms on the outer surface were securing their safety by continually laying down millimeter after millimeter of twisting hard tubes. The worms eventually closed off any entry hole large enough for the young pectens to exit through. The safe refuges the clams had found became prisons from which there was no escape and in which they would eventually die.

For the larger of the two specimens, the process of imprisonment and death repeated itself twice. A second young pecten found enough of an opening to swim into the clam and there it grew and died within the empty gaping valves of the second pecten.

In spite of careful searching, I have not found another dead pecten with more than two other pecten inside, but I always look if the opportunity should present itself again. Some shells, even dead ones, are definitely deserving of a second look.

Reference - The Sound And The Sea by Charles J. Flora and Eugene Fairbanks, M.D.