A Lifelong Attachment

by George Holm

On a shelling trip to Boundary Bay last year during which I was looking for Olympia Oysters (*Ostrea conchaphila* Carpenter, 1857) attached to *Batillaria zonalis* (Bruguiére, 1792), I found one specimen of *Crassostrea virginica* (Gmelin, 1791) attached to a Batillaria.

Oysters commonly attach themselves to solid objects such as rocks and other shells, but the size of this oyster (3 1/2 inches) made it noticeable as it lay by itself on the mud flat with no other of its species nearby. When I saw that it was attached to a Batillaria I was very pleased with my find. The native oysters found in the area seldom get to be 1 1/2 inches, although I did find two long dead valves which were over two inches in length, which is considered the maximum size for the species.

The specimen that I had found had only recently died, so was in perfect condition. The Batillaria was very much alive and as I studied the two shells, I began wondering about the lives of these two molluscs. How long had they been attached to each other? How had they managed to avoid predators? And, particularly, how was the Batillaria, though unable to move the oyster, able to stay alive during the two or more years of their attachment to one another?

The area in which I was collecting is near the mouth of the Serpentine River, where over a hundred years ago a failed attempt had been made to establish the Atlantic Oyster. A small remnant population still can be found in the tidal portion of the Nicomekl River and apparently it was here that "my" oyster had been spawned. The tidal flat to which the larvae would have been carried, is, as I saw the day I was there, home to what appeared to be millions of *Batillaria zonalis*, which would have made it easy for an individual *Crassostrea virginica* larvae to find and individual *Batillaria zonalis* on which to attach itself.

Initially it would have been the Batillaria which moved about on the mud flat with the attached oyster larvae, but as the rich nutrients carried by the river made the oyster grow quickly, in a matter of weeks or months the oyster's enlarged size would have made movement difficult, if not impossible, for the Batillaria.

The oyster would feed, as oysters do, by filtering nutrients form the water. The Batillaria, unable to move, would stretch its body as far as it could and move from side to side while feeding on whatever nutrition it could locate in the mud. A confined existence for the Batillaria and the oyster would work, so long as a storm did not bury it with silt, the sun did not bake the attached mollusks when the tide went out, or one of the ever present gulls did not see the tasty oyster and carry the duo ashore for a meal.

Life cannot have been easy for this molluscan pair. Yet, together they survived for two or more years! It is unlikely the Batillaria could have endured much longer without the living oyster. The oyster shell had become very light when it died, so waves from succeeding tides would eventually have cast it and the Batillaria onto the beach where, out of water, life would have been impossible for the small Batillaria.