**Occurrence of the mudworm *Polydora* in a Manila clam and cockle**

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While recreationally clamming this past summer I came across a couple of interesting shell anomalies in my catch. The first was discovered after cooking a batch of Manila littlenecks (*Venerupis philippinarum*) collected at Anderson Landing County Park near Seabeck, Washington. The specimen had a very large blister-like formation covering most of the interior of the left valve that was completely sealed off from the rest of the interior (**Fig. 1**). Such structures are composed of nacre that the mollusc produces to block an irritant, as is done when forming a pearl.


Fig.1

The second specimen was a Nuttall's or Basket Cockle (*Clinocardium nuttallii*) from the same location. It had a small leathery worm tube extending from inside the shell. Once it was opened and the cockle meat removed, it was apparent that the worm tube was extending from within a large mass of mud that was largely walled off (**Fig. 2**).

I sent photos to polychaete specialist Leslie Harris of the Los Angeles County Museum of Natural History, who confirmed that the tubeworm was in the genus *Acromegalomma*. She was quite sure the original chamber was caused by a boring polydorid worm, and that the tubeworm had settled as a larva into the space after the polydorid died. A small terebellid polychaete had also taken up residence in the mud-filled blister.


Fig.2

The spionid *Polydora*, commonly called a mudworm, is well-known for the damage that it causes to molluscan shells. In Argentina, the pearls resulting from *Polydora* infections render ribbed mussels (*Aulacomya atra*) unfit for human consumption (Diez et al., 2016). Similarly, *Polydora* induces tumor-like structures in the shell of the Japanese scallop *Patinopecten yessoensis* (Silina, 2006). In local waters, the recent confirmation of *Polydora websteri* in Pacific oysters has become a great concern to growers (Martinelli et al., 2020). The thin nacreous cover of the mud-filled blisters is easily broken during shucking, fouling the meat with mud and worm feces or making the oyster visually unappealing for serving on the half shell. Samples from two south Puget Sound sites, Totten Inlet and Oakland Bay, revealed infestation rates of 34% and 53%, respectively.

*Polydora* infestations have long been a problem with oysters on the east coast, and have been implicated in the collapse of oyster fisheries in Australia (Loosanoff and Engle, 1943). Boscolo and Giovanardi (2002) reported the first occurrence of *Polydora* in Manila clams that were held in suspended culture in the Adriatic Sea. It is not known if normally buried clams are susceptible to infection, and I have not found any previous mention of mudworms infecting Manila clams or cockles in our area. I suspect my specimen was at some point briefly exposed and infected, whereas cockles are frequently unburied and more likely to encounter the worms.

References

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