

AN EXTENDED SEASON (FEBRUARY-OCTOBER) OF JAPANESE OYSTER DRILL, *Ocenebrellus inornatus*, EGG CASES IN LADYSMITH HARBOUR, B.C.

**R. M. Harbo, Research Associate, Invertebrate Zoology, Royal BC Museum, Victoria, BC
rmharbo1@gmail.com**

The Japanese oyster drill, *Ocenebrellus inornatus* (Réluz, 1851), was introduced to the Pacific NW shores (Sherwood 1931; Kincaid 1947), transported on Japanese oysters. The snails have persisted in both BC (Quayle 1964; 1988) and Washington (Buhle and Ruesink 2009) at several locations, but their spread has been limited by their reproduction mode with crawl away juveniles.

Upon reviewing my observations and images of the drills, *O. inornatus* egg cases were found earlier and later in Ladysmith Harbour, BC, than those reported from other locations. In Washington State, eggs are generally laid by *O. inornatus* from April to June (Buhle et al. 2004). In France, Martel et al. 2004 reported a second reproductive period in the fall, giving them a higher resistance to seasonal environmental effects. In Denmark, egg cases of *O. inornatus* were found attached to *Ostrea edulis*, March 25, 2010, Nissum Broad, the Limfjord. Most egg cases measure 15 to 20 mm in length.

The *O. inornatus* in Ladysmith Harbour are found in pockets, spread over several kilometers of shoreline, but not in high densities compared to reported collections in Willapa Bay, WA (Ruesink pers. comm.). This may be due to limited suitable habitat, predation or other factors in Ladysmith Harbour. I have also found a few individual *O. inornatus* in Boundary Bay (2019), Baynes Sound (2019, Ship's Point) and in Sooke Basin (2020, Ayum Creek). Museum collections include samples from Useless Inlet, Barkley Sound (2010- RBCM).

Field surveys during day time tides in Ladysmith Harbour, B.C. from 2014 to 2021, found adult snails laying egg cases (Fig. 1) as early as February (Feb. 25, 2015; Feb. 25, 2019). Most activity was observed in April-May in Ladysmith Harbour (Fig. 2, April 10, 2020) with aggregations of 6 and more snails laying eggs. An aggregation of more than 30 snails was observed off Centennial Beach, Boundary Bay, BC in April, 2008 (Fig. 3). Egg deposition at Ladysmith Harbour continued in June (June 11, 2017; June 13, 2018) and egg cases were observed as late as October (Oct. 15, 2020). During winter months the snails are dispersed under rocks, shells and debris, and buried in the mud.



Fig. 1

Fig. 1. *Ocenebrellus inornatus* laying egg cases, Feb. 25, 2019. Head of Ladysmith Harbour.



Fig. 2

Fig. 2. An aggregation of spawning *O. inornatus*, Ladysmith Harbour, April 10, 2020

Fig. 3. An aggregation of *O. inornatus*, Boundary Bay, BC April 21, 2008.



Fig. 3

The crawl-away (non-planktonic) juveniles, 3 to 10, emerge from the cases after a developmental period of three weeks (Martel et al 2004). This reproductive behaviour limits the spread of the introduced snails. Restrictions are in place for aquaculture activities to prohibit the transfer of snails from one area to another.

References

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