

An unexpected find of *Carychium minimum* Müller, 1774, an uncommon introduced land snail
by George P. Holm



George Holm photo

Safely hidden from view under logs, and other wood debris washed down by the mighty Fraser River, and deposited along the shoreline in Richmond, British Columbia, lives a tiny, 1.6 mm, introduced land snail that has been found only once before in the Pacific Northwest on Vancouver Island.

At the end of October 2013, I took my dog for a walk on the dike that protects where I live from flooding by the Fraser River. It was a new walk for us, and what drew me to it was that it was just a short drive from where I live.

A piece of discarded plywood at the side of the dike road caught my attention, and on lifting it, I saw a Grovesnail (*Cepaea nemoralis*), Glossy Pillar (*Cochlicopa lubrica*), and Dark-bodied Glass-snail (*Oxychilus draparnaudi*) underneath. I decided to return and next time have my collecting kit with me.

On my return, a further search of the surrounding area yielded more of the same snails under other discarded material. I became particularly curious about the *Cochlicopa* I was finding since they seemed more slender than what I remembered. I wondered if they might be an introduced species since the location is next to industrial warehouses. At home I had a closer look at them and concluded that they were *C. lubrica* after all, but I still wanted to find others for confirmation.



G. Holm photo
Cochlicopa lubrica, 5 mm

There are a couple of paths that lead from the dike down to the river and I decided to look there the next time. The satellite image on Google maps shows an expanse of foreshore at that location, but being winter, the tide is high during the day and going the short distance to the end of the path was all I could do. I did find more of the same snails, as well as a Northwest Hesperian (*Vespericola columbianus*), a couple of tiny white snails on a piece of Douglas fir bark, too small to pick out, plus some interesting slugs. All were documented with a photograph.

The snails on the bark were barely visible to the eye, but on my computer screen, the photograph showed them to be a *Carychium*, though not *C. occidentale*, our local species, which is found from southern British Columbia to central California. They were also smaller than the *C. tridentata*, an introduced species I had found in Queen Elizabeth Park in Vancouver in 2010.

I returned to the same location the following day, and once my eyes adjusted to the snail's small size, I began seeing them on almost every piece of wood or piece of bark I picked up. I could not believe how numerous the species was. One seven inch piece of wood had about twenty snails on it and on another larger piece of wood I counted almost fifty.



C. minimum on a section of the larger piece of wood



View of the path from the river with the dike in the background.

After checking the literature, and comparing pictures of it on the web, I identified the species as *C. minimum* Müller, 1774, an introduced species that had previously been found in the province only on Vancouver Island. I also sent photos to Ed Johannes, and he confirmed the identification. The species originates from Europe and Siberia and has been introduced to Cobble Hill on Vancouver Island. It has also been found by Barry Roth in San Francisco (Forsyth, 2004) and I found it live in Griffith Park, Los Angeles, California in 1974 (Holm, 2010). They have been found in Ithaca, New York (Weigand & Jochum, 2010) and in Pittsburg, Pennsylvania (Pearce & Payne, 2011). Fred Schueler and his daughter, Jennifer, found empty shells along the Tioughnioga River, Cortland Co., New York in 2003. Schueler also collected empty shells in Port Whitby, Durham Regional Municipality, east of Toronto, Ontario (Forsyth, 2011). Empty adult shells have also been found in drift along the Brant River, Brant Co., Ontario (Forsyth et al. 2008).

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Left: *Carychium minimum*, from Richmond, B.C. **Center:** *C. occidentale* from Poulsbo, WA **Right:** *C. tridentata* from Vancouver, B.C.



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This most recent find is in Richmond, B.C. The city encompasses most of the land area of Lulu Island, a large island at the mouth of the Fraser River which is surrounded on all sides by a flood-preventing dike. It is bordered to the north and south by the river and by the Strait of Georgia to the west. The snails were found along the south arm of the Fraser River at Dyke Road, one hundred meters west of a lane that extends from the end of McCartney Way at Lat: 49.153 Lon: -123.018.

C. minimum requires a permanent wet environment and where these snails were found, on waterborne drift material at the edge of the river, is ideal habitat. I intend to do a more thorough search for the species along the foreshore once conditions will allow.

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