
Lithoglyphus virens

Giant Columbia River spire shell

Phylum: Mollusca

Class: Gastropoda, Vetigastropoda

Order: Trochida

Family: Trochoidea, Tegulidae

Description

Size: to 11mm long (Clarke 1981); illustrated specimen (Columbia River) 7.5 mm.

Color: "virens" = green; periostracum chestnut brown to yellowish brown or olive green. With or without dark collabral or spiral bands (Clarke 1981) (this specimen without, fig. 1). Interior white.

Shell:

Shape: thick, solid, ovate, imperforate; 4 to 5 inflated whorls, nuclear whorl flatly coiled, then decurrent (turning down). Early coils often corroded (fig. 1); following whorls enlarge rapidly, are convex and separated by deep sutures. Body whorl large and constitutes most of shell (fig. 1).

Sculpture: coarse growth rests, fine collabral lines, obscure spiral striation (fig. 1).

Aperture: subcircular; rounded below, acute above. Simple lip; thickened peristome reflexed over columella region, obscuring umbilicus (fig. 1); sometimes exposing a tiny slit (Clarke 1981) (not in this specimen).

Operculum: thin, pale brown; almost transparent in this specimen (fig. 3); corneous, paucispiral (only three turns) (Clarke 1981). Strong radial wrinkles, fine spiral lines.

Body: tentacles long, cylindrical; gills internal; male with external winged verge behind right tentacle (Clarke 1981) (not shown).

Radula: with 7 teeth (2-1-1-2), each with many cusps (Clarke 1981) (not shown).

Eggs: round or oval, attached singly to stones or vegetation; family Hydrobiidae (Clarke 1981) (eggs not shown).

Possible Misidentifications

Lithoglyphus spp., known until recently as *Fluminicola*, doesn't seem to have any close relative or obviously similar associates. Its family, the Hydrobiidae, or spire shells, is worldwide, and may be marine, brackish or freshwater (Clarke 1981). The genus has formerly been placed in the family Amnicolidae (as *Fluminicola* (Henderson 1929)), and also in Bulimidae (also as *Fluminicola* (Ward and Whipple 1966)). The present family designation is by Taylor 1966. One species of the genus, (*Fluminicola*) *seminalis*, is found far inland, in the Steens Mountain and Klamath Falls areas of Oregon (Henderson 1929). Another, *F. nuttalliana* Lea, now considered a species synonym (Clarke 1981), was formerly differentiated because of its more cylindrical, less inflated shape (Henderson 1929). *L. columbiana* Hemphill (Pilsbry, 1899) is a dark species, once found in the Columbia River to its mouth, and now only at Hanford, in a last bit of free-flowing river. It was listed as an endangered species in 1976 (Clarke 1976). *Lithoglyphus hindsii* (Baird, 1863) is also a synonym for *L. virens*, being simply an older name (Clarke 1981).

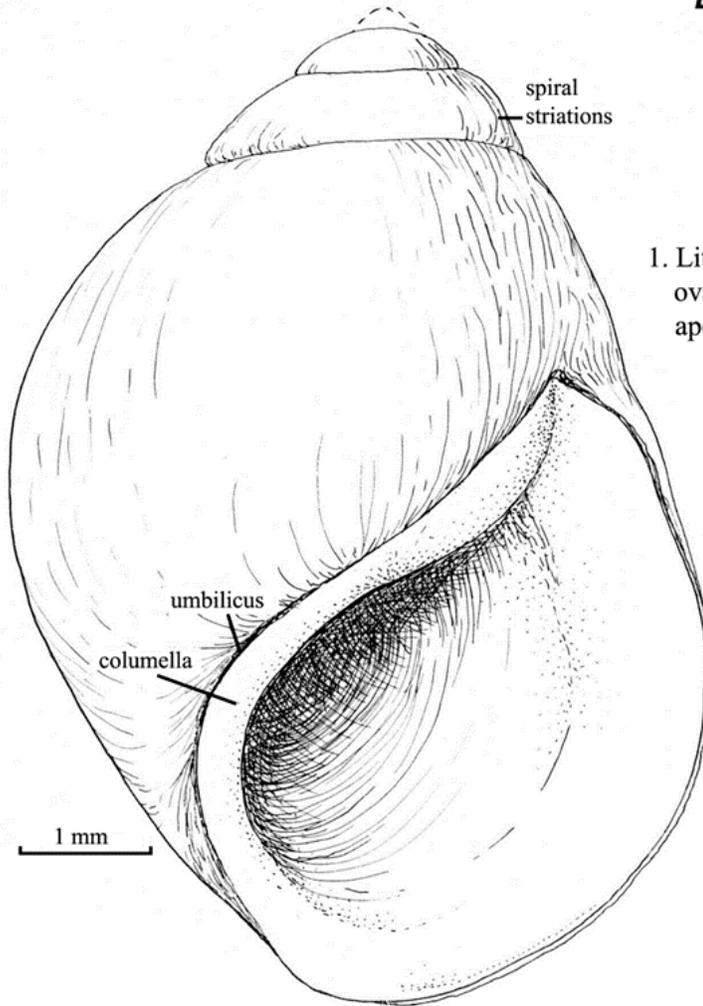
Ecological Information

Range: Idaho, Wyoming, Utah, Washington and Oregon. Kootenay, Wigwam and Columbia Rivers of British Columbia (Clarke 1981).

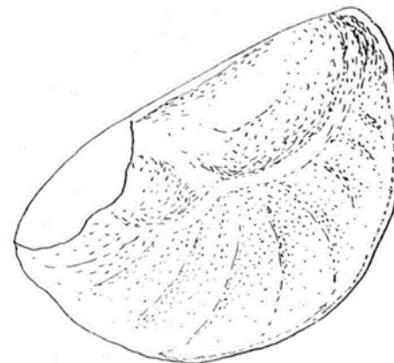
Local Distribution: Columbia, Siuslaw Rivers (Clarke 1981); N. Umpqua at Winchester Bay; mouth of Deschutes River; Yaquina River at Eddyville; Santiam River (Henderson 1929).

Habitat: on and under rocks and among vegetation in large and medium lakes, rivers, creeks; in rapid to slow currents (Clarke

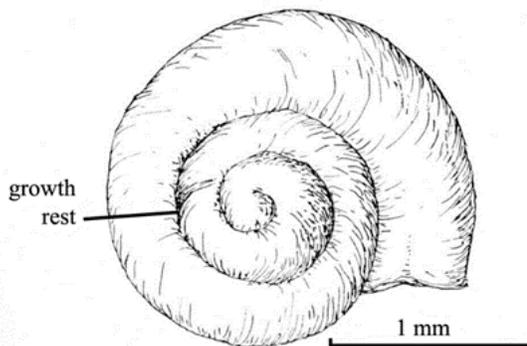
Lithoglyphus virens



1. *Lithoglyphus virens* (L:7.5mm) x20:
ovate, smooth; large body whorl;
aperture subcircular, lip simple.



3. Operculum x30:
(from small specimen, 4.2 mm)
thin, pale, transparent;
few spirals; radial wrinkles.



2. Dorsal view x30
(small specimen, 2.5 mm).

1981).

Salinity: considered a freshwater species, it is found in lower reaches of Oregon's rivers.

Temperature:

Tidal Level:

Associates:

Abundance:

Life-History Information

Reproduction: dioecious (separate sexes); lays eggs which are attached singly to stones or to vegetation (Clarke 1981).

Larva:

Juvenile:

Longevity:

Growth Rate:

Food:

Predators:

Behavior:

Bibliography

1. CLARKE, A. H. 1976. Endangered freshwater mollusks of northwestern North America. *Bulletin of the American Malacological Union*. 43:18-19.
2. ———. 1981. *The freshwater molluscs of Canada*. National Museum of Natural Sciences, National Museums of Canada, Ottawa, Canada.
3. HENDERSON, J. 1929. *Non-marine Mollusca of Oregon and Washington*. [University of Colorado], Boulder, Colo.
4. TAYLOR, D. W. 1966. Summary of North American Blanford nonmarine mollusks. *Malacologia*. 4:1-172.
5. WARD, H. B., and G. C. WHIPPLE. 1963. *Fresh-Water Biology*. John Wiley & Sons; New York.

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