Juga plicifera

Graceful keeled horn snail (Lea, 1838)

Phylum: Mollusca
Class: Gastropoda
Order: Mesogastropoda
Family: Pleuroceriadae

Description

Size—"small to medium", to 35 mm long (Clarke 1981). Illustrated specimen, (Columbia River), (incomplete as drawn): 16 mm long (fig. 1).
Color—shell pale dusky grey; animal with dark transverse stripes on head and tentacles (not shown) (Clarke 1981). Periostracum blackish or brown.
Shell Shape—turriform (many-whorled, slender spired), dextrally coiled. About 15 whorls; early ones usually corroded (Clarke 1981).
Sculpture—10 to 12 axial plicae (raised ribs) on each whorl. (Plicae also described as sigmoid (C-shaped) growth rests, or as varices.) Fine collabral cords (i.e. conforming to shape of outer lip at an earlier growth stage (Clarke 1981)) (fig. 1).
Aperture—rounded below, acutely angled above (Clarke 1981); outer lip simple, entire, not notched (figs. 1, 2).
Columella—smooth (not twisted); with broad canal below it (Clarke 1981) (fig. 2).
Operculum—typical of Prosobranchia: ovate, corneous (horny), with spiral growth lines; "paucispiral," i.e. with few whorls - about 3 (Clarke 1981) (fig. 3).
Radula—(not shown); central tooth without basal denticles (Ward and Whipple 1966): family Pleuroceridae. 7 teeth/row, in pattern of 2-1-1-2, each multicuspid.
Animal—(not shown); mantle border not fringed (Ward and Whipple 1966); tentacles long, very narrow, tapering, with dark stripes; boot short, wide. Males lack penis (Clarke 1981).
Eggs—single or in small groups (Clarke 1981) (not shown).

Possible Misidentifications

The superfamily Cerithiacea includes many common marine snail genera - *Bittium, Cerithiopsis, Metaxis, Cerithidea,* etc. These are also turriform, with a smooth, unfolded columella. *Cerithidea californica,* the California horn snail, is quite similar to *J. plicifera,* but is no longer found north of Tomales Bay, California (McDonald 1969). This species occurs in estuaries and bays, in mud, and under boards and debris. It has low axial ribs, not high C-shaped plicae; its operculum has multiple spirals, not just a few. It tolerates brackish water, but not fresh water.

The genus *Juga* is distinguished by its lack of the apertural notch common to many of the Cerithiacea genera. *Juga* is separated from *Goniopsis* and *Pleurocera* partly by its eggs, which are single or in small groups, not massed, and by its genitalia (the males have no penis) (Clarke 1981). *Pleurocera,* found in the eastern U.S., has a twisted columella, not a smooth one (Ward and Whipple 1966). *Goniobasis,* to which *J. plicifera* belonged until recently (Taylor 1966), is shorter than *Juga,* and has fewer whorls (Clarke 1981). *J. pficifera* is the only species of the genus in the northwestern U.S. (Clarke 1981). Also synonymized with *J. plicifera* is *J. sificula,* which was formerly believed to be a different species because it is stouter, with stronger ribs and a wider apical angle (Henderson 1929).

J. acutifilosa Stearns, the sharp lined river shell of northern California lakes, has strong spiral keels (Keep 1935), and is probably extinct (Clarke 1976).

Ecological Information

Range—Olympic Peninsula, Washington; Columbia River and other drainages south to California. Possibly Vancouver Island.
Local Distribution—Columbia River, lower reaches; also Tahkenich Lake, near Florence, Oregon (Douglas Co.).
Habitat—muddy-sand bottoms of small and medium lakes; also slow flowing streams (Clarke 1981). Likes cool clear water, green algae (Keep 1935).
Salinity—considered a freshwater species, it is also found in the lower Columbia River.

Temperature—
Tidal Level—
Associates—

Quantitative Information

Weight—
Abundance—

Life History Information

Reproduction—family is oviparous (Henderson 1929); no external verge (male organ).
Growth Rate—
Longevity—
Food—most of family are bottom feeders; some feed on plants, algae, dead vegetation (Clench and Turner 1956).
Predators—
Behavior—

Bibliography

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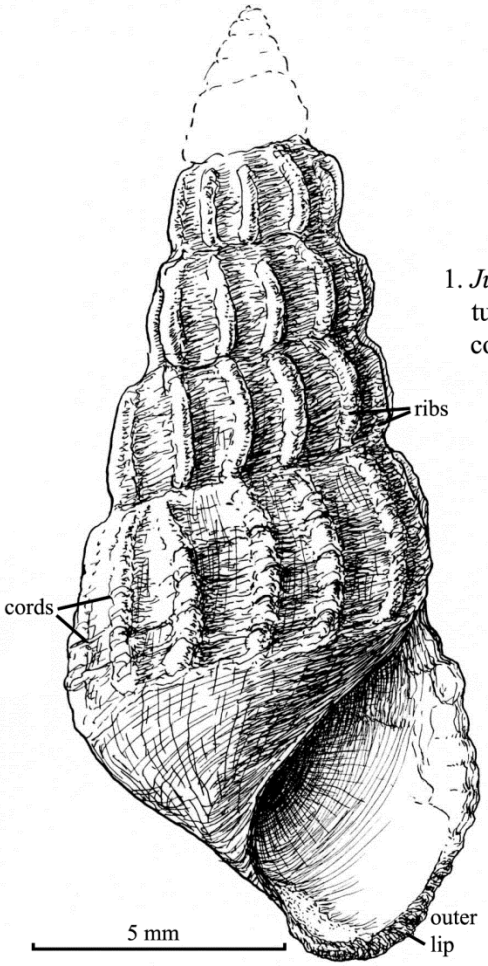
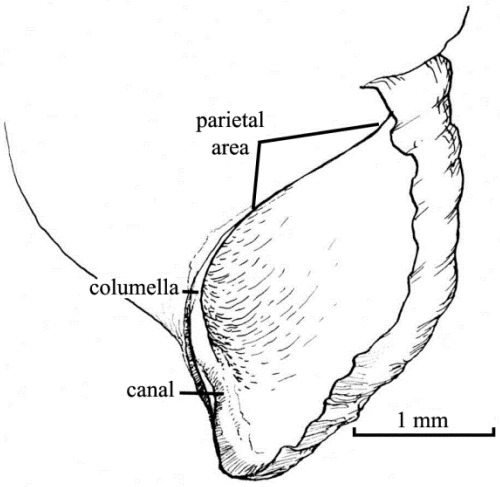


1. *Juga plicifera* x8:
turriform; axial ribs, spiral cords, dusky grey.



2. Aperture x12:
rounded below, acutely angled above; parietal area attenuate, imperforate; columella smooth, canal below it.

3. Operculum x12:
ovate corneous; a few spiral growth lines.