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A New Species of the Genus *Sarsia* (Hydrozoa, Corynidae) from Vancouver Island and Puget Sound

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Abstract

A new species of hydromedusa, *Sarsia viridis* sp. nov., is described from Vancouver Island and Puget Sound. It can be distinguished from all other species of the genus *Sarsia* by small adult size, long manubrium, gonads on the distal part of the manubrium only, and brilliant green colour of marginal bulbs and apical canal.

Introduction

Collections of hydromedusae from surface waters at several marinas and floating docks on Vancouver Island and the San Juan Islands (R. Miller, pers. comm.) revealed a new species belonging to the genus *Sarsia*. This new medusa, described here as *Sarsia viridis* sp. nov., has so far been found in four different locations: Brentwood Bay, Ucluelet Inlet, Sooke Harbour, and Friday Harbor. About 20 specimens were collected from the floating docks with a small dip net or glass jar and preserved in 10 per cent formalin. The species occurred regularly in May and June (1976–79).

Description of New Species of *Sarsia*

Sarsia viridis sp. nov.

Figs. 1 and 2

Etymology

Latin *viridis*, green, in reference to the green colour of marginal bulbs and apical canal.

Type Specimens

Holotypes

National Museum of Natural History, Ottawa, Canada NMCIC-1980-36, male, Sooke Harbour, Vancouver Island, Canada, surface water, 9 May 1979.

Paratype

NMCIC-1980-37, female, Brentwood Bay, Vancouver Island, Canada, surface water, 5 May 1976.

Royal Ontario Museum, Toronto, Canada, ROM CN B96, male, Ucluelet Inlet, Vancouver Island, Canada, surface water, collected between 25 May and 25 June 1977.

Provincial Museum, Victoria, British Columbia, Canada, BCPM 980-319-1, male, Sooke Harbour, Vancouver Island, Canada, surface water, 9 May 1979.

Type Description

Umbrella round, deep bell shaped; height of umbrella (preserved) 5.8 mm. Manubrium twice as long as subumbrella in living specimen; con-

tracted to subumbrella length in preserved specimen; proximal half and distal end of manubrium free of gonads. Distal part of manubrium slightly dilated and beset with patches of nematocysts. Apical canal small and rounded. Four tentacles covered with scattered cnidocyst batteries which appear to be arranged in rings when preserved. Radial canals inserting with middle of the marginal bulb, leaving a small space between radial canals and subumbrella (Fig. 2B). Nematocyst pads of same thickness viewed from the front or side of the marginal bulb. Ocelli situated on a small round protrusion of the marginal bulb (Fig. 2B). Colour: marginal bulbs and apical canal brilliant green in living specimen. Manubrium green but colour less intense than marginal bulb and apical canal. Umbrella slightly green, especially against dark background. Tentacles whitish, ocelli black.

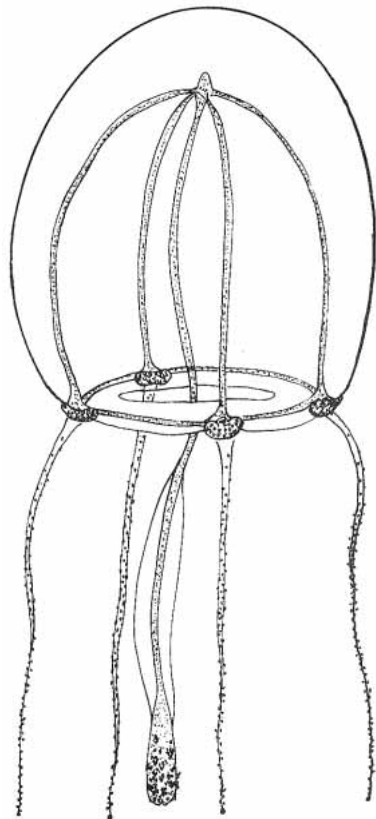


Fig. 1 *Sarsia viridis* sp. nov. Holotype; drawing made from a sketch from the living specimen; height 6.5 mm.

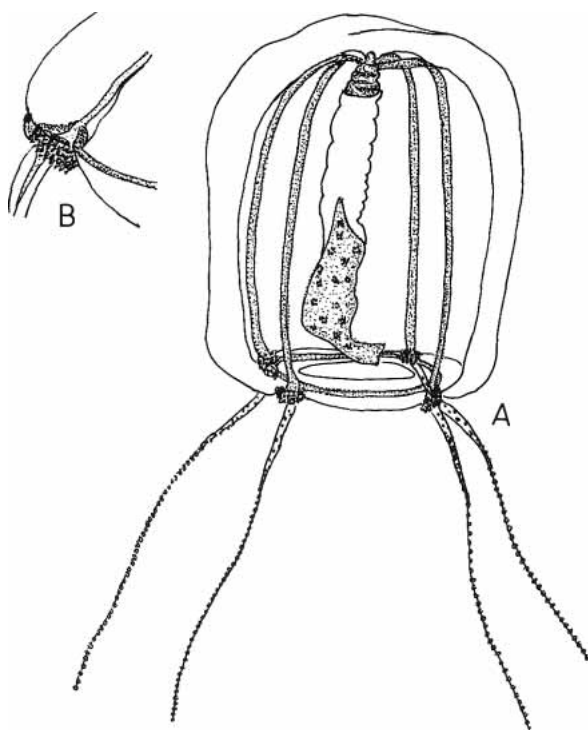


Fig. 2. *Sarsia viridis* sp. nov. Holotype preserved in 10 per cent formalin.

A Total with contracted manubrium.

B Side view of marginal bulb.

Variation

Other specimens showed little deviation from the type described above; height of the mature specimens varied from 5 to 8 mm. The gonad-free proximal part of the manubrium may be up to two-thirds of its whole length, but never less than one half.

Distribution

Canada, Vancouver Island: Brentwood Bay, Ucluelet Inlet, Sooke Harbour; USA, San Juan Islands: Friday Harbor.

Discussion

Sarsia viridis sp. nov. can be distinguished from all other described *Sarsia* species (Kramp, 1926, 1961; Nagao, 1962; Brinckmann-Voss, 1970; Edwards, 1978) by brilliant colour, small size, long manubrium, and undivided gonads occupying the distal part of the manubrium only. The

systematics and variations of the genus *Sarsia* from waters of Vancouver Island and the San Juan Islands are extremely complex (Arai and Brinckmann-Voss, 1980). Apart from *Sarsia viridis* sp. nov., five other *Sarsia* species are known from the area (Arai and Brinckmann-Voss, 1980): *Sarsia apicula*, *S. japonica*, *S. princeps*, *S. tubulosa*, and *Sarsia* sp. *Sarsia viridis* sp. nov. is most distinct from *S. tubulosa*, *S. princeps*, *S. apicula*, and *Sarsia* sp. in its small adult size. The last four species mentioned have an average adult height of no less than 10 mm, whereas the average height of *S. viridis* sp. nov. is no more than 6 mm.

In *S. viridis* sp. nov. the proximal half of the manubrium is devoid of gonads, whereas in the remainder of species only a very small part of the manubrium is gonad-free. Unfortunately, the manubrium often contracts during preservation and the gonad-free part of the manubrium appears to be much shorter than it is in the living

specimens of *Sarsia viridis* sp. nov. The manubrium of *Sarsia japonica* is shorter than the subumbrella in both living and preserved specimens and can therefore be distinguished easily from *S. viridis* sp. nov. Developing medusae of *Sarsia tubulosa* (Edwards, 1978), *S. apicula*, and *S. princeps* show the onset of gonads in the distal part of the manubrium only; however, during further development the gonads grow in proximal direction until they almost encircle the full length of the manubrium.

Sarsia tubulosa has green marginal bulbs and pink tentacles in certain areas (Kramp, 1926; Edwards, 1978). Arai and Brinckmann-Voss (1980) observed a greenish form of *S. tubulosa* in early spring in Brentwood Bay. However, these colour variants of *S. tubulosa* are not as intense a green as *Sarsia viridis* sp. nov. Green *S. tubulosa*, observed by Edwards (1978), had pink tentacles whereas *S. viridis* sp. nov. has white tentacles.

Work on the hydroid of *S. viridis* sp. nov. is now in progress.

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