



Observations on

Hydra viridissima Pallas 1766

Most likely ID: n. a.

Synonyms: n. a.

EOL Phylogenetic tree: [Hydra viridissima](#)

Hydra viridissima living amongst Java moss (*Taxiphyllum barbieri*) filaments in a freshwater aquarium

The animal



Fig. 1: *Hydra viridissima*. Penetrant nematocysts (arrow), ejected sticky thread of a gulletant ptychocyst (double headed arrow). Scale bar indicates 250 µm.

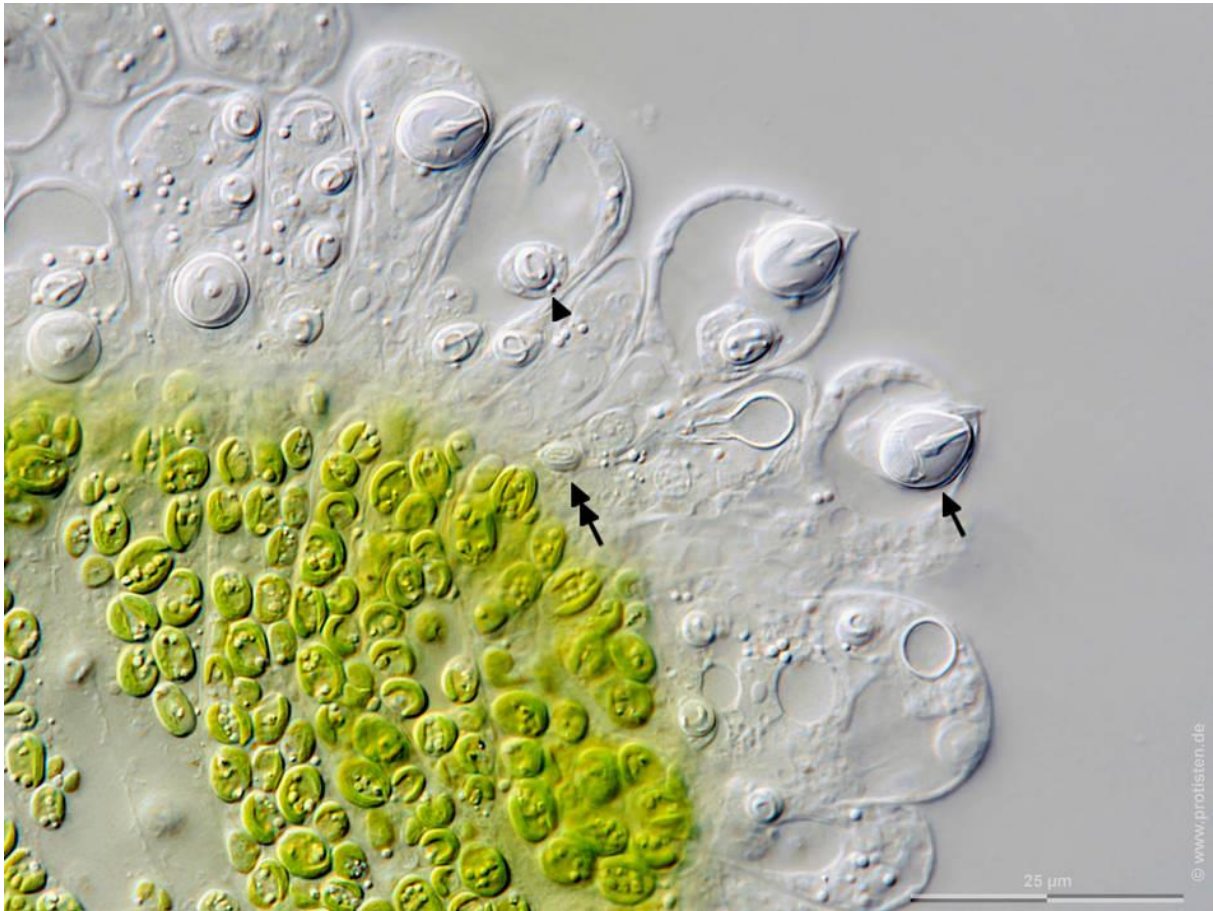


Fig. 2: A closer look at the tentacles. The optical cross section shows three types of their cnidae: some penetrant nematocysts (arrow) showing shaft and coiled hollow tubule for transportation of the toxin into the prey, some more volent spirocyst (arrowhead) and one glutinous ptychocysts (double headed arrow). Scale bar indicates 25 μm .



Fig. 3: In the *Hydra* body. Nucleus of a zoochlorella (arrow), glutinous ptychocyst for attaching the animal to a surface (double headed arrow).

The zoochlorellae

Some species of coccal green algae live as symbionts (zoochlorellae) in the cells of many single-celled species from groups such as the amoebae, the ciliates or the foraminifera. However, zoochlorellae are also known in animals such as freshwater polyps, other groups of coelenterates, in freshwater sponges, turbellarians, etc. These symbioses are generally mutually beneficial, the hosts benefit from secreted assimilates of the algae, and the algae are better protected from grazing due to the size of the hosts.

When the hosts lack food, part of the zoochlorellae is usually digested.

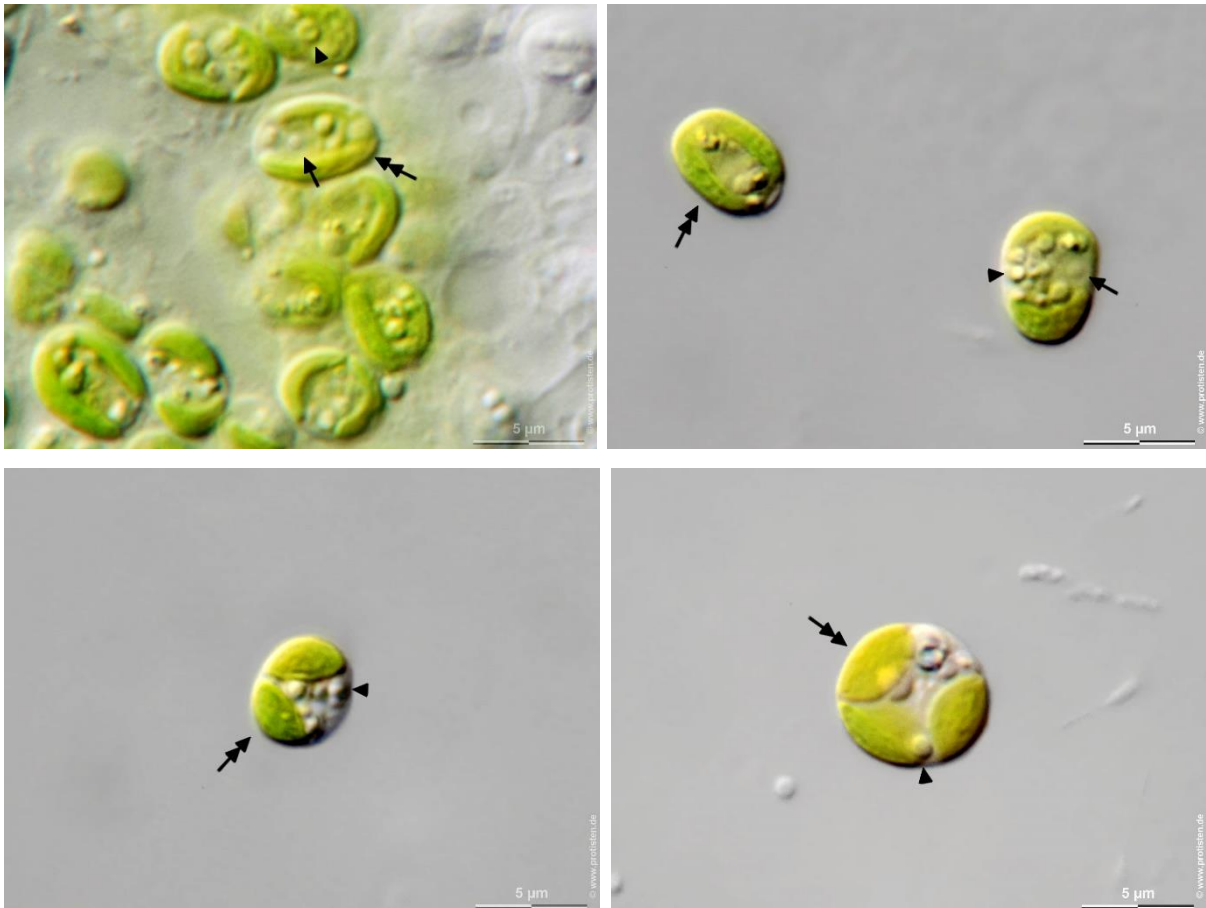


Fig. 4: *Chlorella vulgaris* as symbionts in *Hydra viridissima*. Nucleus (arrow), cup shaped chloroplast (double headed arrow), oil droplet (arrowhead). Scale bars indicate 5 µm.