

“Chitinous” hydroids

SVEN LAUFELD

In the hydrozoan order Hydroida, one of the three suborders, Eleutheroblastina, embraces solitary, naked polypoids that are exceedingly rare as fossils (see, however, Schram & Nitecki 1975 and references therein). The second suborder, Gymnoblastina, contains colonial polypoids with naked hydranths and gonophores but with a “chitinous” or (less commonly) calcareous exoskeleton enclosing hydrorhizae and caulomes. In the third suborder, Calyptoblastina, the hydranths and gonophores are enclosed by hydrothecae and gonothecae, forming parts of a “chitinous” periderm that is easily preserved as fossil (Hill & Wells 1956:F83–86).

Despite the fact that “chitinous” hydroids are very common in most Phanerozoic platform mudstones and carbonates, these fossils have attracted remarkably little attention from specialists on coelenterates. This can probably be explained by the difference in techniques needed for the study of “chitinous” hydroids compared with those for coelenterates with a calcareous skeleton. Most publications on fossil “chitinous” hydroids are authored by specialists either on “chitinous” microfossils or graptolites, and are by-products of the digestion of comparatively small rock samples that yield only few and fragmented hydroid periderms. This is true also of this note.

Not only the Vattenfallet section but the entire Silurian of Gotland offers unique possibilities for studies of “chitinous” hydroids preserved in full relief. To my knowledge not one description or illustration of these fossils from the bedrock of the island has yet been published. However, Eisenack described “chitinous” hydroids from Ordovician and Silurian glacial erratics in a series of publications (1932:266–267, Pl. 11:22–23; 1934:54–56, Figs. 1–7, Pl. 4:5–8; 1937:236–238, Figs. 9–20, Pl. 16:6–7; 1971:455–456, Figs. 31–34). Kozłowski’s (1959) lucid description and discussion of these fossils from Ordovician erratics of Baltic provenance also deserves mention. As pointed out by Kozłowski (1959:212) it is premature to classify early and middle Palaeozoic “chitinous” hydroids into taxa of suprageneric rank at present. My own records in the Vattenfallet section are based solely on the residues of the 50 gram samples processed for Chitinozoa. Thus I have no basis even for an evaluation of which species and genera are represented in the section. The purpose of this contribution is only to record the occurrence of “chitinous” hydroids at Vattenfallet and to stimulate research on these fossils.

The samples in which “chitinous” hydroids were recorded are shown in Fig. 66. These animals are common in most parts of the Lower and Upper Visby Marl, and Högklint *a* and *b*. They may occur in Högklint *c* and *d*, but if so,

they are probably scarce since none of my 50 gram samples from these beds yielded any specimens.

REFERENCES

- EISENACK, A., 1932: Neue Mikrofossilien des baltischen Silurs. II. – *Palaeontol. Z.* 14:257–277.
– 1934: Neue Mikrofossilien des baltischen Silurs. III. Neue Mikrofossilien des böhmischen Silurs. I. – *Ibid.* 16:52–76.
– 1937: Neue Mikrofossilien des baltischen Silurs. IV. – *Ibid.* 19:217–243.
– 1971: Weitere Mikrofossilien aus dem Beyrichienkalk (Silur). – *Neues Jahrb. Geol. Palaeontol. Monatsh.* 1971:449–460.
HILL, DOROTHY, & WELLS, J.W., 1956: Hydroida and Spongiomorphida. In MOORE, R.C., (Ed.): *Treatise on Invertebrate Paleontology* F81-F89. – University of Kansas Press, Lawrence.
KOZŁOWSKI, R., 1959: Les Hydroides Ordovicien à squelette chitineux. – *Acta Palaeontol. Pol.* 4(3):209–271.
SCHRAM, F.R., & NITECKI, M.H., 1975: Hydra from the Illinois Pennsylvanian. – *J. Paleontol.* 49:549–551.