A new chitinozoan species from the Upper Ordovician of the East Baltic

Jaak Nõlvak

Institute of Geology at Tallinn University of Technology, Ehitajate tee 5, 19086 Tallinn, Estonia; nolvak@gi.ee

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Abstract. A new species *Conochitina rugata*, earlier treated as *nomen nudum*, is formally defined. The species has been identified in the upper part of the Pirgu Stage in many East Baltic sections of the Baltica palaeocontinent, and in two regions of the Avalonia palaeocontinent. It has not been found in Scandinavian and Polish sections due to gaps or barren redbeds.

Key words: chitinozoans, Upper Ordovician, Baltica, Avalonia.

SYSTEMATIC DESCRIPTION

Incertae sedis group CHITINOZOA Eisenack 1931
Order PROSOMATIFERA Eisenack, 1972
Subfamily CONOCHITININAE Paris 1981
Genus *Conochitina* Eisenack 1931, emend. Paris et al. 1999

*Conochitina rugata* sp. nov. Nõlvak

Figure 1

1980 *Conochitina* sp.; Nõlvak 1980, pl. 29, fig. 4.
1990 *Conochitina* sp.; Nõlvak 1990, pl. 13, fig. 9.
1993 *Conochitina rugata* Nõlvak *nom. nud.*; Nõlvak & Grahn 1993, pl. IV, C.
2004 *Conochitina rugata* Nõlvak *nom. nud.*; Vanmeirhaeghe & Verniers 2004, pl. 1, e,f,g.

Derivation of name. Latin “*ruga*”, meaning wrinkle, crease, referring to the surface ornamentation of the vesicle.

**Holotype.** Ch 1374/7914, Põltsamaa core, 125.0 m, Adila Formation, Pirgu Stage, Estonia; Nõlvak 1990, pl. 13, fig. 9.

**Type locality** of the *C. rugata* Zone (Nõlvak & Grahn 1993) is in the Hagudi core, interval 24.3–29.8 m, Adila Formation, Pirgu Stage, North Estonia.

**Holotype dimensions** (µm). Total length – L: 510; chamber diameter – Dp: 90; diameter of oral tube – Dc: 68.

**Dimensions** (µm). Twenty specimens from different samples from the Kardla core, mainly flattened (coefficient 0.8). L: 406–630, mean 522; Dp: 84–91, mean 87; Dc: 56–68, mean 62.

**Diagnosis.** Chamber cylindrical, provided with a copula or pronounced mucron; flexure and shoulder lacking or inconspicuous; vesicle wall regularly ornamented with longitudinal ridges.

**Description.** This species displays the main characteristics of the genus *Conochitina* Eisenack, emend. Paris et al. 1999. The vesicle is cylindrical, with straight to slightly convex flanks and tapers towards the aperture. Shoulders and flexure are absent or very weakly developed and the neck, if present, is about 1/3 of the total length of the

Fig. 1. Selected specimens of *Conochitina rugata* sp. nov. (A) Holotype. Ch 1374/7914, Põltsamaa core, 125.0 m, Pirgu Stage, ×170. (B) Aboral pole with copula. Ch 704/6483, Hagudi core, 24.3 m, Pirgu Stage, ×510. (C) Broken oral pole with prosome. Ch 474/6988, Are core, 191.5 m, Pirgu Stage, ×700.
vesicle. The maximum width is just above the rounded aboral margin. The ridges, sometimes anastomosing, are well developed longitudinally over the whole vesicle. However, the inner surface of the vesicle wall is glabrous. The convex base, provided with a pronounced copula, has also a weak ornamentation.

Discussion. Conochitina rugata sp. nov. is easily differentiated from C. incerta Eisenack mainly by its ornamentation. The latter has no ridges and its wall is glabrous. The dimensions of both species are similar. Conochitina incerta, however, has a lower stratigraphical range.

Occurrence. As a zonal form it is found in all localities in the upper part of the Pirgu Stage (Nõlvak & Grahn 1993), in the core sections of (1) Estonia: Valga (Nõlvak 2001, app. 8); Ruhnu (Nõlvak 2003, app. 23); Kaugatuma, Kardla (Brenchley et al. 2003, figs 9, 10); Orjaku, Rapla, Viljandi (Kaljo et al. 2004, fig. 4); Ašmanai (Hints et al. 2005, fig. 4); Hagedü, Kirikuküla, Are, Pärnu, Oostriku, Põlisamaa, Võlitsa, Torma, Võhma-40, Ohesaare, Eikla, Undva, Viki, Tartu, Elva, Laeva-18; (2) Latvia: Baltinava, Kolka; (3) eastern Lithuania: Butkunai, Jaškai, Paukščiai, Schedai, Taurioni, Ukmerge. The species has been recognized also in two regions of the Avalonia palaeocontinent: in the Fosses Formation, Condroz Inlier, Belgium (Vanmeirhaeghe & Verniers 2004), and in the British type Ashgill – in beds of possible late Cautleyan and definite early Rawtheyan age (Vandenbroucke 2005).

Material. Several hundred specimens from 32 sections.

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REFERENCES


Üks uus kitiniiku liik Baltikumi Ülem-Ordoviiitsiumist

Jaak Nõlvak