

SHORT COMMUNICATION

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

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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

Family CONOCHITINIDAE Eisenack 1931, emend. Paris 1981

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. I, e,f,g.

**Derivation of name.** Latin “*rugata*”, 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.

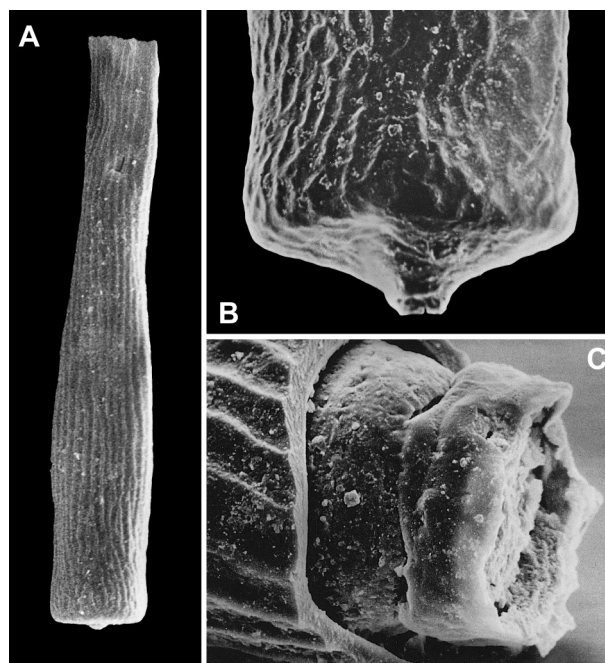
**Holotype dimensions** (µm). Total length – L: 510; chamber diameter – Dp: 90; diameter of oral tube – Dc: 68.

**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,  $\times 170$ . (B) Aboral pole with copula. Ch 704/6483, Hagudi core, 24.3 m, Pirgu Stage,  $\times 510$ . (C) Broken oral pole with prosome. Ch 474/6988, Are core, 191.5 m, Pirgu Stage,  $\times 700$ .

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); Äiamaa (Hints et al. 2005, fig. 4); Hagudi, Kirikuküla, Are, Pärnu, Oostriku, Põltsamaa, Vilita, Torma, Võhma-40, Ohesaare, Eikla, Undva, Viki, Tartu, Elva, Laeva-18; (2) Latvia: Baltinava, Kolka; (3) eastern Lithuania: Butkunai, Jakšai, Pauščiiai, Schedai, Taučionys, 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.

## ACKNOWLEDGEMENT

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## Üks uus kitiiniku liik Baltikumi Ülem-Ordoviitsiumist

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On kirjeldatud uut kitiiniku liiki, mis levib Baltica paleokontinendi Ülem-Ordoviitsiumi Pirgu lademes paljudes Baltikumi läbilõigetel, kuid puudub settelünkade ja punavärvi kivimite leviku tõttu Põhja-Poola ja Skandinaavia seni uuritud läbilõigetel. On leitud ka Avalonia paleokontinendi kahest läbilõikest Belgiast ja Briti klassikalise Ashgilli levikualalt, mis tõstab oluliselt liigi korrelatiivset väärtust.