

MICROPALAEONTOLOGY NOTEBOOK

***Cyathochitina cycnea* (Chitinozoa), a new name for *Cyathochitina giraffa* Hennissen *et al.*, 2010**THIJS R.A. VANDENBROUCKE¹, JAN HENNISSSEN² & THOMAS SERVAIS¹¹UMR 8217 du CNRS: Géosystèmes, Université Lille 1, Avenue Paul Langevin, bâtiment SNS, 59655 Villeneuve d'Ascq cedex, France.²Earth Sciences Centre, University of Toronto, 22 Russell St, Toronto, Ontario M5S 3B1, Canada.

*Corresponding author (e-mail: Thijs.vandenbroucke@univ-lille1.fr)

NOMENCLATURAL NOTE

Hennissen *et al.* (2010) described a chitinozoan fauna from the Dawangou section in the Xinjiang region of China, an auxiliary Global Stratotype Section and Point (GSSP) for the base of the Upper Ordovician Series. The fauna contained one new species, which they named *Cyathochitina giraffa*. Their paper was published in December 2010 (formally accepted 10 July 2010). However, Grahn & Nölvak (2010) had already published a paper in June of the same year, including a different new species that was also named *Cyathochitina giraffa*. According to the rules of the *International Code of Zoological Nomenclature* (ICZN, 1999, Art. 52.3.), the species *Cyathochitina giraffa* Grahn & Nölvak, 2010 is the senior homonym and, therefore, has nomenclatural priority. The species described by Hennissen *et al.* (2010) needs to be renamed. Here, we introduce a new name for this species: *Cyathochitina cycnea* nom. nov.

SYSTEMATIC PALAEONTOLOGYIncertae Sedis Group **Chitinozoa** Eisenack, 1931Order **Prosomatifera** Eisenack, 1972Family **Lagenochitinidae** Eisenack, 1931Subfamily **Cyathochitininae** Paris, 1981Genus *Cyathochitina* Eisenack, 1955 emend. Paris *et al.*, 1999*Cyathochitina cycnea* nom. nov.

(Fig. 1a–e)

v2010 *Cyathochitina giraffa* sp. nov. Hennissen *et al.*: 109, pl. 4, figs 8–11, 11a.non 2010 *Cyathochitina giraffa* sp. nov. Grahn & Nölvak: pl. 3, figs I–L.2007 *Cyathochitina* sp. 1 Tang *et al.*: 482, fig. 19.2001 *Cyathochitina* sp. cf. *C. jenkinsi* Ottone *et al.*: 109, pl. 3, figs 6, 8, 9.2000 *Cyathochitina jenkinsi* Geng *et al.*: pl. 4, fig. 8.1984 *Cyathochitina* sp. cf. *C. jenkinsi* Achab: 135, pl. V, figs 1–9.

Derivation of name. The name *C. giraffa* (Hennissen *et al.*, 2010) was derived from the fact that the species has a long ‘neck’, just like a giraffe. The swan, *cycnus* in Latin, also has a particularly long neck. ‘*Cycneus*’ is the derived adjective. In biology, a slightly different spelling is used to indicate the bird genus *Cygnus* of the Anatidae family.

Diagnosis. *Cyathochitina cycnea* is a long and slender chitinozoan, characterized by a very long neck: the ratio neck length/

total length is at least 0.4 and commonly larger than 0.5. Typically, its maximal diameter is situated at about one-fifth of the total chamber length above the base of the vesicle. This produces a two-dimensional chamber morphology (specimens from Hennissen *et al.*, 2010 are flattened) that has the shape of an oval, i.e. tapering towards both aboral and oral ends of the chamber, but truncated (flattened) at the base. Depending on the degree of roundness, the chamber shape can be close to that of an asymmetrical rhombus (diamond), truncated along the largest diagonal, a short distance below the smallest diagonal.

Holotype. Hennissen *et al.* (2010, pl. 4, fig. 10), as ‘*Cyathochitina giraffa* n. sp.’. Holotype repository: Royal Belgian Institute for Natural Sciences, collection number RBINS_b_5103. Holotype not refigured here.

Locality and horizon. Type locality is the Dawangou section, Xinjiang region of China. Type stratum is the Saergan Formation.

Age. Late Darriwilian to early Sandbian (i.e. late Middle Ordovician to early Late Ordovician).

Description. See Hennissen *et al.* (2010).

Dimensions. The total vesicle length (L) varies between 260 and 580 µm (400 µm on average) and the maximal (chamber) width (Dp) varies between 100 and 190 µm (140 µm on average – see Hennissen *et al.*, 2010, fig. 7, table 17, p. 111).

Stratigraphic occurrence. Late Darriwilian–early Sandbian, Dawangou section in NW Tarim, China (Hennissen *et al.*, 2010): *Didymograptus purchisoni*, *Dicellograptus vagus* and *Nemagraptus gracilis* graptolite biozones; Middle–Lower Ordovician, Charchaq Formation, Mt. Querrqueke section, Kuruktag area, NE Tarim, China (Tang *et al.*, 2007); Late Darriwilian–early Sandbian, Los Azules Formation, Central Precordillera in Argentina (Ottone *et al.*, 2001): *Pterograptus elegans* to *Climacograptus bicornis* graptolite biozones; Late Darriwilian, Tarim, China (Geng *et al.*, 2000): *D. purchisoni* graptolite biozone; Late Darriwilian–early Sandbian, Anticosti Island, Canada (Achab, 1984): *D. multidentis* and *N. gracilis* graptolite biozones.

Remarks. Hennissen *et al.* (2010) discussed how the long neck *C. cycnea* sets it apart from other cyathochitinids, in combination with the shape of the chamber: in most species of *Cyathochitina*, the chamber is conical and the maximal width of the chamber is at, or very close to, the basal edge. Closer to it in overall shape than to

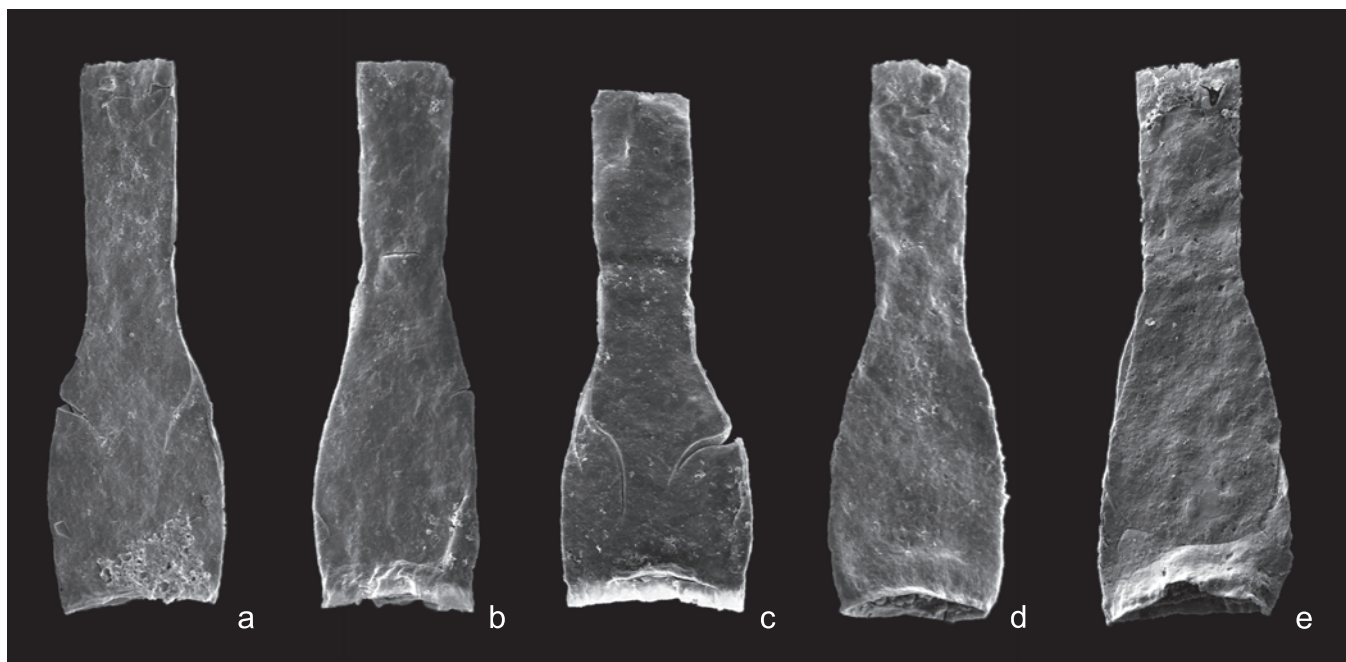


Fig. 1. *Cyathochitina cycnea*: (a) sample NJ 349 (L 510 μ m; Dp 165 μ m); (b) sample NJ 352 (L 380 μ m; Dp 120 μ m); (c) sample NJ 352 (L 385 μ m; Dp 150 μ m); (d) sample NJ 373 (L 360 μ m; Dp 110 μ m); (e) sample NJ 340 (L 420 μ m; Dp 150 μ m).

other cyathochitiniids, *C. cycnea* lacks the longitudinal ridges of *C. jenkinsi*. The length of the neck of *Cyathochitina cycnea* is not significantly different from that of *C. giraffa* of Grahn & Nölvak (2010), which is described as ‘about half the total length or longer’ Grahn & Nölvak (2010, p. 46). If anything, *C. cycnea* has a slightly shorter neck, based on two of the four illustrated specimens of Grahn & Nölvak (2010, p. 65, pl. 3, figs J, K). The most important difference, however, between *C. cycnea* and *C. giraffa* is the morphology of the vesicle’s chamber: *C. giraffa* has a conical chamber, much like that of *C. campanulaeformis*, and its maximal width is at the basal margin. In contrast, *C. cycnea* has an oval-shaped chamber, with its maximal width clearly above the basal margin.

Manuscript received 05 June 2012

Manuscript accepted 23 June 2012

Scientific Editing by John Marshall

REFERENCES

- Achab, A. 1984. Chitinozoaires de l’Ordovicien moyen de subsurface de l’île Anticosti. *Review of Palaeobotany and Palynology*, **43**: 123–143.
- Eisenack, A. 1955. Neue Chitinozoen aus dem Silur des Baltikums und dem Devon der Eifel. *Senckenbergiana lethaea*, **36**: 311–319.
- Geng, L.Y., Wang, Y., Cai, X.Y. & Tang, P. 2000. Chitinozoan biostratigraphy in China. In Song, Z. (Ed.), *Palynofloras and Palynomorphs of China*. Press of University of Science and Technology of China, Hefei, 209–241.
- Grahn, Y. & Nölvak, J. 2010. Swedish Ordovician Chitinozoa and biostratigraphy: A review and new data. *Palaeontographica Abteilung B*, **283**: 5–71.
- Hennissen, J., Vandenbroucke, T.R.A., Chen Xu, Tang Peng & Verniers, J. 2010. The Dawangou auxiliary GSSP (Xinjiang autonomous region, China) of the base of the Upper Ordovician Series: Putting global chitinozoan biostratigraphy to the test. *Journal of Micropalaeontology*, **29**: 93–113.
- International Commission on Zoological Nomenclature (ICZN). 1999. *International Code of Zoological Nomenclature* (4th edn). The International Trust for Zoological Nomenclature. London, 306pp.
- Ottone, E.G., Holfeltz, G.D., Albanesi, G.L. & Ortega, G. 2001. Chitinozoans from the Ordovician Los Azules formation, Central Precordillera, Argentina. *Micropalaeontology*, **47**: 97–110.
- Paris, F., Grahn, Y., Nestor, V. & Lakova, I. 1999. A revised chitinozoan classification. *Journal of Paleontology*, **73**: 549–570.
- Tang, P., Geng, L.Y., Deng, S.H., Zhang, S.B., Paris, F. & Zhu, H.C. 2007. Middle and Upper Ordovician chitinozoan assemblages from the Kuruktag area, northeastern Tarim Basin, China. *Acta Palaeontologica Sinica*, **46**(Suppl.): 477–482.