A Global Chitinozoa Biozonation for the Silurian

J. Verniers[1], V. Nestor[2], F. Paris[3], P. Dufka[4], S. Sutherland[5] & G. van Grootel[6]

A global biozonation of the Silurian with chitinozoa is proposed. Each biozone is an interval range biozone defined by the first occurrence of an index species, selected among well studied, unambiguous and easily identifiable species with a relative short time range. To prevent too local distribution, the selected index species have to be recorded at least in the major Silurian palaeocontinents where usable chitinozoa assemblages have been studied: i.e. Avalonia-Baltica (already linked in the Silurian), Laurentia, Gondwana, South China. Fifteen biozones are identified with, in ascending order, seven in the Llandovery: the *fragilis, postrobusta, electa, maennili, elongata, dolioliformis* and *longicollis* Biozones, four in the Wenlock: the *margaritana, clathrata, pachycephala* and *lycoperdoides* Biozones, three in the Ludlow: the *elongata, philipi* and *barrandei* Biozones and one in the Pridoli: the *urna* Biozone. This latter is divided into 3 subzones: the *kosovensis, elegans* and *superba* Biozones. The chronostratigraphic calibration is partly provided by direct reference to the range of the chitinozoa index species in the global stratotype sections (GSSP) of Silurian series: e.g. in Bohemia (Czech Republic) for the Pridoli and in the Welsh Borderland (United Kingdom) for the Ludlow and Wenlock. When this information was not available, independent stratigraphical control was given by calibration with the graptolite biozonation or in a few cases, by conodont or trilobite biozonation. The index species and most characteristic Silurian Chitinozoa species of each biozone are illustrated and their total stratigraphic range is provided.

[1] Lab. Paleontol., Krijgslaan 281/S8, B-9000 Gent, Belgique
[2] Institute of Geology, Estonian Academy of Sciences, Estonia pst. 7, E-0105 Tallinn, Estonia
[3] Univ. Rennes, I.U.R.A., 1364 CNRS, Lab. Paleontol. & Stratigr., Av. du Général-Leclerc, F-35042 Rennes
[4] Czech Geological Survey, P.O. Box 85, Praha 011, 118 21 Czech Republic
[5] Centre for Palynolog. Stud., Univ. Sheffield, Mappin Street, Sheffield S1 3JD, U.K.
[6] Lab. Paleontol., Krijgslaan 281/S8, B-9000 Gent, Belgique