

VANGUESTAINIDIUM

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Vanguetainidium gen. nov.

Type. *Vanguetainidium cucurbitulum* gen. et sp. nov.

Derivation of name. In honor of Professor Michel Vanguetain of the University of Liège, Belgium, who passed away in 2006.

Diagnosis. Vesicle large ($>300\ \mu\text{m}$ in diameter), originally spherical or nearly so, clearly differentiated from processes. Vesicle wall relatively thin, surface laevigate. Processes about 14 in number, hollow, long, cylindrical,

and heteromorphic, irregularly distributed, with slightly flaring base and blunt tips, that communicate freely with the vesicle interior. Processes bear characteristic pad-like ornamentation. No excystment structure has been observed.

Remarks and comparisons. *Vanguetainidium* gen. nov., differs from other "giant" acritarchs such as *Aremoricanium* (Deunff 1955) Loeblich & MacAdam 1971, *Estiastra* Eisenack 1959, *Hoegkintia* (Dorning 1981) Eley & Legault 1988, *Pulvinosphaeridium* Eisenack 1959, and *Tyrannus* Wood & Tekbali 1987, by its exceptionally large size, and the pad-like ornamentation on the processes, which is a consistent feature and a peculiar and unique characteristic. Other large Mesoproterozoic acritarchs (such as *Shuiyousphaeridium* Yan 1992 and *Tappania* Yin 1997), the Neoproterozoic *Tappania sensu* Butterfield (2005) and *Trachyhystrichosphaera* (Timofeev & Hermann 1976) Butterfield et al. 1994, and those accompanying a major Ediacaran radiation of phytoplankton (Moczydlowska, 2005) (such as *Appendisphaera* Moczydlowska et al. 1993) differ from *Vanguetainidium* gen. nov. by the nature of their processes and the absence of the characteristic pad-like ornamentation.

