

VELATASPHAERA

Miller & Williams 1988

Genus *Velatasphaera* gen. nov.

Type Species. *Velatasphaera hudsonii* sp. nov.

Derivation of Name. The genus is named for the covered, spherical inner vesicle (L., *velata* + *sphaera*).

Description. Vesicle spherical; outline circular to subcircular. Vesicle constructed of two layers, separated by short, variably shaped processes of approximately equal length. Outer wall layer is perforate,

pores coincident with hollow, distally open processes. Walls of processes are integral with outer wall layer. Except for processes, the cavity between inner and outer walls is hollow. Processes proximally closed against imperforate inner wall. Hollow cavity enclosed by inner wall. Surfaces of inner and outer walls may be ornamented. Excystment by micropylome.

Comparison. *Velatasphaera* gen. nov. differs from *Tunisphaeridium* Deunff & Evitt 1968 (p. 2) by having a micropylome and consistently shorter processes which are hollow, distally open, and generally of uniform length. *Tasmanites* Newton 1875 (p. 389) is punctate but, unlike *Velatasphaera* gen.

nov., has only one wall. The bilayered acritarch genera *Asketopalla* Loeblich & Tappan 1969 (p. 47) emend. Loeblich & Tappan 1971 (p. 900) and *Dicommopalla* Loeblich 1970 (p. 39) lack the distally open processes that connect the outer and inner walls. Double pylomes, present in some specimens of *Asketopalla* and *Dicommopalla*, have not been recognized in specimens *Velatasphaera* gen. nov. *Helosphaeridium* Lister 1970 (p. 76) has solid or hollow processes which flair distally and may contact adjacent processes. However, it differs from *Velatasphaera* by excysting by "cryptosuture" (= median split). *Cyclopsiella* Drugg & Loeblich 1967 (p. 188) is flattened and ellipsoidal in outline whereas *Ascotomocystis* Drugg & Loeblich 1967 (p. 187) is generally elliptical in outline with an aperture at the apex. These bilayered acritarchs, originally described from the Paleogene, do not have processes connecting the inner and outer wall layers. *Disphaeria* Cookson & Eisenack 1960 (p. 11; pl. 3, figs. 13, 14) is a bilayered pterate dinoflagellate cyst with an archeopyle formed through the loss of a single precingular plate (Stover and Evitt, 1978, p. 230). It does not have processes connecting the two wall layers. The dinoflagellate genus

Chlamydophorella Cookson & Eisenack 1958 (p. 56) emend. Duxbury 1983 (p. 41) has an autophram with numerous solid or hollow processes supporting

a smooth to perforate ectophram. Although the wall structure of *Chlamydophorella* is nearly identical to that of *Velatasphaera*, *Chlamydophorella* has an apical archeopyle.