**Polyphagus arnaudovii** Doweld, sp.nov.

**IF550465**

Thallus or broadly pyriform rudiment of the prosporangium attached to the underside of a water film by 5 short anchoring rhizoids; 5 long (100-120 Å) primary rhizoids arise from the periphery and curve down into the water like ribs of an open umbrella, and a 6th one develops from the terminal pole of the prosporangium and extends straight down like the handle of an umbrella; these 6 primary rhizoids spirally twisted and bear numerous short (3 to 5 Å), sharp setae (organelles of capture). Zygospores spherical, strongly spinate. Hyponeustonic. Nomenclatural comments: = Arnaudovia hyponeustonica Valkanov in Arch. Protistenk. 106: 562, tab. 44, figs 1-11. 1963, nom. inval. (lacking Latin description and holotype designation) = Polyphagus hyponeustonicus (Valkanov) Karling, Chytridiomycet. Iconogr.: 174. 1977 (â€œhypneustonicaâ€), comb. inval. (based on invalid name, lacking also direct and full reference to basionym).


**Polyphagus asymmetricus** Valkanov ex Doweld, in Doweld, sp.nov.

**IF550466**

Thallus lacking clearly pronounced radial symmetry; prosporangium spherical, up to 20 Å, from which 4 to 8 primary rhizoids branched extensively and chemotropically to the host cells. Sporangium spherical, always radially symmetrical, thick-walled, walls persisting some time after zoospores release. Zygotes elliptic, 6 Ñ… 9 Å, with warty surface, yellow-greenish. Hyponeustonic, on Botrydiopsis. [Modified after Valkanov, l.c.]. Nomenclatural comments: = Polyphagus asymmetricus Valkanov in Arch. Protistenk. 106: 568, tab. 44, figs 1-11. 1963, nom. inval. (lacking Latin description and holotype designation).


**Polyphagus sinicus** Doweld, sp.nov.

**IF550467**

Thallus holocarpic, hyaline, containing several refractive globules, polyphagous, attached to the algal filaments by thread-like rhizoids, 21-31 Ñ… 16-22 Å. Zoosporangia originated from the mature thallus by budding out an outgrowth which gradually enlarges and becomes a sporangium, spherical to elliptical, 17-21 Ñ… 25-29 Å, sporangium quickly disintegrating after the emergence of the zoospores. Zoospores ovoid, 8.5-6.5 Å, posteriorly uniflagellate, with a central lipid body 2.5 Å in diam., flagellum up to 28 Å long. Sexual reproduction by conjugation between two individuals. Zygospores spherical (15.6-18 Ñ… 18-20.5 Å), yellow-brown, strongly spinate (spines 1 Å long), thick-walled, containing a central oily globule 11.4 Å in diam. Germination unknown. On Draparnaldia. [Modified after Chen in Amer. J. Bot. 31: 233. 1944, as Polyphagus rostratus (Serb.) Chen, excl. typo non Sporophlyctis rostrata Serbinow in Bot. Zap. 15: 322. 1899]. Nomenclatural comments: = Sporophlyctis chinensis Sparrow, Aquat. Phycomyc.: 458. 1960, nom. inval. (lacking holotype designation and Latin description).