BRIAREUS Knoll 1992, p. 764

Genus BRIAREUS gen. nov.

Type species. *Briareus borealis* sp. nov.

Diagnosis. Spheroidal vesicles > 100 μm in diameter, bearing numerous regularly arranged cylindrical processes; processes hollow, communicating freely with the vesicle interior, and flaring slightly at both base and apex; process length up to 20 per cent of vesicle diameter (Text-fig. 2F). Process-bearing vesicle may surround an inner, unornamented spheroidal vesicle. Excystment structures unknown.

Derivation of name. From the Greek '*Briareos*', a hundred-armed giant, with reference to the large size and numerous processes of the fossils.

Discussion. *Briareus* is a distinctive morphotype within the PKF assemblage; it can be distinguished from co-occurring acanthomorphs by its distinctive process morphology (Text-fig. 2). Process form in *Briareus* is similar to that of the Early Cambrian genus *Skiagia* (Downie 1982; Moczydłowska 1991); however, processes in the younger genus do not communicate freely with the vesicle interior (Moczydłowska 1991). This alone would justify a generic distinction. Following precedent set by the segregation of the genus *Michrystridium* on the basis of size, it is here argued that the large size of *Briareus* also differentiates it from superficially similar Cambrian fossils. No described specimens of *Skiagia* have diameters that exceed 100 μm; the PKF specimen and morphologically similar fossils from the Pertatataka Formation, Australia (Zang 1988) are all larger than 100 μm. Vesicle volume in *Briareus* exceeds that of *Skiagia* by more than two orders of magnitude. *Briareus* is known only from pre-Ediacaran rocks and is therefore separated stratigraphically from the oldest known *Skiagia* species by as much as 30–40 million years.