

Genotypes of *Septatrocholina* and *Alzonorbitopsella*, two new Jurassic foraminifera: subsequent designations

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ABSTRACT: When the genera *Septatrocholina* BouDagher-Fadel and Banner and *Alzonorbitopsella* BouDagher-Fadel were erected (BouDagher-Fadel 2008, pp. 161; 175), the genotypes *Septatrocholina banneri* and *Alzonorbitopsella arabia*, respectively, were described and figured, but through an oversight the holotypes and paratypes were not identified among the illustrated specimens. The type specimens are here subsequently designated, in accordance with ICZN 1999, article 69, and are further described. The type specimen slides are deposited in the invertebrate collections of the Natural History Museum, London.

Class FORAMINIFERA Lee 1990
Order INVOLUTINIDA Hohenegger & Piller 1977
Suborder INVOLUTININA Hohenegger and Piller 1977
Superfamily INVOLUTINOIDEA Bütschli 1880
Family INVOLUTINIDAE Bütschli 1880
Genus *Septatrocholina* BouDagher-Fadel and Banner in
BouDagher-Fadel 2008

Septatrocholina banneri BouDagher-Fadel and Banner 2008
Page 161; pl. 4.2, figs. 1-4.

Dimensions: maximum measured length 1.2mm.

Description: The test is conical, consisting of a globular proloculus followed by a trochospirally enroled divided tubular second chamber with rudimentary septa around a solid core of pillars, filling the umbilical area. The secondary lamellar thickenings on one or both umbilical regions. The aperture is terminal at the open end of the tube.

Remarks: This species is distinguished from other involutinids by the solid core of pillars filling the umbilicus and the rudimentary septa. Rigaud et al. 2013 included the genus *Septatrocholina* within the synonyms of *Coscinoconus* Leupold in Leupold and Bigler 1936, on the basis that *Coscinoconus* has “possibly slightly constricted endoskeletal structures or wall thickenings” similar to the rudimentary septa of *Septatrocholina*. However, the septa in the latter are almost non-existent, while those of *Coscinoconus* are complete (see Rigaud et al. 2013, Figs 7–11, new illustrations of syntypes of *Coscinoconus chouberti*). In addition, *Septatrocholina* lacks the complex canal system which form polygonal nodes at the umbilical surface of *Coscinoconus*.

Suborder TEXTULARIINA Delage and Hérouard 1896
Order TEXTULARIIDA Delage & Hérouard 1896
Superfamily LITUOLOIDEA de Blainville 1825
Family HAURANIIDAE Septfontaine 1988
Subfamily AMIJIELLINAE Septfontaine 1988
Genus *Alzonorbitopsella* BouDagher-Fadel 2008

Alzonorbitopsella arabia BouDagher-Fadel 2008
Page 172; Plate 4.2, figs 5-10.

Dimensions: maximum measured length 3mm.

Description: The test is planispiral, annular and discoidal with no septulae, ranging in size from 1 to 3mm. The septa are simple, lacking a subepidermal reticulate mesh and thickened around the cribrate apertures. True pillars linking septum to septum are also absent. A delicate reticulate hypodermis of beams and rafters is present, but this structure does not continue onto the septa. Annular chambers immediately follow the large megalospheric proloculus. The aperture is multiple.

Remarks: *Alzonorbitopsella arabia* differs from *Orbitammina elliptica* (d’Archiac), *Orbitopsella* spp. and *Cyclorbitopsella* spp. in lacking true pillars linking the septa. The delicate reticulate hypodermis of beams and rafters are like as those of *Alzonella cuvillieri* Bernier and Neuman, but there is a lack of continuation of this structure on to the septa. Unlike *Orbitammina elliptica* and the megalospheric *Alzonella cuvillieri*, the chambers are completely cyclic, as in *Cyclorbitopsella* spp.

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REFERENCES

- BOUDAGHER-FADEL, M. K. 2008. *Evolution and geological significance of larger benthic foraminifera*. London: Elsevier. Developments in Palaeontology and Stratigraphy no 21, 540 pp.
- ICZN, 1999. *International Commission on Zoological Nomenclature, Fourth Edition*. (Ride, W. D. L., Cogger, H. G., Dupuis, C., Kraus, O., Minelli, A., Thompson, F. C. and Tubbs, P. K., editors). London: Natural History Museum, 106 pp.
- RIGAUD, S., BLAU, J., MARTINI, R. and RETTORI, R., 2013. Taxonomy and phylogeny of the Trocholinidae (Involutinina). *Journal of Foraminiferal Research*, 43: 317–339.

PLATE 4.2

From BouDagher-Fadel 2008, *op. cit.* “BP” refers to slide numbers.

1-4 *Septatrocholina banneri*, n. sp. Figs. 1-3 (BP 7702) from 8172 ft in Juh-1 core, Qatar; Callovian-Oxfordian, upper Araej Formation; fig. 4 (BP 7701) from 9880 ft in Um-Shaif-4 core; Upper Bathonian, basal Uweinat Formation; Abu Dhabi.

- 1 Paratype, tangential section showing rudimentary septa ($\times 64$).
- 2 Holotype, equatorial section showing the globular proloculus followed by a trochospirally enroled divided tubular second chamber with rudimentary septa ($\times 64$).
- 3 Paratype, tangential axial section showing the rudimentary septa ($\times 40$).
- 4 Paratype, axial section in which septa are not visible ($\times 24$).

5-10 *Alzonorbitopsella arabia*, n. sp. Fig. 5 (BP 6626) and figs. 6, 9, 10 (BP 6627) from 9879 $\frac{1}{4}$ ft; figs. 7, 8 (BP 6623) from 9880 ft; Um-Shaif-4 core; Upper Bathonian, basal Uweinat Formation, Abu Dhabi.

- 5 Holotype, equatorial section of the annular holotype with large megalospheric proloculus ($\times 20$).
- 6 Paratype, equatorial section showing the annular test with no septulae ($\times 20$).
- 7 Paratype, equatorial section showing the large megalospheric proloculus ($\times 20$).
- 8 Paratype, oblique equatorial section showing the annular chambers immediately following the large megalospheric proloculus ($\times 20$).
- 9 Paratype, oblique axial section showing the delicate reticulate hypodermis of beams and rafters ($\times 20$).
- 10 Paratype, enlargement of the axial section to show that the reticulate hypodermis of beams and rafters does not continue onto the septa ($\times 32$).

