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RESEARCH ARTICLE

UVIGERINELLOIDES: A NEW ROTALIID BENTHIC FORAMINIFERAL GENUS

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ABSTRACT

This study describes a new Paleogene Rotaliid genus *Uvigerinelloides* from the middle Oligocene, Septarienthon of Hermsdorf, near Berlin, Germany. It is characterized by fusiform triserial perforate calcareous test, chambers regularly triserial throughout, while the final chambers more loosely arranged, surface finely hispid to smooth, which the last-formed chambers often entirely smooth, aperture slender neck and slightly phialine lip. This genus differs from the other Uvigeriniid genera by its finely hispid to smooth surface, which the last-formed chambers often entirely smooth.

KEYWORDS

Benthic foraminifera, Rotaliid, *Uvigerinelloides*, Oligocene, Europe

1. INTRODUCTION

The present study aims at throwing light on the modern paleontological consideration of the new Rotaliid genus *Uvigerinelloides* from the middle Oligocene, Septarienthon, of Hermsdorf, near Berlin, Germany. It is characterized by chambers regularly triserial throughout, while the final chambers more loosely arranged, wall finely hispid to smooth. It is also describing the main characters of the holotypes of the other three related Rotaliid genera of the Uvigeriniid Family, as: *Uvigerina, Euuvigerina, Uvigerinella*, beside the new genus *Uvigerinelloides* (Table 1).

Table 1: The morphocharacters of four Boliviniid genera: *Uvigerina, Euuvigerina, Uvigerinella* and *Uvigerinelloides.*

Genus	Arrangement of chambers	Test shape	Ornamentation	Sutures	Aperture
Uvigerina	triserial	elongate	longitudinal platy costae or striae	distinctly depressed	on neck
Euuvigerina	triserial	elongate	numerous fine spines	depressed	tubular neck
Uvigerinelloides	triserial	fusiform	finely hispid to smooth	slightly depressed	slender neck
Uvigerinella	Triserial tending to uniserial	elongate	smooth	slightly depressed	elongate slit

2. FAUNAL DISCUSSION

The *Uvigerinelloides* Anan n. gen. is compared with other three related Uvigeriniid genera which has a diagnostic character of its fusiform hispid test with regular triserial arrangement, which the last-formed chambers often entirely smooth, with tubular slender aperture with nick. According to Cushman and Edward, the numerous American Oligocene species of typical *Uvigerina* which developed from their ancestral forms in the Eocene are relatively rare (Cushman and Edward, 1937). It has been necessary to give new names to a few of the species after comparison with the types and topotypes of the known species, which are applies in this study.

3. TAXONOMY

The taxonomic classification of Loeblich and Tappan of the new genus *Bolivinoidesella* as well as the other recorded three genera of the Rotaliid benthic foraminifera is followed (Loeblich and Tappan, 1998). The illustrated Uvigeriniid holotypes have been shown in Plate (1).

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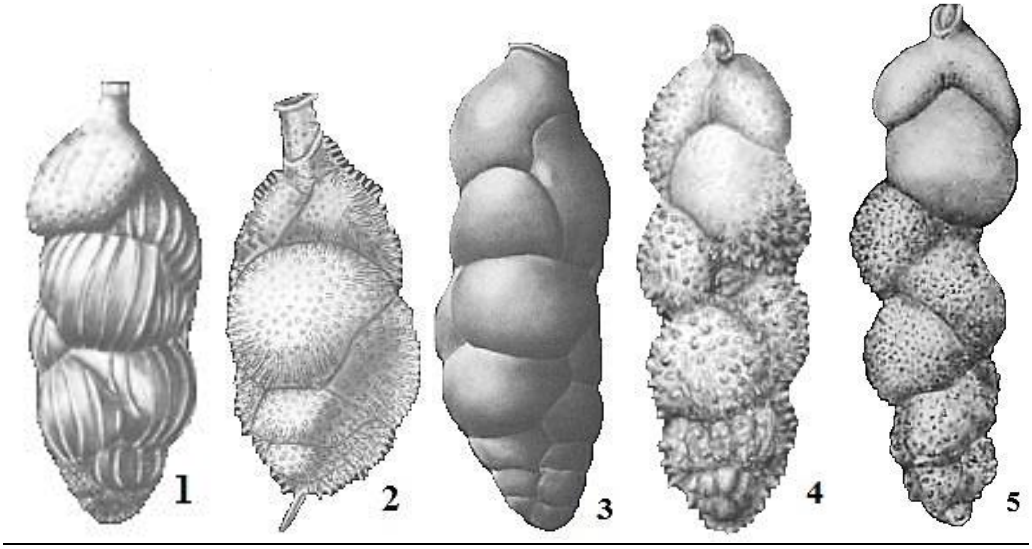

Figure 1: *Uvigerina* d'Orbigny (1826), **2.** *Euuvigerina* Thalmann (1952), **3.** *Uvigerinella* Cushman (1926). **4**, **5.** Holotype and Paratype of *Uvigerinelloides* Anan (n. gen.), respectively.

Order Foraminiferida Eichwald, 1830

Suborder Rotaliina Delage & Hérouard, 1896

Superfamily Buliminacea Jones, 1875

Family Uvigerinidae Haeckel, 1894

Subfamily Uvigerininae Haeckel, 1894

Genus *Uvigerina* d'Orbigny (1826), pl. 1, figure 1.

Genus *Euuvigerina* Thalmann (1952), pl. 1, figure 2.

Genus *Uvigerinella* Cushman (1926). Pl. 1, figure 3.

4, 5. Genus *Uvigerinelloides* Anan, n. gen.

Type species: *Uvigerinelloides gracilis* (Reuss, 1851, p. 77, pl. 5, figure 39) (after Cushman and Edwards, 1937).

Holotype: pl. 1, figure 4.

Paratype: pl. 1, figure 5.

Etymology: A compiled name of two Uvigeriniid names: the prefix of *Uvigerinella* and the suffix *oides*.

Stratigraphic level: Middle Oligocene from Septarienthon, of Hermsdorf, near Berlin, Germany (Figure 1). Dimensions: Length 0.30-0.60 mm.; diameter 0.15-0.20 mm.

Diagnosis: The new genus is characterized by fusiform triserial perforate calcareous test, chambers regularly triserial throughout, while the final chambers more loosely arranged, surface finely hispid to smooth, which the last-formed chambers often entirely smooth, aperture slender neck and slightly phialine lip.

Remarks: The new genus *Uvigerinelloides* differs from the other Uvigeriniid genera (i.e. *Uvigerina, Euuvigerina*, *Uvigerinella*) by its finely hispid to smooth surface, which the last-formed chambers often entirely smooth, and tubular slender aperture with nick, initial end without a spine (as in *Euuvigerina*).

Figure 1: Location map of the type locality of the new genus *Uvigerinelloides* from Septarienthon, of Hermsdorf, near Berlin, Germany.

4. PALEOENVIRONMENT

According to some authors, the genus *Uvigerina* generally prefers a shallow infaunal habitat, and samples were obtained from sediments at a depth of (900 mbsl) of seawater, while some group researchers noted that some members of benthic foraminifera (i.e.: *Uvigerina, Brizalina, Bulimina, Cassidulina, Epistominella* and *Lenticulina*) represents the lower bathyal assemblage (1000–2000 mbsl) (i.e.: Ernst and van der Zwaan, 2004; Balesrta et al., 2020; Uchimura et al., 2017).

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