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## THE ALBIAN FORAMINIFERA OF THE MOESIAN PLATFORM, ROMANIAN PLAIN

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**Abstract.** As an ample monographic study, the current paper presents 230 species of foraminifera, agglutinated, calcareous, benthonic and planktic from the Lower Albian (*L. tarderfurcata* zone) to the Middle Albian (Hoplitan, Euhoplitan) and Upper Albian (Hysteroeratian-Vraconian). Except for the hoplitan samples, all others are from drill core samples. Of the 230 described and figured species, 41 belong to the agglutinated foraminifera, 5 to the aragonitic, 4 to the porcellanous, 147 to the calcareous and 30 to the planktonics. The position within the stratigraphic succession of the associations is well defined due to the fact that the samples come from drill cores which contain macrofauna, particularly represented by ammonites. This precise stratigraphic localisation within the column of Albian deposits of the Moesian Platform has facilitated the separation of particular biozones on the basis of the planctonic foraminifera populations. For the Lower Albian, the *Hedbergella planispira*-*Ticinella primula* biozone, for the Hoplitan, the *Hedbergella rischi*-*Ticinella primula* biozone, for the Euhoplitan, the *Hedbergella trochoidea* biozone, for the Upper Albian-Hysteroeratian, the *Biticinella bregensis* biozone, for the Lower Vraconian, the *Planomalina buxtorfi* biozone and for the Upper Vraconian, the *Rotalipora appenninica* biozone.

*Key words:* foraminifera, Albian biozones, Moesian Platform, Romania

**Résumé.** Ce papier présente 230 espèces des foraminifères comprenant des taxons des aglutinantes, bentoniques et planctoniques qui proviennent de l'intervalle Albien inférieur (la zone d'ammonite *L. tarderfurcata*) jusqu'au l'Albien moyen (Hoplitan, Euhoplitan) et l'Albien supérieur (Hysteroeratian-Vraconian) de la Plaine roumaine. La plupart des échantillons analysés proviennent des forages, exceptant ceux collectés de la section Hoplitan. Du total des 230 espèces des foraminifères déterminées et figurées, 41 sont aglutinantes, 5 sont aragonitiques, 4 sont porcelaniques, 147 sont hyalines benthoniques et 30 sont planctoniques. La faune des ammonites identifiée dans les forages étudiés a confirmé la position stratigraphique indiquée par les biozones des foraminifères décrites dans ce papier. L'âge déterminé avec précision pour les dépôts albiens de la Plateforme Moesique permet la séparation des biozones des foraminifères planctoniques. On a trouvé les biozones suivantes: *Hedbergella planispira* – *Ticinella primula* biozone – Albien inférieur, *Hedbergella rischi* – *Ticinella primula* biozone – Hoplitan, *Hedbergella trochoidea* biozone – Euhoplitan, *Biticinella bregensis* biozone – Albien, Hysteroeratian, *Planomalina buxtorfi* biozone – Vraconien, et *Rotalipora appenninica* biozone – Vraconien supérieur.

*Mots-clés:* foraminifères, Albien biozones, Moesian Plate-forme, Roumanie

## INTRODUCTION

A complex study on the albian foraminifera associations has not been carried out before this present work.

Beginning with 1841, Roemer describes several species from the Albian clays of NW Germany. In 1848, Cornuel presents a paper on albian fossils from Haute-Marne. In 1863, Reuss realizes the most ample work on the Albian foraminifera associations from NW Germany. Later, in 1880, M. Berthelin carries out a similar study on the albian foraminifera fauna from the deposits of la Montclay in France. At the end of the 19<sup>th</sup> century, between 1892–1898, Chapman presents a series of articles in which he describes the foraminifera fauna from the Albian deposits of the Gault of Folkestone

in England. In the first part of the the 20<sup>th</sup> century, the most proeminent works are those of Eichenberg 1932–1935, witch present foraminifera associations from the Albian deposits of NW Germany. In 1938, F. Hecht, compiles a catalog on the lower Cretaceous foraminifera of Germany, followed by other assemblages, among witch are some of Albian age. This work's great shortcoming is the fact that the faunal components are presented only at a generic level.

Between 1951–1954, H. Barnstein, begins a thorough revision of the original material presented in Hecht's catalogue, clearly defining and assigning its components. Barnstein goes on to do the same type of revision on Berthelin's fauna.

Almost in their entirety, the Albian deposits from continental Europe, posses considerable amounts of hydrocarbons. The detailed knowledge of the foraminifera assemblages, in direct correlation with the ammonoid faunal markers is of crucial importance for the correlation of the deposits in witch exploratory, or exploitation wells are drilled.

Therefore, a monographic paper which presents the foraminifera assemblages from the base albian deposits to the Vraconian, realizing a normal succesion of the differing assemblages of benthic (agglutinated and calcareous) and planktonic foraminifera, as well as pointing out the different specific assemblages of the major subdivisions, crono- and biostratigraphic of the Albian, established on the basis of ammonite marker species.

In essence, this has been the economic – practical purpose of this monograph, but which was doubled by the systematic-taxonomic presentation of the 230 species of foraminifera, determined and figured on 76 plates.

In 1959 the author published the first „note” on the presence and paleontological content of the Lower Cretaceous deposits (macro and microfauna) from Giurgiu. Samples were colected during the construction of the Giurgiu-Ruse bridge (1955).

Unfortunately, due to the unknown considerations the day, the soviet engineers who had responsibility for the construction did not allow any Romanian geologists to collect any samples and/or fauna from the excavation shafts for the pillars or to describe the deposits, their succesion and their paleontological content. From the fossiliferous fragments of rock collected from around the excavation site, the author was able to get sporadic information about the deposits, but without any data regarding the normal (real) succession of the deposits and their thickness. These meager samples were collected by Prof. C. Radulescu and muzeographer M. Ionescu from the Natural History Museum of Giurgiu city. It is only through their kindness that the author was able to study the fauna at the Laboratory of Paleontology of Bucharest University.

By preparing the macrofauna for study it was possible to get valuable fragments for a micropaleontological analysis. The foraminiferal assamblages later represented the basis on witch the author was to realise in 1965 the first large study on the Albian foraminifera to be published abroad.

The mirage of the existence of oil and gaze fields in the underground of the Romanian Plain (after 1955) generated a very intense activity for prospections and explorations exemplified by the many drilling programs to be undartaken at the time. Unfortunately all the data (informations) delivered by these drillings became imediately classified as top secret (a typical communistic desire). Untill 1990 was impossible for any geologist to do a thourough and sistematic study, particularly on the Albian deposits, including their foraminiferal assamblages. After 1990 however, it became possible to use for scientific purposes all of the paleontological material offered by many drillings. After 1990 Radu Muțiu (paleontologist), based on the fossils he collected along many years and from many drillings, realized a monograph of the Albian deposits, witch was to be published as his doctorate paper, published in 2004.

Owing to the courtesy of Dr. Radu Muțiu the author was able to obtain small fragments of rock from the core samples containing macrofauna (ammonits or bivalvs) and micro-paleontological samples witch were very well located in the stratigraphycal sequence of the Albian deposits. The first step was to supplement the micropaleontological study started in 1965, the next was made by using the

core samples from the drillings made by ISPH for hidrotechnical purposes in the Oltina-Bala, Chiciu-Călărași area, which passed through the Lower Albian formations, these were offered to the author by Acad. Prof. Ion Băncilă.

In conclusion, our micropaleontological data/analysis covers the whole Albian stage from the lowermost (*Leymeriella tardefurcata* biozone) to the uppermost one (*Stolicszkaia dispar* biozone).

## HISTORY OF THE STUDIES REGARDING THE ALBIAN DEPOSITS FROM THE MOESIAN PLATFORM

The marine Albian deposits on the Romanian territory are represented by two different facies types.

In the Carpathian orogenic area the Albian deposits are represented by a rhythmic sedimentation with many sequencies from coarse, to silty deposits (typical flisch facies). These deposits are very poor, or totally devoid of any macrofauna. The microfauna is represented, when it exists, especially by agglutinated foraminifera. In the Southern part of the Eastern Carpathians these deposits are found as outcroppings on the Teleajen, Telejenel, Prahova and Ialomița Valleys.

The second facies, which is typically epicontinental is made up of soft or compact grey marls and marly-limestones, glauconitic or with a slight sandy character, but very rich in paleontological content (macro and microfauna). These deposits outcrop only in Southern Dobrogea and are present in many drillings from Moesian Platform underground. The major feature of these deposits is their richness in fossils, both macro and microfossils.

The lithologic and biostratigraphic study of the Albian deposits from the underground of the Romanian Plain started with the preliminary „note” of the author „*Studiul paleontologic al Cretacicului inferior de la Giurgiu (nota preliminara)*”, 1959 (The paleontological study of the Lower Cretaceous from Giurgiu). In this „note”, on 7 pages and using only the fossiliferous samples collected by Prof. C. Radulescu and the museographer M. Ionescu from the material left over from the excavation of the pillars for the Giurgiu-Ruse bridge. The author presented a lot of data which was absolutely new, with regard for the lithology of the deposits and also about the fossil from these deposits. The microfauna from these deposits, presented also for the first time by this note, represent the second part of the article. The foraminiferal assemblages are composed of 80 species together with 6 species of ostracods, vertebral pieces of ophiurids and teeth of fishes.

The detailed study of the foraminiferal fauna was published by the author in 1965 in Micropaleontology, vol. 11, no. 1 (first Romanian micropaleontological study about the Albian foraminifera).

A large and detailed study of the Albian deposits from all points of view was realised by R. Muțiu and published in 2004.

After Neagu's “Note”, D. Patrulius and M. Paucă published in 1960 „Contribuții la studiul paleontologic al depozitelor Albianului de la Giurgiu” (Contributions to the paleontological study of the Albian deposits from Giurgiu) Stud. cercet. geol., vol. 5, no. 1, in which the authors made a systematic study of the fossil (figured on 5 Plates), comprised of; bivalves, cephalopods and brachiopods. The paleontological samples were offered to them for study by Acad. G. Murgeanu and geologists L. Turculeț and E. Liteanu. The paper does not offer any detailed informations regarding the deposits themselves and presents only general data about the deposits which lie under Danube River sediments. These deposits start with a succession of gray-marls, followed by glauconitic sandstone and a sedimentary breccia (with white limestones with pachiodonts as *Requienia*). From the glauconitic sand and sandstone the authors described the following fossils: *Neohibolites ultimus* LISTER, *Cymatoceras nekerianus* (PICT. & CAMP.), *Douvilleiceras* sp., *Rhynchonella tripartita* PICT. & CAMP, *Rhynchonella*, n. sp.?, *Terebratula dutempleana* d'ORB, *Plicatula gurgitis* PICT. & CAMP., *P. inflata* SOWERBY, *Ostrea papyracea* SINTZOW, *Serpula* sp. aff. *arcuata* MUNSTER.

From the soft grey marls with compact levels they determined: *Neohibolites minimus* LISTER, *Cymatoceras nekerianus* (PICT. & CAMP.), *Puzosia quenstedti* TAROUX & BONARELLI, *Puzosia* sp., *Hamites maximus* SOWERBY, *Hamites* sp., *Prohelicoceras* sp. aff. *subcatenatum* SPATH, *Hoplites danubiensis* PATRULIU & PAUCA n. sp., *Anahoplites intermedius* SPATH, *A. planus fittoni* (d'ARCH), *A. planus discoideus* SPATH, *Inoceramus concentricus* PARKINSON, *Terebratula dutempleana* d'ORB. In the authors opinion the macrofauna assamblages from the above mentioned lithologic levels belong to the Middle Albian (more exactly middle part of the Middle Albian). On page 97, the authors supplement the information about the Albian deposits from the Romanian Plain with new data. Among this new data, of particular significance for us is the one about the drillings from Putineiu, "This drilling penetrated a packet of grey-marls with 150m in thickness and which have in the lower part (787 m deep) a level with *Oxytropodoceras* aff. *roissyanum* (d'ORB.) and to the upper level (642 m deep) a level with *Neohibolites ultimus* (d'ORB.). The succession of the grey marls from Putineiu reprents the Upper Albian-Vraconian and Lower Cenomanian" (The author obtained from dr. D. Patruliu a fragment of a core sample within the *Oxytropidoceras* level's foraminiferal assamblage, and concluded that this fragment represents the terminal part of the Middle Albian Eohoplitan). In Southern Dobrogea on the southwest banck of the Bugeac Lake, outcrops a series of sediments represented in their lower part by grey-blackish marls with a poor sandy aspect and with gauconit on the basal lavels. The following level is represented by sandy-compact grey-yellowish or buie-grey marls with hard cimentation centers. From this outcrop Neagu collected a rich fossil fauna reprezented by (Neagu et al., 1998): *Inoceramus concentricus* PARK., *Plicatula gurgitis* PICT. & CAMP., *P. placunae* Lamarck, *Gramatodon carinata* SOWERBY, *Neohibolites minimus* LISTER, *Anahoplites planus planus* MANTEL, *A. planus fittoni* (d'ARCH), *Orthohoplites destombesi* CARSEY, *Toxaster* sp. This paleontological assamblage confirms the presence of the Lower part of the Middle Albian. In the same area on the east bank of the Bugeac lake, outcrops a sandy facies or a poor marly-sand with *Neohibolites minimus* LISTER and *Leymeriella tardefurcata* (LEYM.) which confirms the presence of the Lower Albian stage witch lies transgressively on the Aptian deposits.

Radu Muțiu in this doctoral thesis presents a very detailed and complete study on both lithology and fossil records acquired from many drillings made for prospection and exploatation of the oil and gas fields located in the Albian deposits.

All of this data is supplemented with by those from ISPH drillings made for hydrotechnical purposes in the area Oltina-Bala-Chiciu-Călărași. All the paleontological data collected by him relating to the Albian deposits from all the Romanian Plain and adjacent areas led to the conclusion that the Albian sedimentation started with Lower Albian (L. *tardefurcata* zone) until the Uppermost Albian (Vraconian) (Stoliczkaia *dispar* zone). Using all of this very rich paleontological and lithological information, R. Muțiu determined the following paleontologic (biostratigraphic) zones and lithologic units as follows:

#### LOWER ALBIAN

a) *Leymerierlla tardefurcata*-*Hypacanthoplites trivialis* zone. This biozone is present in the following drillings: Chiciu, Călărași, drilling 58-Străulești, drilling 248 Dumbrăvița, drilling 2 Glavacioc, and drilling 2050 Nereni-Bârscoveni.

b) *Douvilleiceras mammilatum* biozone. Encountered in the drillings 14 Bala-Oltina and 107 Călărași.

#### MIDDLE ALBIAN

The macrofauna of this substage is richer and made possible the separation of two major biozones:

a) *Hoplites dentatus* biozone (Hoplitan) discovered in drillings 303 Manasia and 11 Glavacioc and Giurgiu-Pod (the fossil records from the excavations for the bridge Giurgiu-Ruse pillars);

b) *Eohoplites loricatus*-E. *latus* biozone (Eohoplitan), discovered in the drillings from Mitrofani, 146 Ciolănești, 224 Corbeanca, 213 Dârza, 13 Călăreți, 2332 Sâmbureni.

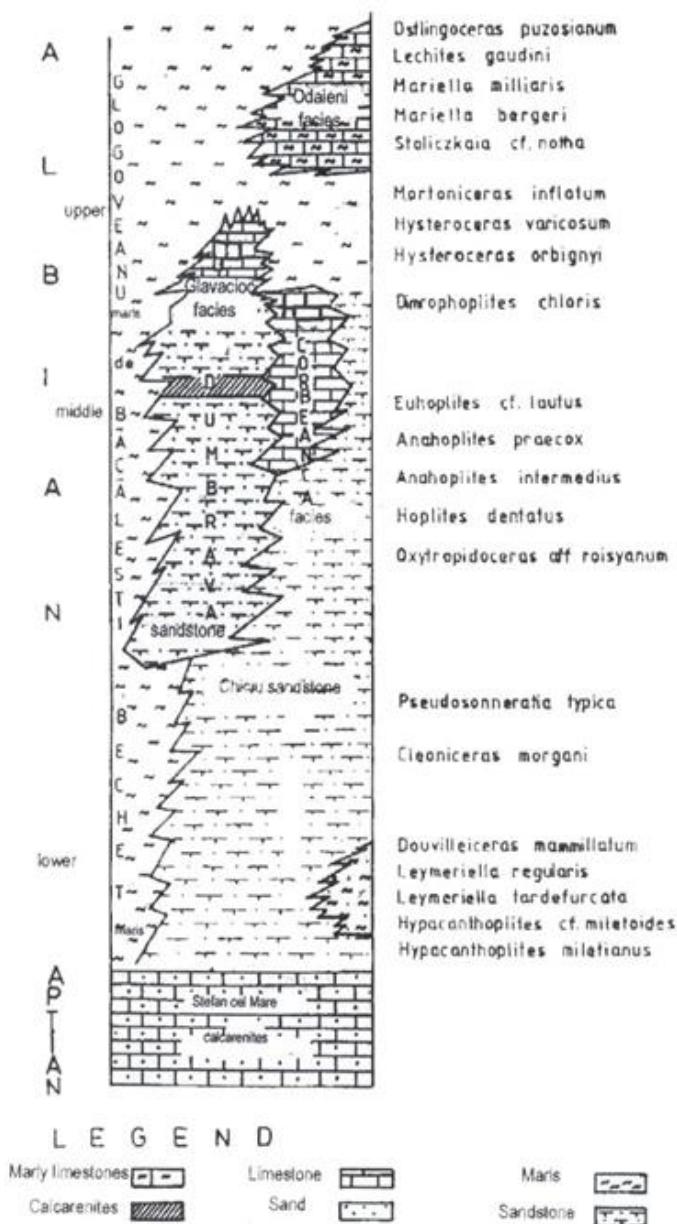
### UPPER ALBIAN

The deposits of this substage present the largest diversity of the macrofossil assemblages. It was possible also to distinguish two biozones:

- a) *Hysteroconus orbignyi* biozone in the lower part of the stage
- b) *Stoliczkaia dispar* biozone at the top of the stage (Vraconian)

The Upper Albian deposits were encountered in the following drillings: 5034 Mitrofani, 1106 Izvoarele, 378 Manolache, 2238 Glogoveanu, 1775 Glogoveanu, 1716 Mărșa, 19 Odăierni.

Radu Muțiu, also in parallel with the study of the macifauna, carefully followed the lithologic variations of the deposits from the many drill cores he obtained, this way he was able to get a lot of information from the standpoint of the lithology.



**Figure 1.** Lithologic column of the Albian deposits from the Romanian Plain.

At the bottom of the stratigraphic column he recognize the **Chiciu (Călărași) Sandstone**. This unit is made up of detrital sediments with glauconite and a dominant sandstone aspect, here and there with a marly aspect, very rich in fossils and in foraminifera. In the Bala-Oltina drilling, it was possible to follow the passage to a marly-siltic lithofacies which outcrops on the west bank of the Bugeac Lake.

A second lithologic unit is that of the **Băcălești-Bechet Marls**. Lithologically this unit is represented by grey-marls or grey-blackish clays. In the south-western part of the Moesian Platform this unit passes into grey-pelitic marls, with a remarkable assortment macrofossils .

The sandy-glaucous lithofacies is kept apart under the **Dumbrava Sandstone** with a Lower-Middle Albian age, in the North-East this lithofacies becomes marly-glaucous-limestones.

The last lithologic unit is represented by **Glogoveranu Marls** Upper Albian in age. Lithologically, this unit is made up by marly-limestones very rich in fossils belonging to Hysteroceratidae and Inoceramidae. To the South, these marls pass to whitish limestone facies with *Hysteroeras orbignyi*, this is the **Glavacioc facies**.

In the Southern Dobrogea, as was mentioned, the Albian deposits outcrop in the **Cochirleni Formation** area (fide Avram *et al.*, 1988). This area is bordered to the East by the Danube River Valley, to the west by a line which joins the villages Seimeni, Cuza-Vodă, Medgidia, Peștera, Șipote, Lipnița and Oltina Lake of the Bugeac-Ostrov. In the area, the Albian deposits lie transgressively on different terms of the Neocomian or Aptian limestones.

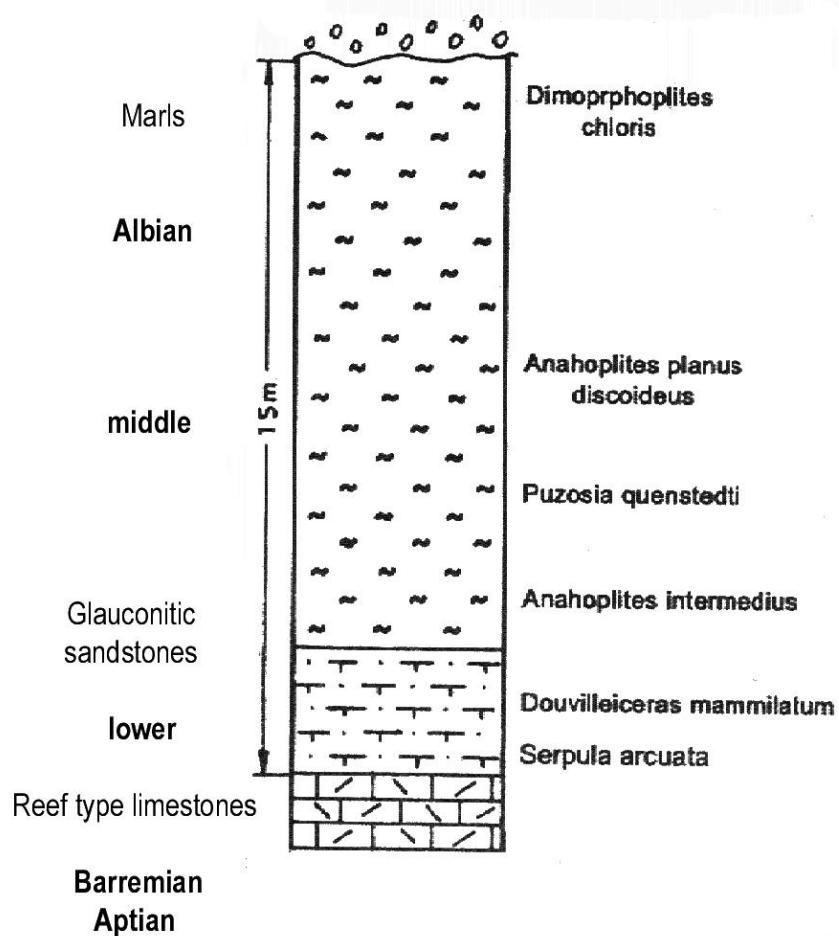


Figure 2. Lithologic succession of the Albian deposits from Giurgiu.

Lithologically the Albian deposits from this area are very much similar to that from the Moesian Platform underground. In the lower part of these deposits is represented by a detritic sandy-glaucous bank with marly-glaucous-sands. The macropaleontological assemblage of this deposit (Chiriac, 1961) is made up by *Leymerialla tardefurcata*, *L. elegans*, *Douvilleiceras mammilatum*.

The Middle Albian quoted by Chiriac (1961) and refined by Neagu *et al.* (1998) on the west of Medgidia village is represented by a sandy-marls with fossils such as: *Hoplites persulcatus*, *Anahoplites planus-planus*, *A. planus-fittoni*.

On the western bank of the Lake Bugeac-Ostrov (Neagu *et al.*, 1998) quoted a fossil fauna represented by: *Inoceramus concentricus*, *Plicatula placunaea*, *Pl. gurgitis*, *Gramatodon carinatas*, *G. secures-major*, *Neohibolites minimus*, *Anahoplites planus-planus*, *A. planus-fittoni*, *Ortohoplites destombesi*, *Toxaster* sp. This faunal assemblage proves the presence of the Middle Albian (Hoplitan) in this outcrop.

In the Southern Dobrogea the Upper Albian is quoted by Chiriac (1961) only in a drilling from the Ghilcomeş hill (between Văleni and Lespezi villages) and substantiated by only one specimen of *Leptohoplites falcoides*.

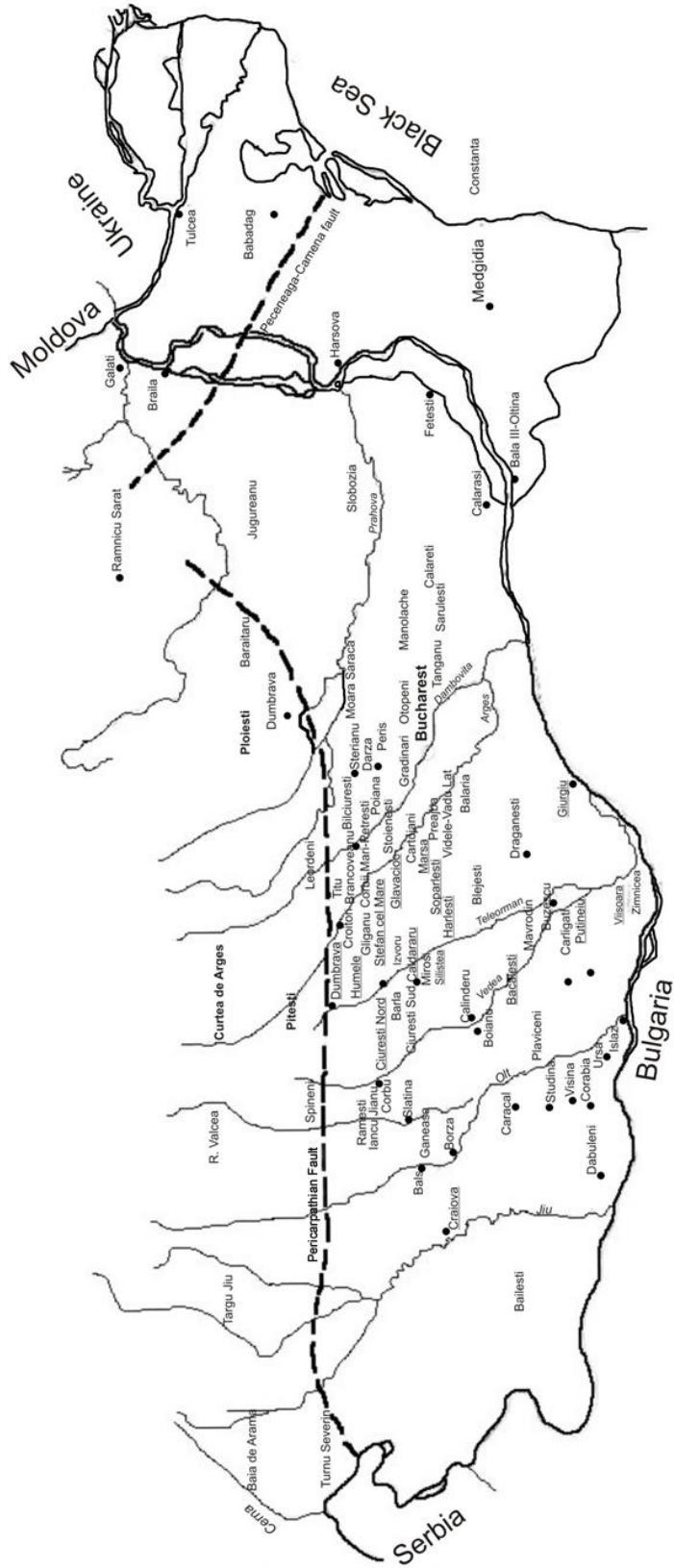
### THE SOURCES OF THE MICROPALAEONTOLOGICAL SAMPLES

To complete the present monograph the author used the micropaleontological samples from the following sources:

For the Lower Albian, the samples come (in their totality) from the ISPH drillings (small, with a depth of no more than 150 m). These samples were essential in the understanding the Lower Albian foraminiferal assemblages. The samples come from the following drillings: Bala III-Oltina (between 36,55 m deep), FH Călăraşii (between 97–156 m deep), FA Călăraşii (between 46–89 m deep), FIV Călăraşii (between 46–89 m deep), FB Călăraşii (between 46–100 m deep).

For the Middle Albian samples in the large part come from Giurgiu Pod (Giurgiu-Ruse bridge) and belong to the *Hoplites dentatus* zone (Hoplitan). For the upper part of the Middle Albian (Eohoplitan) samples come from a fragment of a core sample with *Oxytropidoceras* – drilling Putineiu-Vedea Valley and five samples from the water drilling Zimnicea (between 80–180 m deep). Also we got fragments of cores with macrofauna offered by Dr. Radu Muțu from the drillings: 604 Șopârlița-Siliștea (1391–1302 m), drill 1803 (1872 m deep, marls with *Mortoniceras*), 214 Craiova (1154 m), 173 Hărlești (core from 1118–1128 m deep), 593 Glavacioc (1625–1627 m).

For the Upper Albian, all the foraminiferal assemblages come exclusively from a fragment of a core sample, and are as follows: 1030 Băcălești-marls with *Hysterooceras*, 179 Hărlești (1165–1170 m deep), 2195 Glogoveanu (marls with *Idiohamites* and *Hysterooceras*), 2355 Glogoveanu (marls with *Aucellina*), 1795 Glogoveanu (1700–1705 m deep, marls with *Stoliczkaia dispar*), 138 Copăceni (481–485 m marls with *Aucellina*), 1716 Mărșa (1081–1082 m deep), 2410 Humele (marls with *Pervinqueria*), 15386 Ștefan cel Mare (215 m deep, marls with *Mariella bergeri*), 11 Buzescu (marls with *Hysterooceras orbignyi* 564–569 m, 570 m, 575 m deep), 21 Buzescu (575–580 m deep, marls with *Scaphites*), 2251 Dumbrava (2050 marls with *Anysoceras*), 2251 Dumbrava (marls with *Aucellina*), 335 Căldărușanu (marls with *Plicatula gurgitis*, 1200 m deep), 44 Bălăria (625–627 m deep), 174 Hărlești (Biozone with *Lechites*, 1138 m deep), 138 (marls with *Aucellina*), 485 m deep.



**Figure 3.** Geographical location of the drill core samples from the Romanian Plain, Moesian Platform.

## BIOSTRATIGRAPHICAL CONSIDERATIONS

Following the development of the benthonic and planktonic foraminiferal assamblages in a direct connection with the macrofaunal (ammonites, bivalves) evolution in the successions of the albian deposits from the Moesian Platform, it is possible to garner some very valuable biostratigraphic conclusions.

The macrofaunal data as it is presented by R. Muțiu (2004) in his doctoral paper proves clearly and precisely the presence of the Albian deposits in their entirety as they were established from the classic outcrops or stratotypes.

The presence of the *Lower Albian* is confirmed by the existence of the marker species *Leymeriella tardefurcata*, *Hypacanthoplites* sp., and *Douvilleiceras mammilatum*.

Micropaleontologicaly, the *Lower Albian* was discovered in the drillings from the perimeter Oltina-Bala-Chiciu-Călărași, and characterized by a large development in number of specimens and size of *Palmula asiatica* and *Lenticulina diademata* (for instace the specimens of Palmula are 3–4 mm in length). With a particular biostratigraphical importance for this substage is and the large development of the populations of the genera *Citharina* and *Citharinella*, which, also attained an unusually large size, and is associated with *Gavelinella tormarpensis*. *Citharinella* is present also and in the basal part of the Middle Albian but with a symbolic frequency.

The general foraminiferal fauna discovered in the cores of different drillings from the area Oltina-Bala-Chiciu-Călărași, is represented by *Rephax globulifera*, *Haplophragmoides concavus*, *Trochammina wetteri*, *Tritaxia pyramidata*, *Gaudryina compacta*, *Lenticulina roemerii*, *L. inflata*, *L. macrodisca*, *L. marcki*, *L. gaultina*, *L. limbata*, *Lenticulin diademata*, *L. scitula*, *Saracenaria bonnoniensis*, *S. crassicosta*, *S. frankei*, *Vaginulinopsis cephalotes*, *Marginulina jonesi*, *M. robusta*, *M. stratocostata*, *Palmula asiatica*, *Citrarinella karreri*, *Citharina sparsicosta*, *C. harpa*, *C. orthonota*, *C. reticulata*, *C. angustissima*, *Dentalina linearis*, *D. bambusa*, *D. concina*, *Nodosaria nuda*, *N. prismatica*, *N. orthopleura*, *Pseudonodosaria mutabilis*, *Vaginulina marginulinoidea*, *V. bicostulata*, *V. arguta*, *V. protosphaera*, *Tristix excavata*, *T. articulata*, *Gavelinella tormarpensis*, *G. intermedia*, *G. rudis*, *Lingulogavelinella cibicidoides*.

The planktonic foraminifera with a medium frequency are represented by *Hedbergella rischi*, *Hedbergella planispira*. During the Lower Albian the specimens of the planktonic species have a very small size (0,2–0,4 mm in diameter). To the upper part of the Lower Albian in a subordinated frequency appears *T. primula* with a larger size (0,3–0,5 mm in diameter) but with its typical umbilical apertures. Out of the above mentioned area, the Lower Albian was reached in the drilling 207 Craiova (1207–1208 m) in Craiova facies with *Neohibolites* and *Douvilleiceras*. The foraminiferal assamblage is representd by *Lenticulina secans*, *Vaginulina recta*, *Marginulina robusta*, *Pleurostomela obtusa*, *Gavelinella tormarpensis* (in a remarkable frequency).

**Middle Albian.** The macrofauna of this stage is well delimited by *Hoplites dentatus* (Hoplitan) in the lower part and *Euhoplites latus* (Euhoplitan) in the upper part. In the foraminiferal assamblages this biostratigraphic unit is marked by a remarkable development of the species of the genus *Vaginulina*, both in frequency and taxonomic diversity. In the foraminiferal assamblages of the Middle Albian could be easy distinguish two groups well individualized.

In the Hoplitan substage in which the poverty in taxa of the Lower Albian is still evident the better part of the genera come from the Lower Albian. The general assamblage is formed by; *Rephax globulifera*, *Ammobaculites terquemi*, *Haplophragmoides latidorsatum*, *Arenobulimina chapmani*, *A.macfadyeni*, *Marssonella trochus*, *Falsogaudryinella moesiana* (as a new taxa) *Gaudryina filiformis*, *G. gradata*, *Belorusiella textilaroides*, *Spiropectinata annectens*, *Tritaxia pyramidata*, *T. carinata*, *Lenticulina macrodisca*, *L. oligostegia*, *L. inflata*, *L. turgidula*, *L. subalata*, *L. muensteri*, *L. gaultina*, *Saracenaria bonnoniensis*, *S. triangularis*, *S. frankei*, *S. crassicosta*, *Marginulinopsis bacillum*, *M. inaequalis*, *M. ensis*, *M. schloenbachi*, *Marginulina robusta*, *M. perobliqua*, *M. parallela*, *Astacolus sulcifera*, *A. planiuscula*, *Planularia bradyana*, *Vaginulinopsis cephalotes*, *Vaginulina*

*truncata*, *V. bicostulata*, *V. protosphaera*, *V. incompta*, *V. longa*, *V. kochii*, *V. arguta*, *V. eurynota*, *Dentalina intermedia*, *D. legumen*, *D. catenula*, *D. nana*, *D. monile*, *D. Communis*, *D. debilis*, *D. linearis*, *Nodosaria prismatica*, *N. paupercula*, *N. proboscidea*, *N. orthopleura*, *N. sceprium*, *Tristix insignis*, *T. excavata*, *T. acutangula*, *Frondicularia filocincta*, *F. inversa*, *F. planifolium*, *Lingulina loryi*, *Pleurostomella reussii*, *P. obtusa*, *Eoguttulina anglica*, *Vitriwebbina laevis*, *Histogramphus cervicornis*, *Ramulina novaculeata*, *R. arkadelphiana*, *Valvulineria loeterlei*, *Gavelinella rufus*, *G. intermedia*, *G. sazigenensis*, *G. asterigerinoides*, *G. bellorusica*, *G. emanueli*, *Globorotalites rumanus*.

The planktonic foraminifera are represented also by the Lower Albian genera *Hedbergella rischi*, *H. planispira*, *Ticinella primula* and *Bifarina calcarata* (as a new taxon).

The distinctive features of those are the size and remarkable frequency. The Hoplitan substage in such a manner delimited by macrofauna and foraminifera was discovered at Giurgiu, in the samples from the pillars excavation of the bridge.

The second distinct group of foraminiferal assemblages is well individualized and rich especially in new taxa. Biostratigraphically, this second group corresponds to the Euhoplitan (the upper part of the Middle Albian). The benthic and planktonic foraminiferal assemblages are flagrantly distinct from those of the Hoplitan. The drillings from Putineiu (Vedea Valley), Zimnicea, 214 Craiova, 604 Șopârlita-Siliștea, 593 Glavacioc, 137 Ciurești, Băcălești, 335 Căldăraru prove this observation.

The general benthonic foraminiferal assemblage consists of *Saccammina alexanderi*, *Psammosphaera fusca*, *Thorammina* sp., *Glomospirella gaultina*, *Flabellammina urgonensis*, *Bulbobaculites parvispira*, *B. subcretacea*, *Tritaxis fusca*, *Gaudryina dividens*, *G. compacta*, *G. richteri*, *Tritaxia pyramidata*, *Spiroplectina annectens*, *S. complanata*, *Patellovalvulina patruliusi*, *Textulariopsis anglica*, *Arenobulimina chapmani*, *A. macfadyeni*, *Marssonella trochus*, *Falsogaudryinella moesiana*, *Pseudonubeculina nodulosa*, *Lenticulina subalata*, *L. turgida*, *L. triangularis*, *L. secans*, *L. muensteri*, *Marginulinopsis schloenbachii*, *Saracenaria frankei*, *S. crassicosta*, *Nodosaria sceprium*, *N. rugosa*, *Vaginulina arguta*, *V. incompta*, *Frondicularia filocincta*, *Lingulina loryi*, *L. denticulocarinata*, *L. furcifata*, *Tristix excavata*, *T. acutangula*, *Pseudonodosaria mutabilis*, *Dentalina pseudochrysalis*, *D. disatincta*, *D. nana*, *Lagena oxystoma*, *L. emaciata*, *L. globosa*, *Spirillina minima*, *Epistomina juliae*, *E. carpenteri*, *E. chapmani*, *Eoguttulina bucculenta*, *E. tenuicostata*, *E. subsphaerica*, *Globulina prisca*, *Siphogenerina asperula*, *Globorotalites rumanus*, *Gavelinella schloenbachii*, *G. intermedia*, *G. emanueli*, *Lingulogavelinella ciry*.

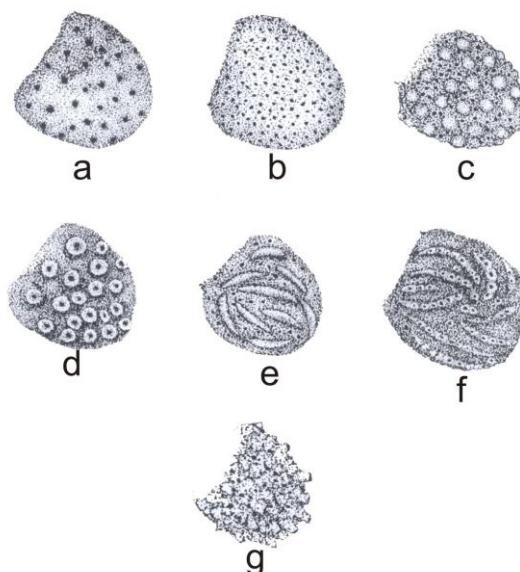
To the upper part of the Euhoplitan, the planktonic foraminiferal assemblages show remarkable changes. Newly evolved species of the genus *Hedbergella* become visible (*Hedbergella trochoidea*-*H. gautirensis*) These are characterized by a sensibly larger size, the chambers having a visibly rugged aspect and a large umbilicus. In the *Hedbergella trochoidea* group there can be observed a tendency, of course incipient, but present, for the development of the peripheral keel (Pl. 38, Figs. 31–34; Pl. 39, Figs. 13–14). In the same association appears the genus *Schackoina*, represented by *S. primitiva*, although with a low frequency. The most interesting and visible process which is pointed out by the planktonic foraminifera from the Euhoplitan substage is that of speciation. Together with the growing size, there is also the number of specimens in comparison with the Hoplitan substage, and a radiative process which will go on to create the new taxa. The ESM photos taken of the external morphology of the wall of the chambers, reveal the presence of 4 different types of structures.

Type 1. To which the simple pores are spread on the smooth surface of the wall;

Type 2. The surface of the chamber is covered by pustules (the muricat aspect) and the pores are spread among these pustules;

Type 3. Presents on the surface of the chamber large pustules (strongly muricat) and each pustule carries a pore in the middle (crateriform aspect);

Type 4. Represents an evolved structure of type 3, the pustules have a high, conical aspect with a central pore.



**Figure 4.** Synthesized wall external morphology of the wall.

**a** – simple large pores; **b** – simple small pores; **c** – muricat aspect with pores spread among murica; **d** – muricat aspect with a high, conical texture of the murica and a central pore; **e** – muricat aspect with pores spread among the thin costae (striae); **f** – muricat aspect with the pores on the costae; **g** – muricat aspect with the pores spread among the short spines.

These structures, evidently, represent important features which have to be taken into consideration with regard to their taxonomical value (Moullade *et al.*, 2003 partially discerned these features). If type 1 is typical for the old *Hedbergella (planispira, rischi)* the others, observed on the test of *Hedbergella trochoidea* and *H. gautirensis*, possibly to represent new taxa. A detailed study is necessary, using specimens from the Upper Albian.

The similar assemblages with those from the two afore mentioned drillings were also met in the following fragments of cores belonging to the following drillings:

**Băcălești** (1050 m). (marls with *Plicatula*) *Psammosphaera fusca*, *Bulbobaculites parvispira*, *B. subcretaceus*, *Haplophragmoides excavatus*, *Gaudryina gradata*, *Spiroplectinata annectens*, *Falsogaudryinella moesiana*, *Lamarckina* sp., *Lenticulina* div. sp., *Vaginulina recta*, *Lagena apiculata*, *Lingulina* sp., *Siphogenerina asperula*, *Pl. eurostomella reussi*, *Valvulineria loeterlei*, *Globorotalites rumanus*, *Hedbergella cf. rischi*, *H. planispira*, *Ticinella primula*, Radiolarans.

137 **Ciurești** *Trochammina wetteri*, *Falsogaudryinella moesiana*, *Spiroplectinata annectens*, *Lenticulina* div. sp., *Lingulina* sp., *Nodosaria prismatica*, *Valvulineria loeterlei*, *Gavelinella intermedia*, *Hedbergella rischi*, *H. planispira*, *Ticinella primula*;

214 **Craiova** (1154 m) *Psammosphaera fusca*, *Ammodiscus cretaceus*, *Falsogaudryinella moesiana*, *F. trigona*, *Spiroplectinata annectens*, *S. complanata*, *Arenobulimina macfadyeni*, *Barkerina minima*, *Spirillina minima*, *Spiroloculina papyracea*, *Lingulina loryi*, *Lenticulina* div. sp., *Tristix excavata*, *Gavelinella intermedia*, *Valvulineria loeterlei*, *Hedbergella rischi*, *H. planispira*, *Ticinella primula*.

604 **Șopărlița-Silistea** (1301–1302 m) glauconitic marls: *Ammodiscus tenuissimus*, *Falsogaudryinella moesiana*, *Arenobulimina macfadyeni*, *Quasisiroplectammina goodlandana*, *Gaudryina gradata*, *Spiroplectinata annectens*, *Verneuilinoides pumilionis*, *Quinqueloculina antiqua*, *Lenticulina* div. sp., *Frondicularia* sp., *Tristix excavata*, *Lingulina loryi*, *Nodosaria orthopleura*, *N. prismatica*, *Ramulina novaculeata*, *Gavelinella intermedia*, *Valvulineria loeterlei*, *Hedbergella rischi*, *H. planispira*, *Ticinella primula*.

335 Căldăraru (1200 m) marls with *Plicatula gurgitis*, *Textulariopsis anglica*, *Gaudryina gradata*, *Verneuilinoides pumilionis*, *Marssonella trochus*, *Spirillina minima*, *Lenticulina macrodisca*, *L. muensteri*, *L. nuda*, *Saracenaria frankei*, *Tristix excavata*, *Valvulineria berthelini*, *Gavelinella baltica*, *Globorotalites rumanus*, *Hedbergella* sp., *Ticinella* sp. (specimens very badly preserved)

593 Glavacioc (1625–1627 m) with *Neohibolites*, *Ammodiscus tenuissimus*, *Haplophragmoides excavata*, *Falsogaudryinella neagui*, *F. moesiana*, *Arenobulimina macfadyeni*, *Gaudryina filiformsi*, *Spiroplectinata annectens*, *Marssonella trochus*, *Verneuilinoidea pumilionis*, *Lenticulina* div. sp., *Dentalina* sp., *Gavelinella intermedia*, *Globorotalites rumanus*, *Hedbergella rischi*, *H. planispira*, *Ticinella primula*.

2408 (2242–2247 m) marls with *Pervinqueria* (fauna is very badly preserved) *Spiroplectinata annectens*, *Lenticulina* sp., *Gavelinella intermedia*, *Valvulineria loeterlei*, *Nodosarella* sp., *Hedbergella planispira*, *H. rischi*, *Ticinella primula*.

1863 (1850,50 m) marls with *Mortoniceras*. *Ammodiscus tenuissimus*, *Falsogaudryinella moesiana*, *Gaudryina gradata*, *Tritaxia carinata*, *Arenobulimina machadyeni*, *Valvulineria loeterlei*, *Gavelinella intermedia*, *G. schloenbachi*, *G. asterigerinoides*, *Hedbergella rischi*, *H. planispira*, *Tricinella primula*.

As a general conclusion, the foraminiferal assamblages from the different drillings, with small and non esential variations, are similar, both among the benthonic and planktonic species.

**Upper Albian.** Based on the data offered by the macrofauna (especialy ammonites), R. Muțiu distinguishes two biozones: at the basal part Hysteroceras biozone (Hysteroeratan) founded by the presence of the species *Hystertroceras orbignyi* and the upper part the Vraconian until the boundary with the Lower Cenomanian founded on the presence of the species *Stoliczkaia dispar*. As a particularity of the Upper Albian it worth noteing, the richness of ammonite species (see Muțiu, 2004, p. 14).

On the data proffered by the micropaleontology owing to the rapid process of speciation among the planktonic foraminifera, it is possible, and very useful to do, a detailed biozonation of the deposits. This rapid and strong process of radiative evolution is possibly determined and controled by the weather patterns and temperatures of the global ocean in the Lower Cretaceous. If it is taken into consideration that the planktonic foraminifera grow and live only in the surface layer of the oceans water column, and the fact that enviromental factors have a primary role in the process of evolution, this oppinion seems to be logical and normal.

In order to realize a detailed, clear and useful biozonation we try to superimpose the biozones containing the planktonic foraminifera over the benthonic foraminiferal assamblages with which they are fossilized. The result shows that the benthonic assamblages reflect in a very reduced manner the radical developments in the planktonic assamblages.

Generally considered, the agglutinated foraminifera assamblages can be differentiated with respect to those two biozones offered by the macrofauna but which are not so conspicuously evident.

At the Hysteroeratan substage, a remarcable frequency is to be noted for the Spiroplectaminaceae group with *Quasispiroplectammina nuda*, *Q. goodlandana*, *Textulariopsis anglica*, *T. longiscata* with which is associate *Gaudryina dividens*. Also, the frequency of the group *Falsogaudryinella moesiana*, *F. neagui*, *F. trigonula* is to be taken into consideration until the boundary with the Vraconian. Together with the agglutinated foraminifera and the miliolids as *Spiroloculina payracea*, *Massilina planoconvexa*, *Quinqueloculina antiqua* and *Barkerina minima*.

The calcareous benthic foraminifera do not excel in frequency and size despite of their variety in taxa. Among of the nodosariids the genus *Lenticulina* is represented by *Lenticulina macrodisca*, *L. muensteri*, *L. nodosa*, *L. subaperta*, together with *Lingulina denticulocarinata* and *Nodosarella articulata*, and *N. solida*.

The dominant genera from Lower and Middle Albian as *Vaginulina*, *Marginulina*, *Marginulinopsis*, *Frondicularia*, *Citharina* are extremely rare or absent. The *Gavelinella* group constantly continues the development begun in the Lower Albian by specimens with a robust sizes and good frequency especially in the Vraconian as: *Gavelinella rudis*, *G. schloenbachi*, *G. intermedia*, *G. baltica*, *Heterolepa gorbenkoi* and the new genus *Falsogavelinella umbilicitecta*. Planktonic foraminifera, within which the radiative process of evolution already started in the Euhoplitan subsstage, progressively go on in the Hysteroceratian until the Vraconian, and would go on to produce during the Cenomanian excellent assemblages with “markers” until the end of Maastrichtian.

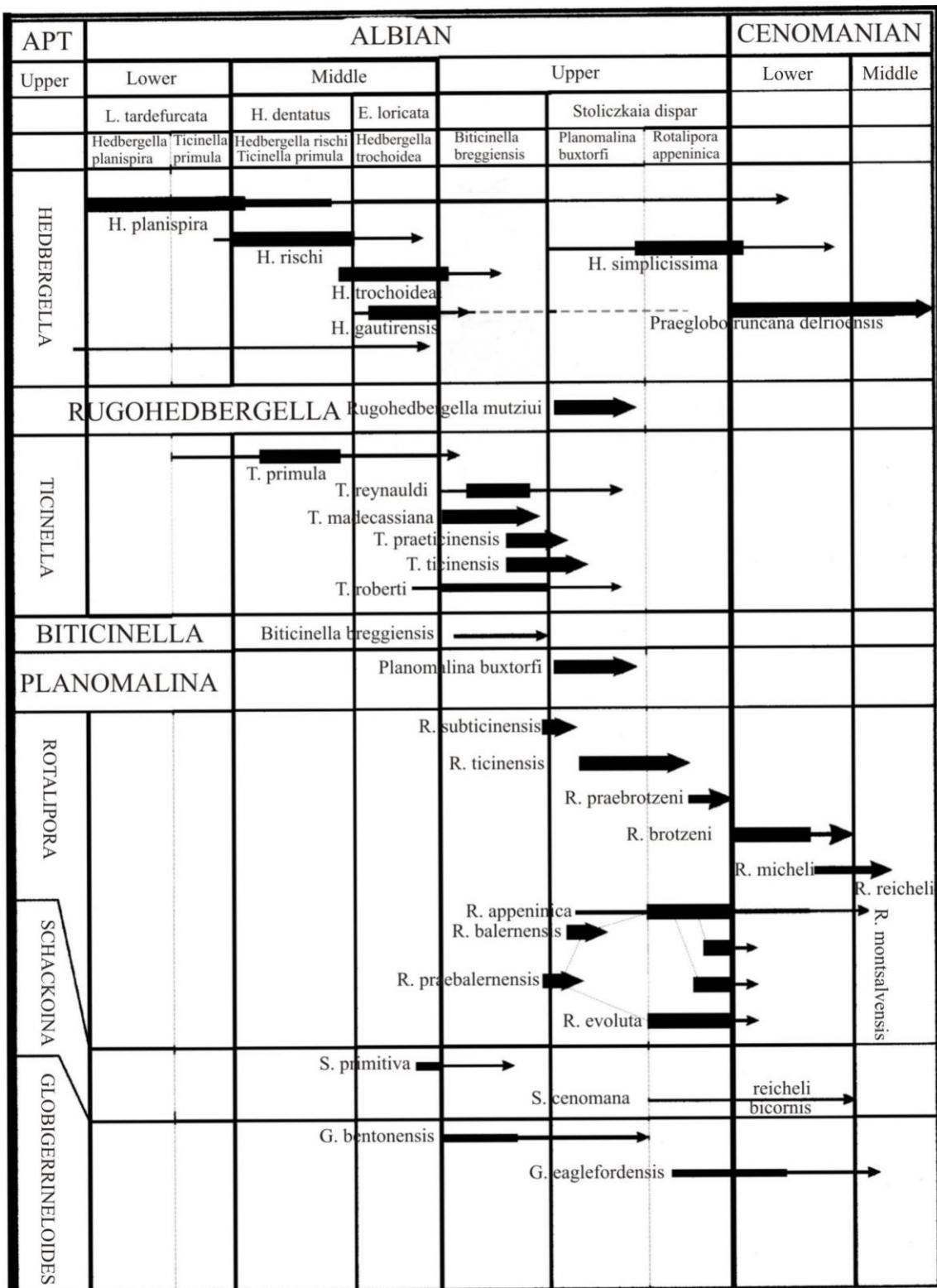
Starting with a planktonic foraminifera assemblage from the Putineiu drilling-marls with *Oxytropidoceras* and stive samples from Zimnicea drilling, arriving to Vraconian with *Stoliczkaia dispar*, under the population aspects those assemblages progressively grow richer until more than 75% from the assemblages – as is the situation of the assemblages from the core from Bălăria, Glogoveanu, Dumbravița and Copăceni where their frequency reaches 80%. In the lower part of the Hysteroceratian the speciation process started in the Holpitan, becomes evident and clear affecting the *Hedbergella* and *Ticinella* groups. The planktonic population from the lower and middle Hysteroceratian have domination over other species, by the presence of *Ticinella roberti*, *T. raynauldi*, *T. madecassiana*. These still preserve the features of the *Ticinella primula* group, mixed up with those of the *Hedbergella trochoidea-gautiereensis* group.

To the upper part of the Hysteroceratian time appears the group *Ticinella praeticinensis-T. ticinensis* with a test morphology well differentiated from the classic *T. primula*. The robust test clearly trochospiral with chambers wake or not inflated on the spiral side with the ogival-rounded aspect of the periphery and the tendency to develop a keel prefigures the *Rotalipora* group which will go off in the upper Vraconian.

Biostratigraphically this span is very well marked by the complete evolution of the genera *Biticinella breggiensis* which is, from a theoretical point of view, an excellent example of an inadaptive radiation. Also is an excellent marker for biostratigraphic purposes because of its short and rapid evolution, as well as having a broad geographical expanse. Stratigraphically this biozone represents the lower part of the Hysteroiceratian, ending at the boundary with the basal Vraconian when the new biozone with *Planomalina buxtorfi* begins. From this moment, starts the development of the *Rotalipora* group. By carefully following this process in the foraminiferal assemblages from different cores it was possible to discern very clearly the existence of two distinct phyletic directions of evolution.

1. The first branch. Starts with the species *Rotalipora subticinensis-R. ticinensis*. This branch continues in the Lower Cenomanian with the series: *Rotalipora brotzeni-Rotalipora micheli*, *R. reicheli*, *R. deeckeai* ending its evolution at the basal part of the Upper Cenomanian. This branch is characterized by a high test with a bi-convex to strong biconvex aspect, with a clear trochospiral side and an umbilical side, initially narrow and with a deep umbilicus, high rhomboidal chambers evidently provided with umbilical shoulders.

2. The second branch. Has a low, expanded and patelliforme shells with the spiral side having a flattened conical aspect, with expanded chambers (on both sides). The umbilical side is large. The chambers are devoid of umbilical shoulders having an expanded rhomboidal aspect. This branch starts with *Rotalipora praebalernaensis* – and continues with *Rotalipora balernaensis*, *Rotalipora appenninica* (in the Upper Vraconian), and past the Vraconian/Cenomanian boundary continuing its evolution through *R. montsalvensis* and *R. cushmani* in the Upper Cenomanian. A particular feature of this second branch is its capacity to produce very short and totally inadaptive radiations but with a rapid evolution (short span of evolution).



**Figure 5.** Range zones of planktonic foraminifera from the Albian deposits of the Moesian Platform.

This phenomenon starts to be visible in the Vraconian when in parallel with the majors species, also appears: *Rotalipora appenninica*, *Rotalipora evoluta*, *R. gandolfi*, *R. moesiana*. In the Upper Cenomanian this process is repeated around the major species *R. cushmani* together with *Rotalipora expansa*, *R. thomei*, *R. Turonica*.

Using the evolution of the planktonic foraminifera from the Albian deposits of the Moesian Platform, in 2006 the author put together in parallel the data from the references, recognizing many of the biozones mentioned in 1977 by J. Sigal and restudied and developed afterwards by M. Caron-Robaszinski (1985, 1995), M. Moullade *et al.*, (2003). It is useful to remark that in the papers of the above mentioned authors (particularly M. Caron *et al.*) the biostratigraphic value of the planktonic foraminifera until the Lower Cenomanian level contains only general considerations because of the lack of detailed data about Lower Cretaceous and particularly Albian times. The author in 2006 fortunately benefitted from a very clear stratigraphical positioning of the fragmens of core samples. In such way it was possible to realize a detailed and clear biozonation of the Albian.

For the Lower Albian it was possible to identify a total range zone with *Hedbergella planispira* at the lowermost part of the biozone with *Leymeriella tardefurcata*. The second biozone is a partial range zone with *Hedbergella rischi* and *Ticinella primula*, which continues in the Lower part of the Middle Albian.

For the Middle Albian the biozonation is much more clear and evident. The Hoplitan is marked by the a considerable development of the populations of *Hedbergella rischi* and *Ticinella primula*, *Ticinella primula* becoming more frequent. These two species are invariable accompanied by *Hedbergella planispira* which stil preserves its small size and high frequency.

The Euhoplitan is well individualized by the development fo a total new population of planktonics beeing possible to carry out a partial range zone with Hedbergella trochoidea-gautirensense and Globigerinelloides bentonensis. This biozone extends until the basal part of the Upper Albian. During its evolution it is possible to remark the flagrant growth in size and number of specimens of the *Hedbergella trochoidea* population. This species by its test morphology, the aspect and size, comes closer to the size and dimensions of the specimens of genus *Ticinella* from the Upper Albian.

The *Hysteroeras orbignyi* biozone appears very well individualised from a micropaleontological point of view by the span of the genus *Biticinella breggiensis* wich characterizes a total range zone with Biticinella breggiensis. In this biozone there is be noted the first presence of the new *Ticinella* group represented by: *Ticinella roberti*, *T. raynaudi*, *T. madecassiana*.

The basal part of the Vraconian is marked by a new total range zone with Planomalina buxtorfi associated with *Ticinella praeticinensis* – *Ticinella ticanensis* group which represents the start of evolution for the Rotalipora group.

In the upper part of the Vraconian laying directly on the *Planomalina buxtorfi* biozone, follows the partial range zone with Rotalipora appenninica. This biozone is very well marked by the presence of those two major branches of evolution of the Rotalipora group. The end of this zone is marked by the first appearance of *Rotalipora brotzeni* when it is considered to be start of the Lower Cenomanian. *R. appenninica* still exists, but with a progresive reduction of its frecquency and disappearing before the boundary with the Middle Cenomanian.

The foraminiferal assamblages of the Upper Albian were recognized in followings cores, of course with similar but not identical associations:

**11 Buzescu** (564–569 m) marls with *Hysteroeras orbignyi* – T.r.z with *Biticinella breggiensis*, *Glomospirella gaultina*, *Ammodiscus cretaceus*, *Haplophragmoides concavus*, *Falsogaudryinella neagui*, *F. trigonula*, *Gaudryina filiformis*, *G. gradata*, *Textulariopsis goodlandana*, *T. longiscata*, *Quasispiroplectammina nuda*, *Spiroplectinata complanata*, *Eggerellina mariae*, *Spirillina minima*, *Spiroloculina papyracea*, *Quinqueloculina antiqua*, *Lenticulina macrodisca*, *L. muensteri*, *L. roemeri*,

*Tristix excavata*, *Nodosaria scepturnum*, *Frondicularia filocincta*, *Saracenaria bonnoniensis*, *Marginulina stritocostata*, *Lagena aspiculata*, *Ramulina novaculeata*, *R. globotubulosa*, *Elpisoidella pleurostomelloides*, *Nodosarella articulata*, *Gavelinella rufis*, *G. baltica* (small size), *Gavelinella intermedia*, *G. schloernbachi*, *Falsogavelinella umbilicata*, *Valvularia berthelini*, *Hedbergella trochoidea*, *Globigerinelloides bentonensis*, *G. carseyae*, *Ticinella madecassiana*, *T. sp.*, *Biticinella breggiiensis*.

11. **Buzescu** (570m) marls with *Hysteroeras*: *Reophax* sp., *Ammodiscus tenuissimus*, *Psammosphaera fusca*, *Haplophragmoid excavata*, *Gaudryina gradata*, *G. filiformis*, *Falsogaudryinella neagui*, *F. trigonula*, *Quasispirolectammina nuda*, *Textulariopsis longiscata*, *T. goodlandana*, *Spiroloculina papyracea*, *Massilina convexoplana*, *Barkerina minima*, *Spirillina minima*, *Coniscospirillina* sp., *Lenticulina macrodisca*, *L. sp.*, *Dentalina debilis*, *Dentalina* sp., *Vaginulina recta*, *Planularia vestita*, *Lagena globosa*, *L. apiculata*, *Eoguttulina fusus*, *Gavelinella baltica*, *Valvularia loeterlei*, *Globigerinelloides eaglefordensis*, *Hedbergella trochoidea*, *Ticinella roberti*, *T. raynaudi*, *T. madecassiana*, *T. praeticinensis*.

21. **Buzescu** (marls with *Scaphites*) (dominant planktonic foraminifera): *Ammodiscus cretaceus*, *Ammobaculites* sp., *Textulariopsis goodlandana*, *Falsogaudryinella neagui*, *F. moesiana*, *F. trigonula*, *Gaudryina gradata*, *Spirolectinata annectens*, *Eggerellina mariae*, *Quinqueloculina antiqua*, *Lenticulina macrodisca*, *Saracenaria bonnoniensis*, *Marginulina robusta*, *M. striatocostata*, *M. jonesi*, *Vaginulina recta*, *Lagena* sp., *Dentalina* sp., *Tristix excavata*, *Pl. anularia bradyana*, *Spirillina minima*, *Pleurostomerella obtusa*, *Nodosarella articulata*, *Elpisoidella pleurostomelloides*, *Bifarina calcarata*, *Gavelinella rufis*, *G. intermedia*, *Falsogavelinella umbilicata*, *Hedbergella trochoidea*, *Globigerinelloides carseyae*, *G. bentonensis*, *Ticinella roberti*, *T. raynaudi*, *T. madecassiana*.

1795 **Glogoveanu** (1699–1701 m) marls with *Stoliczkaia dispar* and *Idiohamites*. Biozone with Pl. anomalina buxtorfi: *Ammodiscus tenuissimus*, *Ammobaculites terquemi*, *Gaudryina gradata*, *G. filiformis*, *Textulariopsis longiscata*, *T. anglica*, *Verneuilinoides pumilionis*, *Spirillina minima*, *Lenticulina muensteri*, *L. turgidula*, *L. nodosa*, *Eoguttulina fusus*, *Vitriwebbina laevis*, *Gavelinella intermedia*, *G. schloenbachi*, *Valvularia loeterlei*, *Falsogavelinella umbilicata*, *Planomalina buxtorfi*, *Rugohedbergella mutziui*, *Ticinella madecassiana*, *T. roberti*, *T. praeticinensis*, *Rotalipora praebalernaensis*, *R. subticinensis*.

227 **Glogoveanu** (2004–2008 m) – biozone with Planomalina buxtorfi: *Ammodiscus cretaceus*, *Gaudryina gradata*, *G. filiformis*, *Falsogaudryinella neagui*, *Quinqueloculina antiqua*, *Lingulina* sp., *Pleurostomella reussi*, *Hedbergella* sp., *Ticinella praeticinensis*, *Planomalina buxtorfi*, *Rotalipora praebalernaensis*, *R. subticinensis*.

2251 Dumbrăvița (2050 m) marls with *Anysoceras*. *Reophax pilulufer*, *Ammodiscus cretaceus*, *Ammobaculites terquemi*, *Gaudryina gradata*, *G. dividens*, *G. filiformis*, *Textulariopsis longiscata*, *Verneuilinoides pumilionis*, *Spirillina minima* (very frequent), *Lenticulina muensteri*, *L. macrodisca*, *L. secans*, *Lagena apiculata*, *Nodosarella articulata*, *Valvularia berthelini*, *Gavelinella schloenbachi*, *G. intermedia*, *G. emanueli*, *G. baltica*, *Planomalina buxtorfi*, *Rotalipora praebalernaensis*, *R. balernaensis*, *R. subticinensis*, *R. ticanensis*.

138. **Copăceni** (481–485 m) marls with *Aucellina*: biozone with Rotalipora appenninica: *Tritaxia plummerae*, *T. pyramidata*, *Spirolectinata annectens*, *Eggerellina mariae*, *Quinqueloculina antiqua*, *Lenticulina macrodisca*, *L. muensteri*, *Marginulinopsis ensis*, *Marginulinopsis* sp., *Planularia bradyana*, *Frondicularia filocincta*, *Vaginulina recta*, *Tristix excavata*, *Dentalina* sp., *Lagena apiculata*, *Pseudonodosaria mutabilis*, *Ramulina novaculeata*, *Eoguttulina subsphaerrica*, *E. fusus*, *Nodosarella solid*, *Praebulimina minima*, *Valvularia berthelini*, *Gavelinella baltica*, *Hedbergella gautiereensis*, *H. simplicissima*, *H. delrioensis*, *Globigerinelloides eaglefordensis*, *Ticinella madecassiana*, *T. raynaudi*, *T. roberti*, *T. raynaudi digitata*, *Rotalipora ticanensis*, *R. praebalernaensis*, *R. balernaensis*, *R. appenninica*, *Schackoyna cenomana*.

44. **Bălăria** (625–627 m) – Rotalipora appenninica biozone: *Lenticulina macrodisca*, *L. nodosa*, *L. turgidula*, *L. nuda*, *L. subaperta*, *Marginulina robusta*, *Marginulinopsis comma*, *Saracenaria saratogana*, *Chrisalgonium cretaceus*, *Dentalina ailiqua*, *D. communis*, *D. strangulata*, *D. pseudochrysalis*, *D. oligostegia*, *Nodosaria prismatica*, *N. tetragona*, *Vaginulina biochei*, *V. bicostulata*, *Tristix excavata*, *Frondicularia filocincta*, *Lagena apiculata*, *Gonatosphaera* sp., *Ramulina novaculeata*, *Paleopolymorphina* sp., *Eoguttulina subsphaerica*, *E. fusus*, *Valvularia loeterlei*, *Globorotalites rumanus*, *Falsogavelinella umbilicitecta*, *Gavelinella baltica*, *G. varsoviensis*, *Heterolepa gorbenkoi*, *Praeglobotruncana delrioensis*, *Rotalipora appenninica*, *R. evoluta*, *R. gandolfii*, *R. moesiana*, *R. praebrotzeni*.

## PALEOECOLOGICAL CONSIDERATIONS

The lithological constitution the Lower Cretaceous from the Moesian Platform under-ground is fundamentally made up by two groups of major deposits.

At the bottom part (Valanginian-Aptian) the dominant facies is the carbonate one, represented by limestones with multiple origins and structures essentially accumulated under a epicontinental regime of sedimentation with shallow, warm waters, which made possible the development of the constructive organisms (calcareous algae and bivalves). Incidentally is possible to find more subordinate, softy marls. This lithologic complex, in its entirety is very rich in fossils of the constructivs organisms which have central tot hem, the scleractinia group, frequently making up the typical reef facies. According to the lithology and fossils preserved in these deposits, they represent a typical tropical or mediteranean climate.

In the upper part, particularly in the Albian, the lithology is esentiaiy changed. The dominant lithofacies is represented by marls in a large scale of colours from the darky gray to whitish-gray sometimes, especially in the basal part, sandy or glauconitic marls, compact, or in decimetric to metric beds. Paleontologaly all these deposits are particularly rich in fossils, represented by Molluscs (bivalvs, rarely gastropods, Nautiloideae, Ammonoidea and Coleoideae). The richness in fossil records lenghtened the biostratigraphic study of those deposits. The frequent presence of the softy marls intercalations have made it possible to aquire rich foraminiferal assambages some time with the original shell preserving the wall ultrastructure. For planktonic foraminifera this kind of preservation is extremely important.

Following the areal distribution of the Albian deposits from the Moesian Platform it has been found that in the east part from the Călărași-Chiciu-Oltina area and Southern part of Dobrogea (border Lacke Bugeac), the Lower Albian with *Leymeriella tardefurcata* laying transgresively on the Aptian or older deposits. Usually in Southern Dobrogea (after Chiriac, 1981) the Lower Albian is in a sandy facies wich is laying transgressively on the similar sandy deposits of the uppermost Aptian. On the eastern bank of the Bugeac-Oltina Lake, the detritic sandy facies contains fossil such as the *Neohibolites minimus* group and also *Leymeriella tardefurcata* laying on the Barremian limestones. In the Oltina-Bala Chiciu-Călărași drilling areas, the facies becomes a compact marly sand, rich in fossils (Chiciu Sandstone, after R.Mutiu).This lithofacies is also rich in foraminifera. From these deposits R. Mutiu 2004) collected from many drillings a rich fauna with *Leymeriella*, *Hypacanthoplites*, *Douvilleiceras*. From the same drillings the foraminiferal asamblages not so rich in specimens but very well preserved are reprezented predominantly by Nodosariids. Is to be noted that in these assamblages *Palmula asisatica* presents an unusual size (more than 3–4 mm length). Planktonic associations are constituted by *Hedbergella planispira*, *H. rischi*, *Ticinella primula* but with a small size.

The macro- and microfaunal assamblages are typical of shallow marine waters-epicontinental deposits of a large open sea with a normal and constant salinity. The cephalopods like the planktonic foraminifera too are typical stenohaline organisms living in clear waters which indicates an appreciable distance from the shore. It is an external epicontinental environment. The richness in carbonatic foraminifera (benthic and planktonics) represents a concrete proof that the sedimentation was carried out up to the CCD limit.

The middle Albian deposits are dominantly represented by gray marls in compact beds (as it was possible to observe at Giurgiu Pod excavations), soft or very soft especially in the Giurgiu-Putineiu-Zimnicea area. To the west of the Moesian Platform, as R. Mușu shows, these deposits become hard with a marly-limestones aspect.

This lithological aspect continues, generally, and in the Upper Albian.

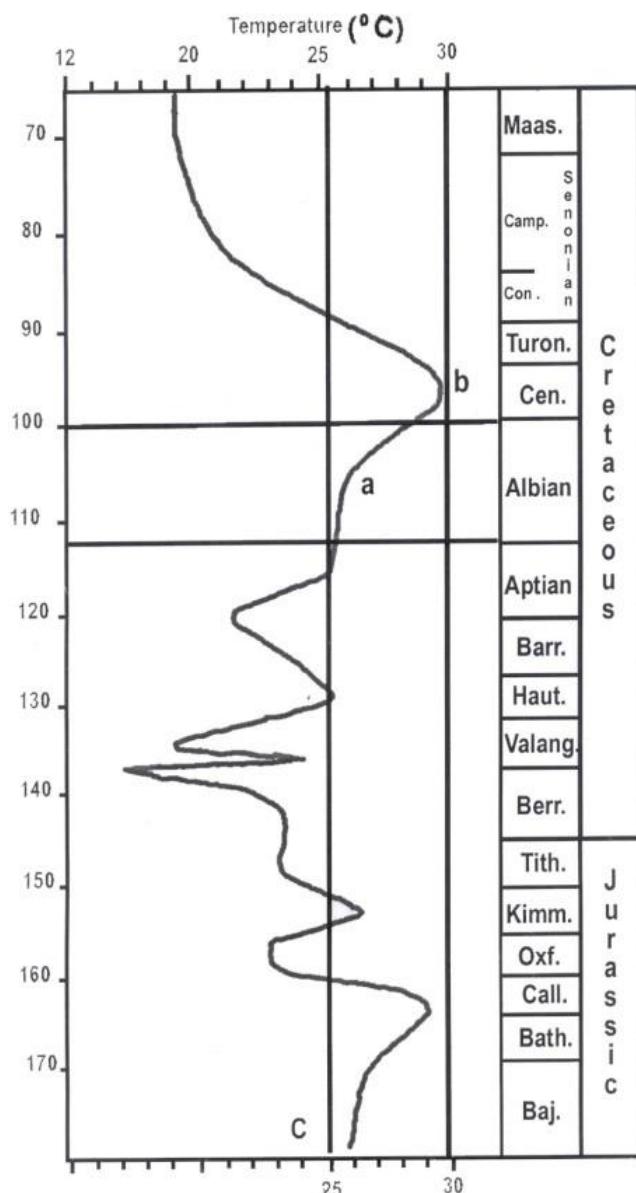
The constant presence along all of the Albian, of the Cephalopods and especially the planktonic foraminifera, from a paleoecological point of view, represents a good indicator of the marine water temperature. This one was not high during a good part of the Albian, because as it is known, in the temperate to cold waters planktonic foraminifera exhibit a small size connected to a simple and thin wall. This is the situation especially for the Lower Albian and Hoplitan. In the Euhoplitan and Upper Albian looking to the planktonic foraminifera, the shell aspect and the morphology of the test shows evident changes. Water temperature increases to the tropical zone levels, and this change is very well reflected by the test of planktonics which become larger and the wall morphology progressively grows complexity. In such way, the shell presents a tendency to build a peripheral keel, together with strongly differentiation of the two sizes of the test (spiral and umbilical) conjugated with the evolution of the chamber morphology.

One of the most important environmental factors which induced these radical changes is, in the author opinion, the change in water temperature. During the Upper Albian the temperature of the marine waters was as high as in the tropical seas today. This opinion is corroborated by the recent studies on the Jurassic and Cretaceous marine paleotemperatures using oxygen isotopes from fish tooth enamel realized by the Lecuyer *et al.* (2003).

Using the oxygen isotope-composition of the fish teeth enamels the authors draw the curve of the thermal evolution of Cretaceous marine water temperatures. This curve shows exactly in the Upper Albian time to the boundary with Lower Cenomanian a peak at 30 degrees Celsius from the marine waters in the Tethyan ocean to which the Moesian Platform deposits belong.

It is an excellent example that supports the opinion that the fossil record and particularly planktonic foraminifera are excellent markers of the environment. Coming back to the observations about the evolution of the planktonic foraminifera the explanation of the extraordinary evolutionary explosion from the Upper Albian-Cenomanian time becomes clear and logical. The environment is one of the decisive factors towards the realization, development, and results of the evolutionary process. The temperature curve presented, proves without any doubt that the moment from the Upper Euhoplitan marked by the appearance of the *Hedbergella trochoidea* group is the result of a sensible growth in the water temperature of the Tethyan ocean.

Looking back to the Albian foraminiferal assemblages from the different moments of the geologic evolution of the Moesian Platform trying to do a comparative observation with the similar ones from England, Paris Basin, North of Germany, Poland in the light of the paleoecology, the major conclusion is clear. In the beginning (Lower Albian-Middle Albian (Hoplitan) the Moesian Platform was under a boreal facies. After the Upper Albian and continuing along the Upper Cretaceous the dominant characteristics of the environment was that of the tropical hot to temperate Mediterranean zone.



**Figure 6.** The evolution of the marine temperature using Oxygen isotopes from fish tooth enamel (Lecuyer *et al.*, 2003).

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## PALEONTOLOGICAL PART

Class FORAMINIFERA Eichwald, 1830  
 Subclass ASTRORHINA Saidova, 1980  
 Ord SACCAMMINIDA Lankester, 1881  
 Family SACCAMMINIDAE Brady, 1884  
 Subfamily THURAMMININAE Mikluho & Maklay, 1963  
 Genus *Thorammina* Brady, 1874  
*Thorammina* sp.  
 Plate 1, Fig. 18

**Dimensions:** large diameter 0,75 mm.

**Small diameter:** 0,55 mm.

**Remarks:** because a so weak frequency (one specimen) and a reduced degree of preservation was difficult to carried out the specific affiliation.

**Type specimens:** L.P.B.IV. 11753

**Occurrence:** Vedea Valley, Putineiu core.

**Stratigraphic distribution:** Middle Albian (terminal part)

Genus *Psammosphaera* Schultze, 1875  
*Psammosphaera fusca* Schultze, 1875  
 Plate 52, Fig. 10

*Psammosphaera fusca* SCHULTZE & GRZYBOWSKI 1896, p. 270, pl. 1, fig. 1; CUSHMAN 1910, p. 35, text-figs. 25–26; FRANKE 1928, p. 8, pl. 1, fig. 3; BARTENSTEIN-BRAND 1951, p. 265, pl. 1, fig. 2; NEAGU 1962, p. 53, pl. 1, fig. 3; HUSS 1966, p. 15, pl. 1, figs. 1–3; FUCHS 1967, p. 259, pl. 1, fig. 1; NEAGU 1970, p. 33, pl. 1, . fig. 10.

**Dimensions:** diameter 0,38 mm.

**Type specimen:** L.P. B. IV. 12035

**Occurrence:** 11 Buzescu (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysteroconus orbignyi zone)

Genus *Saccammina* Sars, 1869  
*Saccammina alexanderi* (Loeblich & Tappan, 1950)  
 Plate 1, Figs. 4–5

*Proteonina alexanderi* LOEBLICH & TAPPAN, 1950, p. 5, pl. 1, figs. 1–2.

*Saccammina alexanderi* (LOEBLICH, TAPPAN & EICHER, 1960), p. 55, pl. 3, figs. 1–3; EICHER 1967, pl. 180, pl. 17, fig. 1.

**Dimensions:** length 0,6 mm; thickness 0,4 mm

**Remarks:** specimens from the Putineiu core corresponds to the Loeblich and Tappan's species.

**Type specimens:** L.P. B.IV. 11754

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part)

Order HYPOCREPINIDA SAIDOVA, 1981  
 Superfamily AMMODISCACEA REUSS, 1862  
   Family AMMODISCIDAE REUSS, 1862  
   Subfamily AMMODISCINAE REUSS, 1862  
     Genus *Ammodiscus* REUSS, 1862  
     *Ammodiscus cretaceus* (REUSS, 1845)  
       Plate 2, Fig. 30

*Operculina cretacea* REUSS, 1845, p. 35, pl. 13, figs. 64–65.  
*Cornuspira cretacea* (REUSS, 1860), p. 177, pl. 1, fig. 1; REUSS, 1863, p. 34, pl. 1, figs. 10–12.

*Ammodiscus cretaceus* (REUSS & CUSHMAN, 1946), p. 17, pl. 1, fig. 35; ten DAM, 1950, p. 6.

**Dimensions:** larger diameter 0,65 mm; small diameter 0,65 mm

**Type specimens:** L.P. B.IV. 11755

**Occurrence:** Glogoveanu core

**Stratigraphic distribution:** Upper Albian (Vraconian- S. dispar zone)

*Ammodiscus tenuissimus* (Gumbel, 1862)  
 Plate 1, Figs. 19–20

*Spirillina tenuissima* GUMBEL, 1863, p. 214, pl. 4, fig. 12.

*Ammodiscus tenuissimus* (GUMBEL), GEROCH, 1966, p. 137, pl. 8, fig. 14; MICHAEL 1967, p. 22, pl. 1, fig. 13; NEAGU 1972, p. 191, pl. 1, figs. 19–20; NEAGU, 1975, p. 21, pl. 1, figs. 1–4, 7–13, 25; pl. 2, figs. 1–14, 16, 21, 30.

**Dimensions:** larger diameter 0,35 mm, small diameter 0,33 mm

**Type specimens:** L.P. B.IV. 11756, 11757

**Occurrence:** Vedea Valley, Putineiu core, 11 Buzescu core (570m)

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian (Hysteroberas orbignyi zone).

Subfamily Ammovertellinae Saidova, 1981  
 Genus *Glomospirella* Plummer, 1945  
*Glomospirella gaultina* (Berthelin, 1880)  
 Plate 1, Figs. 21–22

*Ammodiscus gaultinus* BERTHELIN, 1880, p. 19, pl. 1, fig. 3; TAPPAN, 1940, p. 95, pl. 14, fig. 6; TAPPAN 1943, p. 481, pl. 77, fig. 6; ten DAM, 1950, p. 7; BARTENSTEIN, BETTENSTAEDT & BOLLI, 1966, p. 140, pl. 1, fig. 29.

**Dimensions:** larger diameter 0,4 mm, small diameter 0,35 mm, thickness 0,20 mm

**Type specimens:** L.P.B.IV. 11758

**Occurrence:** Vedea Valey, Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

Order LITUOLIDIA Lankester, 1885  
 Subord HORMOSINA Haeckel, 1894  
 Superfamily HORMOSINACEA Haeckel, 1894  
   Family REOPHACEDAE Cushman, 1910  
     Genus *Reophax* de Montfort  
     *Reophax globulifera* (Brady, 1879)  
       Plate 1, Figs. 11–14

*Hormosina globulifera* BRADY & CHAPMAN, 1892. p. 326, pl. 6, fig. 10.

**Dimensions:** length 0,8–0,65 mm; thickness 0,30–0,30 mm

**Type specimens:** L.P.B.IV. 11759, 11760

**Occurrence:** Bala III – Oltina drilling (50–55m), Giurgiu Pod

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (Hoplites dentatus zone).

Suborder LITUOLINA Lankester, 1885

Superfamily LITUOLACEA Lankester, 1885

Family HAPLOPHRAGMOIDIDAE Maync, 1952

Genus *Haplophragmoides* CUSHMAN, 1901

*Haplophragmoides concavus* (Chapman, 1892)

Plate 2, Figs. 12–14, 18–21

*Trochammina concava* CHAPMAN, 1892, p. 327, pl. 6, fig. 14.

*Haplophragmoides concavus* (CHAPMAN) TAPPAN, 1943, p. 481, pl. 77, fig. 7; BARTENSTEIN & BRAND, 1951, p. 261, pl. 1, figs. 24–25; FUCHS, 1967, p. 264, pl. 2, fig. 7; NEAGU, 1972, p. 192, pl. 2, figs. 5–6; NEAGU, 1975, p. 24, pl. 12, figs. 3–15; NEAGU, 2004, p. 29, p. 2, figs. 19–22; pl. 6, figs. 5–6.

**Dimensions:** larger diameter 0,6–0,35 mm, small diameter 0,3–0,25 mm

**Type specimens:** L.P.B.IV. 11761–11762

**Remarks:** In our samples the majority of the specimens are flattened proving the presence of a very thin test wall.

**Occurrence:** Lower Albian, Bala III-Oltina drilling; Upper Albian 11 Buzescu core (570 m).

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Upper Albian (Hysteroconus orbignyi zone).

*Haplophragmoides latidorsatus* (Bornemann, 1855)

Plate 2, Figs. 15–17

*Haplophragmium latidorsatum* (BORNEMANN); CHAPMAN, 1892, p. 5, pl. 1 figs. 12.

*Haplophragmoides latidorsatum* (BORNEMANN); FRANKE, 1928, p. 170, pl. 15, figs. 17; EICHENBERG, 1933, p. 20, pl. 1, figs. 7.

*Haplophragmoides latidorsatus* (BORNEMANN); FUCHS, 1967, p. 264, pl. 2, figs. 2.

**Dimensions:** larger diameter 0,55mm; small diameter 0,4 mm; thickness 0,12 mm

**Remarks:** Specimens from the Middle Albian (Hoplitan) Giurgiu-Pod correspond well to Chapman's 1892 figures.

**Type specimens:** L.P.B.IV. 11763

**Occurrence:** Giurgiu-Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone)

Family LITUOLIDAE de Blainville, 1827

Subfamily AMOMARGINULININAE Podobina, 1978

Genus *Ammobaculites* CUSHMAN, 1910

*Ammobaculites terquemi* (Berthelin, 1880)

Plate 1, Figs. 6–10.

*Haplophragmium terquemi* BERTHELIN, 1880, p. 22, pl. 2, fig. 1.

*Ammobaculites terquemi* (BERTHELIN); BARTENSTEIN, 1954.

**Dimensions:** length 1,5–0,86 mm; thickness 0,6 mm

**Remarks:** Our specimens are closer with what BERTHELIN, figured in 1880 as *Haplophragmium terquemi* n. sp. After Bartenstein's 1954 revisions of BERTHELIN's material its belongs to the genus *Ammobaculites* as a valid species. Similar material was figured by Fuchs 1967 as *Ammobaculites germanicus* n.sp. In our oppinion the defferences between these two species are insignificant, Fuchs's species becoming a junior synonime.

**Type specimens:** L.P.B.IV. 11764–11765

**Occurrence:** Giurgiu Pod, Glogoveanu core (2004 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Vraconian (S. dispar zone).

Subfamily FLABELAMMININAE Podobina, 1978

Genus *Flabellammina* CUSHMAN, 1928

*Flabellammina urgoniensis* Bartenstein & Kovatcheva, 1982

Plate 1, Figs. 1–3

*Flabellammina urgoniensis* BARTENSTEIN & KOVATCHEVA, 1982

**Dimensions:** length 1,9–1,0 mm, breadth 1,4–0,9 mm, thickness 0,25 mm

**Type specimens:** L.P.B.IV. 11766

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Superfamily HAPLOPHRAGMIACEA Eimer & Fickert, 1899

Family AMMOBACULINIDAE Saidova, 1981

Genus *Bulbobaculites* MAYNC, 1952

*Bulbobaculites parvispira* (ten Dam, 1950)

Plate 2, Figs. 1–4

*Ammobaculites parvispira* ten DAM, 1950, p. 10, pl. 1, fig. 8; NEAGU, 1965, p. 4, pl. 1, figs. 1–3.

**Dimensions:** length 0,67–0,50 mm; thickness 0,27–0,12 mm

**Remarks:** The weakly trochospiral colining prooves the appartenence of this species to *Bulbobaculites*.

**Type specimens:** L.P.B.IV. 11767, 11768

**Occurrence:** Craiova core, Vedea Valley, Putineiu core, Băcălești core (1050 m)

**Stratigraphic distribution:** Middle Albian.

*Bulbobaculites subcretaceus* (Cushman & Alexander, 1930)

Plate 7, Figs. 5–10

*Ammobaculites subcretacea* CUSHMAN & ALEXANDER, 1930, p. 6, pl. 2, figs. 9–10.

*Ammobaculites subcretaceus* CUSHMAN & ALEXANDER; CUSHMAN, 1946, p. 23, pl. 3, figs. 18–20; ten DAM, 1950, p. 10, pl. 1, fig. 7; BARTENSTEIN, BETTESTAEDT & BOLLI, 1957, p. 17, pl. 2, figs. 32–33; SZTEJN, 1958, p. 13, figs. 17, 19; NEAGU, 1965, p. 5, pl. 1, figs. 4–6; FUCHS, 1967, p. 267, pl. 2, figs. 6.

**Dimensions:** length 0,65–0,46 mm; thickness 0,21–0,19 mm

**Remarks:** Specimens from the Middle Albian (Putineiu core) present all the *A. cretaceous* characters, except the weakly trochospiral early stage typical for the genus *Bulbobaculites*.

**Type specimens:** L.P.B.IV. 11769

**Occurrence:** Vedea Valey, Putineiu core.

**Stratigraphic distribution:** Middle Albian.

Suborder TROCHAMMININA Saidova, 1891  
 Superfamily TROCHAMMINACEA Schwager, 1877  
 Family TROCHAMMINIDAE Schwager, 1877  
 Subfamily TROCHAMMININAE Schwager  
 Genus *Trochammina* Parker & Jones, 1859  
*Trochammina wetteri* Stelck & Wall, 1955  
 Plate 2, Figs. 22–25

*Trochammina umiatensis* TAPPAN, 1957, p. 214, pl. 67, fig. 27–29; TAPPAN, 1962 p. 150, pl. 38, figs. 5–8.

*Trochammina wetteri* STELCK & WALL; EICHER, 1967, p. 184, pl. 18, figs. 7, 9.

**Dimensions:** larger diameter 0,43 mm, small diameter 0,36mm, thickness 0,19mm.

**Remarks:** Our specimens from the Lower Albian Bala drilling correspond with what D. Eicher 1967 paper presents as *Trochammina wetteri*. Also he considers *T. umiatensis* Tappan 1957 as a junior synonym of that.

**Type specimens:** L.P.B.IV. 11770

**Occurrence:** Bala III – Oltina drilling (50–55 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata biozone)

Genus *Patellovalvulina* Neagu, 1975  
*Patellovalvulina patruliusi* Neagu, 1975  
 Plate 14, Figs. 30–32

*Patellovalvulina patruliusi* NEAGU, 1975, p. 44, pl. 16, figs. 1–4; pl. 17, figs. 1–13; pl. 26, figs. 1–2; text-fig. 10; ARNAUD-VANNEAU, 1980, p. 452, pl. 54, fig. 6; text-figs. 168; NEAGU, 2004, p. 282, pl. 3, figs. 24–29.

**Dimensions:** larger diameter 0,21 mm, small diameter 0,19 mm, height 0,2mm

**Type specimens:** L.P.B.IV 11771

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part)

Suborder SPIROPLECTAMMININA CUSHMAN, 1927  
 Superfamily SPIROPLECTAMMINACEA CUSHMAN, 1927  
 Family TEXTULARIOPSIDAE Loeblich & Tappan, 1982  
 Genus *Quasispiroplectammina* Loeblich & Tappan, 1982  
*Quasispiroplectammina nuda* (Lalicker, 1935)  
 Plate 4, Figs. 1–3

*Spiroplectammina nuda* LALICKER, 1935, p. 4, pl. 1, figs. 6–7

*Quasispiroplectammina nuda* (LALICKER); LOEBLICH & TAPPAN, 1982, p. 61, pl. 1, figs. 6–10.

**Dimensions:** length 0,5–0,43 mm; breadth 0,17–0,14 mm; thickness 0,07–0,07 mm

**Type specimens:** L.P.B.IV. 11772

**Occurrence:** 11 Buzescu core (570m)

**Stratigraphic distribution:** Upper Albian (Hysteroconus orbignyi zone).

***Quasispiroplectammina goodlandana*** (Lalicker, 1935)  
 Plate 4, Figs. 16–20

*Spiroplectammina goodlandana* LALICKER, 1935, p. 2, pl. 1, figs. 2–3.  
*Quasispiroplectammina goodlandana* (LALICKER); LOEBLICH & TAPPAN, 1982, p. 60, pl. 1,  
 figs. 31–33.

**Dimensions:** length 0,62–0,48 mm; breadth 0,31–0,29 mm; thickness 0,14–0,14 mm

**Type specimens:** L.P.B.IV. 11776

**Occurrence:** 11 Buzescu core.

**Stratigraphic distribution:** Upper Albian (basal part Hysteroberas orbignyi zone).

Genus ***Textulariopsis*** Banner & Pereira, 1981  
***Textulariopsis anglica*** (Lalicker, 1935)  
 Plate 4, Figs. 24–25

*Textularia anglica* LALICKER, 1935, p. 10, pl. 2, figs. 6, 7.

*Textulariopsis anglica* (LALICKER); LOEBLICH & TAPPAN, 1982, p. 60; Pl. 1, fig. 5

**Dimensions:** length 0,36 mm; breadth 0,25 mm; thickness 0,21 mm

**Type specimens:** L.P.B.IV. 11775

**Occurrence:** Craiova core.

**Stratigraphic distribution:** Middle Albian.

***Textulariopsis losangica*** (Loeblich & Tappan, 1951)  
 Plate 4, Figs. 4–15, 23

*Textulariopsis losangica* (LOEBLICH & TAPPAN); LOEBLICH & TAPPAN, 1982, p. 67, pl. 2,  
 figs. 8–10.

**Dimensions:** length 0,96–0,48 mm – 0,31 mm; breadth 0,34 mm – 0,34 mm – 0,26 mm; thickness  
 0,24 mm – 0,21 mm – 0,20 mm

**Type specimens:** L.P.B.IV. 11773, 11774

**Occurrence:** 11 Buzescu core (570 m), Glogoveanu core (2004 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone), Vraconian (S. dispar zone).

Superfamily VERNEUILINACEA CUSHMAN, 1911  
 Family VERNEUILINIDAE Cushmna, 1911  
 Subfamily VERNEUILINANAE Suleymanov, 1973  
 Genus ***Falsogaudryinella*** Barternstein, 1977  
***Falsogaudryinella moesiana*** (Neagu, 1966)  
 Plate 6, Figs. 1–8; Plate 7, Figs. 21–25; Plate 52, Figs. 12–13

*Uvigerinammina moesiana* NEAGU, 1965, p. 5, pl. 2, figs. 11–18

*Falsogaudryinella moesiana* (NEAGU); BARTENSTEIN & KOVATCHEVA, 1982, p. 672, pl. 1,  
 figs. 7–10; pl. 5, figs. 12–15; KAMINSKI, NEAGU & PLATON, 1995, p. 147, pl. 1, figs. 1–8; pl. 4,  
 fig. 1.

**Dimensions:** length 0,36–0,29 mm; breadth 0,19–0,14 mm

**Type specimens:** L.P.B.IV. 11777–11778

**Occurrence:** Giurgiu Pod, 11 Buzescu core (570 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Upper Albian (basal part –  
 Hysteroberas orbignyi zone).

***Falsogaudryinella trigonula* Fuchs, 1967**  
**Plate 7, Figs. 1–20**

*Uvigerinammina trigonula* FUCHS, 1967, p. 271, pl. 3, fig. 6.

**Dimensions:** length 0,26 mm – 0,24 mm – 0,21 mm; breadth 0,14 mm – 0,14 mm – 0,12 mm

**Remarks:** The tricarinate aspect of the test is a good marker which separates this species from the *F. moesiana* (Neagu)

**Type specimens:** L.P.B.IV. 11779

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part – Hysterooceras orbignyi zone)

***Falsogaudryinella neagui* Bartenstein, 1981**  
**Plate 7, Figs. 26–33; Plate 52, Figs. 14–18**

*Uvigerinammina hannoverana tealbyensis* (BARTENSTEIN); NEAGU 1975, p. 36, pl. 18, figs. 1–23.

*Uvigerinammina hannoverana hannoverana* (BARTENSTEIN); NEAGU 1975, pl. 36, pl. 18, figs. 32–41.

*Falsogaudryinella neagui* BARTENSTEIN 1981, p. 319, figs. 3, 8, 3, 11; KAMINSKI, NEAGU & PLATON 1995, p. 148, pl. 1, figs. 18–23; pl. 4, figs. 4–5; NEAGU & CARNARU, 2004, p. 283, pl. 1, fig. 13.

**Dimensions:** length 0,48 mm – 0,46 mm – 0,43 mm; breadth 0,14 mm – 0,14 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11780

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part, Hysterooceras orbignyi zone).

***Falsogaudryinella* sp. (n. sp. ?)**  
**Plate 7, Figs. 34–47**

**Dimensions:** length 0,48 mm – 0,46 mm – 0,43 mm – 0,31 mm; breadth 0,096 mm – 0,17 mm – 0,17 mm – 0,096 mm

**Remarks:** By its gracil-elongated test with the chamber disposition almost alternate and weakly twisted (similar to the adult stage of *Pleurostomella*) our specimens from Glavacioc core (Vraconian) differ from the other species of *Falsogaudryinella*. The presence of a first globulous chamber colling up the gamontic-macrosphaeric stage in such a way that this material could be considered as a gamontic stage of the species *F. neagui* with which is very similar as regard to the elongated and slightly twisted aspect. This is the why we do not consider erecting a new species.

**Type specimens:** L.P.B.IV. 11781–11782

**Occurrence:** Glavacioc core, Buzescu core (570 m)

**Stratigraphic distribution:** Middle Albian, Upper Albian (Hysterooceras orbignyi zone).

Genus ***Verneulinoides*** Loeblich & Tappan, 1949  
***Verneulinoides pumilionis* Neagu, 1997**  
**Plate 3, Figs. 4–9, 11–20, 30**

*Verneulinoides pumilionis* NEAGU 1997, p. 313, pl. 5, figs. 9–20.

**Dimensions:** length 0,39 mm – 0,24 mm – 0,21 mm; breadth 0,24 mm – 0,12 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 11783–11784

**Occurrence:** 11 Buzescu core, Glavacioc core

**Stratigraphic distribution:** Middle Albian, Upper Albian basal part (Hysteroconus orbignyi zone).

Subfamily SPIROPLECTANITINAE CUSHMAN, 1918

Genus *Belorussiella* Akimets, 1958

*Belorussiella textilaroides* (Reuss, 1863)

Plate 3, Figs. 1–3

*Bolivina textilaroides* REUSS 1862, p. 81, pl. 10; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 42, pl. 5, figs. 108; pl. 6, fig. 140.

*Palaeogaudryina textilaroides* (REUSS); NEAGU 1972, p. 196, pl. 1, fig. 40; NEAGU, 1975, p. 36, pl. 15, figs. 10–18; pl. 109, figs. 16–19.

*Belorussiella textilaroides* (REUSS); ARNAUD-VANNEAU 1980, p. 421, pl. 6, figs. 12–14; text–figs. 155–156; NEAGU & CARNARU 2004, p. 283, pl. 1, figs. 18–25; pl. 6, fig. 9; text–fig. 4.

**Dimensions:** length 0,34 mm – 0,24 mm; breadth 0,29mm – 0,096 mm

**Type specimens:** L.P.B.IV. 11799

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone)

Genus *Spiropl ectinata* Cushman, 1911

*Spiroplectinata complanata* (Reuss, 1860)

Plate 6, Figs. 20–21; Plate 52, Figs. 11

*Proroporus complanatus* REUSS 1860, p. 231, pl. 12, fig. 5

*Spiroplecta complanata* (REUSS); CHAPMAN 1892, p. 751, pl. 11, fig. 4; FRANKE 1928, p. 150, pl. 13, fig. 18

*Spiroplectinata complanata* (REUSS); GRABERT, 1959, p. 14, pl. 1, fig. 13; pl. 2, figs. 39–41; pl. 3, figs. 87–88; GAWOR & BIEDOVA, 1972, p. 24, pl. 1, fig. 9.

**Dimensions:** length 1,08 mm; breadth 0,84 mm; thickness 0,072 mm

**Type specimens:** L.P.B. IV. 11785

**Occurrence:** Craiova core.

**Stratigraphic distribution:** Middle Albian.

*Spiroplectinata annectens* (Parker & Jones, 1863)

Plate 5, Figs. 23–26; Plate 53, Figs. 4–6

*Spiroplecta annectens* (PARKER & JONES); CHAPMAN, 1892, p. 750, pl. 1, figs. 3.

*Spiroplectinata annectens* (PARKER & JONES); CUSHMAN, 1937, p. 102, pl. 14, figs. 10, 11; ten DAM, 1950 p. 13, pl. 1, figs. 14 (non fig. 13); GRABERT, 1959, p. 12, pl. 1, figs. 10–12; pl. 2, figs. 36–38, pl. 3, figs. 77–86; NEAGU, 1965, p. 6, pl. 2, fig. 19; FUCHS, 1967, p. 269, pl. 3, fig. 1; GAWOR & BIEDOVA, 1972, p. 23, pl. 1, fig. 8.

**Dimensions:** length 0,67–0,43 mm; breadth 0,17–0,17 mm, thickness 0,096–0,096 mm

**Type specimens:** L.P.B.IV. 11786

**Occurrence:** Craiova core, Șopârlita-Siliștea core (1301–1302 m)

**Stratigraphic distribution:** Middle Albian.

Subfamily VERNEUILININAE CUSHMAN, 1911

Genus *Gaudryina* d'Orbigny, 1839

*Gaudryina compacta* Grabert, 1959

Plate 4, Figs. 26–40; Plate 5, Figs. 3–4, 9–10, 19–20

*Gaudryina compacta* GRABERT 1959, p. 11, pl. 1, figs. 6–8; pl. 3, figs. 48–52

**Dimensions:** length 0,72 mm – 0,65 mm – 0,65 mm; breadth 0,36 mm – 0,34 mm – 0,34 mm

**Type specimens:** L.P.B.IV. 11787, 11788

**Occurrence:** Craiova core, 11 Buzescu core, Vedea Valley, Putineiu core, Călărași drillings.

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian, (terminal part), Upper Albian (basal part Hysteroeras orbignyi zone).

*Gaudryina dividens* Grabert, 1959

Plate 4, Figs. 26–31

*Gaudryina dividens* GRABERT 1959, p. 9, pl. 1, figs. 3–5; pl. 2, figs. 16–30; pl. 3, figs. 53–59

*Gaudryina rugosa* d'ORBIGNY; EICHENBERG 1935, p. 4, pl. 6, fig. 6; NEAGU 1965, p. 6, pl. 2, fig. 6

**Dimensions:** length 0,91 mm – 0,58 mm – 0,36 mm; breadth 0,31 mm – 0,21 mm – 0,24 mm; thickness 0,24 mm – 0,19 mm – 0,19 mm

**Type specimens:** L.P.B.IV. 11793–11794

**Occurrence:** Glavacioc core (1625–1627 m), 11 Buzescu core (570 m)

**Stratigraphic distribution:** Middle Albian, Upper Albian (Hysteroeras orbignyi zone).

*Gaudryina richteri* Grabert, 1959

Plate 5, Fig. 12; Plate 53, Fig. 8

*Gaudryina richteri* GRABERT 1950, p. 12, pl. 1, figs. 1–2, pl. 3, figs. 46–47

**Dimensions:** length 0,39–0,29 mm; breadth 0,26–0,6 mm; thickness 0,19–0,19 mm

**Type specimens:** L.P.B.IV. 11795

**Occurrence:** Vedea Valley, Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

*Gaudryina gradata* Berthelin, 1880

Plate 6, Figs. 9–11; Plate 53, Figs. 1–3

*Gaudryina gradata* BERTHELIN 1880, p. 24, pl. 1, fig. 6; FRANKE 1928, p. 142, pl. 13, fig. 4

*Dorothia gradata* (BERTHELIN); CUSHMAN 1937, p. 74, pl. 8, figs. 3–5; ten DAM 1950; NEAGU 1965, p. 8, pl. 2, fig. 23; GAWOR & BIEDOVA 1972, p. 24, pl. 2, fig. 7.

**Dimensions:** length 0,72 mm – 0,48 mm – 0,48 mm; breadth 0,43 mm – 0,26 mm – 0,24 mm; thickness 0,34 mm – 0,26 mm – 0,26 mm

**Type specimens:** L.P.B.IV. 11791, 11792

**Occurrence:** Zimnicea drilling, Vedea Valley, Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

*Gaudryina filiformis* Berthelin, 1880

Plate 6, Figs. 16–17; Plate 53, Fig. 7

*Gaudryina filiformis* BERTHELIN 1880, p. 25, pl. 1, fig. 8; SHERLOCK 1914, p. 222, pl. 18, fig. 4

*Dorothia filiformis* (BERTHELIN); CUSHMAN 1937, p. 73, pl. 8, figs. 1–2; NEAGU 1965, p. 10, pl. 2, fig. 24; FUCHS 1967, p. 273, pl. 4, fig. 4.

**Dimensions:** length 1,03 mm – 0,94 mm – 0,46 mm; breadth 0,26 mm – 0,24 mm – 0,17 mm

**Remarks:** The specimens from the Albian of Romanian Platform are very well preserved. This made possible the observation of the early stages of growth in their entirety. They have a typical triserial disposition of the chambers, without a trochospiral coiling as in the genus *Dorothia*. By these considerations we preserve the initial affiliation to the genus *Gauryina* of the Berthelin's species *G. filiformis* and *G. gradata*.

**Type specimens:** L.P.B.IV. 11789, 11790

**Occurrence:** Giurgiu Pod, 11Buzescu core (570 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Upper Albian, (Hysteroconus orbignyi zone).

Family TRITAXIIDAE Plotnikova, 1979

Genus *Tritaxia* REUSS, 860

*Tritaxia tricarinata* Reuss, 1845

Plate 5, Figs. 11, 17–18

*Textularia tricarinata* REUSS 1845, p. 39, pl. 8, fig. 6

*Tritaxia tricarinata* (REUSS); REUSS 1860, p. 228, pl. 12, fig. 2; CUSHMAN 1937, p. 25, pl. 16–25; NEAGU 1965, p. 6, pl. 1, figs. 7–8, 17–18; NEAGU 1975, p. 35, p. 15, figs. 19, 21–24; pl. 26, figs. 3–6; NEAGU & CARNARU 2004, p. 19, pl. 21–24.

**Dimensions:** length 0,67–0,57 mm; breadth 0,41–0,43 mm

**Type specimens:** L.P.B.IV. 11797

**Occurrence:** Bala III-Oltina drilling (50–55 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone)

*Tritaxia pyramidata* Reuss, 1863

Plate 5, Figs. 13–14, 21–22

*Tritaxia pyramidata* REUSS 1863, p. 32, pl. 1, figs. 9; BERTHELIN 1880, p. 25, pl. 1, fig. 4; FRANKE 1928, p. 138, pl. 12, fig. 8; CUSHMAN 1937, p. 22, pl. 3, figs. 1–8; ten DAM 1950, p. 12; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 19, pl. 2, fig. 37; NEAGU 1965, p. 5, pl. 1, figs. 9–10; NEAGU 1979, p. 43, pl. 7, figs. 14–15; GAWOR & BIEDOVA 1972, p. 27, pl. 1, fig. 10

**Dimensions:** length 0,53 mm; breadth 0,43 mm

**Type specimens:** L.P.B.IV. 11798

**Occurrence:** Vede Valley, Putineiu core, 138 Copăceni (480–485 m)

**Stratigraphic distribution:** Middle Albian (terminal part).

*Tritaxia plummerae* Cushman, 1937

Pl. 5, Figs. 3–8

*Tritaxia plummerae* CUSHMAN 1937, p. 24, pl. 3, figs. 12–15; TAPPAN 1943, p. 485, pl. 78, figs. 17–21; ten DAM 1950, p. 12, pl. 1, fig. 12; NEAGU 1965, p. 5, pl. 1, figs. 19; GAWOR & BIEDOVA 1972, p. 26, pl. 2, figs. 1, 3

**Dimensions:** length 1,15–0,58 mm; breadth 0,48–0,29 mm

**Type specimens:** L.P.B.IV. 11796

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Superfamily ATAXOPHRAGMIACEA Schwager, 1877

Family ATAXIPHRAGMIIDAE Schwager, 1877

Subfamily ATAXOPHRAGMIINAE Schwager, 1877

Genus *Arenobulimina* Cushman, 1927

*Arenobulimina macfaydeni* Cushman, 1936

Plate 3, Figs. 21–27; Plate 53, Figs. 10–11

*Arenobulimina macfaydeni* CUSHMAN 1937, p. 35, pl. 4, figs. 13–14; ten DAM 1950, p. 14; NEAGU 1965, p. 10, pl. 2, figs. 9

**Dimensions:** length 0,43–0,29 mm; thickness 0,29–0,17 mm

**Type specimens:** L.P.B.IV. 11800, 11801, 11802

**Occurrence:** 604 Șopârlița, Siliștea core (1301–1302 m), 11 Buzescu core (570 m)

**Stratigraphic distribution:** Middle Albian, Upper Albian (Hysteroconus orbignyi zone).

*Arenobulimina chapmani* Cushman, 1937

Plate 6, Figs. 18–19; Plate 2, Figs. 28–29

*Arenobulimina chapmani* CUSHMAN 1937, p. 36, pl. 3, figs. 27–28; ten DAM 1950, p. 14; NEAGU 1965, p. 10, pl. 2, figs. 9

**Dimensions:** length 0,34 mm; thickness 0,26 mm

**Type specimens:** L.P.B.IV. 5106

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Subclass TEXTULARIANA Mikhalevich, 1980

Order EGGERELLIDA Neagu, 2003

Family EGGERELLIDAE CUSHMAN, 1937

Subfamily DOROTHIINAE Balakhmatova, 1972

Genus *Marssonella* CUSHMAN, 1933

*Marssonella trochus* (d'Orbigny, 1840)

Plate 5, Figs. 1–2

*Textularia trochus* d'ORBIGNY 1840, p. 45, pl. 4, figs. 25–26; CHAPMAN 1892, p. 10, pl. 6, fig. 18

*Marssonella trochus* (d'ORBIGNY); HAGN 1953, p. 24, pl. 1, fig. 30; NEAGU 1965, p. 8, pl. 1, figs. 14–16

*Marssonella cf. trochus* (d'ORBIGNY); FUCHS 1967, p. 273, pl. 4, fig. 6

*Dorothia trochus* (d'ORBIGNY); NEAGU, 1970, p. 44, pl. 8, figs. 8–9; GAWOR & BIEDOVA 1972, p. 30, pl. 2, fig. 4

**Dimensions:** length 0,37 mm; thickness 0,40 mm

**Type specimens:** L.P.B.IV. 11803

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

*Marssonella oxycona* (Reuss, 1860)

Plate 4, Figs. 21–22

*Gaudryina oxycona* REUSS 1860, p. 229, pl. 12, fig. 3; FRANKE 1928, p. 143, pl. 13, fig. 3; CUSHMAN & JARVIS 1932, p. 18, pl. 5, figs. 1–2

*Marssonella oxycona* (REUSS); CUSHMAN 1937, p. 56, pl. 5, figs. 27–29; pl. 6, figs. 1–17; CUSHMAN 1946, p. 44, pl. 12, figs. 3–5; HAGN 1953, p. 23, pl. 1, fig. 28

*Dorothia oxycona* (REUSS); NEAGU 1970, p. 44, pl. 8, fig. 7

**Dimensions:** length 0,53 mm; thickness 0,26 mm

**Type specimens:** L.P.B.IV. 11804

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Genus *Eggerellina* Marie, 1941

*Eggerellina marie* ten Dam, 1950

Plate 3, Figs. 10–17

*Eggerellina marie* ten DAM 1950, p. 15, pl. 1, fig. 17; GAWOR & BIEDOVA 1972, p. 33, pl. 3, figs. 1–2

**Dimensions length:** 0,34–0,24 mm; thickness 0,29–0,19 mm

**Type specimens:** L.P.B.IV. 11805

**Occurrence:** 44 Bălăria core (625–627m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Genus *Tetrataxis* Ehrenberg, 1854

*Tetrataxis fusca* Williamson, 1858

Plate 2, Figs. 26–27

*Valvulina fusca* (WILLIAMSON); CHAPMAN 1892, p. 754, pl. 11, fig. 12; BARTENSTEIN & BRAND 1951, p. 277, pl. 4, fig. 79; pl. 16, figs. 13–14; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 145, pl. 1, figs. 22–25

*Tetrataxis fusca* (WILLIAMSON); FUCHS, 1967, p. 268, pl. 3, fig. 9

**Dimensions:** breadth 0,50–0,43 mm; height 0,36–0,39 mm

**Type specimens:** L.P.B.IV. 11806

**Occurrence:** Vedea Valley, Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

Subclass PFENDERIINANA Neagu, 2003

Order PHENDERINIDA Neagu, 2003

Family BARKERINIDAE Smout, 1956

Genus *Barkerina* Frizzell & Schwartz, 1950

*Barkerina minima* n. sp.

Plate 8, Figs. 20–2; Plate 53, Figs. 16–24

**Derivation of name:** Latin *minimus-a-um* = small

**Type level:** Upper Albian (Hysteroberas orbignyi zone)

**Type locality:** 11 Buzescu core (570 m)

**Type specimens:** holotype L.P.B.IV. 11807; paratype 12025

**Description:** Small sized test, globulous, clear trochospiral coiling with a streptospiral tendency; involute, with a small umbilicus, spiral side low-convex, shows a little part of the last whorl, low chambers with weak depressionary sutures, presents inner incomplete transversal septula; microgranular-carbonatic wall with a dull white aspect, aperture low basal opening at the base of the apertural face of the last chamber.

**Dimensions:** holotype large diameter 0,19 mm; thickness 0,096 mm; paratypes large diameter 0,17 mm; thickness 0,096 mm

**Remarks:** The small size and aspect of the coiling (low trochospiral to streptospiral) represents the distinctive feature of this species from other Lower Cretaceous (Valanginian-Lower Aptian) species.

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone).

Subclass ROBERTINA  
 Order ROBERTINIDA Loeblich & Tappan, 1984  
 Superfamily ROBERTINACEA Loeblich & Tappan, 1984  
   Family CERATOBULIMINIDAE CUSHMAN, 1927  
   Subfamily CERATOBULIMINACEAE CUSHMAN, 1927  
     Genus *Lamarckina* BERTHELIN, 1881  
       *Lamarckina lamplughii* (Sherlock, 1914)  
       Plate 23, Figs. 1–9

*Discorbina turbo* (d'ORBIGNY); CHAPMAN 1896, p. 591, pl. 13, fig. 13  
*Pulvinulina lamplughii* SHERLOCK 1914, p. 200, pl. 10, fig. 16  
*Discorbis turbo* d'ORBIGNY; EICHENBERG 1933, p. 20, pl. 1, fig. 11  
*Lamarckina lamplughii* (SHERLOCK); ten DAM 1946, p. 14, fig. 16; ten DAM 1948, p. 187, text–figs. 3; MJATLIUK 1949, p. 198, pl. 1, fig. 1; ten DAM 1950, p. 46, text–fig. 5; NEAGU 1965, p. 34, pl. 9, figs. 6–7

**Dimensions:** large diameter 0,62–0,31 mm; small diameter 0,58–0,26 mm; height 0,24–0,19 mm

**Type specimens:** L.P.B.IV. 11808

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Family EPISTOMINIDAE Wedekind, 1937  
 Subfamily EPISTOMININAE Wedekind, 1937  
   Genus *Epistomina* Terquem, 1883  
     *Epistomina juliae* Myatliuk, 1948  
     Plate 23, Figs. 10–11

*Epistomina juliae* MYATLIUK 1949, p. 205, pl. 2, figs. 4–5; MYATLIUK 1953, pl. 71, pl. 7, figs. 2–3; GORBATCHIK & SHOHINA 1969, p. 105, pl. 12, figs. 4–5; KAPTARENKO & CHERNOUSOVA 1967, p. 106, pl. 12, figs. 1

**Dimensions:** large diuameter 0,50 mm; small diameter 0,50 mm; thickness 0,26 mm

**Type specimens:** L.P.B.IV. 11809

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

*Epistomina chapmani* ten Dam, 1948  
 Plate 25, Figs. 16–21

*Epistomina chapmani* ten DAM 1948, p. 166, pl. 1, figs. 5; ten DAM 1950, p. 53, pl. 4, fig. 6; NEAGU 1965, p. 34, pl. 9, fig. 5; KAPTARENKO & CHERNOUSOVA 1967, p. 105, pl. 12, fig. 4

**Dimensions:** large diameter 0,26 mm; small diameter 0,24 mm; thickness 0,19 mm

**Type specimens:** L.P.B.IV. 11810

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

*Epistomina carpenteri* (Reuss, 1863)  
 Plate 25, Figs. 13–15, 22–24

*Rotalia carpenteri* REUSS 1863, p. 94, pl. 13, figs. 6

*Epistomina carpenteri* (REUSS); ten DAM 1948, p. 165, pl. 1, fig. 4; SZTEJN 1957, p. 80, pl. 10, fig. 94

*Hoeglundina carpenteri* (REUSS); HOFKER 1957, p. 194, text-figs. 36–37; NEAGU 1965, p. 34, pl. 9, figs. 3–4; NEAGU 1975, p. 126, pl. 104, figs. 10–15

**Dimensions:** large diameter 0,36–0,31 mm; small diameter 0,31–0,26 mm; thickness 0,19–0,17 mm

**Type specimens:** L.P.B.IV. 11811

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Subclass INVOLITININA HOHNEGGER, 1975

Order SPIRILINIDA HOHNEGGER & PILLER, 1975

Family SPIRILLINIDAE REUSS & FRITSCH, 1861

Genus *Spirillina* Ehrenberg, 1838

*Spirillina minima* Schacko, 1892

Plate 37, Figs. 4

*Spirillina minima* SCHACKO; FRANKE 1928, p. 16, pl. 1, fig. 21; TAPPAN 1940, p. 119, pl. 19, fig. 8; TAPPAN 1943, p. 510, pl. 82, fig. 1; ten DAM 1948, p. 186; ten DAM 1950, p. 46, pl. 4, fig. 2

**Dimensions:** large diameter 0,26 mm; small diameter 0,24 mm; thickness 0,048 mm

**Type specimens:** L.P.B.IV. 11812

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Family PATELLINIDAE Rhumbler, 1906

Subfamily PATELLININAE Rhumbler, 1906

Genus *Patellina* Williamson, 1858

*Patellina subcretacea* Cushman & Alexander, 1930

Plate 27, Figs. 4–5

*Patellina subcretacea* CUSHMAN & ALEXANDER 1930, pl. 3, figs. 1a, b; BARTENSTEIN & BRAND 1951, pl. 11, fig. 319; NEAGU 1975, pl. 82, figs. 1–16; pl. 85, figs. 26–29; SLITER 1980, pl. 16, figs. 1–4; TAPPAN 1943, p. 511, pl. 82, fig. 4; LOEBLICH & TAPPAN 1949, p. 264, pl. 51, figs. 3; ten DAM 1950, p. 47; BARTENSTEIN & BRAND 1951, p. 325, pl. 11, fig. 319; SZTEJN 1957, p. 46, fig. 11; FUSHS 1967, p. 331, pl. 18, figs. 7

**Dimensions:** diameter 0,24 mm; height 0,12 mm

**Type specimens:** L.P.B.IV. 11813

**Occurrence:** Zimnicea drilling.

**Stratigraphic distribution:** Middle Albian (terminal part).

Subclass MILIOLATA Michalevich, 1982

Order MILIOLIDA Delage & Herouard, 1896

Superfamily CORNISPIRACEA Schultze, 1864

Family NUBECULARIIDAE Jones, 1875

Genus *Pseudonubeculina* Barnstein & Brand, 1949

*Pseudonubeculina nodulosa* (Chapman, 1896)

Plate 37, Figs. 1–3

*Nubecularia nodulosa* CHAPMAN 1891, p. 9, pl. 9, fig. 2

*Nubeculina nodulosa* (CHAPMAN); ten DAM 1950, p. 18, pl. 1, fig. 20

*Pseudonubeculina nodulosa* (CHAPMAN); BARTENSTEIN & BRAND 1949, p. 670, figs. 3–5; BARTENSTEIN & BRAND 1951, p. 278, pl. 4, figs. 82–84; NEAGU 1965, p. 10, pl. 2, figs. 25–26

*Nodobacularia nodulosa* (CHAPMAN); FUCHS 1967, p. 278, pl. 5, figs. 1–2

**Dimensions:** length 0,48–0,79 mm (fragments)

**Type specimens:** L.P.B.IV. 11816

**Occurrence:** Zimnicea drilling, Vedea Valley, Putineiu core.

**Stratigraphic distribution:** Middle Albian (terminal part).

Superfamily MILIOLACEA Ehrenberg, 1839

Family SPIROLOCULINIDAE Wiesner, 1920

Genus *Spiroloculina* d'Orbigny, 1826

*Spiroloculina papyracea* Burrows, Sherborn & Bailey, 1890

Plate 8, Figs. 1–8

*Spiroloculina papyracea* BURROWS, SHERBORN & BAILEY; ten DAM 1950, p. 18, pl. 1, fig. 11; FUCHS 1967, p. 277, pl. 5, fig. 8

**Dimensions:** length 0,36–0,29 mm; thickness 0,17–0,14 mm

**Type specimens:** L.P.B.IV. 11817

**Occurrence:** 25 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (Hysteroferas orbignyi zone).

Family HAUERINIDAE Schwager, 1876

Subfamily HAUERININAE Schwager, 1876

Genus *Massilina* Schlumberger, 1893

*Massilina planconvexa* Tappan, 1940

Plate 8, Figs. 15–19

*Massilina planconvexa* TAPPAN 1940, p. 100, pl. 15, fig. 8

**Dimensions:** length 0,40–0,24 mm; breadth 0,19–0,12 mm; thickness 0,072–0,04 mm

**Type specimens:** L.P.B.IV. 11815

**Occurrence:** 11 Buzescu core (570m)

**Stratigraphic distribution:** Upper Albian (basal part, Hysteroferas.orbignyi zone).

Genus *Quinqueloculina* d'Orbigny, 1826

"*Quinqueloculina*" *antiqua* Franke, 1928

Plate 8, Figs. 9–14; Plate 53, Fig. 12

*Miliolina (Quinqueloculina) antiqua* FRANKE 1928, p. 126, pl. 11, figs. 25–26

*Quinqueloculina antiqua* FRANKE; ten DAM 1950, p. 17, pl. 1, fig. 18; VASILENKO 1961, p. 33, pl. 6, figs. 8–9; FUCHS 1967, p. 279, pl. 5, fig. 5; GAWOR & BIEDOVA 1972, p. 35, pl. 3, fig. 6

**Dimensions:** length 0,26–0,36 mm; breadth 0,14–0,24 mm; thickness 0,12–0,17 mm

**Remarks:** Because the studied specimens have are of a very small size and the preservation is not excellent, it was impossible to make a transverse section in order to observe the wall structure and the disposition of the chambers, therefore we consider that the generic affiliation of this species is still obscure.

**Type specimens:** L.P.B.IV. 11814

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian basal part (Hysteroferas orbignyi zone).

Subclass NODOSARIATA  
 Ord. LAGENIDA Delage & Herouard, 1896  
 Superfamily NODOSARIACEA Ehrenberg, 1838  
 Family NODOSARIIDAE Ehrenberg, 1838  
 Genus *Chrisalgonium* Schuberet, 1908  
***Chrisalgonium cretaceum*** Cushman & Church 1929  
 Plate 30, Fig. 20

*Chrisalgonium cretaceum* CUSHMAN & CHURCH;  
*Chrisalgonium cretaceum* CUSHMAN & JARVIS, 1932, p. 31, pl. 10, fig. 2  
*Chrisalgonium cretaceum* CUSHMAN 1946, p. 75, pl. 27, fig. 13;  
*Chrisalgonium cretaceum* POZARYSKA 1957, p. 94, pl. 10, fig. 4, text–fig. 19  
**Dimensions:** length 0,96 mm; thickness 0,34 mm  
**Type specimens:** L.P.B.IV. 11818  
**Occurrence:** 44 Bălăria core (625–627 m)  
**Stratigraphic distributions:** Upper Albian (Vraconian, S. dispar zone).

Genus *Dentalina* RISSO, 1826  
*Dentalina linearis* (Roemer, 1841)  
 Plate 12, Figs. 15–16; Plate 26, Fig. 21

*Nodosaria linearis* ROEMER 1841, p. 95, pl. 15, figs. 5  
*Dentalina linearis* (ROEMER); REUSS 1863, p. 42, pl. 2, fig. 15; EICHENBERG 1934, p. 164, pl. 10, fig. 13; BARTENSTEIN & BRAND 1951, p. 309, pl. 9, figs. 234–236, 337; NEAGU 1975, p. 96, pl. 72, figs. 2, 4, 10–13, 15, 17–20; pl. 73, figs. 17–18  
**Dimensions:** length 0,96–1,39 mm; thickness 0,12–0,14 mm  
**Type specimens:** L.P.B.IV. 11820  
**Occurrence:** Călărași drillings  
**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

*Dentalina bambusa* (Chapman, 1894)  
 Plate. 11, Figs. 21

*Nodosaria bambusa* CHAPMAN 1894, p. 591, pl. 9, fig. 7  
**Dimensions:** length 0,84 mm; thickness 0,14 mm  
**Type specimens:** L.P.B.IV. 11819  
**Occurrence:** Călărași drillings  
**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

*Dentalina cylindroides* Reuss, 1860  
 Plate. 33, Fig. 23

*Dentalina cylindroides* REUSS 1860, p. 185, pl. 1, fig. 8; REUSS 1863, p. 40, pl. 2, fig. 16; FRANKE 1928, p. 28, pl. 2, fig. 14; BROTZEN 1936, p. 73, pl. 5, fig. 1; MARIE 1941, p. 90, pl. 12, fig. 136; HAGN 1953, p. 44, pl. 4, fig. 9; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 153, pl. 3, figs. 202, 218–219; FUCHS, 1967, p. 285, pl. 7, fig. 8; NEAGU 1970, p. 47, pl. 9, figs. 7–9; NEAGU 1975, p. 94, pl. 72, fig. 14

**Dimensions:** length 1,56 mm; thickness 0,24 mm  
**Type specimens:** L.P.B.IV. 11838

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian-Vraconian, (S. dispar zone).

*Dentalina nana* Reuss, 1863  
Plate 22, Fig. 38; Plate 37, Figs. 7–8

*Dentalina nana* REUSS 1863, p. 39, pl. 2, figs. 10–18; FRANKE 1928, p. 35, pl. 3, fig. 2; BROTZEN 1936, p. 74, pl. 5, fig. 8; ten DAM 1950, p. 28, pl. 2, fig. 16; HAGN 1953, p. 46, pl. 4, fig. 9; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 35, pl. 6, fig. 28; NEAGU 1965, p. 20, pl. 5, fig. 24; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 152, pl. 2, figs. 174–177; FUCHS 1967, p. 288, p. 7, fig. 5; NEAGU 1970, pl. 10, fig. 2; NEAGU 1972, p. 202, pl. 6, figs. 19–20; NEAGU 1975, p. 97, pl. 160, fig. 25

**Dimensions:** length 0,53 mm – 0,72 mm – 0,98 mm; thickness 0,14 mm – 0,19 mm – 0,21 mm

**Type specimens:** L.P.B.IV. 11839, 11840

**Occurrence:** Zimnicea drilling, 44 Bălăria core (625–527 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian-Vraconian

*Dentalina debilis* (Berthelin, 1880)  
Plate 26, Figs. 1–5

*Marginulina debilis* BERTHELIN 1880, p. 35, pl. 3, fig. 28; CHAPMAN 1894, p. 16, pl. 4, fig. 15

*Dentalina debilis* (BERTHELIN); EICHENBERG 1933, p. 183, pl. 23, fig. 19; EICHENBERG 1934, p. 167, pl. 11, fig. 9; ten DAM 1950, p. 37, pl. 3, fig. 5; BARTENSTEIN & BRAND 1951, p. 310, pl. 10, figs. 239–240; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 35, pl. 7, fig. 149; NEAGU 1965, p. 21, pl. 5, fig. 19; MICHAEL 1967, p. 63, pl. 5, figs. 9–11; FUCHS 1967, p. 311, pl. 13, figs. 4; NEAGU 1975, p. 96, pl. 72, figs. 25–32

*Vaginulina debilis* (BERTHELIN); TAPPAN 1943, p. 500, pl. 80, fig. 15.

**Dimensions:** length 0,96 mm – 0,89 mm – 0,53 mm; breadth 0,072 mm – 0,096 mm – 0,048 mm

**Type specimens:** L.P.B.IV. 11827

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part – Hysterooceras orbignyi zone).

*Dentalina deflexa* Reuss, 1863  
Plate. 26, Figs. 9–11; Plate 58, Fig. 4

*Dentalina deflexa* REUSS 1863, p. 43, pl. 2, fig. 19

**Dimensions:** length 0,91 mm – 0,72 mm – 0,62 mm; thickness 0,12 mm – 0,14 mm – 0,12 mm

**Type specimen:** L.P.B.IV. 11828

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysterooceras orbignyi zone).

*Dentalina praegnans* Reuss, 1865  
Plate 26, Figs. 12–14

*Nodosaria praegnans* REUSS 1865, p. 450, pl. 1, fig. 4

**Dimensions:** length 0,70–0,62 mm; thickness 0,14–0,14 mm

**Type specimens:** L.P.B.IV. 11835

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysterooceras orbignyi zone).

*Dentalina catenula* Reuss, 1863

Plate 16, Fig. 33; Plate 17, Fig. 8; Plate 26, Fig. 16

*Dentalina catenula* REUSS 1860, p. 185, pl. 3, fig. 6; FRANKE 1928, p. 26, pl. 2, fig. 6; EICHENBERG 1933, p. 185, pl. 22, fig. 6; CUSHMAN 1946, p. 67, pl. 23, figs. 27–32; POZARYSKA 1957, p. 76, pl. 9, fig. 8; FUCHS 1967, p. 284, pl. 8, fig. 1

**Dimensions:** 1,08 mm – 0,98 mm – 0,50 mm; thickness 0,36 mm – 0,34 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11821

**Occurrence:** Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part, Hysterooceras orbignyi zone).

*Dentalina oligostegia* Reuss, 1845

Plate 26, Figs. 17–19; Plate 31, Fig. 1

*Nodosaria (Dentalina) oligostegia* REUSS 1845, p. 27, pl. 13, figs. 19–20

*Nodosaria oligostegia* REUSS; CHAPMAN 1893, p. 586, pl. 8, fig. 23

*Dentalina oligostegia* REUSS; FRANKE 1928, p. 24, pl. 2, figs. 9–10; EICHENBERG 1933, p. 183, pl. 23, fig. 5; FUCHS 1967, p. 288, pl. 7, fig. 4; NEAGU 1975, p. 95, pl. 72, figs. 35–38; pl. 73, figs. 24–31

**Dimensions:** length 0,58 mm – 0,50 mm – 0,43 mm; thickness 0,17 mm – 0,12 mm – 0,096 mm

**Type specimen:** L.P.B.IV. 11829, 11830

**Occurrence:** 44 Bălăria core (625–627 m), Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysterooceras orbignyi zone), Vraconian (S. dispar zone).

*Dentalina reussi nomen novum* (for *Dentalina filiformis* REUSS, 1860)

Plate 26, Fig. 18

*Dentalina filiformis* REUSS 1860 (non d'ORBIGNY, 1826), p. 188, pl. 3, fig. 8

**Dimensions:** length 0,70 mm; thickness 0,096 mm

**Remarks:** Respecting the priority low of the ICZN, *Dentalina filiformis* REUSS 1860 is not a valid name, being preoccupied by *Dentalina filiformis* d'ORBIGNY 1826. We introduce for REUSS's species a nomen novum *Dentalina reussi* (in honor of a great paleontologist August Emanuel von REUSS).

**Type-specimens:** L.P.B.IV. 11831

**Occurrence:** Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysterooceras orbignyi zone).

*Dentalina siliqua* Reuss, 1863

Plate 30, Fig. 15; Plate 31, Fig. 2

*Dentalina siliqua* REUSS 1863, p. 39, pl. 2, fig. 11; NEAGU 1992, p. 66, pl. 4, fig. 11

**Dimensions:** length 0,87 mm; thickness 0,17 mm

**Type specimens:** L.P.B.IV. 11832

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (S. dispar zone).

***Dentalina strangulata* Reuss, 1860**  
 Plate 30, Fig. 18; Plate 33, Fig. 10

*Dentalina strangulata* REUSS 1860, p. 185, pl. 2, fig. 6; EICHENBERG 1935, p. 163, pl. 10, fig. 6; FUCHS 1967, p. 289, pl. 7, fig. 2

**Dimensions:** length 1,20–0,67 mm; thickness 0,24–0,14 mm

**Type specimens:** L.P.B.IV. 11833, 11834

**Occurrence:** 44 Bălăria core (625–627 m), 130 Copăceni core (680–685 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (S. dispar zone).

***Dentalina pseudochrysalis* Reuss, 1863**  
 Plate 22, Fig. 35; Plate 30, Fig. 17

*Dentalina pseudochrysalis* REUSS 1863, p. 40, pl. 2, fig. 12; FRANKE 1928, p. 34, pl. 3, fig. 8; EBENSBERGER 1962, p. 49, pl. 3, fig. 17; NEAGU 1970, p. 47, pl. 9, figs. 5–6

**Dimensions:** length 0,55–1,20 mm; thickness 0,17–0,24 mm

**Type specimens:** L.P.B.IV. 11823, 11824

**Occurrence:** Zimnicea drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Middle Albian (terminal part)-Upper Albian (Vraconian, S. dispar zone).

***Dentalina distincta* Reuss, 1860**  
 Plate 22, Figs. 36–37, 40; Plate 33, Fig. 7; Plate 58, Fig. 3

*Dentalina distincta* REUSS 1860, p. 184, pl. 2, fig. 5; FRANKE 1928, p. 26, pl. 2, fig. 13; EICHENBERG 1933, p. 185, pl. 18, fig. 10; MARIE 1941, p. 91, pl. 12, figs. 14, 21, 44; ten DAM 1950, p. 28, pl. 2, fig. 15; BARTENSTEIN, BETTENSTAEDT & BOLLI 1951, p. 153, pl. 3, figs. 203–217; FUCHS 1967, p. 286; NEAGU 1975, p. 95, pl. 73, figs. 1–5, 7–12

**Dimensions:** length 0,46 mm – 0,60 mm – 0,53 mm – 0,60 mm; thickness 0,12 mm – 0,14 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 11825, 11826

**Occurrence:** 138 Copăceni core (481 – 485 m)

**Stratigraphic distribution:** Upper Albian (Vraconian – S. dispar zone).

***Dentalina intermedia* Reuss, 1860**  
 Plate 16, Figs. 28–30

*Dentalina intermedia* REUSS 1860, p. 186, pl. 2, fig. 8; FUCHS 1967, p. 287, pl. 7, fig. 3

**Dimensions:** length 0,86 mm – 0,79 mm – 0,62 mm – 0,62 mm; thickness 0,14 mm – 0,096 mm – 0,12 mm – 0,096 mm.

**Type specimens:** L.P.B.IV. 11822

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (H. dentatus zone).

***Dentalina lilli* Reuss, 1851**  
 Plate 33, Figs. 8–9

*Dentalina lilli* REUSS 1851, p. 25, pl. 1, fig. 11; FRANKE 1928, p. 32, pl. 2, fig. 30; NEAGU 1970, p. 48, pl. 9, fig. 32; NEAGU 1992, p. 65, pl. 4, fig. 40; pl. 6, fig. 8

**Dimensions:** length 0,48–0,46 mm; thickness 0,12–0,12 mm.

**Type specimens:** L.P.B.IV. 11836

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (S. dispar zone).

***Dentalina expansa*** Reuss, 1860  
Plate 33, Figs. 11–12

*Dentalina expansa* REUSS 1860, p. 188, pl. 3, fig. 4

*Nodosaria expansa* (REUSS); REUSS, 1865, p. 452

*Dentalina expansa* (REUSS); NEAGU 1992, p. 65, pl. 2, figs. 6–8

**Dimensions:** length 1, 8–0,84 mm; thickness 0,14–0,096 mm

**Type specimens:** L.P.B.IV. 11837

**Occurrence:** 138 Copăceni core

**Stratigraphic distribution:** Upper Albian-Vraconian (S. dispar zone).

***Dentalina linearis*** (Roemer, 1840)  
Plate 12, Figs. 15–16; Plate 16, Fig. 32; Plate 26, Figs. 20–21

*Nodosaria linearis* ROEMER 1840, p. 95, pl. 15, fig. 5

*Dentalina linearis* (ROEMER); REUSS 1863, p. 42, pl. 2, figs. 15; EICHENBEREG 1935, p. 164, pl. 10, fig. 13; NEAGU 1965, p. 20, pl. 5, fig. 1

**Dimensions:** length 1,00 mm; thickness 0,17 mm

**Type specimens:** L.P.B.IV. 5044

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (H. dentatus zone).

***Dentalina monile*** Cornuel, 1848  
Plate 16, Fig. 31

*Dentalina monile* CORNUEL 1848, p. 250, pl. 1, fig. 18

**Dimensions:** length 1,85 mm; thickness 0,17 mm

**Type specimens:** L.P.B.IV. 5048

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (H. dentatus zone).

Genus ***Nodosaria*** Lamarck, 1812  
***Nodosaria tubifera*** REUSS, 1863  
Plate 33, Fig. 13

*Nodosaria tubifera* REUSS 1863, p. 37, pl. 2, fig. 4

**Dimensions:** length 0,48–0,31 mm; thickness 0,096–0,072 mm

**Type specimens:** L.P.B.IV. 11841

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (S. dispar zone).

***Nodosaria prismatica*** REUSS, 1860  
Plate 12, Figs. 1–3; Plate 30, Fig. 16; Plate 57, Fig. 18; Plate 58, Figs. 10, 13–16

*Nodosaria prismatica* REUSS 1860, p. 180, pl. 2, fig. 2; REUSS 1863, p. 36, pl. 2, fig. 3; BROTZEN 1936, p. 88, pl. 5, figs. 12–18; POZARYSKA 1957, p. 70, pl. 11, fig. 20; NEAGU 1965, p. 21, pl. 5, figs. 22–23; FUCHS 1967, p. 281, pl. 6, fig. 6; NEAGU 1975, p. 91, pl. 70, fig. 29

**Dimensions:** length 1,89–0,98 mm; thickness 0,36–0,36 mm

**Type specimens:** L.P.B.IV. 11842, 11843

**Occurrence:** Bala III-Oltina drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Upper Albian-Vraconian (S. dispar zone).

***Nodosaria obscura* REUSS, 1845**

Plate 26, Fig. 31

*Nodosaria obscura* REUSS 1845, p. 26, pl. 13, figs. 7-9; REUSS 1865, p. 450; BERTHELIN 1880, p. 17, pl. 1, fig. 17; CHAPMAN 1893, p. 593, pl. 9, fig. 16; BROTZEN 1936, p. 68, pl. 8, fig. 5; TAPPAN 1940, p. 104, pl. 16, figs. 7-8; TAPPAN 1943, p. 416, pl. 80, figs. 1-2; CUSHMAN 1946, p. 73, pl. 26, figs. 15-16; BARTENSTEIN & BRAND 1951, p. 312, pl. 10, figs. 247-248; HAGN 1953, p. 50, pl. 4, fig. 24; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 36, pl. 13, fig. 102; pl. 6, fig. 129; FUCHS 1967, p. 280, pl. 6, fig. 2; NEAGU 1975, p. 90, pl. 70, figs. 31-43; pl. 71, figs. 1, 4-10; NEAGU 1992, p. 63, pl. 2, fig. 20

**Dimensions:** length 0,55 mm; thickness 0,19 mm

**Type specimens:** L.P. B.IV. 12030

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysteroberas orbignyi zone).

***Nodosaria paupercula* Reuss, 1846**

Plate 26, Fig. 32; Plate 57, Fig. 16; Plate 58, Fig. 11

*Nodosaria (Nodosaria) paupercula* REUSS 1846, p. 26, pl. 12, fig. 12

*Nodosaria paupercula* REUSS; REUSS 1875, p. 81, pl. 20, figs. 5–7; FRANKE 1928, p. 45, pl. 3, figs. 37; CUSHMAN 1946, p. 75, pl. 27, figs. 10–12; BARTEBSTEIN, BETTENSTAEDT & BOLLI 1957, p. 36, pl. 7, fig. 15; NEAGU 1965, p. 21, pl. 5, fig. 18; FUCHS 1967, p. 281, pl. 6, fig. 1; NEAGU 1975, p. 90, pl. 70, figs. 25–28; pl. 71, fig. 15

**Dimensions:** length 0,82 mm; thickness 0,14 mm

**Type specimens:** L.P.B. IV. 11844

**Occurrence:** Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysteroberas orbignyi zone).

***Nodosaria lamelocostata* Reuss, 1863**

Plate 26, Fig. 33

*Nodosaria lamelocostata* REUSS 1863, p. 38, pl. 2, fig. 6

**Dimensions:** length 0,91 mm; thickness 0,17 mm

**Type specimens:** L.P.B.IV. 11845

**Occurrence:** Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysteroberas orbignyi zone).

***Nodosaria intercostata* Reuss, 1860**

Plate 12, Fig. 6

*Nodosaria intercostata* REUSS 1860, pl. 1, fig. 4

**Dimensions:** length 0,84 mm; thickness 0,24 mm

**Type specimens:** L.P.B.IV. 11846

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Nodosaria sceptrum*** Reuss, 1863

Plate 26, Fig. 35; Plate 57, Fig. 20

*Nodosaria sceptrum* REUSS 1863, p. 37, pl. 2, fig. 3; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 35, pl. 7, fig. 150; NEAGU 1975, p. 90, pl. 70, figs. 3–5, 7

**Dimensions:** length 0,43 mm; thickness 0,094 mm

**Type specimen:** L.P.B.IV. 11847

**Occurrence:** Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysteroberas orbignyi zone).

***Nodosaria nuda*** Reuss, 1863

Plate 11, Figs. 22–23

*Nodosaria nuda* REUSS 1863, p. 38, pl. 2, figs. 8–9; NEAGU 1975, p. 92, pl. 72, figs. 6–7, 9

**Dimensions:** length 0,86–0,67 mm; thickness 0,19–0,19 mm

**Type specimens:** L.P.B.IV. 11848

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Nodosaria orthopleura*** Reuss, 1863

Plate 12, Figs. 4–5; Plate 30, Fig. 16; Plate 58, Figs. 17–18

*Nodosaria orthopleura* REUSS 1863, p. 89, pl. 12, fig. 5; CHAPMAN 1893, p. 595, pl. 9, figs. 22–23; EICHENBERG 1933, p. 4, pl. 5, fig. 5; MICHAEL 1967, p. 68, pl. 4, figs. 23–24; NEAGU 1975, p. 91, pl. 70, figs. 23–24

**Dimensions:** length 0,84 mm – 0,77 mm – 0,65 mm; thickness 0,21 mm – 0,21 mm – 0,096 mm

**Type-specimens:** L.P.B.IV. 11849, 12031

**Occurrence:** Bala III-Oltina drilling, Buzescu core (570 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Upper Albian (basal part Hysteroberas orbignyi zone).

***Nodosaria fontannesi*** Berthelin, 1880

Plate 26, Fig. 34; Plate 57, Figs. 19

*Dentalina fontannesi* BERTHELIN 1880, p. 42, pl. 2, figs. 14–16

**Dimensions:** length 0,36 mm; thickness 0,12 mm

**Type-specimens:** L.P.B.IV. 11850

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Nodosaria tetragona*** Reuss, 1860

Plate 36, Figs. 5–6

*Nodosaria tetragona* REUSS 1860, p. 181, pl. 2, fig. 1

**Dimensions:** length (fragment) 0,84 mm; thickness 0,14 mm

**Type specimens:** L.P.B.IV. 11851

**Occurrence:** Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian (Vraconian R. appenninica zone).

Genus *Pseudonodosaria* Boomgart, 1949

*Pseudonodosaria mutabilis* (Reuss, 1863)

Plate 12, Figs. 7–13; Plate 22, Figs. 33–34, 41–42; Plate 57, Fig. 15; Plate 58, Figs. 7–9

*Glandulina mutabilis* REUSS 1863, p. 58, pl. 5, figs. 7–11

*Pseudoglandulina mutabilis* (REUSS); BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 37, pl. 7, fig. 156; KALANTARI 1969, p. 161, pl. 14, fig. 20

*Rectoglandulina mutabilis* (REUSS); GORBATCHIK & SHOHINA 1960, p. 87, pl. 4, fig. 1; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 154, pl. 3, figs. 231–232

*Pseudonodosaria mutabilis* (REUSS); NEAGU 1972, p. 213, pl. 5, figs. 37, 41, 43; NEAGU 1975, p. 93, pl. 7 figs. 32–45; pl. 74, figs. 111, 14–15

**Dimensions:** length 0,40 mm – 0,43 mm – 0,50 mm – 0,53 mm – 0,58 mm – 0,65 mm; thickness 0,26 mm – 0,19 mm – 0,26 mm – 0,29 mm – 0,26 mm – 0,24 mm

**Type specimens:** L.P.B.IV. 11852, 11853, 11854, 11855

**Occurrence:** Bala III-Oltina drilling, Călărași drillings, Zimnicea drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian–Upper Albian–Vraconian (R. appenninica zone).

*Pseudonodosaria humilis* (Roemer, 1841)

Plate 26, Figs. 22–23

*Nodosaria humilis* ROEMER 1841, p. 95, pl. 15, figs. 6; FUCHS 1967, p. 279, pl. 5, fig. 9; pl. 6, figs. 3–4

*Glandulina mutabilis* (ROEMER); REUSS 1863, p. 58, pl. 5, fig. 7; FRANKE 1928, p. 52, pl. 4, fig. 2; BROTZEN 1936, p. 89, pl. 4, fig. 16

*Pseudoglandulina humilis* (ROEMER); BARTENSTEIN & BRAND 1951, p. 315, pl. 10, fig. 255; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 37, pl. 7, figs. 153–155; SZTEJN 1957, p. 55, pl. 6, fig. 51

*Rectoglandulina humilis* (ROEMER); TAPPAN 1962, p. 170, pl. 6, fig. 8; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 155, pl. 3, figs. 216–217

*Pseudonodosaria humilis* (ROEMER); NEAGU 1972, p. 213, pl. 5, figs. 42–44; NEAGU, 1975, p. 93, pl. 74, figs. 12–13, 15–6, 18–32; pl. 75, fig. 3

**Dimensions:** length 0,67 mm; thickness 0,19 mm

**Type specimens:** L.P.B.IV. 11857

**Occurrence:** Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (basal part Hysteroeras orbignyi zone).

*Pseudonodosaria pygmaea* Reuss, 1851

Plate 36, Figs. 4–6

*Glandulina pygmaea* REUSS 1851, p. 22, pl. 1, fig. 3

**Dimensions:** length 0,34 mm – 0,36 mm – 0,58 mm; thickness 0,24 mm – 0,29 mm – 0,39 mm

**Type specimens:** L.P.B.IV 11856

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian (R. appenninica zone, Vraconian).

Genus ***Gonatosphaera*** Guppy, 1894  
***Gonatosphaera sequana*** (Berthelin, 1880)  
 Plate 31, Figs. 7–9

*Lingulinopsis sequana* BERTHELIN 1880, p. 63, pl. 2, fig. 19  
*Lingulina denticulomarginata* (CHAPMAN); FUCHS 1967, p. 314, pl. 15, fig. 2  
**Dimensions:** length 0,60–0,64 mm; thickness 0,39–0,46 mm  
**Type specimens:** L.P.B.IV. 11966  
**Occurrence:** 44 Bălăria core (625–627 m)  
**Stratigraphic distribution:** Upper Albian (R. appenninica zone-Vraconian).

Genus ***Lingulina*** d'Orbigny, 1826  
***Lingulina denticulomarginata*** (Chapman, 1894)  
 Plate 26, Figs. 24–27; Plate 35, Fig. 1

*Frondicularia denticulomarginata* CHAPMAN 1894, p. 155, pl. 3, fig. 4  
**Dimensions:** length 0,46 mm – 0,55 mm – 0,55 mm – 0,60 mm – 0,60 mm; breadth 0,19 mm – 0,14 mm – 0,14 mm – 0,24 mm – 0,17 mm; thickness 0,096 mm  
**Type specimens:** L.P.B.IV. 11858, 11859  
**Occurrence:** Buzescu core (570m), 138 Copaceni core (480 485 m)  
**Stratigraphic distribution:** Upper Albian (Vraconian R. appenninica zone).

***Lingulina loryi*** (Berthelin, 1880)  
 Plate 22, Figs. 29–32; Plate 26, Fig. 29

*Frondicularia loryi* BERTHELIN 1880, p. 80, pl. 4, fig. 5; EICHENBERG 1935, p. 179, pl. 11, fig. 1; NEAGU 1965, p. 26, pl. 6, figs. 13–16  
*Lingulina loryi* (BERTHELIN); ten DAM 1950, p. 30, pl. 2, fig. 20; BARTENSTEIN & BRADND 1951, p. 303, pl. 8, figs. 202–203; TAPPAN 1962, p. 172, pl. 44, figs. 19–21; DIENI & MASSARI 1966, p. 154, pl. 6, figs. 20–21; BARTENSTEIN, BETTENSTAEDT & BOLLI, 1966, p. 155, pl. 3, figs. 243–245; FUCHS, 1967, p. 314, pl. 14, fig. 2; NEAGU 1972, p. 214, pl. 4, fig. 51; NEAGU 1975, p. 99, pl. 75, figs. 9, 14, 21–25  
**Dimensions:** length 0,29–0,3 mm; breadth 0,17–0,17 mm; thickness 0,072 mm  
**Type specimens:** L.P.B.IV. 11860  
**Occurrence:** Zimnicea drilling  
**Stratigraphic distribution:** Middle Albian (terminal part).

***Lingulina nodosaria*** Reuss, 1863  
 Plate 26, Fig. 28

*Lingulina nodosaria* REUSS 1863, p. 59, pl. 5, fig. 12; CHAPMAN 1894, p. 153, pl. 3, fig. 1; EICHENBERG 1933, p. 175, pl. 11, fig. 9; EICHENBERG 1935, p. 24, pl. 2, fig. 12; BARTENSTEIN & BRAND 1951, p. 300; DIENI & MASSARI 1966, p. 154, pl. 6, fig. 22; MICHAEL 1967, p. 70, pl. 8, fig. 9; NEAGU 1975, p. 99, pl. 75, figs. 5–8, 10–13, 16–20  
**Dimensions:** length 0,43–0,53 mm; breadth 0,12–0,12 mm; thickness 0,072 mm  
**Type specimens:** L.P.B.IV. 11861  
**Occurrence:** Buzescu core (570 m)  
**Stratigraphic distribution:** Upper Albian (basal part, Hysteroberas orbignyi zone).

***Lingulina furcifata* Berthelin, 1880**  
**Plate 36, Figs. 2–3**

*Lingulina furcifata* BERTHELIN 1880, p. 65, pl. 4, fig. 6

**Dimensions:** length 0,34 mm; breadth 0,12 mm; thickness 0,12 mm

**Type specimen:** L.P.B.IV. 11862

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Subfamily FRONDICULARIINAE, Colom 1982

Genus ***Tristix*** Macfayden, 1941

***Tristix excavatum*** (Reuss, 1863)

Plate 10, Figs. 23–24; Plate 31, Figs. 4–5; Plate 35, Figs. 2–3; Plate 53, Figs. 16–18

*Rhabdogonium excavatum* REUSS 1863, p. 91, pl. 122, fig. 8; CHAPMAN 894, p. 160, pl. 4, figs. 6; FRANKE 1928, p. 73, pl. 5, fig. 22

*Tristix excavata* (REUSS); GORBATCHIK-SHOHINA 1960, p. 86, pl. 3, fig. 9; NEAGU, 1965, p. 24, pl. 5, figs. 14–15; DIENI & MASSAR 1966, p. 161, pl. 7, fig. 10

*Dentalinopsis excavata* (REUSS); TAPPAN 1940, p. 118, pl. 18, fig. 10

*Dentalinopsis tricarinatum excavatum* (REUSS); TAPPAN 1943, p. 500, pl. 81, fig. 29

**Dimensions:** length 0,48 mm – 0,46 mm – 0,29 mm; breadth 0,19 mm – 0,21 mm – 0,17 mm

**Type specimens:** L.P.B.IV. 11863, 11864, 11865

**Occurrence:** Bala III-Oltina drilling, 138 Copăceni core (480–485 m), 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. *tardefurcata* zone), Upper Albian-Vraconian (R. *appenninica* zone).

***Tristix acutangulum*** (Reuss, 1863)

Plate 23, Figs. 24–25; Plate 53, Fig. 17

*Rhabdogonium excavatum* REUSS 1863, p. 55, pl. 4, fig. 14

*Rhabdogonium tricarinatum acutangulum* REUSS; CHAPMAN 1893, p. 159, pl. 4, fig. 2

*Tristix acutangulus* (REUSS); BARTENSTEIN & BRAND 1951, p. 314, pl. 10, figs. 257–261; SZTEJN 1957, p. 228, pl. 6, fig. 49; DIENI & MASSARI 1966, p. 160, pl. 7, figs. 5–9; NEAGU 1975, p. 103, pl. 75, figs. 40–49; pl. 76, figs. 7–11, 13–16

**Dimensions:** length 0,36 mm; breadth 0,12 mm

**Type specimens:** L.P.B.IV. 11866, 118867, 11868

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

***Tristix articulata*** (Reuss, 1863)

Plate 10, Figs. 25–26; Plate 22, Fig. 28; Plate 53, Fig. 17

*Rhabdogonium articulatum* REUSS 1863, p. 55, pl. 4, fig. 11

*Tristix articulatum* (REUSS); NEAGU 1975, p. 104, pl. 76, figs. 1–6, 12, 15, 19

**Dimensions:** length 0,60–0,39 mm; breadth 0,21–0,14 mm

**Type specimens:** L.P.B.IV. 11866

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Genus ***Frondicularia*** Defrance, 1826

***Frondicularia filocincta*** Reuss, 1863

Plate 17, Fig. 13; Plate 31, Fig. 3; Plate 56, Fig. 11

*Frondicularia filocincta* REUSS 1863, p. 54, pl. 4, fig. 12; GORBATCHIK-SHOHINA 1960, p. 90, pl. 5, fig. 2; NEAGU 1965, p. 25, pl. 6, figs. 8–11; NEAGU 1975, p. 82, pl. 68, fig. 7

**Dimensions:** length 0,82–0,67 mm; breadth 0,42–0,31 mm.

**Type specimens:** L.P.B.IV. 11869, 11890

**Occurrence:** Giurgiu-Pod, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Middle Albian (H. dentatus zone), Upper Albian (Vraconian, R. appenninica zone).

***Frondicularia inversa*** Reuss, 1845

Plate 19, Fig. 14

*Frondicularia inversa* REUSS 1845, p. 31, pl. 8, figs. 1, 19; pl. 13, fig. 42; CUSHMAN 1946, p. 86, pl. 3, figs. 11–12; NEAGU 1965, p. 25, pl. 6, fig. 20; DIENI & MASSARI 1966, p. 141, pl. 15, figs. 22–24; NEAGU 1975, p. 81, pl. 77, figs. 24–25; pl. 78, figs. 2–6, 8–9, 11–15, 19, 21–25

**Dimensions:** length 1,37–2,87 mm; breadth 0,60–1,05 mm

**Type specimens:** L.P.B.IV. 5067

**Occurrence:** Giurgiu-Pod

**Stratigraphic distribution:** Middle Albian (H. dentatus zone).

***Frondicularia planifolium*** Chapman, 1894

Plate 19, Fig. 15

*Frondicularia planifolium* CHAPMAN 1894 p. 158, pl. 4, fig. 1; ten DAM, 1950, p. 22, pl. 2, figs. 25; NEAGU 1965, p. 25, pl. 6, fig. 12

**Dimensions:** length 1,55 mm; breadth 0,75 mm

**Type specimens:** L.P.B.IV. 5068

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Family VAGINULINIDAE REUSS, 1860

Subfamily LENTICULININAE Chapman & Parr & Collins, 1934

Genus ***Lenticulina*** Lamark, 1804

***Lenticulina roemeri*** (Reuss, 1863)

Plate 9, Figs. 1–4

*Cristellaria roemeri* REUSS 1863, p. 75, pl. 8, fig. 9

*Lenticulina roemeri* (REUSS); STANCHEVA 1959, p. 131, pl. 1, figs. 1–2; MOULLADE 1966, p. 54, pl. 5, fig. 8; NEAGU 1970, p. 52, pl. 11, figs. 1–2; NEAGU 1972, p. 205, pl. 5, figs. 24–25; NEAGU & CARNARU 2002, p. 101, pl. 1, figs. 1–16, 19–20

**Dimensions:** diameter 0,68 mm; thickness 0,24 mm

**Type specimens:** L.P.B.IV. 11871

**Occurrence:** Bala III-Oltina drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Lenticulina macrodisca* (Reuss, 1863)**

Plate 9, Figs. 5–6; Plate 17, Fig. 9; Plate. 30, Figs. 1–4, 25–26; Plate 33, Figs. 1–4

*Cristellaria macrodisca* REUSS 1863, p. 78, pl. 9, fig. 5; BERTHELIN, 1880, p. 48, pl. 3, fig. 6–11, 14  
*Cristellaria rotulata macrodisca* REUSS; CHAPMAN 1896, p. 6, pl. 1, fig. 9

*Lenticulina macrodisca* (REUSS); EICHENBERG 1933, p. 15, pl. 1, fig. 1; EICHENBERG 1935, p. 15, pl. 13, fig. 1; TAPPAN 1962, p. 162, pl. 40, figs. 5–8; NEAGU 1972, p. 205, pl. 4, figs. 44–45; NEAGU 1975, p. 58, pl. 45, figs. 1–16, 20; pl. 47, figs. 25–26

*Robulus macrodiscus* (REUSS); CUSHMAN 1946, p. 54, pl. 17, fig. 14; POZARYSKA 1957, p. 132, pl. 15, fig. 7

*Lenticulina (Robulus) macrodisca* (REUSS); NEAGU 1965, p. 12, pl. 4, figs. 7–8

*Lenticulina (Lenticulina) macrodisca* (REUSS); FUCHS 1967, p. 294, pl. 10, fig. 3

**Dimensions:** large diameter 0,91–0,79 mm; small diameter 0,72–0,67 mm; thickness 0,48–0,40 mm.

**Type specimens:** L.P.B.IV. 11872, 11873, 11874, 11875

**Occurrence:** Bala III-Oltina drilling, Giurgiu Pod, 44 Bălăria core (625–627 m), 138 Copăceni core (480–485 m).

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (H. dentatus zone), Upper Albian-Vraconian (R. appenninica zone).

***Lenticulina gaultina* (Berthelin, 1880)**

Plate 9, Figs. 7–8; Plate 14, Figs. 10–11; Plate 19, Figs. 7–11

*Cristellaria gaultina* BERTHELIN 1880, p. 41, pl. 3, figs. 15–19

*Robulus gaultinus* (BERTHELIN); EICHENBERG 1933, p. 156, pl. 16, fig. 6; STANCHEVA 1959, p. 143, pl. 4, figs. 5–7

*Lenticulina gaultina* (BERTHELIN); TAPPAN 1940, p. 101, pl. 15, fig. 11; TAPPAN 1943, p. 494, pl. 79, figs. 13–15; SZTEJN 1958, p. 34, pl. 3, fig. 19; NEAGU 1965, p. 10, pl. 3, figs. 1–2; FUCHS 1967, p. 295, pl. 11, fig. 1; KAPTARENKO-CHERNOUSOVA 1967, p. 81, pl. 9, fig. 1; NEAGU 1970, p. 51, pl. 11, figs. 27–28; NEAGU 1972, p. 204, pl. 5, figs. 13–14; NEAGU 1975, p. 58, pl. 46, figs. 3, 12–13.16–19; pl. 49, figs. 18, 20, 23–26, 29–31, 33–34

**Dimensions:** large diameter 0,84–0,65 mm; small diameter 0,55–0,40 mm; thickness 0,29–0,26 mm

**Type specimens:** L.P.B.IV. 11876, 11877, 11878

**Occurrence:** Călărași drillings, Giurgiu Pod

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone)-Middle Albian (H. dentatus zone).

***Lenticulina lituola* (Cornuel, 1848)**

Plate 9, Figs. 9–10

*Cristellaria lituola* CORNUEL 1848, p. 254, pl. 2, figs. 9–10

**Dimensions:** large diameter 0,53–0,48 mm; small diameter 0,36–0,26 mm,

**Remarks:** Having the early stage atypical “*Lenticulina*” followed by the uncoiled last chambers this species belongs to the genus *Lenticulina*.

**Type specimens:** L.P.B.IV. 11879

**Occurrence:** Bala III-Oltina drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Lenticulina diademata* (Berthelin, 1880)**  
**Plate 9, Figs. 11–20**

*Cristellaria diademata* BERTHELIN 1880, p. 51, pl. 3, figs. 4, 5, 12, 13

**Dimensions:** large diameter 1,41mm – 1,20mm – 1,00mm – 0,79mm – 0,65mm; small diameter 1,12 mm – 1,03 mm – 0,86 mm – 0,70 mm – 0,53 mm; thickness 0,40 mm – 0,34 mm – 0,39 mm

**Remarks:** This species is very well delimited by the presence of a peripheral-hyaline keel and the sutures which become elevated (as a keel) in the central part of the test. In the assemblages from the area Bala-Oltina-Călărași the population of this species presents a remarkable variability in size and test morphology. Following an evolutive serie can be observe a slightly tendency of uncoil (involute-evolute coiling), becoming visible the last two whorls. Also the size grows sensible til more than 1 mm in diameter, but the thickness is almost constant.

Stratigraphical, it is to write down that this species do not cross the boundary Lower-Middle Albian and can be used successfully as a stratigraphic marker.

**Type specimens:** L. P. B. IV. 11880, 11880

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Lenticulina inflata* (Reuss, 1860)**  
**Plate 10, Figs. 27–28; Plate 16, Figs. 18–19**

*Cristellaria inflata* REUSS 1860, p. 212, pl. 8, fig. 6

**Dimensions:** length 0,58 mm; breadth 0,26 mm; thickness 0,17 mm

**Type specimens:** L.P.B.IV. 11890

**Occurrence:** Giurgiu Pod

**Stratigraphic distributions:** Middle Albian (H. dentatus zone).

***Lenticulina oligostegia* (REUSS, 1860)**  
**Plate 16, Figs. 5–8**

*Cristellaria oligostegia* REUSS 1860, p. 213, pl. 8, fig. 8; REUSS 1863, p. 93, pl. 13, figs. 2; CHAPMAN 1894, p. 652, pl. 10, fig. 5; FRANKE 1928, p. 111, pl. 10, fig. 8

*Robulus oligostegia* (REUSS); CUSHMAN 1946, p. 54, pl. 8, fig. 8

*Lenticulina oligostegia* (REUSS); HAGN 1953, p. 36, pl. 3, fig. 5

*Lenticulina oligostegia* (REUSS); NEAGU 1965, p. 11, pl. 4, figs. 1–2; FUCHS 1967, p. 297, pl. 10, fig. 4

**Dimensions:** length 0,40–0,34 mm; thickness 0,21–0,17 mm

**Type specimens:** L.P.B.IV. 11965

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (H. dentatus zone).

***Lenticulina marcki* (REUSS, 1860)**  
**Plate 10, Figs. 29–30; Plate 55, Fig. 10**

*Cristellaria marcki* REUSS 1860, p. 212, pl. 9, fig. 4

**Dimensions:** length 1,20 mm – 0,77 mm – 0,77 mm; breadth 0,55 mm – 0,50 mm – 0,40 mm; thickness 0,21 mm – 0,21 mm – 0,14 mm

**Remarks:** By the presence of a flat aspect of the last part of the test and a clear uncoiled tendency this species is well delimited.

**Type specimens:** L.P.B.IV. 11878

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Lenticulina subalata* (REUSS, 1863)**

Plate 17, Fig. 10; Plate 22, Figs. 1–2

*Cristellaria subalata* REUSS 1863, p. 76, pl. 8, fig. 10; pl. 9, fig. 1; FRANKE 1928 p. 110, pl. 10, fig. 5

**Dimensions:** diameter 0,40 mm; thickness 0,19 mm

**Type specimens:** L.P. B.IV. 11881, 11882

**Occurrence:** Călărași drillings, Giurgiu Pod, Zimnicea drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (H. dentatus zone), Middle Albian (terminal part).

***Lenticulina muensteri* (Roemer, 1841)**

Plate 19, Figs. 1–6; Plate 22, Figs. 3–4

*Robulina muensteri* ROEMER 1841, p. 98, pl. 15, fig. 30

*Cristellaria muensteri* (ROEMER) REUSS 1863, p. 77, pl. 9, figs. 3–4

*Cristellaria (Robulus) muensteri* (ROEMER) FRANKE 1928, p. 111, pl. 10, fig. 9

*Robulus muensteri* (ROEMER) CUSHMAN 1946, p. 53, pl. 17, figs. 3–9; HAGN 1953, p. 32, pl. 3, fig. 13

*Lenticulina (L.) muensteri* (ROEMER) BARTENSTEIN & BRAND 1951, p. 263, pl. 5, fig. 109; BARTENSTEIN, BETTENSTAEDT & BOLLI 1967, p. 22, pl. 3, fig. 54; pl. 4, figs. 80–81; MICHAEL 1967, p. 34, pl. 3, fig. 5

*Lenticulina muensteri* (ROEMER) SZTEJN 1957, p. 37, pl. 1, fig. 23; STANCHEVA 1959, p. 134, pl. 13, fig. 5; KAPTARENKO-CERNOUSOVA 1967, p. 79, pl. 8, fig. 3; NEAGU 1970, p. 5, pl. 11, fig. 3; NEAGU 1975, p. 61, pl. 45, figs. 17–19; pl. 46, figs. 4–10; pl. 48, figs. 18–21; pl. 49, figs. 1–2

**Dimensions:** large diameter 0,94 mm – 0,89 mm – 0,82 mm – 0,65 mm – 0,55 mm; small diameter 0,79 mm – 0,79 mm – 0,67 mm – 0,53 mm – 0,43 mm; thickness 0,48 mm – 0,53 mm – 0,48 mm – 0,34 mm – 0,36 mm

**Type specimens:** L.P.B.IV.11883, 11884

**Occurrence:** Giurgiu Pod, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Middle Albian (H. dentatus zone), Upper Albian-Vraconian (R. appenninica zone).

***Lenticulina turgidula* (REUSS, 1863)**

Plate 22, Figs. 5–10, 21–22; Plate 30, Figs. 9–10

*Cristellaria turgidula* REUSS 1863, p. 73, pl. 8, fig. 4

*Lenticulina turgidula* (REUSS); NEAGU 1975, p. 61, pl. 44, fig. 26; pl. 108, fig. 26

**Dimensions:** large diameter 0,55 mm – 0,53 mm – 0,29 mm; small diameter 0,39 mm – 0,34 mm – 0,19 mm; thickness 0,19 mm – 0,17 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 11885, 11886

**Occurrence:** Zimnicea drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian-Vraconian (R. appenninica zone).

***Lenticulina nodosa* (REUSS, 1863)**  
Plate 30, Figs. 5–8

*Robulina nodosa* REUSS 1863, p. 78, pl. 9, fig. 6

*Lenticulina (L.) nodosa* (REUSS); BARTENSTEIN & BRAND 1951, p. 283, pl. 15B, figs. 5–6; pl. 15D, figs. 4–6; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 24, pl. 3, fig. 49; pl. 4, figs. 60–67; SZTEJN 1957, p. 28, pl. 4, fig. 24; MOULLADE 1966, p. 51, pl. 4, figs. 9–12; MICHAEL 1967, p. 34, pl. 3, fig. 8; KALANTARI 1969, p. 141, pl. 12, figs. 3–7; NEAGU 1970, p. 51, pl. 10, figs. 21–22; NEAGU 1975, p. 57, pl. 43, figs. 11–26; pl. 44, figs. 13–14, 17–18

**Dimensions:** large diameter 1,27–0,50 mm; small diameter 1,08–0,40 mm; thickness 0,62–0,24 mm

**Type specimens:** L.P.B.IV. 11887

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (R. appenniniuca zone).

***Lenticulina nuda* (REUSS, 1861)**  
Plate 30, Figs. 11–12

*Cristellaria nuda* REUSS 186, p. 328, pl. 6, , figs. 1–3; REUSS 1863, p. 72, pl. 8, fig. 2

*Cristellaria gibba* f. *nuda* (REUSS); FRANKE 1928, p. 106, pl. 9, fig. 22

*Lenticulina nuda* (REUSS); CUSHMAN 1946, p. 56, pl. 18, fig. 17; NEAGU & CĂRNARU 2002, p. 102, pl. 1, fig. 21

**Dimensions:** large diameter 0,48 mm; small diameter 0,26 mm; thickness 0,12 mm

**Type specimens:** L.P.B.IV.12027

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (R.appenninica zone).

***Lenticulina discrepans* (REUSS, 1863)**  
Plate 33, Figs. 5–6

*Cristellaria discrepans* REUSS 1863, p. 78, pl. 9, fig. 7

*Lenticulina discrepans* (REUSS); NEAGU 1975, p. 64, pl. 60, figs. 1–3; NEAGU-CĂRNARU 2002, p. 101, pl. 1, figs. 26–28

**Dimensions:** large diameter 0,53mm; small diameter 0,39mm; thickness 0,21mm

**Type specimens:** L.P.B.IV. 11888

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (S. dispar zone).

***Lenticulina subaperta* (REUSS, 1863)**  
Plate 36, Figs. 9–12

*Cristellaria subaperta* REUSS 1863, p. 73, pl. 8, fig. 5

**Dimensions:** large diameter 0,84 mm – 0,65 mm – 0,60 mm; small diameter 0,67 mm – 0,53 mm – 0,40 mm; thickness 0,36 mm – 0,24 mm – 0,24 mm

**Type specimens:** L.P.B.IV.11889

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (R.appenninica zone).

Genus *Saracenaria* Defrance, 1824

*Saracenaria crassicosta* Eichenberg, 1933

Plate 10, Figs. 5–6, 16, 12, 16; Plate 22, Figs. 19–20; Plate 26, Figs. 42; Plate 55, Fig. 4

*Saracenaria italicica crassicosta* EICHENBERG 1933, p. 17, pl. 5, fig. 2

*Saracenaria crassicosta* EICHENBERG 1933; ten DAM 1950, p. 25, pl. 2, fig. 10

*Lenticulina (Saracenaria) crassicosta* EICHENBERG; FUCHS 1967, p. 302, pl. 12, fig. 10

**Dimensions:** length 0,72 mm – 0,55 mm – 0,48 mm – 0,36 mm – 0,31 mm; breadth 0,31 mm – 0,24 mm – 0,17 mm – 0,14 mm – 0,14 mm; thicknrs 0,26 mm – 0,19 mm – 0,21 mm – 0,21 mm – 0,17 mm

**Type specimens:** L.P.B.IV 11891, 11892, 11893, 11894

**Occurrence:** Călărași drillings; Giurgiu Pod, Zimnicea drilling, Buzescu core

**Stratigraphic distribution:** Lower Albian (L.tardefurcata zone), Middle Albian, Upper Albian (Hysteroconus orbygnii zone).

*Saracenaria bonnoniensis* (Berthelin, 1880)

Plate 16, Fig. 2; Plate 21, Figs. 9–10, 15–16; Plate 35, Figs. 6–7;

Plate 54, Fig. 16; Plate 55, Figs. 2–3

*Cristellaria bonnoniensis* BERTHELIN 1880, p. 55, pl. 3, figs. 23; CHAPMAN 1894, 652, pl. 10, fig. 9

*Saracenaria bonnoniensis* (BERTHELIN); ten DAM, 1950, p. 24

*Saracenaria bonnoniensis bonnoniensis* (BERTHELIN); FRIZZELL 1954, p. 83, pl. 8, fig. 24; POZARYSKA 1957, p. 117, pl. 10, fig. 1

*Lenticulina (Saracenaria) bonnoniensis* (BERTHELIN); BARTENSTEIN 1954, p. 46; NEAGU 1965, p. 16, pl. 4, figs. 26–27; FUCHS 1967, p. 300, pl. 12, fig. 2

**Dimensions:** length 0,67 mm – 0,60 mm – 0,53 mm – 0,48 mm – 0,29 mm; breadth 0,21 mm – 0,24 mm – 0,096 mm – 0,24 mm – 0,096 mm; thickness 0,26 mm – 0,24 mm – 0,096 mm – 0,24 mm – 0,048 mm

**Type specimens:** L.P.B.IV 11897, 11898

**Occurrence:** dilling H. Călărași, Giurgiu Pod, 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (Hoplites dentatus zone)-Vraconian (R. appenninica zone).

*Saracenaria saratogana* Howe & Wallace, 1932

Plate 30, Figs. 23–24; Plate 35, Fig. 4

*Saracenaria navicula* (d'ORBIGNY); EICHENBERG 1933, p. 17, pl. 2, fig. 15

*Saracenaria saratogana* HOWE & WALLACE 1932, p. 41; CUSHMAN 1946, p. 58, pl. 28, figs. 4–6; NEAGU 1965, p. 16, fig. 16

**Dimensions:** length 0,46 mm; breadth 0,21 mm; thickness 0,21 mm

**Type specimens:** L.P.B.IV. 11901

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Vraconian (R. appenninica zone).

*Saracenaria frankei* ten Dam, 1946

Plate 10, Figs. 31–31; Plate 16, Figs. 9–11; Plate 22, Figs. 15–16; Plate 56, Fig. 1

*Cristellaria italicica* DEFRENCE; FRANKE 1928, p. 102, pl. 9, fig. 17

*Saracenaria italicica* DEFRENCE; EICHENBERG 1935, p. 158, pl. 11, fig. 21

*Saracenaria frankei* ten DAM 1946, p. 573, pl. 88, fig. 1

*Lenticulina(Saracenaria) frankei* ten DAM; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 33, pl. 3, fig. 60; NEAGU 1965, p. 16, pl. 4, figs. 24–25

**Dimensions:** length 0,36–0,31 mm; thickness 0,17–0,17 mm

**Type specimens:** L.P.B.IV.11899

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

*Saracenaria triangularis* (d'Orbigny, 1840)

Plate 22, Figs. 11–12

*Cristellaria triangularis* d'ORBIGNY 1840, p. 27, pl. 2, figs. 21–22; REUSS 1845, p. 34, pl. 8, fig. 48; CHAPMAN 1894, p. 65, pl. 10, fig. 3

*Saracenaria triangularis* (D'ORBIGNY); CUSHMAN 1946, p. 58, pl. 28, fig. 13; HAGN 1953, p. 52, pl. 6, fig. 4; POZARYSKA 1957, p. 119, pl. 10, fig. 8; EBENSBERGER 1962, p. 34, pl. 5, fig. 16

*Lenticulina (Saracenaria) triangularis* (d'ORBIGNY); FUCHS 1967 p. 302, pl. 12, fig. 3

**Dimensions:** length 0,46 mm; thickness 0,29 mm

**Type specimens:** L.P.B.IV.11900

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Genus *Marginulinopsis* Silvestri, 1904

*Marginulinopsis trunculata* (Berthelin, 1880)

Plate 33, Fig. 30

*Cristellaria trunculata* BERTHELIN 1880, p. 53, pl. 3, figs. 26–27

**Dimensions:** length 0,24 mm; breadth 0,12 mm

**Type specimens:** L.P.B.IV. 11902

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

*Marginulinopsis comma* (Roemer, 1841)

Plate 27, Fig. 16; Plate 30, Figs. 21–22; Plate 55, Fig. 9

*Marginulina comma* ROEMER 1841, p. 96, pl. 15, fig. 15

*Marginulinopsis comma* (ROEMER); ten DAM 1948, p. 183, pl. 32, figs. 1–2

*Lenticulina (Marginulinopsis) comma* (ROEMER); BARTENSTEIN & BRAND 1951, p. 288, pl. 6, fig. 135; FUCHS 1967, p. 297, pl. 11, fig. 7

**Dimensions:** length 0,53–0,50 mm; breadth 0,24–0,19 mm

**Type specimens:** L.P.B.IV.11896, 11902, 11903

**Occurrence:** 21 Buzescu core (575–580 m), 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian (Hysteroeceras orbignyi zone), Vraconian (Rotalipora appenninica zone).

*Marginulinopsis incurvatum* (REUSS, 1863)

Plate 27, Figs. 14–15

*Cristellaria incurvata* (REUSS, 1863), p. 66, pl. 6, fig. 18

**Dimensions:** length 0,65 mm; breadth 0,14 mm

**Type specimens:** L.P.B.IV. 11904

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone).

***Marginulinopsis lituola*** (Cornuel, 1880)

Plate 27, Figs. 17

*Cristellaria lituola* CORMUEL 1848, p. 254, pl. 2, figs. 9–10

**Dimensions:** length 0,58 mm

**Type specimens:** L.P.B.IV. 11905

**Occurrence:** 21 Buzescu (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyii zone).

***Marginulinopsis bacillum*** (Reuss, 1845)

Plate 16, Figs. 3–4

*Marginulina bacillum* REUSS 1845, p. 29, pl. 8, fig. 11; REUSS 1860, p. 208, pl. 6, fig. 8

**Dimensions:** length 0,48 mm; breadth 0,19 mm

**Type specimen:** L.P.B.IV.12026

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Marginulinopsis scitula*** (Berthelin, 1880)

Plate 10, Figs. 3–4

*Cristellaria scitula* BERTHELIN 1880, p. 54, pl. 3, fig. 3

**Dimensions:** length 0,58 mm; breadth 0,29 mm

**Type specimens:** L.P.B.IV. 11910

**Occurrence:** F. B. drilling Călărași

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Marginulinopsis ensis*** (Reuss, 1845)

Plate 16, Fig. 1, 25–27; Plate 21, Figs. 5–8; Plate 58, Fig. 6; Plate 57, Figs. 17, 20

*Marginulina ensis* REUSS 1845, p. 29, pl. 12, fig. 13; pl. 13, figs. 26–27; pl. 24, fig. 30; REUSS 1851, p. 27, pl. 1, fig. 16

*Cristellaria ensis* (REUSS); FRANKE 1928, p. 97, pl. 9, fig. 1–3

**Dimensions:** length 0,43 mm – 0,39 mm – 0,39 mm; thickness 0,14 mm – 0,12 mm – 0,12 mm

**Type specimens:** L.P.B.IV.11909

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Marginulinopsis schloenbachi*** (Reuss, 1863)

Plate 16, Fig. 17; Plate 17, Figs. 5–6; Plate 22, Figs. 13–14, 26–27; Plate 27, Fig. 20

*Cristellaria schloenbachi* REUSS 1863, p. 65, pl. 6, figs. 14–15

*Astacolus schloenbachi* (REUSS); EICHENBERG 1935, p. 12, pl. 6, figs. 14–15

*Lenticulina(Astacolus) schloenbachi* (REUSS); BARTENSTEIN & BRAND 1951, p. 286, pl. 5, figs. 124–125

*Lenticulina (Marginulinopsis) schloenbachi* (REUSS); FUCHS 1967, p. 298, pl. 12, fig. 14

*Marginulinopsis schloenbachi* (REUSS); NEAGU 1972, p. 210, pl. 4, figs. 19–22; pl. 5, fig. 35

*Marginulinopsis schloenbachi schloenbachi* (REUSS); NEAGU 1975, p. 66, pl. 58, figs. 22–23, 26; pl. 59, fig. 47; pl. 60, figs. 7–8, 15–16, 26, 34, 38–40, 42–48; pl. 61, figs. 4–6, 8–12

*Astacolus schloenbachi* (REUSS); NEAGU & CĂRNARU 2002, p. 103, pl. 2, figs. 1–2

**Dimensions:** length 0,72 mm – 0,55 mm – 0,53 mm; thickness 0,21 mm – 0,17 mm – 0,14 mm

**Type specimens:** L.P.B.IV.11906, 11907, 11908

**Occurrence:** Giurgiu Pod, Zimnicea drilling, 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone, terminal part), Upper Albian (Hysteroconus orbignyi zone).

Subfamily PALMULINAE Saidova, 1981

Genus *Palmula* Lea, 1833

*Palmula asiatica* Furstenko, 1949

Plate 11, Figs. 1–15; Plate 57, Figs. 8–13

*Palmula asiatica* FURSENKO, GORBATCHIK & SHOHINA 1960, p. 98, pl. 10, fig. 1

**Dimensions:** (evolutive serie) length 0,48 mm – 0,72 mm – 0,77 mm – 1,24 mm – 1,92 mm – 2,21 mm – 3,00 mm; breadth 0,39 mm – 0,43 mm – 0,67 mm – 1,18 mm – 1,75 mm – 2,23 mm – 2,90 mm

**Remarks:** By its planispiral early stage (*Lenticulina* stage) followed by the uncoiled intermediate one (*Astacolus* stage) and the adult uniserial stage with the typical reversed “V” chambers and also the large to extremely large size (over 3 mm length) this species is very well limited. This species by its larger development (frequency and size) in the Lower Albian (L. tardefurcata zone) become a good stratigraphic marker.

**Type specimens:** L.P.B.IV. 11911

**Occurrence:** Drilling F.IV. Călărași, BalaIII-Oltina drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

Genus *Astacolus* de Montfort, 1808

*Astacolus planiuscula* (Reuss, 1863)

Plate 21, Figs. 3–4

*Cristellaria planiuscula* REUSS 1863, p. 71, pl. 7, fig. 15; BERTHELIN 1880, p. 53, pl. 13, fig. 25; CHAPMAN 1894, pl. 1, fig. 14

*Lenticulina (Vaginulinopsis) planiuscula* (REUSS); BARTENSTEIN & BRAND 1951, p. 287, pl. 5, fig. 129

*Marginulina planiuscula* (REUSS); TAPPAN 1962, p. 170, pl. 43, figs. 8–11

*Lenticulina (Astacolus) planiuscula* (REUSS); BARTENSTEIN, BETTENSTAEDT & BOLLI, BRAND, 1966, p. 148, pl. 2, figs. 142–146; FUCHS 1967, p. 292, pl. 9, fig. 6.

*Marginulinopsis planiuscula* (REUSS); NEAGU 1975, p. 72, pl. 56, figs. 15–16; pl. 58, figs. 1–3, 10–13; pl. 60, figs. 4–6

**Dimensions:** length 0,40 mm; breadth 0,21 mm

**Type specimen:** L.P.B.IV. 11913

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

*Astacolus sulcifera* (Reuss, 1863)

Plate 21, Figs. 1–2

*Cristellaria sulcifera* REUSS 1863, p. 74, pl. 8, fig. 9

**Dimensions:** length 0,39 mm; breadth 0,21 mm; thickness 0,12 mm

**Remarks:** By the flat aspect of the test this species differs from *Saracenaria crassicosta* Eichenberg with which have in common the aspect of the depressed sutures.

**Type specimens:** L.P.B.IV. 11912

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Genus *Marginulina* d'Orbigny, 1826

*Marginulina inaequalis* Reuss, 1860

Plate 17, Fig. 7; Plate 27, Figs. 11–13, 20

*Marginulina inaequalis* REUSS 1860, p. 207, pl. 7, fig. 3; REUSS 1863 p. 59, pl. 5, fig. 13; pl. 6, fig. 8

**Dimensions:** length 0,62 mm – 0,58 mm – 0,36 mm; thickness 0,14 mm – 0,12 mm – 0,096 mm

**Type specimens:** L.P.B. IV. 11914

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroconus orbignyi zone).

*Marginulina linearis* Reuss, 1863

Plate 26, Figs. 6–8, 30; Plate 33, Figs. 18–20

*Marginulina linearis* REUSS 1863, p. 60, pl. 5, fig. 15; EICHENBERG 1934, p. 161, pl. 11, figs. 2, 7; BARTENSTEIN, BETTENSTAEDT & BOLI 1966, p. 151, pl. 2, figs. 160–163; pl. 3, fig. 210; NEAGU 1972, p. 210, pl. 4, figs. 16–18; pl. 6, fig. 18

*Lenticulina (Marginulina) linearis* (REUSS); MICHAEL 1967, p. 45, pl. 4, fig. 4

**Dimensions:** length 0,60 mm – 0,67 mm – 0,84 mm; thickness 0,40 mm – 0,58 mm – 0,77 mm

**Type specimens:** L.P.B.IV. 11915, 11916

**Occurrence:** 21 Buzescu core (575–580 m), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian, Vraconian (Hysteroconus orbignyi zone, Rotalipora appenninnica zone).

*Marginulina jonesi* Reuss, 1863

Plate 10, Fig. 15; Plate 26, Figs. 36–37; Plate 54, Fig. 10

*Marginulina jonesi* REUSS, 1863, p. 61, pl. 5, fig. 19; CHAPMAN 1894, p. 163, pl. 4, fig. 24; EICHENBERG 1933, p. 9, pl. 7, fig. 8; EICHENBERG 1935, p. 160, pl. 17, figs. 5; ten DAM 1950, p. 22, pl. 2, fig. 4; TAPPAN 1962, p. 167, pl. 42, figs. 1–6; NEAGU 1965, p. 17, pl. 5, figs. 11–12

*Lenticulina (Marginulinopsis) jonesi* (REUSS); FUCHS 1967, p. 296, pl. 11, figs. 2–3, 5

**Dimensions:** length 0,49–0,55 mm; thickness 0,12 – 0,17 mm

**Type specimens:** L.P.B.IV. 11920, 11921

**Occurrence:** Bala III-Oltina drilling, 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Upper Albian (Hysteroconus orbignyi zone).

*Marginulina parallela* (Reuss, 1863)

Plate 16, Fig. 20

*Cristellaria parallela* REUSS 1863, p. 67, pl. 5, figs. 1–2

*Vaginulinopsis parallela* (REUSS); KAPTARENKO-CHERNOUSOVA 1967, p. 55, pl. 4, figs. 11–12

Non *Cristellaria parallela* SCHWAGER 1865, p. 71, pl. 5, fig. 5

**Dimensions:** length 0,39 mm; breadth 0,17 mm

**Type specimens:** L.P.B.IV. 11922

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Marginulina striatocostata* Reuss, 1863**

Plate 10, Fig. 14; Plate 12, Fig. 1; Plate 35, Fig. 59

*Marginulina striatocostata* REUSS 1863, p. .62, pl. 6, fig. 2; CHAPMAN 2894, p. 163, pl. 4, fig. 21

*Lenticulina (Marginulinopsis) striatocostata* (REUSS); BARTENSTEIN & BRAND 1951, p. 289, pl. 6, fig. 141; DIENI & MASSARI 1966, p. 129, pl. 4, fig. 11

*Marginulinopsis striatocostata* (REUSS); KAPTARENKO-CHERNOUSOVA 1967, p. 62, pl. 6, figs. 1–2

*Marginulina striatocostata* (REUSS); NEAGU 1965, p. 20, pl. 4, fig. 28

**Dimensions:** length 0,60 mm – 0,53 mm – 0,53 mm – 0,39 mm; thickness 0,17 mm – 0,17 mm – 0,12 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 11917, 11918, 11919

**Occurrence:** Bala III-Oltina drilling, 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Upper Albian-Vraconian (Rotalipora appenninnica zone).

***Marginulina turgida* Reuss, 1863**

Plate 22, Fig. 25

*Marginulina turgida* REUSS 1863, p. 67, pl. 6, fig. 7

*Marginulinopsis turgida* (REUSS); NEAGU-CĂRNARU 2002, p. 102, pl. 2, fig. 17

**Dimensions:** length 0,40 mm; thickness 0,21 mm

**Type specimens:** L.P.B.IV. 11924

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

***Marginulina aequivoca* Reuss, 1863**

Plate 26, Fig. 39; Plate 54, Figs. 12–13; Plate 55, Fig. 1

*Marginulina aequivoca* REUSS 1863, p. 60, pl. 5, fig. 17; CHAPMAN 1894, p. 162, pl. 4, fig. 20; ten DAM 1950, p. 23, pl. 2, fig. 6; NEAGU, 1965, p. 17, pl. 4, figs. 36–37

**Dimensions:** length 0,60 mm; thickness 0,17 mm

**Type specimens:** L.P.B.IV. 11925

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone).

***Marginulina robusta* Reuss, 1863**

Plate 10, Fig. 22; Plate 20, Figs. 24–25; Plate 30, Fig. 13; Plate 54, Fig. 11; Plate 55, Figs. 7–8

*Marginulina robusta* REUSS 1863, p. 63, pl. 6, fig. 5; CHAPMAN 1894, p. 163, pl. 4, fig. 23; EICHENBERG 1932, p. 6, text–figs. 3–4; ten DAM 1948, p. 185, pl. 23, fig. 6; GORBATCHIK-SHOHINA 1969, p. 96, pl. 5, fig. 4; ANTONOVA 1969, p. 46, pl. 4, fig. 9

*Lenticulina (Marginulinopsis) robusta* (REUSS) BARTENSTEIN & BRAND 1951, p. 289, pl. 6, figs. 142–143; MICHAEL 1967, p. 46, pl. 4, figs. 15–19; FUCHS 1967, p. 298, pl. 11, figs. 2–3, 5

*Marginulinopsis robusta* (REUSS); KAPTARENKO-CHERNOUSOVA 1967, p. 65, pl. 6, fig. 8; NEAGU 1975, p. 68, pl. 61, figs. 23, 26–41

**Dimensions:** length 1,03–0,50 mm; thickness 0,36–0,19 mm

**Type specimens:** L.P.B.IV. 11926, 11927

**Occurrence:** Bala III-Oltina drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Upper Albian-Vraconian (Rotalipora appenninnica zone).

***Marginulina perobliqua* (Reuss, 1863)**

Plate 21, Figs. 11–14

*Cristellaria perobliqua* REUSS, 1863, p. 67, pl. 7, fig. 3

**Dimensions:** length 0,29–0,26 mm; thickness 0,096–0,12 mm

**Type specimen:** L.P.B.IV. 11923

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

**Genus *Vaginulinopsis* Silvester, 1904**

***Vaginulinopsis cephalotes* (Reuss, 1863)**

Plate 10, Figs. 7–13; Plate 17, Figs. 1–3; Plate 54, Fig. 9

*Cristellaria cephalotes* REUSS, 1863, p. 67, pl. 7, figs. 4–6.; CHAPMAN 1894, p. 650; SHERLOCK 1914, p. 26, pl. 18, fig. 20; EICHENBERG 1933, p. 175, pl. 17, fig. 13

*Vaginulinopsis cephalotes* (REUSS); ten DAM 1950, p. 39, pl. 3, fig. 9

*Lenticulina (Vaginulinopsis) cephalotes* (REUSS); NEAGU 1965, p. 12, pl. 4, fig. 2

**Dimensions:** length 0,69 mm – 0,58 mm – 0,53 mm – 0,48 mm – 0,43 mm – 0,34 mm – 0,31 mm; thickness 0,26 mm – 0,29 mm – 0,29 mm – 0,21 mm – 0,29 mm – 0,21 mm – 0,21 mm

**Type specimens:** L.P.B.IV. 11928, 11929

**Occurrence:** FB drilling Călărași, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Vraconian (Rotalipora appenninnica zone).

**Subfamily VAGINULININAE REUSS, 1860**

**Genus *Citharina* d'Orbigny, 1839**

***Citharina reticulata* (Cornuel, 1848)**

Plate 11, Fig. 20; Plate 15, Figs. 7–10; Plate 57, Fig. 2

*Planularia reticulata* (CORNUEL) 1848, p. 253, pl. 12, figs. 1–4

*Citharina reticulata* (CORNUEL), GORBATCHIK-SHOHINA, 1960, p. 101, pl. 11, fig. 4; NEAGU 1975, p. 70, pl. 64, fig. 1

**Dimensions:** length 1,53–2,21 mm; breadth 0,53–0,84 mm; thickness 0,072–0,17 mm

**Type specimens:** L.P.B.IV. 11930, 11931

**Occurrence:** Călărași drillings, Bala III-Oltina drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Citharina orthonota* (Reuss, 1863)**

Plate 12, Figs. 20–21; Plate 55, Fig. 13; Plate 57, Fig. 7

*Vaginulina otrthonota* REUSS 1863, 49, pl. 4, fig. 3

*Citharina orthonota* (REUSS); BARTENSTEIN & BRAND 1951, p. 298, pl. 7, figs. 180–181; SZTEJN 1957, p. 68, pl. 7, fig. 66

**Dimensions:** length 0,96 mm – 1,20 mm – 1,39 mm; breadth 0,34 mm – 0,29 mm – 0,48 mm; thickness 0,072 mm – 0,072 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11932

**Occurrence:** Bala III-Oltina drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Citharina angustissima* Reuss, 1863**

Plate 12, Fig. 22

*Vaginulina angustissima* REUSS 1863, p. 45, pl. 3, fig. 3

**Dimensions:** (fragment) length 0,77 mm; breadth 0,14 mm; thickness 0,072 mm

**Type specimens:** L.P.B.IV. 11933

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian, (L. tardefurcasa zone).

***Citharina sparsicostata* (Reuss, 1863)**

Plate 15, Figs. 11–12; Plate 56, Fig. 2; Plate 57, Fig. 1

*Vaginulina sparsicostata* REUSS 1863, p. 50, pl. 4, fig. 4; CHAPMAN 1894, p. 426, pl. 8, fig. 12

*Citharina sparsicostata* (REUSS); BARTENSTEIN & BRAND, 1951, p. 297, pl. 7, figs. 173–175; NEAGU, 1975, p. 79, pl. 59, fig. 2

**Dimensions:** length (fragment) 1,08–1,32 mm; breadth 0,72–0,55 mm; thickness 0,072–0,072 mm

**Type specimens:** L.P.B.IV. 12028

**Occurrence:** Bala III-Oltina drilling, Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Citharina harpa* (Roemer, 1841)**

Plate 15, Figs. 13–16; Plate 55, Fig. 14

*Vaginulina harpa* ROEMER 1841, p. 96, pl. 15, fig. 12; REUSS 1863, p. 46, pl. 4, figs. 5–7; EICHENBERG 1935, pl. 9, fig. 4; pl. 12, fig. 7

*Citharina harpa* (ROEMER) GORBATCHIK-SHOHINA 1960, p. 100, pl. 11, fig. 3

**Dimensions:** length 1,15 mm – 1,03 mm – 0,91 mm; breadth 0,40 mm – 0,43 mm – 0,26 mm; thickness 0,096 mm (all)

**Type specimen:** L.P.B.IV.11934

**Occurrence:** Bala III-Oltina drilling

**Stratigraphic distribution:** Lower Albian( L.tardefurcata zone).

**Genus *Planularia* Defrance, 1826**

***Planularia bradyana* (Chapman, 1894)**

Plate 16, Fig. 21; Plate 26, Figs. 40–41; Plate 27, Fig. 18; Plate 33, Fig. 31

*Cristellaria bradyana* CHAPMAN 1894, p. 654, pl. 10, fig. 13

*Planularia bradyana* (CHAPMAN) ten DAM 1950, p. 24, pl. 2, fig. 8; ANTONOVA 1969, p. 42, pl. 5, figs. 1–3; NEAGU 1975, p. 74, pl. 62, figs. 6–23

*Lenticulina (Planularia) bradyana* (CHAPMAN); FUCHS 1967, p. 300, pl. 12, fig. 9

**Dimensions:** length 0,58 mm – 0,40 mm – 0,36 mm – 0,36 mm; breadth 0,26 mm – 0,17 mm – 0,14 mm – 0,17 mm; thickness 0,096 mm – 0,072 mm – 0,48 mm – 0,96 mm

**Type specimens:** L.P.B.IV. 11935, 11936

**Occurrence:** 21 Buzescu core (575–580 m), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian (Hysteroeras orbignyi zone), Vraconian (Rotalipora appenninnica zone).

***Planularia vestita*** (Berthelin, 1880)

Plate 26, Fig. 38

*Cristellaria vestita* BERTHELIN 1880, p. 55, pl. 3, fig. 22

**Dimensions:** length 0,34–0,43 mm; breadth 0,17–0,19 mm; thickness 0,072–0,092 mm

**Type specimens:** L.P.B.IV. 11937

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroeras orbignyi zone).

Genus ***Vaginulina*** d'Orbigny, 1826

***Vaginulina marginulinoides*** REUSS, 1863

Plate 12, Figs. 17–18

*Vaginulina marginulinoides* REUSS 1863, p. 44, pl. 3, fig. 2

**Dimensions:** length 0,48–0,50 mm; breadth 0,4–0,014 mm

**Type specimens:** L.P.B.IV. 11938

**Occurrence:** Călărași drillings

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Vaginulina arguta*** REUSS, 1860

Plate 12, Fig. 23; Plate 18, Fig. 16; Plate 20, Fig. 29; Plate 34, Fig. 29

*Vaginulina arguta* REUSS 1860, p. 202, pl. 8, fig. 4; REUSS 1863, p. 47, pl. 3, fig. 13; BERTHELIN 1880, p. 42, pl. 2, fig. 7; CHAPMAN 1894, p. 425, pl. 8, fig. 9; EICHENBEG 1933, p. 10, pl. 8, fig. 5; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 38, pl. 5, fig. 104; pl. 6, fig. 136; MICHAEL 1967, p. 51, pl. 6, figs. 2, 5; NEAGU 1975, p. 87, pl. 65, figs. 3, 12; pl. 66, figs. 1–2, 7, 12, 16; pl. 67, fig. 3

**Dimensions:** length 0,62 mm – 0,98 mm – 1,08 mm; breadth 0,29 mm – 0,29 mm – 0,36 mm; thickness 0,12 mm – 0,12 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 11939, 11940, 11941

**Occurrence:** Călărași drillings, Giurgiu Pod, 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (Hoplites dentatus zone), Upper Albian (Rotalipora appenninnica zone).

***Vaginulina protosphaera*** Reuss, 1863

Plate 12, Figs. 24–25; Plate 15, Figs. 1–3; Plate 17, Fig. 14; Plate 18, Fig. 13; Plate 56, Fig. 9; Plate 57, Fig. 5

*Vaginulina protosphaera* REUSS 1863, p. 90, pl. 12, fig. 10

**Dimensions:** length 0,67 mm – 0,70 mm – 0,77 mm – 0,70 mm – 0,82 mm – 0,86 mm; breadth 0,26 mm – 0,29 mm – 0,26 mm – 0,26 mm – 0,26 mm – 0,26 mm; thickness 0,096 mm (all)

**Type specimens:** L.P.B.IV. 11942, 11943, 11944

**Occurrence:** drilling FV Călărași, Bala III-Oltina drilling, Giurgiu Pod

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (H. dentatus zone).

***Vaginulina truncata* Reuss, 1863**  
 Plate. 15, Fig. 4; Plate 17; Figs. 15–16, 18; Plate 56, Fig. 6

*Vaginulina truncata* REUSS 1863, p. 47, pl. 3, fig. 9; BERTHELIN 1880, p. 39, pl. 1, figs. 25–28; CHAPMAN 1894, p. 423, pl. 8, figs. 5–6; EICHENBERG 1935, p. 393, pl. 1, fig. 11; pl. 5, figs. 17, 32; pl. 110, fig. 4; BARTENSTEIN & BRAND 1951, p. 293, pl. 12a, fig. 15; GORBACHIK & SHOHINA 1960, p. 98, pl. 10, fig. 2

**Dimensions:** length 1,42 mm – 1,12 mm – 0,89 mm – 0,50 mm; breadth 0,50 mm – 0,48 mm – 0,50 mm – 0,24 mm; thickness 0,12 mm (all)

**Type specimens:** L.P.B.IV. 11955

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Vaginulina bicostulata* Reuss, 1860**  
 Plate 15, Figs. 5, Plate 30, Fig. 19

*Vaginulina bicostulata* REUSS 1860, p. 202, pl. 8, fig. 5a

**Dimensions:** length 0,94 mm – 0,84 mm – 0,72 mm; breadth 0,26 mm – 0,26 mm – 0,36 mm; thickness 0,12 mm (all)

**Type specimens:** L.P.B.IV. 11945, 11946

**Occurrence:** Bala III-Oltina drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Vraconian (Rotalipora asppenninnica zone).

***Vaginulina stolley* Eichenberg, 1933**  
 Plate 18, Fig. 5

*Vaginulina stolley* EICHENBERG 1933, p. 11, pl. 2, fig. 14

**Dimensions:** (fragment) length 0,89 mm; breadth 0,17 mm

**Type specimens:** L.P.B.IV. 11951

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Vaginulina eurynota* Reuss, 1863**

Plate 15, Fig. 6; Plate 18, Figs. 10, 11; Plate 20, Fig. 27; Plate 33, Fig. 29; Plate 56, Figs. 5, 7, 10

*Vaginulina eurynota* REUSS 1863, p. 90, pl. 12, fig. 9

**Dimensions:** length 0,43 mm – 0,67 mm; breadth 0,17 mm – 0,24 mm; thickness 0,096 mm – 0,096 mm

**Type specimens:** L.P.B.IV. 11947, 11948

**Occurrence:** drilling IV Călărași, Giurgiu Pod

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (Hoplites dentatus zone).

***Vaginulina incompta* Reuss, 1863**  
 Plate 17, Fig. 19

*Vaginulina incompta* REUSS 1863, p. 45, pl. 3, fig. 5; NEAGU 1965, p. 24, pl. 6, fig. 7; KAPTARENKO & CHERNOUSOVA 1967, p. 46, pl. 3, figs. 15–16

**Dimensions:** length 0,48 mm, breadth 0,19 mm

**Type specimens:** L.P.B.IV.11950

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Vaginulina recta* Reuss, 1863**

Plate 18, Figs. 6–9, 12; Plate 20, Fig. 26; Plate 26, Fig. 15; Plate 55,  
Figs. 11, 15; Plate 56, Figs. 4, 8

*Vaginulina recta* REUSS 1863, p. 48, pl. 3, figs. 14–15; BERTHELIN 1880, p. 41, pl. 2, figs. 5–6; CHAPMAN 1894, p. 422, pl. 8, fig. 1; FRANKE 1928, p. 82, pl. 7, figs. 27–28; TAPPAN 1943, p. 501, pl. 80, figs. 7–8; ten DAM 1950, p. 34; BARTENSTEIN & BRAND 1951, p. 293, pl. 6, fig. 156; SZTEJN 1957, p. 64, pl. 7, fig. 68; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 38, pl. 5, fig. 103; pl. 6, figs. 134–135; NEAGU 1965, p. 24, pl. 5, fig. 31; pl. 6, figs. 1–2; DIENI & MASSARI 1966, p. 151, pl. 6, figs. 10–12; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 153, pl. 3, figs. 250–253; MICHAEL 1967, p. 56, pl. 5, fig. 20; FUCHS 1967, p. 313, pl. 13, fig. 5; pl. 5, fig. 5; pl. 14, fig. 1; KAPTARENKO & CHERNOUSOVA 1967, p. 48, pl. 4, figs. 6–7; NEAGU 1975, p. 87, pl. 65, figs. 4–5

**Dimensions:** length 1,53 mm – 1,52 mm – 1,12 mm – 0,84 mm – 0,79 mm; breadth 0,23 mm – 0,29 mm – 0,27 mm – 0,26 mm – 0,12 mm – 0,19 mm; thickness 0,096 mm – 0,096 mm – 0,076 mm – 0,76 mm – 0,096 mm

**Type specimens:** L.P.B.IV. 11952, 11953

**Occurrence:** Giurgiu Pod, 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Middle Albian(Hoplites dentatus zone), Vraconian (Rotalipora appenninnica zone).

***Vaginulina longa* (Cornuel, 1848)**

Plate 18, Fig. 14; Plate 57, Figs. 3–4

*Planularia longa* CORNUEL 1848, p. 253, pl. 1, figs. 38–39

**Dimensions:** length 1,39 mm; breadth 0,39 mm; thickness 0,12 mm

**Type specimens:** L.P.B.IV. 11954

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Vaginulina kochii* Roemer, 1841**

Plate 18, Fig. 15; Plate 57, Fig. 6

*Vaginulina kochii* ROEMER 1841, p. 96, pl. 15, fig. 10; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 38, pl. 5, fig. 105; pl. 6, fig. 124; MICHAEL 1967, p. 54, pl. 6, fig. 3; NEAGU 1972, p. 212, pl. 6, fig. 2; NEAGU 1975, p. 84, pl. 64, fig. 32; pl. 65, figs. 7, 9, 11, 14–15, 18–20; pl. 66, fig. 9

**Dimensions:** length 1,03 mm; breadth 0,45 mm; thickness 0,14 mm

**Type specimens.** L.P.B.IV. 11955

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Vaginulina biochei* Berthelin, 1880**

Plate 30, Fig. 14; Plate 33, Fig. 27

*Vaginulina biochei* BERTHELIN 1880, p. 42, pl. 2, fig. 9; CHAPMAN 1894, p. 427, pl. 8, fig. 14; ten DAM 1950, p. 36, pl. 2, fig. 28; GORBATCHIK-SHOHINA 1960 p. 99, pl. 10, fig. 3

*Vaginulinopsis biochei* (BERTHELIN); KAPTARENKO-CHERNOUSOVA 1967, p. 49, pl. 4, fig. 3

**Dimensions:** length 0,50–0,67 mm; breadth 0,16–0,24 mm; thickness 0,048–0,048 mm

**Type specimens:** L.P.B.IV. 11936, 11949

**Occurrence:** 44 Bălăria core (625–627 m), 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora penninnica zone).

Genus *Citharinella* Marie, 1938

*Citharinella karreri* (Berthelin, 1880)

Plate 11, Figs. 16–19; Plate 55, Fig. 12; Plate 57, Figs. 9, 12, 14

*Flabellina karreri* BERTHELIN 1880, p. 62, pl. 4, figs. 1–3

*Citharinella chapmani* MARIE; NEAGU 1965, p. 25, pl. 6, fig. 17

**Dimensions:** length 1,56 mm – 1,34 mm – 1,20 mm; breadth 0,88 mm – 0,79 mm – 0,64 mm; thickness 0,096 mm (all)

**Type specimens:** L.P.B.IV. 5065, 11956

**Occurrence:** drilling H Călărași, Giurgiu Pod

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (Hoplites dentatus zone).

Family LAGENIDAE REUSS, 1862

Genus *Lagena* Walker & Jacob, 1798

*Lagena apiculata* Reuss, 1851

Plate 16, Figs. 22, 24; Plate 36, Fig. 1

*Oolina apiculata* REUSS 1851, p. 22, pl. 1, fig. 1

*Lagena apiculata* (REUSS); REUSS 1862, p. 318, pl. 1, figs. 4–9, 11; CHAPMAN 1893, p. 581, pl. 7, figs. 2–3; FRANKE 1928, p. 86, pl. 7, figs. 34–35; EICHENBERG 1933, p. 182, pl. 2, fig. 12; BROTZEN 1936, p. 109, pl. 7, fig. 2; TAPPAN 1940, p. 111, pl. 17, fig. 15; TAPPAN 1943, p. 503, pl. 80, fig. 31; CUSHMAN 1946, p. 94, pl. 39, fig. 23; HAGN 1953, p. 67, pl. 2, fig. 24; SZTEJN 1958, p. 41, fig. 96; EBENSBERGER 1962, p. 51, pl. 10, fig. 13

*Oolina apiculata* REUSS; TAPPAN 1962, p. 182, pl. 47, fig. 16; FUCHS 1967, p. 328, pl. 17, fig. 8

**Dimensions:** length 0,40 mm – 0,36 mm – 0,26 mm; thickness 0,26 mm – 0,21 mm – 0,16 mm

**Type specimens:** L.P.B.IV. 11957, 11958

**Occurrence:** Giurgiu Pod, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Vraconian (Rotalipora appenninica zone).

*Lagena oxystoma* Reuss, 1863

Plate 23, Fig. 17

*Lagena oxystoma* REUSS 1863, p. 335, pl. 5, fig. 66; FRANKE 1928, p. 88, pl. 8, fig. 5

**Dimensions:** length 0,21 mm; thickness 0,14 mm

**Type specimen:** L.P.B.IV. 11959

**Occurrence:** Vedea Valley-Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

*Lagena hispida* Reuss, 1858

Plate 23, Figs. 18–19, 20, 23

*Lagena hispida* REUSS 1862, p. 335, pl. 6, figs. 77, 79; CHAPMAN 1893, p. 582, pl. 8, figs. 9–10; FRANKE 1928, p. 88, pl. 8, figs. 4, 6

**Dimensions:** length 0,21–0,19 mm; thickness 0,19–0,14 mm

**Type specimens:** L.P.B.IV. 11960

**Occurrence:** Vedea Valley-Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

***Lagena emaciata*** Reuss, 1858

Plate 23, Fig. 21

*Lagena emaciata* REUSS 1862, p. 319, pl. 1, fig. 9; FRANKE 1928, p. 85, pl. 7, fig. 33

*Lagena apiculata emaciata* REUSS; CHAPMAN 1893, p. 581, pl. 8, figs. 4, 7; NEAGU 1975, p. 97, pl. 50, figs. 13–14, 16–17; pl. 69, figs. 24–27

**Dimensions:** length 0,24 mm; thickness 0,12 mm

**Type specimen:** L.P.B.IV. 11961

**Occurrence:** Vedea Valley – Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

***Lagena globosa*** (Montagu, 1803)

Plate 23, Fig. 22; Plate 33, Fig. 21; Plate 53, Fig. 19

*Lagena globosa* (MONTAGU); REUSS 1862, p. 318, pl. 1, figs. 1–3; CHAPMAN 1893, p. 579, pl. 8, fig. 1; SZTEJN 1957, p. 78, pl. 8, fig. 78; NEAGU 1965, p. 26, pl. 5, fig. 30; KAPTARENKO & CHERNOUSOVA 1967, p. 27, pl. 1, fig. 8

**Dimensions:** length 0,21–0,19 mm; thickness 0,14–0,16 mm

**Type specimens:** L.P.B.IV. 11962, 11963

**Occurrence:** Zimnicea drilling, 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Vraconian (Rotalipora appenninica zone).

***Lagena isabella*** d'Orbigny, 1839

Plate 33, Figs. 15, 22

*Lagena isabella* d'ORBIGNY; REUSS 1862 p. 330, pl. 4, figs. 55, 56; FRANKE 1928, p. 87, pl. 8, fig. 1; BROTZEN 1936, p. 111, pl. 7, fig. 5; BARTENSTEIN & BRAND 1951, p. 167; POZARYSKA 1957, p. 48, pl. 1, fig. 4; NEAGU 1975, p. 98, pl. 70, figs. 8–9

**Dimensions:** length 0,24–0,16 mm; thickness 0,14–0,096 mm.

**Type specimens:** L.P.B.IV. 11964

**Occurrence:** 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Family POLYMORPHINIDAE d'Orbigny, 1839

Subfamily POLYMORPHININAE d'Orbigny, 1839

Genus ***Eoguttulina*** Cushman & Ozawa, 1930

***Eoguttulina subsphaerica*** (Berthelin, 1880)

Plate 17, Fig. 14; Plate 23, Fig. 32; Plate 31, Figs. 11–12; Plate 35, Figs. 8–10; Plate 53, Fig. 15

*Polymorphina subsphaerica* BERTHELIN 1880, p. 58, pl. 4, fig. 18;

*Globulina lacrima subsphaerica* (BERTHELIN); CUSHMAN & OZAWA 1930, p. 78, pl. 19, figs. 5–7; CUSHMAN 1946, p. 97, pl. 40, fig. 13

**Dimensions:** length: 0,38 mm – 0,36 mm – 0,33 mm – 0,31 mm – 0,31 mm; thickness 0,21 mm – 0,19 mm – 0,21 mm – 0,19 mm – 0,19 mm.

**Type specimens:** L.P.B.IV. 11967, 11968, 11969

**Occurrence:** Zimnicea drilling, 44 Bălăria core (625–627 m), 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Vraconian (Rotalipora appenninica zone).

***Eoguttulina bucculenta*** (Berthelin, 1880)  
Plate 23, Figs. 26–29; Plate 35, Figs. 11–14

*Polymorphina bucculenta* BERTHELIN 1880, p. 58, pl. 4, figs. 16–17

*Globulina exerta* BERTHELIN; CUSHMAN & OZAWA 1930, p. 80, pl. 21, fig. 2

**Dimensions:** length 0,21 mm – 0,24 mm – 0,33 mm – 0,33 mm – 0,24 mm – 0,24 mm – 0,24 mm; thickness 0,12 mm – 0,14 mm – 0,14 mm – 0,12 mm – 0,14 mm – 0,14 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 11970, 11971

**Occurrence:** Zimnicea drilling, 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Vraconian (Rotalipora appenninica zone).

***Eoguttulina exerta*** (Berthelin, 1880)  
Plate 35, Figs. 15–18

*Polymorphyna exerta* BERTHELIN 1880, p. 57, pl. 4, figs. 22–23

*Globulina exerta* (BERTHELIN); CUSHMAN & OZAWA 1930, p. 80, pl. 20, fig. 2; BARTENSTEIN, BETTENSTAEDT & BOLLI 1957, p. 41, pl. 7, fig. 165; TAPPAN 1962, p. 183, pl. 47, figs. 20–23; DIENI & MASSARI, 1966, p. 156, pl. 6, figs. 26–27

**Dimensions:** length 0,45 mm – 0,45 mm – 0,38 mm – 0,38 mm; thickness 0,19 mm – 0,19 mm – 0,12 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11972

**Occurrence:** 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

***Eoguttulina fusus*** Fuchs, 1967  
Plate 27, Figs. 21–23; 27–28, Plate 31, Figs. 13–18

*Eoguttulina fusus* FUCHS 1967, p. 316, pl. 15, fig. 1

**Dimensions:** length 0,40 mm – 0,48 mm – 0,50 mm – 0,60 mm; thickness 0,19 mm – 0,19 mm – 0,19 mm – 0,21 mm

**Type specimens:** L.P.B.IV. 11973, 11974

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone), Vraconian (Rotalipora appenninica zone).

***Eoguttulina tenuicosta*** Neagu & Carnaru, 2001  
Plate 21, Figs. 33

*Eoguttulina tenuicosta* NEAGU-CARNARU 2001, p. 80, pl. 3, figs. 2–10; pl. 8, figs. 9–12

**Dimensions:** length 0,26–0,24 mm; thickness 0,14–0,12 mm

**Type specimens:** L.P.B.IV. 11975

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Genus ***Globulina*** d'Orbigny, 1839

***Globulina prisca*** Reuss, 1863

Plate 23, Figs. 30–31

*Globulina prisca* REUSS 1863 p. 79, pl. 9, figs. 8; BERTHELIN 1880, p. 57, pl. 4, fig. 20; BARTENSTEIN & BRAND 1951, p. 320, pl. 10, fig. 286; SZTEJN 1957, p. 75, pl. 9, fig. 83; TAPPAN 1962, p. 184, pl. 47, figs. 25–26; NEAGU 1965, p. 28, pl. 7, figs. 3–5; BARTENSTEIN, BETTENSTAEDT & BOLLI 1966, p. 158, pl. 3, figs. 286–292; FUCHS 1967, p. 316, pl. 15, figs. 9–10; KAPTARENKO & CHERNOUSOVA, 1967, p. 94, pl. 10, fig. 10; NEAGU 1970, p. 54, pl. 12, figs. 16–17; NEAGU 1972, p. 214, pl. 6, figs. 32, 35–36; NEAGU 1975, p. 100, pl. 76, figs. 34–44, 48–51

**Dimensions:** length 0,40 mm – 0,36 mm – 0,31 mm, thickness 0,19 mm – 0,14 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11976

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Genus ***Paleopolymorphina*** Cushman & Ozawa, 1930

***Paleopolymorphina* sp.**

Plate 37, Figs. 13

**Remarks:** One specimen from Bălăria core (625–627 m) Vraconian (Rotalipora appenninica zone) have a large size (over 2mm in length) and a fistulose aperture. Unfortunately the test is broken. The chambers disposition (so much as was possible to observe) is similar to the manner of the genus *Paleopolymorphina*. It is possible to represent a new taxa (species). Having only one specimen we prefer to not give a new name.

Dimensions length 2,01mm; thickness 0,28mm

**Type specimen:** L.P.B.IV. 11977

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Subfamily WEBBINELLINAE Rhumbler, 1904

Genus ***Histopomphus*** Loeblich & Tappan, 1949

***Histopomphus cervicornis*** (Chapman, 1892)

Plate 19, Figs. 18–19

*Ramulina cervicornis* CHAPMAN 1892, p. 584, pl. 12, fig. 11

*Vitriwebbina cervicornis* (CHAPMAN); EICHENERG 1935, p. 184, pl. 16, fig. 2

*Bullopora cervicornis* (CHAPMAN); TAPPAN 1943, p. 507, pl. 81, fig. 10

*Globulina cervicornis* (CHAPMAN); BULLARD 1953, p. 342, pl. 45, figs. 23–27

*Histopomphus cervicornis* (CHAPMAN); FRIZZELL 1954, p. 101, pl. 15, fig. 1; NEAGU 1965, p. 28, pl. 7, figs. 9–10

**Dimensions:** Unlimited, due to the branched aspect of the test

**Type specimens:** L.P.B.IV. 5076,

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Genus ***Vitriwebbina*** Chapman, 1892

***Vitriwebbina laevis*** (Sollas, 1877)

Plate 19, Fig. 16.

*Vitriwebbina laevis* (SOLLAS); CHAPMAN 1892, p. 585, pl. 12, fig. 12; FRIZZELL 1954, p. 107, pl. 15, fig. 5; NEAGU 1965, p. 28, pl. 7, fig. 13

*Bullopora laevis* (SOLLAS); TAPPAN 1943, p. 507, pl. 81, figs. 11–12; CUSHMAN 1946, p. 98, pl. 42, figs. 1–4; ten DAM 1950, p. 43

**Dimensions:** 1,17 mm

**Type specimens:** L.P.B.IV. 5075 12..

**Occurrence:** Giurgiu Pod, 11 Buzescu core (564–569 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Upper Albian (Hysteroconus orbignyi zone).

Subfamily RAMULININAE Brady, 1884

Genus ***Ramulina*** T. R. Jones, 1875

***Ramulina novaculeata*** Bullard, 1953

Plate 19, Fig. 17; Plate 27, Fig. 29; Plate 33, Figs. 24–26; Plate 53, Figs. 13–14; Plate 58, Fig. 5

*Ramulina novaculeata* BULLARD 1953, p. 346; NEAGU 1965, p. 28, pl. 7, figs. 17–18; NEAGU 1970, p. 56, pl. 12, fig. 5; NEAGU 1972, p. 213, pl. 6, figs. 27–31; NEAGU 1975, p. 102, pl. 78, figs. 1–6

**Remarks:** As already mentioned, this species has been confused with *Dentalina aculeata* d'Orbigny, but the designation of a new specific name has resolved the nomenclatural problem.

**Dimensions:** (fragments of the test) length 0,48 mm – 0,67 mm – 0,45 mm – 0,62 mm – 0,60 mm – 0,60 mm; thickness 0,12 mm – 0,33 mm – 0,19 mm – 0,24 mm – 0,42 mm – 0,21 mm.

**Type specimens:** L.P.B.IV. 5077, 5134, 11978, 11979, 11980

**Occurrence:** Călărași drillings, Giurgiu Pod, 21 Buzescu core (575–780 m), 138 Copăceni core (481–485 m), 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone), Middle Albian (Hoplites dentatus zone), Upper Albian.

***Ramulina globotubulosa*** Cushman, 1938

Plate 31, Figs. 10

*Ramulina globotubulosa* CUSHMAN; CUSHMAN 1946, p. 100, pl. 43, fig. 10

**Dimensions:** Thickness (fragments) 0,33–0,43 mm

**Type specimens:** L.P. B.IV. 11981

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

***Ramulina arkadelphiana*** Cushman & Parker, 1935

Plate 19, Figs. 20–21.

*Ramulina arkadelphiana* CUSHMAN & PARKER; CUSHMAN, 1946, p. 124, pl. 52, fig. 34

**Dimensions:** length 0,72–0,52 mm

**Type specimens:** L.P.B. IV. 12029

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Family ELLIPSOLAGENIDAE Silvester, 1923  
 Subfamily ELLIPSOLAGENINAE Silvester, 1923  
 Genus *Fissurina* REUSS, 1860  
*Fissurina alata* Reuss, 1851  
 Plate 33, Fig. 16

*Fissurina alata* REUSS 1851, p. 58, pl. 3, fig. 1; REUSS 1862, p. 339, pl. 7, fig. 87; FUCHS 1967, p. 327, pl. 17, fig. 12

*Lagena (Fissurina) alata* (REUSS); FRANKE 1928, p. 89, pl. 8, fig. 8

**Dimensions:** length 0,14 mm; breadth 0,12 mm; thickness 0,072 mm

**Type specimens:** L.P.B.IV. 11982

**Occurrence:** 138 Copăceni core (461–465 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Ord. BULIMINIDA Furstenko, 1958  
 Superfamily TURRILININACEA CUSHMAN, 1927  
 Family TURRILINIDAE CUSHMAN, 1927  
 Genus *Praebulimina* Hofker, 1953  
*Praebulimina minima* (Tappan, 1940)  
 Plate 35, Figs. 23–24

*Neobulimina minima* TAPPAN 1940, p. 117, pl. 19, fig. 56; FRIZZEL 1954, p. 116, pl. 17, fig. 13; GAWOR & BIEDOVA 1972, p. 54, pl. 5, fig. 2

**Dimensions:** length 0,21–0,19 mm; thickness 0,12–0,096 mm

**Type specimens:** L.P.B.IV. 11983

**Occurrence:** 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Superfamily BULIMINACEA Jones, 1981  
 Family SIPHOGENEROIDIDAE Saidova, 1981  
 Genus *Siphogenerina* Schlumberger, 1882  
*Siphogenerina asperula* (Chapman, 1896)  
 Plate 25, Fig. 25.

*Sagrina asperula* CHAPMAN, 1896, p. 58, pl. 12, fig. 1

*Uvigerina asperula* (CHAPMAN); EICHENBERG 1933, p. 18, pl. 1, fig. 3

*Siophogenerina asperula* (CHAPMAN); ten DAM 1950, p. 45; NEAGU 1965, p. 29, pl. 7, fig. 6

**Dimensions:** length 0,43 mm; thickness 0,19 mm

**Type specimens:** L.P.B. IV. 5135, 11984.

**Occurrence:** Vedea Valley, Putineiu core, Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

Superfamily PLEUROSTOMELLACEA REUSS, 1860  
 Family PLEUROSTOMELLIDAE REUSS, 1860  
 Subfamily PLEUROSTOMELLINAE REUSS, 1860  
 Genus *Pleurostomella* REUSS, 1860  
*Pleurostomella reussi* Berthelin, 1880  
 Plate 17, Figs. 20–22; Plate 54, Figs. 6, 8

*Pleurostomella reussi* BERTHELIN 1880, p. 28, pl. 1, figs. 10–12; ten DAM 1950, p. 44, pl. 3, fig. 15; GORBATCHIK & SHOHINA 1960, p. 115, pl. 18, fig. 7; NEAGU 1965, p. 30, pl. 7, figs. 27–28

**Dimensions:** length 0,86 mm – 0,69 mm – 0,67 mm; thickness 0,16 mm – 0,14 mm – 0,16 mm

**Type specimens:** L.P.B.IV. 5088, 11985

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

**Pleurostomella obtusa** Berthelin, 1880

Plate 17, Figs. 23–24; Plate 54, Fig. 7

*Pleurostomella obtusa* BERTHELIN 1880, p. 29, pl. 1, fig. 9; BARTENSTEIN 1954 , p. 41; NEAGU 1965, p. 29, pl. 7, figs. 29–32

**Remarks:** Presence of the specimens with the a globulous first chamber, is a confirmation of the opinion that *P. obtusa* represents a macrosphaeric (gamontic) generation of *P. Reussi*.

**Dimensions:** length 1,03–0,84 mm; thickness 0,21–0,19 mm

**Type specimens:** L.P.B.IV. 5080, 11985

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Genus ***Nodosarella*** Rzekak, 1895

***Nodosarella articulata*** Brotzen, 1936

Plate 27, Figs. 1–4; Plate 35, Figs. 20–22

*Nodosarella articulata* BROTZEN 1936, p. 139, pl. 9, fig. 10, text–fig. 49

*Clarella articulata* (BROTZEN); FUCHS 1967, p. 334, pl. 18, figs. 3–4

**Dimensions:** length 1,15 mm – 1,15 mm – 1,08 mm – 1,00 mm – 0,76 mm – 0,81 mm; thickness 0,21mm – 0,24 mm – 0,16 mm – 0,19 mm – 0,19 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11988, 11989

**Occurrence:** 21 Buzescu core (575–580 m), 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone)-Vraconian (Rotalipora appenninica zone).

***Nodosarella solida*** Brotzen, 1936

Plate 27, Figs. 5–7

*Nodosarella solida* BROTZEN 1936, p. 140, pl. 9, fig. 11

**Dimensions:** length 0,96 mm – 0,79 mm – 0,72 mm; thickness 0,14 mm – 0,14 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 11990

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone).

Genus ***Ellipsoidella*** Hallen & Earland, 1910

***Ellipsoidella pleurostomelloides*** (Franke, 1928)

Plate 27, Figs. 8–10

*Polymorphina pleurostomelloides* FRANKE, 1928, p. 121, pl. 11, fig. 11

**Dimensions:** length 0,52 mm – 0,48 mm – 0,43 mm – 0,30 mm; thickness 0,14 mm – 0,096 mm – 0,096 mm – 0,096 mm

**Type specimens:** L.P. B.IV. 11987

**Occurrence:** 21 Buzescu core (575–580 m)

**Stratigraphic distribution:** Upper Albian (Hysteroberas orbignyi zone).

Order ROTALIIDAE Lancaster, 1885  
Superfamily DISCORBACEA Ehrenberg, 1838  
Family BAGGINIDAE CUSHMAN, 1927  
Subfamily BAGGININAE CUSHMAN, 1927  
Genus *Valvulineria* CUSHMAN, 1926  
*Valvulineria loeterlei* (Tappan, 1940)  
Plate 21, Figs. 27–32; Plate 24, Figs. 1–9

*Gyroidina loeterlei* TAPPAN, 1940, p. 120, pl. 19, fig. 10; TAPPAN 1943, p. 512, pl. 82, fig. 9  
*Valvulineria gracillima* ten DAM; NEAGU 1965, p. 30, pl. 7, figs. 33–35  
**Dimensions:** diameter 0,24 mm – 0,21 mm – 0,28 mm – 0,19 – 0,21 mm; thickness 0,19 mm –

0,096 mm – 0,12 mm – 0,12 mm – 0,12 mm  
**Type specimens:** L.P.B.IV. 5073, 11991, 11992

**Occurrence:** Zimpica drilling, Veda Valley, Bu-

**Occurrence:** Zimnicea drilling, Vedeau Valley-Putineliu core  
**Stratigraphic distributions:** Middle Albion (terminal part)

## **Stratigraphic distributions. Middle Albian (terminal part).**

***Valvularia berthelini* Jannin, 1967**

Plate 31, Figs. 28–31; Plate 32, Figs. 19–20; Plate 34, Figs. 4–8; Plate 54, Fig. 5; Plate 60, Figs. 3–5.

*Valvulineria berthelini* JANNIN 1967, p. 159, pl. 2, figs. 8–11; pl. 3, figs. 10–12; pl. 4, fig. 3

**Dimensions:** diameter 0,36 mm – 0,31 mm – 0,26 mm – 0,31 mm – 0,33 mm – 0,33 mm – 0,31 mm; thickness 0,28 mm – 0,16 mm – 0,19 mm

**Type specimens:** L.P.B.IV. 11993, 12013

**Occurrence:** 138 Copăceni core (485 m), 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian-Vraconian.

## Family GLOBOROTALITIDAE Loeblich & Tappan, 1984

## Genus *Globorotalites* Brotzen, 1942

#### ***Globorotalites rumanus* Neagu, 1965**

Plate 21, Figs. 19–26; Plate 23, Figs. 12–16; Plate 29, Figs. 7–9; Plate 31, Figs. 19–27; Plate 54, Figs. 1–4

*Globorotalites brotzeni* HOFKER rumanus NEAGU 1965, p. 36, pl. 10, figs. 7-9

**Dimensions:** diameter 0,36 mm – 0,33 mm – 0,38 mm – 0,31 mm – 0,40 mm – 0,24 mm – 0,26 mm; thickness 0,21 mm – 0,16 mm – 0,21 mm – 0,16 mm – 0,36 mm – 0,12 mm – 0,14 mm

**Remarks:** In 1842 Roemer described and figured (p. 97, pl. 15, fig. 20) from Hilsthor am Hilse, *Rotalia sucata*. The same species was also described by Reuss, 1863 (p. 85, pl. 9, fig. 2) from the same deposits. Both figures are almost identical (of course more idealized) and shows convincing the affiliation to the genus *Globorotalites*. Having not the possibility to check this opinion on the original material if this one still exist – we consider natural, with incertitude, the identity between Roemer's species with ours species which become in such way a junior synonyme.

**Type specimens:** L.P.B.IV. 5144, 5197, 11994, 11995

**Occurrence:** Giurgiu Pod, Vedeau Valea-Putineu core, Zimnicea drilling, 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Middle Albian (*Hoplites dentatus* zone), Middle Albian (terminal part)-Vraconian (*Rotalipora appenninica* zone).

## Family HETEROLEPIDAE Gonzales &amp; Donoso, 1969

Genus *Heterolepa* Franzenau, 1884*Heterolepa gorbenkoi* (Akimez, 1961)

Plate 34, Figs. 21–23; Plate 36, Figs. 12–17

*Cibicides gorbenkoi* AKIMEZ; GAWOR & BIEDOVA 1972, p. 91, pl. 12, figs. 5–6**Dimensions:** diameter 0,48 mm – 0,43 mm – 0,43 mm – 0,36 mm – 0,52 mm; thickness 0,21 mm – 0,16 mm – 0,16 mm – 0,12 mm – 0,096 mm**Type specimens:** L.P.B.IV. 11996**Occurrence:** 44 Bălăria core (625–627 m)**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone)..

## Family GAVELINELLIDAE Hofker, 1956

Subfamily GAVELINELLINAE Hofker, 1956

Genus *Gavelinella* Brotzen, 1942*Gavelinella tormarpensis* Brotzen, 1942

Plate 13, Figs. 1–12, 22–24; Plate 14, Figs. 21–29; Plate 59, Figs. 1–7; Plate 60, Figs. 1–2, 9–10

*Gavelinella tormarpensis* BROTZEN 1942, p. 52, pl. 1, fig. 6*Gavelinella tormarpensis* BROTZEN; MALAPRIS 1965, p. 146, pl. 3, figs. 5–6**Dimensions:** diameter: 0,48 mm – 0,50 mm – 0,45 mm – 0,40 mm – 0,40 mm – 0,40 mm – 0,40 mm – 0,45 mm – 0,43 mm – 0,48 mm; thickness 0,16 mm – 0,16 mm – 0,14 mm – 0,12 mm – 0,14 mm – 0,12 mm – 0,12 mm – 0,12 mm – 0,12 mm – 0,14 mm**Type specimens:** L.P.B.IV. 11997, 11998**Occurrence:** Călărași drillings, Bala III-Oltina drilling**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).*Gavelinella rufis* (Reuss, 1863)

Plate 14, Figs. 1–9; Plate 20, Figs. 1–3, 7–9; Plate 27, Figs. 33–35, 39–40;

Plate 28, Figs. 10–12; Plate 59, Figs. 12–15

*Rosalina rufis* REUSS 1863, p. 87, pl. 11, figs. 7*Anomalina rufis* (REUSS); BERTHELIN 1880, p. 4, fig. 15; CHAPMAN 1898, p. 5, pl. 1, fig. 6; ten DAM 1950, p. 56, pl. 4, fig. 8*Gavelinella rufis* (REUSS); NEAGU 1965, p. 32, pl. .8, fig, 6; FUCHS 1967 p. 337, pl. 19, fig. 3**Dimensions:** diameter 0,31 mm – 0,33 mm – 0,28 mm – 0,33 – 0,31 mm – 0,28 mm – 0,28 mm – 0,28 mm; thickness 0,12 mm – 0,12 mm – 0,14 mm – 0,12 mm – 0,12 mm – 0,12 mm – 0,12 mm – 0,14 mm – 0,12 mm**Type specimens:** L.P.B.IV. 11999, 12000, 12001, 12002**Occurrence:** Giurgiu Pod, 179 Hărlești core (1165 m) Dumbravița core (2050 m), 11 Buzescu (570 m)**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Upper Albian (basal part Hysteroceras orbignyi zone), Vraconian (Rotalipora appenninica zone).*Gavelinella intermedia* (Berthelin, 1880)

Plate 20, Figs. 4–6, 13–14; Plate 24, Figs. 16–18, 28–36; Plate 27, Figs. 30–32, 36–38;

Plate 28, Figs. 1–3; Plate 29 Figs. 1–6; Plate 34, Figs. 9–11; Plate 60, Figs. 11–13

*Anomalina intermedia* BERTHELIN 1880, p. 67, pl. 4, fig. 14*Gavelinella intermedia* (BERTHELIN); MOULLADE-PORHAULT 1961, p. 221, pl. 3, figs. 17–19; TAPPAN 1962, p. 197, pl. 58, fig. 12; NEAGU 1965, p. 32, pl. 8, figs. 1–2; BARTENSTEIN, BETTENSTAEDT & BOLI 1966, p. 161, pl. 4, figs. 340–353

*Gavelinella intermedia* (BERTHELIN); MALLAPRIS 1965, p. 138, pl. 1, figs. 2, 3, 4, 6; pl. 2, fig. 2; FUCHS 1967, p. 336, pl. 19, fig. 6; GAWOR-BIEDOVA 1972, p. 120, pl. 15, figs. 7, 8, 9

**Dimensions:** diameter 0,31 mm – 0,33 mm – 0,36 mm – 0,31 mm – 0,33 mm – 0,31 mm – 0,31 mm – 0,36 mm – 0,40 mm; thickness 0,14 mm – 0,14 mm – 0,14 mm – 0,14 mm – 0,12 mm – 0,12 mm – 0,12 mm – 0,12 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 12003, 12004, 12005, 12006, 12007

**Occurrence:** Giurgiu Pod, Zimnicea drilling, Vedea Valley-Putineiu core, 11 Buzescu core (570 m), Dumbravița core (2050 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Middle Albian (terminal part), Upper Albian (basal part Hysteroconus orbignyi zone), Vraconian (S. dispar zone).

#### *Gavelinella belorussica* (Akimez, 1961)

Plate 20, Figs. 10–12, 18–20; Plate 29, Figs. 10–18; Plate 36, Figs. 7–11; Plate 59, Figs. 8–11

*Gavelinella belorussica* (AKIMEZ); GAWOR & BIEDOVA, 1972, p. 116, pl. 16, figs. 5–6

*Gavelinopsis infracretacea simionescui* NEAGU 1965, p. 32, pl. 8, figs. 4–7; pl. 9, figs. 1–2

**Dimension.** diameter 0,45 mm – 0,45 mm – 0,40 mm – 0,38 mm – 0,45 mm – 0,36 mm; thickness 0,12 mm – 0,12 mm – 0,072 mm – 0,096 mm.

**Type specimens:** L.P.B.IV. 12008, 5086, 5141, 5194

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

#### *Gavelinella schloenbachi* (Reuss, 1863)

Plate 24, Figs. 10–15; Plate 25, Figs. 7–12; Plate 28, Figs. 4–9

*Rotalia schloenbachi* REUSS 1863, p. 894, pl. 10, fig. 5

*Planulina schloenbachi* (REUSS); ten DAM 1950, p. 55, pl. 4, fig. 17; NEAGU 1965, p. 32, pl. 8, fig. 3

*Gavelinella (Gavelinella) schloenbachi* (REUSS); GAWOR & BIEDOVA 1972, p. 229, pl. 16, fig. 2

**Dimensions:** diameter 0,21 mm – 0,24 mm – 0,26 mm – 0,21 mm – 0,24 mm – 0,14 mm; thickness 0,096 mm (for all)

**Type specimens:** L.P.B.IV. 12009, 12010

**Occurrence:** Zimnicea drilling, Dumbravița core (2050 m).

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian-Vraconian (Rotalipora appenninica zone).

#### *Gavelinella emanueli* nom. nov. (pro *Rosalina complatata* REUSS, var. 1863)

Plate 14, Figs. 19–21; Plate 25, Figs. 1–3

(Non *Anomalina coproplanata* REUSS, 1851, p. 36, pl. 4, fig. 3)

**Derivation of name:** dedicated to August Emanuel von REUSS, who, in 1863, understood that it is a new taxa.

**Type-level:** Middle Albian (terminal part)

**Type locality:** Zimnicea drilling

**Type specimens:** L.P.B.IV. holotype 12011; paratype L.P.B.IV. 12036

**Description:** Low trochospiral test; spiral side low convex shows only partially the last anterior whorl, presents centrally a small calcareous boss; spiral sutures moderate-depressionary and arcuated. Umbilical side concave with a large umbilical area; umbilical sutures arcuated and reduced depressionary, presents periumbilical typical flaps very clear at the base of the last 2–5 chambers; peripheral to partial umbilical aperture presents a very thin lip; ogival to rounded periphery.

**Remarks:** In 1863, Reuss described from the Gault deposit of Northern Germany *Rosalina complanata* REUSS, var. (as a new taxa but he did not introduce a name)

He realized that the characters of the specimens from the Gault deposits are not the same with *Anomalina complanata* described by him in 1851 from the Senonian form Lemberg. Unfortunately, all the authors who studied Upper Cretaceous put the identity between these two species forgetting the Reuss's opinion (and text). For to correct this misunderstanding we propose a name for Reuss's variety from 1863 *Gavelinella emanueli* nom. nov.

**Dimensions:** diameter 0,31–0,31 mm; thickness 0,12–0,14 mm

**Stratigraphic distribution:** Middle Albian (terminal part).

***Gavelinella baltica* Brotzen, 1942**

Plate 32, Figs. 10–18; Plate 35, Figs. 25–30

*Gavelinella baltica* BROTZEN 1942, p. 50, pl. 1, fig. 7

*Anomalina (Gavelinella) baltica* (BROTZEN); VASSILENKO 1954, p. 76, pl. 7, fig. 2

*Gavelinella (Gavelinella) baltica* (BROTZEN); GAWOR-BIEDOVA 1972, p. 125, pl. 17, fig. 5

**Dimensions:** diameter 0,43 mm – 0,40 mm – 0,36 mm – 0,36 mm – 0,36 mm – 0,40 mm – 0,33 mm – 0,31 mm; thickness 0,21 mm – 0,16 mm – 0,16 mm – 0,16 mm – 0,14 mm – 0,19 mm – 0,14 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 12012, 12014

**Occurrence:** 138 Copăceni core (481–485 m), 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Upper Albian-Vraconian (Rotalipora appenninica zone).

***Gavelinella sagizensis* Myatliuk, 1954**

Plate 20, Figs. 15–17, 21–23

*Anomalina (Anomalina) sagizensis* MYATLIUK; VASILENKO 1954, p. 555, pl. 2, fig. 1

*Anomalina ex. gr. rufa* (REUSS); MYATLIUK, 1949, p. 219, pl. 5, fig. 1

**Dimensions:** diameter 0,28 mm – 0,28 mm – 0,28 mm; thickness 0,14 mm – 0,14 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 12015

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

***Gavelinella varsoviensis* Gawor & Biedova, 1972**

Plate 34, Figs. 12–20

*Gavelinella (Gavelinella) varsoviensis* GAWOR & BIEDOVA, 1972, p. 132, pl. 17, fig. 6

**Dimensions:** diameter 0,36 mm – 0,36 mm – 0,36 mm – 0,33 mm – 0,31 mm; thickness 0,12 mm – 0,12 mm – 0,12 mm – 0,096 mm – 0,096 mm

**Type specimens:** L.P.B.IV. 12034

**Occurrence:** 44 Bălăria (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

**Genus *Lingulogavelinella* Malapris, 1965**

***Lingulogavelinella ciry* Malapris & Bizouard, 1967**

Plate 24, Figs. 22–27; Plate 25, Figs. 4–6

*Lingulogavelinella ciry* MALAPRIS; BIZOUARD, 1967, p. 136, pl. 1, figs. 16–19; pl. 2, figs. 16–20

**Dimensions:** diameter 0,26 mm – 0,24 mm – 0,24 mm; thickness 0,096 mm – 0,096 mm – 0,12 mm

**Type specimens:** L.P.B.IV. 12016

**Occurrence:** Zimnicea drilling

**Stratigraphic distribution:** Middle Albian (terminal part).

***Lingulogavelinella cibicidoides*** Malapris, 1965

Plate 13, Figs. 13–15, 19–21, 25–27

*Lingulogavelinella cibicidoides* MALAPRIS 1965, p. 144, pl. 4, figs. 9–10

**Dimensions:** diameter 0,36 mm – 0,45 mm – 0,48 mm – 0,43 mm – 0,40 mm; thickness 0,14 mm – 0,12 mm

**Type specimens:** L.P.B.IV 12018

**Occurrence:** Bala III-Oltina drilling

**Stratigraphic distribution:** Lower Albian (L. tardefurcata zone).

***Lingulogavelinella asterigerinoides*** (Plummer, 1931)

Plate 52, Figs. 4–9; Plate 60, Figs. 6–10

*Valvularia asterigerinoides* PLUMMER 1931, p. 190, pl. 14, fig. 10; TAPPAN 1940, p. 120, pl. 19, fig. 9; TAPPAN 1943, p. 511, pl. 82, figs. 10–11

*Lingulogavelinella albiensis* MALAPRIS 1965, p. 140, pl. 4, figs. 5–8

*Lingulogavelinella albiensis albiensis* MALAPRIS; MALAPRIS-BIZOUARD 1967, p. 132, pl. 1, figs. 4–9; pl. 2, figs. 6–10

*Lingulogavelinella asterigerinoides asterigerinoides* (PLUMMER); GAWOR-BIEDOVA 1972, p. 101, pl. 14, fig. 5

*Lingulogavelinella aff. frankei* (BYKOVA); MALAPRIS 1965, p. 140, pl. 4, figs. 1–4

**Dimensions:** diameter 0,36 mm – 0,28 mm – 0,36 mm – 0,36 mm – 0,26 mm – 0,38 mm – 0,33 mm – 0,36 mm – 0,36 mm; thickness 0,14 mm – 0,12 mm – 0,14 mm – 0,14 mm – 0,12 mm – 0,14 mm – 0,14 mm – 0,14 mm – 0,12 mm

**Remarks:** This species, clearly differs from *Falsogavelinella umbilicitecta* Fuchs, with which is very easy to be confused, by its umbilical side larger-concave and presenting umbilical flaps around the umbilicus which are absent to the Fuchs's species; the sutures on the spiral side are simple, depressionary-arcuate.

**Type specimens:** L.P.B.IV. 12033

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone).

Genus ***Falsogavelinella*** Neagu, n. g.

**Type species:** *Falsogavelinella umbilicitecta* (FUCHS, 1967)

**Derivation of name:** latin falsus-a-um = false (a false *Gavelinella*)

**Type level:** Upper Albian

**Type locality:** 44 Bălăria core (625–627 m)

**Description:** Low trochospiral test, with a convex spiral side and a concave umbilical one; 4–6 chambers in the last whorl with a globulous aspect; peripheral side of the test is rounded till a fable subangular aspect, but without a keel; aperture a low opening with a reduce lip has an equatorial till equatorial-umbilical position; umbilical side with a depressionary aspect, without any tendency to present perumbilical lips, suture fable, depressionary and arcuated; on the spiral side sutures are well developed and with large flaps giving a stellate aspect of the central part of the convex spiral side.

**Remarks:** This genus fundamentally differs from the adjacent genera *Gavelinella* and *Lingulogavelinella* by the presence of the spiral (not umbilical) flaps which give an little star aspect. Fuchs present a correct figuration but he did not realise that the depressionary side of the test correspond to the umbilical one and the convexe one with the star aspect of the suture, to the spiral one.

***Falsogavelinella umbilicitecta* (Fuchs, 1967)**

Plate 28, Figs. 25–35; Plate 32, Figs. 1–9; Plate 37, Figs. 14–24; Plate 71, Figs. 3–4

*Gavelinella umbilicitecta* FUCHS 1967, p. 237, pl. 19, figs. 5a–c

**Dimensions:** diameter 0,26 mm – 0,24 mm – 0,26 mm – 0,28 mm – 0,24 mm – 0,21 mm – 0,19 mm – 0,33 mm – 0,43 mm – 0,36 mm – 0,31 mm; thickness 0,072 mm – 0,096 mm – 0,096 mm – 0,14 mm – 0,096 mm – 0,096 mm – 0,14 mm – 0,16 mm – 0,14 mm – 0,14 mm

**Type specimens:** L.P.B.IV. 12017, 12019, 12020, 12021

**Occurrence:** 11 Buzescu core (570 m), 44 Bălăria core (625–627 m), Dumbravița core (2050 m)

**Stratigraphic distribution:** Upper Albian (Hysterooceras orbignyi zone), Vraconian (Rotalipora appenninica zone).

Order GLOBIGERINIDA Carpenter & Parker & Jones, 1862

Superfamily HETEROHELICACEA CUSHMAN, 1927

Family HETEROHELICIDAE CUSHMAN, 1927

Subfamily GUBLERININAE Aliyulla, 1977

Genus *Bifarina* Parker & Jones, 1872

***Bifarina calcarata* (Berthelin, 1880)**

Plate 21, Fig. 18; Plate 35, Fig. 19; Plate 58, Figs. 1–2

*Bigenerina calcarata* BERTHELIN 1880, p. 27, pl. 1, figs. 14–15

*Sagrina calcarata* (BERTHELIN); CHAPMAN, 1892, p. 15, pl. 2, fig. 1

*Bifarina calcarata* (BERTHELIN); BARTENSTEIN 1954, p. 40; NEAGU 1965, p. 29, pl. 7, figs. 11–12; GAWOR-BIEDOVA 1972, p. 62, pl. 5, fig. 7

**Dimensions:** length 0,31–0,43 mm; thickness 0,072–0,096 mm

**Type specimens:** L.P.B.IV. 5079, 12023, 12024

**Occurrence:** Giurgiu Pod, 138 Copăceni core (481–485 m)

**Stratigraphic distribution:** Middle Albian (Hoplites dentatus zone), Vraconian (Rotalipora appenninica zone).

Superfamily PL. ANOMALINACEA Bolli & Loeblich & Tappan, 1957

Family GLOBIGERINELLOIDAE Longoria, 1974

Genus *Globigerinelloides* Cushman & ten Dam, 1948

***Globigerinelloides bentonensis* (Morrow, 1934)**

Plate 38, Figs. 42–43; Plate 42, Figs. 4–10

*Anomalina bentonensis* MORROW; CUSHMAN 1946, p. 154, pl. 63, fig. 7

*Globigerinelloides bentonensis* (MORROW); LOEBLICH & TAPPAN 1961, p. 267, pl. 2, figs. 8–10; TODD 1964, p. 400, pl. 1, figs. 3–4; CARON 1985, p. 47, pl. 29, figs. 8–9; NEAGU 2006, p. 316, pl. 1, figs. 22–24; pl. 4, figs. 28–29

**Dimensions:** larger diameter 0,19–0,26 mm; small diameter 0,17–0,21 mm

**Type specimens:** L.P.B.IV. 11679, 11680, 111688

**Occurrence:** Vedea Valley-Putineiu core, Zimnicea drilling, 11 Buzescu core (504 m – 508 m – 64 m)

**Stratigraphic distribution:** Middle Albian (upper parte)-Upper Albian (Hysterooceras orbognyi zone).

***Globigerinelloides eaglefordensis*** (Moreman, 1927)  
Plate 42, Figs. 1–3

*Globigerinelloidea eaglefordensis* (MOREMANN); LOEBLICH & TAPPAN 1961, p. 268, pl. 2, figs. 3–7; NEAGU 2006, p. 316, pl. 1, figs. 22–24

**Dimensions:** larger diameter 0,31 mm – 0,24 mm – 0,16 mm – 0,21 mm; small diameter 0,26 mm – 0,16 mm – 0,16 mm – 0,16 mm; thickness 0,096 mm – 0,072 mm – 0,072 mm – 0,072 mm

**Remarks:** This species differs from *G. bentonensis* by its evolut-involute coiling test near planispiral.

**Type specimens:** L.P.B.IV. 11681

**Occurrence:** 44 Bălărie core (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

***Globigerinelloides carseyiae*** Bolli & Loeblich & Tappan, 1957

Plate 42, Figs. 11–29; Plate 43, Figs. 1–6; Plate 71, Figs. 5–8; Plate 75, Figs. 4–6

*Globigerinelloides carseyiae* BOLLI, LOEBLICH & TAPPAN 1957, p. 24, pl. 1, figs. 4–5.

**Dimensions:** larger diameter 0,24 mm – 0,24 mm – 0,21 mm – 0,24 mm – 0,24 mm – 0,24 mm; small diameter 0,16 mm – 0,16 mm – 0,19 mm – 0,19 mm – 0,16 mm – 0,19 mm; thickness of the last chamber 0,12 mm (for all the measured specimens)

**Remarks:** *G. carseyiae* differs from *G. bentonensis* by the much more globulous aspect of the last chambers which become very globulos. From *G. eaglefordensis* differs by the clear involute and bimarginate test.

**Type specimens:** L.P.B.IV. 12038, 12039

**Occurrence:** 11 Buzescu core (570 m), 604 Șopârlia-Siliștea core (1301–1302 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian (Hysteroeras orbignyi zone).

Family PLANOMALINIDAE Bolli & Loeblich & Tappan, 1957

Genus ***Planomalina*** Loeblich & Tappan, 1946

***Planomalina buxtorfi*** (Gandolfi, 1942)

Plate 41, Figs. 20–23; Plate 73, Figs. 1–2

*Planulina buxtorfi* (GANDOLFI); SIGAL 1952, p. 23, fig. 22

*Planomalina buxtorfi* (GANDOLFI); LOEBLICH & TAPPAN 1961, p. 269, pl. 2, figs. 1–2; CARON 1985, p. 65, pl. 29, figs. 1–2; NEAGU 2006, p. 316, pl. 2, figs. 22–23; pl. 7, figs. 12–19

**Dimensions:** small diameter 0,26–0,39 mm; larger diameter 0,31–0,50 mm

**Type specimens:** L.P.B.IV. 11682, 11683

**Occurrence:** Glogoveanu core (1700–1705 m), Dumbravița core (2050 m)

**Stratigraphic distribution:** Vraconian (S. dispar zone).

Family SCHACKOINIDAE Pokorny, 1958

Genus ***Schackoina*** Thalmann, 1932

***Schackoina primitiva*** Tappan, 1940

Plate 41, Fig. 24; Plate 43, Figs. 25–26

*Schackoina primitiva* TAPPAN 1940, p. 123, pl. 18, fig. 14; LOEBLICH & TAPPAN 1961, pl. 272, pl. 1, fig. 1

*Schackoina sp.* NEAGU 1965, p. 36, pl. 10, fig. 5

**Dimensions:** small diameter 0,24 mm; larger diameter 0,34 mm

**Type specimens:** L.P.B.IV. 11685

**Occurrence:** Vede Valley-Putineiu core

**Stratigraphic distribution:** Middle Albian (terminal part).

***Schackoina cenomana* (Schako, 1897)**

Plate 43, Fig. 27; Plate 47, Figs. 16–17; Plate 48, Figs. 13–14; Plate 49, Figs. 27

*Siderolina cenomana* SCHACKO-EGGER 1900, p. 174, pl. 21, fig. 42; FRANKE 1928, p. 193, pl. 18, fig. 11

*Schackoina cenomana* (SCHACKO); MONTANARO & GALITELLI 1955, p. 143, pl. 3, BOLLI, LOEBLICH & TAPPAN 1957, p. 26, pl. 2, figs. 1–2; LOEBLICH & TAPPAN 1961, p. 270, pl. 1, figs. 2–7; NEAGU 1966, p. 365, pl. 1, fig. 12

**Dimensions:** larger diameter 0,17–0,17 mm; small diameter 0,17–0,092 mm

**Type specimens:** L.P.B.IV. 11686, 12040

**Occurrence:** 44 Bălăria core (625–627 m), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Superfamily HEDBERGELLIDAE Loeblich & Tappan, 1961

Family HEDBERGELLIDAE Loeblich & Tappan, 1961

Subfamily HEDBERGELLINAE Loeblich & Tappan, 1961

Genus *Hedbergella* Bronimann & Brown, 952

***Hedbergella rischi* Moullade, 1974**

Plate 38, Figs. 1–23; Plate 61, Figs. 1–2, 8, Plate 62; Figs. 1–6, 11; Plate 63, Figs. 5–8,

Plate 64, Figs. 3–5, 7–9, 11–12; Plate 65, Figs. 10–12; Plate 66, Fig. 7

*Hedbergella (H.)* sp. aff. *infracretacea* (GLAESNER); MOULLADE 1966, p. 89, pl. 8, figs. 6–9  
*Hedbergella rischi* MOULLADE 1974, p. 1816; NEAGU 2006, p. 316, pl. 1, figs. 1–12

**Dimensions:** small diameter 0,17–0,19 mm; larger diameter 0,17–0,19 mm

**Remarks:** (By the total unusual manner to carried out a new species as Dr. M. Moullade used, this species was not considered by authors , excepting Dr. J. Sigal).

By the reduced number of chambers on the last whorl (4–6) and the globulous aspect of its, this species differs from *H. planispira* with which is ordinary in assamblage at the Hoplites dentatus zone of Middle Albian.

**Type specimens:** L.P.B.IV. 11637, 11638, 11639

**Occurrence:** Balla III-Oltina drilling, Călărași drilling, Giurgiu Pod, Zimnicea drilling, Vede Valley-Putineiu core, Șopârlița-Siliștea core (1301–1302 m), Hărlești core with *Protohoplites* (1169–1170 m), Ostrov-Bugeac Lake

**Stratigraphic distribution:** Lower Albian (L. tardefurcata – terminal part), Middle Albian (Hoplites dentatus zone), Middle Albian (terminal part).

***Hedbergella planispira* (Tappan, 1940)**

Plate 38, Figs. 24–32; Plate 61, Figs. 3–7; Plate 65, Figs. 1–3, 6–9

*Globigerina planispira* TAPPAN 1940, p. 122, pl. 19, fig. 12; TAPPAN 1943, p. 513, pl. 83, figs. 3

*Hedbergella planispira* (TAPPAN); LOEBLICH-TAPPAN 1961, p. 276, pl. 5, figs. 4–17; NEAGU 1965, p. 36, pl. 10, fig. 1 (not figs. 2–4); CARON 1985, p. 59, pl. 25, figs. 23–24; NEAGU 2006, p. 316, pl. 1, figs. 13–21

**Dimensions:** larger diameter 0,17 mm – 0,19 mm – 0,14 mm – 0,14 mm – 0,24 mm; small diameter 0,14 mm – 0,17 mm – 0,12 mm – 0,12 mm – 0,19 mm

**Remarks:** By a so small test (not more than 0,2 mm diameter) and by a clear planispiral coiling this species is very well delimited.

**Type specimens:** L.P.B.IV. 11641, 11642, 11643

**Occurrence:** Bala III-Oltina drilling (right bank of the Danube River), Chiciu, Călărași drillings (left bank of the Danube River), Giurgiu Pod, Vedea Valley-Putineiu core, 44 Bălăria core (625–627 m), Ostrov-Bugeac Lake, Hărlești core with *Protohoplites* (1165–11670 m), 604 Șopârlița-Siliștea core (1301–1302 m)

**Stratigraphic distribution:** Lower Albian (L. *tardefurcata* zone) til Upper Albian (S. *dispar* zone).

***Hedbergella trochoidea* (Gandolfi, 1942)**

Plate 38, Figs. 38–41; Plate 39, Figs. 13–14; Plate 67, Figs. 3–7

*Anomalina lorneiana* var. *trochoidea* GANDOLFI 1942, p. 99, pl. 2, fig. 1

*Hedbergella trochoidea* (GANDOLFI); LOEBLICH & TAPPAN 1961, p. 277, pl. 5, figs. 1–2; TODLOW 1964, p. 403, pl. 2, figs. 1–2; CARON 1985, p. 60, pl. 25, figs. 17–18; NEAGU 2006, p. 317, pl. 2, figs. 2; pl. 7, figs. 7–11

*Hedbergella planispira* TAPPAN; NEAGU 1965, pl. 10, figs. 2–4, (not figs. 1–2)

**Dimensions:** larger diameter 0,21 mm – 0,29 mm – 0,31mm – 0,34 mm – 0,24 mm – 0,36 mm; small diameter 0,199 – 0,21 mm – 0,24 mm – 0,24 mm – 0,24 mm – 0,31 mm

**Remarks:** The hispid aspect of the chambers, clear trochospiral coiling and the large umbilical aperture are distinctive charaters of this species.

**Type specimens:** L.P.B.IV. 11644, 11645

**Occurrence:** Vedea Valley-Putineiu core, Zimnicea drilling, 11 Buzescu core (570 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian (Hysteroeras orbignyi zone).

***Hedbergella gautirensis* (Bronnimann, 1952)**

Plate 39, Figs. 24–32; Plate 62, Fig. 12; Plate 63, Figs. 1–4; Plate 65, Figs. 4–5; Plate 66, Figs. 8–12; Plate 67, Fig. 9; Plate 69, Figs. 11–12; Plate 73, Figs. 11–12

*Globigerina gautirensis* (BRONNIMANN) 1952, p. 11, pl. 1, figs. 1–3, text–figs. 2 a–m

*Praeglobotruncana gautirensis* (BRONNIMANN); BOLLI 1959, p. 265, pl. 21, figs. 3–6

*Hedbergella gautirensis* (BRONNIMANN); NEAGU 2006, p. 317, pl. 2, figs. 1–6

**Dimensions:** larger diameter 0,21–0,24 mm; small diameter 0,17–0,19 mm

**Remarks:** By the flat aspect of the spiral side this species differs from *H. trochoidea* to which is close. The absence of a peripheral keel make the difference from the genus *Praeglobotruncana*.

**Type specimens:** L.P.B.IV. 11646, 11647, 11648

**Occurrence:** Vedea Valley-Putineiu core, Zimnicea drilling, 11Buzescu core (564–560 m)

**Stratigraphic distribution:** Middle Albian (terminal part), Upper Albian (Hysterocer as orbignyi zone, basal part).

***Hedbergella simplicissima* (Magne & Sigal, 1954)**

Plate 39, Figs. 15–23

*Hastigerinella simplicissima* MAGNE-SIGAL 1954, p. 487, pl. 14, fig. 11

*Hedbergella simplicissima* (MAGNE-SIGAL); CARON 1985 p. 147, text–fig. 3; NEAGU 2006, p. 317. pl. 2, fig. 24

**Dimensions:** larger diameter 0,39 mm – 0,31mm – 0,31mm; small diameter 0,26 mm – 0,17 mm – 0,24 mm

**Remarks:** This species differs from *H. simplex* (Morrow) 1934 from the Upper Cretaceous – Kansas, after the original description by "des loges moins allongées la dernière en particulier et par un nombre habituellement plus élevé de loges".

**Occurrence:** 44 Bălăria core (625–627 m), 1795 Glogoveanu core (1700–1705 m)

**Stratigraphic distribution:** Vraconian (S. dispar zone – Rotalipora appenninica zone).

***Hedbergella delrioensis* (Carsey, 1926)**

Plate 39, Figs. 4–12

*Globigerina cretacea* var. *delrioensis* CARSEY 1926, p. 43

**Dimensions:** larger diameter 0,34–0,31 mm; small diameter 0,26–0,24 mm

**Type specimens:** L.P.B.IV 12041

**Occurrence:** 44 Bălăria core (625–627 m), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone),

***Hedbergella gorbachikae* Longoria, 1974**

Plate 39, Figs. 1–3

*Hedbergella gorbachikae* LONGORIA 1974, p. 56, pl. 15, figs. 11–13; CARON 1985, p. 59, pl. 25, figs. 8–9

**Dimensions:** larger diameter 0,26 mm; small diameter 0,24 mm

**Type specimen:** L.P. IV. 11640

**Occurrence:** Vedea valley, Putineiu core, Giurgiu Pod

**Stratigraphic distribution:** Middle Albian.

**Genus *Rugohedbergella* Neagu, 2006**

***Rugohedbergella mutziui* Neagu, 2006**

Plate 41, Figs. 1–16; Plate 69, Figs. 10; Plate 74, Figs. 8–12

*Rugohedbergella mutziui* NEAGU 2006, p. 317, pl. 3, figs. 1–33

**Dimensions:** larger diameter 0,39 mm – 0,36 mm – 0,29 mm; small diameter 0,34 mm – 0,31 mm – 0,24 mm

**Type specimens:** L.P.B.IV. 11649, 11650

**Occurrence:** Glogoveanu core

**Stratigraphic distribution:** Vraconian ( Planomalina buxtorfi zone).

Subfamily ROTUNDININAE Bellier & Salaj, 1977

Genus ***Praeglobotruncana*** Bermudez, 1952

***Praeglobotruncana delrioensis* (Plummer, 1931)**

Plate 42, Figs. 30–35

*Globorotalia delrioensis* PLUMMER 1931, p. 199, pl. 13, fig. 2

*Praeglobotruncana delrioensis* (PLUMMER); LOEBLICH & TAPPAN 1961, p. 280, pl. 6, figs. 9–12; TODLOW 1964, p. 404, pl. 2, figs. 4; CARON 1985, p. 65, pl. 30, figs. 1–2

**Dimensions:** larger diameter 0,48 mm – 0,38 mm – 0,45 mm – 0,38 mm; small diameter 0,43 mm – 0,36 mm – 0,38 mm – 0,31 mm

**Type specimens:** L.P.B.IV. 11678

**Occurrence:** 44 Bălăria core (625–627 m), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

Family GLOBULIGERINIDAE Loeblich & Tappan, 1984

Genus *Conoglobigerina* Morozova, 1961

*Conoglobigerina graysonensis* (Tappan, 1940)

Plate 53, Figs. 1–15

*Globigerina graysonensis* TAPPAN 1940, p. 122, pl. 19, figs. 15–17; BOLLI, 1959, p. 270, pl. 23, figs. 1, 2

*Gubkinella graysonensis* (TAPPAN); PFLAUMANN & KRASHENINICOV 1977, p. 546, pl. 1, figs. 9–11

*Conoglobigerina* (?) *graysonensis* (TAPPAN); GORBACHIK 1986, p. 81

**Dimensions:** small diameter 0,096 mm – 0,12 mm – 0,12 mm – 0,12 mm; larger diameter 0,096 mm – 0,12 mm – 0,144 mm – 0,144 mm; high 0,072 mm – 0,096 mm – 0,072 mm – 0,096 mm

**Remarks:** Specimens from the Hoplitan deposits from Giurgiu Pod (Giurgiu-Ruse bridge) with a very small size and a high trochospiral coiling, differs clear from *Hedbergella rischi* and *H. planispira* with which are in association, but in symbolic frequency. Bolli (1959) considers that the Tappan's species *G. graysonensis* have a long range until Albian. Pflaumann-Krasheninicov (1977) put Tappan's specie in the genus *Gubkinella* with a range from late Hauterivian til early Albian. Gorbachik (1985, p. 81) emending the genus *Conoglobigerina* Morozova 1961 considers that Tappan's species is possible to belong to Morozova's genus. We consider this oppinion correct.

**Type specimens:** L.P.B.IV 12049

**Occurrence:** Giurgiu Pod

**Stratigraphic distribution:** Middle Albian (Hoplitan).

Family ROTALIPORIDAE Sigal, 1958

Subfamily TICINELLINAE Longoria, 1974

Genus *Ticinella* Reichel, 1950

*Ticinella primula* Luterbacher, 1964

Plate 39, Figs. 36–38; Plate 40, Figs. 1–4, 35; Plate 61, Figs. 9–12; Plate 62, Figs. 7–10;

Plate 63, Figs. 9–12; Plate 64, Figs. 1–2, 6, 9–10; Plate 66, Figs. 1–2; Plate 67, Figs. 1–2

*Ticinella primula* LUTERBACHER; RENZ, LUTERBACHER & SCHNEIDER 1964, p. 1085, figs. 4 a–c; SIGAL 1966, p. 198, pl. 3, figs. 11–14; pl. 4, figs. 1–9; CARON 1985, p. 79, pl. 37, figs. 6–7; NEAGU 2006, p. 318, pl. 2, figs. 12–17

**Dimensions:** larger diameter 0,26 mm – 0,24 mm – 0,21mm – 0,24 mm; small diameter 0,21 mm – 0,19 mm – 0,14 mm – 0,21 mm

**Remarks:** The globulous aspect of the chambers in the last whorl and the almost planspiral coiling individualizes well this species.

**Type specimens:** L.P.B.IV. 11652, 11653, 11654

**Occurrence:** Craiova core, Bala III-Oltina drilling, Chiciu, Călărași drillings, Soparlița-Siliștea core (1301–1302 m), Giurgiu Pod, Hărlești core (1165–1170 m), Glavacioc core (1625–1627 m)

**Stratigraphic distribution:** Lower Albian (*L. tardifurcata* zone), Middle Albian (Hoplites dentatus zone), Middle Albian (upper part).

***Ticinella roberti* (Gandolfi, 1942)**

Plate 43, Figs. 7–9; Plate 68, Fig. 12; Plate 70, Figs. 1–3; Plate 73, Figs. 3–5

*Anomalina roberti* GANDOLFI 1942, p. 100, pl. 2, figs. 2a–c

*Globotruncana (Ticinella) roberti* (GANDOLFI); REICHEL 1950, p. 600. text–figs. 1a–c, pl. 16, fig. 1; pl. 17, fig. 1

*Rotalipora roberti* (GANDOLFI); LOEBLICH & TAPPAN 1961, p. 41, pl. 10, figs. 1

*Ticinella roberti* (GANDOLFI); SIGAL 1952, p. 24, text–fig. 19; LOEBLICH & TAPPAN 1961, p. 294, pl. 6, fig. 14; CARON 1985, p. 79, pl. 36, figs. 13–15

**Dimensions:** large diameter 0,33 mm – 0,33 mm – 0,33 mm – 0,28 mm – 24 mm – 0,24 mm – 0,21 mm; small diameter 0,28 mm – 0,28 mm – 0,24 mm – 0,26 mm – 0,21 mm – 0,19 mm – 0,19 mm

**Remarks:** Test with an evolute-involute coiling, small globulous chambers growing gradually, 6–8 on the last whorl, are the distinctive characters of this species.

**Type specimens:** L.P.B.IV. 12042, 12043, 12044

**Occurrence:** 11 Buzescu core (575–580 m) with *Scaphites*, Dumbravița core, Dumbrava core (with *P. majoriana*), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Albian.

***Ticinella madecassiana* Sigal, 1966**

Plate 40, Figs. 14–25; Plate 70, Figs. 4–12.

*Ticinella madecassiana* SIGAL 1966, p. 197, pl. 3, figs. 7–10; CARON 1985, p. 76, pl. 36, fig. 45

SHULAMIT–LIPSON–BENITAH–AHUVA ALMAGI–LOBIN 2000, p. 12, pl. 1, figs. 6–8; NEAGU 2006, p. 318

**Dimensions:** larger diameter 0,31 mm – 0,31 mm – 0,25 mm – 0,28 mm – 0,28 mm – 0,24 mm; small diameter 0,21 mm – 0,24 mm – 0,24 mm – 0,26 mm – 0,21 mm – 0,19 mm

**Remarks:** The reduce number of chambers on the last whorl (3–4–5), the globulous aspect of its, lobate and rounded periphery together with a low trochospiral coiling of the test separate clear this species from the neighbour *T. praeticinensis*.

**Type specimens:** L.P.B.IV. 11660

**Occurrence:** Hărlești core (marls with *Anysoceras*), 11 Buzescu core (575–580 m, marls with *Hysteroberas*)

**Stratigraphic distribution:** Upper Albian (*Hysteroberas orbignyi* zone).

***Ticinella raynaudi* Sigal, 1966**

Plate 39, Figs. 33–35; Plate 68, Figs. 1–7

*Ticinella raynaudi* SIGAL 1966, p. 200, pl. 5, figs. 10, pl. 6, figs. 1–13; NEAGU 2006, p. 318, pl. 1, figs. 25–27

**Dimensions:** larger diameter 0,33 mm – 0,33 mm – 0,33 mm – 0,31 mm – 0,33 mm – 0,26 mm – 0,28 mm; small diameter 0,24 mm – 0,28 mm – 0,24 mm – 0,24 mm – 0,28 mm – 0,24 mm – 0,24 mm

**Remarks:** The nearly planispiral coiling, globulous chambers with elongation tendency and the lobate periphery are the distinctive characters of this species.

**Type specimens:** L.P.B.IV. 11656, 11657

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian (*Hysteroberas orbignyi* zone).

***Ticinella praeticinensis*** Sigal, 1966

Plate 51, Figs. 1–8; Plate 69, Figs. 1–4; Plate 71, Figs. 1–2; Plate 74, Figs. 1–7

*Ticinella praeticinensis* SIGAL 1966, p. 195, pl. 2, figs. 3; pl. 3, figs. 1–6; CARON 1985, p. 78, pl. 36, figs. 8–9

SHULAMIT-LIPSON-BENITAR-ALMOGI-LABIN 2000, p. 14, pl. 2, figs. 1–3; NEAGU 2006, p. 318, pl. 3, fig. 1–3; pl. 7, figs. 1–8

**Dimensions:** larger diameter 0,48 mm – 0,40 mm – 0,33 mm – 0,26 mm; small diameter 0,40 mm – 0,33 mm – 0,28 mm – 0,26 mm

**Remarks:** By its high trochospiral coiling with 6–8 chambers on the last whorl, the weak flattened aspect of the chambers on the spiral side and globulous on the umbilical one without a periferal keel this species is well delimited.

**Type specimens:** L.P.B.IV. 11661

**Occurrence:** Glogoveanu core (1695–1700 m), Glogoveanu core (2004–2995 m)

**Stratigraphic distribution:** Upper Albian-Lower Vraconian (Planomalina buxtorfi zone).

Genus ***Biticinella*** Sigal, 1956

***Biticinella breggiensis*** (Gandolfi, 1942)

Plate 41, Figs. 17–19

*Anomalina breggiensis* GANDOLFI 1942, p. 102, pl. 3, fig. 6

*Ticinella (Biticinella) breggiensis* (GANDOLFI); SIGAL 1966, p. 192, pl. 1, fig. 1–10; pl. 2, fig. 2

*Biticinella breggiensis* (GANDOLFI); LUTERBACHER & PREMOLI SILVA 1962, p. 272, pl. 23, figs. 2–4; NEAGU 2006, p. 318, pl. 4, figs. 25–27

**Dimensions:** larger diameter 0,34 mm; small diameter 0,24 mm

**Type specimen:** L.P.B.IV. 11684

**Occurrence:** 11 Buzescu core (570 m)

**Stratigraphic distribution:** Upper Albian-Lower Vraconian.

Subfamily ROTALIPORINAE Sigal, 1956

Genus ***Rotalipora*** Brotzen, 1942

***Rotalipora subticinensis*** Gandolfi, 1957

Plate 49, Figs. 21–26; Plate 73, Figs. 8–10; Plate 75, Figs. 1–3

*Globotruncana (Thalmanninella)ticinensis* ssp. *subticinensis* GANDOLFI 1957, p. 59, pl. 8, **fig. 2**

*Rotalipora subticinensis* (GANDOLFI); CARON 1985, p. 72, pl. 33, figs. 1–2; LIPSON-BENITOAH-ALMOGI-LOBIN 2000, p. 32, pl. 9, figs. 1–3; NEAGU 2006, p. 318, pl. 3, figs. 4–6; pl. 6, figs. 1–11

*Rotalipora (Thalmanninella)ticinensis subticinensis* (GANDOLFI); KLAUS 1959, p. 803, pl. 1, fig. 4

**Dimensions:** larger diameter 0,31 mm – 0,31 mm – 0,33 mm – 0,26 mm – 0,38 mm – 0,43 mm; small diameter 0,26 mm – 0,26 mm – 0,31 mm – 0,24 mm – 0,31 mm – 0,38 mm

**Remarks:** The degree of primitivity of this species is represented by the aspect of the peripheral keel large with an indefinite structure, having a cord aspect remaining of *Ticinella praeticinensis*.

**Type specimens:** L.P.B.IV. 11670

**Occurrence:** Glogoveanu core (2001–2008 m)

**Stratigraphic distribution:** Vraconian (Planomalina buxtorfi zone).

***Rotalipora tictinensis* (Gandolfi, 1942)**

Plate 49, Figs. 1–20; Plate 40, Figs. 26–34; Plate 72, Figs. 8–13

*Globotruncana tictinensis* GANDOLFI 1942, pl. 2, fig. 3

*Rotalipora (Thalmanninella)tictinensis tictinensis* (GANDOLFI); KLAUS 1959, p. 804, pl. 2, fig. 1

*Rotalipora tictinensis* (GANDOLFI); CARON 1985, p. 72, pl. 33, fig. 3–4; SHULAMIT-LIPSON-BENITAH- & all., 2000, p. 32, pl. 9, figs. 4–6; NEAGU 2006, p. 319, pl. 4, figs. 7–9

**Dimensions:** larger diameter 0,43 mm – 0,36 mm – 0,42 mm – 0,28 mm – 0,40 mm – 0,36 mm – 0,38 mm – 0,31 mm – 0,31 mm – 0,31 mm; small diameter 0,33 mm – 0,33 mm – 0,36 mm – 0,28 mm – 0,36 mm – 0,31 mm – 0,33 mm – 0,31 mm – 0,31 mm – 0,31 mm

**Remarks:** The obvious conical aspect of the spiral side produced by the trochospiral coiling and the conic-trunk shape of the umbilical side, the absence of the perumbilical keels or pustules, characterize very well this species. In the *Planomalina buxtorfi* zone the specimens present a small to moderate size but in the *Rotalipora appenninica* zone the size grows sensible.

**Type specimens:** L.P.B.IV. 11671, 11672, 11673, 11674

**Occurrence:** 1795 Glogoveanu core (1700–1705 m), 2055 Glogoveanu core (2002–2008 m), 44 Bălăria core (625m–627 m), 2151 Dumbravița core (2050m), 1536 Ștefan cel Mare core (215 m)

**Stratigraphic distribution:** (*Planomalina buxtorfi* zone – *Rotalipora appenninica* Vraconian zone).

***Rotalipora praebalernaensis* Sigal, 1969**

Plate 43, Figs. 10–18; Plate 44, Figs. 1–9; Plate 50, Figs. 1–15;

Plate 73, Figs. 6–7; Plate 75, Figs. 10–11

*Rotalipora praebalernaensis* SIGAL 1969, p. 635, pl. 1, figs. 1–12; pl. 2, figs. 1–3; LIPSON & BENITAH & all., 2000, p. 30, pl. 8, figs. 4–6; NEAGU 2006, p. 319, pl. 5, figs. 1–2

**Remarks:** the presence of an incomplete peripheral keel represented by fused rugosities, a moderate trochospiral coiling and an open umbilical area are distinctive characters of this species. The umbilical and spiral aspect of the chambers are similar to that of *Rotalipora appenninica*, confirming Sigal's opinion who considered it as the ancestor of the *R. appenninica* lineage. In the Moesian Platform deposits this species is present only in the basal part of the total range zone with *Planomalina buxtorfi*, together with *R. praeticinensis* – *R. tictinensis* from which it differs very clear by its low trochospiral coiling.

**Type specimens:** L.P.B.IV. 11687

**Occurrence:** 2195 Glogoveanu core (1690–1700 m, marls with *Aucellina gryphaeoides*, *Anysoceras* sp.), 20055 Glogoveanu core (2002–2008 m, marls with *Aucellina gryphaeoides*)

**Stratigraphic distribution:** Vraconian (S. dispar zone).

***Rotalipora balernaensis* Gandolfi, 1957**

Plate 43, Figs. 19–24; Plate 50, Figs. 28–33; Plate 69, Figs. 5–9

*Rotalipora balernaensis* GANDOLFI; LOEBLICH & TAPPAN 1961, p. 297, pl. 8, fig. 11; SIGAL 1969, pl. 2, figs. 2–8; COLIGNON, SIGAL & GREKOFF 1979, 224, pl. 2, figs. 3–23; SHULAMIT-LIPSON-BENITAH & all., 2000, p. 30, pl. 8, figs. 1–3; NEAGU 2006, p. 319, pl. 5, figs. 16–19

***Rotalipora (Thalmanninella) appenninica balernaensis* (GANDOLFI); KLAUS 1960, p. 808, pl. 3, fig. 2**

**Dimensions:** larger diameter 0,38 mm – 0,38 mm – 0,36 mm – 0,43 mm – 0,31 mm – 0,48 mm – 0,40 mm – 0,48 mm – 0,43 mm – 0,43 mm; small diameter 0,31 mm – 0,33 mm – 0,28 mm – 0,36 mm – 0,21 mm – 0,43 mm – 0,31 mm – 0,43 mm – 0,36 mm – 0,36 mm

**Remarks:** This species differs from *Rotalipora praebalernaensis* by the development of a clear peripheral keel and a tendency to develop a weak ornamentation on the umbilical side of the chambers.

**Type specimens:** L.P.B.IV. 11662, 11663, 12045

**Occurrence:** 11795 Glogoveanu core (1695–1700 m), 2251 Dumbravița core (2050 m)

**Stratigraphic distribution:** Vraconian (Planomalina buxtofi zone).

***Rotalipora evoluta* Sigal, 1948**

Plate 44, Figs. 10–17; Plate 45, Figs. 1–10; Plate 72, Figs. 3–4; Plate 75, Figs. 12

*Rotalipora evoluta* SIGAL 1948, p. 100, pl. 1, fig. 3; pl. 2, fig. 2; CARBONIER 1952, p. 118, pl. 7, fig. 2; LOEBLICH & TAPPAN 1961, p. 298, pl. 7, figs. 1–4; NEAGU 2006, p. 319, pl. 5, figs. 20–25

*Rotalipora appenninica evoluta* SIGAL; LUTERBACHER & PREMOLI-SILVA 1962, pl. 20, fig. 8

**Dimensions:** larger diameter 0,52 mm – 0,55 mm – 0,55 mm – 0,52 mm – 0,60 mm – 0,55 mm – 0,48 mm – 0,48 mm; small diameter 0,38 mm – 0,40 mm – 0,48 mm – 0,38 mm – 0,48 mm – 0,45 mm – 0,38 mm – 0,38 mm

**Remarks:** By the pateliform (evasive) aspect of the last two chambers especially on the spiral side this species is very well limited from *Rotalipora appenninica* Gandolfi.

**Type specimens:** L.P.B.IV. 11664, 11665

**Occurrence:** 44 Bălăria core (625–627 m), 1538 Ștefan cel Mare core (215m)

**Stratigraphic distribution.** Upper Albian (basal part), Vraconian (*Rotalipora appenninica* zone).

***Rotalipora gandolfii* Luterbacher & Premoli & Silva, 1962**

Plate 47, Figs. 7–15; Plate 48, Figs. 1–3

*Rotalipora appenninica gandolfii* LUTERBACHER-PREMOLI-SILVA 1962, pl. 19, fig. 3

*Rotalipora gandolfii* LUTERBACHER-PREMOLI-SILVA; CARON 1985, p. 69, pl. 35, figs. 5–7;

NEAGU 2006, p. 320, pl. 5, figs. 14–15

**Dimensions:** larger diameter 0,64 mm – 0,62 mm – 0,72 mm – 0,67 mm – 0,64 mm – 0,60 mm – 0,62 mm – 0,72 mm – 0,64 mm; small diameter 0,50 mm – 0,52 mm – 0,62 mm – 0,52 mm – 0,60 mm – 0,48 mm – 0,55 mm – 0,55 mm – 0,55 mm

**Remarks:** By the high-rhomboidal aspect of chambers in the last whorl and the size ordinary over 0,60–0,70 mm in diameter this species is well delimited from its ancestor *Rotalipora appenninica*.

**Type specimens:** L.P.B.IV. 11667

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian – terminal part of the *Rotalipora appenninica* zone.

***Rotalipora appenninica* (Renz, 1936)**

Plate 45, Figs. 11–16; Plate 46, Figs. 1–12; Plate 51, Figs. 9–12; Plate 72, Figs. 5–7

*Globotruncana appenninica* RENZ 1936, p. 20, pl. 6, figs. 1–11; pl. 7 fig. 1; pl. 8, fig. 4; GANDOLFI 1942, p. 117, pl. 2, fig. 6

*Globotruncana (Rotalipora) appenninica* RENZ; MORNOD 1950, p. 578, text–figs. 3–4, pl. 15, fig. 11

*Rotalipora appenninica* (RENZ); SIGAL 1952, p. 24, text–fig. 23; SUBBOTINA 1953, p. 159, pl. 1, figs. 5–6 (not 7–8); pl. 2, figs. 1–2; SIGAL 1969, p. 622

*Rotalipora appenninica appenninica* (RENZ); LUTERBACHER & PREMOLI-SILVA 1962, p. 266, pl. 19, figs. 1–2; pl. 20, figs. 1–4; pl. 21, figs. 1–4

*Rotalipora (Thalmanninella) appenninica appenninica* (RENZ); KLAUS 1960, p. 808, pl. 3, fig. 3

*Rotalipora appenninica* (RENZ); CARON, 1985 p. 67, pl. 31, figs. 10, 12, 15; NEAGU 2006, p. 319, pl. 5, figs. 5–10; pl. 6 figs. 21–28

**Dimensions:** larger diameter 0,57 mm – 0,52 mm – 0,62 mm – 0,57 mm – 0,52 mm – 0,57 mm – 0,55 mm – 0,48 mm – 0,67 mm – 0,55 mm – 0,60 mm – 0,55 mm; small diameter 0,43 mm – 0,40 mm – 0,55 mm – 0,43 mm – 0,43 mm – 0,43 mm – 0,48 mm – 0,38 mm – 0,50 mm – 0,45 mm – 0,48 mm – 0,38 mm

**Remarks:** This species, very frequent in the Upper Vraconian (over the Planomalina buxtorfi zone) presents a large morphological variety. Even from 1942 Gandolfi understood this variability and he separated three distinct varieties. After him, a lot of authors starting with Mornod 1950, Klaus Reichel, Dalbiez Luterbacher & Premoli Silva, A. M. Borsetti, Caron) confirmed this variation. Sigal 1969 (p. 622–635) however put order in this taxonomic ambiguity giving a correct and clear content of definition for this so controversial species.

**Type specimens:** L.P. B.IV. 11666

**Occurrence:** 44 Bălăria core (625–627 m), 138 Copăceni core (480–485 m)

**Stratigraphic distribution:** Upper Vraconian (with an acme under the Vraconian-Lowermost Cenomanian boundary (*Rotalipora appenninica* zone).

#### *Rotalipora moesiana* Neagu, 2006

Plate 48, Figs. 4–12; Plate 71, Figs. 9–10

*Rotalipora moesiana* NEAGU 2006, p. 320, pl. 5, figs. 11–13

**Description.** Test robust with 7–9 chambers in the last whorl; chambers with an evident high-angular-rhomboid aspect, deep and arched sutures; last 2–4 chambers very robust, smooth and high, the others are not as high and show reduced or absent ornamentation on the perumbilical area; peripheral keel is simple (not with a moniliform aspect) becoming slender; sutural apertures are perumbilical in position and large; umbilicus is widely open; the spiral side is more or less flat, and the early stage has a largely conical aspect; sutural keels on the spiral side are arched.

**Dimensions:** larger diameter 0,72 mm – 0,67 mm – 0,72 mm – 0,62 mm – 0,67 mm – 0,67 mm – 0,62 mm – 0,74 mm; small diameter 0,67 mm – 0,60 mm – 0,62 mm – 0,48 mm – 0,62 mm – 0,55 mm – 0,60 mm – 0,55 mm

**Remarks:** By the robust aspect of the test and particularly of their last 2–3 chambers, this species clearly differs from *R. appenninica*. From *R. gandolfi* it differs by the high-rhomboid aspect of the chambers from the last whorl and also by the absence of the perumbilical chambers ornamentals.

**Type specimens:** L.P.B.IV. 11668, 1166

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian, uppermost part, (terminal part of the *Rotalipora appenninica* zone).

#### *Rotalipora praebrotzeni* NEAGU, 2006

Plate 46, Figs. 13–21; Plate 47, Figs. 1–6; Plate 71, Figs. 11–12; Plate 72, Figs. 1–2

*Rotalipora praebrotzeni* NEAGU 2006, p. 320, pl. 4, figs. 10–15, 22–24; pl. 8, figs. 13–22

**Description.** Test with a medium size, moderately conical-trochospiral side; chambers of the last whorl with a high rhomboidal aspect; straight and deep sutures; a small and deep umbilicus with a crateriform aspect; sutural apertures raised on the umbilicus brim; surface of the chambers are

perumbilical ornamented; spiral side with a typical conical aspect; spiral side sutures marked by arcuate and with a pearly aspect; apertural side of the last chamber with a high aspect having a large primary aperture.

**Dimensions:** larger diameter 0,60 mm – 0,50 mm – 0,58 mm – 0,39 mm – 0,43 mm – 0,43 mm – 0,42 mm – 0,43 mm – 0,50 mm – 0,50 mm – 0,52 mm; small diameter 0,48 mm – 0,46 mm – 0,48 mm – 0,39 mm – 0,40 mm – 0,38 mm – 0,38 mm – 0,36 mm – 0,45 mm – 0,40 mm – 0,48 mm

**Remarks:** From *R. brotzeni* with which this species presents visible affinities, *R.praebrotzeni* differs by its moderate size and by the absence of perumbilical keels on the last chambers; this species has an intermediary position between the small but high trochospiral coiled species such as *R. tycinensis* and those robust species with high perumbilical chambers and with perumbilical keels such as *R. brotzeni*.

**Type specimens:** L.P.B.IV.11675, 11676, 11767

**Occurrence:** 44 Bălăria core (625–627 m)

**Stratigraphic distribution:** Vraconian (Rotalipora appenninica zone).

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## EXPLANATION OF THE PLATES

### **PLATE 1**

- Figs. 1–3 *Flabellammina urgonensis* BARTENSTEIN & KOVATCHEVA 1982, Middle Albian, Zimnicea drilling, L.P.B.IV 11766  
 Figs. 4–5 *Saccammina alexanderi* (LOEBLICH & TAPPAN) 1950, Middle Albian, Zimnicea drilling, L.P.B.IV.11754  
 Figs. 6–9 *Ammobaculites terquemi* (BERTHELIN) 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 11764; Fig. 10 Upper Albian Glogoveanu core L.P.B.IV. 11765  
 Figs. 11–14 *Reophax globulifer* BRADY 1879; Figs. 11–12, 15 Middle Albian, Giurgiu Pod, L.P.B, IV. 11859;  
     Figs. 13–14 Upper Albian, Buzescu core, L.P.B. IV. 11760  
 Fig. 18 *Thurammina* sp., Middle Albian, Putineiu core, L.P.B.IV. 11753  
 Figs. 19–20 *Ammodiscus tenuissimus* (TERQUEM) 1862, Upper Albian, Buzescu core, L.P.B.IV. 11756–11757  
 Figs. 21–22 *Glomospirella gaultina* (BERTHELIN) 1880, Middle Albian, Putineiu core, L.P. B.IV. 11758

### **PLATE 2**

- Figs. 1–4 *Bulbobaculites parvispira* (ten DAM) 1950; Figs. 1–2 Middle Albian, Craiova core, L.P. B.IV. 11768;  
 Figs. 3–4 Middle Albian, Putineiu core, L.P.B.IV. 11767  
 Figs. 5–10 *Bulbobaculites subcretaceus* (CUSHMAN & ALEXANDER) 1930, Middle Albian, Putineiu core, L.P.B.IV. 11769  
 Figs. 12–14 *Haplophragmoides concavus* (CHAPMAN) 1892, Upper Albian, Buzescu core, L.P.B.IV. 11761  
 Figs. 15–17 *Haplophragmoides latidosatus* (BORNEMANN) 1855, Middle Albian, Giurgiu Pod, L.P.B.IV. 11763  
 Figs. 18–21 *Haplophragmoides concavus* (CHAPMAN) 1892, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11762  
 Figs. 22–25 *Trochammina wetteri* STELCK & WALL 1955, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11770  
 Figs. 26–27 *Tetrataxis fusca* (WILLIAMSON) 1858, Middle Albian, Putineiu core, L.P.B.IV. 11806  
 Figs. 28–29 *Arenobulimina chapmani* CUSHMAN 1937, Middle Albian, Giurgiu Pod, L.P.B.IV. 5106  
 Fig. 30 *Ammodiscus cretaceus* (REUSS) 1845, Upper Albian, Glogoveanu core, L.P. B.IV. 11755

### **PLATE 3**

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- Figs. 1–3 *Pseudonubeculina nodulosa* (CHAPMAN) 1896, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11816.  
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- Figs. 1–16 *Rugohedbergella mutzui* NEAGU 2006, Vraconian, Glogoveanu core, L.P.B.IV. 11650  
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- Figs. 1–3 *Rotalipora gandolfii* LUTERBACHER & PREMOLI-SILVA 1962, Vraconian, Bălăria core, L.P.B.IV. 11667  
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- Figs. 1–20 *Rotalipora tycinensis* GANDOLFI 1942, Vraconian, Dumbrăvița core, L.P.B.IV. 11673  
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 Figs. 4, 8 *Vaginulina recta* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod  
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 Fig. 3 *Dentalina distincta* REUSS 1860, Lower Albian (L. tardefurcata zone), Călărași drillings  
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 Fig. 12 *Marginulina cf. acuticostata* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings  
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- Figs. 1–6, 11 *Hedbergella rischi* MOULLADE 1974, Lower Albian (L. tardefurcata zone), Călărași drillings  
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**PLATE 65**

- Figs. 1, 2, 6, 9–10 *Ticinella primula* LUTERBACHER 1964, Middle Albian Hoplitan, Giurgiu Pod  
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**PLATE 66**

- Figs. 1–3, 6–9 *Hedbergella planispira* (TAPPAN) 1949, Middle Albian-Hoplitan, Giurgiu Pod  
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 Figs. 10–12 *Hedbergella rischi* MOULLADE 1974, Middle Albian-Hoplitan, Giurgiu Pod

**PLATE 68**

- Figs. 1, 2 *Ticinella primula* LUTERBACHER 1964, Lower Albian (L. taredefurcata zone), Călărași drillings  
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 Figs. 9–12 *Hedbergella gautirensis* BRONNIMAN 1952, Middle Albian-Eohoplitan Putineiu core

**PLATE 69**

- Figs. 1–4 *Ticinella praeticinensis* SIGAL 1966, Upper Albian, Buzescu core  
 Figs. 5–9 *Rotalipora balernaensis* GANDOLFI 1957, Vraconian, Glogoveanu core  
 Fig. 10 *Rugohedbergella mutziui* NEAGU 2006, Vraconian, Dumbrăvița core  
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- Figs. 1–3 *Ticinella roberti* (GANDOLFI) 1942, Vraconian, Buzescu core  
 Figs. 4–12 *Ticinella madecassiana* SIGAL 1966, Vraconian, 138 Copaceni core

**PLATE 71**

- Figs. 1, 2 *Ticinella praeticinensis* SIGAL 1966, Vraconian, Glogoveanu core  
 Figs. 3, 4 *Falsogavelinella umbiliculata* (FUCHS) 1967, Upper Albian, Buzescu core  
 Figs. 5–8 *Globigerinelloides carseyiae* BOLLI, LOEBLICH & TAPPAN 1957, Upper Albian, Buzescu core  
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- Figs. 1, 2 *Rotalipora praebrotzeni* NEAGU 2006, Vraconian, Bălăria core  
Figs. 3–4 *Rotalipora evoluta* SIGAL 1948, Vraconian, Bălăria core  
Figs. 5–7 *Rotalipora appenninica* (RENZ) 1936, Vraconian, Bălăria, core  
Figs. 8–13 *Rotalipora ticinensis* (GANDOLFI) 1942, Vraconian, Bălăria core.

**PLATE 73**

- Figs. 1–2 *Planomalina buxtorfi* (GANDOLFI) 1942, Vraconian, Glogoveanu core  
Figs. 3–5 *Ticinella roberti* (GANDOLFI) 1942, Upper Albian buzescu core  
Figs. 6–7 *Rotalipora praebalernaensis* SIGAL, 1969, Vraconian, Glogoveanu core  
Figs. 8–10 *Rotalipora subticinensis* GANDOLFI 1957, Vraconian Glogoveanu core  
Figs. 11,12 *Hedbergella gautirensis* (BRÖNNIMAN) 1952, Vraconian, Glogoveanu core

**PLATE 74**

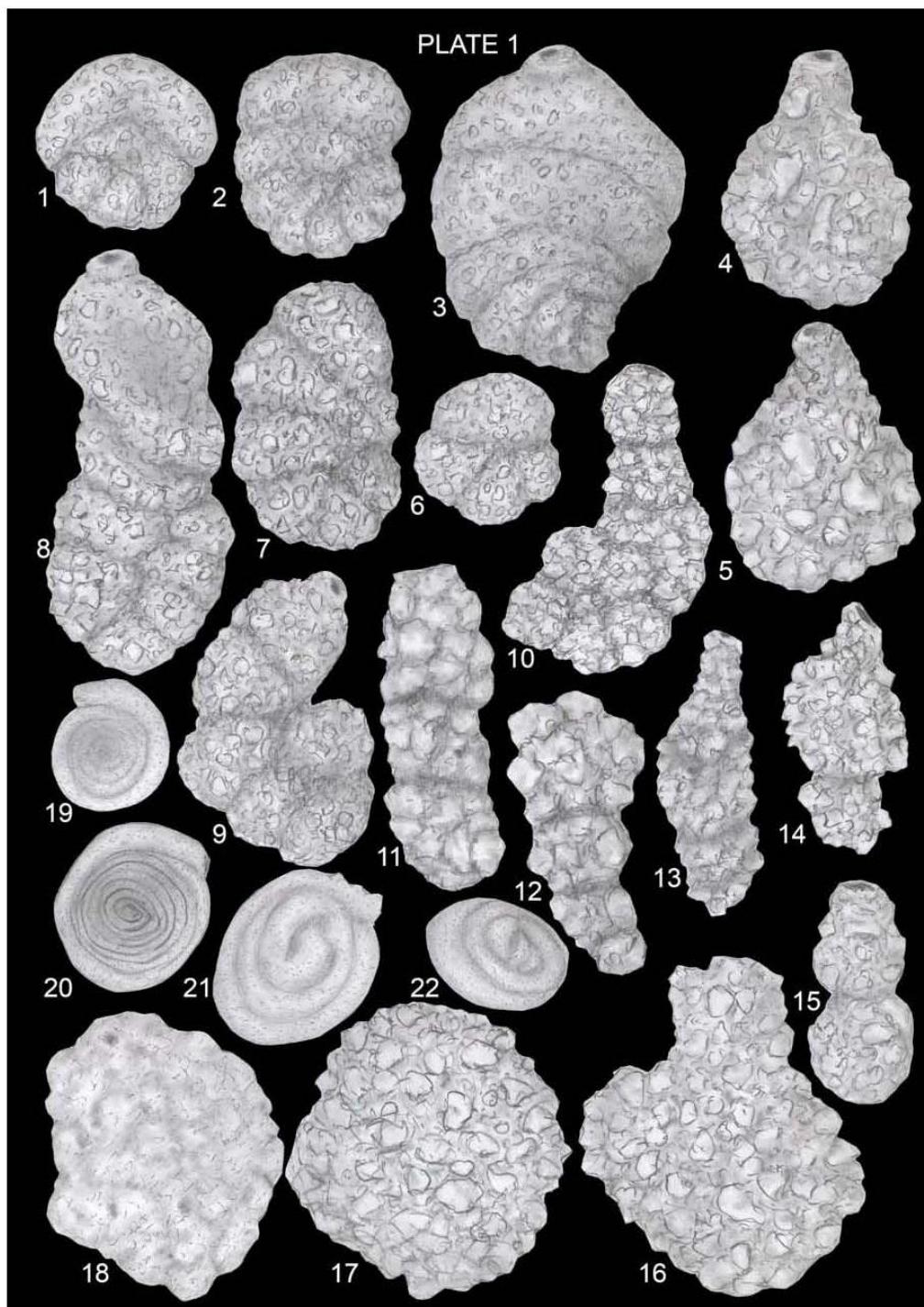
- Figs. 1–3, 4–7 *Ticinella praeticinensis* SIGAL 1969, Vraconian, Glogoveanu core  
Figs. 8–12 *Rugohedbergella mutziui* NEAGU 2006, Vraconian, Glogoveanu core

**PLATE 75**

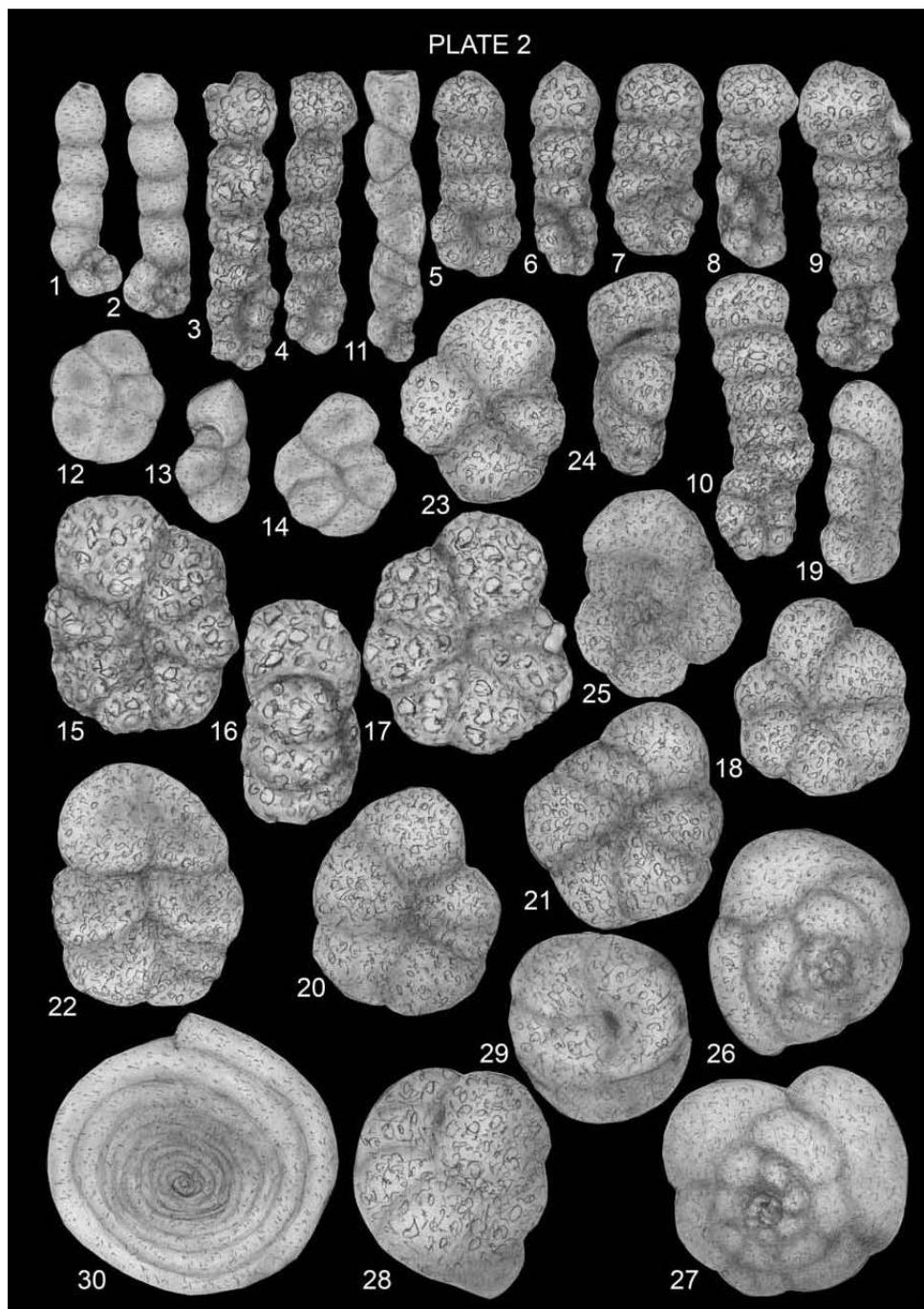
- Figs. 1–3 *Rotalipora subticinensis* GANDOLFI 1957, Vraconian Glogoveanu core, 4–6 *Globigerinelloides carsyiae* BOLLI, LOEBLICH, TAPPAN 1957 Upper Albian Buzescu core  
Figs. 7–9 *Globigerinelloides eaglefordensis* (MOREMANN) 1927, Upper Albian, Buzescu core  
Figs. 10, 11 *Rotalipora praebalernaensis* SIGAL 1969, Upper Albian Vraconian, Glogoveanu core  
Fig. 12 *Rotalipora evoluta* SIGAL 1948, Vraconian, Bălăria.

**PLATE 76**

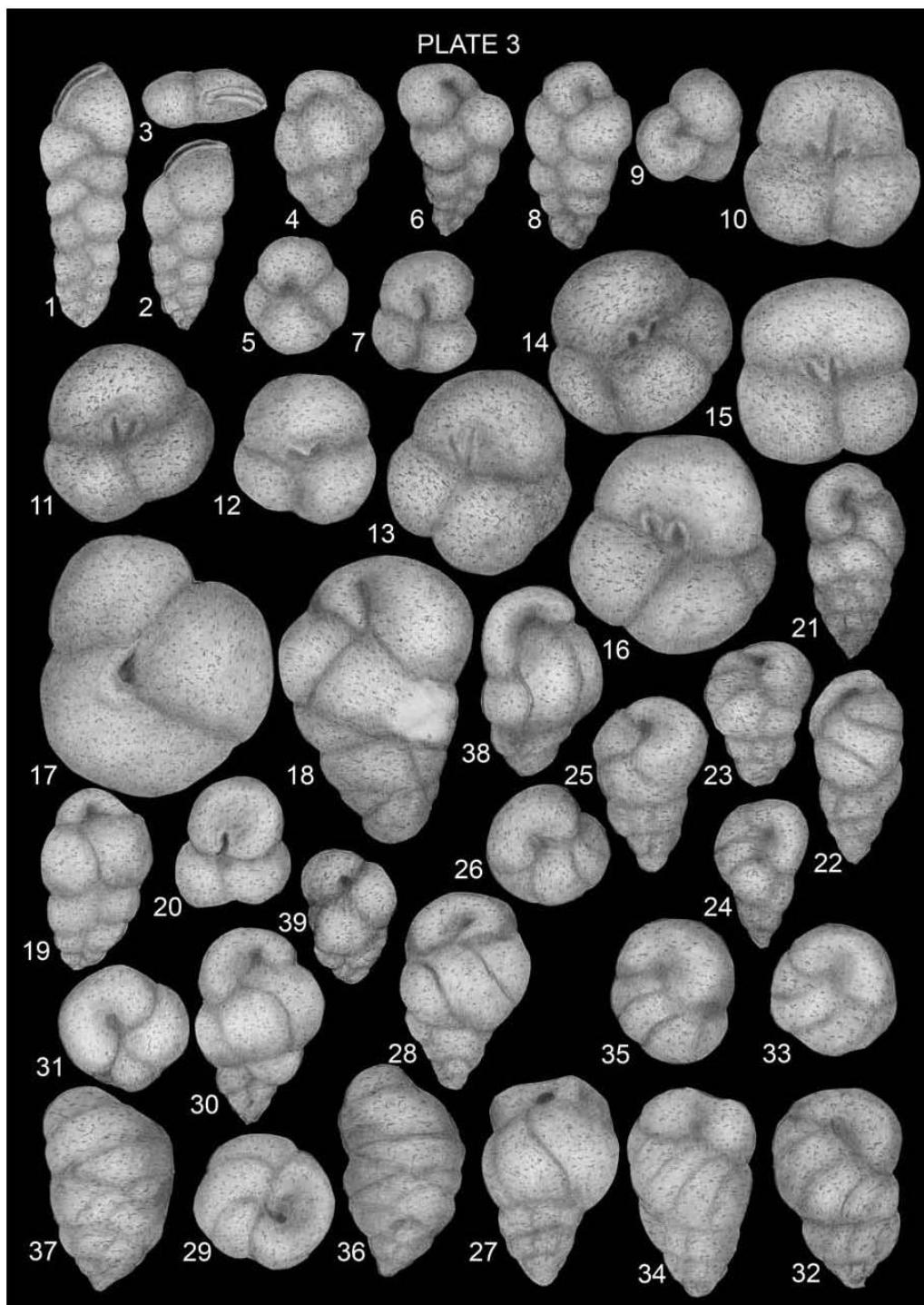
- Figs. 1–7 *Ticinella raynauldi* (SIGAL, 1966), Upper Albian, Buzescu core  
Figs. 8–11 *Hedbergella gautirensis* (BRÖNNIMANN, 1952), Upper Albian, Buzescu core  
Fig. 12 *Ticinella roberti* (GANDOLFI, 1942), Upper Albian, Buzescu core



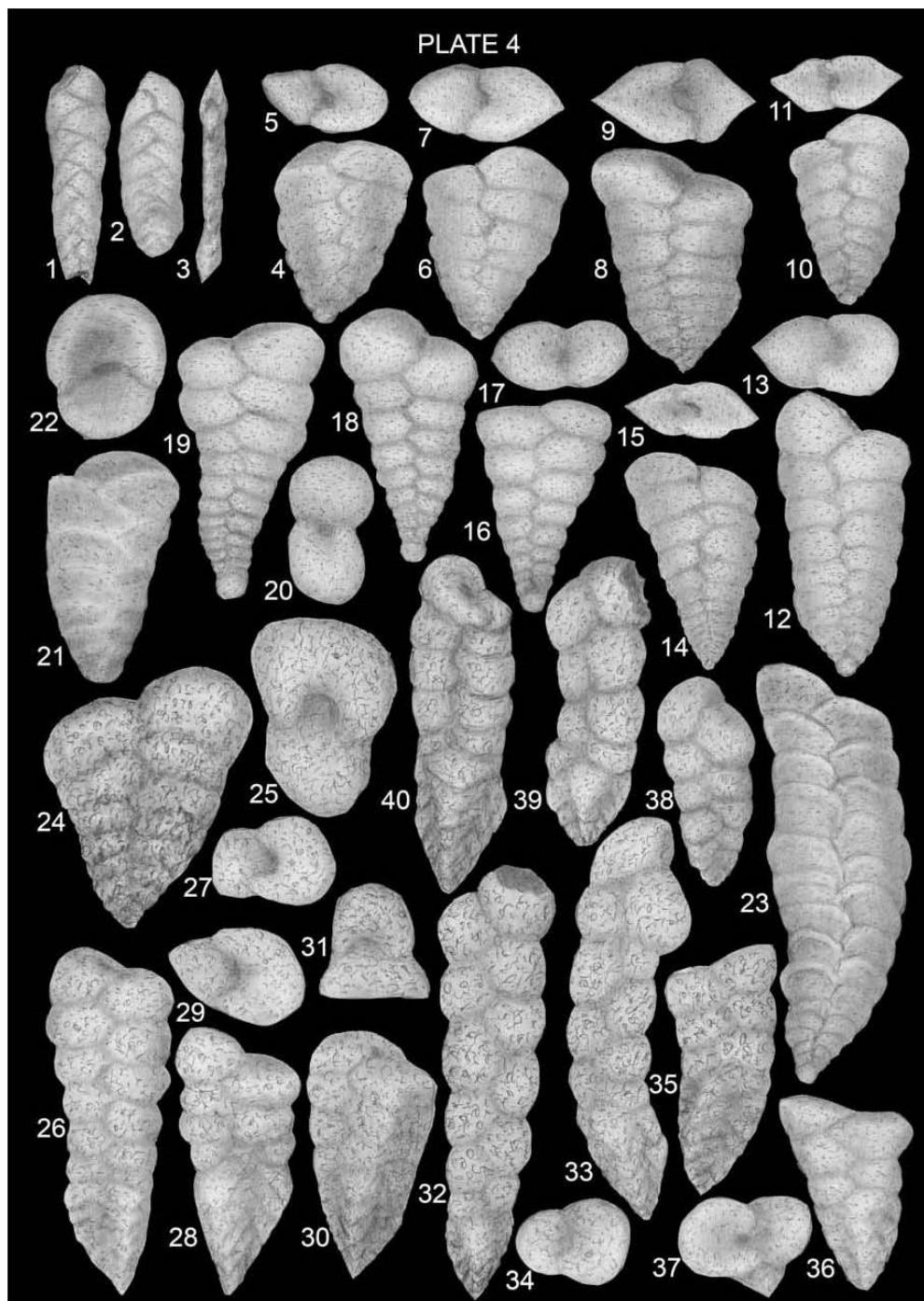
**Figs. 1–3** *Flabellammina urgonensis* BARTENSTEIN & KOVATCHEVA 1982, Middle Albian, Zimnicea drilling, L.P.B.IV. 11766. **Figs. 4–5** *Saccammina alexanderi* (LOEBLICH & TAPPAN) 1950, Middle Albian, Zimnicea drilling, L.P.B.IV. 11754. **Figs. 6–9** *Ammobaculites terquemi* (BERTHELIN) 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 11764; **Fig. 10** Upper Albian Glogoveanu core L.P.B.IV. 11765. **Figs. 11–14** *Reophax globulifer* BRADY 1879; **Figs. 11–12, 15** Middle Albian, Giurgiu Pod, L.P.B. IV. 11859; **Figs. 13–14** Upper Albian, Buzescu core, L.P.B. IV. 11760. **Fig. 18** *Thurammina* sp., Middle Albian, Putineiu core, L.P.B.IV. 11753. **Figs. 19–20** *Ammodiscus tenuissimus* (TERQUEM) 1862, Upper Albian, Buzescu core, L.P.B.IV. 11756–11757. **Figs. 21–22** *Glomospirella gaultina* (BERTHELIN) 1880, Middle Albian, Putineiu core, L.P. B.IV. 11758.



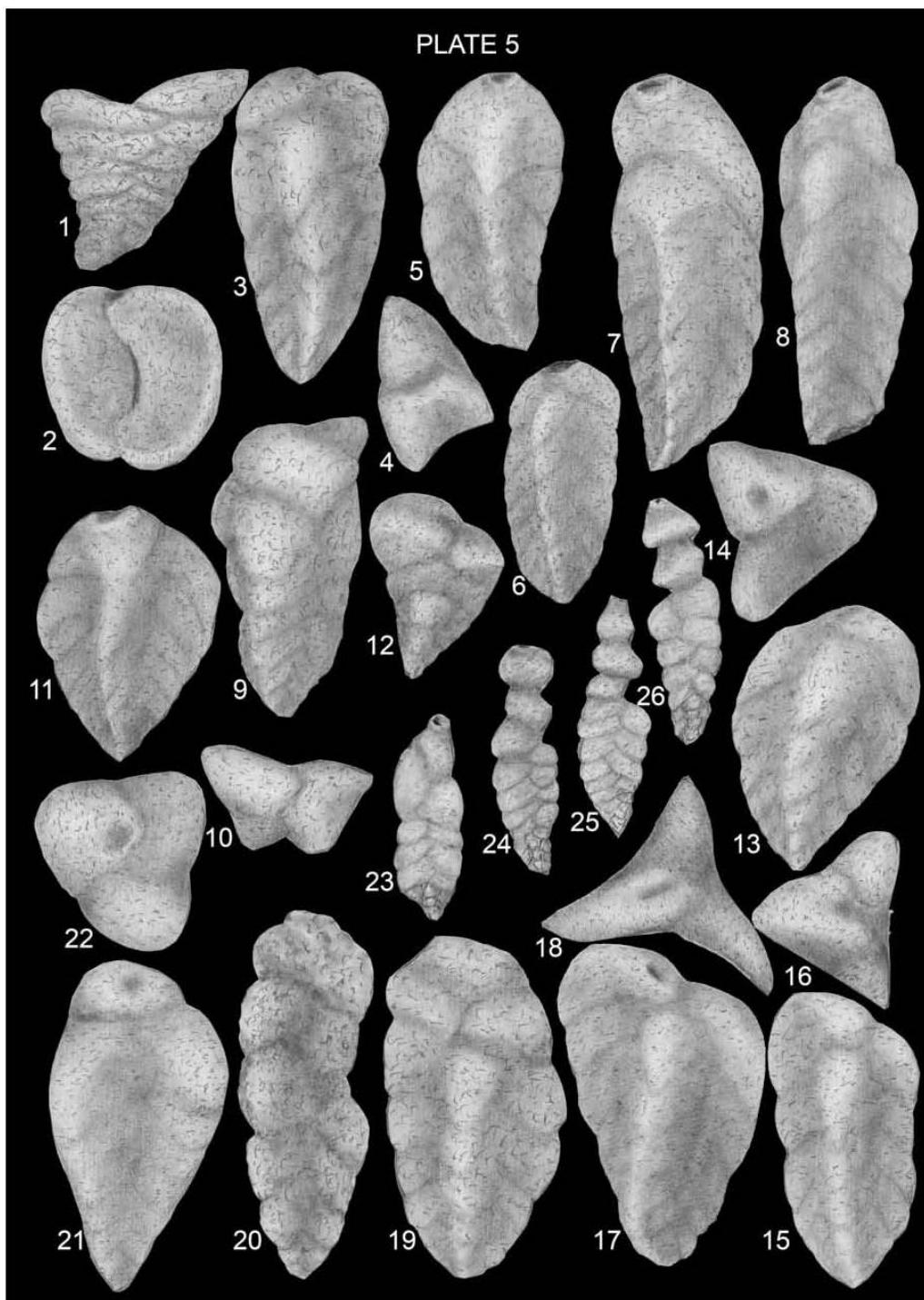
**Figs. 1–4** *Bulbobaculites parvispira* (ten DAM) 1950; Figs. 1–2 Middle Albian, Craiova core, L.P. B.IV. 11768; **Figs. 3–4** Middle Albian, Putineiu core, L.P.B.IV. 11767. **Figs. 5–10** *Bulbobaculites subcretaceus* (CUSHMAN & ALEXANDER) 1930, Middle Albian, Putineiu core, L.P.B.IV. 11769. **Figs. 12–14** *Haplophragmoides concavus* (CHAPMAN) 1892, Upper Albian, Buzescu core, L.P.B.IV. 11761. **Figs. 15–17** *Haplophragmoides latidosatus* (BORNEMANN) 1855, Middle Albian, Giurgiu Pod, L.P.B.IV. 11763. **Figs. 18–21** *Haplophragmoides concavus* (CHAPMAN) 1892, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11762. **Figs. 22–25** *Trochammina wetteri* STELCK & WALL 1955, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11770. **Figs. 26–27** *Tetrataxis fusca* (WILLIAMSON) 1858, Middle Albian, Putineiu core, L.P.B.IV. 11806. **Figs. 28–29** *Arenobulimina chapmani* CUSHMAN 1937, Middle Albian, Giurgiu Pod, L.P.B.IV. 5106. **Fig. 30** *Ammodiscus cretaceus* (REUSS) 1845, Upper Albian, Glogoveanu core, L.P. B.IV. 11755.



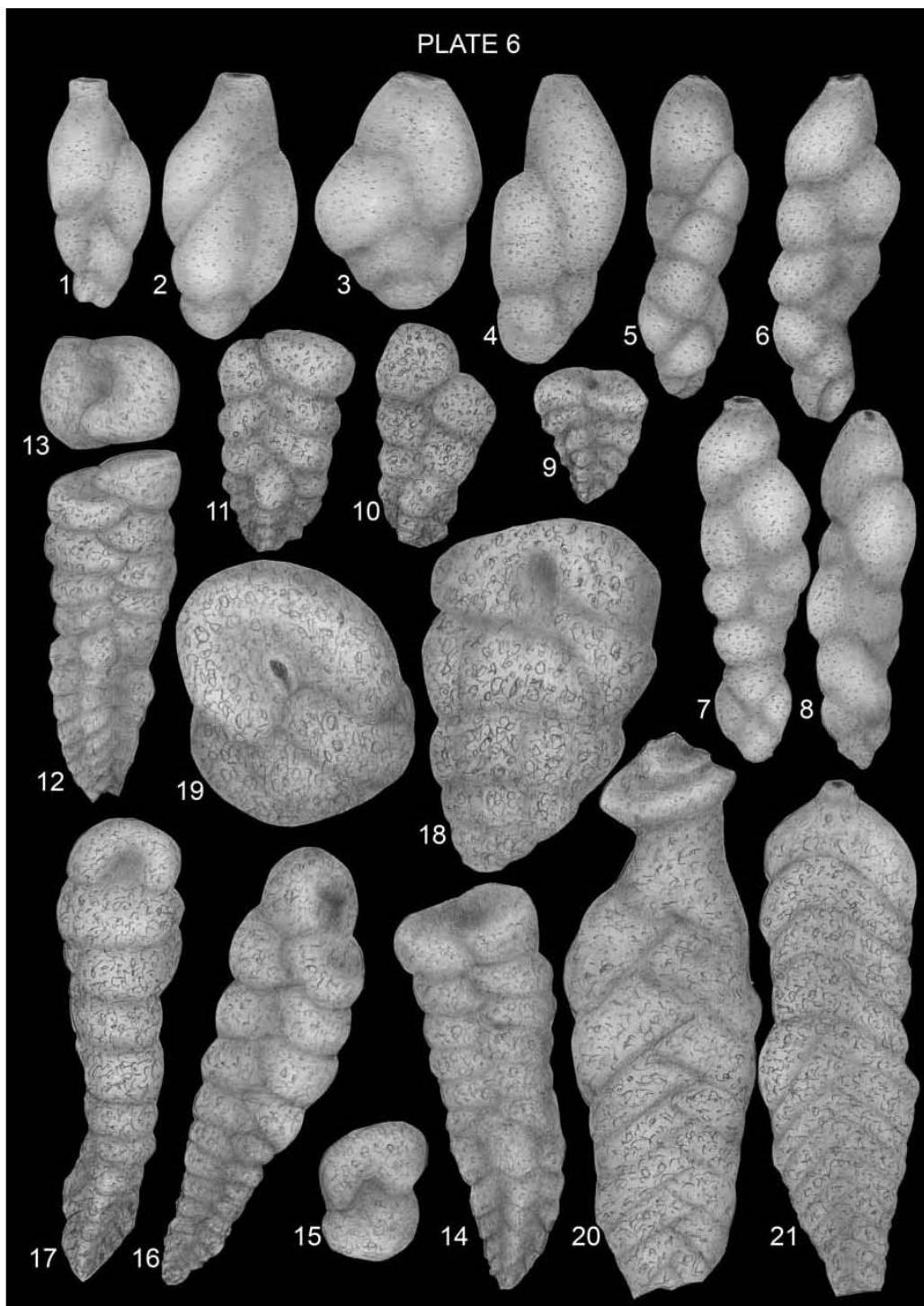
**Figs. 1–3** *Belorosiella textilaroides* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11799. **Figs. 4–9, 19–20, 39** *Verneulinoides pumilionis* NEAGU 1999; **Figs. 4–9, 39** Upper Albian, Glavacioc core, L.P.B.IV. 11783; **Figs. 19–20** Upper Albian, Buzescu core, L.P.B.IV. 11784. **Figs. 10–17** *Eggerelina mariae* ten DAM 1950. **Figs. 10–16** Upper Albian, Bălăria core, L.P.B.IV. 11805. **Figs. 21–27** *Arenobulimina macfadyeni* CUSHMAN 1937, **Fig. 18** Middle Albian, Craiova core, L.P.B.IV. 11800. **Figs. 21–27** Upper Albian, Buzescu core, L.P.B.IV. 11802; **Figs. 28–31** Upper Albian, Șopârlița core, L.P.B.IV. 11801; **Figs. 32–37** Middle Albian, Giurgiu Pod, L.P.B.IV.



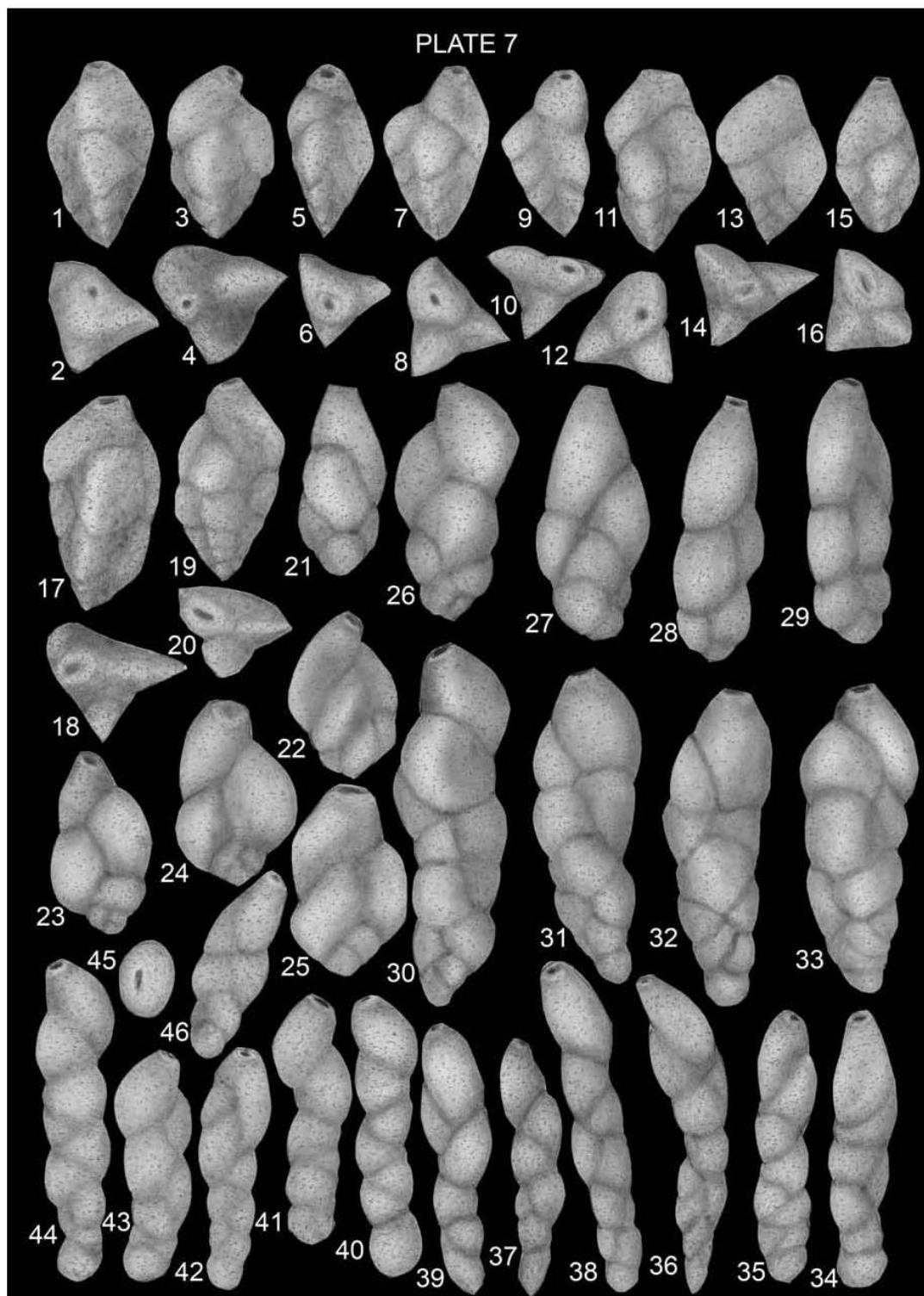
**Figs. 1–3** *QuasSpirolectammina nuda* (LALICKER), Upper Albian, Buzescu core, L.P.B.IV. 11772. **Figs. 4–15, 23** *Textulariopsis losangica* (LOEBLICH & TAPPAN); **Figs. 4–9, 12–15, 23** Upper Albian, Buzescu core, L.P.B.IV. 11773; **Figs. 10, 11** Upper Albian, Glogoveanu core, L.P.B.IV. 11774. **Figs. 16–20** *QuasSpirolectammina goodlandana* (LALICKER) 1935, Upper Albian, Buzescu core, L.P.B.IV. 11776. **Figs. 21–13** *Marssonella oxycona* (REUSS) 1860, Upper Albian-Vraconian, Bălăria core, L.P.B.IV. 11804. **Figs. 24–25** *Textulariopsis anglica* (LALICKER) 1935, Middle Albian, Craiova core, L.P.B.IV. 11775. **Figs. 26–31** *Gaudryina dividens* GRABERT 1959, Upper Albian, Buzescu core, L.P.B.IV. 11793; **Figs. 35–36** Middle Albian, Craiova core, L.P.B.IV. 11794. **Figs. 32–40** *Gaudryina compacta* (GRABERT) 1959, Middle Albian, Craiova core, L.P.B.IV.



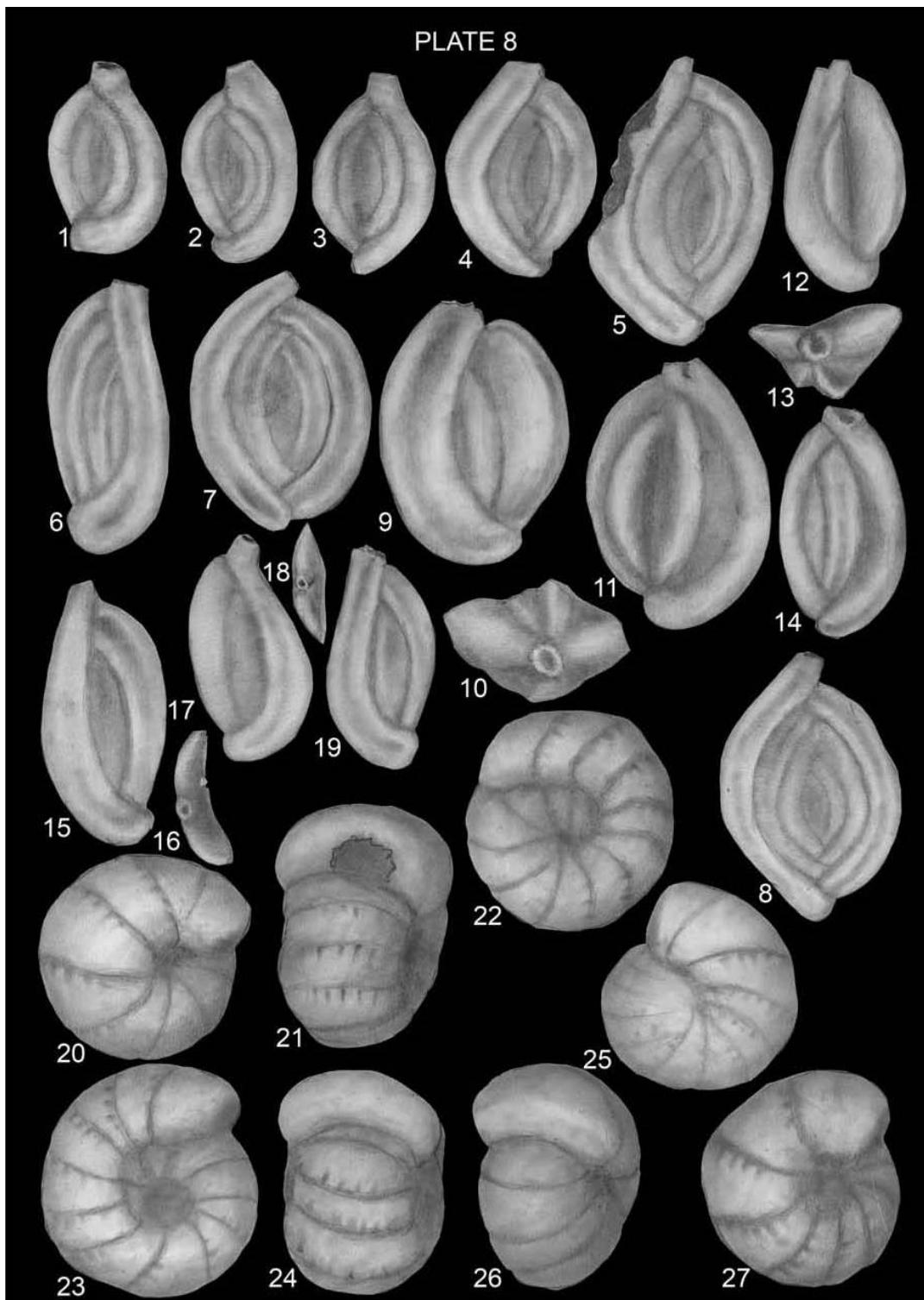
**Figs. 1–2** *Marssonella trochus* (d'ORBIGNY), Middle Albian, Giurgiu Pod, P. L.B.IV. 11803. **Figs. 3–8** *Tritaxia plummerae* CUSHMAN Upper Albian-Vraconian, Bălăria core, L.P.B.IV. 11796. **Figs. 9–10, 12, 19–20** *Gaudryina compacta* GRABERT 1959, Lower Albian, Călărași drillings, L.P.B. IV. 11787. **Figs. 11, 17–18** *Tritaxia tricarinata* (REUSS) 1845, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11797. **Figs. 13, 14, 21–22** *Tritaxia pyramidata* (REUSS) 1863, Middle Albian, Putineiu core, L.P.B.IV. 11798. **Fig. 12** *Gaudryina richteri* GRABERT 1959, Middle Albian, Putineiu core, L.P. B.IV. 11795. **Figs. 19–20** *Gaudryina compacta* GRABERT 1959, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11788. **Figs. 23–26** *Spiroplectinata annectens* (PARKER & JONES) 1863, Middle Albian, Craiova core, L.P.B.IV. 11786.



**Figs. 1–4** *Falsogaudryinella moesiana* (NEAGU) 1965, Middle Albian, Giurgiu Pod, L.P.B.IV. 11777. **Figs. 5–8** *Falsogaudryinella neagui* BARTENSTEIN 1981, Upper Albian, Buzescu core, L.P.B.IV. 11780. **Figs. 9–11** *Gaudryina gradata* BERTHELIN 1880, Middle Albian, Putineiu core, L.P.B.IV. 11791. **Figs. 12–15** *Gaudryina dividens* GRABERT 1959, Upper Albian, Buzescu core, L.P.B.IV. 11794. **Figs. 16–17** *Gaudryina filiformis* BERTHELIN 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 11789. **Figs. 18–19** *Arenobulimina chapmani* CUSHMAN 1937, Middle Albian, Putineiu core, L.P.B.IV. 5106. **Figs. 20–21** *Spiroplectinata complanata* (REUSS) 1860, Middle Albian, Craiova core, L.P.B.IV. 1178.

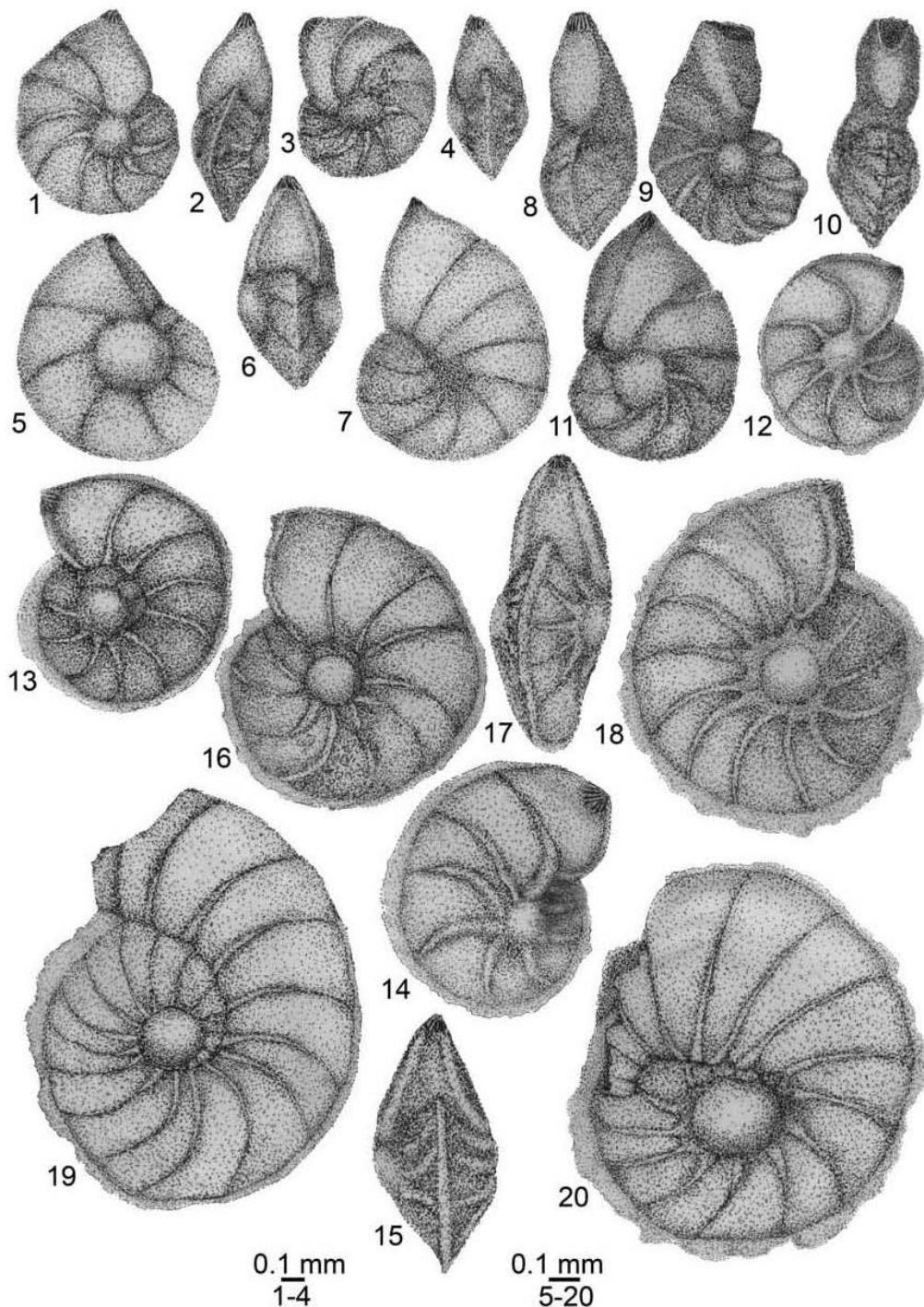


**Figs. 1–20** *Falsogaudryinella trigonula* FUCHS 1967, Upper Albian, Buzescu core, L.P.B.IV. 11779. **Figs. 21–25** *Falsogaudryinella moesiana* (NEAGU) 1965, Upper Albian, Buzescu core, L.P.B.IV. 11778. **Figs. 26–33** *Falsogaudryinella neagui* BARTENSTEIN 1981, Upper Albian, Buzescu core, L.P.B.IV. 11780. **Figs. 34–47** *Falsogaudryinella* sp. n. sp.? Upper Albian, Glavacioc core, L.P.B.IV. 11781–11782.

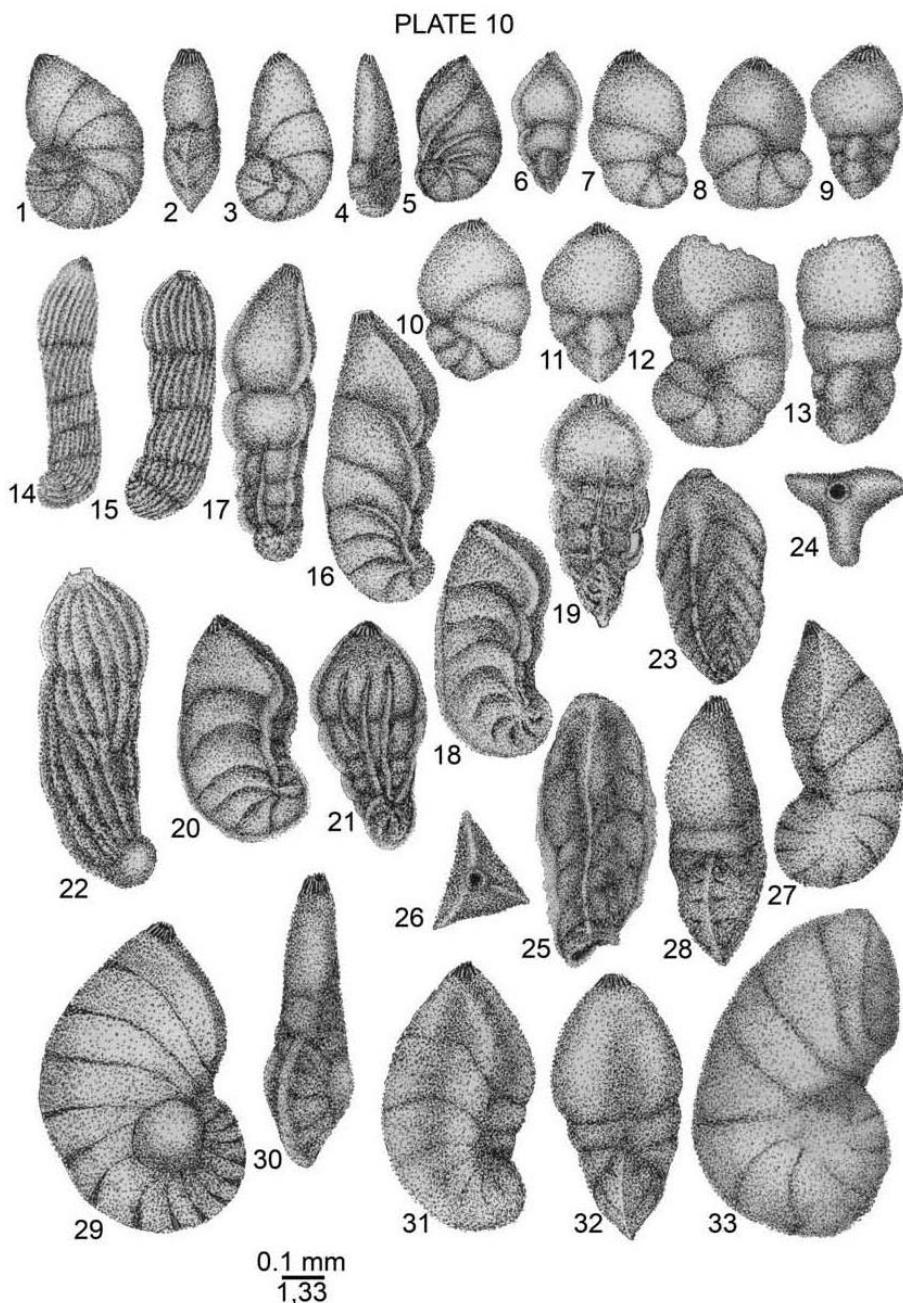


**Figs. 1–8** *Spiroloculina papiracea* BURROWS, SHERBORN & BAILEY 1890, Upper Albian, Buzescu core, L.P.B.IV. 11817. **Figs. 9–14** “*Quinqueloculina*” *antiqua* FRANKE 1928, Upper Albian, Buzescu core, L.P.B.IV. 11814. **Figs. 15–19** *Massilina planconvexa* TAPPAN 1940, Upper Albian, Buzescu core, L.P.B.IV. 11815. **Figs. 20–27** *Barkerina minima* NEAGU n. sp., Upper Albian, Buzescu core, holotype L.P.B.IV. 11807, paratypes L.P. B.IV. 12025.

## PLATE 9

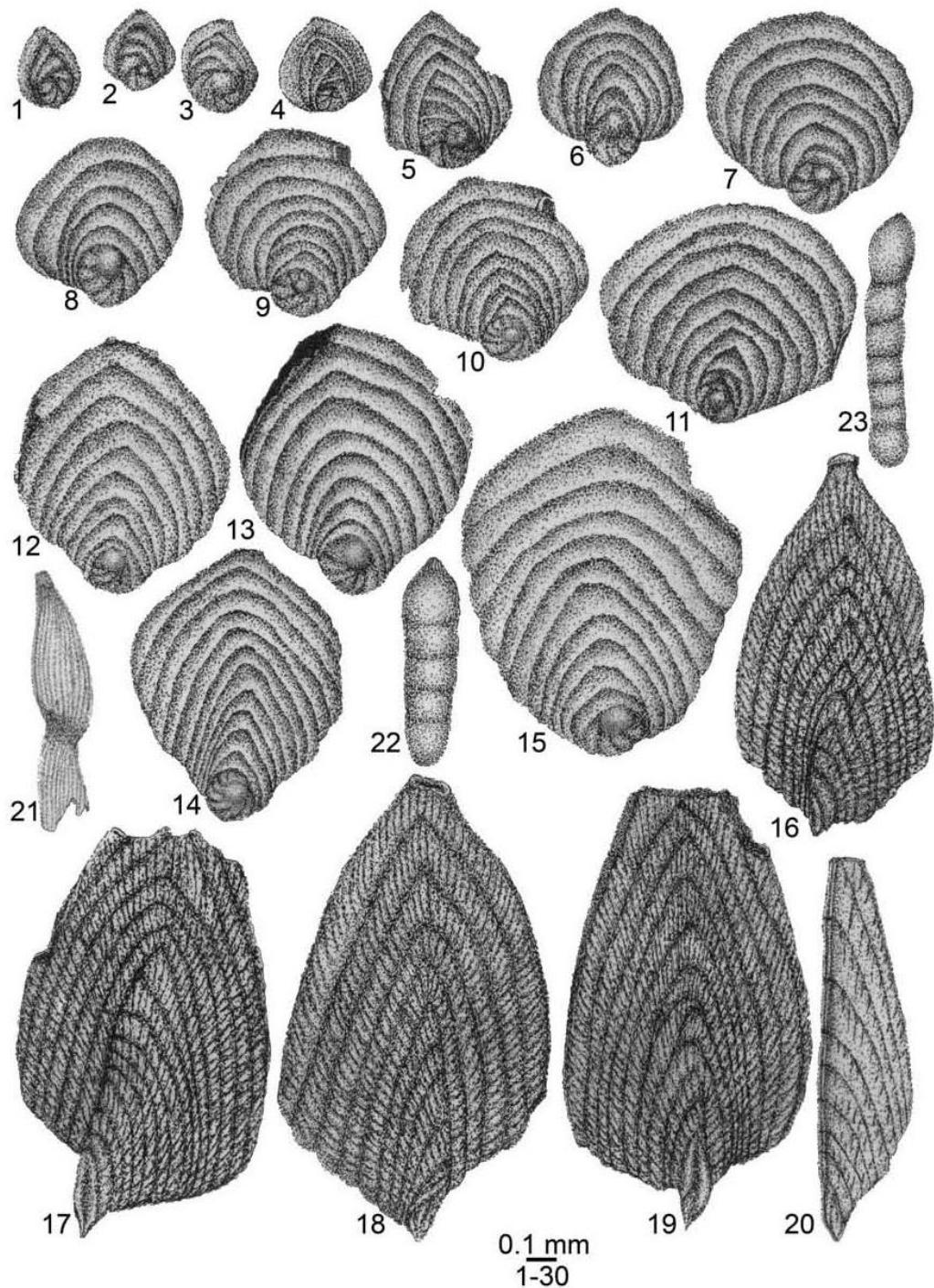


**Figs. 1–4** *Lenticulina roemeri* (REUSS) 1863, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11871. **Figs. 5–6** *Lenticulina macrodisca* (REUSS) 1863, Lower Albian, Balla III-Oltina drilling, L.P.B.IV. 11872. **Figs. 7–8** *Lenticulina gaultina* (BERTHELIN) 1880, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11876. **Figs. 9–10** *Lenticulina lituola* (CORNUEL) 1848, Lower Albian, Bala III-Oltina drilling, L.P.B.IV. 11879. **Figs. 11–20** *Lenticulina diademata* (BERTHELIN) 1880, Lower Albian, Călărași drillings, L.P.B.IV. 11880.



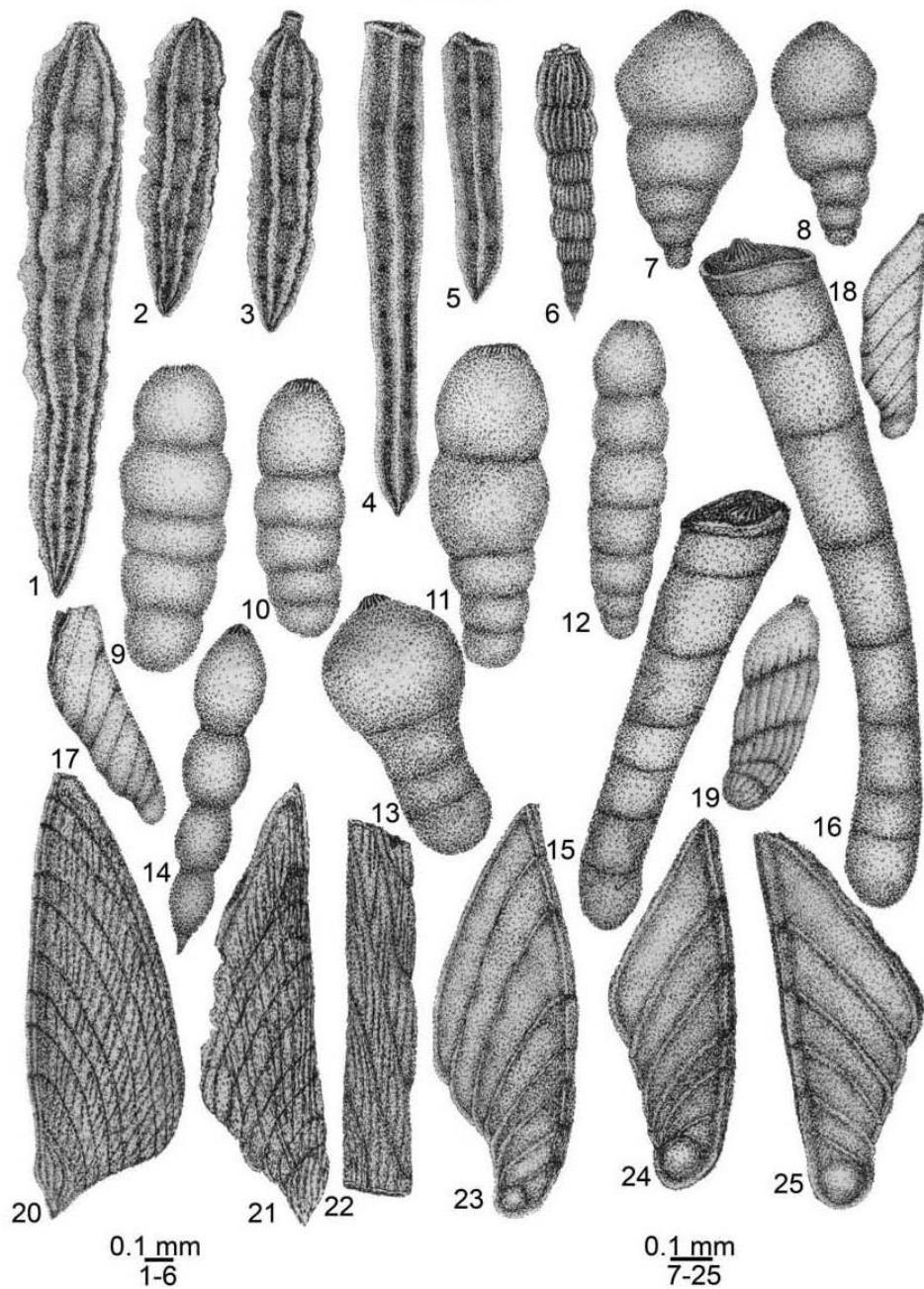
**Figs. 1–2** *Marginulinopsis scitula* BERTHELIN 1880, Lower Albian, Călărași borehole, L.P.B.IV. 11910. **Figs. 5–6** *Saracenaria crassicosta* EICHENBERG 1933, Lower Albian, Călărași borehole, L.P. B.IV. 11891. **Figs. 7–13** *Vaginulinopsis cephalotes* (REUSS) 1863, Lower Albian, Călărași borehole, L.P.B. IV. 11928. **Fig. 14** *Marginulina striatocostata* (REUSS) 1863, Lower Albian, Bala-Oltina borehole, L.P.B.IV. 11917. **Fig. 15** *Marginulina jonesi* (REUSS) 1863, Lower Albian, Călărași borehole, L.P. B.IV. 11920. **Figs. 16–21** *Saracenaria crassicosta* EICHENBERG 1933, Lower Albian, Călărași borehole, L.P.B.IV. 11897. **Fig. 22** *Marginulina robusta* REUSS 1863, Lower Albian, Bala-Oltina borehole, L.P.B.IV. 11926. **Figs. 23–24** *Tristix excavata* (REUSS) 1863, Lower Albian, Călărași borehole, L.P.B.IV. 11863. **Figs. 25–26** *Tristix articulata* (REUSS) 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11866. **Figs. 27–28** *Lenticulina inflata* (REUSS) 1860, Lower Albian, Bala-Oltina borehole, L.P.B.IV. 11890. **Figs. 29–30** *Lenticulina marcki* (REUSS) 1860, Lower Albian, Bala-Oltina borehole, L.P.B.IV. 11878. **Figs. 31–32** *Saracenaria frankei* ten DAM 1950, Lower Albian, Călărași boreholes, L.P.B.IV. 11899. **Fig. 33** *Lenticulina* sp.

## PLATE 11



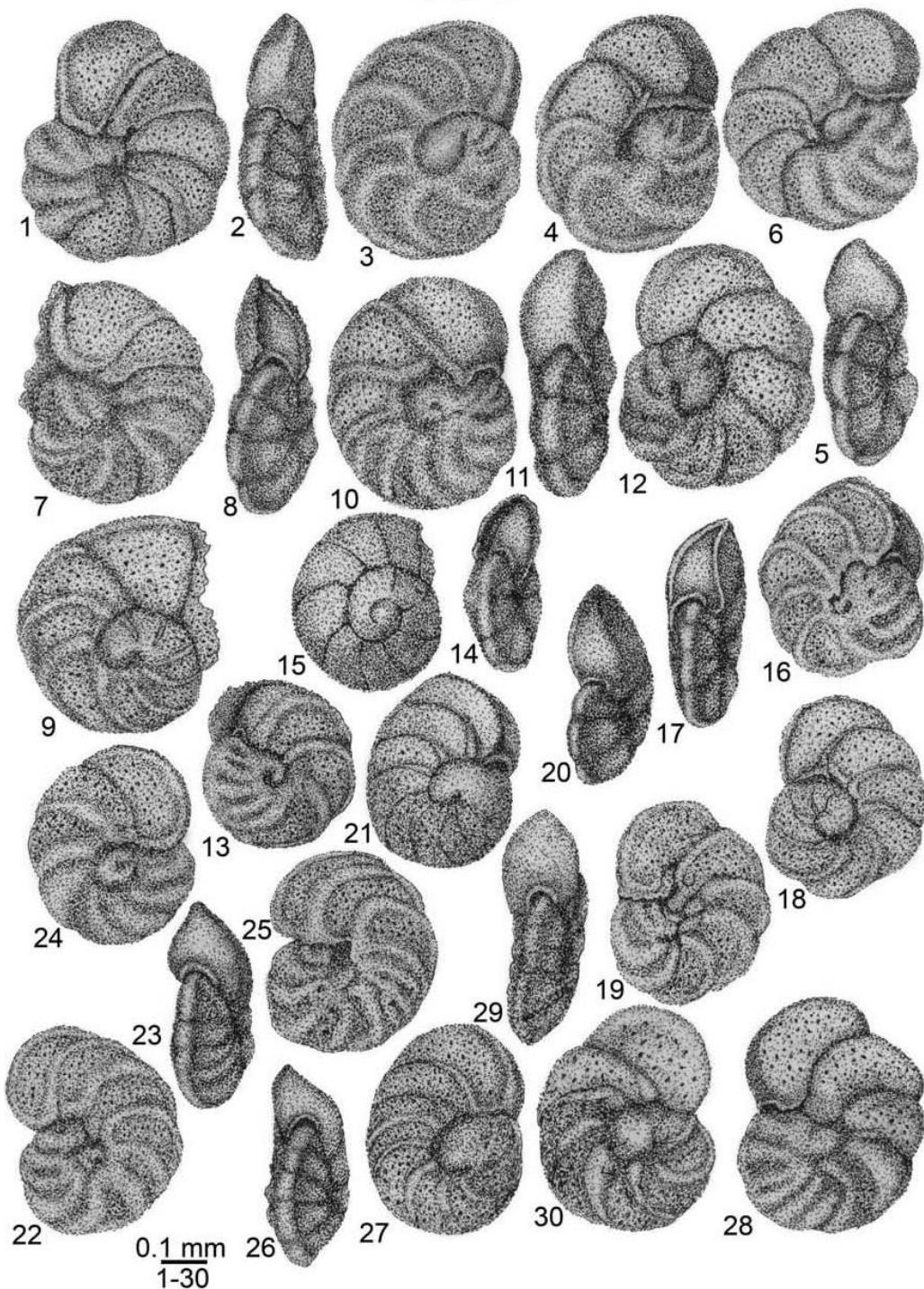
**Figs. 1–15** *Palmula asiatica* FURSENKO 1949 (evolutive serie), Lower Albian, Călărași boreholes, L.P.B.IV. 11911. **Figs. 16–19** *Citharinella karreri* (BERTHELIN) 1880, Lower Albian, Călărași boreholes, L.P.B.IV. 11956. **Fig. 20** *Citharina reticulata* (CORNUEL) 1848, Lower Albian, Călărași boreholes, L.P.B.IV. 11930. **Fig. 21** *Dentalina bambusa* (CHAPMAN) 1894, Lower Albian, Călărași boreholes, L.P.B.IV. 11819. **Figs. 22–23** *Nodosaria nuda* REUSS 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11848.

## PLATE 12



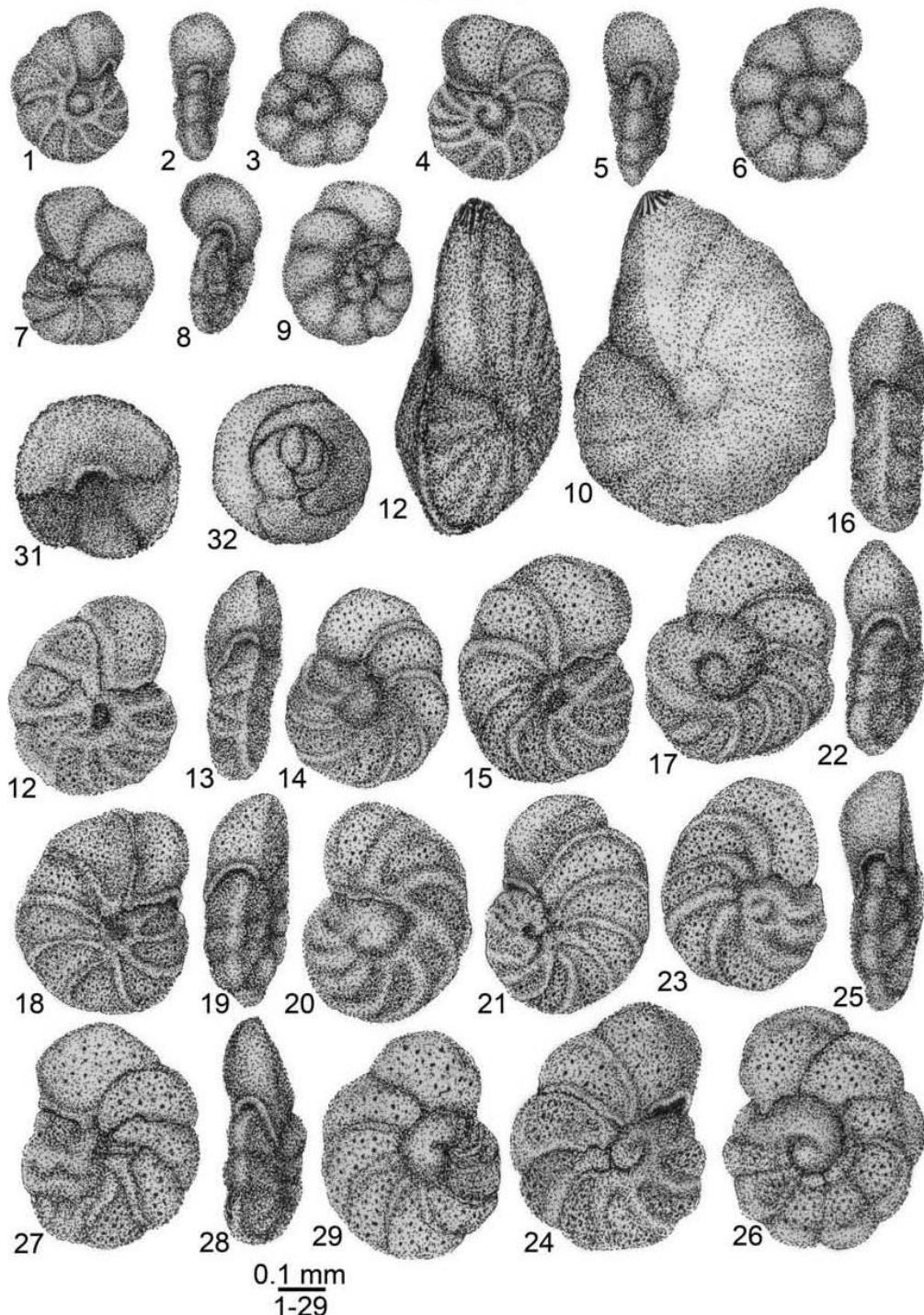
**Figs. 1–3** *Nodosaria prismatica* REUSS 1860, Lower Albian Călărași boreholes, L.P.B.IV. 11842. **Figs. 4–5** *Nodosaria orthopleura* REUSS 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11849. **Fig. 6** *Nodosaria intercostata* REUSS 1860, Lower Albian, Călărași boreholes, L.P.B.IV. 11846. **Figs. 7–13** *Pseudonodosaria mutabilis* (REUSS) 1860, Lower Albian, Călărași boreholes, L.P.B.IV. 11852. **Fig. 14** *Dentalina concina* REUSS 1860, Lower Albian, Călărași boreholes, L.P.B.IV. **Figs. 15–16** *Dentalina linearis* (ROEMER) 1841, Lower Albian, Călărași boreholes, L.P.B.IV. 11820. **Figs. 17–18** *Vaginulina marginulinoides* REUSS 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11938. **Fig. 19** *Marginulina striatocostata* REUSS 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11918. **Figs. 20–21** *Citharina orthonota* (REUSS) 1863, Lower Albian Călărași boreholes, L.P.B.IV. 11932. **Fig. 22** *Citharina angustissima* (REUSS) 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11933. **Fig. 23** *Vaginulina arguta* REUSS 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11939. **Figs. 24–25** *Vaginulina protosphaerra* (REUSS) 1863, Lower Albian, Călărași boreholes, L.P.B.IV. 11942.

## PLATE 13

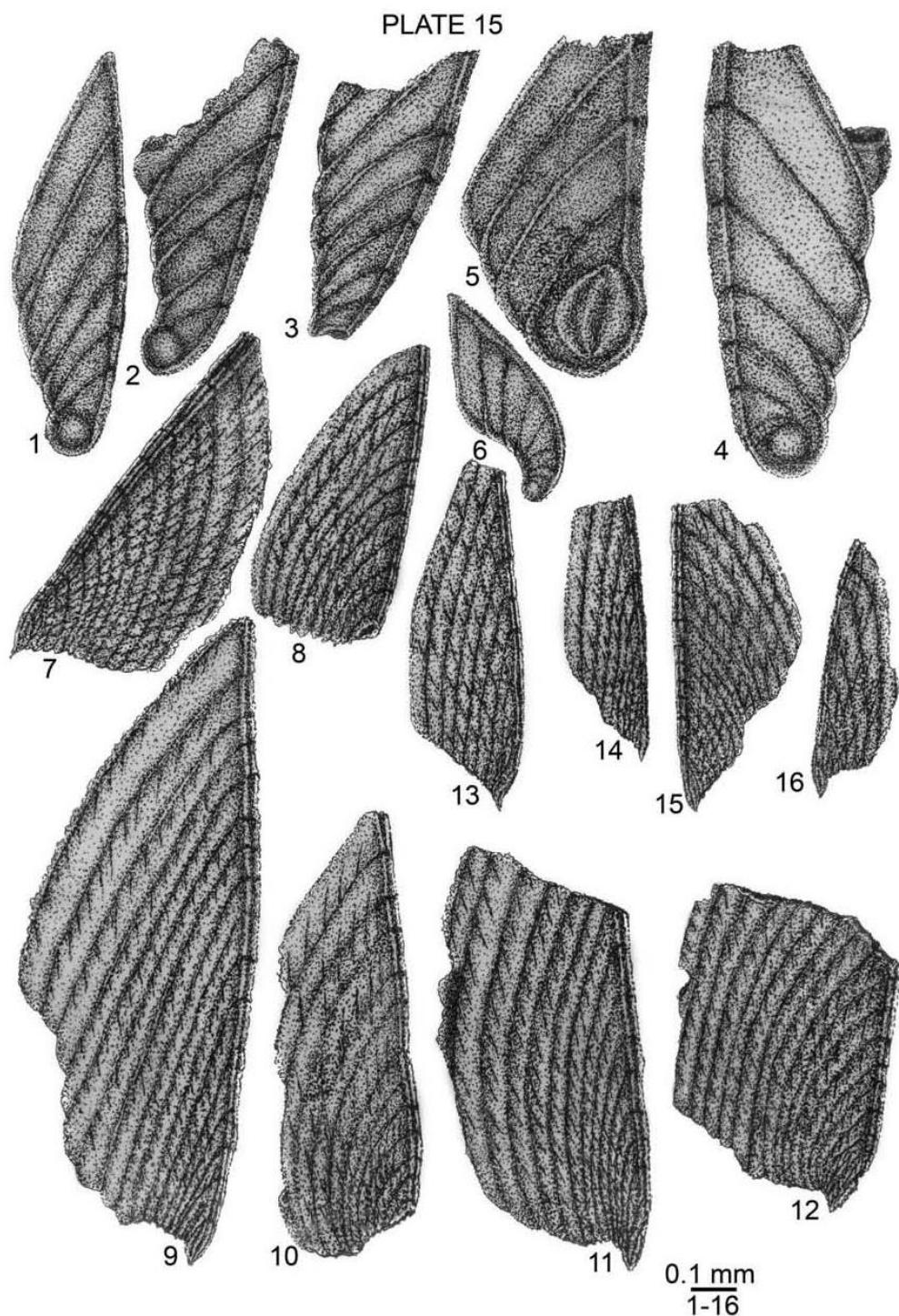


**Figs. 1–5** Lower Albian, Bala –Oltina drilling. **Figs. 6–30** Călărași drilling. Figs. 1–12 *Gavelinella tormarpensis* BROTZEN 1942; Figs. 1–6 Balla-Oltina drilling, L.P. B.IV. 11997. Figs. 7–12 Călărași drillings, L.P.B.IV. 11998. **Figs. 13–17, 19–21, 25–27** *Lingulogavelinella cibicidoides* MALAPRIS 1965. Figs. 13–15 Bala-Oltina drilling, L.P.B.IV. 12018; Figs. 19–21, 25–27 Călărași drillings, L.P. B.IV. 12018. **Figs. 22–24, 28–30** *Gavelinella tormarpensis* BROTZEN 1942, Călărași drillings L.P. B.IV. 11018.

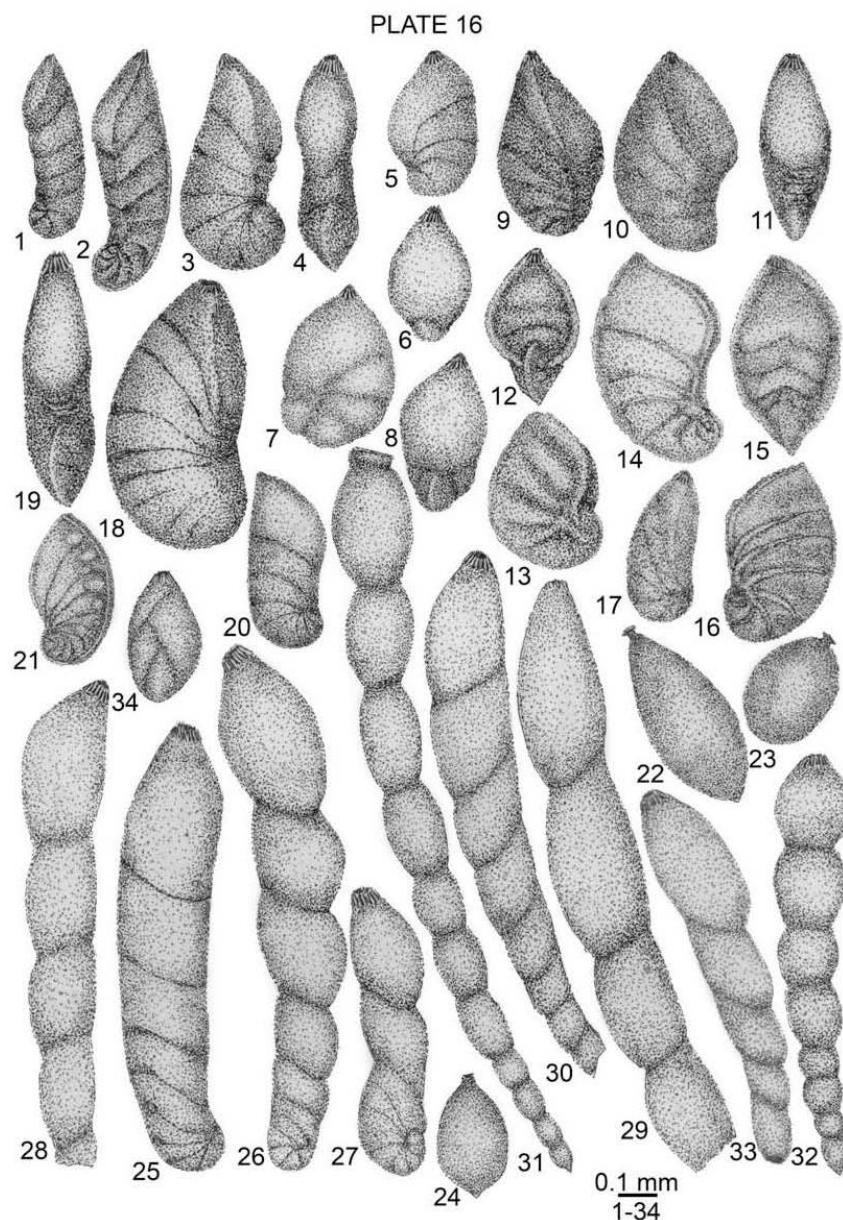
## PLATE 14



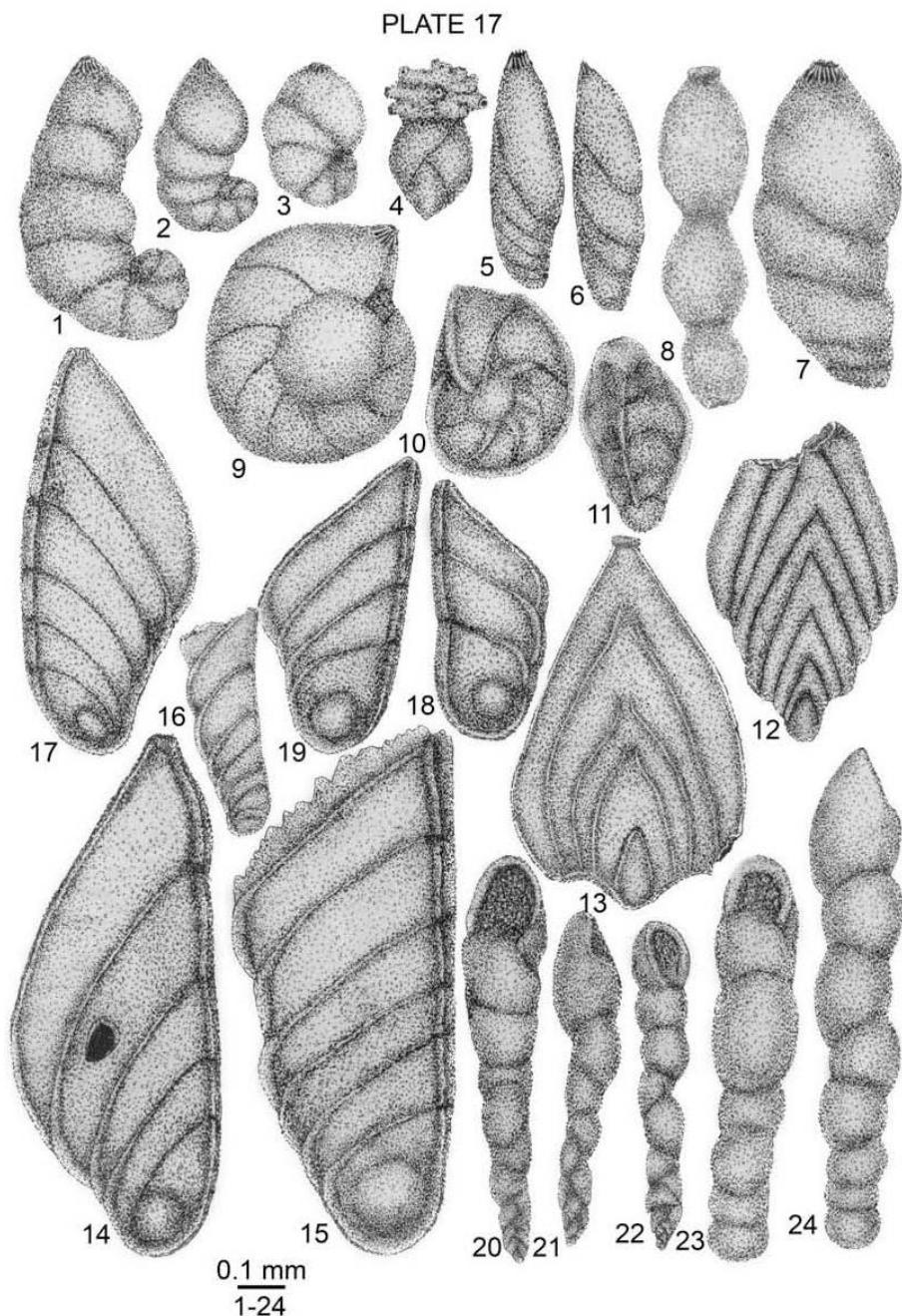
**Figs. 1–9** *Gavelinella rudis* (REUSS) 1863, Lower Albian, Hărlești borehole, L.P.B.IV. 11999. **Figs. 10–11** *Lenticulina gaultina* (BERTHELIN) 1880, (with a *Darbyella*'s coiling and fable elevated sutures), Middle Albian, Giurgiu Pod, L.P.B.IV. 11877. **Figs. 12–20** *Gavelinella emanueli* nom. nov., Lower Albian, Călărași boreholes, L.P.B.IV. 12003. **Figs. 21–29** *Gavelinella tormarpensis* BROTZEN 1942, Lower Albian, Călărași boreholes, L.P.B.IV. 11998. **Figs. 30–31** *Patellovalvulina patruliusi* NEAGU 1975, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11771.



**Figs. 1–3** *Vaginulina protosphaera* REUSS 1863, Lower Albian, Bala-Oltina drilling, L.P.B.IV. 11942. **Fig. 4** *Vaginulina truncata* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11955. **Fig. 5** *Vaginulina bicostulata* REUSS, 1860 Lower Albian, Călărași boreholes, L.P. B.IV. **Fig. 6** *Vaginulina eurynota* REUSS, 1863, Lower Albian Călărași, borholes, L.P.B.IV. 11947. **Figs. 7–10** *Citharina reticulata* (CORNUEL) 1848, Lower Albian, Călărași cores, L.P.B.IV. 11911. **Figs. 11–12** *Citharina sparsicosta* REUSS 1863, Lower Albian; **Fig. 11** Bala-Oltina drilling, L.P. B.IV. 12028, **Fig. 12** Călărași boreholes, L.P.B.IV.12028. **Figs. 13–16** *Citharina harpa* (ROEMER) 1841, Lower Albian, Bala drilling, L.P.B.IV. 11934.

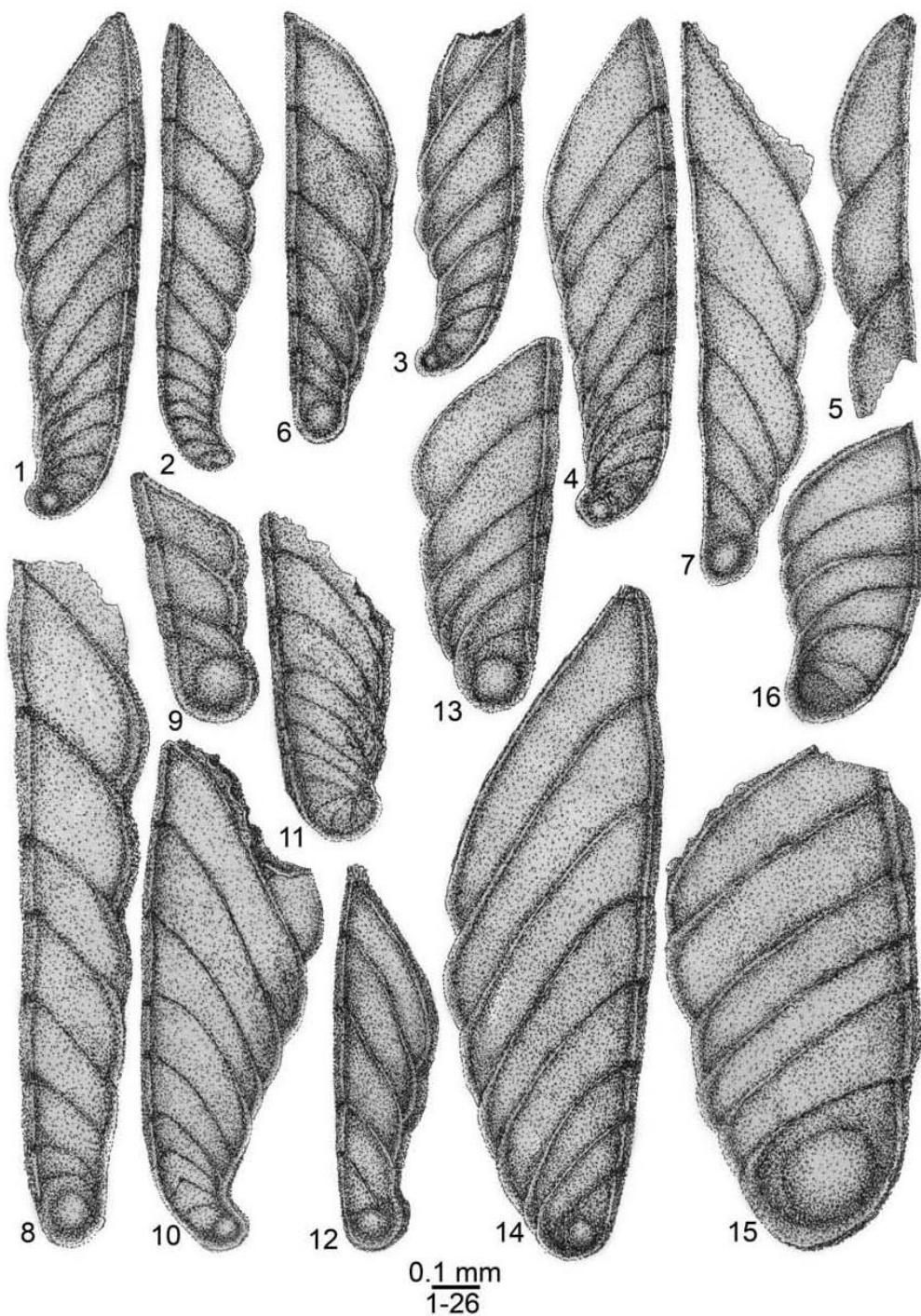


**Figs. 1, 25–27** *Marginulinopsis ensis* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11909. **Fig. 2** *Saracenaria bononiensis* BERTHELIN 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 5039. **Figs. 3–4** *Marginulinopsis bacillum* (REUSS) 1845, Middle Albian, Giurgiu Pod, L.P.B.IV. 12026. **Figs. 5–8** *Lenticulina oligostegia* (REUSS) 1860, Middle Albian, Giurgiu Pod, L.P.B.IV. 11965. **Figs. 9–11** *Saracenaria frankei* ten DAM 1950, Middle Albian, Giurgiu Pod, L.P.B.IV. 11899. **Figs. 12–16** *Saracenaria crassicosta* EICHENBERG 1933, Middle Albian, Giurgiu Pod, L.P.B.IV., 11894. **Fig. 17** *Marginulinopsis schloenbachi* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11906. **Figs. 18–19** *Lenticulina inflata* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. **Fig. 20** *Marginulina paralella* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11922. **Fig. 21** *Planularia bradyana* CHAPMAN 1894, Middle Albian, Giurgiu Pod, L.P.B.IV. 11935. **Figs. 22–24** *Lagena apiculata* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11937. **Fig. 23** *Lagena inornata* (d'ORBIGNY), Middle Albian, Giurgiu Pod. **Figs. 25–27** *Marginulinopsis ensis* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 5036. **Figs. 28–29, 30** *Dentalina intermedia* REUSS 1860, Middle Albian, Giurgiu Pod, L.P.B.IV. 11822. **Fig. 31** *Dentalina monile* CORNUEL 1848, Middle Albian, Giurgiu Pod, L.P.B.IV. 5948. **Fig. 32** *Dentalina linearis* (ROEMER) 1841, Middle Albian, Giurgiu Pod, L.P.B.IV. 5044. **Fig. 33** *Dentalina catenula* REUSS 1860, Middle Albian, Giurgiu Pod, L.P.B.IV. 11821. **Fig. 34** *Eoguttulina anglica* CUSHMAN & OZAWA 1930, Middle Albian, Giurgiu Pod, L.P.B.IV. 5132.



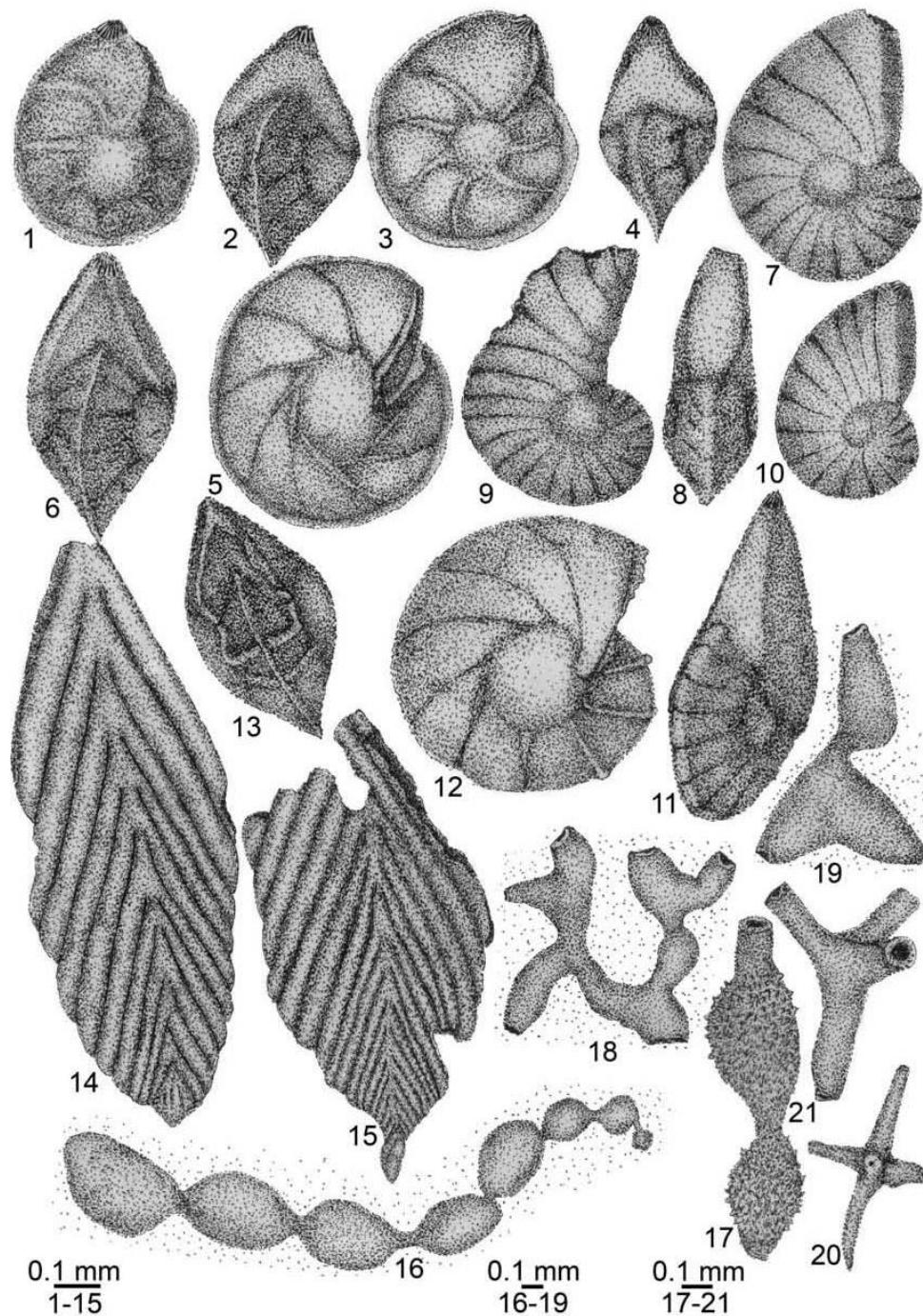
**Figs. 1–3** *Vaginulinopsis cephalotes* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11929. **Fig. 4** *Eoguttulina subsphaerica* (BERTHELIN) 1880, Middle Albian, Giurgiu Pod, L.P. B.IV. 11967. **Figs. 5–6** *Marginulinopsis schloenbachi* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11906. **Fig. 7** *Marginulina inaequalis* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 5042. **Fig. 8** *Dentalina catenula* REUSS, Middle Albian, Giurgiu Pod. **Fig. 9** *Lenticulina macrodisca* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11873. **Fig. 10** *Lenticulina subalata* (REUSS) 1863, Middle Albian, Goiurgiu Pod, L.P.B.IV. 11881. **Fig. 11** *Tristix insigniae* (REUSS) 1863, Middle Albian, Giurgiu Pod. **Fig. 12** *Frondicularia* sp., Middle Albian, Giurgiu Pod. **Fig. 13** *Frondicularia filocincta* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11869. **Figs. 14, 17** *Vaginulina protosphaera* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11943. **Figs. 15–16, 18** *Vaginulina truncata* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11955. **Fig. 19** *Vaginulina incompta* REUSS 1863, Middle Albian, Giurgiu Pod. **Figs. 20–22** *Pleurostomella* sp. REUSS & BERTHELIN 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 5088, 11985. **Figs. 23–24** *Pleurostomella obtusa* BERTHELIN 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 5080, 11986.

## PLATE 18



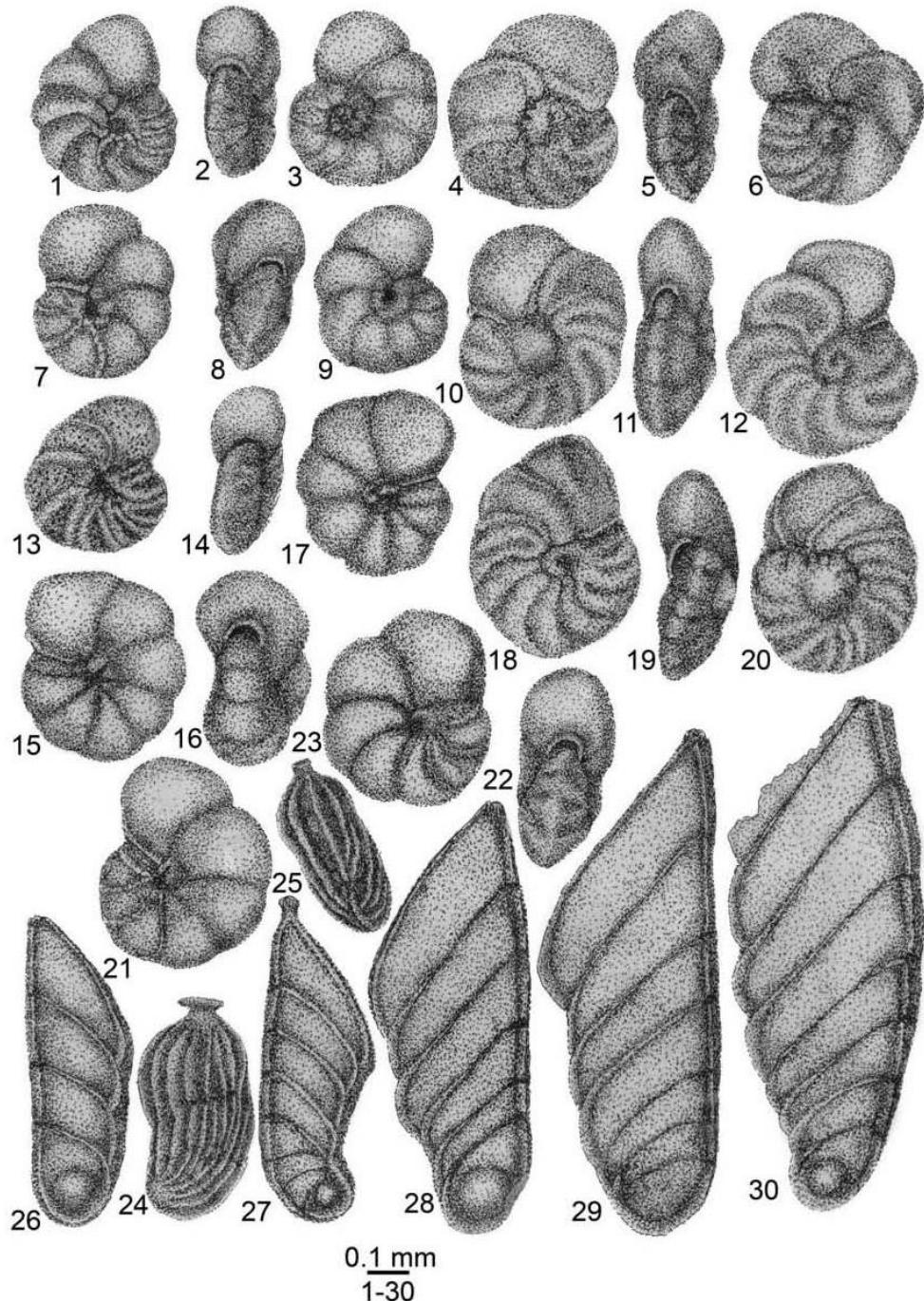
**Figs. 1–4, 10–11** *Vaginulina eurynota* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11948. **Fig. 5** *Vaginulina stolleyi* EICHENBERG 1933, Middle Albian, Giurgiu Pod, L.P.B.IV. 11951. **Figs. 6–9, 12** *Vaginulina recta* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11952. **Fig. 13** *Vaginulina protosphaera* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11943. **Fig. 14** *Vaginulina longa* (CORNUEL) 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 11954. **Fig. 15** *Vaginulina kochii* ROEMER 1841, Middle Albian, Giurgiu Pod, L.P.B.IV. 11955. **Fig. 16** *Vaginulina arguta* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11940.

## PLATE 19



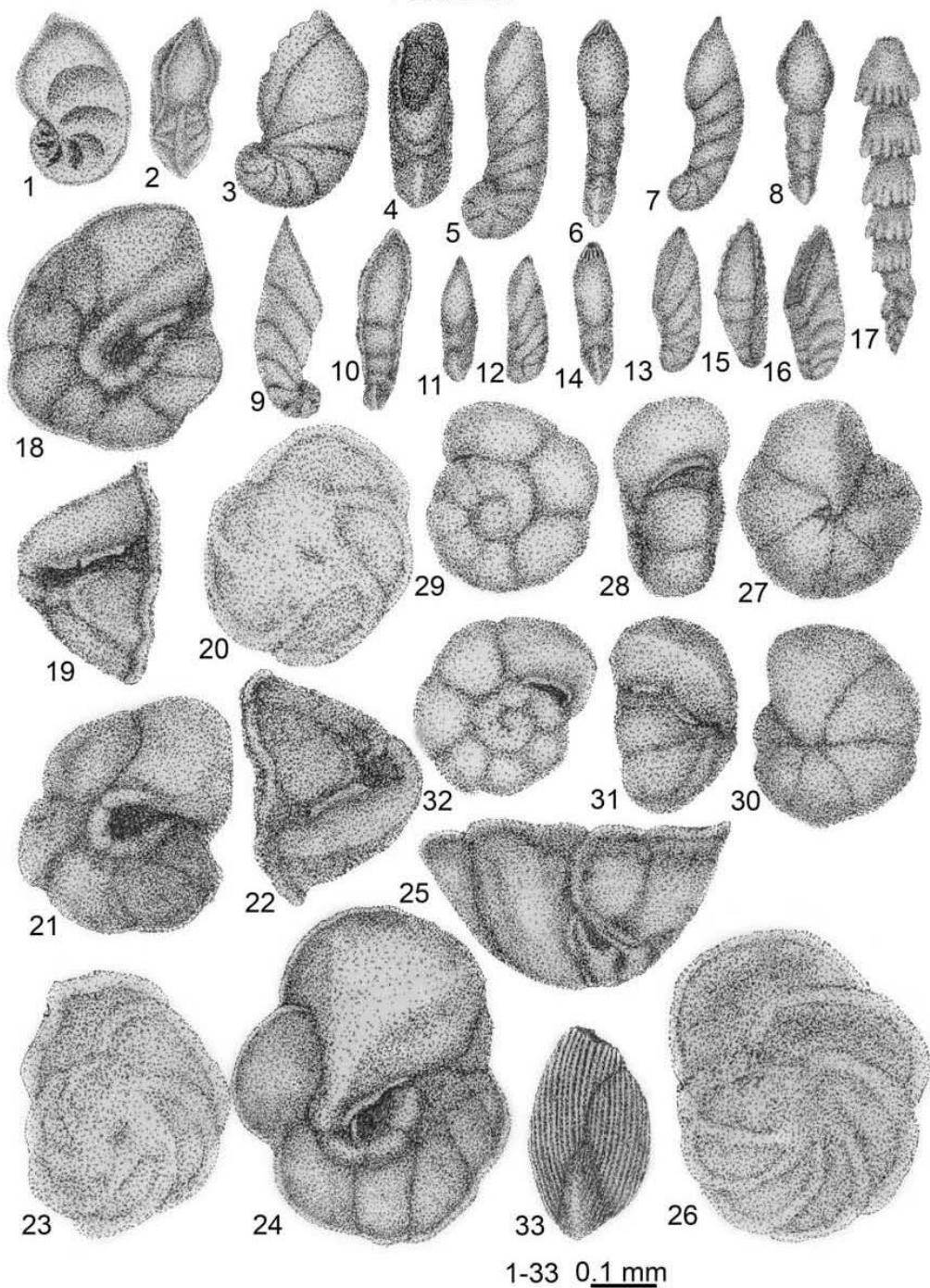
**Figs. 1–6, 12, 13** *Lenticulina muensteri* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11883. **Figs. 7–11** *Lenticulina gaultina* (BERTHELIN) 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 11877. **Fig. 4** *Frondicularia inversa* REUSS 1845, Middle Albian, Giurgiu Pod, L.P.B.IV. 5067. **Fig. 15** *Frondicularia planifolium* CHAPMAN 1894, Middle Albian, Giurgiu Pod, L.P.B.IV. 5068. **Fig. 16** *Vitriwebbina laevis* SOLAS 1877, Middle Albian, Giurgiu Pod, L.P.B.IV. 5075. **Fig. 17** *Ramulina novaculeata* BULLARD 1953, Middle Albian, Giurgiu Pod, L.P.B.IV. 5077. **Figs. 18–19** *Histopomphus cervicornis* CHAPMAN 1892, Middle Albian, Giurgiu Pod, L.P.B.IV. 5076. **Figs. 20–21** *Ramulina arkadelphiana* CUSHMAN & PARKER 1935, Middle Albian, Giurgiu Pod, L.P.B.IV. 12029.

## PLATE 20

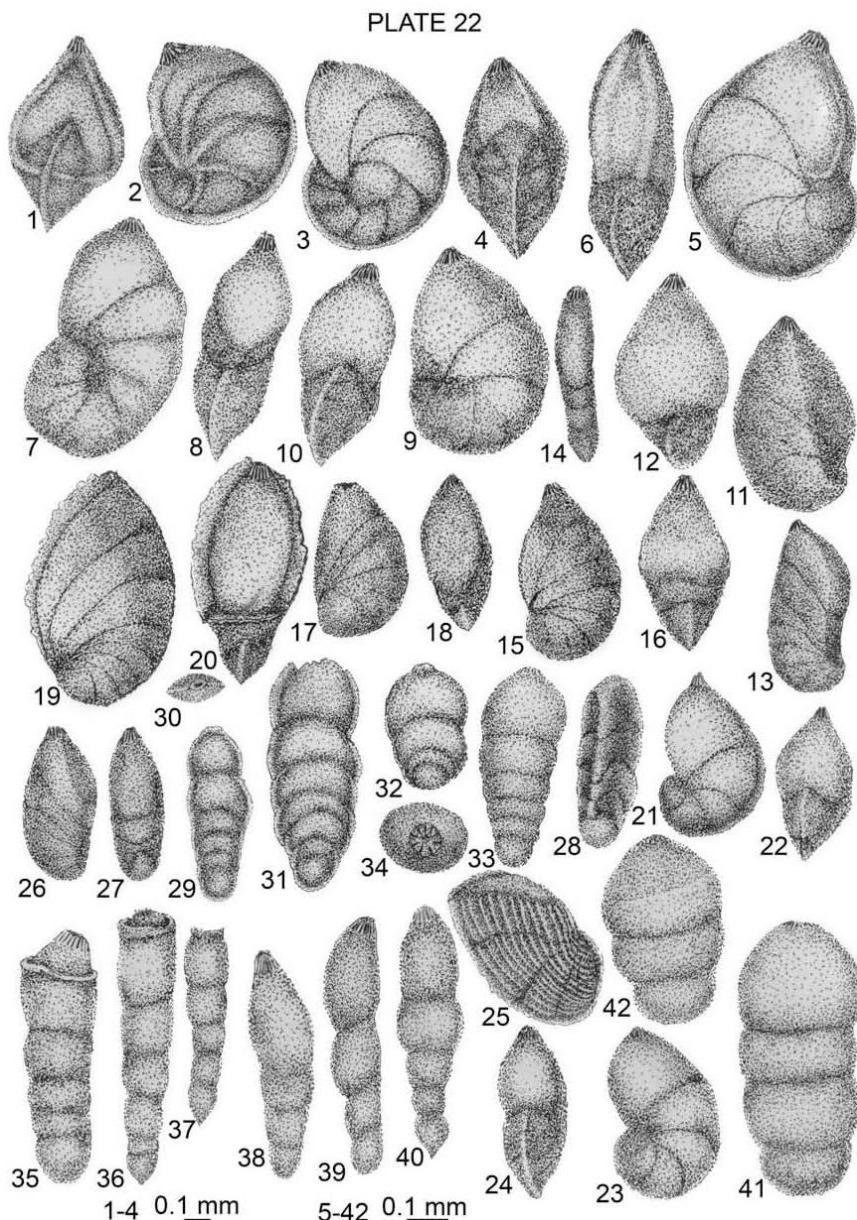


**Figs. 1–3, 7–9** *Gavelinella rufis* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 12000. **Figs. 4–6, 13–14** *Gavelinella intermedia* (BERTHELIN) 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 12004. **Figs. 10–12, 18–20** *Gavelinella belorussica* (AKIMEZ) 1961, Middle Albian Giurgiu Pod, L.P.B.IV. 12008. **Figs. 15–17, 21–23** *Gavelinella sagizensis* MYATLIUK 1954, Middle Albian Giurgiu Pod, L.P.B.IV. 12015. **Figs. 24–25** *Marginulina robusta* REUSS 1863, Middle Albian, Giurgiu Pod. **Fig. 26** *Vaginulina recta* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11952. **Fig. 27** *Vaginulina eurynota* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11948. **Figs. 28, 30** *Vaginulina elongata* (CORNUEL) 1848, Middle Albian, Giurgiu Pod, L.P.B.IV. Fig. 29 *Vaginulina arguta* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11940.

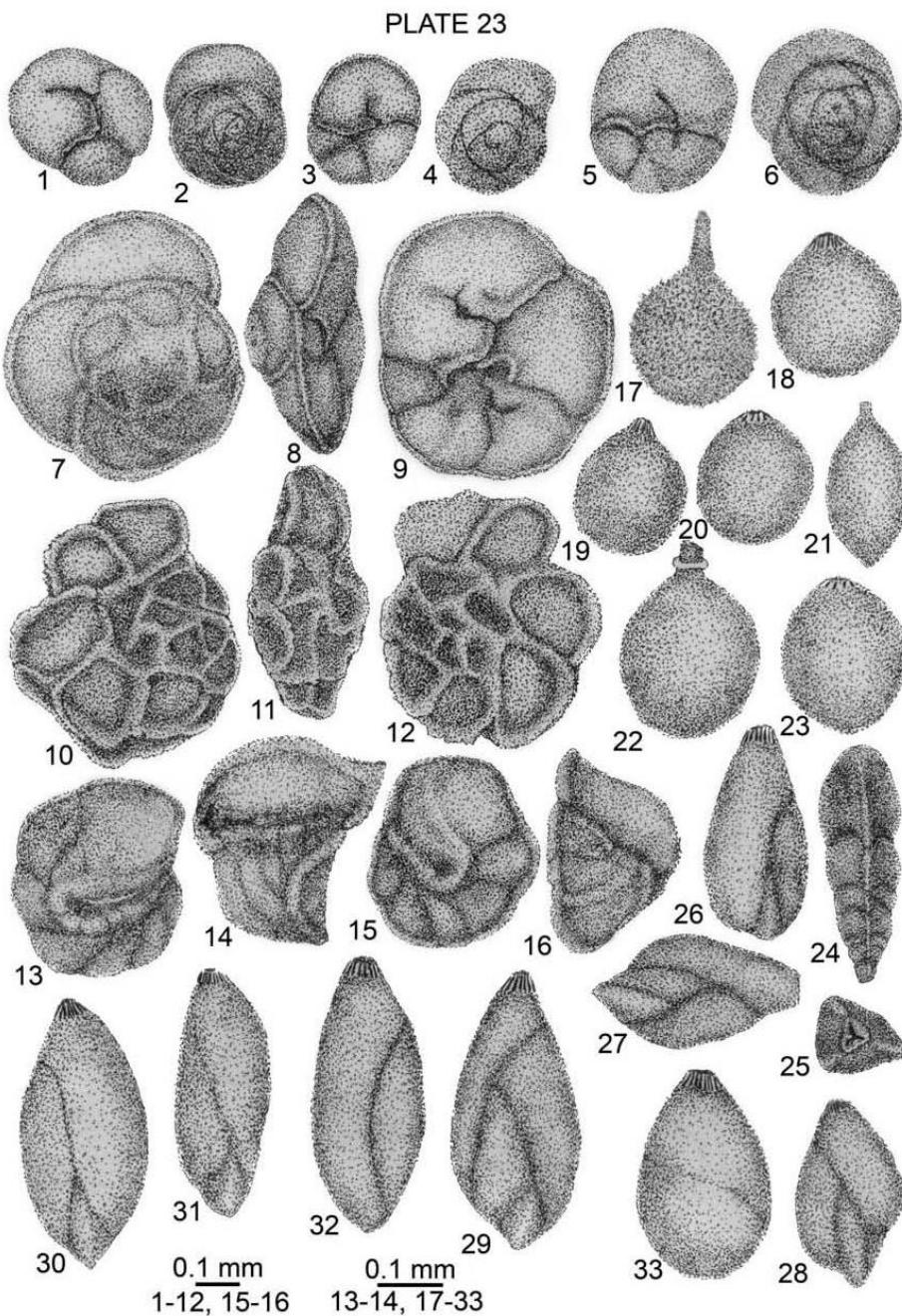
## PLATE 21



**Figs. 1–2** *Astacolus sulcifera* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11912. **Figs. 3–4** *Astacolus planiuscula* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P. B.IV.11913. **Figs. 5–6, 7–8** *Marginulinopsis ensis* (REUSS) 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11909. **Figs. 9–10, 15–16** *Saracenaria bonnoniensis* (BERTHELIN) 1880, Middle Albian, Giurgiu Pod, L.P.B.IV. 11898. **Figs. 11–14** *Marginulina perobliqua* REUSS 1863, Middle Albian, Giurgiu Pod, L.P.B.IV. 11923. **Fig. 18** *Bifarina calcarata* BERTHELIN 1880, Middle Albian, Giurgiu Pod. **Figs. 19–26** *Globorotalites rumanus* NEAGU 1965, Middle Albian, Giurgiu Pod. **Figs. 27–32** *Valvularia loeterlei* (TAPPAN)1940 Middle Albian, Giurgiu Pod, L.P.B.IV. 11991. **Fig. 33** *Eoguttulina tenuicosta* NEAGU 2001, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11975.

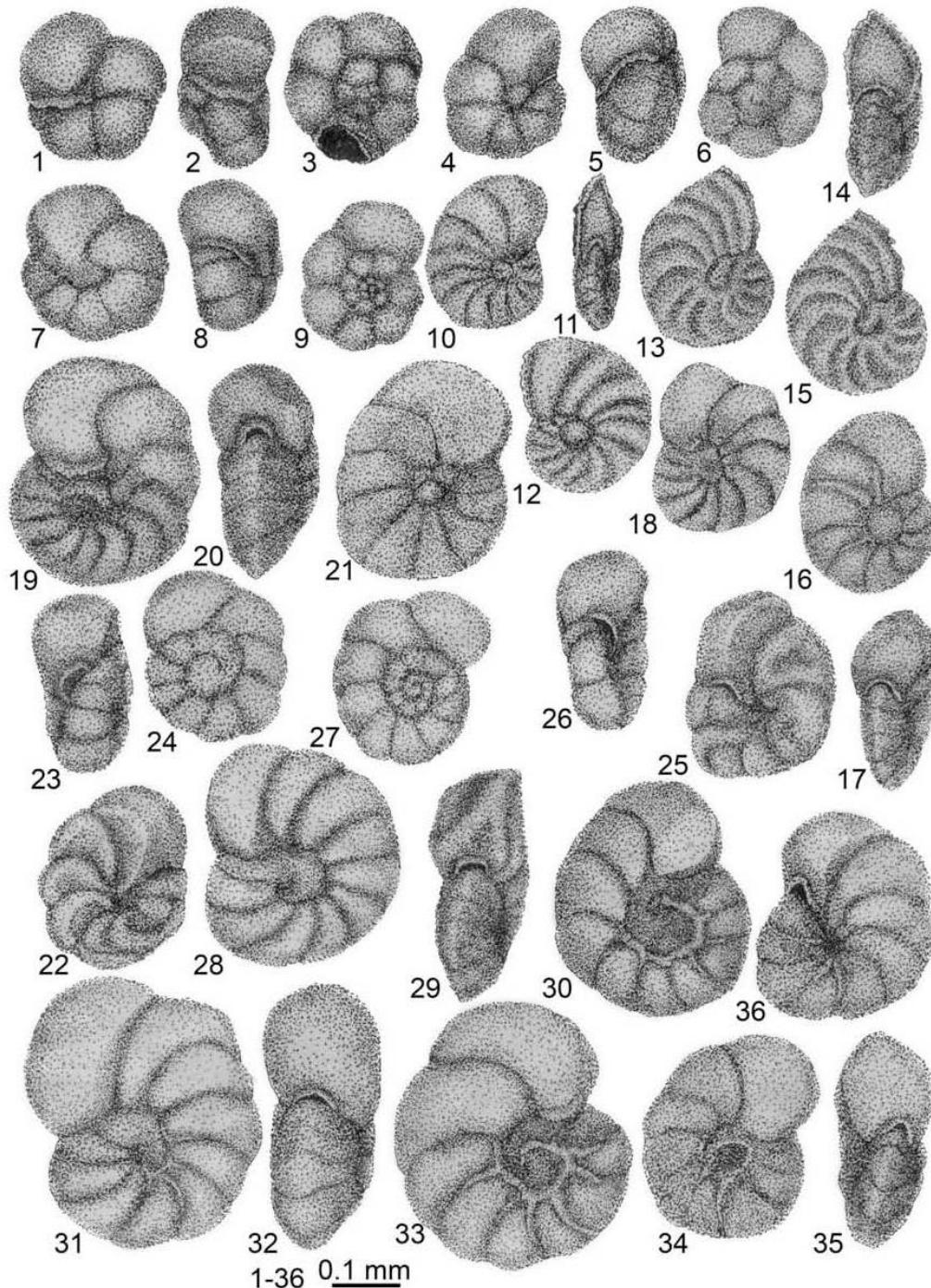


**Figs. 1, 2** *Lenticulina subalata* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11882. **Figs. 3, 4** *Lenticulina muensteri* (REUSS) 1863, Middle Albian (terminal part), Zimnicea Drilling, L.P.B.IV. 11994. **Figs. 5–10, 21, 22** *Lenticulina turgidula* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11885. **Figs. 11, 12** *Saracenaria triangularis* (d'ORBIGNY) 1840, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11900. **Figs. 13, 14, 26, 27** *Marginulinopsis schloenbachii* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11907. **Fig. 15, 16** *Saracenaria frankei* ten DAM 1950, Middle Albian (terminal part), Zimnicea drilling, L.P. B.IV. 11900. **Figs. 17–20** *Saracenaria crassicosta* EICHENBERG 1933, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11893. **Fig. 25** *Marginulina turgida* REUSS 1863, Middle Albian (terminal part) Zimnicea drilling, L.P.B.IV. 11924. **Fig. 28** *Tristix articulatum* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11867. **Figs. 29–32** *Lingulina loryi* BERTHELIN 1880, Middle Albian (terminal part), L.P.B.IV. 11860. **Figs. 33, 34, 41, 42** *Pseudonodosaria mutabilis* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11853. **Fig. 35** *Dentalina pseudochrysalis* REUSS 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.VI. 11823. **Figs. 36, 37** *Dentalina distincta* REUSS 1860, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11839. **Fig. 38** *Dentalina nana* REUSS 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11839. **Fig. 39** *Dentalina* sp. **Fig. 40** *Dentalina distincta* REUSS 1860, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11825.



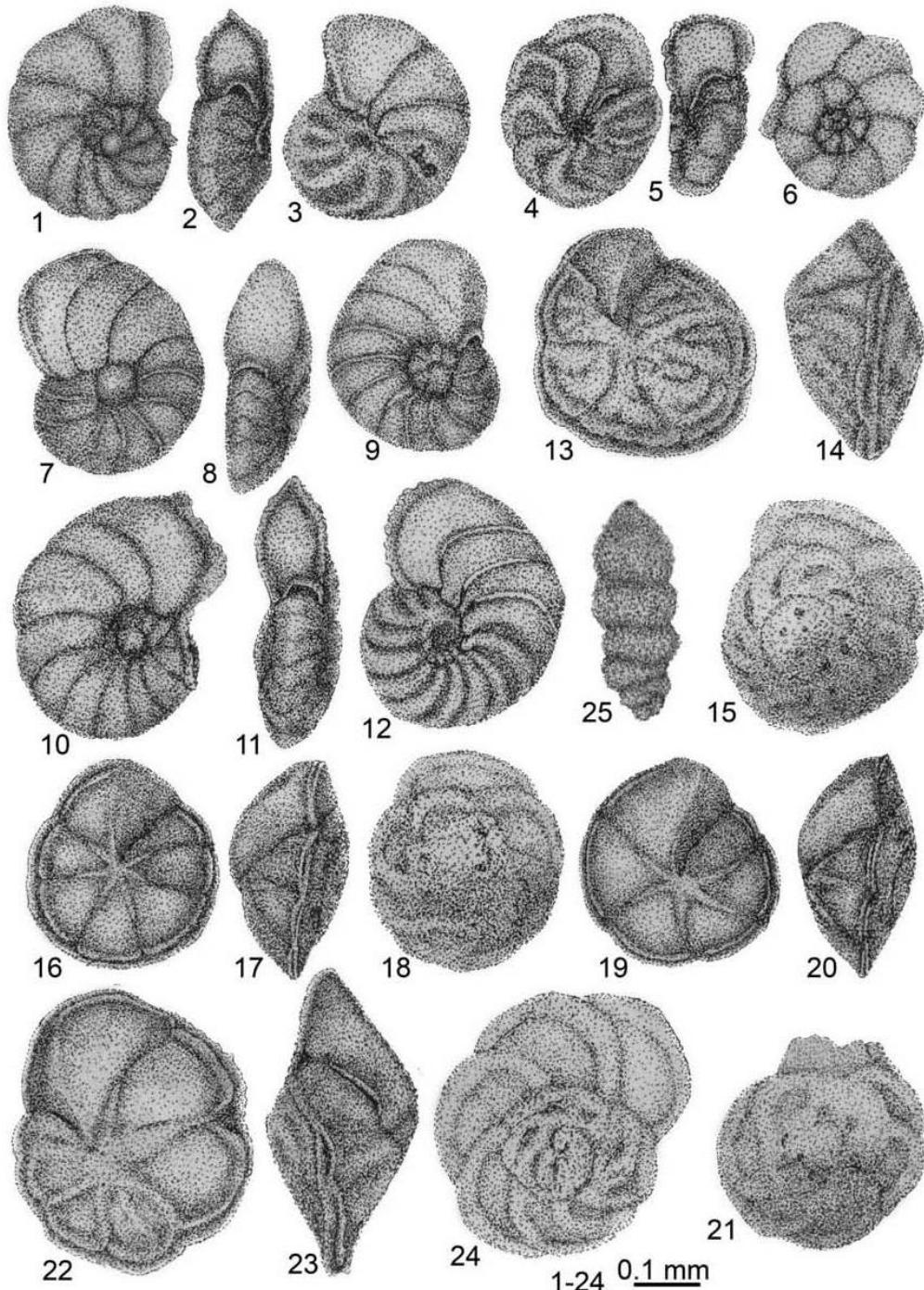
**Figs. 1–9** *Lamarkina lamplughii* (SCHERLOCK) 1881, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11808. **Figs. 10,11** *Epistomina juliae* MYATLIUK 1949, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11809. **Figs. 12–16** *Globorotalites rumanus* NEAGU 1965, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11994. **Fig. 17** *Lagena oxyystoma* REUSS 1862, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11958. **Figs. 18–20, 23** *Lagena* sp. REUSS 1858, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11960. **Fig. 21** *Lagena apiculata emaciata* REUSS 1858, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11961. **Fig. 22** *Lagena globosa* WALKER & JAKOB, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11962. **Figs. 24, 25** *Tristix acutangulum* REUSS 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11866. **Figs. 26–29** *Eoguttulina bucculenta* (BERTHELIN) 1880, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11970. **Figs. 30, 31** *Globulina prisca* REUSS 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11976. **Fig. 32** *Eoguttulina subsphaerica* (BERTHELIN) 1880, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11969.

## PLATE 24



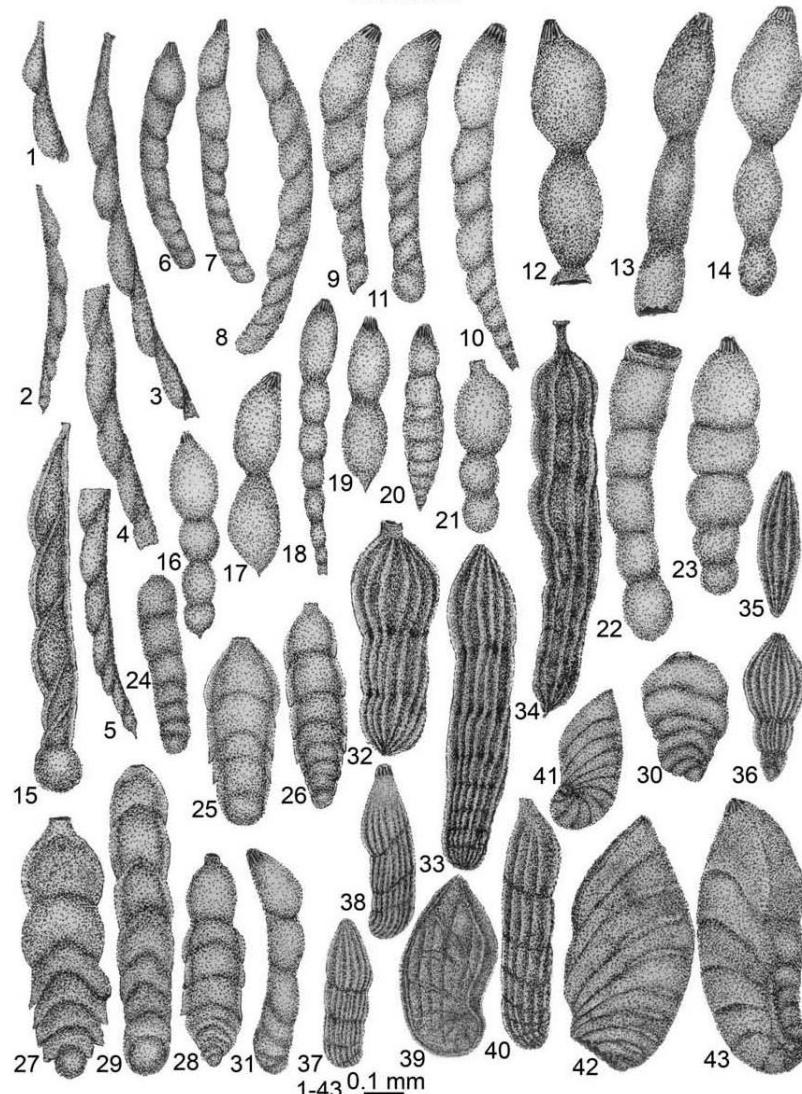
**Figs. 1–9** *Valvularia loeterlei* (TAPPAN) 1940, Middle Albian, 6 Putineiu core, L.P.B.IV. **Fig. 9** Zimnicea drilling, L.P.B.IV. 11992. **Figs. 10–15** *Gavelinella schloenbachi* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 12009. **Figs. 16–18, 28–36** *Gavelinella intermedia* (BERTHELIN) 1880, Middle Albian (terminal part), **Figs. 16–18** Zimnicea drilling, L.P.B.IV. 12005; **Figs. 28–36** Putineiu core, L.P.B.IV. 12004. **Figs. 19–21** *Gavelinella complanata* (BERTHELIN) 1880, Middle Albian (terminal part), Putineiu core, L.P.B.IV. 12011. **Figs. 22–27** *Lingulogavelinella ciry* MALAPRIS 1967, Middle Albian (terminal part), Zimnicea drilling, L.P. B.IV. 12016.

## PLATE 25

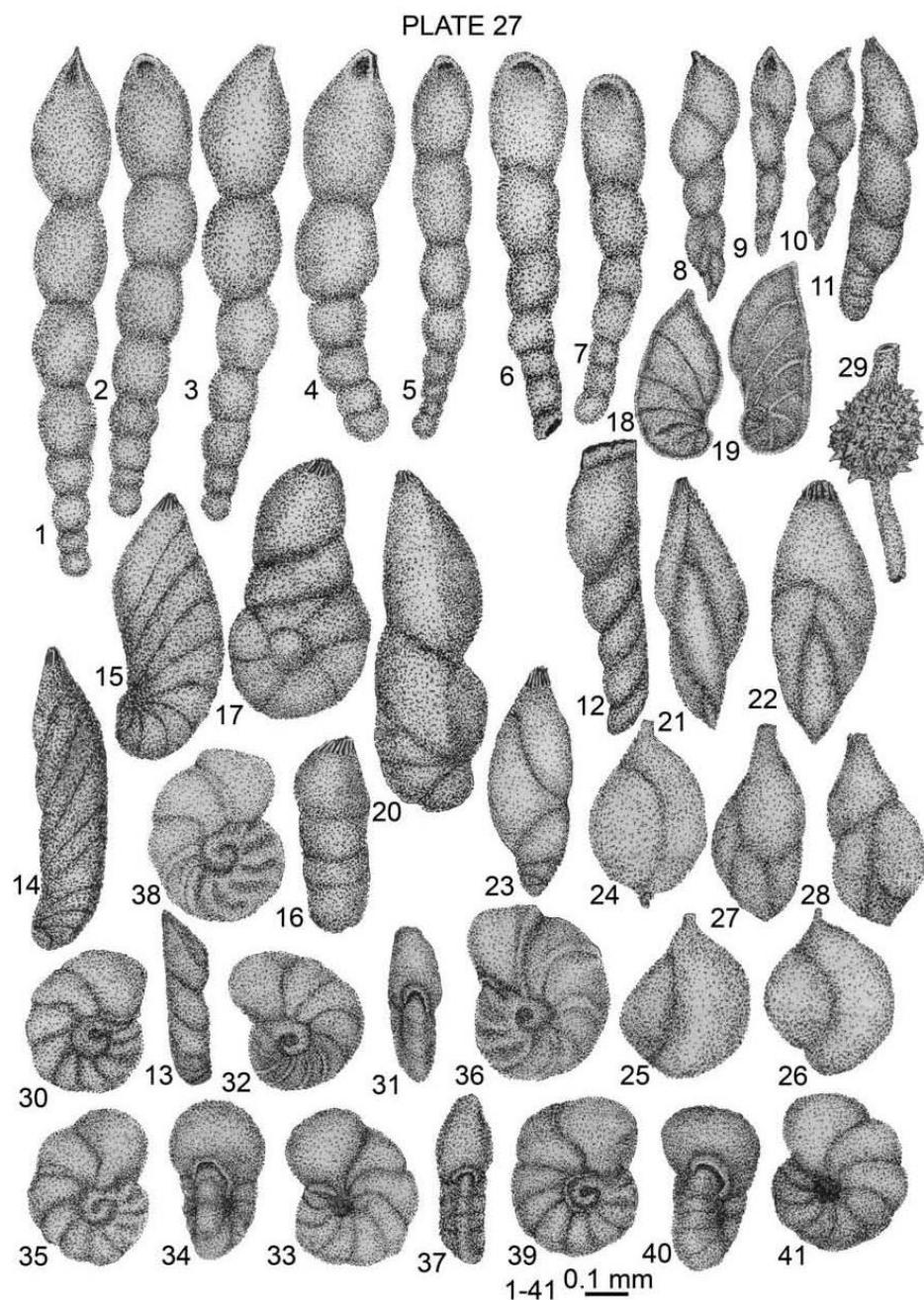


**Figs. 1–3** *Gavelinella emanueli* nom. nov., Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 12011. **Figs. 4–6** *Lingulogavelinella ciry* MALAPRIS 1967, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11016. **Figs. 7–12** *Gavelinella schloenbachi* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 12009. **Figs. 13–15, 22–24** *Epistomina carpenteri* (REUSS) 1863, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11811. **Figs. 16–21** *Epistomina chapmani* ten DAM 1948, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11810. **Fig. 25** *Siphogenerina asperula* CHAPMAN 1896, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11984.

## PLATE 26

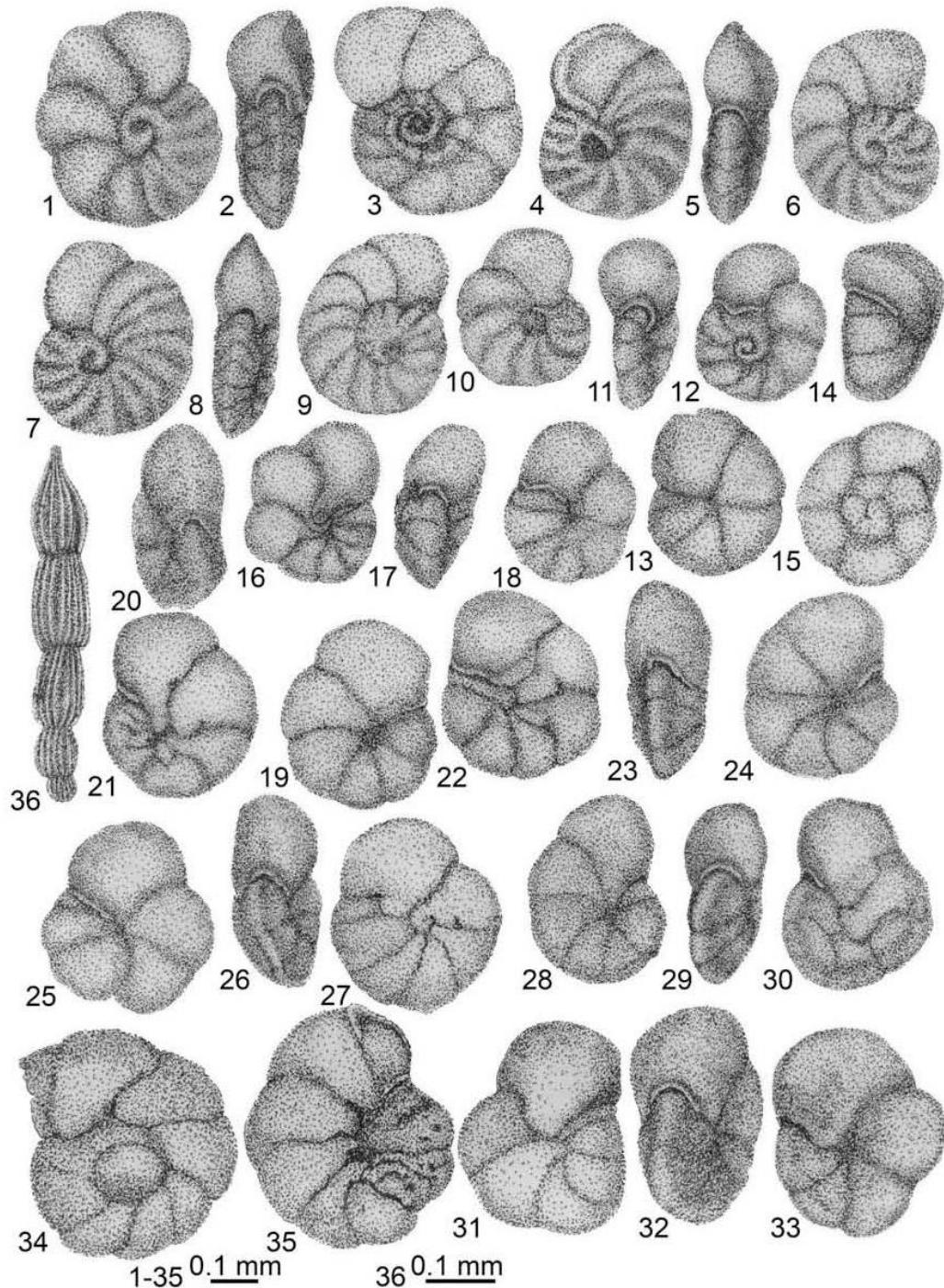


**Figs. 1–5** *Dentalina debilis* BERTHELIN 1880, Upper Albian, Buzescu core, L.P.B.IV. 11827. **Figs. 6–8, 30** *Marginulina linearis* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11915. **Figs. 9–11** *Dentalina deflexa* REUSS, 1863 Upper Albian, Buzescu core, L.P.B.IV. 11828. **Figs. 12–14** *Dentalina praegnans* REUSS 1865, Upper Albian, Buzescu core, L.P.B.IV. 11835. **Fig. 15** *Vaginulina recta* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11953. **Fig. 16** *Dentalina catenula* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11831. **Figs. 17, 19** *Dentalina oligostegia* REUSS 1845, Upper Albian, Buzescu core, L.P.B.IV. 11829. **Fig. 18** *Dentalina* sp. REUSS, nom. nov., Upper Albian, Buzescu core, L.P. B.IV. 11831. Figs. 20, 21 *Dentalina linearis* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11863. **Figs. 22, 23** *Pseudonodosaria humilis* (ROEMER) 1841, Upper Albian, Buzescu core L.P.B.IV. 11857. **Figs. 24–27** *Lingulina denticulocarinata* (CHAPMAN) 1894, Upper Albian, Buzescu core, L.P.B.IV. 11858. **Fig. 28** *Lingulina nodosaria* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11861. **Fig. 29** *Lingulina loryi* BERTHELIN 1880, Upper Albian, Buzescu core, L.P.B.IV. 11858. **Fig. 31** *Nodosaria obscura* REUSS 1845, Upper Albian, Buzescu core, L.P.B.IV. 12030. **Fig. 32** *Nodosaria paupercula* REUSS 1845, Upper Albian, Buzescu core, L.P.B.IV. 11844. **Fig. 33** *Nodosaria lamellocostata* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11845. **Fig. 34** *Nodosaria fontanesii* BERTHELIN 1880, Upper Albian, Buzescu core, L.P.B.IV. 11850. **Fig. 35** *Nodosaria scepstrum* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11847. **Figs. 36, 37** *Marginulina jonesi* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11921. **Fig. 38** *Planularia vestita* (BERTHELIN) 1880, Upper Albian, Buzescu core, L.P.B.IV. 11937. **Fig. 39** *Marginulina aequivoca* REUSS 1863, Upper Albian, Buzescu core, L.P.B.IV. 11925. **Figs. 40, 41** *Planularia bradyana* (CHAPMAN) 1894, Upper Albian, Buzescu core, L.P.B.IV. 11936. Fig. 42 *Saracenaria crassicosta* EICHENBERG 1933, Upper Albian, Buzescu core, L.P.B.IV. 11892.

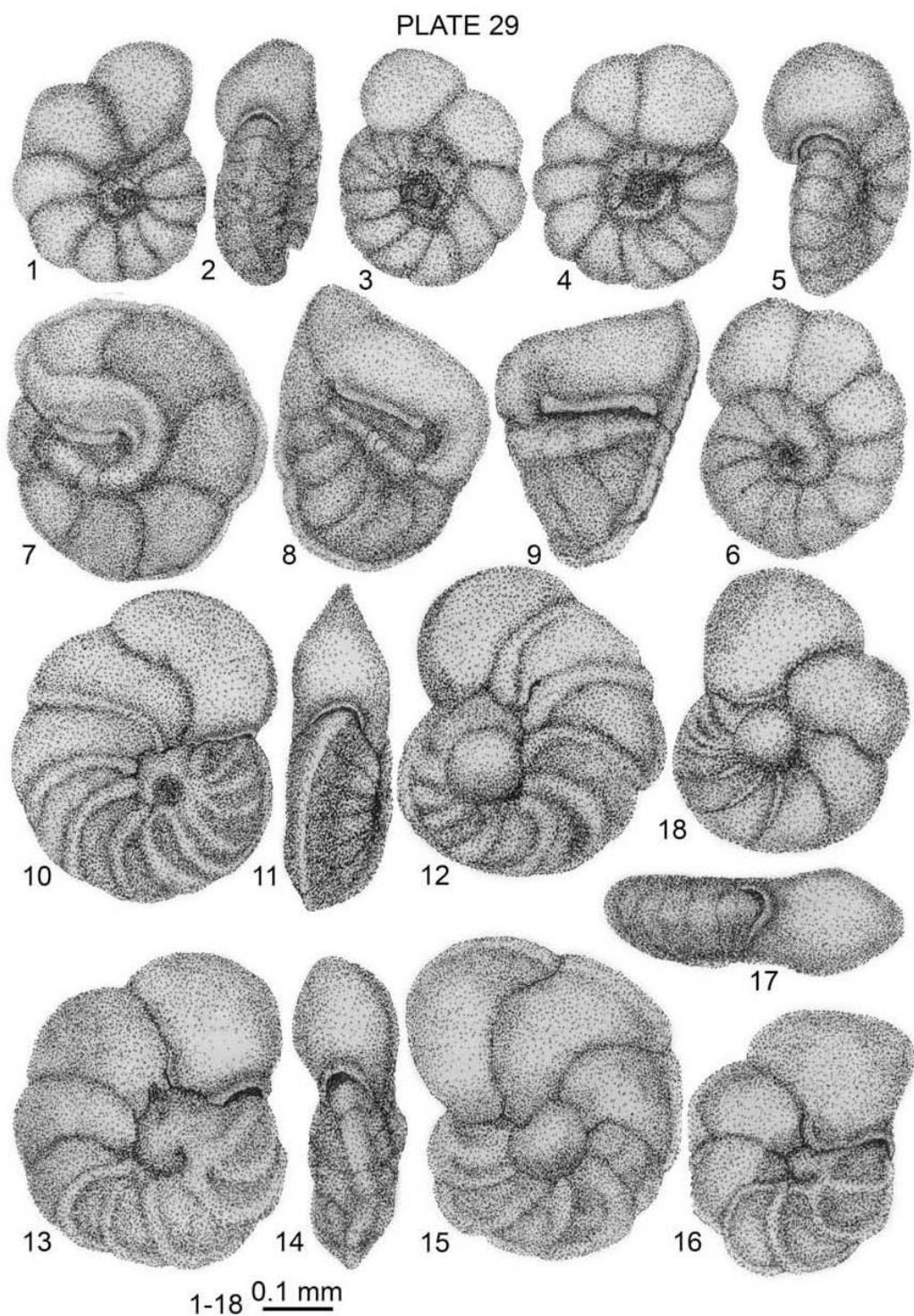


**Figs. 1–4** *Nodosarella articulata* BROTZEN 1936, Upper Albian, Buzescu core, L.P.B.IV. 11988. **Figs. 5–7** *Nodosarella solida* BROTZEN 1936, Upper Albian, Buzescu core, L.P.B.IV. 11990. **Figs. 8–10** *Ellipsoidella pleurostomelloides* (FRANKE) 1928, Upper Albian, Buzescu core, L.P.B.IV. 11987. **Figs. 11–13** *Marginulina inaequalis* REUSS, 1860, Upper Albian, Buzescu core, L.P.B.IV. 11914. **Figs. 14, 15** *Marginulinopsis incurvatum* (REUSS) 1863, Upper Albian, Buzescu core, L.P.B.IV. 11904. **Fig. 16** *Marginulinopsis comma* (ROEMER) 1841, Upper Albian, Buzescu core, L.P.B.IV. 11902. **Fig. 17** *Marginulinopsis lituola* (CORNUEL) 1848, Upper Albian, Buzescu core, L.P.B.IV. 11905. **Fig. 18** *Planularia bradyana* CHAPMAN 1894, Upper Albian, Buzescu core, L.P.B.IV. 1936. **Fig. 20** *Marginulinopsis schloenbachi* (REUSS) 1863, Upper Albian, Buzescu core, L.P.B.IV. 11908. **Figs. 21–23, 27–28** *Eoguttulina fusus* FUCHS 1967, Upper Albian, Buzescu core, L.P.B.IV. 11974. **Figs. 24–26, 29** *Ramulina novaculeata* BULLARD 1953, Upper Albian, Buzescu core, L.P.B.IV. 11978. **Figs. 30–32, 36–38** *Gavelinella intermedia* (BERTHELIN) 1880, Upper Albian, Buzescu core, L.P.B.IV. 12006. **Figs. 33–35, 39–41** *Gavelinella rufis* (REUSS) 1863, Upper Albian, Buzescu core, L.P.B.IV. 12001.

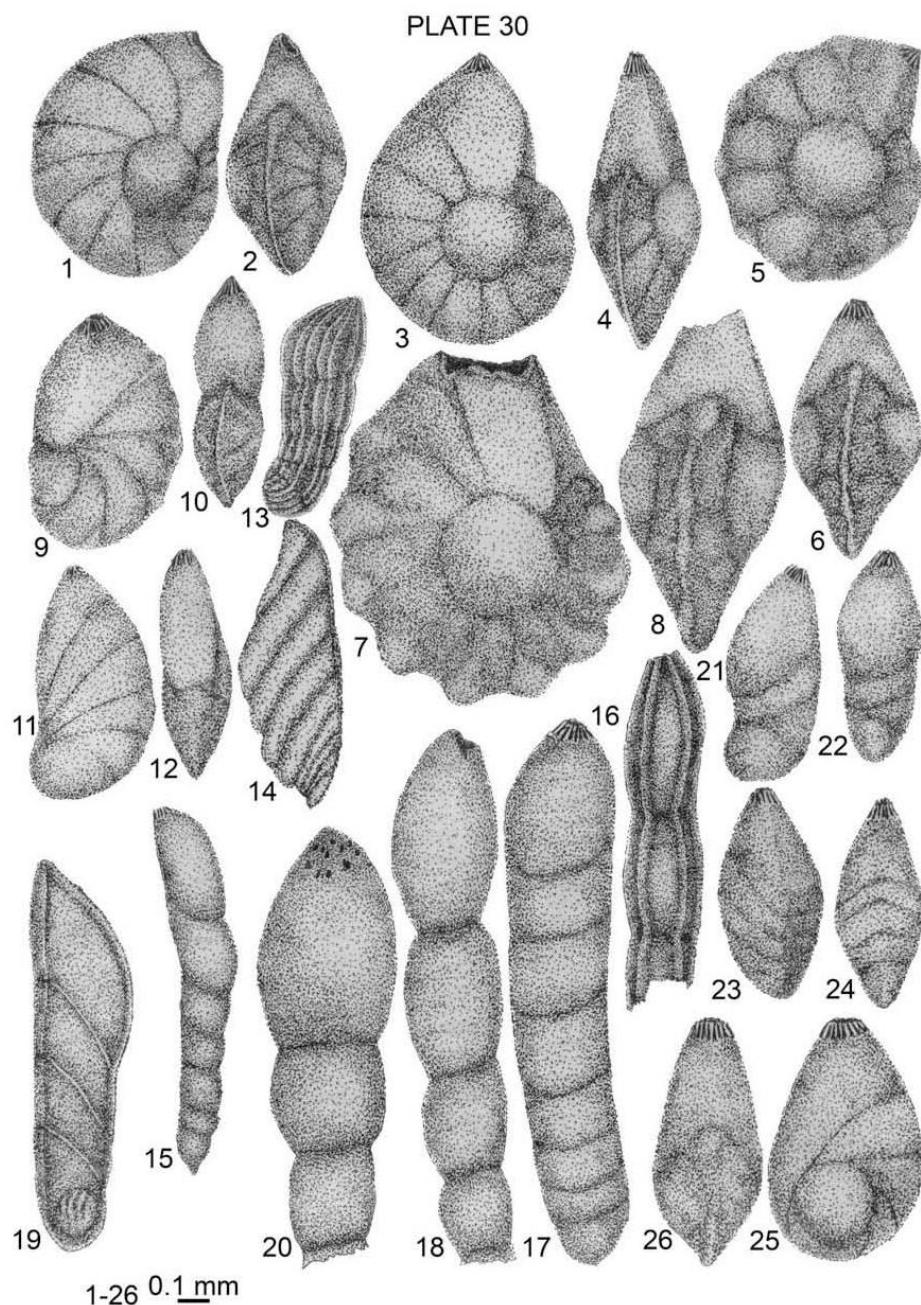
## PLATE 28



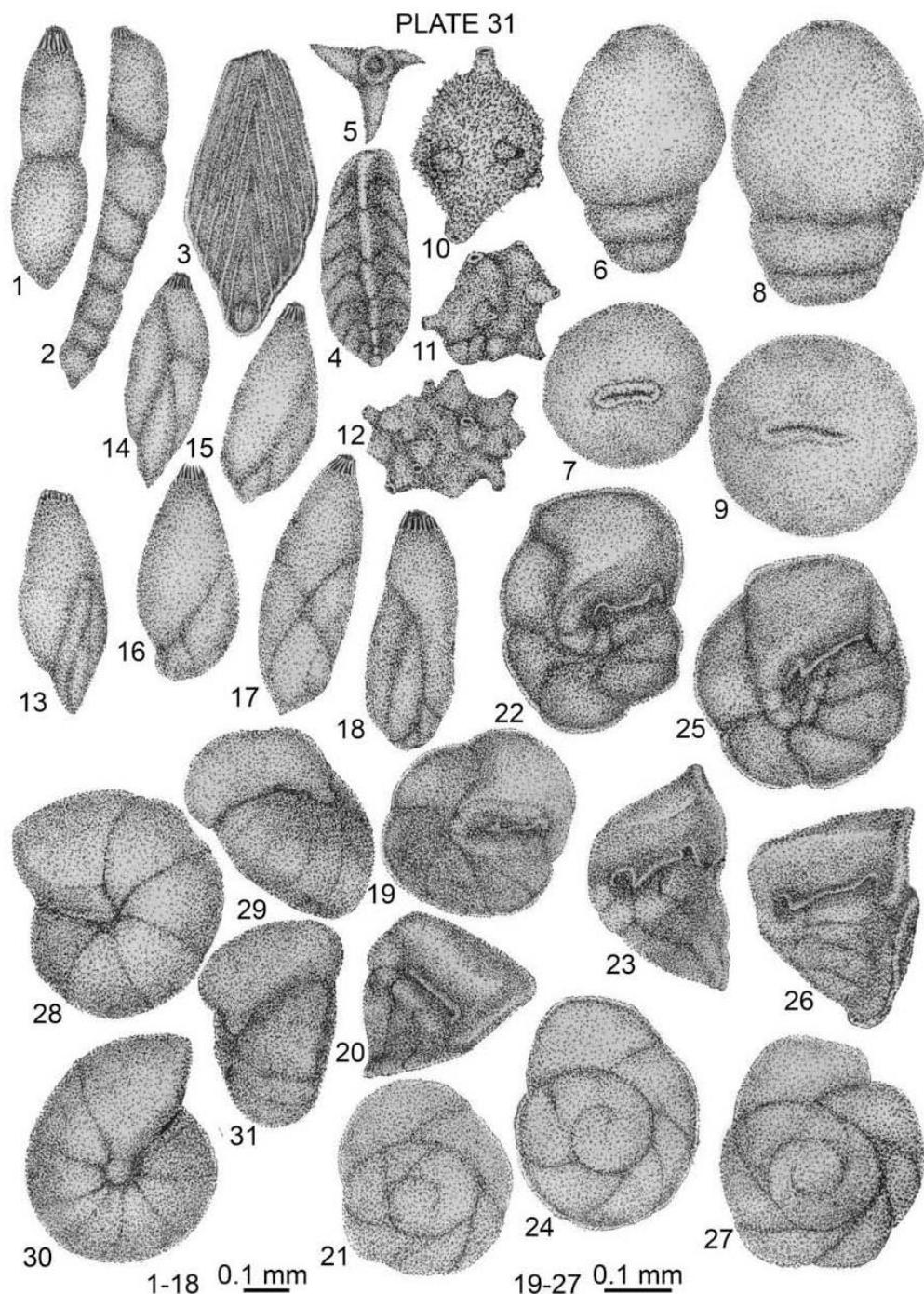
**Figs. 1–3** *Gavelinella intermedia* (BERTHELIN) 1880, Upper Albian, Dumbrăvița core, L.P.B.IV. 12006. **Figs. 4–9** *Gavelinella schloenbachi* (REUSS) 1863, Upper Albian, Dumbrăvița core, L.P. B.IV.12010. **Figs. 10–12** *Gavelinella rudis* (REUSS) 1863, Upper Albian, Dumbrăvița core, L.P.B.IV. 12002. **Figs. 13–15** *Gyroidinoides infracretacea* (MOROZOWA) 1948, Upper Albian, Buzescu core. **Figs. 25–35** *Falsogavelinella umbiliciteca* (FUCHS), 1967, Upper Albian; **Figs. 16–33** Buzescu core, L.P.B.IV. 12019. **Figs. 34–35** Middle Albian (terminal part), Zimnicea borehole, L.P.B.IV. 12020.



**Figs. 1–6** *Gavelinella intermedia* (BERTHELIN) 1880, Upper Albian, Dumbrăvița core, L.P.B.IV. 12007. **Figs. 7–9** *Globorotalites rumanus* NEAGU 1965, Middle Albian (terminal part), Zimnicea drilling, L.P.B. IV. 11994. **Figs. 10–18** *Gavelinella belorussica* (AKIMEZ) 1961, Middle Albian, Giurgiu Pod, L.P.B.IV. 5141. **Figs. 10–12** holotype of *Gavelinopsis infracretacea simionescui* NEAGU 1965).

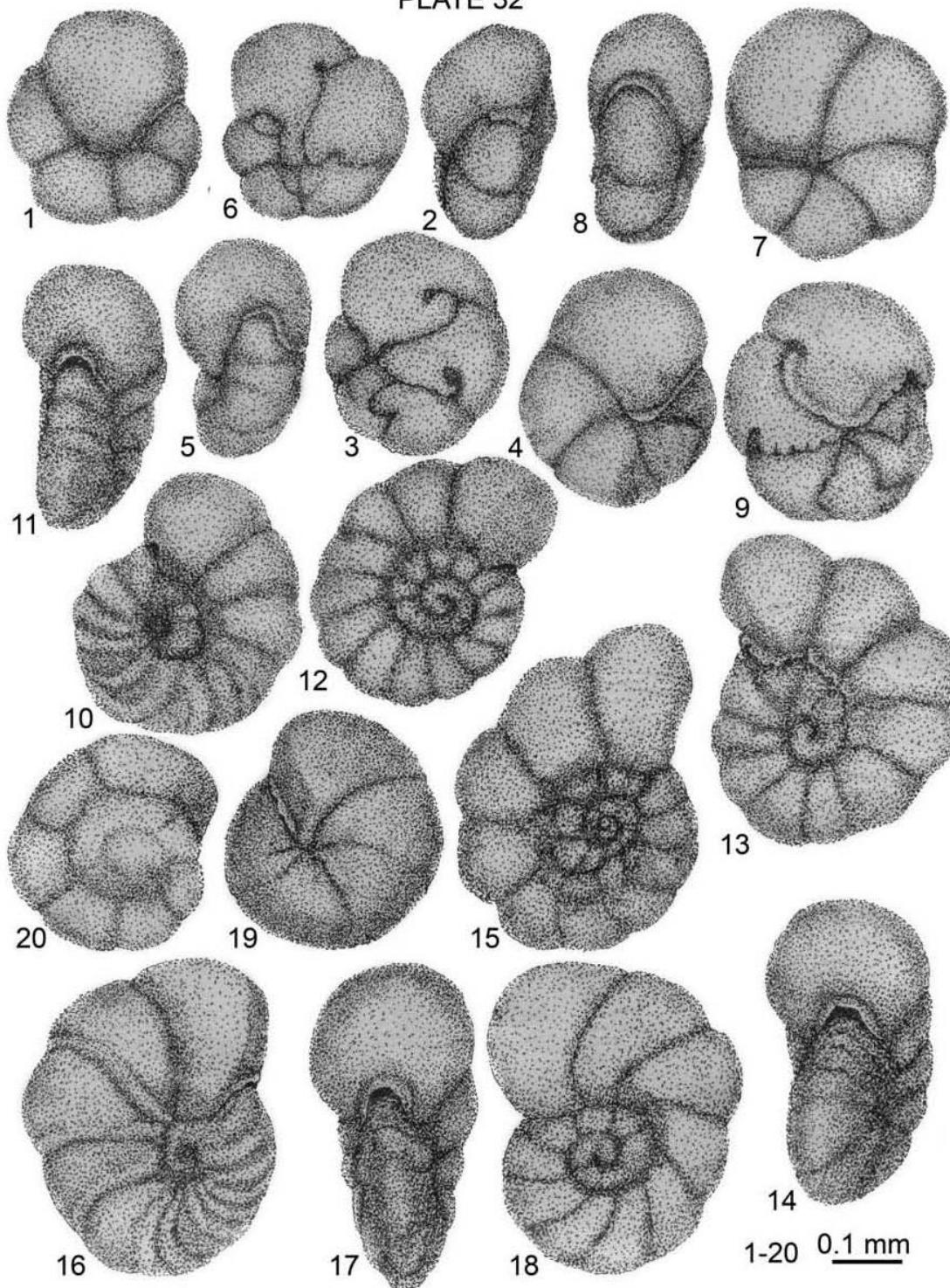


**Figs. 1–4, 25, 26** *Lenticulina macrodisca* (REUSS) 1863, Upper Albian-Vraconian, Bălăria core, L.P.B.IV. 11874. **Figs. 5–8** *Lenticulina nodosa* (REUSS) 1863, Vraconian, Bălăria core, L.P. B.IV. 11887. **Figs. 9, 10** *Lenticulina turgidula* (REUSS) 1863, Vraconian, Bălăria borehole, L.P.B.IV. 11886. **Figs. 11, 12** *Lenticulina nuda* (REUSS) 1861, Vraconian, Bălăria core, L.P.B.IV. 12027. **Fig. 13** *Marginulina robusta* (REUSS) 1863, Vraconian, Bălăria core, L.P.B.IV. 11926. **Fig. 14** *Vaginulina biochei* BERTHELIN 1880, Vraconian, Bălăria core, L.P.B.IV. 119936. **Fig. 15** *Dentalina siliqua* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 11832. **Fig. 16** *Nodosaria orthopleura* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 12031. **Fig. 17** *Dentalina pseudochrysalis* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 11824. **Fig. 18** *Dentalina strangulata* REUSS 1860, Vraconian, Bălăria core, L.P.B.IV. 11833. **Fig. 19** *Vaginulina bicostulata* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 11945. **Fig. 20** *Chrysalogonium cretaceum* CUSHMAN & CHURCH 1929, Vraconian, Bălăria core, L.P.B.IV. 11818. **Figs. 21, 22** *Marginulinopsis comma* (ROEMER) 1841, Vraconian, Bălăria core, L.P.B.IV. 11903. **Figs. 23, 24** *Saracenaria saratogana* HOWE & WALLACE 1932, Vraconian, Bălăria core, L.P.B.IV. 11901.

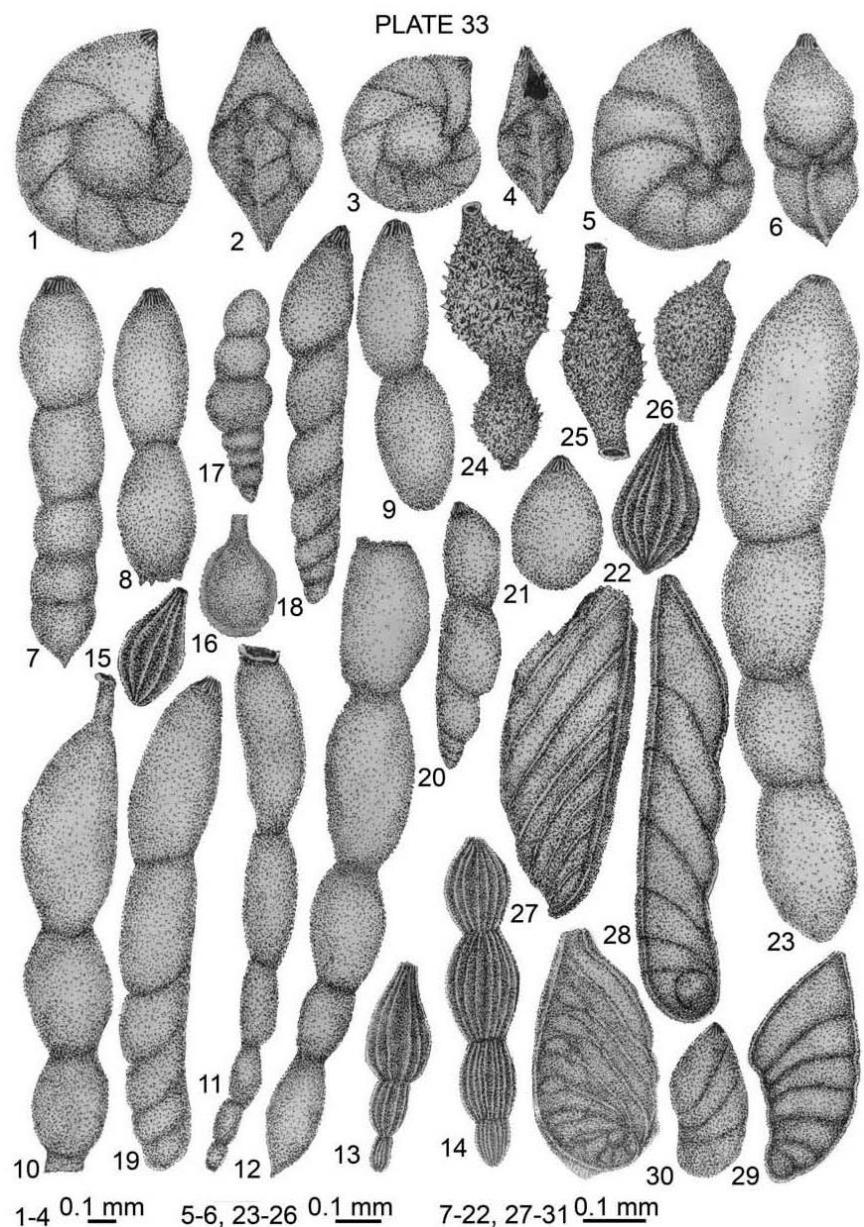


**Fig. 1** *Dentalina oligostegia* REUSS 1863, Vraconian (Uppermost Albian), Bălăria core, L.P.B.IV. 11830. **Fig. 2** *Dentalina siliqua* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 11832. **Fig. 3** *Frondicularia filocincta* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 11870. **Figs. 4-5** *Tristix excavata* (REUSS) 1863, Vraconian, Bălăria core, L.P.B.IV. 11864. **Figs. 7-9** *Gonatosphaera sequana* BERTHELIN 1880, Vraconian, Bălăria core, L.P.B.IV. 11966. **Fig. 10** *Ramulina globotubulosa* CUSHMAN 1938, Vraconian, Bălăria core, L.P.B.IV. 11981. **Figs. 11, 12** *Eoguttulina.subsphaerica* (BERTHELIN) 1880, (fistulose specimen), Vraconian, Bălăria core, L.P.B.IV. 11968. **Figs. 13-18** *Eoguttulina fusus* FUCKS 1967, Vraconian, Bălăria core, L.P.B.IV. 11973. **Figs. 19-27** *Globorotalites rumanus* NEAGU 1965, Vraconian, Bălăria borehole, L.P.B.IV. 11995. **Figs. 28-31** *Valvularia* BERTHELIN & JANNIN 1967, Vraconian, Bălăria core, L.P.B.IV. 11993.

## PLATE 32

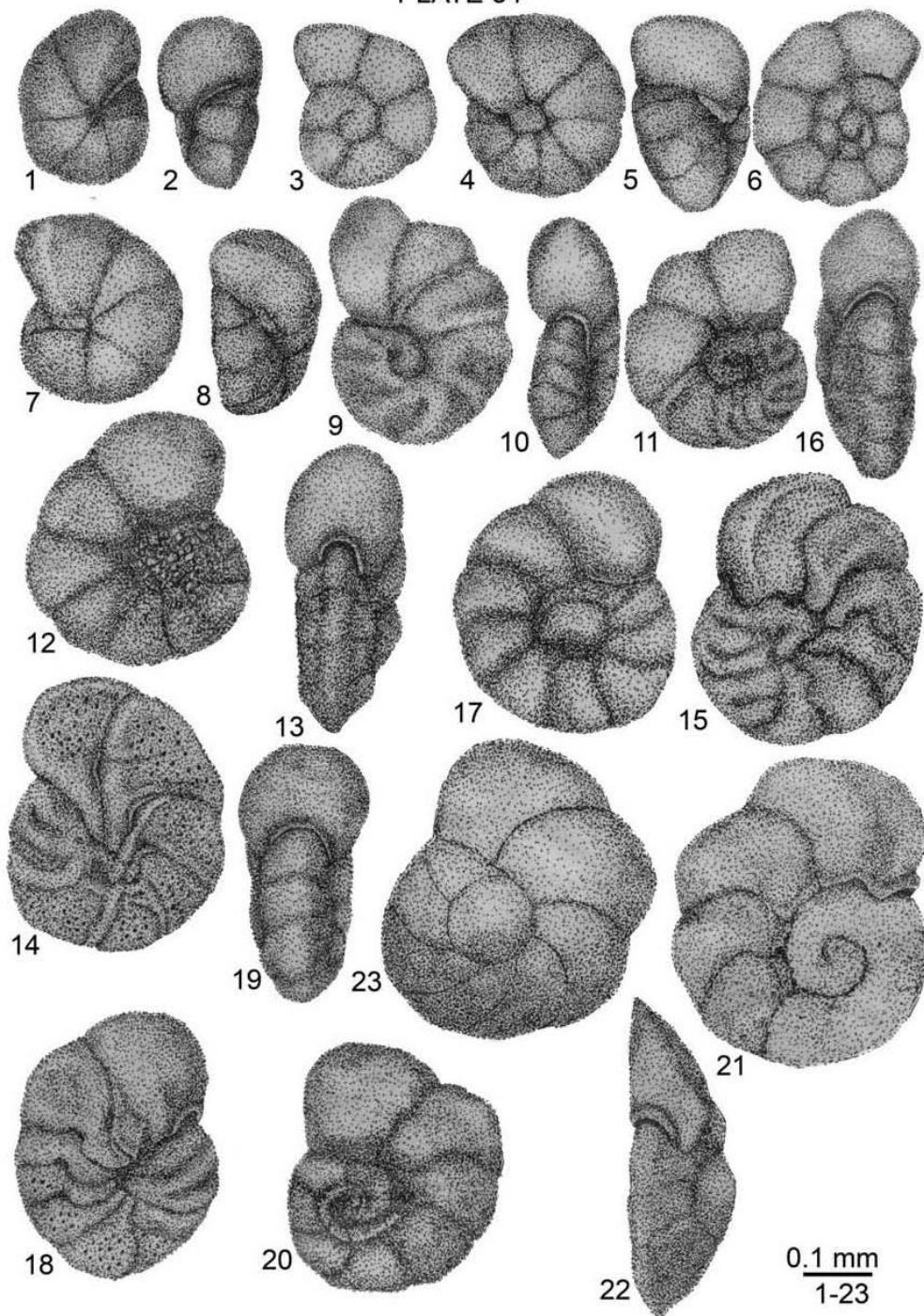


**Figs. 1–9** *Falsogavelinella umbilicitecta* FUCHS 1967, Vraconian, Bălăria core, L.P.B.IV. 12020. **Figs. 11–18** *Gavelinella baltica* BROTZEN 1942, Vraconian, Bălăria core, L.P.B.IV. 1201. **Figs. 19–20** *Valvulineria berthelini* JANNIN 1967, Vraconian, Bălăria core, L.P.B.IV. 11993.

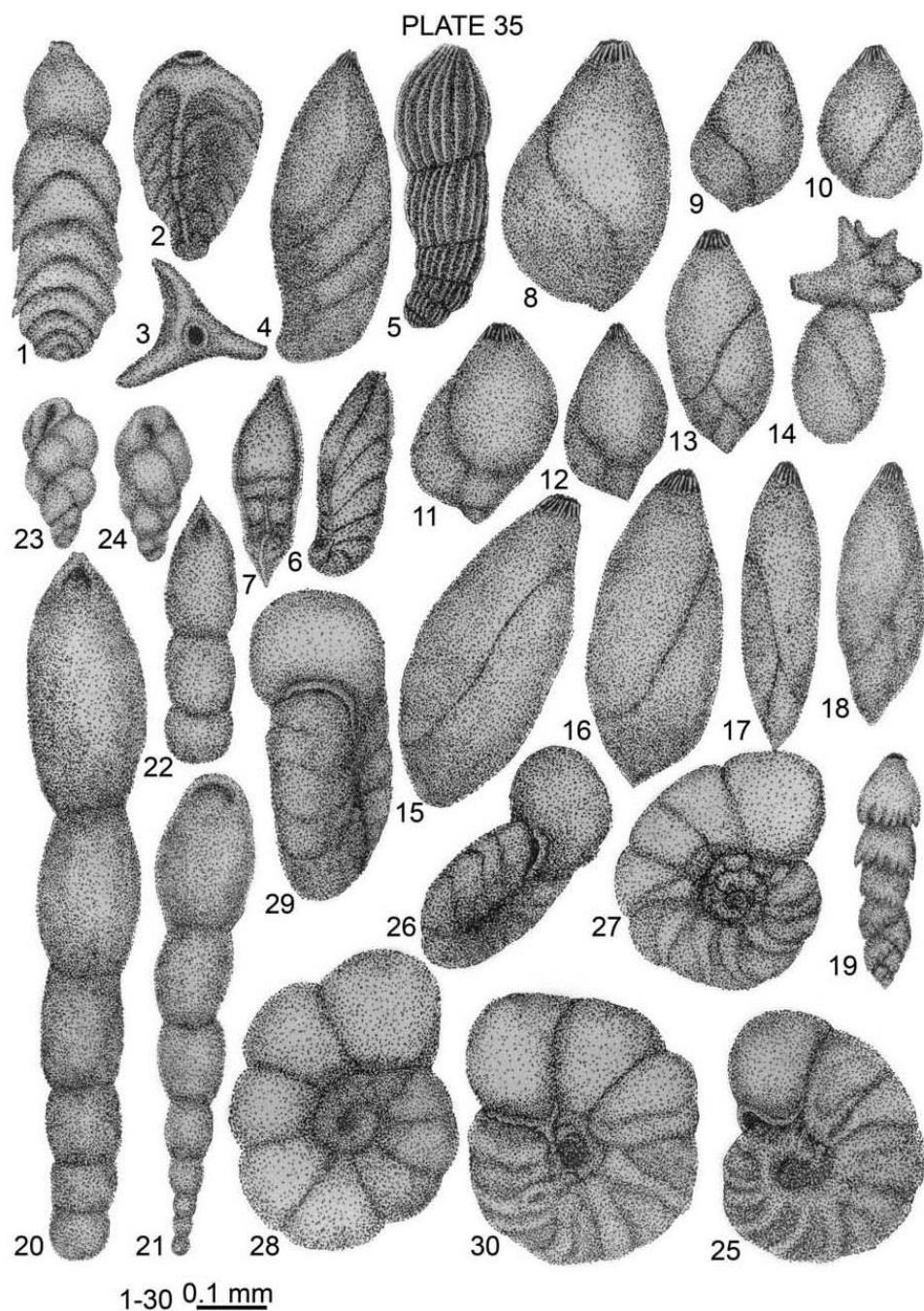


**Figs. 1–4** *Lenticulina macrodisca* (REUSS) 1863, Uppermost Albian (Vraconian), Copăceni core, L.P.B.IV. 11875. **Figs. 5, 6** *Lenticulina discrepans* (REUSS) 1863, Vraconian, Copăceni core, L.P.B.IV. 11888. **Fig. 7** *Dentalina distincta* REUSS 1860, Vraconian, Copăceni core, L.P.B. IV. 11825. **Figs. 8, 9** *Dentalina lili* REUSS 1851, Vraconian, Copăceni core, L.P. B.IV 11836. **Fig. 10** *Dentalina strangulata* REUSS 1860, Vraconian, Copăceni core, L.P.B.IV. 11834. **Figs. 11,12** *Dentalina expansa* REUSS 1860, Vraconian, Copăceni core, L.P.B.IV. 11837. **Figs. 13, 14** *Nodosaria tubifera* REUSS 1863, Vraconian, Copăceni core, L.P.B.IV. 11841. **Figs. 15–22** *Lagena isabella* (d'ORBIGNY) 1839, Vraconian, Copăceni core, L.P.B.IV. 11964. **Fig. 16–17** *Fissurina alata* REUSS 1860, Vraconian, Copăceni core, L.P.B.IV. 11982. **Fig. 29** *Vaginulina arguta* REUSS 1863, Vraconian, Copăceni core, L.P.B.IV. 11941. **Figs. 18–20** *Marginulina linearis* REUSS, 1863, Vraconian, Copăceni core, L.P.B.IV. 11916. **Fig. 21** *Lagena globosa* WALKER 1803, Vraconian, Copăceni core, L.P.B.IV. 11963. **Fig. 23** *Dentalina cylindroides* REUSS 1860, Vraconian, Copăceni drilling, L.P.B.IV. 11838. **Figs. 24–26** *Ramulina novaculeata* BULLARD 1953, Vraconian, Copăceni core, L.P.B.IV. 11979. **Fig. 27** *Vaginulina biochei* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 11949. **Fig. 29** *Vaginulina erynota* REUSS 1863, Vraconian, Copăceni core, L.P.B.IV. 11948. **Fig. 30** *Marginulinopsis trunculata* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 11902. **Fig. 31** *Planularia bradyana* CHAPMAN 1894, Vraconian, Copăceni core, L.P.B.IV. 11936.

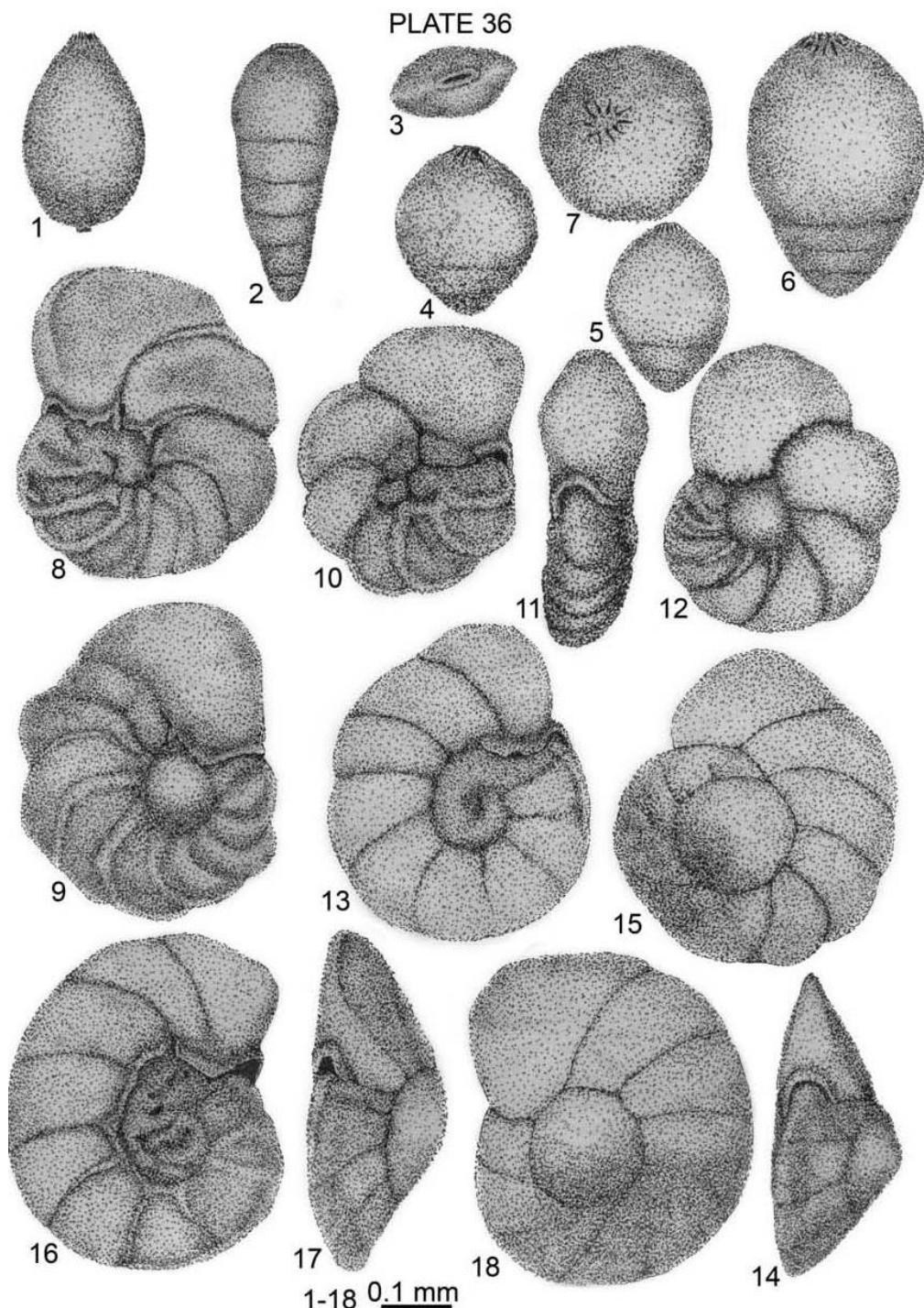
## PLATE 34



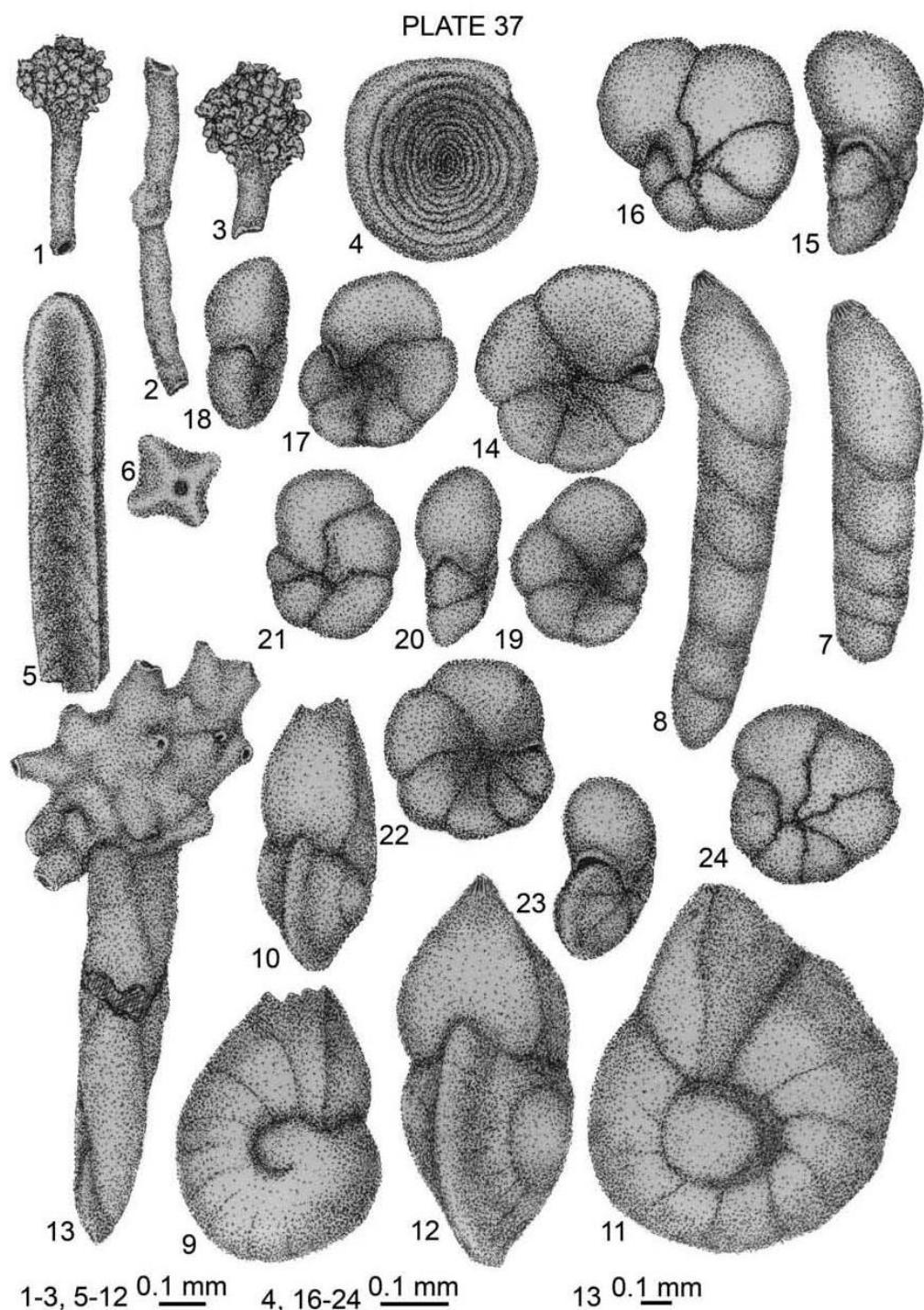
**Figs. 1–3** *Valvulineria loeterlei* TAPPAN 1940, Vraconian, Copăceni core, L.P.B.IV. 11992. **Figs. 4–8** *Valvulineria berthelini* JANNIN 1967, Vraconian, Copăceni core, L.P.B.IV. 1201. **Figs. 9–11** *Gavelinella intermedia* (BERTHELIN) 1880, Upper Albian, Buzescu core, L.P.B.IV. 12006. **Figs. 12–20** *Gavelinella varsoviensis* (GAVOR-BIEDOVA) 1972, Vraconian, Bălăria core. **Figs. 21, 23** *Heterolepa gorbenkoi* (AKIMEZ) 1961, Vraconian, Bălăria core, L.P.B.IV. 11996.



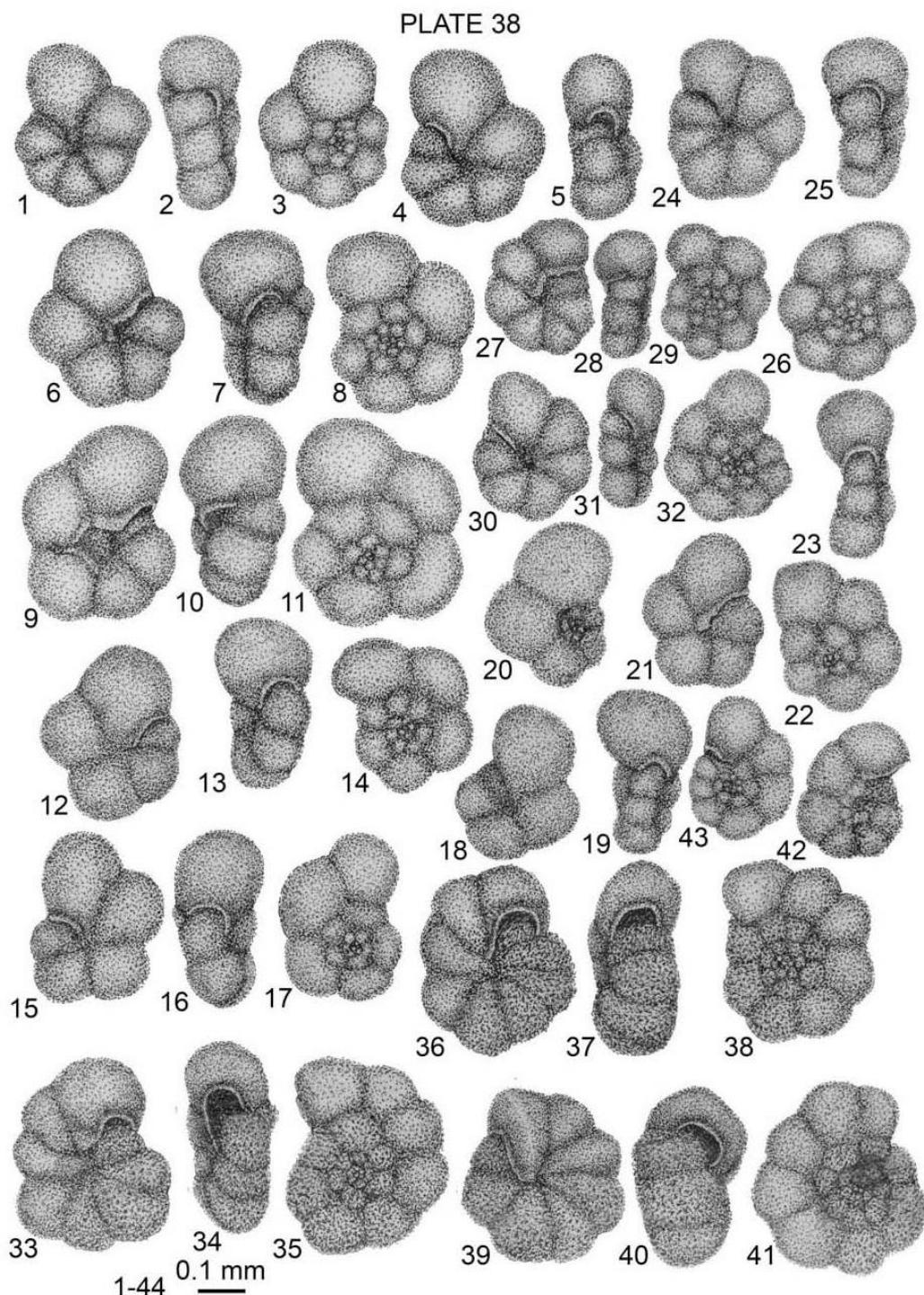
**Fig. 1** *Lingulina denticulocarinata* (CHAPMAN) 1894, Vraconian, Copăceni core, L.P.B.IV. 11859. **Figs. 2–3** *Tristix excavata* (RESUSS) 1863, Vraconian, Copăceni Core, L.P.B.IV. 11865. **Fig. 4** *Saracenaria saratogana* (HOWE & WALLACE) 1932, Vraconian, Copăceni core, L.P.B.IV. 11901. **Fig. 5** *Marginulina striatocostata* REUSS, 1863, Vraconian, Copăceni L.P.B.IV. 11919. **Figs. 6, 7** *Saracenaria bononiensis* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 11898. **Figs. 8–10** *Eoguttulina subsphaerica* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 11969. **Figs. 11–14** *Eoguttulina bucculenta* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 11970. **Fig. 18** *Eouttulina exerta* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 11972. **Fig. 19** *Bifarina calcarata* (BERTHELIN) 1880, Vraconian, Copăceni core, L.P.B.IV. 12023. **Figs. 20–22** *Nodosarella articulata* BROTZEN 1936, Vraconian, Copăceni core, L.P.B.IV. 11989. **Figs. 23–24** *Praebulimina minima* TAPPAN 1940, Vraconian, Copăceni core, L.P.B.IV. 11983. **Figs. 25–30** *Gavelinella baltica* BROTZEN 1942, Vraconian, Copăceni core, L.P.B.IV. 12014.



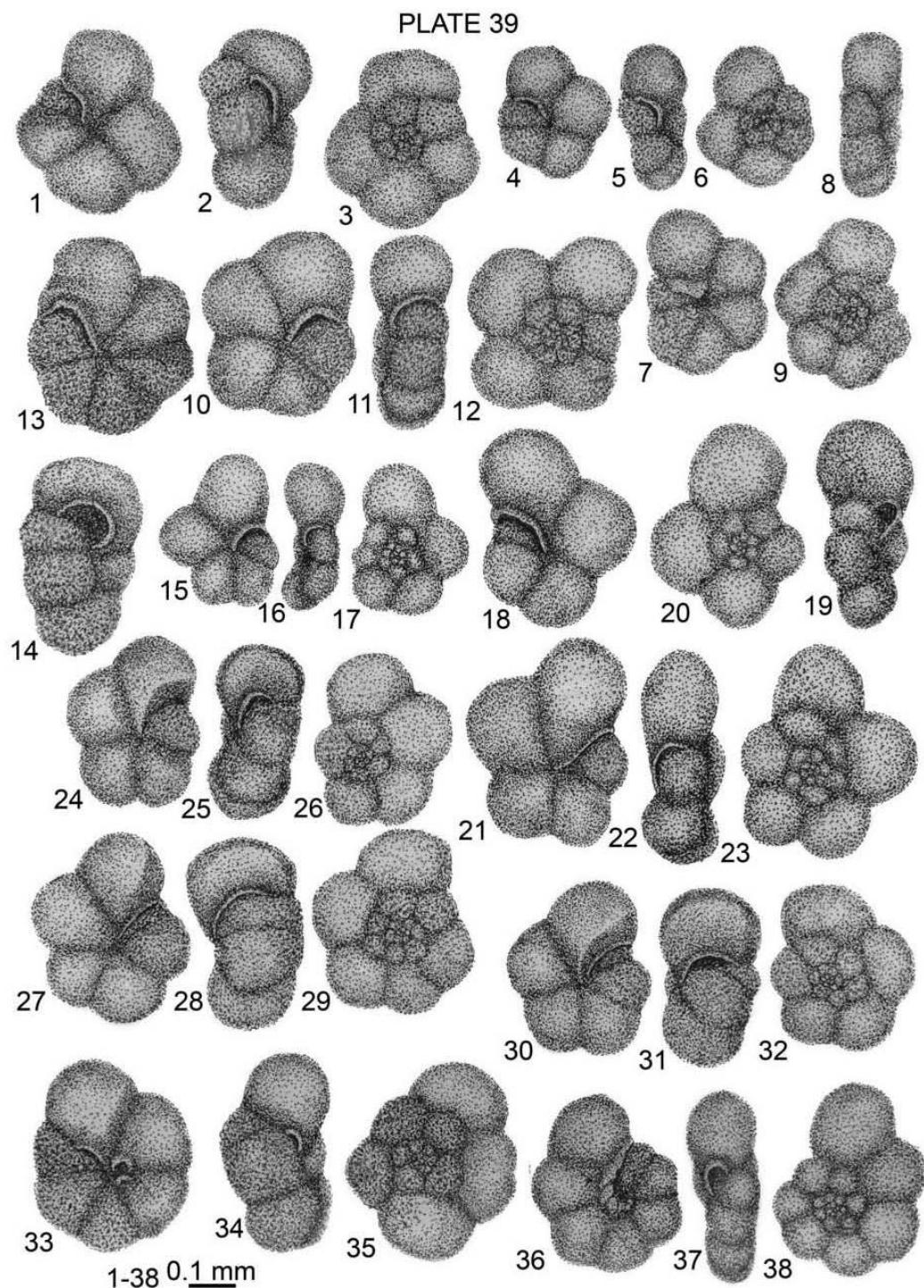
**Fig. 1** *Lagena apiculata* REUSS 1851, Vraconian, Bălăria core, L.P.B.IV. 11958. **Figs. 2, 3** *Lingulina furcilata* BERTHELIN 1880, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11862. **Figs. 4-6** *Pseudonodosaria pygmaea* (REUSS) 1851, Vraconian, Bălăria core, L.P.B.IV. 11856. **Figs. 7-11** *Gavelinella belorussica* (AKIMEZ) 1961, Middle Albian, Giurgiu Pod, L.P.B.IV. 11996. **Figs. 12-17** *Heterolepa gorbenkoi* (AKIMEZ) 1961, Vraconian, Bălăria core, L.P.B.IV. 11996.



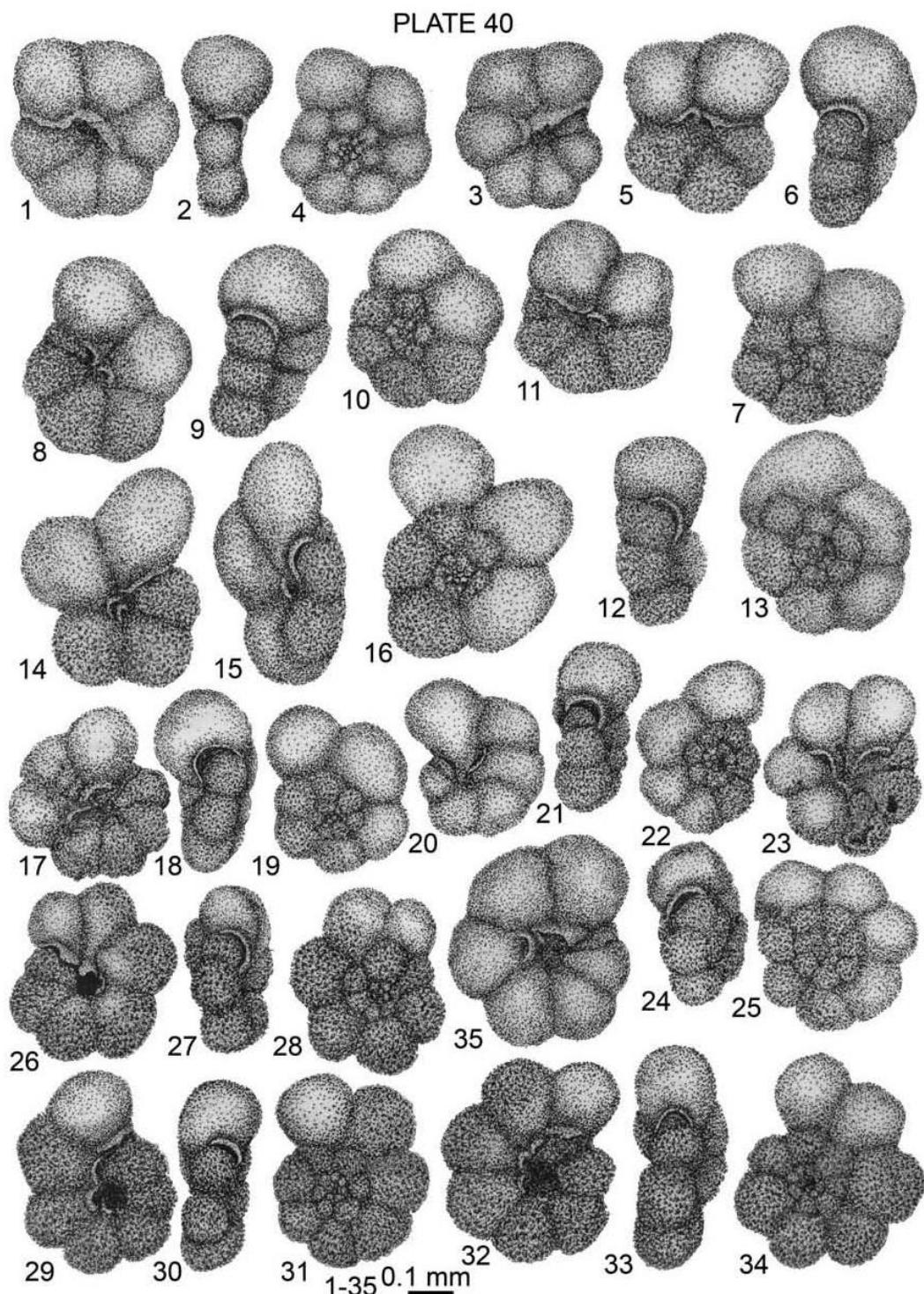
**Figs. 1–3** *Pseudonubeculina nodulosa* (CHAPMAN) 1896, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11816. **Fig. 4** *Spirillina minima* SCHACO 1892, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11812. **Figs. 5–6** *Nodosaria tetragona* REUSS 1860, Vraconian, Bălăria core, L.P.B.IV. 11851. **Figs. 7–8** *Dentalina nana* REUSS 1863, Vraconian, Bălăria core, L.P.B.IV. 11840. **Figs. 9–12** *Lenticulina subaperta* (REUSS) 1863, Vraconian, Bălăria core, L.P.B.IV. 11889. **Fig. 13** *Palaeopolymorpha* sp., Vraconian, Bălăria core, L.P.B.IV. 11977 Buzescu core. **Figs. 14–24** *Falsogavelinella umbilicitecta* (FUCHS) 1967, Upper Albian, Buzescu core, L.P.B.IV. 12021.



**Figs. 1–23** *Hedbergella rischi* MOULLADE 1974, Lower Albian. **Figs. 1–3** Bala core, L.P.B.IV. 11638. **Figs. 4, 5** Călărași core, L.P.B.IV. 11637, Middle Albian. **Figs. 6–11** Giurgiu Pod, L.P.B.IV. 11639, Middle Albian (terminal part). **Figs. 12–17** Zimnicea drilling, L.P. B.IV. 11638; Băcălești core. **Figs. 24–32** *Hedbergella planispira* (TAPPAN) 1940, Lower Albian; **Figs. 24–26** Călărași cores, L.P.B.IV. 11640; Middle Albian, **Figs. 27–32** Giurgiu Pod, L.P.B.IV. 11641. **Figs. 34–41** *Hedbergella trochoidea* (GANDOLFI) 1942, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11644. **Figs. 42, 43** *Globigerinelloides bentonensis* (MORROW) 1934, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11688.

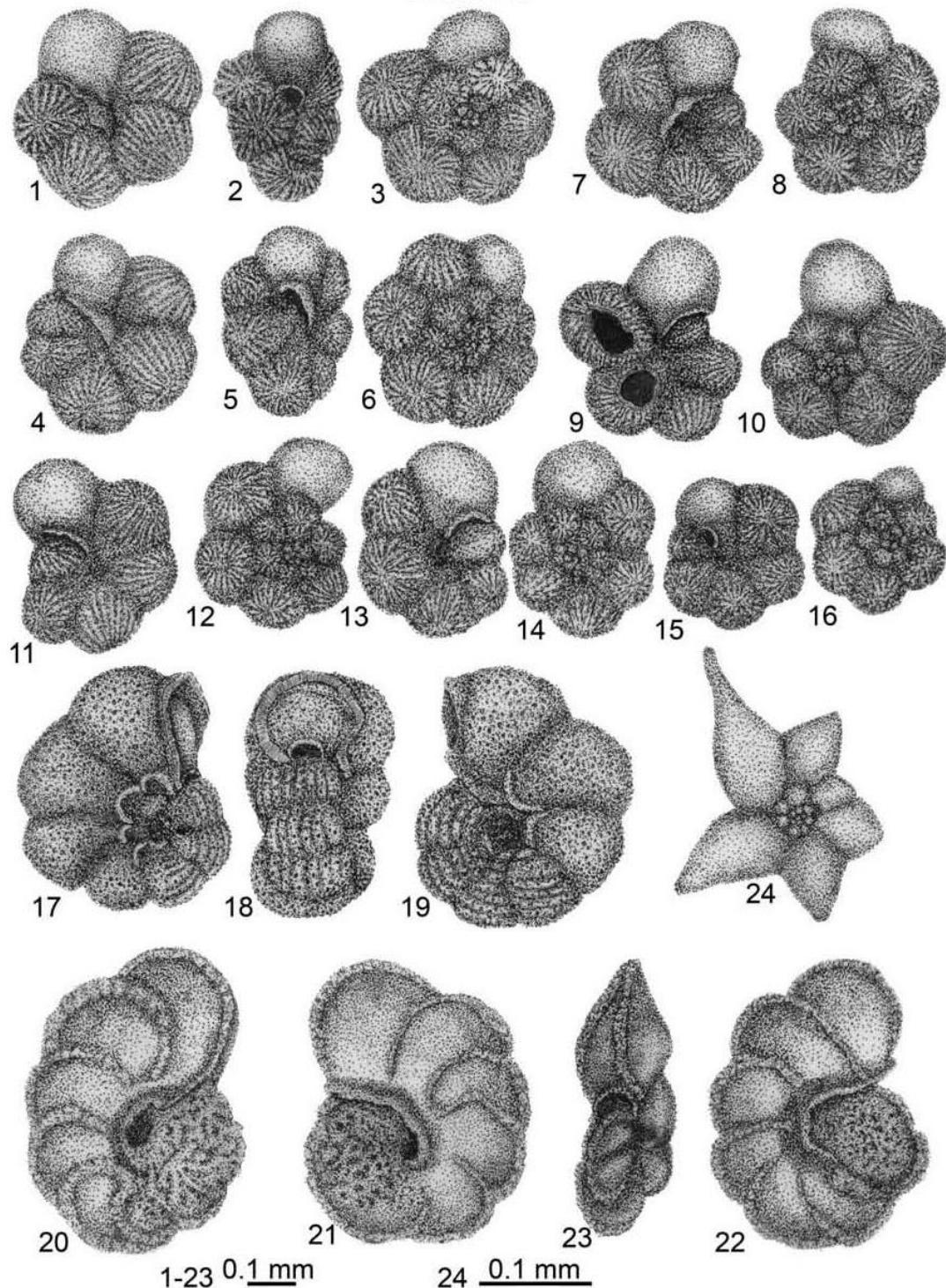


**Figs. 1–3** *Hedbergella gorbatchikae* LONGORIA 1974, Middle Albian (terminal part), Putineiu core. **Figs. 4–12** *Hedbergella delrioensis* (CARSEY) 1926, Vraconian, Bălăria core. **Figs. 13–14** *Hedbergella trochoidea* (GANDOLFI) 1942, Middle Albian (terminal part), Zimnicea drilling, L.P.BV.IV. 11644. **Figs. 15–23** *Hedbergella simplicissima* MAGNE & SIGAL 1954, Vraconian, Bălăria core. **Figs. 24–32** *Hedbergella gautirensis* (BRONNIMANN) 1952, Vraconian, Bălăria core, L.P.B.IV. 11649. **Figs. 33–35** *Ticinella raynauldi* SIGAL 1966, Upper Albian, Buzescu cores, L.P.B.IV. 11655. **Figs. 36–38** *Ticinella primula* LÜTERBACHER 1964, Middle Albian (terminal part), Putineiu core, L.P.B.IV. 11652.



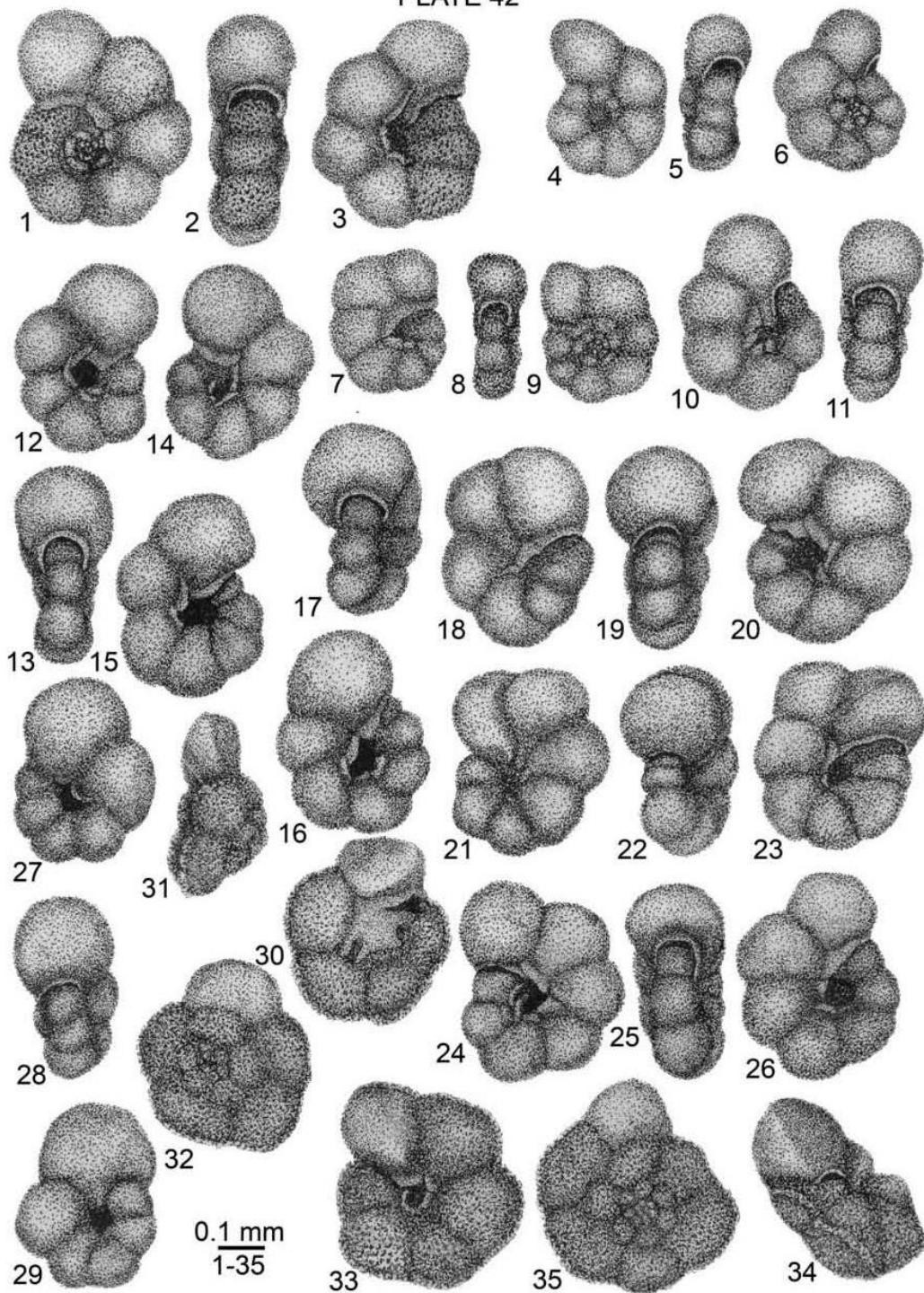
**Figs. 1–4** *Ticinella primula* LUTERBACHER 1964, Middle Albian (terminal part), Putineiu core, L.P.B.IV. 11653. **Figs. 5–13** *Ticinella madecassiana* SIGAL 1966, Upper Albian, Buzescu cores, L.P.B.IV. 11660. **Figs. 14–25** *Ticinella madecassiana* SIGAL 1966, Vraconian, Copăceni core. **Figs. 17–25** Upper Albian, Dumbrăvița core, L.P.B IV 11660. **Figs. 26–34** *Rotalipora ticinensis* (GANDOLFI) 1942, Upper Albian, Buzescu cores. **Fig. 35** *Ticinella primula* LUTERBACHER 1964, Middle Albian, Giurgiu Pod, L.P.B.IV. 11653.

## PLATE 41



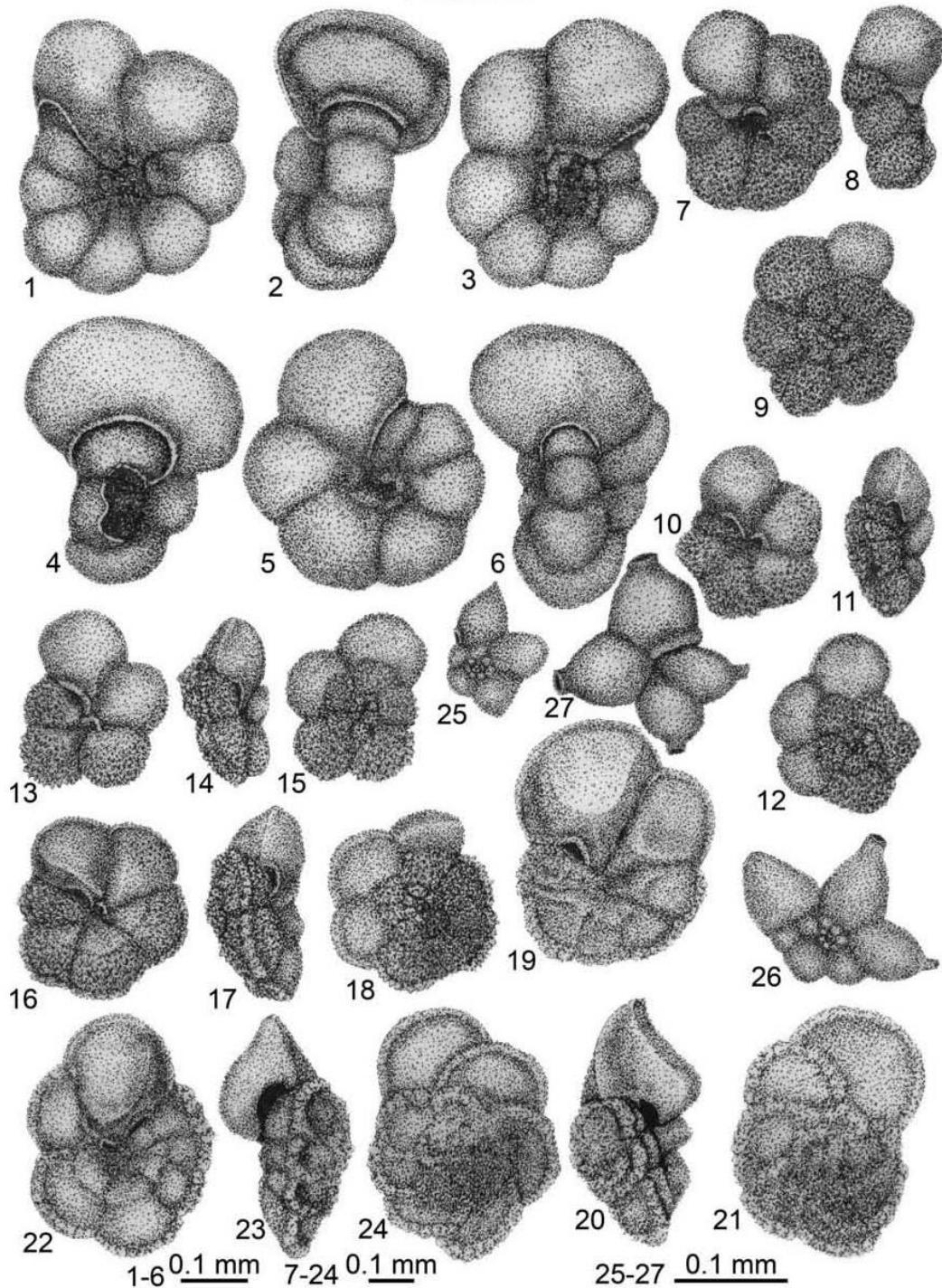
**Figs. 1–16** *Rugohedbergella mutziui* NEAGU 2006, Vraconian, Glogoveanu core, L.P.B.IV. 11650. **Figs. 17–19** *Biticinella breggiensis* (GANDOLFI) 1942, Upper Albian, Buzescu cores, L.P.B.IV. 11684. **Figs. 20–23** *Planomalina buxtorfi* (GANDOLFI) 1942, Vraconian, Glogoveanu core, L.P.B.IV. 11683. **Fig. 24** *Schackoinea primitiva* TAPPAN 1940, Middle Albian (terminal part), Putineiu core, L.P.B.IV. 11685.

## PLATE 42



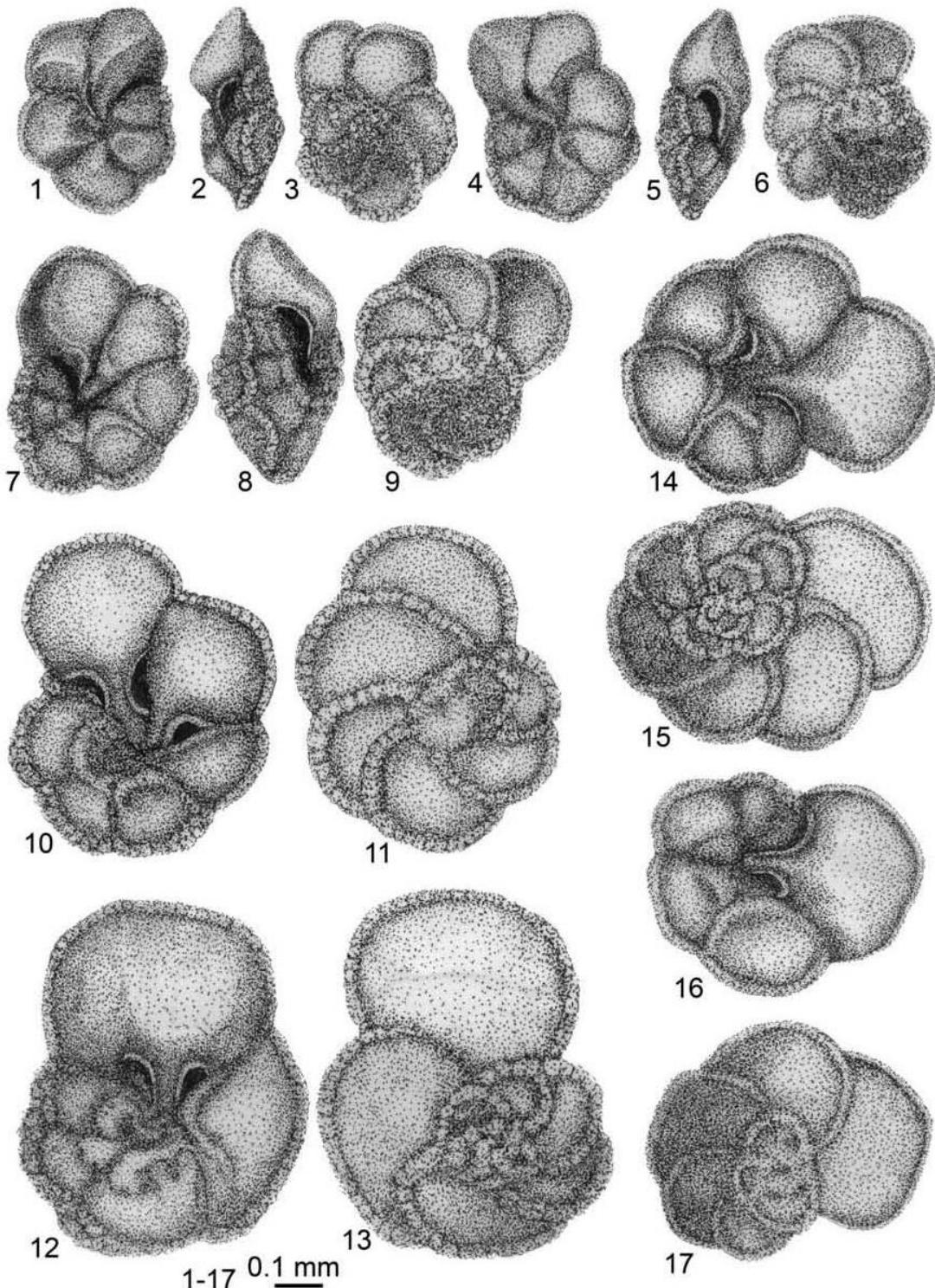
**Figs. 1–3** *Globigerinelloides eaglefordensis* (MOREMANN) 1927, Vraconian, Bălăria core, L.P.B. IV. 11681. **Figs. 4–10** *Globigerinelloides bentonensis* (MORROW) 1934, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 11679. **Figs. 11–29** *Globigerinelloides caseyae* BOLLI, LOEBLICH & TAPPAN 1957, Middle Albian (terminal part), Zimnicea drilling, L.P.B.IV. 12039. **Figs. 30–35** *Praeglobotruncana delrioensis* (GANDOLFI) 1957, Vraconian, Bălăria core, L.P.B.IV. 11678.

## PLATE 43



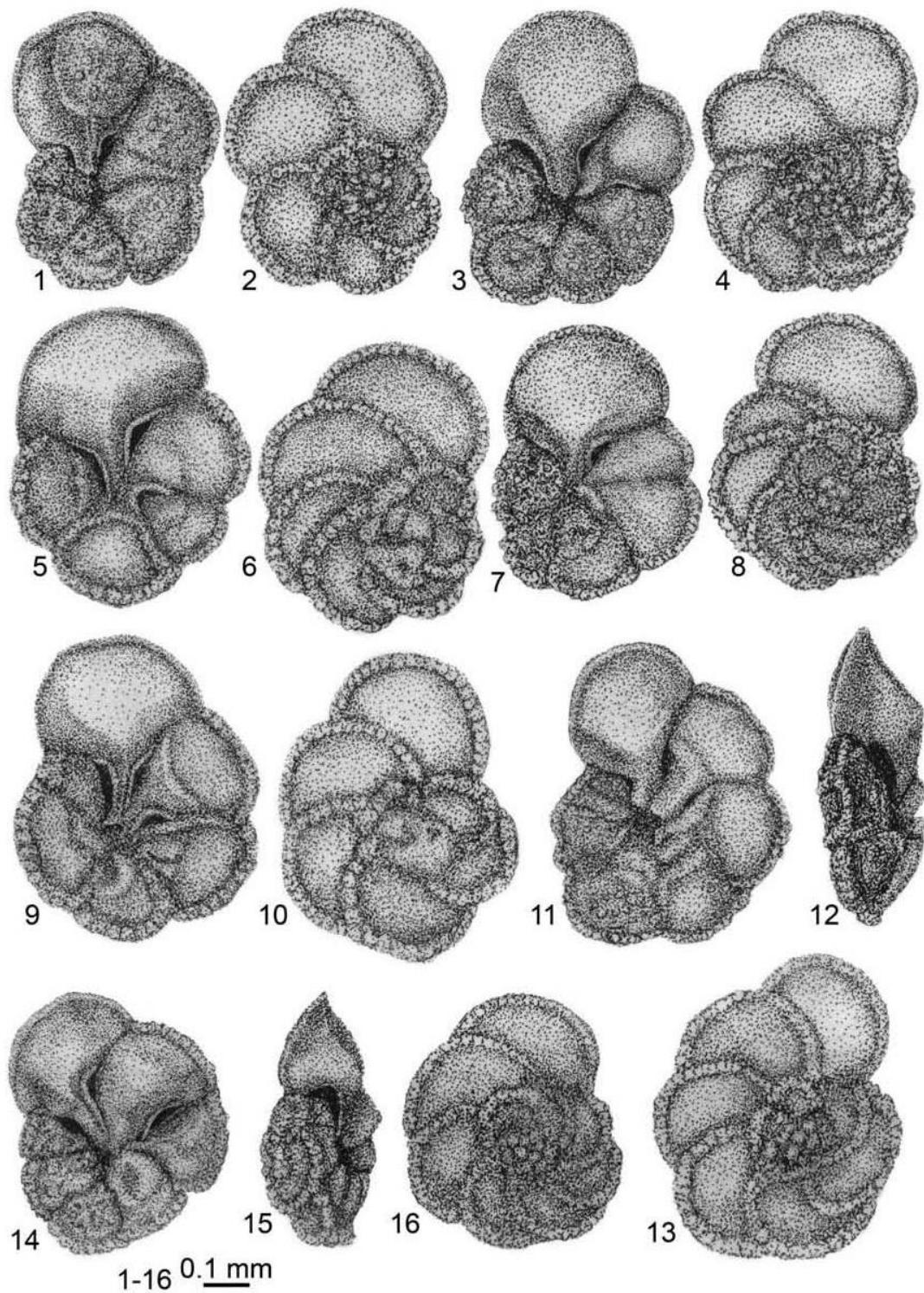
**Figs. 1–6** *Globigerinelloides caseyae* BOLLI, LOEBLICH & TAPPAN 1957, Şopârlita-Siliştea core, Buzescu cores, L.P.B.IV. 12038. **Figs. 7–9** *Ticinella roberti* (GANDOLFI) 1942, Upper Albian, Buzescu cores, L.P.B.IV. 12043. **Figs. 10–18** *Rotalipora praebalernaensis* SIGAL 1969, Vraconian, Copăceni, core, L.P.B.IV. 11687. **Figs. 19–24** *Rotalipora balernaensis* GANDOLFI 1957, Vraconian, Copăceni core, L.P.B.IV. 11683. Figs. 25–26 *Schackoina primativa* TAPPAN 1940, Middle Albian (terminal part), Putineiu core, L.P.B.IV. 11685. Fig. 27 *Schackoina cenomana* (SCHACKO) 1897, Vraconian, Copăceni core, L.P.B.IV. 12040.

## PLATE 44



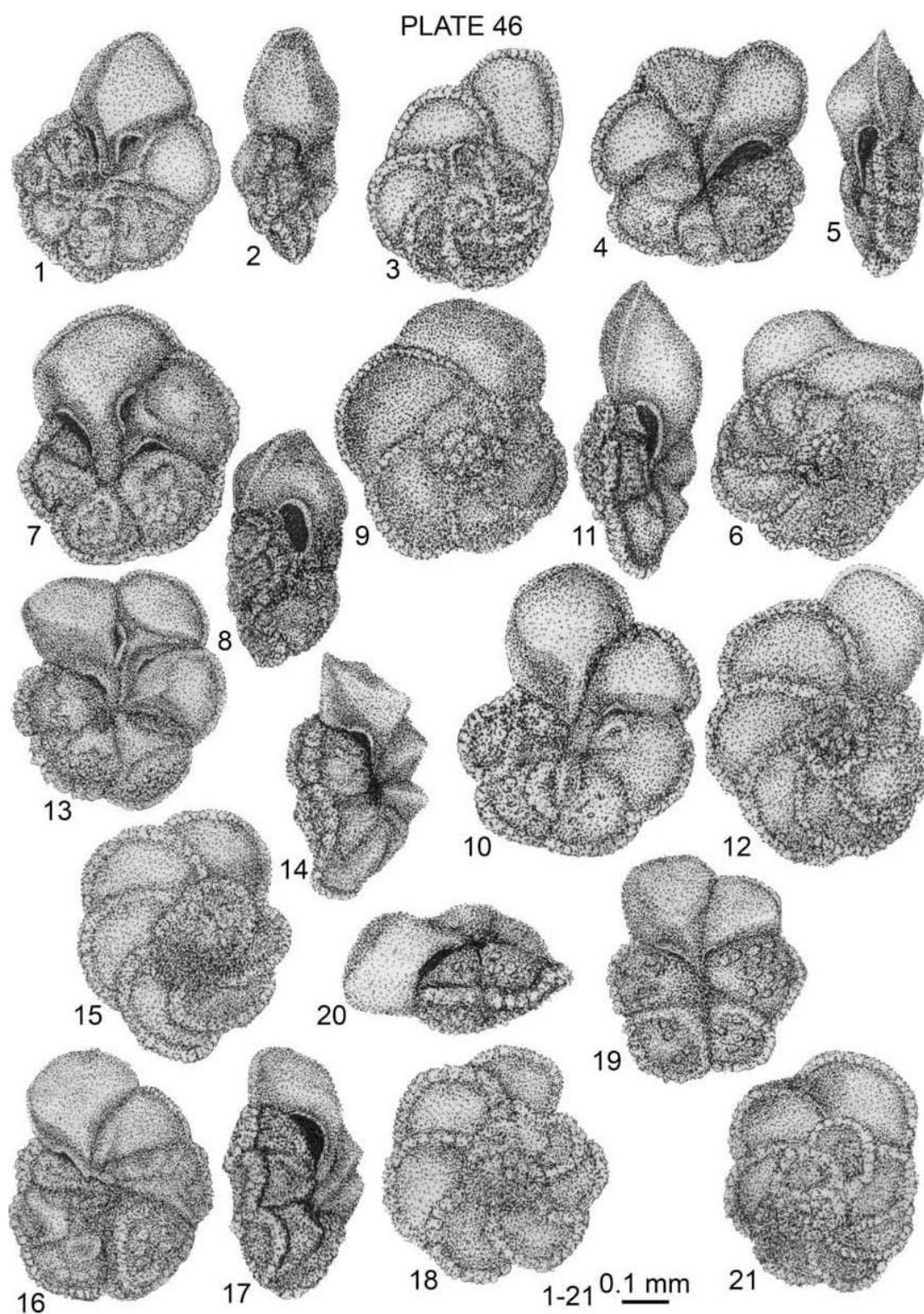
**Figs. 1–9** *Rotalipora praebalernaensis* SIGAL 1969, Vraconian; **Figs. 1–6** Glogoveanu core, L.P. B.IV. 11687. **Figs. 7–9** Copaceni core, L.P.B.IV. 11687. **Figs. 10–17** *Rotalipora evoluta* SIGAL 1948, Vraconian; **Figs. 10–13** Bălăria core, L.P.B.IV. 11664. **Figs. 14–17**, Dumbrăvița core, L.P.B.IV. 11665.

## PLATE 45



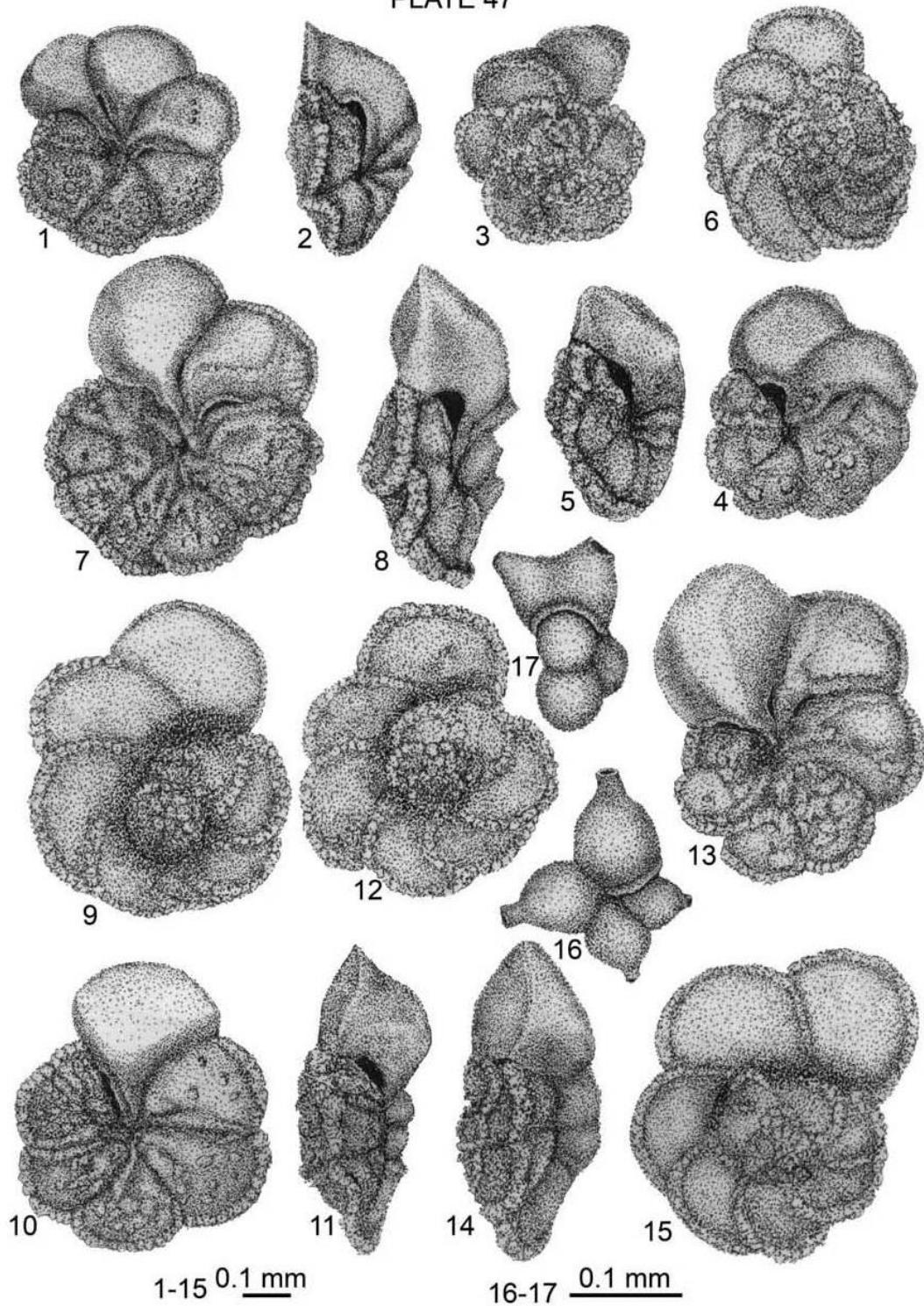
Figs. 1-10 *Rotalipora evoluta* SIGAL 1948, Vraconian, Bălăria core, L.P.B.IV. 11664.

Figs. 11-16 *Rotalipora appenninica appenninica* (RENZ) 1936, Vraconian, Bălăria core, L.P.B.IV. 11666.



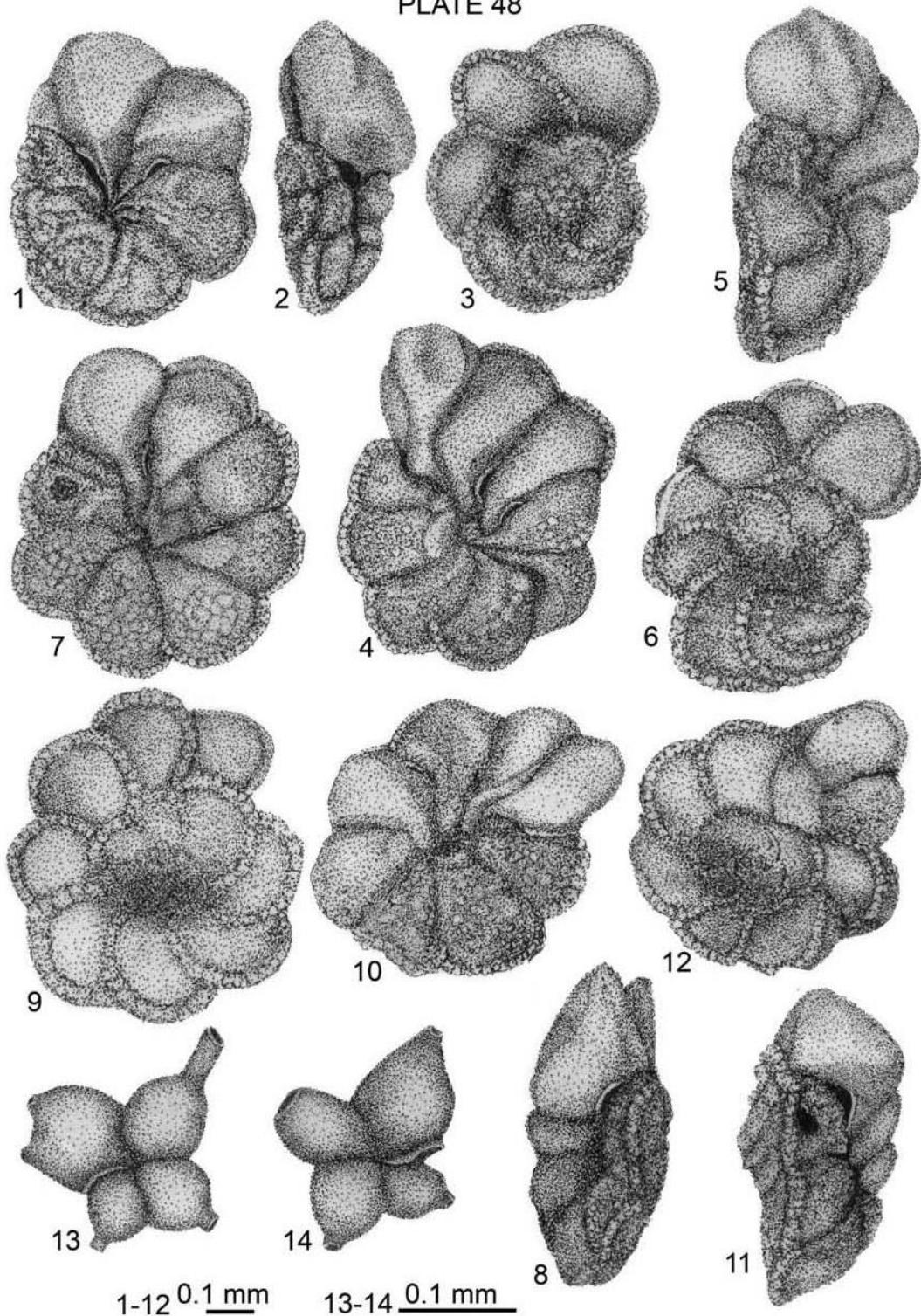
Figs. 1–12 *Rotalipora appenninica appenninica* (RENZ) 1936, Vraconian, Bălăria core, L.P.B.IV. 11666.  
 Figs. 13–21 *Rotalipora praebrotzeni* NEAGU 2006, Vraconian, Bălăria core, L.P.B.IV. 11676.

## PLATE 47

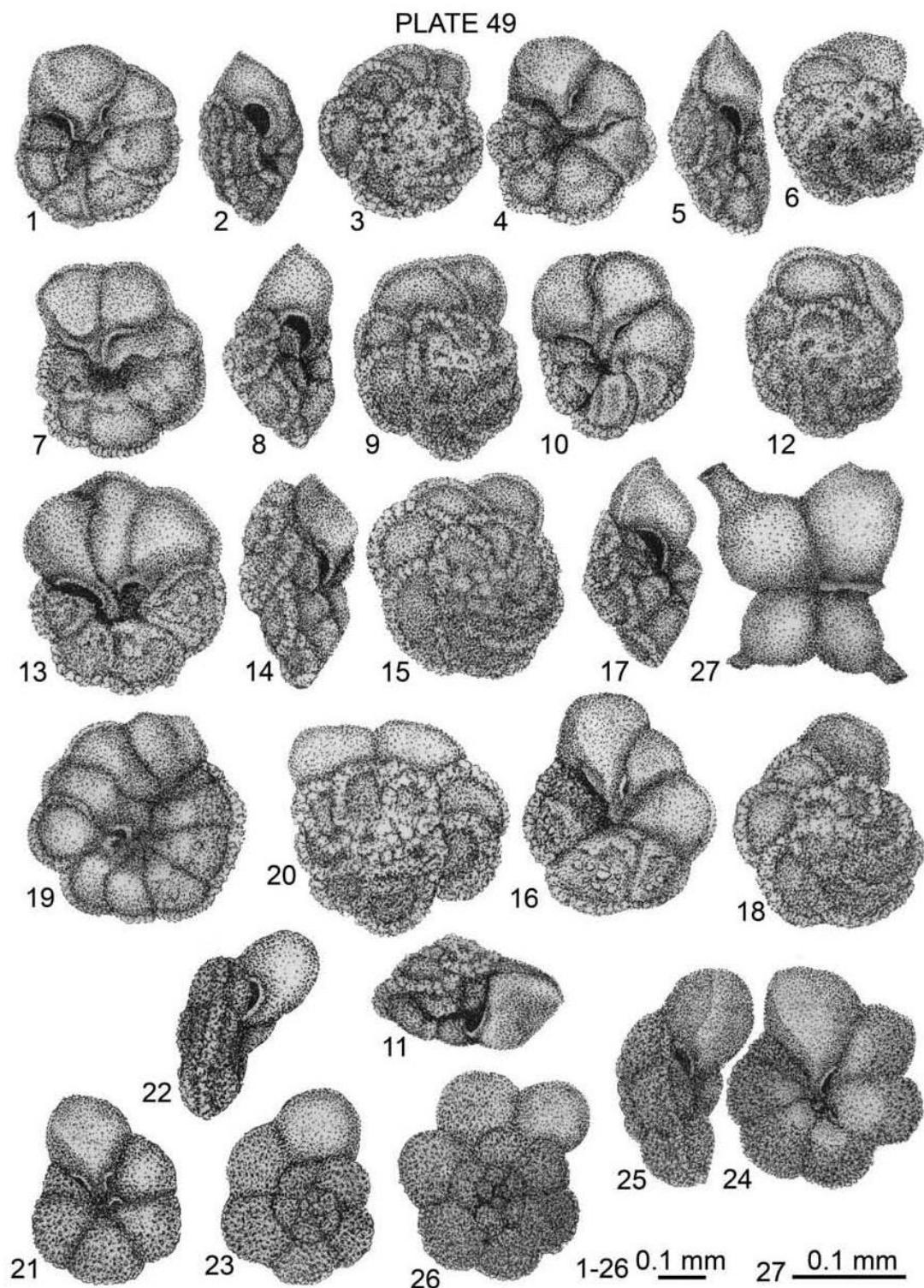


**Figs. 1–6** *Rotalipora praebrotzeni* NEAGU 2006, Vraconian, Bălăria core, L.P.B.IV. 11676. **Figs. 7–15** *Rotalipora gandolfii* LUTERBACHER & PREMOLI-SILVA 1962, Vraconian, Bălăria core, L.P.B.IV. 11667. **Figs. 16–17** *Schackoina cenomana* (SCHACKO) 1897, Vraconian, Copăceni core, L.P.B.IV. 12040.

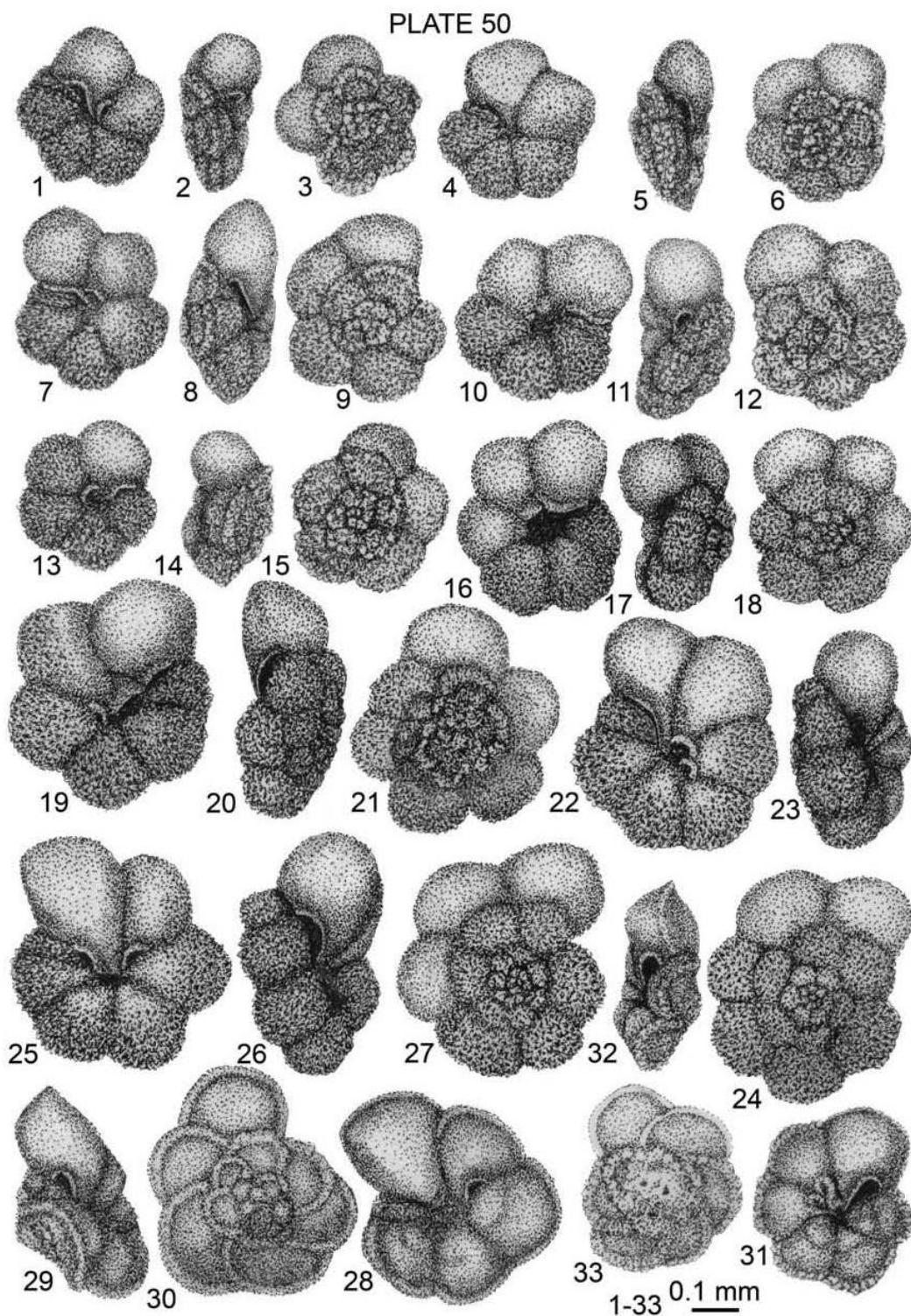
## PLATE 48



**Figs. 1–3** *Rotalipora gandolfii* LUTERBACHER & PREMOLI-SILVA 1962, Vraconian, Bălăria core, L.P.B.IV. 11667.  
**Figs. 4–12** *Rotalipora moesiana* NEAGU 2006, Vraconian, Bălăria core, L.P.B.IV. 11669. **Figs. 13, 14** *Schackoina cenomana* (SCHACKO) 1897, Vraconian, Copăceni core, L.P.B.IV. 11686.

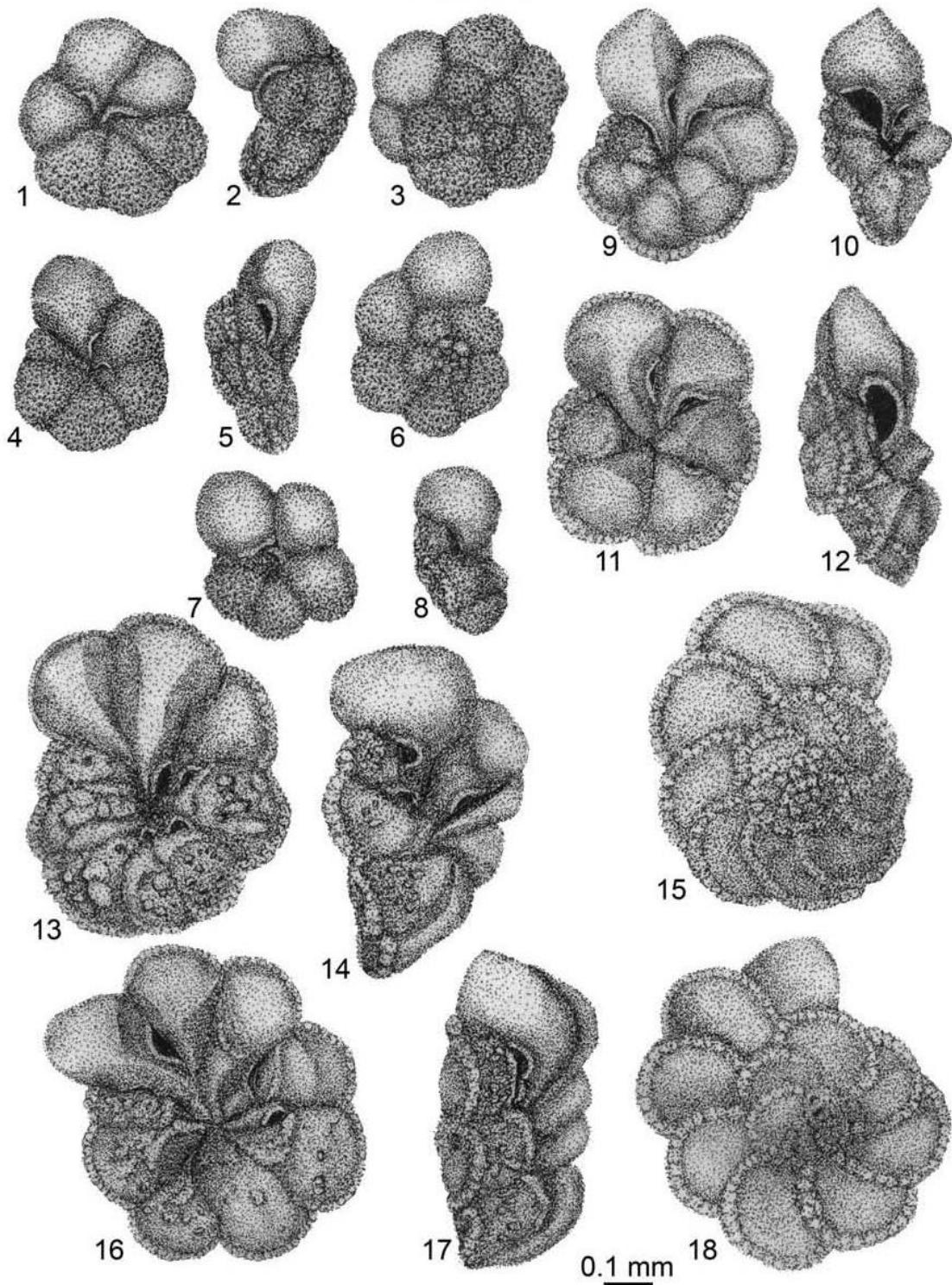


**Figs. 1–20** *Rotalipora ticinensis* GANDOLFI 1942, Vraconian, Dumbrăvița core, L.P.B.IV. 11673. **Figs. 21–26** *Rotalipora subticinensis* GANDOLFI 1957, Vraconian, Dumbrăvița core, L.P.B.IV. 11670. **Fig. 27** *Schackoina cenomana* (SCHACKO) 1897, Vraconian, Copăceni core, L.P.B.IV. 11686.

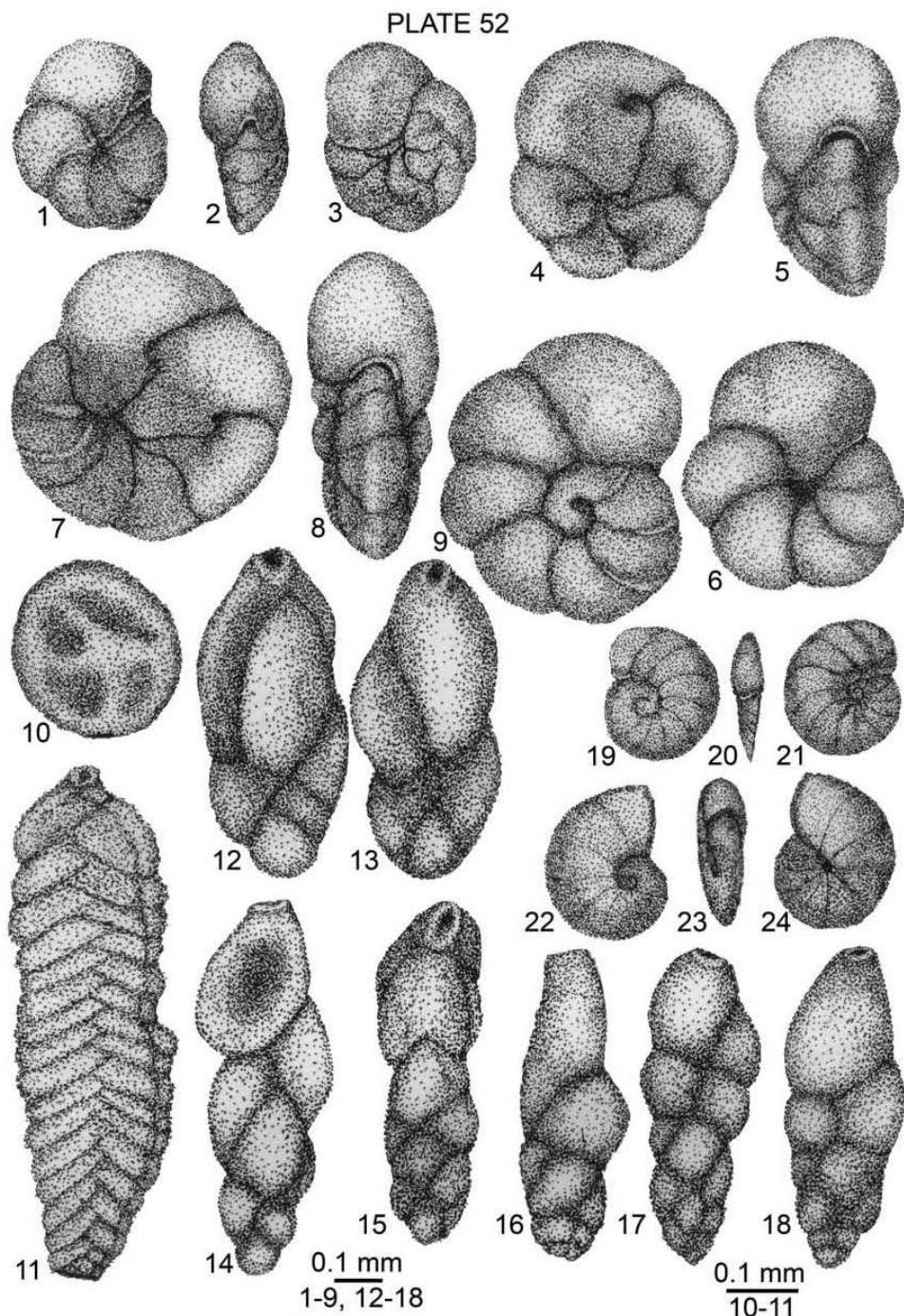


**Figs. 1–15** *Rotalipora praebalernaensis* SIGAL 1969, Vraconian, Glogoveanu core, L.P.B.IV. 11687. **Figs. 16–27** *Rotalipora ticiensis* GANDOLFI 1942, Vraconian, Glogoveanu core, L.P. B.IV. 11672. **Figs. 28–30, 31–33** *Rotalipora balernaensis* GANDOLFI 1957, Vraconian, Dumbravița core, L.P.B.IV. 11663.

## PLATE 51

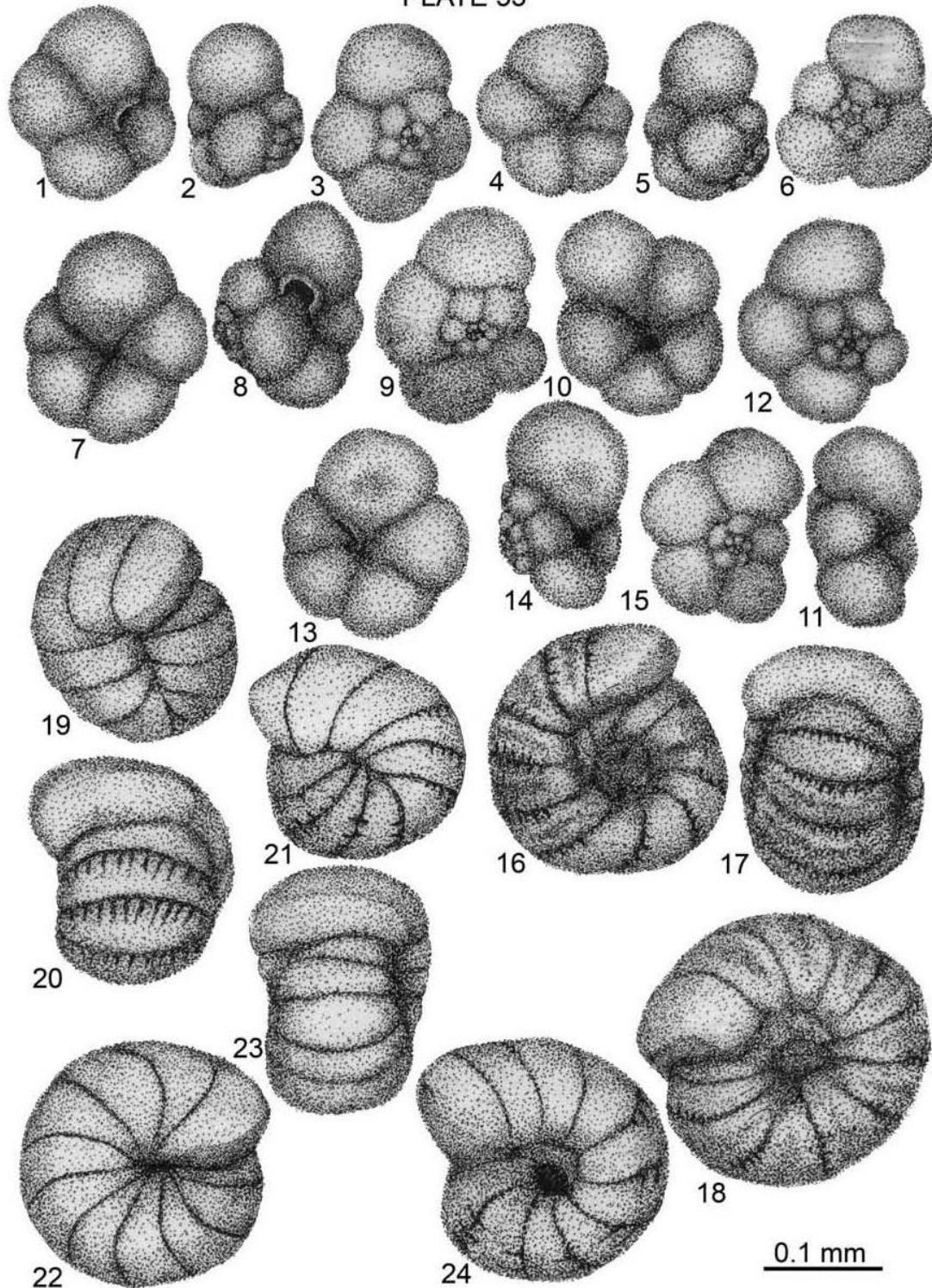


**Figs. 1–8** *Ticinella praeticinensis* SIGAL 1966, Vraconian, Glogoveanu core, L.P.B.IV. 11661.  
**Figs. 9–12** *Rotalipora appenninica* (RENTZ) 1936, Vraconian, 44 Bălăria core, L.P.B.IV. 11660.

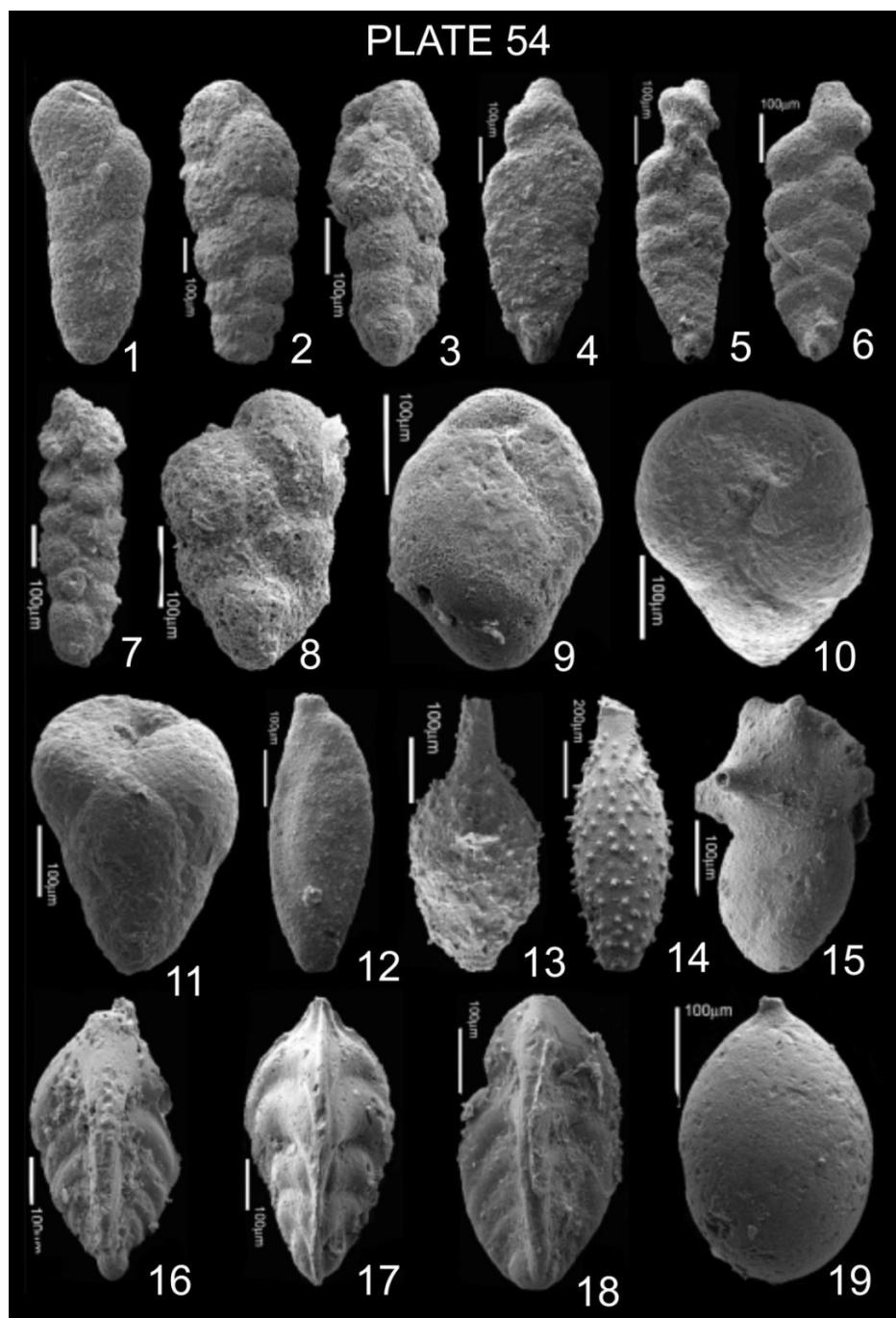


**Figs. 1–3** *Falsogavelinella umbilicitecta* (FUCHS) 1976, (after Fuchs 1967, pl. 19, fig.5) L.P. B.IV. 781. **Figs. 4–9** *Lingulogavelinella asterigerinoides* (PLUMMER) 1931, Giurgiu Pod, Middle Albian (Hoplitan), L.P.B.IV. 12033. **Fig. 10** *Psammosphaera fusca* SCHULTZE 1875, Upper Albian, Buzescu core (570 m), L.P.B.IV. 12035. **Fig. 11** *Spiroplectinata complanata* (REUSS) 1860, Middle Albian, Craiova core, L.P.B.IV. 11785. **Figs. 12–13** *Falsogaudryinella moesiana* (NEAGU) 1965 (macrosphaeric specimens), Upper Albian, Buzescu core (570m), L.P.B.IV. 11778. **Figs. 14–18** *Falsogaudryinella neagui* BARTENSTEIN 1981 (**Figs. 14–16** macro sphaeric specimens. **Figs. 17–18** microsphaeric specimens), Upper Albian, Buzescu core (570m), L.P.B.IV. 11780. **Figs. 19–21** *Anomalina complanata* REUSS 1851, (from REUSS, original 1851). **Figs. 22–24** *Rosalina complanata* REUSS, var... (from REUSS, original 1863).

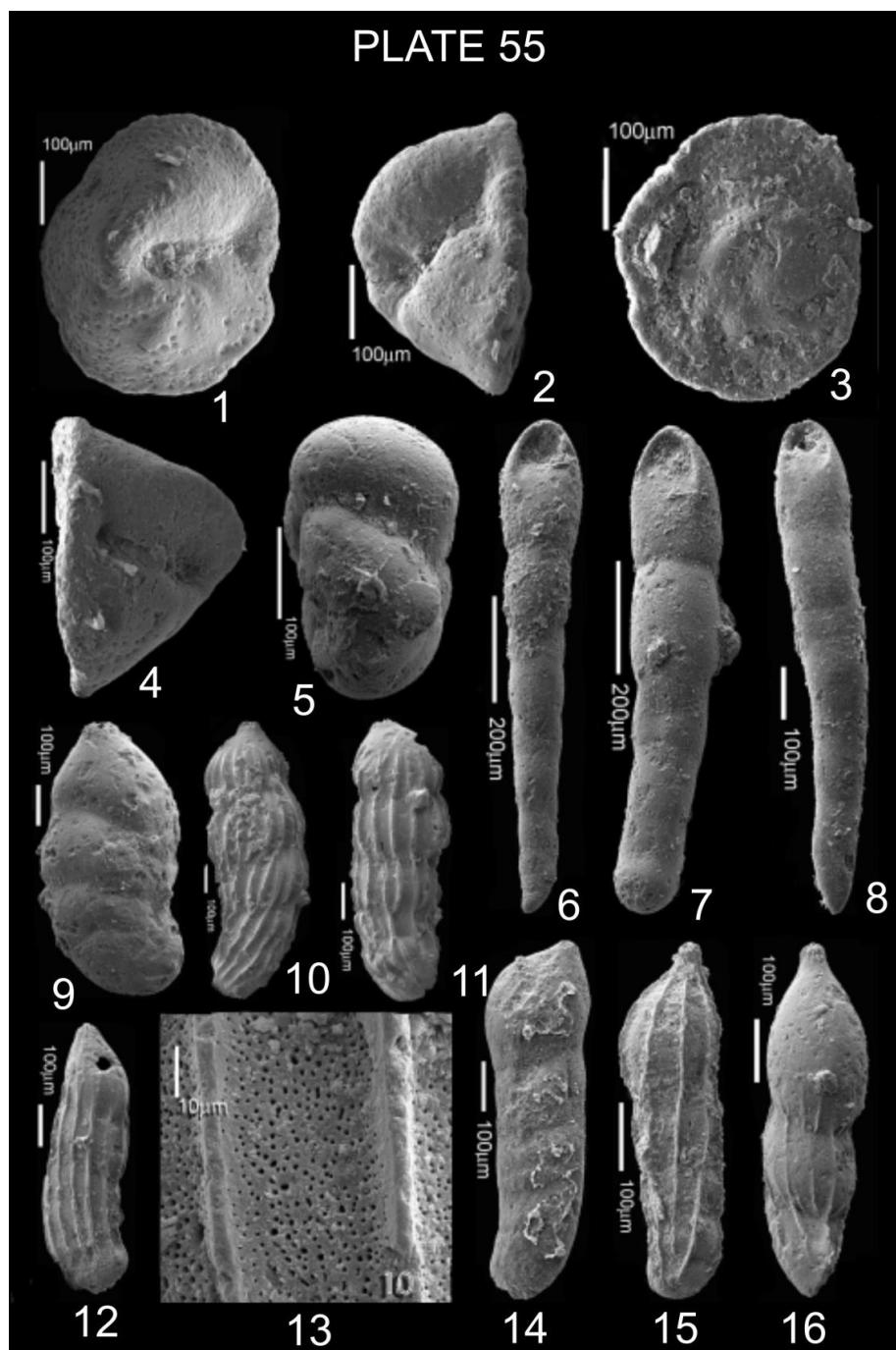
## PLATE 53



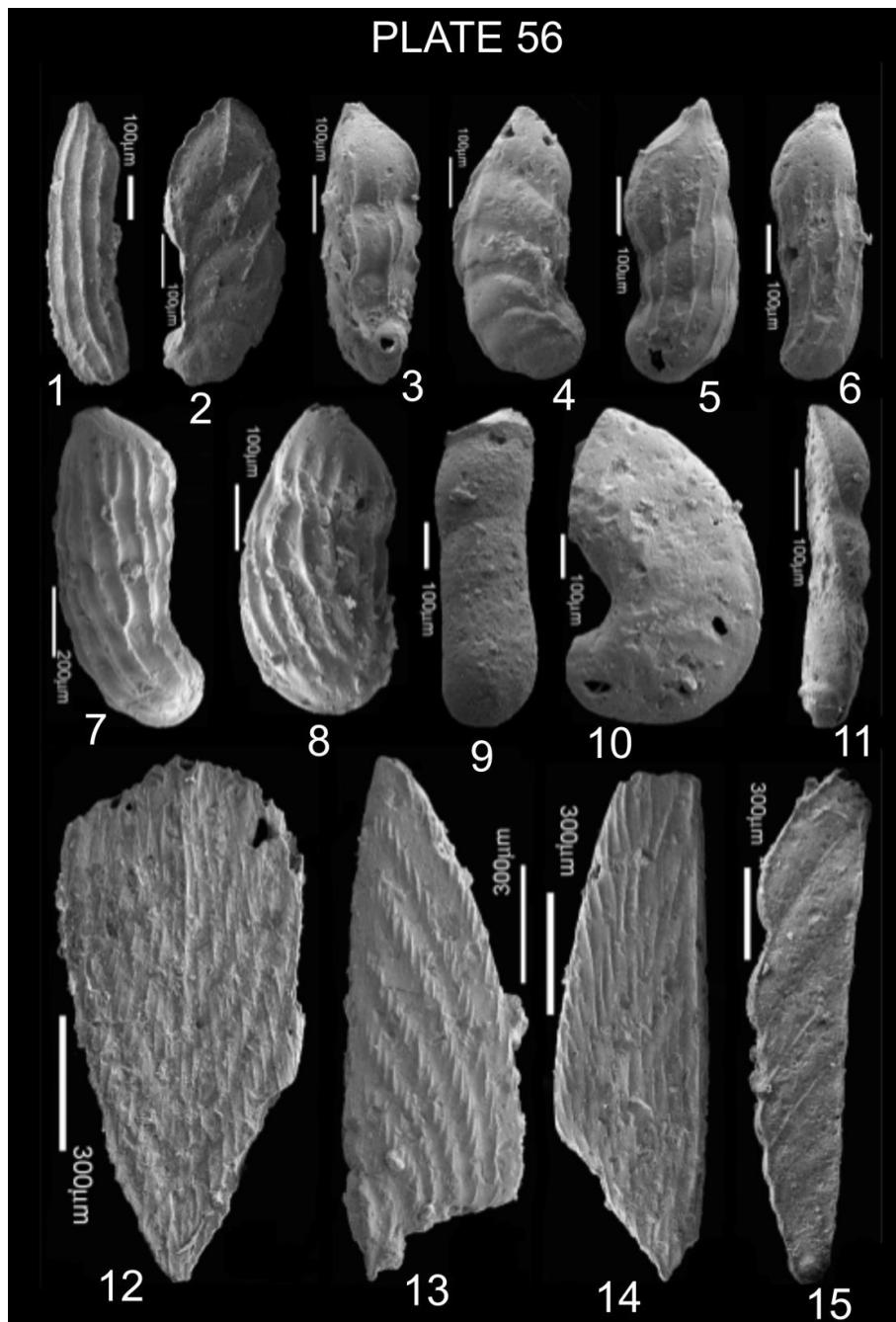
**Figs. 1–15** *Conoglobigerina graysonensis* (TAPPAN) 1940, Hoplitan, Giurgiu Pod, L.P.B.IV. 12049. **Figs. 16–24** *Barkerina minima* n. sp. Upper Albian-Hysteroceanian, 25 Buzescu core, 575 m, holotype **Figs. 16–18** L.P.B.IV. 11807; paratypes **Figs. 19–24** L.P.B.IV. 12025.



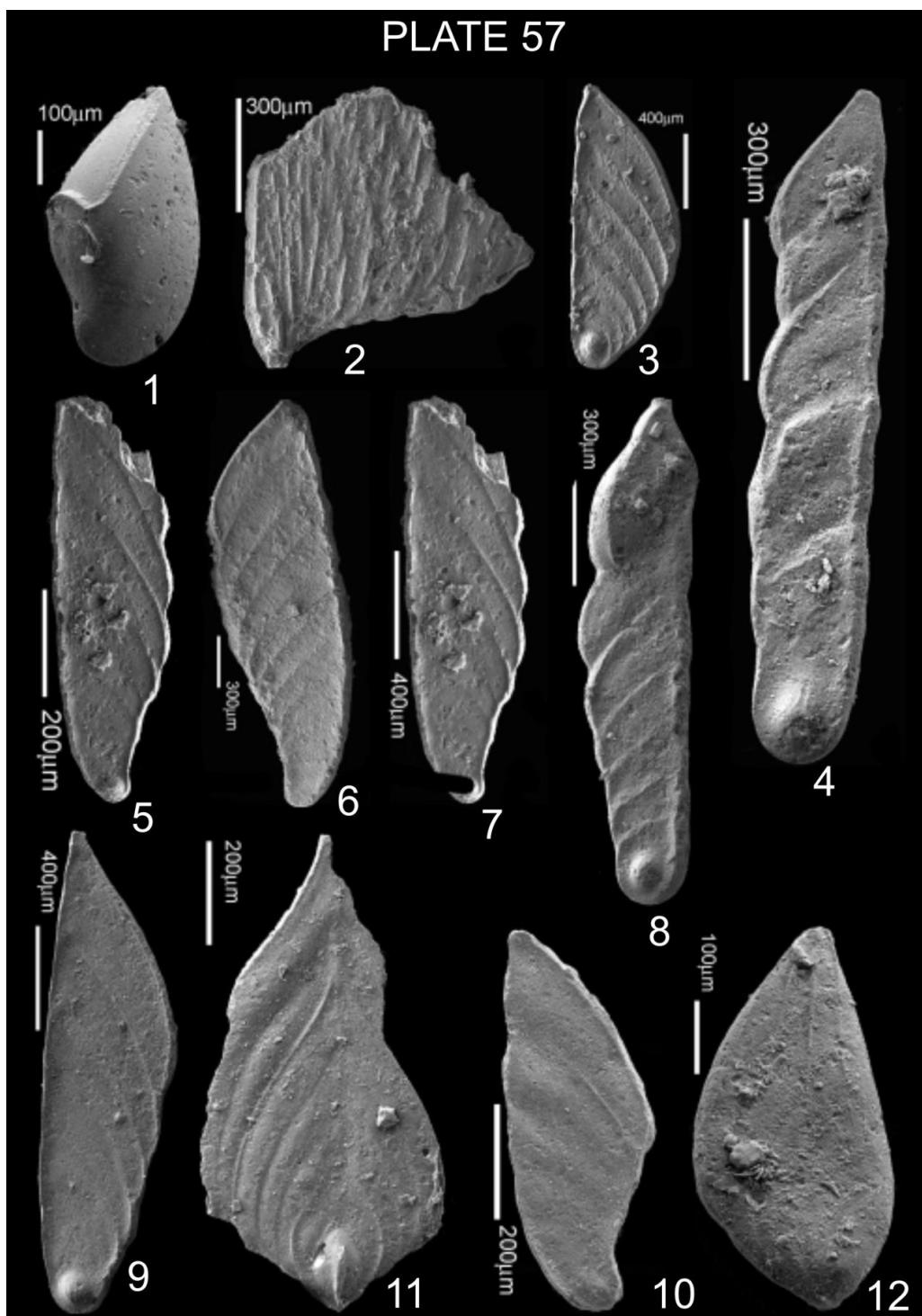
**Figs. 1–3** *Gaudryina gradata* BERTHELIN 1880, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 4–6** *Spiroplectinata annexens* (PARK. & JONES) 1863, Middle Albian, Băcălești core. **Fig. 7** *Gaudryina filiformis* BERTHELIN, 1880 Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 8** *Gaudryina richteri* GRABERT 1959, Middle Albian-Eohoplitan, Vedea Valley-Putineiu core. **Figs. 10–11** *Arenobulimina macfadyeni* CUSHMAN 1936, Middle-Albian-Hoplitan-Giurgiu Pod. **Fig. 12** *Quinqueloculina antiqua* FRANKE 1928, Middle Albian-Eohoplitan, Vedea Valley-Putineiu core. **Figs. 13–14** *Ramulina novaculeata* BULLARD 1953, Middle Albian-Eohoplitan, Vedea Valley-Putineiu core. **Fig. 15** *Eoguttulina subsphaerica* (BERTHELIN) 1880, Middle Albian-Eohoplitan, Vedea Valley-Putineiu core. **Figs. 16, 18** *Tristix excavata* (REUSS) 1863, Middle Albian-Eohoplitan, Zimnicea drilling. **Fig. 17** *Tristix articulata* (REUSS) 1863, Middle Albian-Eohoplitan, Zimnicea drilling. **Fig. 19** *Lagena globosa* (MONTAGU) 1808, Middle Albian-Eohoplitan, Zimnicea drilling.



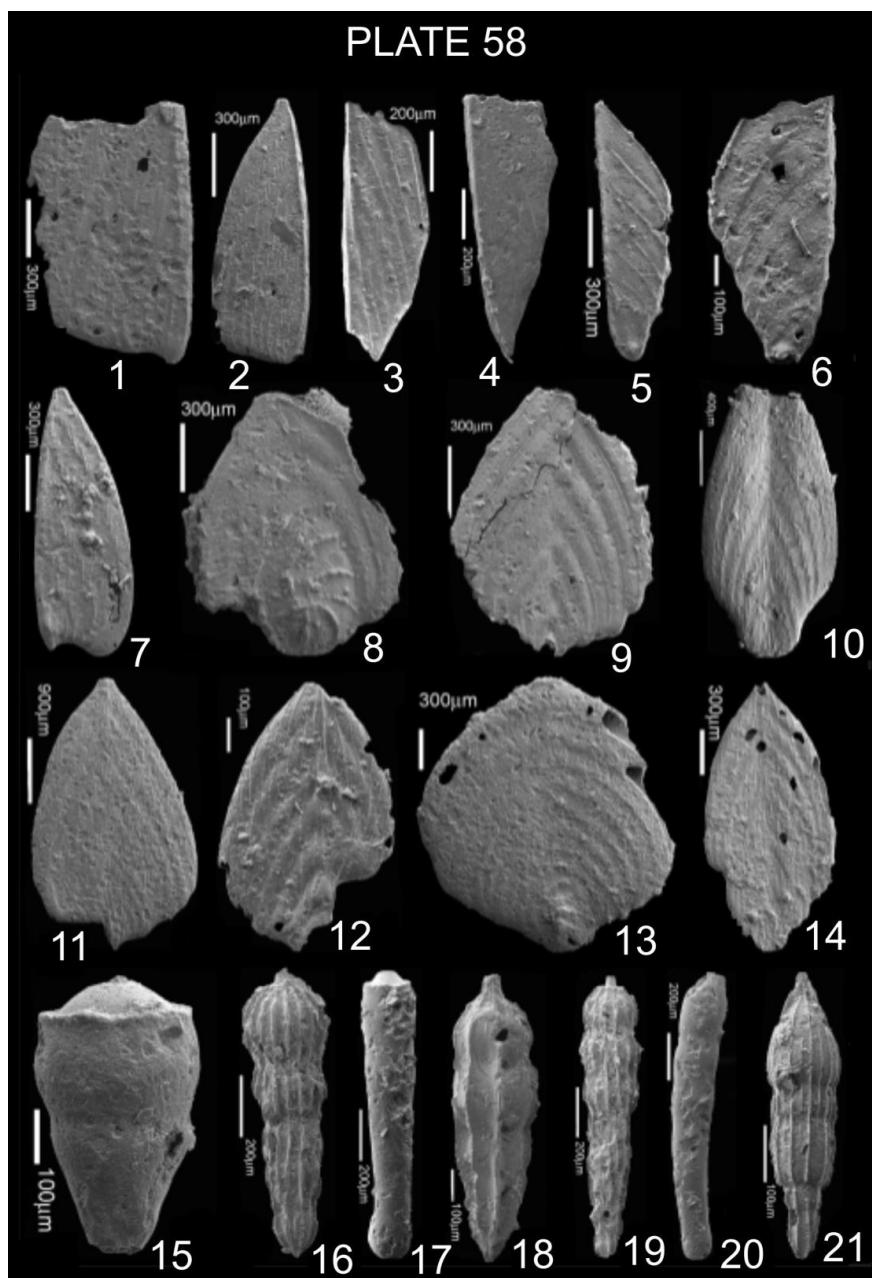
**Figs. 1–4** *Globorotalites rumanus* NEAGU 1965, Middle Albian-Eohoplitan, Zimnicea drilling. **Fig. 5** *Valvularineria berthelini* BERTHELIN & JANNIN 1967, Middle Albian-Eohoplitan, Zimnicea core. **Figs. 6, 8** *Pleurostomella reussi* REUSS & BERTHELIN 1880, Middle Albian-Eohoplitan, Zimnicea drilling. **Fig. 7** *Pleurostomella obtusa* BERTHELIN 1880, Middle Albian-Eohoplitan, Vedea Valley-Putineiu core. **Fig. 9** *Vaginulinopsis cephalotes* (REUSS) 1863, Middle Albian-Eohoplitan, Vedea Valley-Putineiu core. **Fig. 10** *Marginulina jonesi* (REUSS) 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 11** *Marginulina robusta* (REUSS) 1863, Lower Albian (L. *tardefurcata* zone), Bala-Oltina drilling. **Figs. 12–13** *Marginulina aequivoca* REUSS 1863, Middle Albian-Eohoplitan, Zimnicea drilling. **Fig. 14** *Vaginulinopsis* sp. **Fig. 15** *Marginulina* cf. *robusta* REUSS 1863, Lower Albian (L. *tardefurcata* zone), Călărași drilling. **Fig. 16** *Saracenaria bonnoniensis* (BERTHELIN) 1880, Lower Albian (L. *tardefurcata* zone), Călărași drilling.



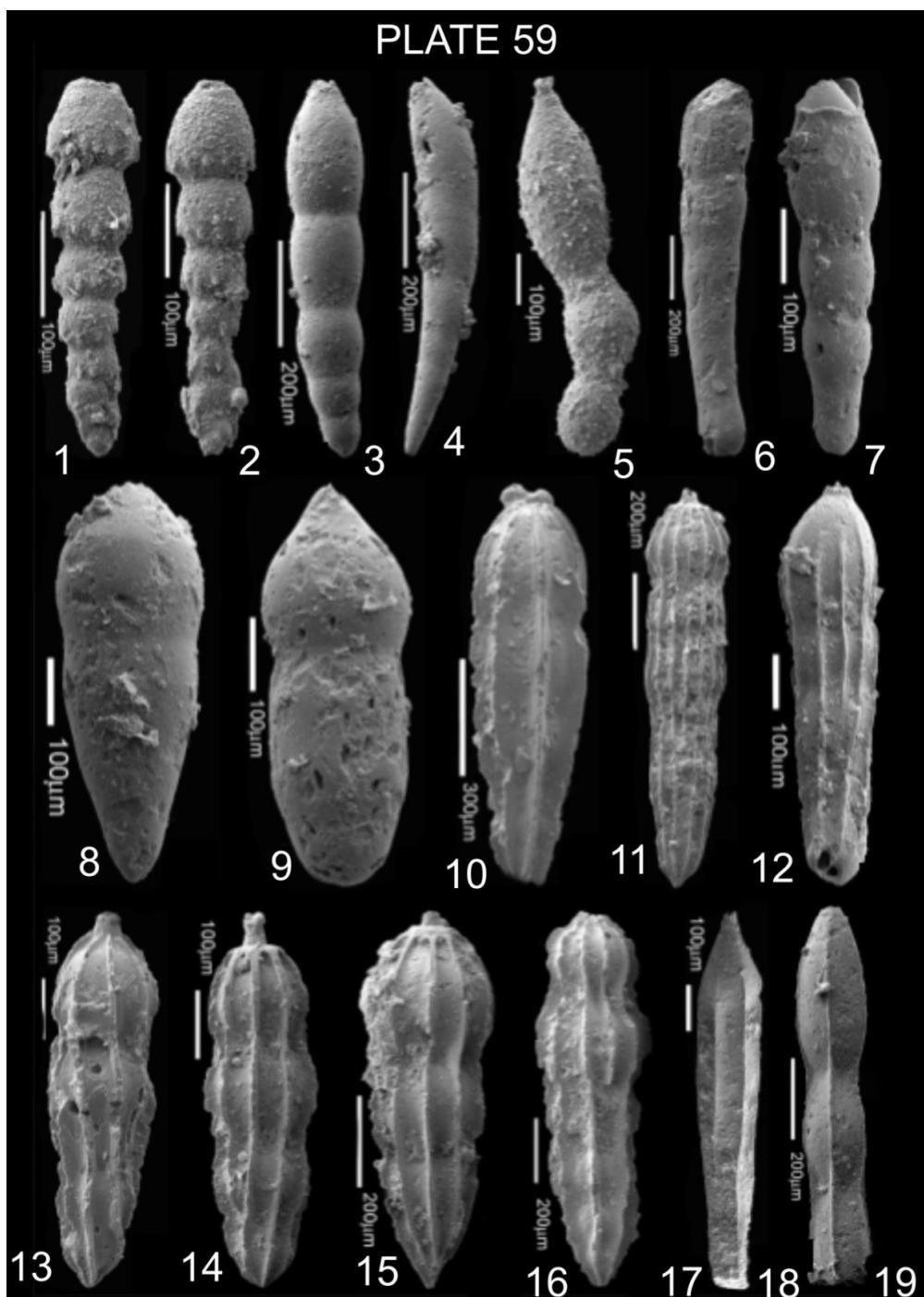
**Fig. 1** *Marginulina aequivoca* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Figs. 2–3** *Saracenaria bonnoniensis* (BERTHELIN) 1880; **Fig. 2** Lower Albian (L. tardefurcata zone), Călărași drillings; **Fig. 3** Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 4** *Saracenaria crassicosta* EICHENBERG 1933, Lower Albian (L. tardefurcata zone), Bala-Oltina drilling. **Figs. 5–6** *Marginulina muelleri* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Figs. 7–8** *Marginulina robusta* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 9** *Marginulinopsis comma* (ROEMER) 1841, Upper Albian, Buzescu core. **Fig. 10** *Lenticulina marcki* (REUSS) 1860, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 11** *Vaginulina recta* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 12** *Citharinella karreri* (BERTHELIN) 1880, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 13** *Citharina orthonota* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Bala-Oltina drilling. **Fig. 14** *Citharina harpa* (ROEMER) 1841, Lower Albian (L. tardefurcata zone), Bala-Oltina drilling. **Fig. 15** *Vaginulina recta* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod.



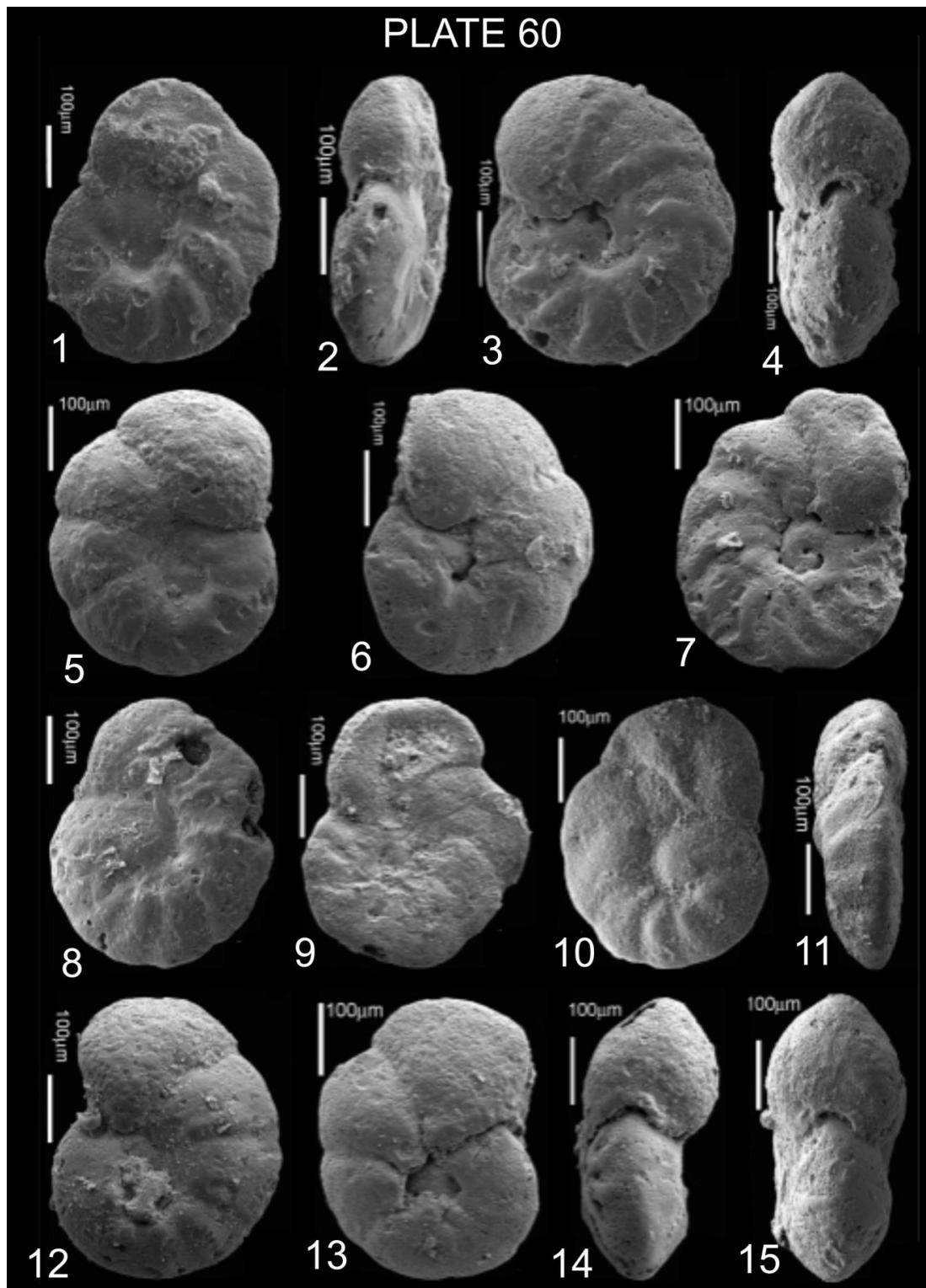
**Fig. 1** *Saracenaria frankei* ten DAM 1950, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 2** *Citharina sparsicosta* (REUSS) 1863, Lower Albian (L. *tardefurcata* zone), Bala-Oltina-drilling. **Fig. 3** *Vaginulina gaultina* BERTHELIN 1880, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 4, 8** *Vaginulina recta* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 5, 7, 10** *Vaginulina eurynota* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 6** *Vaginulina truncata* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 9** *Vaginulina protosphaera* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 11** *Frondicularia filocincta* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod.



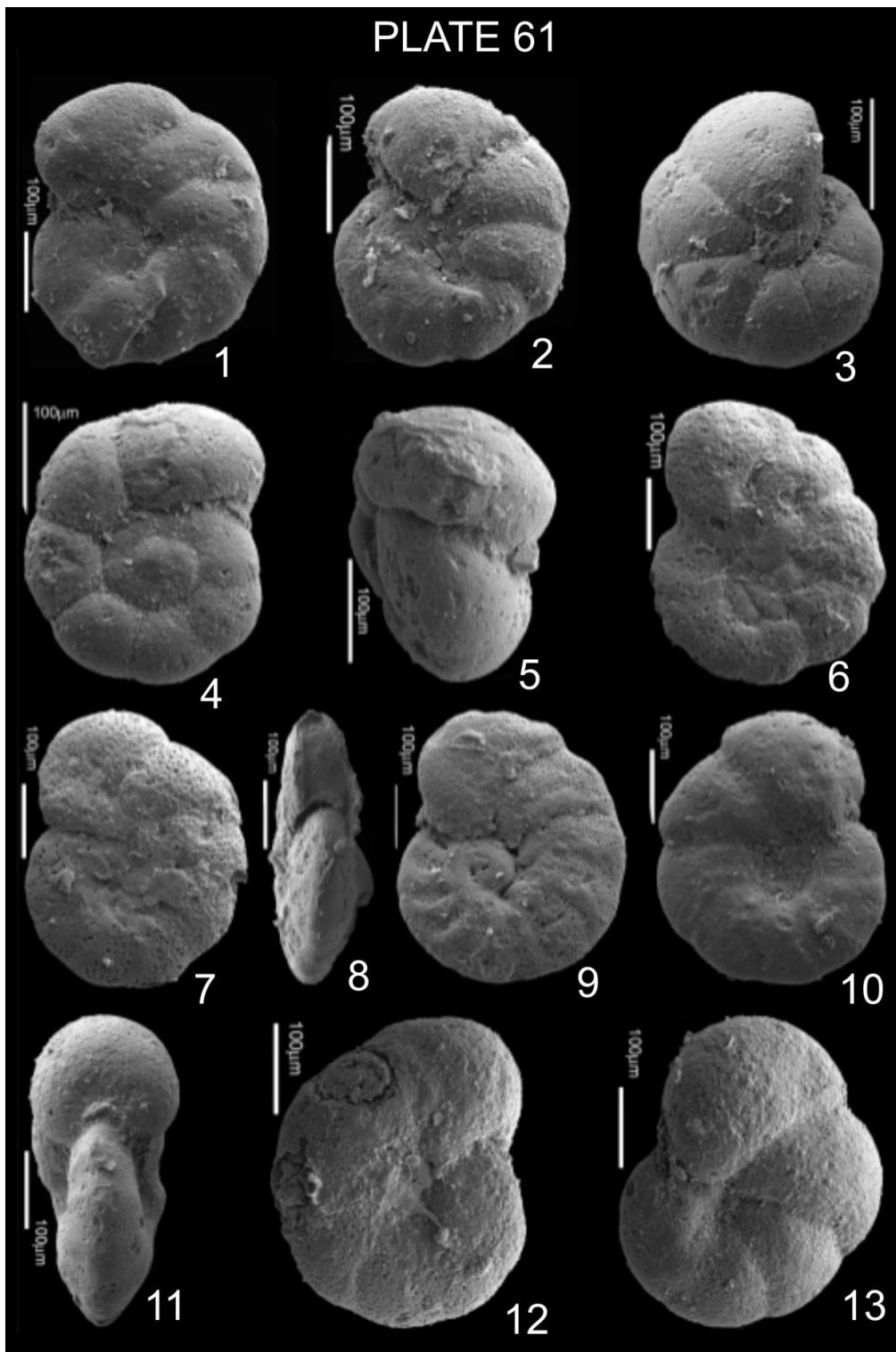
**Fig. 1** *Citharina sparsicosta* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Bala-Oltina dredging. **Fig. 2** *Citharina reticulata* (CORNUEL) 1848, Lower Albian (L. tardefurcata zone), Călărași drillings. **Figs. 3–4** *Vaginulina longa* (CORNUEL) 1848, Lower Albian (L. tardefurcata zone) Călărași drilling. **Fig. 5** *Vaginulina protosphaera* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 6** *Vaginulina kochii* (ROEMER) 1841, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 7** *Citharina orthonota* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 8** **13** *Palmula asiatica* FURSENKO 1948, Lower Albian (L. tardefurcata zone), Bala-Oltina, Călărași drillings. **Figs. 9–12, 14** *Citharinella karreri* (ROEMER), Lower Albian (L. tardefurcata zone) Bala-Călărași drillings. **Fig. 15** *Pseudonodosaria mutabilis* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 16** *Nodosaria paupercula* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Figs. 17, 20** *Marginulinopsis ensis* (REUSS) 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 18** *Nodosaria prismatica* REUSS 1863, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 19** *Nodosaria fontanesi* BERTHELIN 1880, Lower Albian (L. tardefurcata zone) Bala-Oltina drilling. **Fig. 20** *Nodosaria sceptrum* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings.



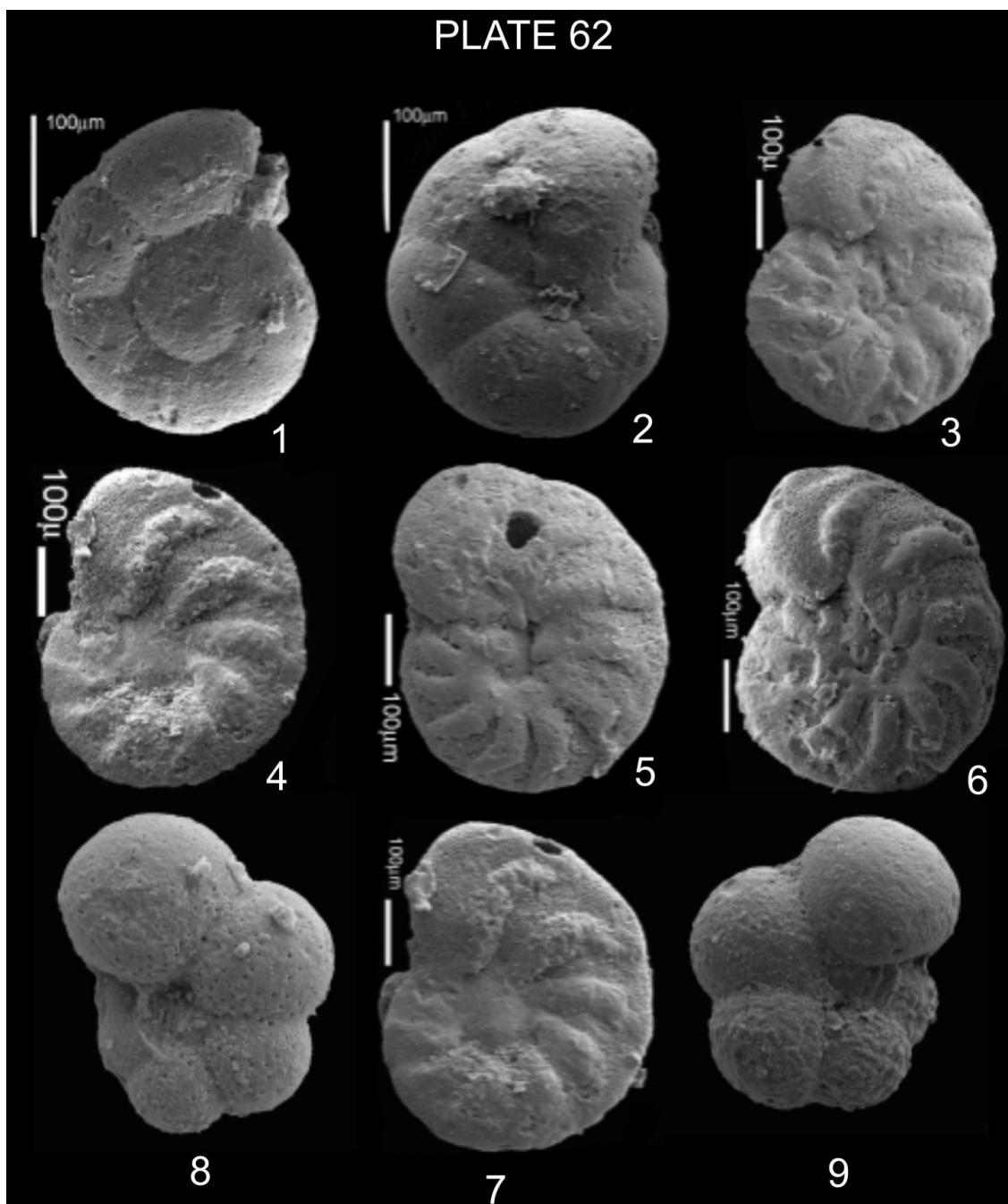
**Figs. 1, 2** *Bifarina calcarata* BERTHELIN 1880, Middle Albian-Eohoplitan, Putineiu core. **Fig. 3** *Dentalina distincta* REUSS 1860, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 4** *Dentalina deflexa* REUSS, 1863, Lower Albian (L. tardefurcata zone) Călărașii drillings. **Fig. 5** *Ramulina novaculeata* BULLARD 1953, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 6** *Marginulinopsis ensis* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Bala-Oltina drilling. **Figs. 7–9** *Pseudonodosaria mutabilis* (REUSS) 1863, Lower Albian (L. tardefurcata zone), Bala-Oltina drilling. **Figs. 10, 13–16** *Nodosaria prismatica* REUSS 1860, Middle Albian-Hoplitan, Giurgiu Pod. **Fig. 11** *Nodosaria paupercula* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Fig. 12** *Marginulina* cf. *acuticostata* REUSS 1863, Lower Albian (L. tardefurcata zone), Călărași drillings. **Figs. 17–18** *Nodosaria orthopleura* REUSS, 1863, Lower Albian (L. tardefurcata zone) Bala-Oltina, Călărași drillings.



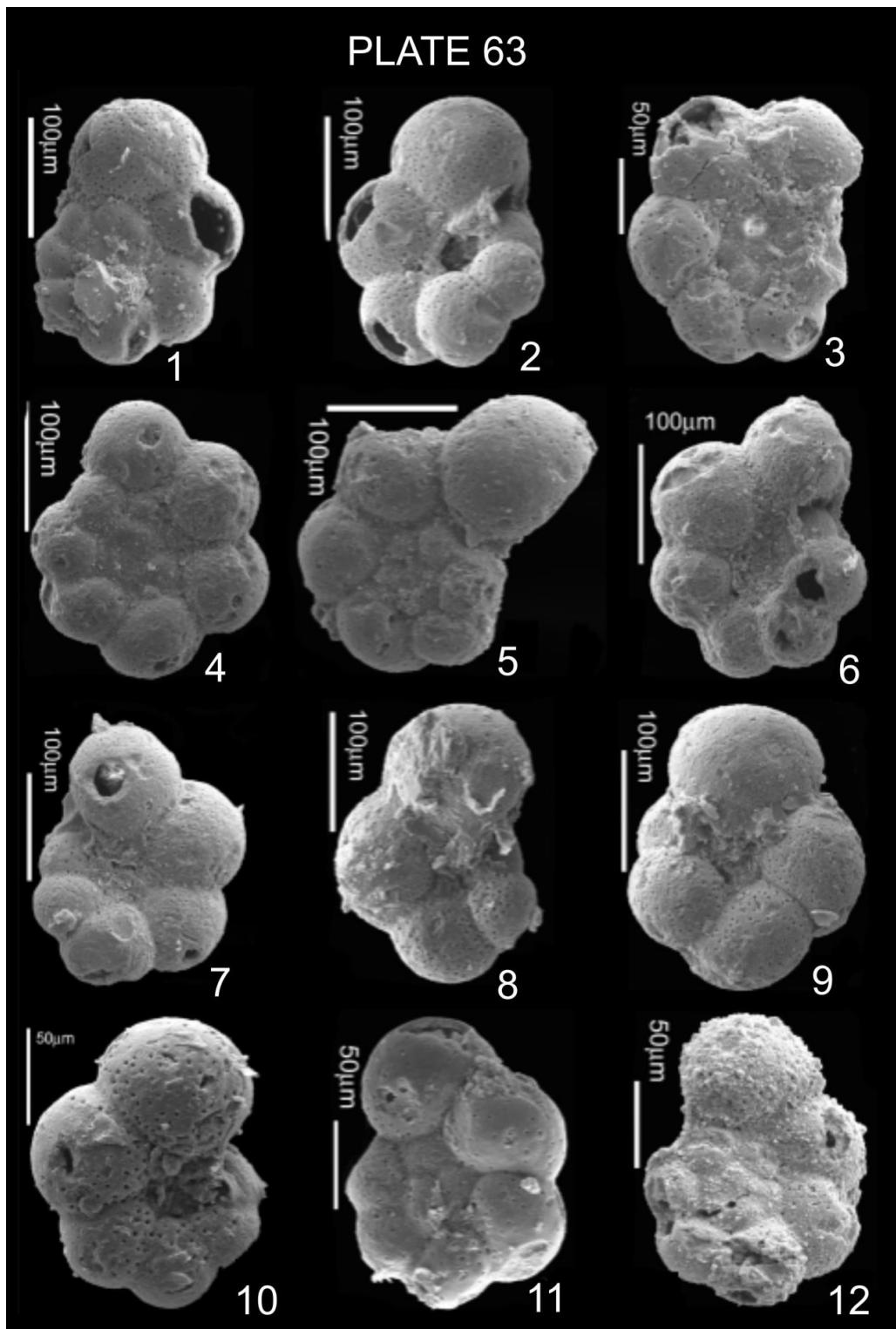
**Figs. 1–7** *Gavelinella tormarpensis* BROTZEN 1942, Lower Albian (L. *tardefurcata* zone), Bala-Oltina-Călărași drillings.  
**Figs. 8–11** *Gavelinella belorussica* (AKIMEZ) 1961, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 12–15** *Gavelinella rudis* (REUSS) 1863, Middle Albian-Hoplitan, Giurgiu Pod.



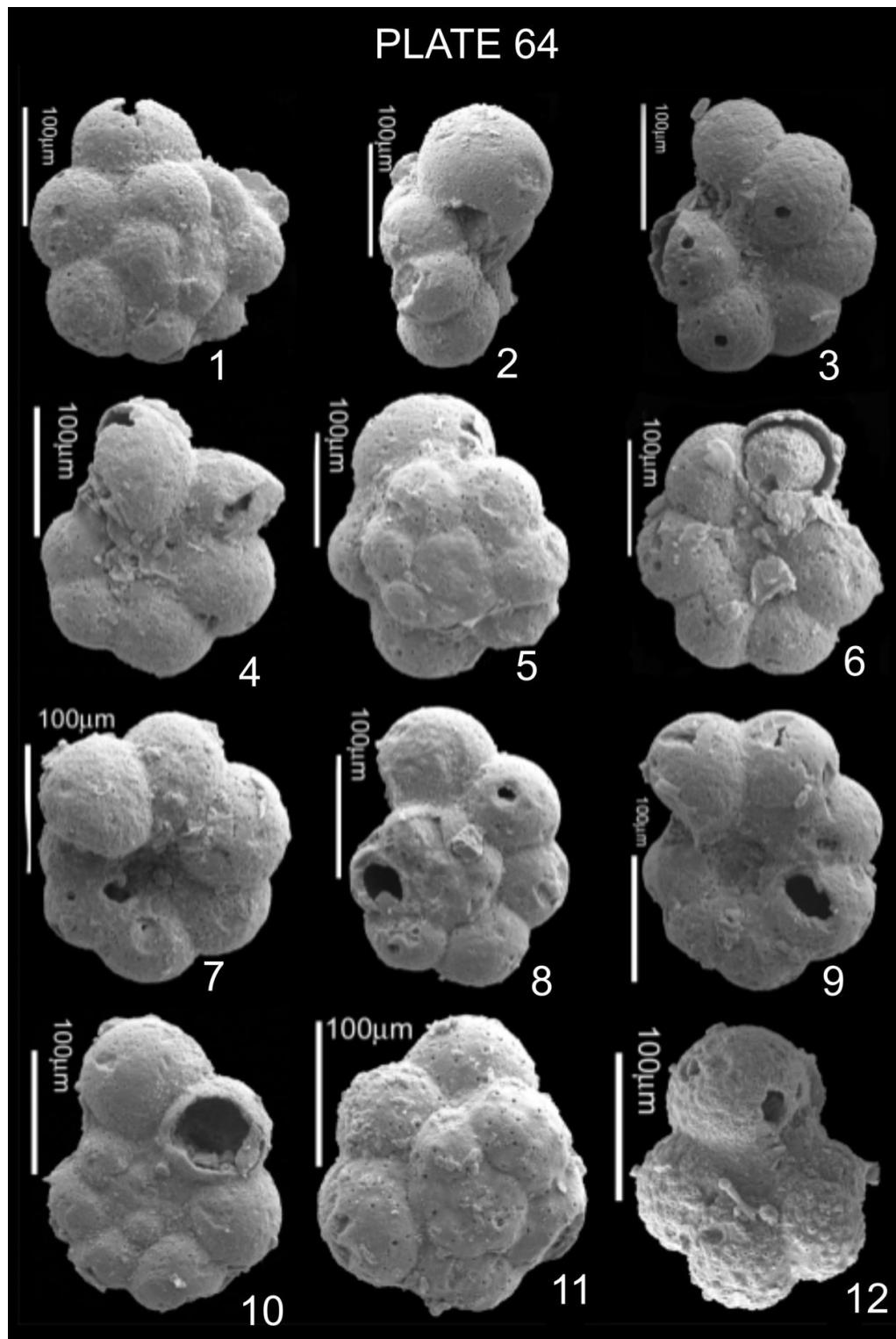
**Figs. 1–2, 9–10** *Gavelinella tormarpensis* BROTZEN 1942, Lower Albian (L. *tardefurcata* zone), Călărași drillings. **Figs. 3–5** *Valvularia* BERTHELIN & JANNIN 1967, Middle Albian-Euhoplitan, Zimnicea drilling. **Figs. 6–10** *Lingulogavelinella asterigerinoides* (PLUMMER) 1931, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 11–13** *Gavelinella intermedia* (BERTHELIN) 1880, Middle Albian-Hoplitan, Giurgiu Pod.



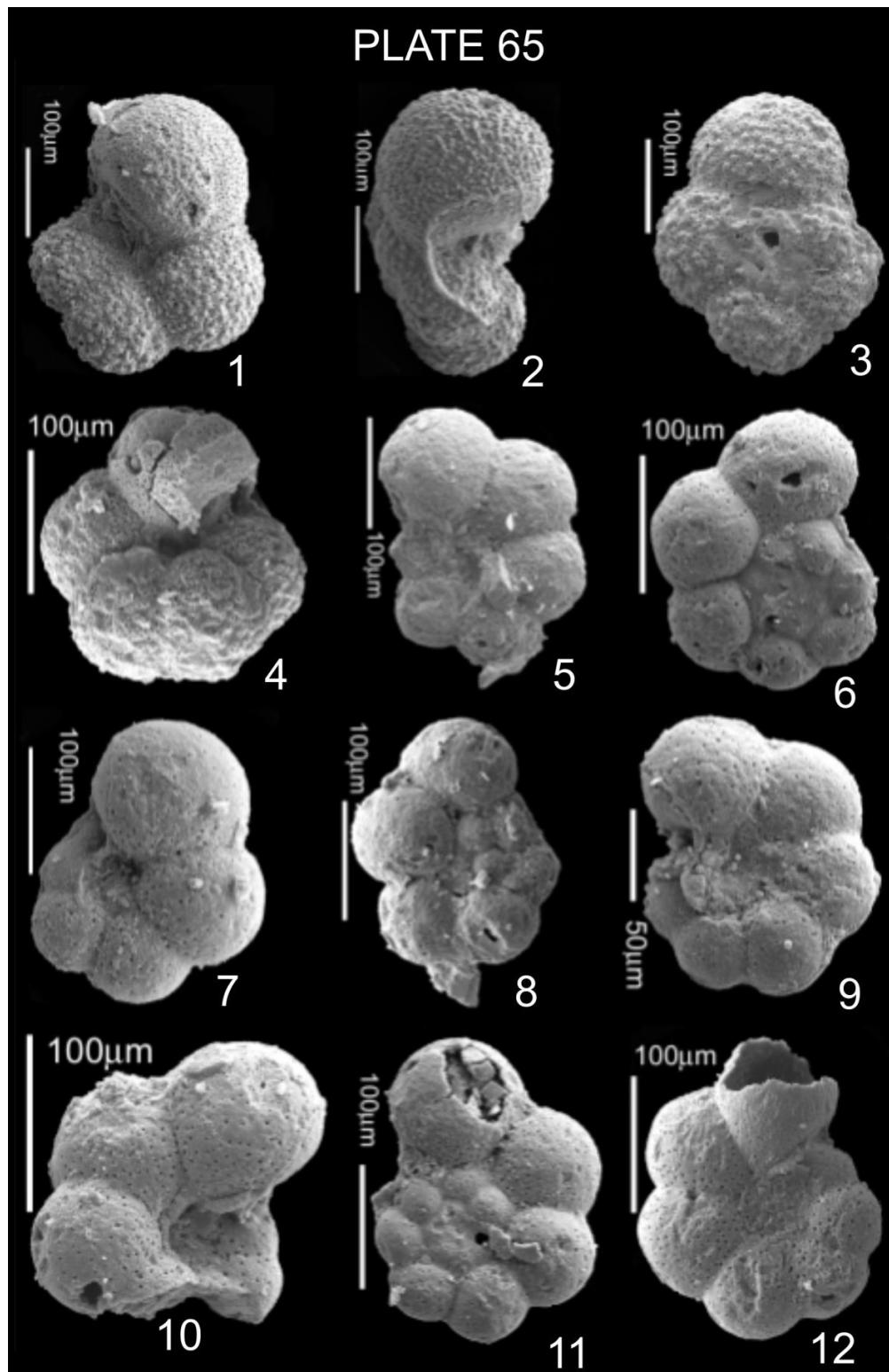
**Figs. 1, 2, 8** *Hedbergella rischi* MOULLADE 1974, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 3–7** *Hedbergella planispira* (TAPPAN) 1940, Middle Albian Hoplitan, Giurgiu Pod. **Figs. 9–12** *Ticinella primula* LUTERBACHER 1964, Middle Albian-Hoplitan Giurgiu Pod.



**Figs. 1–6, 11** *Hedbergella rischi* MOULLADE 1974, Lower Albian (L. *tardefurcata* zone), Călărași drillings. **Figs. 7–10** *Ticinella primula* LUTERBACHER 1964, Lower Albian (L. *tardefurcata* zone) Călărași drillings. **Fig. 12** *Hedbergella* (?) cf. *gautiereensis* (BRONNIMANN) 1952, Middle Albian-Eohoplitan (wall with muricat pores), Putineiu core.

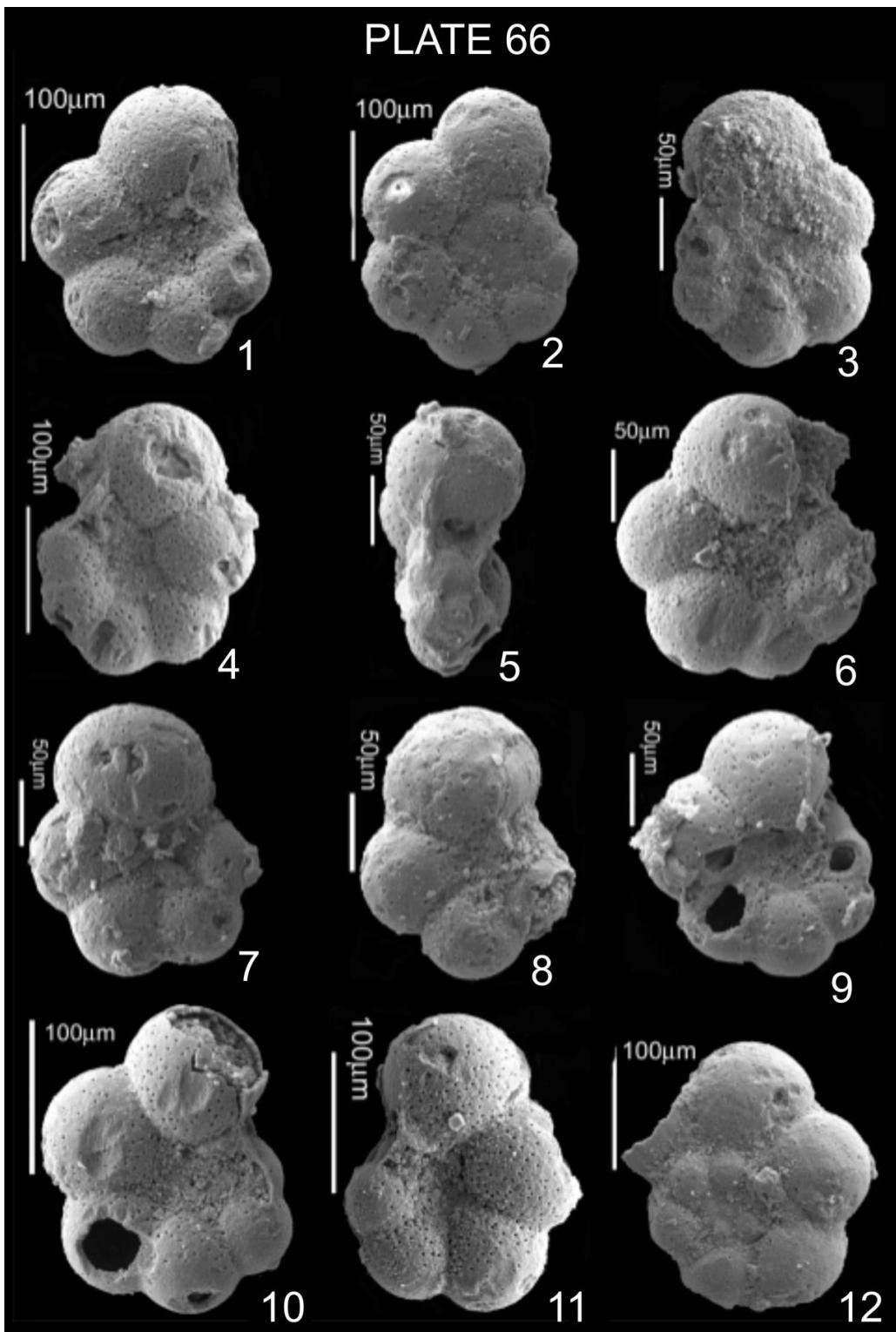


**Figs 1–4** *Hedbergella gautirensis* (BRONNIMAN) 1952, Middle Albian Eohoplitan, Zimnicea drilling, Putineiu core.  
**Figs. 5–8** *Hedbergella rischi* MOULLADE 1974, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 9–12** *Ticinella primula* LUTERBACHER 1964, Lower Albian (L. tardefurcata zone), Călărași drillings.

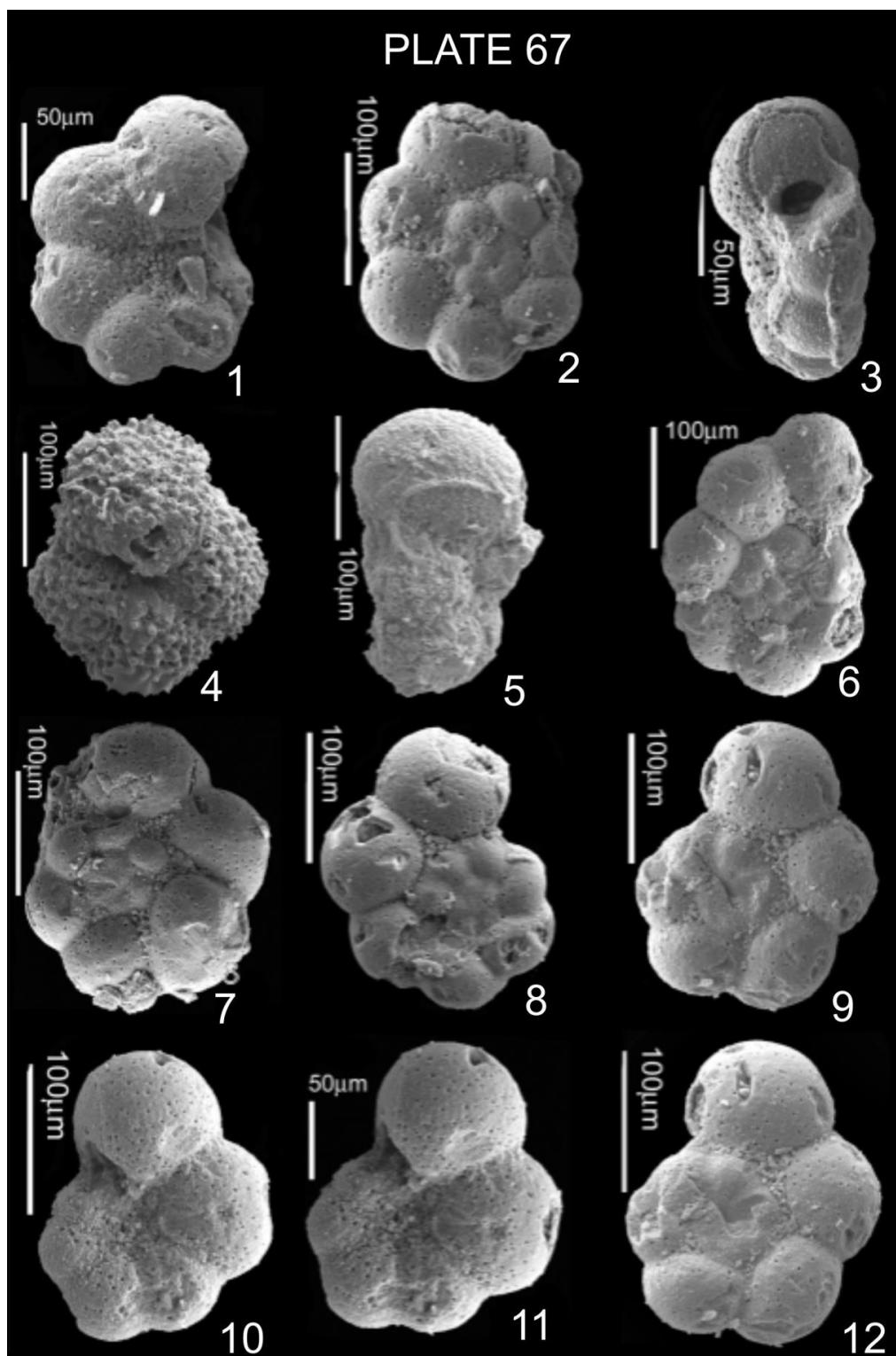


Figs. 1, 2, 6, 9–10 *Ticinella primula* LUTERBACHER 1964, Middle Albian Hoplitan, Giurgiu Pod.

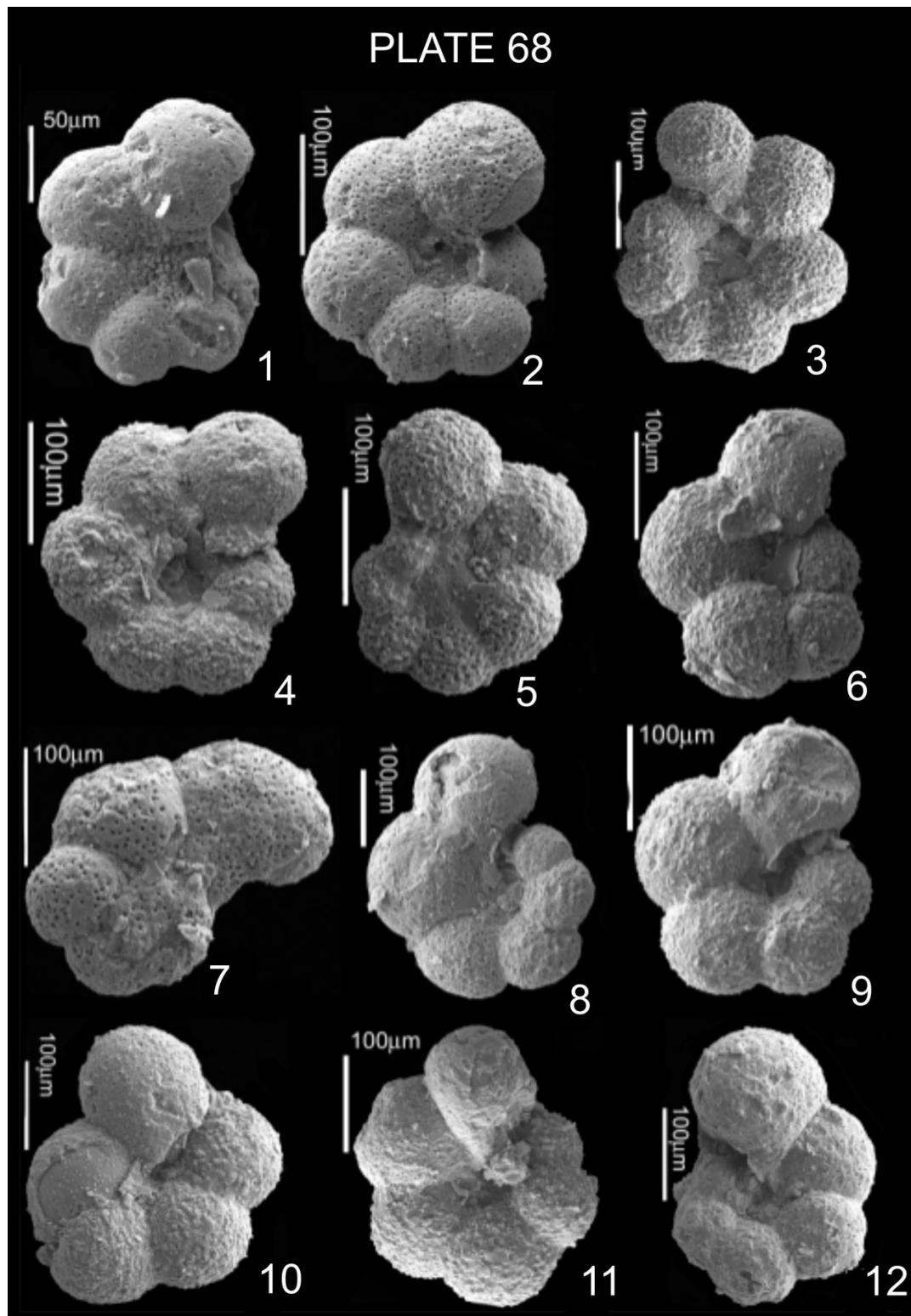
Figs. 3–5, 7–9, 11–12 *Hedbergella rischi* MOULLADE, Lower Albian (L. *tardefurcata* zone), Călărași drillings.



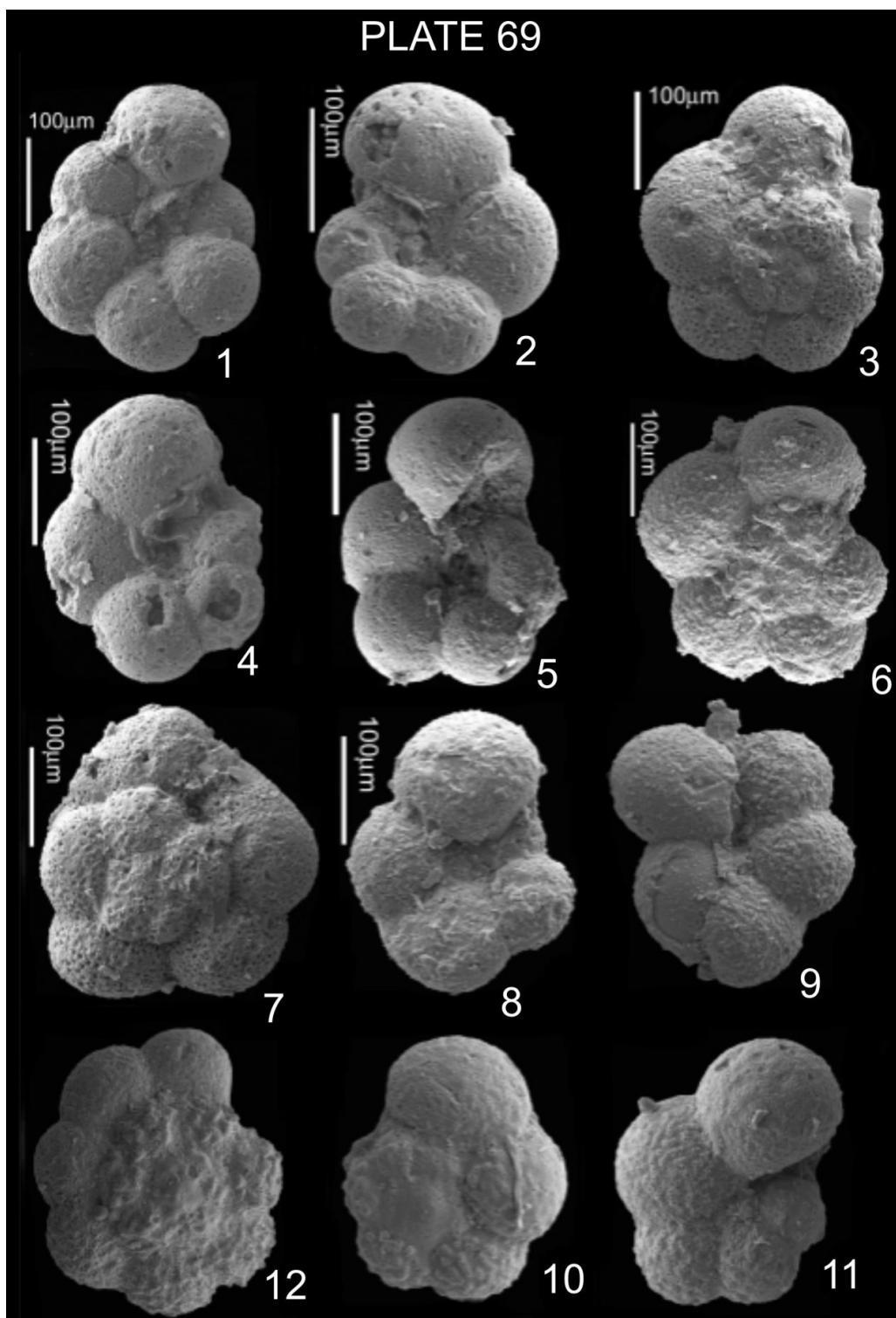
**Figs. 1–3, 6–9** *Hedbergella planispira* (TAPPAN) 1949, Middle Albian-Hoplitan, Giurgiu Pod. **Figs. 4, 5** *Hedbergella* (?) cf. *gautirensis* (BRONNIMAN) 1952, (wall with muricae) Middle Albian-Eohoplitan, Zimnicea drilling, Putineiu core. **Figs. 10–12** *Hedbergella rischi* MOULLADE 1974, Middle Albian-Hoplitan, Giurgiu Pod.



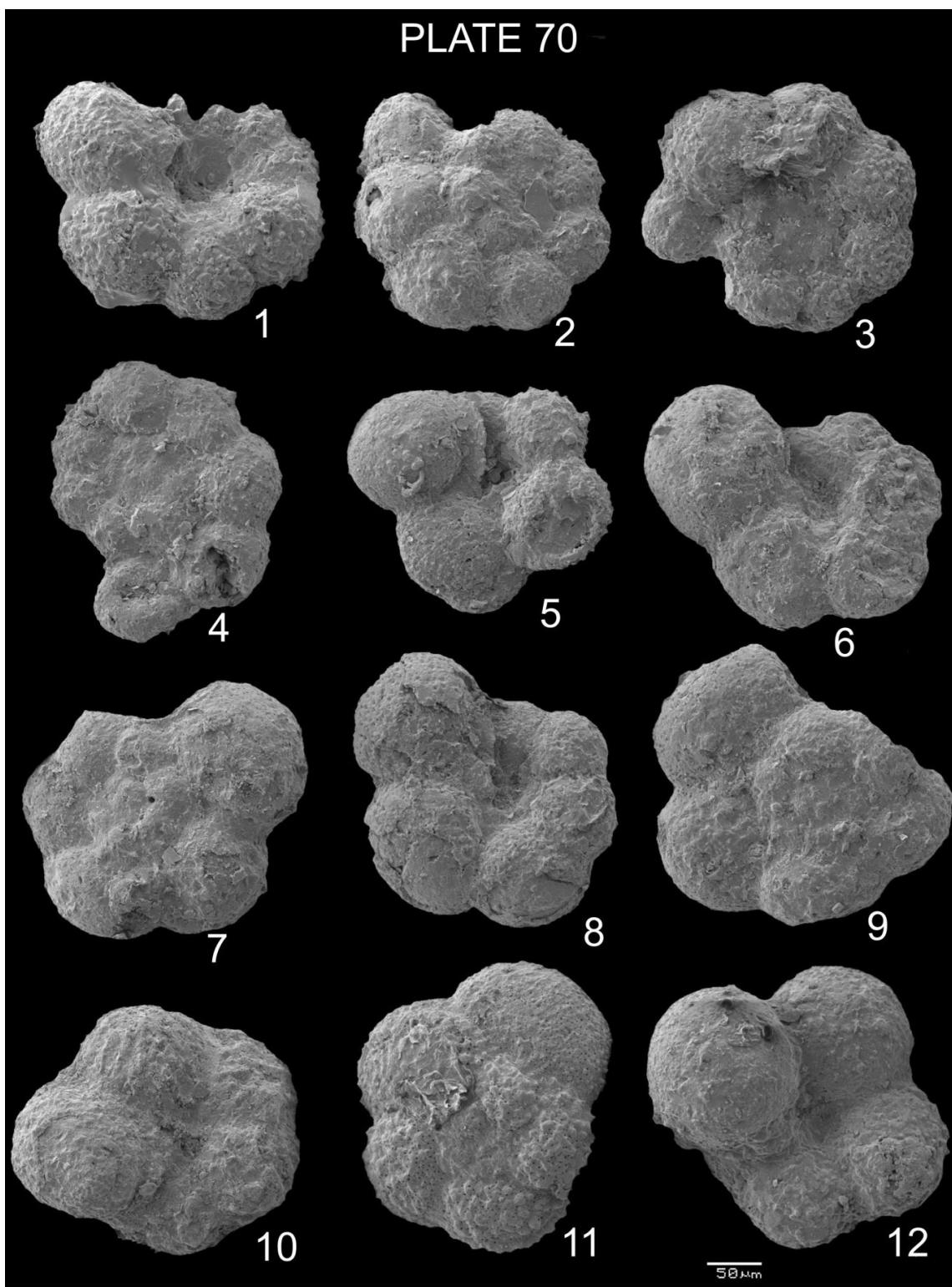
**Figs. 1, 2** *Ticinella primula* LUTERBACHER 1964, Lower Albian (L. taredefurcata zone), Călărași drillings. **Figs. 3–7** *Hedbergella trochoidea* (GANDOLFI) 1942, Middle Albian-Eohoplitan Zimnicea drilling, Putineiu core. **Figs. 9–12** *Hedbergella gautiereNSE* BRONNIMAN 1952, Middle Albian-Eohoplitan Putineiu core.



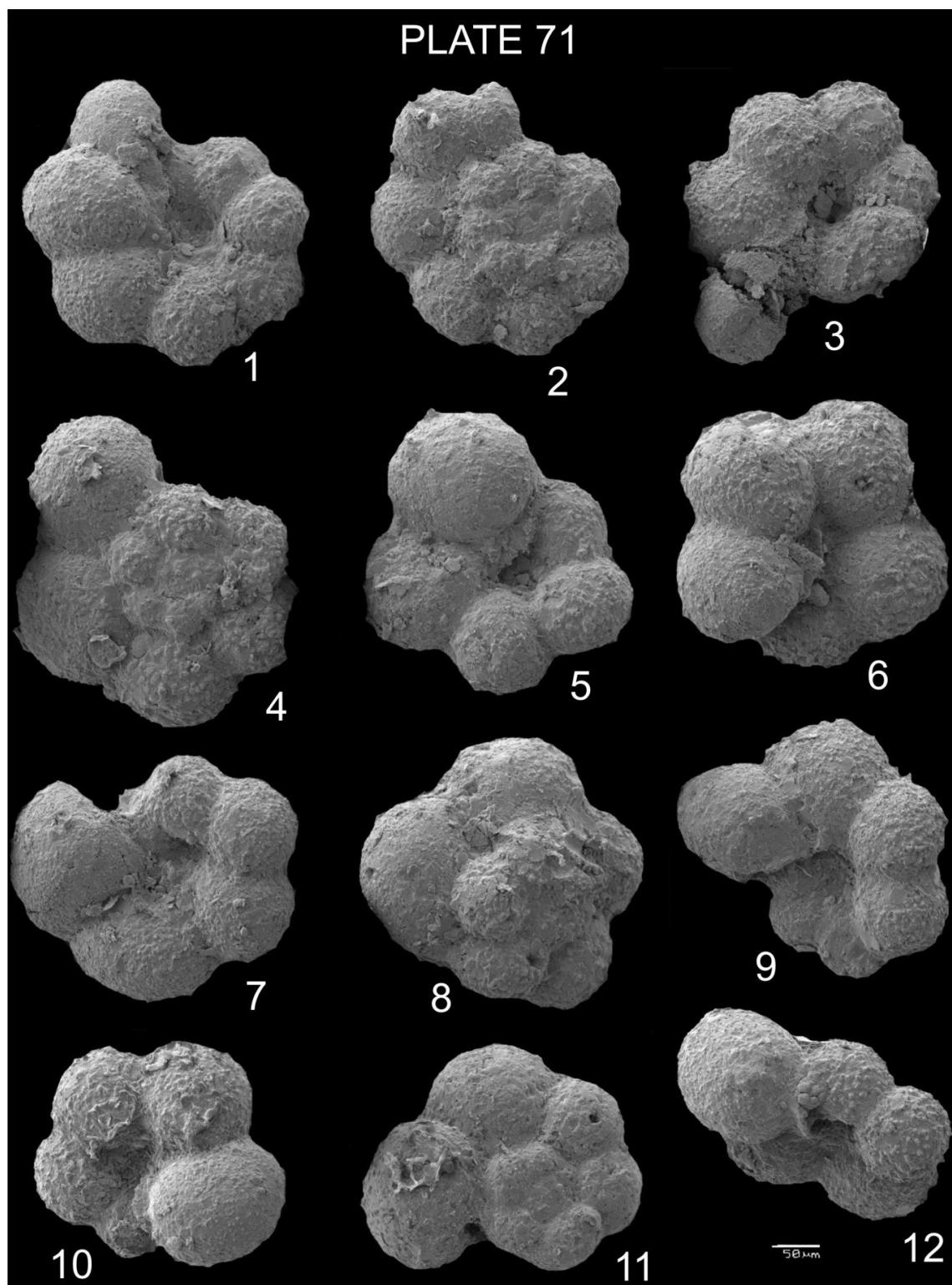
**Figs. 1–7** *Ticinella raynauldi* SIGAL 1966, Upper Albian, Buzescu core. **Figs. 8–11** *Hedbergella gautirensis* (BRONIMANN) 1952, Upper Albian, Buzescu core. **Fig. 12** *Ticinella roberti* (GANDOLFI) 1942, Upper Albian, Buzescu core.



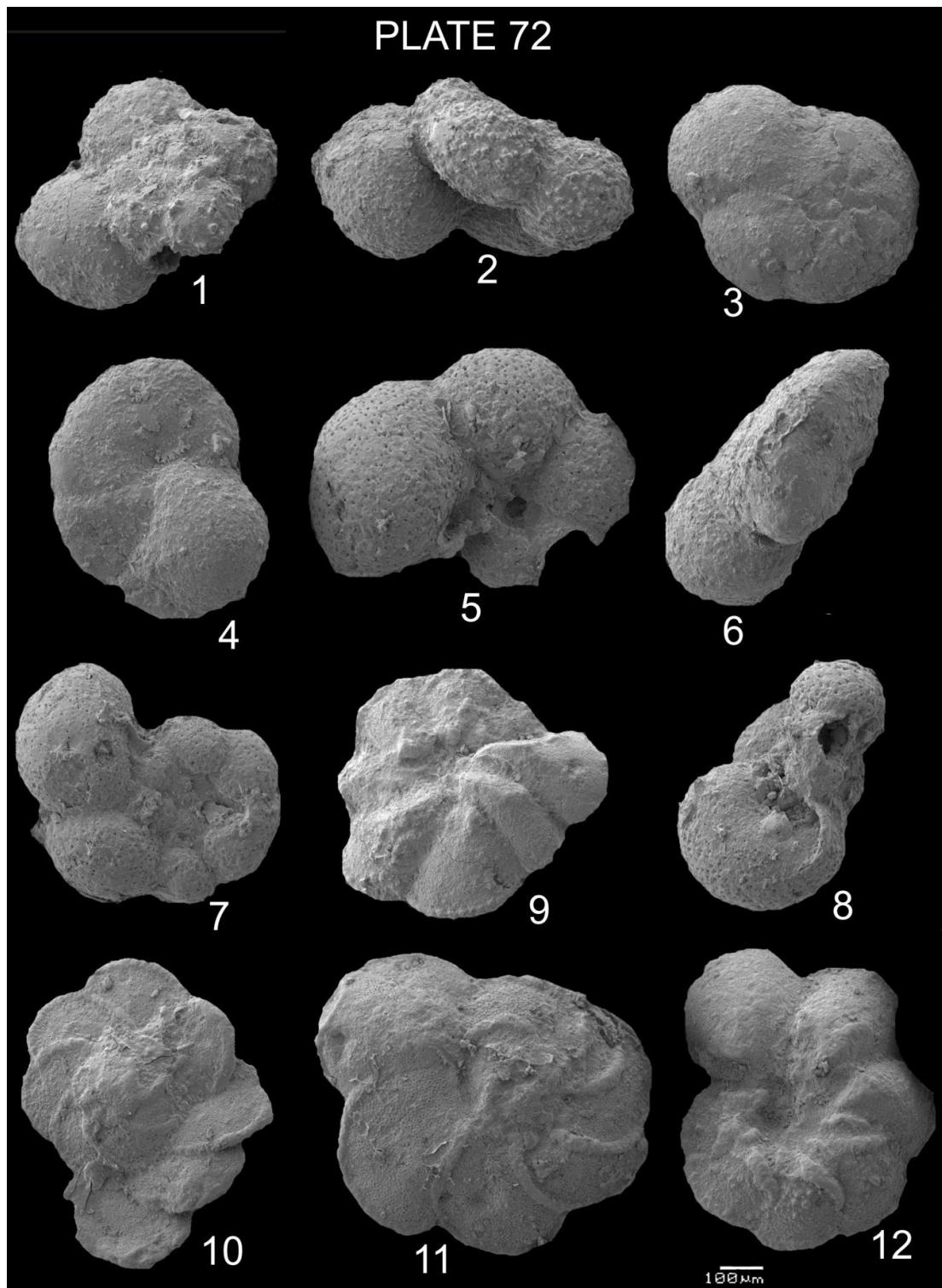
**Figs. 1–4** *Ticinella praeticinensis* SIGAL 1966, Upper Albian-Vraconian, Glogoveanu core. **Figs. 5–9** *Rotalipora balernaensis* GANDOLFI 1957, Vraconian, Glogoveanu core. **Fig. 10** *Rugohedbergella mutziui* NEAGU 2006, Vraconian, Dumbrăvița core. **Figs. 11, 12** *Hedbergella gautirensis* (BRONNIMAN) 1952, Upper Albian, Buzescu core.



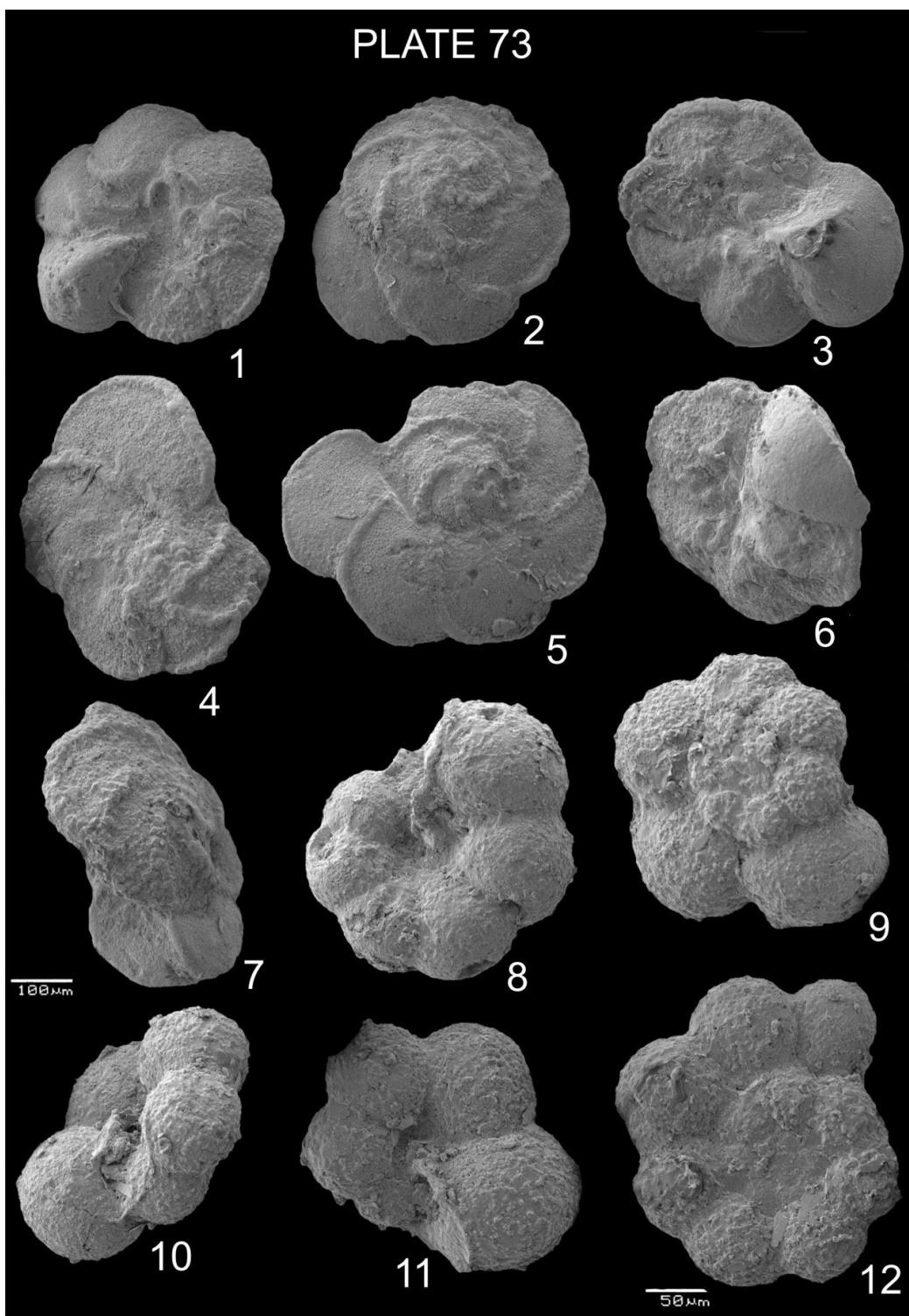
**Figs. 1–3** *Ticinella roberti* (GANDOLFI) 1942, Vraconian, Buzescu core. **Figs. 4–12** *Ticinella madecassiana* SIGAL 1966, Vraconian, 138 Copăceni core.



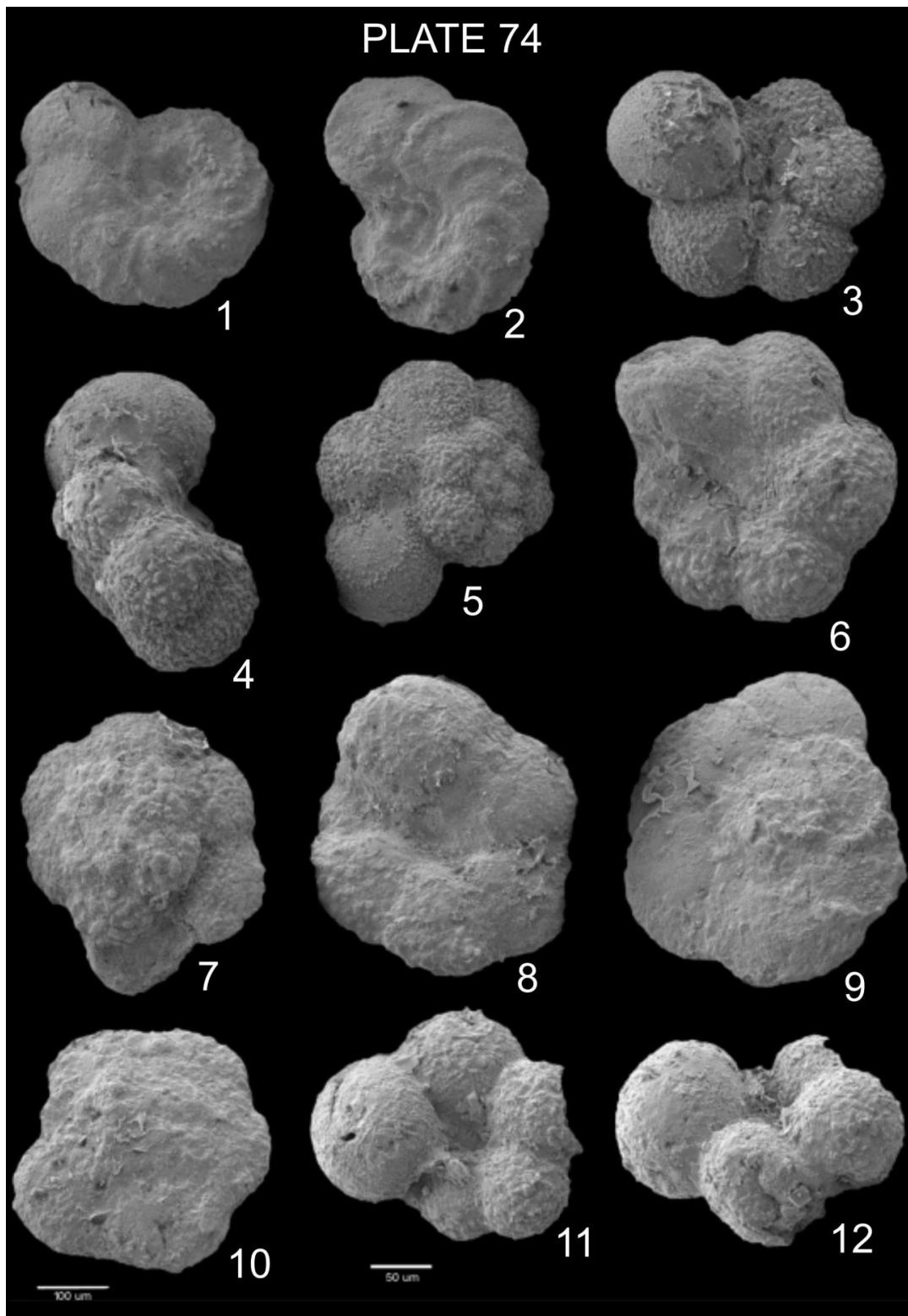
**Figs. 1, 2** *Ticinaella praeticinensis* SIGAL 1966, Vraconian, Glogoveanu core. **Figs. 3, 4** *Falsogavelinella umbilicitecta* (FUCHS) 1967, Upper Albian, Buzescu core. **Figs. 5–8** *Globigerinelloides carseyiae* BOLLI, LOEBLICH & TAPPAN 1957, Upper Albian, Buzescu core. **Figs. 9, 10** *Rotalipora moesiana* NEAGU 2006, Vraconian, Bălăria core.



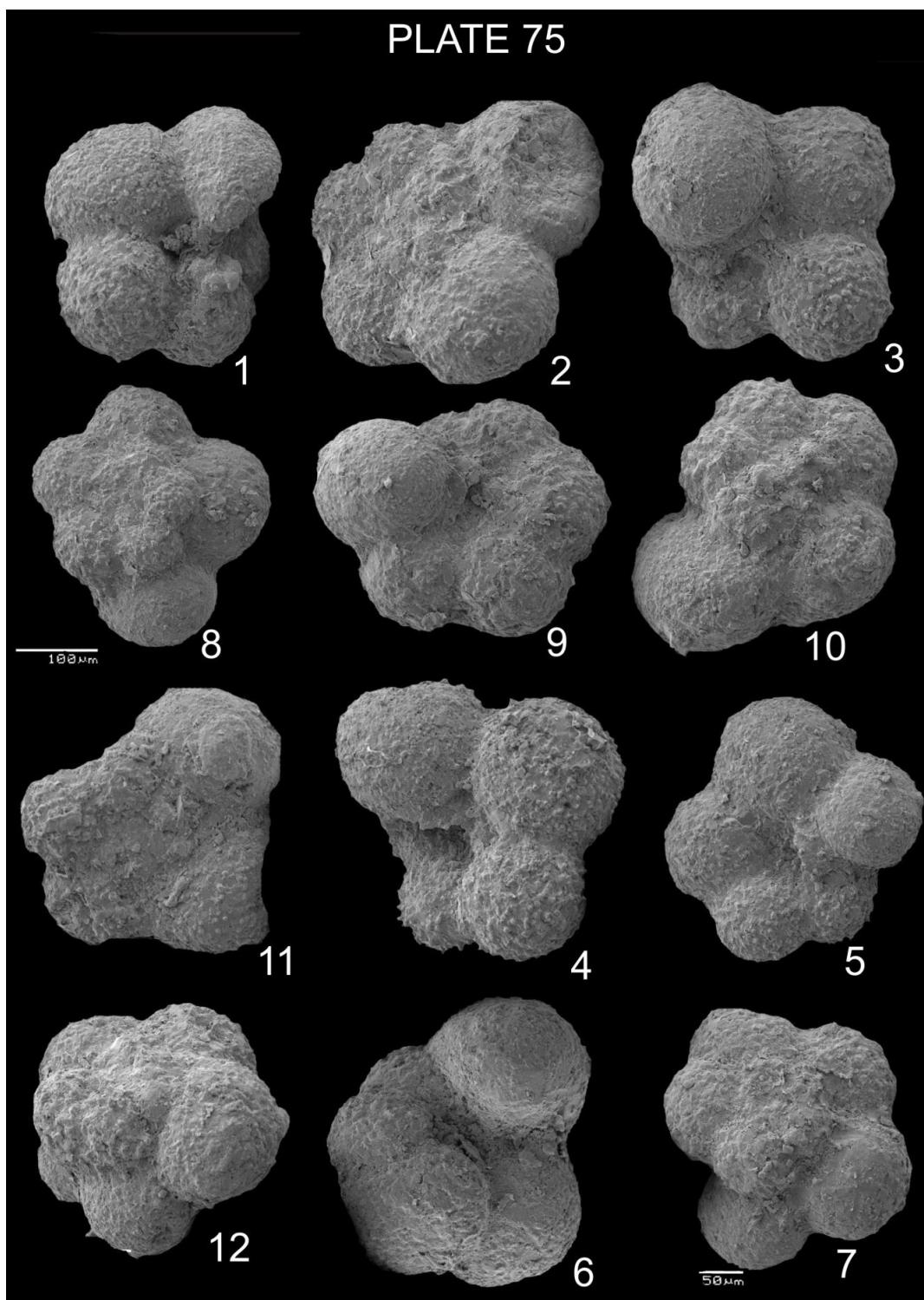
**Figs. 1, 2** *Rotalipora praebrotzeni* NEAGU 2006, Vraconian, Bălăria core. **Figs. 3–4** *Rotalipora evoluta* SIGAL 1948, Vraconian, Bălăria core. **Figs. 5–7** *Rotalipora appenninica* (RENZ) 1936, Vraconian, Bălăria, core. **Figs. 8–13** *Rotalipora ticinensis* (GANDOLFI) 1942, Vraconian, Bălăria core.



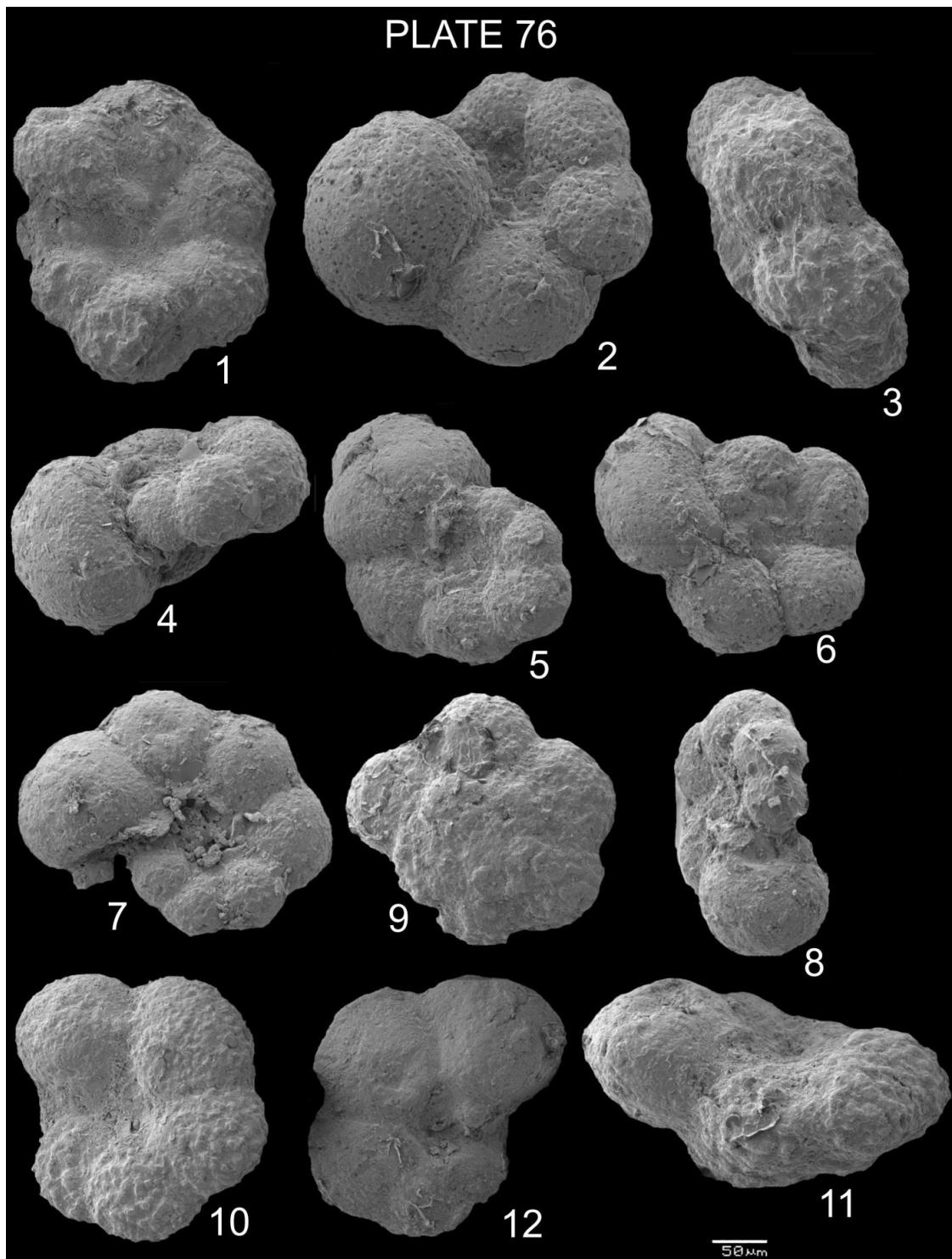
**Figs. 1–2** *Planomalina buxtorfi* (GANDOLFI) 1942, Vraconian, Glogoveanu core. **Figs. 3–5** *Ticinella roberti* (GANDOLFI) 1942, Upper Albian buzescu core. **Figs. 6–7** *Rotalipora praebalernaensis* SIGAL, 1969, Vraconian, Glogoveanu core. **Figs. 8–10** *Rotalipora subticinensis* GANDOLFI 1957, Vraconian Glogoveanu core. **Figs. 11,12** *Hedbergella gautirensis* (BRONNIMAN) 1952, Vraconian, Glogoveanu core.



Figs. 1–3, 4–7 *Ticinella praeticinensis* SIGAL 1969, Vraconian, Glogoveanu core.  
Figs. 8–12 *Rugohedbergella mutziui* NEAGU 2006, Vraconian, Glogoveanu core.



**Figs. 1–3** *Rotalipora subticinensis* GANDOLFI 1957, Vraconian Glogoveanu core. **Figs. 4–6** *Globigerinelloides carsyiae* BOLLI, LOEBLICH, TAPPAN 1957, Upper Albian Buzescu core. **Figs. 7–9** *Globigerinelloides eaglefordensis* (MOREMANN) 1927, Upper Albian, Buzescu core. **Figs. 10, 11** *Rotalipora praebalernaensis* SIGAL 1969, Upper Albian-Vraconian, Glogoveanu core. **Fig. 12** *Rotalipora evoluta* SIGAL 1948, Vraconian, Bălăria.



**Figs. 1–7.** *Ticinella raynauldi* (SIGAL, 1966), Upper Albian, Buzescu core, L.P.B.IV. Figs. 8–11. *Hedbergella gautirensis* (BRÖNNIMANN, 1952), Upper Albian, Buzescu core, L.P.B.IV. **Fig. 12.** *Ticinella roberti* (GANDOLFI, 1942), Upper Albian, Buzescu core, L.P.B.IV.

