AGGLUTINATED CONICAL FORAMINIFERA (ORBITOLINIDAE, COSKINOLINIDAE) FROM THE UPPER CRETACEOUS (CAMPANIAN) OF GREECE, WITH DESCRIPTION OF PARACOSKINOLINA KLOKOVAENSI N. SP.

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Abstract An assemblage of agglutinated conical foraminifera including Lepinoconus chiocchinii Cruz-Abad et al., Calvezeconus lavelveziae Caus & Cornella, Paleodictyoconus sp., and Paracoskinolina klokovaensis n. sp. are described from the upper lower-middle Campanian of Klokova Mountain of the Gavrovo-Tripolitza Zone, SW continental Greece. With the presence of one rafter in the marginal zone, the new species P. klokovaensis compares to the Lower Cretaceous species Paracoskinolina arcuata (Arnaud-Vanneau) that is distinguished by its cylindroconical test morphology and much larger size. The assemblage occurs in inner platform carbonates associated with other foraminifers such as dicyclinds, and Accordiella conica Farinacci. Representatives of the genus Paracoskinolina were so far only reliably reported from the Upper Berriasian–Albian interval. This new record suggests that the genus either survived the larger benthic foraminifera extinction event associated with the Cenomanian – Turonian boundary anoxic event, or may be an example of an Elvis taxon or homoplasy.

Keywords: Late Cretaceous, Larger Benthic Foraminifera, Dictyoconinae, taxonomy, biostratigraphy

INTRODUCTION

Larger agglutinated conical foraminifers (Orbitolinidae, Coskinolinae) are widespread in Lower Cretaceous shallow-water platform carbonates (e.g., Arnaud-Vanneau, 1980; Clavell et al., 2014). Records from the Upper Cretaceous (post-Cenomanian) are restricted to a distinctly reduced number of genera and species (Gendrot, 1968; Moullade and Vallard, 1973; Neumann, 1978; Bilotte, 1974; Luperto Sinni and Martin-Chivelet, 1999; Schlagintweit et al., 2016; Luger, 2018; Schlagintweit and Rashidi, 2021). In the Adriatic-Dinaric carbonate platforms, occurrences of Upper Cretaceous orbitolinids are known, where these have been described in open nomenclature (Fleury, 1970; Luperto Sinni, 1976). From the “lower Senonian” of Greece, Orbitolinid foraminifers have been described and illustrated by Fleury (1970). Referring to the locality Mount Klokova, and their description in open nomenclature, they have been grouped as “K orbitolinidés”. Fleury (1970, p. 36) noted that the observed forms could not be assigned to any known species. In fact, three different forms were described as Orbitolinidae gen. ind., Coskinolina sp., and Dictyoconus sp. This assemblage of agglutinated conical foraminifers is herein taxonomically reassessed, including a description of Paracoskinolina klokovaensis n. sp. It contributes to the still relatively poor knowledge of this group of larger benthic foraminifera from Upper Cretaceous shallow-water carbonates, and their distribution within the peri-Mediterranean realm.

GEOLOGICAL SETTING

The Gavrovo–Tripolitza Platform (Dercourt, 1964) belongs to the external Hellenides and crops out in the western part of continental Greece, the Peloponnesus, and some islands (Zambetakis-Lekkas and Alexopoulos, 2007, Fig. 1). Composed mainly of Upper Cretaceous and Eocene shallow-water carbonates, these sedimentary rocks form the mountains of Varassova and Klokova in south Akarnania, as well as the Gavrovo massif (Ori Valtou) further north, and a discontinuous chain of smaller massifs at the Peloponnesus western edge, from Skolís to Pylos-Methoni (Auboin et al., 1958; Fleury, 1970, 1980; Bernier and Fleury, 1980; Mavrikas, 1993). In a greater paleotectonic context, the Gavrovo-Tripolitza Zone represents “an Adria-derived” (Nírta et al., 2020) or “South Adriatic” unit (Zelic et al., 2010), so that the successions and their fossil biota can be compared with Apulia, and the “Senonian” occurrences of orbitolinids there (Luperto Sinni, 1976). The material studied herein comes from Klokova Mountain in Akarnania, a region of west-central Greece. The locality has been studied in detail by Fleury (1970), distinguishing eight lithologic units. Orbitolinid foraminifers have been observed in the lower-middle part (~60 m vertical range in Klokova section) (Fleury, 1970, Fig. 1) (Fig. 2). The orbitolinid assemblage occurs in biomicritic (occasional fenestral) limestones, indicating inner platform facies. Accompanying benthic foraminifers include Accordiella conica Farinacci, dicyclinds and Senalveolina aubouini Fleury (Fig. 3). The succession studied by Fleury (1970, p. 93, figs. 28-29, 1980) is exposed on the southern side of Klokova Mountain along the road between Nafpaktos and Messolonghi. It is also the type-locality of Senalveolina aubouini (Fleury, 1984). The levels with “Orbitolinidés K”

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83
showing the location of Klokova

tions containing the illustra
ted specification of the Gulf of Corinth facing
ichotic side of Klokova

The classification follows Kaminski (2014).

Zagreb, Croatia

in the Croatian Geological Survey and their repository is
illustrated from Brač Island, Croatia, are
numbers 2

Fig. 1 Geographic sketch map showing the location of Klokova
mountains on the opposite side of the Gulf of Corinth facing
Patra. This is the type-locality of Paracoskinolina klokovaensis
n. sp.

(for Klokova) have been placed into the upper Santonian-
Lower Campanian by Fleury (1980, fig. 8, p. 44). Based
on Orbitolinid and other larger benthic foraminifera, they
can be assigned to the uppermost lower-middle Campanian
(subchapter Biostratigraphy following the sys-
tematic descriptions for details).

MATERIAL AND DEPOSITORY

The four thin sections containing the illustrated speci-
mens from Klokova Mountain (material from Fleury,
1970, 1980) are hosted by the Paleontology Museum,
Department of Geology of Babeș-Bolyai University,
Cluj-Napoca, Romania, under the official depository
numbers 24307 to 24310 (Table 1). The two specimens
illustrated from Brač Island, Croatia, are the property
of the Croatian Geological Survey and their repository is
currently in the Geological-Paleontological Department
of the Croatian Natural History Museum, Demetrova 1,
Zagreb, Croatia.

SYSTEMATIC MICROPALEONTOLOGY

The classification follows Kaminski (2014).

Phylum Foraminifera d’Orbigny, 1826

Class Globothalamea Pawlowski et al., 2013
Order Loftusiida Kaminski & Mikhalevich, 2004
Suborder Orbitolinina Kaminski, 2004
Superfamily Coskinolinioidea Moullade, 1965
Family Coskinolinidae Moullade, 1965

Remarks: While the family Coskinolinidae is placed in
the order Loftusiida by Kaminski (2014), it is included in
the order Textulariina by Cruz-Abad et al. (2017).
Genus Lepinoconus Cruz-Abad, Consorti & Caus, 2017
Lepinoconus chiocchini Cruz-Abad, Consorti & Caus,
2017
Fig. 4a, d, g, j

1970 Coskinolina sp. – Fleury, p. 36, pl.1, figs. 5-7.
1976 Urgonina sp. – Luperto Sinni, p. 312, pl. 37, figs. 1-
6.
1976 Paracoskinolina sp. – p. 313, Luperto Sinni, pl. 38,
figs. 1-3.
1976 Abradia mosae (Hofker) – p. 316, Luperto Sinni, pl.
41, figs. 1-12.
1993 Orbitolinidés K – Mavrikas, pl. 1, fig. 10.
*2017 Lepinoconus chiocchini gen. et sp. nov. – Cruz-
Abad et al., p. 348-350, pls. 1-2 (with synonymy)

Table 1. Sample numbers

| Inventory number | Field Number   | Collection          |
|------------------|---------------|---------------------|
| 24307            | 273-GKL39-3357| Bucur & Schlagintweit |
| 24308            | 276-GKL43X-3845| Bucur & Schlagintweit |
| 24309            | 276-GKL43-511 | Bucur & Schlagintweit |
| 24310            | 276-GKL43-1780| Bucur & Schlagintweit |

Remarks: For a detailed description of this monospecific
genus see Cruz-Abad et al. (2017). The thick wall (with
pseudo-keriotheca) and the aligned pillars are clearly
discernible in the Greek specimens (Fig. 4A, D, J). The
broken transverse section shown in Fig. 4D has a diame-
ter of ~1.1 mm, slightly larger as the maximum test di-

Apart from the occurrences in Greece, Italy, and ?Albania
(see synonymy in Cruz-Abad et al., 2017), a further oc-
currence can be added from Brač Island, Croatia, also in
association with Calveziconus lecalvezae and Paracos-

icosa klokovaensis and at an equivalent stratigraphic
position (Gušić and Jelaska, 1990; Cvetko-Tešović et al.,
2001).

Superfamily Orbitolinioidea Martin, 1890
Family Orbitolinidae Martin, 1890
Subfamily Dictyoconinae Schubert, 1912

Remarks: Schubert (1912, p. 207) introduced the name
Dictyoconinae for a “group” (Gruppe) of agglutinated
foraminifers comprising the five genera: Lituonella
Agglutinated conical foraminifera (orbitolinidae, coskinolinidae) from the Upper Cretaceous (Campanian) of Greece

Fig. 2 Upper Cretaceous successions of Klokova Mountain, SW Greece (see Fleury, 1970, fig. 1, for details) with the distribution of some benthic foraminifers (A-B: Senalveolina aubouini Fleury, sample GKL 43; C-D Accordiella conica Farinacci, sample GKL 43x, without scale). Note: the lower/middle Campanian boundary is approximately placed at the LAD of K. tergestina (Frijia et al., 2015, fig. 15). For microfacies of sample GKL 39 see Figure 3.

Genus *Paleodictyoconus* Moullade, 1965

*Paleodictyoconus* cf. *senonicus* Moullade & Viallard, 1973

Figs. 3 pars, 4b-c, e-f

1970 *Dictyococcus* sp. – Fleury, pl. 1, 1?, 4.  
*1973 Paleodictyoconus senonicus* n. sp. – Moullade and Viallard, p. 338-340, pls. 1-3.  
?1976 *Paleodictyoconus* sp. – Luperto Sinni, p. 315-316, pl. 39, figs. 1-6, pl. 40, figs. 1-4.  
1985 *Paleodictyoconus senonicus* Moullade & Viallard – Bilotte, p. 358, pl. 16, figs. 1-5.
Remarks: Although Moullade and Viallard (1973, p. 340, footnote) noted similarities of the specimens illustrated by Fleury (1970) as Dictyoconus sp. with Paleodictyoconus senonicus, they refrained from a concluding assessment because the Greece material lacks axial sections showing the pronounced initial spire, a circumstance also accounting for some reservations expressed herein (cf.). P. cf. senonicus has been observed in association with P. klokovaensis in the same samples (Fig. 3). The dimensions of P. senonicus are larger (height up to 1.5 mm, diameter up to 1.15 mm), there are 1 to 2 rafters (according to Moullade and Viallard, 1973), the test diameter is not increasing continuously from apex to base as in P. klokovaensis, but may decrease later resulting in a bell-shaped outline in axial sections (e.g. Moullade and Viallard, 1973, pl. 1, figs. 1, 5, 8). The pillars of P. senonicus, with a tendency to anastomization, are alternating between subsequent chambers (Fig. 4C, F). Last but not least, there are 8-9 chambers per last 0.5 mm axial length, meaning that the chamber height of P. cf. senonicus is reduced compared to P. klokovaensis.

Remarks: Bilotte (1985) reported P. senonicus from the lower Campanian of the French Pyrenees. For the orbitolinid occurrences in southern Italy, the exact stratigraphic position is still uncertain (Luperto Sinni, 1976, p. 303, “restano...datati con molta precision”). At the type locality, P. senonicus occurs in levels with Lacazina elongata Munier-Chalmas & Schlumberger below and above. This species is reported from the upper Santonian–lower Campanian (Gräfe, 2005, fig. 4).

Genus Calveziconus Caus & Cornella, 1982
Calveziconus lecalvezae Caus & Cornella, 1982
Fig. 4h-k
Aglutinated conical foraminifera (orbitolinidae, coskinolinidae) from the Upper Cretaceous (Campanian) of Greece

2012 *Calveziconus lecalvezae* Caus and Cornellà – Sokač et al., pl. 19, figs. 7-10.

2013 *Calveziconus lecalvezae* Caus and Cornellà – Molina et al., fig. 8.6 and fig. 8.8 pars.

2015 *Calveziconus cf. lecalvezae* Caus and Cornellà – Frija et al., fig. 8L.

2016 *Calveziconus cf. lecalvezae* Caus and Cornellà – Moro et al., fig. 5c, f, o, p, t, and u.

2019 *Calveziconus lecalvezae* Caus and Cornellà – Villalonga et al., p. 20, pl. 1, figs. 1-6, pl. 2, figs. 1-11.

2020 *Calveziconus lecalvezae* Caus and Cornellà – Sha et al., fig. 9d, f, ?g.

**Remarks:** Rare sections, not allowing a detailed description have been observed in the orbitolinid assemblage of Klokova Mountain. The species has a wide palaeogeographic distribution from Spain, Slovenia, Croatia, Greece, to India (see synonymy). In the original description, *Calveziconus* has been compared with the genera *Orbitolinopsis* Henson, *Neorbitolinopsis* Schroeder, and *Abrardia* Neumann & Damotte. Instead, striking structural matches with the Lower Aptian *Iraulia* Henson can be stated. These comprise the medium-high conical test, a simple, slightly eccentric embryo, a marginal zone with several beams and one rafter, and a reticulate central zone. From the Maastrichtian Simsima Formation of Greece.
Qatar, Whittaker et al. (1998) reported “Calveziconus” sp. nov. showing a complex marginal zone (with up to four orders of rafters, pl. 42, fig. 3 therein) and pillars in the central zone (pl. 42, figs. 4-5 therein); this form is different from Calveziconus Caus & Cornell. More sections are needed for a better characterization of the Middle East form.

Genus Dictyoconella Henson, 1948

Type species: Dictyoconella complanata Henson, 1948

Fig. 5 Paracoskinolina klokovaensis n. sp., from the late early-middle Campanian of Mount Klokova, SW Greece (a-f, h-j) and Brač Island, Croatia (g). a Axial section. b-c, f-g Subaxial sections. d Oblique transverse section. h Oblique section. i Tangential section. j Axial section, holotype specimen. Abbreviations: b = beam, f = foramen, ib = intercalary beam, pi = pillar, r = rafter. Thin sections: a GKL 39 (1754) (from Fleury, 1970, pl. 1, fig. 2), b-j GKL 39 (3357).

*1948 Dictyoconella complanata n. gen., n. sp. – Henson, p. 25, plate 6, figs. 2-3, 16, pl. 10, fig. 14.
1998 Dictyoconella complanata Henson – Whittaker et al., pl. 47, figs. 4-6.
2021 Dictyoconella complanata Henson – Schlagintweit and Rashidi, p. 7, figs. 2a-b pars. 3-4 (with synonymy).
Remarks: A single specimen (~4 mm in diameter) in a slightly oblique section parallel to the plane of test compression. *D. complanata* has so far been reported from Maastrichtian strata; the occurrence in the Campanian of Greece extends its stratigraphic record and also the previously assumed palaeogeographic restriction to the Arabian Plate (see Schlagintweit and Rashidi, 2021).

Subfamily Dictyorbitolininae Schroeder in Schroeder et al., 1990
Genus *Paracoskinolina* Moullade, 1965
**Type species:** *Coskinolina sungilindensis* Maync, 1950
*Paracoskinolina klokovaensis* n. sp.
Figs. 3 pars, 5a-j, 6a

1970 *Dictyoconus* sp. – Fleury, p. 37, pl. 1, figs. 2-3.

**Origin of the name:** Referring to the type-locality of the new species: Mount Klokova in western Greece.

**Holotype:** Subaxial section shown in Fig. 5a.

**Paratypes:** Specimens illustrated in Fig. 5b-j.

**Horizon and locality:** Late early-middle Campanian of Mount Klokova, SW Greece.

**Description:** Medium- to high-conical test displaying smooth surface and plane to slightly convex base. The test height may slightly exceed the diameter, often the latter accounts for about 2/3 of the former. A small initial spire is barely visible (Fig. 5a, i); the embryo has not been observed. Each adult rectilinear chamber (up to 16 in adult specimens) is subdivided into a marginal and central zone. The exoskeleton of the marginal zone consists of one horizontal partition (rater) (e.g. Fig. 5b) and 1 to 2 intercalary beams between the vertical main partitions (beams). The latter are straight and slightly but continuously widening inwards and exceed the length of the intercalary beams distinctly (about 4 times). The pillars of the central zone are aligned between subsequent chambers as visible in axial sections (Fig. 5b). In oblique section, they appear slightly offset against each other (Fig. 5e). The pillars are widened at the base and top and may have a string-of-pearls appearance (Fig. 5a). There are ~5 pillars in axial section for a test diameter of 0.5 mm. The foramina of the central zone are, like the pillars, aligned; the outermost foramina (towards the marginal zone) are arranged in a circle (Fig. 5d, left side). The wall is finely agglutinated.

**Dimensions (in mm):**
- Test diameter: 0.85-1.1 mm
- Test height: 0.75-1.2 mm
- Number of chambers per last 0.5 mm cone axis: 6-7
- Apical angle: ~28 to 55 degrees

**Remarks:** From the upper Albian-Cenomanian shallow-water carbonates of the Argolis Peninsula of Greece, Decrouez and Moullade (1974) described four new Orbitolinidae, which amongst them *Paracoskinolina fleuryi*. This taxon does not possess aligned pillars, instead alternating main partitions, and is therefore excluded from the genus *Paracoskinolina* Moullade (see emended genus diagnosis of Arnaud-Vanneau, 1980). Although nothing is known about the embryo and the internal structure displayed in transverse sections, this taxon lacks horizontal partitions and has been tentatively transferred to *Cribellopis* Arnaud-Vanneau by Yazdi-Moghadam and Schlagintweit (2021). The form described as *Dictyoconus walnutensis* (Carey) subspecies *pyrenaicus* by Moullade and Peybernès (1975) from the lower-middle Albian of northern Spain is similar to the Campanian species from Greece to some extent (e.g. dimensions, one rater). Schroeder (1985) clarified that this Spanish taxon does not belong to *Dictyoconus* Blanchenkon horn because of the aligned pillars in the former. In addition, Schroeder (1985, p. 46) concluded that “*Dictyoconus*” *pyrenaicus* should be transferred to *Paracoskinolina* or an allied form due to the aligned pillars and foramina. In fact, the transverse section provided by Moullade and Peybernès (1975, pl. 1, fig. 1) nicely shows the concentric arrangement of the foramina, a diagnostic feature of the Dictyorbitolininae sensu Schroeder et al. (1990). Some morphological differences, such as a more inflated test and differing apical angle (50-70 degrees, acc. to Schroeder, 1985), of *Paracoskinolina pyrenaicus* (Moullade and Peybernès) comb. nov. are worth mentioning.

**Comparisons:** The new species has been described and illustrated by Fleury (1970) as *Dictyoconus* sp. Contrasting with *Paracoskinolina* Moullade, *Dictyoconus* Blanchenkon horn has pillars in the central zone that alternate in position between subsequent chambers (e.g., Davies, 1930, 1939; Arnaud-Vanneau, 1980; Loeblich and Tappan, 1987). Having a single rater in the chamber marginal zone, *P. klokovaensis* can be compared with *P. arcuata* Arnaud-Vanneau, 1976 and *P. reicheli* (Guillaume, 1956) (Fig. 6). *P. arcuata* is morphologically different with its cylindro-conical test also displaying larger dimensions (e.g., height > 3 mm) (Arnaud-Vanneau, 1976, 1980). *P. reicheli* (Guillaume) is slightly larger as *P. klokovaensis* and with up to four intercalary beams (e.g. Guillaume, 1956, pl. 1, fig. 6), its marginal zone is more complex. The other species, *P. maynci* (Chevalier, 1961), *P. sungilindensis* (Maync, 1950), and *P. coogani* Scott, 2002 lack rafters in the marginal zone. Note that many other “*Paracoskinolina*” have already been taxonomically revised or are still in need of revision (e.g., Cherchi and Schroeder, 1982; Schlagintweit, 2020; Yazdi-Moghadam, 2021). These include those described before the taxonomic clarification of the genus provided by Arnaud-Vanneau (1980).

**Biosтратigraphy:** The levels with “Orbitolinidés K” (for Klokova) have been placed into the upper Santonian-Lower Campanian (Fleury, 1980, fig. 8, p. 44). Fleury (1980) respectively established a zone “Cs B 5 à “Orbitolinidés K” et Montcharmontia apenninica s.s.” In some sections, these orbitolinids appear some metres above the
Fig. 6 Comparison of *Paracoskinolina* species with one horizontal partition in the marginal zone: a *P. klokovaensis* sp. nov., b *P. reicheli* Guillaum., 1956. c *P. arcuata* (Arnaud-Vanneau 1976). D = test diameter, H = test height, n = number of chambers per last 0.5 mm axial length, h = chamber height (all data except D/H in mm). * measured from original illustrations. Stratigraphy of the two Lower Cretaceous species according to Clavel et al. (2014).

Fig. 7 Central Mediterranean area (modified from Google Earth) with occurrences of Campanian Orbitolinidae-Coskinolinidae. 1: Zambetakis-Lekkas and Alexopoulos (2007) 2: Fleury (1970, 1980, this work) 3: Mount Biokovo (Sokač et al., 2012) 4: Brač Island (Gušić and Jelaska, 1990; Cvetko-Tesović et al., 2001) 5-7: Moro et al. (2016) 8: Luperto-Sinni (1976) 9: Frijia et al. (2015) 10: Cruz-Abad et al. (2017).
LAD of *Murgella lata* Luperto Sinni and *Keramosphaera tergestina* (Stache) (Fleury, 1980, figs. 18 and 30) while in others (including the material studied herein) *M. lata* and the first Orbitolinids display overlapping ranges (op. cit., Fig. 25). *Lepinoconus chiocehinni* was reported within a rather short interval at its type-locality in southern Italy, “bracketed between the *K. tergestina* level… and the upper limit of the *S. mediterranea* subzone”, that is lower Campanian. With this data, the Orbitolinid levels of Klokova Mountain can be assigned to the uppermost lower-middle Campanian (see Fig. 15 in Frijia et al., 2015: SIS data; Cruz-Abad et al., 2017; Villalonga et al., 2019).

**DISCUSSION**

The genus *Paracoskinolina* was so far recorded from the upper Berriasian (Bucur et al., 2020) to the middle-upper Albian interval (Maync, 1955; Scott, 2002). The occurrence of an individual species in the Upper Cretaceous was already reported for the genera *Falsurgonina* Arnaud-Vanneau, 1980 (*F. para* Luperto Sinni & Martin-Chivelet), *Orbitolinopsis* Henson, 1948 (*O. senonicus* Gendrot, 1968), and *Paleodictyoconus* Moullade, 1965 (*P. senonicus* Moullade & Viallard, 1973). As already noted previously, also *Calveziconus* Caus & Cornella, 1982 might belong to this group, showing striking similarities with the lower Aptian *Iraqia* Henson. Concerning *Orbitolinopsis senonicus*, Gendrot (1968, p. 680) noted the presence of a pseudo-keriothecal wall structure *sensu* Douglass (1960) visible only in extreme thin sections. Poorly discernible in the detailed view provided by Gendrot (1968, pl. 6, fig. 6), such a feature has so far not been described from any other species of the genus (e.g., Arnaud-Vanneau, 1980). The four species appear several million years after the larger benthic foraminifera extinction event associated with the Cenomanian – Turonian boundary anoxic/eutrophication event (e.g., Parente et al., 2008). This phenomenon of “reappearance” after longer gaps (or “ghost ranges”; Wills, 2007) may be related to morphological convergence (homeomorphism) (see also Elvis taxa; Fara, 2001) or iterative evolution reflecting common functional constraints. The repeated evolution of peculiar shell morphologies (e.g., digitate) for example are known from planktonic foraminifera during the Cretaceous and Cenozoic (Coxall et al., 2007). Iterative evolution as the main mode of morphological variation in Mesozoic imperforate larger benthic foraminifers has been recently discussed by Septfontaine (2020). This phenomenon appears to be present also in the long-lasting and complex history of the Orbitolinidae stretching from the upper Berriasian to the Paleogene (lower Oligocene) including two main-mass extinctions (Ce/T and K/T). The functional significance of individual test morphologies and structures in the Orbitolinidae (e.g., Hottinger and Drobone, 1980) is poorly constrained and needs further studies.

The distribution pattern of the conical agglutinated taxa reported from the Upper Cretaceous of Greece herein within the Central Mediterranean realm is shown in figure 7. The occurrence of comparable assemblages seems to be characteristic for distinct levels in the lower-middle Campanian of the Adriatic-Dinaridic Carbonate Platform (Italy, Slovenia, Bosnia, Croatia, Greece).

**CONCLUSIONS**

The taxonomic assessment of the conical agglutinated foraminifera (*Coskinolinae*, *Orbitolinidae*) from the Gavrovo–Tripolitza Platform of the external Hellenides (Greece), first described by Fleury (1970) demonstrates that the following taxa are present: *Lepinococcus chiocehinni* Cruz-Abad, Consorti & Caus, *Paleodictyoconus* cf. *senonicus* Moullade & Viallard, *Calveziconus* lecalveae Caus & Cornella, *Dictyoconella complanata* Henson, and *Paracoskinolina klokovaensis* n. sp. The age of this assemblage can be revised to the uppermost lower-middle Campanian. *Paracoskinolina klokovaensis* represents the first record of the genus *Paracoskinolina* Arnaud-Vanneau in the Upper Cretaceous, thus representing either a survivor of the Cenomanian-Turonian boundary extinction or the reappearance of a peculiar morphological trait. Displaying a comparably complex exoskeleton (one rafter and several orders of intercalary beams), *P. klokovaensis* can be considered a rather advanced (or complex) representative of the genus. The occurrence of comparable assemblages of agglutinated conical larger benthic foraminifers seems to be characteristic for distinct levels in the lower-middle Campanian of the Adriatic-Dinaridic Carbonate Platform (Italy, Slovenia, Bosnia, Croatia, Greece).

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