



Paratethys. Previously, this interval has been incorporated to the Pontian stage, but according to the new data we suggest the Meotian age for it.

The underlying deposits (less than 200 m thick) are represented by silts and clays that contain rare Elphidium species, as well as many foraminifers and ostracods reworked from the Senonian chalk. We attribute this interval to the Sarmatian stage.

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THE ALBIAN TO CONIACIAN MACROFAUNAL DISTRIBUTION IN NORTHERN AND SOUTHERN DOBROGEA (SE ROMANIA) REVISITED. PRELIMINARY RESULTS

Jaume GALLEMÍ¹, Iuliana LAZĂR², Gregori LÓPEZ¹ & Ricard MARTÍNEZ³

¹ Museu de Geologia de Barcelona-MCNB, Parc de la Ciutadella s/n, 08003 Barcelona, Spain,
jaume.gallemi@uab.cat, gregori.lopez@uab.cat

² University of Bucharest, Faculty of Geology and Geophysics, Department of Geology and Paleontology, 1, N. Balcescu Ave., Bucharest, RO – 010041 Romania, iuliana.lazar@g.unibuc.ro

³ Departament de Geologia, Facultat de Ciències, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain,
e-mail: ricard.martinez@uab.cat

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Introduction

Previous taxonomic and biostratigraphic studies dealing with Cretaceous macrofaunas of both South Dobrogea (Moesian Platform) and North Dobrogea (Babadag Syncline) have been the starting point for our research (Chiriac, 1956, 1981; Szasz, 1985; Szasz & Ion, 1988; Ion & Szasz, 1994; Dragastan et al., 1998; Ion et al., 2004). Fieldwork developed in 2008, 2009 and 2010. Only preliminary (and provisional) data on ammonoids, inoceramids, echinoids, rudists and chondrichthyans are presented herein. This project includes the revision of former collections of these groups collected in Dobrogea (including type and figured inoceramids studied by Szasz in 1985) and housed in the Department of Geology and Palaeontology at the University of Bucharest.

Albian to Coniacian of the Moesian Platform

Studied localities can be geographically grouped around Ostrov (Bugeac Lake W and N) and Medgidia (Peștera Quarry, La Porcărie, Amzalia Hills, Remus Opreanu, Gara and Cazemate). Lithostratigraphic formations (after Avram et al., 1988) involved are, at least, Glogoveanu Fm., Peștera Fm., Cuza Vodă Fm. and Murfatlar Fm.; our sections may have also interested the Satu Nou Fm. The recognized species at each locality follow. Inoceramid zonal index species are identified with the acronym [IZ].

Bugeac Lake W. Inoceramids *Actinoceramus concentricus* (Parkinson, 1819), *Inoceramus anglicus* (Woods, 1911) and *Actinoceramus* cf. *gryphoides* (Goldfuss, 1864) have been identified here, dating these levels as late Albian.



Bugeac Lake N. A lowermost Turonian age is supported by the inoceramids *Mytiloides kossmati* (Heinz, 1930) [IZ] and *Mytiloides mytiloides* (Mantell, 1822).

Peștera Quarry. Echinoids as *Conulus subrotundus* Mantell, 1822 and *Discooides minimus* (Desor, 1842) are common and would indicate a Middle or Upper Turonian age. Shark teeth as *Scapanorhynchus* sp., *Paranomotodon* sp., *Squalicorax* sp., *Cretoxyrhina?* sp. and *Ptychodus* aff. *mammillaris* Agassiz, 1835 are abundant and point to the same age, although the last species has been also identified in the early Coniacian of Texas. A fragment of a big Radiolitidae was also collected here. Towards the top of this section, *Cremnoceramus deformis erectus* (Meek, 1877) [IZ], indicating the lowermost Coniacian, has been identified.

La Porcărie (Peștera). *Conulus subrotundus* Mantell, 1822, *Discooides minimus* (Desor, 1842) and terebratulids are common near the base, in a microconglomeratic layer containing phosphatic pebbles that has also provided *Protocardia cotteauanus* (d'Orbigny, 1855). Up in the section, *Inoceramus* cf. *apicalis* (Woods, 1912) [IZ] indicating the lower Middle Turonian and the upper Middle Turonian *Inoceramus* cf. *cuvieri* [IZ] occur.

Amzalia Hill. In the basal part of this locality, *Mytiloides scupini* (Heinz, 1930) [IZ] and *Mytiloides herbichi* (Atabekian, 1969) indicate the middle part of the upper Turonian and occur together with *Epiaster* echinoid species and belemnites. In the middle part of the section, a well developed level of microconglomerate with phosphatic nodules is found. Such nodules include not only pebbles but also gastropods, bivalves, solitary corals (*Micrabacia*-like) and, specially, ammonoids: *Beudanticeras* sp., *Puzosia subplanulata* (Schlüter, 1871), *Anahoplites planus* (Mantell, 1822), *Discohoplites transitorius* Spath, 1930, *Stoliczkaia (S.) clavigera* (Neumayr, 1875), *Mortoniceras (Durnovarites) subquadratum* (Spath, 1931), *M. (D.) postinflatum* Spath, 1930, *Anisoceras perarmatum* Pictet & Campiche 1861, *Ostlingoceras puzosianum* (d'Orbigny, 1842), *O. sublaevigatum* Wiedmann & Dieni 1968, and *Mariella (M.)* sp. This association fits well in the Upper Albian *Stoliczkaia (S.) dispar* zone and its position in the section clearly points to its transport and resedimentation. Over this level, *Conulus subrotundus* and *Camerogalerus minimus* occur, followed by *Cremnoceramus waltersdorfensis waltersdorfensis* (Andert, 1911) [IZ] (uppermost Turonian) and *Micraster* sp.

Remus Opreanu. Specimens of *Mantelliceras saxbii* (Sharpe, 1857) indicating the Lower Cenomanian together with poorly preserved *Inoceramus* cf. *crippsi* Mantell, 1892 have been identified; over them, the upper Middle Turonian *Inoceramus cuvieri* [IZ] and *Micraster* sp. occur.

Cazemate. The base is similar to that of Amzalia Hill and contains *Epiaster* sp. and belemnites.

Turonian-Coniacian of the Babadag Syncline

Localities include Jurilovca, Slava Rusă (Coșarul Mic Quarry), Visterna and Baia (Baia North Quarry and Bal Bair Hill). All of them are representatives of the Dolojman Formation members: the basal Harada Mb., the partially overlying Caugagia Mb., and the topmost Jurilovca Mb. (*sensu* Ion&Szasz, 1994).

Jurilovca. Few *Mytiloides hattini* Elder, 1991 [IZ] occur at the base while *Mytiloides kossmati* (Heinz, 1930) [IZ], *Mytiloides* cf. *kossmati* (Heinz, 1930) and *Mytiloides mytiloides* (Mantell, 1822) have been identified in the middle part of the section, all indicating the lowermost Turonian. Topmost part of the section has yielded the upper Lower Turonian *Mytiloides* cf. *labiatus* (Schlothheim, 1813) [IZ] and *Mytiloides* sp.



Coşarul Mic Quarry (Slava Rusă). In the lower part of the section *Mytiloides herbichi* (Atabekian, 1969), *Cremonceramus transilvanicus* (Simionescu, 1899), *Cremonceramus denselamellatus* (Kociubynskij, 1965), *Cremonceramus globosus* (Simionescu, 1899) and *Inoceramus lusatieae* Andert, 1911, all representative of the *Mytiloides scupini* Zone (middle Upper Turonian), are found. Over them, *Cremonceramus waltersdorfensis waltersdorfensis* (Andert, 1911) [IZ] (topmost Turonian) occurs together with the ammonite *Pachydesmoceras* sp. In the upper part, the lowermost Coniacian is recognized by the occurrence of *Cremonceramus deformis erectus* (Meek, 1877) [IZ]. Finally, some loose specimens of *Cremonceramus crassus inconstans* (Woods, 1912) [IZ] coming from the top of the section date the Lower Coniacian.

Visterna. As in the former locality, *Cremonceramus transilvanicus* (Simionescu, 1899), *Cremonceramus denselamellatus* (Kociubynskij, 1965) and *Cremonceramus globosus* (Simionescu 1899), all belonging to the *Mytiloides scupini* Zone (middle Upper Turonian), are well represented here. An ammonite from this locality is under study.

Baia North Quarry. At the base of this section the Lower Coniacian *Cremonceramus crassus inconstans* (Woods, 1912) [IZ] occurs; in the middle, the uppermost Lower Coniacian *Cremonceramus deformis deformis* (Meek, 1871) [IZ] has been identified. The echinoid *Rispolia subtrigonata* (Catullo, 1827) is recorded from the base to almost the top of this section; ammonites are currently under study.

Bal Bair Hill (Caugagia). This is the type locality of the Caugagia Member. Big specimens of the reputed uppermost Lower Coniacian *Cremonceramus crassus crassus* (Petrascheck, 1903) [IZ] are abundant; this zone might have a similar range than the *Cremonceramus deformis deformis* Zone in what some authors call the *Cremonceramus crassus crassus/C. deformis deformis* Zone. Some ammonites and a few holasteroid echinoids are still under study.

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