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THE PONTIAN-DACIAN LIMIT IN THE WESTERN AREA OF THE DACIC BASIN

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Abstract. The position of the Pontian/Dacian boundary in the Dacic Basin has preoccupied a lot of researchers. In Erghevița Valley was found a sand level very rich in fauna, with mollusc taxa certifying the Dacian. Close to Şimian were also found sands with forms similar to the Erghevița ones. The presence of these outcrops certifies the fact that the Pontian/Dacian limit is located under the Erghevița sands, correlated with the "Cocorova sands". The crucial argument is the appearance of the new elements of the Dacian fauna.

Keywords: Dacic Basin, Pontian, Dacian, Copcii Valley, Erghevița Valley.

In the western area of the Dacic Basin, the Pontian formations lay over a large characteristic area.

The western limit of these deposits may be constantly followed from the left shore of the Danube river downstream Drobeta Tr. Severin towards north on the valleys that cross the Malovăț, Lazu, Cocorova, Siseşti localities up to Glogova locality from Valea Motrului.

After Marinescu (1978) the Pontian ends with a yellow fossil-devoid sand packet. These sands can be followed from south towards south, beginning from Valea Copcii up to Valea Motrului, level named " Cocorova Sands".

In the top of these sands there is a thin and discontinuous early coal layer. Over this layer there is a packet of white quartz sand named "Lazu Sands".

Ghenea & Ghenea (1962) and Marinescu (1978) considered the Cocorova Sands as belonging to the Bosphorian.

Continuing the search south of Valea Copcii, I identified a yellow sandy clay outcrop, containing a rich transition fauna. On the Erghevița Valley 800 meters downstream the type locality, on the left shore, there is an outcrop with a rich transition fauna, including Pontian and Dacian elements. At the base of these sands, in the valley's bed, I found blue compact clay. In the Bistrița outcrop located at south at 3 km distance Pană et al. (1981) discovered a Bosphorian fauna including:

Dreissenomya aperta (DESHAYES, 1870)
Plagiodacna arcaeformis (WENZ, 1972)
Phyllocardium planum planum (DESHAYES, 1838)
Pontalmyra subcarinata (DESHAYES, 1838)

The fauna from the sands westward from Erghevița contains the following:

Dreissena rostriformis curvirostris ANDRUSOV
D. rostriformis corniculata SABBA
D.rostriformis elongata PAPAIANOPOL
D. rostriformis gibba ANDRUSOV
Phyllocardium planum planum (DESHAYES, 1838)
P.planum stevanovici MARINESCU, 1964
Lunadacna lunae (VOITEŞTI, 1927)
L. drobetica sp.nov.
Caladacna steindachneri (BRUSINA)
Viviparus argesiensis SABBA, 1896
Viviparus achatinoides oltenensis LUBENESCU & ZAZUL
V. achatinoides motruensis (SABBA, 1896)
V. achatinoides glogovensis (SABBA, 1896)
Limnaea korlevici BRUSINA
Plagiodacna tohanensis PAPAIANOPOL
Pontalmyra (P.) otiosa ANDREESCU
P.(P.) extensa (SABBA)
P.(P.) subcarinata (DESHAYES,1838)
Prosodacna longiuscula obliqua EBERZIN
Limnocardium zagrabiense BRUSINA
Pseudocatillus subangularis PAULIUC
P. omnivagus EBERZIN
Prosodacnomya stenopleura (SABBA, 1896)

From these, a lot of forms have reached the apogee in Bosphorian, surviving in the Early Dacian (Marinescu et al., 1995).

In the same outcrop are also elements that make their first occurrence in Dacian (Marinescu et al., 1995) like: *Dreissena, Prososthenia, Prosodacnomya* species.

The drillings made for the extraction of the coal in Prunişor, Livezile, Husnicioara perimeters came with a series of data. From these data results that in the area the Dacian deposits have a regressive character.

In this situation we consider that both " Cocorova Sands" and "Erghevița Sands" may be related to the Dacian regressive cycle. This cycle often had setbacks with swampy episodes and coal sequences, with incomplete sedimentation cycles.

The occurrence of the Dacian faunal elements is an argument for a Dacian age for the sand packets.

CONCLUSIONS

The general image of the western area of the Dacic Basin shows the fact that the transition from Pontian to Dacian is made by a transition fauna.

The limit between the two formations is located above the gray, blue shade, low clay clays with Bistrița fauna and under the low clay yellow sands in the west of Erghevița.

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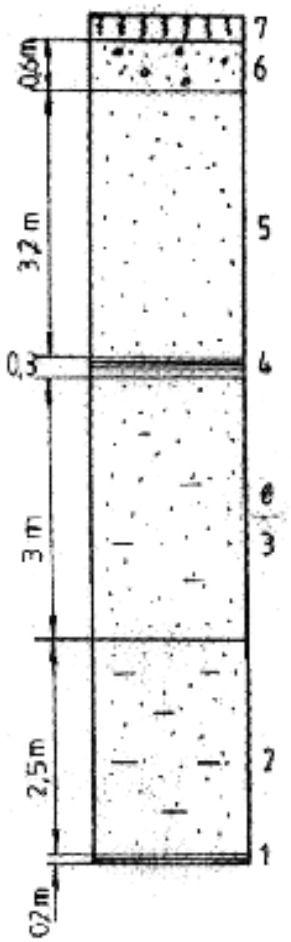

Fig. 1 Geological log of the outcrop with the fauna from the Erghevita Valley

1. 0.2 m Bosphorian blue-gray sandy marl
2. 2,5 m white-yellow clay sand with rare fossils
3. 3m yellow clay sand rich in fossils
4. 0,3 m red sandy clay
5. 3 m white yellow sand with brown spots
6. 0,6 m white yellow sand with gravel elements
7. 0,4 m soil

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