

The fauna discovered at Leu is similar to the ones already described, located in several deposits in Oltenia – Irimesti (Mitilan’s Fountain), Tetoiu (Bugiulesti) – horizon 2 – and from the Romanian Plain – Prundu.

In Eastern Europe, the fauna from Leu is equivalent to the fauna from the Odessian Complex, which contains the same large mammals. In Central Europe, an equivalent could be the Kisslingian level in the Netherlands, the correspondent could be represented by the Eburonian level. In France and Italy, the equivalents are the faunas from Senèze and Olivola.

Most of the fossil samples (over 90%) discovered at Leu belong to the species *Mammuthus meridionalis*: three mandibles, two upper M3, 24 vertebrae, numerous ribs, carpians, metacarpians, tarsians, metatarsians, patellas, and phalanx. To these elements, the bones of stylopodium and zeugopodium are added: one humerus, one radius, one cubitus, one femur, six tibiae and two fibulae.

The humerus of *M. meridionalis* discovered at Leu is reconstituted from several fragments and it presents deteriorations at the cranial side of the proximal extremity. It is characterized by massiveness and poor relief. The head is low and broad.

Unfortunately, the ulna is rather deteriorated.

The radius discovered at Leu is reconstituted out of several fragments and it presents deteriorations at the proximal extremity; the distal extremity is missing.

The femur discovered at Leu is characterized by the following peculiarities: relatively short diaphyse, under-developed head and badly emphasized condyles.

The six tibiae of *M. meridionalis* from Leu are massive and rectilinear. The proximal extremity is the greatest portion of the bone. The shaft of the bone has a prismatic shape in the proximal half, while in the distal half is closer to a cylindrical shape. The distal extremity displays a cochlea for the articulation with the astragal.

In Romania, *M. meridionalis* as a species is relatively frequent at the level of Pleistocene, but descriptions of the post-cranial skeleton undertaken so far are scarce and extremely concise.

This research is a contribution to the better knowledge of the post-cranial skeleton of the *M. meridionalis* species.

New data regarding the resources of tellurium and its distribution in the waste dumps and tailing dam from the Certej-Sacaramb ore deposit, Metaliferi Mts., Romania

Popescu C.Gh.¹, Cioacă M.², Neacșu A.¹, Filipescu D.³ and Orlandea E.³

¹Dept of Mineralogy, Faculty of Geology and Geophysics, University of Bucharest, 1, N. Balcescu Blvd., Bucharest, ghpop@geo.edu.ro, antonela.neacsu@gmail.com

²Geological Institute of Romania, 1, Caransebeș Street, 012271, Romania mihaela2012@yahoo.com

³S.A.Deva-Gold S.C. flip58ro@yahoo.com

The Sacaramb ore deposit is located in the so-called ‘Golden Quadrangle’ area situated in the Metaliferi Mts. and it is the most important Au-Ag tellurides deposit in Romania and in Europe, too. Genetically, it is a hydrothermal vein deposit with Au-Ag tellurides. The ore veins are located in an andesitic stock (pyroxene andesite of Sacaramb) generated by the Neogene calc-alkaline magmatism in the Metaliferi Mts. The vertical extension is about 600 m and the surface of this stock is ca. 1 km². Over 100 mineral species have been identified in the Sacaramb ore deposit, some of them firstly described in the world (nagyagite, petzite, krennerite, stuetzite, muthmannite, museumite). Till recently, tellurium was interesting only from scientific–mineralogical point of view and there was no interest for resource estimation in Romania. Since 2005 this element started to be considered as an important one, when the company ‘First Solar’, USA used it in the construction of solar panels with photovoltaic cells based on Cd-Te technology.

The first estimation regarding tellurium resource of the Sacaramb ore deposit was made by Udubașa & Udubașa (2004), taking into consideration Au/Te ratio, (i.e 1/2) into the most common tellurides - nagyagite and sylvanite (1/2 ratio) and the amount of gold extracted from Sacaramb ore deposit (over 1746-1941), calculated as being ~ 30 t Au. Therefore, the amount of Te mined and unprocessed (i.e. just dumped) would be ~ 60 t.

Our report presents the results of the last two-year research on the tellurium resources hosted into three waste dumps (Sectors I, II and III – at Sacaramb area) and into the “Iazul Avariati/Damaged Tailings Dam” at Certej. The tellurium contents have been determined using ICP-MS on the previously analyzed samples where Au-AA26 method for Au- and Ag-contents was made. Based on the resulting data the Au/Te ratio was obtained and the tellurium resources were estimated. Concerning the Au/Te ratio, it should be mentioned that this is ~ 0.25 in the case of the damaged tailing dam and it is averaging 0.35 in the three waste dumps; these values are different from the above mentioned theoretical values. The explanation of the existence of a higher Au/Te ratio in the damaged tailing dam is that the tailings originate from the processing plant where gold has been recovered, but tellurium has not. Consequently, the Au/Te ratio changes for Te. There is a difference in the content of useful elements in all four investigated zones, meaning that the waste dumps have higher Au and Te contents in comparison with the ore deposit. According to the new data, accepting that the Au/Te ratio is 0.3, it would result in a resource of ~ 85.7 t of tellurium for all the perimeters of Sacaramb.

Regarding the correlation degree, tellurium is directly well correlated with gold and silver respectively, confirming that tellurium is related to gold and silver mineral compounds. Actually, the Au, Ag and Te distribution map into the tailings dam area and waste dumps area indicates an overlap of the enrichment zones for all these elements.

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Biostratigraphic zonation based on foraminifera and algae in the Triassic deposits of the north sector of the Eastern Carpathians

Popescu D.A. and Popescu L.G.

Department of Geography, Faculty of History and Geography, Stefan cel Mare University of Suceava, 13, Universitatii, 720 229 Suceava, Romania, danys@atlas.usv.ro, livius@atlas.usv.ro

Triassic carbonate deposits which represent the topic of our research belong to a system of Alpine nappes (Median Dacides) that form the Crystalline Mesozoic Area of the Eastern Carpathians. From bottom to top, these tectonic units are the following: the Infrabucovinian Nappes, the Subbucovinian Nappe, the Bucovinian Nappe and the Transylvanian Nappes. The Bucovinian Nappe has the highest extension among the Central-East-Carpathian Nappes system, supporting the remains of the Transylvanian Nappes that occur only as isolated klippe floating within the Hauterivian-Albian wildflysch Formation of the Bucovinian Nappe. The lower tectonic units of the Bucovinian Nappe, respectively of the Infrabucovinian Nappes and of the Subbucovinian Nappe, occur discontinuously, outcropping in several halfwindows. Triassic sedimentation started by an Induan detrital level, consisting of conglomerates and sandstones. The Induan deposits are overlain by Olenekian-Rhaetian carbonate deposits. The detrital Induan completely lacks microfauna and subsequently, the zones approached in our research are only defined in the overlaying carbonates. The Anisian-Ladinian dolomites and limestones that form almost exclusively the Infrabucovinian and Subbucovinian Nappes offer little micropaleontological information, and with no stratigraphical significance. The limestones of the Bucovinian Nappe and especially those of the Transylvanian Nappes have revealed a paleontological content, rich enough to define Triassic zones. As a result, the biostratigraphic zonation in the studied area especially relies on biofacies data, achieved by microscopic studies of carbonate Triassic deposits of these two last units. Six zones on foraminifera and algae assemblages are defined in the Olenekian-Rhaetian. The *Meandrospira pusilla* Zone characterizes the Olenekian stage. The zone occurs in Bucovinian and Transylvanian facies. It was separated in the stratified limestone level, overlying the detrital Induan in Haghimas Syncline (Bucovinian facies). The massive dolomites of the Bucovinian Nappe provided a poor paleontological content consisting of a few foraminifera of no stratigraphical value, which makes impossible the definition of the zone in the lower Anisian. The *Meandrospira dinarica* Zone corresponds to Pelsonian and Lower Illyrian of the