

widely and deeply discussed by many authors either on the mythological/literary point of view, and on the morphological and geographical side.

Even if we go into a detailed picture of this well defined central Mediterranean area, till now, beside some stone anchors, whose chronology could range between unidentified prehistoric and historical periods, and few isolated evidences of prehistoric and protohistoric objects so far found, we don't have any real archaeological context of that period. The only consistent "prehistoric discovery" so far done in this area of Mediterranean was the controversial "wreck" of Pignataro, found nearby the eastern coast of Lipari.

Taking into consideration this insufficient archaeological situation I'll try to give some indications on the methodologies to be used, as well as on the most potential areas to be investigated with the aim to discover real traces of underwater prehistoric sites around Sicily. But it will be necessary, in order to fulfil a correct methodological and logical approach to this fascinating scientific domain, to proceed firstly with a comprehensive picture of the sporadic prehistoric and protohistoric evidences so far collected from the sea, secondly with the knowledge of palaeo-geographic background of the area under exam and finally with the indication of a research's strategy and perspective.

In this frame the recent discovery of two fossilized molars of *Elephas mnaidrensis*, in the sea not far from the south-western Sicilian shore will open new research horizons.

The main types of gold deposits in Romania

Udubasa S.S. and Udubasa G.

Department of Mineralogy, Faculty of Geology and Geophysics, University of Bucharest, 010041, Bucharest, Romania, sorin.udubasa@gmail.com

Romania is (was) known as a country rich in gold, richer as the most European countries. One area (the Gold Triangle or Quadrangle in Metaliferi Mts.) and several deposits/mines (Roşia Montană, Gurabarza/Brad, Bucium, Săcărâmb etc.) are worldwide known, due to the gold richness of the ores and in some cases as being type localities of some minerals, especially Au-Ag tellurides (e.g. Săcărâmb/Nagyag), respectively.

The above mentioned deposit type is of hydrothermal origin and have been formed in relation to the Neogene, mostly subduction-related, volcanism. In addition, there are also gold deposits located in metamorphic rocks, mostly in the South Carpathians, which are shear-zone related. The third type is of alluvial origin; for some of them the source was identified but there are numerous deposits or occurrences with diffuse or dispersed sources. The latter are also distributed mainly in the South Carpathians.

In addition to the above mentioned major gold deposit types, the gold production of Romania was based also on gold derived as by-product from polymetallic ores, mostly hydrothermal, situated in the northern part of Romania, related to the Neogene volcanism too. There are either gold-dominated deposits, e.g. Săsar, Valea Roşie, Dealul Crucii or polymetallic deposits with disseminated gold. In the Metaliferi Mts. (western part of Romania) porphyry type ores with a typical association Cu-Au, e.g. Bolcana-Troiţa, Voia, Bucium-Tarniţa etc., are also known.

The gold production of Romania was however basically related to the hydrothermal ores belonging mainly to the Gold Quadrangle in the Metaliferi Mts. The famous deposits of the area, named "the New Eldorado" by McLaren (1918) are (were) not very large. Nevertheless, the veins are concentrated on small areas, with a high to very high frequency of ore veins per area. For example, the celebrated Au-Ag telluride deposit at Săcărâmb producing 300 kg Au per year, with an average Au content of about 9 g/t and Ag of 17 g/t (the period involved is before World War II), is developed on an area of only 1 km², on a depth of about 500 m. From the same deposit about 60 t of Te have been extracted. Locally, some gold vein were extremely rich, e.g. Musariu (13-19 g/t), Valea Morii (15-30 g/t).

Roşia Montană is by far the largest gold deposit in Romania with a total of about 500 t of gold. Estimates by Roşia Montană Gold Corporation for the remaining gold to eventually be mined in open pit, range between 250 and 300 t.

All the gold mines in Romania are now closed. Attempts are made to recover the nanogold from the waste dump material by different methods, e.g. by using suitable plants (an ongoing research project by the authors).

A future gold resource could be also the gold presumably associated with BIF-like iron deposits, such as Palazu Mare in Dobrogea, a Krivoi Rog type deposit covered by a relatively thick, partly karstified, carbonate sequence.

The gold production of Romania is best known from the period before the World War II; it varied from 4 t to 8 t of gold. Afterwards the gold production became secret and no public data were available until 1990. A figure of about 1-2 t/year is estimated for the last years. The gold fineness greatly varied from deposit to deposit. Older data give 500 ‰ for the gold from Roşia Montană and about 975 ‰ for the gold from alluvial deposits at Pianu (North Sebeş Mts.).

Upper Cretaceous marine sites of the Haţeg Country Dinosaur Geopark

Vărzaru C., Melinte-Dobrinescu M.C. and Briceag A.

Department of Marine Geology and Sedimentology, National Institute of Marine Geology and Geo-ecology, 23-25 Dimitrie Onciul Street, RO-024053, Bucharest, Romania, camelia.cazacu@geoecomar.ro; melinte@geoecomar.ro; andrei.briceag@geoecomar.ro

The Haţeg Country Dinosaur Geopark is located in the central part of Romania, being famous for its continental macrofaunas in general, and for its Upper Cretaceous (Maastrichtian) dinosaur fossils in special. However, in this geopark there are also significant sites of Upper Cretaceous deposits that contain abundant and various marine fossils. Among them, there are two palaeontologically-important sites, namely the Snail Hill from Ohaba-Ponor and the Rudists from the Strei Valley, both of them being located in the SE part of Haţeg Country Dinosaur Geopark. The Snail Hill exposes a sequence spanning the Early Cenomanian-Early Turonian interval. This age was assigned based on the identified calcareous nannoplankton assemblages, containing, among other taxa, *Quadrum gartneri*, *Q. intermedium*, *Eprolithus floralis*, *Lithastrinus septenarius* and *Helenea chiastia*. The oldest Cenomanian deposits are sandstones and calcarenites with numerous taxa of *Actaeonella*, mostly belonging to *A. lamarki*, *A. conica* and *A. goldfussi* species. Other rudist taxa of the Cenomanian deposits exposed in the Snail Hill from Ohaba-Ponor are *Durania connectens* LUPU 1966, *Eoradiolites* sp., *Eoradiolites triangularis* ORBIGNY 1842, *Fossilites* sp., *Medeella* sp., *Neocaprina gigantea* GEMMELLARO 1865, *Praeradiolites fleuriau* ORBIGNY 1842, *Sauvagesia praesharpei* TOUCAS 1909, *Sauvagesia* sp., *Sphaerucaprina* sp., *Sphaerulites astrei* LUPU 1966, *Sphaerulites foliaceus* LAMARCK 1815. In the marlstones that overly the *Actaeonella* coquina, specimens of the ammonite *Mantelliceras mantelli* (indicative for the upper part of the Early Cenomanian), as well as other macrofaunal taxa, such as *Nerinea parva*, *Pecten acuminatus*, *Exogyra columba*, *E. conica*, *Modiola polygona*, *Lopha carinata* and *Puzosia* sp. are present. Mollusc genera, such as *Aporrhais*, *Protocardium* and *Panopea*, could be also found. Upwards, the marlstones and claystones of the Snail Hill from the Ohaba-Ponor contains the ammonite species *Acanthoceras rhotomagense*, *Acanthoceras jukes-brownei* and *Eucalycoceras pentagonum* indicating a Middle-Late Cenomanian age, together with abundant other macrofaunas, especially molluscs. Another marine Upper Cretaceous palaeontologically-important site is represented by the Rudists exposure from Strei. There, a sequence of marine Upper Cretaceous sedimentation, consisting of *Actaeonella*- and *Hippurites*-bearing conglomerates and sandstones of the Strei Formation, is exposed. These are the youngest Cretaceous marine sediments of the SE part of the Haţeg Country. The rudist fauna, comprising mostly *Hippurites lapeirousei* (GOLDFUSS), *Hippurites nabresinensis* FUTTERER and *Hippurites* cf. *colliciatus* WOODWARD, dates these deposits as Santonian–Campanian, but the sandstones contain Campanian nannofloras. Therefore, probably the age of the exposed sequence is Campanian. Both above-described sites add a significant palaeontological value to the geological heritage of the Haţeg Country