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ABSTRACT BOOK
The recent study about the shell architecture of the siderolitids genera based on well-preserved specimens from Maastricht and Pyrenees confirms the validity of the following genera: Siderolites, Pseudosiderolites, Arnaudiella and Praesiderolites, which have been controversial for a long time. Siderolites is characterized by the presence of canaliferous spines and lateral meshes, while Pseudosiderolites has lateral chamberlets and lack spines. Arnaudiella also has lateral chamberlets, but lacks lateral meshes and spines. In Praesiderolites, the enveloping canal system is reduced to the equatorial plane.

1089 - Evolution of Late Jurassic and Early Cretaceous dinoflagellate communities in East European Sea (Russia)

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In the Late Jurassic and Early Cretaceous, East European Sea was periodically linked with the Boreal and Tethyal basins by the system of channels. The links with the Tethys ceased in the Early Volgian. The isolation of East European Sea increased in the Late Volgian. Nevertheless, it didn’t affect Upper Jurassic dinoflagellate communities. They were very rich and diverse in the Kimmeridgian and Volgian and mostly represented by the Suborder Gonyaulacinae. First representatives of the Suborder Peridiniineae appeared in the Late Kimmeridgian. Important evolution event was the inception of the Suborder Ceratiineae in the Middle Volgian. In the Ryazanian, the renewed links with the Boreal and Tethyal basins resulted in the inception of numerous Cretaceous taxa (Families Ceratiaceae and Gonyaulacaceae) with wide areas of distribution. In general, Late Jurassic and Early Cretaceous dinoflagellate communities of East European Sea and other Boreal and Arctic basins contain a lot of common species, although the dinoflagellate communities of Arctic seas are less diverse. In generic level, there is even substantial similarity to the dinoflagellate communities of Tethyal basins and seas of southern hemisphere.

1114 - Questioning the age and correlations of the Cretaceous Formation Falaise de Blanche in Lebanon

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Falaise de Blanche, the name of which is dedicated to Ch.J. Blanche (1847) who first described this distinctive geomorphological/geological unit, runs throughout the chains of Mount Lebanon, Anti-Lebanon (Lebanon), and into Southern Alawite Mountains (Syria).

According Dubertret and Vautrin (1937) it is Albian in age but later the first of these two authors (Dubertret, 1963) referred it to the late Aptian sensu anglico (i.e., Aptian sensu stricto following Moullade et al.’ nomenclature, 2012). More recently, Walley (1998), while formally naming this stratigraphic unit the Mdairej Fm, allocates it to a time range spanning the Early Aptian and early late Aptian sensu anglico (i.e., Bedoulian and early Aptian sensu stricto following Moullade et al.’ nomenclature, 2012). But, none of these datings is strongly constrained, and our preliminary investigations point to a new dating.

During a first field work campaign in summer 2012, we sampled and logged several sections in discrete localities of Lebanon. Thin section analyses of the material collected prove to bear rather rich micropaleontological assemblages consisting of benthic foraminifers (with representatives of the Charentiidae, Loftusiacea, Orbitolinidae, Nezzazatidae, and Miliolidae families) and calcareous algae (mostly Dasycladales). These microfossils are not usually given enough attention though they proved to be efficient biostratigraphic tools to date sections where the classical markers (ammonites, planktonic foraminifers) are lacking.

Among many evidences, the occurrence of Montseciella arabica in the lowermost part of the unit (Saint-Marc, 1970) and that of Palorbitolina lenticularis spanning the whole interval led us to correlate this unit with the upper Kharaib(-ian) of the Persian Gulf (Granier et al., 2003; Granier and Busnardo, 2013). When correlated with a North-Tethyan scale (Clavel et al., 2007), the corresponding time range of this South-Tethyan unit should be latest Barremian - Bedoulian (following Moullade et al.’ nomenclature, 2012).

Forthcoming investigations in this unit and in both its overburden and its underburden (respectively the Hammana Fm above and the Abeih Fm below) will probably help to validate this working hypothesis and to get better paleogeographical reconstructions at the scale of the Arabian plate.
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1223 - Benthic foraminifera associated with sea grass ‘meadows’ in the Upper Maastrichtian of ENCI Quarry Maastricht The Netherlands
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Sea grasses (eel, turtle, widgeon and manatee) are a group of angiosperm plants totally adapted to a marine or estuarine environment. They characterize an important shallow-water environment and help generate a distinctive habitat for foraminifera and other marine biota. Sea grasses, with their rhizome root systems also provide an effective role in the stabilization of sediment. In modern, tropical environments, sea grass leaves, rhizomes, roots and intra-meadow sediments are often characterized by miliolid foraminifera that are often large (e.g., Peneroplis, Sorites, Marginopora). In temperate regions epiphytal taxa include smaller benthic foraminifera such as Rosalina, Discorbis, Cibicides and Planorbulina. In the sea grass meadows of Tor Bay and the Salcombe Estuary (S.W. England) the sea grass fronds, in summer, are covered in living Elphidium crispum, a well-known geotropic taxon. The biconvex shape of the genus Elphidium does not appear to be adapted to an epiphytal existence, making it difficult to use simple morphology as a guide to the presence or absence of fossil sea grass meadows.

The oldest sea grass fossils are thought to be of Cretaceous age, though direct evidence is limited. The most important information in Maastrichtian sea grass comes from the Netherlands (van der Ham et al., 2007). In recent years both fronds and rhizomes have been described from the Upper Maastrichtian of the ENCI Quarry in Maastricht, including beautifully preserved specimens of Thalassotaenia debeyi (Cymodoceaceae) The benthic foraminifera (Renema & Hart, 2012) include a range of larger taxa (Orbitoides apiculata, O. brinkae, Lepidorbitoides minor) and Ompahlocyclus macropora, which is a discoidal form comparable in morphology to Marginopora. Larger benthic taxa such as Calcarina and Baculogypsina are often associated with modern Thalassia meadows. Siderolites, of the Upper Maastrichtian of the ENCI Quarry succession, is a close homeomorph of Baculogypsina. The sea grass fossils and associated foraminifera of the ‘classic’ Upper Maastrichtian provide strong evidence of a sea grass meadow community that was probably assisting in the stabilization of the uppermost cretaceous chalk sediments. This has significant palaeoecological implications as the water depth, within the photic zone, must have been quite shallow. Sea level changes in the late Maastrichtian (and above) may be limited by such shallow-water evidence within the succession as a significant fall would have exposed the sea floor. How these shallow-water chalk taxa were able to calcify in such an high pCO₂ world (perhaps with lowered pH) is also significant for palaeoenvironmental and palaeoecological research.


1206 - A Late Cretaceous biostratigraphical and palaeoenvironmental study of the Norwegian Sea and Barents Sea area – application of dinoflagellate cysts and foraminifera
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This study was conducted in order to establish the Upper Cretaceous biostratigraphy and estimate palaeoenvironment in the Norwegian Sea and Barents Sea region based on dinoflagellate cyst analysis integrated with foraminiferal data. Due to the fact that a high number of exploration wells have been drilled, the data coverage from that area is huge and an increasing number of wells are being released. However, very little scientific work including palynology and micropaleontology has been published yet.