palaeontological spot near Epanomí. The finds are referred to *Mammuthus* cf. *meridionalis* and *Equus* sp. On the basis of biochronological data the deposits are dated as latest Pliocene.

Large Scale Geoelectrical survey of the Sarantaporon Basin (Thessaly, Greece)

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A large-scale Vertical Electrical Sounding (VES) survey was conducted at the basin of Sarantaporon, Elassona in order to study the tectonic and hydrogeological setting of the area. More than 150 soundings (AB/2 > 500m) were measured on a near-regular grid and were processed with 1-D inversion algorithm. Selected Interpretation models took into account the existing detailed drilling information of the area. Since some of the dense measured soundings were co-linear was possible to combine 1-D sounding data and produce 2D data sets which were interpreted using a fully 2D inversion algorithm. Finally the 2D and 1D results were combined to produce pseudo-3D geolectrical images of the subsurface.

Interpretations are in very good agreement with the existing drilling and geological information and reveal a relatively detailed picture of the basin's lithological and hydrogeological environment. Further, the results allowed us to obtain new, and verify existing, structural information regarding the studied area. Overall it is concluded that advanced interpretation to 1-D VES measurements can produce improved subsurface geophysical images and presents a very useful tool for larger scale geological investigations.

Middle Jurassic matrix radiolarians from the Meliata ophiolite melange at the type Meliatic sites Meliata and Jaklovce (Western Carpathians): palaeogeographic evidence.

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The Meliata Unit is crucial for understanding the West Carpathian geology. Its remnants mark an important suture zone which remained after the Meliata part of Neotethys Ocean which was open in the Middle Triassic and partly closed in Late Jurassic time. The key areas, in which occurrences of this unit are concentrated, are near Meliata village and in the wider surrounds of Margecany and Jaklovce villages. The first site lies southwest of the Gemeric Superunit, whereas the second occurs at its NE margin. Position of the Meliata Unit on the both sides of this crustal block (comparable with Greywacke Zone of the Eastern Alps) led some authors to oppinions about two branches of the Meliata Ocean surrounding the Gemeric Superunit, whereas others inferred that the northern occurrences do not represent a true suture but they were transported to its recent position tectonically by thrusting (obduction). If the first oppinion was true there would be some time difference between the closures of the two branches. Therefore, the two principal sites, Meliata and Margecany were revisited and new micropaleontological data were obtained, the first report of which is given herein.

Margecany (the type outcrops of radiolarite-basalt succesion along the railway at the local cement factory were sampled)

In a red cherty limestone intercalated in the basalts, Triassic radiolarians (together with some poorly preserved conodonts (similar conodont fauna was previously found here by Kozur & Mock) with a mixture of some Jurassic ones, were extracted by dissolution. Microfacies of most of the reddish cherty limestone to radiolarites, is evidently Triassic. From a reddisch cherty limestone to radiolarite overlying the basalts, following radiolarian fauna was extracted: *Actinomma. cf. siciliensis, Crucella squama, Crucella spp., Hagiastrum sp., Paronaella pygmaea, Praeconocaryomma spp., Spongotripus sp., Elodium cameroni* and *Hsuum parasolense*. The assemblage indicates Middle Jurassic age (Aalenian to Bajocian with two species; Callovian to Oxfordian indicated by one species). Estimation of the exact stratigraphic position is problematic due to the actual knowlegde of the age range of the species.

Meliata (the type locality of the meliata Unit)

Late Middle Jurassic matrix between the olistostromes and slide blocks of the upper part of the succession has already been investigated. The Lower part of the section was interpreted as a continous Anisian to Carnian sequence. A sample from the basal part of the section below the Ladinian cherty limestones and radiolarites and above the Anisian limestones yielded *Higumastra winteri, Dictyomitrella cf. kamoensis, Stichocapsa cicciona*, and *Zhamoidellum cf. ovum*. The assemblage indicates the Callovian to Early Oxfordian age. A sample taken higher, but still in the basal part contained *Sethocapsa cf. kodrai* indicating late Middle Jurassic. Microfacies of the samples represent radiolarian bearing filament limestone (resembling silicified Bositra limestone with radiolarians). In the upper part of the Meliata type section occur several grey limestones and dolomites in a late Middle Jurassic mélange. Besides Carnian limestones also Norian grey limestones occur representing typical components which were derived from the grey Hallstatt facies (Pötschen sequence in the Eastern Alps).

The studied samples all contain Jurassic or mixed Triassic-Jurassic fauna which is in accordance to the mélange character of the Meliata Unit with Triassic/Jurassic blocks and Middle to early Late Jurassic matrix. However, no new constraints concerning the time difference between the southern and northern occurrences of the Meliata Unit are possible.

The floods and regime of Hármas-Körös since river regulation in Hungary

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The studied area is located in Hungary, one of the deepest parts of the Carpathian Basin. Körös Rivers (it means Fekete-, Fehér-, Kettős-, Sebes-, Hármas-Körös) is belonging to Tisza river drainage basin that is the second main watercourse in the country. The Körös catchment area is 27,537 km^2, but 53% is in Romania, and 47% is in Hungary. Vast areas of the Hungarian Plain were flooded by the Paleo-Tisza and its affluents; and the river itself had not fix bed. The settlements were threatened by the enormous flood hazards returning year by year. The flood control has a long history in Hungary, because barrages were already built in 1613 along Tisza and other rivers. The real work started (with mapping) when a big flood was happened in the Körös–Berettyó region, in 1816. The Körös river regulation plan was made by M. Huszár, who distributed the work, and gave the depth and width of the bed, barrages distance and dimension. He determined the width of the active floodplain: by Hármas-Körös 379 m, by Kettős-Körös 246 m, by Sebes-Körös 246 m, by Fekete-Körös 190 m, by Fehér-Körös 114 m. The river regulation of the Danube and Tisza, and their affluents, was the most important reform in the remaking of nature in the 19th century Europe. These impacts were filled the requirements of the era's economic and social assumption. Low and a high water level database were made for the time interval between 1907 and 2006 with two water gauges in case of analysing the regime of Hármas-Körös River. The low water level had occurred in