

## Carnian Pluvial Event in the Mežica area, Karavanke Mts., Slovenia

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The Carnian Pluvial Event (CPE) denotes a wet climatic interval. This phenomenon was first identified in the Northern Calcareous Alps and was later recognized throughout the Tethys. A short humid event characterizes one of the most severe ecological crises and it corresponds to a sudden input of siliciclastic sedimentation. The causes of the CPE are still not well explained, but it seems they are all associated with the rifting of Pangaea. In order to make paleoenvironmental reconstruction of the region several biostratigraphic studies have been carried out more recently. The study area is situated north of the Periadriatic Lineament in the Northern Karavanke Mts., Eastern Alps. Carnian rocks of the “Raibl Beds” in the Mežica area are characterized by three clastic horizons of marly-shaly rocks positioned within dolomite-limestone succession what means the carbonate sedimentation was three times interrupted. The cyclicity of the “Raibl Beds” is explained as eustatic sea-level fluctuations. An increase of carbonate amount is evidenced from the first clastic horizon to the third clastic horizon. Differences are observed also in composition of the three palynological assemblages and a decreasing deltaic influence parallel to an increasing marine influence is evidenced from the first, through the second and to the third horizon. The obtained assemblages belong to the northern palynofloras of the wide equatorial palynofloristic domain. Quantitative palynological analyses of the first and the second clastic horizons indicate hygrophytic associations, whereas the third clastic horizon is marked by prevailing xerophytic elements. The Julian age of the first clastic horizon is dated by ammonoid *Carnites floridus*. Based on the typical Carnian sporomorphs the CPE is constrained to the hygrophytic associations of the first two clastic horizons in the study area, and their age is confined to the Julian, but the second clastic horizon might be partly Tuvallian. Macrofauna of the second clastic horizon is rare. It is limited to the two thin beds with frequent bivalves *Hoernesia sturi*. The footwall of the second clastic horizon is marked by diversified invertebrate fauna that includes bivalves, gastropods, crinoids, brachiopods and others. Crinoid fauna is characterized by the prevailing *Laevigatocrinus* and *Tyrolecrinus*, and the absence of encrinids is obvious. Within the second clastic horizon particular layers and lenses of limestone occur. Several limestone samples were treated for conodonts, but a single one was productive. Well preserved elements are represented by the monospecific conodont fauna of *Nicorella? budaensis* that also enables apparatus reconstruction. *Nicorella? budaensis* has been hitherto known only from few locations where it appears in a muddy bituminous limestone in an oxygen deficient sediment demonstrating stressed conditions, where conodonts could still live. The presence of a short-lived conodont species *Nicorella? budaensis* is important tool for a better understanding of the CPE in the Northern Karavanke Mts.

## Permo-Triassic and Jurassic palaeomagnetic components in the Greek Pelagonian and sub-Pelagonian zones: Implications for successive counterclockwise and clockwise rotations

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During the last three decades, comprehensive palaeomagnetic investigations have been conducted in North and North – Western Greece. A variety of formations ranging in age from Cenozoic to Paleozoic/Mesozoic were analyzed. These reveal the existence of an “ancient”