

Carpathians. The drowning of the platform sediments can be dated by the occurrence of *Nicoraella germanicus*, *Nicoraella kockeli*, *Gondolella bulgarica*, and *Gondolella cf. bifurcata* as Late Pelsonian; these conodonts derive from the overlying Bulog Limestones. Deposition of the Bulog Limestones in this section lasted until the Illyrian, proven by the occurrence of *Gondolella excelsa*, *Gondolella trammeri*, and *Gondolella liebermanni*. Following radiolarians from the reddish laminated radiolarites on top of the Bulog Limestones prove an Illyrian age (Spongosilicarmiger italicus Zone to lower part of Ladinocampe multiperforata Zone; equivalent of Reitziites reitzi Ammonoid Zone): *Baumgartneria cf. retrospina*, *Cryptostephanidium cornigerum*, *Oertlispongos inaequispinosus*, *Paroertlispongos multispinosus*, and *Triassocampe scalaris*. The directly overlying sequence of the radiolarite is not exposed, but upsection follow Late Ladinian to Early Carnian shallow-water limestones and dolomites.

In the section Obzovica the drowning sequence of the carbonate platform is not exposed. Red limestones below the radiolarite succession belong to the Bulog Limestone. Upsection follows a five metre thick succession of red and partly grey well-bedded radiolarites. From the red radiolarites we isolated a well preserved Illyrian radiolarian fauna (Spongosilicarmiger italicus Zone; equivalent of Reitziites reitzi Ammonoid Zone) with: *Baumgartneria bifurcata*, *Baumgartneria cf. yehae*, *Cryptostephanidium cornigerum*, *Eptingium manfredi*, *Eptingium ramovsi*, *Falcispongos calcaneum*, *Hozmadia sp.*, *Oertlispongos inaequispinosus*, *Parasepsagon asymmetricus*, *Pseudostylosphaera japonica*, *Pseudostylosphaera tenuis*, *Spongostephanidium sp.*, *Triassocampe deweveri*, *Triassocampe scalaris*. In the upper part of the radiolarite sequence up to ten centimetre thick intercalated hemipelagic filament-bearing limestones are of latest Anisian to earliest Ladinian age, proven by the following conodonts: *Gondolella excelsa*, *Gondolella trammeri*, and *Gladigondolella tethydis*. Upsection the radiolarian cherts decrease rapidly and the following hemipelagic red limestones are of earliest Ladinian age, proven by conodonts. These red limestones pass continuously into grey hemipelagic limestones of Late Ladinian age (with *Gladigondolella tethydis* and *Gondolella foliata*), topped by shallow-water dolomites of Late Ladinian to Early Carnian age.

This short-lasting latest Anisian radiolarite event in the succession of the High Karst Nappe is contemporaneous with the complete demise of shallow-water carbonate production in the whole western Tethyan realm and corresponds to the onset of the first radiolarites on the Neotethys Ocean floor, as proven in Albania and northern Croatia as well as in the Meliata Unit in Slovakia and Hungary. In the late Anisian the huge parts of the passive margin facing the newly formed Neotethys Ocean became flooded and volcanic ashes and radiolarites were deposited in the whole Dinarides reaching the palaeogeographic realm of the High Karst Nappe. Obviously, volcanics in our sections are preserved only as some thin intercalations of metabentonites. The latest Anisian radiolarite deposition corresponds also to the onset of intense volcanism in the Dinarides more to the north and in the southern Alps in Italy. The studied successions are nice examples of short-lived hemipelagic basins that formed on continental margin during the late Anisian rifting and were later, in the Ladinian and Early Carnian, completely infilled with sediments of prograding carbonate platforms.

## **Palaeoenvironment of the Eocene-Oligocene of the northern Ukraine in the light of palynological analysis and comparison with coeval Carpathian strata**

Gedl P.<sup>1</sup> and Shevchenko T.<sup>2</sup>

<sup>1</sup>*Institute of Geological Sciences, Polish Academy of Sciences, Senacka 1, 31-002 Kraków, Poland, ndgedl@cyf-kr.eu.pl*

<sup>2</sup>*Institute of Geological Sciences, National Academy of Sciences of Ukraine, 55-b O. Gonchara Street; 01601 Kiev, Ukraine, t\_shevchenko@mail.ru*

Eocene-Oligocene sequence of the northern Ukraine consists of diversified, mainly non-calcareous clastic deposits representing following lithostratigraphic units: Kanev Formation (?Ypresian), Buchak Formation (Lutetian), Kiev Formation (Upper Lutetian-

Bartonian), Obuhov Formation (Priabonian), Mezhygor Formation (Rupelian) and Bereka Formation (?Chattian).

We compared results of palynofacial analysis (i.e., composition of organic remains of marine and terrestrial origin) and taxonomical diversity of aquatic palynomorphs representing both marine and freshwater taxa. Our palynological analysis revealed variable sedimentological settings of these deposits reflecting various palaeoenvironments.

The oldest investigated strata (the Kanev Formation) contain high ratio of marine dinoflagellate cysts (occasionally up to 90%) pointing to marine environment optimal for development of rich and diversified dinoflagellate flora during the Early Eocene (Ypresian). Younger strata (the Buchak Formation) contain already palunofacies that could be interpreted as indicative to deposition in more proximal setting than Kanev Formation. It contains higher ratio of terrestrial plant remains, whereas dinoflagellate cysts are dominated by near-shore species *Homotryblium tenuispinosum*.

Bartonian strata (the Kiev Formation) yield rich and diversified dinoflagellate cysts assemblages, which are indicative for marine environments. Taxonomical richness and occurrence of an oceanic genus *Impagidinium* suggests offshore sedimentary setting during Bartonian. A gradual sea withdraw can be interpreted as Priabonian: diversified assemblages in basal part of the Obuhov Formation, become relatively impoverished in the upper part of this unit where representatives of the genus *Deflandrea* and Prasinophyta algae (*Pterospermella*, *Tasmanites*) occur. Land-influences are markedly evident in Lower Oligocene Mezhygor Formation: palunofacies is dominated by sporomorphs and land plant tissue remains. Moreover, freshwater algae also frequently occurs.

Preliminary comparison of our data with palynology of coeval strata from Polish part of epicontinental sea and Carpathian basins suggests that these basins were presumably connected during the Middle and Late Eocene. This is based on general taxonomical composition similarity of our assemblages to those known from Middle and Upper Eocene strata of the Flysch Carpathians (e.g., the Variegated Shale, the Hieroglyphic Beds). Throughout Early Oligocene, however, epicontinental basins were rather separated from Carpathian ones. Dinoflagellate cysts from the Mezhygor Formation are relatively diversified, whereas the ones from coeval Menilite facies of the Carpathian basins are almost absent.

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## **Revisiting the source characteristics of Quaternary monogenetic basalts in Central Anatolian Volcanic Province: asthenospheric or lithospheric melts?**

Gençalioglu Kuşcu G.

*Department of Geological Engineering, Faculty of Engineering, Muğla University, TR48000, Muğla, Türkiye, gkuscu@mu.edu.tr*

The Neogene-Quaternary Central Anatolian Volcanic Province (CAVP) is characterized by widespread polygenetic and monogenetic volcanism. About 800 monogenetic volcanoes were identified within the CAVP and these mainly include scoria cones and related flows (basaltic and andesitic), with subordinate maars (of both basaltic and rhyolitic composition), and domes (generally rhyolitic in composition).

Despite the occurrence of q-normative, ol-hy-normative, and ne-normative basalts, CAVP monogenetic basalts (*s.l.*) have been generally considered as alkaline. Based on this fact, they are recently evaluated as tholeiitic, transitional, and mildly alkaline (<5% normative ne), respectively. Similar patterns and HFS anomalies of monogenetic basalts on mantle-normalized diagrams to CAVP calc-alkaline lava flows from the polygenetic volcanoes were also noted. These andesitic-dacitic lava flows from the CAVP stratovolcanoes display orogenic trace element fingerprint, reflecting enrichment of their source regions by subduction-related fluids. So, this brings about the need for revisiting the source characteristics of CAVP monogenetic basalts. Compilation and re-evaluation of all available