



Fossils and bathymetry of the Carpathian orogenic front

Since 1974, paleontological field conferences are organized in Poland almost every year. The 14th Conference was held on October 7 to 9 at Kamionka near Sędziszów. The session, arranged by the Paleontological Section of the Polish Geological Society, was devoted to fossils as depth indicators. It was attended by 30 scientists from Poland and Hungary.

Sędziszów is located close to the present margin of the Carpathian orogen. During the Tertiary, the Carpathian nappes, moving northward, overthrust more than fifty kilometers wide belt of the craton. The tectonic evolution of the area has very good paleontological record. Latest Cretaceous and Early Tertiary flysch of the marginal Skole unit contains diverse exotic blocks of Paleozoic limestones and Carboniferous coal (commercially exploited at a time) derived from the eroded margin of the Małopolska Massif. These slump deposits are very fossiliferous at places, containing quite shallow-water faunas. The Oligocene deep-water shales of the Menilite Formation (famous extraordinary fish Lagerstätte) that range in composition from diatom to coccolite ooze may contain at some horizons shallow water crabs and fish. Finally, very fossiliferous shallow-water Miocene deposits cap the folded flysch, which overthrusts similar age autochthonous beds. All this makes this area an exciting place for paleoecological studies.

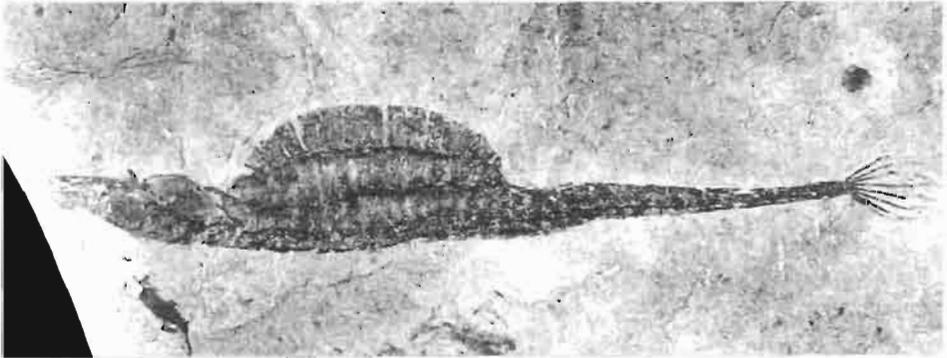


Fig. 1. Shallow water fish *Hipposyngnathus* from the Oligocene Menilite Formation at Jamna Dolna near Rzeszów, Polish Carpathians, specimen UWR 558A, $\times 3$ [from Jerzmańska, A. & Kotlarczyk, J. 1991. Zasięgi pionowe bytowania ichtiofauny znalezionej w serii menilitowo-krośnieńskiej Karpat Rzeszowskich. In: J. Kotlarczyk (ed.) *Paleontologia a Batymetria. Materiały XIV Konferencji Paleontologów w Karpatach Rzeszowskich*, 22-24, 73-74. Instytut Geologii i Surowców Mineralnych AGH. Wydawnictwa Własne nr 24. Kraków].

The shallow-water Paleocene molluscs transported to the flysch were discovered in the Classic locality Babica by Bolesław Kropaczek. He defended in 1910 his doctoral dissertation *Montien-fauna aus dem Flysch der Nordkarpaten von Babica bei Rzeszów*. I Teil. Gastropoda at Vienna University. In result of his sudden death in battle at Kromolów on 18 November 1914 the monograph has never been published and the manuscript was definitely lost during

World War II. The Conference in Kamionka was dedicated to the memory of Bolesław Kropaczek in recognition of his pioneer works.

During the first day of the Conference several presentations were given mostly concerning the problem of changing bathymetry of the marine basin between the colliding Carpathian orogen and European craton as well as during subsequent development of the Rzeszów Bay of the Parathetys. The paper by Pal Müller and Imre Magyar was on the gradual evolution of bivalves in a Miocene lake of Hungary. The second day was devoted to a field excursion to several fossiliferous localities of the Paleogene in the Skole unit, including classic localities of the Babica clays and menilite shales. Many excellently preserved fish specimens have been collected. The question of eustatic versus anoxic interpretations of the shallow-water fish assemblage from Jamna Dolna (Fig. 1), sandwiched inbetween typical for the formation bathypelagic faunas, was discussed. During the last day of the Conference outcrops of the Miocene of Parathetys were visited. In patches of the Miocene that survived intense erosion a great variety of facies is still represented, from coarse clastics (Nockowa), through limestones (Niechobrz) to evaporates (Siedliska). Field trips were lead, in cooperation with several other paleontologists, by Janusz Kotlarczyk, who also edited the Conference volume containing summaries of delivered papers and descriptions of visited localities.

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