

strata with *Mactra*, Tamanian strata of Akchagyl (with *Avimactra* and *Cardium dombra*), etc., are in direct correlation with phases of cooling. At the same time, in glacio-eustatic rhythmicity of sediments of Paratethys the critical events of biota which occurred in Mediterranean, such as Serravalian and Messinian crises of megafauna, have been manifested. It is worth mentioning that in literature the question was debating for a long time about conditions of formation of the abovementioned monomorphic (sensu lato) faunas of Eastern Paratethys: are they the result of salinization or of desalination? The data obtained provide an evidence that the phases of cooling in World ocean led apparently to isolation and desalination of Neogene basins of Eastern Paratethys:

17 million years - of Kotsakhurian regional stage;

15 m.y. - of Karaganian regional stage (sensu N. I. Andrusov - strata with *Spaniodontella*);

9.5 m.y. - of Khersonian regional stage;

2.6 m.y. - of Tamanian strata of Akchagyl, etc., coinciding with global phases of paleoclimate changes directed to its worsening.

Hence, synthesis of all events passed - from underthrust of European and African plates in Neogene (Serravalian crisis), glacio-eustatic decrease of the Atlantic level (Messinian crisis), manifestation of phases of Alpidic orogenesis, to fixation of global waves of cooling - has led to a possibility of creation of peculiar Calendar of geological (mainly tectonic-climatological) events in the Neogene of Paratethys.

The find of Lower Liassic (Hettangian) brachiopods in the Fatric Unit (Central West Carpathians)

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Hettangian brachiopods occur very rarely in the West Carpathians. From the Kopienec Formation Gazdzicki et al. (1979) reported brachiopods of Upper Hettangian age. During the research of the Jurassic sediments in the Fatric Unit in the Veľká Fatra Mountains new brachiopod fauna of Middle Hettangian age has been found (Jakub quarry near Banská Bystrica). In the lithological section, the Svätý Jakub Formation (probably of Rhaetian age) is developed in the basal part. In the overlie, about 20 m thick succession is present, consisting of rhythmic alternation of well-bedded dark-grey biopelmicritic limestones with very thin brownish interbeds slightly enriched in clay and silt quartz. In the upper part of this succession brachiopod fauna occur.

In beds no. 143-147 the *Lobothyris* assemblage occur, with dominant representatives of *Lobothyris*. They show significant variability in shell outline, convexity, presence of anterior median depressions and bilobation, character of beak, beak ridges and foramen size. On the basis of these characters it is possible to distinguish several morphotypes. In the meantime it is not known if morphotypes of *Lobothyris* belong to one species with strong intras-

pecific variability or to several species. Oysters (*Gryphaea* sp.) are scarce in this assemblage.

Up-section, limestone beds (no. 148-150) with no macrofauna are present. In their overlie (beds no. 151-153) monospecific oyster assemblage occur (the *Gryphaea* assemblage). It passes upward into the *Zeilleria-Calcirhynchia-Gryphaea* assemblage (beds no. 154-158).

Higher, limestone beds with oyster assemblage are present (beds no. 159-166), locally with scarce zeilleriids. In the bed no. 167 the *Zeilleria-Calcirhynchia-Gryphaea* assemblage occur again. In this assemblage zeilleriids are prevailing. They show similarity to *Zeilleria mutabilis* (Oppel) and *Z. choffati* (Haas). Rhynchonellids are externally very similar to *Calcirhynchia plicatissima* (Quenstedt) and *C. latifrons* (Stur in Geyer), but they have different internal structure. The Middle Hettangian age is supported by ammonite *Kammerkarites haploptychum* (Wähner) (determined by dr. M. Rakús), which has been found in the bed no. 168.

Gazdzicki, A., Michalik, J., Planderová, E. & Sýkora, M., 1979: An Upper Triassic - Lower Jurassic sequence in the Krížna nappe (West Tatra Mountains, West Carpathians, Czechoslovakia). *Záp. Karpaty, Geol.*, 5, 119-148.