anterior and posterior margins, frequently also the shape of the dorsal and ventral margins. This is followed by a description of sculptural elements, such as ribs, pits, nodes, spines, etc., and of their positions on the valve surface, sometimes, a brief description of the hingement is included. The imperfection of optical microscopes of that time is most likely responsible for some inaccuracies in Reuss' descriptions, e.g. on the valve surfaces of some species, he describes short hairs, which are obviously normal pore canals. The description is followed by a list of the localities, where the respective species was found.

The work is supplemented with 4 tables which depict the valves or carapaces of each species from outer lateral, and ventral or dorsal views. Only with some few species the inner view is given, depicting first of all the selvage pattern. Singularly, there are details of valve surfaces. Although the level of the depictions is fairly good for that time, the resolution power in smooth, unsculptured forms is smaller.

Note to revisions: In some species I could not verify the genus classification. In such cases I refer by abbreviation „rev." (revised) to the respective work.

In his next work, Reuss (1860) presented a list of ostracod fauna of the Miocene deposits in the environs of Česká Třebová of localities Opatov, Třebovice and Rudoltice. With each species he only gave the occurrence frequency and another collecting locality. All the 26 ostracod species quoted here were already described by the author in his work of 1850. It is worth mentioning that the genus classification does not agree in any case with the original one, the species were re-classified to genera Cythere, Bairdia, Cytherella and Cytheridea.

List of the occurring species: Cythere galeata (REUSS), C. bituberculata (REUSS), C. plicata (REUSS), C. Edwardsi (RÖMER), C. cinctella (REUSS), C. cicatricosa (REUSS), C. angulata (REUSS), C. deformis (REUSS), C. hastata (REUSS), C. Haueri (RÖMER), C. similis (REUSS), C. hystrix (REUSS), C. canaliculata (REUSS), C. Haidingeri (REUSS), C. corrugata (REUSS), C. verrucosa (REUSS), C. polyptycha (REUSS), C. plicatula (REUSS), C. reticulata (REUSS), Bairdia subdeltoidea (MÜNSTER), B. arcuata (MÜNSTER), B. exilis (REUSS), B. falcata (REUSS), B. glabrescens (REUSS), Cytherella compressa (MÜNSTER), Cytheridea Mülleri (MÜNSTER).

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Abstrakt

Práce A. E. Reusse o ostrakodech neogenních pánví Rakousko-Uherska z roku 1850 patří mezi klasická, základní díla věnovaná ostrakodové fauně.

V této německy psané práci autor popsal celkem 90 druhů, z nichž převážná většina pochází z lokalit vídeňské pánve. Pokud se týká stratigrafického stáří vrstev zkoumaných lokalit, lze je zařadit do badenu až pontu, přičemž nejvíce jich patří badenskému stupni.

U všech Reussem popsaných druhů byla provedena taxonomická revize jejich rodového určení.

Zusammenfassung

Die von A. E. Reuß verfaßte Arbeit über Ostrakoden der neogenen Becken in Österreich-Ungarn vom J. 1850 gehört den klassischen, grundlegenden Werken an, die sich mit Ostrakodenfaunen befassen. In dieser in Deutsch erschienenen Arbeit beschrieb der Verfasser insgesamt 90 Arten, von denen die überwiegende Mehrheit aus Fundorten im Wiener Becken stammt. Was das stratigraphische Alter der Schichten an untersuchten Fundorten betrifft, kann man sie in das Baden bis Pont einstufen, wobei die meisten davon der Baden-Stufe angehören. An allen von Reuß beschriebenen Arten wurde eine taxonomische Revision ihrer Gattungsbestimmung durchgeführt.

METAMORPHIC EVOLUTION OF THE VEPORICUM (CONTRIBUTION TO POSSIBLE CORRELATION WITH THE EASTERN ALPS)

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Metamorphism in the West Carpathians should be considered from several aspects. First of all there is a close relation between metamorphism and tectonics — like in the Alps (M. Frey et al. 1974) and in other regions (e. g. G. B. Haxel et al. 1984). Recent investigations of crystalline complexes in the West Carpathians revealed fragments of a formerly uniform Hercynian system. The nature of Lower Paleozoic sediments and volcanics indicates that the system was formed upon Proterozoic continental crust. In respect of geotectonics it is the evolution of intracratonic orogen also described from other parts of the Hercynides (e. g. Dalmayrac et al. 1980). The results of the study of European Hercynides indicate the dynamical character of the Hercynina orogeny (P. Matte 1986). Recently it was proved by the research in the Veporicum of the West Carpathians (V. Bezák 1988). In the West Carpathians the Hercynian system was completely destroyed during the Alpine tectogenesis. Fragments of the Hercynian system and Precambrian elements are incorporated in the structure of new Alpine tectonic units (Tatricum, Veporicum) practically ignoring the Hercynian structure.

The Veporicum, mainly its southern part is most favourable for the analysis of metamorphism. On a relatively small area there are the elements of all the three structural and age levels, i. e. the Upper Paleozoic and Mesozoic (upper structural levels) units, Lower Paleozoic complexes (middle level) and the complexes of the lower level (their elementary classification was presented by V. Bezák 1988). Recently we advanced in the range of information about tectonic position of particular complexes, their lithological content and grade of metamorphosis, and in age determinations, mainly of Lower Paleozoic complexes.

In the Veporicum the lowest level is represented by gneisses and migmatites — perhaps products of Cadomian metamorphism. So far there is only indirect evidence of their age: change of metamorphosis in comparison with Lower Paleozoic complexes, different structural pattern, tectonic breccias of these rocks cemented by Hercynian granitoids, deformational structures (lineations, boudinage) occurring under the conditions of higher-rank metamorphism than Alpine. The primary metamorphosis ranged up to temperatures above 600 °C (according to the first records of the graphite and garnet-biotite thermometers), Hercynian metamorphism had diapthoritic effects upon the rocks.

Fragments of Early Paleozoic metamorphites (mica-schist complex of Ostrá and Klenovec complex of biotite albitized gneisses) underwent the Hercynian regional dynamic medium-pressure metamorphosis. The lower age limit of the metamorphosis is defined by the age of sediments (Silurian-Devonian), the upper age limit is indicated by the upper Carboniferous sedimentation (its metamorphosis and tectonic position are already different). The metamorphism was evidently the most intensive at the end of the Devonian and during the Lower Carboniferous. In analogy with the Bohemian Massif the process of metamorphosis might be longer (J. Cháb — M. Suk 1977). According to paragenetic analysis the conditions of metamorphism are close to the low grade/medium grade boundary in the sense of H. G. F. Winkler (1979) — to the almandine zone of the green schist facies with a stable chlorite + muscovite association. On the basis of petrogenetic lattice and geothermometric determinations (we have used the garnet-biotite and graphite thermometers and the results show a good accordance) the conditions of metamorphism may be determined to 450 — 530 °C and 400—500 MPa. Main differences between Lower Paleozoic complexes are not in the grade of metamorphosis but in lithology (the complex of Ostrá consists of pelites with a small portion of basic volcanics; the Klenovec complex consists of psammites with admixture of intermediary volcanic material). The products of the first — synkinematic stage of the Hercynian metamorphism were later overlain by the products of the static thermal phase, most likely associated with intrusions of Late Hercynian granitoids and with heat outlets in the form of thermal domes. Analogous evolution of Hercynian metamorphism is also described from other parts of European Hercynides (Ch. Pin — J. J. Peucat 1986). Local more intensive static metamorphosis of Cadomian metamorphites may be explained by the „basement effects" (in the sense of J. M. Fonteille — G. Guitard 1964).

The nature of the Alpine metamorphism may be studied on the rocks of the upper structural level (Upper Paleozoic and Mesozoic) overlying the complexes of the lower and middle levels. The rocks are only incorporated in the Alpine tectonic structures. The Upper Paleozoic complexes (mainly the Sinec complex) differ markedly from the Lower Paleozoic also in their lithological content (occurrences of magnesite, metaconglomerates, basic volcanics), and in the grade of metamorphosis (synkinematic metamorphosis did not surpass the chlorite zone). The Alpine metamorphism proceeded in two stages — with synkinematic crystallization of minerals in the chlorite zone, and with postkinematic crystallization of mainly biotite and garnet. In this stage also crystallization of disthene and chloritoid proceeded, for instance on the contact with the Gemericum (S. Vrána 1964). These minerals were also in other parts of the Veporicum and their origin is influenced by chemical composition of rocks. Rocks affected by pre-Alpine metamorphosis under similar conditions underwent hardly distinguishable alterations (isozonal recrystallization) whereas rocks affected by metamorphosis of higher rank, show effects of diaphthoresis.

According to K/Ar dating the Alpine metamorphism proceeded mainly during the Cretaceous (94 ± 18 Ma — J. Burchart et al. 1987) and its upper age limit is defined by the uplift of the Veporicum (fission tracks indicate its beginning about 75 Ma ago — J. Kráľ 1982). V. Hurai (1983) estimates the rate of uplift to 0,3 mm per year. So in contrast to the Alps the metamorphism in the Veporicum did not extend to the Neoalpine period. According to the records by the garnet—biotite and graphite thermometers the synkinematic metamorphosis proceeded at the temperatures 360 — 430 °C and pressure about 400 MPa (according to petrogenetic lattice). The postkinematic metamorphosis had a variable extent (the effects of granitoids) and proceeded under higher temperatures (formation of biotite and garnet). It is generally presumed that the Alpine metamorphism proceeded under the conditions of the thickness of overlying complex at least 5 — 10 km which is sought either in the denuded nappe of the Tatricum (S. Vrána 1980) or of the Gemericum (D. Plašienka 1984). The question concerning the role of the nappes of the basement is still unanswered.

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Abstrakt

V článku je analyzovaný metamorfný vývoj kryštalinika veporickej jednotky Západných Karpát na základe najnovších výskumov. V dnešnej stavbe veporika sú zakomponované elementy troch orogénov — najstaršieho (kadomského?), hercýnskeho a alpínskeho. Tomu odpovedá aj metamorfný vývoj veporika, ktorý prebiehal v niekoľkých etapách v súhlase s tektonickým vývojom. V práci sú charakterizované aj podmienky všetkých etáp metamorfózy.

Zusammenfassung

Im Artikel ist die metamorphe Entwicklung des Kristallins der Vepor-Einheit in den Westkarpaten auf Grund der neuesten Ergebnisse analysiert. Am heutigen Bau des Veporikums sind Elemente von drei Orogenen beteiligt, nämlich ?kadomische, herzynische und alpine. Dem entspricht auch die metamorphe Entwicklung des Veporikums, welche in einigen Etappen in Übereinstimmung mit der tektonischen Entwicklung verlief. In der Arbeit sind auch die Bedingungen aller Etappen der Metamorphose charakterisiert.