

nicht eindeutig den Wunsch nach einer entsprechenden Analyse auf. Die neuesten Ereignisse der Fachliteratur nach 1945 fehlen allerdings in den meisten Fällen, und damit ist zu erklären, daß diesmal kein Konsens mit diesen Ergebnissen für wichtig gehalten wird. Allein die Abhandlung von Vilmos Csernochorszky kann vielleicht in dieser Hinsicht hervorgehoben werden: in dieser Abhandlung, die sich mit der Vorgeschichte der Katastrophe von Mohács beschäftigt, wird ein Streben nach Kenntnissen der modernen Fachliteratur realisiert. Dies kann deshalb für wichtig gehalten werden, weil die Kenntnis der Untersuchungen der ungarischen Wissenschaftler keinen geringen Beitrag zu den Ergebnissen der neueren Quellenforschungen bietet zu dem Zweck, "die häufig diskutierten, im Laufe der Zeit vergessenen oder bewußt zurückgehaltenen Details in neues Licht zu rücken" (Zitat aus der Einführung von Éva Saáry). Es scheint nicht auszureichen, die bekannten Tatsachen einfach neuzugruppieren oder umzuwerten.

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Neogene Mineral Resources in the Carpathian Basin. Historical Studies on their Utilization

Edited by József Hála

Budapest, Hungarian Geological Survey, 1985., 676 pp.

It might be surprising that a journal entitled *Hungarian Studies* gives a review of a book which qualifies as a geological publication. It is the reader of the review that should decide whether the book is in fact about history of culture and history of science in Hungary, or about mineral sources and other petrifications. We greet the publication with great pleasure, because there are very few historical surveys about science in Hungary. Another benefit is that the publication is also in English, making thus the book available abroad. This unusual publication is not common in bookshops in Hungary, and interested persons should consult the sponsoring institution if they require a copy (Magyar Állami Földtani Intézet) Hungarian Geological Survey, (Budapest, XIV., Népstadion út 14, Hungary).

The book is dedicated by Géza Hámor, Director of the Hungarian Geological Survey, to the participants of the 8th Congress of the Regional Committee on Mediterranean Neogene Stratigraphy, as well as to all those interested in this topic. The collection of papers offers a lot: it enriches the manifold data of Hungarian cultural history with new, important and previously unknown facts.

Most of the authors (17 out of 22) are qualified in the natural sciences, while the others represent the fields of either archaeology, museology or anthropology. The mineral resources of the Carpathian Basin are of tangible reality, and they have been known since the Copper Age by the peoples that have been living there, for they have been the consumers and utilizers of these resources.

The book is divided up into three parts. The first part is entitled "*Geological Research, Mapping and Geophysical Exploration*" and it shows that the peculiar Hungarian word *ásvány* (it means: 'something dug out') was first used by J. Molnár, a Jesuit professor, in a book published in 1783. Another piece of rare information is that the first map of Hungary's geological structure was drawn

up by R. Townson, an English traveller, and, interestingly, he used such Hungarian place-names as *Ins. Csepel-Rázköve, Paks, Sárköz, Zsebelátó-hegy*, in a book he entitled *Travels in Hungary*, published in 1797. Yet another fascinating piece of science history is the fact that the inventor of the Eötvös torsion balance used apparatus and other measuring accessories from his laboratory to equip a waggon drawn by two long-homed "Hungarian" grey cattle. He carried out his geophysical measurements in this mobile observatory and this is verified by photographs taken at the end of the last century.

In the book's second and most extensive part, entitled *Exploration, Exploitation and Utilization of Mineral Resources*, the discovery and exploitation of those energy resources determining our economic life are often depicted as already being interrelated with our political life. Besides this other intriguing details are also to be found here. For instance, János György Rieder, a blacksmith in Sopron, was the first to use charcoal – found under the ruins of an inn – for heating in 1753. Then there is a story about an anonymous shepherd who reported even earlier, in 1735, that "on the hill where he made fire, the soil kept burning and smoking for several days." On the basis of archeological finds non-ferrous metals have been continuously mined in Hungary since the Copper Age, though not on an even scale. The author's precise and detailed information is provided not only for the technical reader. Besides the annual production yields, the fact that among the plans of the Transylvanian Prince, Gábor Bethlen, there was a Swedish–Hungarian copper society – with a European monopoly at that time – should also be considered as if it were mentioned in a history book with background material. The paper on the minting of precious metal coins is also a comprehensive and excellent review of the topic, especially useful for those engaged in the humanities. Under this heading one can learn not only the alloying techniques of coins in the different ages but the contemporary denominations and values, as well as the history of the various ornamental motifs. (The inscription *Patrona Hungariae* was officially used from 1467 until as late as 1939.) The mining, transportation and utilization of iron ore, salt, obsidian and limestone, the miners' wages and way of life, and the regulation of duties all represent, in an impressive and detailed way, the wide-scale and determining role of the mineral resources in the culture and civilization of the people living in the Carpathian Basin.

In the third, concluding and ethnographical part there is only one paper entitled "*Chapters from the ethnography of mining*". In this paper the author provides a general picture of the topic and divides it up into material culture and intellectual culture.

It is worth noting that in the references following each paper, besides the large comprehensive books used, there is also reference to the articles published in the various technical journals, such as the *Bányászati és Kohászati Lapok* ('Mining and Metallurgical Journal') totalling some 500. The number of publications referred to in the references is over 1000. An ample number of photographs, drawings, maps and tables facilitate the understanding of the text. The usefulness of the index, which contains some 600 geographical names, deserves special emphasis.

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