

FOREWORD

Ipolytarnóc (Nógrád County, N Hungary) owes its worldwide fame to its unique fossil finds. Having buried the paleoenvironment, rhyolite tuff flows have preserved the original morphology of the Early Miocene land surface, its vegetation and traces of its animal kingdom. Now we are able to decipher the exact scenario of that "catastrophic" event of some 19.6 ± 1.4 Ma ago, being aware of both the immediate prehistory and the aftermath.

The locality has since outscored in importance the discoveries of the initial stage, restricted as they were to descriptions of paleontological curiosities. In fact, Ipolytarnóc now may serve as a standard key section and type area for Neogene lithostratigraphy, biostratigraphy, geochronology, chronostratigraphy, sedimentology, volcanology, paleobiogeography and faciology alike.

The major dates themselves are landmarks reflecting the importance of the locality for a better understanding of the history of science. Let us quote them:

It was in 1836 that F. KUBINYI discovered what he referred to as "the giant-sized petrified tree of Tarnóc" and it was in 1900 that H. BÖCKH and J. TUZSON recognized the footprints of ancient animals. In 1903 A. KOCH published marine shark teeth and a marine Mollusca fauna recovered from the underlying beds. In 1912 K. LAMBRECHT reported on footprints of birds and J. JABLONSKY, in 1914 on the contemporaneous fossil flora. It was a paper on fossil traces of life by O. ABEL (1835) that called the attention of scientists to the locality of Ipolytarnóc. From the foreign literature, the relevant publications of E. THENIUS (1948) and O. S. VIALOV—K. K. FLEROV (1952) are worthy of attention.

After the pioneering researchers a host of scientists have during the nearly 150 years past dealt with the Ipolytarnóc sites and more than a hundred publications appeared. The wealthy literature devoted to this small area readily illustrates the history of Hungarian geology, reflecting the hot and extended debates that have enhanced progress in stratigraphic methodology.

Since the time of the first rescue excavations (J. BÖCKH 1901, F. NOPCSA 1920) the Hungarian Geological Institute, in cooperation with the Geological and Paleontological Department staff of the Hungarian National Museum, has contributed to the processing of the Ipolytarnóc finds, its share of the work having varied in time in dependence on the possibilities available. The achievements of this work are highlighted by the works of J. NOSZKY Sr. (1917—1940), M. KRETZOI (1950), L. MAJZON (1950), Mrs. K. RÁSKY (1959), Mrs. I. CSEPREGHY-MEZNERICS (1967), Mrs. R. NYÍRŐ (1967), A. TASNÁDI KUBACSKA (1937—1977), I. PÁLFALVY (1974) and L. BARTKÓ (1961—1984).

After the establishment of the North Hungarian Regional Geological Survey Department in 1970, the work has speeded up. Upon a decree passed by J. Fülöp, president of the Central Office of Geology, the geological conservation area in question was surveyed geologically on scales of 1:25,000 and 1:10,000 and the key sections and the bedding surface of the footprint sandstone were unearthed. The National Environment and Nature Conservancy Office, by decree 513/54 (1954), declared the fossil site a geological conservation area, though, in fact, its conservancy had dated back to as early as 1943. In addition, a Conservation Hall with a ground-space of 500 m² was built from funds of considerable amount provided by the Conservancy Office. The implementation of this conservationist project of national priority belongs primarily to the merits of L. BARTKÓ, J. Kéri, G. Józsa, L. KORDOS and P. SOLT on the Geological Institute's staff and, in addition, it is to be thanked to the unselfish work of F. MÁRTON and J. TARDY of the National Nature Conservancy Office.

Contradictorily enough, in spite of the afore-mentioned efforts, no monographic synthesis of Ipolytarnóc has been accomplished up to the present time. It was not until these days that the task of complete excavation, conservation and up-to-date demonstration of the world-famed finds could be achieved, even though the most prominent fellow professionals have urged developments of this kind for more than 100 years now.

Thanks are due to all who have contributed most actively to filling this gap.

Relying on the work of preceding generations the following workers have helped to bring this work to completion: L. BARTKÓ by carrying out the geological surveying of the study area and by summarizing his experience of more than a decade of work devoted to the locality: I. PÁLFALVY and Mrs. L. HÁBLY by phytopalaeontological studies; L. KORDOS by processing the vertebrate fauna; Mrs. L. RAVASZ-BARANYAI by mineralogical-petrographical analyses; KADOSA BALOGH by radiometric studies; Mrs. I. KORECZ-LAKY by foraminiferological research; Mrs. M. HAJÓS by studying the siliceous-“skeletal” microflora; Mrs. ESZTER NAGY by palynological analyses; GY. LELKES, Mrs. E. KOVÁCS, I. VICZIÁN and Mrs. E. BARABÁS-SERÉNYI by laboratory analyses and Mrs. PELLÉRDY by preparing the photographic documentation.

I am particularly pleased to have had the opportunity to contribute with a monograph on the Nógrád—Cserhát area forming the extended neighbourhood of the Ipolytarnóc area and with manuscripts of paleogeographic maps showing the farther Neogene areas of Northern Hungary to the reconstruction of the paleogeography of Ipolytarnóc.

The festal nature of this volume stems from the very fact that it is issued under the auspices of the VIIIth Congress of R.C.M.N.S. convened in 1985 in Hungary. And we hope that it may give, as a concise portrayal of the present state of knowledge, a marked impetus to further research.

I allow myself the pleasure of envisaging Ipolytarnóc to become an international treasury of universal geoscience, a national training ground, a base for the propagation of knowledge, for the training of the students of geology and for the cultivation of science. Let it serve as a model for those who seek to conserve the irreproducible geological values of Nature for generations to come.

DR. GÉZA HÁMOR
Director
of the
Hungarian Geological Institute



Fasciculus 44

1984 nyarán a Borókás-árokban feltárt lábnyomos homokkőpad

Fotó: DR. KORDOS L., 1984

Footprint sandstone bed from Borókás-árok in the summer of 1984

Photo: L. KORDOS, 1984