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EVALUATION OF THE SPORE-POLLEN ASSEMBLAGE OF THE BAUXITE IN GÁNT

M. KEDVES—J. RÁKOSY

Institute for Plant Morphology and Systematic
of the Attila József University, Szeged

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Introduction

The first data about the pollen examination of the bauxite in Gánt containing plat relicts were published with description of the zonotrilete spores in 1965. In this paper further results of the examinations upon this sediments are published.

Results

Pteridophyta
Tmesopsida
Psilotales, Psilotaceae. — *Microfoveolatosporis pseudodentatus* W. Kr. 1959 b.
Pteropsida
Leptosporangiatae
Filicales, Polypodiaceae. — Verrucatosporites alienus (R. Pot. 1931 c) Th. and Pf. 1953; Verrucatosporites favus (R. Pot. 1931 c) Th. and Pf. 1953 subfsp. favus; *Polypodiidites secundus* (R. Pot. 1934 b) W. Kr. 1963. subfsp. *secundus.*
Gymnospermatophyta
Coniferopsida
Pinales, Abietaceae, Pinoideae. — *Pinus haploxylon* type — *Pityosporites microalatus* (R. Pot. 1931 b) Th. and Pf. 1953; *Pinus diploxylon* type — *Pityosporites labdacus* (R. Pot. 1931 b) Th. and Pf. 1953.
Abietoideae v. *Laricoideae* — ? *Pseudotsuga*, ? *Larix* — *Inaperturopollenites* cf. *magnus* (R. Pot. 1934 b) Th. and Pf. 1953. (The forms under this name represent, for the present, a heterogeneous group. Also fresh-water plankton organisms may, possibly, have a role besides pollens of conifera, and even spores of *Equisetum* can conditionally be thought of).

Taxodiaceae v. *Cupressaceae.* — *Inaperturopollenites* cf. *dubius* (R. Pot. and Ven. 1934) Th. and Pf. 1953.

Angiospermatophyta

Dicotyledonopsida

Polycarpicae-Rubiales

? *Magnoliales,* ? *Magnoliaceae.* — *Ovoidites* cf. *microligneolus* (R. Pot. 1931 d) W. Kr. 1959 b. It is an extremely problematic type of microfossils, frequently mentioned in literature as a vegetal or animal planktonic or benthonic organism.

Myrtales, Nyssaceae v. Mastixiaceae. — *Tricolporopollenites* cf. *kruschi* (R. Pot. 1934 b) Th. and Pf. 1953.

Caryophyllales — *Monochlamydeae*

Fagales, Fagaceae. — *Tricolporopollenites oviformis.* (R. Pot. 1931 a) Th. and Pf. 1953.

Juglandales, Juglandaceae — *Engelhardtia* — *Triatriopollenites* fsp. Cf. *Juglandaceae.* — *Subtriporopollenites* fsp.

Monocotyledonopsida

Monocolpopollenites fsp.

Apart from spores and pollens, we have observed the relicts of several planktonic organisms.

Discussion

From the bauxite patterns examined, the bauxite with vegetal remains was the richest in microscopic relicts. In the course of our investigations, we could not observe any fossils demonstrating salt-water conditions.

In comparison with the palynological results of bauxite sediments or those covering it, known so far from the area of Transdanubia, the following can be ascertained:

1. The bauxite overlying of Halimba (H. Deák 1957, 1960, Kedves 1961 c), the oldest one, belongs, even on the basis of recent comparative investigations (Kedves 1967 a), into the lower part of the Cuisian.

2. The bauxite overlying of Iszkaszentgyörgy (Kedves 1962 d, f, 1965 e, Kedves and Endrédi 1965) is a younger formation than the former one, but it still represents the upper part of the lower Eocene.

3. We consider the spore-pollen assemblage of type Gánt a younger formation than the former ones. This is supported by the following:

a) A complete lack of the polyanulate myricoid, the tri- and subtriporate pollens of older type, the *Interpollis* fgen., generally of the *Normapolles.*

b) Similarly, there is a lack in tropical elements *(Palmae, Schizaeaceae,* etc.) which were characteristic of the lower part of the middle Eocene in this country.

c) In the spore pollen assemblage in Gát the pollens of air-pocket type are of considerable number: that is — as we know so far — characteristic of the upper part of Eocene or the top of the middle Eocene.

Thus, in contradiction to the low Eocene bauxite in Halimba and Iszkaszentgyörgy, the examined material is, first of all, referring to the upper Eocene period.

Summary

Some palynological investigations have been carried out on the bauxite layers with vegetal relicts in Gánt.

1. In the relict assemblage examined the elements of subtropical character are dominating but also the number of taxons demonstrating a climate of temperate zones is considerable.

2. On the basis of the spore-pollen data, the patterns examined belong to the geological early upper Eocene or to the upmost part of the middle Eocene, being by no means older than those. On the basis of the palynological investigation of the bauxite layers, resp. the coverage of them, known so far, we are not informed about the formation of bauxite in the upper Cretaceous period (cf. H. Deák 1957, 1960).

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Address of the authors:

Dr. M. Kedves
J. Rákosy
Botanical Institute of the A. J. University, Szeged, Hungary