

## THE RECYCLED SPOROMORPHS OF THE BORING NO. NY-1 IN KECSKEMÉT

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### Introduction

The boring under examination was surrounded at its deepest site by Sarmatian and Tortonian layers proved by the fauna, and it has come to a stop in a depth of 2127 m in Tortonian layers. According to B. Molnár's oral information, geologists suppose on petrological basis a recycling of an age older than the Tertiary period, and consider the whole material to be possibly reworked. As referred to by Wilson (1964), and as expressed in a former publication by us (Kedves, Endrédi and Szalay 1966), in the Hungarian relations, the palynological method is highly suitable to illuminate the conditions of reworking, therefore we have considered useful to investigate the layers in question. Obtaining the material for our research work from Dr. Mária Miháلتz-Faragó, we wish to express her our thanks for her so kind help in this way, as well.

### Material and Method

On the basis of geological period determination, we have investigated one sample from the Sarmatian layers (1931,0—1933,0 m), and four ones from the torton layers (1968,0—1970,0; 1005,5—2004,5; 2096,0—2098,0; 2121,0—2125,0 m).

### Results

The samples examined are generally rich in sporomorphs, referring to the middle Tertiary period. The number of the sporomorphs recycled is small. As the assemblage of the reworked forms is by and large the same in every sample, the demonstrated secondary sporomorphs can be summarized as follows:

- Zonalasporites* fsp.<sub>1</sub>  
*Zonalasporites* fsp.<sub>2</sub>  
*Ovalipollis* cf. *rarus* Klaus 1960  
*Pityosporites* cf. *illustris* Leschik 1955  
*Pityosporites devolvens* Leschik 1955  
*Lunatisporites acutus* Leschik 1955  
*Vitreisporites* fsp.  
*Parcisporites* fsp.  
*Platysaccus* fsp.  
*Scopulisporites* fsp.<sub>1</sub>  
*Scopulisporites* fsp.<sub>2</sub>  
*Tricolpites (Eucomiidites) troedssonii* Erdtman 1947.

Two *Hystriichosphaeridae* types (A, B) are referring to saltwater origin, and also a *Peridinium* sp. of a probable sea ecology has been observed.

### Discussion

About Hungary there are but comparatively few paleo- and mezo-zoic palynological publications. Therefore, the age of being reworked can be indicated only approximately on the basis of the sporomorphs recycled, being anyway very few in number.

The observed secondary assemblage is separated well from the assemblages arising from the period between the upper Permian and the upper part of middle Triassic published from boring No. 1. Mesteri (Juhász, Kóváry, Kriván-Hutter and Majzon 1964) and the upper part of the middle Trias period, as well from the Permian-Triassic assemblage in Solymár (Kedves 1965 c). It is difficult, as well, to identify it with the younger assemblage of the Triassic period, first of all with the spore-pollen assemblage described by Venkatachala and Góczán (1964) from the Bakony mountain. In connection with this, the complete lack of the families of the *Operculati* group (*Classopollis*, *Circulina*, *Granuloperculatipollis*) is conspicuous. It is interesting that the most types are similar to the assemblage from the Keuper period published by Kräusel and Leschik (1955). On the otherhand, it is separated well from the sporomorph assemblage from the Liassic period known from the publications of Góczán (1956) and Bóna (1963).

On the basis of a comparison with the forms of Kräusel and Leschik (1955), the age of recycling can be fixed in the Trias, more close in the upper part of Trias. It differs from the sporomorph assemblage recycled and formerly published from the area of the Great Hungarian Plain (Kedves, Endrédi and Szeley 1966) first of all by the fact that, in the present case, the recycling is simple while in the borings at Macs, Kemece, Szentes and Makó a complex recycling could be ascertained. The lack of spores, unaccustomed opposite to the observations so far, is very interesting and obvious. From this fact the conclusion can be drawn that the transferred sediment was far from

the zone of the littoral vegetation. A comparison with the transferred forms, discussed in the former paper, from the Triassic period is rather difficult because of the poverty of the assemblage, it is similar anyhow, in some degree, for the most part to the type known from the surroundings of Macs and Kemece.

### Summary

The recycled spore pollen assemblage of five samples from the lower site of the boring No.Ny.-1 in Kecskemét has been investigated. On the basis of our results, it can be ascertained as follows:

1. The recycling is simple, only sporomorphs from the Triassic period could be observed among the sedimental autochthonous sporomorphs.

2. From the lack of spores in the secondary sporomorphs the conclusion can be drawn that the zone of the transferred sediment was far from the coastal line.

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