

SPORE-POLLEN INVESTIGATIONS ON THE PALEOCENE SEDIMENTS OF OICHING

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Introduction

A knowledge of the spore-pollen assemblage of the sediments of Palaeocene age is of great importance for appraising the spore-pollen assemblages, of the Tertiary period and, in connection with them, the development of the Tertiary flora of modern character, from the point of view of evolution. In this respect, the Danian and Monsian stages are particularly important. About the spore-pollen composition of the localities of these stages there wasn't, unfortunately, published anything, so far; and even, on the basis of the observations till now, the stratum typicum of the Danian stage does not contain any sporomorphs (KEDVES, 1967a). In addition to them, also the sporomorph data of the lower Palaeocene sediments of the other localities are worth while being studied as relatively few documentations are known about that period. That made me publish in a short paper the palynological observations on the Palaeocene sediments of Oiching.

Materials and Methods

The samples investigated have been collected by Mrs. Báldi. The material has been placed at my disposal at first hand by DR. TIBOR KECSKEMÉTI. I am deeply indebted to him for his kind support. A lot of samples were investigated from the Danian, Monsian and Thanetian stages. From the material at my disposal, the Monsian sample has given, so far, sporomorphs of enough quantity. The aim of the present publication is first of all to draw attention to a further systematic palynological investigation of these localities. Therefore, I am publishing here but a partial documentation about the sporomorphs observed.

Results

1. From the Pteridophyte spores the following taxons have occurred: *Schizaeaceae*, cf. *Lygodium* — *Leiotriletes dorogensis* (KDS. 1960) KDS. 1961 —, *Anemia* — *Cicatricosisporites dorogensis* (R. POT. and GELL., 1933) KDS. 1961 subfsp. *minor* Kds. 1961 fvar. *triplan* KDS. 1961, *Cicatricosisporites* sp., *Schizaeaceae* v. *Gleicheniaceae* — *Triplanosporites* cf. *sinuosus* PF. 1953, *Schizaeaceae* — *Trilites* sp., *Pteri-*

daceae — *Polypodiaceoisporites* fsp.₁₋₂, *Polypodiaceae* — *Laevigatosporites* fsp., *Osmundaceae* — *Baculatisporites* fsp., *Selaginellaceae* — *Echinatisporis* fsp. The following spores are unknown in view of their nearer botanical affinities: *Leiotriletes* fsp.₁₋₂, *Triletes* fgen. et fsp. indet.

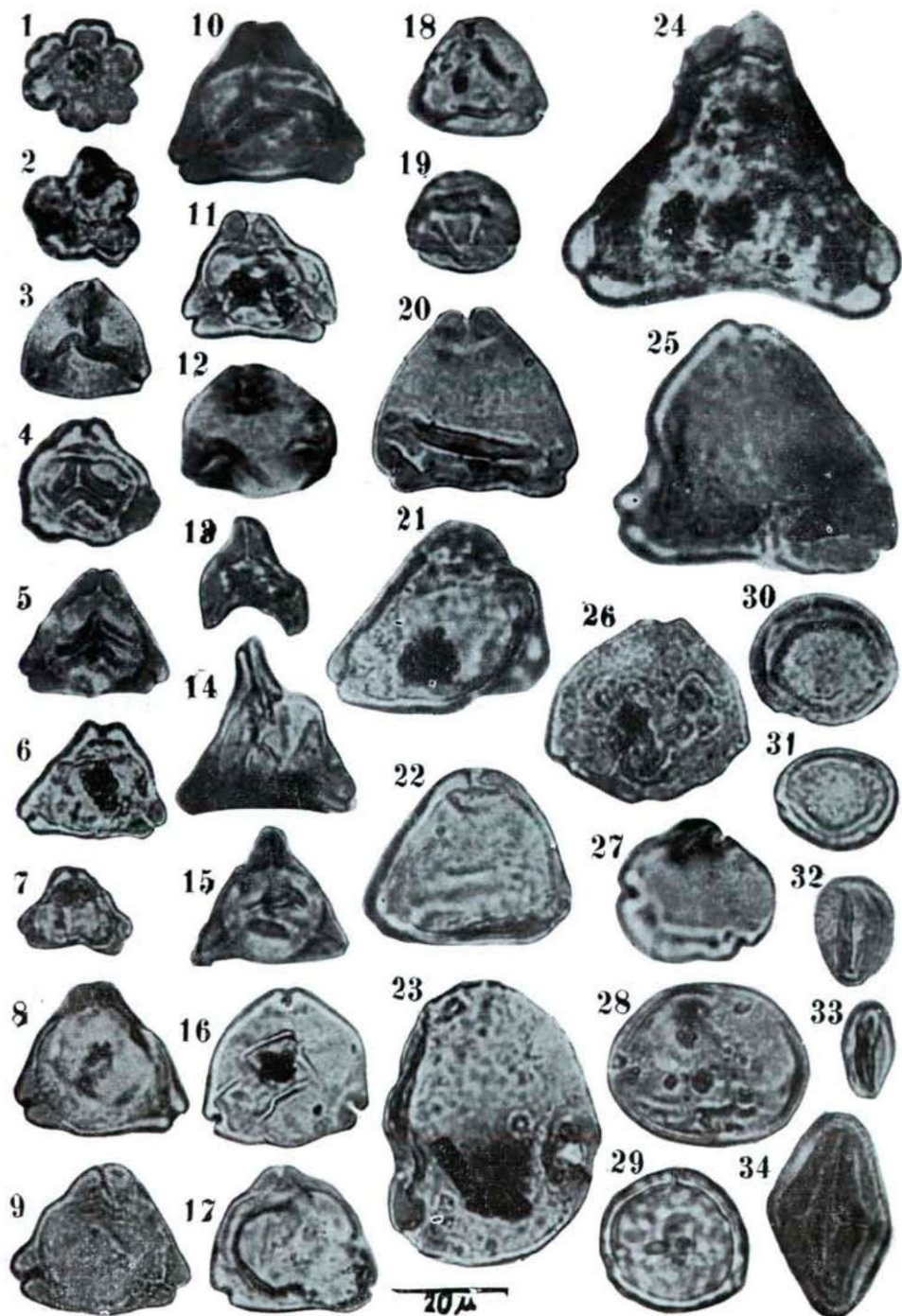
2. The *Gymnospermatophytae* are represented by pollen grains of *Pinus haploxy-lon* type, the *Ephedraceae* by another pollen type — *Ephedripites* (*Ephedripites*) fsp.

3. From the point of view of the age determination, the most important ones are the *Angiospermatophyte* pollens of which the following may be accentuated: *Stephanoporopollenites hexaradiatus* (Thg. 1940) Th. and Pf. 1953 subfsp. *hexaradiatus* (Plate I, 1), *Stephanoporopollenites pentaradiatus* W. Kr. 1961 (Plate I, 2), cf. *Sporopollis* aut *Plicapollis* fsp. (Plate I, 3) *Plicapollis* fsp. ex group *pseudoexcelsus* (Plate I, 4), *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *turgidus* Pf. 1953 (Plate I, 5, 6), *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *minor* Pf. 1953. (Plate I, 7) *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *semiturgidus* Pf. 1953 (Plate I, 8, 9), *Plicapollis* fsp. (Plate I, 10), *Trudopollis*

Plate I

- Fig. 1. *Stephanoporopollenites hexaradiatus* (Thg. 1940) Th. and Pf. 1953 subfsp. *hexaradiatus*.
 Fig. 2. *Stephanoporopollenites pentaradiatus* W. Kr. 1961.
 Fig. 3. Cf. *Sporopollis* aut *Plicapollis* fsp.
 Fig. 4. *Plicapollis* fsp. ex group *pseudoexcelsus*.
 Fig. 5. *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *turgidus* Pf. 1953.
 Fig. 6. *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *turgidus* Pf. 1953.
 Fig. 7. *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *minor* Pf. 1953.
 Fig. 8. *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *semiturgidus* Pf. 1953.
 Fig. 9. *Plicapollis pseudoexcelsus* (W. Kr. 1958) W. Kr. 1961 subfsp. *semiturgidus* Pf. 1953.
 Fig. 10. *Plicapollis* fsp.
 Fig. 11. *Trudopollis* fsp.
 Fig. 12. *Oculopollis* fsp.
 Fig. 13. Cf. *Nudopollis* fsp.
 Fig. 14. *Nudopollis endangulatus* (Pf. 1953a) Pf. 1953b.
 Fig. 15. *Nudopollis terminalis* (Pf. and Th 1953) subfsp. *hastiformis* Pf. 1953a.
 Fig. 16. *Triatriopollenites* fsp.₁.
 Fig. 17. *Triatriopollenites* fsp.₁.
 Fig. 18. *Triatriopollenites* fsp.₂.
 Fig. 19. Cf. *Platycarya*.
 Fig. 20. *Triatriopollenites roboratus* Pf. 1953a.
 Fig. 21. *Triatriopollenites roboratus* Pf. 1953a.
 Fig. 22. *Triatriopollenites* fsp.₃.
 Fig. 23. *Triatriopollenites roboratus* Pf. 1953a.
 Fig. 24. *Triatriopollenites pseudovestibulum* Pf. 1953a.
 Fig. 25. *Triatriopollenites arboratus* Pf. 1953a.
 Fig. 26. *Triporopollenites robustus* Pf. 1953a.
 Fig. 27. *Intratriporopollenites* cf. *ceciliensis* W. Kr. 1961.
 Fig. 28. *Caryopollenites* cf. *circulus* (Pf. 1953a) W. Kr. 1961.
 Fig. 29. *Triporopollenites* cf. *vadosus* Pf. 1953a.
 Fig. 30. *Subtriporopollenites constans* Pf. 1953a. subfsp. *constans*.
 Fig. 31. *Subtriporopollenites constans* Pf. 1953a. subfsp. *constans*.
 Fig. 32. *Tricolporopollenites* fsp.₁.
 Fig. 33. *Tricolporopollenites* cf. *oviformis* (R. Pot. 1931).
 Fig. 34. *Tricolporopollenites* fsp.₂.

Plate I



fsp. (Plate I, 11), *Oculopollis* fsp. (Plate I, 12), cf. *Nudopollis* fsp. (Plate I, 13), *Nudopollis endangulatus* (Pf. 1953a) Pf. 1953b (Plate I, 14), *Nudopollis terminalis* (Pf. and TH. 1953) Pf. 1953b subfsp. *hastaformis* Pf. 1953a (Plate I, 15), *Triatriopollenites* fsp.₁ (Plate I, 16, 17), *Triatriopollenites* fsp.₂ (Plate I, 18), cf. *Platycarya* (Plate I, 19), *Triatriopollenites roboratus* Pf. 1953a (Plate I, 20, 21, 23), *Triatriopollenites* fsp.₃ (Plate I, 22), *Triatriopollenites pseudovestibulum* Pf. 5953a (Plate I, 24), *Triatriopollenites arboratus* Pf. 1953a (Plate I, 25), *Tripoporollenites robustus* Pf. 1953a (Plate I, 26), *Intratriporopollenites* cf. *ceciliensis* W. KR. 1961 (Plate I, 27), *Caryapollenites* cf. *circulus* (Pf. 1953) W. KR. 1961 (Plate I, 28), *Tripoporollenites* cf. *vadosus* Pf. 1953a (Plate I, 29), *Subtripoporopollenites constans* Pf. 1953 a subfsp. *constans* (Plate I, 30, 31), *Tricolporopollenites* cf. *oviformis* (R. POT. 5931) (Plate I, 33), *Tricolporopollenites* fsp.₁₋₂ (Plate I, 32, 34).

Discussion of results

From the sporomorphs published, the occurrence of genus *Stephanoporopollenites* has a particular importance as regards the determination of age, first of all at "old palaeocene" species that are different e. g. from those observed in the spore—pollen assemblage belonging to the Thanetian stage of Menat (KEDVES 1967 b). From this point of view, *Triatriopollenites pseudovestibulum* is to be emphasized, too, described on the basis of Wehmigen's Danian sediments or of the Palaeocene period.

Summary

We have carried out investigations on Oiching's Danian, Monsian and Thanetian sediments. From the samples observed, we have succeeded in observing sporomorphs belonging to the Monsian stage. Although the samples contained but a low number of forms that were, here and there, damaged, too, we could demonstrate in the spore-pollen assemblage the most important types that are characteristic of the lower Palaeocene sediments.

References

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