

PALAEOBOTANIC CHARACTERISTICS OF THE FRESH-WATER
PLIOCENE DEPOSITS AT KROŚCIENKO, PIENINY MOUNTAINS

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The palaeobotanic characteristics of the fresh-water Pliocene deposits from Krościenko was given by W. Szafer (1946-7, 1950, 1954). The fossil flora is represented here by 58 families, 106 genera and about 150

plant species. The extinct forms are represented by 33 per cent of the whole assemblage, and the so-called „exotic” forms — by 66.2 per cent. The most interesting fossil plant found at Krościenko belongs to the extinct representative of the family *Podostemonaceae*: *Podostemonites corollatus* n. gen. et sp. S z a f e r.

The following geographical elements are recognized in the Pliocene flora of Krościenko:

1. East Asiatic element	—	37.1 per cent
2. East American element	—	18.5 per cent
3. Middle-European and West Asiatic element	—	17.7 per cent
4. Eurasiatic element	—	7.1 per cent
5. Balkanian-, Caucasian-, and Transcaucasian element	—	7.1 per cent
6. Holarctic element	—	6.3 per cent
7. South European and West Asiatic element	—	3.5 per cent
8. Cosmopolitic element	—	2.7 per cent
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		100.0 per cent

The following ecologic groups may be distinguished:

1. Representatives of higher mountaineous stage, mainly conifers (*Picea rubra*, *P. Glehnii*, *P. aff. excelsa*, *Tsuga europaea*, *T. caroliniana*, *Abies cf. alba*).

2. Representatives of lower mountaineous forest zone (*Liriodendron*, *Carpinus betulus*, *C. cf. Tschonoskii*, *C. laxifolia*, *Fagus decurrens*, *F. ferruginea* etc.).

3. Representatives of forests growing still lower down, with trees and bushes of the warmer zone (*Magnolia*, *Acer palmatum*, *A. japonicum*, *Ostrya carpinifolia*, *Staphylea*, *Styrax* etc.), as well as with lians (*Vitis*, *Actinidia*, *Trichosanthes* etc.).

4. Representatives of forests growing on water-saturated soil close to a lake (*Nyssa silvatica*, *Pterocarya*, *Carya*, *Liquidambar*, *Alnus* etc.).

5. Representatives of water reservoir and bog vegetation (*Nuphar*, *Euryale*, *Potamogeton*, *Trapa*, *Dulichium*, *Sparganium* etc.).

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