

PLEISTOCENE FLORAS OF POLAND

by
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Five profiles from different regions of Poland were investigated:

The profile from Przasnysz (50 km north of Warsaw) represents sediments of a very controversial stratigraphical position. For the first time they have been investigated by means of pollen analysis by Selle (9), who referred them to the Holsteinian Interglacial (=Mazovian). Różycki (8) situated them below the Cracovian Glaciation (=South Polish Gl.). He named this unit Przasnysz Interglacial and correlated it with the Cromerian.

Later, a new core was obtained from this site. The sequence of pollen zones distinguished in this profile (4) has features characteristic of the Mazovian Interglacial (=Holsteinian). There are the following pollen assemblage zones: *Pinus-Picea-Alnus*, *Picea-Alnus*, *Carpinus-Abies-Quercus* and *Pinus-Betula*-NAP. The first cold oscillation of the following glaciation is represented by the *Cyperaceae-Gramineae-Betula nana* zone.

The results are difficult to interpret because of the presence of Tertiary spore-morphs (mostly redeposited) through the whole profile.

According to present geological interpretation these sediments are situated within two older South Polish Glaciations called Nida and San (2,3) or within Narew and San Glaciations (7). Three Tl dates are known: 686 pm \pm 88, 634 pm \pm 76, 615 \pm 74 ka B. P.

The controversial stratigraphical position of these sediments calls for a precise comparison of the pollen sequence from Przasnysz with other Mazovian pollen sequences in Poland and also with the pollen sequence of the youngest interglacial in the Cromerian complex in Holland which is similar to the Holsteinian.

The profile from Dąbrówka near Jasło (SE Poland) revealed the first Eemian Interglacial in the Polish Carpathians (6). The pollen succession represents a decline of the Late Glacial of the Middle Polish Glaciation s. l. (=Saalian s. l.) with extremely high values of *Selaginella selaginoides* (47% in relation to the AP + NAP sum) and the older part of the Eemian up to the climatic optimum. *Corylus* values reach 53%. This is a preliminary investigation and new coring is expected.

The Jasło-Bryły locality in the Wisłoka Valley (1) revealed very interesting data for the problems connected with the Middle Vistulian. The pollen assemblage obtained from the bottom part of the profile suggested a parkland landscape with rather frequent *Pinus cembra* and *Larix*. In the upper part of the profile the occurrence of *Pinus cembra* and *Larix* is a little lower and herbaceous pollen values are higher indicating more open vegetation.

The pollen sequence from this profile is very similar to that which has been discovered at Brzeźnica situated also in the Wisłoka Valley near Dębica (5). Sediments from Brzeźnica have been referred to the Hengelo Interstadial based on the C^{14} date 35 965 pm \pm 1 500 B. P. received from the top part of organic deposits.

Radiocarbon dates from the upper part of the Jasło-Bryły profile are approximate to those from Brzeźnica. The bottom part of the peaty muds appeared, however, to be older than 45 000 yrs B. P.

Below this layer there is still undated gyttja. These data suggest that a parkland landscape of the forest-tundra type with *Pinus cembra* and *Larix* could have persisted in this region of Poland during the whole Middle Vistulian period.

A pollen diagram from Kryspinów near Cracow reveals the cold stage assemblage with 90–98% herbaceous pollen. It reflects a treeless landscape with a high proportion of *Betula nana*. The great variety of taxa from various habitats points to a mosaic composition of vegetation in the immediate surroundings of the locality. Radiocarbon dating places this sediment in the upper part of the Middle Vistulian. Investigations are being continued.

A small series of samples taken from deposits at Ściejowice in the Vistula Valley near Cracow represents the glacial type of pollen assemblages most probably contaminated in the bottom part by redeposited interglacial sediments. Radiocarbon dates point to the Middle Vistulian. These are preliminary results, investigations will be continued.

References

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