

LATE CRETACEOUS — EARLY TERTIARY FLORAS OF KING GEORGE ISLAND, WEST ANTARCTICA

by

Ewa ZASTAWNIAK

The investigations are carried out on the materials from several localities on the King George Island, South Shetland Islands, West Antarctica which were collected during the Polish Antarctic Expeditions in the years 1977-1985. Plant remains preserved as impressions of leaves, shoots, sometimes also seeds, occur in the Late Cretaceous and Palaeogene sediments of the King George Supergroup. This supergroup is composed of 2 500 m thick sediments predominantly andesitic and basaltic lavas alternating with tuffs, tuffities, shales, conglomerates etc. and with numerous plant bearing horizons. The stratigraphic position of most of them has been established on the basis of K-Ar dating of associated volcanics. The hitherto obtained results allow us to outline the vegetation history of the Antarctic Peninsula sector from the Late Cretaceous to Neogene. The most interesting results are the first documentation of the Late Cretaceous angiosperms, the occurrence of the *Nothofagus* leaves in this period on the South Hemisphere and the statement that the *Nothofagus-Podocarpaceae* palaeoassemblage from the Oligocene/Miocene boundary of West Antarctica (Point Hennequin flora) is of interglacial age.

References

1. Zastawniak, E. 1981. Tertiary leaf flora from the Point Hennequin Group of King George Island (South Shetland Islands, Antarctica). Preliminary report. Stud. Geol. Polon. 72:97-108.
2. Zastawniak, E., Wrona, R., Gaździcki, A., Birkenmajer, K. 1985. Plant remains from the top part of the Point Hennequin Group (Upper Oligocene), King George Island (South Shetland Islands, Antarctica). Stud. Geol. Polon. 81:143-164.
3. Birkenmajer, K., Zastawniak, E. 1986. Plant remains of the Dufayel Island Group (Early Tertiary?), King George Island, South Shetland Islands (West Antarctica). Acta Palaeobot. 26:33-54.
4. Tokarski, A. K., Danowski, W., Zastawniak, E. 1987. On the age of fossil flora from Barton Peninsula, King George Island, West Antarctica. Polish Polar Research 8: 293-302.
5. Birkenmajer, K., Zastawniak, E. (in press). Late Cretaceous-Early Tertiary floras of King George Island, West Antarctica: their stratigraphic distribution and palaeoclimatic significance. Cambridge University Press.
6. Birkenmajer, K., Zastawniak, E. (in press). Late Cretaceous-Early Neogene vegetation history of the Antarctic Peninsula sector, Gondwana break-up and Tertiary glaciations. Bull. Pol. Acad. Sci., Earth Sc.