

THE MOUNTAINS OF SOUTH POLAND

The chapter below comprises data representing two mountain areas of Poland very different in both genesis and landscape.

The Carpathian Mts.

The Carpathians, i.e. the Polish part of the Carpathian Mountains, which include the northern part of the West Carpathians, and a small area of East Carpathians in the south-east, are young, folded mountains consisting almost entirely of Cretaceous and Paleogene flysch sandstones and shales, with only the highest part—the Tatra Mts.—composed of crystalline rocks, Mesozoic limestones, and other sedimentary rocks.

The vegetation of the Carpathians shows vertical zonation closely associated with the climatic zones which are as follows:

1. foothill zone of mixed deciduous forests — temperate warm climate;
2. lower montane forest zone of beechwoods — temperate cool climate;
3. upper montane forest zone of spruce forests — cool climate;
4. dwarf pine zone
5. subalpine and alpine meadow zones } very cool and cold climates.

The altitudinal extent of particular zones varies in different Carpathian ranges, in connection with the absolute altitudes and massiveness of the range, and is also dependent on the climatic characteristics changing from the west eastwards, with the increasing continental influences.

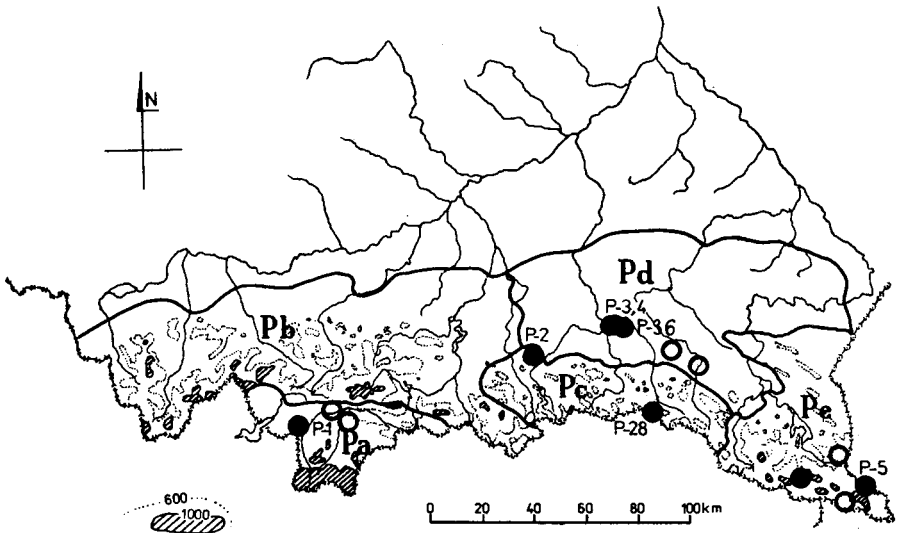


Fig. 1. The subdivision of the Carpathians into the type regions. Black dots — reference sites, open dots — complementary sites

The Carpathians have been subdivided into 5 type regions (Fig. 1) corresponding with the subdivision of Slovakian part of Carpathians being prepared by Rybničková and Rybniček.

P-a Tatra Mts., up to ca. 2500 m a.s.l. with the adjacent Nowy Targ-Orawa Basin at 650 ± 700 m.

P-b Western Beskidy Mts., with the highest elevation of Babia Góra, 1725 m a.s.l., no reference sites studied in this region.

P-c Low Beskidy Mts., at 500—800 m a.s.l. with the occasional elevations up to 997 m a.s.l.

P-d Jasło-Sanok Depression and eastern forelands, at 230 ± 600 m a.s.l.

P-e Bieszczady Mts., up to 1348 m a.s.l., belonging to the East Carpathians and differing from the West Carpathian ranges in geomorphology, hydrology, climate, and vegetation including its zonal pattern.

The region P-c and P-d form together a lowering and contraction in the Carpathian arc, exposed directly to the climatic influences of the Hungarian Plain, and believed to have been in the past an important migration route of plants and animals from the south northwards. This lowering is a transitional area between West and East Carpathians.

The Sudety Mts. (P-f)

Are old mountains, with altitudes 700—1600 m a.s.l., of very differentiated geological structure, with horsts, subsidence depressions and flat tops, supporting extensive peat-bogs. The climate is cooler and wetter, and both climatic and vegetational zones reach here lower altitudes, than in the Carpathian ranges.

The vegetation of Sudety Mts. is much poorer; only 40% of mountain species growing in the Carpathians occur also here, and only a few of Sudety mountain species do not appear in the Carpathians; the same concerns non-montane flora. The forests of lower montane zone (*Fagetum sudeticum*), and upper montane zone (*Piceetum hercynicum*), though having the same dominant trees, differ in floristic composition from the corresponding zonal communities of the Carpathians, and are closer to the forests of the mountains situated further westwards.

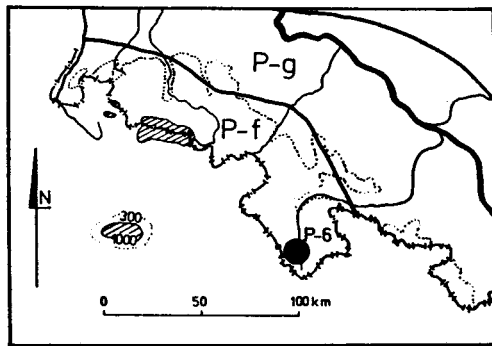


Fig. 2. The Sudety Mts. type region with the indicated reference site (P-6)

It may be assumed that the vegetation of the Sudety Mts. developed to a high extent separately from the Carpathians, and the migration routes of many plants were different, in spite of a common „corridor” of Moravian Gate open to the south.

For all these reasons, in the geobotanical subdivision of Poland the Sudety Mts. have been included to another mountain subprovince of Europe (Hercynic-Sudetic subprovince), than the Carpathian Mts. (Carpathian subprovince).

A considerable part of the Sudety Mts. belong to Czechoslovakia; the Polish part treated as one type region (P-f) (Fig. 2), is represented by 1 reference site; the studies at other sites are in progress.

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