Die Höhenstufung der Vegetation in Südwest-Kreta (Griechenland) entlang eines 2450 m-Transektes

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mit 8 Photos, 14 Figuren und 7 Tabellen

Abstract. The dwarf shrub vegetation of the south-east Lefka Ori (Crete, Greece) is analysed and described along a transect with an altitudinal range of 2450 metres, i.e. from the coast to the highest peaks. The floristic gradient is illustrated by means of a detailed differential relevé table and a summarized constancy table based on 122 sampling sites subjectively arranged along this transect. The species turnover is mainly due to climatic reasons. The temperature and precipitation regime at different altitudes is discussed in detail.

The dwarf shrub vegetation of the lower and medium altitudes up to 1300 m asl (phrygana) includes 70 % therophytes. It is among the ecosystems with the highest species density in Europe. The high-altitude dwarf shrub vegetation is poor in therophytes and dominated by low perennials (hemicyptophytes and chamaephytes), many of which are endemic.

A classification is proposed comprising 8 altitudinal vegetation zones based on the distribution and coverage of the dominant dwarf shrub taxa. Compared to previous zonation systems for Crete which are founded primarily on the hypothetical zonal vegetation and the sparse forest remnants on the island, the zonation presented here is more exact and reflects the predominant real vegetation. As a well-founded broad-scale classification of eastern Mediterranean dwarf shrub vegetation is not available, no attempt has been made to classify syntaxonomically.

The diverse floristic composition of phrygana vegetation is far from being merely a matter of chance but is actually the result of competition, small-scale habitat diversity, and more or less constant land-use impact throughout several thousands of years.

Keywords: altitudinal gradient, altitudinal zonation, Crete, dwarf shrub vegetation, endemicism, phrygana, plant life forms, species density, transect.