

ABSTRACT

The vegetation of Serra de Moixeró and Tosa d'Alp massif (Eastern Iberian Pyrenees)

This work offers an approach to the vegetation of the Pyrenean area mentioned above according to three successive and related levels -vascular flora, plant communities and plant landscape.

The study area stretches over 147.5 square km (projected surface), nearly 70% belonging to Cadí-Moixeró Natural Park. Altitudes rise from 720 m a.s.l. (Southern part) and 1100 m a.s.l. (Northern part) to 2536 m a.s.l. at the top of la Tosa d'Alp. Limestone, the most common substrate, constitutes the highest mountain ranges in the area and also the roughest relief. Slate, carbonated slate, marl, sandstone and different kinds of conglomerate are also present.

The bioclimate of lower parts is axeromeric sub-mediterranean type in the Gaussen scale, with a marked continental factor in the Northern sector (Cerdanya district). High parts have high mountain climates -cold axeric, sub-alpine and alpine types.

Vascular flora collects nearly 1400 taxa at species, subspecies and hybrid levels, the records coming mainly from published data (see SORIANO 1992, 1994 and appendix 3). A global chorological approach reveals several wide groups, their percentage contribution to the local flora being: Eurosiberian (34.7%), Orophytes (20.9%), Pluriregional and Sub-cosmopolite (21.8%), Mediterranean (12.2%), Boreo-alpine (4.9%), Alloctone (2.2%), other groups (3.3%). These data provide evidence for the floristic richness and diversity of the area, which can be related with its wide range of altitudes, physiographic complexity, diversity of substrates and anthropic impacts.

Plant communities have been studied through the Braun-Blanquet method. The local catalogue includes 125 associations and 65 sub-associations belonging to 66 alliances, 40 orders and 21 classes. For each association a set of data are given, concerning floristic composition, structure, variability, local and general distribution, and syntaxonomic remarks. Tables of *rélévés* (or references to former published tables), synthetic tables and data on chorological and biological spectra for almost all the associations are also included.

Two associations and six sub-associations in the catalogue are described for the first time. The status of sub-alliance for *Bromo-Eupatorienion cannabi-ni* and *Laserpitio nestleri-Ranunculenion thorae*, a new combination and four nomenclatural corrections are also proposed (see index). New associations belong to alliance *Genistion lobelii* -*Allio senescentis*-*Stipetum eriocaulis*, an open pasture growing in the rocky ridges of Eastern Pre-Pyrenean ranges, and *Koelerio splendentis-Lavanduletum pyrenaicae*, a chamaephytic pasture of calcareous slopes from the Northern side of Serra de Moixeró. On their hand, new sub-associations belong to classes *Quercu-Fagetea* (2), *Elyno-Seslerietea* (2), *Artemisietea vulgaris* (1) and *Ononido-Rosmarinietea* (1). Moreover, six associations and five sub-associations in the catalogue were previously described by the author and other colleagues on the basis of relevés coming in part from the studied area.

In the chapter devoted to **vegetal landscape**, the spatial arrangement of the communities and the main features of their dynamism (vegetation series) are studied. Altitude becomes the most determinant factor for the landscape zonation. According to Catalan authors five altitudinal belts are recognised -basal, sub-montane, montane, sub-alpine and alpine, each having one or more specific types of potential vegetation. Several phytogeographic units are also proposed, each characterised by specific elements of flora and vegetation, and also related with particular physiographic, lithologic or climate trends. A potential vegetation map and several examples of catenae for the phytogeographic units illustrate this part.

Key words: Eastern Pyrenees, Local monograph, Vascular flora, Plant communities, Phytocoenology, Braun-Blanquet method, Plant landscape.