Zur Kenntnis der Adiantetea-Gesellschaften des Mittelmeerraumes und angrenzender Gebiete

– mit allgemeinen Überlegungen zur ökologischen Skalierung ihrer Standorte und zur Sättigung von Pflanzengesellschaften

von Ulrich Deil, Bayreuth

mit 5 Figuren, 2 Tabellen und 3 Verzeichnissen

Adiantetea communities in the Mediterranean area and in surrounding regions – with general remarks about ecological scales within their habitats and about the saturation of plant communities

Abstract. The class Adiantetea comprises plant communities growing in halfcaves and on cliffs with dripping water. The stands cover small surfaces and are highly dispers. After a description of some new communities from Morocco (Tab. 1, Fig. 1), a state of knowledge report is given for the Mediterranean area, based upon 513 relevés in 74 publications (see register 1). The results are presented in a constancy table (Tab. 2). The locations are documented in two maps (Fig. 2 and 5). Well known are the communities in Spain and Sicily. Although bryophytes are an important component within the Adiantetea, the moss lists are incomplete in many studies.

In Morocco, Adiantetea-communities are concentrated in mountainous regions. Based upon 46 samplings (Tab. 1, Fig. 1), the following associations can be recognized: The Adianto-Hypericetum naudiniani colonizes schisty slopes in the middle altitudes of the Rif Mountains and of the High Atlas. Besides the common subtype, the subassociation philonotidetosum fontanae is found along water courses in the sprinkling zone. Limestone cliffs with drizzling water in the Middle Atlas are covered with the Adianto-Hypericetum pubescentis. Besides the typical form, known also from the Betic mountains, the subass. cratoneuretosum filicini is described as new. The Trachelio-Adiantetum, a community of Westmediterranean-Canarian distribution, is recorded for Morocco. It is concentrated in the thermo- and mesomediterranean bioclimatic belt. Apart from its typical form, a Didymodon tophaceus-phase develops on thick, intermittent drying tufflayers. Late succession stages of the Trachelio-Adiantetum in the Tazzekka-region are differentiated by Hypericum metroi. The basal community Eucladio-Adiantetum is widespread in Morocco.

A syntaxonomical review of all published communities from the Mediterranean area shows, that their authors use different scales of ecological homogeneity. This is explained in a general scheme (Fig. 3) and a concrete cliff-halfcave-catena from the Yemeny escarpment (Fig. 4). The classification proposed here (Reg. 3) is based upon the combination of the vascular plant species and their sociological behaviour in the Mediterranean region. More subtle processes in the bryophyte layer are typified as subassociations respectively phases.

The class Adiantetea is floristically and ecologically clearly separated from other vegetation units. The transitions to the Asplenietea, the Parietarietea and the Montio-Cardaminetea are discussed, some hints are given to equivalent units in other continents.