Patterns of *Isoeto-Nanojuncetea* communities in Iberian Peninsula

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Abstract

Questions: What are the main community types of *Isoteo–Nanojuncetea* class in the Iberian Peninsula? How does current phytosociological classification match with classified community types? Which are their main diagnostic species? Which communities correspond natural habitats listed under Habitats Directive?

Location: Iberian Peninsula (c.a. 582 000 Km^2).

Methods: An initial data set of 786 relevés assigned to the *Isoeto-Nanojuncetea* was compiled and analyzed with Modified TWINSPAN, checking crispness of classification. Plant community types were recognized and diagnostic species were obtained by fidelity through the coefficient *Phi*.

Results: The classification revealed a clear differentiation of *Isoetetalia* and *Nanocyperetalia* orders. We obtain 34 clusters which differentiate communities according to the moisture gradient and biogeographic factors. Seven alliances were clearly recognized: *Isoetion*, *Menthion cervinae*, *Agrostion pourretii* and *Cicendion* (from *Isoetalia*); *Nanocyperion flavescentis*, *Verbenion supinae* and *Lythrion tribacteati* (from *Nanocyperetalia*). The *Cicendion* and *Lythrion tribacteati* are clearly separated from all the other alliances. Diagnostic species were obtained for the well-represented community types. Most of these communities correspond to habitats 3110, 3120, 3130 and 3170 priority habitat under the Habitat Directive.

Conclusions: Despite some groups of communities reveal some biogeographic separation, traditional classification of other communities could be simplified. We suggest the use of diagnostic species for clear differentiation between habitat types. Diagnostic species can be used to unequivocally identify natural habitat types in a practical way.

Keywords: Classification, Diagnostic species, Ephemeral Wetlands, Habitat types, Syntaxonomy.