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Notas do Herbário da Estação Florestal Nacional (LISFA): Fasc. XXIV

∫1. De Novarum Flora Lusitana Commentarii - VII

In memoriam A. R. Pinto da Silva (1912 – 1992).

21. New interesting mosses occurring on moist calcareous cliffs in West Coast of for Portugal

In a study for the characterization of vegetation related of the *Adiantetea* class, growing on the sea cliffs of SW Alentejo (the lower coastline between Sines and São Vicente as well as north of Lisbon), was discovered in different places an uncommon system of water circulation allowing water flow non-stop, that ensures the development and survival of large carpets of hydrophytic mosses included in a particular vascular vegetation.

From the point of view of bryophyte vegetation, their originality is conveyed by the presence of the *Eurhychium speciosum* (Brid.) Jur, *Didymodon spadiceus* (Mitt.) Limpr. and *Eucladium verticillatum* (With.) Bruch & Schimp. var. *angustifolium* Lindb., these two last taxa corresponding to the first known in Portugal.

Apart from the indicated taxa in the inventories published by NETO *et al.* (2006), characteristic species of the class *Scheuchzerio-Caricetea fuscae* were also found, although their appearance in the bryophyte Adiantetea communities, that is not at all usual. So, according to this study, this new community on sea cliffs of western Portugal have really an original geomorphic, hydrological and floristic nature carry out to in indescribed community in the *Adiantetea* class (*Didymodon spadici-Adiantetum capilli-veneris*).

On the other hand, taking into account the presence of *Eucladium verticillatum* in most of the inventories confers to this community some similarities with the associations described by DÍAZ *et al.* (1982) for the Iberian Peninsula's southeastern mountains. However, both are synecologically and chorologically distinct. Although the colonies observed in the majority of the inventories correspond not the type of *Eucladium verticillatum* but to var. *angustifolium*, a taxa which has not been reported until now in Portugal.

In the same way, it should be mentioned that the bryophytes found in these habitats are much more frequent in northern regions with temperate or boreal climates, such as *Didymodon spadiceus* (DIERßEN, 2001). *Eurhynchium speciosum* as well as *Bryum donianum* Grev. and *Bryum pseudotriquetrum* (Hedw.) P. Gaertn., B. Mey. & Scherb., present in other inventories, are mosses with temperate affinities (DÜLL, 1984, 1985) but also characteristic in acidophytic to subneutrophitic substrates (DIERßEN, 2001).

The material studied is incorporated in LISU herbarium (National Bryophyte collection).

***Didymodon spadiceus* (Mitt.) Limpr.**

It is a moss not reported as a Portuguese species until now. These new

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localities, and the know Iberian distribution (JIMÉNEZ, 2004), more in mountain areas in the north and north-eastern part of the Peninsula, suggests that it may be found in some more southern and in less elevated regions of coastal Atlantic areas.

Studied material

Estremadura: S. Julião, Sul da Ericeira, escorrência permanente ao longo da arriba de arenitos calcários, com água de origem subterrânea, 29SMD60, 2004, Silva Neto (LISU 195007).

Baixo Alentejo: a Sul de Porto Covo, Praia do Malhão, excorrência permanente ao longo da arriba de xisto, com água de origem subterrânea, 29SNB18, 2004, Silva Neto (LISU 195002); Nova de Milfontes, Almograve, arriba de xisto, 29SNB16, 8 m, 2004, Silva Neto (LISU 208192); Vila Nova de Milfontes, Porto das Barcas, arriba de xisto com intercalações de quartzitos, 29SNB17, 2004, Silva Neto (LISU 208103).

***Eucladium verticillatum* (With.) Bruch & Schimp. var. *angustifolium* Lindb.**

Regarding to this variety, there are very few records to Iberian Peninsula, however (CASARES, 1932) specify that is also a frequent variety in Spain. It is not generally recognized as a distinct taxa, however we think that it is doubtless under-recorded in Iberian region as well as in the rest of Europe. Nevertheless, for the new Iberian Flora (EDERRA, 2004), have observed only one specimen. We consider here an independent variety perhaps restricted to coastal sites of Portugal.

Studied material

var. *angustifolium*

Baixo Alentejo: Sul de Porto Covo, Praia do Malhão, escorrência permanente ao longo da arriba de xisto, água de origem subterrânea, 29SNB18, 2004, Silva Neto (LISU 195005); Vila Nova de Milfontes, Almograve, arriba de xisto, 29SNB16, 8 m, 2004, Silva Neto (LISU 208106); Vila Nova de Milfontes, Porto das Barcas, arriba de xisto com intercalações de quartzitos, 29SNB17, 2004 Silva Neto (LISU 208105).

var. *verticillatum*

Estremadura: S. Julião a Sul da Ericeira, escorrência permanente ao longo da arriba de arenitos cálcarios, água de origem subterrânea, 29SMD60, 2004, Silva Neto (LISU 195008).

Baixo Alentejo: Sul de Porto Covo, Praia do Malhão, escorrência permanente ao longo da arriba de xisto, água de origem subterrânea, 29SNB18, 2004, Silva Neto (LISU 195006); Porto Covo, escorrência permanente ao longo da arriba de xisto, 29SNB19, 2004, Silva Neto (LISU 195011); Porto Covo, Praia do Salto, arriba de xisto, 29SNB18, 7 m, 2004, Silva Neto (LISU 208104).

***Eurhynchium speciosum* (Brid.) Jur.**

This moss is a temperate element (DÜLL, 1985), not rare in Portugal but occurring in restricted areas, more frequent in Central e Southern part of the country (SÉRGIO e CARVALHO, 2003). In Britain and Ireland according HILL *et al*. (1994) this species at northern edge of its range is confined to sea-cliffs, at wet rock cervices, on wet and or in dripping

habitats, as it was found in the majority of these Portuguese inventories.

Studied material

Baixo Alentejo: Sul de Porto Covo, Praia do Malhão, escorrência permanente ao longo da arriba de xisto, água de origem subterrânea, 29SNB18, 2004, Silva Neto (LISU 195004); Porto Covo, escorrência permanente ao longo da arriba de xisto, 29SNB19, 2004, Silva Neto (LISU 195010); Porto Covo, Praia do Salto, arriba de xisto, 29SNB18, 7 m, 2004, Silva Neto (LISU 208107); Vila Nova de Milfontes, Almograve, arriba de xisto, 29SNB16, 8 m, 2004, Silva Neto (LISU 208108); Vila Nova de Milfontes, Porto das Barcas, arriba de xisto com intercalações de quartzitos, 29SNB17, 2004 Silva Neto (LISU 208109).

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