25. *CARDUNCELLUS CUATRECASASII* G. LÓPEZ (ASTERACEAE) AND *ERYNGIUM AQUIFOLIUM* CAV. (APIACEAE), TWO NEW SPECIES TO THE PORTUGUESE FLORA

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Carduncellus cuatrecasasii G. López (Asteraceae) y Eryngium aquifolium Cav. (Apiaceae), dos nuevas especies para la flora de Portugal

Key words. *Carduncellus*, Asteraceae, *Eryngium*, Apiaceae, distribution, Portugal

Palavras-chave. *Carduncellus*, Asteraceae, *Eryngium*, Apiaceae, distribuição, Portugal

Carduncellus cuatrecasasii G. López is a hemicryptophyte that inhabits semi-natural habitats like roadside verges, slopes and grasslands, in dry and slightly nitrified sites, in basic soils (Blanca & Suárez Santiago, 2009). It is endemic to the South of Spain, being circumscribed to the Baetic mountains (Jaén region) on the East, and sierras de Olivenza (Badajoz region) on the West (Anthos, 2014). Throughout its range, it is more abundant on the East and presents a more scattered distribution on the West (Devesa, 1995; Anthos, 2014). It is considered an isolated species inside *Carduncellus*, due to consistent morphological differences from the other European species, and a particular mechanism of fruit dispersion (López González, 1998). Molecular data confirm its isolation inside the genus (Vilatersana *et al*., 2000). The species has been classified as "Vulnerable" in "Lista Roja de la flora vascular de Andalucía" (Cabezudo *et al*., 2005) and it is included in the list of threatened species in "Catálogo Regional de Especies Vegetales Amenazadas de Extremadura" (Junta de Extremadura, 2010) as "of Special interest".

Eryngium aquifolium Cav. is a hemicryptophyte that inhabits perennial grasslands and dry and rocky places, with preference for basic soils (Nieto, 2003; Cueto & Giménez, 2009). It is endemic to the North of Morocco (Rif region) and South of Spain. Its distribution ranges from Sierra de Segura (Jaén region) in the East to Litoral (Huelva region) in the West, being more frequent in the regions of Cádiz and Malaga (Anthos, 2014).

We now add *Carduncellus cuatrecasasii* and *Eryngium aquifolium* to the Portuguese flora, being the first records of these species to Portugal. Both species were observed in a roadside near Safara (Baixo Alentejo region), in limestone soils, within a landscape dominated by olive groves and annual grasslands. The two species were found in an herbaceous community which includes other important species like *Biarum mendax* P.C.Boyce, Iris planifolia (Mill.) Fiori & Paol., *Phlomis herba-venti* L. subsp. *herba-venti*, *Salvia argentea* L. and *Tragopogon porrifolius* L., the latter being a species which was not included in the most recent Portuguese Flora, apparently by mistake.

The *C. cuatrecasasii* population is composed of several individuals (>50) of different ages occupying an extent of approximately 20 meters along the roadside, in clumps. Although we observed a high flower production, fertile seeds were not detected. A low rate of fertility was also observed in the populations of Extremadura (Junta de Extremadura, 2010). This new

population is relatively close to the westernmost Spanish populations (approximately 50 km) near Jerez de los Caballeros, which occur in similar ecological conditions (Anthos, 2014). Hence, it is likely that other populations are to be found in this region of Portugal.

The *E. aquifolium* population is represented by just a few individuals (<20), mainly adults, occupying no more than two square meters. All plants were flowering at the time of observation. This new locality represents a very disjoint population, as the westernmost Spanish population is approximately 120 km away (near Sanlúncar la Mayor, Sevilla province), and is 200 km from the main area of distribution (western Subbaetic mountains).

In this region of Alentejo, roadsides represent an important refuge for species that do not withstand regular disturbance associated with olive grove maintenance, like regular soil mobilization, and more recently the use of herbicides. Moreover, due to the development of Alqueva dam, a new intensive agriculture system is gradually replacing traditional olive groves by intensive olive explorations. Such alterations in land use are severely threatening the highly diverse plant communities associated with traditional olive groves in limestone soils. These two species are only two examples, among many others, of plants that will certainly suffer (and probably already suffered) the effects of this intensification.

Material estudiado

Carduncellus cuatrecasasii G. López *in* Anal. Jard. Bot. Madrid 38: 531 (1982)

Exsiccata:

PORTUGAL, BAIXO ALENTEJO: Beja. Moura. Safara. UTM 29SPC5416. No talude da estrada entre Safara e Vila Verde de Ficalho, em solo de natureza calcária, em local muito exposto e seco, ca. 200 m.s.m., 22-V-2011, M. Porto & A.J. Pereira SPB13 (LISU 257322).

Eryngium aquifolium Cav. *in* Anales de Ci. Nat. 3: 32 (1801)

Exsiccata:

PORTUGAL, BAIXO ALENTEJO: Beja. Moura. Safara. UTM 29SPC5415. No talude da estrada entre Safara e Vila Verde de Ficalho, em solo de natureza calcária, ca. 200 m.s.m., 22-V-2011, M. Porto & A.J. Pereira SPB14 (LISU 257324).

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26. ALGUNAS CITAS DE GRAMÍNEAS DE INTERÉS PARA LA FLORA ANDALUZA

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Some interesting records of grasses for Andalusian flora

Palabras clave. Gramíneas, Poaceae, Andalucía

Key words. Grasses, Poaceae, Andalusia

Avena barbata subsp. ***castellana*** Romero Zarco in Lagascalia 16: 262 (1990)

GRANADA. Guadix, rambla Becerra, 30S VG9142 (GDA 43462-A).

JAÉN. Jaén, Hileras, cerro margo-calizo, 380 m.s.m., 30SVG4094, 12-V-1994, G. Siles & al. (JAEN 941053).

Endemismo del Mediterráneo occidental cuya área de distribución conocida en el momento de su publicación era el centro y NE de la Península Ibérica y la isla de Menorca (Romero-Zarco, 1990: 262-264). Posteriormente se dió a conocer su presencia en la parte oriental de Andalucía (Romero-Zarco, 2009) en las áreas naturales "Guadalquivir" y "Guadiana Menor" (según la terminología de Blanca & al., 2009). Tratándose de un taxón bastante raro en todo su areal, consideramos de interés la publicación de los testimonios que sirvieron de base a su inclusión en la obra citada.

Avena barbata subsp. ***hírtula*** (Lag.) Tab. Mor. in *Bol. Soc. Brot.* ser. 2, 13: 622 (1939)

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