

# Contribution towards the knowledge of Catalonia's alien flora

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Received 10 June 2009; Accepted 15 July 2009

## Abstract

The following species: *Drosanthemum candens*, *Ononis mitissima* and *Thinopyrum intermedium* subsp. *barbulatum* are here documented as hitherto unrecorded introductions to the flora of Catalonia.

Key words: alien flora; *Drosanthemum*; *Ononis*; *Thinopyrum*.

## Resumen

Contribución al conocimiento de la flora alóctona de Cataluña.- Las siguientes especies: *Drosanthemum candens*, *Ononis mitissima* and *Thinopyrum intermedium* subsp. *barbulatum* son citadas aquí como novedades para la flora alóctona catalana.

Palabras clave: *Drosanthemum*; neófitas; *Ononis*; *Thinopyrum*.

## *Drosanthemum candens* (Haw.) Schwant.

Hs, (Girona) Begur, sa Riera, EG1747, 10 m, acantilados marinos, 01.11.2007, *S. Pyke* 5554; Hs, (Girona) Palafrugell, Cap Roig, EG1436, 30 m, acantilados marinos, 03.05.2008, *S. Pyke* 5743; (Girona) Cadaqués, sa Conca, EG 2281, 5 m, playas, 22.07.2009, *J. Font*, *N. Membrives* & *S. Pyke* s. n. (cultivated in the Botanical Garden of Barcelona).

This creeping mesembryanthemum has possibly been recorded from the region under the name *D. floribundum* (Haw.) Schwant. Whilst the latter has certainly been sold in the horticultural trade in this country, it is the former species which is much more likely to spread from gardens to the surrounding areas, especially along the coast or where there are cliffs. *Drosanthemum floribun-*

*dum* has been recorded from Catalonia in Bolòs (2005) where it is considered to be more or less spontaneous as a garden escape in the Balearic Islands and the Spanish Levant. I have not been able to confirm these records, but have observed another plant, closely related but not identical, with long-trailing stems and pink flowers up to 35mm diameter when fully open. This plant remains to be accurately identified, and those I have observed have not yet to be added to the wild flora of the region, since they are either the remains of street and garden planting or the odd isolated plant growing very close to houses or gardens.

On the other hand, *D. candens* has clearly escaped from gardens and become more or less naturalised on sea cliffs in the province of Girona, and should be included in the catalogues of non-native flora of the region.

This dew plant, known as Cabellera de la Reina locally (along with the other spreading species of this South African genus) is characterised by its slender, rough, far-creeping and rooting stems, small leaves, small flowers (12-20 mm diameter) on short pedicels, with short stigmas overtopped by the stamens in newly-opened flowers, and prominent water cells (or papillae) on the obconical calyx. Flower colour has been stated as white in classical literature (Harvey & Sonder, 1861, and other old floras) but in recent times several observations, including those of plants naturalised in Australia (eg: [www.charlessturt.sa.gov.au](http://www.charlessturt.sa.gov.au)), indicate pink (see also Adamson & Salter, 1950). Flowers that start out as white become pink with age, and some plants display white “petals” with a pink tip. Other (cultivated) plants, provisionally considered here under the same name, possess rich pink-purple flowers. This variation could be due to crossing with other species (some other mesembryanthemums are known to hybridise when obliged to (*Aptenia*, *Carpobrotus* and *Dorotheanthus* species have been indicated to do so: e. g. in Albert *et al.*, 1997) or this could be a case of a wider colour range than that originally annotated, as further populations have come to light (as is the case of *Lampranthus multiradiatus* (Jacq.) N.E. Br.). The plants observed on the Costa Brava have small white, pink-tinged flowers and repond closely to the description of the species.

Apart from the evident difficulties in classifying these plants, special care must be taken with cultivated material. In particular, the dimensions of the different parts of a plant can vary considerably according to the conditions of growth under cultivation.

### ***Ononis mitissima* L.**

Hs, (Barcelona) Barcelona, Montjuïc, DF2878, 60 m, 26.06.2007, *S. Pyke s. n.* (BC 870338).

This annual occurs quite widely across the Mediterranean region, but in the Iberian Peninsula it is only common in the south-west. It is also found in the Balearic Islands. On the Spanish mainland it can be found in the Valencia area (Bolòs & Vigo, 1984) but further north it appeared to be absent until found recently on Montjuïc, Barcelona’s well-known coastal hill outcrop. The presence of this plant in grassy areas on thin soil overlying the

calcareous substrate suggests a rather recent introduction, since the plant was not recorded from this area by any of the classical or previous century’s botanists, who evidently knew the local vegetation reasonably well. The proximity of port areas provides a possible explanation as to its arrival, but today it has the appearance of a native plant that may possibly have been overlooked. It is certainly an ephemeral species, for it quickly withers and dries in June, and for a good part of the year can not be seen even when searching carefully. Two colonies have been located, with well over 100 individuals in total when counted in 2008, though the number will probably fluctuate considerably depending on weather conditions.

***Thinopyrum intermedium* (Host) Barkw. & D.R. Dewey subsp. *barbulatum* (Schur) Barkw. & D.R. Dewey**

**[*Elymus hispidus* (Opiz) Melderis subsp. *barbulatus* (Schur) Melderis; *Elytrigia trichophora* (Link) Nevski]**

Hs, (Barcelona) El Prat de Llobregat, DF2673, 0-5 m, diques y bordes de camino, 11.07.2008, *S. Pyke s. n.* (BC 870339).

This grass, an apparently unrecorded alien, must have been included in some seed mixtures for land recuperation purposes. It was found growing along a path and alongside an irrigation canal in the delta area of the river Llobregat, this being a protected area at present. Within the same area, two other alien grasses, *Bromus inermis* and *Agropyron cristatum* var. *pectiniforme*, have also been observed. *Elymus hispidus* has been recorded from the region, mainly in the more elevated areas, though not all records are reliable, but subsp. *barbulatus* has not, to my knowledge, been recorded, and no herbarium sheets have been found. This fact, along with the presence of the associated introductions mentioned here, suggests a foreign source for this plant. The source is probably Asia, since the European populations are of a greener colour and with less pubescent spikelets as opposed to those from Persia and Central Asia, as pointed out by Kudrjashev in the notes accompanying sheet BC 83746, a plant collected in Tadzhikistan in 1930.

The plant collected in the delta is characterised by its very pubescent spikelets and glaucous colour.

As with the species, its lemmas are blunt and the glumes truncate, sometimes at a noticeable angle. Plants collected had short rhizomes. But for the rhizomes and hairy spikelets, they are quite similar to *Thinopyrum ponticum* (Podp.) Liu & Wang [*Elymus elongatus* (Host) Runemark subsp. *ponticus* (Podp.) Melderis], another species of recent introduction in Spain.

Though of Eurasian origin, the taxon has been introduced and is well established in North America, where the genus has now been transferred to *Thinopyrum* A. Löve by several authorities, following Barkworth and Dewey. This name, derived from the section Junceae of the old *Agropyron* complex, may well end up replacing former combinations of most of the Eurasian species that have suffered from the conflicting taxonomic treatment of both Asian and

European botanists over the past two centuries. If this means an end to confusion, it must be considered a welcome contribution, and with this in mind, priority has been given to this name.

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