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SOME PLANT RECORDS FROM SOUTHERN SPAIN

R. M. BURTON

Sparepenny Cottage, Sparepenny Lane, Eynsford, Kent, England

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Resumen. Se recogen en esta nota algunas especies recolectadas en la provincia de Granada en la primavera de 1978. La cita de *Picris cupuligera* (Durieu) Walpers es la primera para Europa.

Summary. Records of some vascular plants observed in Granada province in the spring of 1978 are presented. *Picris cupuligera* (Durieu) Walpers is new to Europe.

The plants listed below are a selection from about 600 seen in the course of two weeks in March and April, 1978 by a small group of English amateurs which I conducted for the London firm of Cox & Kings. Ltd. The party was accommodated at Salobreña and made day excursions from there by hired motor-coach. Material was collected only to the extent necessary for identification; of the resulting specimens supporting some of these records. *Picris cupuligera* (Durieu) Walpers and some others have been donated to the herbarium of the University of Sevilla, whilst a few are in England in the private collections of myself, J. W. Carr, 117 Vicarage Hill, South Benfleet, Eseex or E. J. Clement, 13 Shelford, Burritt Road, Kingston, Surrey.

The sequence and nomenclature follow *Flora Europaea* (1964-1976). Localities are all in Granada province unless otherwise indicated. References in brackets (e.g. VF 46), refer to the U. T. M. grid.

Aptenia cordifolia (L. fil.) N. E. Br.

Well naturalised on rocks just above high tide about 1 km west of La Caleta (VF 46); no doubt an escape from gardens higher up the hill. The

species becomes established much more readily than most of the many other Aizoaceae cultivated and is quite tolerant of salt.

Sagina procumbens L.

Wet flush above road above Capileira at c. 1700 m (VF 69). Also on stone pavements of Generalife gardens, Granada (VG 41), to which it was perhaps introduced on the feet of tourists. The numerous fountains of the gardens keep the pavement moist, rendering the habitat suitable for the plant. It is significant that the earlier botanical explorers of Andalusia reported it from the Sierra Nevada only.

Spergularia heldreichii Fouc. ex E. Simon secundus & P. Monnier

Sandy ground at edge of field above the beach west of Peñón de Salobreña (VF 46). The identification of species in this genus is often delicate and this one was long confused with *S. diandra* (Guss.) Boiss. My plant has shiny black seeds and can only be *S. heldreichii* which seems to be here at its western limit in Spain.

Silene behen L.

On a steep bank above a minor road north of La Caleta (VF 46). This extends the modern Spanish range of the species beyond that given by TALAVERA & BOCQUET (1976:108) who first reported its presence in the country and provides a link with the Motril locality (VF 56) known only from a 1901 specimen.

Sarcocapnos enneaphylla (L.) DC.

Overhanging limestone rocks north of Orgiva (VF 68) and elsewhere. All specimens of *Sarcocapnos* from the western Alpujarras which I have seen are of this species, though some, in the European herbarium of the Brititsh Museum (Natural History), are incorrectly placed with *S. crassifolia* (Desf.) DC. In pressed material the size of the corollas provides the best means of separating the two.

Vicia ervilia (L.) Willd.

Roadside west of Albuñol (VF 77). The omission of Spain from the countries where this species occurs listed by BALL (1968: 133) is no doubt accidental; there are numerous records, e.g. GUINEA (1953: 174).

Euphorbia serpens Kunth

On the surface of the road by the picnic area, Cuevas de Nerja (Málaga) (VF 26). This American species appears to be increasing in those parts of south Spain most frequented by tourist traffic.

Maytenus senegalensis (Lam.) Exell

West of Salobreña (VF 46) in an intensively cultivated area. This species, like other native shrubs *(Chamaerops humilis* L., *Ephedra fragilis* Desf. etc.) occurs only as scattered relict individuals by roads and tracks and in gullies. From *Rhamnus* species of similar spiny habit it can be separated in the field by the fact that the leaves are borne on the spines; these leaves are commonly slightly crenate and not very entire as described in European floras.

Peucedanum hispanicum (Boiss.) Endl.

Ditches near Playa de Salobreña (VF 46). One plant was in full flower on the very early date of 31st March; normal flowering of this species is in late summer when there is little for the visiting botanist to admire.

Centaurium linarifolium (Lam.) G. Beck

About 1 km north of Itrabo (VF 47) among calcareous rocks. This is the *Erythraea barrelieri* Dufour, not *E. linarifolia* of WILLKOMM (1870) who gives no records of the species from Granada province.

Lafuentea rotundifolia Lag.

Walls of the Arab castle, Salobreña (VF 46) and on limestone rocks below. Suitable habitats for this curious endemic plant are lacking elsewhere in the inmediate neighbourhood, where loose schists predominate.

Eupatorium adenophorum Sprengel

Well naturalised along field ditches near Motril (VF 56). The abundance of this species near Nerja (VF 26) has been widely reported, e.g. by STOCKEN (1969: 87, sub *E. ageratoides*); a gap of about 25 km. separates the two areas.

Gazania rigens (L.) Gaertner

On the sand, Playa de Salobreña (VF 46), with unmarked ligules, although plants cultivated about 20 m away have the usual dark spots. The plant on the beach was presumably derived from these but has grown into a patch about a metre across, a process which I estimate indicates that it has been there for three years.

Picris cupuligera (Durieu) Walpers

Near the cliff edge west of La Caleta (VF 46) in the company of *Reichardia intermedia* (Schultz Bip.) Coutinho, *Leontodon taraxacoides* subsp. *longirostris* Finch & P. D. Sell, *Plantago afra* L. and a few other common annuals. Though not previously recorded in Europe, this species is widespread in varied habitats in Morocco, Algeria and Tunisia and may well have been overlooked in Andalusia. The plant was originally placed in the genus *Spitzelia* Schultz Bip., differing from *Picris* in its peripheral achenes which lack the plumose pappus and often the beak of the central achenes, having instead a pappus of more or less fused scales; at maturity the peripheral achenes, each clasped by an involucral bract, spread stellately, a character which cannot be observed in my specimen. In this species the scales are completely fused into a scarious cup. *Spitzelia* is no longer maintained as a genus; in other respects the plants closely resemble *Picris,* and the variation of *P. coronopifolia* (Desf.) DC., a Saharan species, includes plants with *Spitzelia* type achenes and others without. A parallel variation occurs in the closely allied genus *Leontodon.* The dimorphism of the achenes ensures that they are not all carried by the wind away from the habitat which was suitable for the parent plant.

Provided at least some fruit can be found, it should not be difficult to identify *P. cupuligera.* The only other *Spitzelia* type species occurring in Spain, over 200 km to the west, is *P. willkommii* (Schultz Bip.) Nyman; the differences are listed by WILLKOMM (1865: 220). *P. cupuligera* has rigid hairs but these are by no means as harsh as those of is congeners. My specimen, like many of those I have seen, shows a greenish discoloration of the ligules on drying like that usual in *Tolpis.* Many collectors of African specimens now in the British Museum (Natural History) comment on the dark colour at the centre of the capitulum, as in *Reichardia,* but I do not know if this is a constant feature.

One previous gathering of *Picris cupuligera* in Spain has come to light:

12.IV.1974, sandy beach, Playa Negra (Playa del Negro?) SW of Estepona (Málaga), *Clement* & *al.* (Herb. Clement). This plant like mine has larger cauline leaves than all but one of the African specimens seen. That one also came from a maritime locality. It may be the case that African plants include a distinct coastal ecotype and that this ecotype alone occurs in Europe.

Potamogeton nodosus Poiret

In one or two of the more fast flowing water courses draining the cultivated plain below Salobreña (VF 46). Suitable habitats for *Potamogeton* species are rare in E. Andalusia; this one has not been recorded previously in this region.

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