DOI: 10.1111/curt.12626

PLANT PORTRAIT

CURTIS'S
Botanical Magazine

1132. *Primula subpyrenaica* Aymerich, López-Alvarado & Sáez

Primulaceae

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Summary
The Spanish endemic *Primula subpyrenaica* Aymerich, López-Alvarado.& Sáez, a close relative of *P. auricula* L., is described and illustrated. A multi-character key to *Primula* section *Auricula* subsection *Auricula* is provided.

The mountains of western Europe have been scoured by botanists for centuries, and it seems unlikely that many new species of plants remain to be discovered. Taxonomists working in herbaria or the genomics lab may, however, decide to split a species, as happened with *Primula auricula* L., first by separating plants from the south and east of the range as *Primula balbisii* Lehm., using the name of the earliest former species in the separated group (Zhang & Kadereit, 2004). Then it was realised that the Linnean type specimens of *P. auricula*, from which a lectotype was subsequently selected (Halda, 1992), were within their separated group, so *Primula balbisii* became a synonym of *Primula auricula*. They also narrowed its scope to include only southern populations (Italy, Balkans). All northern populations (from France and Switzerland to Poland and Slovakia) changed from *Primula auricula* to *Primula lutea* Vill. (Zhang & Kadereit, 2005). Another member of this group is *Primula palinuri* Petagna, a narrow endemic of coastal cliffs in Calabria, Italy (Richards, 2003) Plate 1132.

The idea that there could be plant species hiding in the European mountains, to be discovered by observant botanists with their boots on, seems highly implausible, particularly in genera with showy flowers of interest to gardeners as well as botanists. Yet, remarkably, three species of *Primula* have been added to the European tally in the last 35 years. First, a beautiful plant with farinose leaves and large, rose-pink flowers was found on Monte Alben, in the Bergamasque Pre-alps, and subsequently named *Primula albenensis* Banfi & R. Ferlinghetti (Banfi & Ferlinghetti, 1993). Then a rather similar species, *Primula recubariensis* Prosse & Scortegagna, was reported from Piccole Dolomiti (Prosse & Scortegagna, 1998). How is it possible that such striking and conspicuous plants could not have been recorded before?

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In both cases, the new species were found on outlying foothill mountains, relatively little visited, by walkers or botanists. They flower before the main botanising season, which is usually timed for the higher mountains. A plant can only be recognised as new if it is seen by someone who knows all other possibilities, or collected in a systematic survey and deposited in a herbarium for others to study.

Similarly, the third of the trio of new species was hiding in plain sight. It was well known that neither *Primula auricula* nor anything similar grew in the Pyrenees. It would be obvious to any botanist, professional or amateur, if it was seen. But although the high mountains had been thoroughly explored botanically, the foothills had been neglected. Such plants do indeed grow in the foothills of the Pyrenees, only about one hour's drive from Barcelona, in small numbers in a few rather inaccessible places on limestone cliffs. Such plant lovers as do go there are entranced by masses of *Ramonda myconi* and *Saxifraga longifolia*, and the *Primula*, flowering relatively early in the year, could easily be missed. It *was* missed – until plants that were clearly related to *Primula auricula* were found in the Serra de Picancel in 2011 (Aymerich et al., 2012). The new species was described two years later as *Primula subpyrenaica* (Aymerich et al., 2014).

Since then much has been learned about this species by observations both in its limited wild distribution and in cultivation. The multi-character key (Table 1) allows the species closely related to *Primula subpyrenaica* to be distinguished easily.

CULTIVATION

In 2018 Jim Jermyn, then Head Gardener at the National Trust for Scotland Branklyn Garden in Perth, Scotland, had permission to collect wild plants (Jermyn, 2018). A single plant subsequently provided seed, and the species is now securely in cultivation. It is from this collection that the plate by Nicola Macartney has been painted. Plants have been grown out of doors since then in the limestone rock garden at Branklyn, and seeds and small plants have been shared with several botanic and private gardens.

Seeds can be sown in winter in gritty alpine compost with added lime and a sparse covering of grit, and left outdoors, with or without cover, until spring, when they will germinate. Seedlings are pricked out and then potted on into a similar compost with a small amount of slow-release fertiliser. By the following spring they are ready to be planted outside, or grown on in pots in an alpine house or equivalent unheated, covered place.

TABLE 1 Key to *Primula* section *Auricula* subsection *Auricula.*

● = usually ○ = occasionally ° = recorded but not normal	***Primula auricula***	***Primula lutea***	***Primula palinuri***	***Primula subpyrenaica***
Leaves efarinose	●	○	●	●
farinose	°	●		
Farina on calyx dense		●	●	
sparse				●
absent	●			
Bracts scarious, length <4 mm	●	●		
foliose, > 6 mm			●	●
Calyx teeth obtuse, < half tube	●	●		●
acute, c. two thirds of tube			●	



PLATE 1132 *Primula subpyrenaica* NICOLA MACARTNEY



FIGURE 1 *Primula subpyrenaica* × *P. auricula* in cultivation. Photograph: David Rankin.

At the time of writing, all cultivated plants have been thrums, although both pin and thrum forms exist. Effective ex situ conservation will require both to be maintained in collections.

Plants were grown by a nursery as *Primula subpyrenaica*, but they were clearly not that species, and appeared to be a hybrid with *Primula auricula*. They were very attractive (Figure 1). There is potential for growing garden-worthy plants, but conservation of the species in cultivation will require careful avoidance of cross-fertilisation.

NOMENCLATURE AND DESCRIPTION

Primula subpyrenaica Aymerich, López-Alvarado & Sáez, *Phytotaxa* 163 (2): 77–90 (2014). Type: Spain, Barcelona, Berguedà, Southern Pre-Pyrenees, Serra de Picancel, Pic de Salga Aguda, 20 April 2012, P. Aymerich, J. López-Alvarado & L. Sáez *LS-7322* (holotype BC!, isotype MA!).

Evergreen, slightly farinose *perennial*. *Rhizome* 8–10 mm thick, with short branches. *Leaves* in rosettes towards apices of rhizome branches, old leaves persistent, slightly fleshy, efarinose; summer leaves produced continually, to 15 × 7 cm, broadly obovate, lengthening as they mature, apex rounded, sometimes obtuse, base tapering into the petiole, with short hairs, particularly on margins, scented; winter growth slower, leaves smaller, 4–6 × 2.5 cm, cuneate, apex obtuse, acuminate or apiculate, not scented; midrib 5–7 mm wide at base, tapering, conspicuous to beyond middle of leaf below; lateral veins much less conspicuous; leaf margin undulate or almost entire; petiole indistinct from lamina, broad and

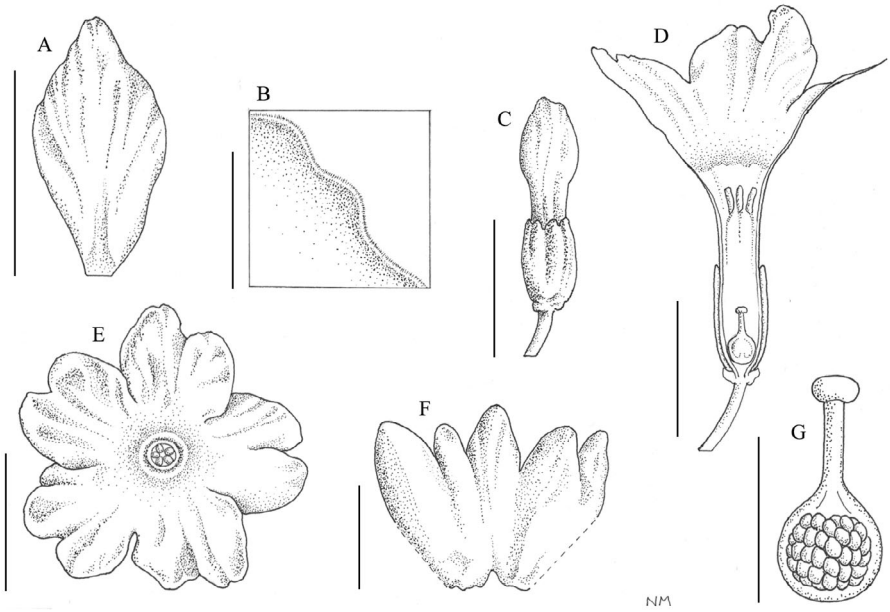


FIGURE 2 *Primula subpyrenaica*. A, bract; B, leaf margin; C, flower bud; D, thrum flower, cross section; E thrum flower; F, calyx; G, ovary, part cut away. Scale bars: A-E 10 mm, F = 5 mm, G = 4 mm. Drawn by Nicola Macartney in 2024 from a plant cultivated at Lasswade.

winged, up to 10 mm wide at base. *Scape* extending during flowering to up to 12 cm, bearing up to 17 scented, distylous *flowers*; *peduncl*e c. 3 mm diameter, slightly hairy, farinose at upper end; bracts 8(18) × 6 mm, ovate to oblanceolate, herbaceous, sometimes irregularly dentate; pedicels up to 16 mm long, 2 mm wide, sparsely hairy, usually farinose. *Calyx* up to 20 mm long, narrowly campanulate, sparsely hairy, farinose, divided to below half its length; calyx teeth 1.5–3.5 mm long, ovate to triangular, apices obtuse to acute. *Corolla* (14–)20(–22) mm long, funnel-shaped, bright yellow, with white farina around the mouth within, farinose below; corolla lobes 5, 5–10 mm long × 8–12-mm wide, shallowly notched; tube 8–15 mm long; anthers 1.4–2.1 mm long, attached 1–2 mm above the base of the tube in pin flowers, above the middle in thrums; *style* c. 9 mm long in pins, 3 mm in thrums; *stigma* club-shaped, c. 1 mm diameter, with 5 lobes. *Capsule* c. 5 mm diameter, subglobose, dehiscing by longitudinal valves, containing up to c. 25 seeds. Seeds c.1 mm diameter, irregularly polyhedral, typically with 5 or 6 almost flat faces, each with 2–4 straight or curved edges, separated by narrow, raised edges, deep chestnut brown. Figure 2.

Phenology. Flowering April to early May in the wild, from early March in cultivation.

Distribution. At, and to the east of the centre of the Serra de Picancel, southern Pre-Pyrenees, Berguedà, Barcelona, Spain, c. 800–1120 m.

Habitat. Open places on very steep slopes and cliffs of conglomerate, with siliceous stone embedded in limestone, often loose (Figure 3), frequently growing with *Ramonda myconi* (L.) Reichenbach and *Saxifraga longifolia* Lapeyrouse (Figure 4). Annual precipitation is c. 1000 mm p.a., mainly summer rain with some snow in winter.



FIGURE 3 *Primula subpyrenaica* habitat, Serra de Picancel. Photograph: Jim Jermyn.



FIGURE 4 *Primula subpyrenaica* growing with *Ramonda myconi* and *Saxifraga longifolia*, Serra de Picancel. Photograph: Jim Jermyn.

CONSERVATION STATUS. The extent of occurrence of *Primula subpyrenaica* is about 5 sq. km, but the area of occupancy is much smaller than that. However, there are at least 15 groups of plants, and thousands of individual plants, scattered throughout the area. It grows on steep, unstable slopes and cliffs, so is not vulnerable to grazing or casual human depredation. There are unoccupied parts of the Serra de Picancel that appear to offer suitable habitat, so modest lateral extension of its range is possible. Upwards extension in response to climate change is not possible, as it already occurs within 50 m of the highest summit. Human development of the area is unlikely, so *Primula subpyrenaica* should be classified as Near Threatened, only because of its very limited distribution.

ACKNOWLEDGEMENTS

I am very grateful to Jim Jermyn for permission to use photographs of *Primula subpyrenaica* in the wild for this article, and for the gift of seeds that have allowed me to grow plants, observing their growth throughout the year.

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How to cite this article: Rankin, D.W.H. & Macartney, N. (2025) 1132. *Primula subpyrenaica* Aymerich, López-Alvarado & Sáez. *Curtis's Botanical Magazine*, 42(1), 19–26. Available from: https://doi.org/10.1111/curt.12626