

TWO NEW SUBSPECIES OF *ERIGERON UNIFLORUS* L. (*ASTERACEAE*) FROM NORTHERN SPAIN

by

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Resumen

FOLEY, M.J.Y. (2001). Dos nuevas subespecies de *Erigeron uniflorus* L. (Asteraceae) del norte de España. *Anales Jard. Bot. Madrid* 58(2): 235-238 (en inglés).

Se describen dos subespecies nuevas de *Erigeron uniflorus* L. procedentes de áreas montañosas del N de España. Son *E. uniflorus* subsp. *picoeuropaeanus* M.J.Y. Foley, *subsp. nov.*, y *E. uniflorus* subsp. *subacaulis* M.J.Y. Foley, *subsp. nov.*

Palabras clave: *Erigeron*, *Asteraceae*, montañas, Picos de Europa, Pirineos, nuevos táxones, ventisqueros.

Abstract

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Two new subspecies of *Erigeron uniflorus* L. are described from montane areas of N Spain. These are *E. uniflorus* subsp. *picoeuropaeanus* M.J.Y. Foley, *subsp. nov.*, and *E. uniflorus* subsp. *subacaulis* M.J.Y. Foley, *subsp. nov.*

Key words: *Erigeron*, *Asteraceae*, mountains, Picos de Europa, Pyrenees, new taxa, ventisqueros habitat.

Erigeron uniflorus L. is a widespread circumpolar plant of the northern hemisphere, occurring in Arctic and subarctic regions as well as in the higher mountains of more southerly latitudes in Europe, Asia and the American continent (cf. HULTÉN, 1970). Throughout its range *E. uniflorus* shows appreciable morphological variation, some of it due to modification of the phenotype induced by variations in habitat, altitude, or exposure to the elements. However, genetically-based morphological differentiation may also occur, especially in the more isolated mountain ranges and within high altitude refugia, often with the result that such plants merit taxonomic recognition (e.g. *E. aragonensis* Vierh., *E. vichrensis* Pawł., *E.*

uniflorus subsp. *eriocephalus* (J. Vahl) Cronquist). This is also thought to be the case for the two taxa described below whose respective morphologies lie well outside that normally found within *E. uniflorus*. On the information available at present they are considered to be most appropriately placed at subspecific rank.

Erigeron uniflorus* subsp. *picoeuropaeanus
M.J.Y. Foley, **subsp. nov.**

E. uniflorus sensu M. Laínz; *E. cantabricus* A.G. Game (1985) and *in sched.*, nom. inval. (nom. nud.)

Affinis E. unifloro subsp. *unifloro* sed *habitu gracillimo, caulibus nanis, foliis plus*

minusve glabris, margine parce pilosis, capitulis minimis, bracteis glabrescentibus divergit.

Closest to *E. uniflorus* s. str. (*E. uniflorus* subsp. *uniflorus*) but differs in its much more slender habit and very small stature, in its subglabrous leaves with sparsely pilose margins, its very small capitula, and its glabrescent involucre bracts.

Plant very small, 2-4(-5.5) cm tall with a sparse basal rosette and a woody rootstock; basal leaves mid-green, obovate, rounded distally, long petiolate, the largest to 20 mm long 3.5 mm broad, the surface sub-glabrous but with \pm rigid, patent, few-celled, eglandular hairs (0.5-1.2 mm long) on the margins; cauline leaves 0-1(-2), similar but smaller and narrower than the basal; stem unbranched, usually with only scattered, long multicellular hairs; capitula single (rarely 2), up to 10 mm wide, dimorphic; involucre bracts green, acute-tipped, the inner sometimes tinged reddish, 3-6 mm long 0.5-0.7 mm wide, only sparsely hairy; ligules pink, 1.2-1.5 times the length of the bracts; cf. plate 1a.

Holotype: Hoyo sin Tierra (Jou sin Tierri)-Hoyos Engros, UN 5183 (León), crestería, 14-IX-1977, *García González*, s.n. (JACA 87785).

So far known only from the Picos de Europa (Spain) to which area it may be endemic, growing in rock fissures and stony places at an altitude of 2000-2400 m, flowering from July-September.

Specimens seen

SPA, ASTURIAS: infra summam Torre Cerredo (Cabralas, Picos de Europa), in fissuris rupium calcarearum aliquatenus umbratis, 2400 m. 2-VIII-1974, *M. Laínz*, LANC. LEÓN: Hoyo sin Tierra (Jou sin Tierri)-Hoyos Engros, UN 5183, crestería, 14-IX-1977, *García González*, s.n., JACA 87785 [holotype]. Entre Torre de Liordes y Torre Salinas, UN 4978, 2000 m, pasto pedregoso calizo, 15-VIII-1977, *García González* 207, JACA 87685. Vega de Liordes-Peña Remoña, UN 5079, 2050 m, pasto rocoso, 17-VII-1978, *García González*, JACA 487185. GAME (1985) also lists a dicephalic specimen from Horcados Rojos por Áliva, 2200 m, 25-VIII-1974, *M. Laínz*.

Erigeron uniflorus subsp. *picoeuropaeanus* occurs locally in discrete colonies within whose limited geographical area subsp. *uniflorus* is also present. Similar plants had been noted previously but were never formally described. M. Laínz seems to have been the first to make a collection, reporting it (LAÍNZ, 1970) as being very different from Nordic *E. uniflorus* but closer to that of the Alps; later however, he revised this opinion (LAÍNZ, 1976), accepting it as *E. uniflorus* s. str. Despite this, such plants were overlooked by HALLIDAY (1976) in his *Flora Europaea* account which also made no mention of *E. uniflorus* s. l. from this region of Spain. According to GAME (1985), who also recognised them as distinct from typical *E. uniflorus*, Laínz at one stage determined them as *E. paolii* Gamisans but the latter, apparently endemic to the alpine region of Corsica, is larger with broader, more spatulate basal leaves, much larger capitula with relatively long ligules, and is much more pubescent overall. A dwarf variant of *E. uniflorus* s. str. was recognised by VIERHAPPER (1906) as *E. valesiacus* Vierh. which he considered a characteristic product of the Swiss Valais, a region he found rich in dwarf endemics of other genera also. From his description it would appear to differ from the Picos plant in several respects, including the narrow, not obovate leaves, red involucre bracts and short overall indumentum. A further dwarf taxon from Turkey was also described by VIERHAPPER (1906) as *Erigeron bithynicus* Vierh. However, this is densely hairy with large leaves and capitula and again cannot be confused with subsp. *picoeuropaeanus*. GAME (1985) and *in sched.* proposed the name '*E. cantabricus*' for the latter but never published a formal description. However, since it appears to be endemic to a very restricted area of Spain, it seems better that it should bear a more precise name. Additionally, it is also more appropriately placed at a lower rank.

Erigeron uniflorus subsp. *subacaulis* M.J.Y. Foley, *subsp. nov.*

Affinis E. unifloro subsp. unifloro sed capitulis plus minusve sessilibus, foliis basalibus

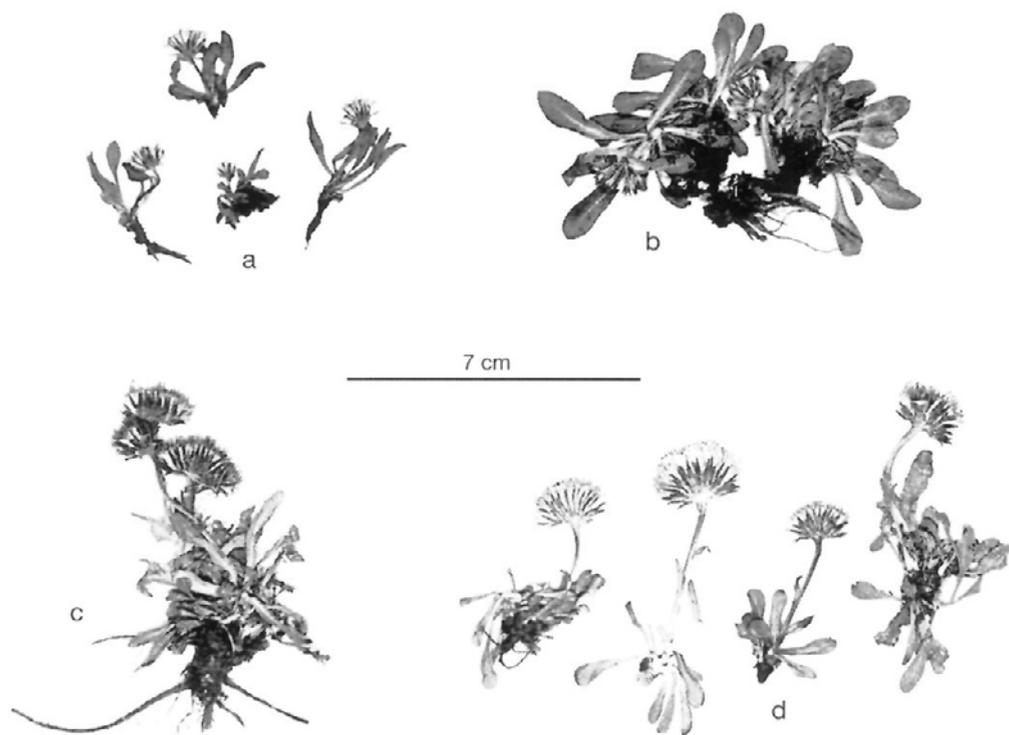


Plate 1.—Specimens typical of the subspecies of *Erigeron uniflorus* discussed: a, subsp. *picoeuropaeanus* from Hoyo sin Tierra (Jou sin Tierri)-Hoyos Engros, Picos de Europa (1977, *García González*, JACA 87785, holotype); b, subsp. *subacaulis* from Monte Perdido, 'ventisqueros habitat', c. 2800 m (1993, *Gómez*, JACA 159993, holotype); c, subsp. *uniflorus* from a similar altitude (2800-3000 m) and very close to the Monte Perdido type locality for subsp. *subacaulis* (1987, *Villar & Gómez*, JACA 188687); d, subsp. *uniflorus* from a Monte Perdido population at a similar altitude (2630 m) and from a 'ventisqueros' habitat similar to that of the type of subsp. *subacaulis* (1993, *Gómez*, JACA 161993).

latissime ovato-spathulatis, propemodum glabris petiolisquae alatis recedit.

Closest to *E. uniflorus* s. str. (*E. uniflorus* subsp. *uniflorus*) but differs in its \pm acaulescent capitula and its very broad ovate-spathulate, subglabrous basal leaves bearing winged petioles.

Plant of very low stature, with a fairly dense rosette and a woody rootstock; basal leaves dull, mid-deep green, broadly ovate-spathulate, rounded distally, gradually tapering into a long, prominently-winged petiole, largest leaf to 30(-40) mm long 5-8 (-10) mm broad, leaves with sparse, few-celled, weak, eglandular hairs on upper surface and margins, similarly but even less pilose below;

\pm acaulescent [stems if present only 1-5 (-10) mm long], cauline leaves usually absent; capitula single, dimorphic, 10-12(-14) mm wide; involucre bracts medium-dark green, 5-8 mm long 1.0-1.5 mm wide, acute-tipped, densely pilose with white, matted, eglandular hairs; ligules creamish, c. 1.2 times the length of the bracts; cf. plate 1b.

Holotype: Monte Perdido, Huesca (Spain), solana. Ventisqueros con suelo muy fino crioturbado, 2800-2810 m, 10-VIII-1993, *D. Gómez*, s.n. (JACA 159993).

Known only from the type collection from Mont Perdido [Spanish Pyrenees] from an area of late snow-lie. At the type locality the substrate comprised a frost-disturbed, leached

limestone, stony and sandy matrix, and plants occurred as scattered groups of a few individuals in an open community with less than 10% cover. Associated species included *Cystopteris fragilis* (L.) Bernh., *Draba dubia* Suter subsp. *laevipes* (DC.) Braun-Blanq., *Minuartia cerastiifolia* (Lam. & DC.) Graebn., *Androsace ciliata* DC., *Veronica nummularia* Gouan, *Omalotheca hoppeana* (Koch) Schultz Bip. & F.W. Schultz, *Leontodon* sp., *Artemisia umbelliformis* Lam., *Poa alpina* L. and *Festuca alpina* Suter.

This is a very distinctive plant (plate 1b), in whose only certainly-known population it is morphologically quite homogenous. A collection from Llosós, Benasque (Pyrenees) at 3055 m growing in rock fissures (1994, *Fernández & Sesé*, JACA 203994) approaches it in its broad, spatulate, but paler green leaves but, of the specimens collected, only a few bore capitula and, in some cases, these appeared to be less acaulescent. Another Monte Perdido collection from about the same altitude (2800-3000 m) and from a population very close to the type locality of subsp. *subacaule* (1987, *Villar, Gómez & al.*, JACA 0188687) is morphologically quite different (plate 1c) and is referable to subsp. *uniflorus*. On the same mountain (Monte Perdido), plants from a similar "ventisqueros" habitat at 2630 m (1993, *Gómez*, JACA 161993) are again typical of subsp. *uniflorus* (plate 1d) and neither of these two collection contains examples referable to the new taxon. All other collections examined of *Erigeron* populations of this group, originating from this immediate area of the Pyrenees, are typical of subsp. *uniflorus* which is found here over an altitudinal range of at least 1850 to

more than 3000 m (e.g. 1970, *Montserrat & Villar*, JACA 650470; 1971, *Gallego & Pípio*, JACA 876971; 1974, *Montserrat*, JACA 554874; 1987, *Montserrat, Gómez & al.*, JACA 0106687; 1987, *Montserrat, Gómez & al.*, JACA 0107687, and 1990, *Jiménez*, JACA 316393). However, it is likely that further searches here or elsewhere will reveal new localities for this quite distinctive plant.

ACKNOWLEDGMENTS

I am grateful to Dr. D. Gómez (JACA) for useful information regarding his collection of subsp. *subacaule* from Monte Perdido, to Dr. I.C. Hedge (E) for providing the Latin translation, and to Mrs R. Berry (Lancaster) for assistance with the photography.

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Editado por Ginés López
Aceptado para publicación: 20-IX-2000