

***Stellaria ruderalis* M. Lepší, P. Lepší, Z. Kaplan & P. Koutecký (Caryophyllaceae), new for the Iberian Peninsula and the Balearic Islands**

Llorenç Sáez^{1,2}

¹Systematic and Evolution of Vascular Plants (UAB), Associated unit to CSIC, Dept. BABVE, Faculty of Biosciences, Autonomous University of Barcelona. ES-08193, Bellaterra, Barcelona, Spain.

²Societat d'Història Natural de les Balears (SHNB), Margarida Xirgu, 16, ES-07003 Palma de Mallorca, Balearic Islands, Spain.

Correspondencia

L. Sáez

e-mail: gymnesicum@yahoo.es

Recibido: 31 agosto 2020

Aceptado: 11 septiembre 2020

Publicado on-line: 15 septiembre 2020

Editado por: Marta Recio Criado

Abstract

Stellaria ruderalis M. Lepší, P. Lepší, Z. Kaplan & P. Koutecký, a recently described allotetraploid species belonging to the *S. media* group, is reported here as new for the Iberian Peninsula (Barcelona and Gerona provinces) and the Balearic Islands (Mallorca). This species could be widely overlooked due to its overall similarity to *S. media*, and it is probably more widespread than currently known.

Key words: Vascular plants, taxonomy, distribution, Western Mediterranean Region.

Resumen

Stellaria ruderalis M. Lepší, P. Lepší, Z. Kaplan & P. Koutecký (Caryophyllaceae), nueva especie para la flora de la Península ibérica e Islas Baleares

Stellaria ruderalis, una especie alotetraploide descrita recientemente y que pertenece al grupo de *S. media*, se cita por primera vez para la Península Ibérica (provincias de Barcelona y Gerona) e Islas Baleares (Mallorca). Esta especie podría haber pasado por alto debido a su similitud con *S. media*, y probablemente se encuentra mucho más extendida de lo que se conoce actualmente.

Palabras clave: Plantas vasculares, taxonomía, distribución, región mediterránea occidental.

Stellaria ruderalis M. Lepší, P. Lepší, Z. Kaplan & P. Koutecký is a recently described allotetraploid species belonging to the *S. media* (L.) Vill. group (Lepší *et al.*, 2019). According the latter authors, *S. ruderalis* could have originated from the hybridization between *S. apetala* Ucria [= *S. pallida* (Dumort.) Piré] and *S. neglecta* Weihe. See Wittig (2019), Hand *et al.* (2020) and Strid & Raus (2020) for the nomenclature of the species traditionally called *S. pallida* [= *S. media* subsp. *pallida* (Dumort.) Asch. & Graebn.].

During our study of the herbarium material of the genus *Stellaria* L. deposited at BC, we have observed several specimens matching the morphological characters attributed to *S. ruderalis* by Lepší *et al.* (2019). The study by means of a stereoscopic microscope of the petals size, number of stamens and ornamentation of the ripe seeds allowed identifying these plants as *S. ruderalis*. The character of the seeds was the one with the highest diagnostic value since they present, on dorsal surface, the characteristic relatively long conical tubercles typical of this new species (Lepší *et al.*,

2019). Therefore, in this contribution the first localities of *S. ruderalis* for the Iberian Peninsula and the Balearic Islands are provided.

***Stellaria ruderalis* M. Lepší, P. Lepší, Z. Kaplan & P. Koutecký in Preslia 91: 405 (2019)**

ESPAÑA. Barcelona: Massif du Tibidabo, lieux ombreux à S. Cipriano, 6-V-1928, *F. Sennen*, *Pl. Espagne 1928* (BC-Sennen, s.n.); Gerona: Cadaqués, s.d., *F. Trémols* (BC 10210, sub *S. media*); Maçanes, La Selva, 11-IV-1948, *J. Braun Blanquet & al.* (BC 106509, sub *S. media*); Islas Baleares, Mallorca: Torrent d'Esclop, 24-IV-1855, *G. Vigineix* (BC 877745 ["BC 877715" on the label], sub *S. media*); Mallorca, llocs ombrejats, Lluc, 24-IV-1954, *Palau Ferrer 616* (BC 126453, sub *Cerastium brachypetalum*; holotype of *Cerastium brachypetalum* subsp. *balearicum* Romo).

The studied specimens of *S. ruderalis* are macro-morphologically intermediate between *S. media* and *S. neglecta*. See Lepší *et al.* (2019) for the characters allowing the separation between *S.*

neglecta and *S. pallida* from *S. ruderalis*. Regarding to the number of stamens and petal length the studied specimens of *S. ruderalis* are practically indistinguishable from *S. media*; however, as was pointed out by Lepší *et al.* (2019) seed ornamentation is the most useful character to separate both species. The studied specimens have seeds with conical and longer than wide tubercles (up to 0.17 mm long) on the dorsal surface (Fig. 1), whereas in *S. media* these tubercles are flat-topped or rounded, sometimes having shortly wider than long subconical tubercles. Furthermore, the studied specimens of *S. ruderalis* can be also separated from *S. media* based on some less distinct characters (Lepší *et al.*, 2019), such as larger size, upper leaves and bracts ovate or elliptical and a more or less condensed inflorescence. None of the studied specimens of *S. ruderalis* have petals longer or as long as sepals, a distinctive character of *S. neglecta*.

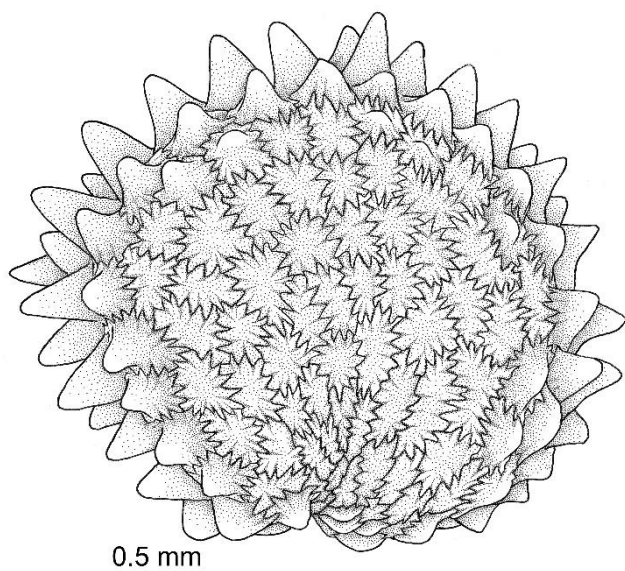


Figure 1. Seed of *Stellaria ruderalis*, from Balearic Islands, Mallorca, S'Esclop, BC 877745. Drawn by L. Sáez.

Figura 1. Semilla de *Stellaria ruderalis*, de Islas Baleares, Mallorca, S'Esclop, BC 877745. Drawn by L. Sáez.

Regarding the identity of some specimens from the Balearic Islands, it is remarkable that the holotype of *Cerastium brachypetalum* subsp. *balearicum* Romo (see above) which corresponds to a plant of the genus *Stellaria* L. (Rosselló & Sáez, 2000), was labeled as "*Stellaria* gr. *media* (L.) Vill." by L. Sáez (26-IX-2000), because at that time its taxonomic ascription to the typical *S. media* was unclear. Previously, from the same collection site and collector, Sáez & Fraga (1999) reported *S. neglecta* as new species for the Balearic Islands, Mallorca, based on this herbarium specimen: "Lluc, sitios umbríos de los montes, 14-VI-1954, Palau Ferrer 616" (MA 348415, sub *Cerastium brachypetalum*). This Majorcan material was attributed by Sáez & Fraga (1999) to *S. neglecta* based on seed size, c. 1.3 mm [not "13 mm"] and

number of stamens (10), but this specimen does not present a distinctive character of *S. neglecta*, such as the petals longer or as long as sepals, among others. Flowers of *S. media* and *S. ruderalis* usually have less than 8 stamens (cf. Lepší *et al.*, 2019). However, Lepší *et al.* (2019) also observed flowers of *S. ruderalis* with 10 stamens. Therefore, considering the morphological characteristics of *S. ruderalis*, we conclude that the Majorcan report of *S. neglecta* due to Sáez & Fraga (1999) should be referred to *S. ruderalis*. Other Balearic reports of *S. neglecta* from Mallorca (Duvigneaud, 1979, sub *S. media* subsp. *neglecta* (Weihe) Grelli; Smythies, 1984; Pla *et al.*, 1992 --its occurrence is considered as doubtful by the latter authors) are probably due to confusion with *S. ruderalis*. However, some occurrences of *S. neglecta* in humid areas of northern Mallorca cannot be ruled out.

Stellaria ruderalis is in all probability an overlooked widespread species in southern and central Europe (Lepší *et al.*, 2019; Strid & Raus, 2020). Neither the Iberian Peninsula nor the Balearic Islands were included in the distribution area by in previous studies. Lepší *et al.* (2019) revealed the broad ecological amplitude of *S. ruderalis* in central Europe. Our data confirm this view, as the specimens listed above were collected in localities with noticeable differences regarding the type of habitat: dry coastal maquis on siliceous substrate, shady limestone rocks in streams at mid-mountain areas and humid places on siliceous substrate, sometimes with volcanic rock outcrops. In our opinion *S. ruderalis* should be a widely distributed species in the Iberian Peninsula and the Balearic Islands. This species has probably been mainly confused with *S. media*, and to a lesser extent with *S. neglecta*. New searches in suitable habitats and herbarium research will reveal additional records for our area.

Acknowledgements

I am very grateful to Laura Gavioli, Neus Ibáñez, Noemí Montes and Neus Nualart for providing helpful assistance in the herbarium (BC) research. I thank Pere Fraga and the two anonymous reviewers for their constructive comments, which helped me to improve the manuscript.

References

- Duvigneaud, J. (1979). Catalogue provisoire de la flore des Baléares [ed. 2]. *Bulletin, Société pour l'Échange des Plantes Vasculaires de l'Europe Occidentale et du Bassin Méditerranéen*. 17, Suppl.: 1-43.
- Hand, R., Thieme, M. & Mitarbeiter (2020). Florenliste von Deutschland (Gefäßpflanzen), begründet von Karl Peter Buttler, Version 11 (May 2020). <https://www.kp-buttler.de> [accessed 22 July 2020].
- Lepší, M., Lepší, P., Koutecký, P., Lučanová, M., Koutecká, E. & Kaplan, Z. (2019). *Stellaria*

- ruderalis, a new species in the *Stellaria media* group from central Europe. *Preslia* 91: 391-420. <http://dx.doi.org/10.23855/preslia.2019.391>
- Pla, V., Sastre, B. & Llorens, L. (1992). *Aproximació al catàleg de la flora vascular de les Illes Balears*. Universitat de les Illes Balears, Jardí Botànic de Sóller. Palma de Mallorca.
- Rosselló, J.A. & Sáez, L. (2000). Index Balearicum: An annotated check list of the vascular plants described from the Balearic Islands. *Collectanea Botanica (Barcelona)* 25: 3-192.
- Sáez, L. & Fraga, P. (1999). Noves aportacions al coneixement de la flora balear. *Bolletí de la Societat d'Història Natural de les Balears* 42: 85-95.
- Smythies, B.E. (1984). Flora of Spain and the Balearic Islands. Checklist of vascular plants, 1 *Englera* 3: 1-212.
- Strid, A. & Raus, Th. (2020). M. Lepší & al. In E. Raab-Straube (ed.). In Euro+Med-Checklist Notulae, 12. *Willdenowia* 50: 312. <https://doi.org/10.3372/wi.50.50214>
- Wittig, R. (2019). Die Bleiche Sternmiere (*Stellaria apetala* Ucria) auf Friedhöfen im Taunus. *Braunschweiger Geobotanische Arbeiten* 13: 59-67.