

A new species of *Pelletiera* (Primulaceae) from Macaronesia

Autor(en): **Valdés, Benito**

Objektyp: **Article**

Zeitschrift: **Candollea : journal international de botanique systématique = international journal of systematic botany**

Band (Jahr): **35 (1980)**

Heft 2

PDF erstellt am: **03.07.2024**

Persistenter Link: <https://doi.org/10.5169/seals-880105>

Nutzungsbedingungen

Die ETH-Bibliothek ist Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Inhalten der Zeitschriften. Die Rechte liegen in der Regel bei den Herausgebern.

Die auf der Plattform e-periodica veröffentlichten Dokumente stehen für nicht-kommerzielle Zwecke in Lehre und Forschung sowie für die private Nutzung frei zur Verfügung. Einzelne Dateien oder Ausdrucke aus diesem Angebot können zusammen mit diesen Nutzungsbedingungen und den korrekten Herkunftsbezeichnungen weitergegeben werden.

Das Veröffentlichen von Bildern in Print- und Online-Publikationen ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Die systematische Speicherung von Teilen des elektronischen Angebots auf anderen Servern bedarf ebenfalls des schriftlichen Einverständnisses der Rechteinhaber.

Haftungsausschluss

Alle Angaben erfolgen ohne Gewähr für Vollständigkeit oder Richtigkeit. Es wird keine Haftung übernommen für Schäden durch die Verwendung von Informationen aus diesem Online-Angebot oder durch das Fehlen von Informationen. Dies gilt auch für Inhalte Dritter, die über dieses Angebot zugänglich sind.

A new species of *Pelletiera* (Primulaceae) from Macaronesia

BENITO VALDÉS

RESUMEN

VALDÉS, B. (1980). Una nueva especie de *Pelletiera* (Primulaceae) de Macaronesia. *Candollea* 35: 641-648. En inglés, resumen español.

Se hacen algunos comentarios sobre *Pelletiera*, se describe una nueva especie: *Pelletiera wildpretii* Valdés, de Macaronesia y se enumeran las especies de *Asterolinum* y *Pelletiera*.

ABSTRACT

VALDÉS, B. (1980). A new species of *Pelletiera* (Primulaceae) from Macaronesia. *Candollea* 35: 641-648. In English, Spanish abstract.

A new species: *Pelletiera wildpretii* Valdés is described from Macaronesia and its history of taxonomic confusion with *Asterolinum linum-stellatum* and *Pelletiera verna* are discussed.

Whilst studying some plants from the Canary Islands the author came across some specimens of a small Primulaceous species with an habit rather similar to *Asterolinum linum-stellatum* (L.) Duby. However, these plants have oblanceolate, thin, clearly reticulate-nervate leaves which are shorter than internodes in contrast to the lanceolate, thick and obscurely nervate leaves which are usually longer than internodes of *Asterolinum linum-stellatum*.

A detailed study of the flowers of these specimens has shown that the corolla consists of three free perianth segments and that the androecium is reduced to three stamens inserted on these segments. Such floral characters indicate that these Canary plants belong to the genus *Pelletiera* St.-Hil., which together with *Asterolinum* Hoffmanns. & Link, *Glaux* L., *Trientalis* L. and *Lysimachia* L. form the subtribe *Lysimachiinae* Pax (Primulaceae), characterised by valvical capsules. Within this subtribe, *Pelletiera*, with a small

corolla, much shorter than the calyx, differs from *Asterolinum*, also with small corolla, by its corolla of three perianth segments, three epipetalous stamens and a three-valved capsule. *Asterolinum* has a pentamerous gamopetal corolla, 5 epipetalous stamens and a five-valved capsule.

When SAINT-HILAIRE (1823: 365) described *Pelletiera* he included only one species, *P. verna* with a distribution in S. America — from Rio Grande (S. Brasil) to Maldonado (near Montevideo, Uruguay). A xerox-copy of the type of *Pelletiera verna* St.-Hil. from the Muséum National d'Histoire Naturelle, Paris, has been studied. It consists of 12 specimens collected by Commerson in 1767 near Montevideo (Uruguay). With this xerox print it was possible to verify that the characters of the specimens do agree with the description by SAINT-HILAIRE (l.c.) for *P. verna*, except for "Petala alba", which is impossible to confirm.

POIRET (1814: 477) described as *Lysimachia serpyllifolia* a plant collected at Buenos Aires (Argentina) by Commerson. Although the original description lacks corolla, androecium and fruits characters, the study of a xerox of the type of Poiret at Paris allows the identification of *Lysimachia serpyllifolia* Poiret with *Pelletiera verna* St.-Hil., an identity already established by DUBY (1844: 68). Consequently, the identification made by PAX & KUNTH (1905: 316) of *Lysimachia serpyllifolia* Poiret with *Asterolinum linum-stellatum* (L.) Duby is erroneous.

WEBB & BERTHELOT (1847: 173) recognised as *Pelletiera serpyllifolia* a plant collected by Despreaux on Gran Canaria, indicating *Lysimachia serpyllifolia* Poiret, *Pelletiera verna* St.-Hil. and *Asterolinum trinum* Bado as synonyms. Although such plants do not fit with those from S. America, as can be confirmed by the vegetative characters indicated by WEBB & BERTHELOT (l.c.), but to the new species here described, the combination established by these authors is nomenclaturally correct, and consequently, the correct name for the American species is *Pelletiera serpyllifolia* (Poiret) Webb & Berth.

PITARD & PROUST (1908: 266) repeated the citation of Webb & Berthelot, but under the name *Pelletiera verna* St.-Hil.

The plants of *Pelletiera* form Macaronesia differ so clearly from *P. serpyllifolia* from S. America, that are described here as a new species with the name of *Pelletiera wildpretii*. In Table 1, the characters of this new species are summarized in comparison with *P. serpyllifolia* and *Asterolinum linum-stellatum* (L.) Duby, with which it has been repeatedly mistaken by Macaronesian botanists.¹

¹For the preparation of this Table, the material of the following herbaria has been used: G and BREM for *P. serpyllifolia*; MA, ORT and SEV for *P. wildpretii*, and B and ORT for *A. linum-stellatum* from the Canary Islands and SEV for material of this species from the Iberian Peninsula.



Fig. 1. — *Pelletiera wildpretii* (ORT 12796). **a**, general aspect (natural size). **b**, calyx and capsule.

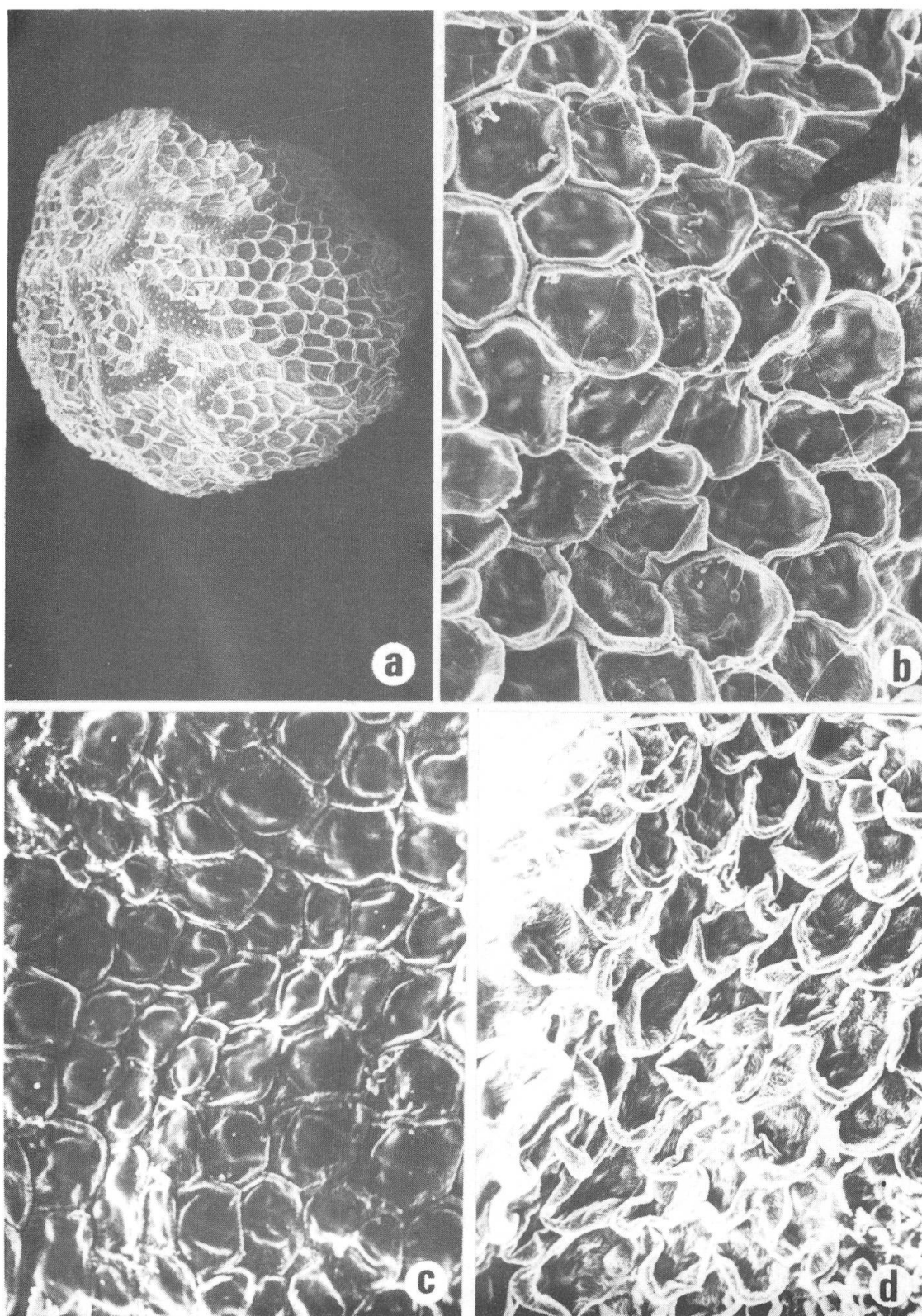


Fig. 2. — **a, b**, *Pelletiera wildpretii*. **a**, seed (\times ca. 85; ORT 12792). **b**, testa (\times ca. 400; ORT 12791). **c**, testa of *P. serpyllifolia* (\times ca. 400; Argentina, San Vicente, G). **d**, testa of *Asterolinum linum-stellatum* (\times ca. 350; Sevilla: entre Venta del Cruce y Aznalcazar; SEV 8370).

***Pelletiera wildpretii* Valdés, spec. nov.¹**

= *Pelletiera serpyllifolia* Webb & Berth., Phytograph. Canar. 3(2): 173 (1847), quoad descr., excl. synonym.

Typus: Gran Canaria, sur las lavas de Lisletae, raro, herb. Webb (FI).

Annual. Caule ad 16 cm, solitario vel ramoso. Foliis mediis 7-14 × 1.5-3.5 mm, generaliter internodiis brevior, oppositis, oblanceolatis, acutis vel subobtusis, mucronatis, tenuibus, reticulato-venosis. Floribus axillaribus 1-2 in nodis. Pedicellis calycibus brevioribus vel parum longioribus, fructiferis nutantibus. Calycis laciniis vix crescentibus, fructiferis 1.5-2.5 × 0.3-0.5 mm, lanceolatis. Corolla ca. 1/3 calycis longitudine, cum tribus petalis. Unum ex his spatulato-ellipticum, altera latioria aut emarginata aut bilobata. Staminibus 3, petalis oppositis ad medium insertis, filamentis longitudine corollae aequantibus. Capsula trivalvata, calyce brevior, 3-2 seminibus 0.8-1 × 0.6-0.8 mm, oblongo-ellipticis, transversaliter corrugatis, fuscis, umbilico ellipticis.

Annual. Stem to 16 cm, branched or simple. Middle leaves 7-14 × 1.5-3.5 mm, generally shorter than internodes, opposite, oblanceolate, acute to subobtuse, mucronate, thin, reticulate-nervate. Flowers axillary, 1-2 per node. Fruiting pedicels somewhat shorter to slightly longer than sepals, recurved. Sepals slightly accrescent, 1.5-2.5 × 0.3-0.5 mm in fruit, lanceolate. Corolla ca. 1/3 as long as sepals, with three perianth segments: one narrow, spatulate-elliptic, the other two wider, one emarginate and the other bilobate. Stamens 3, inserted at about the middle of the perianth segments; filaments more or less as long as petals; anthers introrse. Capsule somewhat shorter than petals, trivalvate, with 3-2 seeds. Seeds 0.8-1 × 0.6-0.8 mm, oblong-elliptic, transversally corrugated, areolate, brown, with elliptic umbilicate hilum.

Distribution area. — Canary Islands (Hierro and Tenerife) and Selvagens.

Studied material. — **Canarias: Hierro.** Ladera de Jinama, 11.5.1949, *Sventenius* (ORT 18124). Sabinal de la Dehesa, 3.4.1958, *Sventenius* (ORT 18125). **Tenerife.** Buenavista, Roque del Fraile, 19.3.1855, *Bourgeau*, Pl. Canar. (MA 161325); idem, 30.5.1970, *Sventenius* (ORT 12796). Santa Cruz de Tenerife, Cardonal de Güimar, 20.2.1979, *Wildpret* (SEV 43644). Teno, 22.3.1951, *Sventenius* (ORT 12791); idem, 15.3.1969, *Sventenius* (ORT 12792).

Salvagens: Gran Pitón (= Gran Salvaje), 14.5.1953, *Sventenius* (ORT 1148).

As can be observed in Table 1, the differences between this species and *P. serpyllifolia* are very clear. Although both species have seeds with areolate testa, in *P. wildpretii* the cell margins are more clearly crestate (Fig. 2, a, b) than in *P. serpyllifolia* (Fig. 2, c) and consequently more similar to those of *Asterolinum linum-stellatum* (Fig. 2, d).

¹Ad Prof. W. Wildpret, La Laguna, dicata.

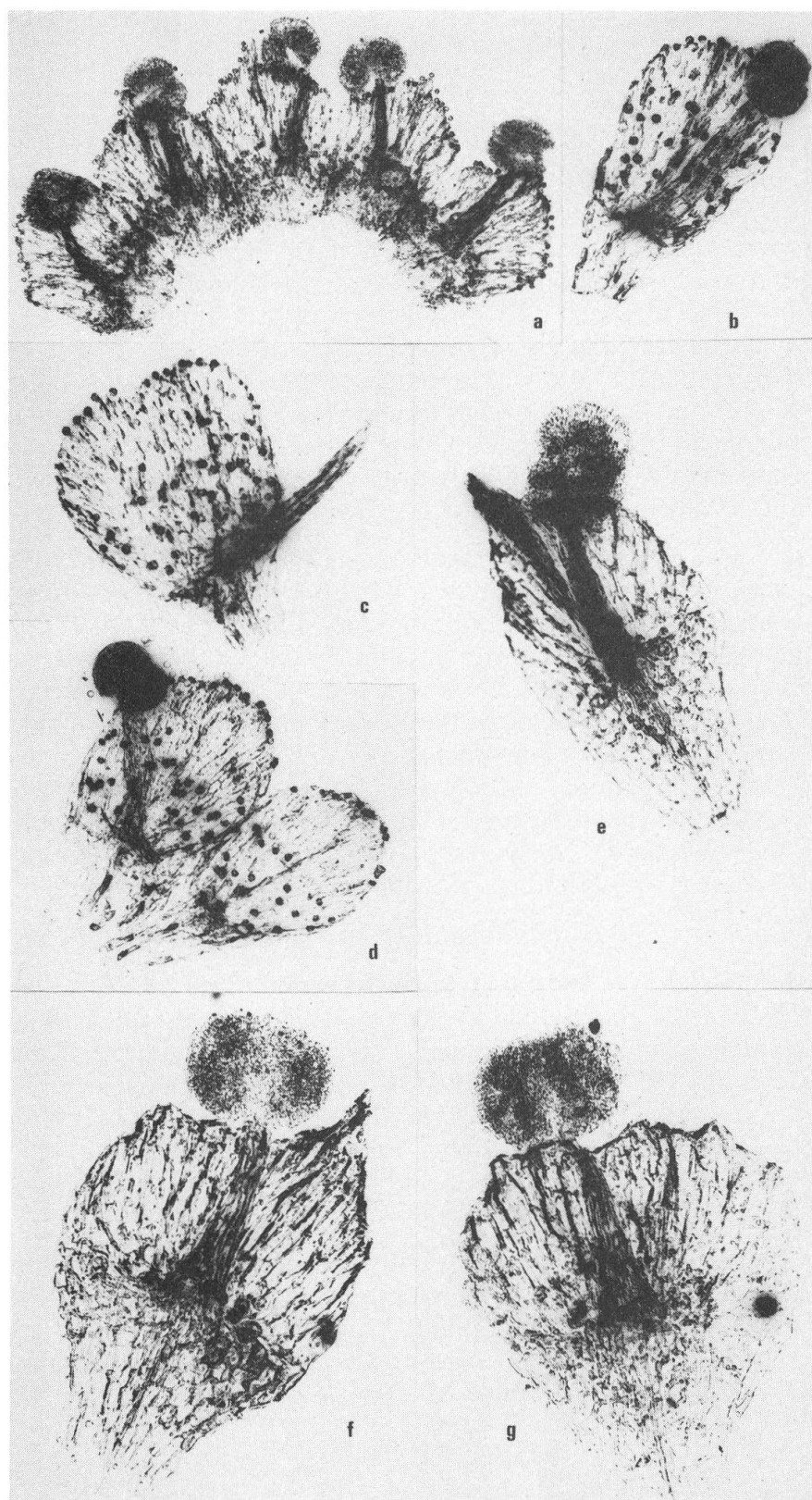


Fig. 3. — **a**, corolla of *Asterolinum linum-stellatum* (= ca. 40; Sevilla: Alcalá de Guadaira; SEV 37560). **b-d**, perianth segments of *Pelletiera wildpretii* (\times ca. 65; ORT 18124). **e-g**, perianth segments of *Pelletiera serpyllifolia* (\times ca. 100; Argentina, Cinco Loma, BREM).

Characters	<i>P. serpyllifolia</i>	<i>P. wildpretii</i>	<i>A. linum-stellatum</i>
Size of plant (cm)	2-7.5	5-16	2-16
Internode length (mm) . .	1-6.5	(5-)10-20(-30)	(0.8-)2-10(-12)
Leaf shape	lanceolate to elliptic-lanceolate	oblanceolate	lanceolate to elliptic-lanceolate
Size of leaves (mm)	3-5.5 × 1-1.5	7-14 × 1.5-3.5	(2.2-)3-8.5 × 0.7-2
Length of leaves in relation to internode	longer	generally shorter	generally longer
Position of fruit pedicels	erect to divaricate	recurved	recurved
Size of sepals in fruit (mm)	2.2-2.5 × 0.2-0.3	1.5-2.5 × 0.3-0.5	(1.8-)2-2.5 × 0.3-0.7
Corolla	3 free pieces	3 free pieces	5 united pieces
Glandular hairs on corolla	very scanty	abundant	abundant
Capsule	trivalved	trivalved	5-valved
Size of seeds (mm)	0.8-1 × 0.6-0.8	0.8-1 × 0.6-0.8	0.9-1.3 × 0.7-1

Table 1. — Differential characters of *Pelletiera serpyllifolia*, *P. wildpretii* and *Asterolinum linum-stellatum*.

The flowers of *P. wildpretii* represent an intermedite position between those of *Asterolinum* from the Old World, with gamopetalous 5-lobed corolla with many glandular hairs and 5 stamens, and those of *P. serpyllifolia* from S. America, with 3 perianth segments, only a few glandular hairs and 3 stamens. In *P. wildpretii*, the flowers likewise have a dialipetalous corolla, but its three perianth segments are markedly unequal: one is narrow and spatulate and presumably comprises a single petal, whereas the other two are each equivalent to two more or less fused petals. The stamens are reduced to three. The glandular hairs are abundant.

With the description of this new species, and the identification of *Lysimachia serpyllifolia* with *Pelletiera verna*, the genera *Asterolinum* and *Pelletiera* comprise the following species.

Asterolinum Hoffmanns. & Link, Fl. Port. 1: 332 (1809).

A. adoense Kunze, Linnaea 20: 37 (1847).
Abyssinia.

A. linum-stellatum (L.) Duby in DC., Prodr. 8: 68 (1844) \equiv *Lysimachia linum-stellatum* L., Sp. Pl.: 148 (1753) \equiv *Asterolinon stellatum* Hoffmanns. & Link, Fl. Port. 1: 333 (1809).

= *A. pusillum* Bub., Fl. Pyr. 1: 231 (1897).

Mediterranean Region, from Canary Islands to Iran.

Pelletiera St.-Hil., Mém. Mus. Paris 9: 365 (1823).

P. serpyllifolia (Poiret) Webb & Berth., Phytograph. Canar. 3(2): 173 (1847), quoad nomen \equiv *Lysimachia serpyllifolia* Poiret, Encycl. Méth., Suppl. 3: 477 (1818) \equiv *Asterolinon serpyllifolium* (Poiret) Ball, J. Linn. Soc. (Bot.) 21: 226 (1886).

= *Pelletiera verna* St.-Hil., Mém. Mus. Paris 9: 365 (1823).

= *Asterolinum trinum* Baudo, Ann. Sci. Nat., sér. 2, 20: 350 (1843).

Extratropical S. American regions (S. Brasil, Uruguay, Argentina and Chile).

P. wildpretii Valdés

= *P. serpyllifolia* Webb & Berth., Phytogr. Canar 3(2): 173 (1847), quoad descr.

Macaronesia (Canary Islands, Salvagens).

ACKNOWLEDGEMENTS

The author would like to thank A. Chater, London, for supplying some bibliographical references, the Director of the Muséum National d'Histoire Naturelle, Laboratoire de Phanérogamie, Paris, for sending some xeroxs of type specimens, and Dr. P. Gibbs, St. Andrews, for helpful comments and for correcting the English of the manuscript. Photographs of seeds (SEM) and corollas were obtained by J. Díez Dapena and J. Pastor.

REFERENCES

- DUBY, J. (1844). Primulaceae. In: A. DE CANDOLLE (ed.), *Prodromus Systematis Naturalis Regni Vegetabilis* 8: 33-74. Parisiis.
- PAX, F. & R. KUNTH (1905). Primulaceae. In: A. ENGLER (ed.), *Das Pflanzenreich* 22. Berlin.
- PITARD, J. & L. PROUST (1908). *Les Isles Canaries. Flore de l'Archipel*. Paris.
- POIRET, J. L. M. (1814). *Encyclopédie Méthodique. Botanique*. Suppl. 3. Paris.
- SAINT-HILAIRE, A. (1823). Aperçu d'un voyage dans l'intérieur du Brésil, la province Cisplatine et les Missions dites du Paraguay. *Mém. Mus. Hist. Nat. (Paris)* 9: 307.
- WEBB, P. & S. BERTHELOT (1847). Histoire Naturelle des Iles Canaries. *Phytogr. Canar.* 3(2). Paris.

Address of the author: Departamento de botánica, Facultad de biología, Sevilla, España.