

EMENDED TYPE DESIGNATION OF THE NAME *THYMUS FILIFORMIS*, BASIONYM OF *MICROMERIA FILIFORMIS* (LAMIACEAE)

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ABSTRACT: William Aiton's name *Thymus filiformis*, the basionym of *Micromeria filiformis* (Lamiaceae), was "lectotypified" from a specimen preserved at BM. However, it is uncertain whether the specimen selected is part of Aiton's original material, and thus it cannot be considered a lectotype. Although the designated type must be accepted, as no original material has been located for this name, the term used ("lectotype") should be considered an error and corrected to neotype in accordance with Art. 9.10 of the *International Code of Nomenclature for algae, fungi, and plants* (Shenzhen Code). The neotype is a specimen labelled "Insulae Baleares. Jacquin", preserved at BM. **Keywords:** Herbarium Jacquin; *Labiatae*; lectotype; Mediterranean flora; *Micromeria*; neotype; nomenclature; *Thymus*.

RESUMEN: Designación de tipo enmendada del nombre *Thymus filiformis*, basiónimo de *Micromeria filiformis* (Lamiaceae). El nombre de William Aiton *Thymus filiformis*, basiónimo de *Micromeria filiformis* (Lamiaceae), fue "lectotipificado" a partir de un ejemplar conservado en el BM. Sin embargo, no es seguro que el espécimen seleccionado forme parte del material original de Aiton, por lo que no puede considerarse un lectotipo. Aunque debe aceptarse el tipo designado, ya que no se ha localizado ningún material original para este nombre, el término utilizado ("lectotipo") debe considerarse un error y corregirse a neotipo de acuerdo con el Art. 9.10 del *Código Internacional de Nomenclatura para algas, hongos y plantas* (Código de Shenzhen). El neotipo es un ejemplar etiquetado como "Insulae Baleares. Jacquin", conservado en el herbario BM. **Palabras clave:** Herbario Jacquin; *Labiatae*; lectotipo; Flora Mediterránea; *Micromeria*; neotipo; nomenclatura; *Thymus*.

INTRODUCTION

Micromeria Benth. (BENTHAM, 1829: sub t. 1282) is a taxonomically complex genus (see BRÄUCHLER & al., 2005, 2008; PUPPO & al., 2014, 2015). It belongs to the family *Lamiaceae* (subfamily *Nepetoideae*, tribe *Mentheae*, and subtribe *Menthinae*) (MORALES, 1991a; HARLEY & al., 2004). *Micromeria* s.str. is currently circumscribed as monophyletic and is represented by nearly 70 species in the world (PUPPO & MEIMBERG, 2015). The genus is distributed from the Macaronesian-Mediterranean region to southern Africa, India, and China (MORALES, 1991b; BRÄUCHLER & al., 2008; PUPPO & al., 2014, 2015).

Micromeria filiformis (Aiton) Benth. is an endemic species of the Balearic Islands. It inhabits cracks in limestone rocks, stony areas, and walls. Citations of this species for Sardinia and Corsica are now considered to belong to its congener *M. cordata* (Moris ex Bertol.) Moris (MORALES, 1991a; PIGNATTI, 2018). Two taxa have been described within this species: *M. filiformis* var. *glandulosa* Sennen & Pau (in Treb. Inst. Catalana Hist. Nat. 3: 193. 1917) and *M. filiformis* var. *rubrifolia* Sennen & Pau (in Treb. Inst. Catalana Hist. Nat. 3: 193. 1917) whose types were designated by ROSSELLÓ & SÁEZ (2000) (see also ROSSELLÓ & SÁEZ, 2017).

MORALES (1991a, 2010) did not locate original material for *Thymus filiformis* Aiton, the basionym of *Micromeria filiformis*, and did not address the typification of this name. BRÄUCHLER (in BRÄUCHLER & al., 2008: 380) designated a specimen preserved at BM as the "lectotype" of *Thymus filiformis* (see below). However, it is uncertain whether the selected specimen is part of the original material used by Aiton to describe his species,

and therefore it cannot be accepted as a lectotype.

Although the designated type must be accepted, as no original material has been located for this name, the term used ("lectotype") should be considered an error and corrected to neotype in accordance with Art. 9.10 of the *International Code of Nomenclature for algae, fungi, and plants* (Shenzhen Code).

The aim of this paper is revise the typification of the name.

BACKGROUND AND NOMENCLATURAL TYPE DESIGNATION

In the 1780s, William Aiton set out to catalogue every plant grown at Kew. The result, published in 1789, was called *Hortus kewensis* (a catalogue of the plants cultivated in the Royal Botanic Garden at Kew) and included information on the country of origin of each plant and who first cultivated it in Britain. The botanical descriptions in the *Hortus kewensis* were not written by the Aitons (William Aiton [1731–1793] and William Townsend Aiton [1766–1849]), but by Daniel Carl Solander, Jonas Carlsson Dryander and Robert Brown (see BRITTEN, 1912; KROK, 1925). On the other hand, some of the new taxa described in the first edition (1789) of the *Hortus kewensis* came from L'Héritier (so indicated), and the types of these taxa are in the L'Héritier herbarium at G-DC and also at BM. Specifically, the diagnoses in *Hortus kewensis* vols. 1 & 2 were largely written by Dryander, who used a manuscript left by Solander, which is held in the Botany Library at BM (BRITTEN, 1912; KROK, 1925; RAUSCHENBERG, 1968; BRIDSON & al., 1980; STAFLEU & COWAN, 1985).

Aiton's protologue (1789: 313) of *Thymus filiformis* consisted of a short diagnosis ("2. T. [Thymus] floribus axillaribus solitariis pedunculatis, foliis cordatis acutis integerrimis petiolatis, caulibus filiformibus decumbentibus") followed by six annotations: 1) "Small-leav'd Thyme"; 2) "Nat. of the Balearic Islands."; 3) "Introd. 1770, by Mr. William Malcolm."; 4) "Fl. June and July"; 5) "G. H." (indicating that this species is cultivated in the Green House at Kew); and 6) "B." (indicating that this species is shrubby [see Aiton 1789: page xxx [30] for abbreviations]) (see AITON, 1789).

According to the protologue, this species was introduced to Kew in 1770 by William Malcolm, a Scottish nurseryman from Kennington (England), who supplied exotic plants to Kew in the 18th century (McEWEN, 2013). However, although it is mentioned that the species is native to the Balearic Islands, it is not explicitly stated that Malcolm introduced it from the Balearic Islands. It could have been introduced from another botanical garden where it was previously cultivated, for example.

In search for the original specimens supporting *Hortus kewensis*, it is relevant to note that the Royal Botanic Gardens at Kew did not have its own herbarium in the 18th century. As noted by STAFLEU & COWAN (1976), almost all types cited in both editions of the *Hortus kewensis* are held in the Banksian herbarium at BM.

BRÄUCHLER (in BRÄUCHLER & al. 2008: 380) indicated the "lectotype" of *Thymus filiformis* as preserved at BM from a specimen collected by Jacquin, arguing that: "The diagnoses in Hort. Kew. vols. 1 & 2 were largely written by Dryander, who used a manuscript left by Solander. In this manuscript (present at the Botany Library at BM), *Thymus filiformis* is stated as described from a Jacquin collection or a specimen from his herbarium (Roy Vickery, pers. comm). At BM there is a sheet in the Banks herbarium that contains three gatherings: the first labeled "Herb. Helvet.", i.e., a collection of (supposedly) Swiss plants, made by Dick, and purchased by Banks from Pitcairn in 1775; a second labeled "Hort. Pitcairne", cultivated at Pitcairn's garden and finally the third collection "Insulae Baleares. Jacquin". The original description by Solander most probably was based on this latter collection and the species later has been introduced to Kew Gardens by Malcolm. The Jacquin collection to our knowledge represents the only preserved part of the original material and therefore is designated as lectotype here. Nevertheless, the authorship for the species is to be attributed to Aiton (McNeill & al. 2006: Art. 46.7, Ex. 35)".

This relevant paragraph, which justifies the selection of the type material, contains several contradictions and unsubstantiated claims. It asserts that Solander's description of the species was based on Jacquin's specimen ("The original description by Solander most probably was based on this latter collection and the species later has been introduced to Kew Gardens by Malcolm"), and further claims that this specimen is the only representative of the original material supposedly studied by Solander ("The Jacquin collection to our knowledge represents the only preserved part of the original material"). However, there is no evidence to support that it was studied by Aiton. This creates a contradiction, as Bräuchler refers to an article of the Code (McNeill & al. 2006: Art. 46.7, Ex. 35") (see Art. 46. Ex. 43 in TURLAND & al., 2018) ("Nevertheless, the authorship for the species is to be attributed to Aiton"), which attributes the

authorship of the names published in *Hortus kewensis* to Aiton.

The International Code of Nomenclature (ICN, Art. 46.8, Ex 43; TURLAND & al., 2018) specifies that names of new taxa published in *Hortus kewensis* (1789) are to be "attributed to Aiton, the stated author of the work, except where a name and description were both ascribed in that work to somebody else. Thus, since the author of the name is Aiton and not Solander, the specimen at BM labeled ("Insulae Baleares. Jacquin") (see Fig. 1) cannot be treated as original material used by Aiton to describe his species. There is no evidence that this specimen was examined by Aiton; thus, treating it as original material is purely speculative.

On the other hand, the specimen mentioned by Bräuchler as "lectotype" cannot be treated as a material mentioned by Aiton in the protologue (neither directly nor indirectly), because the information on the herbarium sheet (i.e., "Insulae Baleares. Jacquin") does not match the details provided in the protologue (i.e., "Nat. of the Balearic Islands." and "Introd. 1770, by Mr. William Malcolm").

I have been unable to locate any specimen of *M. filiformis* that could be selected as the lectotype for this name.

In conclusion, although the type designation as "lectotype" published by BRÄUCHLER (in BRÄUCHLER & al., 2008: 380) must be accepted, the term used in the type designation should be considered an error and corrected to neotype in accordance with Art. 9.10 of the ICN.

Micromeria filiformis (Aiton) Benth., Labiat. Gen. Spec.: 378. 1834

≡ *Thymus filiformis* Aiton, Hort. Kew. 2: 313. 1789 [basionym]

≡ *Clinopodium filiforme* (Aiton) Kuntze in Revis. Gen. Pl. 2: 515. 1891

≡ *Satureja filiformis* (Aiton) Briq. in Engl. & Prantl, Nat. Pflanzenfam. 4(3a): 299. 1896

≡ *Clinopodium filiforme* (Aiton) Kuntze in Revis. Gen. Pl. 2: 515. 1891

≡ *Satureja filiformis* (Aiton) Briq. in Engl. & Prantl, Nat. Pflanzenfam. 4(3a): 299. 1896

≡ *Satureja microphylla* subsp. *filiformis* (Aiton) O. Bolòs & Vigo, Fl. Països Catalans 3: 301. 1995

Type (designated as "lectotype" by Bräuchler (in Bräuchler & al. 2008: 380) and corrected here to **neotype**): – [Spain] "Insulae Baleares", s.d., *Jacquin s.n.* (BM barcode BM 001069187 [Banks herbarium]). For an image of the neotype, see Fig. 1.

FINAL CONSIDERATION

In my opinion, these inadvertent neotypifications, including that of *M. filiformis*, should be considered ineffective, as they result from an incorrect application of the International Code of Nomenclature (even if within the scope of Art. 9.10) and may lead to undesirable consequences. The erroneous assumption that a specimen is original material for lectotype designation—when it is not—may compel the retention of a designation that could otherwise have been more appropriately made using material suitable for neotype selection. Once again, I believe a revision of Art. 9.10 of the Shenzhen Code is necessary (see FERRER, 2025).

Acknowledgements: Thanks to Dr. Ranee Prakash and Dr. Mark Carine for their assistance with the study of herbarium specimens preserved at BM.

REFERENCES

- AITON, W. (1789). *Hortus kewensis, or, a catalogue of the plants cultivated in the Royal Botanic Garden at Kew* 2. George Nicol, London, 460 pp.
- BENTHAM, G. (1829). *Micromeria* Benth., gen. nov. In: Lindley, J. (Ed.) *Edward's Botanical Register* 15. London, pp. 1282. Available from: <http://www.biodiversitylibrary.org/item/9051#page/193/mode/1up> (accessed 1 October 2015)
- BRÄUCHLER, C., H. MEIMBERG, T. ABELE & G. HEUBL, (2005). Polyphyly of the genus *Micromeria* Benth. (Lamiaceae) evidence from cpDNA sequence data. *Taxon* 54: 639–650.
- BRÄUCHLER, C., O. RYDING & G. HEUBL (2008). The genus *Micromeria* (Lamiaceae), a synoptical update. *Willdenowia* 38: 363–410.
- BRIDSON, G.D.R., V.C. PHILLIPS & A.P. HARVEY (1980). *Natural History manuscript resources in the British Isles*. Mansell, London and R.R. Bowker, New York, 473 pp.
- BRITTON, J. (1912). The history of Aiton's "*Hortus Kewensis*". *Journal of Botany* 50 (Suppl. 3): 1–16.
- FERRER GALLEGO, P.P. (2025). On the nomenclatural type of the Linnaean name *Gypsophila struthium* (Caryophyllaceae): a review. *Flora Montib.* 91: 42–48.
- HARLEY, R.M., S. ATKINS, A. BUDANTSEV & al. (2004). Labiatae. In: Kadereit, J.W. (Ed.) *The families and genera of flowering plants* 7. Springer, Berlin & Heidelberg: 167–275.
- KROK, T.O.B.N. (1925). *Bibliotheca botanica suecana*. Uppsala & Stockholm.
- McEWEN, R. (2013). The Northern Lads: The Migration of Scottish Gardeners with Especial Reference to the Royal Botanic Gardens, Kew. *Sibbaldia* 13: 109–123.
- MORALES, R. (1991a). El género *Micromeria* Benth. (Labiatae) en la Península Ibérica e islas Baleares. *Anales del Jardín Botánico de Madrid* 48(2): 131–156.
- MORALES, R. (1991b). Sinopsis y distribución del género *Micromeria*. *Botanica Complutensis* 18: 157–168. <https://doi.org/10.3372/wi.36.36124>
- MORALES, R. (2010). *Micromeria* Benth. In: Morales, R., Quintanar, A., Cabezas, F., Pujadas, A. J. & Cirujano, S. (Eds.), *Flora iberica* 12. Real Jardín Botánico, CSIC, Madrid: 423–430.
- PIGNATTI, S. (2018). *Micromeria* Benth. In: *Flora d'Italia* 3. Edagricole, Milano: 236–239.
- PUPPO, P. & H. MEIMBERG (2015). New species and new combinations in *Micromeria* (Lamiaceae) from the Canary Islands and Madeira. *Phytotaxa* 230(1): 1–21.
- PUPPO, P., M. CURTO, G. VELO-ANTÓN & al. (2014). The influence of geological history on diversification in insular species: genetic and morphological patterns of *Micromeria* Benth. (Lamiaceae) in Tenerife (Canary archipelago). *Journal of Biogeography* 41: 1871–1882. <http://dx.doi.org/10.1111/jbi.12354>
- PUPPO, P., M. CURTO, J. GUSMÃO-GUEDES & al. (2015). Molecular phylogenetics of *Micromeria* (Lamiaceae) in the Canary Islands and Madeira, diversification and inter-island colonization patterns inferred from nuclear genes. *Molecular Phylogenetics and Evolution* 89: 160–170 <http://dx.doi.org/10.1016/j.ympev.2015.04.017>
- RAUSCHENBERG, R.A. (1968). Daniel Carl Solander, naturalist on the "Endeavour". *Transactions of the American Philosophical Society* 58: 1–66. <https://doi.org/10.2307/1006027>
- ROSSELLÓ, J.A. & L. SÁEZ (2000). Index Balearicum: An annotated check-list of the vascular plants described from the Balearic Islands. *Collect. Bot.* 25: 3–203.
- ROSSELLÓ, J.A. & L. SÁEZ (2017). Index Balearicum (III). An annotated check-list of the vascular plants described from the Balearic Islands. Additions (2008–2016) and corrections. *Orsis* 31: 65–78.
- STAFLEU, F.A. & R.S. COWAN (1976). *Taxonomic literature* ed. 2, 1. Bohn, Scheltema & Holkema, Utrecht, 1136 pp.
- STAFLEU, F.A. & R.S. COWAN (1985). *Taxonomic literature* ed. 2, 5. Bohn, Scheltema & Holkema, Utrecht, 1066 pp.
- TURLAND, N.J. & al. (Eds.) (2018). *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017*. Koeltz Scientific Books, Königstein, 254 pp.

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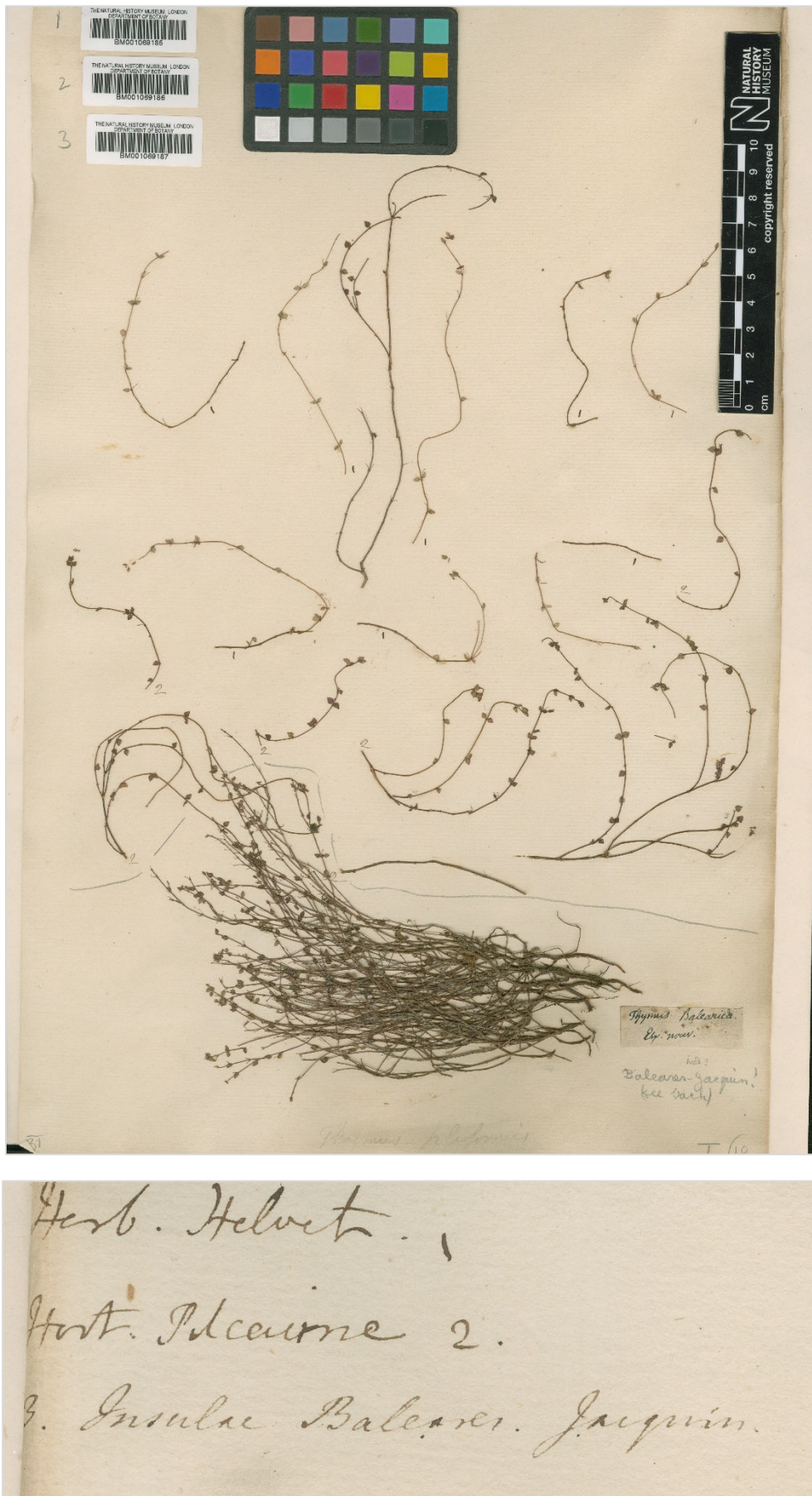


Figure 1. Neotype of *Micromeria filiformis* (Aiton) Benth. ($\equiv$ *Thymus filiformis* Aiton); BM barcode BM001069187. The specimen neotype is the plant labeled as: "Insulae Baleares, Jacquin". Photograph courtesy of Herbarium BM; reproduced with permission.

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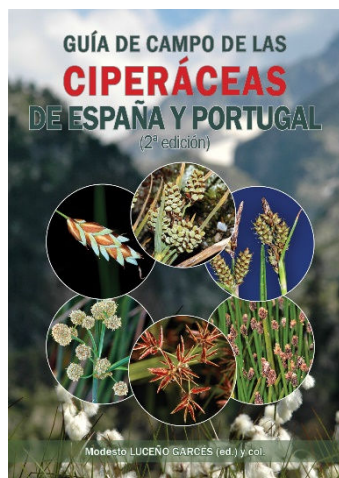
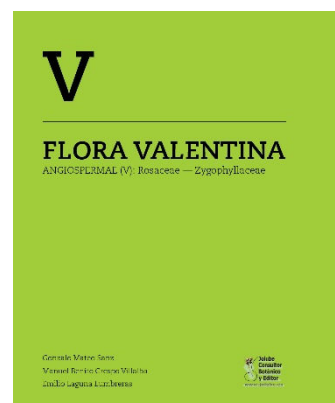
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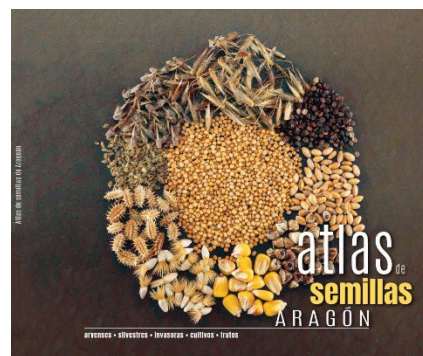
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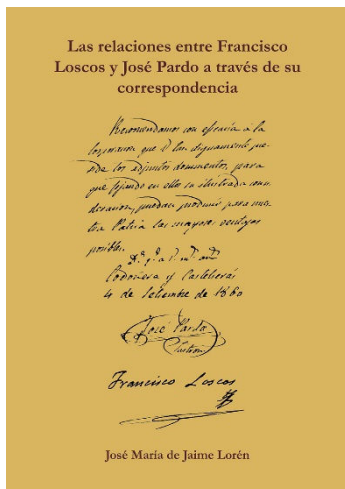
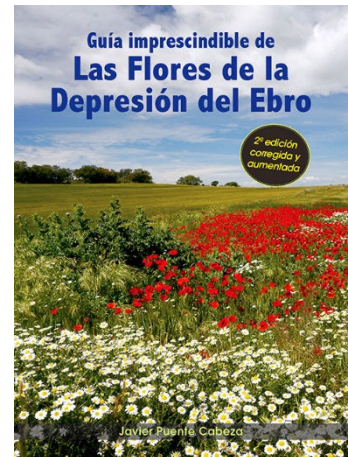
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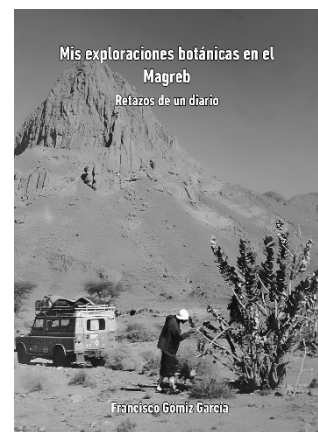
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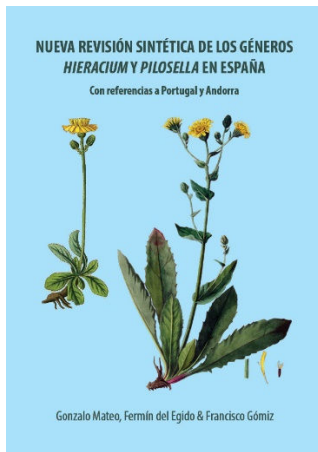
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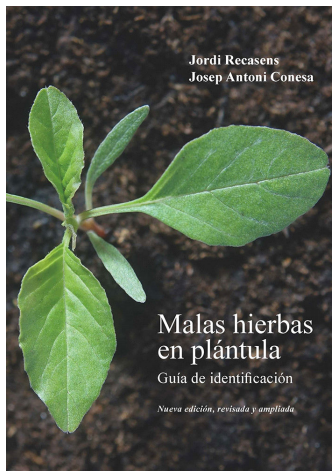
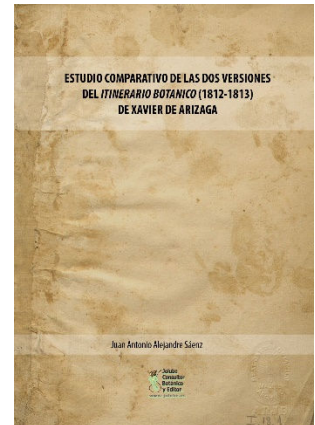
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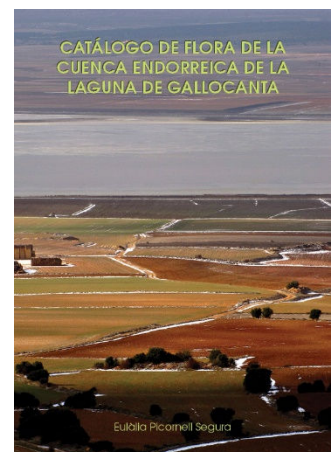
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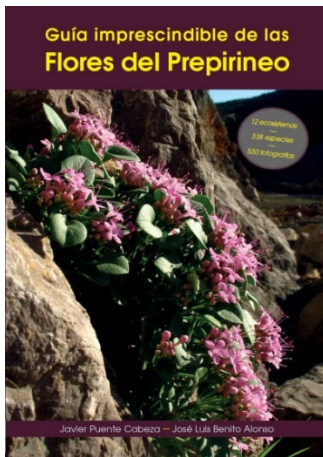
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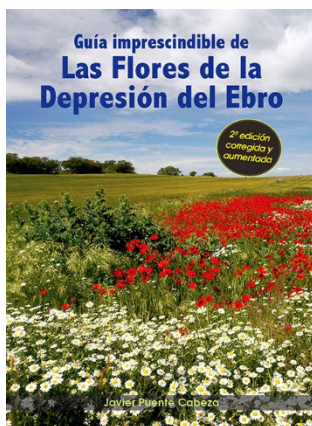
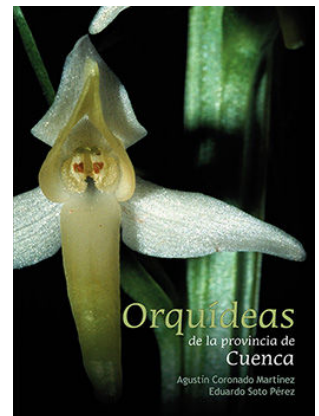
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ISBN: 978-84-126656-3-5

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