

REVISED TYPIFICATIONS OF FOUR LÉON DUFOUR'S NAMES

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ABSTRACT: The typifications of four Léon Dufours's names are revised. The lectotype of *Centaurea scorpiurifolia* (Compositae) is designated from original material preserved in the "Herbier Léon Dufour" at BORD (available at: *Archives départementales des Landes*). The neotypes of *Centaurea stenophylla* and *Thalictrum maritimum* (Ranunculaceae) were designated from material preserve at P and VAL herbaria, respectively. However, original material has been found at BORD. Therefore, the lectotypes of *C. stenophylla* and *T. maritimum* are designated in this work according to Art. 9.19(a) of the *International Code of Nomenclature for algae, fungi, and plants (ICN)*. On the other hand, the lectotype of *Centaurea dracunculifolia* is also designated from original material preserved at BORD. **Keywords:** *Centaurea dracunculifolia*; *Centaurea scorpiurifolia*; *Centaurea stenophylla*; *Compositae*; *Asteraceae*; lectotype; neotype; *Thalictrum maritimum*; nomenclature; typification.

RESUMEN: Tipificaciones revisadas de cuatro nombres de León Dufour. Se revisan las tipificaciones de cuatro nombres de plantas descritas por Léon Dufour. El lectotipo de *Centaurea scorpiurifolia* (Compositae) es designado a partir de material original conservado en el "Herbario Léon Dufour" en BORD (disponible en: *Archives départementales des Landes*). Los neotipos de *Centaurea stenophylla* y *Thalictrum maritimum* (Ranunculaceae) fueron designados a partir de material conservado en los herbarios P y VAL, respectivamente. Sin embargo, material original para estos dos nombres se ha encontrado en BORD. Por lo tanto, los respectivos lectotipos de *C. stenophylla* y *T. maritimum* son designados en este trabajo de acuerdo con lo dispuesto en el Art. 9.19(a) del *Código Internacional de Nomenclatura para algas, hongos y plantas (CIN)*. Por otro lado, el lectotipo de *Centaurea dracunculifolia* es asimismo designado a partir de material original conservado en BORD. **Palabras clave:** *Centaurea dracunculifolia*; *Centaurea scorpiurifolia*; *Centaurea stenophylla*; *Compositae*; *Asteraceae*; lectotipo; neotipo; *Thalictrum maritimum*; nomenclatura; tipificación.

INTRODUCTION

Jean-Marie Léon Dufour (1780-1865) was a French physician, botanist, and entomologist, born in Saint-Sever-sur-Adour, Landes (France). Dufour studied medicine at Paris until 1806, and went to Spain 1823 (see DUSSAUSSOIS, 1988; BOONE, 2003). The herbarium of this author is preserved at NTM, and further material is preserved at BORD, BR, CN, FI, K, LD, LY, P, P-JU (STAFLEU, 2000). This author described a large number of species for the Spanish flora. However, from the standpoint of nomenclature, many of the names of these species have not been typified. The purpose of the present contribution is to stabilize the nomenclature of four species described by Léon Dufour through typification of their names for which original material is known.

Thus, the lectotype of *Centaurea scorpiurifolia* Dufour (Compositae) is designated from original material preserved in the herbarium of Léon Dufour at BORD (Herbier Léon Dufour, available in the Archives départementales des Landes).

On the other hand, the neotypes of *Centaurea stenophylla* Dufour and *Thalictrum maritimum* Dufour (Ranunculaceae) were designated from specimens preserved in the herbarium of the Muséum national d'Histoire naturelle at P (with barcode P04293467) (see FERRER-GALLEGO & al., 2017: 79) and in the herbarium of the Botanic Garden of the University of Valencia at VAL (with barcode

de VAL109022) (see FERRER-GALLEGO & al., 2015: 85), respectively.

However, in the herbarium of Léon Dufour at BORD, we have found Dufour's original material of these two names. Therefore, to contribute to the stability of the nomenclature, and according to Art. 9.19(a) of the *ICN* (see TURLAND & al., 2018), we propose to designate the respective lectotypes of the names *Centaurea stenophylla* and *Thalictrum maritimum*.

Finally, the selected lectotype of *Centaurea dracunculifolia* Dufour (Compositae) by ARNELAS & DEVESA (2011: 43) (see also DEVESA & al., 2015: 449) was not designated according to Art. 7.11 of the *ICN*. The original specimen of this species mentioned by ARNELAS & DEVESA (2011: 43) and preserved in the herbarium of Léon Dufour at BORD is designated in this work as the lectotype of *C. dracunculifolia*.

TYPIFICATIONS OF THE NAMES

***Centaurea dracunculifolia*.** — ARNELAS & DEVESA (2011: 43) selected a sheet at BORD as the "lectotype" of *Centaurea dracunculifolia*: "Lectótipo: "82. 513. Hisp. / *Centaurea Dracunculifolia*. Duf. / caulis decumbens angulosus ramosus nec non simplicissimus, ramis unifloris / Hab. haud infrequens in / maritimis humidiusculis / Valentia loco dicto Dehesa. / flor. Junio, julio" (BORD-Dufour)". This "lectotype" is accepted by DEVESA & al., (2015: 449).

However, unfortunately this lectotype selection does not constitute a legitimate designation according to Art. 7.11 of the *ICN* (see TURLAND & al., 2018), since it is not included the phrase “designated here” (*hic designatus*) or an equivalent being later than 2001.

In the herbarium of Léon Dufour at BORD there are two relevant sheets with material of *C. dracunculifolia* (Herbier Léon Dufour 11.3.068 and 11.3.069) (figs. 1 y 2). The sheet 11.3.068 bears five fragments plant well developed and conserved, and an original label handwritten by Dufour “82. 513. Hisp. / *Centaurea Dracunculifolia*. Duf. / *caulis* decumbens angulosis ramosus nec / non simplicissimus, ramis unifloris / Hab. haud infrequens in / maritimis humidiusculis / Valentia loco dicto Dehesa. / flor. junio, Julio.” (fig. 1). The sheet 11.3.069 bears three fragments plant of this species, well developed and conserved, but no label (fig. 2). This material (Herbier Léon Dufour 11.3.069) could be the same specimen that the material identified as 11.3.068 or a duplicate, however due to the lack of a label or link between these two sheets this material is identified as a probable duplicate. Accordingly, we designate the specimen at BORD (11.3.068) as the lectotype of the name *Centaurea dracunculifolia*.

Centaurea dracunculifolia Dufour in Ann. Sci. Nat. (Paris) 23: 157. 1831

Ind. loc.: “Hab. haudinfrequens in maritimis humidiusculis regni Valentini loco dicto Dehesa de la Albufera”.

Lectotypus (*hic designatus*): [Spain], Valencia loco dicto Dehesa, Léon Dufour 513 hisp., (BORD, Herbier Léon Dufour 11.3.068) (available in the Archives départementales des Landes) (Fig. 1). **Probable isolectotypus:** BORD (Herbier Léon Dufour 11.3.069) (fig. 2).

***Centaurea scorpiurifolia*.** — The protologue of this name includes a diagnosis in Latin and a complete description in French. The protologue also includes the provenance and an indication of a concrete gathering “Cette espèce, bien nouvelle, a été découverte aux environs de Cadix, par MM. Monard, qui m’en ont communiqué plusieurs échantillons”.

We have found a relevant original material of this species in the herbarium of Léon Dufour at BORD (Herbier Léon Dufour 11.3.004). This specimen belongs to the gathering cited in the protologue, collected by Monard in Cádiz (Spain), and bears three complete and well developed fragments plant, and three labels: 1) “1027 hisp. / *Centaurea scorpiurifolia* Duf. / ann. sc. nat. 1831 / Cadiz / ded. M. Monard”; 2) “N.º 631. / *Centaurea heterophylla* / ?”; and 3) “96° 631. / *Centaurea*” (fig. 3).

We designate this specimen at BORD (Herbier Léon Dufour 11.3.004) as the lectotype of the name *Centaurea scorpiurifolia*. This specimen corresponds with the traditional concept and current use of the name (e.g., INVERNÓN & DEVESA, 2013; DEVESA & al., 2015; DEVESA, 2016).

Centaurea scorpiurifolia Dufour in Ann. Sci. Nat. (Paris) 23: 163. 1831

Ind. loc.: “Hab. in sterilibus Gaditensibus [...]. Cette espèce, bien nouvelle, a été découverte aux environs de Cadix, par MM. Monard, qui m’en ont communiqué plusieurs échantillons”.

Lectotypus (*hic designatus*): [Spain], Cádiz, M. Monard s.n. [Léon Dufour 1027 hisp.] (BORD, Herbier Léon Dufour

11.3.004) (available in the Archives départementales des Landes) (fig. 3).

***Centaurea stenophylla*.** — There are two relevant specimens in the herbarium of Léon Dufour at BORD with original material of the name *Centaurea stenophylla*. The sheet 001 (Herbier Léon Dufour 11.3) bears a specimen well developed and complete, and an original label handwritten by Dufour “493 hisp. / *Centaurea stenophylla* Duf. / ann. Sc. Nat. tom. N.º 3. P. 162 / 1831 / in arena marit / Dehesa de / Valencia” (fig. 4). The sheet 002 (Herbier Léon Dufour 11.3) bears four fragments plant and three original labels handwritten by Dufour: 1) N.º. 324 / *Centaurea / incana*”; 2) “N.º. 324 / *Centaurea incana* / Lagasca”; 3) “324 *Centaurea linifolia* / Pinar de Chiclana, abril 1824 / *C. incana*”; y 4) “889 hisp. / *Centaurea stenophylla* Duf / var. 63. / Pinar de Chiclana / prope Gades”. Finally, the sheet 002 (Herbier Léon Dufour 11.3) bears a specimen and an original label handwritten by Dufour “*Centaurea filifolia* ~~mit~~ *stenophylla* / hispan”.

We designate as the lectotype of the name *Centaurea stenophylla* the specimen preserved in the herbarium of Léon Dufour at BORD (Herbier Léon Dufour 11.3.001). This specimen corresponds with the traditional application and current use of the name (e.g., INVERNÓN & DEVESA, 2013; MATEO & CRESPO, 2014; DEVESA & al., 2015; DEVESA, 2016).

Centaurea stenophylla Dufour in Ann. Sci. Nat. (Paris) 23: 162. 1831

Ind. loc.: “Hab. in sterilibus Hispaniae, a frequens loco dicto Dehesa prope Valentiam, β in Pinar de Chiclana prope Gades”.

Lectotypus (*hic designatus*): [Spain], Valencia, in arena marit Dehesa de Valencia, Léon Dufour 493 hisp., (BORD, Herbier Léon Dufour 11.3.001) (available in the Archives départementales des Landes) (fig. 4).

***Thalictrum maritimum*.** — There are two relevant sheets in the herbarium of Léon Dufour at BORD with material of the name *Thalictrum maritimum* (Herbier Léon Dufour 1.1.113 and 1.1.114). The sheet 113 (Herbier Léon Dufour 1.1) bears a plant and an original label handwritten by Dufour “314 hisp. / *Thalictrum maritimum* Duf / stamina sub 24-pistilla 3-5 / aff. *T. simplicis* Lin. / in hispania / maritimis / Valence” (fig. 5). The sheet 114 (Herbier Léon Dufour 1.1) bears a fragment plant of this species, but no label. This material (Herbier Léon Dufour 1.1.114) could be the same specimen that the material identified as 11.3.068 or a duplicate, however due to the lack of a label or link between these two sheets this material is identified as a probable duplicate.

We designate as the lectotype of the name *Thalictrum maritimum* the specimen in the herbarium of Léon Dufour at BORD, mounted on two sheets (Herbier Léon Dufour 1.1.113 and 1.1.114), which corresponds with the traditional application and current use of the name (MONT-SERRAT, 1986; BOLÓS & VIGO, 1984; BOLÓS & al., 2005; AGUILELLA & al., 2009; MATEO & CRESPO, 2014).

Thalictrum maritimum Dufour in Bull. Soc. Bot. Fr. 7: 221. 1860

Ind. loc.: “Hab. in maritimis humidis, Dehesa de la Albufera Valentinae”.

Lectotypus (hic designatus): Spain, Valencia, *Léon Dufour 314 hisp.*, (BORD, Herbarium Léon Dufour 1.1.113) (available in the Archives départementales des Landes) (fig. 5). **Probable isolectotypus**: BORD (Herbarium Léon Dufour 1.1.114).

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LITERATURE CITED

- AGUILELLA, A., S. FOS & E. LAGUNA (eds.) (2009) *Catálogo Valenciano de Especies de Flora Amenazadas*. Colección Biodiversidad, 18. Conselleria de Medi Ambient, Aigua, Urbanisme i Habitatge, Generalitat Valenciana. Valencia.
- ARNELAS, I. & DEVESA, J.A. (2011) Revisión taxonómica de *Centaurea* sect. *Jacea* (Mill.) Pers. (Asteraceae) en la Península Ibérica. *Acta Bot. Malac.* 36: 33-88.
- BOLÒS, O. DE & J. VIGO (1984) *Flora dels Països Catalans*. Vol. 1. Barcino. Barcelona.
- BOLÒS, O. DE, J. VIGO, R.M. MASALLES & J.M. NINOT (2005) *Flora manual dels Països Catalans*. 3ª ed. Pòrtic, Barcelona.
- BOONE, C. (2003) *Léon Dufour (1780-1865): savant naturaliste et médecin*. Atlantica, Anglet.
- DEVESA, J.A. (2016) *Las especies del género Centaurea en la Península Ibérica y Baleares*. UCOPress, Córdoba.
- DEVESA, J.A., E. LÓPEZ NIETO, I. ARNELAS, G. BLANCA, V.N. SUÁREZ-SANTIAGO, V. RODRÍGUEZ & A. MUÑOZ (2015) *Centaurea* L. In: J.A. DEVESA, A. QUINTANAR & M.Á. GARCÍA (eds.). *Flora iberica* 16: 342-603. Real Jardín Botánico-CSIC, Madrid.
- DUSSAUSOIS, G. (1988) *Plantes des Pyrénées et d'Espagne dans l'herbier Léon Dufour*. In: *Homenaje a Pedro Montserrat*. Instituto de estudios Altoaragoneses e Instituto Pirenaico de Ecología (C. S. I. C.), Huesca y Jaca.
- FERRER-GALLEGO, P.P., E. LAGUNA & G. MATEO (2015) Neotipificación de *Thalictrum maritimum* Dufour (Ranunculaceae), planta endémica y amenazada del este peninsular ibérico. *Fl. Montib.* 59: 83-87.
- FERRER-GALLEGO, P.P., R. ROSELLÓ, E. LAGUNA, A. GUILLÉN, J. GÓMEZ & J.B. PERIS (2017) Apunts nomenclaturals per al gènere *Centaurea* L. sect. *Seridia* (Juss.) DC. (Asteraceae). El complex d'hibridació entre *C. aspera* i *C. seridis*. *Nemus* 7: 73-98.
- INVERNÓN, R. & J.A. DEVESA (2013) Revisión taxonómica de *Centaurea* sect. *Seridia* (Juss.) DC. (Asteraceae) en la Península Ibérica e Islas Baleares. *Acta Bot. Malac.* 38: 49-102.
- MATEO, G. & M.B. CRESPO (2014) *Claves ilustradas para la flora valenciana*. Monogr. Fl. Montib. 6. Jolube Ed. Jaca
- MONTERRAT, P. (1986) *Thalictrum* L. In: S. CASTRO-VIEJO & al. (eds.) *Flora iberica* 1: 387-401. Real Jardín Botánico-CSIC, Madrid.
- STAFLEU, F.A. (2000) *Taxonomic Literature, Suppl. 6. Do-E*. Bohn, Scheltema & Holkema, Utrecht.
- TURLAND, N.J., J.H. WIERSEMA, F.R. BARRIE, W. GREUTER, D.L. HAWKSWORTH, P.S. HERENDEEN, S. KNAPP, W.H. KUSBER, D.Z. LI, K. MARHOLD, T.W. MAY, J. MCNEILL, A.M. MONRO, J. PRADO, M.J. PRICE & G.F. SMITH (eds.) (2018) International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code). *Regnum Veg.* 159.

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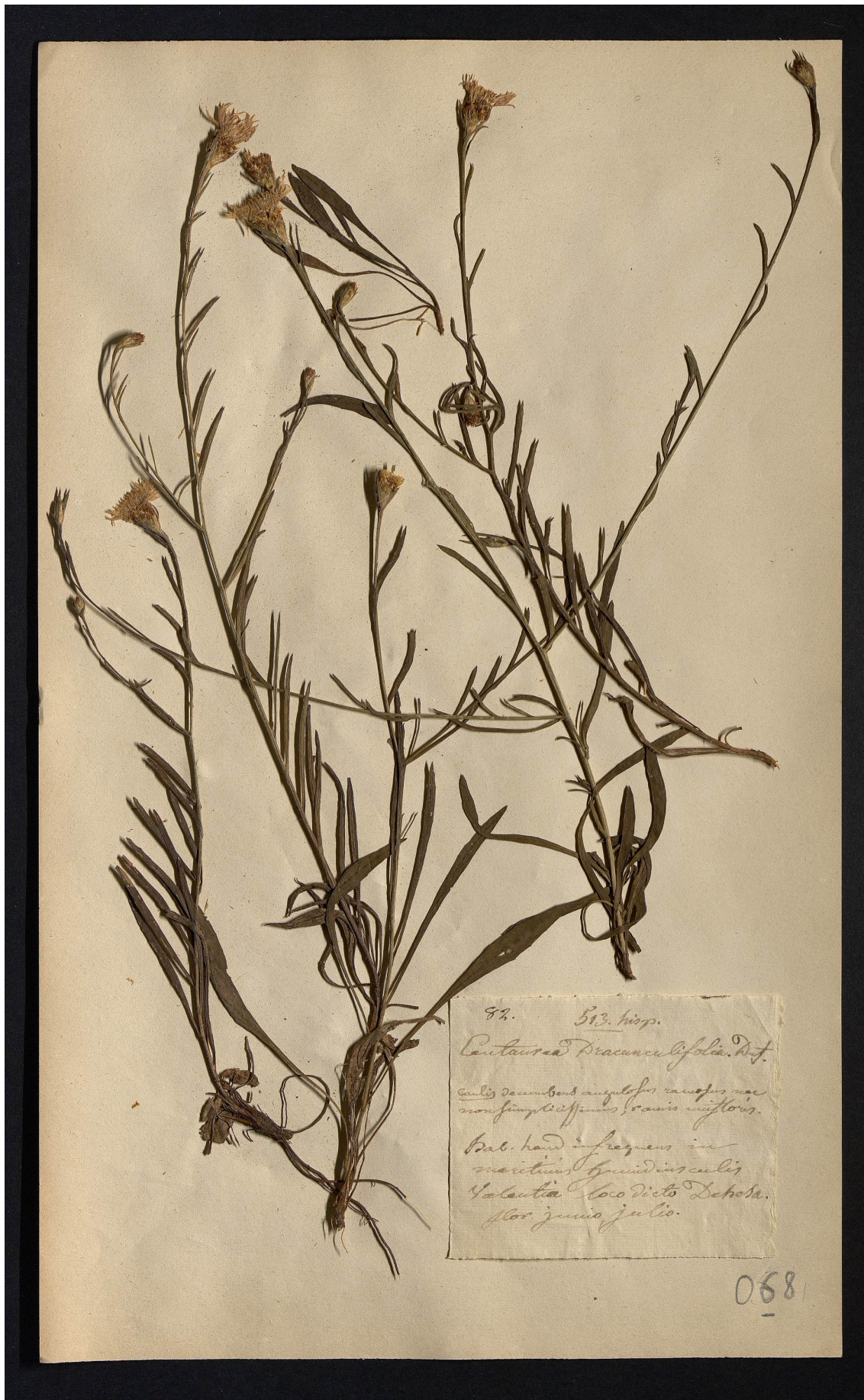


Fig. 1. Lectotype of *Centaurea dracunculifolia* Dufour (BORD, Léon Dufour 11.3.068) (available at Archives départementales des Landes). Herbarium BORD and Archives départementales des Landes, image reproduced with permission.

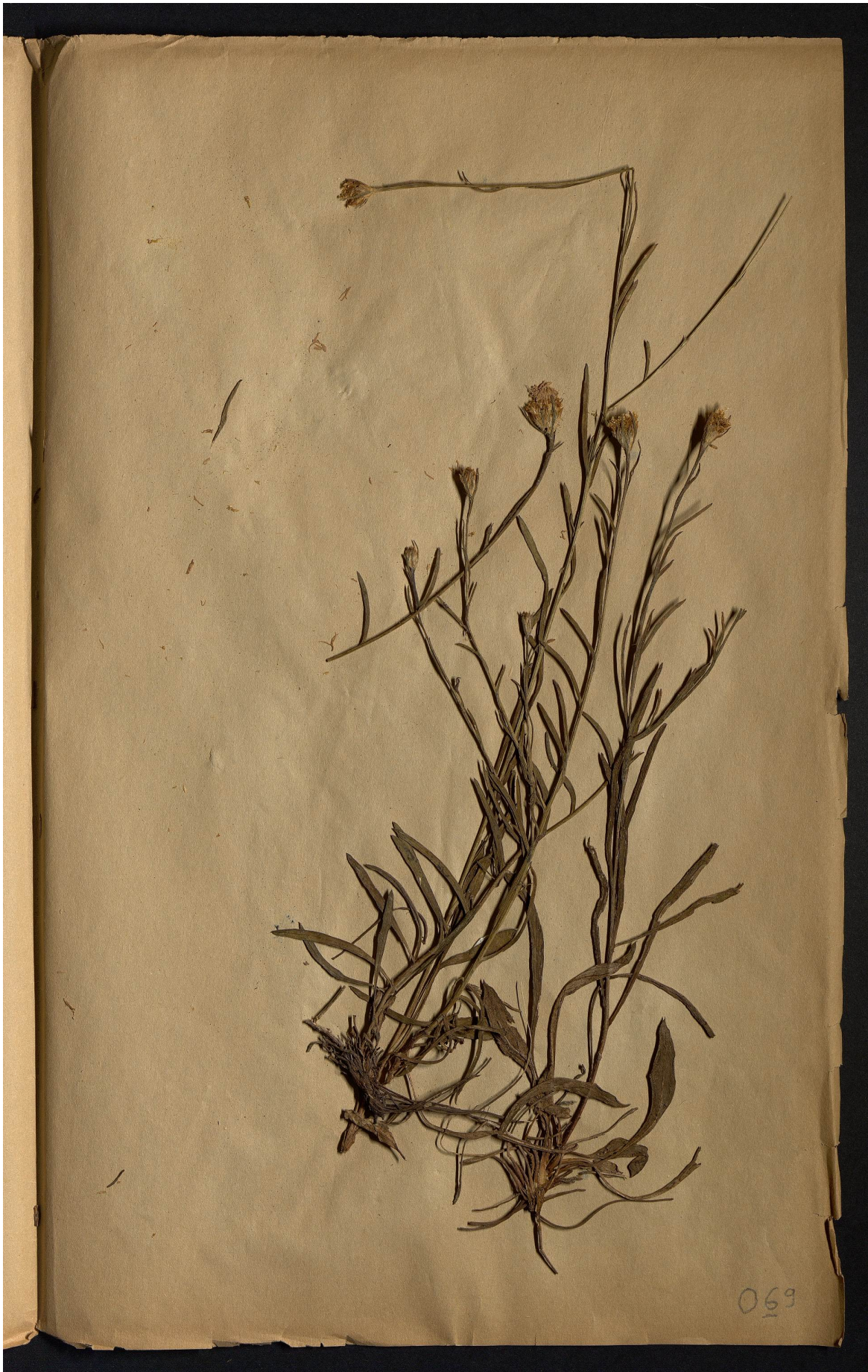


Fig. 2. Probable isoelectotype of *Centaurea dracunculifolia* Dufour (BORD, Léon Dufour 11.3.069) (available at Archives départementales des Landes). Herbarium BORD and Archives départementales des Landes, image reproduced with permission.

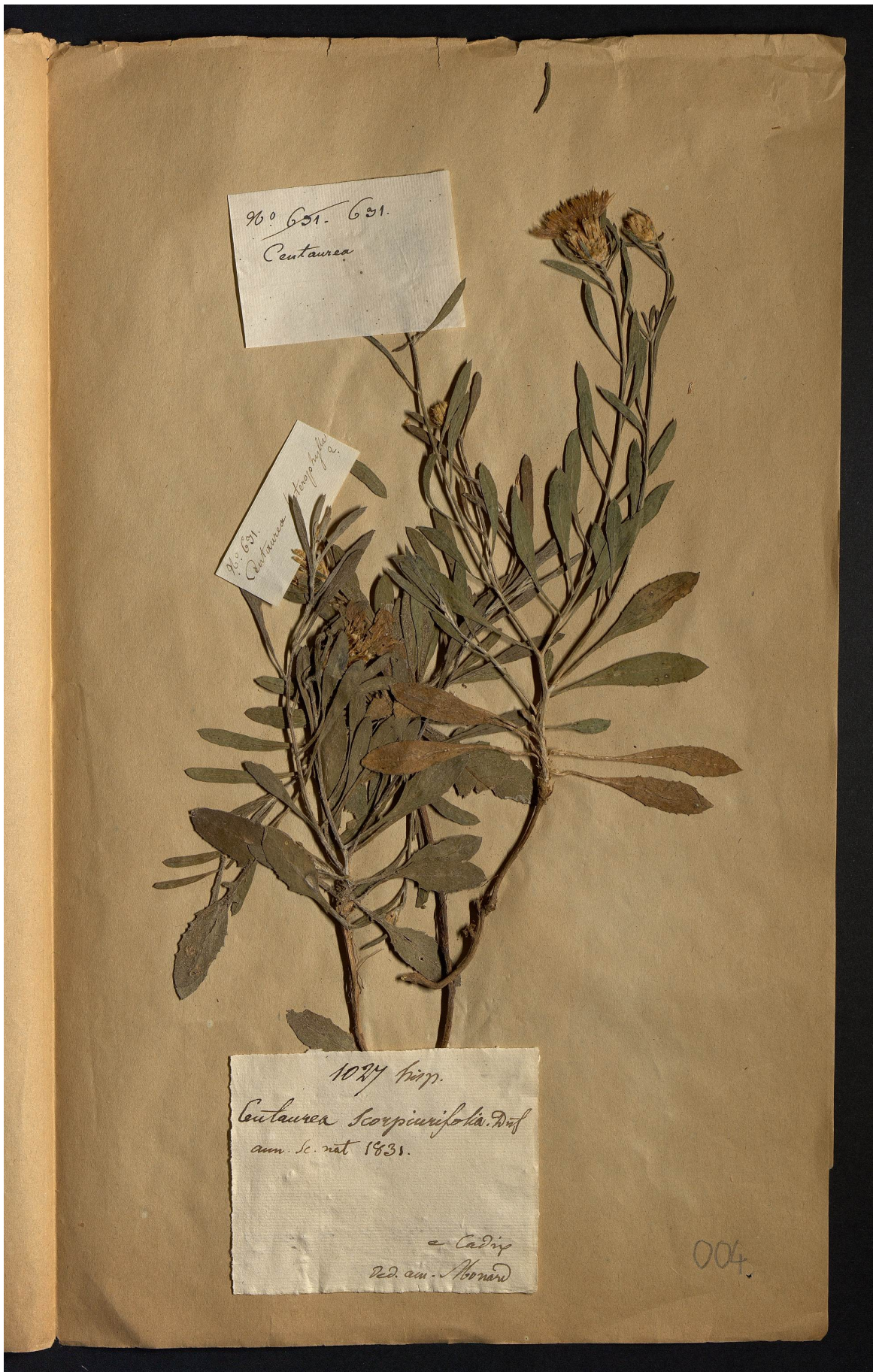


Fig. 3. Lectotype of *Centaurea scorpiurifolia* Dufour (BORD, Léon Dufour 11.3.004) (available at Archives départementales des Landes). Herbarium BORD and Archives départementales des Landes, image reproduced with permission.

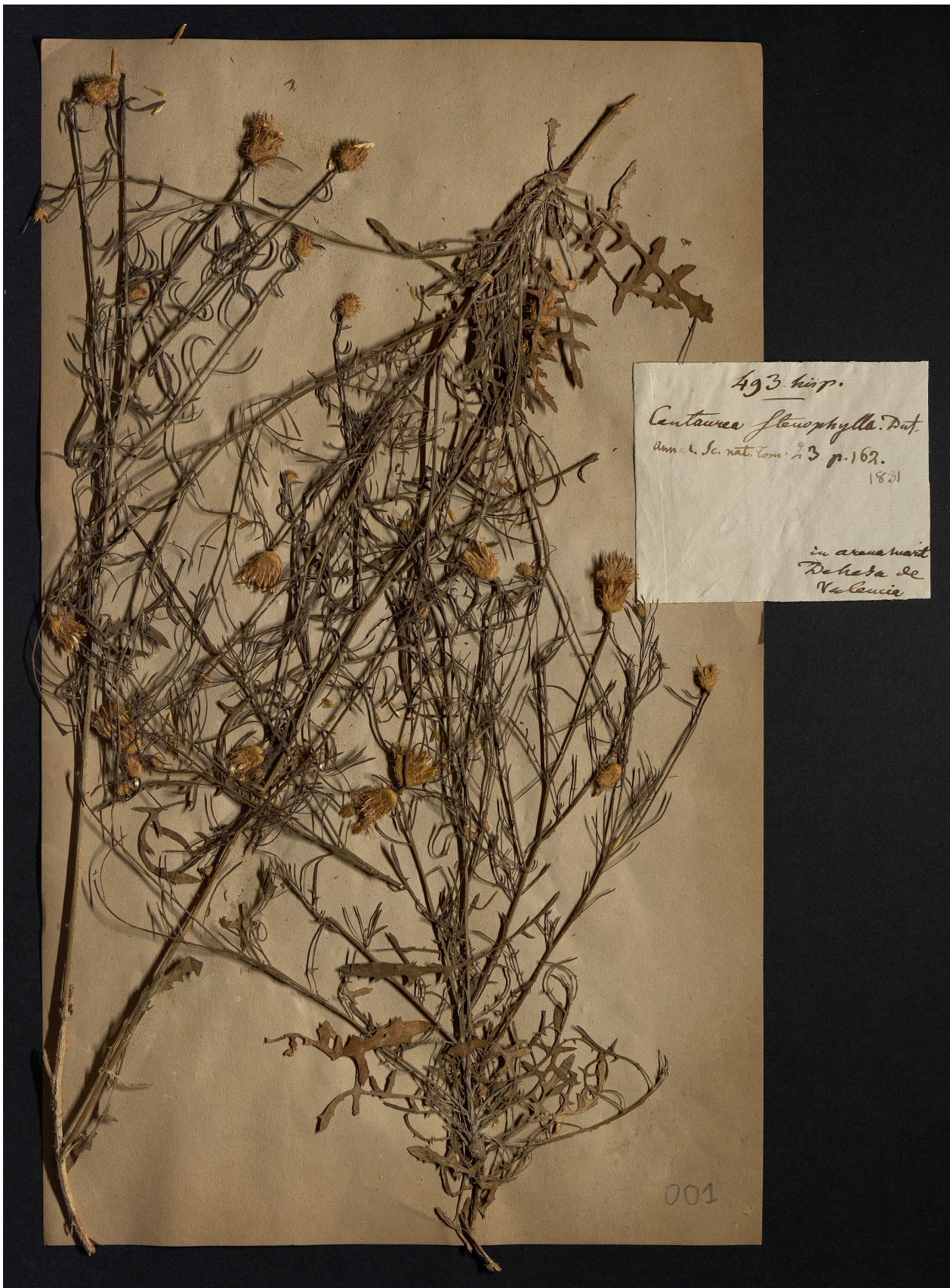


Fig. 4. Lectotype of *Centaurea stenophylla* Dufour (BORD, Léon Dufour 11.3.001) (available at Archives départementales des Landes). Herbarium BORD and Archives départementales des Landes, image reproduced with permission.

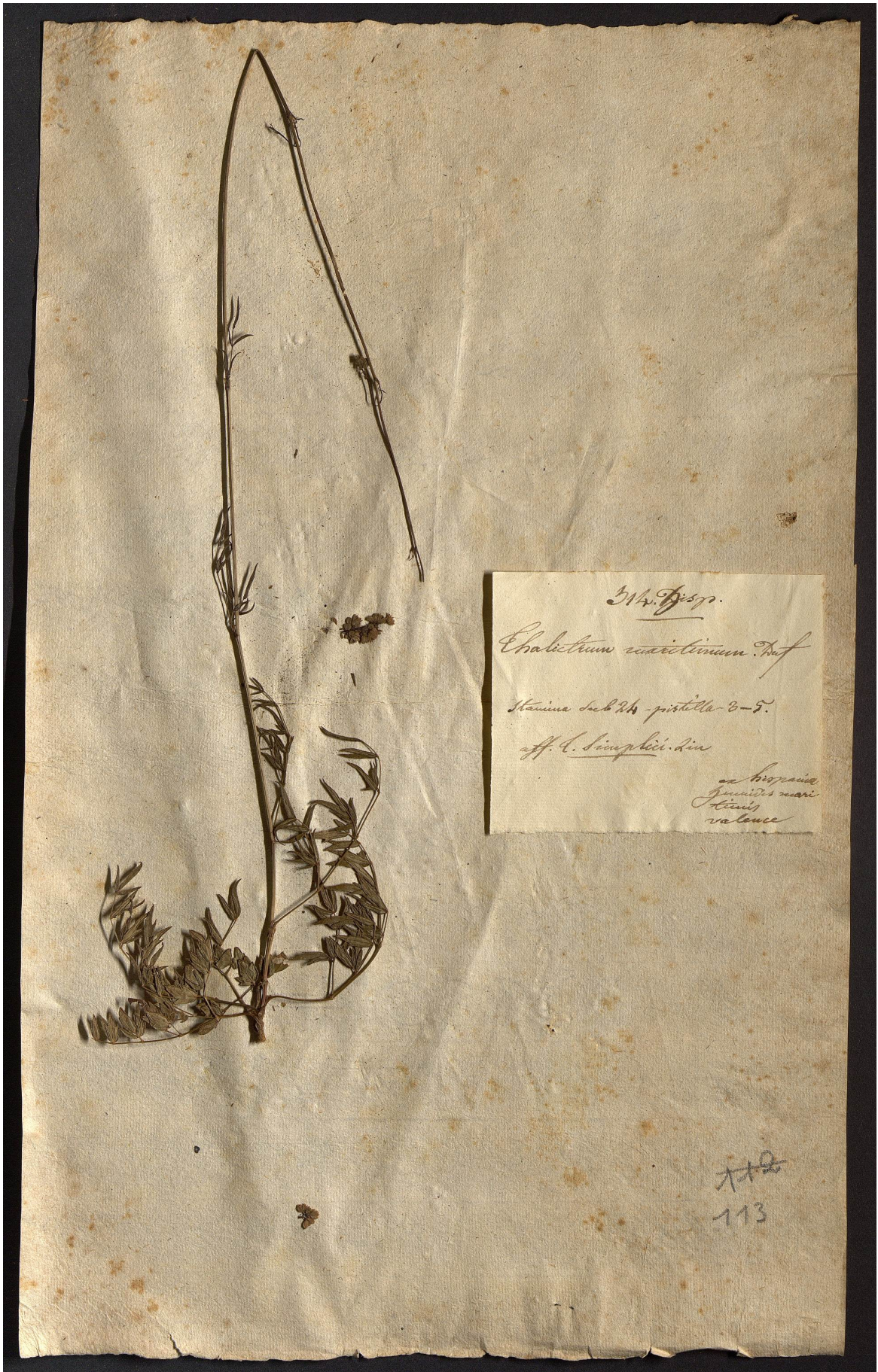
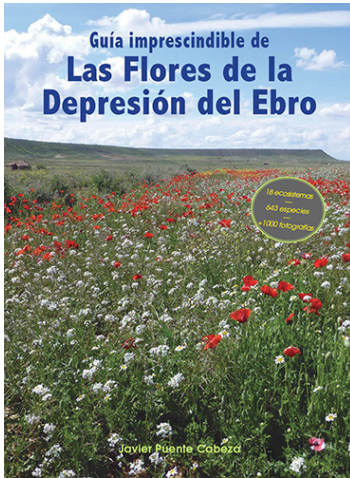


Fig. 5. Lectotype of *Thalictum maritimum* Dufour (BORD, Léon Dufour 1.1.113) (available at Archives départementales des Landes). Herbarium BORD and Archives départementales des Landes, image reproduced with permission.



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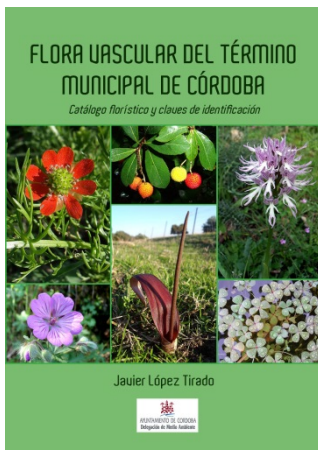
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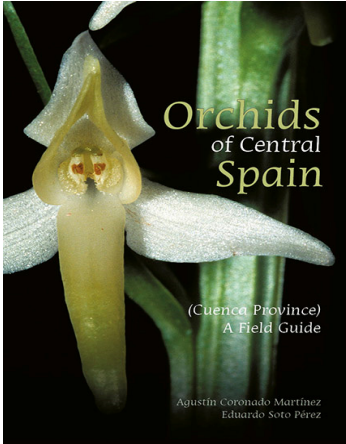
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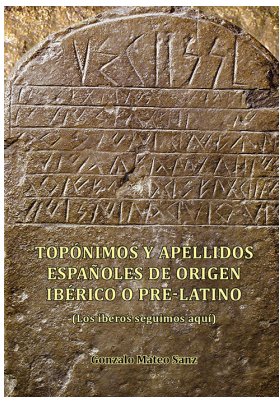
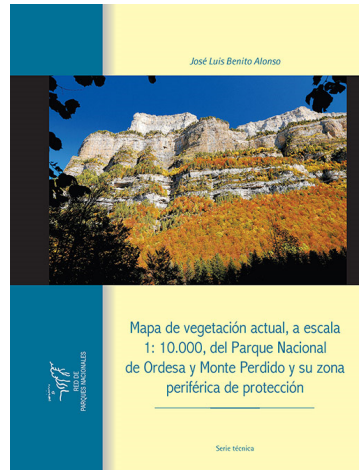
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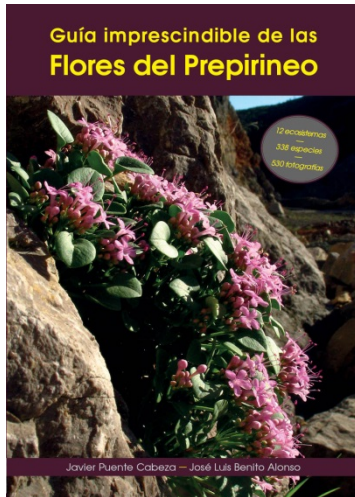
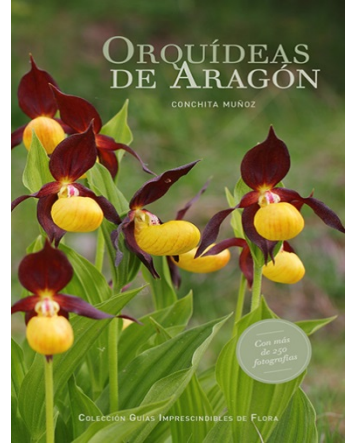
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