

A NEW COMBINATION IN LOTUS L. (FABACEAE)

P. Pablo FERRER-GALLEGO¹ & Josep A. ROSSELLÓ²

¹Servicio de Vida Silvestre y Red Natura 2000, Centro para la Investigación y la Experimentación Forestal de la Generalitat Valenciana (CIEF). Avda. Comarques del País Valencia, 114. 46930-Quart de Poblet (Valencia, Spain). flora.cief@gva.es

² Jardín Botánico, ICBiBE, Universitat de València, c/ Quart 80. 46008-Valencia (Spain)

ABSTRACT: A new combination in the genus *Lotus* L. (Fabaceae) is proposed: *Lotus dorycnium* subsp. *lagunae*. **Keywords:** *Dorycnium*; *Leguminosae*; Mediterranean flora; nomenclature.

RESUMEN: Una nueva combinación en *Lotus* L. (Fabaceae). Se propone una nueva combinación en el género *Lotus* L. (Fabaceae): *Lotus dorycnium* subsp. *lagunae*. **Palabras clave:** *Dorycnium*; *Leguminosae*; flora mediterránea; nomenclatura.

INTRODUCTION

Lotus L. (Fabaceae) is the largest genus of the tribe *Loteae*. Phylogenetic analysis using DNA sequences from the nuclear and plastid genomes have convincingly shown that a monophyletic *Lotus* should include Old World taxa that were traditionally accepted as distinct genera by various taxonomic authorities. Among them, the related *Tetragonolobus* Scop., *Bonjeanea* Rchb. and *Dorycnium* Mill. are included in an expanded *Lotus* genus which, however, is now restricted only to Old World species (ALLAN & al., 2003; DEGTJAREVA & al., 2003; SOKOLOFF, 2003; KRAMINA & al., 2021).

SOKOLOFF (2003) treated *Dorycnium* at the sectional level, as *Lotus* section *Dorycnium* (Mill.) D.D. Sokoloff, which corresponded to the former core *Dorycnium*, that is excluding species from *Dorycnium* section *Canaria* Rikli and *Bonjeanea*.

According to KRAMINA & al. (2021) species of *Lotus* section *Dorycnium* are grouped into two clades, the *L. dorycnium* complex clade (*L. dorycnium* L. s.l., *L. fulgorans* (Porta) D.D. Sokoloff, *L. germanicus* (Gremli) Peruzzi, *L. herbaceus* (Vill.) Jauzein s.l.) and a clade of *L. graecus* and related species [*L. axilliflorus* (Hub.-Mor.) D.D. Sokoloff, *L. graecus* L. and *L. sanguineus* (Vural) D.D. Sokoloff].

Lotus dorycnium (= *Dorycnium pentaphyllum* Scop.) is a very variable plant and constitutes a taxonomic problematic complex whose distribution is mainly centered across the Mediterranean Basin (GREUTER & al., 1989; POWO, 2021). Conspicuous populations from the Eastern Iberian Peninsula showing a restricted distribution were described by CERESUELA & SANCHIS (2011) as *Dorycnium pentaphyllum* subsp. *lagunae* Ceresuela & Sanchis. Plants from these populations are tall (up to 3 m) and show a genistoid habit. In addition, the higher average number of branch internodes, and their longer length, the dimorphic leaflets, the dimensions of the corolla parts and the colors of the corolla and calyx clearly differ from typical populations of *L. dorycnium*.

These morphological differences support the recognition of this entity at the subspecific level as was originally proposed (CERESUELA & SANCHIS, 2011), but its inclusion in the newly circumscribed *Lotus* (SOKOLOFF, 2003;

KRAMINA & al., 2021). requires a new nomenclatural combination which is here proposed.

Lotus dorycnium subsp. *lagunae* (Ceresuela & Sanchis)

P.P. Ferrer & Rosselló, **comb. nov.**

≡ *Dorycnium pentaphyllum* subsp. *lagunae* Ceresuela & Sanchis in Flora Montiber. 49: 41 (2011)

IND. loc.: “Hs, Alicante: Finestrat, partida de Toll (38°34' 27''N; 00°13'15''W) 240 m supra mare” [and “18-06-2007” on the label of the herbarium sheet].

Holotype: MA (barcode MA768638; image available at <http://161.111.171.57/herbarioV/visorVCat.php?img=MA-01-00768638>).

Remarks on the original material: In the Royal Botanic Garden of Madrid herbarium (MA) there are two specimens, with material from “Alicante, Finestrat, puente” (barcode MA768635; image available at <http://161.111.171.57/herbarioV/visorVCat.php?img=MA-01-00768635>) and “Alicante, Finestrat” (barcode MA 768636; image available at <http://161.111.171.57/herbarioV/visorVCat.php?img=MA-01-00768636>) which are labelled as isotypes. These two specimens were collected on June 28, 2007, ten days after the holotype and therefore they cannot be considered strictly as duplicates or isotypes. However, in the protologue (CERESUELA & SANCHIS, 2011) it was mentioned that “La diagnosis y descripción de la nueva subespecie ha sido efectuada sobre el siguiente material: pliegos de herbario depositados en el herbario MA (holotipo nº 768638, isótipo nº 768636 y paratipo nº 768635), [...]” [The diagnosis and description of the new subspecies have been carried out on the following material: herbarium sheets deposited at MA herbarium (holotype nº 768638, isotype nº 768636 and paratype nº 768635), [...]].

Based on the above, the specimen with barcode MA 768636 must be considered as a paratype, since it was cited in the original publication, but not treated as an isotype. Even, if it is interpreted that there is a print error in the collection date of the sheet MA768636 (i.e., June 28 instead of June 18), the location indicated on the labels and in the protologue is not fully coincidental either.

REFERENCES

- ALLAN, G.J., ZIMMER, E.A., WAGNER, W.W. & SOKOLOFF, D.D. (2003). Molecular phylogenetic analysis of tribe *Loteae* (*Leguminosae*): implications for classification and

- biogeography. In: KLITGAARD, B.B. & BRUNEAU, A. (eds.), *Advances in Legume Systematics 10, Higher Level Systematics*: 371–393. Royal Botanic Gardens, Kew.
- CERESUELA, J.L. & SANCHIS, E. (2011). *Dorycnium pentaphyllum* subsp. *lagunae* (Leguminosae, Papilionoideae), nueva subespecie para la flora española. *Flora Montibér.* 49: 40–44.
- DEGTJAREVA, G.V., VALIEJO-ROMAN, C.M., KRAMINA, T.E., MIRONOV, E.M., SAMIGULLIN, T.H. & SOKOLOFF, D.D. (2003). Taxonomic and phylogenetic relationships between Old World and New World members of the tribe *Loteae* (Leguminosae): new insights from molecular and morphological data, with special emphasis on *Ornithopus*. *Wulfenia* 10: 15–50.
- GREUTER, W., BURDET, H.M. & LONG, G. (1989). *Med-Checklist*, vol. 4. Conservatoire et Jardin botaniques de la Ville de Genève: Geneva, Switzerland. Available online: <http://ww2.bgbm.org/mcl/> (accessed on 12 January 2021).
- KRAMINA, T., LYSOVA, M., SAMIGULLIN, T., SCHANZER, I., ÖZBEK, M. & SOKOLOFF, D.D. (2021). Phylogenetic placement and phylogeography of large-flowered *Lotus* species (Leguminosae) formerly classified in *Dorycnium*: Evidence of pre-Pleistocene differentiation of western and eastern intraspecific groups. *Plants* 10(2): 260.
- POWO (2021). *Lotus dorycnium*. In: Plants of the World online. <http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:503605-1> (last accessed 2 March 2021).
- SOKOLOFF, D.D. (2003). On taxonomy and phylogeny of the tribe *Loteae* DC. (Leguminosae). *Byull. Moskovsk. Obshch. Isp. Prir. Otd. Biol.* 108(3): 35–48. (In Russian).

(Recibido el 11-VII-2021)

(Aceptado el 17-VII-2021)