

A NEW COMBINATION IN *HELIOTROPIUM* (*HELIOTROPIACEAE*) FROM SOUTH AMERICA

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Abstract. A new combination in *Heliotropium* (*Heliotropiaceae*) from South America is proposed in this paper: *Heliotropium lilloi*.

Resumen. En este trabajo se propone una nueva combinación en *Heliotropium* (*Heliotropiaceae*) de Sudamérica: *Heliotropium lilloi*.

Keywords: Boraginaceae s. l., flora, Neotropics, nomenclature

The genus *Heliotropium* (*Heliotropiaceae*) was proposed by Linnaeus (1753) and, in its current circumscription according to suggestions of Diane et al. (2003), also encompasses all the species incorporated into *Tournefortia* sect. *Tournefortia* (= genus *Tournefortia* s.str.).

Based on Diane et al. (2016), *Heliotropium* encompasses about 300 cosmopolitan species growing especially in dry zones with centres of taxonomic diversification in the Irano-Turanian region and in the Neotropics.

Heliotropium representatives are herbs, subshrubs, shrubs or small trees, rarely scandent or lianescents. The leaves are alternate to pseudo-opposite, rarely pseudeterminate, linear to broadly ovate or obovate. Inflorescences are 1-pluri-branched, ebracteose, many-flowered. The fruit are dry or fleshy; dry fruits separating into one- or two-seeded mericarpids, rarely dry drupes, fleshy fruits unlobed, white, composed of usually two 2-seeded mericarpids, often with empty chambers (Diane et al., 2016). According to The Plant List (2018) *Heliotropium* currently encompasses 821 names

of which approximately 130 are valid being necessary the updating of the names recently transferred to *Euploca* by Feuillet (2016), Luebert and Frohlich (2016), Feuillet and Hasle (2016, 2017), and Melo (2017a, b) as well as proceed the new combinations of the species of *Tournefortia* s.str. for *Heliotropium*.

Considering the current morphological characterization of *Heliotropium*, here one species of *Tournefortia* endemics from South America (Argentina and Bolivia), is transfer to the genus *Heliotropium* (*Heliotropiaceae sensu* BWG, 2016; Diane et al., 2016).

***Heliotropium lilloi* (I.M. Johnst.) J.I.M. Melo, comb. nov.**

Basionym: *Tournefortia lilloi* I.M. Johnst., Contr. Gray Herb. 92: 71. 1930. TYPE: ARGENTINA. Tucumán, Taffí Viejo, en las cercas, 22 September 1922, 550 m, M. Lillo 7099 (Holotype: GH; isotype: CTES [not seen]).

Distribution: Argentina and Bolivia.

LITERATURE CITED

- BORAGINALES WORKING GROUP (BWG). 2016. Familial classification of the Boraginales. Taxon 65(3): 502–522. <https://doi.org/10.12705/653.5> (accessed February 25, 2018).
- DIANE, N., H. FÖRSTER, AND H. H. HILGER. 2003. A systematic analysis of *Heliotropiaceae* (Boraginales) based on trnL and ITS1 sequence data. Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 125: 19–51. <http://dx.doi.org/10.1127/0006-8152/2003/0125-0019> (accessed February 25, 2018).
- , H. H. HILGER, H. FÖRSTER, M. WEIGEND, AND F. LUEBERT. 2016. *Heliotropiaceae*. Pages 203–211 in J. W. KADEREIT AND V. BITTRICH, eds. *Flowering Plants. Eudicots, The Families and Genera of Vascular Plants*. Vol. 8. Springer International Publishing, Switzerland.
- FEUILLET, C. 2016. Two new combinations in *Euploca* Nutt. (*Heliotropiaceae*, *Boraginales*) and a conspectus of the species of the Guiana Shield area. Phytokeys 61: 101–124. <https://doi.org/10.3897/phytokeys.61.6260> (accessed February 25, 2018).
- AND R. R. HASLE. 2016. New combinations from *Heliotropium* to *Euploca* (*Boraginales*: *Heliotropiaceae*). Phytoneuron 5: 1–3. <http://www.phytoneuron.net/2016Phytoneuron/5PhytoN-Euploca.pdf> (accessed February 25, 2018).
- AND —. 2017. New combinations for *Heliotropium powelliorum* and *Heliotropium pringlei* in the genus *Euploca* (*Boraginales*: *Heliotropiaceae*). Phytoneuron 5: 1–3. <http://www.phytoneuron.net/2017Phytoneuron/05PhytoN-EuplocaCombinations.pdf> (accessed February 25, 2018).

The senior author would like to acknowledge CNPq (National Council for Scientific and Technological Development) for a Research Productivity Fellowship (PQ-2 Proc. n. 303867/2015-9), and also grateful to Dr. Anthony Brach and Dr. Kanchi Gandhi, Assistant Curator and Senior Nomenclatural Registrar respectively, for the assistance and facilities provided during the stay (October–November 2015) at the Harvard University Herbaria, studying in particular collections at the Gray Herbarium (GH). The authors are also grateful to Dr. Norma Deginani and Dr. Fernando Omar Zuloaga by the facilities provided during the stay (June 2017) at the Herbarium SI, Instituto de Botánica del Nordeste (IBONE), San Isidro, Argentina.

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- LINNAEUS, C. 1753. *Species Plantarum*. Vol. 2. Laurentii Salvii, Stockholm.
- LUEBERT F. AND M. W. FROHLICH. 2016. Four new combinations in Argentinian Heliotropiaceae. *Darwiniana, nueva serie* 4: 192–194. <http://dx.doi.org/10.14522/darwiniana.2016.42.717> (accessed February 25, 2018).
- MELO, J. I. M. 2017a. New combinations in *Euploca* (Heliotropiaceae) from Mexico. *Revista Mexicana de Biodiversidad* 88(3): 759–760. <http://www.revista.ib.unam.mx/index.php/bio/article/view/1877/1558> (accessed February 26, 2018).
- MELO, J. I. M. 2017b. New combinations in *Euploca* Nutt (Heliotropiaceae) from Mexico and Central America. *Harvard Papers in Botany* 22(2): 125–126. https://huh.harvard.edu/files/herbaria/files/22_2_125_miranda_demelo.pdf (accessed February 25, 2018).
- THE PLANT LIST: A working list of all plant species 2018. *Heliotropium*. In Boraginaceae. <http://www.theplantlist.org/pl1.1/search?q=Heliotropium> (accessed February 9, 2018).