

NEW COMBINATIONS IN *EUPLOCA* (HELIOTROPIACEAE) FROM SOUTH AMERICA

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Abstract. Four new combinations in *Euploca* from South America (Heliotropiaceae), all them endemic to Peru, are proposed in this paper: *Euploca lobbii*, *Euploca oxyloba*, *Euploca polyanthella*, and *Euploca toratensis*.

Resumen. En este trabajo se proponen cuatro nuevas combinaciones en *Euploca* de Sudamérica (Heliotropiaceae), todas ellas endémicas de Perú: *Euploca lobbii*, *Euploca oxyloba*, *Euploca polyanthella* y *Euploca toratensis*.

Keywords: Boraginales, diversity, flora, nomenclature, taxonomy

Ivan Murray Johnston (1898–1960) studied Boraginaceae in their traditional concept during almost four decades (from the 1920s to the 1950s) at the Gray Herbarium (currently an integral part of the Harvard University Herbaria). For this reason, the Arnold Arboretum (A) and especially the Gray Herbarium (GH) still house the main collections of this family, including types and other historical specimens obtained around the world but mainly in the Neotropical region.

During a detailed study of the collections in the Gray Herbarium (GH), conducted between October and November 2015, all the type specimens belonging to Boraginaceae subfam. Heliotropioideae (= Heliotropiaceae) were reviewed and compiled. However, in the past 15 years some phylogenies have been published treating the various genera and subfamilies of Boraginaceae s.l., resulting in several nomenclatural proposals, including Diane et al. (2003). On the basis of that publication, currently all the genera subordinated to the subfamily Heliotropioideae (Boraginaceae) are relegated to Heliotropiaceae (Boraginales), represented by four genera: *Euploca* Nutt., *Heliotropium* L., *Ixhorea* Fenzl (endemic to Argentina), and *Myriopus* Small (BWG, 2016).

Euploca was reestablished by Diane et al. (2003) to accommodate the species belonging to *Heliotropium* sect. *Orthostachys* R.Br. and the representatives of the genera *Hilgeria* Förther and *Schleidenia* Endl. *Euploca* is one of the most diverse genera of the family, encompassing approximately 100 species, including several endemic to South America, one of the main centers of diversification of the genus. New combinations were proposed recently (Feuillet, 2016; Feuillet and Hasle, 2016, 2017; Luebert and Frohlich, 2016; Melo 2017a,b; Melo and Fernández-Alonso, 2015) in American species of *Euploca*; nonetheless, several taxa from this region of the world still require nomenclature changes.

Considering the current morphological characterization

of *Euploca* and the knowledge of its current representation in South America, four species originally described under *Heliotropium*, all them endemic to Peru, are here transfer to *Euploca* (Heliotropiaceae sensu BWG, 2016; Diane et al., 2016). The JSTOR Global Plants Platform (2018) was also consulted to complement the information about type specimens. Acronyms of herbaria were based on Thiers (continuously updated). The numbers assigned to herbarium specimens below correspond to barcodes attached when they were imaged for the Global Plant Initiative (GPI), a project generously financed by the Mellon Foundation.

Euploca lobbii (I.M. Johnston.) J.I.M. Melo, *comb. nov.*

Basionym: *Heliotropium lobbii* I.M. Johnston., Contr. Gray Herb. 81: 54. 1928. TYPE: PERU. Amazonas: Chacapoyos, s.d., *W. Lobb s.n.* (Holotype: K [000583564]; Isotype: GH [00097645]).

Distribution: Peru.

Euploca oxyloba (I.M. Johnston.) J.I.M. Melo, *comb. nov.*

Basionym: *Heliotropium oxylobum* I.M. Johnston., Contr. Gray Herb. 81: 57. 1928. TYPE: PERU. Bridge of Apurimac, dry hills, January 1867, 8–9000 feet, *R. Pearce s.n.* (Holotype: K [000583560]; Isotypes: BM [611734], GH [00097726]).

Distribution: Peru.

Euploca polyanthella (I.M. Johnston.) J.I.M. Melo, *comb. nov.*

Basionym: *Heliotropium polyanthellum* I.M. Johnston., Contr. Gray Herb. 81: 56. 1928. TYPE: PERU. Cajamarca, Taen, between Shumba and Taen, 700–800 m, 25 April 1912, *A. Weberbauer 6184* (Holotype: F [548715], not seen; Isotypes: G [00177378], G [00236517], fragment; GH [00097734]; MSB [002925], photo and fragment; US [00110877]).

Distribution: Peru.

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Euploca toratensis (I.M. Johnst.) J.I.M. Melo, *comb. nov.*
 Basionym: *Heliotropium toratense* I.M. Johnst., *Contr. Gray*
Herb. 81: 55. 1928. TYPE: PERU. Moquegua, Torata,
 Open mixed formation, 17–18 March 1925, 22–2300

feet, A. *Weberbauer 7407* (Holotype: F [552638];
 Isotypes: G [00177393], fragment, G [000177394];
 GH [00097748]; K [000583563]; S [06-4195]).

Distribution: Peru.

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