



Three new species of *Euphorbia* subg. *Chamaesyce* (Euphorbiaceae) from Bolivia

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Abstract

Three new Bolivian species of *Euphorbia* subg. *Chamaesyce* are described and illustrated. *Euphorbia beckii* is known from the Área Natural de Manejo Integrado of Apolobamba, province of Bautista Saavedra, department of La Paz; it belongs to sect. *Alectoroctonum* and is compared with *E. viridis*. *Euphorbia fuentesii* is known from the Kaa-Iya del Gran Chaco National Park, Cordillera province, department of Santa Cruz. It forms part of sect. *Anisophyllum*, and is most similar to *E. catamarcensis*. *Euphorbia riinae* is known from the Parque Nacional Noel Kempff Mercado, in the province of Velasco, department of Santa Cruz. It is a member of sect. *Crossadenia* subsect. *Ephedropeplus* and is closely related to the Brazilian *Euphorbia gymnoclada*.

Resumen

Se describen e ilustran tres especies nuevas de *Euphorbia* subg. *Chamaesyce* de Bolivia. *Euphorbia beckii* se conoce del Área Natural de Manejo Integrado de Apolobamba, provincia de Bautista Saavedra, departamento de La Paz; pertenece a la sect. *Alectoroctonum* y se compara con *E. viridis*. *Euphorbia fuentesii* crece en el Parque Nacional de Kaa-Iya del Gran Chaco, provincia de Cordillera, departamento de Santa Cruz; es miembro de la sect. *Anisophyllum* y es muy parecida a *E. catamarcensis*, especie endémica de Argentina. *Euphorbia riinae* es originaria del Parque Nacional Noel Kempff Mercado, provincia de Velasco, departamento de Santa Cruz; forma parte de la sect. *Crossadenia* subsect. *Ephedropeplus* y está cercanamente emparentada con *Euphorbia gymnoclada*, una especie brasileña.

Introduction

With more than 2000 species, *Euphorbia* Linnaeus (1753: 450) is the second most speciose genus of flowering plants. It has a nearly worldwide distribution (Berry & Riina 2007), and major centers of diversity include Mexico (256 spp., Steinmann 2002), tropical east Africa (210 spp., Carter 1988), southern Africa (175 spp., Bruyns 2012), and Madagascar (170 spp., Aubriot *et al.* 2013). The continent of South America possesses considerable diversity, but with approximately 220 species, its richness in relation to size is only moderate. Although the South American species lack a recent, comprehensive treatment, there are number of checklists and a few detailed floristic treatments. From these, a panorama of the diversity of *Euphorbia* throughout the continent can be inferred, with the greatest number of native species occurring in Brazil (61 spp., Steinmann 2010), followed by Argentina (44 spp., Subils 1997, Berry *et al.* 2010), Ecuador (38 spp., Webster 1999, Cabrera-Cisneros & Prina 2013), Peru (33 spp., Brako 1993), Colombia (30 spp., Murillo-A. 2004), Venezuela (29 spp., Berry *et al.* 2008), Uruguay (20 spp., Berry *et al.* 2010), and Paraguay (19 spp., Berry *et al.* 2010).

The *Euphorbia* diversity in Bolivia is comparable to that of other South American countries, and Berry *et al.* (in prep.) report 41 native species. During the course of revisionary studies on South American *Euphorbia*, in conjunction with the *Euphorbia* Planetary Biodiversity Inventory Project, specimens of three additional Bolivian species were encountered in the herbaria of the Missouri Botanical Garden (MO), New York