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A new species of *Hechtia* (Hechtioideae, Bromeliaceae) from Puebla, Mexico

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Abstract

A new species of *Hechtia*, *H. pueblensis*, from the Mexican State of Puebla, is described and illustrated. The new taxon is well documented with illustrations and photographs of staminate and pistillate flowers, as well as fruits. It shares its small-sized rosette and usually simple panicles with *H. lyman-smithii* (from a nearby geographical region in Oaxaca) and with *H. fragilis* (from Puebla and Oaxaca).

Key words: dioecy, endemicity

Introduction

Hechtia Klotzsch (1835: 401) previously included in the polyphyletic subfamily Pitcairnioideae, is the only genus of the recently proposed subfamily Hechtioideae (Givnish *et al*. 2007, 2011). Hechtioideae, as characterized by Givnish *et al.* (2007), is represented by plants with "capsular fruits, seeds winged to almost naked, flowers dioecious (sic), leaves succulent, spinose or rarely entire, without stellate clorenchyma". In addition, members of the genus are always terrestrial; furthermore, only rarely the central leaves and bracts subtending the scape color brightly as in most other bromeliads, flowers are unisexual and species dioecious, whereas and pistillate flowers have sessile stigmas. The genus comprises ca. 65 described species (modified from Espejo *et al.* 2004) distributed from the southern USA (Texas) to northern Nicaragua (Megamexico III region *sensu* Rzedowski 1991), from 0 to 2500 m elevation with 94% of them exclusive to Mexico; the state of Oaxaca holds the largest number of species for Mexico in the genus (20 spp.) and in the Bromeliaceae (172 species; Espejo *et al*. 2007).

Eleven species of *Hechtia* have been reported from the Mexican State of Puebla (modified from Espejo *et al.* 2004), one of them endemic to the state: *H. liebmannii* Mez (1901: 6). The other species recorded for Puebla are *H. bracteata* Mez (1896: 550), *H. caulescens* López-Ferrari, Espejo & Martínez-Correa (2009: 197), *H. colossa* Martínez-Correa, Espejo & López-Ferrari (2010: 746), *Hechtia confusa* Smith (1937: 22), *H. conzattiana* Smith (1937: 19), *H. fragilis* Burt-Utley & Utley (1987: 40), *H. perotensis* I.Ramírez & Martínez-Correa in Espejo *et al*. (2007: 103), *H. podantha* Mez (1896: 549), *H. roseana* Smith (1937: 17), and *H. tehuacana* Robinson (1904: 265). All the species in Puebla, except *H. caulescens*, *H. conzattiana*, *H. fragilis* and the species herein proposed as new, belong to the so-called *Hechtia podantha* complex characterized by "having ovate to ovate-triangular primary bracts that are equal or larger than the primary branches, green to green-yellowish flowers, inflorescences twice branched and seeds with circumferential wing", members of this informal complex also occur in xerophytic shrublands in Hidalgo, Morelos, Oaxaca, Puebla, Queretaro and Veracruz between 1400 and 2650 m elevation (Martínez-Correa *et al.* 2010).

To assess and explain morphological similarities or phylogenetic relationships among *Hechtia* species is a difficult task that we are just beginning to understand. In the first place, many described taxa are only known from a fruiting, staminate or pistillate plant. Secondly, there is not even a rudimentary phylogenetic analysis

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