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A new species of *Elaphoglossum* sect. *Lepidoglossa* (Dryopteridaceae) from Bolivia

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Abstract

Elaphoglossum dannoritzeri from Bolivia is described as a geographical vicariant distinct from *E. mathewsii* (Costa Rica to Peru, Chile) based on its medium brown, entire to subdenticulate rhizome scales (versus dark brown, denticulate), narrower and relatively longer petiole scales with few or no sclerotic cells and no or only slightly developed pale margins, longer creeping rhizomes with more widely spaced petioles, less dense adaxial blade scale cover, and smaller spores.

Introduction

The genus *Elaphoglossum* Schott ex Smith (1841: 148) was formerly often placed in the families Elaphoglossaceae Pichi Sermolli (1968: 209) (e.g., Pichi Sermolli 1977) or Lomariopsidaceae Alston (1956: 25) (e.g., Kramer in Kubitzki 1990), but is now generally accepted as a member of the Dryopteridaceae (Herter 1949: 15) (Smith *et al.* 2006, Christenhusz *et al.* 2011). It is one of the largest and taxonomically most complex fern genera, with around 600 described species, 450 of which occur in the American tropics (Mickel & Atehortúa 1980). *Elaphoglossum* is characterized by generally scaly rhizomes with a transversely elongated ventral meristele, simple and nearly glabrous to densely scaly blades with usually free veins, and dimorphic fertile and sterile leaves with acrostichoid sori. The most current sectional and subsectional classification of the genus was proposed by Mickel & Atehortúa (1980) on morphological grounds. This classification has largely been confirmed at the sectional level by molecular studies (Rouhan *et al*. 2004, Skog *et al*. 2004), although taxon sampling is mostly too sparse to assess subsectional groups. The differentiation of species is based primarily on characters of the rhizome and blade scales, blade shape, rhizome habit, and presence or absence of hydathodes. The fairly low number of morphological characters renders species delimitation problematic, and many species groups within *Elaphoglossum* are in need of monographic study (e.g., Vasco *et al*. 2009). In Bolivia alone, *Elaphoglossum* has 127 known species, of which 24 are endemic to the country (Foster 1958, Smith *et al*. 1999, Kessler & Mickel 2006, Kessler 2008, Ballentien *et al.* 2009).

Within *Elaphoglossum*, section *Lepidoglossa* Christ (1899: 21) is the largest section and includes some of the taxonomically most difficult species groups. It is characterized by bearing flat scales, stellate hairs, and/or glandular dots on blades and/or petioles, and by its often long-ciliate rhizome scales. Among the six subsections recognized within *Lepidoglossa* by Mickel & Atehortúa (1980), subsection *Pilosa* Christ (1899: 23) is recognized by short-creeping rhizomes, usually dark rhizome scales, stellate or lanceolate-toothed blade scales, commonly resinous dots on the blades, and acute to acuminate blade apices.

One of the species included in this group is *Elaphoglossum mathewsii* (Fée 1845: 54) Moore (1857: 12), a variable species that is characterized by abaxially scaly blades and denticulate to ciliate blade scales (Mickel 1991). It is closely related to *E. hartwegii* (Fée 1845: 53) Moore (1857: 16) with which it has been treated as conspecific (Mickel & Beitel 1988), but *E. hartwegii* has entire to erose blade scales (Mickel 1991, Mickel &

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