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Typification of a Linnaean name in Gleicheniaceae (Polypodiopsida)

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Introduction

Gleicheniaceae are an ancient fern family with about 157 species and six genera (PPG I 2016). Although its taxonomy has been through several changes in the last years (Gonzales & Kessler 2011), a great gap remains in both taxonomy and nomenclature. For the Neotropics, there are several national or regional taxonomic treatments of the family (*e.g.* Proctor 1985, Lellinger 1989, Tryon & Stolze 1989, Moran 1995, Mickel & Smith 2004, Kessler & Smith 2018) and a revision of the Neotropical members of the genus *Sticherus* Presl (1836: 51) (Gonzales & Kessler 2011), but only few of them are dedicated to solve nomenclatural issues.

In preparation of taxonomic studies of Neotropical Gleicheniaceae, we realized that the typification of a Linnaeus name was insufficient. This name is *Acrostichum furcatum* Linnaeus (1759: 1321), which was the first species described of what later would become Gleicheniaceae. In the original description, Linnaeus cited one of Plumier's plates (Plumier 1693). The circumscription of Gleicheniaceae and its genera have changed over time, so that eventually *A. furcatum* was transferred to the genus *Sticherus* and the species came to be called *Sticherus furcatus* (L.) Ching (1940: 283). This species forms dense thickets in the mountains of Mexico, Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, Cuba, Jamaica, and Martinique. In the taxonomic treatment of the Lesser Antilles, Proctor (1977) designated as lectotype the same plate of Plumier cited in the protologue by Linnaeus (1759). The illustration represents a fragment of a frond (Fig. 1). However, the taxonomy of Gleicheniaceae is intricate, especially regarding the genus *Sticherus,* which is mainly based on scales morphology. Since the lectotype has no representation of any scale of the plant, it is not sufficient by itself to circumscribe the taxon. Therefore, a complement of the type should be selected (article 9.8 of the ICN—McNeill *et al.* 2012).

To solve this issue, we have searched specimens that could represent uncited original material at P and we found an exsiccate of herbarium Turnerfort that corresponds to Plumier's plate. It also bears the remark "Filix furcata, pinnulis longiusculis, non dentatis" in Plumier's writing, the polyonomy created by him to address the plant. Additionally, the collection location on the label matches with the one cited in the original description (Fig. 2).

Other plates by Plumier, especially the ones of the Tournefort herbarium including Linnaean names, were already properly typificated by Cremers & Aupic (2008). However, *A. furcatum* was not included in their work, and it was also not cited in the list of Plumier's plants storage in P published by Cremers & Aupic (2007). Additionally, Cremers *et al.* (2016) cited the above-mentioned material of the Tournefort herbarium as an epitype of *A. furcatum*, but they did not state "designated here" or some equivalent sentence (probably in view of another work by "Cremers & Boudrie in prep."), which makes this type designation not effectively achieved (art. 7.10 of the ICN—McNeill *et al.* 2012). Therefore, aiming to contribute to the nomenclatural elucidation within Gleicheniaceae, here we rectify the situation and propose an epitype for *Acrostichum furcatum*.

Typification

Sticherus furcatus (L.) Ching (1940: 283).

Acrostichum furcatum Linnaeus (1759: 1321). *Mertensia furcata* (L.) Willdenow (1804: 166). *Gleichenia furcata* (L.) Sprengel (1827: 26).

Lectotype (designated by Proctor 1977: 62):—Plumier (1693: tab. 20).(Fig. 1)

Epitype (designated here):—MARTINIQUE. Sur le Morne de la Calebasse, *Plumier s.n.* [Herbarium Tournefort 5232] (P-TRF [P00322140, image!]) (Fig. 2).

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FIGURE 1. Lectotype of *Acrostichum furcatum* L. (Plumier 1693: tab. 20).

FIGURE 2. Epitype of *Acrostichum furcatum*: Plumier *without number* (P00322140). This image is © copyright Muséum neational d'Histoire naturelle (MNHN)—Paris Herbarium (P).

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