



## *Polystichum hainanicola* (Dryopteridaceae), a new fern species from Hainan Island, China

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### Abstract

A new fern species, *Polystichum hainanicola* belonging to section *Haplopolystichum* (Dryopteridaceae), is described and illustrated from Hainan, the southernmost province of China. *Polystichum hainanicola* is most similar to *P. guangxiense*, but the former has pinnae with a length to width ratio of 2.5–2.7, lamina completely fertile and sori fewer than four above midrib of middle pinnae. In contrast, the latter has pinnae with a length to width ratio of ca. 3:1, lamina sterile in its lower portion and sori 6–11 above midrib of middle pinnae.

**Key words:** Hainan island, *Polystichum balansae*, *P. guangxiense*, *P. scariosum*

### Introduction

In 2009, when the senior author (Li-Bing Zhang) was visiting the pteridophyte herbarium of the University of Yunnan in Kunming (PYU), a specimen [*Xinsheng Qin & Rongjing Zhang 533* (IBSC, PYU!)] of *Polystichum* Roth (Dryopteridaceae) came into his attention. It was collected from Hainan and identified as *P. deltodon* (Baker) Diels (1899: 191). *Polystichum deltodon* as one of the most common species in *P.* subg. *Haplopolystichum* (Tagawa) Li Bing Zhang (in Zhang & Barrington, in press) is known from provinces Anhui, Guizhou, Hubei, Hunan, Sichuan, Taiwan, Yunnan and Zhejiang of China (Zhang & Barrington, in press), but has never been found in any of the southern provinces of China. Morphologically, the specimen at PYU has oblong pinnae with rounded pinna apices and sori close to the pinna margins, different from *P. deltodon*, which usually has falcate-oblong pinnae with acute pinna apices and sori not close to the pinna margins. In 2010 the first author (Liang Zhang) visited the locality given on the PYU specimen from Hainan, found the species and collected a few more specimens and DNA material. A molecular study (Zhang et al., unpubl. data) based on the DNA sequences of chloroplast *trnL-F* intergenic spacer confirms that it is a species unknown to science. We describe it here as *Polystichum hainanicola*.