

New species and records of tree ferns (Cyatheaceae, Pteridophyta) from the northern Andes

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Abstract

Four new species of Cyatheaceae from Ecuador are described: *Alsophila conantiana* Lehnert, *Cyathea brucei* Lehnert, *C. moranii* Lehnert, and *C. sylvatica* Lehnert. Range extensions are documented for *Alsophila esmeraldensis* R.C. Moran and *Cyathea macrocarpa* (C. Presl) Domin.

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New species

Alsophila conantiana Lehnert, sp. nov.

Etymology: This species is named for David S. Conant, Lyndon State College, Vermont, to honor his work on Cyatheaceae and especially *Alsophila*, from which my studies have greatly benefited.

Type: Ecuador, Prov. Zamora-Chinchipe, new road Loja—Zamora, ca. 4 km E of pass “El Tiro”, ridge from white cross on left road side (towards the valley), study plot C6, 03°59'S, 79°08'W, 2500–2600 m, 07 October 2004, *Lehnert 1415*. Holotype: GOET; isotypes: LOJA, QCA, UC.

Additional specimen examined: Data as for types, except *Lehnert 1414* (GOET, QCA, UC).

Diagnosis: Ab *Alsophila erinacea* (H. Karst.) D.S. Conant laminis valde tripinnatis indusiisque subsphaeropteroideis (vs. bipinnato-pinnatifidis vel parce tripinnatis et indusiis cyatheoideis urceolatisque vel subsphaer-

opteroidis cum orificio latiore), ab *A. salvinii* Hook., *A. polystichoides* Christ et *A. tryoniana* (Gastony) D.S. Conant in presentia indusiorum firmorum persitentiumque (vs. indusiis tenuis fragilibusque vel absentia indusiorum) absentiaque alarum in parte distale pinnarum differt.

Distribution: Known only from the type locality in SE Ecuador. In moist montane forest at 2500–2600 m; found near a river at the bottom of a small ravine.

Cyathea brucei Lehnert, sp. nov.

Etymology: This species is named for Bruce Gray, co-collector of the type specimen.

Type: Ecuador, Prov. Zamora-Chinchipe, Campamento Miazzi, in forest and cliffs along Río Nangaritzza, ca. 04°18'S, ca. 78°40'W, 900 m, 19 February 1994, *van der Werff et al. 13287*. Holotype: QCNE; isotypes: MO, UC.

Diagnosis: A *Cyathea haughtii* (Maxon) R.M. Tryon indusiis nullis, laminis abrupte reductis pinnisque petiolulatis differt.

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Distribution: Known only from the type locality in SE Ecuador, on sandstone cliffs along the Río Nangaritzza.

***Cyathea moranii* Lehnert, sp. nov.**

Etymology: This species is named for Robbin C. Moran, New York Botanical Garden, renowned pteridologist, prolific writer and collector, to honor his contributions to our knowledge of the Ecuadorian fern flora.

Type: Ecuador, Zamora-Chinchipe, new road Loja—Zamora, ca. 4 km E of pass “El Tiro”, ridge from white cross on left road side (towards the valley), 03°59'S, 79°08'W, 2500–2600 m, 03 October 2004, *Lehnert 1380*. Holotype: GOET; isotypes: LOJA, QCA, UC.

Additional specimens examined: Ecuador, Prov. Zamora-Chinchipe, Reserva Tapichalaca, sector Ventanillas, trail to study plots B2 and B3, 04°29'S, 79°07'W, 2550–2600 m, 02 November 2003, *Lehnert 1076* (GOET, QCA, UC); Reserva Tapichalaca, sector Ventanillas, 04°29'S, 79°07'W, 2520–2600 m, *Lehnert & Kessler 1270* (GOET, LOJA, QCA, UC); Estación Científica San Francisco, study plot A 9, along trail T1 above refuge, 03°59'30"S, 79°04'15"W, 2400 m, 11 November 2004, *Lehnert 1548* (GOET, LOJA, QCA, UC).

Diagnosis: Species ex grege *Cyathea platylepis* (Hook.) Domin statura media, truncis nudis, petiolis patentibus, segmentis angustis longisque; a *Cyathea holdridgeana* Nisman & L.D. Gómez atque *C. arnecornelii* Lehnert indusiis sphaeropteroideis differt.

Distribution: Endemic to the Prov. Zamora-Chinchipe in SE Ecuador, in moist montane forests at 2400–2600 m, mainly in sheltered side valleys and ravines.

***Cyathea sylvatica* Lehnert, sp. nov.**

Etymology: The name refers to the type locality, the private nature reserve “El Bosque” (= the forest) near

San Pedro de Vilcabamba, Ecuador, Prov. Loja (lat. *sylvaticus* = belonging to the forest).

Type: Ecuador, Prov. Loja, Reserva Protegida Privada “El Bosque”, near San Pedro de Vilcabamba, ca. 04°13'S, ca. 79°02'W, 2600 m, 07 Oct 1997, *Busmann 1803*. Holotype: QCA; isotypes: ECSF, LOJA.

Diagnosis: *Cyathea pygmaea truncum deficiens* frondibus bipinnatis vel bipinnato-pinnatifidis, non plus ultra 20 cm longis, indusiis sphaeropteroideis praestans.

Distribution: Endemic; known only from the type locality in Ecuador, at 2600 m, growing in elfin forest.

New records

***Alsophila esmeraldensis* R.C. Moran, Nordic J. Bot. 15: 48–58. 1995**

This species was previously known only from Ecuador, Provs. Esmeraldas and Carchi. This is the first specimen from the Colombian Chocó.

Specimen examined: Colombia, Dept. Valle, carretera Cali—Queremal-Buenaventura, 100 km al W de Cali, 280 m, 05 Nov 1972, *Hagemann & Leist 1405* (COL).

***Cyathea macrocarpa* (C. Presl) Domin, Pteridophyta, 264. 1929**

This species occurs mainly in the Guayana Highlands. This first record from Ecuador represents a range extension of over 1400 km.

Specimen examined: Ecuador, Prov. Morona-Santiago, trail Makuma—Mutinza, eastern foothills of Cordillera Cutucú, 02°10'S, 77°44'W, 660–750 m, 16 November 1995, *Øllgaard & Navarrete 1486* (AAU, QCA).