

A new species of *Campyloneurum* (Polypodiaceae) from northern Peru

Una especie nueva de *Campyloneurum* (Polypodiaceae) del norte del Perú

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Presentado: 14/12/2004

Aceptado: 28/12/2004

Abstract

A new species restricted to the montane forest of Amazonas is recognized as new and described herein.

Keywords: *Campyloneurum*, Polypodiaceae, fern, Peru.

Resumen

Se reconoce y describe como especie nueva una población restringida a los bosques montanos de Amazonas.

Palabras clave: *Campyloneurum*, Polypodiaceae, helecho, Perú.

Introduction

The genus *Campyloneurum* (Polypodiaceae) includes over 50 species distributed from southern USA to northern Argentina (Lellinger 1988; León 1993a, b). This genus includes predominantly entire leaf species (León 1993a). Among Neotropical species, León (1993a) informally recognized the *C. repens* group, which is characterized by long creeping rhizomes, fronds with entire short-petiolate leaves and non-divided areoles. This group was recognized for the Peruvian flora with four species (*C. fasciale* (Willd.) C. Presl, *C. fuscusquamatum* Lellinger, *C. ophiocaulon* (Klotzsch) Fée, and *C. repens* (Aubl.) C. Presl). One interesting population from northern Peru with close affinities to this species group is recognized here as new.

Taxonomy

Campyloneurum amazonensis B. León,
sp. nov.

(Figure 1a-d)

Type: Peru. Amazonas. ca. 12–18 km trail km E of La Peca in Serranía de Bagua, 1800–1950 m, A.H. Gentry et al. 22930 (**Holotype:** USM; isotypes: AMAZ, F, MO, UC).

Description

Rhizomata longa repentia, 3 mm lata; paleae ca. 2.5 cm anguste lanceolatae, leviter clathratae, apice apiculatae. Frondes 18–35 cm longae. Petioli breves, laminae chartaceae vel sub-coriaceae; venae areolatae, areolae apertae, venae secundae flexuosae, adaxialiter prominulae.

Differt a Campyloneurum repens squamis cellulis luminis flavidis et cellulis parvus.

Rhizome black, 2.5–3 mm wide, rhizome scales lightly brown, spreading, linear-lanceolate, 2.5–3.5 mm long × 0.5–0.7 mm wide, scale base biauriculate, auricles short, slightly clathrate in the center of the scale, cell lumina yellowish and cell walls brown, margins differentiate with non-clathrate cells. Phyllopodia 1 mm long, 2 mm wide, 0.5–1 cm apart. Fronds 18–35 cm long; petiole 0.4–0.9 cm long; lamina 0.8–2.5 (–3 cm) wide, chartaceous-sub coriaceous, apices acuminate, margin cartilaginous, slightly undulate, bases

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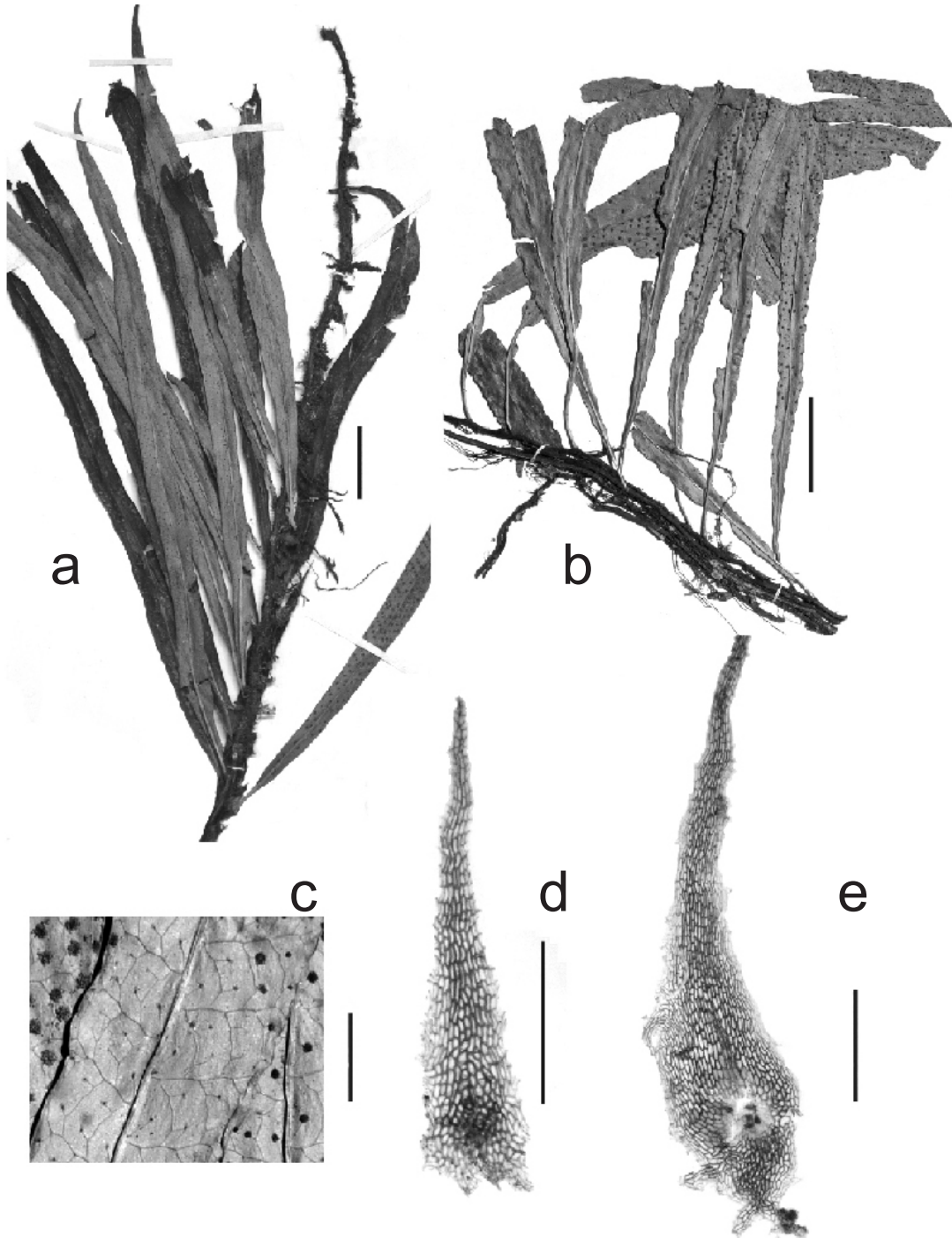


Figure 1. *Campyloneurum amazonensis* B. León, a) Habit of Type specimen (Gentry et al. 22930 USM); b) Broad-leaf specimen (Young & Eisenberg 352a TEX); c) pattern of venation (Young & Eisenberg 352a TEX); d) rhizome scale (Gentry et al. 22930 USM); e) rhizome scale of *Campyloneurum repens* (Aubl.) C. Presl (Vásquez et al. 18776 USM). Measurement bars equivalences: a) 2cm, b) 4cm, c) 1cm, d) and e) 1 mm.

asymmetrical, cuneate, indument of inconspicuous, sparse short hairs abaxially; midrib prominent slightly ranurate adaxially, secondary veins prominulous, slightly flexuous, 65–70° divergent, 3,5–5 mm apart; 3–5 open areoles between margin and midrib, each non-costal areolae with two free excurrent veinlets, veinlets ending in hydathodes on the upper side; 1 or 2 free veinlets along the margin, fertile or sterile; stomata polocytic. Sori roundish, subterminal on the excurrent veinlet, non-paraphysate; annulus with 15 cells, immature or abortive spores seen.

Additional specimens examined

Peru. Amazonas, Province Bagua, 12 km E of La Peca, 1700 m, 23 June 1978, P.J. Barbour 2487 (F, MO, UC); P.J. Barbour 2495 (F, UC); Province Bongará, N by trail from Pedro Ruiz, 5°49'S, 78°01'W, 2300 m, 31 Aug–2 Sep 1983, Smith & Vásquez 4878 (AMAZ, TEX); 2–4 km west-southwest (245°) of Pomacocha, 2200–2400 m, J.J. Wurdack 844 (F, UC, US, USM); Dist. Sipasbamba, Shilla, 1900 m, 5 May 1981, Young & Eisenberg 352a (MO, NY, TEX).

Comments

Campyloneurum amazonensis is distinguished from *C. repens* by rhizome scales narrowly lanceolate with cells oblong versus narrowly oblong, and less than 20 cells (Fig 1d) versus more than 35 cells in a row immediately above the insertion area (Fig. 1e). In *C. amazonensis*, lamina basis are shortly decurrent.

This new species is known from the montane forests in the Utcubamba-Chiriaco basins, between 1700 and 2400 m elevation. It is represented within the Zona Reservada Cordillera de Colán. It appears to be restricted to Peru.

The following key, based on León (1993b) provides a tool for identifying this new species from others in Peru with non-divided areoles and rhizome scales less than 5 mm long.

1. Cell lumina dark yellow or almost occluded; rhizome scales dark brown, linear.

Campyloneurum fuscusquamatum

1. Cell lumina transparent or yellowish, not occluded; rhizome scales linear-lanceolate or ovate-lanceolate.
2. Apex of rhizome scales obtuse; rhizome diameter usually more than 3 mm wide.

Campyloneurum ophiocaulon

2. Apex of the rhizome scales acuminate; rhizome diameter usually 3mm or less.
3. Rhizome scales with differentiated margins.
4. Rhizome scale bases less than 1 mm wide.

Campyloneurum amazonensis

4. Rhizome scale bases more than 1 mm wide.

Campyloneurum repens

3. Rhizome scales without differentiated margins.
5. Lamina narrowly lanceolate, base long decurrent.

Campyloneurum fasciale

5. Lamina broadly lanceolate, base broad cuneate or short decurrent.

Campyloneurum coarctatum

Acknowledgements

Thanks to Alan R. Smith (UC) for his support and for earlier discussion about this newly described taxon, and to Benjamin Øllgaard for his advice and encouragement. I thank José Roque G. for help and advice in preparing Figure 1.

Literature Cited

- Lellinger, D.B. 1988. Some new species of *Campyloneurum* and a provisional key to the genus. *Amer. Fern J.* 78(1): 14–34.
- León, B. 1993a A Taxonomic Revision of the fern genus *Campyloneurum*. Ph.D. Thesis Aarhus University, Denmark.
- León, B. 1993b *Campyloneurum*. Pp. 158–173. In: R.M. Tryon & R.G. Stolze, *Pteridophyta of Peru*. *Fieldiana Bot.* n.s. 32.