



Campyloneurum poloense (Polypodiaceae), a new combination and lectotypification for a Bolivian fern

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During the revision of the fern genus *Campyloneurum* Presl (1836: 189) (Polypodiaceae) for Bolivia, a species previously described in *Polypodium* is recognized in the former, but requiring a new combination, which is done here, in addition to lectotypification and providing an updated description.

Campyloneurum poloense (Rosenst.) B. León, *comb. nov.*

Basionym:—*Polypodium poloense* Rosenstock (1913: 473, as “*poloense*”).

Type:—BOLIVIA. La Paz: Dept. Nor Yungas, “Polo Polo prope Coroico,” 900 m, October 1912, *O. Buchtien 3525* (lectotype S!, designated here, isolectotype US!).

Rhizome pruinose, 2–3 mm in diameter; rhizome scales 3.0–3.6 × 0.7–1.0 mm, 12–15 cells wide at the middle length, ovate-lanceolate, brown, clathrate except for marginal cells (only slightly clathrate), biauriculate at the base, with roundish cells except for narrowly oblong cells along the central axis of the scale, lumina transparent, not iridescent; fronds closely spaced; petioles 0.5–2.0 cm long; laminae 8–20 × (0.7–)1–3 cm, chartaceous, narrowly-oblongate or narrowly lanceolate, bases gradually decurrent, apices obtuse, margins slightly revolute; primary veins obscure, but abaxially contrasting with the lamina tissue when dry, 1–3 series of areoles between costa and margin, costal areoles three times longer than wide, primary non-costal areoles usually divided, hydathodes adaxially sometimes with lime dots; sori in one or two series, generally towards the apices.

Additional specimen examined:—BOLIVIA. La Paz, Nor Yungas, Comunidad Cultural, 36 km Caranavi a Sapecho, 15°41'S, 67°30'W, 1250 m, 24 August 1997, *M. Kessler 11386* (LPB, UC).

Remarks:—*Campyloneurum poloense* belongs to the complex of *C. angustifolium* (Swartz 1788: 130) Fée (1852: 257). Based on the type only León (1993: 32) included this species in the synonymy of *Campyloneurum amphostenon* (Kunze ex Klotzsch 1847: 399) Fée (1852: 258), since width of the lamina was considered part of the variation of this species; however, other characteristics in *C. amphostenon* as laminae with acuminate apices and lanceolate rhizome scales more than 1 mm wide do not support her conclusion. After the examination of a recent collection, we now propose that *C. poloense* can be distinguished from other species in the Bolivian flora as detailed in the following key.

To date, *C. poloense* is only known from the Andean foothills (900–1250 m) in the department of La Paz, Bolivia. Among the closely related species that also occur in this department, *C. angustifolium* (Swartz 1788: 130) Fée (1852: 257) occurs over a wide elevational range (300–3850 m) whereas at higher elevations one may find *C. aglaolepis* (Alston 1939: 346) de la Sota (1960: 96) (1420–3600 m), *C. amphostenon* (2250–3650 m), and *C. angustipaleatum* (Alston 1939: 346) M.Mey. ex Lellinger (1984: 56) (1500–2600 m).

Key to the species of *Campyloneurum* from Dept. La Paz, Bolivia

1. Rhizome diameter 3–5 mm; rhizome scales usually >1.5 mm wide; 2–5 series of areoles between costa and margin. *C. amphostenon*
- Rhizome diameter 1–3 mm; rhizome scales usually <1.5 mm wide at the base; 1–3 series of areoles between costa and margin. 2
2. Rhizome scales narrowly ovate without differentiated margins, with wide oblong cells, the cell lumina iridescent *C. aglaolepis*
- Rhizome scales linear-lanceolate with differentiated margins, with oblong or narrowly oblong cells, the cell lumina not iridescent. 3
3. Laminae shortly decurrent at the bases, abruptly ending in obtuse apices *C. poloense*
- Laminae gradually ending in both ends, acute or acuminate. 4
4. Rhizome scale bases >1 mm wide, scales brown in mass *C. angustifolium*
- Rhizome scale bases <1 mm wide, linear-lanceolate, scales dark brown in mass. *C. angustipaleatum*

References

- Alston, A.H.G. (1939) New species of *Polypodium* sect. *Campyloneurum*. *Journal of Botany, British and Foreign* 77: 346–347.
- de la Sota, E.R. (1960) Polypodiaceae y Grammitidaceae Argentinas. *Opera Lilloana* 5: 1–229.
- Fée, A.L.A. (1852) *Genera Filicum. Exposition des genres de la famille des Polypodiacées (classe des fougères). Mémoires sur la famille des fougères* 5. Berger-Levrault, Strassbourg, 387 pp.
- Klotzsch, J.F. (1847) Flora der Aequinoctial-Gegenden der neuen Welt. *Linnaea* 20: 337–445.
- Lellinger, D.B. (1984) New combinations and some new names in ferns. *American Fern Journal* 74: 56–59.
<http://dx.doi.org/10.2307/1546870>
- León, B. (1993) A taxonomic revision of the fern genus *Campyloneurum* (Polypodiaceae). Ph.D. Thesis, Faculty of Science, Aarhus University, Denmark, 125 pp.
- Presl, C. (1836) *Tentamen Pteridographiae*. T. Haase, Prague, 290 pp.
- Rosenstock, E. (1913) Filices novae a cl. Dr. O. Buchtien in Bolivia collectae. *Repertorium Speciorum novarum regni vegetabilis* 12: 468–477.
- Swartz, O. (1788) *Nova Genera et Species Plantarum seu Prodrromus*. Swederi, Stockholm, Uppsala & Abo, 158 pp.