
Pleopeltis coenosora (Polypodiaceae), a New Species from Peru

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ABSTRACT. *Pleopeltis coenosora* R. C. Moran (Polypodiaceae) is described as new from Peru. It is atypical in the genus by having coenosori. It most resembles *P. fraseri* (Mett. ex Kuhn) A. R. Sm. because of its strongly bicolorous rhizome scales, dark brown petioles, pinnatisect laminae, and obscure veins, but differs by the fewer and wider pinnae, the wider apical segment, the more strongly dimorphic sterile and fertile leaves, and the presence of coenosori. Furthermore, the juvenile leaves of the two species differ. Those of *P. coenosora* remain entire until up to 12 cm long, thereafter becoming pinnatisect; those of *P. fraseri* become pinnatifid when only about 5 cm long.

RESUMEN. Se describe a *Pleopeltis coenosora* R. C. Moran (Polypodiaceae) como nueva de Perú. Es atípica en el género por tener coenosoros. Se parece mucho a *P. fraseri* (Mett. ex Kuhn) A. R. Sm. a causa de sus escamas del rizoma fuertemente bicoloras, pecíolos pardo-oscuros, laminas pinnatisectas y venas oscuras, pero difiere por pinnas menos y más anchas, segmento apical más ancho, hojas estériles y fértiles más fuertemente dimorfas y la presencia de coenosoros. Además, las hojas juveniles de los dos especies difieren. Las de *P. coenosora* permanezcan enteras hasta 12 cm de longitud, después se tornan pinnatisectas; las de *P. fraseri* llegan a ser pinnatisectas cuando alrededor de 5 cm de longitud.

Key words: Ferns, IUCN Red List, Pasco, Peru, *Pleopeltis*, Polypodiaceae.

Pleopeltis Willd. contains about 45 species and is one of the principal Neotropical fern genera in the Polypodiaceae (Otto et al., 2009). Nearly all of its species occur in wet forests, and many are frequently encountered by collectors. While identifying recently collected ferns at MO, I came across the following new species. It is so distinct that I do not hesitate to describe it as new, even though it is known from only a single collection from Peru.

Pleopeltis coenosora R. C. Moran, sp. nov. TYPE: Peru. Pasco: Prov. Oxapampa, Distr. Huancabamba, Prosoya Jardín de Plantas Medicinales,

10°23'58"S, 75°29'12"W, 2200 m, 31 Oct. 2006, R. Rojas et al. 3986 (holotype, HOXA; isotypes, MO, USM not seen). Figures 1, 2.

A *Pleopelte fraseri* (Mett. ex Kuhn) A. R. Sm. foliis sterilibus et fertilibus valdius dimorphis, lamina sterili 8–10 cm lata, pinnis fertilibus obtusis 4–6 mm latis inter se 3–4 cm distantibus et praesentia coenosorum differt.

Rhizomes ca. 1.5 cm wide, compact; rhizome scales 2–3 mm, lanceolate, sharply bicolorous with a dark central stripe and lighter borders; sterile and fertile leaves strongly dimorphic, the fertile longer-petiolate with narrower pinnae; sterile juvenile leaves entire for lengths up to 12 cm, thereafter becoming pinnatisect; sterile mature leaves with petioles up to 8.5 cm, dark brown, scaly throughout but especially toward the base, the scales 1.5–3 × 0.4–0.8 mm, lanceolate, mostly appressed, bicolorous with a dark central stripe and wide pale borders, ciliate to fimbriate; sterile laminae ca. 15 × 8–10 cm, the base abruptly decurrent, forming a short, narrow green wing on the adaxial surface of the petiole, moderately scaly abaxially, the scales up to 1.5 mm, lanceolate, appressed, pale brown with whitish fimbriate borders, the lamina apex somewhat resembling the lateral pinnae (not pinnatifid and tapered to the tip); sterile pinnae 1.5–2 cm wide, 3 or 4 pairs, entire, obtuse; rachis and costae dark brown like the petiole, scaly, the scales 1–3 mm, lanceolate, mostly appressed, bicolorous but less sharply so than those scales on the petiole; veins obscure, anastomosing; petioles of fertile leaves up to 18 cm, otherwise like the petioles of the sterile leaves; hydathodes present, the one on the basal acroscopic side of the pinnae enlarged, darkened, and sunken; fertile pinnae 4–6 mm wide, linear, obtuse, the basal ones 4–5 cm, 3–4 cm distant from the suprabasal pinnae; sori fused into a continuous long coenosorus, except for 1 to 3 distinct sori at the pinna base; paraphyses absent; spores yellow, monolete.

Relationships. *Pleopeltis coenosora* resembles *P. fraseri* (Mett. ex Kuhn) A. R. Sm. by its strongly bicolorous rhizome scales, dark brown petioles, pinnatisect laminae, and obscure veins. It differs from *P. fraseri* by its strongly dimorphic sterile and fertile leaves with the fertile pinnae noticeably

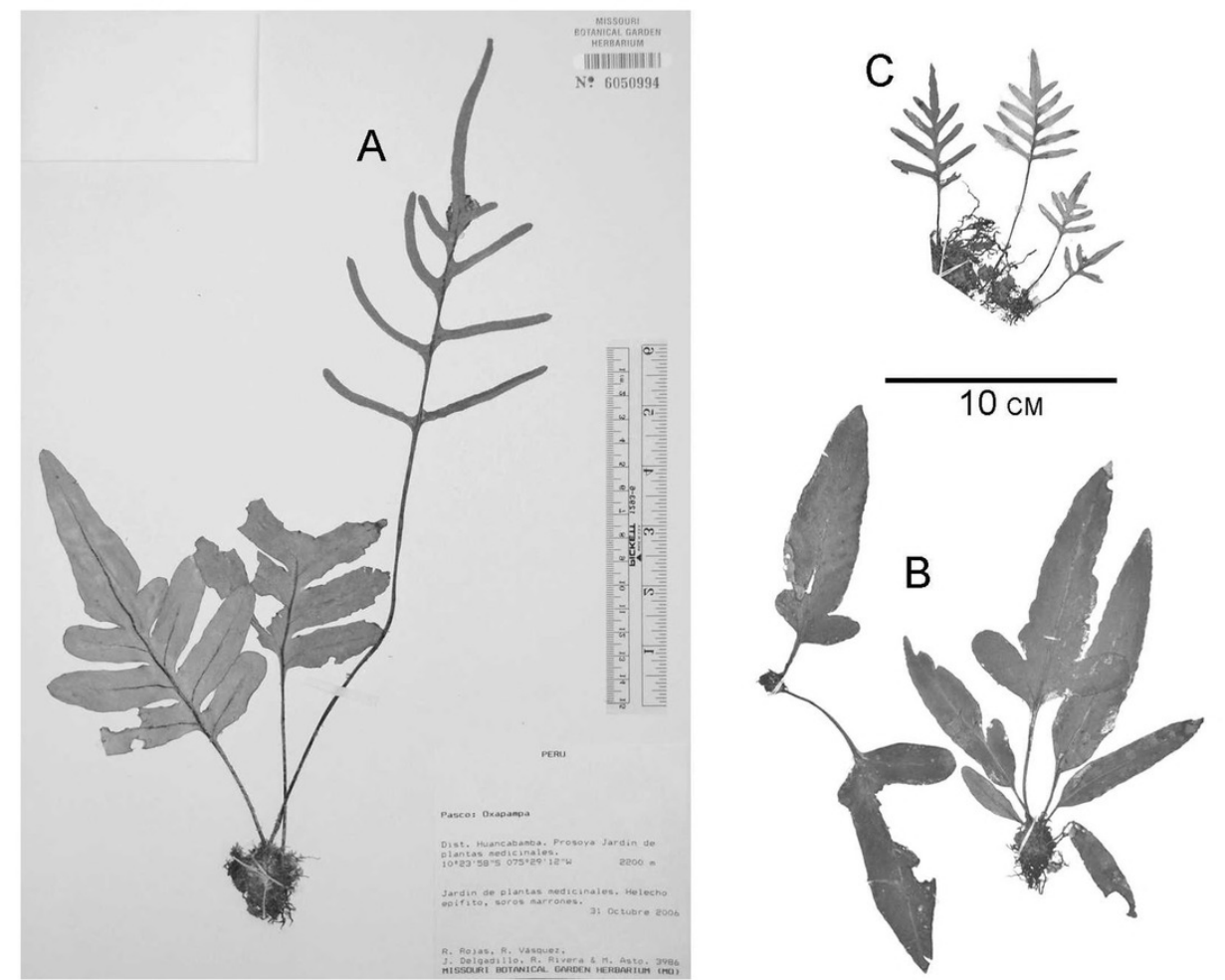


Figure 1. —A. Isotype of *Pleopeltis coenosora* R. C. Moran (Rojas *et al.* 3986, MO). B, C. Comparison of juvenile leaves. —B. *Pleopeltis coenosora* R. C. Moran (Rojas *et al.* 3986, HOXA). —C. *Pleopeltis fraseri* (Mett. ex Kuhn) A. R. Sm. (Ecuador, Jaramillo 1001, NY).

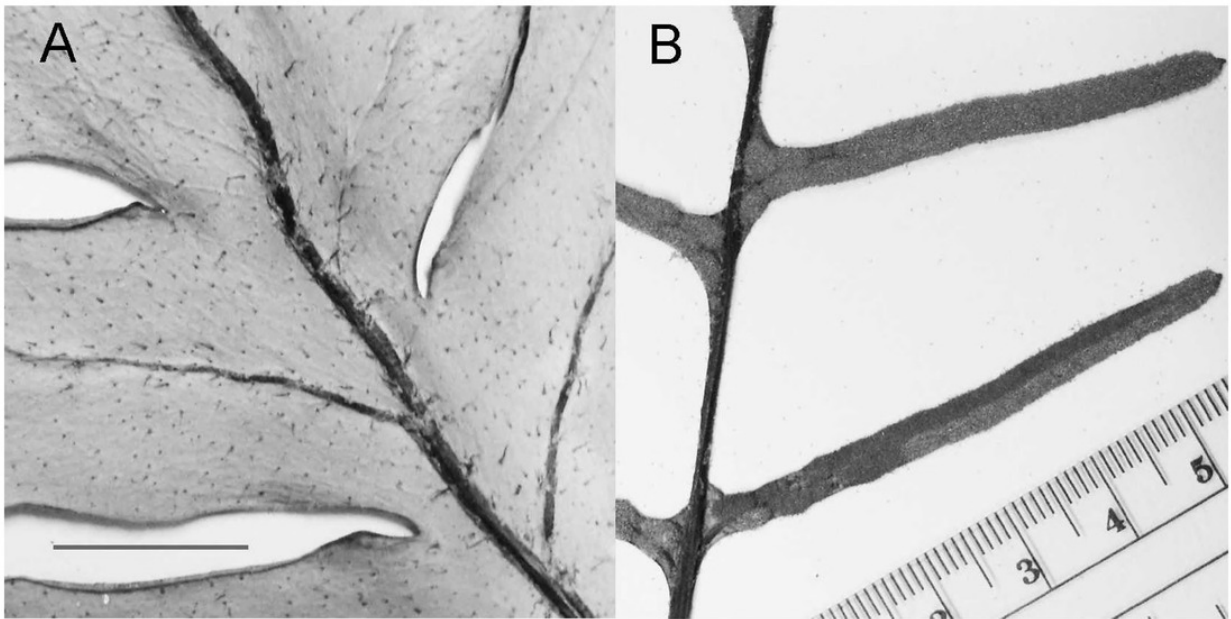


Figure 2. *Pleopeltis coenosora* R. C. Moran (Rojas *et al.* 3986, MO). —A. Abaxial surface of the lamina; note scattered scales and, in upper left, faint anastomosing veins (bar = 1 cm). —B. Detail of coenosorus; note one or two distinct sori at pinna bases.

narrower and spaced more distantly along the rachis (Figs. 1, 2). Sterile and fertile leaf dimorphism is also found in *P. fraseri*, but usually to a far lesser degree. *Pleopeltis coenosora* further differs by having wider sterile laminae and pinnae (1.5–2 mm vs. 2–4 mm), fewer pinna pairs (three or four vs. five to 20), and a broader apical segment that is mostly entire, not pinnatifid toward the tip as in *P. fraseri*. The juvenile leaves of the two species also differ. Those of *P. coenosora* are entire even when they are as long as 12 cm, whereas the juvenile leaves of *P. fraseri* become pinnatifid when only about 5 cm long (Fig. 1B, C).

Etymology. The specific epithet of the new species refers to the coenosori, which is yet another striking difference by which it differs from *Pleopeltis fraseri*, a species that has round, discrete sori (one or two discrete sori may be found at the base of the coenosorus in *P. coenosora*; Fig. 2B). Among the species of *Pleopeltis*, coenosori are rare. They are currently known only in *P. wiesbaurii* (Sodirol) Lellinger (Wagner, 1986) and two other species that belong to the genus (Otto et al., 2009), but for which combinations have not yet been made: *Neurodium lanceolatum* (L.) Fée and *Dicranoglossum panamense* (C. Chr.) L. D. Gómez.

IUCN Red List category. Because *Pleopeltis coenosora* is known from a single collection, it is assessed here as Data Deficient (DD) according to IUCN Red List criteria (IUCN, 2001).

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