

DARWINIANA 50(1): 154-156. 2012
Versión final, efectivamente publicada
el 31 de julio de 2012

ISSN 1850-1702 (electrónica)
ISSN 0011-6793 (impresa)

GENERIC IDENTITY OF *PHORADENDRON RUSBYI* (VISCACEAE) AND A NEW RECORD FOR ARGENTINA

Greta A. Dettke & Jorge L. Waechter

Programa de Pós-Graduação em Botânica, Instituto de Biociências, Av. Bento Gonçalves, 9500 - Bloco IV – Prédio 43433 - sala 205, Universidade Federal do Rio Grande do Sul, Brazil; gretadet@yahoo.com.br (author for correspondence).

Abstract. Dettke, G. A. & J. L. Waechter. 2012. Generic identity of *Phoradendron rusbyi* (Viscaceae) and a new record for Argentina. *Darwiniana* 50(1): 154-156.

During a review of herbaria in Argentina we found a specimen of *Phoradendron rusbyi*, which represents the third collection of the species and a new record for the flora of Argentina. This species is a little aphyllous plant, being a member of the group of hyperparasitic mistletoes, and was found in a mixed collection, parasitizing *Phoradendron bathyoryctum*. A morphological description of the species is provided, and its inclusion in *Phoradendron* confirmed.

Keywords. Argentina; flora; mistletoes; *Phoradendron*; Viscaceae.

Resumen. Dettke, G. A. & J. L. Waechter. 2012. Identidad genérica de *Phoradendron rusbyi* (Viscaceae) y un nuevo registro para Argentina. *Darwiniana* 50(1): 154-156.

Durante la revisión de herbarios en la Argentina se encontró un ejemplar de *Phoradendron rusbyi*, que representa la tercera colección de esta especie y una nueva cita para la flora de este país. Esta especie es una planta pequeña y áfila, miembro del grupo de hiperparásitas, que fue encontrada en una colección mixta, parasitando *Phoradendron bathyoryctum*. Se incluye una descripción morfológica de la especie y se confirma su inclusión en el género *Phoradendron*.

Palabras clave. Argentina; flora; hiperparásitas; *Phoradendron*; Viscaceae.

INTRODUCTION

Phoradendron Nutt. was first revised for the Argentinean flora in the important work of Abbiati (1946) which included 12 species for this country. Later, Rizzini & Ulibarri (1986) described a new species named *Phoradendron burkartii* Rizz. & Ulib., which is now a synonym of *P. reductum* Trel (Kuijt, 2003). Zuloaga & Morrone (1999) reported 13 species, and more recently Kuijt (2003, 2008) emphasized the occurrence of 14 species of *Phoradendron* in Argentina.

During a review of herbaria in Argentina we found one additional species, *Phoradendron rusbyi* Britton, which represents the third collection of this species, formerly known from Peru and

Bolivia, and now a new record for the flora of Argentina.

RESULTS

Phoradendron rusbyi Britton, Bull. Torrey Bot. Club 27: 136. 1900. *Dendrophthora rusbyi* (Britton) Trelease, *Phoradendron* 218. 1916. TYPE: Bolivia, La Paz, Mapiri, 5,000 ft, IV-1886, *Rusby 1543* (lectotype US! designated by Kuijt, Novon 4: 116. 1994; duplicate NY!). Figs. 1-2.

Plants percurrent, green, erect, up to 15 cm, monoecious. Stem compressed in the distal region

Original recibido el 19 de diciembre de 2011, aceptado el 14 de abril de 2012.

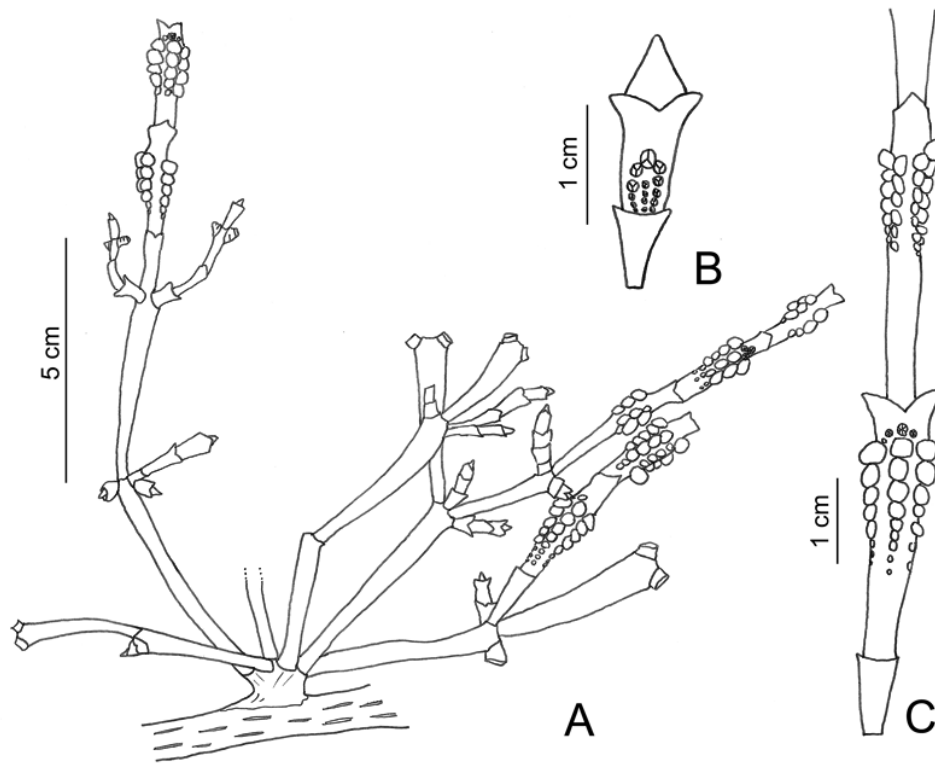


Fig. 1. *Phoradendron rusbyi*. **A**, habit. **B**, detail of young floriferous internode. **C**, detail of inflorescence in fruit. A-C, from Kiesling *et al.* 8155 (SI). Drawn by E.L.C. Soares.

(cuneate), internodes short, 1-4 cm; basal cataphylls absent. Leaves absent. Inflorescences lateral and terminal, with one sterile basal internode and 3-4 floriferous segments, each at least 3 cm long, clavate in fruit, each flower area with ca. 20 flowers, triseriate, the three apical staminate flowers with bilocular anthers. Fruits globose, ca. 3 mm in diameter, pearly white, pericarp smooth, petals closed in the fruiting stage.

Distribution and habitat. *Phoradendron rusbyi* occurs in the eastern slopes of the Andean forest. The small size of the plant makes easy to be it overlooked among the host foliage. The species occurs in the forest canopy, as several other *Phoradendron* species, making a visual recognition rather difficult.

This new record increases to fifteen the listed species of *Phoradendron* in Argentina: *Phoradendron argentinum* Urb., *P. bathyoryctum* Eichl., *P.*

coriaceum Mart., *P. dipterum* Eichl., *P. falcifrons* (Hook. & Arn.) Eichl., *P. interruptum* (DC.) B.D. Jackson, *P. liga* (Gillies ex Hook. et Arn.) Eichl., *P. mucronatum* (DC.) Krug & Urb., *P. obtusissimum* (Miq.) Eichl., *P. reductum* Trel., *P. rusbyi* Britton, *P. quadrangulare* (Kunth) Griseb., *P. paraguari* Kuijt, *P. piperoides* (Kunth) Trel. and *P. tucumanense* Urb.

Observations. *Phoradendron rusbyi* was first described as a leafy plant with a 5-nerved leaves, which were later verified by Kuijt (1994) as belonging to its host *Phoradendron crassifolium* (Pohl ex DC.) Eichl. Trelease (1916) placed *P. rusbyi* in *Dendrophthora* Eichler, but did not provide a justification for this change. *Phoradendron* and *Dendrophthora* are very similar in their general morphology and the only consistent feature that separates them is the number of anther locules: two in *Phoradendron* and one in *Dendrophthora*. The

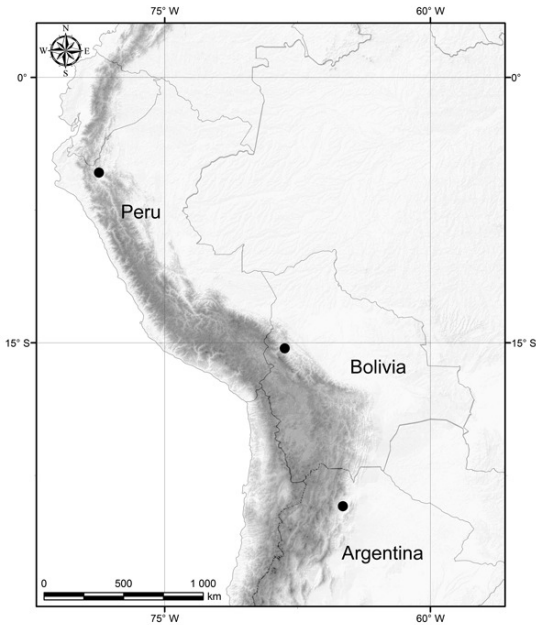


Fig. 2. Collections of *Phoradendron rusbyi* from South America.

two collections cited by Kuijt (2003), the type from Bolivia and a second collection from Peru [*Woytkowski 5740b* (US)], have no staminate flowers to confirm the generic identity of this taxon. Kuijt (2003), notwithstanding the absence of basal cataphylls, kept the species in the genus *Phoradendron*. In the Argentinean material it was possible to verify three staminate flowers on the apical position of floriferous internodes (Fig. 1B) of the young inflorescences of *P. rusbyi*. The bilocular anthers confirmed the placement of the species in the genus *Phoradendron*.

According to Kuijt (2003), *P. rusbyi* is a member of the *P. dipterum* alliance that includes the leafy *P. dipterum* and four aphyllous species (*P. iltisiorum*, *P. aequatoris*, *P. fasciculatum* and *P. falcatum*), all hyperparasitic plants with triseriate inflorescences. All species share the formation of multiple shoots from a basal cushion, as does *P. rusbyi* (Fig. 1A).

The Argentinean specimen differs from the other two existing specimens by the larger number

of flowers and by the clavate segments in fruiting plants. We believe this is a variation within the species, dependent on the degree of fruit maturation. *Phoradendron dipterum* also shows this variation, showing clavate segments when the fruits ripen sequentially (from the apex to the base of the segment) or non-clavate segments when the ripening of fruits is temporally irregular.

Examined material

ARGENTINA. **Jujuy.** Depto. Ledesma, entre la Mendieta y San Pedro, 11-XI-1992 (fl, fr), *Kiesling, Tur & Ulibarri 8155* (SI 41374).

ACKNOWLEDGMENTS

Our sincere thanks to the researchers of the Instituto de Botánica Darwinion, who facilitated our access to Herbarium SI, and to Manuel J. Belgrano and Norma B. Deginani for their special attention and kindness. This is publication 2 in the Parasitic Plants Research Group technical series.

BIBLIOGRAPHY

- Abbiatti, D. 1946. Las Lorantáceas argentinas. *Revista del Museo de La Plata, Botánica* 28: 1-110.
- Kuijt, J. 1994. A hyperparasite mistaken for an inflorescence: The identity and typification of *Phoradendron rusbyi* Britton (Viscaceae). *Novon* 4: 116-118.
- Kuijt, J. 2003. Monograph of *Phoradendron*. *Systematic Botany Monographs* 66: 1-643.
- Kuijt, J. 2008. Viscaceae, in F. O. Zuloaga, O. Morrone & M. J. Belgrano (eds.), *Catálogo de las plantas vasculares del Cono Sur (Argentina, Sur de Brasil, Chile, Paraguay y Uruguay)*, vol. 3, pp. 3169-3172. Missouri: Missouri Botanical Garden Press.
- Rizzini, C.T. & E.A. Ulibarri. 1986. *Phoradendron burkartii* Rizz. et Ulib. nueva especie de Loranthaceae. *Darwiniana* 27: 499-501.
- Trelease, W. 1916. *The genus Phoradendron. A monographic revision*. Urbana: University of Illinois.
- Zuloaga, F. O. & O. Morrone (eds.). 1999. *Catálogo de las plantas vasculares de la República Argentina. II. Dicotyledonae*, vol. 2. Saint Louis: Missouri Botanical Garden Press.