

PLEURISANTHES FLAVA (ICACINACEAE): A NEW RECORD FOR BRAZIL

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ABSTRACT

Pleurisanthes flava Sandwith is reported here for the first time from the Brazilian lowland Amazon Rainforest based on unreported collections from 1936, 1968, and 1975. The species can be recognized by the elliptic to ovate leaves with entire margin, the axillary or supra-axillary and racemose inflorescence, sessile or shortly pedicellate, and 5-merous flowers.

KEY WORDS: Biodiversity, lowland Amazon Rainforest, South America

RESUMO

Pleurisanthes flava Sandwith é citada aqui pela primeira vez para a Floresta Amazônica brasileira baseada em coletas dos anos de 1936, 1968 e 1975 previamente não publicados. A espécie pode ser reconhecida pelas folhas elípticas a ovadas com margens inteiras, pela inflorescência racemosa axilar a supra-axilar com pedicelo curto ou sésil e flores 5-meras.

PALAVRAS CHAVE: América do Sul, Biodiversidade, Floresta Amazônica de terras baixas

Icacinaceae (s.l.) comprises approximately 52 genera and 400 species worldwide. It occurs predominantly in the Tropics and rapidly decreasing in number toward the subtropics. In the Neotropics, the family is represented by 12 genera and 54–57 species (Duno de Stefano 2004). Morphological and molecular studies (Kårehed 2001) showed Icacinaceae (s.l.) as of polyphyletic origin and under a new circumscription, it was segregated in four distinct families [Icacinaceae s.s., Cardiopteridaceae Blume, Stemonuraceae (M. Roem.) Kårehed, and Pennantiaceae J. Agardh].

Icacinaceae s.s. has a pantropical distribution with 30 genera and 140 species (Duno de Stefano 2004; Duno de Stefano & Amorim 2012; Kårehed 2001). *Pleurisanthes* Baill. is a small genus of woody vines to climbing shrubs and restricted to the Neotropics. Seven species of *Pleurisanthes* are recognized from the rainforests of Venezuela, Guyana, Suriname, French Guiana, Ecuador, Peru, and Brazil (Duno de Stefano 2004; Howard & Duno de Stefano 1999; Duno de Stefano & Amorim 2012). The genus is characterized by the flowers not being articulated at the distal portion of the pedicels (Duno de Stefano et al. 2002) and the species have smaller and less attractive flowers and fruits than other species in Icacinaceae s.s. The highest diversity of *Pleurisanthes* species is found in Brazil which comprises five species distributed in the Amazon and Atlantic Forest (Duno de Stefano & Amorim 2012). *Pleurisanthes* has a problematic taxonomy and needs a further review. The genus is poorly known mainly because of the general lack of collections from the Amazon Forest. We publish here the new record of *Pleurisanthes flava* from the Amazon forest of Brazil.

Pleurisanthes flava Sandwith has previously been recorded from Guyana (de Roon 1994; Keloff et al. 2011) and its occurrence in the Brazilian Amazon was suggested by de Roon (1994). However, no Brazilian collections were cited by de Roon (1994). In a recent herbarium survey, four vouchers of *P. flava* from Brazil were discovered and verified, and are here reported from Brazil for the first time, distant ca. 700 Km from the southern record of the species in Guyana, expanding the known distribution of the species.

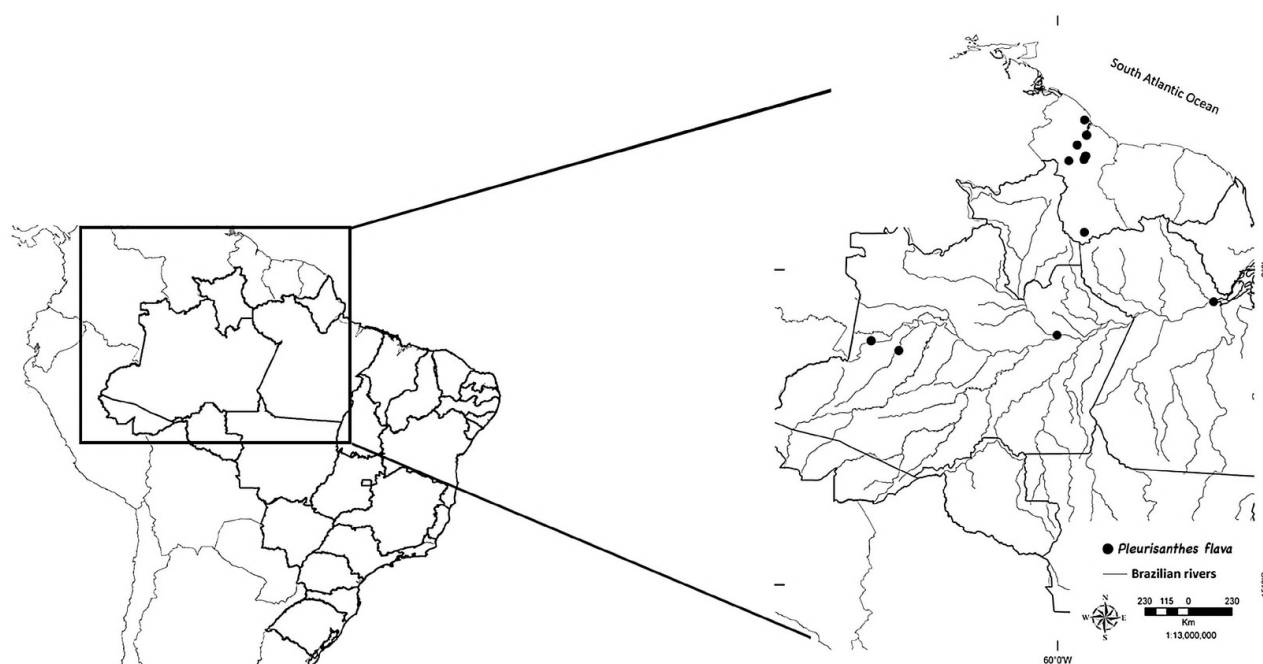


FIG. 1. Distribution map of *Pleurisanthes flava* Sandwith in South America, showing records in Guyana and Brazil (States of Amazonas and Pará).

MATERIAL AND METHODS

This study was based on herbarium collections of *Pleurisanthes* from the Amazon rain forest. Specimens from 16 herbaria were studied (BM, C, F, G, IAN, INPA, K, MIRR, MO, NY, P, PH, RB, SP, UFRR, US, and VEN) (herbarium abbreviation follows Thiers 2013). Morphological studies of the herbarium collections were carried out using a stereomicroscope.

RESULTS AND DISCUSSION

A short description with the main diagnostic characters is provided. A more complete description of *Pleurisanthes flava* can be found in de Rooy (1994) and Sandwith (1931).

Pleurisanthes flava Sandwith, Bull. Misc. Inform. Kew 1931 (10):467–468. 1931. (Figs. 1, 2). TYPE: GUYANA: Bartica, Essequibo River, Moraballi Creek, near sea level, 11 Nov 1929 (fl), N.Y. Sandwith 590 (HOLOTYPE: K!; ISOTYPE: K!, NY!).

Woody vines. Leaves 7.5–19.5 × 4–6 cm, elliptic to ovate, apex apiculate, rarely emarginate, basecuneate to rounded, margin entire, bicolor (dried samples), adaxial surface with midveinsulcate, secondary veins 8–10 pairs, abaxial surface fulvo-stringose; petiole 1–2 cm long. Inflorescence axillary or supra-axillary, simple or compound racemes, main axis ca. 5–7.5 cm long; flowers sessile to shortly pedicellate, 0.1–0.2 cm long; calyx 5-lobed, 0.05–0.1 cm long, triangular, apex acute, pubescent; corolla 5-lobed, petals oblong to lanceolate, 0.2–0.3 cm long; stamens 5, ca. 2 mm long; ovary 0.1 diam., ovoid, tomentose; style 0.1 cm long, tomentose; stigma punctate. Fruits drupaceous, 1–1.2 cm diam., ovoid, apex apiculate, shortly hirsute, reddish-brown, wrinkled when dried.

Voucher specimens/material examined: **BRAZIL. Amazonas:** Jutaí, Rio Solimões, rio Biá, afluente do rio Jutaí, 04 Nov 1975 (fl), L. Coelho et al. 313 (INPA); Lajes, 17 Km from Manaus, 18 Feb 1975 (fr), G.T. Prance & J.F. Ramos P23278 (INPA, MO, NY); São Paulo de Olivença, basin of creek Belém, 26 Oct–Nov 1936 (fl), B.A. Krukoff 8683 (G, K, P, US). **Pará:** Rio Jari, Planalto do Monte Dourado, 22 Jan 1968 (fl), E. Oliveira 3939 (IAN). **GUYANA.** Bartica, Essequibo river, Moraballi Creek, near sea level, 11 Nov 1929 (fl), N.Y. Sandwith 590 (K-3 sheets, NY); Mazaruini Station, 07 Nov 1943 (fl), D.C.O. 67853 (NY); Pomeroon-Supenaam, Mabura, 22 Sep 1992 (fl), B. Hoffman & L. Roberts 2806 (US); Potaro-Siparuni: Paramakatoi and vicinity, 13 Mar 1989 (fr.), W. Han et al. 5661 (K, US); Kaieteur Falls National Park, 28 Jan 1987 (fr), J.J. Pipoly & G. Gharbarran 10168 (NY, P, US); Upper Demerara, 19 Nov 1986 (fl), J.J. Pipoly & R. Boyan 8845 (FDG, NY, P, US); ibid, 19 Nov 1986 (fl), J.J. Pipoly & R. Boyan 8933 (FDG, NY, P, US); Upper Takutu-Upper Essequibo, 24 May 1997 (fr), D. Clarke 4932 (NY, US); ibid, 15 May 1997 (fl),



FIG. 2. *Pleurisanthes flava*. **A.** Fertile branch (from J.J. Pipoly & R. Boyan 8845); **B.** Inflorescence (from D.C.O. 67853); **C.** Flower (from J.J. Pipoly & R. Boyan 8845); **D.** Fruit (from J.J. Pipoly & G. Gharbarran 10168).

D. Clarke 4552 (US); *ibid.*, 12 Nov 1998 (fl), *D. Clarke et al.* 7788 (US); Waraputa Compartment, ca. 25 Km of Mabura, 05 Nov 1991 (fl bud), *M. Polak & P.J.M. Maas* 506 (K, NY, U, US).

In Brazil, *Pleurisanthes flava* occurs in the states of Amazonas and Pará and in different areas from the Brazilian Amazon Forest. The species is recorded in lowland Amazon Forest and usually collected near streams and river banks. The species could possibly be found in the states of Amapá and Roraima based on the current knowledge and geographic distribution of the species. *Pleurisanthes flava* is most similar to *P. howardii* R. Duno, Riina & P.E. Berry, which is endemic to Venezuela, but the leaves of *P. flava* are bicolorous, less coriaceous and with the abaxial surface fulvo-strigose and the fruits are smaller, ovoid, shortly hirsute, reddish-brown, and with the apex noticeably apiculate (Duno de Stefano et al. 2002). *Pleurisanthes flava* differs from *P. artocarp* Baill. and *P. emarginata* Tiegh. by the entire margin (clearly dentate in the other two species), from *P. parviflora* (Ducke) R.A. Howard by the shorter pedicel, broader petals, and tomentose style (de Roon 1994; Sandwith 1931), and from *P. simplicifolia* by the oblong and membranaceous to chartaceous leaves, with entire margin, and 8–10 secondary veins, (elliptic or suborbicular, coriaceous to subcoriaceous with denticulate margin and 6 secondary veins, in *P. simplicifolia*).

KEY TO SPECIES OF *PLEURISANTHES* BAILL. FROM THE BRAZILIAN AMAZON RAINFOREST
[BASED ON HOWARD (1942) AND DE ROON (1994)]

1. Leaves coriaceous to subcoriaceous, margin denticulate to dentate; flowers 4–5-merous.
 2. Leaves obovate to obovate-elliptic, broadest at the base _____ **P. artocarp**
 2. Leaves elliptic to widely elliptic, broadest at the middle.
 3. Leaves with 7–9 secondary veins, flowers 4-merous _____ **P. emarginata**
 3. Leaves with 6 secondary veins, flowers 5-merous _____ **P. simplicifolia**
1. Leaves membranaceous to chartaceous, margin entire; flowers 5-merous.
 4. Flowers distinctly pedicellate (1 cm long) _____ **P. parviflora**
 4. Flowers short pedicellate (0.1–0.2 cm long) _____ **P. flava**

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