

**A NEW COMBINATION IN MEXICAN *MANDEVILLA*
(APOCYNACEAE SUBFAMILY APOCYNODEAE) III**

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ABSTRACT

Trachelospermum stans A. Gray is here treated as a species of *Mandevilla*: *M. stans* (A. Gray) J. K. Williams, **comb. nov.**

KEYWORDS: *Mandevilla*. Mexico. Apocynaceae. SEM

Preparation of a treatment of the Apocynaceae of Mexico (Williams, 1999), revealed populational variation in the endemic but widespread Mexican species, *Mandevilla foliosa* (Müll. Arg.) Hemsl.

A distribution map (Fig. 1) of *Mandevilla foliosa* s.l. shows two disjunct populations, a northern and a southern, separated by a distance of approximately 600 km. Comparisons of the two populations indicate that the northern populations are densely pubescent, while the southern populations are wholly glabrous (except the midribs; Fig. 2).

The northern populations were originally described as *Trachelospermum stans* A. Gray. The species was later synonymized under *Mandevilla foliosa* by Woodson (1933) and maintained there as a synonym by Morales (1998). Observations of the type of *T. stans* show it to be pubescent, consistent with other northern collections of *M. foliosa*.

Another Apocynaceae genus, *Haplophyton* A. DC., has a similar disjunct distribution with a population in northern Mexico and one in southern Mexico. *Haplophyton* was traditionally treated as monotypic (Pichon, 1950; Kartez, 1994) until Williams (1995) presented evidence in

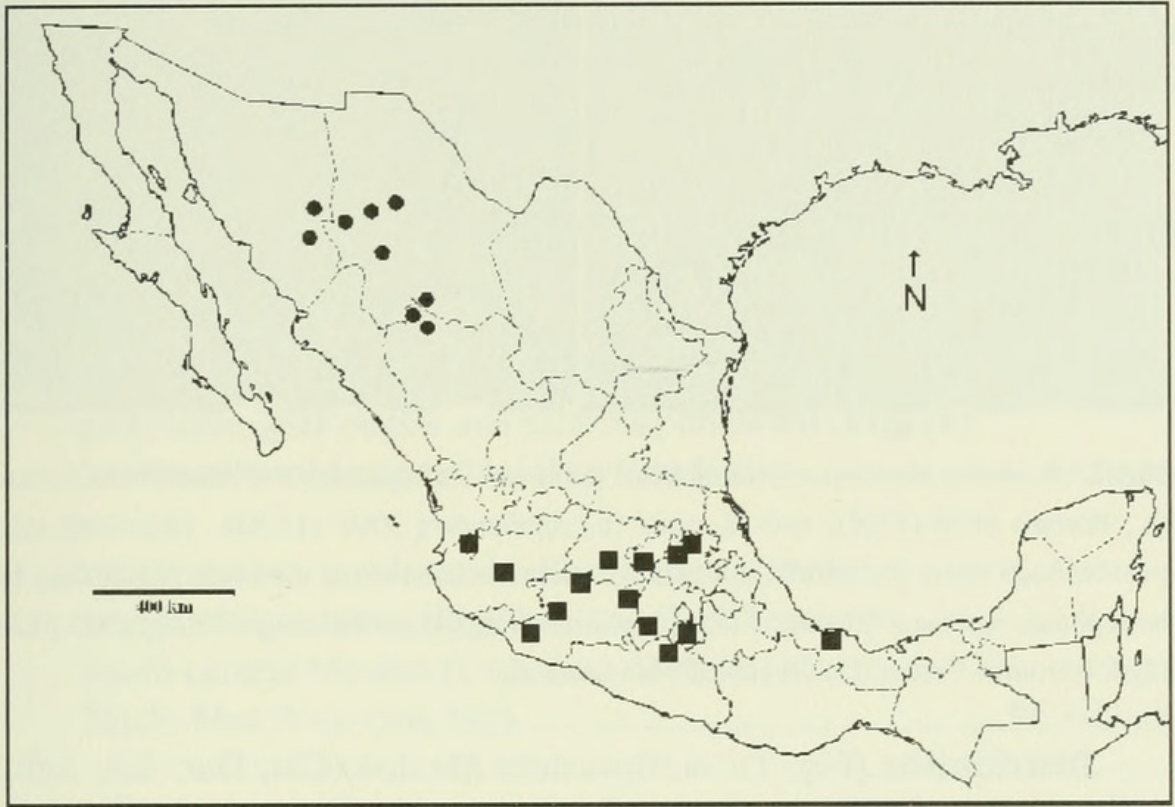


Fig. 1. Distribution of *Mandevilla foliosa* sensu lato (squares *M. foliosa*, circles *M. stans*).

support of two species based on a “correlation of... character [states] with the allopatric distribution of the two populations”. As in *Haplophyton*, *Mandevilla foliosa* is composed of two allopatric populations that are reproductively isolated in geography and readily distinguished by morphological characters.

Accordingly, *Trachelospermum stans* is here treated as a distinct species of *Mandevilla* and the following combination is made:

Mandevilla stans (A. Gray) J. K. Williams, **comb. nov.**

Trachelospermum stans A. Gray, Proc. Amer. Acad. Arts 21: 394. 1886.
Secondantia stans (A. Gray) Standl., Contrib. U.S. Natl. Herb. 23: 1165. 1924. TYPE: **MEXICO. CHIHUAHUA**: rocky hills near Chihuahua, 19 Oct 1885, *Pringle 640* (HOLOTYPE: GH; ISOTYPES: NY!; P!).

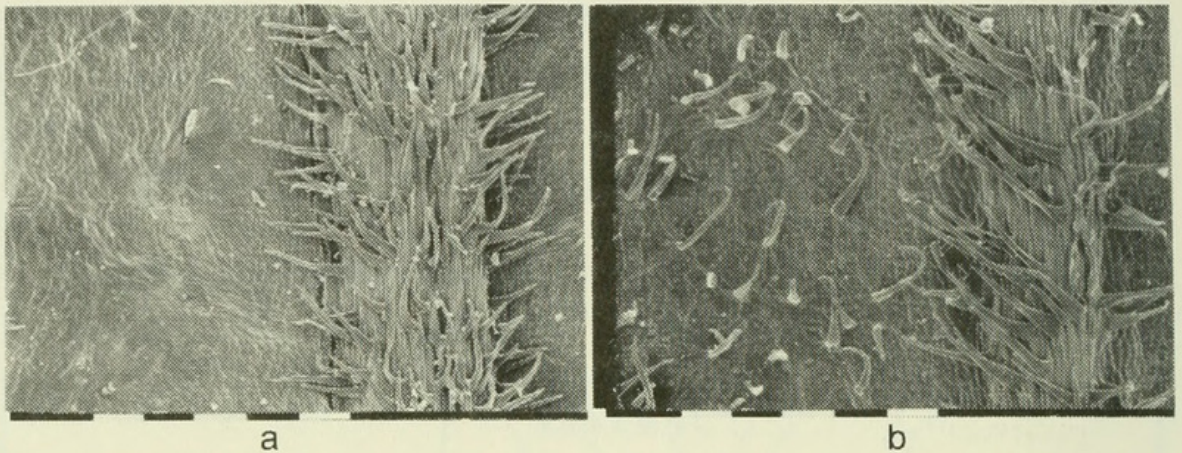


Fig. 2. Scanning electron micrographs of the lower leaf epidermis of *Mandevilla foliosa* (a., Ventura 6928 (TEX)) and *M. stans* (b., Spellenberg 9309 (TEX)). Note both taxa possess hairs along the midrib, but only *M. stans* has hairs along the blade. White bars on both photos represent 0.1 mm. Micrographs made by the author using a Phillips 515 SEM (Cell Resource Center, University of Texas Austin).

Distribution (Fig. 1): northwestern Mexico (Chi, Dur, Sin, Son), typically found in open rocky slopes, chaparral and pine-oak forest, 1200-2200 m.

Representative specimens. MEXICO. CHIHUAHUA: Mpio. Ocampo, Parque Nacional de la Cascada de Basaseachic, on the S and SW facing slopes in the canyon below the falls, with pines and oaks, (28° 10' N, 108° 12' W), 14 Sep 1987, *Spellenberg* 9309 (TEX); Mpio. Temosachi, Nabogame (28° 03' N, 108° 30' W), 24 Jun 1988, *Laferrière* 1459 (TEX); about 30 mi N of Cd. Chihuahua, W of HWY 45, W of Boca del Potero in mountains, in canyon 1 mi W of Bella Vista (29° 2' N, 106° 27' W), with *Acacia* and oaks, 16 Jul 1981, *Ward & Worthington* 81-344 (NMC, TEX, MEXU); N of Chihuahua, 29 Jul 1935, *LeSueur* 839 (F); vicinity of Quirire, between Creel and La Bufa, 2 Aug 1973, *Bye* 4475 (TEX); 20 mi S of Parral on HWY 45, 5900 ft, 28 Jul 1975, *Engard* 644 (TEX); mouth of canyon, along road, E of Majalca, 28 Jul 1958, *Correll* 20284 (TEX); Balleza, Dec 1945, *Martínez s.n.* (F); Sierra Charuco, Río Fuerte, 21 Jul 1935, *Standley* 1503 (F); Canyons near Chihuahua, 24 Jul 1886, *Pringle* 701 (US). **DURANGO:** Mpio. de Santiago Papasquiaro, 20 km W of Santiago Papasquiaro, 15 Jul 1982, *Hernández* 7889 (US); along the road W of Indé toward Santa María, ca 3 mi W of Indé on a steep mountain slope of volcanic origin, 10 Aug 1971, *Reveal* 2727 (US); 45 mi W of Hildago de Parral, along road from Parral to El Vergel (Hwy 24), ca 54 km W of jct with HWY 12, 7 Aug 1978, *Funk* 2766 (TEX, US); Tobar, 28 May 1906, *Palmer* 238 (F); Santiago Papasquiaro, Apr 1896, *Palmer* 395 (F, US); Indé, Jun 1927, *Reko* 5166 (US); Canyon Cantero, Sierra Gamon, 12 Sep 1948, *Gentry* 8385 (US). **SINALOA:** La Petaca, Concordia, 1915, *Dehesa* 1653 (US). **SONORA:** Maicoba, Jul 1968, *Pennington* 195 (TEX); near Santa Barbara (27° 06'

N, 108° 43' W), 18 Oct 1992, *Jenkins 92-119* (TEX); canyon on the NE side of the Sierra Batuc, 10 mi NE of Mátape on the road to Batuc, 9 Sep 1941, *Wiggins 446* (US); ridge S of Arroyo Gochico, E of San Bernardo, granitic soil, 5-9 Aug 1935, *Pennell 19569* (US).

Madevilla stans is distinguished from *M. foliosa* by the following contrasts:

1. Stems, petioles, sepals, and inflorescence densely pubescent, leaf blades and midribs pubescent (Fig. 2b); northwestern Mexico (Chi, Dur, Sin, Son).....*M. stans*
1. Stems, petioles, sepals, and inflorescence glabrous, leaf blades glabrous (Fig. 2a), midrib pubescent; south-central Mexico (Gua, Gue, Hid, Jal, Mex, Mich, Mor, Nay, Que, Ver).....*M. foliosa*

Mandevilla foliosa (Müll. Arg.) Hemsl., Biol. Centr. Amer. Bot. 2: 316. 1881.

Amblyanthera foliosa Müll. Arg., Linnaea 30: 427. 1860. *Laseguea foliosa* (Müll. Arg.) Miers., Apoc. S. Am. 253. 1878. TYPE: **MEXICO. MEXICO:** Near Mexico city, 1842, *Ghiesbreght s.n.* (HOLOTYPE: G!, photos F!, MO!).

Echites apocynifolia A. Gray, Proc. Amer. Acad. Arts 22:435. 1887. *Mandevilla apocynifolia* (A. Gray) Woodson, Ann. Missouri Bot. Gard. 19:65. 1932. TYPE: **MEXICO. JALISCO:** Río Blanco, Jun-Oct 1886, *Palmer 734* (HOLOTYPE: GH; ISOTYPE: NY!).

Distribution (Fig. 1): pine-oak forests of central Mexico, typically found in volcanic soils, 1000-2000 m. Associated species include *Acacia* spp., *Juniperus flaccida*, *Opuntia* spp., and *Quercus hypoleucoides*.

Representative specimens. **MEXICO. GUANAJUATO:** Mpio. Abasolo, 4 km ESE of Saucillo, 19 Aug 1989, *Galván 3300* (NY); Mpio. León, 5 km N of Ibarra, 15 Jul 1987, *Galván 2652* (NY); Mpio. Puríssima, 3 km SW of Puríssima de Bustos, 1770 m, 20 Jul 1986, *Galván 1880a* (NY); Mpio. Silao, 10 km N of Silao, 21 Aug 1989, R. & J. D. *Galván 3403* (NY, TEX); Lagunilla, 15 km N of Victoria, 24 Aug 1989, 1800 m, *Ventura 6928* (TEX); Sierra de Obrajuelo, 12 Oct 1913, *Salazar s.n.* (US). **GUERRERO:**

Dist. Mina, Zihuatepec-Ojo de Agua, 1500 m, 22 Aug 1936, *Hinton et al.* 9319 (F, TEX); Dist. Montes de Oaxaca, San Antonio, 20 Oct 1937, *Hinton et al.* 11514 (TEX, US); Tehuilotepic, Mar 1945, *Martínez s.n.* (F); 3 mi N of Taxco, 21 Aug 1947, *J. B. Paxson* 17M895 (F, TEX); Between Taxco and Tehuilotepic, Sep 1942, *Martínez* 104 (US). **HIDALGO:** Mpio. Jacala, 23 Jun 1939, *Chase* 7074 (F); Mpio. Metzquititlan, 9.1 km N of Metzquititlan on Hwy 105, 25 Oct 1985, *Bartholomew* 3391 (NY); Mpio. Zimapán, between Puerto las Trancas and Puerto de la Estancia on highway NE of Zimapán, with pines and juniper, 5 Aug 1948, *Moore* 4263 (TEX); Mpio. Zimapán, 4 km NE of Trancas, 17 km NE of Zimapán on road to Jacala, 1990 m, 6 Sep 1979, *García* 1078 (TEX); Jacala, 13 Aug 1937, *Edwards* 810 (F, TEX); Puerto de la Zorra, near km 284 on highway NE of Jacala, 20 Sep 1949, *Moore* 5028 (TEX). **JALISCO:** 13 mi S of Guadalajara, 18 Aug 1959, *Waterfall* 15619 (F); Volcanic soil of mountain side near Lake Chapala, 12 Aug 1947, *Barkley* 7660 (TEX); Brecha a Manuel M. Dieguez km 40, 21 Feb 1987, *Díaz Luna* 18341 (NY). **MEXICO:** Temascaltepec, 1 Aug 1934, *Hinton et al.* 6379 (TEX, US). **MICHOACÁN:** Coalcoman, 22 Jul 1939, *Hinton et al.* 13980 (F); 2 mi N of Río Tuxcan, 13 Jul, 1940, *Hitchcock* 7136 (F, US); Mpio. Tlazazalca, road to Cerro de la Cruz, 5 Jul 1990, *Pérez* 1360 (F); Moist field above road with areas of exposed flat rock, Rte. 15, 8 km E of Morelia, 3 Sep 1970, *D. Burch* 2650 (F); Mpio. Puruándiro, 9 km SE of Puruándiro, along road to Cuitzeo, 2050 m, 22 Jun 1985, *Barriga* 1146 (TEX); slopes of Cerro Potrerillos, ca. 5 mi N of Cotija and 22 mi S of Jiquilpan, 6000-6200 ft, 5 Oct 1961, *King* 4632 (TEX, US); Zitacuaro, 25 Jul 1938, *Hinton et al.* 13059 (F, TEX); Lava fields, near Monteleon, 19 Aug 1902, *Pringle* 11015 (F, US). **MORELOS:** on lava field, km 15 of HWY between Yautepec-Cuernavaca road, 2 Oct 1943, *Lundell* 12499 (TEX, US). **NAYARIT:** Mpio. Amatlan de Casas, 10-13 km S of Ahuacatlán, road to Amatlan de Casas (20° 59' N, 104° 31' W), 8 Aug 1990, *Téllez* 12836 (F, NY). **QUERETARO:** 32 mi NE of Zimapán, 21 Aug 1957, *Waterfall* 14204 (F); Black volcanic soil, 3 mi W of Querétaro, 28 Aug 1947, *Barkley* 693 (TEX); Mpio. Pinal de Amoles, 3 km S of Escanelilla, 8 Jun 1986, *Fernández & Rzedowski* 3376 (NY); near San Juan del Río, on rocky hillside, 17 Aug 1905, *Rose* 9510 (US); Querétaro, 1910-13, *Arséne* 10408 (US). **VERACRUZ:** Grassland above Santiago de Tuxtla, 20 Jul 1971, *Nevling & Gómez-Pompa* 1808 (F).

Woodson (1938) and Morales (1998) regarded *Mandevilla apocynifolia* A. Gray as specifically distinct from *M. foliosa*. Williams (1998) discussed the misinterpretation of *M. apocynifolia* and regarded it as a synonym of *M. foliosa*.

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