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Author(s): Angélica Ramírez Roa and Laurence E. Skog

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Novae Gesneriaceae Neotropicarum X: A New Species of *Achimenes* from Mexico

Angélica Ramírez Roa

Herbario Nacional de México, Facultad de Ciencias, Universidad Nacional Autónoma de México, México D.F., México

Laurence E. Skog

U.S. National Herbarium, MRC-166, Smithsonian Institution, P.O. Box 37012, Washington, D.C. 20013-7012, U.S.A. skog.larry@nmnh.si.edu

ABSTRACT. A new species of *Achimenes* Persoon, *A. hintoniana*, is described from western Mexico and distinguished from the closely related *A. mexicana* by the pilose indumentum of the stem, leaves, and pedicels, the linear-lanceolate calyx lobes, and the slightly saccate purple or rarely white corolla.

Key words: *Achimenes*, Gesneriaceae, Mexico.

Achimenes Persoon is a genus of neotropical Gesneriaceae distributed from northern Mexico (Chihuahua and Tamaulipas states) south to Ecuador, Venezuela, and Jamaica and comprising 23 species. About two-thirds of the species are endemic in Mexico, where numerous collections have been made and where the center of diversification appears to be. A recent revision of *Achimenes* (Ramírez Roa, 1987) and recent plant collections have shown that the description of a new species, *A. hintoniana* from Mexico, is warranted.

***Achimenes hintoniana* Ramírez Roa & L. E.**

Skog, sp. nov. TYPE: Mexico. Nayarit: Nayar, 7 km al S de La Mesa del Nayar, encinar en barranca, brecha a Jesús María, 22°12'N, 104°36'W, 1400 m, 23 Sep. 1989, P. Tenorio L. & G. Flores F. 16332 (holotype, MEXU; isotypes, FCME, US). Figure 1.

Herba erecta pilosa non ramosa ad 56 cm alta. Folia petiolata opposita paribus subaequalibus, laminis ovatis vel ovato-ellipticis longiacuminatis margine serratis. Flores axillares solitarii; calycis lobi lineari-lanceolati pilosi; corolla infundibuliformis ad 6.9 cm longa purpurea, fauce albida glabra maculis purpureis, tubo sursum ampliato base leviter saccata, limbo 5-fido; stamina 4 (quinto ad staminodium reducto) didynama inclusa, filamentis glabris tubo insertis; discus annularis integer membranaceus. Ovarium glabrum; stylus puberulus; stigma infundibuliforme; capsula pilosa.

Herbs; stems erect, 5.3–56 cm tall, green or redtinged, pilose. Rhizome 6.4 cm long, 7.5 mm wide,

scales red-tinged. Leaves almost isophyllous; ovate-elliptic or ovate, 3.2–12 × 1.4–8 cm, apex largely acuminate, base oblique, margin serrate, 10–27 teeth per side, and ciliate, 7–12 pairs of secondary veins, the upper surface pilose, green, the lower surface pilose, pale green or red; petioles 1.5–4.5 cm long, pilose. Flowers solitary; pedicels 1.1–2.3 cm long, pilose, green or red; floral tube 2–3 × 1.5–2 mm, pilose or almost glabrous; calyx lobes linear-lanceolate, 4–9 × 1–2 mm, pilose or nearly glabrous, ciliate; corolla infundibuliform, slightly oblique in the calyx, 4.1–6.9 cm long, purple or rarely white, glabrous to pilose, tube slightly saccate, 2–5 cm long, slightly ventricose, 3–6 mm wide at the base, very narrow, 1.2–2.5 cm wide at the throat, white with purple spots at the throat, limb 3.4–4.2 cm wide, 5-lobed, lobes oblate, 0.9–1.9 × 1–2.2 cm, crenate, purple or rarely white; stamens 4 (with a reduced staminode), 2.5–2.8 cm long, filaments briefly adnate to corolla tube base and free above, glabrous, anthers ovate depressed, 0.5–1 × 1–1.5 mm; annular nectariferous disc entire, membranous, 0.7 mm long; ovary glabrous, style 2.3–3.3 cm long, glandular-puberulous, stigma funnel-shaped. Capsule 8 mm long, 4 mm wide, green, lightly pilose to glabrous. Seeds oblong, ca. 0.5 × 0.2 mm, red-brown, longitudinally striate.

Distribution and ecology. Endemic to Mexico, *Achimenes hintoniana* is known mainly from Jalisco and Nayarit states at 800–1650 m, with outliers in Durango and Michoacán, growing in oak forests, mixed oak-pine forests, dry deciduous forests, and montane rain forests. Collections have been made of flowering plants in July through September and fruiting in September.

The specimens included here had in most cases been identified as the closely related *Achimenes mexicana* (Seemann) Benth & J. D. Hooker ex Fritsch. However, *A. mexicana* has villous indu-



Figure 1. *Achimenes hintoniana* Ramírez Roa & L. E. Skog. —A. Habit. —B. Lower leaf surface. —C. Corolla. —D. Opened corolla with stamens and staminode. —E. Calyx. —F. Pistil with calyx and disc. —G. Dehiscent capsule with surrounding persistent calyx and floral tube split to the base, and funicles within the capsule. —H. Seeds. —I. Rhizome scales. (A–F, I from *R. McVaugh 16443*; G, H from *R. McVaugh 16336*.)

ment with hairs of various lengths primarily on the stems, petioles, pedicels, and floral tube. The indumentum of *A. hintoniana* is pilose and much less dense. In addition, the calyx lobes in *A. mexicana* are lanceolate-ovate, and the blue-violet corollas are ventricose with a broadly sacciform base. *Achimenes mexicana* occurs in Chihuahua, Durango, Sinaloa, and Sonora. The two species are not sympatric except for an unlocalized collection of *A. hintoniana* from Durango (Rose 2331).

The variation seen in *Achimenes hintoniana* is principally in size, but the specimen collected by McVaugh (16336A) has white corollas. McVaugh mentioned on the specimen label that these plants were found among plants with purple corollas. This color variation is not unusual in the genus and is found also in *A. antirrhina* (DC.) C. V. Morton, *A. erecta* (Lamarck) H. P. Fuchs, *A. heterophylla* (Martius) DC., and *A. patens* Benth. The epithet honors George B. Hinton (1882–1943), a collector of plants in southwestern Mexico where he collected many specimens of *Achimenes* species.

Paratypes. MEXICO. **Durango:** 16 Aug. 1897, *J. Rose 2331* (NY, US). **Jalisco:** 8.2 mi. W of Chapala on road to Jocotepec, at km 62, hills above Lake Chapala's N shore, *W. Anderson & C. Anderson 5169* (GH, MICH, NY); Mpio. Talpa de Allende, Texcalame, sobre la brecha de Talpa a Cuale, *M. Cházaro et al. 7378* (MEXU); Mpio. Tonalá, Barranca de Huentitán, microcuenca de las 7 Cascadas, 2 km al E de Tonalá, *A. Flores-M. & P. Ramos G. 2428* (MEXU); 10.1 mi. SSW Autlán off hwy. 80, *R. Kral 27657* (ENCB); 9.4 mi. from Autlán (kms 218–219) on road to Barra de Navidad, *H. Moore & G. Bunting 8725* (US); km 69–70, near Jocotepec, on hills above the W end of Lake Chapala, *E. Norman 64* (MICH); along Jocotepec–Chapala road on the N side of Lake Chapala, ca. 2 mi. (3 km) E of San Juan Cozalá, *A. Sanders 74140* (MICH); along hwy. 110 about 5 mi., NE of Río Tuxpan bridge and about 20 mi. NE of Huizache, *W. Stevens & M. Fairhurst 1820* (MICH, MO); trail between El Chante and Manantán about 15 mi. SSE of Autlán, *R. Wilbur & C. Wilbur 2092* (MICH, US); 10 mi. S of Autlán, *R. Wilbur & C. Wilbur 2118* (MICH, US). **Michoacán:** Sierra Naranjillo-Puentes, Dist. Coalcoman, *G. Hinton et al. 15978* (US). **Nayarit:** mountain 10 mi. SE of Ahuacatlán, on road to Barranca del Oro, *C. Feddema & R. King 258* (MICH, US);

3.5 mi. NW of Ahuacatlán, S of the base of volcán Cerroco and about 1 km N of the highway, *C. Feddema 422* (MICH); 31 km al NE de Jesús María, camino Jesús María–Huejuquilla, *G. Flores-F. et al. 2094* (MEXU, US); Mpio. Nayar 5 km al SE de la Mesa del Nayar, *G. Flores-F. & R. Ramírez R. 2639* (MEXU, US); Mpio. Nayar, 32.5 km al NE de Jesús María, La China, *G. Flores-F. & P. Tenorio L. 1008* (MEXU, US); Mpio. Nayar, 22.7 km al NW de Jesús María, camino Jesús María–La Mesa del Nayar, *G. Flores-F. & P. Tenorio L. 1333* (MEXU, US); 5–8 km al NW de la Mesa del Nayar, camino a la Mesa del Nayar–Villa de Guadalupe (Cerro Cangrejo), *G. Flores-F. et al. 1130* (MEXU, US); 2 mi. NW of Ahuacatlán, *R. McVaugh 15405* (MICH); Arroyo de la Fundición, 5 mi. SE of Ahuacatlán on road to Barranca del Oro, *R. McVaugh 16336* (MICH, US), *R. McVaugh 16336A* (MICH); 9 mi. N of Compostela, *R. McVaugh 16443* (MICH, US); ca. 12 mi. W of Tepic, 6.5 mi. E of Jalcoctán, *McVaugh et al. 18919* (MICH), *McVaugh et al. 18975* (MICH); km 15 on road from Tepic to Jalcoctán, *H. Moore & G. Bunting 8699* (MEXU, UC, US); along road from Hwy. 15 to Santa Cruz (W of Tepic), about 9.9 mi. W of Hwy. 15, *W. Stevens 1486* (ENCB, MICH, MO); km 4 de la carr. a San Blas, del entronque con carr. Tepic–Mazatlán, *O. Tellez V. et al. 10742* (MO). **Cultivated:** Growing at Marie Selby Botanical Gardens, Sarasota, FL, originally from Nayarit, W of Tepic near La Libertad, *N. Bashor 1878* (F, SEL, US).

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Literature Cited

- Ramírez Roa, A. 1987. Revisión de *Achimenes* (Gesneriaceae). Tesis de Licenciatura. Facultad de Ciencias, UNAM. México, D.F. México.