

STUDIES OF MEXICAN AND CENTRAL AMERICAN
SPECIES OF *SENECIO*

J. M. Greenman¹

SENECIO ANDRIEUXII DC., Prodr. **6**: 430. 1837; Hemsl. in Biol. Cent.-Am. Bot. **2**: 236. 1881.

MEXICO: Sierra Madre, Michoacán and Guerrero, alt. 2000 m., Feb. 1899, *Langlassé 895* (Herb. De Candolle, Geneva).

SENECIO ASCHENBORNIANUS Schauer in Linnaea **20**: 698. 1847.

MEXICO: Chiefly in the region of San Luis Potosí, 22° N. latitude, alt. 1800-2400 m., 1878, *Parry & Palmer 539* (Phil. Acad. Sci.); hills near Jalapa, Vera Cruz, alt. 4000 m. April 1, 1899, *Pringle 8069* (Phil. Acad. Sci. and Mo. Bot. Gard.); Chontla, Vera Cruz, alt. 508 m., March 1910, *Cárdenas 497* and *521* (Mo. Bot. Gard.); Sierra San Lucas, Jaumave, Tamaulipas, June 1933, *von Rozynski 654* and *693* (Mo. Bot. Gard.); on moist open pine-oak slopes, Dulces Nombres, Nuevo León and just east of the border into Tamaulipas, alt. 1690 m., July 18, 1948, *Meyer & Rogers 2800* (Mo. Bot. Gard.).

Senecio Bartlettii Greenm. sp. nov.

Herbaceous perennis, juventate ubique plus minusve floccoso-tomentulosus; caule simplici vel basi ramoso, 4.5-6 dm. alto, aliquanto glabrato; foliis pinnato-lobatis, plus minusve petiolatis, amplexicaulibus, supra arachnoideo-tomentosis, subtus denique persistenter albo-tomentosis; lobis lateralibus oblongis, acutis vel obtusis, lobo terminali rhombeo-ovato vel reniformi; inflorescentiis corymbo-cymosis; capitulis ca. 1 cm. altis; involucris campanulatis, minute bracteolatis; involucri reniformi; inflorescentiis corymbo-cymosis; capitulis ca. 1 cm.

¹ Curator Emeritus of the Herbarium of the Missouri Botanical Garden; Professor Emeritus in the Henry Shaw School of Botany of Washington University.

longis; floribus femineis ligulatis, ligulis flavis; floribus disci ca. 60; achaeniis maturitate striatis, hirtellis.

MEXICO: Mesa de Tierra, vicinity of San José, Tamaulipas, alt. 1060 m., July 19, 1930, *Bartlett 10427* (type in Univ. Mich. Herb.); Cerro Barril, vicinity of San José, Taamalipas, alt. 1400 m., July 19, 1930, *Bartlett 10422a* (Univ. Mich. Herb.).

Senecio cobanensis *Coulter* var. **sublaciniatus** *Greenm., var. nov.*

Frutex, 2-5 m. altus; foliis petiolatis, alternis, elliptico-lanceolatis, 6-17 cm. longis, 1-4 cm. latis, utrinque acuminatis, acutis, subintegris, sinuato-denticulatis vel laciniato-dentatis, utrinque glabris; petiolis 1-6 cm. longis; inflorescentiis juventate albo-tomentulosis, glabris; involucri squamis 5; floribus 4-5, flavis, 1 vel 2 ligulatis; achaeniis glabris.

GUATEMALA: in damp forest, hills of finca Carmona southeast of Antigua, Sacatépequez, shrub or tree 2-5 m., alt. 1590-1800 m., Jan. 27, 1939, *Standley 63680* (Mo. Bot. Gard. Herb., TYPE; Chicago Nat. Hist. Mus. Herb.); Volcán Sta. Clara, south facing slopes to the summit, alt. 2100-3000 m., June 5, 1942, *Steyermark 46994* (Mo. Bot. Gard. and Chicago Nat. Hist. Mus.).

SENECIO HARTWEGH Benth., Pl. Hartw. 18. 1839.

MEXICO: trail from El Batel to Pico del Aguila, Sierra Madre, Sinaloa, alt. 1200 m., Nov. 11, 1925, *Mexia 441* (Copenhagen Herb.).

SENECIO HETERODONTUS Greenm. in Field Columb. Mus. Bot. 2: 277. 1907.

MEXICO: Alvarez, San Luis Potosí, July 13-23, 1904, *Palmer 237* (Copenhagen Herb.).

The specimen, namely Palmer 237 in the United States National Herbarium, is somewhat intermediate between *S. heterodontus* Greenm. and *S. multidentatus* Schz. Bip. ex Hemsley.

SENECIO HOFFMANII Klatt in Leopoldina **25**: 106. 1899 (reprint p. 3).

MEXICO: Tapachula, Chiapas, alt. 90 m., Jan. 27, 1911, *Quarles van Uffort* 79 (Bot. Mus. Utrecht).

SENECIO JURGENSENI Hemsl., Biol. Cent.-Am. Bot. **2**: 242. 1881.

MEXICO: rocky shaded slope, open forest, Cerro Tiburón, Sierra Tacuichamona, Sinaloa, alt. 1400 m., Feb. 18, 1940, *Gentry* 5659 (Univ. Mich. and Mo. Bot. Gard.).

Senecio lithophilus Greenm., *sp. nov.*

Herbaceous perennis; caule erecto vel adscendente simplice vel ramoso 40-60 cm. alto, albo-tomentoso, usque ad inflorescentiam folioso; foliis inferioribus oblanceolatis 5-20 cm. longis, 1-4 cm. latis aliquanto et irregulariter sinuato-denticulatis, caulinis sessilibus semiamplexicaulibus, oblongo-lanceolatis, 5-20 cm. longis, 1-4 cm. latis, supra juventate floccoso-tomentosis mox glabratis, subtus persistenter albo-tomentosis; inflorescentiis terminalibus corymboso-cymosis, capitulis in anthesi 10-12 mm. altis, heterogamis; involucri bracteis 21-25, lineari-lanceolatis, acutis, sparse floccoso-tomentosis, plus minusve glabratis; floribus liguliferis circiter 18, ligulis anguste oblongo-linearibus 10-15 mm. longis, flavis, tubo gracili circiter 5 mm. longo, floribus disci numerosis, circiter 80; achaeniis sparse hirtellis.

MEXICO: on open faces of limestone cliffs on road from Adelaida, Tamaulipas to Dulces Nombres, Nuevo León but in the state of Tamaulipas, alt. 1690 m., July 12, 1948, *Meyer & Rogers* 2751 (TYPE in Mo. Bot. Gard. Herb.).

Senecio lithophilus is related to *S. huachucanus* Gray, but differs in being copiously tomentose, and in having larger heads and more numerous flowers.

SENECIO LORATIFOLIUS Greenm. in Ann. Mo. Bot. Gard. **5**: 93. 1948.

MEXICO: in mountain meadows 6 kilometers west of Miquihuana, Tamaulipas, alt. 2940 m., August 6, 1941, *Stanford*, *Retherford*, and *Northcraft 734* (Mo. Bot. Gard.); densely tufted perennial to 40 cm. tall, in open pine forest, Cerro del Viejo, 24 kms. west of Dulces Nombres, municipality of Zaragoza, Nuevo León, alt. 3330 m., August 18, 1948, *Meyer & Rogers 2979* (Mo. Bot. Gard.).

***Senecio morazensis* Greenm., sp. nov.**

Frutex scandens ubique glaber, caule tereti in sicco cortice brunneo tecto; foliis alternis, plus minusve secundis, petiolatis, elliptico-lanceolatis, 4-8 cm. longis, 1.5-3 cm. latis, acuminatis, acutis, integris, basi cuneatis; petiolis usque ad 10-12 mm. longis; inflorescentiis paniculatis; capitulis heterogamis ca. 1 cm. longis; involucris sparse calyculatis, campanulatis; involucri squamis 8, lineari-lanceolatis vel oblongis, 6-7 mm. longis, usque ad 4 mm. latis; floribus femineis 8 ligulatis, ligulis anguste lineari-oblongis, 5-6 mm. longis; floribus disci circiter 30; achaeniis glabris.

HONDURAS: flowers yellow, vine in tree in cloud forest area in mountains above San Juancito, Morazán, alt. 2000 m., March 25, 1948, *Williams & Molina 13976* (TYPE in Mo. Bot. Gard. and ISOTYPE in Herb. Escuela Agrícola Panamericana); liana de 1-3 m., floresta de nubes de la montaña La Tigra, suroeste de San Juancito, Morazán, 5 febrero 1950, *Williams & Molina 17104* (Herb. Escuela Agrícola Panamericana).

Senecio morazensis belongs to the section *Streptothamni* and it is allied to *S. candelariae* Benth. and *S. parasiticus* Hemsl. In general habit, stem and leaves, there in almost complete accord with *S. parasiticus*, but *S. morazensis* differs in having heterogamous heads with larger diameter, longer and wider involucreal bracts with wide margin.

SENECIO MULGEDIFOLIUS Schauer in *Linnaea* **19**: 733. 1847; Hemsl. *Biol. Cent.-Am. Bot.* **2**: 243. 1881; Greenm. *Monog. Senecio*, pt. I, p. 25 and in Engler's *Bot. Jahrb.* **32**: 21. 1902.

MEXICO: S. Miguel el Soldado, Vera Cruz, June-Oct. 1840, *Galeotti 2291* (Bot. Gard., Brussels); bosque de encinos, Angostura, D. F., alt. 2600 m., Sept. 1941, *Lyonnet 3427* (U. S. Nat. Herb.).

SENECIO MULTIDENTATUS Schz. Bip. ex Hemsl., Biol. Cent.-Am. Bot. **2**: 243. 1881.

MEXICO: by streams, Sierra de las Cruces, Mexico, alt. 3000 m., Aug. 28, 1904, *Pringle 13077* (Copenhagen Herb.); Vaqueria del Jacal, alt. 2500-3200 m., June-Oct. 1840, *Galeotti 2164* (Bot. Gard., Brussels); by streams, Sierra de las Cruces, México, Aug. 23, 1892, *Pringle 4205* (Phil. Acad. Nat. Sci., Mo. Bot. Gard. and Vienna Herb.); by streams, Sierra de las Cruces, Mexico, alt. 3000 m., Sept. 3, 1901, *Pringle 9314* (Mo. Bot. Gard.); orilla del arroyo Bosque, Salazar, (Mexico), alt. 2900 m., Sept. 1941, *Lyonnet 3375* (U. S. Nat. Herb.); La Cima, alt. 3000 m., Aug. 1904, *Kuntze s. n.* (N. Y. Bot. Gard.).

SENECIO PHANERANDRUS Cufodontis in Arch. Bot., Forli **9**: 103. 1933.

COSTA RICA: Volcán Poás, alt. 2400 m., April 26, 1930, *Cufodontis 544* (Mo. Bot. Gard.); Volcán Poás, alt. 2678 m., January 30, 1922, *J. M. & M. T. Greenman 5392* (Mo. Bot. Gard.); Volcán Poás, alt. 2500-2575 m., Dec. 1-Jan. 1, 1938, *Allen 616* (Mo. Bot. Gard.); Volcán Poás, alt. 2600 m., March 31, 1907 *Pittier 2050* (U. S. Nat. Herb.); Volcán Poás, alt. 2500-2640 m., Feb. 17, 1924, *Standley 34840* (U. S. Nat. Herb.); environs de la Lagune du Barba, alt. 2755, Feb. 6, 1890, "*A. C.*", 1894 (U. S. Nat. Herb.).

SENECIO QUEBRADENSIS Greenm. in Ann. Mo Bot. Gard. **3**: 117. 1916.

MEXICO: paraje de los Sabinos, San Ignacio, Sinaloa, alt. 510 m., March 9, 1918, *Narvaez & Salazar 267* (U. S. Nat. Herb.); steep clay slopes with brush in oak forest, Puerto a Tamiapa, Sinaloa, alt. 1400 m., March 6-8, 1940, *Gentry 5825* (Mo. Bot. Gard.).