

EL GENERO MIMULUS TRATADO POR GRANT

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Este género, perteneciente a la familia de las Escrofulariaceas, fue tratado por el Dr. Carlos Reiche en el tomo 6º de los "Estudios Críticos sobre la Flora de Chile", publicado en 1911 y ha sido materia de una revisión practicada por Adele Lewis Grant, en 1929, en el "Missouri Botanical Garden Annals".

Sin pretender hacer una nueva revisión, presento el trabajo de la señora Grant, tal como ella lo publicó, con algunas acotaciones.

La señora Grant estudió especies de varios países, pero me referiré solamente a las especies chilenas, conservando la numeración del original.

GENERO MIMULUS, L.

"10.—*M. luteus* L. Sp. Pl. ed. 2-884-1763. Willd. Sp. Pl. 3-361-1800; Lindl. en Botanical Register 12-lámina 1030-1826; Hook. en Curtis Botanical Magazine II-8-lámina 3336-1834; Benth. Scroph. Ind. 28-1835; DC Prodr. 10-370-1846; Hook. and Arn. Bot. Beechey's Voyage 40-1841; Clos en Gay, Hist. Chile 5-140-1849; Planchon en Fl. des Serres 9-1-1853-54; Carlos Reiche, Estudios Críticos de la Flora de Chile 6-60-1911.

M. luteus subvar. *macrophyllus* Clos en Gay, Hist. Chile 5-140-1849; Reiche - Fl. Chile - 6-60-1911.

M. aurantiacus Renjifo, Anales Universidad Chile, 65-301-1884.

M. luteus var. *aurantiacus* (Renjifo) Reiche, Fl. Chile 6-60-1911.

"A creeping glabrous perennial, freely rooting from the nodes; stem terete, 1-3 dm. long, decumbent or prostrate; leaves numerous, broadly ovate, acute, 2,5-3 cm. long, nearly as broad, regularly serrate, 5-7 nerved from the base, the lower short-petioled, upper sessile, clasping; flowers few, pedicels 3 or more times as long as the calyx, much longer than the subtending

leaves; calyx campanulate, 1.5-2 cm. long, teeth triangular-acute, the upper longer, corolla 3-4 cm. long, tube slender, exerted, lobes spreading, middle lobe of the lower lip longer than the others, throat red-maculate, stamens and style glabrous.

Distribution: common along streams and in moist place in Chile.

The plants of this species are commonly called "placa" in Chile and the more succulent, tender-leaved ones are eaten either as a salad or cooked in soup.

M. luteus was first collected by Father Feuillee along a river bank in Concepcion, Chile, about 1714. He described and pictured it as "*Gratiola foliis subrotundus, nervosis, floribus luteus*", and, so far as known, no specimens were made for seeds sent to Europe. Linnaeus referred to Feuillee's description and plate when he transferred the yellow-flowered plant to the genus *Mimulus* and nothing more known of it for some time. Langsdorff, early in the next century, sent some seed from Unalaska; plants from these were named *M. guttatus* by Fischer in 1812. De Candolle took up this name in 1813, fully describing the species noting some of its differences from *M. luteus*. Others botanists, however, did not agree with this view and believed that the plants from North America and those pictured by Feuillee were conspecific. Several years later, seeds were sent from South America by various collectors so that it was possible to distinguish the *M. luteus* of Feuillee from the yellow-flowered North American *Mimulus* that had been confused with it. *M. luteus* resembles *M. guttatus* rather closely, but can be separated from it, in general, by its creeping habit, its fewer flowers with pedicels 3 or more times longer than the calyx, its mostly glabrous condition, and its more open corolla with relatively narrow tube. The throat in *M. guttatus* is nearly closed by the two hairy ridges running down the lower side, whereas the throat in *M. luteus* is wide open.

This species, like its North American relative, is polymorphic and several varieties and species have been described, dependent on the color and the number and size of the spots, if present, on the lobes of the corolla. More material for study as to differences or intergradations might modify one's concept of the group as a whole, but, after examining the specimens available, it seems best to keep the following as varieties.



Mimulus luteus variedad *variegatus* (Lodd) Hook.

10 a. *Var. rivularis* Lindl. in Bot. Reg. 12-lámina 1030-1826; Lodd. in Bot., Cab. 16-lámina 1575-1829; Hook. in Curtis, Bot. Mag. II-8-en lámina 3336-1834.

M. guttatus Reichenback H. G. L. en Iconnes Pl. Cult. 3-lámina 204-1827-30, not DC.

Stems decumbent or ascending; leaves coarsely toothed, more or less tinged and spotted with red; calyx tinged with red; corolla yellow, lobes unequal, almost truncate, a large reddish spot on the middle lobe of the lower lip and numerous small spots down the throat.

Specimens examined: Chile, Río Maipo, Santiago, about 6000 ft. alt. Jan. 1892.

10 b. *Var. variegatus* (Lodd) Hook. in Curtis, Bot. Mag. II-8-lámina 3336-1834; Lindl. in Bot. Reg. 21-lámina 1796-1836; C. Gay Hist. Chile 5-140-1849; Reiche Fl. Chile 6-60-1911.

M. variegatus Lood. in Bot. Cab. 19-lámina 1872-1832; Paxt. Mag. Bot. I, lámina 79-1834; Planchon in Fl. des Serres 9-2-1853-54.

M. ocellatus Bert. ex Steud Nom. ed 2-150-1841.

Stems erect, leaves thin, ovate to oblong, these and the calyx usually tinged with red; corolla pale yellow, the lobes more or less deply banded with pinkish - purple at the margins, throat spotted with numerous small red dots.

Distribution: known only from Chile and from cultivated specimens.

Specimens examined: Chile: Quillota 1829, Bertero; Chile without date, Bertero 1148; in swamps near Aculeo and in Mt. Leona Rancagua, without date, Bertero 437 Chile.

10 c. *Var. Youngana* Hook. in Curtis, Bot. Mag. II-8-lámina 3363-1834; C. Gay, Hist. Chile 5-140-1849; Reiche, Fl. Chile 6-60-1911.

M. Smithii Lindl. in Bot. Reg. 20-lámina 1674-1835, not Paxton.

Stems ascending or decumbent; calyx oval, more or less spotted with red; corolla deep yellow, throat dotted with red and each lobe with a large broad reddish spot near the margin.

Distribution: known only from Chile and from specimens cultivated in European gardens.

10 *d. Var. nummularis* C. Gay, Hist. Chile 5-140-1849; Reiche Fl. Chile 6-60-1911.

M. nummularis C. Gay, Hist. Chile - Atlas 1, lámina 57-1854.

Stems glabrous, 1-2 dm. long, fistulose, decumbent or ascending, rooting freely from the nodes; leaves ovate or elliptical, 1,5-2,5 cm. long, 1-2 cm. wide, acute, coarsely serrate, sessile and clasping or tapering to a short broad petiole, 3-5 nerved; flowers few in a terminal raceme rarely solitary, pedicels longer or shorter than the subtending leaves, stout, somewhat quadrangular calyx campanulate, 1,5-2 cm. long, more or less spotted or tinged with red, teeth broadly triangular-acute, the upper larger; corolla 3,5-4,5 cm. long, yellow, tube slender, throat wide open, lobes unequal, upper lip erect, middle lobes of the spreading lower lip with a single large spherical reddish spot near the center and numerous small dots down the throat, capsule stipitate; seeds longitudinally striate.

Distribution: along streams and in swampy places in Chile.

11 *M. cupreus* Donbrain in Fl. Mag. 2-lámina 70-1862; Regel in Gartenfl. 13-3-lámina 422, fig. 1-1864 (amplified description); Reiche, Fl. Chile 6-61-1911.

M. luteus var. *cuprea* Hook. in Curtis Bot. Mag. III-lámina 5478-1864.

A glabrous or puberulent annual, branching freely from the base, more or less dwarfed and somewhat compact stems terete, 1-2 dm. high; leaves subrhombic - ovate or elliptical, 1,5-3 cm. long, 0,8-2 cm. wide, sessile or subsessile, 3-5 nerved from the base, irregularly and coarsely serrate; flowers numerous, pedicels mostly shorter than the subtending leaves or sometimes much longer; calyx campanulate, more or less spotted with red. teeth triangular - acute, the upper one longer, broader, obtuse; corolla 2,5-3,5 cm. long, tube yellow, throat expanded, spotted with red below the lower lip, lobes spreading, golden-yellow, becoming a brilliant copper color at maturity; capsule constricted at the base but not stipitate; seeds longitudinally striate.

Distribution: known only from southern Chile.

Specimens examined: Chile: Santiago, U. S. Exp. 1838; Provincia de Colchagua, 1862, Bridges (or ? Cumming) (U. S. número 259695); Chile, without locality or date, Gay.

M. cupreus was one of the popular garden plants of the middle 18th century. Seeds of it were collected by a Mr. Pearce

in the mountains near Chillán, and were sent by him to Europe. The original description and illustration were made from cultivated plants.

12 *M. acaulis* Phil. in Anales Universidad Chile 9-112-1895.

M. depressus var. *acaulis* (Phil.) Reiche 6-62-1911. Plants small; leaves in a basal rosette, rhomboid, 1,5-1,6 cm. long, 9 mm. broad, short petioled, upper leaves incise-dentate; pedicels short, 1-flowered; calyx 6 mm. long; corolla 2,8-3 cm. long, lobes nearly equal; stamens and style short.

Distribution: in the Andes in Illapel, Province of Coquimbo, Chile. Locally called "La Polcura".

The shape of the leaves and the short - pedicelled flowers indicate that this species is distinct from *M. luteus*.

22. *Mimulus crinitus* Grant, *M. acutidens* Reiche, Fl. Chile 6-63-1911, not Greene.

Plants hairy; stems weak, diffuse; leaves ovate, acute, 6-7 cm. long, thin, short-petioled; pedicels shorter than the leaves; calyx cylindrical, 1-1,5 cm. long, teeth linear, subulate, the upper tooth larger; corolla 2-2,4 cm. long, yellow; capsule unknown.

Distribution: swamps in the Province of Valdivia, Chile. Specimens of this species have not been seen by the writer, and the above diagnosis is compiled from the original description.

23. *Mimulus depressus* Phil. Fl. Atac. 45-1860; Reiche, Fl. Chile 6-62-1911.

A low glabrous perennial; stems short leaves in a basal rosette, crowded, ovate, short-petioled, 3-4 cm. long, 2-2,5 cm. broad, serrate-dentate, blade with a transverse dark bar; flowers subsessile, crowded at the apex of the stem; calyx 4-5 mm. long; corolla 1,4-1,5 cm. long, not spotted.

Distribution: in swamps in the high mountains in Atacama and Coquimbo, Chile.

23 a. *variedad nanus* (Phil.) Reiche, Fl. Chile 6-62-1911.

M. nanus Phil. Fl. Atac. 45-1860 not Hook. & Arn.

Plants small; stems scarcely 2,5 cm. high, mostly 1-flowered; leaves ovate, 5 mm. long, entire, short-petioled; corolla 6 mm. long.

Distribution: in wet places in the Sardon Valley in the desert of Atacama, Chile.

These plants are known to the writer only from the descriptions cited above. The variety was originally described from five plants collected by a spring in the Sardon Valley, Chile. It may be a depauperate form of the species or examination of authentic material may show it to be specifically distinct.

24. *Mimulus pilosiusculus* HBK, Nov. Gen. & Sp. 2:370-1817; Benth. in DC. Prodr. 10:371-1846; McCloskie in Princeton Patagonia Exp. 8:721-1903-1906.

M. sylvaticus Phil. in Linnaea 30:197-1859-60; Reiche, Fl. Chile 6:62-1911.

A low pubescent perennial with stems 0,5-1,5 cm. long, procumbent or creeping, freely branched; leaves numerous, mostly crowded, the lower short-petiolate, broadly ovate or oblong-ovate, 1,6-1,8 cm. long, 6-12 mm. wide, acute or obtuse, irregularly dentate, pale green, the upper sessile or short-petioled; flowers axillary, numerous, pedicels slender, mostly shorter than the leaves; calyx 5-6 mm. long, inflated and oval when mature, 6-8 mm. long, the throat slightly constricted, teeth spreading, broadly triangular-acute, the upper longer and much broader; corolla 1-1,4 cm. long; capsule oblong, almost as long as the calyx-tube, not stipitate; seeds smooth, oval, nearly as broad as long.

Distribution: Perú, Chile and Argentine Republic.

Specimens examined: Chile: Quillota, without date or collector.

This plant is closely related to *M. glabratus* and may be only a pubescent, short-pedicelled form of that species.

25 *b. Mimulus glabratus variedad parviflorus* (Lindl.) Grant. *M. parviflorus* Lindl. Bot. Reg. Lámina 874-1825; Trans. Hort. Soc. London 6:294-1826; Benth. Scroph. Ind. 28-1835; DC. Prodr. 10:371-1846; Clos in C. Gay, Hist. Chile 5:141-1849.

M. propinquus Lindl. Bot. Reg. lámina 1330-1830; Hook. Fl. Bot. Am. 2:99-1840; Benth. in DC. Prodr. 10:371-1846;

M. luteus var. *micranthus* Phil. in Linnaea 29:28-1857-58; Reiche, Fl. Chile 6:60-1911.

M. kingii Phil. in Anales Univ. Chile 43:528-1873; Reiche, Fl. Chile 6:61-1911.

Creeping or procumbent annuals, freely rooting at the lower nodes, more or less pubescent above; stems terete; leaves broadly ovate, base subcordate or nearly truncate, lower leaves taper-

ing to margined petioles, upper leaves sessile; calyx-teeth short, triangular-acute, upper at least twice as long as the others; corolla tubular, usually less than twice the length of the calyx, throat dotted with red.

Distribution: in wet places in Chile and Argentine Republic. Specimens scarce in American herbaria.

Specimens examined: Chile: Province de Chiloé, without date C. Gay; near Santiago, 1899, Najarre (Cornell); Valparaíso, without date, Mertens; Desert of Atacama, Sept.-Oct., 1890, Morong 1213.

The original description and plate of *M. parviflorus* correspond closely with *M. glabratus* that even with the limited material at hand the writer has no hesitation in regarding it as a mere variation of *M. glabratus*, separated mainly by the extent of the pubescence. Additional material may show two to be conspecific. Lindley said that *M. parviflorus* differed from *M. glabratus* in not having square stems and in being hairy but this does not hold. The amount of hairiness is variable. Plants grown from seeds of Jorgensen's collection número 980 from Argentine Republic showed much diversity; some of the plants were glabrous, some had distinctly pubescent petioles, pedicels, and calyces, and some were merely puberulent. In this section, annual or perennial characters seem to be largely dependent on the amount of water present and the conditions under which the individual plants are growing, so that these could not be used for specific diagnosis unless accompanied by others more important differences".

El Dr. Carlos Reiche, en la obra citada, trata las siguientes especies:

- 1.—*M. luteus* L.
 - Variedad nummularius Clos.
 - Var. macrophyllus Clos.
 - Var. youngana Hook.
 - Var. micranthus Phil.
 - Var. aurantiacus Renjifo.
- 2.—*M. cupreus* Regel.
- 3.—*M. parviflorus* Lindl.
- 4.—*M. kingii* Phil.
- 5.—*M. silvaticus* Phil.

- 6.—*M. depressus* Phil.
 Variedad *nanus* (Phil.) R.
 Var. *acaulis* (Phil.) R.
 Var. *pissisi* (Phil.) R.
- 7.—*M. acutidens* R.
- 8.—*M. bridgesii* Clos.
- 9.—*M. longipes* Ph.
- 10.—*M. tener* Phil.

Se notan las siguientes diferencias en la revisión de Adele Lewis Grant, pues ella le da validez al *M. acaulis* que en Reiche aparecía como una variedad de *M. depressus*; elimina *M. acutidens* y en cambio le da validez a *M. crinitus* y deja *M. acutidens* como sinónimo; coloca *M. pilosiusculus* y como sinónimo de éste a *M. sylvaticus*; coloca a *M. tener* como sinónimo de *M. glabratus*, que el Doctor Reiche había rechazado como planta chilena y por último, no hace referencia alguna a *M. bridgesii* y a *M. longipes*.

No menciona en su trabajo a *M. parviflorus* variedad externa que el Profesor Skottsberg describió en 1922 en *Nat. Hist. of Juan Fernández*, página 168, así:

"*M. parviflorus* Lindl. Johow, *Estud.* 82 var. *externa* nov. Var. A plantis in Chile lectis differt foliis omnibus petiolatis (superioribus brevius sed semper distincte), margine sat grosse et irregulariter serratis, nec non pedunculis petiolum aequantibus sed foliis multum brevioribus. Planta perennis pilosa.

Masafuera: Germain - Q. de las Casas (also observed by Johow) wet places under overhanging rocks etc.; Q. de las Vacas (fr. 13-2-17 Número 497); Q. Angosta, at the waterfall; Q. de la Lobería (Fl. fr. 17-2 17, número 486).

It is hardly possible to ascertain the right position of the insular form unless all the material from the continent is revised.

Germain's specimens were labelled *M. parviflorus* var. by Philippi, and Johow remarks that the Masafuera plant differs from the continental one in the short pedicels and in the pubescence.

As all specimens collected in Masafuera are of the same kind, while there is no similar form in the collections from Chile, I have described the former as a variety. It is not impossible that *M. pilosiusculus* Kunth from Perú is the same, but

as I have not seen authentic material and the description is very brief, I must leave this question open".

La señora Grant describe *M. crinitus* con un nombre nuevo y he omitido las palabras *Nom. nov.* porque ya está publicada y ahora sólo hago una reproducción de una publicación que no he encontrado en las bibliotecas de Chile.

Según el Diccionario Geográfico de Riso Patrón el lugarejo de La Polcura, citado respecto de *M. acaulis* está situado en la parte superior del valle de Petorca a 32°04' y 70°24'.

La aguada, cerro, quebrada, mineral y portezuelo de "Sandon" citada respecto de 23 a. var. *nanus* está citada por el Dr. R. A. Philippi en el Viaje al Desierto de Atacama, en la página 79, y de acuerdo con el Diccionario Geográfico ya citado, está a 25°15' y 69°18'.

Agradezco a doña Mélica Muñoz, Jefe de la Sección Botánica del Museo Nacional de Historia Natural y a don Francisco Bellot Rodríguez, Director del Jardín Botánico de Madrid, quien me proporcionó una copia fotostática de parte de los Anales del Jardín Botánico de Missouri.

La lámina en colores corresponde a una especie hallada por mí en la Cordillera de Linares, en un sitio muy húmedo a orillas del Río Ancoa, como a seiscientos metros sobre el nivel del mar, a unos cinco kilómetros aguas abajo de la boca de salida del túnel de El Melado, que trae aguas del río Melado al río Ancoa.

La planta no tiene diferencias con un *M. luteus*, salvo el color, de un rosado casi rojo, muy diferente también del *M. cupreus*. El color es exactamente el que aparece en la fotografía sin que tenga influencia en ella el papel rojo que se puso de fondo, como pudiera creerse.

Estuve tentado de describirla como variedad nueva, pero, honestamente, no tengo antecedentes suficientes.

Creo que podría pensarse que se trata de un *Mimulus luteus* variedad *variegatus* Hook, cuya lámina N° 3363 del Botanical Magazine tiene cierto parecido.

