LITERATURE CITED

- ANDERSON, L. C. 1963. Studies on Petradoria (Compositae): anatomy, cytology, taxonomy. Trans. Kans. Acad. Sci. 66:632-684.
 - ——. 1966. Cytotaxonomic studies in Chrysothamnus (Astereae, Compositae). Amer. J. Bot. 53:204–212.
 - - -----., and J. L. REVEAL. 1966. Chrysothamnus bolanderi, an intergeneric hybrid. Madroño 18:225-233.

------., and P. S. FISHER. Phylogenetic indicators from floral anatomy in Chrysothamnus (Astereae, Compositae). Phytomorphology (in press).

- BEAUDRY, J. R. 1958. Studies on Solidago. III. Megasporogenesis, development of megagametophyte and mode of reproduction in Solidago altissima. Proc. Genet. Soc. Canada 3:7-14.
- DAVIS, G. L. 1966. Systematic Embryology of the Angiosperms. Wiley, New York.
- HALL, H. M. and F. E. CLEMENTS. 1923. The phylogenetic method in taxonomy The North American species of Artemisia, Chrysothamnus, and Atriplex. Publ. Carnegie Inst. Wash. 326.
- HARLING, G. 1951. Embryological studies in the Compositae. III. Astereae. Acta Hort. Berg. 16:73-120.
- Howe, T. D. 1959. Recent studies of the female gametophyte in the Compositae, especially in the tribe Astereae. Proc. IX Int. Bot. Cong. 2:171-172.
- SASS, J. E. 1958. Botanical Microtechnique, 3rd ed. Iowa State Univ. Press.
- SNOW, E. 1945. Floral morphology of Chrysothamnus nauseesus speciosus. Bot. Gaz. (Crawfordsville) 106:451-462.

TWO NEW SPECIES OF LAMOUROUXIA (SCROPHULARIACEAE) IN MEXICO

WALLACE R. ERNST and MICHAEL F. BAAD

The genus *Lamourouxia* H. B. K., nom. cons. (Taxon 18: 479–480. 1969), allied to the Rhinanthoideae of Scrophulariaceae, is distributed from northern Mexico through Central America to South America about as far south as Lima, Peru. Of the approximately 26 species, the following two have been studied jointly. They are placed in section *Hemispadon* Bentham, having long tubular, red corollas with a pair of large anthers and a pair of sterile staminal filaments. Search through the literature and at least 25 herbaria, including the major ones of Europe, has failed to disclose other names or collections for these two species. They are being described here to make the names available before a taxonomic revision and a discussion of their morphological relationships to avoid a longer author citation.

Lamourouxia colimae Ernst & Baad, sp. nov. Herba suffruticosa, erecta. Folia glabriuscula, elliptica vel ovata, pauce dentata, attenuata basin versus, nervatura supra impressa. Calyx glaber, limbis patulis, late triangulatis. Corolla coccinea, cylindrica, labio superiore bifido, lobis rotundatis parum cuspidatis, non vel minime reflexis, labio inferiore

ERNST & BAAD: LAMOUROUXIA

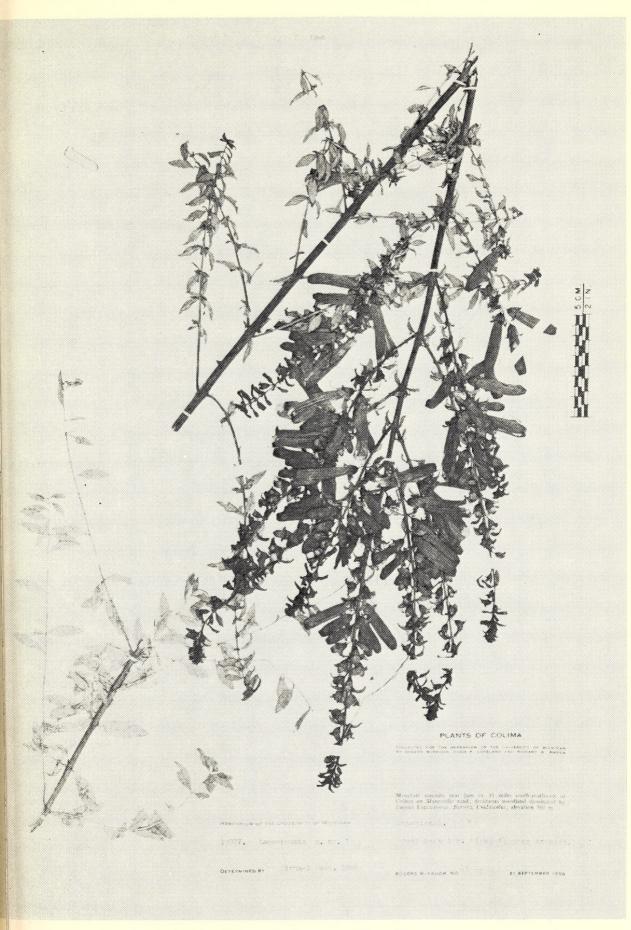


FIG. 1. Holotype, Lamourouxia colimae.

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brevissime trifido. Stamina inferiora fertilia, superiora breviora, parva, sterilia. Affinis sectionis *Hemispadon*, verosimiliter *L. gracilis* vel *L. lanceolata*.

Type: Colima: mountain summits near pass ca. 11 miles south-southwest of Colima on Manzanillo road, elevation 500 m, Rogers McVaugh 18077 (& H. F. Loveland, R. W. Pippen) (MICH-holotype), Sept. 21, 1958 (fig. 1).

Stems erect to 1 m tall. Leaves glabrous or with very few hairs, elliptical or ovate, 18–26 mm long, 6–10 mm broad, attenuate basally, mostly with a very short or indistinct petiole, margins revolute with 3–6 teeth on a side, veining standing out below, the midrib and 3–6 laterals recessed above. Inflorescence erect; pedicels 3–4 mm long. Calyx glabrous or microscopically papillate and possibly glandular, 6–7 mm long, 4 mm broad, the lobes 4–6 mm long, broadly triangular, spreading. Corolla scarlet, 30–35 mm long, 6–7 mm broad, the upper lip 12–13 mm long, the lobes shallow, rounded, slightly cuspidate, little or not rereflexed; the lobes of the lower lip about 1 mm long. Upper pair of stamens $\frac{1}{2}$ or less the length of the corolla, their anthers vestigial and glabrous; lower pair of stamens as long as the corolla, the filaments slightly expanded distally, the anthers shaggy pubescent, their lobes short acuminate at base. Style with a few short hairs.

This species is known only from the type collection, thus the discussion cannot reflect a sense of variation. The new species seems somewhat similar to *L. gracilis* Robinson & Greenman, a rare species in Guerrero and Morelos, having proportionately broader corollas and narrower, basally more attenuate leaves. The flowers recall those of *L. lanceolata* Bentham in DC. in Oaxaca and Central America but in that species the inflorescences are dependent, the flowers resupinate, and the serrate leaves are longer and narrower. The flowers also resemble those of *L. gutierrezii* Oersted in Bentham & Oersted in Central America but that species has scabrous leaves and calyx.

Lamourouxia jaliscana Ernst & Baad, sp. nov. Herba suffruticosa, erecta. Folia pubescentia, anguste lanceolata, grosse dentata, attenuata basin versus. Calyx glandulo-pubescens, limbis subulatis. Corolla rubra, cylindrica, labio superiore bifido, lobis late attenuatis, reflexis, labio inferiore anguste trifido. Stamina inferiora fertilia, superiora breviora, parva, sterilia. Affinia sectionis *Hemispadon*, specie proxima dubia.

Type. Jalisco: Sierra de Caule, southwest of Talpa de Allende, southwest of Piedra Rajada, elevation 1800-2250 m, *Rogers McVaugh 14250* (& J. Sooby, Jr.) (MICH-holotype, and duplicate), Nov. 19-21, 1952, (fig. 2).

Other material examined. Jalisco: 11-12 miles south of Talpa de Allende, headwaters of west branch of Rio de Talpa, elevation 1200-1700 m, *McVaugh 21325* (& C. Feddema, R. Pippen) (MICH) Nov. 23-25, 1960.

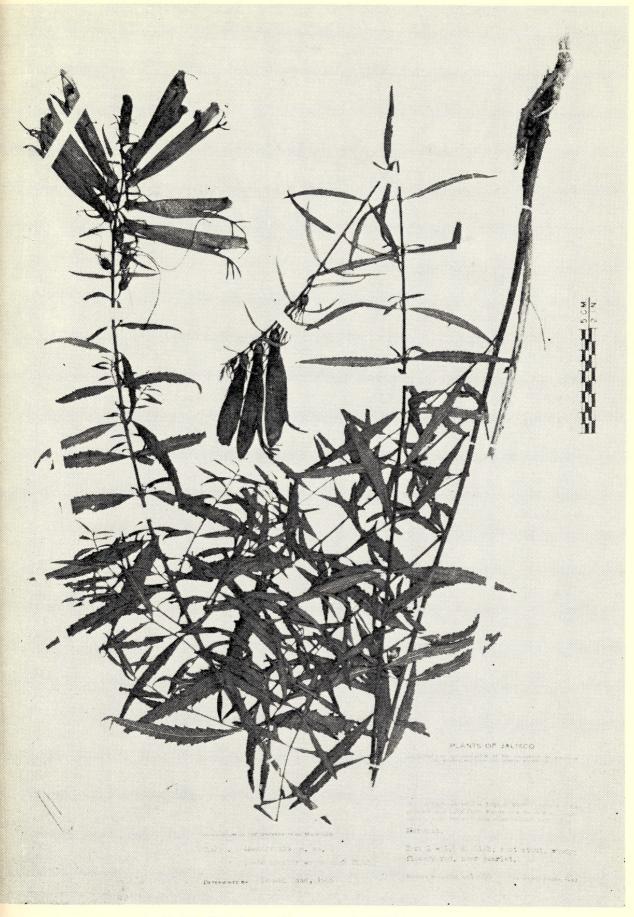


FIG. 2. Holotype, Lamourouxia jaliscana.

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Stems erect to 1.5 m tall. Leaves very pubescent, possibly scabrous above, soft below, narrowly lanceolate, 50-80 mm long, 6-10 mm broad, attenuate apically and basally, revolute, dentate with 12-22 coarse teeth on a side. Inflorescence erect; the pedicels 5-8 mm long. Calyx glandular pubescent, 14-16 mm long, 5 mm broad, the lobes narrowly subulate, 10-12 mm long. Corolla red, cylindrical, 56-63 mm long, 9-10 mm broad, the upper lip 16-25 mm long, the lobes broadly attenuate, 5-7 mm long, reflexed; the lobes of the prominent lower lip narrow, 5-8 mm long. Upper pair of stamens half as long as corolla, the anthers vestigial and glabrous; lower pair of stamens nearly as long as corolla, the filaments slightly dilated distally, the anthers shaggy pubescent, the lobes acuminate at base. Style with spreading hairs. Fruits ovoid, 12-13 mm long, 7-8 mm broad.

This species, known from only two collections, is distinguished by its large, long, narrow, coarsely-toothed and very pubescent leaves, the long narrow, glandular calyx lobes, and the large size of the corolla. The size of the leaves and flowers somewhat recalls *L. longiflora* Bentham of section Lamourouxia, which has entire leaves. The texture of the leaves somewhat recalls *L. viscosa* H. B. K., but the new species does not seem to be closely allied to any other species.

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A NEW TETRAGASTRIS (BURSERACEAE) FROM PANAMA

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The following new species of *Tetragastris* was discovered during a survey of the Burseraceae for the *Flora of Panama*. It is apparently endemic to the Republic of Panama.

Tetragastris tomentosa D. M. Porter, sp. nov. A *T. panamensis* (Engl.) O. Ktze. quadrimerus floribus et foliolis costa infernis conspicuis luteis-tomentosis statim diagnoscenda.

A tree ca. 8 m high; branchlets densely yellowish-tomentose. Leaves once-pinnate, 37 cm long or longer and to 24.5 cm wide; petioles striate, densely yellowish-tomentose, canaliculate above, 84 mm long; leaflets 7(?), membranaceous, elliptic to ovate, abruptly acuminate apically, slightly oblique basally, the main vein densely yellowish-tomentose below, minutely puberulent above, the secondary veins and blade with scattered trichomes on both surfaces, to 18.5 cm long and 9 cm wide, the laterals largest, the lowermost smallest and reflexed; petiolules densely yellowish-tomentose, canaliculate above, swollen apically, the



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