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New American Spermatophytes

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The genus *Russelia* of the Scrophulariaceae, important for its ornamentals, has been neglected by taxonomists. Under a few long established names of misinterpreted groups, many undescribed species have been pigeonholed. In view of the apparent lack of interest in the genus, collectors have not given justified attention to the plants. Since herbarium material necessary for the preparation of a revision of the genus is not accessible, it is desirable to publish descriptions of the new entities at hand in order to stimulate the interest of field botanists. Ten new species and one new variety of *Russelia* are proposed. Included with these are fourteen novelties in other families in the genera *Struthanthus*, *Neea*, *Astragalus*, *Mabea*, *Ilex*, *Rhacoma*, *Souroubea*, *Casearia*, *Doliocarpus*, *Saurauia*, *Eugenia*, *Ardisia*, *Randia*, and *Apodanthera*. Two species are transferred from the genus *Mahonia* to *Berberis*, one species of *Gilbertia* is referred to the genus *Dendropanax*, and two subspecies of *Phlox* are raised to specific rank.

***Struthanthus minutiflorus* Lundell, sp. nov.**—Frutex epiphyticus, ramis ramulisque rufo-furfuraceis. Folia petiolata, petiolis rufo-furfuraceis, 0.8-1.7 cm. longis; lamina coriacea, oblongo-elliptica vel ovato-elliptica, 6.5-11 cm. longa, 3.7-8 cm. lata, apice rotundata, emarginata et apiculata, basi rotundata, integra, glabra. Inflorescentiae spicatae, axillares, solitariae, ad 12 cm. longae. Flores sessiles. Petala ca. 2 mm. longa.

An epiphytic shrub, branches and twigs reddish-brown, scurfy, the twigs compressed at the nodes, the internodes elongate. Petioles stout, canaliculate, reddish-brown, scurfy, 0.8-1.7 cm. long. Leaf blades coriaceous, dull green, the midvein and margin reddish-brown and scurfy, oblong-

elliptic or ovate-elliptic, 6.5-11 cm. long, 3.7-8 cm. wide, apex rounded, slightly emarginate, apiculate, base rounded, slightly decurrent, margin entire, glabrous, costa prominent on undersurface, plane or upper surface, the primary veins slender, 5-8 on each side. Inflorescences axillary, solitary, spicate, up to 12 cm. long, pedunculate, bearing up to 10 pairs of sessile glomerules of flowers, the peduncle and rachis reddish-brown, scurfy; glomerules sessile, 3-flowered, the bracts acuminate. Flowers sessile, small, the perianth about 2 mm. long. Immature fruits oblong-ellipsoid.

BRITISH HONDURAS: Toledo District, on river bank, Botan Creek, Rio Grande, May 22, 1944, *Percy H. Gentle 4633* (type in the herbarium of Southern Methodist University), on tree.

S. minutiflorus is near *S. phanerolomus* (Standl.) Lundell, but may be readily separated from that species by its much larger oblong-elliptic leaves, and elongate many-flowered inflorescences. The peculiar reddish-brown scurfy leaf margin characterizes both species. The flowers of *S. minutiflorus* have a perianth scarcely 2 mm. long.

Neca Gentlei Lundell, sp. nov.—Frutex, ramulis novellis rufo-pubescentibus. Folia petiolata, petiolo 7-15 mm. longo, lamina subchartacea, anguste oblongo-elliptica, lanceolata vel oblanceolata, 11-22 cm. longa, 4-7.8 cm. lata, apice subabrupte cuspidato-acuminata, basi acutiuscula. Inflorescentiae foem. ad 10 cm. longae. Fructus ellipsoideus, 8.9 mm. longus.

Arborescent shrub; twigs pubescent at first with short subappressed reddish hairs, glabrescent early, subterete, somewhat compressed at the nodes. Petioles 7-15 mm. long. Leaf blades subchartaceous, narrowly oblong-elliptic, lanceolate or oblanceolate, 11-22 cm. long, 4-7.8 cm. wide, apex subabruptly cuspidate-acuminate, base rounded to acute, decurrent, the sides often unequal, primary veins 8-10 on each side, slender, the costa conspicuous on undersurface. Fruiting panicles up to 10 cm. long, apparently tomentose at first, the persistent indument of short subappressed reddish hairs. Fruits sessile or pedicellate, the pedicels up to 8 mm. long. Drupes narrowly ellipsoid, rather obscurely costate, 8-9 mm. long, glabrescent.

BRITISH HONDURAS: Toledo District, Rio Grande, on river bank, August 24, 1944, *Percy H. Gentle 4775* (type in the herbarium of Southern Methodist University), fruits pink.

Although the species resembles *N. acuminatissima* Standl., it differs from the latter in having fruits scarcely more than half as large. In leaf characteristics the two diverge primarily in venation.

Berberis pinifolia (Lundell) Lundell, comb. nov.

Mahonia pinifolia Lundell, Carnegie Inst. Wash. Publ. 478: 209. 1937.

Berberis chiapensis (Lundell) Lundell, comb. nov.

Mahonia chiapensis Lundell, *Lloydia* 3: 209. 1940.

Astragalus Soxmaniorum Lundell, sp. nov.—Herba, ramulis ad 45 cm. longis, parce adpresse pubescentibus. Folia ad 11 cm. longa; foliola 13-21, elliptica, oblongo-elliptica vel obovata, 3-13 mm. longa, 2.5-8.5 mm. lata, apice emarginata. Inflorescentiae ad 13 cm. longae, pauciflorae. Pedicelli ad 2 mm. longi. Calyx ca. 7 mm. longus, lobis acuminatis. Corolla ca. 1.5 cm. longa, glabra. Ovarium glabrum, stipitatum.

Low spreading annual, stems branching at base, up to 45 cm. long, sparsely pubescent with scattered appressed hairs. Leaves up to 11 cm. long, the petiole and rachis sparsely pubescent; leaflets 13-21, the petiolules short, less than 1 mm. long, the blades elliptic, oblong-elliptic or obovate, 3-13 mm. long, 2.5-8.5 mm. wide, apex conspicuously notched, sparsely appressed pubescent on the midvein and margin, otherwise essentially glabrous. Racemes up to 13 cm. long, including peduncles up to 10 cm. long, exceeding the subtending leaves, striate, sparsely appressed pubescent. Flowers few, borne on pedicels less than 2 mm. long. Calyx pale green, thin, about 7 mm. long, sparsely appressed hairy externally; lobes triangular, acuminate, slightly shorter than the tube. Corolla pale greenish-yellow or greenish-white, about 1.5 cm. long, glabrous. Ovary glabrous, stipitate. Immature pods about 2.5 cm. long, bladderly, leathery, glabrous, curved, 1-celled, apiculate.

TEXAS: Nacogdoches County, off U. S. highway 59, about 8 miles south of Nacogdoches, along sandy roadside, March 22, 1941, *C. L. Lundell and Amelia A. Lundell 9750*, corolla pale greenish-yellow; Anderson County, 17 miles southeast of Athens, sandy roadside, April 13, 1942, *Lundell and Lundell 11115*, annual, corolla pale green, fruits bladdery; Van Zandt County, off highway 64, near Edom, in sandy fallow field, March 24, 1944, *Lundell and Lundell 12701* (type in the herbarium of Southern Methodist University), annual, calyx pale green, corolla tinted green, nearly white.

It is with pleasure that I name this species in honor of Mr. and Mrs. G. M. Soxman of Dallas as a token of recognition for their work upon the flora of Texas. Both have devoted years to the critical collecting, growing, and study of the native and naturalized pteridophytes of the state.

This attractive plant is locally abundant in Van Zandt and Anderson counties. Its affinity is with *A. obcordatus* Ell., a species which has a blue or purple corolla not over 1 cm. long compared with the pale greenish-yellow corolla 1.5 cm. long in *A. Soxmaniorum*.

***Mabea belizensis* Lundell, sp. nov.**—Arbor parva, 10 cm. diam., ramulis parce pubescentibus. Folia petiolata, petiolis 5-10 mm. longis; lamina chartacea, oblongo-elliptica, 5-12 cm. longa, 1.8-4 cm. lata, apice abrupte acuminata, basi rotundata, serrulata. Inflorescentiae paniculatae, longe pedunculatae, ad 18 cm. longae. Stamina 21-23. Pedicelli fructiferi 1-1.3 cm. longi. Capsula ca. 1.2 cm. longa, 1.3 cm. diam.

A small tree, 10 cm. in diameter, bark grayish-white; twigs smooth, slender, sparsely pubescent, the short hairs usually branched. Petioles 5-10 mm. long, slender, canaliculate, sparsely pubescent at first, glabrous with age. Stipules acicular, 5-6 mm. long. Leaf blades chartaceous, oblong-elliptic, 5-12 cm. long, 1.8-4 cm. wide, apex abruptly acuminate, base rounded, margin inconspicuously serrulate, dull above, paler beneath, reticulate-veined, the costa and primary veins conspicuous on undersurface, primary veins 8-13 on each side, anastomosing remote from margin.

Panicle long pedunculate, up to 18 cm. long, sparsely pubescent with branched hairs; staminate flowers reddish-purple, stamens 21-23. Pedicels of fruits 1-1.3 cm. long, puberulent, reddish-purple. Columella about 9-10 mm. long. Capsule finely tomentulose, reddish-purple, about 1.2 cm. long, 1.3 cm. in diameter, crowned by the long persistent style. Seeds smooth, ellipsoid, slightly compressed, about 7 mm. long, 5.5 mm. wide.

BRITISH HONDURAS: Toledo District, upper reach of Golden Stream, in cohune ridge, May 10, 1944, *Percy H. Gentle* 4595 (type in the herbarium of Southern Methodist University), a tree, 4 inches in diameter, flowers dark red, bark grayish-white, wood creamish and soft.

Gentle reports that the latex causes skin itching. The species has been confused with *M. occidentalis* Benth. to which it has affinity.

Ilex Gentlei Lundell, sp. nov.—Arbor parva, ramulis puberulis. Folia petiolata, petiolo 2-6 mm. longo, lamina coriacea, obovata, oblanceolata vel elliptica, 4-12.5 cm. longa, 1.7-6.5 cm. lata, apice acuta, obtusa vel abrupte subacuminata, basi acutiuscula, integra, glabra. Pedicelli fructiferi fasciculati, puberuli, ad 6 mm. longi. Fructus subglobosus, ad 7 mm. diam., glaber.

Small tree, 12.5 cm. in diameter; twigs rather stout, densely puberulent. Petioles stout, canaliculate, sparsely puberulent, 2-6 mm. long. Leaf blades firm, coriaceous, obovate, oblanceolate or elliptic, 4-12.5 cm. long, 1.7-6.5 cm. wide, apex acute, obtuse or abruptly short acuminate, base decurrent, margin entire, glabrous, costa and veins impressed on upper surface, costa prominent on undersurface, primary veins slender, 5-8 on each side. Fruiting pedicels fasciculate in the leaf axils, puberulent, angled, up to 6 mm. long. Fruits subglobose, up to 7 mm. in diameter at maturity glabrous.

BRITISH HONDURAS: Toledo District, on Punta Gorda-San Antonio road, in broken ridge, September 8, 1944, *Percy H. Gentle* 4807 (type in the herbarium of Southern Methodist University).

I. Gentlei has affinity to *I. belizensis* Lundell and *I. panamensis* Standl.

Rhacoma lanceifolia Lundell, sp. nov.—Arbor parva, 10 cm. diam., ramis ramulisque angularibus, parce puberulis. Folia petiolata, petiolis 2-4 mm. longis, parce puberulis; lamina subchartacea, lanceolata vel anguste lanceolata, 6-13 cm. longa, 1.7-4.3 cm. lata, apice attenuata, acuminata, basi obtusiuscula, subintegra. Cymae axillares, ad 6.5 cm. longae, puberulae. Pedicelli ad 1.5 mm. longi. Sepala 4, late ovata, ca. 0.75 mm. longa, puberula. Petala 4, 2.2-2.5 mm. longa. Ovarium 2-loculare.

A small tree, 10 cm. in diameter; branchlets and twigs sharply angled, sparsely puberulent, compressed at the nodes. Petioles canaliculate, 2-4 mm. long, sparsely puberulent. Leaf blades subchartaceous, slightly paler beneath, lanceolate or narrowly lanceolate, 6-13 cm. long, 1.7-4.3 cm. wide, apex attenuate, acuminate, base obtusish, slightly decurrent, at first sparsely puberulent, margin subentire. Cymes axillary, up to 6.5 cm. long, branched up to 6 times, many-flowered, puberulent. Pedicels slender, puberulent, up to 1.5 mm. long at anthesis, accrescent. Sepals 4, broadly ovate, about 0.75 mm. long, puberulent, erose. Petals 4, suberect, obovate-elliptic, 2.2-2.5 mm. long, with a short claw, glabrous. Disk annular, thin, lobed. Stamens 1.2 mm. long. Ovary 2-celled, with 1 erect ovule in each cell. Stigma bifid.

BRITISH HONDURAS: Toledo District, between Rancho Chico and Cockscomb, Monkey River, on hillside in wild coffee ridge, March 22, 1943, *Percy H. Gentle 4320* (type in the herbarium of Southern Methodist University), tree, 4 inches in diameter, bark green, wood creamish when cut, flowers white, red within; vernacular name, *uvito*.

R. lanceifolia closely resembles *R. macrocarpa* (Bran-deg.) Standl. The sharply angled branchlets and narrowly lanceolate subentire leaves attenuate at apex characterize the new tree.

Doliocarpus belizensis Lundell, sp. nov.—Frutex scandens, ramulis novellis parce strigosis. Folia petiolata, petiolo 1.5-2.3 cm. longo, lamina subcoriacea, late elliptica, raro obovato-elliptica, 5.5-12 cm. longa, 3.6-9 cm. lata, apice rotundata et apiculata, basi decurrenti, margine subintegra.

Paniculae axillares, ca. 3 cm. longae; bracteae ovato-lanceolatae, ad 5 mm. longae. Pedicelli 1.7-4.2 mm. longi. Sepala 3, ca. 4 mm. longa. Petala 3, obovata, 4.5-5 mm. longa.

Woody vine, the bark on old wood peeling off, somewhat shredded; twigs sharply angled, drying brown, thinly strigose at first. Petioles narrowly winged, 1.5-2.3 cm. long, thinly strigose on lower surface, puberulent on upper surface. Leaf blades stiff, subcoriaceous, drying brown, broadly elliptic, rarely obovate-elliptic, 5.5-12 cm. long, 3.6-9 cm. wide, apex rounded, usually apiculate, base decurrent, margin subentire, sparsely pubescent on upper surface, the hairs subappressed, thinly strigose along costa and veins on undersurface, primary veins 7-10 on each side, subimpressed above, prominent beneath, finely reticulate veined. Panicles axillary, branched from the base, usually less than 3 cm. long, pubescent with short subappressed hairs; bractlets ovate-lanceolate, up to 5 mm. long. Pedicels 1.7-4.2 mm. long. Sepals 3, obovate or elliptic, about 4 mm. long. Petals 3, obovate, 4.5-5 mm. long. Stamens numerous. Carpels 2 or 3, united; styles free.

BRITISH HONDURAS: Toledo District, between Rancho Chico and Cockscomb, Monkey River, in wild coffee ridge, April 5, 1944, *Percy H. Gentle 4389* (type in the herbarium of Southern Methodist University), woody vine, flowers white, scented; vernacular name, *water tietie*.

Saurauia belizensis Lundell, sp. nov.—Arbor, 10 m. alta, ad 30 cm. diam.; ramulis stellato-tomentosis, parce setosis. Folia petiolata, petiolo 1.3-5 cm. longo, lamina chartacea, oblanceolata vel anguste elliptico-oblonga, 5.5-14 cm. longa, 1.8-5 cm. lata, apice acuminata, basi acuta, remote serrulata. Paniculae axillares, ad 15 cm. longae, stellato-tomentosae. Pedicelli 1-3 mm. longi. Sepala 4. Petala 4, elliptica vel obovato-elliptica, ca. 4 mm. longa. Stamina 2.2-2.5 mm. longa. Ovarium 4-loculare.

Tree, 10 m. high, up to 30 cm. in diameter, twigs tomentose with fine stellate brown hairs interspersed with short incurved prickles, glabrescent early, drying black. Petioles slender, 1.3-5 cm. long, glabrescent early, the prickles persistent. Leaf blades chartaceous, thin, oblanceolate or narrowly elliptic-oblong, 5.5-14 cm. long, 1.8-5 cm. wide, apex

short acuminate, base acute, margin rather remotely serrulate, glabrescent early, with scattered prickles on veins on both surfaces, primary veins 6-9 on each side, slightly impressed above, conspicuous on undersurface, reticulate veined. Panicles axillary, solitary, up to 15 cm. long including peduncles up to 7 cm. long, tomentose with fine stellate hairs, the prickles interspersed. Pedicels slender, tomentose, 1-3 mm. long. Sepals 4, unequal, the smaller elliptic, about 2.5 mm. long, the larger depressed-orbicular, 2.5 mm. long, 4 mm. wide, pubescent. Petals 4, elliptic or obovate-elliptic, about 4 mm. long. Receptacle pubescent with long hairs. Stamens numerous, 2.2-2.5 mm. long. Ovary 4-celled; styles 4, free.

BRITISH HONDURAS: Toledo District, between Monkey River and Cockscomb, near creek, July 9, 1943, *Percy H. Gentle 4439* (type in the herbarium of Southern Methodist University), tree, 7 inches in diameter, flowers white, sweet scented; vernacular name, *limonaro*.

The species is remarkable for its 4-merous flowers which are unique in the genus. The tree has been collected over most of the Colony south of the Belize River.

***Souroubea belizensis* Lundell, sp. nov.**—Frutex epiphyticus, glaber. Folia membranacea vel subchartacea, petiolis ad 2.5 mm. longis; laminis obovatis vel obovato-ellipticis, 6-14.5 cm. longis, 3-7.5 cm. latis, apice rotundatis, apiculatis, basi obtusis. Inflorescentiae terminales, racemosae, ad 6 cm. longae, multiflorae. Pedicelli ad 8.5 mm. longi. Bractea sub calyce inserta, tubuloso-cylindrica. Stamina 5.

Epiphytic shrub, entirely glabrous, the twigs rather stout, drying blackish. Leaves comparatively large, subsessile, the petioles canaliculate, up to 2.5 mm. long. Leaf blades membranaceous or subchartaceous, obovate or obovate-elliptic, 6-14.5 cm. long, 3-7.5 cm. wide, apex rounded and sharply apiculate, base somewhat attenuate, obtuse, venation obscure on upper surface, conspicuous on undersurface, reticulate. Racemes terminal, up to 6 cm. long, many-flowered. Pedicels strongly ascending, up to 8.5 mm. long (in bud). Bract tubular, not over 3 mm. long (in bud), suspended from base of calyx, sessile, the aperture laterally

2-auriculate, the auricles very short. Flowers in bud only, greenish. Stamens 5.

BRITISH HONDURAS: Toledo District, Botan Creek, Rio Grande, on tree on river bank, May 25, 1944, *Percy H. Gentle* 4648 (type in the herbarium of Southern Methodist University).

The species resembles both *S. triandra* Lundell and *S. micrantha* Standl. & Steyererm., but differs at once from both in its large thin sharply apiculate leaves and flowers with 5 stamens. In *S. micrantha* the pedicels do not exceed 5 mm. in length.

The flowers of the material available are in bud only; hence the measurements of pedicel length and size of bract represent the immature condition.

Casearia Gentlei Lundell, sp. nov.—Arbor parva, 17.5 cm. diam., ramis ramulisque pubescentibus, striatis. Folia petiolata, petiolis 4-8 mm. longis; lamina chartacea, oblanceolata vel oblongo-oblanceolata, 7-10.5 cm. longa, 2-3.5 cm. lata, apice subacuminata, basi acuta, serrulata. Inflorescentiae axillares, pedunculatae, ad 2.5 cm. longae. Pedicelli ca. 1 mm. longi. Calyx pubescentibus, 3-3.5 mm. longis, lobis ciliatis. Stamina 8; filamenta glabra.

A small tree, 17.5 cm. in diameter; branchlets and twigs slender, the twigs rather sparsely subappressed pubescent with short hairs and puberulent, drying blackish, striate. Petioles slender, canaliculate, sparsely appressed pubescent, 4-8 mm. long. Leaf blades chartaceous, pellucid-punctate, oblanceolate or oblong-oblanceolate, 7-10.5 cm. long, 2-3.5 cm. wide, apex obtusely subacuminate, base acute, margin serrulate, sparsely subappressed pubescent or undersurface at first, inconspicuously barbate, essentially glabrous with age, glabrous on upper surface except along the costa, the midvein impressed above, conspicuous on undersurface, the primary veins 8-10 on each side. Inflorescences axillary, solitary, pedunculate, puberulent and sparsely appressed hairy, up to 2.5 cm. long; peduncle slightly longer than the petiole, up to 1.2 cm. long. Pedicels about 1 mm. long. Calyx 3-3.5 mm. long, finely appressed pubescent, the 5 lobes elliptic, subequal, finely ciliate. Stamens 8, filaments glabrous; appendages of the disk ligulate, short, alternating with the stamens, pilose. Ovary ovoid, pilose; stigma capitate.

BRITISH HONDURAS: Toledo District, Bolo Camp, upper reach of Golden Stream, in high ridge, April 4, 1944, *Percy H. Gentle 4489* (type in the herbarium of Southern Methodist University), flowers creamish.

C. Gentlei approaches *C. nitida* (L.) Jacq., a species with ovate-elliptic leaves. Another species of the complex is *C. dolichophylla* Standl. which differs in having larger flowers and broader leaves densely pubescent on the under-surface.

Eugenia riograndis Lundell, sp. nov.—Arbor, 25 cm. diam., ramulis puberulis. Folia petiolata, petiolo puberulo, 1.5-3 mm. longo, lamina chartacea vel subcoriacea, oblanceolata vel anguste elliptica, 3.5-6.5 cm. longa, 1-2.2 cm. lata, apice obtuse acuminata, basi acuminata, supra puberula, subtus glabra. Inflorescentiae axillares, racemosae, ad 2 cm. longae, raro ad 4 cm. longae, puberulae. Pedicelli 1-5 mm. longi. Petala elliptica, 2.5-3 mm. longa, ciliolata. Fructus subglobosus.

Tree, 25 cm. in diameter; twigs slender, brownish, slightly compressed at the nodes, densely puberulent. Petioles puberulent, 1.5-3 mm. long. Leaf blades slightly paler beneath, chartaceous or subcoriaceous, oblanceolate or narrowly elliptic, 3.5-6.5 cm. long, 1-2.2 cm. wide, apex obtusely acuminate, base acuminate, upper surface puberulent with incurved hairs, undersurface glabrous except along costa at base, punctate, costa slightly impressed above, conspicuous beneath, primary veins evident but fine, about 9 on each side, anastomosing about one-third of distance from margin. Inflorescence axillary, racemose, the racemes solitary or fasciculate, sessile or subsessile, usually less than 2 cm. long, rarely up to 4 cm. long, densely puberulent. Pedicels slender, 1-5 mm. long. Calyx small, obscurely puberulent, the lobes unequal, rounded at apex. Petals white, elliptic, 2.5-3 mm. long, ciliolate. Immature fruits subglobose. Persistent calyx lobes finely puberulent, the longer about 1.2 mm. long, the shorter about 0.6 mm. long.

BRITISH HONDURAS: Toledo District, Rio Grande, in wild coffee ridge, July 15, 1944, *Percy H. Gentle 4711*, tree, 10 in. diameter, flowers white; same locality, in high ridge, August 25, 1944, *Gentle 4784* (type in the herbarium of Southern Methodist University).

The delicate racemes, and the small leaves with the peculiar fine incurved hairs on the upper surface of the blade are noteworthy.

Dendropanax concinnus (Standl.) Lundell, comb. nov.

Gilibertia concinna Standl., Tropical Woods 18: 30. 1929.

Ardisia Gentlei Lundell, sp. nov.—Arbor parva, 22.5 cm. diam., ramulis novellis rufo-tomentosis. Folia petiolata, petiolis ad 1 cm. longis, glabris; lamina coriacea, obovato-elliptica, oblanceolata vel oblongo-elliptica, 8-13.5 cm. longa, 3-5.5 cm. lata, apice obtusa, basi acutiuscula, glabra. Inflorescentiae terminales, paniculatae. Pedicelli crassi, ca. 1 mm. longi. Fructus globosus, 6-7 mm. diam.

Tree, 22.5 cm. in diameter; twigs stout, closely red-tomentose at first, glabrescent with age, the internodes very short. Petioles short, up to 1 cm. long, margined by the decurrent blade, glabrous. Leaf blade coriaceous, pallid, obovate-elliptic, oblanceolate or oblong-elliptic, 8-13.5 cm. long, 3-5.5 cm. wide, apex obtuse, base acutish, decurrent, glabrous, margin entire, costa impressed above, elevated beneath, the lateral veins scarcely evident. Inflorescence terminal, paniculate, the fruits subspicate upon the branches of the panicle, the rachis and branches sparsely furfuraceous; pedicels stout, scarcely exceeding 1 mm. in fruit. Persistent sepals coriaceous, ovate, about 1.7 mm. long, ciliate. Mature fruits globose, 6-7 mm. in diameter, the style persistent.

BRITISH HONDURAS: Toledo District, Bolo Camp, upper reach of Golden Stream, in high ridge, April 28, 1944, *Percy H. Gentle 4561* (type in the herbarium of Southern Methodist University), tree, 9 inches in diameter, bark grayish-white, wood creamish-white, moderately hard.

The species bears a close resemblance to *A. spicigera* Donn. Sm. Most of the fruits on *Gentle 4561* are malformed and abnormally large due probably to insect infestation.

Phlox texensis (Lundell) Lundell, comb. nov.

Phlox nivalis Lodd. subsp. *texensis* Lundell, Contr. Univ. Mich. Herb. 8: 77. 1942.

Phlox pulcherrima (Lundell) Lundell, comb. nov.

Phlox pilosa L. subsp. *pulcherrima* Lundell, Contr. Univ. Mich. Herb. 8: 79. 1942.

Russelia chiapensis Lundell, sp. nov.—Suffruticosa, ramis 6-costatis, ramulis 4-costatis, parce pubescentibus. Folia opposita vel verticillata, breviter petiolata, chartacea vel subcoriacea, ovata, ad 7 cm. longa, 4 cm. lata, apice acuta vel acuminata, basi rotundata, parce pubescenti, serrata. Inflorescentiae cymosae. Pedicelli 3.5-6 mm. longi. Calyx parce pubescentibus, lobis ovatis, 3-3.2 mm. longis, acuminatis. Corolla rubra, 12-13 mm. longa. Capsula subglobosa, ca. 5.5 mm. longa.

Suffruticose, the stems sharply 6-angled, the branches sharply 4-angled, with short internodes, rather sparsely pubescent. Leaves opposite or verticillate, short petiolate, the petioles pubescent, less than 3 mm. long. Leaf blades chartaceous or subcoriaceous, ovate, up to 7 cm. long, 4 cm. wide, apex acute or acuminate, base rounded, margin serrate, rather sparsely pubescent, the hairs mostly along the veins, reticulate-veined, costa and veins impressed above, prominent on undersurface, the primary veins 3 to 5 on each side, without resinous glands. Floriferous branches short, with reduced leaves, the inflorescences cymose, rather sparsely hirtellous. Pedicels 3.5-6 mm. long, glabrous. Calyx lobes ovate, 3-3.2 mm. long, acuminate, glabrous except for a few hairs along the keel. Corolla red, cylindrical, 12-13 mm. long, glabrous externally, barbate on lower side in tube and at base at point of attachment of anthers, with scattered short gland-tipped hairs on lower lobes and in throat, filaments 6 and 8 mm. long, ovary glabrous. Capsules subglobose, about 5.5 mm. long, apiculate.

MEXICO: Chiapas, Mt. Ovando, December, 1937, *Eizi Matuda 2088* (type in the herbarium of Southern Methodist University).

Two other collections from Mt. Ovando, *Matuda 2088A* and *2563*, represent either a variety or a closely related species differing in the longer subulate calyx lobes and denser pubescence of all parts.

Russelia glandulifera Lundell, sp. nov.—Suffruticosa, virgata, ramis ramisque 6-multi-costatis. Folia verticillata,

petiolata, petiolis ad 3 mm. longis; lamina chartacea, ovato-elliptica, ad 4 cm. longa, 2.5 cm. lata, apice obtusa, apiculata, basi acutiuscula, resinoso-glandulosa, serrato-crenata. Inflorescentiae cymosae, pseudo-racemosae, ad 5.5 cm. longae, piloso-glandulosae. Pedicelli 1.5-3.5 mm. longi. Calyx glanduloso-pubescentibus, lobis ovato-lanceolatis, 3-3.8 mm. longis, acuminatis. Corolla ca. 1 cm. longa, extus glanduloso-pilosa. Capsula globosa, 3.5 mm. longa.

Suffruticose, virgate, the stems and branches 6-many-angled, subterete, hairy at the nodes. Leaves verticillate, short petiolate, the petioles pubescent, up to 3 mm. long. Leaf blades chartaceous, ovate-elliptic, up to 4 cm. long, 2.5 cm. wide, apex obtuse, apiculate, base acutish, usually rounded, glabrous except for a few scattered hairs, mealy, with resinous glands on the undersurface, margin serrate-crenate with 2 or 3 teeth on each side above the middle, costa and veins impressed above, conspicuous on the undersurface, the primary veins 2 or 3 on each side. Floriferous branches rather stout, the inflorescences axillary, pseudo-racemose, up to 5.5 cm. long, densely pubescent with gland-tipped hairs. Pedicels 1.5-3.5 mm. long, pubescent with gland-tipped hairs. Calyx glandular pubescent, the lobes ovate-lanceolate, 3-3.8 mm. long, acuminate. Corolla scarlet, cylindrical, 1 cm. long, the lower lobe erect, 2.5 mm. long, the other lobes spreading, pubescent externally and on the lower side within with gland-tipped hairs, barbate on lower side and at base on inside, filaments 3.5 and 4.5 mm. long. Ovary glabrous. Capsules globose, somewhat compressed laterally, 3.5 mm. long, apiculate.

MEXICO: Oaxaca, Tututepec, April 12, 1940, *L. H. Bailey* 604 (type in the herbarium of Southern Methodist University), small virgate branchy bush, flowers scarlet.

Although the material is scrappy and unsatisfactory, an unusually well marked species is represented. No other species of the genus known to the writer has the inflorescence and external surface of the corolla pubescent with gland-tipped hairs. In *R. serratifolia* Lundell and *R. chiapensis* Lundell a few glandular hairs are present on the inside of the corolla indicating a relationship between those species and *R. glandulifera*.

Russelia Hintoni Lundell, sp. nov.—Suffruticosa, ramis ramulisque 4-angularibus, hirtellis. Folia opposita, petiolata, petiolis hirtellis, 2-4.5 mm. longis; lamina membranacea, ovata, ovato-elliptica vel elliptica, 2.5-6 cm. longa, 2-4.5 cm. lata, apice acuta vel obtusa, basi obtusa vel rotundata, serrato-dentata. Inflorescentiae cymosae, ad 4 cm. longae, hirtellae. Pedicelli 4-8 mm. longi, hirtelli. Calyx parce pubescentibus, lobis 3 mm. longis, subulatis. Corolla 10-12 mm. longa.

Suffruticose, stems and branches 4-angled, persistently hirtellous. Leaves opposite, petiolate, the petioles hirtellous, 2-4.5 mm. long. Leaf blades thin, membranaceous, ovate, ovate-elliptic, or elliptic, 2.5-6 cm. long, 2-4.5 cm. wide, apex acute or obtuse, base obtuse or rounded, margin coarsely serrate-dentate, the basal third subentire, sparsely hairy on upper surface, short villous on lower surface, without resinous glands, costa and veins impressed above, elevated beneath, the primary veins 4 or 5 on each side. Floriferous branches leafy; inflorescences cymose, axillary, up to 4 cm. long, with short peduncles, rather densely hirtellous. Pedicels slender, 4-8 mm. long, hirtellous. Calyx sparsely pubescent, usually with a few resinous glands, the lobes ovate, 3 mm. long, sharply attenuate at the middle into the subulate apex. Corolla tubular, slightly narrowed below, 10-12 mm. long, glabrous externally, barbate within on lower side and at base at point of filament attachment; filaments barbate at base on inner side, 6 and 7 mm. long. Ovary glabrous.

MEXICO: without locality, *Geo. B. Hinton 10921* (type in the herbarium of Southern Methodist University).

From *R. cuneata* Robinson, to which it is related, *R. Hintoni* differs at once in being densely pubescent and in having leaves obtuse or rounded at base, not cuneate-attenuate.

Russelia lanceifolia Lundell, sp. nov.—Suffruticosa, 2 m. alta, ramis 6-angularibus, glabris; ramulis novellis parce pubescentibus. Folia opposita vel ternata, petiolata, petiolis 3-8 mm. longis; lamina membranacea, parce resinoso-punctata, lanceolata vel ovato-lanceolata, ad 7.5 cm. longa, 3.5 cm. lata, apice acuta, basi acuta, dentato-serrata. Inflorescentiae cymosae, pauciflorae. Calyx parce pubescentibus,

lobis ovatis, 4 mm. longis, acuminatis, subulatis. Corolla 1.3-1.7 cm. longa. Capsula ovoidea, 4 mm. longa.

Suffruticose, 2 m. high, stems subterete, inconspicuously 6-angled, glabrous; branches 6-angled, sparsely pubescent at first. Leaves usually opposite, sometimes ternate, petiolate, the petiole slender, 3-8 mm. long, sparsely pubescent; leaf blades membranaceous, sparsely pubescent on both surfaces at first, sparsely resinous-punctate, lanceolate or ovate-lanceolate, up to 7.5 cm. long, 3.5 cm. wide, apex acute, base acute, decurrent, margin coarsely dentate-serate with 4-7 teeth on each side, basal third entire, ciliate, costa and veins impressed above, prominent and white beneath. Inflorescences axillary, solitary, cymose, short-pedunculate, mostly 3-flowered, rather sparsely pubescent, the bractlets subulate, ciliate. Calyx lobes ovate, 4 mm. long, acuminate, subulate above the middle, keeled, ciliate, sparsely hairy, not resinous-punctate. Corolla reddish, cylindrical, 1.3-1.7 cm. long, lobes spreading, glabrous externally, barbate within on lower side. Filaments glabrous; staminode about 0.8 mm. long. Ovary glabrous. Capsule ovoid, 4 mm. long, crowned by the persistent style.

MEXICO: Guerrero, kilometer 157, near Taxco, on mountain side, August 1, 1943, *C. L. Lundell and Amelia A. Lundell 12317* (type in the herbarium of Southern Methodist University)

Although closely allied to *R. multiflora* Sims, the species differs in its lanceolate leaves and few-flowered inflorescences.

Russelia leptopoda Lundell, sp. nov.—Suffruticosa, 3 m. alta, ramis ramulisque 6-angularibus, glabris. Folia opposita, petiolata, petiolis ad 2.5 mm. longis; lamina membranacea, ovato-elliptica, 1-2.3 cm. longa, 0.6-1.5 cm. lata, apice acutiuscula vel obtusa, basi acutiuscula, dentata. Inflorescentiae cymosae, pauciflorae. Pedicelli 7-10 mm. longi, glabri. Calyx glabris, lobis ovatis, 4 mm. longis, subulatis. Corolla 13-15 mm. longa. Filamenta glabra.

Shrub, 3 m. high, the stems and branches rather slender, 6-angled, glabrous. Leaves opposite, small, petiolate, the petioles slender, up to 2.5 mm. long, white villous on upper side; leaf blades membranaceous, ovate-elliptic, 1-2.3 cm.

long, 0.6-1.5 cm. wide, apex acutish or obtuse, base entire, acutish, usually rounded, margin dentate with 2-4 teeth on each side, reticulate-veined, primary veins 3 or 4 on each side, sparsely resinous-punctate, glabrous except for a few hairs along the midvein at base on upper surface. Inflorescences cymose, axillary, solitary, ordinarily 3-flowered; peduncles slender, glabrous, 8-12 mm. long; pedicels slender, glabrous, 7-10 mm. long, the bractlets linear-lanceolate, ciliate. Calyx lobes ovate, 4 mm. long, subulate to the middle, glabrous, not resinous-punctate. Corolla crimson, 13-15 mm. long, cylindrical, narrowed slightly toward base, barbate within on lower side of tube, the upper lobe emarginate, the lower lobes 2.5-3.5 mm. long. Filaments glabrous. Ovary glabrous.

MEXICO: Michoacan, Coalcoman, in woods, June 25, 1939, *Geo. B. Hinton 13845* (type in the herbarium of Southern Methodist University), shrub, 3 m. high, flowers crimson.

P. leptopoda is noteworthy for its 3-flowered inflorescences with elongate filiform peduncles and pedicels.

***Russelia ovatifolia* Lundell, sp. nov.**—Suffruticosa, ca. 1 m. alta, ramis ramulisque 4- vel 6-angularibus. Folia opposita vel ternata, breviter petiolata, petiolis ad 2 mm. longis; lamina chartacea, ovata vel late ovata, 3-6.5 cm. longa, 2.5-5.5 cm. lata, apice acuta, basi rotundata, crenatodentata. Inflorescentiae cymosae, multiflorae. Pedicelli glabri, 4-7 mm. longi. Calyx parce pubescentibus, lobis ovatis, 3 mm. longis, acuminatis, apice subulatis. Corolla 12-13 mm. longa.

Shrubby, about 1 m. high, stems 4- or 6-angled, branches 4-angled, slender, glabrous except for a ring of hairs at the nodes. Leaves usually opposite, sometimes ternate, subsessile, the petioles less than 2 mm. long, hirtellous on upper surface; leaf blades chartaceous, ovate or broadly ovate, 3-6.5 cm. long, 2.5-5.5 cm. wide, apex acute, base rounded, sometimes truncate or subcordate, margin crenate-dentate, glabrous on both surfaces except for a few hairs along the costa and primary veins, bullate, the veins impressed above, prominent on undersurface, the primary veins 4 or 5 on each side. Floriferous branches with reduced

leaves, the inflorescences cymose, axillary, solitary, crowded, many-flowered, the peduncle and branches glabrous or sparsely pubescent, the bractlets subulate, ciliate and sparsely pubescent; pedicels slender, glabrous, 4-7 mm. long. Calyx lobes ovate, 3 mm. long, acuminate, subulate at apex only, glabrous or with a few hairs along the keel. Corolla bright red, cylindrical, 12-13 mm. long, glabrous externally, short barbate within at base and on lower side of tube above, the upper lobe emarginate, the lower lobes about 2 mm. long, suberect. Filaments barbate at base on the inner side. Ovary glabrous.

MEXICO: Guerrero, kilometer 344.5, Taxco-Acapulco highway, near Acahuizotla, in mountain pine land, October 21, 1943, *C. L. Lundell and Amelia A. Lundell 12597* (type in the herbarium of Southern Methodist University).

The relationship of the species is with the Cuban *R. sarméntosa* Jacq.

RUSSELLIA PENNELLIANA Lundell var. **pilosa** Lundell, var. nov.—Suffruticosa, ramis ramulisque pilosis. Folia ad 3 cm. longa, 2.3 cm. lata, pilosa. Pedicelli ad 7 mm. longi. Calyx pubescentibus.

Suffruticose, the stems, branches, leaves, inflorescences and calyx lobes pilose. Leaves up to 3 cm. long, 2.3 cm. wide. Pedicels rather stout, up to 7 mm. long. Flowers large, calyx lobes 5 or 6, corolla cerise-red, yellow barbate in the paler throat, the tube expanded above, stamens 4-6. Ovary glabrous.

MEXICO: San Luis Potosi, kilometer 524.7, Mexico City highway, on bank of arroyo along roadside, September 25, 1943, *C. L. Lundell and Amelia A. Lundell 12489* (type in the herbarium of Southern Methodist University).

The variety differs from the typical form of the species in its pubescence, stouter longer pedicels, and larger leaves. The occurrence of calyces and corollas with 6 lobes, and of 5 or 6 stamens in some flowers is unusual for the genus.

Russelia serratifolia Lundell, sp. nov.—Suffruticosa, ad 3 m. alta, ramis ramulisque 6-multi-costatis, parce pubescentibus. Folia verticillata, petiolata, petiolis ad 5 mm. longis; lamina subchartacea, ovata vel lanceolata, ad 8.5 cm. longa,

3.8 cm. lata, apice acuminata, basi subacuminata vel rotundata, serrata, parce pubescenti, resinoso-punctata. Inflorescentiae cymosae, pseudo-racemosae. Pedicelli ca. 3 mm. longi. Calyx parce pubescentibus, lobis ovato-lanceolatis, 3.5-4.5 mm. longis, subulatis. Corolla 10-12 mm. longa, extus glabra, intus parce stipitato-glandulosa, barbata.

Suffruticose, up to 3 m. tall, the stems and branches 6-many-angled, subterete, with hairy nodes, the young twigs usually rather sparsely hirtellous. Leaves verticillate, petiolate, the petioles up to 5 mm. long, usually only 2 or 3 mm. long, canaliculate, pubescent. Leaf blades thin, subchartaceous, ovate or lanceolate, up to 8.5 cm. long, 3.8 cm. wide, usually about 5 cm. long, 2.5 cm. wide, apex acuminate, base subacuminate to rounded, margin serrate, the basal third entire, sparsely hairy on both surfaces or essentially glabrous, the lower surface covered with numerous small resinous glands, the costa and primary veins impressed above, conspicuous on lower surface, the primary veins 4 or 5 on each side. Floriferous branches elongate, leafy, or the leaves reduced to bracts; inflorescence cymose, appearing pseudo-racemose with age, axillary, solitary, rather sparsely hirtellous, becoming up to 4 cm. long with age, pedunculate; bractlets linear-lanceolate, hirtellous. Pedicels glabrous or sparsely hirtellous, short, usually about 3 mm. long, sometimes up to 4 mm. long. Calyx not resinous-punctate, the lobes ovate-lanceolate, 3.5-4.5 mm. long, the apical half subulate, glabrous except for a few scattered short hairs. Corolla cylindrical, bright red, 10-12 mm. long, glabrous externally, barbate within on lower side and at base at point of attachment of filaments, with small stipitate glands at base of lower corolla lobes and in throat. Filaments barbate at base on inner side. Ovary glabrous.

MEXICO: San Luis Potosi, kilometer 342 on highway between Chapulhuacan and Tamazunchale, along roadside cliff, November 5, 1943, *C. L. Lundell and Amelia A. Lundell 12650* (type in the herbarium of Southern Methodist University).

The species is represented by the following additional collections from the same region: *Lundell and Lundell 12401, 12402, 12406, 12422, 12651*. All of this material is remarkably uniform.

R. serratifolia with its subterete stems and small flowers obviously is allied to *R. multiflora* Sims, a species known to the writer only from description. The small stipitate glands on the inside of the corolla are noteworthy.

Russelia tenuis Lundell, sp. nov.—Suffruticosa, ramulis 4-costatis, filiformis, novellis parce hirtellis. Folia opposita, petiolata, petiolis 1-2.3 mm. longis; lamina subchartacea, ovata vel ovato-elliptica, ad 4 cm. longa, 2.5 cm. lata, apice acuta vel obtusa, basi rotunda vel acuta, serrato-dentata, parce resinoso-glandulosa. Inflorescentiae cymosae, pauciflorae. Pedicelli 2-6 mm. longi. Calyx parce pubescentibus, lobis ovatis, 3 mm. longis, acuminatis. Corolla 11-13.5 mm. longa.

Suffruticose, branches sharply 4-angled, slender, almost filiform, sparsely hirtellous at first, the bases of the petioles connected by a pubescent line. Leaves opposite, petioate, the petioles pubescent, 1-2.3 mm. long. Leaf blades thin, subchartaceous, ovate or ovate-elliptic, up to 4 cm. long, 2.5 cm. wide, apex acute or obtuse, base rounded or acute, slightly decurrent, margin rather coarsely serrate-dentate usually with 4 teeth on each side, sparsely pubescent on both surfaces, with few resinous glands on the undersurface, costa and veins impressed above, slender but conspicuous on the undersurface, the primary veins 2 or 3 on each side. Floriferous branches very slender, with reduced leaves, these sometimes only bracts; inflorescences cymose, solitary, axillary, pedunculate, few-flowered, pubescent, the bractlets small. Pedicels slender, 2-6 mm. long, rather sparsely pubescent. Calyx lobes ovate, 3 mm. long, acuminate, glabrous except for a few hairs along the keel. Corolla red, cylindrical, 11-13.5 mm. long, glabrous externally, barbate on lower side within and at base above point of attachment of filaments, the filaments 6.5 and 8 mm. long. Ovary glabrous.

MEXICO: Michoacan, District of Coalcoman, Aquila, on cliff, *Geo. B. Hinton 15841* (type in the herbarium of Southern Methodist University), hanging shrub, flowers red.

The very slender almost filiform branches are distinctive.

Russelia teres Lundell, sp. nov.—Suffruticosa, 1 m. alta, ramis ramulisque teretibus. Folia opposita vel ternata, breviter petiolata, petiolis ad 2.5 mm. longis, hirtellis; lamina ovata vel ovato-lanceolata, ad 6 cm. longa, 3.8 cm. lata, apice acuminata, basi subcordata, crenulato-serrulata. Inflorescentiae cymosae. Pedicelli ad 3 mm. longi, glabri. Calyx parce pubescentibus, lobis ovatis, 5 mm. longis, subulatis. Corolla 9 mm. longa. Filamenta 3 vel 4 mm. longa.

Suffruticose, 1 m. high, stems and branches terete, minutely puberulent at base of stems, hairy at the nodes, otherwise glabrous, internodes elongate. Leaves opposite or ternate, subsessile, the petioles up to 2.5 mm. long, hirtellous. Leaf blades ovate or ovate-lanceolate, up to 6 cm. long, 3.8 cm. wide, apex acuminate, base shallowly cordate, sparsely short hairy on the veins on both surfaces, the margin obscurely crenulate-serrulate, short ciliate, finely reticulate-veined, costa and primary veins plane above, rather prominent on lower surface, primary veins 6 or 7 on each side. Floriferous branches slender, the leaves at the terminal nodes reduced to lanceolate bracts 1.5-3 cm. long; inflorescences cymose, axillary and solitary or terminal and fascicled, short peduncled, glabrous or sparsely hirtellous in lines, the bractlets linear, sparsely hirtellous. Pedicels slender, short, up to 3 mm. long, glabrous. Calyx lobes ovate, 5 mm. long, the apex subulate for 3 mm., somewhat reflexed, glabrous except for a few short appressed hairs along the keel and subulate calyx. Corolla red, cylindrical, slightly expanded above, 9 mm. long, upper lobe subentire, lower lobes 2 mm. long, glabrous externally, barbate within on lower side and at point of attachment of filaments 2 mm. above the base. Stamens didymous, the shorter filaments 3 mm. long, the longer 4 mm. long, filaments barbate at base on inner side, staminode slender, about 0.7 mm. long. Ovary glabrous, style equaling calyx.

MEXICO: Michoacan, Coalcoman, in woods, November 11, 1941, *Geo. B. Hinton 16127A* (type in the herbarium of Southern Methodist University).

The species is remarkable for its terete stems and branches, terminal fascicled inflorescences, and long subulate calyx lobes.

Russelia villosa Lundell, sp. nov.—Suffruticosa, ad 1.5 m. alta, ramis ramulisque 6-multi-angularibus, raro 4-angularibus, villosis. Folia opposita vel verticillata, breviter petiolata; lamina ovata vel late ovata, ad 6 cm. longa, 5 cm. lata, apice acutiuscula, obtusa vel rotundata, basi cordata vel rotundata, serrato-dentata, villosa. Inflorescentiae cymosae, multiflorae. Calyx parce pubescentibus, lobis ovatis, 2-3 mm. longis, acuminatis. Corolla 9-10.5 mm. longa.

Suffruticose, up to 1.5 m. high, the stems and branches usually 6- many-angled, sometimes only 4-angled, the base of stems up to 1.2 cm. in diameter, copiously and persistently white villous. Leaves opposite or verticillate, the basal reduced, suborbicular, sometimes only 1 cm. long, the upper ovate or broadly ovate, up to 6 cm. long, 5 cm. wide, apex acutish, obtuse or rounded, base cordate or rounded, often slightly decurrent, subsessile, the petioles usually less than 2 mm. long, rarely up to 3 mm. long, bullate, margin conspicuously serrate-dentate, persistently villous on both surfaces, paler beneath, the costa and primary veins impressed above, conspicuous on the undersurface, primary veins 5-7 on each side. Floriferous branches elongate, leafless or with small leafy bracts, densely white villous; inflorescences cymose, axillary, crowded, many-flowered; bractlets linear. Pedicels villous, 2.5-5 mm. long. Calyx lobes ovate, 2-3 mm. long, acuminate, keeled, often short ciliate and with a few hairs along the keel. Corolla rose-red, 9-10.5 mm. long, cylindrical, the lobes spreading, the lower up to 2 mm. long, the upper inconspicuously emarginate, glabrous externally, bearded in the throat on lower side of tube. Filaments glabrous, staminode minute. Ovary glabrous.

MEXICO: Guerrero, near Taxco, on mountain side, kilometer 142 of highway, October 19, 1943, *C. L. Lundell and Amelia A. Lundell 12568* (type in the herbarium of Southern Methodist University).

The species has affinity to *R. ternifolia* H.B.K. The densely white villous indument of all parts except the flowers, the small tubular corolla rarely exceeding 1 cm. in length, and the compact inflorescences distinguish the plant.

Randia texensis Lundell, sp. nov.—Frutex, ad 2 m. altus, ramis ramulisque armatis, hirsutis. Folia petiolata, petiolis ad 1.2 cm. longis, breviter hirsutis; lamina cuneato-obovata vel cuneato-orbiculata, 1-4.5 cm. longa, ad 3 cm. lata, apice rotundata, truncata vel emarginata, hirsuta. Flores solitarii vel fasciculati. Calyx 1.5-2 mm. longus. Corolla 6-7 mm. longa. Fructus globosus, ca. 1 cm. diam., rugosus.

A shrub, up to 2 m. high, bearing numerous pairs of spines scattered along the branches, the spines divaricate, 0.5-1.2 cm. long, the twigs short hirsute with white incurved hairs. Leaves borne on short lateral spurs; stipules broadly ovate, apiculate, about 2 mm. long; petioles slender, 0.1-1.2 cm. long, short hirsute; leaf blades cuneate-obovate or cuneate-orbicular, 1-4.5 cm. long, up to 3 cm. broad, usually smaller, chartaceous, persistently short hirsute on both surfaces, the lateral veins 3 or 4 on each side, apex rounded, truncate or shallowly notched. Flowers solitary or clustered, sessile, 4- or 5-parted. Calyx 1.5-2 mm. long, glabrous or with a few subappressed hairs, the hypanthium oblong-ovoid, the teeth ciliate, about 0.5 mm. long, subacuminate, spreading or reflexed. Corolla pale green, glabrous outside, villous in throat, 6-7 mm. long, the tube slender, 3.5-4 mm. long, the lobes 4 or 5, ovate-elliptic, up to 2.7 mm. wide. Anthers exerted two-thirds from throat, about 1.7 mm. long, apiculate. Style slender, glabrous; stigma clavate, laminated. Fruit globose, up to 1 cm. in diameter, drying with a rugose surface, the pericarp hard.

TEXAS: Hidalgo County, off U. S. highway 83, west of Mission, in scrub, April 5, 1941, *C. L. Lundell and Amelia A. Lundell 9974*, a thorny shrub, about 1 m. high; Cameron County, about 5 miles north of Brownsville off Point Isabel road, in scrub, September 21, 1943, *Lundell and Lundell 12456* (type in the herbarium of Southern Methodist University), a thorny shrub, about 3 m. high, corolla pale green.

R. texensis belongs to the widespread group of closely allied desert species which includes *R. Gaumeri* Greenm. & Thomps., *R. blepharodes* Standl., *R. rhagocarpa* Standl. and *R. obcordata* S. Wats. It is nearest *R. rhagocarpa* of

Tamaulipas, a species known only from incomplete fruiting material.

Apodanthera cucurbitoides Lundell, sp. nov.—Herba, ramulis gracilibus, striatis, parce villosis. Folia petiolata, petiolo 1.5-4 cm. longo, lamina late ovata, 2.5-5 cm. longa, 4-7 cm. lata, basi cordata, 5-lobata, scabrida. Inflorescentiae axillares, ad 5 cm. longae, pauciflorae. Pedicelli ad 1.5 cm. longi. Calyx ca. 1.5 cm. longus, subulato-dentatus. Corolla 2.5 cm. longa, extus villosa, intus stipitato-glandulosa. Antherae ca. 6.5 mm. longae.

Annual vine; stems slender, long-running, striate, thinly villous, prickly. Tendrils small, less than 1.5 cm. long, branched at base. Leaves ashy-green, broadly ovate to nearly reniform in outline, broadly cordate at base, the blade 2.5-5 cm. long, 4-7 cm. wide, deeply 5-lobed, the lobes subdivided into lobelets and dentate, the teeth mucronate, the sinuses prominent, rounded, scabrous with subappressed hairs on both surfaces, the primary veins conspicuous; the petiole stout, villous and prickly, 1.5-4 cm. long. Staminate flowers 2 to several on a peduncle, the inflorescence axillary, up to 5 cm. long, villous; pedicels slender, up to 1.5 cm. long. Calyx (including hypanthium and teeth) about 1.5 cm. long, the teeth subulate, thinly villous and glandular, the glandular hairs stipitate. Corolla orange-yellow, 2.5 cm. long, the lobes free almost to base, finely villous on outer surface, glandular within, the glandular hairs stipitate. Anthers about 6.5 mm. long.

MEXICO: San Luis Potosi, Charcas, in arroyo bed, July 16, 1934, *C. L. Lundell 5296* (type in the herbarium of Southern Methodist University).

From the incomplete material available, the species seems nearest *A. undulata* A. Gray. It closely resembles *Cucurbita Lundelliana* Bailey in leaf characteristics.

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