

TWO NEW SPECIES OF *RUSSELIA* (SCROPHULARIACEAE) FROM MEXICO
AND GUATEMALA

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ABSTRACT

Two novelties of *Russelia* are described and illustrated: *R. iltisneeana* B.L. Turner, *spec. nov.*, from westernmost Jalisco; and *R. contrerasii* B.L. Turner, *spec. nov.*, from México and Guatemala. The former, with stiffly erect, rounded, multicostate stems, essentially devoid of foliage, relates to *R. elongata*; the latter a sprawling shrub or shrublet having angled stems, and well-developed leaves with entire margins, relates to *R. campechiana*. A map showing the distribution of these taxa vis-a-vis closely related taxa is provided.

KEY WORDS: Scrophulariaceae, *Russelia*, México, Guatemala, systematics

Russelia, a genus of about 50 attractive species of perennial herbs and shrubs possessing ruby red flowers, is largely centered in México, a few of these extending into Central America and one (*R. sarmentosa*) into South America (Standley & Williams 1973). Carlson (1957) provided a relatively sound taxonomic treatment of the complex, but subsequently several additional species have been proposed, two of these by the present author (Turner 1983, 1997).

The two novelties described below are represented by only a few collections, but these seem quite distinct from closely related elements, as noted in the protologue of each.

RUSSELIA ILTISNEEANA B.L. Turner, *spec. nov.* Figure 1. TYPE: MEXICO. Jalisco: 1 km SW of Nacastillo (19° 35' N, 104° 55' W) on road to Chamela, "Very peculiar, highly local, xeromorphic thorn scrub (matorral tropical espinoso), with dense stands of low *Hechtia* species, dry crumbling rock (granitic?) outcrops," ca. 280 m, 12 Jan 1979, H.H. Iltis & M. Nee 1552 (HOLOTYPE: WISC!; Isotype: IBUG!).

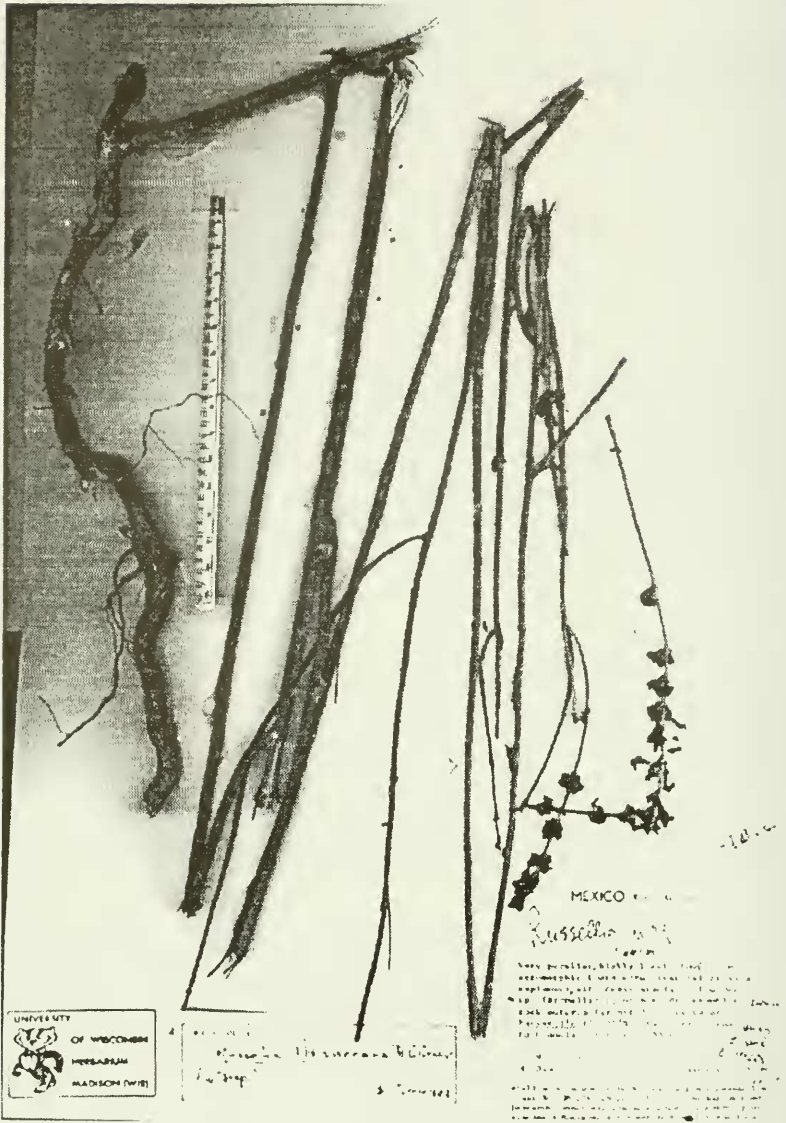


Figure 1. *Russelia iltisneeana*, holotype.

Similis *R. elongatae* Carlson sed caulibus valde costatis, sulcis dense hispidulis, et corollis parioribus (5-8 mm longis vice 12-18 mm longis).

Stiffly erect nearly leafless perennial herbs ca. 1.5 m high, the stems arising from very stout lateral rhizomes; midstems 5-7 mm across, markedly rounded, endowed with ca. 8 longitudinal glabrous stout ribs ca. 0.8 mm across, between these lie 8, somewhat smaller, grooved additional ribs, the sulci between the ribs densely and minutely hispidulous. Leaves not apparent, reduced to (4-)6-8 lanceolate leaves 10 mm long or less, or else the blades disarticulating, the petiole bases persistent as appressed ovate cartilaginous nubbins 2-4 mm long, giving the stem an *Equisetum*-like appearance. Flowers numerous, relatively small, arranged in terminal spike-like inflorescences, any one node producing 10-20 flowers on very short branches, the pedicels mostly 1-3 mm long. Sepals ovate with acuminate apices, 2.5-3.5 mm long, glabrous. Corollas deep red, 5-10 mm long, the tubes glabrous without, pubescent within, ca. 1 mm across at the base but soon flaring into a broad throat 3-4 mm across at the apex, the lobes 1-2 mm long. Capsules ovoid, glabrous, 2.5-3.0 mm long. Seeds numerous, immature.

ADDITIONAL SPECIMENS EXAMINED: Jalisco: Puente los Tortugas, 2 km carretera a Ameca, 1589 m, Oct 1981, A. Michel 47 (IBUG); margenes de Río Salada, por la brecha de cañon de las flores, 1550 m, 22 Mar 1987, Reyna B. 320 (IBUG).

Russelia iltisneeana is a remarkably distinct taxon what with its seemingly leafless markedly ribbed, stiffly erect stems and terminal, spike-like inflorescences. Collectors of the type describe its habitat as "very peculiar," as is the species, and in my diagnosis I have compared it with *R. elongata* Carlson more out of convenience than conviction, the latter also having nearly leafless rounded stems. It differs from the latter in having a much stiffer, more *Equisetum*-like habit, and markedly grooved stems, similar to those of *R. equisetiformis* Schlect. & Cham., but lacking the whorled branching characteristic of that taxon and having a very different inflorescence and flowers.

It is a perverse pleasure to name this species for the two individuals who participated in its collection, both much admired warm friends of mine: Hugh Iltis of the University of Wisconsin, renowned biophilic and pleasantly peripatetic curmudgeon of sorts; and Pat Nee of the New York Botanical Garden, well-known unobtrusive, constant collector caught up in his passion that each man does his duty as he can. I hope they will forgive me for officiating in this eponymic union.

RUSSELIA CONTRERASII B.L. TURNER, *spec. nov.* Figure 2. TYPE: GUATEMALA. Petén: "Guayaca La Pita, bordering Laguna Guayacan, in low forest, north," 15 Jan 1968, *Elias Contreras 7464* (HOLOTYPE: LL!; Isotypes: LL!, WISC!).

Similis *R. campechianae* Cham. & Schlect. sed inflorescentia est panicula terminalis et cymosa (vice inflorescentiae congestae, et axillaris et terminalis), et pedicelli sunt plerumque 5-10 mm longis (vice pedicellorum plerumque 1-3 mm longorum).

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HOLOTYPE OF *Russelia contrerasii* B. Tuom.
 B. Tuom.

UNIVERSITY OF TEXAS HERBARIUM
R. contrerasii B. Tuom.
 Det. B. L. Turner 1983

HOLOTYPE of *Russelia* sp. 1982 11.
Russelia campechiana Standl.
 Det. B. L. Turner 1983

FLORA OF GUATEMALA
 Lundell Herbarium 257

Russelia contrerasii B. Tuom.

Woody vine, flowers red carmine
 DEPARTMENT OF PEÑON, Guaymas, S. P. D.,
 bordering Laguna Guaymas, in low forest,
 asept.

Elmer Cosentino No. 7406 January 13, 1968

Figure 2. *Russelia contrerasii*, holotype.

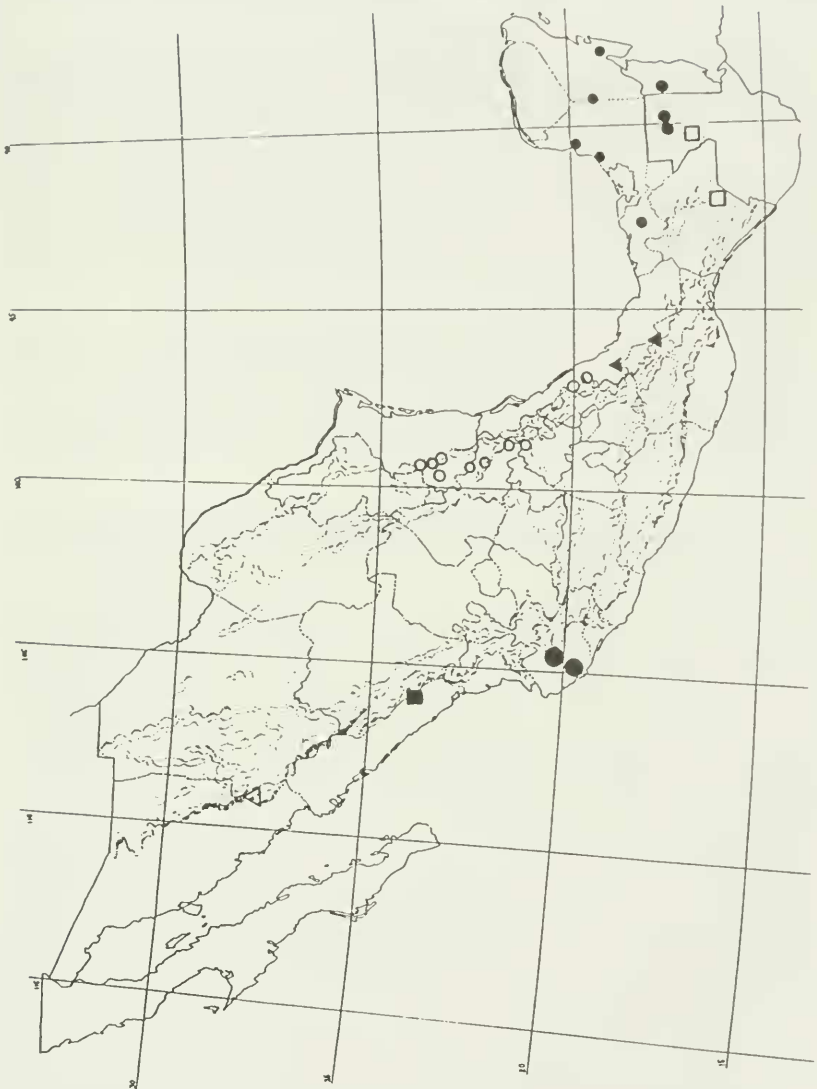


Figure 3. Distribution of the *Russelia campechiana* complex: *R. campechiana* (closed circles), *R. syringifolia* (open circles), *R. purpusii* (closed triangles), *R. contrerasii* (open squares); distribution of the *Russelia elongata* complex: *R. elongata* (open triangle), *R. iltisneeana* (large closed circle), and *R. worthingtonii* (closed square). Based upon specimens at IBUG, LL, TEX, and WISC).

"Woody vine," the larger stems 4-5 mm across, tan, glabrate. Leaves mostly 8-10 cm long, 3.5-8.0 cm wide; petioles 5-10 mm long; blades broadly ovate to cordate, pinnately nervate, glabrous or nearly so, the lower surfaces minutely punctate. Flowers arranged in terminal diffuse pyramidal panicles, 6-10 cm across and about as high, the pedicels glabrous, mostly 10-16 mm long. Calyces 3.0-3.4 mm long, broadly ovate to subcordate, the apices acute or apiculate, glabrous or the margins minutely ciliate. Corollas "red carmine," 12-16 mm long, 4-5 mm across (pressed), glabrous, the lobes 3-4 mm long, broadly rounded at the apices. Ovary glabrous. Capsules broadly ovoid, turgid or woody at maturity, dehiscent apically, ca. 8 mm high, 5 mm across; seeds numerous, ovoid, ca. 1 mm long, 0.6 mm wide, the surfaces both warty and pitted.

ADDITIONAL COLLECTIONS EXAMINED: GUATEMALA. Petén: "Guayacan, in high forest, bordering Laguna Guayacan, on rock wall," 30 Dec 1967, Contreras 7380 (LL).

MEXICO. Chiapas: Mpio. La Trinitaria, Montane Rain Forest, 10 km ENE of Dos Lagos above Santa Elena, growing on cliff face, 1170 m, 14 Oct 1981, Breedlove 53557 (LL).

This novelty is closely related to *Russelia campechiana* and *R. syringifolia*, but differs from both in having flowers arranged in a diffuse terminal inflorescence, the pedicels 5-10 mm long (vs. both axillary and terminal in congested clusters, the pedicels mostly 0-2 mm long).

These several species, along with *Russelia purpusii*, belong to a group of taxa (cf. Figure 3) which Carlson (1957) keyed as distinguished from all other russelioid taxa in having entire leaf blades. She also included among these, *R. elongata*, which has very reduced leaves with a few dentations. I would exclude the latter from this complex since it appears to have its closest relationships with *R. worthingtonii* B.L. Turner and *R. iltisneeana*, the latter described in the present paper. The latter two species possess rounded stems and very reduced leaves, in habit appearing *Equisetum*-like (but lacking a whorled branching system as occurs in *R. equisetiformis*).

The following key will distinguish among the four taxa having large leaves with entire margins:

1. Stems terete, without ridges, leaves (especially the major veins) pilose; Veracruz, Oaxaca..... *R. purpusii*
1. Stems 4-sided, ridged at their angles; leaves glabrous or nearly so (the petioles and nodal regions often minutely pubescent)..... (2)
2. Inflorescence congested, arranged both terminal and axillary along upper stems, the ultimate pedicels mostly 0-2 mm long..... (3)
3. Corollas 11-13 mm long; petioles 7-9 mm long; Oaxaca to Guatemala.....
..... *R. campechiana*
3. Corollas 15-25 mm long; petioles 3-5 mm long; Tamaulipas and Veracruz..
..... *R. syringifolia*
2. Inflorescence open and terminal, not at all congested, the ultimate pedicels mostly 5-10 mm long; Chiapas, México, and Guatemala..... *R. contrerasii*

In their treatment of *Russelia* for the Flora of Guatemala (Standley & Williams 1973), *R. contrerasii* will key to *R. campechiana*, but these authors apparently did not possess material of *R. contrerasii*, to judge from their annotations and description of the former. They did, however, place *R. lilacina* (Lundell) Lundell, an entire leafed taxon described after Carlson's monograph, in synonymy with *R. campechiana*, a disposition with which I concur.

It should be noted that the Chiapan collection of *Russelia contrerasii* (Breedlove 53557), while having an inflorescence typical of the species, possesses markedly different leaves, very much like those of *R. campechiana*. With further investigations, this might prove distinct.

The type locality for *Russelia contrerasii*, as given on the label and quoted with the descriptions, is obscure. Dr. Thomas Wendt, at my request, scouted out the locality in more detail, concluding that the type was probably collected at Finca Guayacan (16° 41' N, 89° 54' W), south of the village of Flores, where the collector resided during the collecting period concerned.

ACKNOWLEDGMENTS

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LITERATURE CITED

- Carlson, M.C. 1957. Monograph of the genus *Russelia*. Fieldiana, Bot. 29:231-292.
- Standley, P.C. & L.O. Williams. 1973. *Russelia*, in Flora Guatemala, Fieldiana, Bot. 24:388-395.
- Turner, B.L. 1983. A new species of *Russelia* (Scrophulariaceae). Phytologia 54:24.
- _____. 1997. *Russelia manantlana* (Scrophulariaceae), a new species from Jalisco, México. Phytologia 81(1):22-23.