

## Notes on the genus *Ruellia* (Acanthaceae) in Bolivia, Peru and Brazil

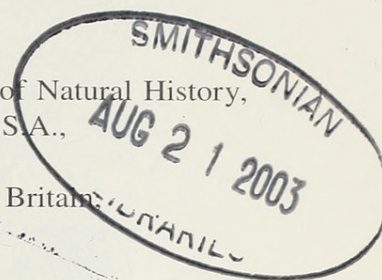
D. C. Wasshausen and J. R. I. Wood

(DCW) Department of Systematic Biology—Botany, National Museum of Natural History,  
Smithsonian Institution, Washington, D.C. 20560-0166, U.S.A.,

e-mail: [wasshausen.dieter@nmnh.si.edu](mailto:wasshausen.dieter@nmnh.si.edu);

(JRIW) 111 Forest Road, Liss, Hampshire GU33 7BP, Great Britain

e-mail: [jriwood@hotmail.com](mailto:jriwood@hotmail.com)



**Abstract.**—Taxonomic notes on *Ruellia* are presented in preparation for the authors' forthcoming annotated checklist of Bolivian Acanthaceae. Four new species (*R. antiquorum*, *R. beckii*, *R. dolichosiphon* and *R. exserta*) are described and illustrated, two new combinations are made and variation in *R. haenkeana* is discussed leading to the recognition of two varieties and two forms in the species. The little-known *R. pearcei* is described, illustrated and discussed in relation to the widespread *R. brevifolia*.

*Ruellia* is the second largest genus of Acanthaceae in the flora of Bolivia with 27 species in the annotated checklist of Bolivian Acanthaceae (Wasshausen and Wood, in prep.). Most species are quite well defined and there are relatively few novelties, perhaps a reflection of the fact that *Ruellia* is not primarily Andean in distribution. The following notes update our taxonomic knowledge of the genus in Bolivia preliminary to the publication of our checklist.

### 1. Infra-specific Variation

Two species are especially variable but differ in the nature of their variation. *Ruellia puri* (Nees) Mart. ex Jackson varies greatly in the size of its corolla and the form of its inflorescence but detailed study of this widespread species is needed before the nature of this variation can be determined. However, *R. haenkeana* (Nees) Wassh. is restricted to a relatively small area of Bolivia and Peru and we have been able to recognize one very distinctive variety and two forms below, based mainly on striking color variations.

*Ruellia haenkeana* (Nees) Wassh.

*Ruellia haenkeana* (Nees) Wassh., Beitr. Biol. Pflanzen 63: 423 (1988). Type:

Peru, T. Haenke s.n. (isotypes PR, GZU!).

var. *haenkeana*

This is the common morphotype of the species found throughout its range in Peru and Bolivia. It is characterized by its glabrous or puberulous leaves and crimson corollas.

var. ***pilosa*** Wasshausen & J. R. I. Wood,  
var. nov.

Fig. 1A–C

*Ruellia haenkeana* var. *pilosa* Wasshausen & J. R. I. Wood, var. nov. Type.—BOLIVIA: La Paz, Sud Yungas, Río Bopi, San Bartolomé (near Calisaya), 750–900 m, 1–22 Jul 1939, B. A. Krukoff 10502 (holotype US!; isotypes NY!, K!).

*Varietas nova corolla rosea et foliis pilosis distincta.*

*Additional specimens examined.*—BOLIVIA: La Paz, Sud Yungas, Cerro Pelado, Puerto Linares-Yacumo, 1050 m, 14 Jul 1979, Beck 1756 (US, LPB); Larecaja, San Carlos, Mapiri, 850 m, 11 May 1927, Buchtien 1372 (US); ibid, 5 May 1927, Buchtien 1373 (US); ibid, 16 Apr 1927, Buchtien



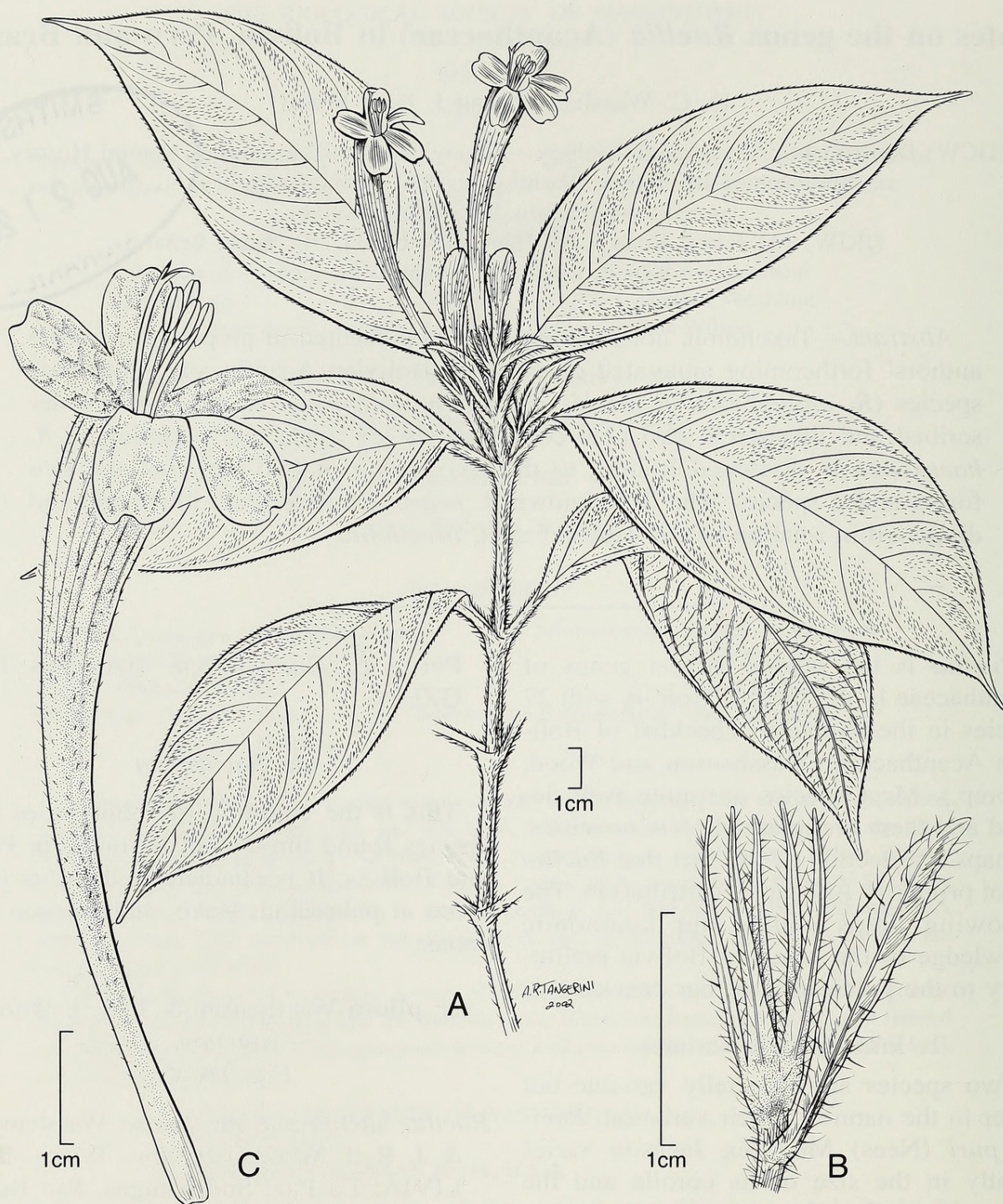


Fig. 1. A–C, *Ruellia haenkeana* var. *pilosa* (Krukoff 10502). A, Habit; B, Bracteole and calyx lobes; C, Corolla, stamens and stigma.

1378 (US); Caranavi, 19 km from Caranavi towards Bella Vista, 1240 m, 8 Jun 1996, Wasshausen *et al.* 2109 (LPB, US); *ibid.*, Wasshausen *et al.* 2111 (CAS, LPB, US).

Leonard had annotated a number of duplicate Krukoff 10502 collections as “*Ruellia nobilis* Leonard, type”. Since he never published this epithet it simply remains a *nomen nudum*.

f. **lutea** Wasshausen & J. R. I. Wood,  
*forma nov.*  
Fig. 2A–D

*Ruellia haenkeana* var. *haenkeana* forma *lutea* Wasshausen & J. R. I. Wood, *f. nov.*  
Type.—BOLIVIA: La Paz, Murillo, Valle de Zongo, 1300 m, 14 Jun 1980, Beck 3681 (holotype US!; isotype LPB!).





Fig. 2. A–D, *Ruellia haenkeana* var. *haenkeana* f. *lutea* (Beck 3681); E–G, *Ruellia haenkeana* var. *haenkeana* f. *purpurea* (Wasshausen & Wood 2144). A, Habit; B, Bracts, bracteoles and calyx lobes; C, Bracteoles, calyx lobes, corolla, stamens, style and stigma; D, Corolla expanded; E, Habit; F, Bract, bracteoles and calyx lobes; G, Bracteoles, calyx lobes, corolla, stamens, style and stigma.



*Forma nova corolla lutea et foliis glabris distincta.*

*Additional specimen examined.*—BOLIVIA: La Paz, Murillo, Valle de Zongo, 1400–1600 m, 22 Apr 1982, *Solomon 7535* (MO, US).

f. **purpurea** Wasshausen & J. R. I. Wood,  
*forma nov.*  
Fig. 2E–G

*Ruellia haenkeana* var. *haenkeana* forma *purpurea* Wasshausen & J. R. I. Wood, f. *nov.* Type.—BOLIVIA: La Paz, Caranavi, by road ascending serrania E of Caranavi towards Bolinda, 1200 m, 27 Jul 1998, *Wood & Wasshausen 13768* (holotype US!; isotypes K!, LPB).

*Forma nova corolla purpurea et foliis puberulis distincta.*

*Additional specimens examined.*—BOLIVIA: La Paz, Caranavi, Bolinda above Caranavi, 1300 m, 27 Jul 1998, *Wasshausen & Wood 2144* (US, LPB); Caranavi, 5 km from Serrania de Bella Vista on road to Caranavi, 1100 m, 8 Jun 1996, *Wasshausen et al. 2104* (CAS, GOET, LPB, K, US); Caranavi, Serrania de Bella Vista, 17.6 km N of the bridge at Carrasco, 1600 m, 11 Jun 1985, *Solomon 13984* (MO, US); Caranavi, N of Caranavi towards Linares, 17 km from Carrasco, 1700 m, 30 Jun 1983, *Beck 9242* (LPB, US); Caranavi, 10 km N of Bolinda, 1450 m, 2 Jun 1991, *Rea & Rea 10* (LPB, US).

The new variety and forms are restricted to moist hill forest in the area NE of La Paz, occurring very locally amongst typical *R. haenkeana*. Forma *lutea* is apparently restricted to the Zongo Valley whereas the other variety and form have their centers of distribution on the mountains north and east of Caranavi. Variety *pilosa* is the most distinct, as it has pilose leaves in addition to the distinctive pink corolla.

## 2. Species Clusters

*Ruellia geminiflora* Kunth and *R. brevifolia* (Pohl) Ezcurra are the best known and

most widespread representatives of two species clusters, which require detailed study throughout South America. The group centered on *R. geminiflora* comprises blue-flowered perennial herbs of open savannas and cerrados. Most species have some kind of thickened rootstock, which enables the plant to survive burning, something that often stimulates the plants to flower. Apart from *R. geminiflora* there are only two representatives of this group in Bolivia, *R. bulbifera* Lindau and *R. brachysiphon* (Nees) Benth. & Hook. f. The three species differ from each other in indumentum and corolla size but are probably good species, although no final decision about their status and relationships can be made without detailed studies of the whole species complex, which is centered in Brazil.

*R. brevifolia* is part of a cluster of species, which includes *R. pearcei* Rusby, *R. gracilis* Rusby and *R. ruiziana* (Nees) Lindau. These are bushy perennials of forest regions and are more diverse in the Andes than in the lowland regions. The four species in Bolivia are reasonably well defined although a few specimens can be difficult to assign. One of them, *R. pearcei*, has been universally neglected since its description and so we include a description of its main characters below, together with the citations of a range of specimens:

*Ruellia pearcei* Rusby  
Fig. 3A–D

*Ruellia pearcei* Rusby, Bull. New York Bot. Gard. 4: 429 (1907). Type.—BOLIVIA: Cochabamba, *Bang 2056* (lectotype NY!, here chosen; isolectotype US!)

*Ruellia pearcei* is related to *R. brevifolia* (Pohl) Ezcurra but can be distinguished from that species and all of its allies by its much longer corolla, which is 3.6–4.0 cm in length (up to 3.0 cm only in *R. brevifolia*) and differently shaped. The corolla tube has a very short cylindrical base and is then ventricose and gradually widened to the mouth whereas in *R. brevifolia* the basal cy-





Fig. 3. A–D, *Ruellia pearcei* (Wasshausen et al. 2103); E–H, *Ruellia brevifolia* (Nee & Atha 50090). A, Habit; B, Bracteoles and calyx lobes; C, Calyx lobes, corolla and stamens; D, Anther enlarged; E, Habit; F, Bracteoles and calyx lobes; G, Bracteoles, calyx lobes, corolla and stamens; H, Anther enlarged.



lindrical part is longer, the tube is then abruptly ventricose and even slightly contracted at the mouth (Fig. 3C, G). In habit, it is a perennial herb similar in general appearance to *R. brevifolia* but the leaves are always lanceolate or oblong-lanceolate, acuminate at the tip, glabrous and usually dark violet on the undersurface.

*Habitat and distribution:* *R. pearcei* is a local species of moist, tropical lowland forest along the eastern foothills of the Andes from the Santa Cruz area in Santa Cruz north through the Yungas of La Paz to southern Peru. Its distribution appears to be somewhat discontinuous, perhaps indicating that it has somewhat precise ecological demands. It is found between 600 and 1200 meters.

*Additional specimens examined.*—BOLIVIA: Beni, Ballivián, bridge Río Quibuibey, 4 km towards San Borja, 700 m, 14 Jul 1979, *Beck 1691* (LPB, US); Beni, Ballivian, E side of Serrania de Pilon Lajas, 21 km from Yacumo [15°17'S, 67°40'W], 1035 m, 17 May 1989, *Smith, Quintana & Garcia 13200* (K, LPB, MO); La Paz, Iturralde, Río San Antonio, 46 km from Ixiama to Alto Madidi, 300 m, 17 Aug 1997, *Kessler et al. 11204* (LPB, US); La Paz, Tamayo, Haciend Ubito, Río Ubito Valley, 800 m, 12 Jul 1993, *Kessler 3803* (LPB, US); *ibid.*, *Kessler 3836* (LPB, US); La Paz, Larecaja, 5 km from Consata to Sorato, 1250 m, 31 May 1995, *Kessler et al. 4402* (LPB, US); La Paz, Sud Yungas, 5 km from Chamaca to La Asunta, 850 m, 6 Oct 1995, *Kessler et al. 5793* (LPB, US); Sud Yungas, ca. 1.5 km W of El Sillar on road from Sapecho to Yacumo, 600 m, 28 Jul 1998, *Wood & Wasshausen 13783* (K, LPB); La Paz, Caranavi, outskirts of Caranavi, along streambank, 680 m, 27 Jul 1998, *Wasshausen & Wood 2139* (CAS, GOET, LPB, US); Caranavi, 17 km from Caranavi along road to Coroico, 500 m, 7 Jun 1996, *Wasshausen et al. 2103* (CAS, GOET, K, LPB, US); Nor Yungas, ca. 25 km below Yolosa on road to Caranavi, near Chala, 900 m, 19 Feb 1999, *Wood & Mondaca 14530* (K, LPB); La Paz, without exact location, Río San

Juan, 1100 m, 7 Apr 1902, *Williams 258* (K, NY); Cochabamba, Chapare, Espiritu Santo, 160 km NE of Cochabamba, 750 m, Jan 1909, *Buchtien 2239* (US); *ibid.*, *Buchtien 2309* (US); Cochabamba, Tiraque, on escarpment above El Palmar, 1200 m, 6 Jun 1998, *Wood 13673* (K, LPB); Chaparé, Río Espiritu Santo, at beginning of ascent to Cochabamba, 1000 m, 19 Jun 1994, *Wood 8537* (K, LPB, US); Río Espiritu Santo, ca. 20–25 km E of Villa Tunari on road to Cochabamba, 700 m, 27 Jul 1995, *Wood 10081* (K, LPB); Cochabamba area without precise department, *Bang 1223* (K, NY, US); Santa Cruz, Ichilo, ca. 2 km below Campamiento Mataratu, Amboró Park, 300 m, 30 May 1997, *Wood 12212* (K, US); Ichilo, near San Rafael de Amboró, S of Buenavista, 500 m, 21 May 1995, *Wood 9843* (K, LPB, US); Ichilo, Campamiento Mucunucu. Amboró Park, 500 m, 28 May 1996 *Wood et al. 11150* (LPB); Amboró, SW of Buena Vista, near Macunucu Camp, 450–500 m, 28 May 1996, *Brummitt et al. 19320* (K, LPB, US); *ibid.*, *Wasshausen et al. 2060* (CAS, GOET, K, LPB, US); ca. 2 km below Campamiento Mataratú, Amboró Park, 300 m, 30 May 1997, *Wood 1212* (K, LPB); Santa Cruz, Valle Grande, 10 km from Loma Larga to Masicuri, 1450 m, 26 May 1996, *Kessler et al. 6104* (LPB, US).—PERU: Puno, Sandia, between San Juan de Oro and San Ignacio, 1200 m, 7 Jun 1982, *Wasshausen & Salas 1205* (K, MO, NY, US, USM); *ibid.*, 1100 m, *Wasshausen & Salas 1211* (G, K, MO, NY, US, USM); without precise locality, 1863, *Pearce 276* (K), 596 (K); Huánuco, Pachitea, Honoria, Iparia National Forest, along Río Pachitea, 11 km above Tournavista Village, 3–400 m 19 Jul 1967, *Schunke 2128* (K, US); Cuzco, Quispicanchis, Inambari bridge, 530 m, 4 Mar 1965, *Vargas 16185* (CUZ, US); *ibid.*, 580, m, 8 Dec 1967, *Vargas 18455* (CUZ, US).

### 3. New Combinations

The following is a widespread species in the SW Amazon region although hitherto unnamed in most herbaria:



*Ruellia nitida* (Nees) Wassh. & J. R. I.  
Wood, *comb. nov.*

*Ruellia nitida* (Nees) Wassh. & J. R. I.  
Wood, *comb. nov.* *Arrhoxylum nitidum*  
Nees, in Mart., Fl. Bras. 9(7): 59 (1847).  
Type.—BRAZIL: Amazonas: Borba, *Riedel s.n.* (holotype LE!; isotype GZU!).

This species appears to be common in moist lowland forest and we have seen many collections from northern Bolivia in the departments of Pando, Beni and Santa Cruz, and in western Brazil in the territory of Rondônia [e.g. *Prance et al.* 5603 (K, NY, US.), 5876 (K, NY, US)], and in the states of Amazonia and Mato Grosso.

*Ruellia multisetosa* Rusby is not, in fact, a *Ruellia* and should be transferred to the genus *Suessenguthia* as follows:

*Suessenguthia multisetosa* (Rusby) Wassh.  
& J. R. I. Wood, *comb. nov.*

*Suessenguthia multisetosa* (Rusby) Wassh.  
& J. R. I. Wood, *comb. nov.* *Ruellia multisetosa* Rusby, Mem. New York Bot. Gard. 7: 362 (1927). Type.—BOLIVIA: La Paz: Huachi (alto Beni), 13 Aug 1921, *White 547* (holotype NY!).

#### 4. New Species

The following four species are new, with three being from Bolivia and one being from Brazil. The Brazilian species is included because of its obvious similarity to the Bolivian novelty, *R. beckii*.

***Ruellia antiquorum*** Wassh. & J. R. I.  
Wood, *sp. nov.*  
Fig. 4A–C

*Species nova speciosa* *R. patula* Jacq. *re-*  
*vocans sed corolla longipedunculata statim*  
*recedens et inter speciorum austro-ameri-*  
*canarum corolla coerulea, longipeduncu-*  
*lata, solitare, axilliare valde distincta.*

Low perennial herb from a woody root-stock; stems to 25 cm long, trailing, terete, pilose with spreading multicellular tri-

chomes, becoming slightly woody when old, occasionally sending down adventitious roots from the leaf nodes; leaves shortly petiolate, the petioles 1–4 mm long, the blades ovate or elliptic, acute at apex, abruptly narrowed to the base, 1.4–3.0 cm long, 0.5–2.2 cm wide, sparsely to densely pilose with white, multicellular trichomes which are sometimes bulbous at the base, the margin entire; inflorescence of solitary pedunculate flowers borne in the axils of the upper leaves, in each leaf pair, one axil fertile and one sterile; peduncles slender, glabrous, 1.5–5 cm long; bracteoles paired, borne 1–2 mm below flower, linear-oblong, 9–10 mm long, 0.75–1.00 mm wide, sparsely ciliate; calyx 1.4–1.7 mm long, divided to ca. 1 mm above base, the lobes narrowly oblong-elliptic, acute, glabrous or with a few short, marginal trichomes; corolla funnel-shaped, 55–70 mm long, ca. 2 mm wide at base, cylindrical for 25–30 mm, then gradually widened to 18–28 mm at the mouth, the tube dirty whitish-brown, pubescent on the exterior, the lobes blue, glabrous, spreading, broadly ovate to sub-orbicular, rounded, 10–16 mm long, 15–20 mm wide; stamens 4, didynamous, inserted ca. 30 mm above base of corolla, immediately above narrow cylindrical part of the tube; filaments glabrous, 5–6 mm long, the outer one in each pair ca. 1 mm longer than the other; anthers included in corolla tube, ca. 3 mm long, glabrous; style 40 mm long, pubescent, persistent; ovary glabrous; capsule 10–15 mm long, 4 mm wide, narrowly obovoid, glabrous, gland-dotted; seeds lenticular, ca. 3 mm long and wide, flattened, glabrous, the margin white.

Type.—BOLIVIA: Santa Cruz: Florida, Samaipata, on hill by radio transmitter, 1700 m, 17 Feb 1995, *J. R. I. Wood 9419* (holotype K!; isotypes LPB, US!).

*Additional specimens examined.*—BOLIVIA: Santa Cruz: Florida, El Fuerte, Samaipata, 1800 m, 15 May 1994, *Wood 8376* (K, LPB); *ibid*, 11 Sep 1994, *Wood 8630* (K, LPB, US); *ibid*, 2 May 1994, *Rojas & Vargas 1994* (BOL); *ibid*, 1550–1650 m,



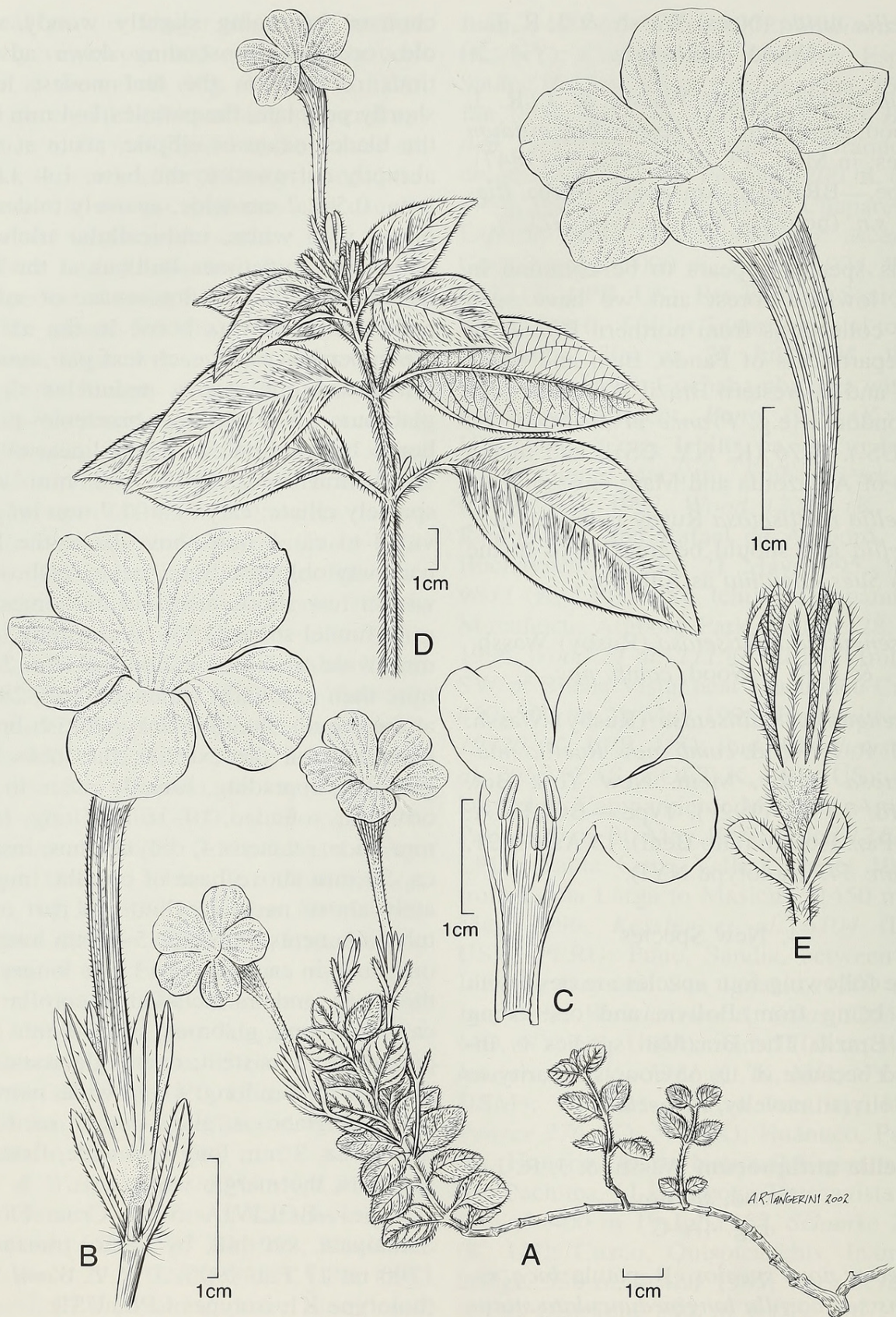


Fig. 4. A–C, *Ruellia antiquorum*, A, B, (Wood 9419) C, (Beck 6769); D, E, *Ruellia dolichosiphon* (Balcazar, Montero & Alvarez 2422). A, Habit; B, Bracteoles, calyx lobes and corolla; C, Corolla expanded; D, Habit; E, Bracteoles, calyx lobes and corolla.



23 Mar 1981, *Beck 6769* (LPB, US); Río Pirai Gorge between Las Cuevas and Bermejo, 1300 m, *Wood 10561* (K, LPB).

***Ruellia beckii*** Wassh. & J. R. I. Wood,  
*sp. nov.*

Fig. 5A–D

*Inter species generis Ruellia habitu scandenti, ramis lignosis, corolla luteo-viridi et antheris valde exsertis bene distincta.*

Woody liana reaching 10 m in height; stems woody, weakly quadrangular, sparsely scurfy-pubescent when young, glabrescent; leaves shortly petiolate, the petioles 0.8–1.0 cm long, the blades 6–14 cm long, 3–6 cm wide, broadly oblong-elliptic, acute, tapering at both ends, slightly asymmetric at the base, the margin obscurely repand, glabrous except for a few trichomes on the veins, cystoliths common above; inflorescence a small, terminal subumbelliform cyme, the branches arising in opposite pairs, the branches scurfy-pubescent; bracteoles ovate-triangular, 4–8 mm long, 2–3 mm wide, glabrescent or with a few scurfy marginal trichomes; calyx 5-lobed to just above the base, lobes 12–14 mm long, 5–6 mm wide, oblanceolate to obovate, imbricate, glabrous or with a few scattered marginal trichomes; corolla ca. 38 mm long, tube ca. 7 mm wide at base, bulbous, then gradually narrowed to 4 mm at 13 mm above base, then abruptly widened to ca. 14 mm, shortly glandular pubescent on the exterior, lobes broadly oblong, 7 mm long, 6.5 mm wide, rounded, yellow-green; stamens 4, didynamous, inserted ca. 10 mm above base of corolla tube, the outer of each pair inserted ca. 1 mm below the inner; filaments 22 mm long, glabrous; anthers exerted 10–15 mm, 6 mm long, glabrous, sagittate at base; ovary glabrous except for the puberulent tip; style 45 mm long, pubescent, stigma bifurcate; capsule not known.

Type.—BOLIVIA: La Paz: Caranavi, 20 km along road from Caranavi to Carrasco,

1200 m, 1 Jul 1983, *S. G. Beck 9298* (holotype US!; isotype LPB).

Only known from the type locality where it was growing in hill forest.

***Ruellia exserta*** Wassh. & J. R. I. Wood,  
*sp. nov.*

Fig. 5E–H

*A R. beckii inflorescentia spicata unilaterale et lobis calycis angustioribus, distantibus, corolla parviori diagnosenda.*

Woody liana to 10 m, “climbing over trees”; stems woody, rounded, glabrous below, scurfy above; leaves petiolate, the petioles 0.6–2.0 cm long, the blades 6–23 cm long, 2.0–10.5 cm wide, lanceolate, ovate or oblong-elliptic, acuminate at apex, tapering to a sometimes asymmetric base, the margin obscurely crenate, glabrous except for a few scurfy trichomes on the veins, cystoliths common above; inflorescence of small, apparently one-sided spike-like cymes terminal on branches arising alternately from each leaf axil; pedicels 3–5 mm long with numerous cystoliths; bracteoles ovate-triangular, 2–6 mm long, 1.5–2.5 mm wide, pubescent on the margins; calyx 5-lobed to just above the base, lobes 8–9 mm long, 2 mm wide, oblong, obtuse, distant, glabrous above, puberulent or sometimes scurfy glandular-pubescent below; corolla ca. 28 mm long, tube at base 2.0–4.5 mm wide, cylindrical for ca. 10 mm, not or hardly narrowed, then gradually widened to 12 mm at mouth, the exterior pubescent and with scattered sessile glands, the lobes ovate, 6 mm long and 5 mm wide, rounded, yellow-green or green; stamens 4, didynamous, inserted ca. 17 mm above base of corolla tube; filaments ca. 22 mm long, glabrous; anthers 5 mm long, glabrous, sagittate at base, exerted 10–13 mm; ovary pubescent; style 32–35 mm long, pubescent with a few glands, stigma bifurcate; capsule oblanceolate, apiculate, ca. 20 mm long, 8 mm wide, shortly and densely pubescent, 4-seeded; seeds suborbicular, 3.5 mm long, 3





Fig. 5. A–D, *Ruellia beckii* (Beck 9298); E–H, *Ruellia exserta* (de Santos et al. 1798). A, Habit; B, Calyx lobes; C, Calyx lobes, disc and ovary; D, Corolla, stamens, style and stigma; E, Habit; F, Calyx; G, Calyx lobes, disc and ovary; H, Corolla, stamens, style and stigma.



mm wide with a pale margin and scurfy surface.

Type.—BRAZIL: Mato Grosso: N of Xavantina on Xavantina-São Felix road, 40 km N of base camp at [12°54'S, 51°52'W], 14 Jun 1968, *R. R. de Santos, R. Souza & A. Ferreira 1798* (holotype K!; isotype US!).

*Additional specimens examined*.—BRAZIL: Pará: ca. 6 km on road NW of Camp 3-Alfa towards Camp 4-Alfa [5°47'S, 50°34'W], 250 m, 9 Jun 1982, *Sperling et al. 6013* (K, NY); Marabá, 24 May 1982, *Secco et al. 300* (MB, NY); Mato Grosso: Cuibá-Porto Velho, 15 km from frontier with Rondônia, Patronal District, Vila Bela de Santíssima Trindade [12°13'S, 60°59'W], 9 Jun 1984, *Cid et al. 4387* (K, NY, US); 16 km N of [12°51'S, 51°52'W], ca. 270 km N of Xavantina, 20 May 1968, *de Santos et al. 1483* (K, NY, US); Territory Rondônia: Mun. de Ariquemes, Mineração Mibrasa, Sector Alto Candeias, km 128, [10°35'S, 63°35'W], SE of Ariquemes, 14 May 1982, *Texeira 440* (INPA, NY); Mun. de Costa Marques, Chapada dos Parecís, Distrito de Alta Floresta, estrada P-56, km 17 [11°12'S, 62°63'W], 16 Jun 1984, *Cid 4581* (INPA, NY).

*Habitat and distribution*: Apparently an uncommon Brazilian endemic plant of Pará, Mato Grosso and Territory Rondônia, growing on roadsides, in disturbed primary forest and in swampy gallery forest around 250 m.

*Ruellia beckii* and *R. exserta* are closely related species, being similar in habit, leaf shape and flower color. After some hesitation, we felt confident in treating them as different species, since the calyx is very different in the two species and the corolla is somewhat so. Possibly more important is the inflorescence,  $\pm$  umbellate in *R. beckii* but in apparently one-sided spikes in *R. exserta*. Although we have only seen one collection of *R. beckii*, there are various collections of *R. exserta*, all of which maintain the distinctive inflorescence, calyx and corolla character even though collected

from different states in Brazil. Additionally, it is highly improbable that an Andean species such as *R. beckii* should be widespread in the Brazilian lowlands without any intermediate populations.

***Ruellia dolichosiphon*** Wassh. & J. R. I.  
Wood, *sp. nov.*  
Fig. 4D–E

*Ob inflorescencia terminale et calyce quam bracteis bracteolisque longiore Ruellia glischrocalyx Lindau tingit sed ramis albo-pilosis, foliis ovatis, corolla longituba, lobis roseis distincta.*

Stout herb to 50 cm; stem rounded, densely white-pilose; petioles 0.4–1.4 cm long, white pilose; blades 3.5–8.5 cm long, 2.0–3.5 cm wide, ovate, acute, base abruptly narrowed and then attenuate onto the petiole, sparsely white-pilose, the trichomes mostly on the upper surface, margins and veins, cystoliths very small, obscure, margin slightly undulate; inflorescence of short terminal racemes; pedicels 2–4 mm long, glandular-pilose; bracts at base of pedicel, 6–8 mm long, 1.0–1.5 mm wide, subpetiolate, linear-oblongate, rounded, pilose with large, brownish trichomes; bracteoles 5–6 mm long, 1.0–1.5 mm wide, linear-elliptic or linear-oblongate, weakly acute, pilose with large brownish trichomes; calyx much longer than the bracts, subequally 5-lobed to just above the base, lobes 20–22 mm long, 4 mm wide, oblong-lanceolate, obtuse, one slightly larger than the others, ciliate and with a thick line of brownish trichomes along the midrib, a few trichomes noticeably longer than the others; corolla funnel-shaped, the tube pubescent below, ca. 47 mm long, 4 mm wide at base, then narrowed to 1.5 mm after ca. 4 mm, before widening gradually to 6 mm at mouth, pale, probably dirty white, the lobes ca. 8 mm long, ca. 15 mm wide, broadly ovate, acute, pink, subglabrous outside; anthers not seen; style sparsely pilose; ovary minutely and densely pilose; capsule not seen.

Type.—BOLIVIA: Pando: Manuripi,



Comunidad Lago, 17 km NE of Pursima on road to Chivé [05°0012'S, 57°3581'W] 220 m, 29 Jun 2001, *J. Balcazar, J. C. Montero & J. Alvarez* 2422 (holotype USZ!).

*Habitat and distribution:* Only known from the type collection in Amazonian rain-forest in northern Bolivia.

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Literature Cited

Ezcurra, C. 1993. Systematics of *Ruellia* (Acanthaceae) from South America.—*Annals of the Missouri Botanical Garden* 80:747–845.





Wasshausen, Dieter C. and Wood, J. R. I. 2003. "Notes On The Genus *Ruellia* (Acanthaceae) In Bolivia, Peru And Brazil." *Proceedings of the Biological Society of Washington* 116, 263–274.

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