

Two new species of *Serjania* (Sapindaceae) from southeastern Brazil

PEDRO ACEVEDO-RODRÍGUEZ¹ AND GENISE VIEIRA SOMNER

Acevedo-Rodríguez, P. (Smithsonian Institution, Department of Systematic Biology (Botany), National Museum of Natural History, MRC-166, Washington, DC 20560-0166, U.S.A.) & G. V. Somner (Universidade Federal Rural do Rio de Janeiro, Departamento de Botânica-IB, Caixa Postal 74582, Seropédica, Rio de Janeiro, Brazil). Two new species of *Serjania* (Sapindaceae) from southeastern Brazil. *Brittonia* 53: 477–481. 2001.—One new species of *Serjania* (*S. erythrocaulis*) belonging to the *S. paradoxa* group of *Serjania* sect. *Eurycoccus* is described and illustrated bringing the total number of species in this group to eight. A second new species, *Serjania divaricocca*, belonging to sect. *Serjania* is also described and illustrated.

Key words: Sapindaceae, *Serjania*, *Serjania* section *Eurycoccus*, Southeastern Brazil.

Acevedo-Rodríguez, P. (Smithsonian Institution, Department of Systematic Biology (Botany), National Museum of Natural History, MRC-166, Washington, DC 20560-0166, U.S.A.) & G. V. Somner (Universidade Federal Rural do Rio de Janeiro, Departamento de Botânica-IB, Caixa Postal 74582, Seropédica, Rio de Janeiro, Brazil). Two new species of *Serjania* (Sapindaceae) from southeastern Brazil. *Brittonia* 53: 477–481. 2001.—Una especie nueva de *Serjania* (*S. erythrocaulis*) perteneciente al grupo *S. paradoxa* de la sección *Eurycoccus* es descrita e ilustrada. Con esta especie, el número total de especies conocidas para este grupo aumenta a ocho. Una segunda nueva especie, *Serjania divaricocca*, perteneciente a la sección *Serjania* es también descrita e ilustrada.

While doing fieldwork in the southeastern states of Brazil (Espírito Santo and Rio de Janeiro), we collected two species of *Serjania*, that after prolonged studies turned out to be new species. These species are herein described and illustrated. One of these, *S. erythrocaulis*, belongs to the *S. paradoxa* group of *Serjania* sect. *Eurycoccus*, characterized by the presence of mericarps with laterally subcompressed cocci and spherical or semispherical seeds (Acevedo-Rdgz., 1993; Radlkofer, 1931). The *S. paradoxa* group is further characterized by stems with xylem radially divided into five parts (Acevedo-Rdgz., 1991). This new species brings to eight the total number of species in the *S. paradoxa* group. The remaining new spe-

cies, *S. divaricocca*, belongs to *Serjania* sect. *Serjania*, characterized by mericarps with woody, globose, ellipsoid or trigonous cocci, with the partitioning walls not projecting beyond the cocci walls (Acevedo-Rdgz., 1993). The total number of species belonging to this section has not yet been determined because there are still a number of *Serjania* species known only from flowering collections. However, a conservative estimate would be around 135.

SERJANIA SECT. *EURYOCCUS*, *SERJANIA*
PARADOXA GROUP

Key to the species of *Serjania paradoxa* group

1. Leaves pinnately 5-foliolate; stipules conspicuous, 5–22 mm long.

¹ Author to whom reprint requests should be sent.

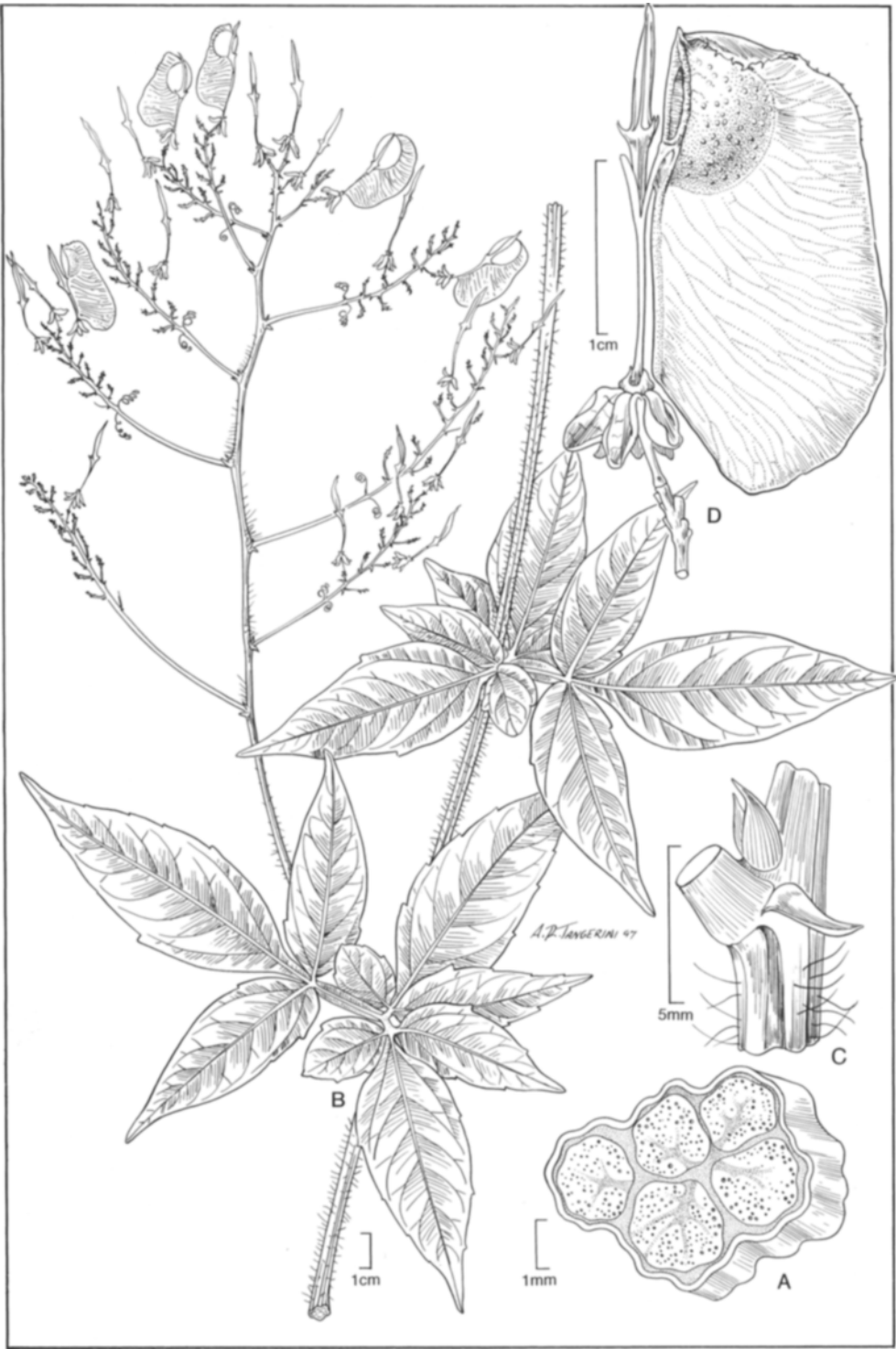


FIG. 1. *Serjania erythrocaulis*. **A.** Cross section of mature stem. **B.** Branch with infructescence. **C.** Detail of stipule and perules. **D.** Mericarp attached to central column. (All from *Sommer et al.* 612).

2. Stipules 10–22 mm long, ovate or broadly ovate, auriculate at base; leaflets pubescent, especially along abaxial surface *S. magnistipulata*
2. Stipules 5–8 mm long, lanceolate or ovate, not auriculate at base; leaflets glabrous, except for a few hairs on veins, both surfaces covered with minute stipitate glands *S. lancistipula*
1. Leaves biternate; stipules <5 mm long.
3. Stems nearly terete and striate *S. paradoxa*
3. Stems sulcate or costate.
4. Plant setulose or hirsute.
5. Plant setulose.
6. Stems obscurely aculeate at base; petioles 2–5 mm long; leaf rachis winged; mericarp cocci puberulent *S. erythrocaulis*
6. Stems not aculeate; petioles 5–6 cm long; leaf rachis not winged; mericarp cocci setulose *S. deflexa*
5. Plants hirsute *S. paleata*
4. Plant tomentose, puberulent, or subglabrous.
7. Leaves membranous, usually drying wrinkled, vein angles barbate abaxially; petals white or cream-colored *S. corrugata*
7. Leaves membranous to coriaceous, not drying wrinkled, veins pilose or subglabrous abaxially, not barbate; petals reddish *S. elegans*

***Serjania erythrocaulis* Acev.-Rodr. & G. V. Somner, sp. nov. (Fig. 1)**

TYPE: BRAZIL. Espírito Santo: Município do Fundão, Três Barras, dirt rd. to Rio Salim, 21 Sep 1990 (fr), G. V. Somner, P. Acevedo-Rdgz. & H. Q. Boudet Fernandes 612 (HOLOTYPE: RBR; ISOTYPES: CTES, K, MBML, NY, P, RB, RBR, US).

A *Serjania deflexa* Gardner foliis subsessilis rachidis alatis differt.

Woody vine to 5 m long, not producing milky sap. Stems obscurely aculeate at base, acutely 5-costate, setulose, the setae yellowish; cross section of stems with xylem radially divided into 5 subequal parts. Axillary buds covered with overlapping, minute (ca. 2.5 mm long) scales or perules. Stipules oblong, ca. 2 mm long, early deciduous. Leaves biternate, subsessile; rachises broadly winged, yellowish setulose on margins and along veins, primary rachis 1.8–3 cm long, lateral rachis 3–4 mm long; petiole not winged, 2–5 mm long; leaflets chartaceous, glabrous, sessile, the venation

brochidodromous, the apex acuminate and mucronate, the margins remotely glandular-serrate, with scattered, minute glandular hairs, terminal leaflet ovate-lanceolate, 3.4–10 × 1.4–4 cm, attenuate at base, lateral leaflet 2.4–6.3 × 0.9–2.6 cm, oblong-elliptic, asymmetrical (obtuse-acute) at base, lateral basal leaflet 1–1.8 × 0.8–1.5 cm, ovate. Inflorescence axillary, simple or compound; axes 4-angled, with glandular and simple pubescence, glabrescent; rachis obtusely angled, furrowed, glandular-pubescent; bracts 2–2.5 mm long, subulate, glandular-pubescent; bracteoles similar to the bracts but smaller; cincinni alternate or verticillate, 3–9 mm long, glandular-pubescent, 4-flowered. Sepals and disc glands persistent at the base of fruit; sepals 5, oblong, the external ca. 2.5 mm long, the internal ca. 3.2 mm long; disc glands 4, the central ones ovate, the lateral ones circular, smaller. Mericarps oblong, 2.7–3 cm long, with prominent reticulate venation, the apex obtuse-rounded, margins undulate, continuous from apex to base, coccus lentil-shaped, 7–8 × 5–6 mm, not reaching the margin, minutely pubescent, partitioning wall with elliptic outline, 4–5 mm wide; endocarp glabrous. Seeds hemicircular, ca. 4.5 mm wide, laterally subcompressed, dark brown, attached to base of locule, hilum semicircular; external cotyledon curved, internal cotyledon biplicate.

Distribution.—Known only from the state of Espírito Santo, Brazil.

Serjania erythrocaulis belongs to the *Serjania paradoxa* Radlk. group, within *Serjania* sect. *Eurycoccus*, because it has stems with xylem radially divided into five parts and mericarps with laterally subcompressed cocci. *Serjania erythrocaulis* seems to be closely related to *S. deflexa* Gardner. Both have biternate leaves, setulose stems, and lenticular mericarp cocci. However, *S. erythrocaulis* differs by having nearly sessile leaves with winged rachises (vs. petioles 5–6 cm long and unwinged rachises) and mericarps with puberulent cocci (vs. setulose).

Additional specimens examined: BRAZIL. Espírito Santo. Município Ibraçu, Estação Ecológica do Morro da Vargem, Trilha do Mirante, disturbed primary Atlantic valley forest, ca. 19°53'S, 40°23'W, 300–400 m,



31 May 1990 (fr), *Gomes, Boudet Fernandes, Martins et al.* 1170 (US).

SERJANIA SECT. *SERJANIA*

Serjania divaricocca G. V. Somner & Acev.-Rodr., sp. nov. (Fig. 2)

TYPE: BRAZIL. Espírito Santo: Município Santa Teresa, Valssugana Velha, Estação Biológica de Santa Lucia, west slope of Rio Tingui, gorge below waterfall by Alto do Itapinhoa, 18 Sep 1990 (fr), *G. V. Somner, P. Acevedo-Rdgz. & H. Q. Boudet Fernandes* 593 (HOLOTYPE: RBR; ISOTYPES: CTES, MBML, RB, NY, US).

A *Serjania lethalis* St.-Hil. mericarpis majoris coccis glabris reticulatis diversa.

Woody vine, glabrous. Branches subterete, glabrous, becoming triangular, hollow, and lenticellate with age; cross section of stems with a central, large, trigonous stele and 3(–4) peripheral, smaller, equidistant steles, embedded into the central one. Stipules glabrous, triangular, ca. 1 mm long. Leaves biternate; petioles 1–3.2 cm long, canaliculate; rachises canaliculate, primary rachis 2.3–4.3 cm long, lateral rachis 0.6–2.2 cm long; leaflets subcoriaceous, glabrous, the apex acute to shortly acuminate, the margins revolute, remotely glandular-serrate, the adaxial surface slightly glossy, the abaxial surface opaque, the venation mixed craspedodromous terminal leaflets elliptic to obovate, 6.2–8.7 × 3–4 cm, attenuate at base, the petiolule 4–8 mm long; lateral leaflets elliptic or oblong-elliptic, 5–8.5 × 2–3.4 cm, asymmetrical obtuse-cuneate at base, petiolule ca. 2 mm long. Inflorescence axillary or terminal. Sepals and disc glands persistent at the base of fruit; sepals 5, oblong, the external ca. 2.5 mm

long, the internal ca. 3.2 mm long; disc glands 4, the central ones ovate, the lateral ones circular, smaller. Mericarps hemispherical, 4–4.6 cm long, glabrous, strongly reticulate-veined, the coccus transversely ellipsoid, woody, not margined or winged dorsally, the wing 3.2–4.2 × 1.6–1.9 cm, narrowed below the cocci; partitioning wall with trigonous outline, ca. 5 mm wide, endocarp glabrous. Seeds ca. 7 × 5 mm, brown, obovoid, hilum crescent-shaped; external cotyledon curved, internal cotyledon biplicate.

Distribution.—*Serjania divaricocca* is known only from the type locality at the Biological Station of Santa Lucia in Espírito Santo, Brazil.

Serjania divaricocca belongs in *Serjania* sect. *Serjania* because its mericarp cocci are woody and ellipsoid to subglobose. *Serjania divaricocca* seems to be closely related to *S. lethalis* because of their similar vegetative morphology. However, it differs from the latter by its larger fruits with ellipsoid, divaricate, glabrous (vs. globose, nondivaricate, pubescent or tomentose) cocci.

Acknowledgments

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FIG. 2. *Serjania divaricocca*. A. Cross section of mature stem. B. Branch with leaves and tendrils. C. Infructescence. D. Schizocarp with three winged mericarps. (All from *Somner et al.* 593).