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## 126. SURIANACEAE

Family description and key to genera by G. Davidse.

Shrubs or trees; cork also in inner cortex. Leaves simple or pinnately compound, alternate, spiral or 2-ranked; stipules small or absent. Inflorescences cymose, usually terminal or solitary flowers; pedicels articulated. Flowers bisexual; calyx 5-lobed, connate basally, quincuncial, the lobes imbricate; petals 5 and free, or absent, imbricate; stamens 10, staminodial tissue forming a circular nectary disc between the base of the petals and the ovaries (this not developed in *Suriana*), the anthers dorsifixed, opening by lateral slits, the filaments filiform, the alternating filaments slightly shorter and sometimes without anthers; ovaries 1-5, free; styles lateral, more or less gynobasic; stigma clavate to capitate; ovules 1-2(-5) per carpel, unitegmic, campylotropous. Fruit a drupe-like or achene-like, 1-seeded carpel, the calyx persistent, accrescent or not; seed with the embryo curved or folded, the cotyledons incumbent. 5 gen. Pantropical.

*Recchia* and *Suriana* have traditionally been included in the Simaroubaceae. However, based on multiple lines of evidence, especially DNA analysis, there is now a consensus that both genera, along with three Australian genera, are best classified in their own family (Stevens, 2001 and onwards; Crayn et al., 1995; Fernando et al., 1993).

Bibliography: Crayn, D.M. et al. *Brittonia* 47: 397-402 (1995). Fernando, E.S. et al. *Mol. Phylogenet. Evol.* 2: 344-350 (1993). Stevens, P. F. *Angiosperm Phylogeny Website*. (2001 onwards).

1. Trees; leaves petiolate, the blades 10-32 cm, elliptic to ovate-elliptic; stipules small but persistent; flowers with a short gynophore and a nectary disc.

**1. Recchia**

1. Shrubs; leaves sessile, the blades 1-4.5 cm, linear-spatulate; stipules absent; flowers without a gynophore and nectary disc.

**2. Suriana**

**1. Recchia** Sessé et Moc. ex DC.

*Rigiostachys* Planch.

Por G. Davidse.

Trees. Leaves alternate, pinnately compound or simple, petiolate; stipules small. Inflorescences panicles, borne among the leaves or cauliflorous. Flowers bisexual; calyx with the 5 sepals united only at the base; corolla with the 5 petals free; stamens 10, borne on a circular nectary disc surrounding the ovaries; ovaries 2-3(4), free, borne on a short, thick gynophore, each with 2 ovules, the styles lateral, nearly basal, the stigma capitulate. Fruits 1-2, drupe-like carpels per flower; seed 1 per fruit, the testa thin, the endosperm absent, the cotyledons swollen. 3 spp. Mexico, Mesoamerica.

Bibliography: Wendt, T. y Lott, E.J. *Brittonia* 37: 219-225 (1985).

**1. Recchia simplicifolia** T. Wendt et E.J. Lott, *Brittonia* 37: 219 (1985). Isotype: Mexico, Veracruz, *Wendt et al.* 3409 (MO!). Illustr.: Wendt y Lott, *Brittonia* 37: 221, t. 1 (1985).

Trees 3-15 m, to 35 cm d.b.h. Bark of trunk grayish-brown, irregularly finely roughened by lenticellar warts 1-3 mm in diameter. Branchlets grayish- or reddish-brown, glabrous, with irregularly scattered round or oblong lenticels 0.2-0.5 mm. Stipules 0.5-1.5(-2.5) mm, deltate to lance-triangular, at first puberulent with appressed hairs but soon glabrate and indurate, persistent, the apex narrowly acute

to acuminate. Leaves distichous; blades  $10-32 \times 3-11$  cm, elliptic or ovate-elliptic to narrowly elliptic, glabrous, dull olive-green when dry, slightly paler beneath, chartaceous when dry, the base strongly oblique with the distal side rounded to subtruncate and the proximal side acute to cuneate, the margins entire, often irregularly weakly wavy, the tip abruptly acuminate from an acute to broadly rounded apex, the drip-tip usually 1-2.5 cm, the extreme tip minutely rounded, the midvein slightly raised above, strongly raised and more prominent beneath, the other venation slightly raised above, raised and prominent beneath, the secondary veins 11-18 per side excluding the tip, diverging  $55-75^\circ$  from the midrib, arcuately anastomosing 3-5 mm from the margins; petioles  $5-15 \times 1.2-2.5$  mm, glabrous, slightly canaliculate adaxially. Inflorescences up to  $35 \times 30$  cm, borne on the trunk and larger branches, occasionally also axillary among the leaves, in open irregularly many-branched to much contracted panicles, short- to long-pedunculate, the branches to 17 cm, branching irregular and generally divergent, sometimes reduced (especially in inflorescences among the leaves) to a short scaly axis a few mm long with 1 to few flowers; bract and 2 bracteoles subtending each flower, these puberulent, the bracts c. 0.4-0.5 mm, deltate, the bracteoles smaller, sterile bracts and bracteoles usually concentrated in the basal parts of the inflorescence branches; pedicels 1-4 mm, lightly puberulent, articulated c. 0.2 mm above the base. Flowers with the calyx spreading at anthesis, the 5 lobes subequal,  $2.5-4 \times 1.5-3$  mm, rounded, glabrous to pilosulose externally, glabrous internally, lightly ciliate, entire or slightly erose, persistent; petals  $3.5-5 \times 1-1.8$  mm, oblong-elliptic, white, cream, yellow or orange, early deciduous; stamens 10, early deciduous, the filaments 2-3 mm, glabrous, the anthers  $0.8-1 \times 0.8-1$  mm, versatile, 2-theous, opening by lateral longitudinal slits; carpels 2-3(4),  $0.8-0.9 \times c. 0.6$  mm, borne on a gynophore c. 0.5 mm, the styles 1.5-2.5 mm. Drupes 1 or 2 per flower, each 1.5-2 mm, spherical or slightly reniform, bright orange-red, the exocarp thin, papyraceous, smooth, brittle, breaking easily and irregularly, the mesocarp of a longitudinally oriented reticulum of fleshy fibers, yellow, sweet, the endocarp thin, light

brown; seed 1 per carpel, 8-10 × 12-15 mm, reniform, the testa thin, soft. *Rain forests, generally on limestone outcrops or steep slopes.* T (Cowan *et al.* 3409, MO); Ch (Wendt *et al.* 53244, MO); CR (Herrera 4291, MO). 40-700 m. (Mexico [Oaxaca, Veracruz], Mesoamerica.)

The other two species, *Recchia mexicana* Sessé et Moc. ex DC. and *R. connaroides* (Loes. et Soler.) Standl., from the Pacific slope of Mexico have compound leaves and inhabit dry deciduous forests.

## 2. *Suriana* L.

Por G. Davidse.

Shrubs or small trees. Stipules absent. Leaves simple, sessile, entire, narrow. Inflorescences of solitary flowers or terminal in few-flowered cymes. Flowers bisexual; sepals 5, united near the base, persistent; petals 5, imbricate, free, ephemeral; stamens 10, the filaments filiform, free, in 2 unequal sets, those opposite the petals shorter; nectary disc obsolete; ovaries 5, distinct, 1-celled; styles 5, lateral, inserted near the base of ovary, filiform, the stigmas capitate; ovules 2 in each cell, collateral, ascending. Fruits 5, separate, achene-like carpels per flower; embryo hippocrepiform. 1 sp. Nearly pantropical on seashores.

Bibliography: Beentje, H.J. *Fl. Trop. E. Afr.* 1-4 (1998). Fernando, E.S. *Mol. Phylogenet. Evol.* 2: 344-350 (1993). Juárez Sierra, C. *Fl. Veracruz* 58: 1-5 (1988).

**1. *Suriana maritima* L., *Sp. Pl.* 284 (1753).** Lectotype (designated by Basak, 1980): Plukenet, *Phytographia*, t. 241, f. 5 (1692). Illustr.: Juárez Sierra, *Fl. Veracruz* 58: 3, t. 1 (1988).

Shrubs 0.5-3 m, abundantly branched. Stems gray-green tomentose and with glandular hairs when young; young twigs with prominent leaf scars. Leaves 1-4.5 cm × 2-6 mm, crowded towards the

tips of the branches, gray-green, somewhat fleshy, sessile, linear-spatulate, flat, the upper surface densely puberulent, the lower surface less densely puberulent, the base long-attenuate, the margins entire, the apex rounded to acute. Inflorescences 1-6-flowered; rachis and pedicels tomentose and with glandular hairs; bracts 4-11 mm, leaf-like, acuminate. Flowers borne more or less among the leaves; sepals 6-10 mm, lanceolate to ovate, tomentulose on both surfaces, the apex acuminate; petals 6-9 mm, obovate, yellow, the base clawed for up to 1 mm, the apex broadly obtuse, with a few, widely spaced teeth, the veins prominent in dried specimens; stamens opposite the sepals 4-4.5 mm, those opposite the petals 3-4 mm, the filaments sparsely to moderately pilose in the lower 1/4-3/4, the anthers 0.8-0.9 mm; ovary densely tomentose; styles 3-4 mm, glabrous. Achenes 4-5 × 3-3.5 mm, rounded triangular in cross-section, densely tomentose. *Sandy seashores and dunes*. Y (*Davidse y Davidse 29489*, MO); QR (*Chater et al. 14*, MO); B (*Walker 1114*, MO); H (*Nelson et al. 213*, MO); N (*Stevens 10501*, MO); P (*Hammel y D'Arcy 5063*, MO). 0-2 m.(Estados Unidos [Florida], México, Mesoamérica, Antillas, Colombia, Venezuela, Brazil, Asia, East Africa, Australia, Pacific Islands.)

The fruits are capable of floating and the seeds maintain their viability for a long time. For these reasons the species has become nearly cosmopolitan along tropical beaches and dunes.