

A new species of *Securidaca* L. (Polygalaceae) from Peru

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Abstract

Securidaca dolod sp.n. (Polygalaceae) is described from Peru. This species is related to *S. rivinifolia* ST.-HIL., from which it differs in the indumentum of leaves, in the grey-pruinose abaxial leaf surfaces and in the shape of the crests on the proximal part of the single-winged samaras. A full description of this species including illustrations is presented.

Key words: Polygalaceae, *Securidaca*, South America, Peru.

Zusammenfassung

Securidaca dolod sp.n. (Polygalaceae) aus Peru wird hier beschrieben. Diese Art ist verwandt mit *S. rivinifolia* ST.-HIL. und unterscheidet sich von dieser in der Behaarung der Blätter, in der glauken Färbung der Blattunterseiten und in der Form der Anhängsel der geflügelten Schließfrucht. Eine ausführliche Beschreibung, sowie einige Abbildungen sind beigelegt.

Introduction

The genus *Securidaca* is characterized by papilionaceous flowers, single-winged samaras, and is represented by scandent shrubs and lianas. It occurs in the tropical and subtropical areas of the New and Old World (except Australia), and has yet to be monographed. According to MELCHIOR (1964) it comprises 30 species, while LEWIS & HERRERA-MACBRYDE (1969) list ca. 50, and MABBERLEY (1987) and GENTRY (1993) 80. MACBRIDE (1949) and BRAKO & ZARUCCHI (1993) cite 6 and 9 species, respectively, from Peru.

The new species described here belongs to the group characterized by flat or only slightly prominent venation on adaxial leaf surfaces. It is related to *S. rivinifolia* ST.-HIL., differing, however, in the appressed, more scattered indumentum, in the glaucous abaxial leaf surfaces, and in the markedly prominent, undulated, crest-like appendages on the proximal part of the single-winged samara. Another related species is *S. micheliana* CHODAT from Costa Rica, which possesses larger, acuminate leaves and basally ramified inflorescences subtended by large leaves.

Securidaca dolod B.WALLN. sp.n. (fig. 1 - 4)

Type: Peru, Dept. Huanuco, Prov. Pachitea, western slope of Cerro del Sira, ca. 20 - 24 km SE of Puerto Inca, montane rain forest surrounding the temporary "Campamento Sira"

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Flora of Peru

Polygaceae

Securidaca

Dept. Huanuco, Prov. Pachitea, region of Pucallpa, western part of the "Sira mountains" and adjacent lowland; from c. 20 km to 24 km SE of Puerto Inca, crest of the mountain range going west to east from the "Campamento Oro" (9°29' S, 74°50' W, 360 msn) to the "Campamento Sira" (9°28' S, 74°47' W, 800 msn) and continuing to NNE to the beginning of the cloud forest at 1050 msn, next to the Campamento "Pato rojo" (9°27' S, 74°46' W, 1080 msn). --- Primary mountain rain forest, having some species and features of the lowland rain forest. Soils: Brown and red latosols with rocky outcrops.

Liana with red flowers; this plant at 750 msn.

leg: B. Wallnöfer

Nº 11-8488

date: 8. April 1988

Austrian-Peruvian Sira Expedition 1987/1988; field work directed by W. Morawetz. For geographical and other details see: MORAWETZ, G. et al. (1990): Plant Syst. Evol.

Fig. 1: *Securidaca dolod* B. WALLN. (Wallnöfer 11-8488)

(9°28'S, 74°47'W), red-brown latosols, ca. 800 m, 11 Jun 1988 (fl, fr)¹, **Wallnöfer 11-11688** [holotype: W² (photo W 2001 + 2002); isotypes: G, NY, LZ, USM].

Diagnosis: Differt a *Securidaca rivinifolia* pilis appressis foliorum, glandulis stipularum sessilibus et appendicibus in parte proximale fructus magis prominentibus.

Canopy liana, observed growing to a height of 25 m; flowering branches lateral, sweeping, divaricate, markedly exposed above tree crowns, and possessing only small leaves; branches terete, densely strigose (sensu HEWSON 1988) when young, soon glabrescent, smooth to longitudinally striate, dark brown when dry, sometimes developing tendril-like loops (thigmotaxis); stipular-nectaries sessile, well visible, especially on distal parts of twigs; **leaves** alternate; petioles 2 - 4 mm long, 0.7 mm wide, strigose; lamina chartaceous, elliptic to broadly lanceolate, often slightly ovate, (1.5 -) 3 - 4.5 (- 5.7) x (0.8 -) 1.5 - 2 (- 2.5) cm, with scattered, appressed, straight, (0.06 -) 0.13 (- 0.21) mm long hairs, and densely, minutely papillose-vesiculose on both surfaces; abaxial surfaces dark green and dull, dark grey-brown when dry; adaxial surfaces grey-pruinose (surface-film rubs off easily) in the living stage, grey-light brown when dry; margins entire, slightly revolute; apices obtuse to shortly acute, sometimes rounded; bases cuneate to slightly rounded; venation brochidodromous (HICKEY 1979); primary vein flat or slightly impressed adaxially, prominent abaxially; secondary and tertiary veins slightly prominent on both surfaces; secondary veins ± straight, somewhat irregular, 0.2 - 1 cm distant from each other; **inflorescences** axillary or superaxillary, epedunculate, racemose, densely strigose; axis 0.4 - 1.6 cm long; subtended by juvenile, small leaves; anthesis proceeding from proximal to distal parts of inflorescences; **flowers**³ (fig. 2) zygomorphic, pedicels 3 - 5 mm long, thin; bracts and bracteoles sessile, inconspicuous, hardly visible among trichomes; outer three sepals strigose-tomentose on both surfaces, green, the [with respect to the inflorescence axis] adaxial (dorsal) one markedly concave on its adaxial side, ca. 3.1 x 1.5 mm, the two abaxial (ventral) ones flat, ca. 2.2 x 1.3 mm; inner two sepals ("lateral wings") petaloid, glabrous, yellow-green proximally, reddish-brown to wine-red distally, strongly involute, clawed basally, slightly asymmetric, ca. 6 x 3.6 mm when expanded; petals glabrous, clawed and basally adnate to the staminal tube; lateral two petals wine-red to brown-red, asymmetric, ca. 5.3 x 2.1 mm; abaxial (ventral) petal ("keel") reddish, ca. 6.3 x 3.3 mm, often asymmetric, its apical appendages yellowish, strongly plicate and irregular; stamens 7 - 8; staminal tube ca. 3.3 x 3.4 mm, greenish, open adaxially, glabrous except along the adaxial margins outside, scattered tomentose inside; free part of filaments ca. 0.5 mm long, glabrous, greenish; anthers yellow, ca. 0.8 x 0.2 mm; style ca. 3.7 mm long, curved distally, glabrous; stigma dark red-brown; ovary ca. 0.9 x 0.7 mm, superior, slightly flattened laterally, glabrous; **fruits** (single-winged samaras; see fig. 4) glabrous, light green when fresh, light brown when dry, pendent; basal body of fruit (except wing) ca. 0.8 cm in diameter, covered with irregular, undulated, markedly prominent crests; wing 3.5 - 4 x 1.5 cm, its [with respect to the inflorescence axis] adaxial margin entire and curved, the abaxial margin irregularly and shallowly sinuate, often dentate distally.

Epithet: The name is coined arbitrarily (see GREUTER et al. 1994: Art. 23.2).

¹ Abbreviations: fl = flowering; fr = fruiting.

² Acronyms of herbaria according to HOLMGREN et al. (1990).

³ The colours mentioned refer to the living stage.

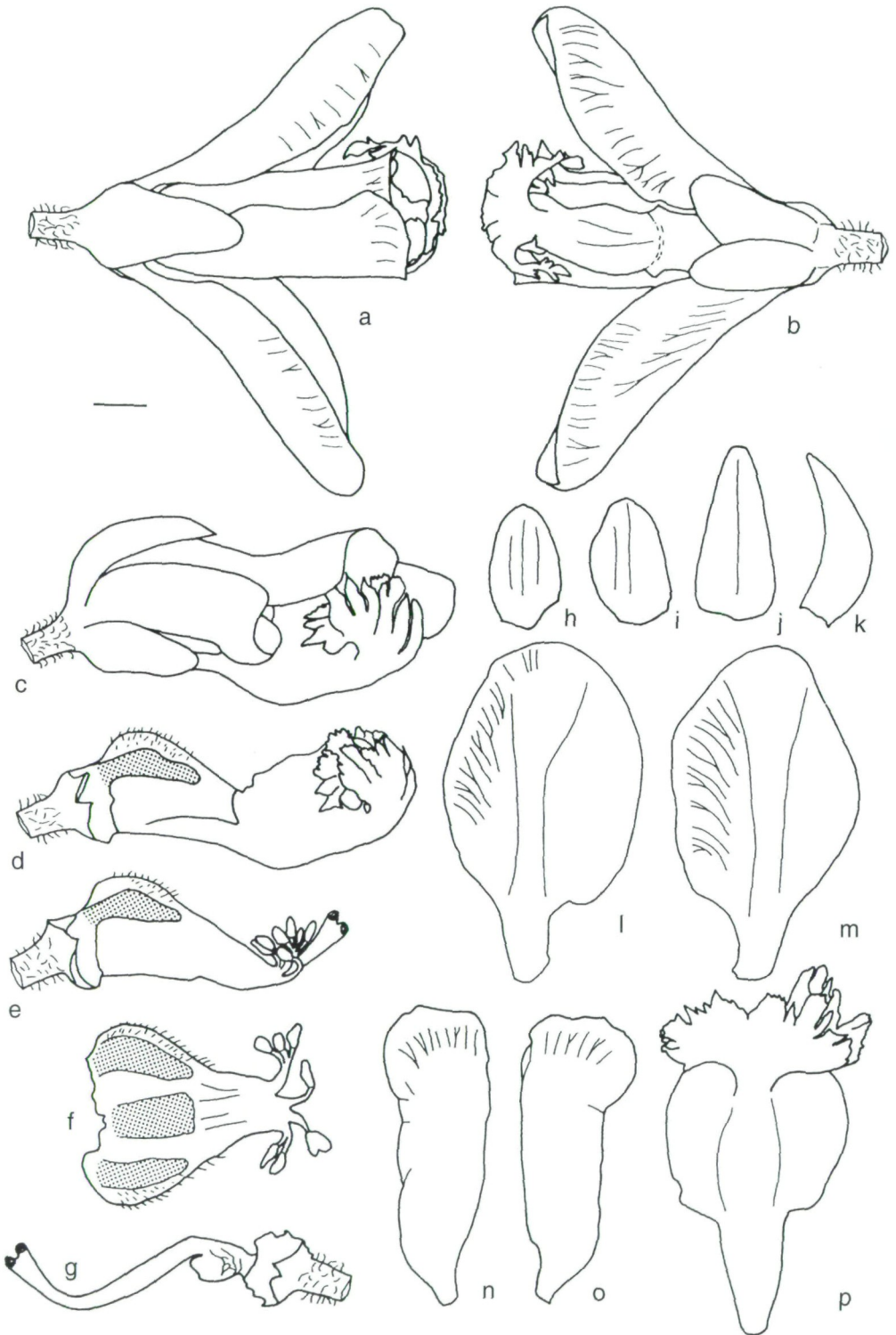




Fig. 3: Partial-Inflorescence of *Securidaca dolod* (from Wallnöfer 11-8488). Bar = 1 cm.

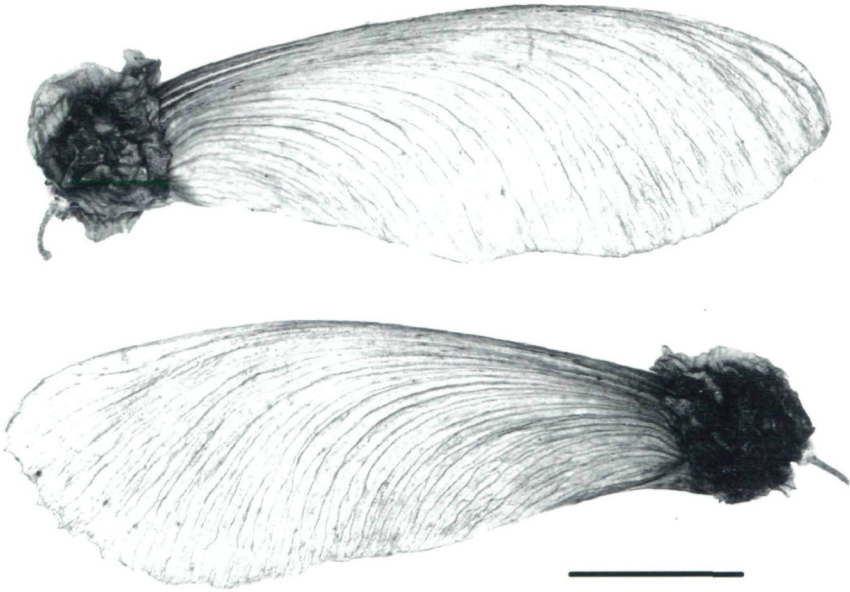


Fig. 4: Fruits of *Securidaca dolod* (from Wallnöfer 11-11688). Bar = 1 cm.

Fig. 2: Flower of *Securidaca dolod*: **a**) adaxial side; **b**) abaxial side; **c**) lateral side; **d**) staminal-tube and ventral petal, after removal of sepals and lateral petals; **e**) staminal tube with anthers; **f**) exterior side of the expanded staminal tube; **g**) ovary, style and stigma; **h - i**) ventral sepals; **j - k**) dorsal sepal (**k**: lateral view); **l - m**) expanded, lateral, petaloid sepals; **n - o**) lateral petals; **p**) expanded, ventral petal. — Dotted areas in **d - f** indicate sites of adnation of petals to staminal tube. Sepals and petals shown from abaxial side. From alcohol-preserved material, Wallnöfer 11-8488. Bar = 1 mm.

Paratypes: Peru, Dept. Huanuco, Prov. Pachitea, western slope of Cerro del Sira, ca. 20 - 24 km SE of Puerto Inca, montane rain forest between the temporary camp "Casa Campa" (9°29'S, 74°48'W) and the temporary "Campamento Sira" (9°28'S, 74°47'W), red-brown latosols, ca. 750 m, 8 Apr 1988 (fl), **Wallnöfer 11-8488** [F, K, LZ, USM, W].

Dept. Junin, Pichinaki, between Satipo and Bridge over the Chanchamayo, alt. 900 - 1000 m, premontane wet forest with *Cedrelinga* dominant, 10°50'S, ca. 75°W, 28 Jun 1982 (fr), **Gentry, Cook, Smith & Tredwell 37262** [US 2981087]; "liana, fruits green".

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