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NEW GESNERIACEAE FROM PERU AND ECUADOR

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Several new species have appeared among specimens received for identification from collections made in Ecuador and Peru. Three are described here. The new species from Peru will be included in the treatment of the Gesneriaceae now being prepared for the Flora of Peru.

Anetanthus rubra L. E. Skog, sp. nov. Figure 1

A. gracili Hiern affinis, corollis atrorubentibus longioribus (ca. 1 cm longis) foliis ovatis differt.

Terrestrial herbs pendent from cliff faces; stems to 50 cm long, slender, 2-3 mm in diameter at base, green to brown, pilose; branches frequent and usually very short. Leaves opposite, equal to subequal, blades ovate, 1-4 cm long, 0.9-2.3 cm wide, membranous, the apex acute, the base acute to subcordate or suboblique, the margin dentate to serrate, above medium green, appressed pilose or sparsely sericeous, below light green, appressed pilose along the veins; petioles subsessile to 1 cm long, pilose. Inflorescences axillary, numerous, of 3-6 flowers, racemose on slender, pilose peduncles to 7 cm long; pedicels ca. 1 cm long; calyx tube 0.5-1.0 mm long, green, sparsely pilose, lobes erect, lanceolate, 2-3 mm long, ca. 1 mm wide, green, long glandular-pilose outside, short pilose on the inner side, apex acuminate; corolla tube subcylindric, ca. 1 cm long, 2-4 mm wide at the base, narrowing slightly at the middle and slightly wider at the throat, deep red, sparsely pilose at the base of the lobes, outside glabrous, lobes orbicular, ca. 3 mm across, somewhat spreading; filaments adnate to the corolla base for ca. 2 mm, curved above, anthers ca. 0.5 mm long, coherent in 2 pairs; disc cupulate but somewhat lobed; ovary ovoid, puberulous above, style ca. 5 mm long, mostly glabrous, but glandular, stigma stomatomorphic. Capsule elongate ovoid, ca. 7 mm long, 2-valved; seed suborbicular in outline, flattened, ca. 0.3 mm in diameter, with a wing at the margin, light brown.

Etymology: The species name refers to the deep red color of the corollas.

TYPE: *PERU:* AMAZONAS: Provincia de Chachapoyas, scrub forest along Rio Ventilla 1-2 km W of Molinopampa, alt. 2350-2400 m, on dry cliff faces, infrequent, corolla deep red, 23-25 July 1962, *Wurdack 1469* (HOLOTYPE: US; ISOTYPE: NY).

Distribution: This species is known only from Peru from a single collection made in the department of Amazonas.

The genus *Anetanthus* seems to be anomalous in the Gesneriaceae in the shape of the flattened winged seeds, but several other characters place the genus in this family. *Anetanthus rubra* differs from the other species found in Peru, the more widespread *A. gracilis* Hiern, in having dark red corollas, ca. 1 cm long, as well as ovate leaves and occurs at 2350-2400 m elevation. *Anetanthus gracilis* has white corollas ca. 0.5 cm long, elliptic or lanceolate leaves and usually occurs below 1000 m elevation.

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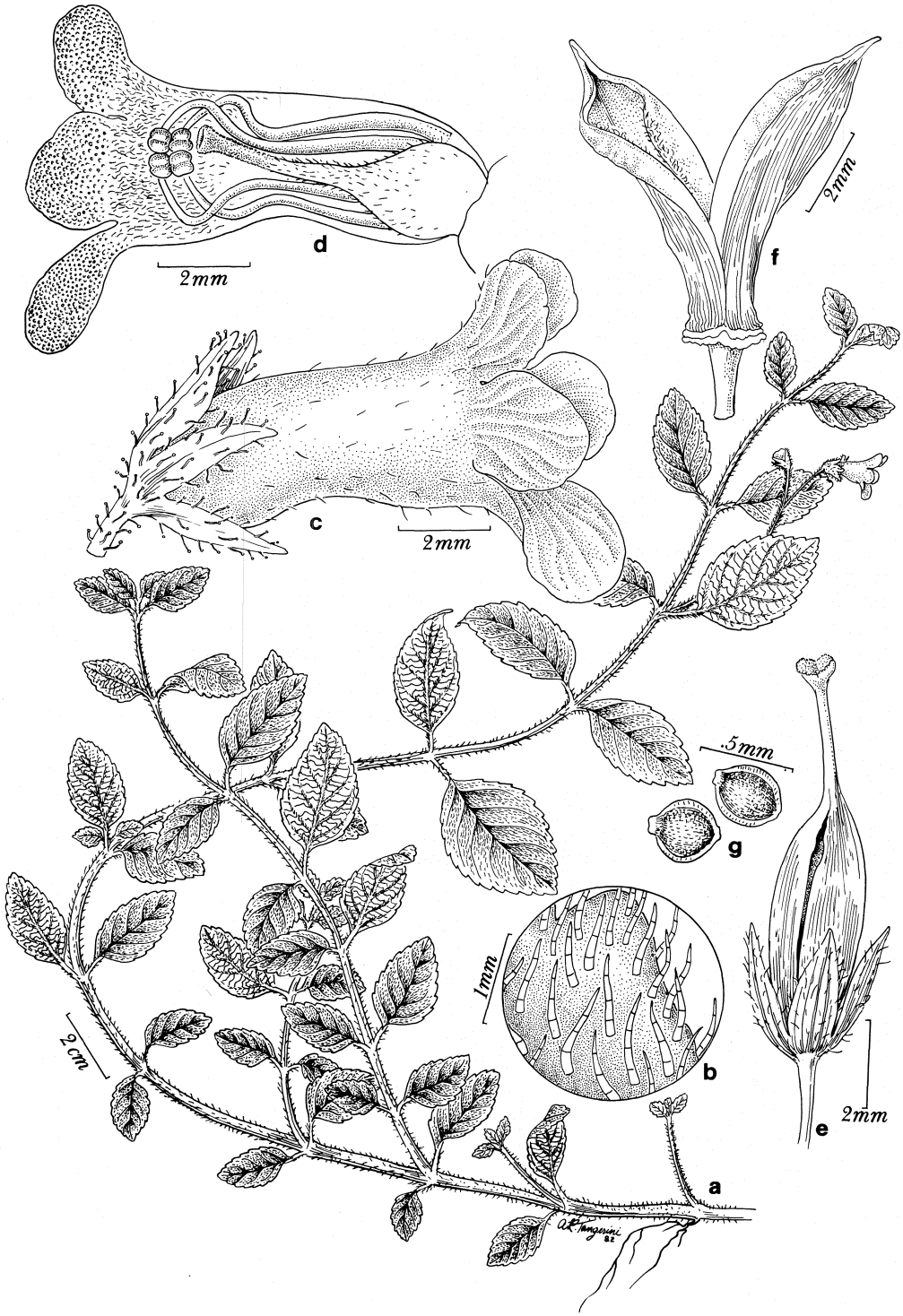

Figure 1. *Anetanthus rubra* (after *Wurdack 1469*). a, habit; b, upper leaf surface; c, flower; d, flower (longitudinal section); e, young fruit; f, opened capsule; g, seeds.

Besleria quadrangulata L. E. Skog, sp. nov. Figure 2

Species insignis caulibus quadrangularibus alatis glabris, inflorescentiis congestis, calycibus aurantiacis et corollis flavis nitidis.

Suffrutescent herbs; stems to 2 m tall, ca. 1 cm wide, quadrangular, winged at the outer angles, somewhat succulent, green, puberulent near the apex, glabrous, but with minute glands below; internodes ca. 1 cm long; branches not evident. Leaves decussate, those of a pair equal; blades oblanceolate to elliptic or subfalcate, 18-30 cm long, 6-11 cm wide, subcoriaceous, the apex acute to acuminate, the base cuneate to decurrent into the petiole, the margin entire, thickened slightly, strigillose, above dark green, nitid, glabrous, below lighter green, sparsely strigillose along the veins; petioles 3-8 cm long, glabrous. Inflorescences from the upper leaf axils, of several flowers in fasciculate cymes; peduncles very short or lacking; pedicels arching, 0.8-1.5 cm long, ca. 1 mm in diameter, glabrous, but with minute glands; calyx lobes clasping the corolla, rotund, connate 1-2 mm at the base, to 1 cm long, orange, nitid, glabrous inside and outside, but margin ciliate, apex indented; corolla erect in the calyx, cylindric, but ventricose on lower side at middle, ca. 1 cm long, orange, nitid, inside glabrous, outside glandular, limb lobes slightly spreading, semiorbicular, 1-2 mm long, the margin ciliate; stamens included, filaments adnate to base of corolla tube for 1-2 mm, each glabrous, curved and coiling after anthesis, anthers orbicular, ca. 1 mm long, coherent; disc lobed, glabrous; ovary ovoid, glabrous below, strigillose above, style ca. 7 mm long, sparsely strigillose, stigma obliquely stomatomorphic. Berry subspherical, 4-5 mm in diameter, brown, glabrous; seeds oblong, ca. 0.5 mm long, obliquely striate, light brown.

Etymology: The species name refers to the prominently winged square stems of the plants.

TYPE: *ECUADOR:* NAPO: San Raphael Falls, alt. 1310 m, 17 Apr. 1980, *Bleiweiss 23* (HOLOTYPE: US; ISOTYPES: to be distributed).

Distribution: Known only from Napo province in Ecuador, but the species may also be expected in Putumayo, Colombia.

Additional material examined: *ECUADOR:* NAPO: Trail in deep forest above Cesaria, Rio Chingual, herb-shrub to 2 m high, fls. yellow, calyx clear orange, 8 Aug. 1943, *Steere 8020* (US).

Quadrangular stems are occasionally found in various genera of the Gesneriaceae, e.g., *Drymonia*, and in other species of *Besleria*. In herbaceous or succulent species the shape of the stem is obscured on preservation and seldom noted on herbarium labels. The wings on the angles make the character in *Besleria quadrangulata* obvious. Observations of living material in the field or greenhouse may reveal quadrangularity as a more common character than now known. The adaptive nature of the shape of the nearly square stem is unknown.

Figure 2. *Besleria quadrangulata* (after *Bleiweiss 1023*). a, habit; b, cross-section of stem; c, young berry; d, flower; e, corolla (cut open) showing stamens adnate to corolla base; f, flower (longitudinal section) with corolla removed, to show ovary and disc; g. berry; h, seeds.

Cremosperma peruvianum L. E. Skog, sp. nov. Figure 3

C. serrato Morton affinis, habitu minore (10-15 cm altis), calycis lobis ovato-triangularibus foliis in basibus laminarum obliquis differt.

Terrestrial herbs; stems somewhat stoloniferous with upright branches 10-15 cm tall, slender, 2-4 mm in diameter, green, villous to densely strigose. Leaves nearly equal in a pair; blades elliptic to obovate, 1.7-7.3 cm long, 1.1-3.1 cm wide, membranous, the apex broadly acute to rounded, the base oblique, the margin crenate to serrate, above dark green, subbullate to deeply furrowed along the impressed veins, subglabrous or with multicellular trichomes at the apices of the bullae, below lighter green, strigose on the veins; petioles 0.3-1.5 cm long, pilose. Inflorescences from the upper axils, appearing terminal, equalling the leaves, cymose-racemose, of one to many flowers; peduncles erect, slender, 1.4-3.6 cm long, sparsely pilose; pedicels 2-4 mm long, densely pilose; calyx tube turbinate, 1-2 mm long, green, pilose, lobes ovate-triangular, connate ca. 1 mm above the ovary, free part ca. 1 mm long, outside pilose, inside glabrous; complete corollas lacking from specimens examined, but the tube funnelform, ca. 7 mm long, white below, glabous both inside and outside at the base, sparsely pilose (?) above, limb of 5 orbicular (?) lobes, crenulate (?), lower 1/3 of throat with purple streaks (fide *Wolfe 12288*); filaments adnate to corolla tube base for ca. 2.5 mm, free part ca. 2 mm long, reddish above, anthers ca. 0.5 mm across, coherent; disc semi-annular, ca. 1.5 mm long; ovary narrowly ovoid, style glabrous, 3-5 mm long, stigma stomatomorphic, puberulent. Capsule subglobose; seeds oblong, ca. 0.5 mm long, coarsely reticulate.

Etymology: The species name refers to the country of origin.

TYPE: *PERU:* HUANUCO: Southwestern slope of the Rio LlullaPichis watershed, on the ascent of Cerros del Sira, in dense rain forest at Camp 3 (Laguna), 9° 26′ S, 74° 45′ W, alt. 1290 m, 12 July 1969, *Wolfe 12288* (HOLOTYPE: US; ISOTYPES: BH, NA).

Distribution: Known only from near the type locality in Peru.

Additional material examined: *PERU:* HUANUCO: Southwestern slope of the Rio LlullaPichis watershed, on the ascent of Cerros del Sira, in dense cloud forest at Camp 3 (Laguna), 9° 26′ S, 74° 45′ W, alt. 1290 m, 19 July 1969, *Dudley 13020* (NA); Southwestern slope of the Rio LlullaPichis watershed, on the ascent of Cerros del Sira, in dense cloud forest halfway between Camp 3 (Laguna) and Camp 4 (Peligroso), alt. 1400 m, 22 July 1969, *Dudley 13118* (NA); Southwestern slope of the Rio LlullaPichis watershed, on the ascent of Cerros del Sira, ground cover on forest floor, in very dense, damp, dark, drippy cloud forest in shallow valley just beyond Camp 4 (Peligroso), alt. 1540 m, 25 July 1969, *Dudley 13286* (NA).

The discovery of *Cremosperma peruvianum* extends the distribution of the genus farther south in Peru. Now known from Panama to Peru, species of *Cremosperma* are, however, concentrated in the Choco region of Colombia and in Ecuador. The most similar species to the one described above seems to be *C. serratum* Morton, known from a single collection (*Killip 35234*) from Choco, Colombia. *Cremosperma peruvianum* differs in being generally more diminutive, in having ovate-triangular calyx lobes and oblique leaf bases.

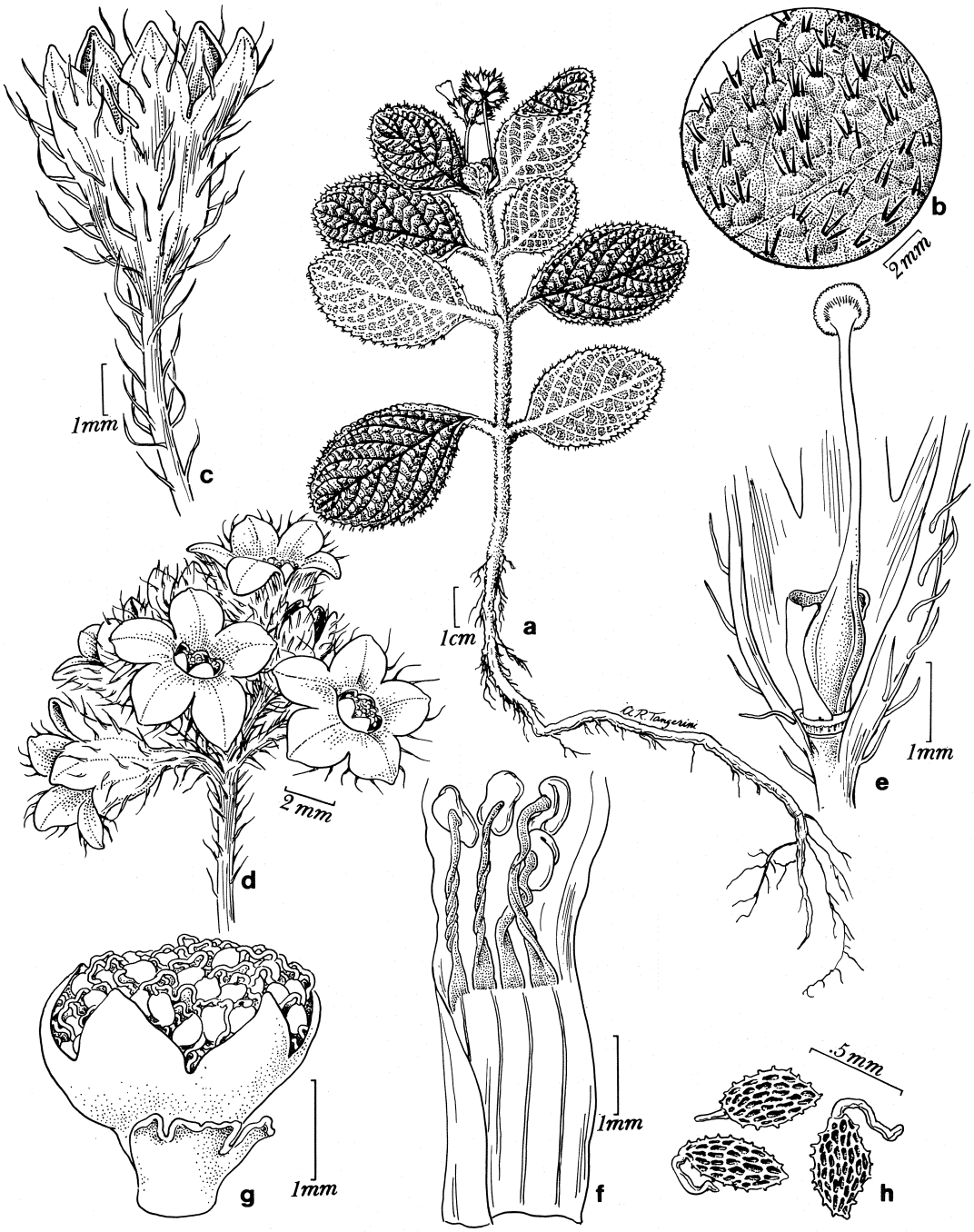

Figure 3. *Cremosperma peruvianum* (after *Wolfe 12288* and *Dudley 13020*). a, habit. b, upper leaf surface; c, calyx; d, infructescence; e, flower base (longitudinal section) showing disc. f, corolla base (opened) showing adnate stamens; g, opened fruit; h, seeds.