

New Taxa and Combinations in the Tribe Juanulloeae (Solanaceae)

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ABSTRACT. A new species of *Trianaea* from eastern Ecuador, *T. naeka*, is described and illustrated. Several new combinations in the genera *Trianaea*, *Schultesianthus*, and *Juanulloa* are made in preparation of a larger work on the phylogeny of the tribe Juanulloeae.

A recent phylogenetic study of the tribe Juanulloeae (Persson et al., 1994) has necessitated several new combinations in the genera *Trianaea*, *Schultesianthus*, and *Juanulloa*. These nomenclatural changes are made here in preparation for a conspectus of the tribe and a more ample discussion of relationships within the groups. In addition to the nomenclatural changes identified, several new taxa were discovered, one of which is described here. Other new taxa will be described as more material becomes available.

Trianaea naeka S. Knapp, sp. nov. TYPE: Ecuador. Morona Santiago: Colinas, above the Misión Salesiana-Shuar, 800–1000 m, 3°25'S, 78°35'W, 6 Nov. 1986, Neill & Cerón 7449 (holotype, MO; isotypes, NY, QCNE). Figure 1.

Species *Trianaeae nobili* Planchon & Linden similis, sed foliis linearis pubescentibus, inflorescentiis unifloribus differt.

Epiphytic shrub or liana at forest edge; stems densely hirsute, the trichomes 4–5 mm long, consisting of a simple, 2–4-celled, uniseriate tip arising from a multicellular, multiseriate, pustular base, the apex minutely glandular, golden brown, the uniseriate tips of the trichomes often deciduous, leaving the pustulate base; bark of older stems pale tan, loose and somewhat exfoliating. Leaves 0.4–1 × 5–10 cm, linear, coriaceous, drying dark olive green, the venation obscure, ca. 8–10 primary veins, densely hirsute with simple, uniseriate, minutely glandular trichomes like those of the stems, but lacking the pustular bases, arising directly from the epidermis, the base attenuate, the margins revolute, the apex acuminate; petiole 5–8 mm, somewhat winged from the attenuate leaf base, drying dark brown. Inflorescence terminal, consisting of a single flower. Buds not known. Pedicel at anthesis

18–20 cm long and flexuous, 2 mm diam. at the base, ca. 10 mm diam. at the apex, densely pubescent with simple uniseriate 2–4-celled trichomes, the trichomes 4–5 mm, less rigid than those of the stems, lacking pustulate bases. Flowers with the calyx tube 1.5–2 cm, conical, the lobes 4–5 cm, triangular, pubescent with simple uniseriate trichomes like those of the pedicel, sparsely pubescent within; corolla campanulate, greenish brown or purplish ("clear lila" fide *van der Werff & Gudiño 11246*), the tube flaring, ca. 5 cm long, the lobes rounded, 1.5–2 cm long, reflexed at anthesis, sparsely pubescent with trichomes like the calyx, the trichomes weak and crumpling; stamens with the filaments ca. 3.5 cm, inserted in the basal 1/3 of the corolla tube, the anthers ca. 7 × 3 mm, ventrifixed; ovary glabrous, the style 5.5–6 cm long, glabrous, the stigma globose, ca. 5 mm diam., papillose. Fruit and seeds not known.

Distribution. Known only from wet premontane rainforest in eastern Ecuador, from 800 to 1000 m elevation.

Trianaea naeka is a striking plant and cannot be confused with any other species of *Trianaea*, or with any other species of epiphytic Solanaceae. The narrowly linear, densely pubescent leaves are found nowhere else in the tribe. Pollen morphology is of the *Trianaea nobilis* type (Persson et al., 1994), where the exine ornamentation is reticulate at the equator and at the poles but the muri are not joined in the mesocolpium to form a tectum.

The specific epithet, *naeka*, is the Shuar name (given by Antonio Wampash, Shuar informant) for this plant.

Paratype. ECUADOR. **Morona Santiago:** along new road Mendez-Morona, km 30–35, 800 m, 19 Aug. 1989, *van der Werff & Gudiño 11246* (QCNE).

Trianaea brevipes (Cuatrecasas) S. Knapp, comb. et stat. nov. Basionym: *Trianaea spectabilis* Cuatrecasas var. *brevipes*, J. Wash. Acad. Sci. 49: 271. 1959. TYPE: Colombia. Cundinamarca: Monterredondo between Guaybetal and Limoncito, Cordillera Oriental, forests, 1800–2100 m, 6 July 1955, *Vogel 6* (holotype, US; isotype, M).



Figure 1. Holotype of *Trianaea naeka* S. Knapp (Neill & Cerón 7449, MO).

Schultesianthus venosus (Standley & C. V. Morton) S. Knapp, comb. nov. Basionym: *Markea venosa* Standley & C. V. Morton, Publ. Field Mus. Nat. Hist., Bot. 18: 1065. 1938. TYPE: Costa Rica. Alajuela: Vara Blanca de Sarapiquí, 1770 m, Oct. 1937, *Skutch 3355* (holotype, US 1643419).

Schultesianthus crosbianus (D'Arcy) S. Knapp, comb. nov. Basionym: *Markea crosbiana* D'Arcy, Ann. Missouri Bot. Gard. 60: 654. 1973 [1974]. TYPE: Panama. Chiriquí: Cerro Horqueta NW of Boquete, 5000–5800 ft., *Dwyer et al. 430* (holotype, MO).

Schultesianthus uniflorus (Lundell) S. Knapp, comb. nov. Basionym: *Markea uniflora* Lundell, Phytologia 1: 340. 1939. TYPE: Mexico. Chiapas: Volcán Tacana, 2800 m, 27 Mar. 1939, *Matuda 2816* (holotype, MICH; isotypes, MEXU, MO).

Juanulloa wardiana (D'Arcy) S. Knapp, comb. nov. Basionym: *Rahowardiana wardiana* D'Arcy, Ann. Missouri Bot. Gard. 60: 671. 1973 [1974]. TYPE: Panama. Coclé: beyond La Mesa towards El Llano and the Panamá/Coclé border N of El Valle de Antón, 800–860 m, *Luteyn 3150* (holotype, DUKE, isotype, MO).

Juanulloa globifera (S. Knapp & D'Arcy) S. Knapp, comb. nov. Basionym: *Rahowardiana globifera* S. Knapp & D'Arcy, Novon 3: 429. 1993. TYPE: Colombia. Antioquia: Parque Nacional Natural "Las Orquideas," Sector Venados, 890 m, 6°33'N, 76°19'W, 1 Apr. 1988, *Cogollo et al. 2895* (holotype, JAUM-018167; isotypes, COL, FMB, JAUM, MO).

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Literature Cited

Persson, V., S. Knapp & S. Blackmore. 1994. Pollen morphology and systematics of tribe Juanulloeae A. T. Hunziker (Solanaceae). *Rev. Palaeobot. Palynol.* 83: 1–30.