Jaltomata II: new combinations for five South American species (Solanaceae)

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Mione, T. (Biological Sciences, Central Connecticut State University, New Britain, CT 06050-4010, U.S.A.). *Jaltomata* II: new combinations for five South American species (Solanaceae). Brittonia 51: 31–33. 1999.—The following species, originally described in the genus *Saracha* Ruiz & Pav., are transferred to *Jaltomata,* in accordance with contemporary generic boundaries. **Jaltomata auriculata** (Miers) Mione is distributed from Venezuela to Peru; **J. contorta** (Ruiz & Pav.) Mione and **J. diversa** (J. F. Macbr.) Mione both occur in Peru; **J. herrerae** (C. V. Morton) Mione is distributed in Peru and Bolivia; **J. nitida** (Bitter) Mione occurs in Venezuela.

Key words: Andean flora, *Jaltomata, Saracha,* Solanaceae

Jaltomata Schltdl. is a neotropical genus of approximately 35 species, occurring from Arizona (U.S.A.) south to Bolivia, in the Galápagos Islands, and the Greater Antilles. Peru and Mexico are centers of species diversity. The genus includes herbs and shrubs with diverse corolla forms, ranging from rotate to tubular to urceolate; it extends from near sea level to over 4000 m (Mione et al., 1993).

Saracha was first described by Ruiz and Pavón (1794). In the second volume of that work (Ruiz & Pavón, 1799), species now recognized as *Saracha* and others now recognized as *Jaltomata* were described as *Saracha.* The result was a polyphyletic group that has since been divided. *Jaltomata* was described by Schlechtendal (1838), but the next year he (1839) reduced *Jaltomata* to synonymy under *Saracha.* Gentry (1973) resurrected *Jaltomata* and all subsequent workers have been in agreement that these are distinct genera (Mione, 1992).

Jaltomata auriculata (Miers) Mione, comb. nov.

Saracha auriculata Miers, Ann. Mag. Nat. Hist., ser. 2, 3: 448. 1849. Miers, Illustr. S. Amer. Pl. 2: 18, t. 38A. 1857. *Witheringia auriculata* (Miers) Miers, Ann. Mag. Nat. Hist., ser. 2, 11: 92. 1853. TYPE: COLOMBIA. Dept. Tolima, Playas del Combeima, 4°19′N, 75°09′W, *J. Goudot s.n.* (HOLOTYPE: K; ISOTYPE: P, photo F neg. 39249). This taxonomic transfer was proposed by Castillo (unpubl., 1974: 115).

Distribution and ecology.—Venezuela, Colombia, Ecuador, and Peru; collected at 1400–2100 m, usually in disturbed habitats including roadsides. Flowering and fruiting November–March and August. *Jaltomata auriculata* is autogamous and self-compatible; fruits were abundantly self-set in a pollinator-free greenhouse. Fruits are bright red, 5–11 mm across, and remain attached to the parent plant after ripening, suggesting bird dispersal.

Jaltomata auriculata resembles the Venezuelan species *J. nitida* (Bitter) Mione. Both possess glabrate leaves, white flowers, and red fruits. They are easily distinguished, however, as *J. auriculata* has 5–6 flowers per inflorescence, the filaments are villous along the lower half, and the calyx diameter (at fruit maturity) is less than 16 mm, whereas *J. nitida* has 3–4 flowers per inflorescence, glabrous filaments, and the calyx diameter (at fruit maturity) is greater than 18 mm.

Additional specimens examined: VENEZUELA. **Mérida:** Sine loco, *Ruiz-Terán 14145* (MERF); orillas de la nueva carretera para Acariqua, entre el caserío San Jacinto y la quebrada abajo de El Plan, 1950 m,

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27 Dec 1977, *Ruiz-Terán & Ruiz-Pérez 14980* (K, MERF).

COLOMBIA. **Prov. Mariquita:** 1851–1857, *Triana 1866* (G).

ECUADOR. **Pichincha:** Rd. from Aloag to Santo Domingo de los Colorados, km 36, 2104 m, 17 Nov 1974, *Plowman & Davis 4449* (GH, K); grown from seeds from R. Lester, *Mione 450* (C, HAO, MO); Reserva Florística-Ecológica "Río Guajalito," km 59.5 carretera antigua Quito–Santo Domingo de los Colorados, 1800–2200 m, 0°13′53″S, 78°48′10″W, *Zak 2187* (NY). **Tungurahua:** Valley of Río Pastaza, between Machai and La Victoria, 1400 m, 24 Aug 1939, *Asplund 8500* (NY); hacienda Machai, 1500 m, 4 Feb 1956, *Asplund 19223* (B, NY); Río Verde Grande, 1500 m, 30 Mar 1956, *Asplund 20074* (B, G, K, NY).

PERU. **Cajamarca:** Prov. San Ignacio, Mpio. San Ignacio, rd. San Martín–El Chaupe, 1590 m, 12 Aug 1996, *Sawyer & Leiva 775* (CONN), *Leiva & Sawyer 1850* (HAO); grown from seeds from N. Sawyer, *Mione 340* (CONN); ruta Marisahua–El Chaupe, 1860 m, 3 Jan 1998, *Leiva et al. 2091* (HAO). **Cuzco:** Prov. La Convencion, Sahuayaco, Río Chalpimayo above Pacchar, 1174 m, 25 Jan 1975, *Plowman & Davis 4861* (GH, K, MO).

Jaltomata contorta (Ruiz & Pav.) Mione, comb. nov.

Saracha contorta Ruiz & Pav., Fl. Peruv. 2: 43, t. 180. 1799. *Atropa contorta* (Ruiz & Pav.) Pers., Synopsis plantarum, 219. 1805. *Bellinia contorta* (Ruiz & Pav.) Roem. & Schult., Syst. Veg. 4: 689. 1819. *Witheringia contorta* (Ruiz & Pav.) Miers, Ann. Mag. Nat. Hist. ser. 2, 11: 92. 1853; Miers, Illustr. S. Amer. Pl. 2: App. 56. 1857. TYPE: PERU. Dept. Lima, Prov. Canta, pueblo Obrajillo, 76°36′33″W, 11°26′40″S, 2732 m, 3–7 Feb 1788, *H. Ruiz L. s.n.* (LECTOTYPE, here designated: G; ISOLECTOTYPE: B–destroyed, photo F neg. 2549). No type material was received in a loan of specimens from MA, and Benítez de Rojas (1976) remarked that no type material of this taxon is held by MA.

Distribution and ecology.—Known only from the type locality. The protologue states that cultivated plants, from which the species was described, flowered almost the entire year. The habitat (*praeruptis*) translates to steep or rugged places or cliffs.

This species is similar to *Jaltomata repandidentata* (Dunal) Hunz., known from disturbed habitats, especially coffee plantations, from Mexico to Bolivia; both are herbaceous and produce dark purple to black fruit. However, *J. contorta* has straight filaments and the anthers are uniform in size. *Jaltomata repandidentata* has sigmoid filaments and exhibits size variation among the undehisced anthers of a flower (Mione, 1992).

Additional specimen examined: PERU. Sine loc., *H. Braun s.n.* (GH).

Jaltomata diversa (J. F. Macbr.) Mione, comb. nov.

Saracha dentata Ruiz & Pav. var. *diversa* J. F. Macbr., Field Mus. Nat. Hist., Bot. Ser. 13, part V-B, no. 1: 34. 1962. TYPE: PERU. Dept. Arequipa, Prov. Condesuyos, above Salamanca, 3600–3700, Mar 1914, *A. W. Weberbauer 6853* (LECTOTYPE, here designated: US; ISOLECTOTYPES: F, GH, NY). Treatment of this taxon at the species level was proposed by C. V. Morton (unpubl. manuscript from W. G. D'Arcy, Missouri Botanical Garden).

Distribution and Ecology.—Southern Peru; Depts. Apurímac, Arequipa, Ayacucho and Cuzco, 2897–3700 m. It has been collected in sandy to rocky places. Flowering December and February–April; fruiting February–April.

This species is distinguished from *Jaltomata dentata* (Ruiz & Pav.) Benítez, of which it was originally treated as a variety, by its lack of peduncles and its shrubby habit, reaching 0.5–1.5 m in height. *Jaltomata dentata* has peduncles 0–18 mm long, is woody only at the base, and reaches no more than 25 cm in height.

Additional specimens examined: PERU. **Apurímac:** Quebrada 2 km north of Andahuaylas, 3050 m, 23 Feb 1939, *Stork & Horton 10716* (F, G, GH). **Arequipa:** Lower slopes of Misti, 2897 m, Feb 1943, *Laudeuiau 3808* (K); Condesuyos, above Chuquibamba, 3202 m, 31 Dec 1937, *Stafford 1159* (K). **Ayacucho:** Lucanas, alrededores de Puquio, 3350 m, 22 Apr 1950, *Ferreyra 7181* (US, USM); Lucanas, on rd. 8 km NW of Puquio, above San Juan, 3250 m, 14 Dec 1962, *Iltis & Ugent 457a* (WIS); Lucanas, on trail from Quebrada de Chulla Bora to main rd., 3100 m, 3 Apr 1942, *Metcalf 30317* (G); Cangallo, Ocros, 2900 m, 2 Mar 1939, *Stork & Horton 10799* (G, K). **Cuzco:** Paruro, Huanoquite, 3400 m, 1942, *Vargas 2272* (F).

Jaltomata herrerae (C. V. Morton) Mione, comb. nov.

Saracha herrerae C. V. Morton, Revista Univ. (Cuzco) 33(87): 96. 1944–1945. TYPE: PERU. Dept. Cuzco: Sacsayhuaman, 3500 m, Dec 1925, *F. L. Herrera 828* (HOLOTYPE: US; ISOTYPES: F, photo F neg. 49347, G). [The isotype label at G reads "Urubamba Basin"; this is not stated in the protologue, nor on the label of the isotype at F.]

Distribution and ecology.—Peru and Bolivia, along stone walls and disturbed habitats, 3000–3800 m. Flowering and fruiting December–June. Ripe fruit is eaten (type; *Mione et al. 564*) and is used to treat canker sores and high fever (*Alvarez 92*). Local names are "ahuaimantu" (type), "awilmantu" (*King et al. 114*), "awaymanto" (*Brunel 811*), "chilto" (*Alvarez 92, Mione et al. 563, 564*) and "yahuarmanto" (*Hermann et al. 473*).

Additional specimens examined: PERU. **Ayacucho:** Pampa de Chupas, *Soukup 5523* (US). **Cuzco:** Huailabamba, Paucartambo, 3660 m, 5 Jun 1939, *Balls 6731* (F, K); Anta, El Chaccan, 3680 m, 16 Apr 1973, *Brunel 811* (MO, NY); Ollantaytambo, 3000 m, 27 Apr 1915, *Cook & Gilbert 417* (NY, US); Sacsayhuaman, 3500 m, Mar 1929, *Herrera 2351* (F), 3600 m, Jan 1931, *Herrera 3088* (US); Sacsayhuaman, 3600 m, 1 Apr 1944, *Vargas 4166* (WIS); Sacsayhuaman, 3550 m, 14 Dec 1944, *Vargas 4836* (WIS); 1 km before Mutuipata, on rd. from Limotambo to Anta at km 62 from Cuzco, 3100 m, 23 Dec 1962, *Iltis & Ugent 772* (WIS); valley of Río Urubamba, 9 km (by rd. SW of Pisac) on rd. to Cuzco, 3800 m, 30 Dec 1962, *Iltis & Ugent 972* (K, US, WIS); Urubamba, Chincheros, Chinchero ruins, 3750 m, 3 Feb 1982, *King et al. 114* (NY), 3650 m, 14 Jun 1990, *Hermann et al. 473* (NY); Urubamba, Dec 1937, *Soukup 740* (F). **Huancavelica:** Yauli, 3500 m, 11 Mar 1939, *Stork & Horton 10859* (F, K).

BOLIVIA. **La Paz:** PROV. BAUTISTA SAAVEDRA: Kanlaya, 3568 m, 25 Dec 1979, *Alvarez 92* (NY); Amarete, 3280 m, 12 May 1981, *Feuerer 6386a* (NY), 3260 m, 14 Apr 1982, *Feuerer 11140* (NY); Charazani, Chari, 30 Mar 1982, *Feuerer 10969a* (NY); town of Kanlaya, a right fork on rd. Charazani–Amarete, 3600 m, 30 Dec 1991, *Mione et al. 563* (CONN, LPB). PROV. LARECAJA: Sorata, 19 Apr 1920, *Holway & Holway 554* (NY, US); Sorata, 2700–3200 m, 1818–1819, *Mandon 430* (G, GH, NY); Sorata, comunidad Chorquikoa, 3150 m, 1 Jan 1992, *Mione et al. 564* (LPB); Sorata, Feb 1886, *Rusby 831* (GH, NY, US).

Jaltomata nitida (Bitter) Mione, comb. nov.

Saracha nitida Bitter, Feddes Repert. Spec. Nov. Regni Veg. 19: 265. 1924. TYPE: VENEZUELA. Aragua: Colonia Tovar, 17 Jun 1855, *A. Fendler 1007* (LECTOTYPE, here designated: G, photo F neg. 23088; ISOLECTOTYPES: F, G–2 sheets, GH, K, MO). Type at GH adds "high mountains E. of Colonia Tovar." This transfer was first proposed by Castillo (unpubl., 1974: 115).

Distribution and ecology.—Known only from Venezuela. The elevation was not given in the protologue but on the isotype at GH it was given as 1500 ft where it should have been 1500 m. Thus it is known from 1400–1700 m. It has been collected along a highway and in primary jungle. Flowering and fruiting in June, August, and October.

Additional specimens examined: VENEZUELA. **Aragua:** Hwy. to Choroní, 1400 m, 19 Oct 1940, *Chardou 158* (US); Colonia Tovar, 1854–1855, *Fendler s.n.* (G, P); on old dirt rd. to beach on W side of main rd. La Victoria–Colonia Tovar, beginning ca. 3 km S of Colonia Tovar, ca. 1700 m, 21 Aug 1992, *Spooner et al. 6301* (CONN).

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