

Two New Species of *Palicourea* (Rubiaceae) from Western South America

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ABSTRACT. The new species *Palicourea jatun-sachensis* and *P. plowmannii* are similar vegetatively to *P. subspicata*, but can be separated by linear relatively long calyx lobes and well-developed inflorescence bracts, respectively.

The neotropical genus *Palicourea* Aublet comprises about 200 species of shrubs, small trees, and suffrutescent herbs found widely in moist to wet forest. It is closely related to *Psychotria* subg. *Heteropsychotria* Steyermark, from which it is separated by its corollas that are generally relatively longer and tubular to infundibuliform and have a basal swelling that is closed at the top by a ring of dense pubescence borne on the inside of the corolla. Additionally, the inflorescences are characteristically brightly colored and the corollas are often strongly gibbous and asymmetrical at the apex, but these features vary widely within the genus (Taylor, 1989).

Palicourea jatun-sachensis C. M. Taylor, sp. nov. TYPE: Ecuador. Prov. Napo: Cantón Tena, Estación Biológica Jatun Sacha, ca. 8 km ESE of Puerto Misahuallí, 1°04'S, 77°37'W, J. S. Miller & Medical Botany Class 2167 (holotype, MO). Figure 1A, B.

A *Palicourea subspicata* Huber panicula brevior purpurea violaceae etiam bracteis inflorescentiae sicut lobulis calycinis linearibus longioribus differt.

Suffrutescent herbs or shrubs to 2.5 m tall, flowering at 0.3 m; stems glabrous. Leaves paired, with blades 20–33 cm long, 8.5–16 cm wide, 1.6–2.4 times as long as wide, elliptic, at apex acuminate with tip 5–20 mm long, at base cuneate to obtuse, papyraceous to thinly chartaceous, sparsely to usually densely pustulose abaxially but otherwise glabrous; secondary veins 14–17 pairs, widely spreading, broadly curved, sometimes looping to interconnect near apex, without domatia, costa and secondary veins usually prominulous above and below, occasionally with 1(–2) weakly developed intersecondary veins present between pairs of secondary veins; petioles 30–57 mm long, glabrous; stipules united to form a continuous sheath, gla-

brous; sheath 1–3 mm long, interpetiolar sinus concave to usually truncate; lobes 6–17 mm long, lanceolate to ovate, acute, usually deciduous after distalmost 1–2 nodes. Inflorescences racemiform, narrowly cylindrical; peduncles 3.5–14 cm long; panicles 1.5–4.5 cm long, 1.5–4 cm wide, 0.9–1.8 times as long as wide, with flowers borne in congested cymes of 3–5; axis somewhat thickened; bracts 3–10 mm long, linear, acute; pedicels 0–1.5 mm long, thickened; peduncle, axis, branches, bracts, and pedicels minutely puberulous, purple or violet; flowers with calyx puberulous to usually glabrescent, purple to violet; hypanthium cylindrical, 1–1.2 mm long; limb 1.5–5.5 mm long, divided to base, lobes narrowly triangular to linear, acute; corolla red, sometimes tinged with yellow or yellow internally, membranaceous, tubular to somewhat funnelform, somewhat swollen at base, generally straight in tube, externally densely puberulous with stout multicellular trichomes ca. 0.1 mm long, internally glabrous except for a ring of villous pubescence just above the basal swelling; tube 11–15 mm long; lobes 1–2 mm long, triangular. Infructescences similar in size, proportion, and color to inflorescences, with fruiting pedicels 2–10 mm long; fruit ca. 5 mm long, ca. 8.5 mm wide, didymous, the halves subglobose, laterally somewhat flattened, purple; pyrenes with 3–5 gently angled faces.

Uncommon in understory of wet primary forest at 280–400 m in Amazonian Colombia and Ecuador. Collected in flower February–August and October, in fruit January, April, and July.

This species is distinguished by its relatively large leaves, narrow racemiform inflorescences, narrowly triangular to linear bracts, long narrow calyx lobes, and didymous fruits with gently angled pyrenes. The stipules deciduous after the distalmost 1–2 nodes represent an unusual condition in *Palicourea*. This new species is similar to *P. subspicata* Huber, which can be distinguished by its inflorescences with long panicles, 6.5–23 cm long, calyx limb shorter, ca. 0.8 mm long, and pyrenes smooth.

The specific epithet refers to the Jatun Sacha Biological Station, where most of the specimens of this species have been collected.

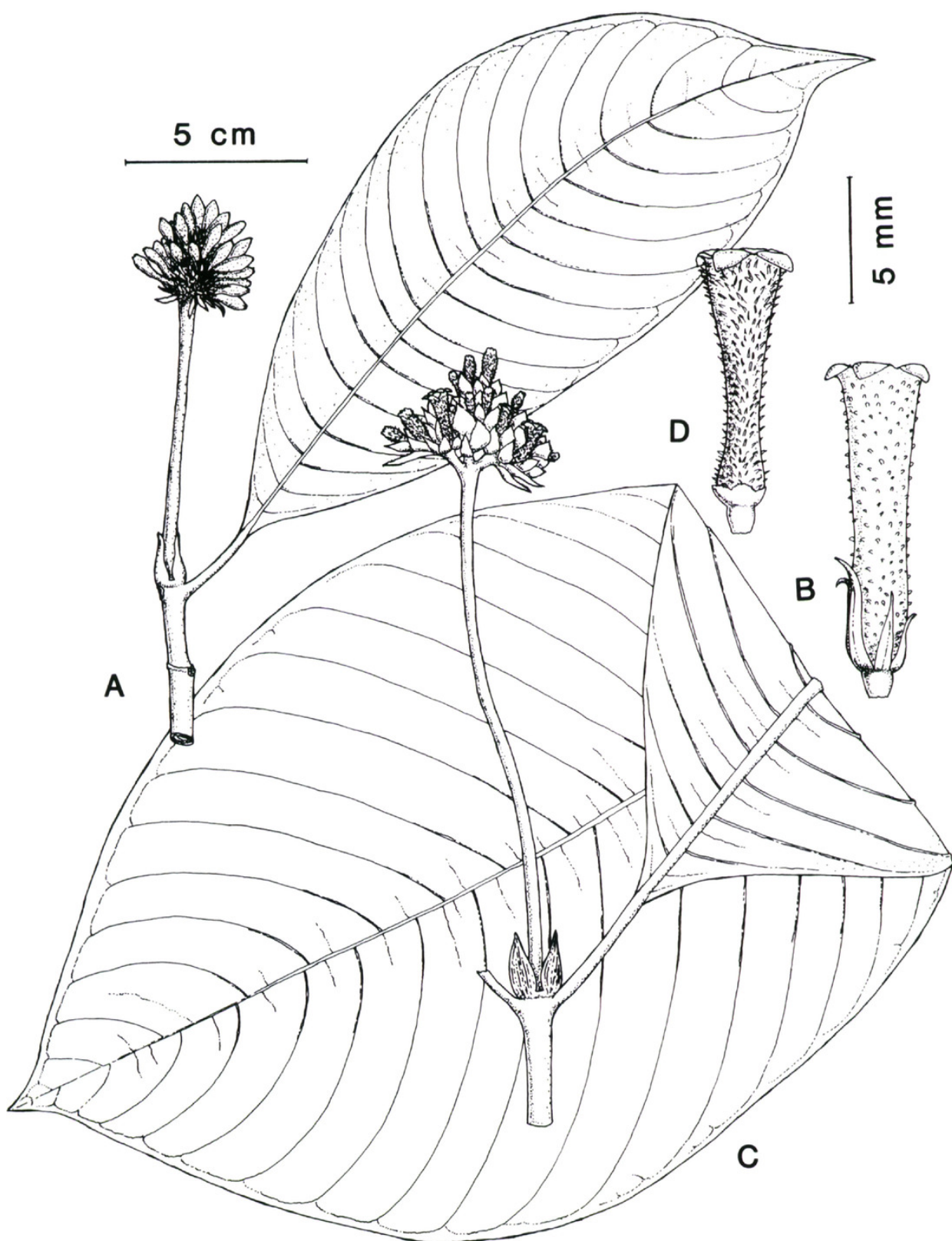


Figure 1. A, B, *Palicourea jatun-sachensis* C. M. Taylor. —A. Habit. —B. Flower at anthesis. —C, D, *Palicourea plowmannii* D. Simpson ex C. M. Taylor. —C. Habit. —D. Flower at anthesis. A, C to same scale (5 cm bar); B, D to same scale (5 mm bar). A, B from Miller *et al.* 2167 (MO); C, D from Knapp & Mallet 6940 (MO).

Additional specimens examined. COLOMBIA. **Prov. Caquetá:** 13 km SE of Morelia on road to Río Pescado, SW of Florencia, Davidse *et al.* 5681 (MO). ECUADOR. **Prov. Napo:** Cantón Tena, Estación Biológica Jatun

Sacha, ca. 8 km ESE of Puerto Misahuallí, 1°04'S, 77°37'W, Cerón 1221 (MO), 3586 (MO), Croat 73404 (MO), Flynn *et al.* 4028 (MO, PTBG), McDade 1086 (MO), Palacios 1371 (MO), 2462 (MO), 2501 (MO),

Palacios & Neill 1521 (MO), *Palacios et al. 478* (MO), *Rueda 1137* (MO); Río Napo, Pañococha (Oasis), *Harling et al. 7564* (MO). **Prov. Pastaza:** vía Auca, 115 km al sur de Coca, 10 km al sur de la frontera Napo–Pastaza, cerca del río Tigüina, carretera de Petro-Canada, *Hurtado et al. 1366* (MO).

Palicourea plowmanii D. Simpson ex C. M. Taylor, sp. nov. TYPE: Peru. Dept. San Martín: Lamas, Naranjal, trail to Jorge Chávez, Km 85 of Tarapoto–Yurimaguas road, 6°17'S, 76°17'W, *S. Knapp & J. Mallet 6940* (holotype, MO). Figure 1C, D.

A *Palicourea subspicata* Huber lobulis stipularibus diu persistentibus, panicula brevi ex pyramidalis hemisphaerica, bracteis inflorescentiae bene evolutis, etio fructu no didymo differt.

Little-branched or monopodial shrubs to 2.5 m tall, stems glabrous or puberulous to pilosulous. Leaves paired, with blades 24–32.5 cm long, 18.5–25 cm wide, 1.3–1.5 times as long as wide, elliptic to broadly so, at apex acute to acuminate with tip 2–5 mm long, at base cuneate to rounded, papery-aceous to thinly chartaceous, glabrous and dark velvety green adaxially or sometimes the veins white or purple, abaxially minutely pustulose and glabrescent or sometimes puberulous to pilosulous and purple throughout; secondary veins 17–24 pairs, spreading to ascending, broadly curved, usually looping to interconnect distally, without domatia, costa and secondary veins prominulous above and below, occasionally 1 weak intersecondary vein present between pairs of secondary veins; petioles 25–60 mm long, glabrescent or puberulous to pilosulous; stipules united to form a continuous sheath, glabrescent or puberulous to pilosulous; sheath ca. 1 mm long, interpetiolar sinus truncate to usually concave; lobes 17–35 mm long, lanceolate to somewhat ovate, acute, sometimes ciliolate. Inflorescences terminal, pyramidal to somewhat rounded; peduncles 7–21.5 cm long; panicles 2.5–4.5 cm long, 4–9 cm wide, 0.5–0.8 times as long as wide, with flowers borne in congested cymes of 3–7; primary branches not subtended by bracts; bracts 2.5–17 mm long, 1–6 mm wide, narrowly triangular or usually elliptic to broadly so, acute to acuminate, entire or usually ciliolate; pedicels 0–1.5 mm long; peduncle, axis, branches, bracts, and pedicels bright purple or magenta, pilosulous; flowers with calyx bright purple to magenta, glabrescent; hypanthium 1–1.5 mm long, cylindrical to turbinate; limb 0.8–1.2 mm long, subtruncate to denticulate or shallowly lobed, entire or usually ciliolate; corollas red-purple to deep pink or usually blue, tubular to somewhat infundibuliform,

somewhat swollen and strongly bent at base, generally straight in tube, membranaceous, externally densely puberulous with slender multicellular colored trichomes 0.5–1 mm long, internally glabrous except for a densely villous ring ca. 1 mm wide just above basal swelling; tube 9–12 mm long; lobes 1–2.5 mm long, triangular, the sinuses usually thickened and extruded in bud. Infructescences similar in size, proportion, and color to inflorescences; fruits ca. 5 mm long, 5–6 mm wide, ellipsoid to ovoid, flattened laterally, purple; pyrenes with 4–5 rounded longitudinal ridges.

Infrequent in wet forest at 180–800 m in the Amazonian region of Peru. Collected in flower April, October, and November, in fruit April and November.

This species is distinguished by its relatively large leaves and stipules, short pyramidal to rounded inflorescences, relatively large inflorescence bracts, bright purple or magenta inflorescences with purple to blue flowers, subtruncate calyx limb, and densely hirsutulous or pilosulous corollas. It is similar to *Palicourea subspicata* Huber and *P. jatun-sachensis*, from both of which it can be distinguished by the features noted above.

Donald Simpson, formerly of the Field Museum of Natural History, proposed the specific epithet in honor of Timothy Plowman, also of that institution, but did not publish this name.

Additional specimens examined. PERU. **Cuzco:** Prov. Paucartambo, road from Pillcopata to Patrias, *Maas et al. 6148* (MO); Río Tambopata, 2 km E of the Colpa de Guacamayos, *Núñez 6532* (MO). **Loreto:** Prov. Maynas, Río Ampiyacu, Puca Urquillo and vicinity, 3°05'S, 71°55'W, *Plowman et al. 6950* (F). **Madre de Dios:** Tambopata, a 39 km de Puerto Maldonado, alrededor de Planchón, 12°35'S, 69°10'W, *Núñez & Quispe 10054* (MO); Tambopata Wildlife Reserve, 30 km S of Puerto Maldonado, 12°15'S, 69°17'W, trail on S side of La Torre River, *Young & Stratton 173* (MO), 257 (MO), 288 (MO). **San Martín:** Prov. Lamas, Convento, trail to Tioyacu and Nuevo Lamas, Km 68 of Tarapoto–Yurimaguas road, 6°16'S, 76°17'W, *Knapp & Mallet 6989* (MO); Caserio Bonilla, trail to E of Tarapoto–Yurimaguas road at Km 75, 6°16'S, 76°17'W, *Knapp & Mallet 7135* (MO).

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