

## **Passiflora markiana, a New Species of Passifloraceae from Ecuador**

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## PASSIFLORA MARKIANA, A NEW SPECIES OF PASSIFLORACEAE FROM ECUADOR

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**Abstract:** A new species of *Passiflora* was collected while doing fieldwork in Zamora-Chinchipe Province in Ecuador in 1999. It is placed in subgenus *Passiflora*, series *Lobatae*.

**Keywords:** Passifloraceae, *Passiflora*, *Lobatae*, Zamora-Chinchipe, Ecuador.

*Passiflora markiana* K. Hansen, sp. nov.  
(Fig. 1)

TYPE: ECUADOR. Prov. ZAMORA-CHINCHIPE: Km 91.3 on road from Zamora to Guayacaliza, gallery forest, 3°33.927' S, 78°33.245' W, elev. 805 m, 25 May 1999 (fl), K. Hansen et al. 89 (HOLOTYPE: QCA!; ISOTYPE: QCA!).

*Passiflora* subgeneris *Passiflora* series *Lobatae*, *P. castellanosii* Sacco referenti sed ab hac foliis peltatis, operculo plicato, bracteis petiolatis, nectariis petolari turbinatis.

Small to medium-sized herbaceous VINE with tendrils, 1–3 m, completely glabrous. STEMS terete, glaucescent. STIPULES 1.5–1.8 cm × 0.7–1 cm, reniform, acuminate, aristate, attached below the middle. LEAVES alternate, trilobed with lateral leaf lobes ascending, petioles 2.5–3.5 cm, 2–4 glandular, the nectaries 0.3 mm long × 0.4 mm wide, turbinate, with two nectaries adjacent to one another near middle of petiole, the remaining scattered distally; laminas 3.5 × 5.5 cm (probably large variation in size with age), thin, membranous, adaxial side dark green, abaxial surface purplish, lobed to below middle, distinctly peltate, central lobe 3.5–4 × 2.1 cm, obovate-orbicular, aristate to 1 mm, lateral lobes obovate, 3–3.5 cm × 2.1 cm wide. INFLORESCENCE 1-flowered, the pedicels ca. 4–4.5 cm, stout, 2/3 as thick as the stem; BRACTS 3, verticillate, 2.2 × 1.5 cm ovate, slightly crenate with awns 3.5–4 mm at apex, ap-

pearing variegated or mottled, dark green with pale green, prominently 1-veined, the veins much lighter in color with midvein often having a reddish tone especially towards base, petiolate to 1.5–2 mm. FLOWERS (all floral measurements from re-hydrated material) oriented well above the horizontal to nearly vertical, corolla pinkish-purple, reflexed at anthesis, corona violet banded with white; FLORAL STIPE 4 mm long; floral tube long-campanulate, ca. 6 mm in diameter; SEPALS 2.2 × 0.5 cm, pale purple abaxially, green adaxially, linear-oblong, slightly concave, with dorsal ridge, fleshy, keeled, terminating in a foliaceous awn 6.5–7 mm long; PETALS 2.2 × 0.5 cm, as long as the sepals, oblong, obtuse, fleshy, pinkish-purple; CORONAL FILAMENTS in 3 series, the first and third series filiform, 0.5 mm long and may be difficult to detect in a dried specimen, second series of varying lengths 6–10 mm, radiate, filiform, capitellate, banded violet and white, maroon near base; OPERCULUM erect, densely plicate at base, with row of liguliform filaments 6 mm long, inserted outside, filaments free for 4–4.5 mm, tips of filaments slightly angled toward androgynophore, mottled maroon and cream from tips to point where filaments fuse and then solid, pale yellowish-cream below; NECTAR RING fleshy; LIMEN 3 mm in diameter, cupuliform, its raised edge crenulate and less than 2 mm high and 4 mm from base of floral tube, pale green-cream, not marked; STAMINAL FILAMENTS connate 8 mm along

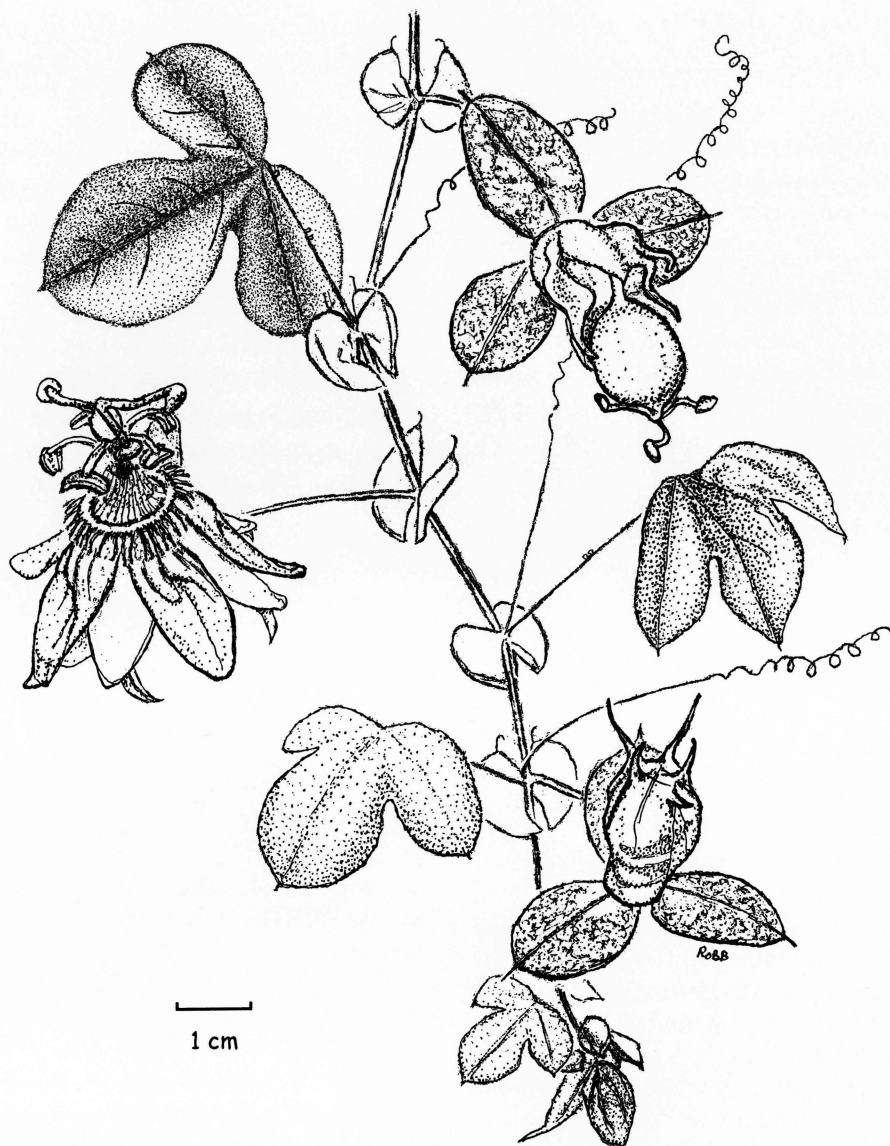


FIG. 1. *Passiflora markiana* in flower. Illustration by Rosemary Barker.

androgynophore, pale yellowish green on edges, mottled maroon in center, the free parts 6–7 mm long; ANTHERS dorsifixed, 7 mm long, held with their axes perpendicular to the filament; OVARY 3 mm long, ellipsoid, pale green, glaucous, glabrous, with styles projecting out of tip; styles 5.5 mm long including stigmas, glabrous, mottled pale green and maroon; stigmas 1.5 mm in diameter. FRUIT unknown; SEEDS unknown.

ECOLOGY: S. Knapp and J. Mallet reportedly caught *Heliconius ethilla* Godart near their collection of *Passiflora markiana* (from label data). As *Heliconius* butterflies are obligate egg-layers on Passifloraceae, it is possible that they utilize *P. markiana* as a host-plant in some areas.

ADDITIONAL SPECIMENS EXAMINED: PERU: Dept. SAN MARTIN. Lamas km 54–55 of Tarapota-Yurimaguas road, sandy cliffs along

road, tropical wet forest 6°26'S, 76°18'W, elev. 450 m, 2 Apr 1986, Knapp & Mallet 6923 (TEX).

I am placing *Passiflora markiana* in subgenus *Passiflora*, series *Lobatae*. The combination of foliaceous, verticillate bracts that are persistent, foliaceous stipules, and trilobed leaves fit all of the defining characteristics of this group. However, the densely plicate operculum with a row of filaments inserted to the outside is much more characteristic of series *Kermesinae*, although similar, less plicate operculum structures are also seen in *P. sprucei* Mast. series *Lobatae* and *P. deltoifolia* Holm-Nielsen & Lawesson of the series *Menispermifoliae*. *Passiflora markiana*'s closest relatives appear to be *P. picturata* Ker and *P. castellanosii* Sacco both of series *Lobatae*. It can be distinguished from these two species by its distinctly peltate leaves with obovate lobes, the bracts are petiolate, the petiolar glands are turbinate rather than filiform or stipitate and the operculum is densely plicate.

In the most recent, comprehensive key for the New World species of *Passiflora* (Killip 1938), *P. markiana* will key out to either *P. aristulata* Mast. if the awns on the sepals are erroneously determined to be less than 5 mm or to *P. picturata* Ker based on the petiolate bracts. *P. aristulata* is remarkably different in nearly all aspects of the plant, both vegetative and floral. However, the new species is clearly distinguished from *P. picturata*, as *P. picturata* has 2 conspicuous coronal rows vs. 1 conspicuous row in *P. markiana*, a non-plicate operculum with the filaments free nearly to the base, leaves that are not distinctly peltate, and filiform petiolar glands.

*Passiflora markiana* was collected during fieldwork in Ecuador during May of 1999. It was found just off the roadside on the edge of a small patch of relatively intact, moist forest. Except for this patch, the habitat in the near vicinity was greatly disturbed due to landslides. Although it was too early for fruits, the ovary was already swelling on all of the closed flowers, some containing undeveloped seeds.

*Passiflora markiana* is named in honor of my field companion, driver, and husband, Mark Price. His enthusiasm and support during my doctoral career have been unfailing, and are gratefully acknowledged.

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#### LITERATURE CITED

- Killip, E. P. 1938. The American species of Passifloraceae. Field Mus. Nat. Hist. Bot. Ser. 19: 1-613.