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A New Species of *Calathea* (Marantaceae) from Veracruz, Mexico

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ABSTRACT. A new species, *Calathea misantlensis*, is described and illustrated. Its closest affinities are with *C. coccinea* Standley & Steyermark from Chiapas and Oaxaca, Mexico, and Guatemala, but it differs from that species in inflorescence morphology.

RESUMEN. Una nueva especie, *Calathea misantlensis*, se describe e ilustra. Sus afinidades más cercanas son con *C. coccinea* Standley & Steyermark de Chiapas y Oaxaca (México) y Guatemala, pero difiere de esta especie en la morfología de la inflorescencia.

Calathea is a New World genus of about 300 species, most of them tropical. While examining specimens for a study of the Marantaceae of Veracruz, six *Calathea* species were identified as occurring in this state. A few herbarium specimens were tentatively identified as *C. coccinea*. However, observations from field studies and from plants growing at the botanical garden at Francisco Javier Clavijero del Instituto de Ecología, A.C., Xalapa, Veracruz, led me to conclude that they are actually a new species.

Calathea misantlensis Lascurain, sp. nov. TYPE: Mexico. Veracruz: Mpio. Yecuatla, la Zeta, arriba de Luz Bella, 1200 m, 19°49'N, 96°49'W, 4 June 1991, *C. Gutiérrez 4215* (holotype, XAL).

Planta acaulis, rhizomatosa. Folia corrugata, ovata vel amplissime ovata, tenuia, cum acumine, basi rotundata. Spica ovoidea, capitata, compacta, pedunculo subglabro. Bracteae spiraliter dispositae, ovatae, apiculatae, basi obtusae vel rotundatae. Corollae lobis ovatis vel ellipticis, rubris. Staminodium callosum obovatum, cucullatum, rubrum. Capsula obovoidea.

Rhizomatous acaulescent deciduous herbs, 1–1.5 m high. Leaves borne in a basal rosette, new shoots developing from rhizomes. Petiole glabrous to pubescent, ca. 34 cm long. Pulvinus delicate, elliptic in cross section, abaxial surface glabrous, adaxial surface with several longitudinal dark pubescent lines, light yellow, 1.4–4 cm long. Sheath auriculate, delicate, translucent, glabrous, 18.5–34 cm long. Cataphylls membranaceous when live, glabrous to pubescent, 5–18 cm long and probably

longer. Lamina corrugate, ovate to widely ovate, delicate, smooth, membranaceous, abaxial surface glabrous, adaxial surface glabrous to pubescent, apex lightly apiculate, base obtuse to rounded, midrib pubescent, darker than the rest, 29.5–47 cm long, 21–27 cm wide. Inflorescences simple, terminal, capitate, ovate to widely ovate, 3.5–7 cm long, 2.5–6.5 cm wide, occasionally with two inflorescences per shoot, one pedunculate and the other sessile, the second one developing in the middle of the peduncle, with one bract, this acuminate, clasping, membranous, red- and green-spotted, longer than the pair of flowers that protect or cover it, 5 cm long, 3 cm wide; occasionally developing in the basal portion of the peduncle with one pair of red flowers, with one bract. Peduncle dark brown to red, succulent, subglabrous, to 63 cm long. Bracts closely set, 15–30, spirally arranged, lanceolate to ovate, red to green or yellow, 2–5.5 cm long, ca. 1–1.3 cm wide, the basal ones 3.3 cm long, 1.5–2 cm wide, membranaceous or fibrous, apex acute to acuminate, base truncate, abaxial surface pubescent, adaxial surface glabrous, each bract subtending two pairs of flowers, the lowermost margins corrugate. Prophyll bicarinate, carina with villous margins, apex sericeous, 1.3–1.5 cm long, 0.5–1 cm wide. Interphyll membranaceous, glabrous, apex obcordate, 1.1 cm long, 0.8 cm wide. Bracteoles lanceolate, flat in cross section, 1–2 per cymule, membranaceous, glabrous, somewhat fibrous and strong when dry, 1.4 cm long, 1.6 cm wide. Flowers sessile, red, closed and open. Corolla tube with the internal side of throat hirsute in the median part, 1.2–3.8 cm long, ca. 0.5 cm wide. Lobes ovate to elliptic, red, almost equal, 1.2–3.2 cm long, 0.3–0.8 cm wide. Sepals glabrous, equal, persistent in fruit, papyraceous when dry, translucent when live, membranous when live, lanceolate to linear, base white, terminal part red, 1.3–2.7 cm long, 0.2–0.4 cm wide. Outer staminode 1.3 cm long, 0.7 cm wide, sometimes absent. Callose staminode obovate, bilobate, base red, 0.7–1 cm long, callus white. Cucullate staminode, base pilose, 0.7–0.9 cm long and 0.4–0.6 cm wide, appendix red. Style white, thin, translucent. Stigma white, curved. Ovary glabrous, 0.2 cm long. Capsule obovate, 0.7

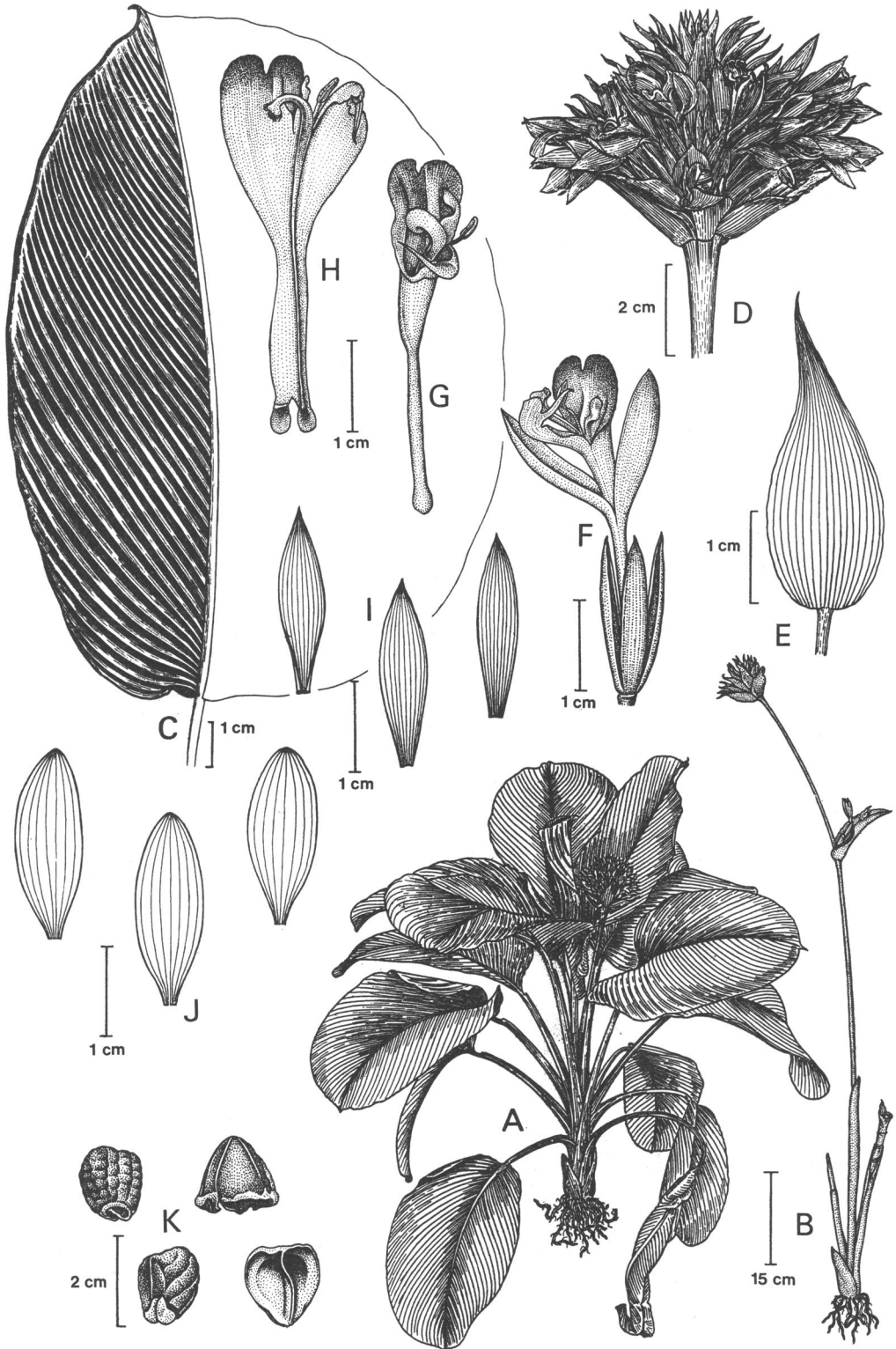


Figure 1. *Calathea misantlensis* Lascurain. —A. Habit. —B. Inflorescence. —C. Leaf. —D. Close-up of inflorescence. —E. Basal bract. —F. Flower. —G. Staminodes, stamen, and style. —H. Longitudinal section of staminodes, stamen, and style. —I. Sepals. —J. Corolla lobes; corolla tube has been extended and the three lobes were removed. —K. Seed.

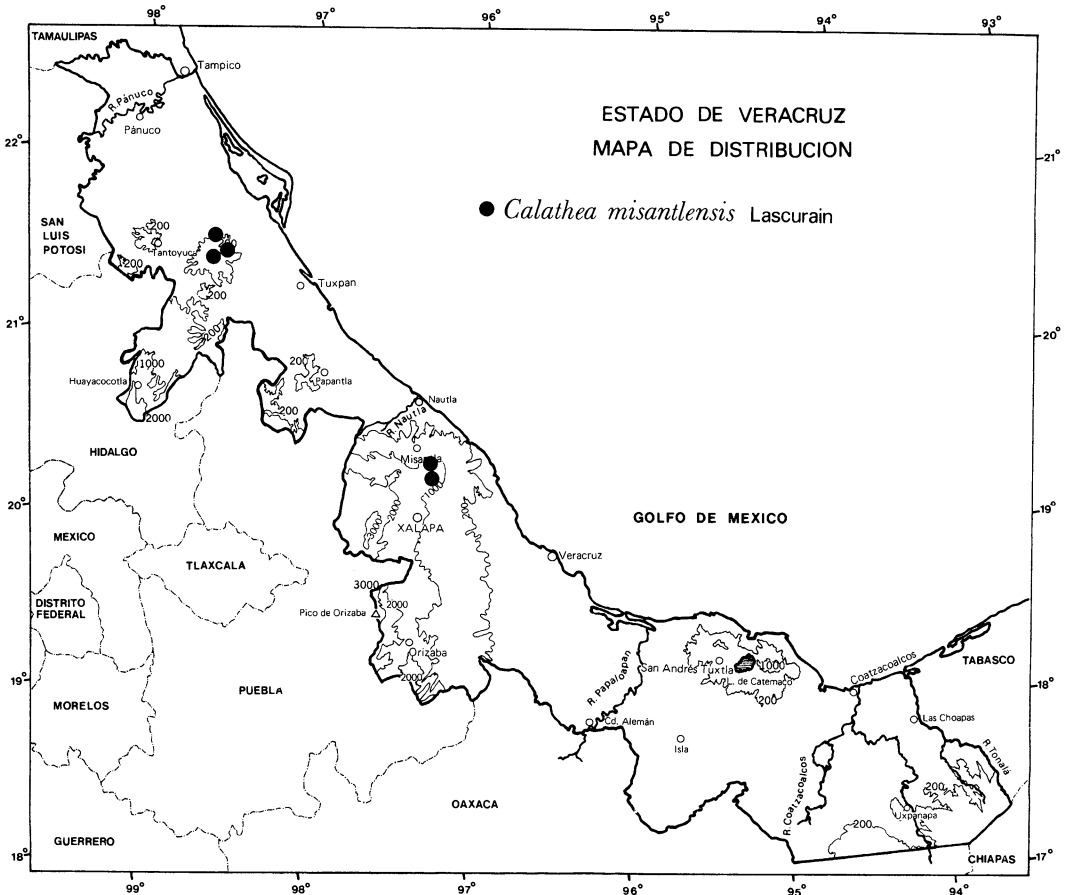


Figure 2. Location of populations of *Calathea misantlensis* (Veracruz, Mexico).

cm long. Seed rugose, brown, 0.4–0.5 cm diam. Figure 1.

This species is known only from cloud and tropical forests from the Sierra de Misantla and the Si-

erra de Otontepec, both in Veracruz, Mexico (Fig. 2). The leaves of *Calathea misantlensis* are used locally for enveloping “tamales,” and the species is known in Veracruz with the common name “papatlillo.” Flowering occurs from April to September.

Table 1. A comparison of morphological features between *Calathea coccinea* and *C. misantlensis*.

Feature	<i>C. coccinea</i>	<i>C. misantlensis</i>
bracts	separated	closely set
bract length (cm)	1.2–1.6	2–3.3(–5.5)
bract width (cm)	0.6–1.2	1–1.3(–2)
bract shape	oval	lanceolate to ovate
inflorescence shape	elliptical	ovate to widely ovate
inflorescence length (cm)	5.5–7	3.5–7
inflorescence width (cm)	2–5.5	2.5–6.5

DISCUSSION

The new species is distinguished by the bracts closely set, 2–3.3(–5.5) cm long and 1–1.3(–2) cm wide, lanceolate to ovate with the tip acute to pronouncedly acuminate. The inflorescence is ovate to widely ovate, compact, capitate; some individuals rarely exhibit a sessile inflorescence with a pair of flowers, one of which is cleistogamous. All the specimens examined exhibit inflorescences and leaves simultaneously. *Calathea coccinea*, described by Standley and Steyermark (1944), has bracts separated by 5 mm or less; the bracts are 1.2–1.6 cm long and 0.6–1.2 cm wide; and the inflorescence is lax, elliptical. The known herbarium specimens of

C. coccinea rarely exhibit leaves. For a side-by-side comparison of the two species, see Table 1.

At the Sierra de Misantla, *Calathea misantlensis* grows in mixed stands of temperate cloud forests with tropical forests, at an elevation of 1100–1650 m. The dominant species in these forests are *Quercus affinis* Scheidweiler, *Liquidambar macrophylla* Oersted, and *Cyathea fulva* (M. Martens & Galeotti) Fée. Populations of *C. misantlensis* are more abundant on the plateau of the Sierra de Otontepec. Here, the vegetation consists of cloud forests dominated by *Quercus acutifolia* Née, *Nectandra* spp., and *Ilex* spp.

The accelerated disappearance of its habitat, due to agricultural expansion and livestock grazing, has caused the fragmentation of populations of *C. misantlensis*, which therefore are threatened.

Paratype. MEXICO. Veracruz: Mpio. Misantla,

Cañada del Huérfano, 6 km al NW de Santa Rita, 1650 m, 3 Apr. 1982, R. Fernández N. 1086–e (ENCB).

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Literature Cited

- Standley, P. C. & J. A. Steyermark. 1944. Studies of Central American Plants—IV. Field Mus. Nat. Hist., Bot. Ser. 23: 39.