

1. *Agave abisaii* A.Vázquez & Nieves, sp. nov.—TYPE: MEXICO. Jalisco: Mun. Pihuamo, A 5 km sobre la brecha La Estrella–Los Trojes, km 41 de la carr. Colima–

Pihuamo 19°10.447' N, 103°25.111' W, 792 m, 19 feb 1997 (fl. and fr.), *A. García-Mendoza et al.* 6414 (holotype: MEXU; isotype: IBUG).

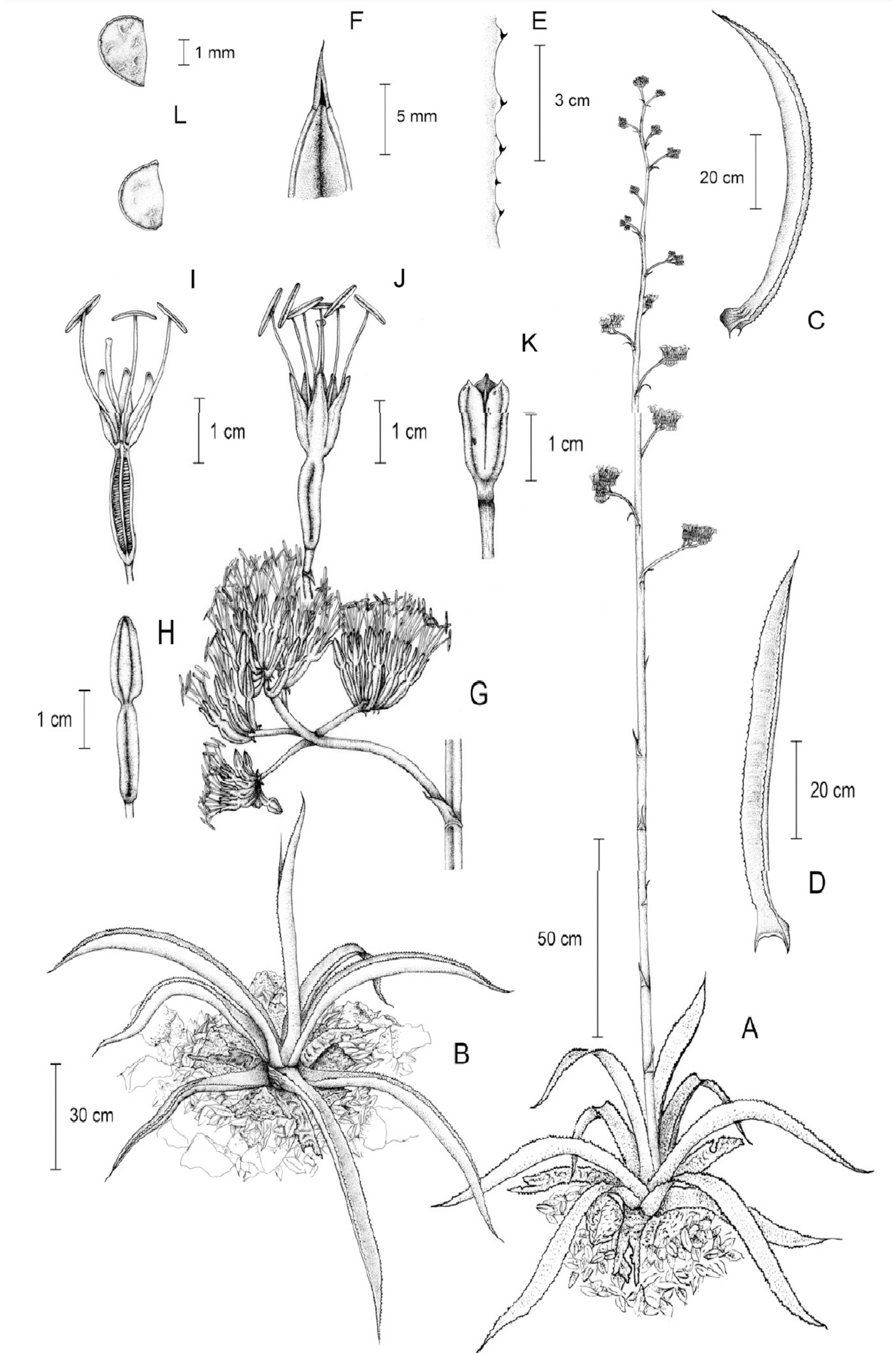


FIG. 2. *Agave abisaii* A.Vázquez & Nieves. A. Habit with panicle. B. Habit. C and D. Leaves. E. Leaf teeth. F. Spine. G. Flowers on a branch. H. Flower bud. I. Longitudinal section of a flower at anthesis. J. Flower at anthesis. K. Capsules. L. Seeds. From *García-Mendoza et al.* 6414 (specimen in photographs).

Agave gypsophila aemulans, differt roslis surculosis, dentibus foliorum aequidistantibus, floribus aurantiacis (vs floribus flavis vel armeniatis vel aurantiacis), inflorescentiis brevioribus, bulbis rubris, capsulis brevioribus.

Rosettes multiannual, surculose, 9–11 leaved, 0.95–1 × 1.5 m; **mature leaves** 80–90 × 9–13 cm, to 7 cm wide at base, to 3.5 cm thick at base, linear to narrowly lanceolate to obtrullate, concave adaxially, convex abaxially, weak, wider above the base, abaxially with a transversal or longitudinal wrinkle at the base, firm but brittle, generally arched, smooth, light to dark green, not evidently cross-zoned, abaxially glaucous at the base; **margins** closely dentate with regularly spaced teeth, the sides involute, undulate, with mammae 3–4 × 2.5–3 mm; teeth firm, 1–3 mm long, 6–17 mm apart at mid leaf, the cups from broad bases 2–5 mm wide, mostly curved, dark brown, with few interstitial denticles, interstitial margin curved; **spine** 4–5 mm long, short and conic, firm, dark brown, nondecurent; **panicles**, including the peduncles, 2.5–3 m tall, oblong, occasionally with numerous red bulbils; shaft 2.5–3 cm in diameter at base, with 13 *primary flowering branches* in the upper third of the shaft; bracts triangular, the basal ones to 7.5 cm long, acute at the apex, spirally arranged, smooth, 15–18 cm apart; **flowers** 30–38 per branch, 28.5–35.5 mm long, orange, protandrous; ovary 12–16 × 2–3 mm, tube 2.5–3.5 × 6–8 mm (upper part of tube), funnellform, green; tepals 14–16 × 2.5–4 mm, triangular, erect, fleshy, the apex galeate, orange; filaments 18–25 mm, inserted 1 mm above the base of tube; anthers at anthesis 8–10 mm long, centric, yellow; **capsules** oblongoid, 22 × 10 mm, slender, short stipitate, apiculate, thin walled; carpels acute, 22 × 7 mm, curving outward; **seeds** 3–4 × 2–3 mm, lunular, thin, flat, membranous, black. Figure 2.

Agave abisaii resembles *A. gypsophila* in having few-leaved rosettes with smooth green leaves. However, it differs from the latter in having suckering rosettes, linear to narrowly obtrullate leaves, transversal or longitudinal wrinkles at the abaxial base of leaves, glaucous leaf base, regularly spaced marginal teeth at mid leaf, orange flowers rather than mostly yellow, red bulbils on the inflorescence, smaller inflorescence with fewer (ca. half) flowering branches, and smaller capsules (Table 1).

Distribution and Ecology—*Agave abisaii* is endemic to southern Jalisco state, on limestone outcrops of both Encino (Late Aptian, 118–112 mya) & Vallecitos formations (Early Albanian, 112–106 mya) (Pantoja-Alor & Estrada-Barraza 1986) in tropical dry forest, with *Bursera* spp., *Cochlospermum vitifolium* (Willd.) Spreng., *Pseudobombax* spp., *Stenocereus* spp., *Opuntia* spp., *Ursulaea mcvaughii* (L. B. Sm.) Read & Baensch., *Philodendron warcsewiczii* K. Koch & C.D. Bouché, *Bromelia* sp., and *Tillandsia* spp.; at 640–792 m (Table 1).

Phenology—Flowering and fruiting from February to March.

Etymology—The specific epithet honors Abisai García-Mendoza, a renowned researcher of the Agaves of Mexico.

Ethnobotany and Conservation Status—Due to the attributed anti-inflammatory medicinal properties of the roasted leaves, it has been heavily extirpated from large areas in the vicinity of Fátima, Pihuamo, in the State of Jalisco. This use should be investigated and regulated to make it compatible with species survival.

Additional Specimens Examined—MEXICO. Jalisco, Mun. Pihuamo, ca. 25 mi NE of Colima, 640 m, 8 Feb 1975, *H.S. Gentry* 23532 (DES, MEXU—not found, MICH!); Mun. Pihuamo, Hw Pihuamo to the Encino

mine, just Before Puente de Fátima, *G. Hernández-Vera et al.* 37–1 (19°07'90" N, 103°24'46" W, 590 m), 37–2 (19°07'91" N, 103°24'45" W, 601 m), 15 Dec 2002 (IBUG—not found); Mun. Pihuamo, 600 m East of km 2.5 on road from La Estrella to Fátima, km 41 carr. Colima–Pihuamo, 786 m, 28 Mar 2011 (sterile) *J.A. Vázquez-García* 9078, 9078b (IBUG!, GUADA!); Municipio de Pihuamo, Las Trojes–Puente de Fátima, km 5.5 km, 100 m al lado E del camino, 19°10'43.93" N, 103°25'09.19" W, 16 mar 2012 (fl bud), *J. Antonio Vázquez-García & Jesús Padilla-Lepe* 9334 (IBUG, MEXU); Municipio de Tecalitlán, Sierra del Halo, 10 km al E de Alotitlán, 1610 m, 19°16'16.18" N, 103°14'40" W, 12 mar 2012 (fl), *Arturo Castro Castro et al.* 2950 (IBUG, IEB, ENCB, MEXU, XAL, ZEA).