A NEW AGAVE FROM OAXACA, MEXICO

HOWARD SCOTT GENTRY
Crops Research Division, ARS, U. S. Department of Agriculture, Beltsville, Maryland

Agave guiengola Gentry, sp. nov.

Planta acaulis monocarpica; foliis 25-30 rosulatis ovato-lanceolatis carnoso-coriaceis persistenter glaucis, crassis 35–50 cm longis, 15–25 cm latis, spina terminali aculeato-pungenti 1–3 cm longa; spinis marginalibus inaequalibus, 1–2-cuspidatis, obtusis, brunneis, 1–4 mm longis, 2–9 mm latis; scapo inflorescentia inclusa 2–4 m alto, gracili; bracteolis scariosis, subulato-lanceolatis, 1–2 cm longis; pedunculis 1–2-furcatis, 8–25 mm longis; ovario cylindrico viridi, 15 mm longo apice constricto; tubo nullo; segmentis aequalibus, 17–18 mm longis exterioribus 5 mm latis, interioribus 4 mm latis, pallidi-luteis, adscendentibus; filamentis 30–35 mm longis ad basin segmentorum insertis; antheris luteis 13 mm longis.

Acaulescent, mostly single, few-leaved, light gray or white-glaucous; open rosettes with ca. 30 leaves at maturity; leaves ovate to ovate-lanceolate, short-acuminate, openly ascending, nearly plane above but briefly and narrowly channeled apically, the margins variously serrate with flattened, blunt, 1- to 2-cuspidate, dark brown, fine or coarse teeth; epidermis finely and densely papillate; spine acicular, dark brown, rounded above and below, not decurrent or decurrent for about its own length in a corneous margin; inflorescence spicate, the stalk flowering from near the base, erect; upper bracts and bracteoles similar, 1-2 cm long, 3 mm wide at the deltoid base, scarious, recurved, long attenuate, with a dark midvein; flowers inconspicuous, 33-35 mm long (from base of ovary to apex of tepals) at anthesis; tepals pale yellow or yellowish white, elliptic, openly ascending, straight; anthers yellow, excentrically attached, versatile; capsules (immature) 22–24 mm long, oblong, thin-walled.–Type, in U.S. National Herbarium (US), *Gentry 16436,* 25–27 km NW of Tehuantepec, Oaxaca, Mexico, 22 Mar 1957, on Guiengola limestone at 125 m altitude. From the same locality, *Gentry 12241,* 30 Sep 1952, leaves and young plants only.

Agave guiengola is a strikingly ornamental species, distinct because of its broad, thick, white glaucous leaves serrated by numerous broad, low, blunt, dark-colored teeth. The light shade in which some individuals grow suggests that it will tolerate some shade without the etiolation that deforms other *Agave* leaves in similar situations. The virtually tubeless flower with its consequently distinct tepals, and the insertion of the filaments at the base of the tepals, show a close relation to *Agave bracteosa* S. Wats. and *A. ellemeetiana* Jacobi in the section *Anoplagave* Berger (subgenus *Littaea*) (Berger, Alwin. Die Agaven. pp. 121–127. Jena, 1915). Its broad, white, ovate leaves with their conspicuous coarse teeth, and its monocarpic rather than polycarpic habit, set off *Agave guiengola* distinctly from either of the species mentioned. The population observed at the type locality showed individuals varying in the form and size of both leaves and teeth. On one variant the lower two-thirds of the leaf margins were without teeth. Altogether, however, the plants appeared to constitute a well integrated species, indicating normal sexual reproduction via seed dissemi-

FIG. 1. *Agave guiengola* Gentry, drawn from the type. Leaves about 2/5 natural size; other figures a little larger than natural size; epidermal detail much enlarged.

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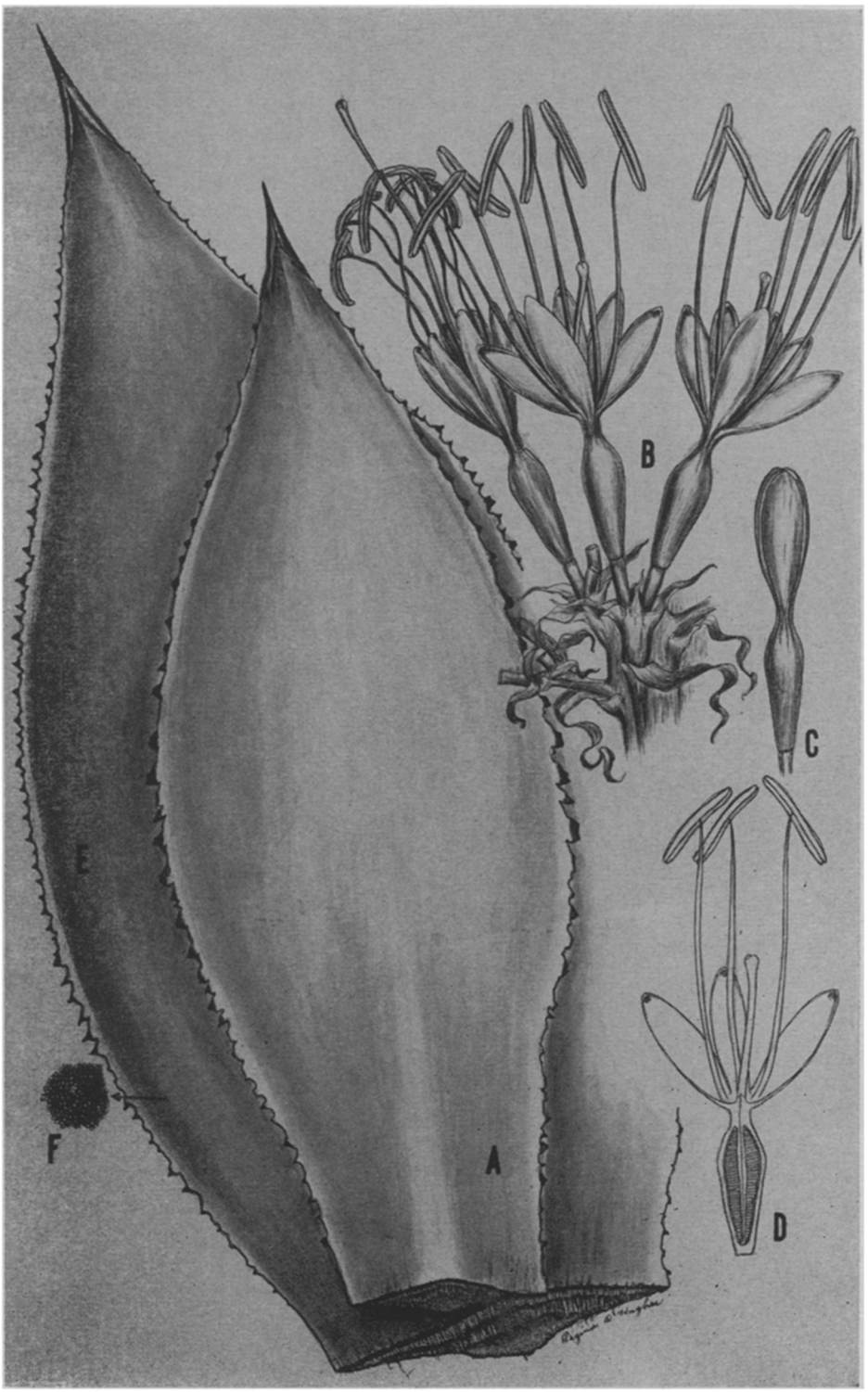
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nation rather than through bulbils or offsets. Some of the plants had rhizomatous offsets, the smallest of which failed to survive transplanting, but several of the larger offsets are established at the Huntington Botanical Gardens in San Marino, California, and the Plant Introduction Station, Miami, Florida.

The specific name is taken from the limestone formation to which this *Agave* appears to be endemic. Mr. Thomas Macdougall, who has long been a student of the Oaxacan flora, stated, on seeing the plant at the collection site, that it was known only from the Guiengola limestone between elevations of 100 and 1000 meters. A note on the collector's label indicates it is used locally for mucilage. The mucilaginous character of the thick sap contained in the turgid leaves is immediately apparent when a leaf is split open, and the dressed leaves adhered tightly to the news sheets during curing. The flowering period in Tehuantepec appears to be during February and March.

FIG. 2. *Agave guiengola* at the type locality.