

Yuccas

OF THE SOUTHWEST

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lower, decidedly broad, conoid-shaped panicle; and its relatively short perianth tube.

Apparent Hybrids of *Yucca faxoniana* and *Yucca torreyi*

Approximately 5 miles west of Allamore, Tex., and in other places where *Yucca faxoniana* and *Y. torreyi* are admixed, apparent hybrids between the two species are quite common. The hybrids are predominantly *Y. faxoniana* in both vegetative and reproductive characters, but resemble *Y. torreyi* in one or more characters. Plants that appear to be *Y. faxoniana* frequently have more or less scabrous leaves, which occasionally are tapered from base to apex as in *Y. torreyi*. Other plants similar to *Y. faxoniana* resemble *Y. torreyi* in their short, rather thin, weak scape. Occasionally plants that appear to be otherwise typical *Y. faxoniana* have rather small, globose flowers, with the segments united only at the base, and, rarely, typical *Y. faxoniana* plants produce a long, cylindrical, short-beaked fruit resembling *Y. torreyi*. McKelvey (24) reported hybrids between the two species.

3. *Yucca schottii*

(Mountain or hoary yucca; locally, sword cactus)

Yucca schottii Engelm., Acad. Sci. St. Louis Trans. (1873) 3: 46. 1878.

Plant arborescent, rather symmetrical, simple, or fairly tall (1.5 to 2.0 m.), rather open clump of stems and heads of leaves, with stems contiguous at base and somewhat spreading toward top; stems commonly 2 or 3, rarely up to 6, of varying height, the older trunklike, up to 4.6 m. tall and 32 cm. in diameter, unbranched or with 2 or 3 assurgent branches; leaves numerous in terminal head, or entire stem bearing fresh leaves, the blade 40 to 90 cm. long, 2.5 to 5.5 cm. wide, divergently spreading, thin, flexible; leaf margin thin, without fibers, or with few fine fibers; scape very short; panicle mainly within foliage, but somewhat extending above, narrowly ellipsoidal, rather densely branched, very tomentose or rarely glabrous; flowers small, subglobose, white; perianth segments 20 to 35 mm. long, 8 to 15 mm. wide, broadly lanceolate; filaments 12 to 14 mm. long, slender; pistil 19 to 24 mm. long; ovary 5 to 7 mm. in diameter, abruptly tapered at apex; style about 3 mm. long; fruit 60 to 125 mm. long, 25 to 38 mm. in diameter, rounded at base, tapering at apex, commonly asymmetrical and constricted near apex; seed 5 to 8 by 7 to 10 mm., thick and flat or rarely rather hemispherical, rough, dull black, wingless. (Pls. 4 and 5.)

TYPE: Sierras west of Santa Cruz County, Ariz., Mo. Bot. Gard. No. 135693.

RANGE: Southeastern Arizona and adjacent corner of New Mexico. Along the southern boundary of Arizona and New Mexico, particularly in New Mexico, the species reaches its height of development in that the plants are usually taller, more common, and approach fairly dense concentrations.

Yucca schottii is strictly a mountainous and foothill plant, mainly occurring in oak woodlands and shady canyon slopes at 4,000 to 7,000 feet elevation.

The species is easily distinguishable by its large, broad, nonfiliferous, flexible, dark blue-green leaves. Although it is associated with *Y. arizonica*, *Y. elata*, and several transitional forms of *Y. baccata*-*Y. arizonica*, no evidence of hybridization with these plants has been found. *Y. schottii* flowers several months later than any other bacciferous yucca (July 15 to August 15), usually following the flowering season of *Y. elata*.

4. *Yucca treculeana*

(Palma-pita or de datils; locally, Spanish-bayonet or Spanish-dagger)

Yucca treculeana Carr., Rev. Hort. 1858: 580. 1858.

Yucca canaliculata Hook., Bot. Mag. 86: pl. 5201. 1860.

Y. longiflora Buckl., Phila. Acad. Sci. Proc. 1862: 8. 1863.

Y. argospatha Verlot, Rev. Hort. 1868: 393. 1868.

Y. aspera Engelm., Acad. Sci. St. Louis Trans. (1873) 3: 37. 1878.

Y. treculeana var. *canaliculata* (Hook.) Trel., Mo. Bot. Gard. Ann. Rpt. 13: 97. 1902.

Plant arborescent, with 1 to few stems of varying height in rather open clump; stems commonly 1 to 4 assurgently branched, 3.0 to 3.5 m. tall; leaves commonly in large, symmetrical head, or occasionally entire shoot bearing fresh leaves, the leaf blade 50 to 98 cm. long, 4 to 8 cm. wide, thick, rigid, concavo-convex, but frequently flattened; leaf margin thin, entire or with few fine, straight fibers; scape short, glabrous; panicle extending 0.5 to 0.75 percent of its length above foliage, ellipsoidal, dense; flowers small, broadly globose or hemispherical, white or lightly tinged with purple, perianth segments somewhat thickened toward base; sepals 29 to 45 (36) mm. long; 8 to 15 (11) mm. wide; petals 30 to 40 (36.5) mm. long, 11 to 21 (14.5) mm. wide; filaments 15 to 24 (18.8) mm. long; pistil 20 to 30 (27.3) mm. long; ovary 4 to 6 (5.8) mm. in diameter, apex abruptly terminating (shouldered) in style; style 1 to 5 (3) mm. long; fruit 65 to 100 mm. long, 17 to 24 mm. in diameter, cylindrical with abruptly tapered apex, symmetrical, rarely constricted; carpel-suture U-shaped, deep or frequently broad and rather flat; seed¹⁸ 4 to 5 by 5 to 6 mm., flat, thick, rough, dull black, wingless. (Pl. 6.)

TYPE: South-central Texas and adjacent Mexico; *A. A. Trecul* 1496, Mus. d'Hist. Nat., Paris.

RANGE: The greater part of the reported distribution of *Yucca treculeana* is east of the present range of study and in Mexico. Consequently the writer has seen the species only in a limited triangular area — between Uvalde, Carrizo Springs, and Eagle Pass, Tex. In this triangle the species is thinly scattered in tall chaparral and is easily overlooked. It flowers between mid-March and early April.

Although *Y. treculeana* is a well-characterized species, it is similar to *Y. torreyi*; and variations that occur in the *Y. torreyi* so closely resemble *Y. treculeana* that it is questionable whether specific distinctions exist between the two plants. *Y. treculeana*, however, is distinguishable from typical *Y. torreyi* by its small flowers of hemispherical shape with stout ovaries and by its more symmetrical head of relatively broader, shorter leaves, which are mainly non-filiferous.

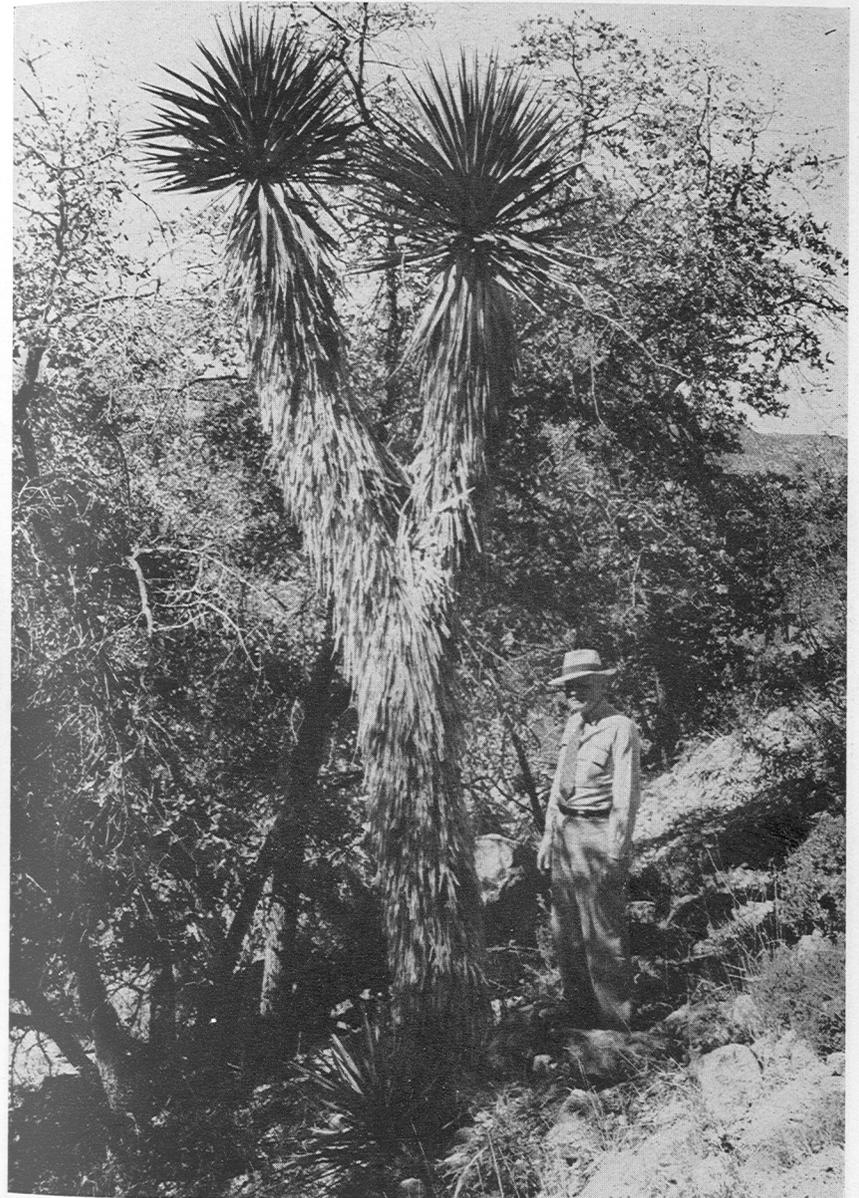
Apparent Hybrids of *Yucca treculeana* and *Yucca torreyi*

Between *Yucca treculeana* on the east and *Y. torreyi* on the west is a comparatively large area that appears to be a transitional zone between the two species. This zone is approximately bounded by a line through Eagle Pass,

¹⁸ Seed from single plant near Rockport, Tex.



Yucca schottii Engelm.: 1 mile east of Patagonia, Ariz. Plants with several shoots and fresh leaves covering entire trunklike stems. Photographed, August 3, 1943.



Yucca schottii Engelm.: 15 miles northwest of Cloverdale, N. Mex. Plants with few shoots and fresh leaves limited to apical crown. Photographed, April 12, 1945.