

BIGNONIACEAE BIGNONIA FAMILY

Charles T. Mason, Jr.
Herbarium
113 Shantz Building
University of Arizona
Tucson, AZ 85721

Trees, shrubs, or woody vines. LEAVES simple or more commonly compound; terminal leaflet often a tendril; stipules absent. INFLORESCENCES racemes, panicles or cymes. FLOWERS showy, perfect, 5-merous; sepals united, the calyx campanulate or 2-lipped; corolla sympetalous, zygomorphic; stamens 4 (2 in *Catalpa*), didynamous, epipetalous, commonly arched under the upper corolla lip, the anthers of 2 diverging cells; 1 staminode usually present; pistil 2-carpelled, the ovary superior on a nectar disk, usually 2 loculed, the style long with 2 flattened stigmas. FRUITS capsules. SEEDS usually flattened and winged. --120 genera, 650 spp., chiefly of tropical and subtropical regions. Many cultivated ornamentals as *Catalpa* and *Jacaranda*.

- 1. Flowers yellow; leaves pinnately compound *Tecoma*
- 1' Flowers white, pink, lavender, or magenta; leaves simple.
 - 2. Leaves linear-lanceolate, mostly alternate *Chilopsis*
 - 2' Leaves broadly ovate, opposite or rarely whorled *Catalpa*

Catalpa Scop. Catalpa

Deciduous trees. LEAVES simple, opposite, rarely whorled, the margins entire or coarsely lobed, 3-5-veined at the base, the petioles to 16 cm long. INFLORESCENCES terminal panicles or racemes. FLOWERS: calyx splitting irregularly or 2-lipped; corolla white, pink or with yellow lines, campanulate, bilabiate with 2 smaller upper lobes and 3 larger lower ones; stamens 2, each of the diverging anther cells 3-4 mm long; staminodia 3, small; style slightly exceeding the stamens. FRUITS cylindric, very long and narrow. SEEDS numerous, compressed, winged, bearing a tuft of long hairs at each end. (From and Indian name for the tree.) -- 10 spp. N. Amer. and Asia.

Catalpa bignonioides Walter. Common Catalpa. (Bignonia + Greek *oides* = like). Tree to 20 m tall. LEAVES broadly ovate, the petiole to 16 cm long, the blade 10-25 cm long, the apex abruptly short acuminate, the base truncate to cordate. INFLORESCENCES broad panicles, 15-25 cm long. FLOWERS numerous, showy; calyx 1-1.5 cm long, unequally 2-lipped, the lobes mucronate; corolla 3-4 cm across white with purple spots and 2 yellow lines inside, the lobes spreading and undulate. FRUITS to about 40 cm long. Widely cultivated, escaped to roadsides, floodplains, canyons, and riparian habitats: Cochise, Gila, Pinal cos.: 1050-1650 m (3500-5400 ft); May-June; native to GA and FL and MS now widely distributed as an escape.

Chilopsis D. Don Desert-willow

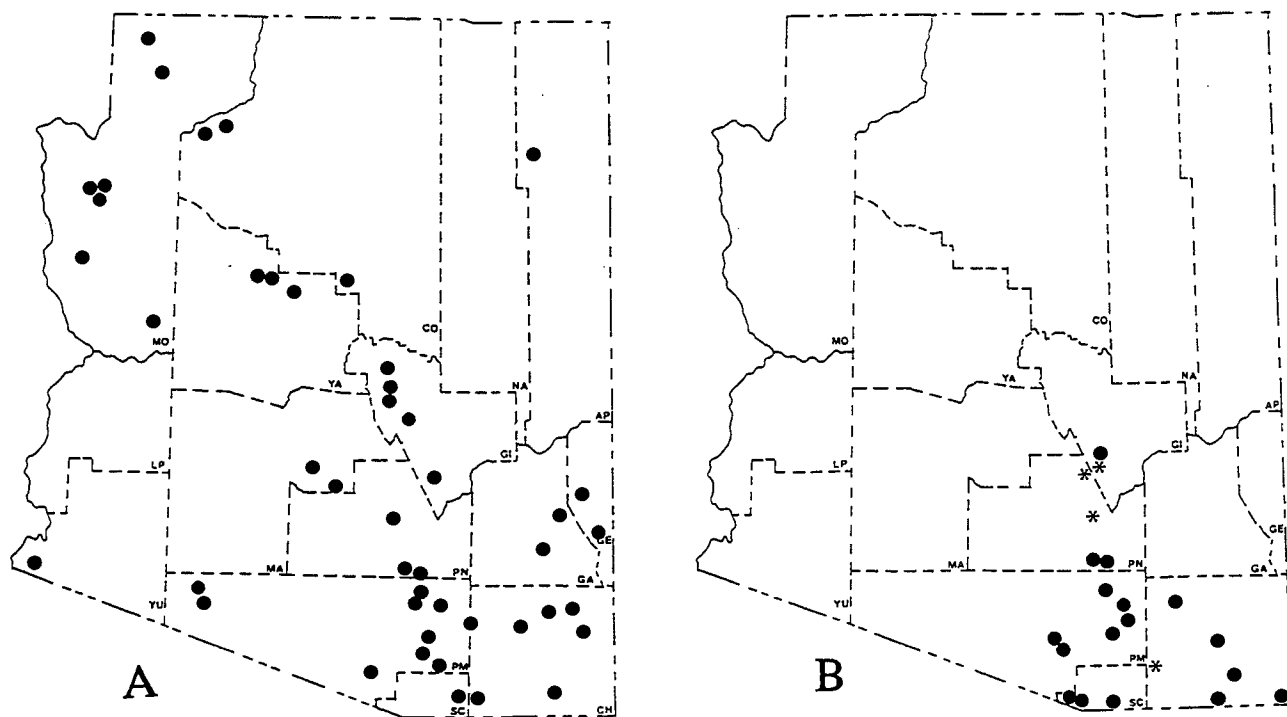
Shrubs or small trees 2-9 m tall. LEAVES simple, mostly alternate, linear to linear-lanceolate, 6-15(-26) cm long, 2-6(-13) mm wide. INFLORESCENCES terminal racemes or panicles. FLOWERS with white throat, the outside pink, lavender to magenta; calyx bilabiate, pubescent; corolla tubular-campanulate, glabrous outside, with gland-tipped hairs below stamen insertion, with simple hairs 1-3 mm long in the throat; anthers 2-3 mm long; staminode 4-10 mm long, sometimes with an aborted anther. FRUITS linear, terete, 13-32 cm long. SEEDS winged by free or basally fused hairs. --1 sp., 2 subspp.; sw U.S.; Mex. (Greek: *cheilos* = lip + *opsis* = like - referring to corolla shape).
Henrickson, J. 1985. *Aliso* 11:179-197.

***Chilopsis linearis* (Cav.) Sweet (linear) subsp. *arcuata* (Fosberg) Henr. (curved)** --Trees 1.5-5(-13) m tall, with spreading or drooping branches. Leaves arcuate, drooping, (8-)10-18(-25) cm long, 2-8(13) mm wide. --Sandy washes; Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Mohave, Pima, Pinal, Santa Cruz, Yavapai, Yuma cos.; 400-1900 m (1300-6200 ft.); Mar-Sep; CA, NM, NV, UT; Baja C., Chih., Son., Mex.

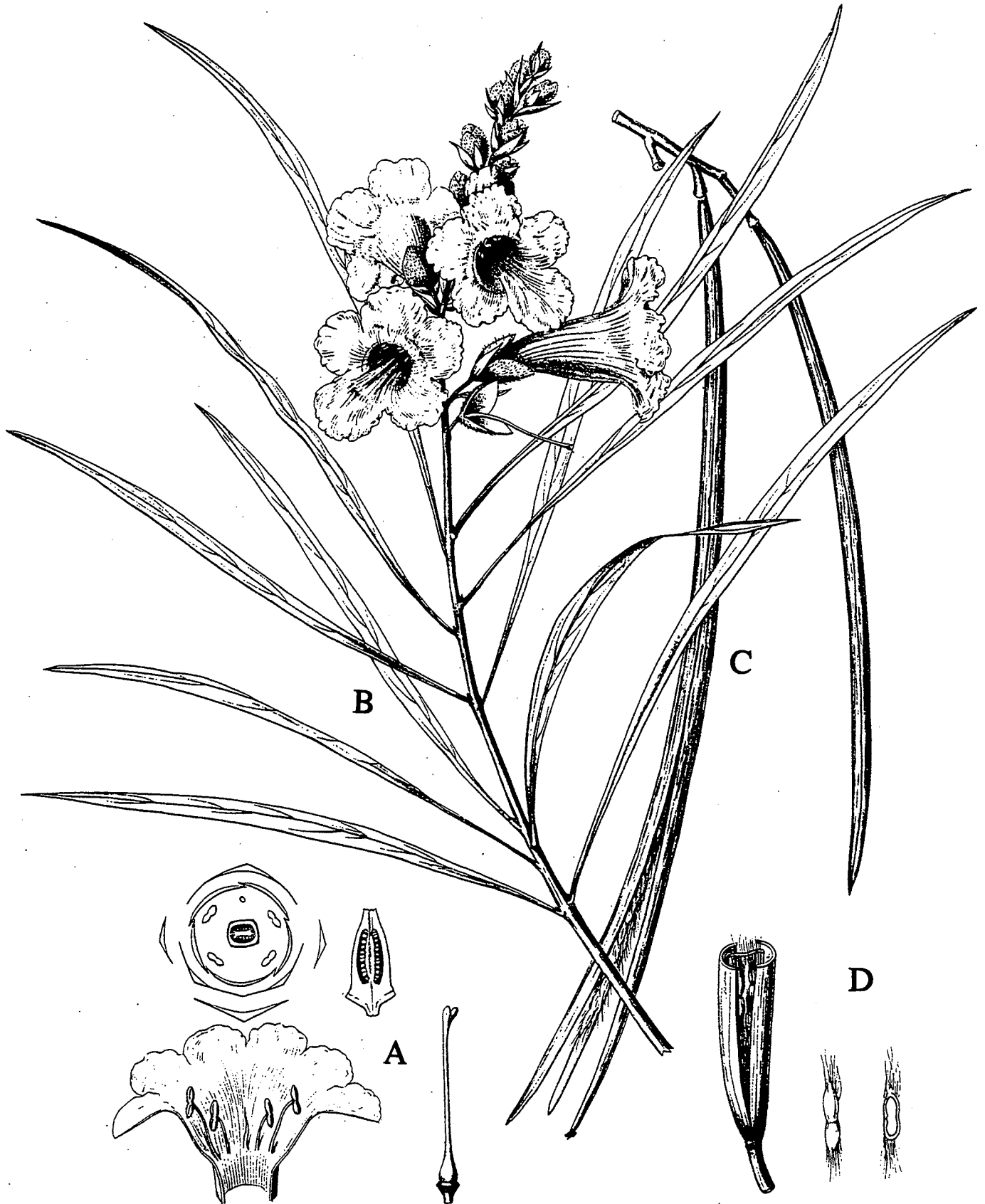
***Tecoma* Juss. Trumpet Flower**

Shrubs or small trees. LEAVES simple or pinnately compound. INFLORESCENCES racemes or panicles. FLOWERS showy; calyx campanulate with 5 small deltoid lobes; corolla yellow or orange, tubular-campanulate; stamens exserted or included, the anthers glabrous or pilose. FRUITS linear capsules. SEEDS flattened, 2-winged. --14 spp., s U.S. s to Argentina; Afr. (from the Aztec name "tecomaxochitl" referring to the "trumpet" shape of the flowers). Gentry, A.H. 1992. *Tecoma*, Pp. 273-292 in *Flora Neotropica* 25(II).

***Tecoma stans* (L.) Juss. ex H.B.K. (erect).** Plants 1-10 m tall. LEAVES pinnately compound, 3-11 foliolate; leaflets opposite, lanceolate to almost linear, apically acute to long-acuminate, 1.5-15 cm long, 0.5-6 cm wide, the margins usually serrate. INFLORESCENCES terminal racemes of up to 20 flowers, the pedicels and rachis finely pubescent. FLOWERS: calyx 3-7 mm long, with glands at the base of the lobes; corolla yellow, 3.5-5 cm long, the lobes ca. 1 cm long; stamens included, the anthers divaricate, sparsely pilose, the staminode 1-2 mm long. FRUITS linear, terete, 7-21 cm long. SEEDS 3-5 mm long. [*T. stans* var. *angustata* Rehder] --Canyons, desert grasslands, oak woodlands: Cochise, Gila, Graham, Pima, Pinal, Santa Cruz cos.; 900-1600 m (2900-5200 ft); May-Oct; s U.S. to n Argentina. Three varieties have been recognized based on leaflet shape. If accepted Arizona plants would be var. *angustata* Rehder.



Bignoniaceae Fig. 1. Distribution of: A, *Chilopsis linearis*; B, *Catalpa speciosa* (stars), *Tecoma stans* (dots).



Bignoniaceae Fig. 2. *Chilopsis linearis*, reproduced from C. S. Sargent (1890-1902), *Silva of North America*. A, dissected flower, B, flowering branch; C, fruits; D, base of fruit and seeds.