

CROSSOSOMATACEAE CROSSOSOMA FAMILY

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Small to large shrubs, rarely arborescent, often spinescent and intricately branched. LEAVES alternate or opposite, scattered or fascicled; stipules minute or absent. FLOWERS solitary, axillary or terminal on short shoots, perfect, actinomorphic, perigynous, with or without a fleshy or thin, glandular, crenately lobed disk lining the hypanthium; sepals (3-)4-5(-6), ovate, persistent; petals (3-)4-5(-6), distinct, deciduous, narrowly lanceolate to round ovate, usually longer than sepals, often short-clawed; stamens 4-50, sometimes unequal in length; carpels 1-5, distinct, stipitate or sessile, with 1-2 or many ovules. FRUITS follicular. SEEDS black or brown, with a whitish or yellowish, entire to fimbriate aril. --3 genera, ca. 6 spp., w and sc U.S. and n Mex.

1. Sepals and petals 5; petals 9-12 mm long; stamens 15-50; follicles without longitudinal striations, usually horizontally wrinkled or reticulately marked; seeds 4-many; aril fringed *Crossosoma*
- 1' Sepals and petals 4-5; petals 4-10 mm long; stamens 4-10; follicles striated longitudinally; seeds 1-2; aril irregularly discoid or minutely fringed.
 2. Leaves alternate, entire; sepals and petals mostly 5; stigma discoid *Glossopetalon*
 - 2' Leaves opposite, entire to 3-lobed; sepals and petals 4; stigma linear *Apacheria*

Apacheria C. T. Mason

Shrubs to 50 cm tall. LEAVES opposite, entire to 3-lobed, oblanceolate to spatulate, 3.5-7.5 mm long, 1.0-2.3 mm wide, apiculate, glabrous; stipules minute. FLOWERS single, sessile or short-pedunculate; sepals 4, 3.0-3.5 mm long; petals 4, white, 4-5 mm long; stamens 8; carpels (1-)4; stigmas linear. FRUITS with prominent striate veins. SEEDS 1-2, brown, 1.5 mm long, 1 mm wide, with an entire or fimbriate white aril. --A monotypic genus restricted to AZ and NM. (Named in honor of the Apache Indians who inhabited the area). Mason, C. T., Jr. 1975. *Madroño* 23:105-108.

Apacheria chiricahuensis C. T. Mason (from the Chiricahua Mountains). --In rhyolitic rock crevices and on ledges in and around Chiricahua National Monument, Cochise Co.; 1700-2100 m (5500-6800 ft); Apr-Nov; East Red Canyon, San Mateo Mts., Socorro Co. NM.

Crossosoma Nutt. *Crossosoma*

Shrubs or small trees. LEAVES alternate, often clustered on short branches, simple, entire. FLOWERS terminal or axillary; sepals 5, 4-5 mm long; petals 5, 9-15 mm long; stamens numerous, usually 15 or more; gynoecium stipitate, 1-5 free carpels; stigmas capitate, oblique. FRUITS horizontally wrinkled or reticulately marked; adaxial suture cartilaginous. SEEDS 4-many with a whitish or yellowish fimbriate aril. --2 spp.; U.S. and Mex. (Greek: *krossoi* = fringe + *soma* = body, because of the aril).

Crossosoma bigelovii S. Wats. (for John M. Bigelow). --Dense often spinescent shrubs to 1.5 m tall. LEAVES lanceolate, elliptic oblanceolate or circular, 5-15 mm long; apex rounded to acute, commonly mucronate. FLOWERS with a glandular disk lining the hypanthium; sepals ovate to circular, persistent; petals white, narrowly lanceolate, elliptic, or oblanceolate, 9-15 mm long. SEEDS 4-8; aril usually white. [*Crossosoma parviflorum* Rob. & Fern.]. --Rock crevices and rocky slopes: Gila, La Paz, Maricopa, Mohave, Pima, Pinal, Yavapai, Yuma cos.; 65-1400 m (200-4500 ft); Jan-Apr; CA, NV; Baja C. Norte, Chih., Son., Mex.

Glossopetalon A. Gray

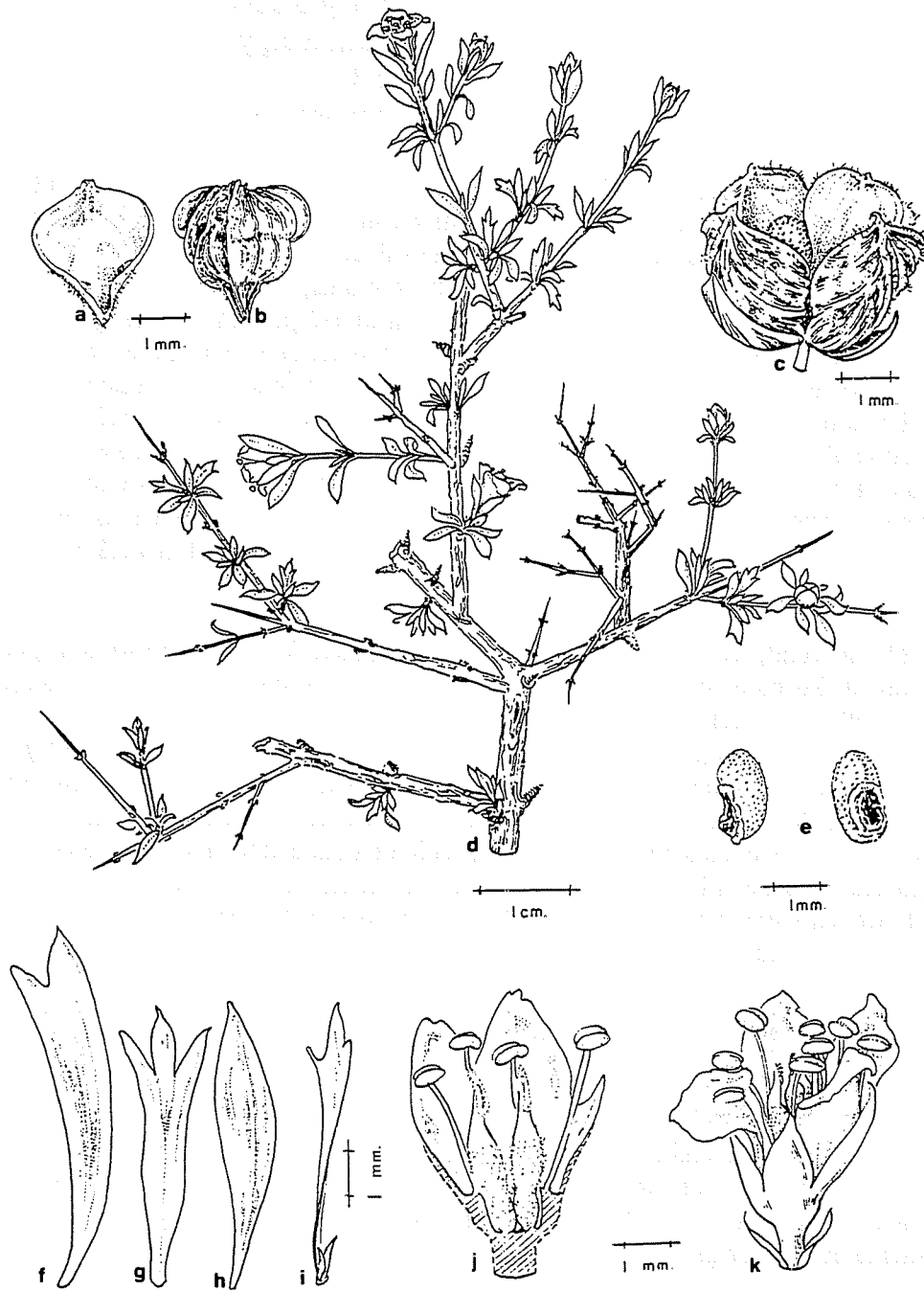
Intricately or divaricately branched or matted, often spinescent shrubs to 2 m tall. LEAVES alternate, entire, crowded or distant, lanceolate, elliptic, to oblanceolate or obovate, 5-10 mm long, forming decurrent lines or ridges on the stem, glabrous or minutely pubescent with ciliolate margins, the apices acute, mucronate or distinctly spine tipped. FLOWERS solitary, axillary or terminal on short shoots; glandular disk lining the hypanthium; sepals (4-)5(-6), lanceolate, ovate, or circular, 4-5 mm long, persistent; petals (4-)5(-6), white, narrowly lanceolate to broadly oblanceolate, deciduous, 6-10 mm long; stamens 6-10; carpels 1(-3), sessile; stigma discoid. FRUITS striated. SEEDS 1-2 with a circular, irregular, whitish aril. --A genus of variable, minute characters; 2-3 spp.; w and sc U.S. and n Mex. (Greek: *glossa* = tongue + *petalon* = petal, referring to the shape of the petals). Ensign, M. 1942. *Amer. Midl. Nat.* 27:501-511. Holmgren, N. 1988. *Brittonia* 40:269-274. [*Forsellesia*].

Glossopetalon spinescens A. Gray (spiny). --Intricately or divaricately branched, spinescent shrubs. LEAVES distant; apices in ours not spine tipped; stipules absent or if present minute, subulate, 0.1-0.9 mm long, attached to the persistent glandular petiole base. --2 vars.; w U.S. from WA to TX; n Mex. mostly on limestone.

1. Plants intricately branched; mature glandular petiole base becoming dark; stipules usually present, to 0.9 mm long; leaves usually persistent; nw and c AZ var. **aridum**
- 1' Plants divaricately branched with ultimate branches curving downward; mature glandular petiole base pale; stipules usually absent or to 0.1 mm long; leaves early deciduous; se AZ var. **spinescens**

Var. **aridum** M. E. Jones (dry). --Plants intricately branched. LEAVES mostly present during flowering, usually puberulent with ciliolate margins; glandular petiole base becoming darkened at maturity; stipules usually present, to 0.9 mm long, attached to glandular petiole base. [*Forsellesia nevadensis* (Gray) Greene, *Glossopetalon nevadensis* A. Gray]. --Hillsides and canyons: Coconino, Graham, Mohave, Yavapai cos.; 1400-1900 m (4500-6300 ft); Mar-Jun; CA, CO, ID, NV, OR, UT, WA.

Var. **spinescens** (spiny). --Plants divaricately branched. LEAVES readily deciduous, commonly absent during flowering, usually glabrous, the glandular petiole base remaining pale at maturity; stipules absent or if present 0.1 mm or less long. [*Forsellesia spinescens* E. Greene]. --Mostly on limestone cliffs, ledges and hillsides: Cochise Co.; 1450-1850 m (4700-6000 ft); Apr-Sep; NM, TX; Chih., Coah., Mex.



Crossomataceae Fig. 1. *Apacheria chiricahuensis*, a and b, single open follicle (a, adaxial, b, abaxial); c, four follicles *in situ*; d, branch; e, seeds, f, g, and h, leaf variation; i, leaf with stipules; j, flower (median longitudinal section); k, flower (entire). Illustrations by Patricia Mason.