



Flora of North America

Polypremaeae

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19 March 2012

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POLYPREMAEAE Takhtajan ex Reveal

* Polyprema Family

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Herbs, usually perennial, sometimes annual, not succulent, autotrophic. **Stems** procumbent to ascending. **Leaves** cauline, opposite, simple; stipules reduced to ridges; petiole absent; blade not fleshy or leathery. **Inflorescences** terminal or axillary, usually dichasial or monochasial cymes, sometimes flowers solitary in axils. **Flowers** bisexual, perianth and androecium partly hypogynous; sepals 4--5(--6), connate proximally, calyx radially symmetric; petals 4(--5), corolla radially symmetric; stamens 4(--5), equal, staminode 0; pistil 1, 2-carpellate; ovary partly inferior, 2-locular, placentation axile; ovules anatropous or amphitropous, unitegmic, tenuinucellate; style 1; stigma 1. **Fruits** capsular, dehiscence septical. **Seeds** 70--120+, yellow; embryo straight, endosperm abundant.

Species 1: c, se United States, Mexico, West Indies, Central America, South America; introduced in Pacific Islands, Australia.

Polyprema has been placed in the Buddlejaceae, Loganiaceae, Rubiaceae (see G. K. Rogers 1986), or, Tetrachondraceae, where it was aligned with *Tetrachondra*, a genus of two species with sessile leaves and flowers with a superior ovary and gynobasic style, known only from Argentina, Chile, and New Zealand (S. J. Wagstaff 2004). B. Oxelman et al. (1999) found evidence from *rbcL* and *ndbF* analyses supporting membership of *Tetrachondra* in a clade within the Lamiales. This was confirmed by B. Schaeferhoff et al. (2010) from analyses using *trnK/matK*, *trnL-F*, and *rsp16* sequence data.

A. L. Takhtajan (2009) followed L. Watson and M. J. Dallwitz (<http://delta-intkey.com>) in recognizing Watson's unigeneric, unpublished, Polypremaeae, which Reveal recently published.

SELECTED REFERENCE Wagstaff, S. J. 2004. Tetrachondraceae. In: K. Kubitzki et al., eds. 1990+. The Families and Genera of Vascular Plants. 10+ vols. Berlin, etc. Vol. 7, pp. 441-444.

1. POLYPREMUM Linnaeus, Sp. Pl. 1: 111. 1753; Gen. Pl. ed. 5, 50. 1754 [Greek *polys*, many, and *premon*, stump or stem, alluding to diffuse much-branched, habit]

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Herbs, taprooted. **Stems** glabrous or sparsely scabrous along ridges. **Leaves**: blade margins entire or finely serrate. **Cymes**: bracts absent. **Pedicels** absent; bracteoles present. **Flowers**: calyx urceolate, lobes lanceolate; corolla white, short-funnelform; stamens adnate to corolla, filaments glabrous; stigma capitate. **Capsules** symmetric. **Seeds** angled to angled-globose, not winged.

Species 1: c, se United States, Mexico, West Indies, Central America, South America; introduced in Pacific Islands, Australia.

1. *Polyprema procumbens* Linnaeus, Sp. Pl. 1: 111. 1753 * Juniper leaf, rustweed F W

Stems (5--8--20(--33) cm, much-branched distally. **Leaves** sometimes forming dense, overwintering rosettes; blade 1-veined, linear to narrowly lanceolate, (5--10--25(--42) x (0.5--1(--2) mm, margins ciliate proximally, apex acuminate. **Bracteoles** leaflike. **Calyx lobes** (2--3) mm, keeled, margins scarious, especially medially, apex attenuate; corolla 1--2 mm, usually 1/2--3/4 length of calyx lobes, corolla lobe apex rounded; stamens included. **Capsules** 2-lobed, 2 x 1.5--2 mm, slightly flattened. **Seeds** 0.3 mm, shiny. $2n = 20$ (Guyana), 22.

Flowering May--Nov. Pine woods and barrens, roadsides, sand dunes, sandy fields, waste places; 0--1000 m; Ala., Ark., Del., Fla., Ga., Ill., Ky., La., Md., Miss., Mo., N.C., Okla., S.C., Tenn., Tex., Va.; Mexico; West Indies; Central America; South America; introduced in Pacific Islands, Australia.

Collections of *Polyprema procumbens* were examined from ship ballast piles in New Jersey (1865, 1875) and Pennsylvania (1865, 1868), and there was an 1873 report from Long Island, New York.

Polyprema is sometimes confused with *Loeflingia* and *Scleranthus* of the Caryophyllaceae; the opposite, linear-acuminate leaves and axillary flowers are suggestive of those taxa. The relatively small, but conspicuous, white petals (absent or at most rudimentary in *Loeflingia* and *Scleranthus*) and the 2-lobed capsule (3-valved capsule in *Loeflingia*, utricle in *Scleranthus*) distinguish *Polyprema*.

Since a report from Hawaii (F. R. Fosberg 1962), populations of *Polyprema procumbens* have been discovered in widely scattered locations, often near roads or runways, in the Pacific Basin. Specimens have been examined from Micronesia (Guam, Kwajalein Atoll of the Marshall Islands, Palau), Wallis Island, and one site in eastern Australia.