



# Flora of North America

Brachystigma (Orobanchaceae)

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X. BRACHYSTIGMA Pennell, Proc. Acad. Nat. Sci. Philadelphia  
80: 432. 1928 \* Desert foxglove [Greek *brachys*, short, and  
*stigma*, stigma]

Christopher P. Randle

**Herbs**, perennial; obligate root hemiparasites, caudex woody.  
**Stems** erect, not succulent, hirsutulous. **Leaves** cauline, in  
whorls of 3, not fleshy or leathery; petiole absent; blade  
margins entire. **Inflorescences** terminal, racemes; bracts  
present. **Pedicels** present; bracteoles absent. **Flowers**: sepals  
5, calyx nearly radially symmetric, broadly campanulate, lobes  
deltate; petals 5, corolla yellow, proximally inflated and  
subrotate, abaxial lobes 3, adaxial lobes 2; stamens 4, inserted  
at base of corolla, didynamous, filaments glabrescent  
proximally, villous distally, staminode 0; ovary 2-locular,  
placentation axile; stigma clavate. **Capsules** symmetric,  
dehiscence loculicidal. **Seeds** 100+, dark brown, ellipsoid, +/-  
winged.

Species 1: sw United States, n Mexico.

*Brachystigma* is unispecific and narrowly restricted to dry  
mountain slopes of southeastern Arizona, southwestern New  
Mexico, and northern Mexico. F. W. Pennell (1928)  
differentiated it from the similar genus *Agalinis* by its yellow

corolla, glabrous anthers, capitate stigma, more acute capsule, and winged seeds. Phylogenetic analysis of three chloroplast genes supports this distinction (M. C. Neel and M. P. Cummings 2004). Further, *Brachystigma* may be differentiated from closely related genera *Aureolaria*, *Dasistoma*, and *Seymeria* by its leaves arranged in whorls of three, a character unique among the Orobanchaceae.

SELECTED REFERENCE Pennell, F. W. 1928. *Agalinis* and allies in North America: I. Proc. Acad. Nat. Sci. Philadelphia 80: 339--449.

1. **Brachystigma wrightii** (A. Gray) Pennell, Proc. Acad. Nat. Sci. Philadelphia 80: 433. 1928 \* Arizona desert foxglove

**F**

*Gerardia wrightii* A. Gray in W. H. Emory, Rep. U.S. Mex. Bound. 2(1): 118. 1859; *Agalinis wrightii* (A. Gray) Tidestrom;  
*Dasistoma wrightii* (A. Gray) Wooton & Standley

**Plants** unbranched or branching at the rhizome. **Stems** slender, 30--55 cm. **Leaves** filiform-linear, 30--60 x 2--3 mm, proximal leaves longer than distal. **Inflorescences** racemes of paired flowers, occupying to 2/3 the height of stem, bracts resembling foliage leaves. **Pedicels** 11--30 mm. **Flowers** 10--26 x 7--16 mm; calyx 3--5 x 4--7 mm, lobes broadly deltate, 1--1.5 mm; corolla

abruptly inflating just beyond calyx, 24--30 mm wide, pubescent externally, glabrous internally, lobes orbicular; filaments 8--11 mm, anthers included, base bluntly sagittate, glabrous, locules equal, 5 mm; ovary ovoid, 4--5 x 2--4 mm, style incurving at maturity, 5--6 mm. **Capsules** with persistent calyces, globose-ovoid. 8--10 x 5--8 mm. **Seeds** reticulate, 2 mm.

Flowering Aug--Oct; fruiting Oct--Dec. Dry mountain slopes, often in oak chaparral; 1200--2000 m; Ariz., N.Mex.; Mexico (Chihuahua, Sonora).