

-State Species Abstract-
-Wyoming Natural Diversity Database-

HELIANTHEMUM BICKNELLII
PLAINS FROSTWEED
Family: Cistaceae

Status:

US Fish & Wildlife Service: None.
Agency Status: None.

Heritage Rank:

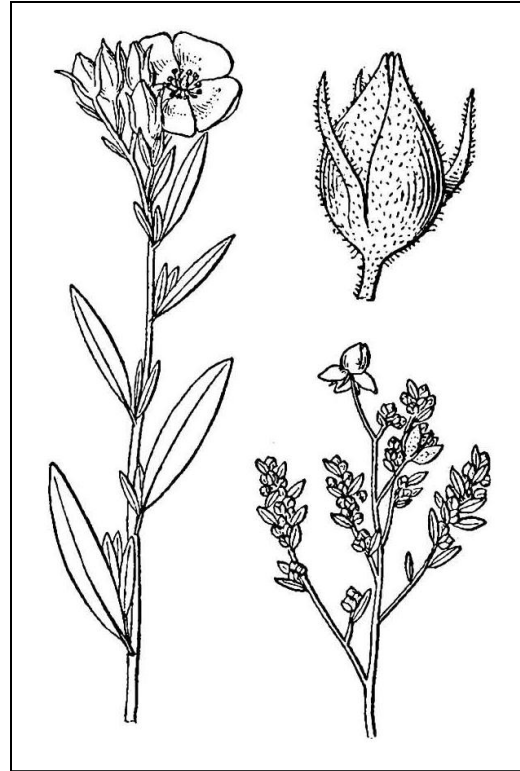
Global: G5 State: S1

Range Context: Widespread/Edge

Wyoming Contribution Rank: Low

Description: Plains frostweed is a perennial forb with densely whitish-gray hairy stems 15-60 cm tall that are clustered at the top of a branched caudex. Leaves are linear-oblong to narrowly elliptic, 5-35 mm long, entire, alternate, and stellate-pubescent. The first flowers of the season have 5 yellow petals 7-12 mm long and numerous, separate stamens and are arranged in clusters of 5-12 in a loose, terminal raceme. Petals fall off within 2 days. The calyx is stellate-pubescent with 3 broad and 2 narrow sepals. Later flowers are much smaller, do not open (cleistogamous), and are crowded in short axillary branches that do not overtop the larger, open flowers. Fruiting capsules of open flowers are 4-5 mm in diameter and rounded with numerous seeds, while the capsules of closed flowers are strongly 3-sided, less than 2 mm in diameter, and bear 1-3 seeds (Dorn 2001; Great Plains Flora Association 1986).

Similar Species: *Lechea intermedia* has linear leaves and reddish-purple flowers less than 2 mm long. *Hypericum* spp. have numerous stamens grouped in clusters, and gland-dotted yellow petals. *Lysimachia ciliata* has broader leaf blades with ciliate petioles and flowers with 5 stamens.

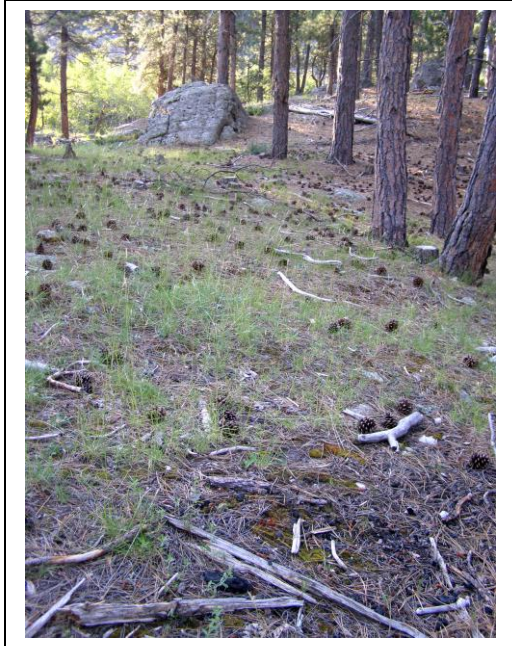


Above: *Helianthemum bicknellii*, from: Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 2: 540.

Below: *Helianthemum bicknellii*, by B. Heidel

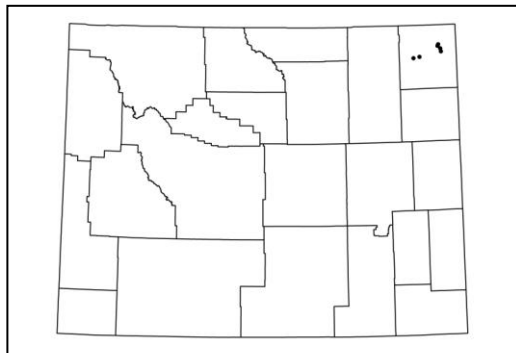


Flowering/Fruiting Period: June-September.



Above: *Helianthemum bicknellii* habitat, by B. Heidel

Distribution: Maine to Manitoba, south to Georgia, Arkansas, and Colorado. In Wyoming it is known only from the Black Hills in Crook County



Wyoming distribution of *Helianthemum bicknellii*.

Habitat: Rangewide, this species occurs on dry, usually sandy soils in open woods and plains. In Wyoming populations occur in Ponderosa pine woods associated with sandstone outcrops and sandy soils at 4200-4800 feet.

Occurrences in Wyoming: Known from 6 occurrences in Wyoming, the last observed in 2008.

Abundance: Not known.

Trends: Not known.

Protection status: One occurrence is in Devils Tower National Monument and another is partially in the Hay Creek RNA on Black Hills National Forest. Other populations are on public lands managed for multiple use.

Threats: Not known.

Managed Areas: Occurs on lands managed by Black Hills National Forest and Devils Tower National Monument.

References:

Dorn, R.D. 2001. Vascular Plants of Wyoming, third edition. Mountain West Publishing, Cheyenne, WY.

Fertig, W. 2000. Rare plants of Devils Tower National Monument. Prepared for the National Park Service by the Wyoming Natural Diversity Database, Laramie, WY.

Great Plains Flora Association. 1986. Flora of the Great Plains. Univ. Kansas Press, Lawrence, KS.

Heidel, B. 2008. Survey for special plant species of concern in Devils Tower National Monument. Prepared for the National Park Service. Wyoming Natural Diversity Database, Laramie, WY.

Heidel, B. 2008. Report on the proposed Hay Creek research natural area. Prepared for Black Hills National Forest. WYNDD, Laramie, WY.

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