BLM

WYOMING'S

Threatened and Endangered Plant Species

Desert Yellowhead

Bureau of Land Management

Desert Yellowhead

Desert yellowhead (*Yermo xanthocephalus*) is the rarest of Wyoming's four listed threatened or endangered plants, being known from a single location in central Wyoming and nowhere else.

What in the world is a Desert yellowhead? Nobody knew until 1990, when Wyoming plant expert Robert Dorn discovered the first population. Dorn first saw the plants in the spring while conducting a survey of another rare plant species and suspected the plant might be a new species of milkweed based on its leathery leaves and waxy, yellow buds. When he returned to collect a flowering specimen in June, Dorn was surprised to learn that the mystery plant was actually a member of the sunflower family (Asteraceae or Compositae) and not a milkweed at all! Although the flowers resembled those of Indian plantain (a genus of swampland plants from the eastern U.S.), the floral bracts were quite unusual in being bright yellow rather than green and leafy as in 99% of all other composites. Dorn recognized that he had not only a new species, but also a new and undescribed genus. The plant was given the scientific name *Yermo xanthocephalus* by Dorn in 1991; yermo meaning "desert" in Spanish, and xanthocephalus translating as "yellow head" for the prominent yellow bracts.

Despite extensive searching of suitable habitat throughout the state for several years, Desert yellowhead remains known only from Dorn's original population, located in the Beaver Rim area of Fremont County, Wyo. In 2002, the Desert yellowhead was listed as threatened by the U.S. Fish and Wildlife Service under the Endangered Species Act. An area of 360 acres surrounding the population was designated as critical habitat in 2004.

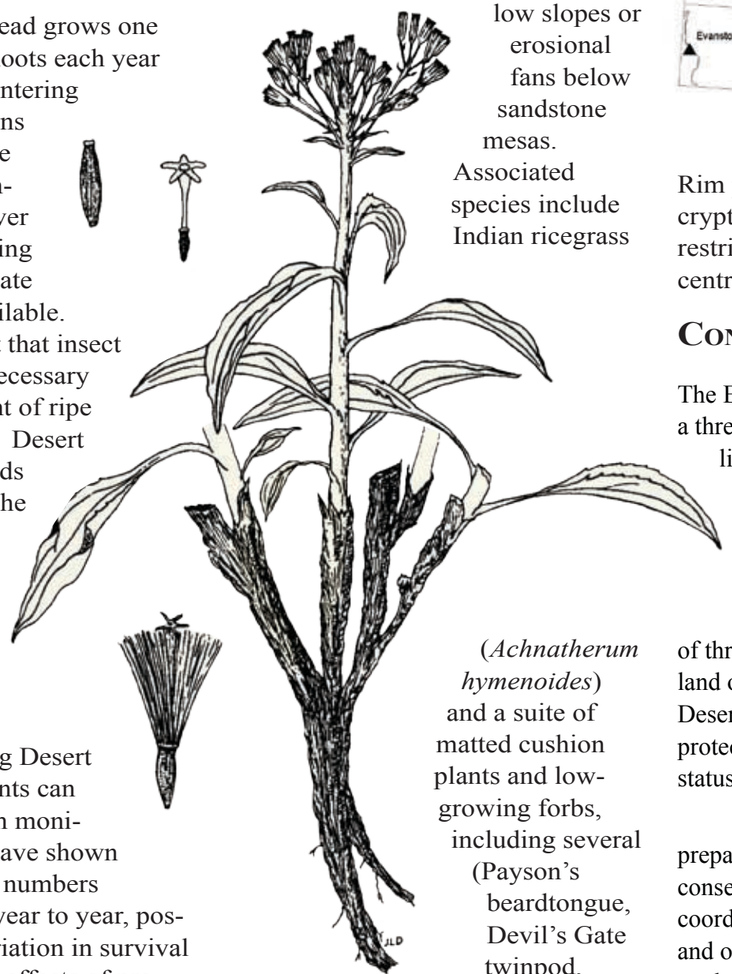
Description

Desert yellowhead is a taprooted perennial with one to five leafy stems up to 12 inches tall. The alternate leaves are somewhat succulent and leathery and either smooth or slightly toothed along the margins. Leaf blades are oval to lance-shaped, 1½ to 10 inches long, and often folded at the midvein.

Typical plants have 25 to 200 flower heads crowded at the top of the stem. Like other members of the sunflower family, Desert yellowhead flowers are located on a small disk that is surrounded by a series of modified leaves called floral bracts or phyllaries. Desert yellowhead is unique among Wyoming composites in having bright yellow floral bracts that resemble a series of fleshy bananas. The actual flowers (or florets) are tubular, tiny, and also bright yellow. Desert yellowhead does not produce showy, petal-like ray flowers along the outer rim of the flower head. After being pollinated, the five disk florets comprising each flower head ripen into single-seeded fruits, each sporting a tuft of white bristles to aid in dispersal by the wind. Some botanists believe the bright yellow floral bracts help attract bees for pollination in the absence of showier ray florets.

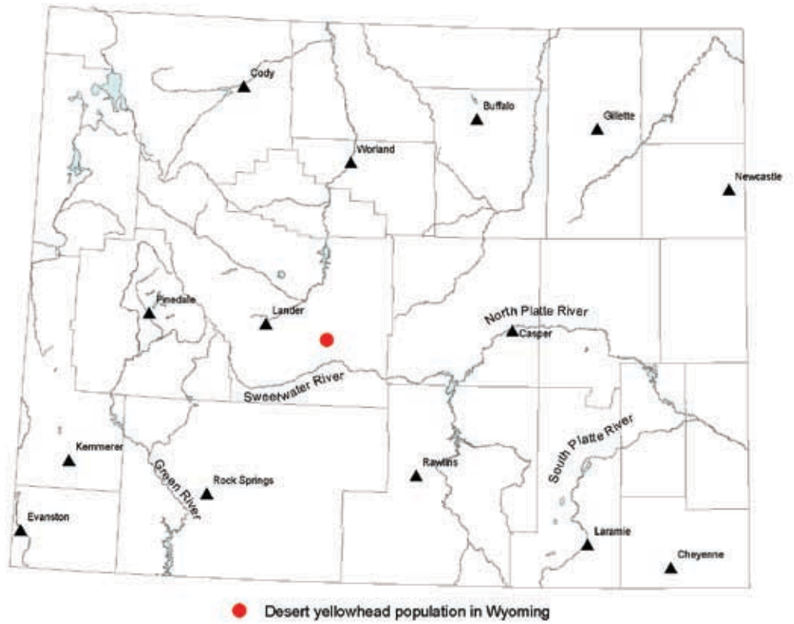
Life History

Desert yellowhead grows one or more new shoots each year from an overwintering taproot. It begins flowering in late June and continues to flower over the entire growing season if adequate moisture is available. Studies suggest that insect pollination is necessary for development of ripe fruits and seed. Desert yellowhead seeds can germinate the same year that they form, but some overwinter to germinate the following year. No one knows how long Desert yellowhead plants can live. Long term monitoring studies have shown that population numbers fluctuate from year to year, possibly due to variation in survival to adulthood or effects of prolonged dormancy. More than 10,000 individual plants or clusters of stems (the exact size of underground rootstalks is poorly known) have been counted in peak years.



Habitat

Desert yellowhead is restricted to aridic sandstone and limestone soils with high concentrations of volcanic ash derived from the Split Rock Formation. Populations occur mostly in wind-carved deflation hollows and on barren low slopes or erosional fans below sandstone mesas. Associated species include Indian ricegrass (*Achnatherum hymenoides*) and a suite of matted cushion plants and low-growing forbs, including several (Payson's beardtongue, Devil's Gate twinpod, Beaver Rim phlox, and Caespitose cryptantha) that are also restricted to barren habitats in central and southern Wyoming.



Desert yellowhead population in Wyoming

Conservation

The Endangered Species Act defines a threatened species as one that is likely to become in danger of extinction within the foreseeable future throughout all or a significant portion of its range. Federal law prohibits the removal or destruction of threatened plants on any federal land or as a result of federal actions. Desert yellowhead also receives protection under the BLM's special status species management policy.

The Wyoming BLM is preparing a Desert yellowhead conservation strategy in coordination with local, state, and other federal agencies to apply federal statutes and agency policy in a way that addresses the conservation needs of this plant. The goal is to foster long term viability of the Desert yellowhead and avert potential threats that include oil, gas, and water development, powerline construction, off-road vehicle use, livestock grazing, and plant collection.

The BLM recognizes that plant conservation and protection is essential to sustain ecological, economic, and aesthetic values of our public lands. The BLM, in partnership with local, state, and federal agencies, works to achieve its multiple-use mandate of public land management. For two decades, the BLM has worked with the Wyoming Natural Diversity Database and the Rocky Mountain Herbarium at the University of Wyoming to survey, monitor, and research native plant species in order to maintain Wyoming's native plants and their habitats.

Suggested Reading

Dorn, R.D. 1991. *Yermo xanthocephalus* (Asteraceae: Senecioneae): a new genus and species from Wyoming. Madroño 38(3): 198-201.

Fertig, W. 1995. Status report on *Yermo xanthocephalus* in central Wyoming. Prepared for the Bureau of Land Management. Wyoming Natural Diversity Database, Laramie, Wyo.

Heidel, B. 2002. Status report on desert yellowhead *(Yermo xanthocephalus)* in Wyoming. Prepared for the Bureau of Land Management. Wyoming Natural Diversity Database, Laramie, Wyo.

Milius, S. 1999. Unknown plants under our noses. *Science News* 155(1): 8-10.

Scott, R.W. 2000. Field studies on *Yermo xanthocephalus* Dorn. Final report to Bureau of Land Management. Central Wyoming College, Riverton, Wyo.

Citation:

B. Heidel, W. Fertig, F. Blomquist, and T. Abbott. 2008. Wyoming's Threatened and Endangered Species: Desert Yellowhead. Wyoming Bureau of Land Management, Cheyenne, Wyo. In collaboration with Wyoming Natural Diversity Database.

Note: New data on the biology and status of this species are being collected constantly, and parts of the information in this publication may become outdated. The fact sheet provides a general overview of the status of this species and is not intended as the sole source of species information for planning and research purposes. For additional information on this or other threatened and endangered species, or for additional copies of this publication, refer to the suggested readings or contact the botany contacts of the Bureau of Land Management in Wyoming, U.S. Fish and Wildlife Service in Wyoming, and the Wyoming Natural Diversity Database.

This Desert Yellowhead fact sheet is one in a series on Wyoming's Threatened and Endangered Plant Species published by Bureau of Land Management and the Wyoming Natural Diversity Database.

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