

*Yermo xanthocephalus* -  
Desert yellowhead

Global: G1

State: S1

Distribution: State endemic in the Beaver Rim area near the Sweetwater River, Fremont County (see map).

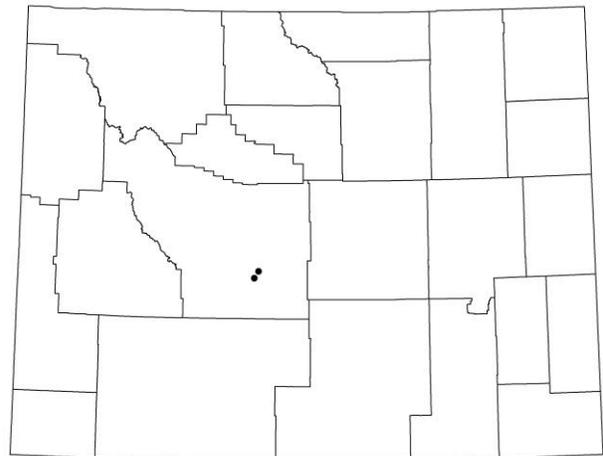
Number of Populations: Known from 2 occurrences in Wyoming.

Number of Plants: Desert yellowhead population estimates have varied with census intensity and extent at the original population (Dorn 1991; Fertig 1995). Richard Scott conducted comprehensive annual census (1995-2004) and documented fluctuations from 9,293 to 13,244 plants (Scott and Scott 2009). The second population has been censused once in 2016 by the same method to indicate that there were about 704 plants (Freeland 2016).

Species' Trends: Census data (Scott and Scott 2009) and demographic data (Doak et al. 2016) were both analyzed as part of the latter project using Population Viability Analyses to conclude that the species' numbers are relatively stable and at low risk of extinction.

Threats: Desert yellowhead was listed as Threatened based on threats associated with surface disturbance associated with oil and gas development, compaction by vehicles, trampling by livestock, and random catastrophic events. Current threats and vulnerability are under analysis in a Biological Assessment under preparation by the U.S. Fish and Wildlife Service.

Pressing Biological Questions: Pollination biology is currently being studied. It is not known if Desert yellowhead reproduces vegetatively with any regularity. This pertains to the numbers of plants and possibly to trends.



# Julie's talking points for the 2018 WYNDD Partner's meeting

November 29, 2018 – Botany Breakout

## Desert yellowhead

Species' ESA status highlights, emphasis on past year or two and current process

- 2002 listed as threatened
- 2004 designated CH around Sand Draw population
- 2005 Sand Draw mineral withdrawal established
- 2010 February Recovery outline drafted
- 2010 Summer Cedar Rim population discovered
- 2012 5-year review
- Ongoing – discussions regarding mineral withdrawal of the Cedar Rim population
- 2018 drafting Species Status Assessment to review the current status of the species and evaluate future scenarios regarding the 3Rs (resiliency, redundancy, and representation) of viability

Reasons for listing

- recreation, motor vehicles, and off-road vehicles/off-highway vehicles
- oil and gas development was considered most severe and immediate
- mineral extraction was considered potential
- livestock and wild ungulate grazing and trampling
- overutilization for commercial, recreational, scientific, or education purposes

unknown

- small population size, restricted distribution, inbreeding, and low genetic diversity
- nonnative species

*Not considered a threat for listing:* disease or predation, climate change and drought

Framework for FWS review

- SSA currently underway and out for peer and partner review for the month of December 2018. Will incorporate comments and make changes to finalize the SSA in January, with a decision meeting in early 2019. The results of the decision meeting will inform if the Service moves forward with the scheduled 5-year review in the streamlined process (for those where no change in status is proposed) or the new RPI process (for those where we foresee a down or delisting).

Current FWS actions and process for them

- Will accept comments from partners and peers through December 2018. All meeting notes, drafts out for review to the core and technical team, etc. will be part of the administrative record.

## *Oenothera coloradensis* -

### Colorado butterfly plant (COBP)

Global: G3T2 - needs to be reassigned at species level and updated

State: S2

Distribution: Laramie and Platte counties, WY (see map); Kimball County, NE; and Jefferson, Larimer and Weld counties, CO.

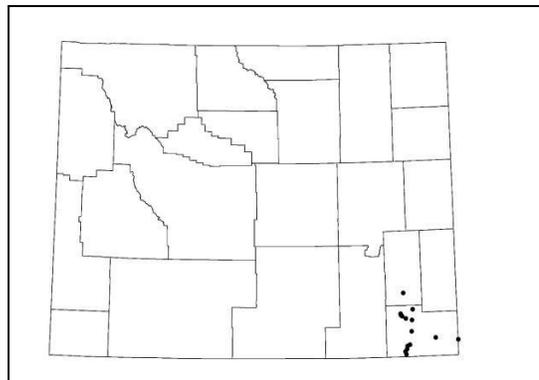
Number of Populations: Conventions for delimiting COBP populations differ somewhat between states, by source, and over time. There are at least 15 populations in Wyoming (based on about 3-mile riparian separation distance). One Wyoming population straddles the Nebraska state line and Nebraska has at least two more; all in Kimball County. Colorado has about 7 extant populations in Jefferson, Larimer and Weld counties, not counting 7 more that are historical, that had relocation survey failures, or were introduced.

Number of Plants: COBP may be locally abundant or sparse, depending on habitat conditions and climate. Rangelwide, the population of flowering individuals was estimated at 47,300-50,300 in 1998 under favorable climate conditions, with the majority of these occurring in Wyoming. Since then, a large population has been discovered in Colorado that has had numbers as high as 26,000 plants, and Nebraska surveys have documented that the Nebraska numbers have plummeted. The mean number of plants and trends may be more important than maximum population size.

Species' Trends: This taxon has probably declined in the past century due to loss of historically known habitat in northcentral Colorado (near Ft. Collins). Recent surveys in Wyoming suggest that extant populations are probably stable. Long term studies at FE Warren Air Force Base suggest that population size can vary from year to year, depending on past recruitment success, moisture conditions, and competition. Overall, the trend at the Base has been increasing since 1986 except on one of the three drainages, and with short-term decline in all three drainages under insect outbreak and drought.

Threats: COBP was listed based on threats associated mainly with agricultural practices, subdivision developments, energy developments and water developments. Current threats are evaluated in a Biological Assessment document prepared by U.S. Fish and Wildlife Service (2017).

Pressing Biological Questions: Population viability analysis for at least the FEWAFB population is currently being studied under different scenarios.



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## **Colorado butterfly plant:**

Species' ESA status highlights, emphasis on past year or two and current process

- 2000 listed as threatened
- 2005 designated CH designated
- 2010 Recovery outline
- 2012 5-year review
- 2017 Biological Assessment to inform the 5-year review and writing a Recovery Plan – decided to move forward with delisting. Recovery Team provided input
- 2018 (June 8) Proposed rule to delist was published; comment period closed August 5. Only 13 public comments and one peer-review comment
- Reviewing comments and preparing final rule and PDM to come out in 2019.

Reasons for listing

- Residential and urban development; energy development
- Agricultural practices – grazing and herbicide application
- Water management
- Natural succession and competition with nonnative invasive species
- Small population size and restricted range

*Not threats during listing:* overutilization or collection, disease or predation, inadequate reg., climate change

Framework for FWS review

- Briefed RD on the proposed rule to delist in February 2018. Agreed that delisting made the most sense for this species. Following the Recovery Planning and Implementation protocol, where a Biological Opinion or SSA is the scientific document that provides the basis for future recovery decisions.
- October 2018, held meeting with other affected bios in the Service to go over comments from public and peer reviewer.

Current FWS actions and process for them

- Final rule to delist expected in early 2019. Final rule will include a post-delisting monitoring plan that will include monitoring at a subset of populations for 5 or more years. I will draft final rule along with a response to comments from the public and peer review, and send it to the Regional Office who will ensure that everything looks good.