

## **Montana Plant Species of Concern, from *Acorus americanus* to *Zizia aurea***

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Before diving right into the core of the subject, we should probably first cover the basics: what is the Montana Natural Heritage Program (MTNHP)? The MTNHP is part of a hemispheric-wide Natural Heritage Network that covers all 50 States, most of Canada, and eight central and South American countries. The mission of the MTNHP is to be the source of reliable, objective information on Montana's native species and habitats, emphasizing species of conservation concern. The Montana program is in its 20<sup>th</sup> year of existence as part of the Montana State Library and the Natural Resource Information System in Helena, and was established by the State Legislature in 1985. The whole story is actually a little more complicated, but we'll leave it at that for now.

A significant part of what the MTNHP does is to maintain a list of plant Species of Concern (SOC), which are those species that are deemed to be at-risk of extinction or extirpation within the state or across its range. Species may be considered at-risk due to the intrinsic rarity of the species, or because of other threats and activities that cause declines in the species' abundance, or a combination of factors. The task of defining SOC is accomplished by collecting data on plant species in the state and determining "status ranks" for each one. Status ranks are a simple numerical assignment on a scale of 1 to 5, with a "1" being at high risk of extirpation and a "5" ranked species being abundant with almost no risk of extinction or extirpation. The ranks are assigned at a state and global level. For example, *Balsamorhiza hookeri* (Hooker's balsamroot) currently has assigned ranks of G5/S1, meaning that it is abundant globally and not at-risk of extinction, but within Montana it is rare and potentially at risk of extirpation in the state. A contrasting example is provided by *Phlox kelseyi* var. *missoulensis*

(Missoula phlox), which has assigned ranks of G2/S2, meaning that it is rare or threatened globally and in Montana. The fact that the global and state ranks are identical for Missoula phlox also tells you that Montana contains most of the known range of the plant and in this case, actually the entire known distribution.

The state status rank for each species is assigned based on a number of factors, including the number of occurrences in the state, the size and condition of the occurrences, population trends, definable threats, and aspects of the species' biology that may make it vulnerable to extirpation. The past methodology of assigning ranks was based largely on the number of known occurrences, with a hearty dose of subjectivity entering into the process—this happening because there was no repeatable process in place and the botanist assigning the rank would often assign a rank based on what they knew of the species and thought was appropriate. Currently, steps are being taken to make this process as quantifiable and repeatable as possible so it is not based on the subjective call of one botanist, or even a group of botanists. Unfortunately, status ranks often need to be determined with an incomplete picture of the species' distribution and abundance, so the process will never be strictly quantitative.

Finally, the Species of Concern list is composed of those plant taxa ranked "S1" or "S2" and recently, taxa ranked "G3" (globally vulnerable) have been included. The SOC list is used by agencies such as the U.S. Forest Service and the Bureau of Land Management to help them prioritize which species are of potential conservation concern on lands managed by each agency. Additionally, state and federal agencies as well as numerous consultants use the SOC list and associated data to help them plan and mitigate potential impacts to plant species during projects and activities.

To find out more about the MTNHP and plant SOC, come to the Plant Conservation Conference February 28-March 1 (see page 3). At the conference you will have the opportunity to contribute information on threats to SOC and

other information that is vital to the ranking process. In the meantime, be sure to visit our website for more information (<http://mtnhp.org/>).

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