



Resource Bulletin

Invasive Weeds

What is a Weed and Where Do They Come From?

What is a weed? The term "weed" can be somewhat ambiguous. Basically, a weed is a plant out of place. Most all non-native plants are considered weeds, especially those that compete with native flora and fauna for habitat. Some weeds are ornamental and are not very dangerous. Others, termed noxious weeds, are destructive to the environment they attempt to take over. Everyone has a legal responsibility to help control noxious weeds. Currently, there are 126 invasive species in Glacier National Park, and 15 of these are noxious weeds.

If weeds are plants out of place, how did they get to where they don't belong? Some were deliberately brought into the area by humans for cultivation, such as Common Tansy. Plants then spread by seed and invade other areas. Many species were not intentionally brought into Glacier National Park but have spread from other areas, sometimes hundreds of miles away. Invasives are carried into new areas by people, animals, machinery, and wind.

Invasive weeds are able to spread rapidly because they are so resilient. Outside of their natural environment, weeds are forced to compete with plants and animals they are not used to. Often they adapt into hardier strains of the original plant to cope with the stresses of their new environment and even find new ways to reproduce. As an example, Spotted Knapweed secretes a chemical into the ground that kills other plants not like itself that try to grow nearby. Areas of recent and/or constant disturbance are the most susceptible to weed invasion. While some



A crew member of the Exotic Plant Management Team sprays an infestation of Spotted Knapweed.

disturbance mechanisms are natural, such as fire, human activities along roadsides and construction sites are a primary vector for weed infestations.

A Pernicious Problem

Once weeds have begun to invade an area, they can have negative effects on native plant species. For native plants, noxious weeds are a dangerous competitor. Invasives out-compete natives for water and soil nutrients, as well as space to grow. Once invasive weeds get established, there are far-reaching consequences throughout the ecosystem for the native plant and wildlife communities.

In a healthy plant community, various native plants fill every ecological niche in the system.

Especially important are the different types of root systems that work together to hold the soil in place. When invasive weeds begin to take over, one type of root system dominates, and often soil erosion can occur. This can put local water resources at risk due to increased run off. Such damage cannot be easily fixed, even if the weeds are removed from the environment.

Another important problem is a decrease in suitable wildlife habitat. The native fauna in Glacier National Park are adapted to depend on native plant species for food sources. When invasive plants become prevalent in an area, they severely reduce the number of native plants. This causes wildlife to have to seek new areas to forage and, in turn, can change the movement patterns of not only herbivores but the predators that depend on them.

Noxious Weeds to Watch Out For

Spotted Knapweed
Canada Thistle
Leafy Spurge
Dalmatian Toadflax
Yellow Toadflax
Sulfur Cinquefoil
St. Johnswort
Oxeye Daisy
Houndstongue
Common Tansy
Field Bindweed
Orange Hawkweed
Meadow Hawkweed Complex
Tall Buttercup
Tansy Ragwort



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Resources for More Information

Glacier National Park staff:

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Documents and web sites:

Montana Weed Control Association:
www.mtweed.org

Center for Invasive Plant Management:
www.weedcenter.org

Montana's Noxious Weeds, Revised Edition

Invasive plants have been present in Glacier National Park for many years. However, this is an issue that continues to grow and becomes more immediate the longer it is allowed to go on. These plants did not evolve here, so they have no natural predators which would help control the population growth. Invasive weeds are spreading at an alarming rate; they are now invading the backcountry of Glacier National Park.

Glacier's Management Strategy

Due to the insidious nature of this threat, there are many theories and plans on how to stop the spread of invasive weeds. Glacier has chosen to use an integrated approach to manage noxious weeds. Integrated Weed Management (IWM) is used to avoid harming Glacier's native plant communities or interfering too much with the ecosystem. It is a multidisciplinary approach using a variety of methods and treatments that are best suited for specific species and locations. The methods used can be manual, mechanical, cultural, biological, or chemical, dependent on the situation.

Prevention is considered the most important and most effective method of stopping the spread of invasive plants in the park. The most effective and easiest way to control an

invasive weed problem is to avoid having one to begin with. By attempting to prevent seeds from being introduced into new areas and quickly managing any infestations that do arise, the much greater difficulty of attempting to remove immense populations of invasive plants is avoided. By taking extra care to watch for weed seeds on clothing, shoes, boots, animals, and vehicles, anyone and everyone can help prevent the spread of invasive weeds at the park, at home, or in their community.

Any sightings of noxious weed populations within the park should be reported to park personnel so they can take appropriate measures. In those areas where a weed problem already exists, careful management is exercised to control weed populations and to keep them from spreading. Education initiatives and research projects are ongoing to further our knowledge of invasive weeds in Glacier National Park.

The park is committed to preventing the spread of invasive weeds. Because of the myriad of consequences an infestation can have and the ability of even a single weed to reproduce and replicate itself many times, every single weed is a threat to the environment of Glacier National Park. With the cooperation of staff and visitors, Glacier can avoid being overrun by noxious weeds.



From left to right: leafy spurge, St. Johnswort, and spotted knapweed.