

# LIGHTS and SHADOWS

from the  
Dishman Hills

June 2003



## WONDER WEED

There is a plant that thrives in the open, sunny, dry areas in the Dishman Hills at the edge of the trails and around the periphery of the forest. This ornamental plant has beautiful bright yellow flowers in clusters that you can see through the end of June. The problem is that this

plant is an uninvited guest to the Natural Area, and we have been trying to evict it for many years. It's the Dalmatian toadflax, also known as Butter and Eggs, Jacobs Ladder, or Wild Snapdragon. Toadflax has traveled a great distance. This robust herbaceous perennial is a native to the Mediterranean region, and in Europe it had been cultivated as a ornamental for nearly four centuries. It can today still be found in some of Spokane's garden stores. In the 1600's it was brought to New England for gardens and for folk remedies, but it soon escaped and with many other Americans headed west.

The plant's success in competing with native species, especially in open, dry areas such as roadsides, clear cuts, and vacant lots, has earned it the designation of "noxious weed". Toadflax shares an affinity with the Ponderosa Pine for long dry summer conditions typical of our region. The plant's ability to maintain active growth during all seasons also gives it a competitive edge. Forest fires fail to deter the plant's spread since its deep roots tend to survive. On a small wildfire burn in the southeast of the Natural Area toadflax was one of the first plants to reappear.

A single toadflax plant can produce up to 500,000 seeds from June to September, and the plant can also propagate by an extensive creeping roots system. The large number of seeds combined with windy conditions explains why it spreads so fast in open areas. Patches of the plant get established in disturbed areas and then expand year after year.

In the Natural Area we have been dealing with the toadflax in several different ways. The strategy has been to hand-pull plants when they first show up. We have used prison labor from Geiger Correctional Facility as well as volunteer "pulling parties" and State workers. The plants are easy to spot in the spring when in flower. Because established infestations spread mainly by roots, care must be taken to pull the roots with the plant, a job that is easier after a spring rain. In the last several years we have been using a new tool to fight toadflax, a tiny weevil.

The mecinus weevil was approved by the government several years ago and has been released in the Natural Area to eat its way through the toadflax infestations. The little bug has a hungry larvae that tunnels through the stem of the toadflax causing the plant to wilt in the process. The imported beast is suitable as a bio-control agent since it is plant-specific in its dining habits and doesn't live long. Populations of the weevil will build up over a number of years, then slowly disappear along with the toadflax. It takes about five years for the weevil to reach numbers to significantly effect the toadflax. So far they seem to be working very well in the Natural Area. Washington State Fish and Wildlife, the agency that placed the weevil in the Natural Area, says successful bio-control does not mean that toadflax will disappear altogether, but will keep populations at a manageable level.

## EDGE PROBLEM

Urban forest habitats in the Dishman Hills, and in many other areas around Spokane County, are suffering from fragmentation as development gobbles up more and more open space. Rural sprawl is playing havoc with natural spaces that are being isolated by fences, driveways, and fields. These forest fragments are more vulnerable to invasion of non-native species and weeds simply because they have both more edges, and edges that are thinned forest. Many of these plant invaders arrive by wind-born seeds that have easier paths into the forest through thinned edges from developed spaces.

A study done in 2001 at an eastern institution simulated the thinning forest edge effect by removing all trees, shrubs and branches that were less than half the height of the forest canopy in a strip extending 65 feet into a forest patch. The researchers found that four times as many wind born seeds crossed the thinned forest edge than in an intact edge, and that seeds crossing the thinned edge penetrated 2.5 times deeper into the forest.

The researchers recommended "sealing" urban forest edges by planting them with dense native shrubs, vines, and understory trees, as well as removing non-native plants from the edges.

## ORGANIZATION NEWS

We are a non-profit organization dedicated to saving nature areas in the Spokane region for public enjoyment and education. Call Michael Hamilton, 747-8147, if you have any questions. We meet every other month on the third Tuesday at Opportunity Elementary School, S. 1109 Wilbur, in the teacher's lounge, 7pm. We break for the summer and our next meeting will be September 16.

The following are our May donors that have consented to be listed: Bertha Booth, Diane Casey, Myrtle Erickson, Lila & George Girvin, Steve & Karen Heaps, Patty Houff, Glen Kivett, William Kuhlman, Linda Martin, Marilyn Miller, Bob Peregoy, Ramona Prescott, Jill Thomas-Pestrin, Jeanne Wilson, and three anonymous donors. Thank you all very much.

*Nature is always hinting at us. It hints over and over again.  
And suddenly we take the hint.*

- - Robert Frost

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