

Invasive Plants: An ounce of prevention...

by Caleb Slemmons

Maybe it's a little early to start thinking about summer landscaping projects and gardening. Nonetheless, here is something to consider when you slip on your gloves and knock the dirt off your gardening tools. Many invasive plants that now wreak havoc in natural settings were introduced as ornamentals or for gardening. For example, garlic mustard (*Alliaria petiolata*) was introduced as a salad green by European settlers and now poses a serious threat to ecosystems and native plants throughout much of the lower 48. A localized population was even discovered near Juneau in 2001 and may now have spread beyond control, despite early removal attempts. Other invasives such as bird vetch, ox-eye daisy and orange hawkweed have already been sighted on the Kenai Peninsula. As such, the Refuge is currently planning to survey disturbed sites for exotic and invasive flora this summer.

So what exactly is an invasive species? No easy answer here but generally, invasives are characterized by their tendency to spread aggressively making removal a struggle, in the best case, and an impossibility in others. They are species that often do substantial environmental and economic harm. Few exotic plants, or those that have not historically been part of the species assemblage of a particular habitat, are actually invasive. Most are content to propagate in small patches on marginal, disturbed habitats.

Although many invasive plants thrive from disturbances, such as timber harvest or soil excavation, some species are even able to invade intact habitats. Once established, invasive plants often form a monoculture by replacing native vegetation. Why is that such a problem? Plants serve as the foundation of a food chain and replacement of native vegetation with invasive, non-native plants can have many negative effects on wildlife that rely on native vegetation. Researchers at the University of Alaska Fairbanks are concerned that invasives, such as European bird cherry, may do just that. Competition with native species such as cottonwoods and willows could potentially threaten preferred winter browse for moose and other wildlife. Other unknown effects may also result such as alteration of hydrology, nutrient cycles and fire regimes.

Still, it's early in the game for Alaska. Many feel

that Alaska has a unique opportunity to be proactive in managing exotic, invasive and other injurious plants. As a combined result of unique climate conditions and fewer population and land use pressures, only 144 (10%) plant species in Alaska are considered exotic with viable wild populations. About 15 invasive species (over half of the known invasive flora for Alaska) have been recorded on the Kenai Peninsula. For comparison, my home state of Ohio has over 700 established exotic species statewide, about one-quarter of which are invasive! It isn't simply a question of aesthetics. Invasive species can inflict tremendous economic harm. In fact, invasive species have the potential to undermine much of Alaska's resource base and industry including fishing and tourism if left unchecked.

This summer the Kenai Refuge will begin surveying disturbed areas for the presence of exotic and invasive plants. This effort will help to guide future monitoring and management. The importance of catching emerging infestations can't be overstressed. Many invasive species produce hundreds of seeds per plant, which may be viable for 20 years or more. In fact, invasives are often armed with a battery of adaptations that allow them to spread, including spreading underground via rhizomes and exuding root chemicals that inhibit the growth of other species. The time and cost for removal and revegetation projects for infestations of these species can be staggering. The best thing to do is be proactive and the immediate results of the summer survey will be a crucial element for Kenai Refuge in this task. Look for an update this summer in the Refuge Notebook.

What can you do? The old adage "an ounce of prevention is worth a pound of cure" seems to ring true when it comes to managing invasives. Invasive plants can come from a variety of sources ranging from bird feeder seeds to landscaping plants. Learn about what plants are non-native and may have invasive tendencies. Avoid using birdseed and "wild-flower" mixes with unknown components. Remove known invasives from your property and use native plants for landscaping, which are already adapted to local soil types and conditions and are consequently

easier to maintain. Remove seeds from your boots and socks between hikes so you don't transport invasive plants from one area to the next. You can even participate in local invasive control efforts such as "weed pulls." Invasive plants are also commonly introduced and spread via animal forages. Use certified weed-free forages, which are becoming increasingly available in the state. To find out more about weed-free forage, native landscaping and volunteer opportunities visit <http://www.cnipm.org> on the web and contact your local UAF Cooperative Extension Service or

Soil and Water Conservation Office. Do your part, protect Alaska's diverse flora and prevent the costly mistake of introducing problematic plants.

Caleb Slemmons is an intern working with the Kenai Refuge. He is completing a Masters Degree in Environmental Science at Miami University in Oxford, Ohio. Caleb will be surveying exotic and invasive flora on refuge lands this summer. Previous Refuge Notebook columns can be viewed on the Web at <http://www.fws.gov/refuge/kenai/>.