

The full extent and impact of exotic plants in Yellowstone is unknown. Many grow in disturbed areas such as developments, road corridors, and thermal basins; they also are spreading into the backcountry. Several exotics, such as the common dandelion, have spread throughout the park.

Exotic plants can displace native plant species and change the nature of vegetation communities. These changes can profoundly effect the entire ecosystem. For example, exotics unpalatable to wildlife may replace preferred native plants, leading to changes in grazing activity. In turn, this stresses plants not adapted to grazing.

Controlling all the exotic species, some well-established, is unrealistic. The park focuses control action on species posing the

#### Exotic Species

- More than 210 exotic plant species in the park.
- Resource managers target the most invasive species for control or removal.

- Species include (common names):  
Dalmation toadflax  
Spotted knapweed  
Canada thistle  
Ox-eye daisy  
Houndstongue  
Leafy spurge

most serious threat or those most likely to be controlled.

The park uses Integrated Pest Management—chemical, biological, sociological, and mechanical methods—to control some of the exotic plants. The park also cooperates with adjacent state and county Weed Control Boards to share knowledge and technology related to exotic plant detection and control.

*Dalmatian toadflax*

#### Dalmation toadflax *Linaria dalmatica*

- Northern portions of the park, especially around Mammoth.
- Highly invasive, replacing native plants.

#### Spotted knapweed *Centaurea maculosa*

- Along roadsides and in the vicinity of Mammoth.
- Aggressive species that, once established, forms a monoculture, which displaces native grasses on the ungulate winter and summer ranges.
- Aggressive control efforts underway to prevent a catastrophic change in park vegetation.

#### Canada thistle *Cirsium arvense*

- Throughout the park and adjacent national forests.
- Airborne seed enable it to spread widely throughout the park, invading wetlands.
- Forms dense monocultures, thus radically changing vegetation.

#### Ox-eye daisy *Leucanthemum vulgare*

- Mammoth and Madison areas.
- Can become dominant in meadows, is unpalatable to elk and other wildlife.
- Control efforts have substantially curtailed infestation; monitoring and evaluation continue.

#### Houndstongue

##### *Cynoglossum officinale*

- Primarily Mammoth and East Entrance.
- May have been introduced by contaminated hay used by both the National Park Service and concessioners in their horse operations.
- Highly invasive.
- Seeds easily attach to the coats of animals, and thus spread along animal corridors.

##### *Euphorbia esula*

- Small patches in Bechler and along roadsides, so far being successfully controlled but spreading actively in Paradise Valley north of the park and outside Bechler on the Caribou-Targhee National Forest.
- Becomes a monoculture, forcing out native vegetation.
- Extremely hard to control because of deep underground stems (up to 30 feet) and dense vegetation.

