

# High Altitude Weeds with Big Attitudes

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Noxious weeds have not affected the higher elevations of Colorado nearly to the extent that has occurred at lower elevations. When we think of "high elevation" in Colorado forests, we generally are talking about those areas in sub-alpine and alpine habitat types-areas above 9,500 -10,000 feet.

While all National Forests in Colorado contain a considerable amount of area with high altitude habitats, this article will highlight weed issues in the San Juan National Forest and the Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests. These Forests contain some of the wildest, most diverse and most scenic land in Colorado.

Subalpine areas within these Forests have long been infested with a variety of state-listed non-native species. The most common is Canada thistle (*Cirsium arvense*). It has been established for 50-75 years in this habitat type and occurs commonly around riparian areas in semi-moist soils. It is also very common on beaver dams and around other ponds in the subalpine zone. Although in most areas it is not a dominant part of the plant community, it quickly expands with ground disturbance of any kind.

Another species common to higher elevations, including the subalpine zone, is ox-eye daisy (*Leucanthemum vulgare*). Ox-eye daisy prefers open meadows and similar habitats and is an aggressive roadside invader. While it has not been around as long as Canada thistle, it has expanded greatly over the past 8-10 years due to its aggressive nature.

Perhaps the most threatening species to the sub-alpine elevations of the San Juan and GMUG National Forests is yellow toadflax (*Linaria vulgaris*). Several thousand acres are infested and some populations have been around for decades. Distribution of seed occurs in the backcountry as a result of birds, rodents, deer, elk and livestock.

Alpine areas (over 10,500 feet) on both Forests have an extremely short growing season, shallow soils and very little past history of disturbance, including low levels of vehicular travel. For these reasons, the problems with invasive plants are far less in the alpine zone. However, yellow toadflax is one species we are concerned about. It is abundant in the sub-alpine and is gradually encroaching upslope into the alpine areas. Although this is happening very slowly, it makes us wonder whether the rate of infestation will acceler-



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ate in the future as the seed bank grows. It is crucial to have a good program of early detection and chemical treatment before the small populations (usually 5-20 feet diameter) expand.

The Rocky Mountain Region hopes to collaborate with the Colorado Department of Agriculture Insectary director Dan Bean to secure funding to expand the biological management effort for yellow toadflax. Because it is so widely scattered it is extremely hard to control with chemicals and the remoteness of populations makes control work expensive if not prohibitive over the long term.

The US Forest Service realizes that how we respond to new populations today will affect the health and diversity of high elevation habitats for generations to come. We work with our back-country Wilderness Rangers, grazing permittees, hikers and volunteers to add to our inventory of weed populations. The more eyes in the woods, the better!