



Capulin Volcano National Monument

Exotic Plants

Exotic plants represent one of the most significant threats to natural resources in national parks. Exotic plants are a concern due to their abilities to reproduce prolifically, rapidly colonize new areas, displace native species, alter ecosystem processes across multiple scales, and detract from the interpretive value of park resources. In the Great Plains, grasslands have been increasingly degraded and fragmented, which results in increasing chances of exotic plant species invasions.

Status and Trends

The Southern Plains Inventory and Monitoring Network began annual monitoring for exotic plants throughout Capulin Volcano National Monument in 2009. High priority vectors (such as roads and trails) were identified based on their potential risk for invasion by exotic plants, and the highest priority vectors were surveyed in 2009 and 2010. Species that posed the greatest risk to the monument based on their significance of impact and feasibility of control and management were determined.

Not only did the exotic bromes have the highest ranking for their significance of impact, but they also were among the most widespread within high-risk areas (those along the high priority vectors). Collectively, at least one of the three exotic bromes was observed in 92% of the high-risk blocks surveyed in 2009 and 2010. Even individually, the exotic bromes had three of the highest four overall percentages of occurrence. The relative order of proportion of plots infested was similar to the high priority blocks with a few notable exceptions. For example, mullein was found in the highest proportion of any species, regardless of whether it was found in high priority or interior sites. In contrast, smooth brome, which was detected on 54% of the high priority blocks was not detected on any of the interior plots; thus, suggesting that its present distribution is largely limited to along roads and trails. Both bindweed and kochia are currently not widespread but are becoming well established, particularly along the entrance road and along the southern and eastern monument boundary.

Discussion

There is often a time lag between the initial establishment of an invasive exotic and its rapid expansion toward local



Cheatgrass (*Bromus tectorum*) is one exotic plant of concern at Capulin Volcano National Monument.

carrying capacity. Therefore, early detection and subsequent eradication is essential. The exotic brome species are of high concern not only because of their potential ecological impact, but also because their distribution is widespread, and they are continuing to spread throughout the monument. It is also worth noting that the distribution of exotic bromes is not known to be widespread on the surrounding landscape adjacent to the monument. Exotic plant control efforts at the monument have been ongoing, with the help of a local youth organization and the NPS Chihuahuan Desert, Southern Shortgrass Prairie Exotic Plant Management Team. Continued work towards detecting and controlling exotic plants will help protect the plants and wildlife that depend upon those habitats for their survival.