



Invasive Exotic Plant Monitoring

*in the Northern Colorado
Plateau Network*



Above: Medusahead (*Taeniatherum caput-medusae*).

Below: Siberian elm (*Ulmus pumila*).



Why Monitor Invasive Exotic Plants?

Invasive exotic plants are one of the most significant threats to natural resources in the national parks today. Exotic plants are able to reproduce prolifically, rapidly colonize new areas, displace native species, and alter ecosystem processes across multiple scales. If invasive exotic plants are discovered while their populations are still small, control efforts are likely to cost less and achieve more success than after a species has become more widespread. Early detection of exotic plants is critical.

What's the Most Recent News?

In 2015, the NCPN monitored invasive plants at Black Canyon of the Gunnison National Park (NP), Capitol Reef NP, Colorado National Monument (NM) and Zion NP. Reports on this work are available at the [network website](#).

In 2016, NCPN monitored invasive exotic plants at Capitol Reef NP, Fossil Butte NM, Golden Spike National Historic Site, and Zion NP. Reports will be completed in the spring of 2017.

How is the Information Used?

Information gathered from this monitoring will support a long-term, park-wide strategy for controlling invasive plant species. It will also allow park managers to be well-informed about the status of ecosystems and prioritize invasive-plant control efforts. Staff from both the parks and the National Park Service Exotic Plant Management

Teams use NCPN monitoring reports to guide control efforts.

Where are Invasive Exotics Monitored?

The network monitors invasive exotic plants at Black Canyon of the Gunnison, Capitol Reef, and Zion national parks; Colorado, Dinosaur, and Fossil Butte national monuments; Curecanti National Recreation Area; and Golden Spike National Historic Site.

How is the Monitoring Done?

The objectives of Northern Colorado Plateau Network (NCPN) invasive plant monitoring are to detect incipient populations and new introductions of invasive plant species and determine the status and trends of selected populations of invasive plants of concern to park managers.

To meet those objectives, the network focuses its monitoring efforts on areas where invasive exotics are likely to first establish. First, NCPN or park staff survey established monitoring routes on a rotational basis. Along those routes, staff establish plots that can be quickly surveyed for data that will enable us to estimate trends over time. Network staff may also dedicate some time to surveying areas of high management concern to park staff.

How Can I Learn More?

Visit <http://go.nps.gov/NCPNIEP> or contact dustin_w_perkins@nps.gov.

PHOTOS

FROM TOP: CANADA THISTLE (LESLIE J. MEHRHOFF, UNIVERSITY OF CONNECTICUT, BUGWOOD.ORG)
MEDUSAHEAD (LESLIE J. MEHRHOFF, UNIVERSITY OF CONNECTICUT, BUGWOOD.ORG)
SIBERIAN ELM (TOM DEGOMEZ, UNIVERSITY OF ARIZONA, BUGWOOD.ORG)



Invasive Exotics at Black Canyon of the Gunnison NP and Curecanti NRA

The Northern Colorado Plateau Network has now completed two full rotations of invasive exotic plant (IEP) monitoring at Black Canyon of the Gunnison National Park and Curecanti National Recreation Area. In addition, the University of Utah collected IEP data at these parks in 2003–2004.

In 2014–2015, twelve IEP species were found in six areas where they were not previously detected (see table). However, in most areas, the total number of IEP patches decreased since the previous round of monitoring—and many areas saw no new IEP species. One of these was the Gunnison River monitoring area, where overall IEP patch numbers and percent cover both decreased and no new species were found.

One goal of NCPN monitoring is to provide early detection of IEP species, in the hope that control efforts may be deployed while eradication is still possible. If invasive exotic plants are discovered while their populations are still small, control efforts are likely to cost less and achieve higher success rates than after a species has become more widespread.

Patch numbers and new IEP species at selected BLCA/CURE monitoring sites.

Monitoring site	Patch numbers	New IEP species
<i>Black Canyon of the Gunnison NP</i>		
East Portal Road	Overall decrease	Russian thistle, scentless chamomile, kochia
Red Rock Canyon	Overall decrease	kochia, marsh elder
<i>Curecanti NRA</i>		
Blue Mesa	Overall increase	Himalayan blackberry, leafy spurge, marsh elder, yellow toadflax
Cooper/Neversink Trails	Stayed similar	common burdock, sulfur cinquefoil
Elk Creek Management Area	Overall decrease	bull thistle, diffuse knapweed, spotted knapweed
Mesa Trails	Stayed similar	bull thistle, Russian thistle



Priority Species Detected in Certain Areas for the First Time During Monitoring at BLCA/ CURE in 2014–2015

- 1) Diffuse knapweed (*Acosta diffusa*)¹
- 2) Spotted knapweed (*Acosta maculosa*)²
- 3) Common burdock (*Arctium minus*)³
- 4) Kochia (*Bassia sieversiana*)⁴
- 5) Bull thistle (*Cirsium vulgare*)⁵
- 6) Marsh elder (*Cyclachaena xanthifolia*)⁶
- 7) Leafy spurge (*Euphorbia esula*)⁷
- 8) Yellow toadflax (*Linaria vulgaris*)⁷
- 9) Scentless chamomile (*Matricaria perforata*)⁷
- 10) Sulfur cinquefoil (*Potentilla recta*)⁸
- 11) Himalayan blackberry (*Rubus armeniacus*)²
- 12) Russian thistle (*Salsola australis*)⁵

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