



Conservation Success in the Piceance and Uinta Basins

by Jared Martin

Dudley Bluffs bladderpod. Photo Credit: Creed Clayton, USFWS

In northwestern Colorado and northeastern Utah, a number of threatened and endangered plant species are benefitting from concerted efforts by the U.S. Fish and Wildlife Service (Service), non-profit organizations, state agencies, federal land managers, and oil and gas companies.

Rapid energy development within Utah's Uinta Basin and Colorado's greater Piceance (pronounced pee-awnz) Basin poses new conservation challenges. Oil and gas projects in the region have implications for several endangered or threatened plant species, their habitats, and their pollinators. Plants on private land are especially susceptible to these threats, since the Endangered Species Act provides no legal protection for them.

In Rio Blanco County, Colorado, the Dudley Bluffs bladderpod (*Physaria congesta*), a small cushion plant with bright yellow flowers, and the Dudley Bluffs twinpod (*Physaria obcordata*), a low-growing perennial herb, occur in an area of accelerated natural gas development. The two species are limited to sparse white shale outcrops on one of the largest accessible natural gas deposits in the nation. The bladderpod consists of eight populations and approximately 546,000 individuals, while the twinpod occurs in 11 populations and approximately 25,000 individuals.

"Ninety-five percent of the development near these rare plant populations has occurred in the last 10 years," says Gina Glenne, a botanist in the Service's Western Colorado

Ecological Services Field Office. "Rio Blanco County has over 2,600 natural gas wells, but predictions estimate 19,000 wells will exist within 15 years. These wells and their associated infrastructure are impacting populations and habitat for both species."

To limit the long-term impacts of essential oil and gas development to these species, and other listed plant species, the Service is working with energy project developers to develop guidelines that ensure projects move forward in a way that minimizes disturbance to plants, their habitats, and their pollinators. The Service recently established a mitigation fund through the National Fish and Wildlife Foundation—the first ever to be established for solely for plant

conservation. Oil and gas companies operating in Uinta Basin hookless cactus (*Sclerocactus wetlandicus*) and Pariette cactus (*Sclerocactus brevispinus*) habitat contribute to the fund, which supports various research and mitigation projects, including a project examining ways to reclaim oil and gas wellpads so these small, barrel shaped cactus species can return.

A number of concerned conservation groups are also contributing to the conservation of these imperiled plant species by conducting surveys, funding research, and strategizing on the most effective means for mitigating impacts of oil and gas development and achieving recovery.

The Rare Plant Conservation Initiative (RPCI) – with representatives from over 22 entities, including state and federal agencies, academia, botanical gardens, non-profit organizations, botanical artists, and private industry – is devoted to ensuring plant diversity in Colorado. The group is working closely with industry to implement management practices for oil and gas development in areas where listed plants occur.

“One of the biggest threats to Colorado’s imperiled plants is a lack of awareness,” says Susan Spackman Panjabi, a botanist for the Colorado Natural Heritage Program of Colorado State University. “By working with oil and gas companies and other partners we can proactively protect high quality habitats and prevent loss of important botanical biodiversity.”

A similar group with equally diverse membership, the Uinta Basin Rare Plant Forum, is working to set priorities for research and conservation for nine plant species that are unique to the stark, cold desert of northeastern Utah. One of the efforts undertaken by the forum is an annual botany blitz, where volunteers gather each spring or



White River beardtongue. Photo Credit: Gina Glenne, USFWS

early summer in the Uinta Basin and visit new field sites to count individuals of rare or listed plant species. In 2010, forum volunteers counted more than 14,000 Uinta Basin hookless cacti at one site—effectively increasing the known population size by 50 percent. The forum also identifies research needs, including further study on the impacts

associated with energy development, life history, and breeding biology for plants in the region.

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Oil and gas development in Dudley Bluffs. Photo Credit: Gina Glenne, USFWS

