

Elkhorn Mountains Elk Project Progress Report – Fall 2015

Background

In collaboration with the Elkhorn Working Group, Helena National Forest, Montana State University, and Montana Department of Military Affairs, Montana Fish, Wildlife & Parks initiated a study to evaluate the impact of mountain pine beetle (MPB) infestation on elk habitat and elk movements in the Elkhorn Mountains. Management agencies as well as communities adjacent to forests impacted by these infestations are working to develop management strategies to deal with these issues and mitigate potential impacts to wildlife. This report summarizes project activities during spring and summer 2015.

Elk Survival Monitoring

A total of 30 adult female and 15 adult male elk are radiocollared. Collars are programmed to collect one location per day and transmit a mortality message if the animal dies and the collar becomes stationary. One adult male collar malfunctioned in February; and the fate of the elk is unknown. There have been no mortalities and all 30 female and 14 male elk are confirmed alive as of September 1, 2015.

Elk Diet Sampling

We collected 6 early summer (June-July) and 6 late summer (August) samples of elk pellets from different regions of the Elkhorn Mountains study area (Figure 1). These pellet samples will be analyzed for fecal plant fragments to identify the key elk summer forage species. After identifying the key summer forage species, we will collect samples of important forage species and have forage plants analyzed for nutritional content and digestibility as part of our elk forage and habitat monitoring program.

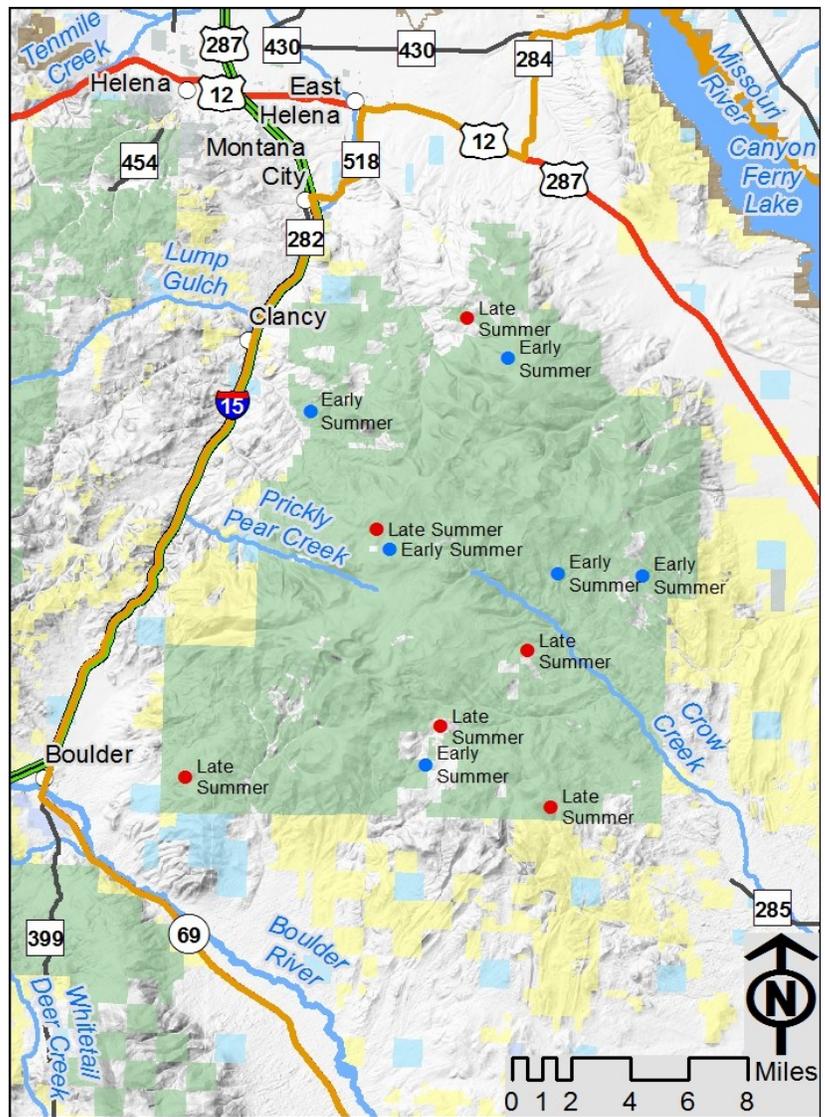


Figure 1. Early summer (blue) and late summer (red) elk pellet collection sites.

Elk Seasonal Movements

Elk in the Devil's Fence, Crow Creek, and Kimber areas of the study area remained on winter range through spring until early June. Two bull elk started moving to higher elevation summer range in the forest as early as May. Female elk remained on low elevation winter range until the end of June, and then started to move to higher elevation forests. There were 9 female elk on the west side of the study area between Boulder and Jefferson City that did not migrate to higher elevations, but instead summered at lower elevations on private, DNRC, and BLM owned land (Figure 2). Elk in the Sheep Creek area did move to higher elevation summer range, but some continued to spend time at low elevations. The female elk that was collared near Doherty Mountain has remained in this area. She made a short trip into the Bull Mountains northeast of Whitehall at the end of August, but has now returned to the west side of Doherty Mountain (Figure 3). No elk have made long distance movements or emigrated from the Elkhorn Mountains area. Spring and summer elk distributions are displayed in Figure 4.

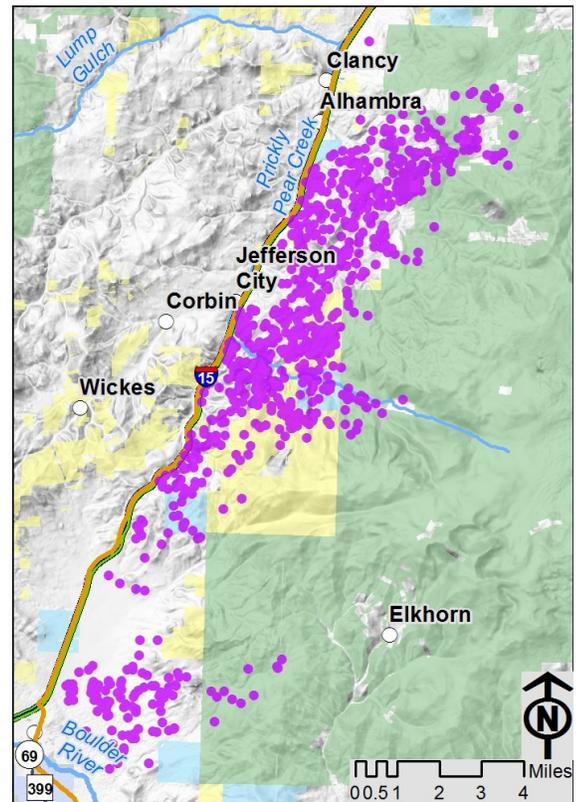


Figure 2. Summer locations of 9 female elk that did not migrate to higher elevation summer range.

Upcoming Project Plans

We will continue to monitor elk movements and survival. During winter 2015-2016, we will try to track, capture and radiocollar 2 adult wolves in the Elkhorns area. We will also be developing vegetation sampling plans and will begin evaluating the effects of MPB on elk forage and habitat during summer 2016.

Acknowledgements

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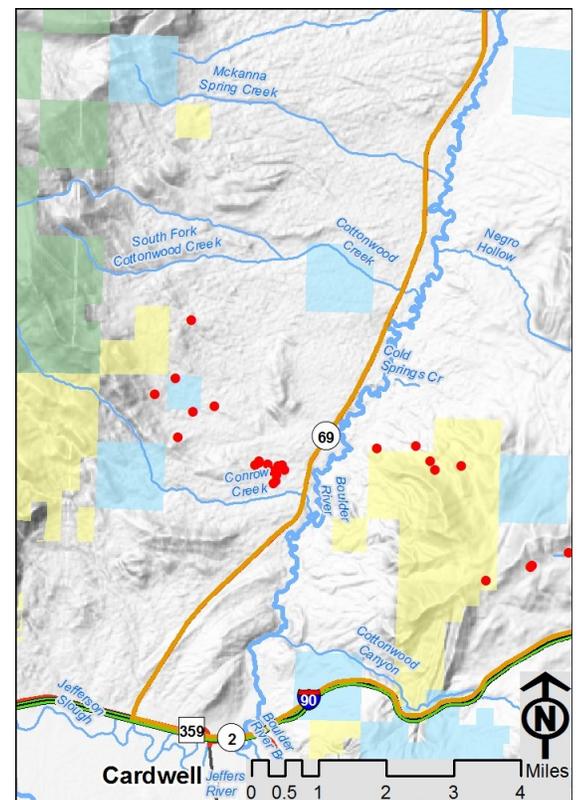


Figure 3. Summer movements of the female elk near Doherty Mountain north of Cardwell.

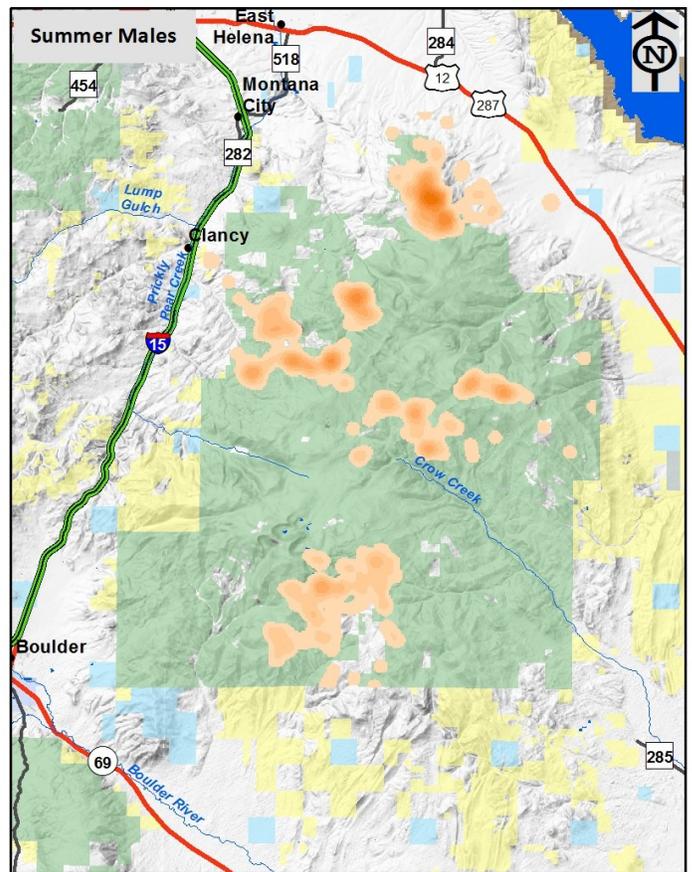
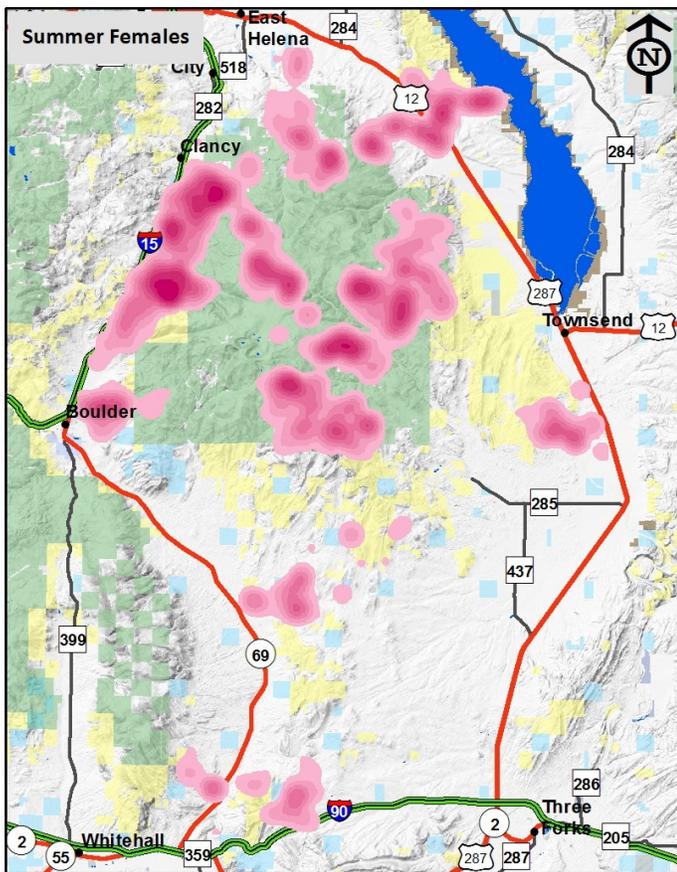
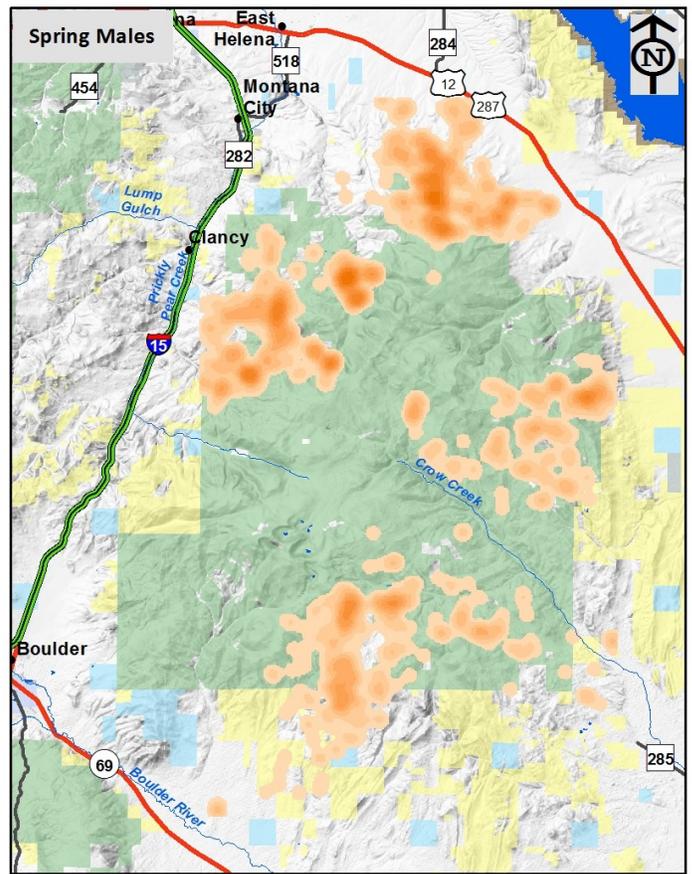
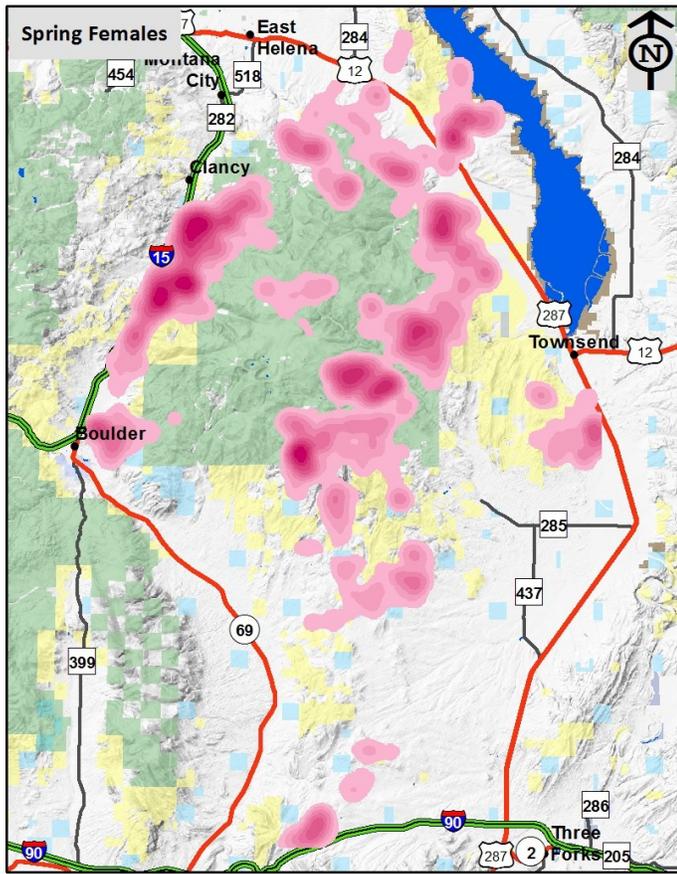


Figure 4. Female (pink) and male (orange) elk distributions during Spring (April 1– June 30) and Summer (July 1– August 31) 2015.