Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Are Boer goats effective weed management tools?
Discipline: Natural
Type of Project: Technical Assistance and Education
Funding Agency: National Park Service
Other Partners/Cooperators: University of Wyoming
Effective Dates: 5/1/2007 – 1/31/2008
Funding Amount: $9,900
Investigators and Agency Representative:
NPS Contact: Cassity Bromley, Bighorn Canyon NRA, 20 Highway 14 A East, Lovell, WY 82431,
cassity_bromley@nps.gov, 307-548-5416

Investigator: Rick Olson, Department of Renewable Resources, University of Wyoming, Laramie, WY 82071; 307-766-2263; rolson@uwyo.edu

Project Abstract: Bighorn Canyon NRA and their adjoining land managers use integrated pest management methods to control weeds in the Yellowtail Wildlife Habitat Management Area. Biological control is being used successfully for Tamarisk and mechanical control has been used for Russian olive. For the past 2 years a herd of Boer Goats has been used on a wide range of species in limited areas. However, most data concerning their effectiveness has been anecdotal. This project will collect more detailed data on goat usage of weeds, and help determine which weed species they are likely to be most effective on. We will find out which species of plant (native and non native)are preferred by the goats, and if treatments of sufficient intensity to have the desired effect on weeds have unacceptable consequences to desired native vegetation.

One specific area where goats are being used is as a follow-up treatment to mechanical removal of Russian olive. Olive is removed with a bobcat and tree grinding device, and then stump sprayed. However, vigorous re-sprouting still occurs. If nothing is done, Russian olive will rapidly re-occupy the site. Repeated grazing by goats should keep Russian olive under control, and eventually kill plants. The summer of 2007 will be the second year in a test plot, and a good opportunity to collect more rigorous data on goat grazing effectiveness on Russian olive.

In several specific habitat types (Russian olive, willow, whitetop, Russian knapweed cottonwood) plots will be established and before and after photos will be taken. Selected plants will be individually measured and marked before and after the goats are herded to the pasture. At the conclusion of the grazing. % offtake will be estimated for native and target plants. Data will be mapped with the assistance of park GIS staff, and entered into a database for analysis. Goats will be attended by a herder and guard dogs, allowing for more control over movements, and maintaining the necessary buffer zone from bighorn sheep. A University of Wyoming student will assist the park with developing protocols for goat preference testing and will collect data ongoat food preference and recommendations for future goat grazing on weeds.

Outcomes with Completion Dates:
May 25, 2007: Written protocols for goat preference testing.

Aug 6, 2007: All data entered in data base. Photo point data labeled and catalogued. Written analysis of goat food preference, and recommendations for habitat type, timing and duration of future goat grazing. Final report and oral presentation of research at the CRM meeting and/or to other interested parties.

Keywords: student intern, invasive plants, Russian olive, boer goats, weed control, Bighorn Canyon NRA, University of Wyoming

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Date Annual Report Received:
Date Final Report Received:
Publications, etc. on file: