RM-CESU - Project Progress Report, FY06

Project Title: Overview of American Indian Ethnobotanical Resources at Fort Laramie National Historic Site

Park: NPS Unit: Fort Laramie National Historic Site

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Contact: Justin Cawiezel, Chief Ranger, justin_cawiezel@nps.gov, (307) 837-2221

University Partner, PI: University of Wyoming, Michael Harkin, harkin@uwyo.edu, (307) 766-6328

Student Participant / Researcher: Paula Renaud, prenaud@uwyo.edu

Project Description:

Rocky Mountains CESU described the need for an overview of ethnobotanical resources for Fort Laramie NHS. This overview will introduce the Native American populations associated with the Fort Laramie area (FOLA) and review the available published and unpublished literature to assemble a detailed overview of Native American uses for botanical resources found in this area. Data from this overview will allow the design of management strategies to protect these resources from unnecessary impacts. These data will also be used to help park personnel devise management strategies that will allow for, to the extent possible, American Indian access to resources used for traditional purposes. Emphasis in this study is on specific cultural group(s) with both long-term and presently active associations with the Fort Laramie NHS resources. This overview will also illustrate the wider position plant resource areas like Fort Laramie played in the dynamic, extensive, and expansive land use strategies employed by a number of Native American groups not immediately associated with the territory.

Project Results:

Former NPS Key Official Tammy Benson provided the researcher with the 2005 Fort Laramie plant survey to serve as a launching point for this study. In May 2005, Sherri Deaver documented the background of potential traditional use areas in Camp Guernsey for the Wyoming Army National Guard and e2M, Inc. Fred Chapman, of the University of Wyoming, Department of American Studies, provided a copy of this document to the Ethnohistory Lab for the researcher's use. These two documents, along with the Rocky Mountain Herbarium collection, Aven Nelson and other's early reports of plants collected in southeast Wyoming recorded in published and unpublished sources housed in the Herbarium or the American Heritage Center, have been instrumental in

securing a comprehensive account of plant species historically and/or currently potential in the Fort Laramie area.

The FOLA plant survey has been augmented to include plants identified as potential in the region because of similarity in ecological niche, as indicated in the Camp Guernsey report, as well as those floral species archival research uncovered as apparent before 1900 in the same region. Additions generated by the Camp Guernsey report are indicated as such in the final Excel spreadsheet. Each Camp Guernsey addition was crosschecked with the USDA online database (http://plants.usda.gov/) before inclusion in the spreadsheet. A few species were found solely through the USDA1 distribution maps. When such distribution maps support an addition, the USDA database is indicated as author. All species are organized in alphabetical order by standard scientific name in an Excel spreadsheet with brief indication of American Indian use.

This spreadsheet is meant to serve as a quick reference. As indicated earlier, this spreadsheet lists various flora occurring in the area. The FOLA 2005 plant survey served as the basis, and other plants were added including a number of varieties from the Deaver (2005) Camp Guernsey report, USDA1 distribution maps, and archival research. This document lists all species by Order, Family, Standard Scientific Name, and Common Name. How the species came to be included in this list is noted in the column: Source. If the FOLA survey indicated the presence of the variety, then Park Status will indicate its presence in the park (PP). An "N" for native and an "E" for exotic or introduced indicate the native status of each plant. In addition, images of a great number of species have been collected, and such is indicated on the quick reference (the collection of images is included as an additional Appendix). Finally, the last column indicates the native group name and general use.

Example from spreadsheet:

Source	Order	Family	Standard Scientific Name	Common Names	Park Status	Abndnce	Nativity	Image	Tribe and use
FOLA	Asterales	Asteraceae	Ambrosia psilostachya	western ragweed	PP	C	N	yes	*Cheyenne* (Medicinal) *Gosiute* (Medicinal) *Kiowa* (Medicinal and Ceremonial)

The peoples included in this overview were identified in three categories. First, the researcher reviewed general literature on tribal territories. This review provided identification of primary tribes whose claim to the area is well documented and even assumed. Further investigation spurred the inclusion of secondary and tertiary groups. Brief outlines of the social, political, religious, and migratory histories of each group are presented in the "Native Americans" section of the document. When available, these summaries include information relating the tribe's general position regarding floral resources as food and medicine, material and ceremonial items.

The researcher reviewed each plant and use against report for tribes with uncontested history in the area (i.e., Cheyenne, Arapaho, Lakota). These groups are considered Primary. Other tribes whose time in the region is less evident because of the era in which or the migratory manner in which they are believed to have utilized parts of the present state of Wyoming (e.g., Blackfoot, Kiowa, Comanche) make up the Secondary category. Since traditional knowledge is by definition culturally defined and generated, and since land use strategies of early groups is expansive, native populations who report a use for a plant identified in the FOLA area and who are closely related but

perhaps geographically removed from the Primary groups (e.g. Mandan, Paiute, Hidatsa) are also included as a Tertiary category.

The document is organized to present the reader first with a general social and cultural history of the area and an introduction to the geography. The next section describes the various native populations associated directly or indirectly with the area. As described above, the Excel spreadsheet provides a quick overview of tribes associated with any given plant in the form of an Appendix. This Appendix lists every plant, including those for which no Native American use was documented. A more comprehensive account of Native American preparation and use and limited only to each utilized plant is available as a narrative in the final section of the document.

Geographic Area is described by Geography, Climate, Soils, Fauna, and General Flora. Summaries of each native population significant to this document are offered in the **Native Americans** section and are grouped as Primary (e.g., Arapaho), Secondary (i.e. Kiowa), and Tertiary (e.g., Omaha). In some cases, a population summary addresses two related groups (e.g., Crow/Hidatsa). In **Ethnobotanical Resources**, a description of each native group's use is listed with the appropriate plant. Research sometimes revealed native terms and translations for particular plants. When these were available, they were included in this section.

The following is an example from **Ethnobotanical Resources** section:

Ambrosia psilostachya DC. (western ragweed)

Cheyenne (Medicinal) Infusion of finely ground stems and leaves taken for constipation, bowel cramps and pains, bloody stools, colds (Grinnell 1905:39; 1972:188 Hart 1981:18). Cheyenne term: *Mōhktāh'wānōsts* (black sagebrush) (Grinnell 1905:39).
Gosiute (Medicinal) Leaves are steeped and applied topically as a poultice to sore eyes (Chamberlin 1911:361).
Kiowa (Medicinal and Ceremonial) Decoction used to wash skin sores on people and horses (Vestal and Schultes 1939:55). Used with various *Artemisia* varieties in the sweatlodge (Vestal and Schultes 1939:55).

Follow-up:

This is a progress report. The researcher is still engaged in research and writing. To date, the researcher has spent and documented approximately 200 hours on this project. A list of species to be included and appearing in the database is complete and lists 330 plants. Twenty-seven plants have been added to the original FOLA plant survey of 303 plants present in the park. Of the 330 plants, 86 are introduced species and three have been identified so far as of questionable native or exotic origin.

At present, the researcher has completed the identification of uses for approximately 100 of these plants. Of these 100 plants, the researcher has identified 20 as occurring without any indication of use by Native American populations significant to this survey. Images have been collected for 52 species. Description of use for the narrative portion (Ethnobotanical Resources) has been completed for the 80 plants identified as significant to various native populations. This is the most time consuming

part of the project and the researcher hopes to reach completion of overviews for all 330 plants by June 2007.

Populations addressed in this report include Arapaho, Cheyenne, Lakota/Dakota, Crow, Shoshone, Blackfoot, Kiowa, Comanche, Kiowa-Apache, Paiute, Ute, Gosiute, Pawnee, Hidatsa, Mandan, Osage, and Ponca. Population outlines for the section: Native Americans are completed for Arapaho, Crow/Hidatsa, and Shoshone/Comanche. Summaries are near completion for Lakota/Dakota, Blackfoot, and Kiowa. A draft of this section should be completed by February 1, 2007. The general social and cultural history of the area and an introduction to the geography is still in an outline form and should be addressed and written before January 1, 2007.