BOTANICAL AND VEGETATION SURVEY OF CARTER COUNTY, MONTANA

BUREAU OF LAND MANAGEMENT-ADMINISTERED LANDS

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SUMMARY

The open plains of Carter County, Montana represent some of the most extensive and unbroken rangeland resources of the state, and among the lesser known in the biological literature. Baseline botany and vegetation baseline inventories were conducted on BLM-administered lands in the county to document these resources in terms of their biological diversity significance.

Eighteen Montana plant species of special concern have been documented in Carter County, half of them on BLM lands, including two species that grow exclusively in a small segment of the Great Plains. There are very few occurrences of these nine species, reflecting the lack of suitable habitat for most of them. A preliminary county flora of 507 species was also compiled.

Over seventy vegetation types (plant associations) have been documented in Carter County, the majority of them occurring on BLM lands. There is only one that is declining from a rangewide perspective (Plains cottonwood/western snowberry; *Populus deltoides/Symphoricarpos occidentalis*), and at least two plant associations dominated by bur oak (*Quercus macrocarpa*) that are peripheral and occur in no other places of the state. Detailed sampling and description is provided for 19 vegetation types that include the common plant associations on BLM lands.

The results point to a landscape-level diversity most closely linked to soils and topography features, including a high concentration of Montana plant species of special concern that require sandy habitat. Among the most distinguishing vegetation features of the county is the extensive natural vegetation on shale plains and contribution of thick-spiked wheatgrass (*Elymus lanceolatus*) among the prevailing vegetation types. These findings contribute to the body of baseline information on features in the Powder River Resource Area and in the state, documenting that many of the features are more common than previously known. They provide dimension to a state perspective that can only be found in this far corner of the state in the heart of the Great Plains.

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View Full Report

TABLE OF CONTENTS

SUMMARY ..... **III**

ACKNOWLEDGEMENTS ..... **IV**

INTRODUCTION **1**

STUDY AREA **2**

METHODS **8**

Ecological Methods 8

Botanical Methods 11

Taxonomic Considerations 13

RESULTS **16**

Ecological Results 16

FOREST AND WOODLAND VEGETATION TYPES **23**

Juniperus scopulorum / Oryzopsis micrantha Plant Association 23

Pinus ponderosa / Juniperus communis Plant Association 25

Pinus ponderosa/Pseudoroegneria spicata Plant Association 27

Pinus ponderosa / Schizachyrium scoparium Community Type 29

Populus deltoides / Symphoricarpos occidentalis Community Type 31

Quercus macrocarpa/ Carex inops ssp. *heliophila* Plant Association 33

Quercus macrocarpa / Symphoricarpos occidentalis Plant Association 35

Artemisia cana / Pascopyrum smithii Plant Association 37

Artemisia tridentata ssp. *wyomingensis / P. smithii* (*Elymus lanceolatus*) Plant Association 39

Artemisia tridentata ssp. *wyomingensis / Opuntia polyacantha* Community Type 42

Atriplex gardneri / Elymus lanceolatus Plant Association 44

Chrysothamnus nauseosus / Eriogonum pauciflorum Community Type 46

View Full Report

Sarcobatus vermiculatus / Elymus lanceolatus Plant Association 48

GRAMINOID- AND FORB-DOMINATED VEGETATION TYPES 51

Artemisia longifolia / Oryzopsis hymenoides Community Type 51

Calamovilfa longifolia / Carex inops ssp. *heliophila* Plant Association 53

Eleocharis palustris (*E. xyridiformis*) Community Type 55

Pascopyrum smithii (*Elymus lanceolatus*) Plant Association 57

Pascopyrum smithii (*Elymus lanceolatus*) - Nasella viridula Plant Association 59

Schizachyrium scoparium - *Carex filifolia* Plant Association 61

Spartina pectinata Plant Association 63

Stipa comata - *Carex filifolia* Plant Association 65

BOTANY RESULTS 67

Amorpha canescens Pursh 71

Asclepias ovalifolia Decaisne 73

Asclepias stenophylla A. Gray 75

Astragalus barrii Barneby 77

Astragalus racemosus Pursh 79

Chenopodium subglabrum (S. Watson) A. Nelson 82

Cyperus schweinitzii Torrey 84

Dalea villosa (Nuttall) Sprengel 86

Eriogonum visheri A. Nelson 88

Linaria canadensis (L.) Chaz. var. *texana* (Scheele) Pennell 90

Maianthemum canadense Desf. var. interius Fern. 92

Mirabilis hirsuta (Pursh) MacM. 94

Penstemon angustifolius Nutt. ex Pursh 96

Phlox andicola Nuttall ex A. Gray 98

Physaria brassicoides Rydberg 100

Psoralea hypogaea Nuttall 102

View Full Report

Quercus macrocarpa Michaux 104

Solidago ptarmicoides (Nees) Boivin 106

LITERATURE CITED 110

FIGURES

Figure 1. Carter County Study Area 3
Figure 2. Carter County study area: Shaded relief with superimposed Ecoregional boundaries. 4
Figure 3. Walter-type climatic diagrams for Ekalaka and Albion, Montana. 6
Figure 4. Locations of Plant Association/Community Type Sampling, Carter County, MT. 10
Figure 5. Sensitive plant locations, Carter County, MT. 70

TABLES

Table 1. Sensitive plant species targeted for survey in Carter County. 12
Table 2. Synonymy of dominant plant species in Carter County, MT. 13
Table 3. Distinguishing characteristics between the two major rhizomatous wheatgrasses. 14
Table 4. Plant associations and community types sampled on BLM land in Carter County; arranged by decreasing lifeform stature and alphabetically within lifeform. 18
Table 5. Plant Communities/Associations matrix of Carter County, Montana referenced to the U. S. National Vegetation Classification: 19
Table 6. Occurrences of Montana plant species of special concern in Carter County, MT. 68

APPENDICES

APPENDIX A. SYNTHESIS AND COVER/CONSTANCY TABLES
(Not reproduced in on-line version.)
APPENDIX B. ELEMENT OCCURRENCE RECORDS
(Not reproduced in on-line version.)
APPENDIX C. PRELIMINARY FLORA OF CARTER COUNTY
APPENDIX D. PHOTOS AND ILLUSTRATIONS OF SENSITIVE PLANT SPECIES

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