S
583.123 The occurrence
N110af of *Arabis fecunda*
[1992] on BLM lands in
the Humbug Spires
Area, Silver Bow
County

The Occurrence of Arabis fecunda
on BLM Lands in the Humbug Spires Area, Silver Bow County

Introduction

Sapphire rockcress (Arabis fecunda Rollins) is a rosette-forming perennial in the Mustard Family (Brassicaceae). This recently described species (Rollins 1984) is endemic to highly calcareous, azonal soils in the foothills of the Sapphire Range in Ravalli County and in the Pioneer Range in Beaverhead and Silver Bow counties, Montana (Lesica 1985, Schassberger 1988). Arabis fecunda occurs on eroding slopes with low vascular plant density but often a relatively high cover of cryptogamic soil crust (Lesica and Shelly 1992). Arabis fecunda is a candidate for listing as a threatened or endangered species by the U.S. Fish and Wildlife Service (USDI, FWS 1990) and is considered threatened in Montana (Lesica and Shelly 1991).

In 1991 a population of A. fecunda was located in the Humbug Spires area of southern Silver Bow County (R. DeVelice, pers. com.). This population was the east of any previously known sites for the species. The purpose of this study was to survey lands administered by the Bureau of Land Management (BLM) in the southern portion of Silver Bow County to locate other populations of this rare plant.

Methods

I obtained information on the geology of the area from the geologist for the Butte District of Deerlodge National Forest. I used this information, aerial photos and USGS topographic maps to determine areas likely to harbor populations of Arabis fecunda. I then searched these areas on foot to locate populations. The area covered by this study is presented in Figure 1.

Results

I located four populations of Arabis fecunda on lands administered by BLM in the Humbug Spires area (Figs. 1-4). Sites on the west slope of the Humbug Spires at 6,000-6,900 ft are dominated by Cercocarpus ledifolius, Juniperus scopulorum and Agropyron spicatum. Each of these sites, including the one located in 1991, contain at least 5,000-10,000 A. fecunda plants. The site on the southeast side of the Humbug Spires at 6,700-6,900 ft. is dominated by herbaceous vegetation, Agropyron spicatum, Koeleria cristata, Phlox muscoides and other cushion plants. There are an estimated 1,000-5,000 A. fecunda plants at this site.

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HELENA, MONTANA 59620

1
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Management Considerations

The three sites on the west side of the Humbug Spires appear to be subject to very little human-caused disturbance. Sites are grazed by cattle, but are little impacted because of the lack of forage. The Reservoir Site has a primitive road through the north (state-owned) end. The South Fork Site shows evidence of historic mining activity. The Moose Creek Site has mining claims and is grazed by livestock. There are numerous trails on the south-facing slopes, but the effect of these disturbances on populations of A. fecunda is unknown. In general, populations of A. fecunda in the Humbug Spires area do not appear threatened at this time.

Literature Cited

- Lesica, P. 1985. Report on the conservation status of Arabis fecunda, a potential candidate species. Submitted to the U.S. Fish and Wildlife Service, Office of Endangered Species, Denver, CO.
- Lesica, P. and J. S. Shelly. 1991. Sensitive, threatened and endangered vascular plants of Montana. Montana Natural Heritage Program Occasional Paper No. 1, Helena, MT.
- Rollins, R. C. 1984. Studies in the Cruciferae of western North America II. Contributions to the Gray Herbarium 214: 1-18.
- Schassberger, L. A. 1988. An update of the report on the conservation status of Arabis fecunda, a candidate threatened species. Report to the U.S. Fish and Wildlife Service, Office of Endangered Species, Denver, CO.
- U.S. Department of Interior, Fish and Wildlife Service. 1990. Endangered and threatened wildlife and plants; review of plant taxa for listing as endangered or threatened species; notice of review. Federal Register 55 (35): 6184-6229.

Peter Lesica
October, 1992

UNIVERSITY OF CHICAGO

Figure 2. Locations of Lime Quarry and Reservoir populations of Arabis fecunda.

Figure 3. Location of South Fork *Arabis fecunda* population.

Figure 4. Location of Moose Creek Arabis fecunda population.

PLANT SPECIES OF SPECIAL CONCERN SURVEY FORM
MONTANA NATURAL HERITAGE PROGRAM

1515 E. 6TH AVE., HELENA, MT 59620

DATE OF SURVEY: 27, Jun, 92

OBSERVER(S): LESICA

WORK LOCATION/POSITION TITLE (Forest/District, District/Resource Area of observer(s)): _____

TAXONOMY:

FAMILY: Brassicaceae

SCIENTIFIC NAME: Arabis Fecunda

LOCATION: (Attach a copy of pertinent 7.5' or 15' topographic map section with locations of populations/subpopulations outlined, one map for each sensitive species described)

COUNTY: Silver Bow

USGS QUADRANGLE: Tucker Creek

TOWNSHIP: 1S RANGE: 9W SECTION: 1 1/4 SEC.: NW

ADDITIONAL T/R/S, SECTIONS or 1/4 SECS.: T1N R9W S36 SW 1/4

ELEVATION (at population center (and range of population if known)): 6680 - 6850

NATIONAL FOREST/BLM DISTRICT: Butte

F.S. DISTRICT/ BLM RESOURCE AREA: Dillon?

LAND OWNERSHIP/MANAGEMENT (If not USFS/BLM): Also State of Montana

FOREST STAND OR ALLOTMENT NUMBER: _____

DIRECTIONS TO SITE (refer to roads, trails, geographic features, etc.):

From Divide take frontage road north 5mi. Go east under I-15 to
ranch. Take road to reservoir. Site is on hill north of
reservoir

HABITAT:

VEGETATION STRUCTURE WITHIN POPULATION AREA:

TOTAL TREE COVER (%) 1

TOTAL SHRUB COVER (%) 40

TOTAL FORB COVER (%) 20

TOTAL GRAMINOID COVER (%) 10

TOTAL MOSS/LICHEN COVER (%) 5

TOTAL BARE GROUND COVER (%) 20

ASSOCIATED PLANT COMMUNITY: (list dominant species currently present, include age structure if known):

Cercocarpus ledifolius, Agropyron spicatum, Haplopappus acaulis

HABITAT TYPE: _____

ADDITIONAL ASSOCIATED PLANT SPECIES: Oryzopsis hymenoides, Cymopterus hirsutus

ASPECT

LIGHT EX

TOPOGRAPH

MOISTURE

PARENT

GEOMORPH

alluvia

SOIL TA

EVIDEN

POPUL

ESTIM

area

NUMBER

SIZE

BIOLOG

PHEN

ANY

EVID

REP

DOC

PH

SPI

ID

EC

Q

ASPECT (S, SE, NNW, etc.): S % SLOPE: 35 SLOPE SHAPE (concave, convex, straight, etc.): undulating
LIGHT EXPOSURE (open, shaded, partial shade, etc.): open
TOPOGRAPHIC POSITION (crest, upslope, midslope, lowerslope, bottom, etc.): midslope
MOISTURE: (dry, moist, saturated, inundated, seasonal seepage, etc.): dry
PARENT MATERIAL: calcareous metasediment

GEOMORPHIC LAND FORM (e.g. glaciated mountain slopes and ridges, alpine glacial valley, rolling uplands, breaklands, alluvial-colluvial-lacustrine (floodplains, terraces etc.), rockslides)

Residual mountain slope

SOIL TEXTURE: sandy

EVIDENCE OF DISTURBANCE: little or no livestock disturbance
tons of deer poop.

POPULATION SIZE:

ESTIMATED NUMBER OF INDIVIDUALS (or exact count, if feasible; if plants are spreading vegetatively, indicate number of aerial stems): > 10,000

NUMBER OF SUBPOPULATIONS (if applicable): _____

SIZE OF AREA COVERED BY POPULATION (acres): 40

BIOLOGY:

PHENOLOGY (percentage flowering, fruiting, vegetative): fruit, seed dispersal

ANY SYMBIOTIC OR PARASITIC RELATIONSHIPS?: _____

EVIDENCE OF DISEASE, PREDATION OR INJURY?: _____

REPRODUCTIVE SUCCESS (evidence of seed dispersal and establishment): seed dispersal

DOCUMENTATION:

PHOTOGRAPH TAKEN? (if so, indicate photographer and repository): No

SPECIMEN TAKEN? (if so, list collector, collection number, and repository): No

IDENTIFICATION (list name of person making determination, and/or name of flora or book used): _____

ECODATA PLOT NUMBER (attach photocopied data sheets): 92 PL105

COMMENTS:

COMMUNITY SURVEY FORM

MTNHP

5/27/91

GENERAL PLOT DATA

IDENTIFICATION AND LOCATION

MANUAL _____ UNITS X ft _____ m
 PLOT NO. 92PL105 MO 06 DAY 27 YEAR 92 EOCODE _____ *
 EXAMINER(S) LESICA
 PNC _____ CT _____
 SITE _____ STATE MT COUNTY SILVER BOW
 PURP _____ PREC _____ QUADNAME TUCKER CREEK QUADCODE _____
15 T/9W R/1 S/NW4S/NW4/4 COMMUNITY SIZE (acres) 80
 PLOT TYPES _____ PLTRL _____ PLOT W _____ SURVEY _____
 PHOTOS _____
 DIRECTIONS --> _____

CONSERVATION RANKING

COND _____ Com: _____
 VIAB _____ Com: _____
 DEFN _____ Com: _____
 RANK _____ Com: _____
 MGMT: _____
 PROT: _____

ENVIRONMENTAL FEATURES

DL S SOIL RPT _____
 SOIL UNIT _____ SOIL TAXON _____
 PM METU LANDFORM RMD PLOT POS SIMS SLP SHAPE u ASP 190
 SLOPE % 35 ELEVATION 6700 EROS POTENT UP EROS TYPE GE
 HORIZON ANGLE (%): N _____ E _____ S _____ W _____ IFSLP _____ IFVAL _____
 SPFE _____
 GROUND COVER: 20 S+ 40 G+ 10 R+ 20 L+ 1 W+ 1 M+ 10 BV+ 3 O = 100%
 DISTURBANCE HISTORY (type, intensity, frequency, season)--> _____

RIPARIAN FEATURES: Channel Width _____ Channel Entrench _____
 Surface Water _____ Ht. Abv. H2O _____ Dist. from H2O _____

GENERAL SITE DESCRIPTION (landscape features and adjacent ct's)

Parent material is calcareous metasediment

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U.S.A.

OCULAR PLANT SPECIES DATA

PltIDL_____

PLOT NO. 92 PL105 NO. SPECIES 27 PNC _____

TREES Tot Cv 7 Mht 20
Tal Cv _____ Med Cv _____
Low Cv _____ Grd Cv _____ CC

T 1 _____ / PSEMEN T
T 2 _____ / JUNSCO T
T 3 _____
T 4 _____
T 5 _____

SHRBS Tot Cv 40 Mht 5
Tal Cv _____ Med Cv _____
Low Cv _____ Grd Cv _____ CC

S 1 _____ / CERLED 40
S 2 _____ / TETCAN 3
S 3 _____ / ARTFRI T
S 4 _____
S 5 _____
S 6 _____
S 7 _____
S 8 _____
S 9 _____
S10 _____
S11 _____
S12 _____

GRAM Tot Cv 16 Mht 1.0
Med Cv _____ Low Cv _____
Grd Cv _____ CC

G 1 _____ / ORYHYM 3
G 2 _____ / CARFEL T
G 3 _____ / POASEC T
G 4 _____ / AGRSPI 10
G 5 _____ / KOECRI T
G 6 _____ / STICOM T
G 7 _____
G 8 _____
G 9 _____
G10 _____
G11 _____
G12 _____

FRBS Tot Cv 20 Mht <
Med Cv _____ Low Cv _____
Grd Cv _____ CC

F 1 _____ / HAPACA 20
F 2 _____ / CYMBIP 3
F 3 _____ / LINPER T
F 4 _____ / PHLMUS 1
F 5 _____ / ARAFEC 1
F 6 _____ / IPOSPI T
F 7 _____ / ACHMIL T
F 8 _____ / ERICOM T
F 9 _____ / PENERI T
F10 _____ / LAPRED T
F11 _____ / TAROFF T
F12 _____ / ALLCER T
F13 _____ / CAMMIC T
F14 _____ / DRAOLT T
F15 _____ / LITRUD T
_____ / CRYSOB T

FERN Tot Cv 0 Mht _____ Med Cv _____
Low Cv _____ Grd Cv _____
BRYO/LICH Tot Cv 3

COMMENTS (EODATA) --> _____

Section 1		Section 2	
Item 1	1.1	Item 2	2.1
	1.2		2.2
	1.3		2.3
	1.4		2.4
Item 3	3.1	Item 4	4.1
	3.2		4.2
	3.3		4.3
	3.4		4.4
Item 5	5.1	Item 6	6.1
	5.2		6.2
	5.3		6.3
	5.4		6.4
Item 7	7.1	Item 8	8.1
	7.2		8.2
	7.3		8.3
	7.4		8.4
Item 9	9.1	Item 10	10.1
	9.2		10.2
	9.3		10.3
	9.4		10.4
Item 11	11.1	Item 12	12.1
	11.2		12.2
	11.3		12.3
	11.4		12.4
Item 13	13.1	Item 14	14.1
	13.2		14.2
	13.3		14.3
	13.4		14.4
Item 15	15.1	Item 16	16.1
	15.2		16.2
	15.3		16.3
	15.4		16.4
Item 17	17.1	Item 18	18.1
	17.2		18.2
	17.3		18.3
	17.4		18.4
Item 19	19.1	Item 20	20.1
	19.2		20.2
	19.3		20.3
	19.4		20.4
Item 21	21.1	Item 22	22.1
	21.2		22.2
	21.3		22.3
	21.4		22.4
Item 23	23.1	Item 24	24.1
	23.2		24.2
	23.3		24.3
	23.4		24.4
Item 25	25.1	Item 26	26.1
	25.2		26.2
	25.3		26.3
	25.4		26.4
Item 27	27.1	Item 28	28.1
	27.2		28.2
	27.3		28.3
	27.4		28.4
Item 29	29.1	Item 30	30.1
	29.2		30.2
	29.3		30.3
	29.4		30.4
Item 31	31.1	Item 32	32.1
	31.2		32.2
	31.3		32.3
	31.4		32.4
Item 33	33.1	Item 34	34.1
	33.2		34.2
	33.3		34.3
	33.4		34.4
Item 35	35.1	Item 36	36.1
	35.2		36.2
	35.3		36.3
	35.4		36.4
Item 37	37.1	Item 38	38.1
	37.2		38.2
	37.3		38.3
	37.4		38.4
Item 39	39.1	Item 40	40.1
	39.2		40.2
	39.3		40.3
	39.4		40.4
Item 41	41.1	Item 42	42.1
	41.2		42.2
	41.3		42.3
	41.4		42.4
Item 43	43.1	Item 44	44.1
	43.2		44.2
	43.3		44.3
	43.4		44.4
Item 45	45.1	Item 46	46.1
	45.2		46.2
	45.3		46.3
	45.4		46.4
Item 47	47.1	Item 48	48.1
	47.2		48.2
	47.3		48.3
	47.4		48.4
Item 49	49.1	Item 50	50.1
	49.2		50.2
	49.3		50.3
	49.4		50.4
Item 51	51.1	Item 52	52.1
	51.2		52.2
	51.3		52.3
	51.4		52.4
Item 53	53.1	Item 54	54.1
	53.2		54.2
	53.3		54.3
	53.4		54.4
Item 55	55.1	Item 56	56.1
	55.2		56.2
	55.3		56.3
	55.4		56.4
Item 57	57.1	Item 58	58.1
	57.2		58.2
	57.3		58.3
	57.4		58.4
Item 59	59.1	Item 60	60.1
	59.2		60.2
	59.3		60.3
	59.4		60.4
Item 61	61.1	Item 62	62.1
	61.2		62.2
	61.3		62.3
	61.4		62.4
Item 63	63.1	Item 64	64.1
	63.2		64.2
	63.3		64.3
	63.4		64.4
Item 65	65.1	Item 66	66.1
	65.2		66.2
	65.3		66.3
	65.4		66.4
Item 67	67.1	Item 68	68.1
	67.2		68.2
	67.3		68.3
	67.4		68.4
Item 69	69.1	Item 70	70.1
	69.2		70.2
	69.3		70.3
	69.4		70.4
Item 71	71.1	Item 72	72.1
	71.2		72.2
	71.3		72.3
	71.4		72.4
Item 73	73.1	Item 74	74.1
	73.2		74.2
	73.3		74.3
	73.4		74.4
Item 75	75.1	Item 76	76.1
	75.2		76.2
	75.3		76.3
	75.4		76.4
Item 77	77.1	Item 78	78.1
	77.2		78.2
	77.3		78.3
	77.4		78.4
Item 79	79.1	Item 80	80.1
	79.2		80.2
	79.3		80.3
	79.4		80.4
Item 81	81.1	Item 82	82.1
	81.2		82.2
	81.3		82.3
	81.4		82.4
Item 83	83.1	Item 84	84.1
	83.2		84.2
	83.3		84.3
	83.4		84.4
Item 85	85.1	Item 86	86.1
	85.2		86.2
	85.3		86.3
	85.4		86.4
Item 87	87.1	Item 88	88.1
	87.2		88.2
	87.3		88.3
	87.4		88.4
Item 89	89.1	Item 90	90.1
	89.2		90.2
	89.3		90.3
	89.4		90.4
Item 91	91.1	Item 92	92.1
	91.2		92.2
	91.3		92.3
	91.4		92.4
Item 93	93.1	Item 94	94.1
	93.2		94.2
	93.3		94.3
	93.4		94.4
Item 95	95.1	Item 96	96.1
	95.2		96.2
	95.3		96.3
	95.4		96.4
Item 97	97.1	Item 98	98.1
	97.2		98.2
	97.3		98.3
	97.4		98.4
Item 99	99.1	Item 100	100.1
	99.2		100.2
	99.3		100.3
	99.4		100.4

PLANT SPECIES OF SPECIAL CONCERN SURVEY FORM
MONTANA NATURAL HERITAGE PROGRAM

1515 E. 6TH AVE., HELENA, MT 59620

DATE OF SURVEY: 27 / JUN / 92

OBSERVER(S): LESICA

WORK LOCATION/POSITION TITLE (Forest/District, District/Resource Area of observer(s)):

TAXONOMY:

FAMILY: Brassicaceae

SCIENTIFIC NAME: Arabis fecunda

LOCATION: (Attach a copy of pertinent 7.5' or 15' topographic map section with locations of populations/subpopulations outlined, one map for each sensitive species described)

COUNTY: Silver Bow USGS QUADRANGLE: Tucker Creek

TOWNSHIP: 1N RANGE: 8W SECTION: 31 1/4 SEC.: NW, NE

ADDITIONAL T/R/S, SECTIONS or 1/4 SECS.:

ELEVATION (at population center (and range of population if known)):

NATIONAL FOREST/BLM DISTRICT: Butte F.S. DISTRICT/ BLM RESOURCE AREA: Dillon?

LAND OWNERSHIP/MANAGEMENT (if not USFS/BLM):

FOREST STAND OR ALLOTMENT NUMBER:

DIRECTIONS TO SITE (refer to roads, trails, geographic features, etc.):

from Divide take frontage road north ca. 5 mi. Go east under I-15
to ranch follow map to get on 2-track trail to site

HABITAT:

VEGETATION STRUCTURE WITHIN POPULATION AREA:

TOTAL TREE COVER (%) 30

TOTAL SHRUB COVER (%) 50

TOTAL FORB COVER (%) 20

TOTAL GRAMINOID COVER (%) 5

TOTAL MOSS/LICHEN COVER (%) 5

TOTAL BARE GROUND COVER (%) 20

ASSOCIATED PLANT COMMUNITY: (list dominant species currently present, include age structure if known):

Cercocarpus ledifolius, Juniperus scopulorum Agropyron spicatum

HABITAT TYPE:

ADDITIONAL ASSOCIATED PLANT SPECIES: Haplopappus acaulis Cynopterus bipinnatus

ASPECT (S, SE, NNW, etc.): SW % SLOPE: 50 SLOPE SHAPE (concave, convex, straight, etc.): CONVEX
LIGHT EXPOSURE (open, shaded, partial shade, etc.): partial shade
TOPOGRAPHIC POSITION (crest, upslope, midslope, lower slope, etc.): lower slope
MOISTURE: (dry, moist, saturated, inundated, seasonal seepage, etc.): dry
PARENT MATERIAL: calc metasediment

GEOMORPHIC LAND FORM (e.g. glaciated mountain slopes and ridges, alpine glacial valley, rolling uplands, breaklands, alluvial-colluvial-lacustrine (floodplains, terraces etc.), rockslides)

Residual mountain slope

SOIL TEXTURE: sandy

EVIDENCE OF DISTURBANCE: tons of deer poop

POPULATION SIZE:

ESTIMATED NUMBER OF INDIVIDUALS (or exact count, if feasible; if plants are spreading vegetatively, indicate number of aerial stems): >10,000

NUMBER OF SUBPOPULATIONS (if applicable):

SIZE OF AREA COVERED BY POPULATION (acres): 30

BIOLOGY:

PHENOLOGY (percentage flowering, fruiting, vegetative): fruiting?

ANY SYMBIOTIC OR PARASITIC RELATIONSHIPS?:

EVIDENCE OF DISEASE, PREDATION OR INJURY?:

REPRODUCTIVE SUCCESS (evidence of seed dispersal and establishment): seed dispersal

DOCUMENTATION:

PHOTOGRAPH TAKEN? (if so, indicate photographer and repository): No

SPECIMEN TAKEN? (if so, list collector, collection number, and repository): Lesica 5729 MONTU

IDENTIFICATION (list name of person making determination, and/or name of flora or book used):

ECODATA PLOT NUMBER (attach photocopied data sheets): 92 PL 106

COMMENTS:

COMMUNITY SURVEY FORM

MTNHP

5/27/91

GENERAL PLOT DATA

IDENTIFICATION AND LOCATION

PLOT NO. 92 PL106 MO 06 DAY 27 MANUAL _____ UNITS X ft _____ m
 EXAMINER(S) LESICA YEAR 92 EOCODE _____ *
 PNC _____ CT _____
 SITE _____ STATE MT COUNTY SILVER Bow
 PURP _____ PREC _____ QUADNAME TUCKER CREEK QUADCODE _____
 IN T/8W R 31 S NW4S/SE4/4 COMMUNITY SIZE (acres) 20
 PLOT TYPES _____ PLTRL _____ PLOT W _____ SURVEY _____
 PHOTOS _____
 DIRECTIONS --> _____

CONSERVATION RANKING

COND _____ Com: _____
 VIAB _____ Com: _____
 DEFN _____ Com: _____
 RANK _____ Com: _____
 MGMT: _____
 PROT: _____

ENVIRONMENTAL FEATURES

DL S SOIL RPT _____
 SOIL UNIT _____ SOIL TAXON _____
 PMMETU LANDFORM RMD PLOT POS SLLS SLP SHAPE R ASP 215
 SLOPE % 50 ELEVATION 6800 EROS POTENT UP EROS TYPE GE
 HORIZON ANGLE (%): N _____ E _____ S _____ W _____ IFSLP _____ IFVAL _____
 SPFE _____
 GROUND COVER: 20 S+ 40 G+ 10 R+ 20 L+ 1 W+ 1 M+ 10 BV+ 1 O = 100%
 DISTURBANCE HISTORY (type, intensity, frequency, season)--> _____

RIPARIAN FEATURES: Channel Width _____ Channel Entrench _____
 Surface Water _____ Ht. Abv. H2O _____ Dist. from H2O _____

GENERAL SITE DESCRIPTION (landscape features and adjacent ct's)

Parent material is calcareous metasediment

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CHICAGO, ILL. 60637

PltIDL

TREES				FRBS			
Tot Cv <u>10</u>		Mht <u>30</u>		Tot Cv <u>20</u>		Mht <u> </u>	
Tal Cv <u> </u> Med Cv <u> </u>				Med Cv <u> </u> Low Cv <u> </u>			
Low Cv <u> </u> Grd Cv <u> </u>		CC		Grd Cv <u> </u>		CC	
T 1	/	PSEMEN	T	F 1	/	HAPACA	10
T 2	/	JUNSCO	10	F 2	/	CUMBIP	3
T 3	/	PINFLE	T	F 3	/	CASPAL	T
T 4	/			F 4	/	ACHMIL	T
T 5	/			F 5	/	ALLCER	T
				F 6	/	ARAFEC	T
SHRBS Tot Cv <u>50</u> Mht <u>6</u>				F 7	/	PENERI	1
Tal Cv <u> </u> Med Cv <u> </u>				F 8	/	IPOSPI	T
Low Cv <u> </u> Grd Cv <u> </u>				F 9	/	LINPER	T
CC				F10	/	SENCAN	T
S 1	/	CERLED	50	F11	/	CRYSOB	T
S 2	/	ARTFRI	T	F12	/	SEDLAN	T
S 3	/	ARTTRI	T	F13	/	LITRUP	T
S 4	/			F14	/	MEROBL	T
S 5	/			F15	/		
S 6	/				/		
S 7	/				/		
S 8	/				/		
S 9	/				/		
S10	/				/		
S11	/				/		
S12	/				/		
					/		
GRAM Tot Cv <u>3</u> Mht <u>1.0</u>					/		
Med Cv <u> </u> Low Cv <u> </u>					/		
Grd Cv <u> </u>					/		
CC					/		
G 1	/	AGRSPI	3		/		
G 2	/	CARROS	T		/		
G 3	/	KOECRI	T		/		
G 4	/				/		
G 5	/				/		
G 6	/				/		
G 7	/				/		
G 8	/				/		
G 9	/				/		
G10	/				/		
G11	/				/		
G12	/				/		

FERN Tot Cv 0 Mht Med Cv
Low Cv Grd Cv

BRYO/LICH Tot Cv 3

COMMENTS (EODATA) -->

PLANT SPECIES OF SPECIAL CONCERN SURVEY FORM

MONTANA NATURAL HERITAGE PROGRAM

1515 E. 6TH AVE., HELENA, MT 59620

DATE OF SURVEY: 26 Jun, 92

OBSERVER(S): Lesica

WORK LOCATION/POSITION TITLE (Forest/District, District/Resource Area of observer(s)): _____

TAXONOMY:

FAMILY: Brassicaceae

SCIENTIFIC NAME: Anabis fecunda

LOCATION: (Attach a copy of pertinent 7.5' or 15' topographic map section with locations of populations/subpopulations outlined, one map for each sensitive species described)

COUNTY: Silver Bow

USGS QUADRANGLE: Mount Humburg

TOWNSHIP: 1S RANGE: 8W SECTION: 3 1/4 SEC.: SW

ADDITIONAL T/R/S, SECTIONS or 1/4 SECS.: T1S R8W S10 (?)

ELEVATION (at population center (and range of population if known)): 6750-6900

NATIONAL FOREST/BLM DISTRICT: Butte (?) F.S. DISTRICT/ BLM RESOURCE AREA: Headwaters (?)

LAND OWNERSHIP/MANAGEMENT (if not USFS/BLM): Private

FOREST STAND OR ALLOTMENT NUMBER: _____

DIRECTIONS TO SITE (refer to roads, trails, geographic features, etc.):

From Highland Road take Moose Town Road to Maloney Park

Site is on bluffs across Moose Creek.

HABITAT:

VEGETATION STRUCTURE WITHIN POPULATION AREA:

TOTAL TREE COVER (%) T

TOTAL SHRUB COVER (%) T

TOTAL FORB COVER (%) 50

TOTAL GRAMINOID COVER (%) 5

TOTAL MOSS/LICHEN COVER (%) 5

TOTAL BARE GROUND COVER (%) 10

ASSOCIATED PLANT COMMUNITY: (list dominant species currently present, include age structure if known):

Agropyron spicatum - Phlox muscoides

HABITAT TYPE: _____

ADDITIONAL ASSOCIATED PLANT SPECIES: Erigeron compositus, Douglasia montana

ASPECT (S, SE, NNW, etc.): S % SLOPE: 45 SLOPE SHAPE (concave, convex, straight, etc.): undulating
LIGHT EXPOSURE (open, shaded, partial shade, etc.): open
TOPOGRAPHIC POSITION (crest, upperslope, midslope, lowerslope, bottom, etc.): midslope
MOISTURE: (dry, moist, saturated, inundated, seasonal seepage, etc.): dry
PARENT MATERIAL: calcareous metasediment
GEOMORPHIC LAND FORM (e.g. glaciated mountain slopes and ridges, alpine glacial valley, rolling uplands, breaklands, alluvial-colluvial-lacustrine (floodplains, terraces etc.), rockslides)

SOIL TEXTURE: sandy
EVIDENCE OF DISTURBANCE: mining claims

POPULATION SIZE:

ESTIMATED NUMBER OF INDIVIDUALS (or exact count, if feasible; if plants are spreading vegetatively, indicate number of aerial stems): 1000 - 5000

NUMBER OF SUBPOPULATIONS (if applicable): This is one of 3 subpopulations in Mono Town

SIZE OF AREA COVERED BY POPULATION (acres): ca. 20

BIOLOGY:

PHENOLOGY (percentage flowering, fruiting, vegetative): fruiting

ANY SYMBIOTIC OR PARASITIC RELATIONSHIPS?: _____

EVIDENCE OF DISEASE, PREDATION OR INJURY?: _____

REPRODUCTIVE SUCCESS (evidence of seed dispersal and establishment): Seed dispenser

DOCUMENTATION:

PHOTOGRAPH TAKEN? (if so, indicate photographer and repository): No

SPECIMEN TAKEN? (if so, list collector, collection number, and repository): No

IDENTIFICATION (list name of person making determination, and/or name of flora or book used): _____

ECODATA PLOT NUMBER (attach photocopied data sheets): 92 PL103

COMMENTS:

COMMUNITY SURVEY FORM

MTNHP

5/27/91

GENERAL PLOT DATA

IDENTIFICATION AND LOCATION

PLOT NO. 92P1103 MO 06 DAY 26 MANUAL _____ UNITS X ft _____ m
EXAMINER(S) LESICA YEAR 92 EOCODE _____ *
PNC _____ CT _____
SITE _____ STATE MT COUNTY SILVER BOW
PURP _____ PREC _____ QUADNAME MOUNT HUMBUG QUADCODE 4511275
1S T/8W R/3 S/SW4S/SE 4/4 COMMUNITY SIZE (acres) 30
PLOT TYPES _____ PLTRL _____ PLOT W _____ SURVEY _____
PHOTOS _____
DIRECTIONS ---> _____

CONSERVATION RANKING

COND _____ Com: _____
VIAB _____ Com: _____
DEFN _____ Com: _____
RANK _____ Com: _____
MGMT: _____
PROT: _____

ENVIRONMENTAL FEATURES

DL F SOIL RPT _____
SOIL UNIT _____ SOIL TAXON _____
PMMETU LANDFORMRMDL PLOT POS SLMS SLP SHAPE u ASP 180
SLOPE % 45 ELEVATION 6850 EROS POTENT uP EROS TYPE SE
HORIZON ANGLE (%): N _____ E _____ S _____ W _____ IFSLP _____ IFVAL _____
SPFE _____
GROUND COVER: 10S+30G+20R+1L+T W+0M+40BV+30 = 100%
DISTURBANCE HISTORY (type, intensity, frequency, season) --> _____

RIPARIAN FEATURES: Channel Width _____ Channel Entrench _____
Surface Water _____ Ht. Abv. H2O _____ Dist. from H2O _____

GENERAL SITE DESCRIPTION (landscape features and adjacent ct's)

Parent material is calcareous metasediment

 

OCULAR PLANT SPECIES DATA

PltIDL_____

PLOT NO. 92 PL103 NO. SPECIES 22 PNC _____

TREES Tot Cv T Mht 20
Tal Cv _____ Med Cv _____
Low Cv _____ Grd Cv _____ CC

T 1 _____ / PINFLE T
T 2 _____ / _____
T 3 _____ / _____
T 4 _____ / _____
T 5 _____ / _____

SHRBS Tot Cv T Mht 1.0
Tal Cv _____ Med Cv _____
Low Cv _____ Grd Cv _____ CC

S 1 _____ / TUNCOM T
S 2 _____ / POTFRU T
S 3 _____ / ARTFRI T
S 4 _____ / _____
S 5 _____ / _____
S 6 _____ / _____
S 7 _____ / _____
S 8 _____ / _____
S 9 _____ / _____
S10 _____ / _____
S11 _____ / _____
S12 _____ / _____

GRAM Tot Cv 3 Mht 1.0
Med Cv _____ Low Cv _____
Grd Cv _____ CC

G 1 _____ / AGRSPI 3
G 2 _____ / KOECRI 1
G 3 _____ / POASEC 1
G 4 _____ / STICOM T
G 5 _____ / _____
G 6 _____ / _____
G 7 _____ / _____
G 8 _____ / _____
G 9 _____ / _____
G10 _____ / _____
G11 _____ / _____
G12 _____ / _____

FRBS Tot Cv 50 Mht <
Med Cv _____ Low Cv _____
Grd Cv _____ CC

F 1 _____ / PHLMUS 30
F 2 _____ / ERICOM 10
F 3 _____ / DOUMON 10
F 4 _____ / HAPACA 3
F 5 _____ / DRAOLI 1
F 6 _____ / SENCAN 1
F 7 _____ / CYMBIP T
F 8 _____ / LINPER T
F 9 _____ / ASTADS 1
F10 _____ / CHARVIL 1
F11 _____ / FRASPE T
F12 _____ / CASPAL T
F13 _____ / ARAFEC T
F14 _____ / PENERI T
F15 _____ / _____

FERN Tot Cv 0 Mht _____ Med Cv _____
Low Cv _____ Grd Cv _____
BRYO/LICH Tot Cv 3

COMMENTS (EODATA) --> _____