

APPENDIX 1. DETAILED DESCRIPTIONS OF SAMPLE PLOTS USED IN THE ROCK SPRINGS FIELD OFFICE  
CUSHION-PLANT VEGETATION SURVEY.

This is Appendix 1 from the following report:

Jones, G.P. 2004. Cushion-Plant Vegetation on Public Lands in the BLM Rock Springs Field Office, Wyoming. Final Report for Assistance Agreement KAA010012, Task Order No. TO- 33. University of Wyoming, Wyoming Natural Diversity Database, Laramie WY USA. 104 pp.

The report text, table, and figures are in the digital file “RS\_Cush\_Pl\_Report”, and Appendix 2 (photographs of selected sample plots) is in the file “RS\_Cush\_Pl\_Photo\_App2”.



Plot	01CM16.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	2	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	5	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	erigeron compositus, cutleaf daisy	erco4	1	Native
	erigeron nanus, dwarf fleabane	erna5	1	Native
	eriogonum sp., eriogonum	eriog	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-4	forb1004	1	Unknown
	linum lewisii, prairie flax	lile3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	packera cana, woolly groundsel	paca15	1	Native
	penstemon sp., penstemon	penst	1	Native
	phlox muscoides, musk phlox	phmu4	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	trifolium andinum, andes clover	tran2	3	Native
		<i>Total</i>	20	
		<i>Total for Plot</i>	27	



Plot	01CM16.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	amelanchier utahensis, utah serviceberry	amut	1	Native
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	10	Native
	chrysothamnus viscidiflorus, green rabbitbrush	chvi8	3	Native
		<i>Total</i>	<i>14</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>2</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	koeleria macrantha, prairie junegrass	koma	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	antennaria microphylla, littleleaf pussytoes	anmi3	1	Native
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	castilleja flava, yellow indian paintbrush	cafl7	1	Native
	castilleja linariifolia, wyoming indian paintbrush	cali4	1	Native
	chaenactis douglasii, douglas' dustymaiden	chdo	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	1	Native
	erigeron nanus, dwarf fleabane	erna5	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-13	forb1013	1	Unknown
	forb unknown cp01-4	forb1004	1	Unknown
	linum lewisii, prairie flax	lile3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	packera multilobata, lobeleaf groundsel	pamu11	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	trifolium andinum, andes clover	tran2	1	Native
	trifolium gymnocarpon, hollyleaf clover	trgy	1	Native
		<i>Total</i>	<i>24</i>	
		<i>Total for Plot</i>	<i>46</i>	

**Plot:** 01CM58.01 **LOCATION**  
**T** 13 N, **R** 11W, **Sec** 24 , **SE** 1/4 **sec**  
**UTM Coordinates:** 4,549,431 m N, 584,695 m E **Projection** NAD 27 **Zone** 12N  
**Map name** McKinnon **Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim **Sampled on:** 06/11/2001  
**Why was plot done?** Illustrate composition of cushion-plant vegetation along rims.

**Uncertainty on measurements**

Few grasses had heads so species were difficult to distinguish.

**Completeness of Spp lists**

**Describe veg**

Short, sparse vegetation (to 25 cm tall) dominated by perennial, cushion-form forbs with a few perennial grasses and dwarf-shrubs.

**Disturbance signs**

Hole may have been excavated in distant past. Dried cattle droppings present.

**Notes** Plot lies between rim and road.

**ENVIRONMENT**

**Elevation** 8,300 ft **Aspect** 170 deg. **Slope** 1 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** Gravel common on surface and in upper part of profile.

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	2	84	1	1	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	1	0	0	0	0	

Plot	01CM58.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	amelanchier utahensis, utah serviceberry	amut	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>4</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	3	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	cryptantha sp., cryptantha	crypt	1	Native
	erigeron nanus, dwarf fleabane	erna5	1	Native
	machaeranthera grindelioides, rayless aster	magr2	3	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	trifolium andinum, andes clover	tran2	1	Native
	trifolium, clover	trifo	1	Unknown
		<i>Total</i>	<i>19</i>	
		<i>Total for Plot</i>	<i>30</i>	

**Plot: 01CM58.02**

**LOCATION**

**T 13 N, R 11W, Sec 24, N 1/4 sec**

**UTM Coordinates:** 4,549,448 m N, 584,673 m E **Projection** NAD 27 **Zone** 12N

**Map name** McKinnon

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Grass away from rim

**Sampled on:** 06/11/2001

**Why was plot done?** Illustrate nature of vegetation adjoining cushion plant stand along rim.

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Short vegetation (to ca. 20 cm tall) of perennial forbs and dwarf-shrubs, with a few perennial grasses.

**Disturbance signs**

Pocket gopher burrows present.

**Notes** Plot lies 40 m from road.

**ENVIRONMENT**

**Elevation** 8,300 ft **Aspect** 170 deg. **Slope** 0 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** Gravel covers much of the soil surface between plants

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	0	69	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	1	0	

Plot	01CM58.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	20	Native
		<i>Total</i>	20	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	2	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	3	Native
	koeleria macrantha, prairie junegrass	koma	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	7	
	<i>6. Forb</i>			
	arabis pendulina, rabbitear rockcress	arpe	1	Native
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	castilleja flava, yellow indian paintbrush	cafl7	1	Native
	castilleja linariifolia, wyoming indian paintbrush	cali4	1	Native
	coryphantha vivipara, spinystar cactus	covi9	1	Native
	crepis, hawksbeard	crepi	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	1	Native
	erigeron nanus, dwarf fleabane	erna5	1	Native
	forb unknown	forbunk	1	Unknown
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	3	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	trifolium andinum, andes clover	tran2	1	Native
	trifolium, clover	trifo	1	Unknown
		<i>Total</i>	20	
		<i>Total for Plot</i>	49	



Plot	01CM71.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
		<i>Total</i>	1	
	<i>5. Graminoid</i>			
	elymus sp., wildrye	elymu	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	hesperostipa comata, needle and thread	heco26	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	6	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	10	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	castilleja flava, yellow indian paintbrush	cafl7	1	Native
	coryphantha vivipara, spinystar cactus	covi9	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	1	Native
	erigeron nanus, dwarf fleabane	erna5	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-12	forb1012	1	Unknown
	machaeranthera grindelioides, rayless aster	magr2	3	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	10	Native
	trifolium andinum, andes clover	tran2	1	Native
		<i>Total</i>	34	
		<i>Total for Plot</i>	43	

**Plot:** 01CM71.02

**LOCATION**

**T** 13 N, **R** 11W, **Sec** 22 , NE 1/4 sec

**UTM Coordinates:** 4,549,287 m N, 582,689 m E **Projection** NAD 27 **Zone** 12N

**Map name** Burntfork

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Grass away from rim

**Sampled on:** 06/19/2001

**Why was plot done?** Determine composition of vegetation next to cushion-plant stands

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Perennial forbs and grasses with big sage distributed uniformly throughout; estimated total canopy cover 50%

**Disturbance signs**

dried cowpies in plot

**Notes**

**ENVIRONMENT**

**Elevation** 8,500 ft **Aspect** 170 deg. **Slope** 1 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** gravel on surface

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	40	51	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	1	0	0	0	0	

Plot	01CM71.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	20	Native
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
		<i>Total</i>	<i>21</i>	
	<i>3. Subshrub</i>			
	erigonum microthecum var. laxiflorum, slender buckwheat	ermil2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	koeleria macrantha, prairie junegrass	koma	3	Native
	poa secunda, sandberg bluegrass	pose	10	Native
		<i>Total</i>	<i>13</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	castilleja, indian paintbrush	casti2	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	erigeron nanus, dwarf fleabane	erna5	1	Native
	erigonum caespitosum, matted buckwheat	erca8	1	Native
	erigonum sp., erigonum	eriog	1	Native
	forb unknown cp01-12	forb1012	1	Unknown
	malacothrix torreyi, torrey's desertdandelion	mato2	1	Native
	mertensia humilis, rocky mountain bluebells	mehu2	1	Native
	penstemon humilis, low penstemon	pehu	1	Native
	potentilla ovina, sheep cinquefoil	poov2	1	Native
	sedum lanceolatum, spearleaf stonecrop	sela	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	10	Native
	trifolium gymnocarpon, hollyleaf clover	trgy	1	Native
		<i>Total</i>	<i>26</i>	
		<i>Total for Plot</i>	<i>61</i>	



Plot	01DR05.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	10	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>12</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	3	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus sp., wildrye	elymu	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>7</i>	
	<i>6. Forb</i>			
	allium textile, textile onion	alte	1	Native
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	penstemon sp., penstemon	penst	1	Native
	phlox hoodii, hoods phlox	phho	1	Native
	phlox muscoides, musk phlox	phmu4	20	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
		<i>Total</i>	<i>33</i>	
		<i>Total for Plot</i>	<i>52</i>	

**Plot:** 01DR05.02 **LOCATION**

**T** 19 N, **R** 96W, **Sec** 34 , **SW 1/4 sec**

**UTM Coordinates:** 4,606,095 m N, 732,448 m E **Projection** NAD 27 **Zone** 12N

**Map name** Red Desert SW **Scale** 1:24,000

### DESCRIPTION

**Plot Group:** CP Grass away from rim **Sampled on:** 06/05/2001

**Why was plot done?** Illustrate nature of grass vegetation between the rim and the sage-grass matrix away from the rim.

#### Uncertainty on measurements

Most grasses are not flowering so we may have been confusing needle-and-thread and Indian ricegrass with each other.

**Completeness of Spp lists** No obvious problems

#### Describe veg

Low-growing vegetation of grasses with forbs and dwarf-shrubs. The major species appear to be uniformly distributed: thickspike wheatgrass, Sandberg bluegrass, birdfoot sage, Nuttall's saltbush, and Hood's phlox.

#### Disturbance signs

#### Notes

### ENVIRONMENT

**Elevation** 7,400 ft **Aspect** 140 deg. **Slope** 1 deg.

#### Topo. Position:

**Surface deposit** Residual **Soil Texture**

#### Soil features

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	85	5	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	1	0	0	1	0	

Plot	01DR05.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
	atriplex gardneri, gardner's saltbush	atga	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>7</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	50	Native
	poa secunda, sandberg bluegrass	pose	10	Native
		<i>Total</i>	<i>61</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	forb unknown	forbunk	1	Unknown
	lesquerella alpina, alpine bladderpod	leal	1	Native
	penstemon sp., penstemon	penst	1	Native
	phlox hoodii, hoods phlox	phho	10	Native
		<i>Total</i>	<i>14</i>	
		<i>Total for Plot</i>	<i>82</i>	



Plot	01DR06.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>4</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	3	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	elymus sp., wildrye	elymu	3	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	3	Native
		<i>Total</i>	<i>10</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	erigonum flavum, yellow erigonum	erfl4	1	Native
	erigonum sp., erigonum	eriog	1	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	penstemon sp., penstemon	penst	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	stanleya pinnata, desert princesplume	stpi	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
		<i>Total</i>	<i>22</i>	
		<i>Total for Plot</i>	<i>37</i>	



**Plot 01DR06.02**

**CANOPY COVER**

<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>3. Subshrub</i>			
artemisia pedatifida, birdfoot sagebrush	arpe6	1	Native
atriplex gardneri, gardner's saltbush	atga	1	Native
krascheninnikovia lanata, winterfat	krla2	1	Native
	<i>Total</i>	3	
<i>5. Graminoid</i>			
achnatherum hymenoides, indian ricegrass	achy	1	Native
elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	20	Native
poa secunda, sandberg bluegrass	pose	3	Native
	<i>Total</i>	25	
<i>6. Forb</i>			
allium textile, textile onion	alte	1	Native
arenaria hookeri, hooker's sandwort	arho4	1	Native
forb unknown	forbunk	1	Unknown
lappula redowskii, western stickseed	lare	1	Native
phlox hoodii, hoods phlox	phho	3	Native
	<i>Total</i>	7	
	<i>Total for Plot</i>	35	



Plot	01DR11.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>4</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus sp., wildrye	elymu	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	erigonum acaule, singlestem buckwheat	erac3	3	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
		<i>Total</i>	<i>19</i>	
		<i>Total for Plot</i>	<i>30</i>	



Plot	01DR11.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	<i>2</i>	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	10	Native
	hesperostipa comata, needle and thread	heco26	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>15</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	penstemon sp., penstemon	penst	1	Native
	phlox hoodii, hoods phlox	phho	1	Native
	phlox muscoides, musk phlox	phmu4	3	Native
	stenotus armerioides, thrift mock goldenweed	star10	1	Native
		<i>Total</i>	<i>11</i>	
		<i>Total for Plot</i>	<i>29</i>	



Plot	01DR12.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
		<i>Total</i>	2	
	<i>5. Graminoid</i>			
	elymus sp., wildrye	elymu	3	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	5	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	erigonum acaule, singlestem buckwheat	erac3	3	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	3	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	trifolium, clover	trifo	3	Unknown
		<i>Total</i>	18	
		<i>Total for Plot</i>	25	



Plot	01DR12.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
	artemisia pedatifida, birdfoot sagebrush	arpe6	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	5	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	20	Native
	hesperostipa comata, needle and thread	heco26	3	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	28	
	<i>6. Forb</i>			
	allium textile, textile onion	alte	1	Native
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	astragalus purshii, woollypod milkvetch	aspu9	1	Native
	erigonum flavum, yellow eriogonum	erfl4	1	Native
	forb unknown	forbunk	1	Unknown
	heterotheca villosa, hairy goldenaster	hevi4	1	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	phlox hoodii, hoods phlox	phho	1	Native
	phlox muscoides, musk phlox	phmu4	3	Native
	stenotus armerioides, thrift mock goldenweed	star10	1	Native
		<i>Total</i>	12	
		<i>Total for Plot</i>	47	



Plot	01DR15.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	atriplex sp., saltbush	atrip	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
		<i>Total</i>	<i>3</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	3	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
		<i>Total</i>	<i>4</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	forb unknown cp01-10	forb1010	1	Unknown
	ipomopsis congesta, ballhead gilia	ipco5	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
		<i>Total</i>	<i>20</i>	
		<i>Total for Plot</i>	<i>28</i>	



Plot	01DR15.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	5	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	3	Native
	elymus sp., wildrye	elymu	1	Native
	poa secunda, sandberg bluegrass	pose	10	Native
		<i>Total</i>	15	
	<i>6. Forb</i>			
	allium textile, textile onion	alte	1	Native
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	aster, aster	aster	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-10	forb1010	1	Unknown
	hymenoxys richardsonii, pingue hymenoxys	hyri	1	Native
	ipomopsis congesta, ballhead gilia	ipco5	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	penstemon sp., penstemon	penst	1	Native
	phlox hoodii, hoods phlox	phho	3	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
		<i>Total</i>	15	
		<i>Total for Plot</i>	37	



Plot	01HM26.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	3	Native
		<i>Total</i>	<i>4</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	eriogonum microthecum var. laxiflorum, slender buckwheat	ermil2	3	Native
		<i>Total</i>	<i>4</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	hesperostipa comata, needle and thread	heco26	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>7</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	coryphantha vivipara, spinystar cactus	covi9	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	1	Native
	forb unknown cp01-1	forb1001	1	Unknown
	forb unknown cp01-5	forb1005	1	Unknown
	forb unknown cp01-7	forb1007	1	Unknown
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	oxytropis sp., crazyweed	oxytr	1	Native
	penstemon sp., penstemon	penst	1	Native
	sphaeralcea coccinea, scarlet globemallow	spco	1	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	trifolium andinum, andes clover	tran2	10	Native
		<i>Total</i>	<i>30</i>	
		<i>Total for Plot</i>	<i>45</i>	



Plot	01HM26.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
	eriogonum microthecum var. laxiflorum, slender buckwheat	ermil2	1	Native
	opuntia polyacantha, plains pricklypear	oppo	1	Native
		<i>Total</i>	<i>5</i>	
	<i>5. Graminoid</i>			
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	hesperostipa comata, needle and thread	heco26	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>5</i>	
	<i>6. Forb</i>			
	allium, wild onion	alliu	1	Native
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus diversifolius, meadow milkvetch	asdi5	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-1	forb1001	1	Unknown
	forb unknown cp01-5	forb1005	1	Unknown
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	penstemon sp., penstemon	penst	1	Native
	sphaeralcea coccinea, scarlet globemallow	scco	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	townsendia nuttallii, nuttall's townsend daisy	tonu	1	Native
	trifolium andinum, andes clover	tran2	3	Native
		<i>Total</i>	<i>24</i>	
		<i>Total for Plot</i>	<i>35</i>	



Plot	01HM32.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	erigonum microthecum var. laxiflorum, slender buckwheat	ermil2	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>5</i>	
	<i>5. Graminoid</i>			
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	hesperostipa comata, needle and thread	heco26	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>5</i>	
	<i>6. Forb</i>			
	antennaria microphylla, littleleaf pussytoes	anmi3	3	Native
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	1	Native
	forb unknown cp01-13	forb1013	3	Unknown
	forb unknown cp01-5	forb1005	1	Unknown
	forb unknown cp01-7	forb1007	1	Unknown
	lesquerella alpina, alpine bladderpod	leal	1	Native
	potentilla ovina, sheep cinquefoil	poov2	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
		<i>Total</i>	<i>20</i>	
		<i>Total for Plot</i>	<i>31</i>	



Plot	01HM32.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	eriogonum microthecum var. laxiflorum, slender buckwheat	ermil2	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>3</i>	
	<i>5. Graminoid</i>			
	elymus spicatus, bluebunch wheatgrass	elsp3	3	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	antennaria microphylla, littleleaf pussytoes	anmi3	1	Native
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	draba oligosperma, fewseed whitlowgrass	drol	3	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-13	forb1013	1	Unknown
	forb unknown cp01-5	forb1005	1	Unknown
	machaeranthera grindelioides, rayless aster	magr2	3	Native
	penstemon sp., penstemon	penst	1	Native
	potentilla ovina, sheep cinquefoil	poov2	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	trifolium andinum, andes clover	tran2	3	Native
		<i>Total</i>	<i>26</i>	
		<i>Total for Plot</i>	<i>36</i>	

**Plot:** 01JH01.01

**LOCATION**

**T** 24 N, **R** 10W, **Sec** 7, **N** 1/4 sec

**UTM Coordinates:** 4,659,446 m N, 674,524 m E **Projection** NAD 27 **Zone** 12N

**Map name** Monument Ridge

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim

**Sampled on:** 06/21/2001

**Why was plot done?** Characterize cushion plant vegetation along rim.

**Uncertainty on measurements**

Identification of some grasses as *Oryzopsis hymenoides* is uncertain because they are not blooming.

**Completeness of Spp lists** Some very-early blooming forbs may have been missed.

**Describe veg**

Vegetation consists of low growing sparse cushion plants (Hooker's sandwort, tufted milkvetch) and dwarf shrubs (birdfoot sagebrush). Estimated total canopy cover is 1-5%.

**Disturbance signs**

A 2-track road runs parallel to and about 12 m from the rim, through this stand.

**Notes** Plot is immediately along rim.

**ENVIRONMENT**

**Elevation** 7,700 ft **Aspect** 50 deg. **Slope** 0 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** The fine soil is clay loam, but most of the soil (>50% volume?) is gravel. 1 hand texture of surface 5 cm. Surface of gravel (angular) lag.

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	1	95	1	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	1	0	0	0	0	

Plot	01JH01.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	5	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	3	Native
		<i>Total</i>	4	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	10	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	cryptantha sp., cryptantha	crypt	1	Native
	erigonum brevicaule, shortstem buckwheat	erbr5	3	Native
	ipomopsis congesta, ballhead gilia	ipco5	1	Native
	lesquerella alpina, alpine bladderpod	leal	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	22	
		<i>Total for Plot</i>	31	



Plot	01JH01.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	20	Native
	chrysothamnus viscidiflorus, green rabbitbrush	chvi8	1	Native
	symphoricarpos oreophilus, whortleleaf snowberry	syor2	1	Native
	tetradymia canescens, spineless horsebrush	teca2	1	Native
	tetradymia spinosa, shortspine horsebrush	tesp2	1	Native
		<i>Total</i>	<i>24</i>	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	1	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
	erigonum microthecum var. laxiflorum, slender buckwheat	ermil2	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>6</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	3	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>5</i>	
	<i>6. Forb</i>			
	antennaria microphylla, littleleaf pussytoes	anmi3	1	Native
	arabis pendulocarpa, dropseed rockcress	arpe10	1	Native
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus purshii, woollypod milkvetch	aspu9	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	castilleja pilosa, parrothead indian paintbrush	capi3	1	Native
	erigeron compositus, cutleaf daisy	erco4	1	Native
	erigonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	forb unknown	forbunk	1	Unknown
	ipomopsis congesta, ballhead gilia	ipco5	1	Native
	penstemon fremontii, fremont's beardtongue	pefr	1	Native
	phlox hoodii, hoods phlox	phho	3	Native
	phlox opalensis, opal phlox	phop2	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
		<i>Total</i>	<i>18</i>	
		<i>Total for Plot</i>	<i>53</i>	



Plot	01JH02.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	10	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>12</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>4</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	castilleja, indian paintbrush	casti2	1	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	cryptantha sp., cryptantha	crypt	1	Native
	erigonum brevicaule, shortstem buckwheat	erbr5	1	Native
	erigonum caespitosum, matted buckwheat	erca8	1	Native
	fabaceae unknown cp01-2	fab102	3	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-2	forb1002	1	Unknown
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox hoodii, hoods phlox	phho	3	Native
	sphaeralcea coccinea, scarlet globemallow	spco	1	Native
	sphaeromeria argentea, silver chickensage	spar2	1	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	stenotus armerioides, thrift mock goldenweed	star10	1	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	<i>23</i>	
		<i>Total for Plot</i>	<i>39</i>	



Plot	01JH02.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	20	Native
	chrysothamnus viscidiflorus, green rabbitbrush	chvi8	1	Native
	symphoricarpos oreophilus, whortleleaf snowberry	syor2	1	Native
	tetradymia canescens, spineless horsebrush	teca2	1	Native
		<i>Total</i>	<i>23</i>	
	<i>3. Subshrub</i>			
	erigonum microthecum var. laxiflorum, slender buckwheat	ermil2	3	Native
		<i>Total</i>	<i>3</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus sp., wildrye	elymu	10	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>15</i>	
	<i>6. Forb</i>			
	arabis holboellii, holboell's rockcress	arho2	1	Native
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus purshii, woollypod milkvetch	aspu9	1	Native
	castilleja pilosa, parrothead indian paintbrush	capi3	1	Native
	chaenactis douglasii, douglas' dustymaiden	chdo	1	Native
	cordylanthus ramosus, bushy bird's beak	cora5	1	Native
	erigonum ovalifolium var. purpureum, cushion buckwheat	erovp2	3	Native
	fabaceae unknown cp01-3	fab103	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-2	forb1002	1	Unknown
	ipomopsis congesta, ballhead gilia	ipco5	1	Native
	penstemon fremontii, fremont's beardtongue	pefr	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox hoodii, hoods phlox	phho	3	Native
	phlox opalensis, opal phlox	phop2	1	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
		<i>Total</i>	<i>23</i>	
		<i>Total for Plot</i>	<i>64</i>	

**Plot:** 01JH03.01

**LOCATION**

**T** 25 N, **R** 10W, **Sec** 9, NE 1/4 sec

**UTM Coordinates:** 4,669,437 m N, 675,363 m E **Projection** NAD 27 **Zone** 12N

**Map name** Rock Cabin Spring

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim

**Sampled on:** 06/22/2001

**Why was plot done?** Characterize cushion plant community on south-facing rim; higher than Bush Rim.

**Uncertainty on measurements**

**Completeness of Spp lists** Some very early blooming forbs may have been missed. No obvious problems.

**Describe veg**

Vegetation consists of low-growing cushion forbs (< 5 cm tall) with scattered grasses and dwarf shrubs. Common species include musk phlox, Hooker's sandwort, tufted milkvetch, birdfoot sagebrush, and needle and thread. Estimated total canopy cover is 35%.

**Disturbance signs**

A 2-track road is located about 2 m from the plot.

**Notes**

**ENVIRONMENT**

**Elevation** 7,760 ft **Aspect** 260 deg. **Slope** 1 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** Sandy loam (one hand texture surface 10 cm). Lag of gravel and cobble (angular) on surface.

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	20	53	10	1	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	1	0	

<b>Plot 01JH03.01</b>		<b>CANOPY COVER</b>		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>				
	artemisia tridentata ssp. tridentata, basin big sagebrush	artrt	1	Native
		<i>Total</i>	<i>1</i>	
<i>3. Subshrub</i>				
	artemisia pedatifida, birdfoot sagebrush	arpe6	3	Native
	eriogonum microthecum var. laxiflorum, slender buckwheat	ermil2	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>5</i>	
<i>5. Graminoid</i>				
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	hesperostipa comata, needle and thread	heco26	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>7</i>	
<i>6. Forb</i>				
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	oxytropis nana, wyoming locoweed	oxna	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox hoodii, hoods phlox	phho	1	Native
	phlox muscoides, musk phlox	phmu4	20	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	<i>31</i>	
		<i>Total for Plot</i>	<i>44</i>	

**Plot:** 01KR01.01 **LOCATION**  
**T** 15 N, **R** 10W, **Sec** 16 , **SE** 1/4 **sec**  
**UTM Coordinates:** 4,570,989 m N, 695,539 m E **Projection** NAD 27 **Zone** 12N  
**Map name** Pine Butte **Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim **Sampled on:** 06/07/2001  
**Why was plot done?** Illustrate species composition of cushion plant vegetation along rim.

**Uncertainty on measurements**

We may have confused Indian ricegrass and needle-and-thread with each other because many plants lacked flowering or fruiting heads.

**Completeness of Spp lists**

**Describe veg**

Very sparse, short (to 10 cm) vegetation of cushion-form, perennial forbs and perennial grasses.

**Disturbance signs**

**Notes**

**ENVIRONMENT**

**Elevation** 8,440 ft **Aspect** 100 deg. **Slope** 4 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** Surface covered with gravels and cobbles of resistant shale bedrock. Bedrock fragments common in upper part of soil profile.

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	0	85	14	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

Plot 01KR01.01		CANOPY COVER		
Species	NRCS Code	Cover Class	Origin	
<i>2. Shrub</i>				
chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	3	Native	
	<i>Total</i>	3		
<i>3. Subshrub</i>				
krascheninnikovia lanata, winterfat	krla2	3	Native	
	<i>Total</i>	3		
<i>5. Graminoid</i>				
achnatherum hymenoides, indian ricegrass	achy	1	Native	
elymus elymoides ssp. elymoides, squirreltail	elele	1	Native	
elymus spicatus, bluebunch wheatgrass	elsp3	1	Native	
	<i>Total</i>	3		
<i>6. Forb</i>				
arenaria hookeri, hooker's sandwort	arho4	3	Native	
arenaria nuttallii, nuttall's sandwort	arnu5	1	Native	
astragalus spatulatus, tufted milkvetch	assp6	1	Native	
cryptantha caespitosa, tufted catseye	crca7	1	Native	
erigonum brevicaule, shortstem buckwheat	erbr5	1	Native	
forb unknown cp01-10	forb1010	1	Unknown	
ipomopsis congesta, ballhead gilia	ipco5	1	Native	
oxytropis sericea, silvery oxytrope	oxse	1	Native	
stanleya viridiflora, green princesplume	stvi	1	Native	
	<i>Total</i>	11		
	<i>Total for Plot</i>	20		



Plot	01KR01.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	atriplex gardneri, gardner's saltbush	atga	1	Native
	krascheninnikovia lanata, winterfat	krla2	3	Native
		<i>Total</i>	<i>5</i>	
	<i>5. Graminoid</i>			
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	20	Native
	poa secunda, sandberg bluegrass	pose	10	Native
		<i>Total</i>	<i>31</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	astragalus agrestis, purple milkvetch	asag2	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	forb unknown	forbunk	1	Unknown
	ipomopsis congesta, ballhead gilia	ipco5	1	Native
	oxytropis sericea, silvery oxytrope	oxse	1	Native
	phlox hoodii, hoods phlox	phho	1	Native
		<i>Total</i>	<i>7</i>	
		<i>Total for Plot</i>	<i>44</i>	



Plot	01PS37.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
		<i>Total</i>	1	
	<i>5. Graminoid</i>			
	elymus elymoides ssp. elymoides, squirreltail	elele	3	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	6	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	forb unknown cp01-6	forb1006	3	Unknown
	phlox muscoides, musk phlox	phmu4	1	Native
	sphaeromeria argentea, silver chickensage	spar2	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
		<i>Total</i>	13	
		<i>Total for Plot</i>	22	



Plot	01PS37.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	3	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	<i>4</i>	
	<i>3. Subshrub</i>			
	artemisia pedatifida, birdfoot sagebrush	arpe6	1	Native
	eriogonum microthecum var. laxiflorum, slender buckwheat	ermil2	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>3</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	castilleja flava, yellow indian paintbrush	cafl7	1	Native
	erigeron pumilus, shaggy fleabane	erpu2	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	3	Native
		<i>Total</i>	<i>12</i>	
		<i>Total for Plot</i>	<i>25</i>	



Plot	01PS48.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
		<i>Total</i>	<i>3</i>	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	cryptantha caespitosa, tufted catseye	crca7	1	Native
	forb unknown cp01-6	forb1006	1	Unknown
	linum lewisii, prairie flax	lile3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	<i>24</i>	
		<i>Total for Plot</i>	<i>34</i>	



Plot	01PS48.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	3	Native
	atriplex confertifolia, shadscale saltbush	atco	3	Native
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
		<i>Total</i>	7	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	1	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	2	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	6	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cryptantha sp., cryptantha	crypt	1	Native
	eriogonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	stenotus acaulis, stemless mock goldenweed	stac	3	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	22	
		<i>Total for Plot</i>	37	



Plot	01RB05.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	<i>4</i>	
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	elymus sp., wildrye	elymu	1	Native
	hesperostipa comata, needle and thread	heco26	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>3</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	astragalus sp., milkvetch	astra	1	Native
	erigonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	forb unknown	forbunk	1	Unknown
	ipomopsis aggregata, skyrocket gilia	ipag	1	Native
	lesquerella condensata, dense bladderpod	leco2	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	1	Native
		<i>Total</i>	<i>9</i>	
		<i>Total for Plot</i>	<i>17</i>	

**Plot:** 01RB05.02 **LOCATION**

**T** 30 N, **R** 11W, **Sec** 24 , **NE 1/4 sec**

**UTM Coordinates:** 4,713,040 m N, 589,990 m E **Projection** NAD 27 **Zone** 12N

**Map name** Ross Butte **Scale** 1:24,000

### DESCRIPTION

**Plot Group:** CP Grass away from rim **Sampled on:** 06/26/2001

**Why was plot done?** Composition of vegetation next to cushion-plant stands.

### Uncertainty on measurements

### Completeness of Spp lists

### Describe veg

Vegetation mainly consists of big sage. It appears to be taller and more abundant than on the other side of the butte. A few low forbs and grasses. Estimated total canopy cover 27%

### Disturbance signs

unknown

**Notes** plot within 70m of rim

### ENVIRONMENT

**Elevation** 7,460 ft **Aspect** 320 deg. **Slope** 0 deg.

### Topo. Position:

**Surface deposit** Residual **Soil Texture**

### Soil features

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	85	5	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

Plot 01RB05.02

CANOPY COVER

<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>			
artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	20	Native
atriplex confertifolia, shadscale saltbush	atco	1	Native
chrysothamnus sp., rabbitbrush	chrys9	1	Native
chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
	<i>Total</i>	<i>23</i>	
<i>3. Subshrub</i>			
krascheninnikovia lanata, winterfat	krla2	1	Native
	<i>Total</i>	<i>1</i>	
<i>5. Graminoid</i>			
elymus sp., wildrye	elymu	3	Native
poa secunda, sandberg bluegrass	pose	1	Native
	<i>Total</i>	<i>4</i>	
<i>6. Forb</i>			
arenaria hookeri, hooker's sandwort	arho4	1	Native
arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
machaeranthera grindeloides, rayless aster	magr2	1	Native
	<i>Total</i>	<i>5</i>	
	<i>Total for Plot</i>	<i>33</i>	



Plot	01RB79.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	3	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
	tetradymia canescens, spineless horsebrush	teca2	1	Native
		<i>Total</i>	5	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	4	
	<i>5. Graminoid</i>			
	elymus sp., wildrye	elymu	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	2	
	<i>6. Forb</i>			
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	astragalus drabelliformis, bastard draba milkvetch	asdr2	1	Native
	erigonum brevicaule, shortstem buckwheat	erbr5	1	Native
	erigonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	erigonum sp., erigonum	eriog	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	1	Native
	potentilla plattensis, platte river cinquefoil	popl	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	12	
		<i>Total for Plot</i>	23	

**Plot: 01RB79.02**

**LOCATION**

**T** 30 N, **R** 11W, **Sec** 13 , **SW 1/4 sec**

**UTM Coordinates:** 4,713,560 m N, 589,963 m E **Projection** NAD 27 **Zone** 12N

**Map name** Ross Butte

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Grass away from rim

**Sampled on:** 06/26/2001

**Why was plot done?** Document composition of vegetation next to cushion-plant stands.

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Veg mainly Wyoming big sage with some grass and cushion plants. Sage appears to be randomly distributed. Estimated total canopy cover 11%.

**Disturbance signs**

Road along rim, and transmitters

**Notes** Plot within 40m of road

**ENVIRONMENT**

**Elevation** 7,460 ft **Aspect** 40 deg. **Slope** 3 deg.

**Topo. Position:**

**Surface deposit** Residual

**Soil Texture**

**Soil features**

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	80	5	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

Plot 01RB79.02		CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>				
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	20	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	<i>21</i>	
<i>3. Subshrub</i>				
	artemisia frigida, fringed sagewort	arfr4	1	Native
		<i>Total</i>	<i>1</i>	
<i>5. Graminoid</i>				
	achnatherum contractum, contracted indian ricegrass	acco22	1	Native
	elymus sp., wildrye	elymu	3	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>7</i>	
<i>6. Forb</i>				
	arabis, rockcress	arabi2	1	Native
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
	astragalus drabelliformis, bastard draba milkvetch	asdr2	1	Native
	erigeron pumilus, shaggy fleabane	erpu2	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
		<i>Total</i>	<i>9</i>	
		<i>Total for Plot</i>	<i>38</i>	



Plot	01RM01.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	3	Native
	chrysothamnus sp., rabbitbrush	chrys9	1	Native
		<i>Total</i>	4	
	<i>5. Graminoid</i>			
	achnatherum contractum, contracted indian ricegrass	acco22	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
		<i>Total</i>	2	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	10	Native
	astragalus jejunus, starveling milkvetch	asje2	1	Native
	cymopterus nivalis, snowline springparsley	cyni3	3	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	erigonum sp., erigonum	eriog	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-3	forb1003	1	Unknown
	penstemon sp., penstemon	penst	1	Native
	trifolium andinum, andes clover	tran2	1	Native
		<i>Total</i>	21	
		<i>Total for Plot</i>	27	



Plot	01RM01.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	10	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
	tetradymia canescens, spineless horsebrush	teca2	1	Native
		<i>Total</i>	<i>12</i>	
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	achnatherum contractum, contracted indian ricegrass	acco22	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	3	Native
	grass, unknown	grassunk	1	Unknown
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	10	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	10	Native
	astragalus jejunus, starveling milkvetch	asje2	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cymopterus nivalis, snowline springparsley	cyni3	1	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	erigonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	penstemon acaulis, stemless beardtongue	peac3	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	3	Native
	trifolium andinum, andes clover	tran2	1	Native
		<i>Total</i>	<i>31</i>	
		<i>Total for Plot</i>	<i>50</i>	

**Plot:** 01RM02.01 **LOCATION**  
**T** 22 N, **R** 11W, **Sec** 23 , **N** 1/4 **sec**  
**UTM Coordinates:** 4,635,469 m N, 546,483 m E **Projection** NAD 27 **Zone** 12N  
**Map name** Willow Springs **Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim **Sampled on:** 06/20/2001  
**Why was plot done?** Document composition of cushion-plant vegetation

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Ground mainly covered by Nuttall's sandwort and singlestem buckwheat; the eastern side of the plot appears to have less vegetation than the west. There is a distinct line where the vegetation begins to get more dense to the west. Mostly herbaceous cover, a few dwarf shrubs. Total estimated canopy cover 17%.

**Disturbance signs**

road and wildlife feces in plot

**Notes** 20 m NW of road

**ENVIRONMENT**

**Elevation** 7,380 ft **Aspect** 20 deg. **Slope** 0 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** gravel on the surface of the soil

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	90	5	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

Plot 01RM02.01

CANOPY COVER

<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>			
artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
	<i>Total</i>	2	
<i>5. Graminoid</i>			
achnatherum contractum, contracted indian ricegrass	acco22	1	Native
elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
poa secunda, sandberg bluegrass	pose	1	Native
	<i>Total</i>	4	
<i>6. Forb</i>			
arenaria hookeri, hooker's sandwort	arho4	3	Native
arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
astragalus jejunus, starveling milkvetch	asje2	3	Native
cymopterus nivalis, snowline springparsley	cyni3	1	Native
erigonum acaule, singlestem buckwheat	erac3	10	Native
forb unknown cp01-3	forb1003	1	Unknown
stenotus acaulis, stemless mock goldenweed	stac	1	Native
trifolium andinum, andes clover	tran2	1	Native
	<i>Total</i>	21	
	<i>Total for Plot</i>	27	



Plot	01RM02.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	3	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	3	Native
	symphoricarpos oreophilus, whortleleaf snowberry	syor2	1	Native
		<i>Total</i>	7	
	<i>3. Subshrub</i>			
	eriogonum microthecum var. laxiflorum, slender buckwheat	ermil2	1	Native
	krascheninnikovia lanata, winterfat	krla2	3	Native
		<i>Total</i>	4	
	<i>5. Graminoid</i>			
	achnatherum contractum, contracted indian ricegrass	acco22	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	3	Native
	grass, unknown	grassunk	1	Unknown
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	6	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	1	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
	astragalus jejunus, starveling milkvetch	asje2	1	Native
	astragalus lentiginosus, specklepod milkvetch	asle8	1	Native
	cymopterus nivalis, snowline springparsley	cyni3	1	Native
	eriogonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	forb unknown	forbunk	1	Unknown
	phlox longifolia, longleaf phlox	phlo2	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	trifolium gymnocarpon, hollyleaf clover	trgy	1	Native
		<i>Total</i>	10	
		<i>Total for Plot</i>	27	



Plot	01RM04.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	tetradymia canescens, spineless horsebrush	teca2	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	4	
	<i>5. Graminoid</i>			
	achnatherum contractum, contracted indian ricegrass	acco22	3	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	grass, unknown	grassunk	1	Unknown
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	6	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	20	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	erigonum brevicaule, shortstem buckwheat	erbr5	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	oxytropis nana, wyoming locoweed	oxna	1	Native
	sphaeralcea coccinea, scarlet globemallow	spco	1	Native
	stanleya, princesplume	stanl	1	Native
	stenotus acaulis, stemless mock goldenweed	stac	1	Native
	trifolium andinum, andes clover	tran2	1	Native
		<i>Total</i>	31	
		<i>Total for Plot</i>	43	

**Plot:** 01RM04.02

**LOCATION**

**T** 22 N, **R** 11W, **Sec** 13 , **SE** 1/4 **sec**

**UTM Coordinates:** 4,637,245 m N, 549,249 m E **Projection** NAD 27 **Zone** 12N

**Map name** Round Mountain **Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Grass away from rim **Sampled on:** 06/20/2001

**Why was plot done?** Composition of vegetation next to cushion-plant stands.

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Uniform distribution of low forbs and grasses. Estimated total canopy cover 30%.

**Disturbance signs**

deer droppings and bedding areas; wildlife tracks

**Notes** ~40 m from top of rim

**ENVIRONMENT**

**Elevation** 7,620 ft **Aspect** 324 deg. **Slope** 12 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** cobble all over the surface and under the surface; gravel mainly on top of soil

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	39	20	25	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	4	0	0	0	0	

Plot	01RM04.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	3	Native
		<i>Total</i>	3	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
		<i>Total</i>	3	
	<i>5. Graminoid</i>			
	achnatherum contractum, contracted indian ricegrass	acco22	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	5	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	arenaria nuttallii, nuttall's sandwort	arnu5	10	Native
	erigonum brevicaule, shortstem buckwheat	erbr5	1	Native
	erigonum ovalifolium var. purpureum, cushion buckwheat	erovp2	1	Native
	erigonum sp., erigonum	eriog	1	Native
	fabaceae unknown cp01-1	fab101	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	oxytropis sp., crazyweed	oxytr	1	Native
	sphaeralcea coccinea, scarlet globemallow	spco	1	Native
	stanleya, princesplume	stanl	1	Native
	stephanomeria runcinata, desert wirelettuce	stru3	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	trifolium andinum, andes clover	tran2	1	Native
		<i>Total</i>	24	
		<i>Total for Plot</i>	35	



Plot	01RR21.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	elymus sp., wildrye	elymu	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	<i>2</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus drabelliformis, bastard draba milkvetch	asdr2	1	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	forb unknown cp01-9	forb1009	1	Unknown
	lesquerella alpina, alpine bladderpod	leal	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	3	Native
		<i>Total</i>	<i>11</i>	
		<i>Total for Plot</i>	<i>14</i>	

**Plot: 01RR21.02**

**LOCATION**

**T** 30 N, **R** 11W, **Sec** 36 , **NE 1/4 sec**

**UTM Coordinates:** 4,709,867 m N, 588,302 m E **Projection** NAD 27 **Zone** 12N

**Map name** Ross Butte

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim

**Sampled on:** 06/27/2001

**Why was plot done?** Document composition of cushion-plant vegetation

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Mainly musk phlox throughout plot. Some low grasses and shrubs. Estimated total canopy cover 20%

**Disturbance signs**

unknown

**Notes**

**ENVIRONMENT**

**Elevation** 7,400 ft **Aspect** 160 deg. **Slope** 0 deg.

**Topo. Position:**

**Surface deposit**

**Soil Texture**

**Soil features** gravel on surface

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	90	5	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

Plot	01RR21.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	atriplex confertifolia, shadscale saltbush	atco	1	Native
	chrysothamnus sp., rabbitbrush	chrys9	3	Native
		<i>Total</i>	<i>4</i>	
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>5. Graminoid</i>			
	elymus sp., wildrye	elymu	3	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>6</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
		<i>Total</i>	<i>14</i>	
		<i>Total for Plot</i>	<i>25</i>	

**Plot: 01RR73.01**

**LOCATION**

**T 30 N, R 11W, Sec25 , SE 1/4 sec**

**UTM Coordinates:** 4,710,631 m N, 590,417 m E **Projection** NAD 27 **Zone** 12N

**Map name** Ross Butte

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim

**Sampled on:** 06/27/2001

**Why was plot done?** Document composition of cushion-plant vegetation

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Mainly dried up cushion vegetation with patchy areas of grass. All species appear to be randomly distributed. Estimated total canopy cover 14%.

**Disturbance signs**

unknown

**Notes**

**ENVIRONMENT**

**Elevation** 7,400 ft **Aspect** 270 deg. **Slope** 2 deg.

**Topo. Position:**

**Surface deposit**

**Soil Texture**

**Soil features** gravel and some large cobble on surface

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	90	5	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

**Plot 01RR73.01**

**CANOPY COVER**

<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>			
artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
atriplex confertifolia, shadscale saltbush	atco	3	Native
chrysothamnus viscidiflorus ssp. lanceolatus, yellow rabbitbrush	chvil4	1	Native
chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
shrub, unknown	shrubunk	1	Native
	<i>Total</i>	<i>7</i>	
<i>3. Subshrub</i>			
artemisia frigida, fringed sagewort	arfr4	3	Native
krascheninnikovia lanata, winterfat	krla2	1	Native
	<i>Total</i>	<i>4</i>	
<i>5. Graminoid</i>			
elymus sp., wildrye	elymu	1	Native
poa secunda, sandberg bluegrass	pose	3	Native
	<i>Total</i>	<i>4</i>	
<i>6. Forb</i>			
arenaria hookeri, hooker's sandwort	arho4	3	Native
arenaria nuttallii, nuttall's sandwort	arnu5	3	Native
astragalus drabelliformis, bastard draba milkvetch	asdr2	3	Native
cryptantha sp., cryptantha	crypt	1	Native
machaeranthera grindelioides, rayless aster	magr2	1	Native
oxytropis sp., crazyweed	oxytr	1	Native
stenotus acaulis, stemless mock goldenweed	stac	1	Native
tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	<i>Total</i>	<i>14</i>	
	<i>Total for Plot</i>	<i>29</i>	



**Plot 01RR73.02**

**CANOPY COVER**

<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>			
artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	10	Native
atriplex confertifolia, shadscale saltbush	atco	1	Native
chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
shrub, unknown	shrubunk	1	Native
	<i>Total</i>	<i>13</i>	
<i>3. Subshrub</i>			
artemisia frigida, fringed sagewort	arfr4	1	Native
krascheninnikovia lanata, winterfat	krla2	1	Native
	<i>Total</i>	<i>2</i>	
<i>5. Graminoid</i>			
achnatherum hymenoides, indian ricegrass	achy	1	Native
elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
elymus sp., wildrye	elymu	1	Native
poa secunda, sandberg bluegrass	pose	1	Native
	<i>Total</i>	<i>4</i>	
<i>6. Forb</i>			
arabis, rockcress	arabi2	1	Native
arenaria hookeri, hooker's sandwort	arho4	1	Native
arenaria nuttallii, nuttall's sandwort	arnu5	1	Native
astragalus drabelliformis, bastard draba milkvetch	asdr2	1	Native
lesquerella alpina, alpine bladderpod	leal	1	Native
linum lewisii, prairie flax	lile3	1	Native
machaeranthera grindelioides, rayless aster	magr2	1	Native
oxytropis sp., crazyweed	oxytr	1	Native
penstemon acaulis, stemless beardtongue	peac3	1	Native
tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	<i>Total</i>	<i>10</i>	
	<i>Total for Plot</i>	<i>29</i>	

**Plot: 01SM04.01**

**LOCATION**

**T** 23 N, **R** 10W, **Sec** 8 , NE 1/4 sec

**UTM Coordinates:** 4,650,324 m N, 667,442 m E **Projection** NAD 27 **Zone** 12N

**Map name** Steamboat Mountain

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Cushion plant on rim

**Sampled on:** 06/27/2001

**Why was plot done?** Document composition of cushion-plant vegetation

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

Good cushion plant plot; virtually the entire plot is cushion species; mainly sandwort species. All appear to have a random distribution. Total estimated canopy cover 16%

**Disturbance signs**

other than rim road, none observed

**Notes**

**ENVIRONMENT**

**Elevation** 8,040 ft **Aspect** 200 deg. **Slope** 1 deg.

**Topo. Position:**

**Surface deposit**

**Soil Texture**

**Soil features** broken shale, gravel on surface

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	55	40	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	0	0	0	0	0	

Plot	01SM04.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	3	Native
		<i>Total</i>	3	
	<i>5. Graminoid</i>			
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	5	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	erigonum umbellatum, sulphur wildbuckwheat	erum	1	Native
	forb unknown	forbunk	1	Unknown
	forb unknown cp01-8	forb1008	3	Unknown
	lesquerella alpina, alpine bladderpod	leal	1	Native
	linum lewisii, prairie flax	lile3	1	Native
	oxytropis sp., crazyweed	oxytr	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox multiflora, flowery phlox	phmu3	10	Native
	sphaeralcea coccinea, scarlet globemallow	spsc	1	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	27	
		<i>Total for Plot</i>	35	

**Plot:** 01SM04.02

**LOCATION**

**T** 23 N, **R** 10W, **Sec** 6 , NE 1/4 sec

**UTM Coordinates:** 4,650,324 m N, 667,470 m E **Projection** NAD 27 **Zone** 12N

**Map name** Steamboat Mountain

**Scale** 1:24,000

**DESCRIPTION**

**Plot Group:** CP Grass away from rim

**Sampled on:** 06/27/2001

**Why was plot done?** Composition of vegetation adjacent to cushion plant stands.

**Uncertainty on measurements**

**Completeness of Spp lists**

**Describe veg**

There is a uniform distribution of mostly perennial grasses, with some forbs and a few dwarf shrubs. Estimated total canopy cover is 40%.

**Disturbance signs**

Old horse droppings were found in plot, as well as pocket gopher holes.

**Notes** The plot is ca. 50 m from the rim. Soil features are difficult to distinguish on all the plots.

**ENVIRONMENT**

**Elevation** 8,040 ft **Aspect** 50 deg. **Slope** 1 deg.

**Topo. Position:**

**Surface deposit** Residual **Soil Texture**

**Soil features** Surface deposits are mainly sandstone gravel pieces, with minimal gravel under the surface.

	Soil	Gravel	Cobble	Boulder	Bedrock	
<b>% Ground Cover</b>	49	35	0	0	0	
	Litter	Wood	DRP	Lichen	Moss	Cush Pl.
	1	0	0	0	0	

Plot	01SM04.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	<i>1</i>	
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	3	Native
		<i>Total</i>	<i>3</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	3	Native
	elymus spicatus, bluebunch wheatgrass	elsp3	1	Native
	poa secunda, sandberg bluegrass	pose	10	Native
		<i>Total</i>	<i>15</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	1	Native
	castilleja exilis, lesser indian paintbrush	caex6	1	Native
	erigonum umbellatum, sulphur wildbuckwheat	erum	1	Native
	forb unknown cp01-11	forb1011	1	Unknown
	forb unknown cp01-5	forb1005	1	Unknown
	penstemon fremontii, fremont's beardtongue	pefr	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox muscoides, musk phlox	phmu4	3	Native
	tetraneuris acaulis, stemless hymenoxys	teac	1	Native
		<i>Total</i>	<i>14</i>	
		<i>Total for Plot</i>	<i>33</i>	



Plot	01SM06.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	atriplex confertifolia, shadscale saltbush	atco	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	artemisia frigida, fringed sagewort	arfr4	3	Native
		<i>Total</i>	3	
	<i>5. Graminoid</i>			
	elymus elymoides ssp. elymoides, squirreltail	elele	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	4	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	10	Native
	erigonum acaule, singlestem buckwheat	erac3	3	Native
	forb unknown	forbunk	1	Unknown
	kochia americana, greenmolly	koam	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	30	
		<i>Total for Plot</i>	39	



Plot 01SM06.02

CANOPY COVER

<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
<i>2. Shrub</i>			
artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
atriplex confertifolia, shadscale saltbush	atco	1	Native
chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
	<i>Total</i>	3	
<i>3. Subshrub</i>			
artemisia frigida, fringed sagewort	arfr4	3	Native
	<i>Total</i>	3	
<i>5. Graminoid</i>			
elymus elymoides ssp. elymoides, squirreltail	elele	3	Native
poa secunda, sandberg bluegrass	pose	1	Native
	<i>Total</i>	4	
<i>6. Forb</i>			
arenaria hookeri, hooker's sandwort	arho4	10	Native
astragalus spatulatus, tufted milkvetch	assp6	3	Native
eriogonum acaule, singlestem buckwheat	erac3	1	Native
kochia americana, greenmolly	koam	1	Native
machaeranthera grindelioides, rayless aster	magr2	1	Native
phlox muscoides, musk phlox	phmu4	3	Native
sphaeromeria argentea, silver chickensage	spar2	1	Native
tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
townsendia spathulata, sword townsendia	tosp	1	Native
	<i>Total</i>	22	
	<i>Total for Plot</i>	32	



Plot	01SM12.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>5. Graminoid</i>			
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	2	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	erigonum acaule, singlestem buckwheat	erac3	3	Native
	forb unknown cp01-8	forb1008	1	Unknown
	linum lewisii, prairie flax	lile3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	oxytropis sp., crazyweed	oxytr	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	townsendia spathulata, sword townsendia	tosp	3	Native
		<i>Total</i>	29	
		<i>Total for Plot</i>	31	



Plot	01SM12.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	10	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
	tetradymia canescens, spineless horsebrush	teca2	1	Native
		<i>Total</i>	<i>12</i>	
	<i>5. Graminoid</i>			
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	poa secunda, sandberg bluegrass	pose	3	Native
		<i>Total</i>	<i>4</i>	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	10	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	erigonum acaule, singlestem buckwheat	erac3	3	Native
	forb unknown cp01-11	forb1011	1	Unknown
	forb unknown cp01-9	forb1009	3	Unknown
	linum lewisii, prairie flax	lile3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	penstemon laricifolius, larchleaf beardtongue	pela9	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	3	Native
	townsendia spathulata, sword townsendia	tosp	1	Native
		<i>Total</i>	<i>37</i>	
		<i>Total for Plot</i>	<i>53</i>	



Plot	01SM14.01	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artrw	1	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	1	Native
		<i>Total</i>	2	
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	1	Native
		<i>Total</i>	1	
	<i>5. Graminoid</i>			
	elymus elymoides ssp. elymoides, squirreltail	elele	3	Native
	poa secunda, sandberg bluegrass	pose	1	Native
		<i>Total</i>	4	
	<i>6. Forb</i>			
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	erigeron compositus, cutleaf daisy	erco4	1	Native
	erigeron pumilus, shaggy fleabane	erpu2	1	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	10	Native
	sphaeromeria argentea, silver chickensage	spar2	1	Native
	stanleya viridiflora, green princesplume	stvi	1	Native
	tetraneuris torreyana, torrey's hymenoxys	teto	1	Native
	townsendia spathulata, sword townsendia	tosp	3	Native
		<i>Total</i>	26	
		<i>Total for Plot</i>	33	



Plot	01SM14.02	CANOPY COVER		
	<u>Species</u>	<u>NRCS Code</u>	<u>Cover Class</u>	<u>Origin</u>
	<i>2. Shrub</i>			
	artemisia tridentata ssp. wyomingensis, wyoming big sagebrush	artw	10	Native
	chrysothamnus viscidiflorus ssp. viscidiflorus, yellow rabbitbrush	chviv2	3	Native
		<i>Total</i>	<i>13</i>	
	<i>3. Subshrub</i>			
	krascheninnikovia lanata, winterfat	krla2	1	Native
	leptodactylon pungens, granite pricklygilia	lepu	1	Native
		<i>Total</i>	<i>2</i>	
	<i>5. Graminoid</i>			
	achnatherum hymenoides, indian ricegrass	achy	1	Native
	elymus elymoides ssp. elymoides, squirreltail	elele	1	Native
	elymus lanceolatus ssp. lanceolatus, thickspike wheatgrass	ellal	1	Native
	grass, unknown	grassunk	1	Unknown
	poa secunda, sandberg bluegrass	pose	10	Native
		<i>Total</i>	<i>14</i>	
	<i>6. Forb</i>			
	allium, wild onion	alliu	1	Native
	arenaria hookeri, hooker's sandwort	arho4	3	Native
	astragalus convallarius, timber milkvetch	asco12	1	Native
	astragalus spatulatus, tufted milkvetch	assp6	3	Native
	castilleja angustifolia, northwestern indian paintbrush	caan7	1	Native
	chaenactis douglasii, douglas' dustymaiden	chdo	1	Native
	comandra umbellata, bastard toadflax	coum	1	Native
	cryptantha cinerea, james' catseye	crci3	1	Native
	cymopterus terebinthinus, spring parsley	cyte8	1	Native
	erigeron compositus, cutleaf daisy	erco4	1	Native
	erigeron pumilus, shaggy fleabane	erpu2	1	Native
	erigonum acaule, singlestem buckwheat	erac3	1	Native
	forb unknown cp01-11	forb1011	1	Unknown
	forb unknown cp01-6	forb1006	1	Unknown
	forb unknown cp01-9	forb1009	1	Unknown
	linum lewisii, prairie flax	lile3	1	Native
	machaeranthera grindelioides, rayless aster	magr2	1	Native
	phlox muscoides, musk phlox	phmu4	3	Native
	sphaeromeria argentea, silver chickensage	spar2	1	Native
	tetaneuris torreyana, torrey's hymenoxys	teto	1	Native
		<i>Total</i>	<i>26</i>	
		<i>Total for Plot</i>	<i>55</i>	