

AK

D18 (MEVE-S)

August 9, 1985

Memorandum

To: Regional Director, Rocky Mountain Region
Attention: Chief, Division of Park Planning

From: Superintendent, Mesa Verde National Park

Subject: Text for Development Concept Plan, Yucca House
National Monument.

Enclosed is the text prepared by Park Technician Marilyn Colyer and Volunteer-in-Park Melvin Moody on the flora and fauna found at Yucca House. Under separate cover are a map showing the monument's plant communities and a chart with detailed information on plant species.

Submission of this information completes this park's input of basic data for the Yucca House Development Concept Plan.

Robert C. Heyder

Enclosure

bcc:
Supt
MA w/c enc
Dimont w/c enc

~~DL CALDWELL:RCHEYDER:1p 08/09/85:529-4465~~

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THE FLORA AND FAUNA
OF YUCCA HOUSE
NATIONAL MONUMENT
COLORADO

Prepared by

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MESA VERDE NATIONAL PARK, COLORADO

July 1985

YUCCA HOUSE FLORA

The vegetation of Yucca House National Monument represents eleven major plant communities. These are:

- 1 - Greasewood-Cheatgrass
- 2 - Saltbrush-Wolfberry-Cheatgrass
- 3 - Rabbitbrush-Cheatgrass
- 4 - Sagebrush-native perennial grasses and forbes
- 5 - Cheatgrass-Cranesbill
- 6 - Poverty weed/Western wheatgrass
- 7 - Russian Knapweed
- 8 - Annual Mustards
- 9 - Native Perennial Grasses
- 10 - Rush Marsh
- 11 - Wet Grassland

The dominate shrub over the 9.6 acres is greasewood, Sarcobatus vermiculatus, with 67 percent cover and the dominate understory plant is cheatgrass, a non-native to the new world, Bromus tectorum, with an 85 percent cover. A native annual, Bromus japonicum, grows along the marsh edges and under the shade of the various bushes.

Two striking habitat types occur side by side. These are the hydric marshes (three areas) and the xeric ruins area.

Two areas show recovery of native perennial grasses and forbes. This occurs along the southern portion of the monument, presumably when species have invaded from the woodland outside of the monument.

The area bordering the east side of the monument is an irrigated but heavily grazed meadow fescue field. To the north is a night holding sheep corral mostly barren of vegetation; and west of the corral is a plant community much like the cover on the ruin area, i.e. greasewood and cheatgrass. To the west of the monument is a wasteland with

weedy annual mustards, Russian knapweed and cheatgrass. Here also is a marsh area (the upper end of the South Marsh) having a shallow pond ringed by softstem bullrush, Scirpus validus, sandbar willows, Salix exigua, and wireweed rush, Juncus balticus.

A few species are represented by one plant only or a small rhizomious patch. These are four o'clocks, Marrubium multiflora; arrowgrass, Tricolchin maritirna; bullrush, Scirpus sp., and tall poverty weed, Iva xanthifolia.

Native forbe species of restricted occurrence are butterfly weed, Gaura neo-mexicana, and yellow evening primrose, Oenothera hookeri, both being on the edge of marsh areas. Bladderpod milk-vetch, Astrogalus sp. is found in small patches on the east section and at the west end of the south marsh. An unidentified penstemon, less than a dozen plants, is in the sagebrush community.

The softstem bullrush, Scirpus validus, is represented only by dead stems in the middle section of the south marsh. Presently, this section is dry, but the presence of this species indicates that within the past several years this area was more permanently wet. Buttercup, Rananculus cymbalaris, and Juncus neyadensis are found in the ditch of the middle marsh which was dug to drain the center of the ruin.

There is evidence of burning in the east ruin sections and along the south ruin portion. This was done by the ruins stabilization crew to inhibit brush growth over the ruin.

The excavated kiva in the east ruin section has moist soil and depositional salts. This is also true in an area just south of the north wall in this area where apparently water from the north marsh seeps southward.

There are only six trees in the monument - five junipers and one pinyon pine, and these are all in the southwest corner, associated with a sagebrush stand. Sparse pinyon-juniper-sagebrush are found outside of the monument to the south. This area shows red eolian soil whereas the rest of the monument is ruin rubble, quaternary gravels, and recent alluvium.

The room blocks have a denser stand of greasewood than the swales between room blocks where the predominate vegetation is cheatgrass. The greasewood on the room blocks grows to heights of five to seven feet.

Field Methods

The density and frequency of the plant communities were determined by sixteen 100-foot line transects, and a full length running line transect through each of the three marshes. Thirty photo points were set up at one end of each transect and compass readings taken indicate direction of the photo and direction of the line transect. Thirty-five mm slides were taken from each photo point. The photo points are staked with green fiber glass stakes and stamped aluminum labels.

A complete plant list of the monument was compiled and cover of each species (measured by transects) was indicated. No rare, threatened, or endangered plant species were found within the monument.

YUCCA HOUSE FAUNA

Three specimens of Western Chorus Frog, Pseudocris triseriata, were observed on June 16, 1985, in the south marsh of Yucca House National Monument. This is the first record in the southwest corner of Colorado.

Also on that date a possible many-lined skink was seen. This will require further research as to the identification.

No endangered fauna species have been observed or recorded for the monument.

4/30/1992
Photo No.

film #6 - big Ant hill

YUCCA HOUSE PHOTO POINTS

	NUMBER	DATE	DEGREES FROM NORTH	LOCATION
	4	1 # tag missing 6/28/85	60° East of North	E. Section, N. Wall
	5	2 chit + old big in background 6/28/85	150° East of North	E. Section, Plaza E. of Wet Kiva
	7 # 6	3 at N. end 6/28/85	128° East of North	E. Section, E. Wall
	14	4 6/28/85	208° East of North	Diagonal across S. Gateway, inward corner from SE
	5	6/28/85	250° East of North	E. Section, S. Wall
	6	6/28/85	55° East of North	E. Section, Wettish area, S. of N. Wall
	1	7 6/28/85	158° East of North	N. to S. thru main gateways
	2+3	8 6/28/85	248° East of North	E. facing trash slope room block N. of kiva tower
	R2 # 5	9 6/28/85	64° East of North	North Marsh, W. to E.
	R2 # 6	10 6/28/85	230° East of North	North Marsh, E. to W.
	15	11 6/28/85	272° East of North	Mid Marsh, E. end lower
	16	12 6/28/85	75° East of North	Mid Marsh, W. end, from lower wall
	12	13 7/2/85	110° East of North	SE corner, SE end of room block
	13	14 7/2/85	100° East of North	SE corner, swale between room block
	17	15 7/2/85	85° East of North	South Marsh, S. facing slope of main S. Wall
	20	16 not at photo pt. 7/2/85	100° East of North	South Marsh, N. facing slope, upper end
	21	17 SW corner from E. end.		
	23	17 7/2/85	95° East of North	SW Corner of Monument, Native dry hill, to SE
	25	18 7/2/85	332° East of North	Across W. end of Monument, S. of W. gateway
	26	19 ck direction - Not at focal pt. 7/2/85	330° East of North	Across W. end of Monument, N. of W. gateway
	33	20 7/3/85	222° East of North	Main N. Wall in NW corner of Monument
	34	21 7/3/85	60° East of North	NE corner of Monument, swale between third and second row of room blocks

	NUMBER	DATE	DEGREES FROM NORTH	LOCATION
	36 22	7/3/85	238° East of North	NW NW corner, on top of third room block, to W.
	35 23	7/3/85	240° East of North	NW NW corner, swale between third and fourth room blocks
	3 24	7/3/85	160° East of North	Kiva tower, N. face, NE corner slope
	2 25	7/3/85	78° East of North 130° East of North	Kiva tower, atop W end Kiva tower, N. face, NW corner slope
R2/1				
	26	7/3/85	312° East of North	18 S. Marsh, upper end, looking NW
R1/18 R1/19			110° East of North	19 S. Marsh, upper end, looking SE
	27	7/3/85	78° East of North	N. Marsh, middle, looking E.
			310° East of North	S. Marsh, middle, looking W.
	28	7/3/85	270° East of North	S. Marsh, lower end, looking W.
			64° East of North	S. Marsh, lower end, looking E.

R2/4

90° E of N

slope, west of main street

~~XVII~~

Red soil

No structures apparent

~~XIV~~

VOCER HOUSE ~~XIV~~ DRY NATIVE HILL, 20' from S Marsh N.W., fence to SE

	1	2	3	4	5	6	7	8	9	10	% Cover	% Freq.
<i>Antennaria tridentata</i>	3	4	2	8	3.5					7	27.5	60
<i>Atriplex canescens</i>		1	.5		3		2				6.5	40
<i>Scirpus</i>								8	.5		8.5	20
<i>Lycium pallidum</i>	1				1						2	20
<i>Agropyron smithii</i>											0	0
<i>Bromus tectorum</i>	6	6	9	3	3	.5	3	5	.5	4	40	100
<i>Orzyopsis hymenoides</i>						5.5	2				7.5	20
<i>Sphaeralcea coccinea</i>	1					.5					.5	10
<i>Stregalus wingstonii</i>							1	1	2		4	30
<i>Aster arenosus</i>					2						2	10
<i>Dacrydium</i>		.5									.5	10
<i>Guthriea sp.</i>		.5					1				1.5	20
<i>Erodium</i>			4								4	10
<i>Penstemon S.P.</i>						.5					.5	10
<i>Satania</i>							1	1			2	10
<i>Ranunculus scutellarioides</i>									6	7	13	20

see check list

16 species diversity

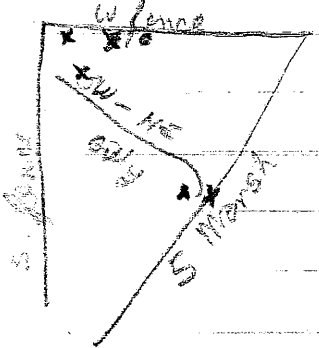
Rabbit use —

More bare ground

Aster arenosus and *Leptochloa* (patches) on slope of SW - NE gully

Thru dry hill

Less total compounded cover - ie overstones



X = JUVT
O = PIED



~~XI~~ XI & XII ~~X~~

Middle marsh lower end (E) to upper end (W) w/ ditch
 YUOJA HOUSE TRANSCRIPT IX

Drainage	Width	Cover %	To N. slope	To S. slope
<i>Agropyron</i> 0-17	5'	95	}	}
<i>Bromus japonicus</i>		5		
<i>Festuca japonica</i>		3		
<i>Hordeum jubatum</i> 17-48	5'	95	}	}
<i>Poa pratensis</i>		5		
<i>Rumex crispus</i>		2		
			40'	40'
<i>Hordeum smithii</i> 48-90		98	}	}
<i>B. japonicum</i>		2		
			Fescue grass - 40'	15'
<i>Hordeum jubatum</i> 90-148		15	<i>Mixy asperifolia</i> 3'	
<i>Echinochloa sp.</i>		80	<i>Centrosea</i> 40'	
<i>Trisetum balticum</i> 148-165	10	100		
<i>Spike rush</i> 165-171	10'	100	<i>Poa pratensis</i> 2'	<i>Poa pratensis</i> 5'
			<i>Bromus japonicum</i> 20'	
<i>Trisetum balticum</i> 0-56	40'	97		<i>Poa pratensis</i> 10'
<i>Poa pratensis</i>		3		
<i>Poa pratensis</i> 56-92	15'		<i>Bromus japonicum</i> 15'	<i>B. japonicum</i> 7'
<i>Typha</i> narrow leaf at 68'				
Beginning of ditch 68'				
<i>Carex</i> little leaved (P. N. H. S.) 68-84'			<i>P. pratensis</i> 3'	<i>P. pratensis</i> 4'
<i>Gaura mexicana</i> 90-115'			<i>B. japonicum</i> 12'	
<i>Ranunculus cymbalaria</i> 99-128				<i>Poa pratensis</i> 10'
			No more <i>B. japonicum</i> - after 108'	
<i>Chenopodium</i> 126-137				
<i>Mixy asperifolia</i> 138-148			4' <i>Poa pratensis</i>	<i>B. japonicum</i> 2'
148 END OF DITCH				
<i>Poa pratensis</i> 0-53	12'	85%	6' <i>Poa</i>	6'
<i>Hordeum jubatum</i>		5%		
<i>Mixy asperifolia</i>		15	}	}
<i>Carex fuscus</i>		25		
<i>Hordeum jubatum</i> 153-95		5	20' Meadow fescue	30' <i>Poa pratensis</i>
<i>Trisetum</i>		25		<i>Sphacelium</i>
<i>Poa pratensis</i>		30		

6/28/85 IV N → S Thru Gateway

~~VII~~ VII

YUCCA HOUSE TRANSECT IV

FREQ

	10	20	30	40	50	60	70	80	90	100	%	%
<i>Sarcobatus</i>		4									4	10
<i>Bromus ^{chrysanthemoides} tectorum</i>	8	6	10	3	7	9	10	8	5	8	77	100
<i>Desmodium illinoense</i>		1	1	2	6	10	10	8	10	6	54	70
<i>Secymlium altissimum</i>					1			2		6	9	30
<i>Marrubium vulgare</i>				1							3	20
<i>Lactuca scariola</i>			1	3	2			2	3	2	13	70
<i>Spartaloca roscina</i>			3	1							1.5	20

6/9/55

~~VII~~

VII

~~IX~~

Lower slope of south gate

EAST - WEST 50 ft
YINNA HOUSE TRANSECT

VIII 900 North - South 50 ft
South

	10	20	30	40	50	10	20	30	40	50
--	----	----	----	----	----	----	----	----	----	----

Sarcobatus	40		3				1	6	7	17
Big Muley	10				6					6
Sarcobatus	20					1	2			3
Lycium	30	3			1			1		5
OPUNTIA	10	2								2
Broomus	40	9	10	10	1					30
Diosyrrhynchium	20		1	1						2
Spartalcea	30		2	1		1	1	1	1	11
Squirrel tail	40				2		1	3	2	8
Orizopsis	10				1					1

LINE III

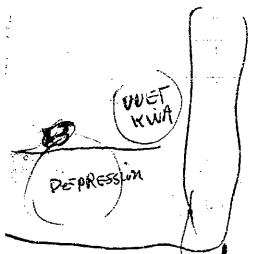
~~IX~~

IX

R UIN TYPE PLAZA# Between kwa(wet) & Depression N → S, 100ft.

	10	20	30	40	50	60	70	80	90	100	cover %	% fresh
Sarcobatus	2	3		1		5					70	40
Lycium			5		5	1	dead Lycium		1		6.5	30
Chrysothamnus								2	9	3	14	30
Atriplex	1							3			4	20
Satanion	2	7	3	5	5	3	3	2	7	2	39	100
Bromus	6	2	1	3	3	6	5	7	3	4	40	100
Sisymbrium			1	2		1				2	6	40

East section



③ Echinococcus
Coccineus
large 36" across

7/21/85

YUCCA HOUSE

XII

Native Recovery

~~XII~~

W. March

□ = DEAD

SOUTH WALL S.E. SECTION south facing slope

Burned?

	1	2	3	4	5	6	7	8	9	10	Wt	
<i>Athyrium</i>		3		3			9	3	4	2	24	80
<i>Sambucus</i>						10				5	5	10
<i>Lycium</i>			2	1				6	3	4	14	40
<i>Opuntia polyacantha</i>	5										.5	10
<i>Agrostis sp.</i>	1	5	1	1	5	1	7	2	2	1	32	100
<i>Formis tetrum</i>	8	9	8	9	6	8	8	9	9	9	83	100
<i>Hilaria jamesii</i>	1.5										15	10
<i>Sida acuta</i>	3	1				1		1			7	40
<i>Erodium</i>		2	2	6	2	2		1	1	1	22	80
											19	

1 *Antennaria tridentata* NE of mossy juniper trees on rain wall

6/15/55

230° E. N
YUCCA HOUSE

~~IX~~

So. East Diag. Corner
So. GATEWAY

TRANSCERT

IV

~~IX~~

	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
<i>Chrysothamnus nauseosus</i>	1		2	2										5	30
<i>Lycium pallidum</i>						2								2	10
<i>Opuntia phaeacantha</i>															
<i>Bromus tectorum</i>	8	9	9	8	10	7	9	3	3	1				67	100
<i>Descurainia</i>	2	1												3	20
<i>Gutierrezia serotina</i>								1.5	1.5					3	20
<i>Sphaeralcea coccinea</i>	6						4					2		12	30
<i>Sisymbrium altissimum</i>		1				1								2	20
<i>Sphaeralcea</i>	3	2	3	4	3	3		6	3					27	80
<i>Manubrium</i>			4											4	10
<i>Satanium hystrix</i>							1/2					1		1.5	20
<i>Oryzopsis hymenophylla</i>												2		2	10

6/28/85

V

W → E Trash Hill (East Exposure)

NE of Large Rock mound

YUCCA HOUSE TRANSECT

~~VI~~ ~~VII~~ VIII

		10	20	40	50	60	70	80	90	100	%	%
<i>Sarcobatus</i>											9	50
<i>Lycium pallidum</i>		1	3	1	1		1				7	50
<i>Opuntia lewisii</i>	3										3	10
<i>Bromus tectorum</i>	9	10	9	10	10	10	10	10	10	7	95	100
<i>Descurainia</i>												
<i>Sisymbrium altiss.</i>	8	9	8	6	10	7	9	4	8	3	72	180
<i>Marrubium vulgare</i>								2	1	2	5	30
<i>Lactuca scariola</i>												
<i>Spharalcea coccinea</i>												
<i>Erodium cicutarium</i>										3	3	10

YUCCA HOUSE XIII

(Red color)

~~XIV~~ ~~XIII~~ IV

North facing
SOUTH SIDE OF S. MARCH - FENCE TO EAST

	1	2	3	4	5	6	7	8	9	10	COVER	Frequency
<i>Artemisia tridentata</i>	5	4	1	2			2	2			14	50
<i>Chrysothamnus nauseosus</i>								3	1	1	5	30
<i>Sarcobatus</i>	3							1	1	2	7	40
<i>Agropyron smithii</i>	3	1.5	3	4	2	3	3	8	9	9	56.5	100
<i>Stipa capensis</i>				1	4	15		2			7.5	40
<i>Eriogonum fasciculatum</i>							1		2		3	20
<i>Eriogonum fasciculatum</i>						4	1	5	7	5	36.5	90
<i>Setaria</i>		1						3	2	1	6	40
<i>Ratargyris bicolor</i>		3	3.5								6.5	20
<i>Phoradendron</i>			3	3	2						7	30
											142	

DRY NA - 4/11 1961
205 years

6-8 *Muhlenbergia* Shaggy hairs - white stalk, black top

Mancos Shale

~~VI~~ VI

7/2/85

YUCCA HOUSE TRAN XV

Paralleling W. fence - N of S. Marsh
Marsh to N, 20' from fence

South of W. gate

												% Flora	
Chrys. Mannia House	8			5	3	5	5					26	50
Sarcobatus			1		1		2					4	40
Bromus tectorum	10	2	4	1	1	2	2	6	6	2		36	100
Agropyron smithii	1	2	5	7	3	3	15	3	3	3		31.5	100
Bromus japonicus				1	1		0.5	3	3	7		15.5	60
Ero. exillaris		2	2	7	7	7	8	4	4	8		49	90
Lolium													0
Dicentra		1.5	1.5									2	20
<u>164</u>													

~~Same as above only N. of west gate~~

VII

Sarcobatus			3		2	3			15	5		14.5	50
Lycium						1.5	1.5					2	20
Agropyron smithii	1											0	0
Bromus tectorum	2	4	7	8	7	4	7	4	4	7		54	100
Bromus japonicus	1	1										2	20
Erodium						3	3		1	5		12	40
Descurainia												0	0
Dentarea Bahout	9	8	7	3	3	17	7	6	3	1.5		52.5	100
<u>137.0</u>													

LINE I

~~II~~ I

100ft line

% area	RUIN WALL TYPE	from 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100ft line
90	Lycium	2	1	2	3	2	4	2	4	2	2	22
40	Sarcobatus Atriplex					8	5	2	7			22
20	Chrysothamnus									2	4	6
100	Bromus tect.	7	5	8	7	3	4	4	7	1	5	51
40	Sisymbrium	3	3	8	2							16
10	Opuntia	1										1
40	Sarcobatus		2		2			1		3		8
30	afopha				2	1						3

7/2/85 PUCCA HOUSE TRANSECT ~~XIII~~ ~~SE~~ Run from Kura Tera to SE FENCE CORNER

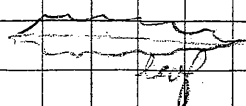
	1	2	3	4	5	6	7	8	9	10	%	Cover	2m
<i>Sarcobatus</i>	3.5		8	8	3	2.5	6	5	8	7	61	90	
<i>Lycium</i>	1	3	1		.5	1.5	2.5	1	2	.5	12	90	
Dead <i>Lycium</i> in SE corner of this area													
<i>Bromus tectorum</i> (Aver. 28" high)	6	9	7	7	10	9	8	10	9	8	85	100	
<i>Sisymbrium albastrum</i>				1	1						1	10	
<i>Erodium</i>	2	2	1	2	3	2	1		3	2	23	90	
<i>Descurainia</i>	1.5										1.5	10	
LATICOA	.5										.5	10	

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NAME AS ABOVE EXCEPT BETWEEN WALLS
TRANSECT ~~XIII~~ ~~SE~~ ~~XIV~~ ~~SE~~ II

<i>Sarcobatus</i>	2	6	4	7	8.5	3	8	2	2	6	48.5	100	
<i>Lycium</i>	.5	2	2						.5		5	40	
<i>Bromus tectorum</i> ave 12-14" high	8	10	8	9	9	8	8	8	7	9	76	100	
<i>Sisymbrium officinale</i>											0	0	
<i>Erodium</i>	4	2	4	4	1	6	3	4	4	4	36	100	
<i>Descurainia</i>											0	0	
<i>Lathyrus</i>			.5								.5	10	
<i>Ranunculus sceleratus</i>	4	2	3					5	5		19	50	

Others not identified



3-4" tall

185

~~III~~ II

RUN WALL TYPE from EAST SECTION

LINE II	10	2	30	40	50	60	70	80	90	100	plant freq	of
Chrysothamnus	9	10	7	6	10	9	6	1	4	1	100	6
Lycium				1	5	2	5	1	1		60	6
Bromus	1	1	2	2	1	2	2	3	3	2	100	19
Satanion			1	1			3	5	4	7	60	21
Atriplex Jarvisia		1					3	2	2	1	50	9

6/1/85

East section/South wall

~~III~~ ~~VII~~ III

YUCCA HOUSE TRANSEPT

	16	20	30	40	50	60	70	80	90	100	%
<i>Atriplex canescens</i>	10	10	1	2	1	3				3	40
<i>Artemisia tridentata</i>											0
<i>Sarcobatus</i>											0
<i>Chrysothamnus nauseosus</i>											0
<i>Lyceum pallidum</i>	1					4	3	1	4		13
<i>Opuntia phaeacantha</i>			2								2
<i>Sisymbrium altissimum</i>	1		1	3	6	3	6	3	1	7	31
<i>Sphaeralcea coccinea</i>		1						2	1		4
<i>Bromus tectorum</i>	8	10	9	9	5	9	10	8	10	9	87
<i>DESCURIANA</i>				2	6		1				9

TYPE # 1	Wolfberry / Saltbush Community	% Cover	% Frequency
	Wolfberry <i>Lycium pallidum</i>	22	90
	Saltbush <i>Atriplex canescens</i>	25	40
	Rabbit brush <i>Chrysothamnus nauseosus</i>	6	20
	Prickly pear <i>Opuntia phaeacantha</i>	1	10
space >	Cheat grass <i>Bromus tectorum</i>	51	100
	Squirrel tail <i>Sitanion hystrix</i>	8	40
	Foxtail	<1	2
space >	Kentucky bluegrass	<1	1
	Hedge Mustard	16	40
	Wild lettuce	5	40
	Jansy mustard <i>Des.</i>	2	30
	Chichony	<1	1
	Globe mallow	5	25
	Purple fall aster	<1	1
	Annual sunflower	<1	1
	Honehound	<1	2