

Section 6 Report Review

Project: Plant Surveys on the Lower Rio Grande National Wildlife Refuges

Job #: 51

Reviewer: Angie Brooks and Karen Meyer Date: December 28, 1994

Reviewer's Station: Corpus Christi Ecological Services Field Office

Lead station was contacted and concurs with the following comments:

 Yes No X Not applicable (reviewer is from lead station)

Report: X is acceptable as is

 is acceptable as is for an interim report, but the following
comments are made for future reference

 needs revision (listed below)

Other comments: (Note to commenter: If you make comments directly on a copy
of the report, write legibly and dark so comments will reproduce well when
photocopied.)

PERFORMANCE REPORT

As Required by

THE ENDANGERED SPECIES ACT, SECTION 6

TEXAS

Project No: E-1-6

ENDANGERED AND THREATENED SPECIES CONSERVATION

Project No. 51: Plant Surveys on the Lower Rio Grande National Wildlife Refuges

Project Coordinator: Gena K. Janssen

Principal Investigator: William R. Carr



Larry D. McKinney, Ph. D.
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Executive Director
Texas Parks and Wildlife Department

November 15, 1994

ABSTRACT

A list of seventy-one target species was developed. Fifty refuge tracts were selected for survey based on known biotic and abiotic features. Thirty-two refuge tracts were surveyed.

PERFORMANCE REPORT

STATE: TEXAS PROJECT NO.: E-1-6

PROJECT TITLE: Endangered and Threatened Species Conservation.

PERIOD COVERED: September 1, 1993 through August 31, 1994

JOB NUMBER: 51

JOB TITLE: Plant Surveys on the Lower Rio Grande National Wildlife Refuges

JOB OBJECTIVE: Survey properties of the U. S. Fish and Wildlife Service in the Lower Rio Grande Valley of Texas for populations of rare plant species.

SEGMENT OBJECTIVE: Prioritize, in terms of relative importance or urgency of rare plant surveys, all USFWS tracts in the LRGV. Develop list of target plant taxa. Establish reporting procedures. Conduct plant surveys on 25 highest priority tracts.

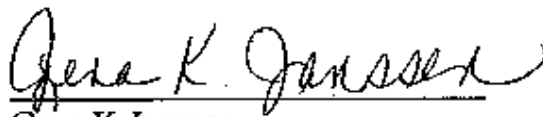
ACCOMPLISHMENTS

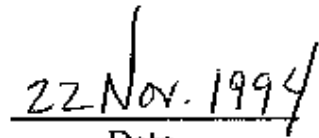
A list of seventy-one target species was developed. Fifty refuge tracts were selected for survey based on known biotic and abiotic features. Thirty-two refuge tracts were surveyed. See Attachments 1-3.

SIGNIFICANT DEVIATIONS

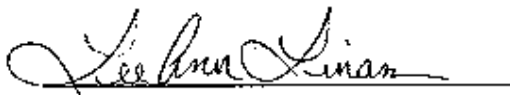
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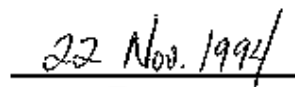
PREPARED BY:


Gena K. Janssen
Endangered Species Botanist


Date

APPROVED BY:


Lee Ann Linam
Section 6 Coordinator
Resource Protection Division


Date

ATTACHMENT 1
FIFTY PRIORITY SITES

**PLANT SURVEYS OF LOWER RIO GRANDE VALLEY NATIONAL WILDLIFE REFUGE
FIFTY PRIORITY SITES FOR BOTANICAL SURVEYS, 1994-1995
28 January 1994**

First Priority

Abram West
Alto Bonito
Chapeño
Chicharra Banco
Cueltar
Gabrielson
Garza-Cavazos
Havana North & South
Kepler
La Puerta
Las Ruinas
Loma Preserve
Los Olmos
Madero
Noriega
Palmito Hill
Ranchito
Sal del Rey
Sam Fordyce North & South
Sam Fordyce West
Santa Maria
Teniente
Thompson Road
Yturria Brush
Zamora Bend

Second Priority

Abram
Boscaje de la Palma
Cottam
Cuevitas
East Lake
El Jardin
Farias
Goodfields
Guerra
La Coma
La Parida Banco
La Perlita
Mercedes
Palmview
Pate Bend
Payne
Pharr Settling Basin
Rangerville
Resaca del Rancho Viejo
Schaleben
Tortuga Banco
Tulosa Ranch
Vela Woods
Vista del Mar
Willamar

ATTACHMENT 2
TARGET PLANT SPECIES

TARGET PLANT SPECIES

October 1994 draft

Family	Scientific Name	Common Name	FWS ¹	TNHP ²	NPP ³
GYMNOSPERMS AND VASCULAR CRYPTOGRAMS					
TAXODIACEAE	<i>Taxodium mucronatum</i>	Montezuma baldcypress	--	--	E
MONOCOTS					
AGAVACEAE	<i>Agave lophantha</i>	thorn-crest agave	--	--	WL
	<i>Agave scabra</i>	rough agave	--	--	--
	<i>Manfreda longiflora</i> (<i>Polianthes runyonii</i>)	Runyon's huaco	C2	G2S2	E
ARECACEAE	<i>Sabal mexicana</i>	Mexican sabal palm	--	--	T
BROMELIACEAE	<i>Tillandsia baileyi</i>	Bailey's ballmoss	C2	G2S2	T
CYPERACEAE	<i>Eleocharis austrotexana</i>	Johnston's spikesedge	--	--	WL
	<i>Eleocharis brachycarpa</i>	shortfruit spikesedge	C2	G1S1	WL
LILIACEAE	<i>Scheandia chandleri</i> (<i>Anthericum chandleri</i>)	lila de los llanos	C2	G3S3	T
POACEAE	<i>Chloris texensis</i>	Texas windmillgrass	C2	G2S2	X
DICOTS					
ACANTHACEAE	<i>Dicliptera vahliana</i>	red dicliptera	--	--	T
	<i>Justicia runyonii</i>	Runyon's water-willow	C2	G2S2	T
	<i>Yeatesia platystegia</i> (<i>Tetramerium platystegium</i>)	Montell fourwort	--	--	T
AIZOACEAE	<i>Sesuvium trianthemoides</i>	roughseed sea-purslane	C2	G1S1	WL
AMARANTHACEAE	<i>Achyranthes aspera</i>	chaff-flower	--	--	E
	<i>Iresine palmeri</i>	Palmer's bloodleaf	--	--	T
ASCLEPIADACEAE	<i>Asclepias prostrata</i>	prostrate milkweed	C2	G1S1	T
	<i>Matelea radiata</i>	Falfurrias milkvine	C2	G1S1	T
ASTERACEAE	<i>Ambrosia cheiranthifolia</i>	south Texas ambrosia	C1	G2S2	E
	<i>Grindelia oolepis</i>	rayless gumweed	3C	G2S2	T
	<i>Parthenium incanum</i>	mariola	--	--	WL
	<i>Thymophylla tephroleuca</i>	ashy dogweed	E	G1S1	E

Rare Plant Surveys of Lower Rio Grande Valley National Wildlife Refuge Tracts

Family	Scientific Name	Common Name	FWS ¹	TNHP ²	NPP ³
BORAGINACEAE	<i>Tournefortia volubilis</i>	twining tournefortia	--	--	WL
BRASSICACEAE	<i>Lesquerella thamnophila</i>	Zapata bladderpod	C1	G1S1	E
CACTACEAE	<i>Astrophytum asterias</i> (<i>Echinocactus asterias</i>)	star cactus	PE	G1S1	E
	<i>Cereus spinulosus</i>	tropical forest cereus	--	--	X
	<i>Coryphantha macromeris</i> var. <i>runyonii</i>	Runyon's corycactus	--	G3T2S2	T
	<i>Echinocereus papillosus</i> var. <i>angusticeps</i>	yellow alicocha	C2	G3T1S1	E
	<i>Echinocereus reichenbachii</i> var. <i>fitchii</i>	Fitch's cactus	--	--	T
	<i>Lophophora williamsii</i>	peyote	--	--	WL
	<i>Opuntia engelmannii</i> var. <i>flexospina</i> (<i>O. strigil</i> var. <i>flexospina</i>)	fewspine pricklypear	C2	G3T1S1	T
	<i>Thelocactus bicolor</i> var. <i>flavidispinus</i>	straw-spine glory of Texas	C2	G4T2S2	T
CAPPARIDACEAE	<i>Capparis incana</i>	vara blanca	--	--	T
CARYOPHYLLACEAE	<i>Paronychia congesta</i>	bushy whitlow-wort	C1	G1S1	WL
	<i>Paronychia lundellorum</i>	Lundell's whitlow-wort	--	G1S1	WL
CELASTRACEAE	<i>Mortonia greggii</i>	afinador	--	--	T
CHENOPODIACEAE	<i>Atriplex klebergorum</i>	Kleberg saltbush	3C	G2S2	T
COCHLOSPERMACEAE	<i>Amoreuxia wrightii</i>	yellow-show	3C	G3S3	T
CRASSULACEAE	<i>Sedum texanum</i> (<i>Lenophyllum texanum</i>)	Texas stonecrop	--	--	T
EUPHORBIACEAE	<i>Adelia vaseyi</i>	Vasey's adelia	--	G2S2	WL
	<i>Chamaesyce golondrina</i>	swallow spurge	C2	G2S2	WL
	<i>Croton soliman</i>	soliman croton	--	--	WL
	<i>Euphorbia antisiphilitica</i>	candelilla	--	--	E
	<i>Manihot walkerae</i>	Walker's manioc	E	G1S1	E
FABACEAE	<i>Acacia constricta</i>	mescat acacia	--	--	T
	<i>Coursetia axillaris</i>	baby-bonnets	--	--	T
	<i>Erythrina herbacea</i>	coralbean	--	--	WL
	<i>Mimosa wherryana</i>	Wherry's mimosa	--	--	T
FLACOURTIACEAE	<i>Xylosma flexuosa</i>	brush-holly, coronilla	--	--	T
FRANKENIACEAE	<i>Frankenia johnstonii</i>	Johnston's frankenia	E	G2S2	E
LAMIACEAE	<i>Physostegia correllii</i>	Correll's obedient-plant	C2	G2S2	WL
LYTHRACEAE	<i>Heimia salicifolia</i>	hachinal	--	--	T

Rare Plant Surveys of Lower Rio Grande Valley National Wildlife Refuge Tracts

Family	Scientific Name	Common Name	FWS ¹	TNHP ²	NPP ³
NYCTAGINACEAE	<i>Pisonia aculeata</i>	devil's claw	--	--	T
POLYGONACEAE	<i>Eriogonum greggii</i>	Gregg's wild-buckwheat	--	G2S1	WL
RHAMNACEAE	<i>Colubrina greggii</i>	Gregg's manzanita	--	--	X
ROSACEAE	<i>Prunus texana</i>	Texas peachbush	--	--	WL
RUBIACEAE	<i>Cephalanthus salicifolius</i>	Mexican buttonbush	--	--	E
	<i>Chiococca alba</i>	David's milkberry	--	--	T
	<i>Hedyotis correllii</i>	Correll's bluet	--	G1S1	WL
RUTACEAE	<i>Amyris madrensis</i>	Sierra Madre torchwood	--	--	T
	<i>Esenbeckia runyonii</i>	jopoy	--	G2G3S1	E
	<i>Helietta parvifolia</i>	barreta	--	--	T
SAPINDACEAE	<i>Cardiospermum dissectum</i>	Chihuahua balloonvine	--	G2S2	T
SCROPHULARIACEAE	<i>Capraria mexicana</i>	Tamaulipan tea	--	--	E
STERCULIACEAE	<i>Ayenia limitaris</i>	Tamaulipan kidneypetal	PE	G1S1	E
TURNERACEAE	<i>Turnera diffusa</i> var. <i>aphrodisiaca</i>	hierba del venado	--	--	WL
VERBENACEAE	<i>Aloysia wrightii</i>	oreganillo	--	--	X
	<i>Citharexylum berlandieri</i>	Tamaulipan fiddlewood	--	--	WL
	<i>Citharexylum spathulatum</i>	Mission fiddlewood	--	G2S2	T
	<i>Lantana microcephala</i>	hammock lantana	--	--	T
VIOLACEAE	<i>Hybanthus verticillatus</i> var. <i>platyphyllus</i>	Cameron green violet	--	--	E

1. United States Fish & Wildlife Service. 1993. Plant taxa for listing as endangered or threatened species; notice of review. Federal Register, Thursday, 30 September 1993, 51144-51190.
2. Texas Natural Heritage Program. 1993. Special Plant list, October 1993. Texas Parks & Wildlife Department, Austin.
3. Native Plant Project. 1993. Endangered, threatened, watch list, and extinct plant species of the Lower Rio Grande Valley of Texas, ed. III. Endangered Species Committee Native Plant Project. Sabal 10(6): 3-10.

Explanation of Terms and Symbols

1. United States Fish & Wildlife Service

- LE = federally listed as an endangered species
LT = listed as a federally threatened plant
PE = proposed to become listed as endangered
PT = proposed to become listed as threatened
C1 = federal candidate category 1; species with enough information available to propose for listing
C2 = federal candidate category 2; species under current review for possible listing as either endangered or threatened, but USFWS is in need of more information
3B = taxa that are no longer considered taxonomically valid
3C = no longer under federal review for listing; either more abundant or widespread than was previously thought

2. Texas Natural Heritage Program

- | | |
|--|---|
| G1 = < 6 occurrences known globally | S1 = less than 6 occurrences known in Texas |
| G2 = 6-20 occurrences known globally | S2 = 6-20 known occurrences in Texas |
| G3 = 21-100 occurrences known globally | S3 = 21-100 known Texas occurrences |
| G4 = > 100 occurrences known | S4 = more than 100 occurrences in Texas |
| G5 = demonstrably secure globally | S5 = demonstrably secure in Texas |
| GH = of historical occurrence throughout its range | SH = historical in Texas |
| Q = taxonomic status uncertain | SX = believed extirpated from the state |
| ? = rarity rank uncertain | T = subspecific taxon |

3. Native Plant Project

- E: Endangered; on verge of elimination or listed as Endangered by USFWS
T: Threatened; threatened with elimination from LRGV or listed as Threatened by USFWS
WL: Watch List; proposed as threatened or endangered, but some are unknown or insufficiently familiar to the committee to be properly placed. Others are borderline and need monitoring to observe whether they continue to face a threat to their survival before the decision is made to list or delist. A few are peripheral, reaching the limits of their ranges in the LRGV or adjoining counties.

ATTACHMENT 3
PLANT SURVEY PROGRESS REPORT

**PLANT SURVEYS OF LOWER RIO GRANDE VALLEY NATIONAL WILDLIFE REFUGE TRACTS
PROGRESS OUTLINE, 4 NOVEMBER 1994**

Tract Surveyed	Date(s) of Survey(s)	Target Plant Species Observed
Abram West	2 Nov 1994 (1/2 hour, with David Hernandez)	none
Alto Bonito	31 Mar 1994 (3 hours) 8 Sep 1994 (3 hour search for <i>Manfreda longiflora</i> , with Pat McNeal) 25 Oct 1994 (1 hour, with Chang Liu)	<i>Citharexylum spathulatum</i> <i>Heliopsis parvifolia</i> <i>Mortonia greggii</i> <i>Sedum texanum</i> (<i>Lenophyllum texanum</i>)
Chapeño	19 Jan 1993 (1/4 hour, with Chris Best and Bill MacWhorter) 1 Feb 1994 (2 hour fence-line survey for <i>Frankenia johnstonii</i>) 2 Feb 1994 (3 hour census of <i>Frankenia johnstonii</i> , with Gena Janssen) 18 Apr 1994 (2 hours) 12 Sep 1994 (3 hour search for <i>Manfreda longiflora</i> , with David Hernandez)	<i>Agave lophantha</i> <i>Agave scabra</i> <i>Amoreuxia wrightii</i> <i>Coryphantha macromeris</i> var. <i>runyonii</i> <i>Echinocereus reichenbachii</i> var. <i>fitchii</i> <i>Frankenia johnstonii</i> <i>Lophophora williamsii</i> <i>Manfreda longiflora</i>
Chicharra Banco	30 Mar 1994 (3 hours) 14 Sep 1994 (2 hour search for <i>Manfreda longiflora</i> , with David Hernandez)	<i>Cardiospermum dissectum</i> <i>Citharexylum spathulatum</i> <i>Heliopsis parvifolia</i>
Cuellar	19 Jan 1993 (1/2 hour, with Chris Best and Bill MacWhorter) 31 Jan 1994 (2 hours) 30 Mar 1994 (1 1/2 hours) 19 Apr 1994 (1/2 hour re-examination of <i>Lesquerella thamnophila</i> population, with Lee Elliott) 13 Sep 1994 (3 hours, <i>Manfreda longiflora</i> search, with David Hernandez) 31 Oct 1994 (3 hours, <i>Manfreda longiflora</i> search, with David Hernandez)	<i>Agave lophantha</i> <i>Amoreuxia wrightii</i> <i>Lesquerella thamnophila</i> <i>Manfreda longiflora</i> <i>Mimosa wherryana</i>
Cuevitas	14 Sep 1994 (1/10 hour search for <i>Manfreda longiflora</i> , with David Hernandez)	none
Fronton	19 Apr 1994 (1/2 hour, with Lee Elliott)	none

Tract Surveyed	Date(s) of Survey(s)	Target Plant Species Observed
Gabrielson	2 Nov 1994 (3 hours, with David Hernandez)	<i>Achyranthes aspera</i> <i>Amyris madrensis</i> <i>Coursetia axillaris</i> <i>Heimia salicifolia</i> <i>Sabal mexicana</i> <i>Xylosma flexuosa</i>
Goodfields	18 Feb 1994 (1/4 hour)	none
Havana North	14 Sep 1994 (1 hour search for <i>Manfreda longiflora</i> , with David Hernandez)	<i>Citharexylum spathulatum</i>
La Grulla	19 Apr 1994 (2 hours, with Lee Elliott)	none
La Puerta (original)	20 Jan 1994 (5 hours, with Bill MacWhorter); 1 Feb 1994 (1/2 hour, solo) 28 Mar 1994 (2 hours) 8 Sep 1994 (3 hour search for <i>Manfreda longiflora</i> , with Pat McNeal) 27 Oct 1994 (2 hours, solo)	<i>Adelia vaseyi</i> <i>Agave scabra</i> <i>Cardiospermum dissectum</i> <i>Citharexylum spathulatum</i> <i>Coryphantha macromeris</i> var. <i>runyonii</i> <i>Eriogonum greggii</i> <i>Helietta parvifolia</i> <i>Lophophora williamsii</i> <i>Mortonia greggii</i> <i>Turnera diffusa</i> var. <i>aphrodisiaca</i>
"La Puerta South"	15 Sep 1994 (5 hours, with Chris Best and David Hernandez)	<i>Agave scabra</i> <i>Amoreuxia wrightii</i> <i>Citharexylum spathulatum</i> <i>Coryphantha macromeris</i> var. <i>runyonii</i> <i>Helietta parvifolia</i> <i>Lophophora williamsii</i> <i>Manfreda longiflora</i> <i>Mortonia greggii</i> <i>Turnera diffusa</i> var. <i>aphrodisiaca</i>

Tract Surveyed	Date(s) of Survey(s)	Target Plant Species Observed
Loma Preserve	14 Dec 1993 (3 hours, with Chris Best) 16 Feb 1994 (with Bill MacWhorter and David Hernandez) 5 Sep 1994 (3 hours, with Pat McNeal) 6 Sep 1994 (3 hours, with Pat McNeal)	Amyris madrensis Citharexylum berlandieri Echeandia chandleri Sedum texanum (Lenophyllum texanum)
Los Ebanos	1 Nov 1994 (2-3 hours, with David Hernandez)	Heimia salicifolia
Los Olmos	19 Jan 1994 (1 hour, with Chris Best and Bill Macwhorter) 29 Mar 1994 (6 hours, with Chris Best) 13 Sep 1994 (5 hours, with David Hernandez)	Agave scabra Cardiospermum dissectum Citharexylum spathulatum Coryphantha macromeris var. runyonii Helietta parviflora Lophophora williamsii Manfreda longiflora Mortonia greggii Sedum texanum (Lenophyllum texanum)
Madero	2 Nov 1994 (2 hours, with David Hernandez)	Achyranthes aspera Sabal mexicana Xylosma flexuosa
Noriega	17 Feb 1994 (3 hours, with Bill MacWhorter and David Hernandez)	Adelia vaseyi Amyris madrensis Chiococca alba Sabal mexicana Tillandsia baileyi
Palmito Hill	16 Feb 1994 (1 hour, with Bill MacWhorter and David Hernandez) 6 Sep 1994 (1 hour search for Echeandia chandleri, with Pat McNeal)	Citharexylum berlandieri
Pate Bend	3 Nov 1994 (1/2 hour, with David Hernandez)	none

Tract Surveyed	Date(s) of Survey(s)	Target Plant Species Observed
Ranchito	14 Dec 1993 (1/2 hour, with Chris Best) 17 Feb 1994 (3 hours, with Bill MacWhorter and David Hernandez)	Adelia vaseyi Amyris madrensis Chiococca alba Esenbeckia runyonii Heimia salicifolia Iresine palmeri Pisonia aculeata Tillandsia baileyi Xylosma flexuosum
Salineño	2 Feb 1994 (1/2 hour, with Gena Janssen) 19 Apr 1994 (1/4 hour, with Lee Elliott)	Cephalanthus salicifolius Heimia salicifolia
Sam Fordyce South	1 Nov 1994 (3 hours, with David Hernandez)	Cephalanthus salicifolius Heimia salicifolia
Sam Fordyce North	1 Feb 1994 (1 hour) 8 Sep 1994 (1 hour search for Manfreda longiflora, with Pat McNeal)	
Sam Fordyce West	19 Jan 1993 (1/2 hour, with Chris Best and Bill MacWhorter) 26 Oct 1994 (3 hours)	Agave lophantha (PLANTED!) Manfreda longiflora
Selva Verde	14 Dec 1993 (1 hour, with Chris Best)	
Thompson Road	7 Sep 1994 (1 hour, with Pat McNeal)	Justicia runyonii
Tulosa Ranch	16 Feb 1994 (2 hours, with Bill MacWhorter and David Hernandez) 22 Jun 1994 (2 hours) 6 Sep 1994 (2 hour search for Echeandia chandleri, with Pat McNeal)	Amyris madrensis Citharexylum berlandieri Sabal mexicana
Vela Woods	3 Nov 1994 (3 hours, with David Hernandez)	Adelia vaseyi Heimia salicifolia

Tract Surveyed	Date(s) of Survey(s)	Target Plant Species Observed
Vista del Mar	15 Feb 1994 (1 hour, with David Hernandez); 22 Jun 1994 (3 hours) 6 Sep 1994 (2 hour search for <i>Echeandia chandleri</i> , with Pat McNeal)	<i>Amyris madrensis</i> <i>Citharexylum berlandieri</i> <i>Sedum texanum</i> (<i>Lenophyllum texanum</i>)
Yturria Brush	15 Dec 1993 (1 hour) 19 Jan 1994 (1 hour, with Chris Best and Bill MacWhorter) 30 Mar 1994 (1 hour) 14 Sep 1994 (4 hour search for <i>Manfreda longiflora</i> , with David Hernandez) 26 Oct 1994 (2 hours, with David Wolfe and Chang Liu) 27 Oct 1994 (2 hours, solo)	<i>Cardiospermum dissectum</i> <i>Citharexylum spathulatum</i>
Zamora Bend	2 Nov 1994 (2 hours, with David Hernandez)	<i>Heimia salicifolia</i>