



Chihuahuan Desert Network Vegetation Monitoring

Field Season Summary Report – Spring 2018

Park: Chamizal National Memorial

Start Date: 2/26/2018

End Date: 4/25/18

Field Crew: Jonathin Horsley, Lindsay Smythe, Kiki Fahey, Tim Pine, Ben Cooper

Contacts

If you would like GPS data or have any questions about the information in this summary, or the monitoring program, please contact the field coordinator or CHDN program manager.

Lindsay Smythe	575-202-6798	lindsay_smythe@nps.gov	Field Coordinator
Marcia Wilson	575-646-5294	marcia_wilson@nps.gov	Program Manager

Areas Surveyed

Chamizal National Memorial is a 55-acre park located in El Paso, TX. The Chihuahuan Desert Network crew surveyed vegetation at 38 points within Chamizal National Memorial (Figure 1).

Methods Overview

The purpose of this survey was to inventory the vegetation at Chamizal National Memorial using a rapid-assessment methodology (as described in Struthers et al. 2014). A 75-m grid was created in ArcGIS, generating 38 survey points across the park (Figure 1). Each survey point was buffered 20m, creating a survey area 40m in diameter at each point where all plant species were inventoried. Because the primary objective was to create a species inventory, no density or cover data was collected. Plants (mostly trees) that could be opportunistically identified outside of vegetation plots were also recorded.

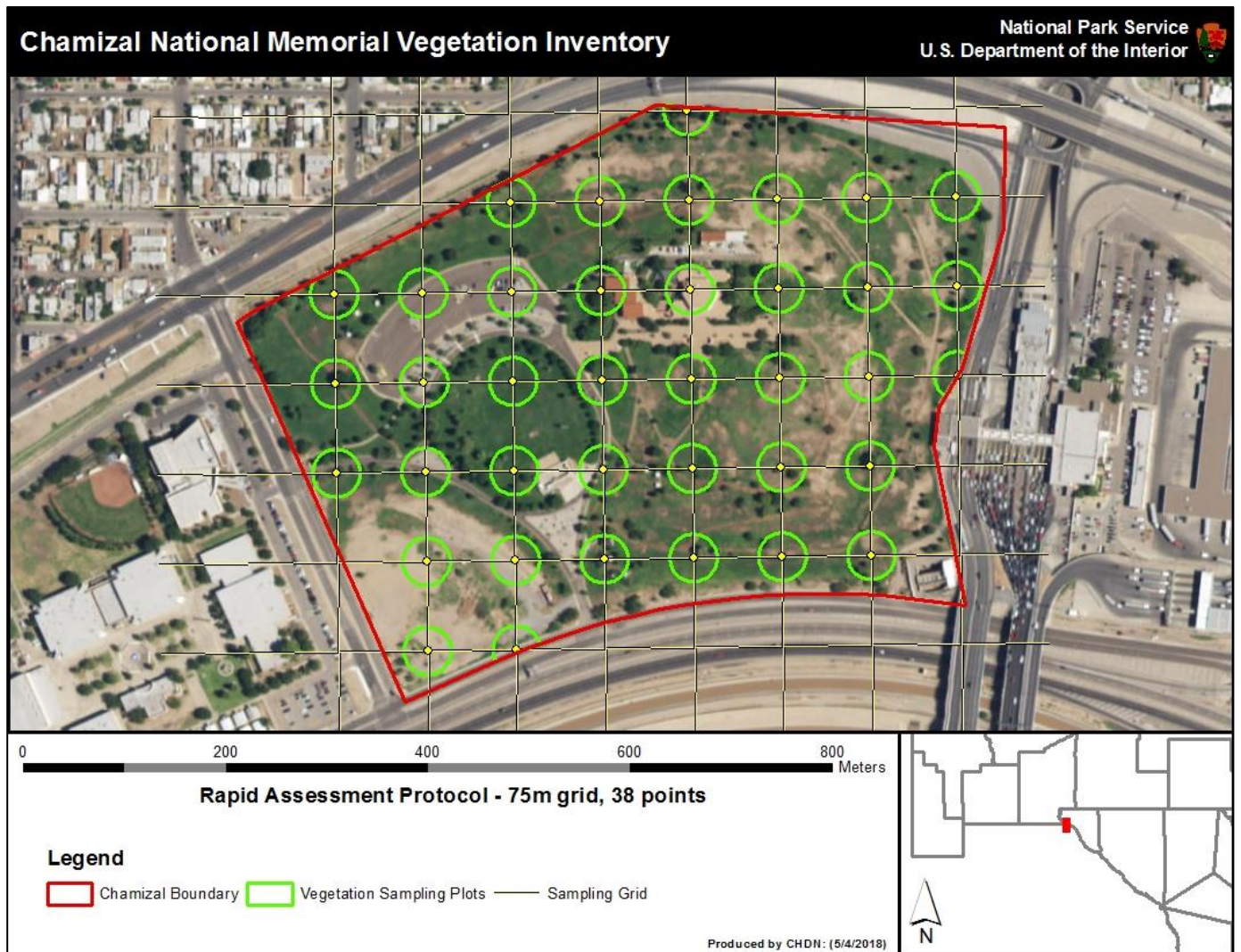


Figure 1. Vegetation survey points at Chamizal National Memorial

Results

The crew documented 100 species of plants at Chamizal in spring 2018, of which 43 were native, 44 were exotic, and 13 could not be identified (Tables 1 and 2). The top 3 species encountered were all exotic: London rocket (92% of plots), Mediterranean barley (92% of plots), and Kochia (89% of plots). The most commonly encountered native species were netseed lambsquarter (84% of plots), common pepperweed (66% of plots) and whorled dropseed (63% of plots).

Table 1. Native[†] species encountered, and number of plots in which observed (out of 38 total plots). “N/A” indicates species observed incidentally in the park, but not in a plot.

Scientific Name	Common Name	Duration	Growth Form	# of plots in which found
<i>Achillea millefolium</i>	western yarrow	Perennial	Forb/Herb	1
<i>Amaranthus retroflexus</i>	redroot pigweed	Annual	Forb/Herb	1
<i>Artemisia filifolia</i>	sand sagebrush	Perennial	Shrub	1
<i>Atriplex canescens</i>	fourwing saltbush	Perennial	Shrub	1
<i>Bouteloua barbata</i>	sixweeks grama	Annual	Graminoid	3
<i>Chenopodium berlandieri</i>	netseed lambsquarter	Annual	Forb/Herb	32
<i>Chenopodium glaucum</i>	rocky mountain goosefoot	Annual	Forb/Herb	5
<i>Chilopsis linearis</i>	desert willow	Perennial	Tree	1
<i>Cryptantha crassisejala</i>	thicksepal cryptantha	Annual	Forb/Herb	1
<i>Dasylirion wheeleri</i>	common sotol	Perennial	Shrub	4
<i>Desmanthus cooley</i>	Cooley's bundleflower	Perennial	Forb/Herb	1
<i>Eschscholzia californica</i>	California poppy	Annual	Forb/Herb	2
<i>Euphorbia antisiphilitica</i>	candelilla	Perennial	Shrub	1
<i>Ferocactus wislizeni</i>	fishhook cactus	Perennial	Succulent	1
<i>Fraxinus velutina</i>	velvet ash	Perennial	Tree	20
<i>Hesperaloe funifera</i>	New Mexico false yucca	Perennial	Shrub	1
<i>Hesperaloe parviflora</i>	red yucca	Perennial	Shrub	3
<i>Hoffmannseggia glauca</i>	hogpotato	Perennial	Forb/Herb	2
<i>Lepidium densiflorum</i>	common pepperweed	Annual	Forb/Herb	25
<i>Leucophyllum frutescens</i>	cenizo, Texas barometer bush	Perennial	Shrub	1
<i>Leucaena retusa</i>	littleleaf leadtree	Perennial	Tree	N/A
<i>Lycium berlandieri</i>	wolfberry	Perennial	Shrub	N/A
<i>Mentzelia asperula</i>	Organ Mountain blazingstar	Annual	Forb/Herb	1

Table 1, continued.

Scientific Name	Common Name	Duration	Growth Form	# of plots in which found
<i>Modiola caroliniana</i>	Carolina bristlemallow	Perennial	Forb/Herb	1
<i>Parkinsonia aculeata</i>	Mexican palo verde	Perennial	Tree	3
<i>Populus X acuminata</i>	lanceleaf cottonwood	Perennial	Tree	N/A
<i>Populus deltoidia</i> var. <i>wislizeni</i>	Rio Grande cottonwood	Perennial	Tree	6
<i>Prosopis glandulosa</i>	honey mesquite	Perennial	Tree	3
<i>Prosopis glandulosa</i> var. <i>torreyana</i>	western honey mesquite	Perennial	Tree	1
<i>Prosopis pubescens</i>	screwbean mesquite	Perennial	Tree	1
<i>Quercus fusiformis</i> *	plateau oak	Perennial	Tree	2
<i>Robinia pseudoacacia</i>	black locust	Perennial	Tree	1
<i>Sapindus saponaria</i>	western soapberry	Perennial	Tree	2
<i>Solanum elaeagnifolium</i>	silverleaf nightshade	Perennial	Forb/Herb	5
<i>Sophora secundiflora</i>	Texas mountain laurel	Perennial	Shrub	1
<i>Sphaeralcea fendleri</i>	Fendler's globemallow	Perennial	Forb/Herb	11
<i>Sporobolus pyramidatus</i>	whorled dropseed	Perennial	Graminoid	24
<i>Vachellia constricta</i>	whitethorn acacia	Perennial	Tree	4
<i>Washingtonia</i> sp.	fan palm	Perennial	Tree	1
<i>Yucca baccata</i>	banana yucca	Perennial	Shrub	1
<i>Yucca elata</i>	soaptree yucca	Perennial	Shrub	1
<i>Yucca madrensis</i>	mountain yucca	Perennial	Shrub	2
<i>Yucca thompsoniana</i>	Thompson's yucca	Perennial	Shrub	1

† We define “native” as plant species native to the U.S. and northern Mexico; however some of these species are not native to the Chihuahuan desert.

*There is some uncertainty in the oak tree ID. The 1989 Landscape Management Plan for Chamizal refers to *Quercus virginiana* and we are presuming that *Q. v.* var. *fusiformis* (Also known as *Quercus fusiformis*), a common landscaping oak, was planted. However, two separate samples keyed to netleaf oak (*Q. rugosa*) and Arizona oak (*Q. arizonica*); it is unlikely a landscaper would have planted these species. Because oaks readily hybridize and are highly variable we are reporting all the oaks as *Q. fusiformis* but it is possible that other species are present.

Table 2: Exotic species encountered, and number of plots in which observed (out of 38 total plots). "N/A" indicates a species observed incidentally in the park, but not in a plot.

Scientific Name	Common Name	Duration	Growth Form	# of plots in which found
<i>Alternanthera pungens</i>	khakiweed	Annual	Forb/Herb	10
<i>Bromus catharticus</i>	rescuegrass	Annual	Forb/Herb	32
<i>Caesalpinia gilliesii</i>	Bird-of-paradise	Perennial	Shrub	2
<i>Capsella bursa-pastoris</i>	Shepherd's purse	Annual	Forb/Herb	26
<i>Cenchrus longispinus</i>	sandburr	Annual	Forb/Herb	1
<i>Chenopodium album</i>	common lambsquarter	Annual	Forb/Herb	1
<i>Ciclospermum leptophyllum</i>	marsh parsley	Annual	Forb/Herb	11
<i>Conyza bonariensis</i>	horseweed	Annual	Forb/Herb	16
<i>Cynodon dactylon</i>	Bermuda grass	Perennial	Graminoid	33
<i>Descurainia sophia</i>	tansy-mustard	Annual	Forb/Herb	1
<i>Eleusine indica</i>	goosegrass, wiregrass	Annual	Graminoid	14
<i>Eragrostis barrelieri</i>	Mediterranean lovegrass	Annual	Graminoid	1
<i>Erodium cicutarium</i>	red-stem stork's bill	Annual	Forb/Herb	1
<i>Festuca arundinacea</i>	tall fescue	Annual	Graminoid	2
<i>Hordeum marinum ssp. gussonianum</i>	Mediterranean barley	Annual	Graminoid	35
<i>Kochia scoparia</i>	kochia	Annual	Forb/Herb	34
<i>Lactuca serriola</i>	prickly lettuce	Annual	Forb/Herb	5
<i>Lamium amplexicaule</i>	common henbit	Annual	Forb/Herb	4
<i>Malva neglecta</i>	common mallow	Annual	Forb/Herb	15
<i>Marrubium vulgare</i>	horehound	Annual	Forb/Herb	1
<i>Medicago lupulina</i>	black medic clover, yellow trefoil	Annual	Forb/Herb	26
<i>Melilotus officinalis</i>	yellow sweetclover	Perennial	Forb/Herb	N/A
<i>Morus alba</i>	white mulberry	Perennial	Tree	2
<i>Pinus eldarica</i>	Afghan pine	Perennial	Tree	9
<i>Plantago major</i>	common plantain	Annual	Forb/Herb	16
<i>Poa annua</i>	annual bluegrass	Annual	Graminoid	10
<i>Polygonum aviculare</i>	prostrate knotweed	Annual	Forb/Herb	31

Table 2, continued.

Scientific Name	Common Name	Duration	Growth Form	# of plots in which found
<i>Prosopis glandulosa x chilensis</i>	mesquite hybrid cultivar	Perennial	Tree	1
<i>Punica granatum</i>	pomegranate	Perennial	Shrub	1
<i>Rhaphiolepis indica</i>	Indian hawthorn	Perennial	Shrub	1
<i>Rosmarinus officinalis</i>	rosemary	Perennial	Shrub	1
<i>Salix matsudana</i>	corkscrew willow, peking willow	Perennial	Tree	1
<i>Schismus barbatus</i>	common Mediterranean grass	Annual	Graminoid	6
<i>Setaria viridis</i>	green bristle grass, green foxtail	Annual	Graminoid	13
<i>Sisymbrium irio</i>	London rocket	Annual	Forb/Herb	35
<i>Sonchus oleraceus</i>	common sowthistle	Annual	Forb/Herb	28
<i>Spartium junceum</i>	spanish broom	Perennial	Shrub	1
<i>Taraxacum officinale</i>	common dandelion	Annual	Forb/Herb	29
<i>Thymophylla pentachaeta</i>	common dogweed	Annual	Forb/Herb	1
<i>Trifolium repens</i>	white clover	Annual	Forb/Herb	3
<i>Tribulus terrestris</i>	puncturevine	Annual	Forb/Herb	9
<i>Ulmus pumila</i>	Chinese elm, Siberian elm	Perennial	Tree	1
<i>Veronica persica</i>	birdeye speedwell	Annual	Forb/Herb	15
<i>Vitex agnus-castus</i>	chastetree	Perennial	Tree	N/A

References

Struthers, K., P. Valentine-Darby, N. Chambers, R.E. Bennetts, and K. Gallo. 2014. Fort Davis National Historic Site: Natural resource condition assessment. Natural Resource Report NPS/CHDN/NRR—2014/892. National Park Service, Fort Collins, Colorado.

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