

PI – Dan Milchunas

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Date of Collection 8.9.05

Point Frame

[illegible]

Recorder J. Stevens, A. Anderson

Data Entered By _____

Page 2 of 9Date of Collection 8.9.05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	05	D	2	4	7	OPPO		2	
								STCO		2	
								BARE		1	
								LITT		5	
					2	4	8	OPPO		1	
								STCO		1	
								BARE		1	
								LITT		7	
					2	4	9	OPPO		4	
								LITT		4	
								BARE		1	
								STCO		1	
					2	4	10	BOGR		3	
								BARE		1	
								LITT		6	
					2	3	10	PIFA		1	
								UPPO		2	
								LITT		6	
								BARE		1	

PI – Dan Milchunas

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Date of Collection 8.9.05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
65A		8	05	D	2	3	9	STCO		1	
								BARE		2	
								LITT		7	
						3	8	KOSC		1	
								STCO		1	
								BARE		1	
								LITT		7	
						3	7	LITT		8	
								BARE		2	
						3	6	KOSC		2	
								LITT		8	
						3	5	KOSC		1	
								BARE		1	
								LITT		8	
						3	4	STCO		3	
								BARE			
								LITT		7	

Recorder J. Stevens, A. Anderson

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	05	D	2	3	3	STCO		1	
								KOSC		1	
								BARE		2	
								LITT		6	
						3	2	BOGR		1	
								LITT		8	
								BARE		1	
						3	1	OPPO		2	
								LITT		6	
						2	1	STCO		2	
								BARE		1	
								LITT		7	
						2	2	KOSC		1	
								CRME		1	
								LITT		8	
						2	3	MATA		1	
								BARE		2	
								LITT		7	

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Date of Collection 8.9.07

Point Frame

[illegible]

Recorder A. Anderson, D. Levens

Data Entered By _____

Page 6 of 9Date of Collection 9.7.07

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	05	D	2	2	6	OPPO	:	2	
								BARE	L:	6	
								LITT	:	2	
				D	2	2	7	LITT	L:	8	
								STRO	:	2	
				D	2	2	8	LITT	:::	6	
								SPOO	.	1	
								BARE	..	3	
				D	2	2	9	ROC	::::	8	
								LITT	"	2	
				D	2	2	10	LITT	L:	8	
								ARFR	:	2	
				D	2	1	10	CAHE	:	2	
								SAIB	.	1	
								LITT	L:	7	
				D	2	1	9	LITT	X:	10	
				D	2	1	8	C. villosa	:	2	
								LITT	L:	8	

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Date of Collection 8.9.0

Point Frame

[illegible]

Recorder A. Anderson J. Storer

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	07	D	2	5	1	OPPO	::	21	
								STCO	.	1	
								LITT	::	5	
				D	2	5	2	CAHE	::	2	
								LITT	::	5	
				D	2	5	3	OPPO	::	4	
								LITT	L	6	
				D	2	5	4	STCO	::	2	
								OPPO	::	4	
								LITT	::	4	
				D	2	5	5	OPPO	::	2	
								BOGR	::	2	
								SAIB	.	1	
								STCO	.	1	
								LITT	::	3	
				D	2	5	6	OPPO	::	5	
								BOGR	::	2	
								CAHE	::	2	
								LITT	.	1	

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Date of Collection 8.9.05

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PI – Dan Milchunas

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Date of Collection 8-8-05

Point Frame

[illegible]

PI – Dan Milchtunas

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Recorder Stevens, A. Anderson
Data Entered By _____Page 2 of 8
Date of Collection 8-8-05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
✓ ESA		8	05	D	2		G 40	Kosc		1	
								L.H		9	
✓							G 41	ST20		1	
								Bojr		1	
								Bare		2	
								L.H		6	
✓							G 42	Bare		1	
								L.H		9	
✓							E 43	Laha		1	
								Bojr		2	
								L.H		7	
✓							E 44	Kosc		2	
								OPPO		1	
								Bare		1	
								L.H		6	
✓							E 45	ARLO		1	
								STRO		1	
								L.H		8	

Recorder J Stevens A. Anderson

Data Entered By_____

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Date of Collection 8-8-05

Point Frame

[illegible]

Recorder J Stevens, A Anderson

Data Entered By _____

Page 4 of 8Date of Collection 8-8-05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	05	D	2		G 5	STCO		1	
								Bare		2	
								Kosc		1	
								L.H		6	
							G 4	L.H		9	
								Kosc		1	
							G 3	Kosc		1	
								L.H		9	
							G 2	Oppo		2	
								L.H		7	
							G 1	L.H		10	
							G 7	Kosc		1	
								bare		4	
								L.H		5	
							G 8	bogr		1	
								L.H		7	
								bare		1	

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Recorder J. Stevens, A Anderson

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	05	D	2		G 17	L.H		8	
								Bare		1	
								Rosa		1	
							G 18	Oppo		1	
								CAHE		1	
								L.H		8	
							G 19	L.H		7	
								Oppo		1	
								Bogr		2	
							G 20	L.H		10	
							G 21	ST10		1	
								Oppo		1	
								L.H		8	
							G 22	Bare		4	
								L.H		6	
							G 23	CAHE		1	
								AZLO		1	
								Bare		2	
								L.H		6	

Recorder A. Anderson, J. Stevens

Data Entered By _____

Page 1 of 3Date of Collection 8.8.01

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	01	F	2	4	10	KOSC	1	1	
								BOGR	1	1	
								LITT	2	8	
				F	2	4	9	BARE	1	1	
								KOSC	2	2	
								LITT	2	7	
				F	2	4	8	CAHE	1	1	
								OPPO	1	1	
								BARE	3	3	
								LITT	1	5	
				F	2	4	7	BARE	3	3	
								HASP	1	1	
								LITT	1	6	
				F	2	4	6	BOGR	1	1	
								BARE	3	3	
								LITT	2	6	
				F	2	4	5	AFER	1	1	
								KOSC	1	1	
								LITT	1	4	

ARS Study #3 (ESA)

PI - Dan Milchunas

Recorder A. Anderson J. Decker

Data Entered By _____

Page 2 of 8Date of Collection 4/3/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
14		5	05	F	2	4	4	BOGR	.	1	
								BARE	.	1	
								LIT	11	8	
				F	2	4	3	BARE	"	2	
								OPHO	.	1	
								LITT	11	7	
				F	2	4	2	KOSC	"	2	
								LITT	11	8	
				F	2	4	1	KOSC	"	2	
								LITT	11	8	
				F	2	3	1	BOGR	.	1	
								BARE	"	2	
								LIT	11	7	
				F	2	3	2	BOGR	"	3	
								BARE	11	7	
				F	2	3	3	BOGR		1	
								SARE		1	
								LITT	11	8	

Recorder A. Anderson, J. Hevri

Data Entered By _____

Page 3 of 9Date of Collection 8.8.05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
24		8	05	F	2	3	4	CAHE		1	
								OPP		2	
								LITT	11	7	
				F	2	3	5	LITT	11	10	
				F	2	3	6	KOSC		1	
								BARE		2	
								LITT	11	7	
				F	2	3	7	ARFR		2	
								STCO		1	
								LITT	11	6	
				F	2	3	8	BOGR		1	
								KOSC		1	
								BARE		2	
								LITT	11	6	
				F	2	3	9	STCO		1	
								KOSC		1	
								POW		2	
								BARE		1	

LITT 11 5

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Date of Collection _____

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
4		8	05	F	2	3	1	LAKE	1	5	
								LIT		1	
				F	2	2	10	OPPO		1	
								KOR		1	
								LIT	1	3	
				F	2	2	9	CAHE		1	
								OPPO		1	
								LAKE		1	
								LIT		7	
				F	2	2	8	ARFR		3	
								CAHE		1	
								OPPO		1	
								LIT	1	5	
				F	2	2	7	OPPO		1	
								BOGR		1	
								CAHE		1	
								LIT	1	7	

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Date of Collection 8.9.07

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
24		8	05	F	2	2	6	KOOL	"	2	
								BOGR	"	1	
								LITT	11	7	
				F	2	2	5	OPPO	"	1	
								CAHE	"	1	
								KOOL	"	1	
								LITT	11	7	
				F	2	2	4	KOOL	"	1	
								BAKE	"	2	
								LITT	11	7	
				F	2	2	5	LITT	11	10	
				F	2	2	7	CAHE	"	1	
								BAKE	"	1	
								LITT	11	8	
				F	2	2	1	BOGR	"	1	
								BAKE	"	2	
								LITT	11	7	

Recorder A. Anderson 7/1/05

Data Entered By _____

Page 6 of 8Date of Collection 8/9/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8	05	F	2	1	1	KOOL		2	
								LITT	2	3	
				F	2	1	2	CAHE		1	
								ROGR		1	
								RARE		2	
								LITT	2	6	
				F	2	1	3	BARE		1	
								LITT	2	9	
				F	2	1	4	ARFR		1	
								LITT	2	9	
				F	2	1	5	ROGR		1	
								CAHE		1	
								LITT	2	8	
				F	2	1	6	RARE		1	
								KOOL		1	
								LITT	2	3	
				F	2	1	7	KOOL		2	
								LITT	2	3	

Recorder A. Anderson, J. Levent

Data Entered By _____

Page 7 of 8Date of Collection 8/9/07

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		08	07	F	2	1	8	KOIL	'	1	
								BOGR	'	1	
								PAKE	'	2	
								LITT	L	6	
				F	2	1	9	KOSC	'	2	
								CAHE	'	1	
								LITT	L	7	
				F	2	1	10	KOIL	'	1	
								BAKE	'	2	
								LITT	L	7	
				F	2	5	1	KOSC	'	2	
								LITT	L	8	
				F	2	5	2	BAKE	'	3	
								LITT	L	7	
				F	2	5	3	CAHE	'	1	
								BAKE	'	1	
								BOGR	'	1	
								LITT	L	7	

Recorder A. AndersonPage 3 of 8

Data Entered By _____

Date of Collection 6/20/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		5	05	F	2	5	4	MATA	.	1	
								BOGR	.	1	
								LITT	17	8	
				F	2	5	5	KOSC	.	2	
								BARE	.	1	
								LITT	LI	7	
				F	2	5	6	KOSC	.	1	
								BARE	.	1	
								LITT	17	8	
				F	2	5	7	LITT	18	10	
				F	2	5	8	CAHE	.	1	
								KOSC	.	1	
								BOGR	.	1	
								LITT	LI	7	
				F	2	5	9	KOSC	.	2	
								BARE	.	1	
								LITT	LI	7	
				F	2	5	10	OPPO	.	1	
								BARE	.	1	
								LITT	18	8	

Recorder M. Hendrick, A. Armon

Data Entered By _____

Page 1 of 8Date of Collection 8-9-05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	1	1	LITT	11	4	
								BARE	1	2	
								AGSM	11	3	
								CHLE	1	1	
ESA		8-05		E	2	1	2	KOSC	11	4	
								BARE	11	4	
								LITT	1	2	
ESA		8-05		E	2	1	3	LITT	11	3	
								KOSC	11	5	
								BARE	1	2	
ESA		8-05		E	2	1	4	KOSC	1	5	
								LITT	11	5	
ESA		8-05		E	2	1	5	BARE	11	4	
								KOSC	11	3	

Recorder A. Arun + M. Hendrick

Data Entered By _____

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Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	1	5	LITT	1	3	
ESA		8-05		E	2	1	6	BARE	0	1	
								LITT	1	4	
								KOSC	1	5	
ESA		8-05		E	2	1	7	BARE	1	2	
								KOSC	0	1	
								LITT	1	7	
ESA		8-05		E	2	1	8	KOSC	1	5	
								BARE	0	1	
								LITT	1	4	
ESA		8-05		E	2	1	9	KOSC	1	7	
								LITT	1	3	
ESA		8-05		E	2	1	10	KOSC	1	5	

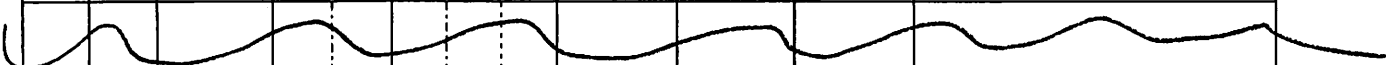
Recorder A. Arriaga + M. Hersh

Data Entered By _____

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Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	1	10	STCO	.	1	
								LITT	::	4	
											
ESA		8-05		E	2	2	10	LITT	N	10	
ESA		8-5		E	2	2	9	KOSL	::	4	
								LITT	=	6	
ESA		8-5		E	2	2	8	KOSL	.	1	
								LITT	☑	9	
ESA		8-5		E	2	2	7	BAKE	::	3	
								KOSL	::	3	
								LITT	::	4	
ESA		8-5		E	2	2	6	BAKE	.	1	
								LITT	::	5	
								STCO	.	1	
								KOSL	::	3	
ESA		8-5		E	2	2	5	LITT	::	5	
								BAKE	::	3	
								STCO	.	1	

KOSL . 1

Recorder A. Arredondo + M. HernandezPage 4 of 8

Data Entered By _____

Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	2	4	BAPE	.	1	
								KOCL	..	3	
								STCO	..	4	
								LITT	..	2	
ESA		8-05		E	2	2	3	BAPE	..	3	
								STCO	..	3	
								LITT	..	2	
								KOCL	.	1	
								POCL	.	1	
ESA		8-05		E	2	2	2	LITT	..	5	
								KOCL	..	5	
ESA		8-05		E	2	2	1	LITT	..	1	
								POCL	..	1	
											
ESA		8-05		E	2	3	1	SPCO	.	1	
								KOCL	..	3	
								LITT	..	6	
ESA		8-05		E	2	3	2	KOCL	..	2	

Recorder: Amber A HendrickPage 16 of 8

Data Entered By _____

Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	3	10	KOSC	.	1	
								LITT	..	9	
ESA		8-05		E	2	4	10	BAPE	.	1	
								LITT	..	3	
								KOSC	..	6	
ESA		8-05		E	2	1	7	BAPE	..	2	
								KOSC	..	3	
								LITT	..	5	
ESA		8-05		2	4		8	KOSC	..	4	
								LITT	..	6	
ESA		8-05		2	1		7	KOSC	..	7	
								LITT	..	3	
ESA		8-05		2	1		6	BAPE	..	4	
								STCO	.	1	
								LITT	..	5	
ESA		8-05		2	1		5	BAPE	..	2	
								KOSC	..	3	

STCO . 1
LITT .. 4

Recorder A. Aron + M. HurdPage 7 of 8

Data Entered By _____

Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	4	4	STED	''	2	
								KOSC	''	3	
								LITT	''	5	
ESA		8-05		E	2	4	3	KOSC	''	2	
								BAZE	'	1	
								LITT	''	7	
ESA		8-05		E	2	4	2	BAZE	''	3	
								KOSC	''	3	
								LITT	''	4	
ESA		8-05		E	2	4	1	BAZE	''	4	
								BAZE	''	2	
								LITT	''	4	
ESA		8-05		E	2	5	5	BAZE	''	4	
								KOSC	'	1	
								LITT	''	5	
ESA		8-05		E	2	5	4	BAZE	'	1	
								SPCO	'	1	
								LITT	''	8	

Recorder M. Hendrick, A. ArsenPage 8 of 8

Data Entered By _____

Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	2	5	3	KOSC	11	3	
								LITT	11	7	
ESA		8-05		E	2	5	2	BOGR	.	1	
								BARE	:	2	
								LITT	11	7	
ESA		8-05		E	2	5	1	BOGR	11	2	
								LITT	11	8	
ESA		8-05		E	2	5	6	KOSC	11	6	
								LITT	11	4	
ESA		8-05		E	2	5	7	BARE	*	1	
								KOSC	11	1	
								LYJU	.	1	
								LITT	11	4	
ESA		8-05		2	5		8	KOSC	11	1	
								LITT	11	9	
ESA		8-05		2	5		9	KOSC	11	4	
								LITT	11	6	
ESA		8-05		2	5		10	KOSC	11	7	

LITT 11 3

Recorder A. Amen + M. Hendrick

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	1	1	1	STCO	.	1	
								LITT	☐	9	
ESA		8-05		G	1	1	2	KOSC	.	1	
								CAH	.	1	
								LITT	☐	8	
ESA		8-05		G	1	1	3	KOSC	::	4	
								LITT	☐	6	
ESA		8-05		G	1	1	4	KOSC	..	2	
								LITT	☐	8	
ESA		8-05		G	1	1	5	KOSC	::	4	
								LITT	☐	6	
ESA		8-05		G	1	1	6	BARE	.	1	
								KOSC	..	2	
								LITT	☐	7	
ESA		8-05		G	1	1	7	CAHE	.	1	
								KOSC	.	1	
								LITT	☐	8	
ESA		8-05		G	1	1	8	BARE	::	3	
								KOSC	.	1	
								LITT	☐	6	

Recorder M. Hendrick, A. Amen

Data Entered By _____

Page 2 of 7Date of Collection 8/9/08

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	1	1	9	KOSC	::	4	
								LITT	::	6	
ESA		8-05		G	1	1	10	KOSC	::	5	
								LITT	::	5	
ESA		8-05		G	1	2	10	KOSC	::	7	
								LITT	::	3	
ESA		8-05		G	1	2	9	KOSC	::	7	
								LITT	::	3	
ESA		8-05		G	1	2	8	LITT	::	3	
								KOSC	.	1	
								CRME	.	1	
								BARE	::	5	
ESA		8-05		G	1	2	7	KOSC	::	3	
								LITT	::	7	
ESA		8-05		G	1	2	6	KOSC	::	5	
								CRME	.	1	
								LITT	::	4	

Recorder M. Hunsicker + A. Amen

Data Entered By _____

Page 3 of 7Date of Collection 8/9/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	1	2	5	KOSC	::	3	
								CAHE	'	1	
								LITT	⌈	6	
ESA		8-05		G	1	2	4	KOSC	::	5	
								LITT	::	5	
ESA		8-05		G	1	2	3	KOSC	::	4	
								CAHE	'	1	
								LITT	::	5	
ESA		8-05		G	1	2	2	CRME	::	3	
								KOSC	'	1	
								LITT	::	6	
ESA		8-05		G	1	2	1	CRME	'	1	
								KOSC	'	1	
								LITT	⌈	8	
ESA		8-05		G	1	3	1	KOSC	'	1	
								BAZE	'	1	
								LITT	⌈	8	

Recorder M. Hendrick, A. Amen

Data Entered By _____

Page 4 of 7Date of Collection 8/9/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	1	3	2	LITT	☒	10	
ESA		8-05		G	1	3	3	CRME	.	1	
								KOSC	::	4	
								LITT	☒	5	
ESA		8-05		G	1	3	4	KOSC	☒	3	
								LITT	☒	5	
ESA		8-05		G	1	3	5	KOSC	☒	7	
								LITT	::	3	
ESA		8-05		G	1	3	6	KOSC	☒	6	
								LITT	::	4	
ESA		8-05		G	1	3	7	KOSC	☒	7	
								LITT	::	3	
ESA		8-05		G	1	3	8	KOSC	:	2	
								LITT	☒	8	
ESA		8-05		G	1	3	9	KOSC	☒	5	
								LITT	☒	5	
ESA		8-05		G	1	3	10	KOSC	:	2	
								LITT	☒	8	

Recorder M. Hendrick + A. AmenPage 5 of 7

Data Entered By _____

Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	1	4	10	KOSC	::	3	
								LITT	□	7	
ESA		8-05		G	1	4	9	KOSC	::	2	
								STCO	'	1	
								LITT	□	7	
ESA		8-05		G	1	4	8	KOSC	□	7	
								LITT	::	3	
ESA		8-05		G	1	4	7	KOSC	□	5	
								LITT	□	5	
ESA		8-05		G	1	4	6	CAHE	'	1	
								CFME	'	1	
								KOSC	'	1	
								LITT	□	7	
ESA		8-05		G	1	4	5	KOSC	□	6	
								BAPE	::	2	
								LITT	::	2	
ESA		8-05		G	1	4	4	KOSC	□	7	
								LITT	::	3	

Recorder M. Hendrick & A. Amen

Data Entered By _____

Page 6 of 7

Date of Collection _____

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	1	4	3	KOSC	⌈	7	
								LITT	::	3	
ESA		8-05		G	1	4	2	BARE	..	2	
								LITT	⌈	8	
ESA		8-05		G	1	4	1	BARE	..	2	
								STO	.	1	
								LITT	⌈	7	
ESA		8-05		G	1	5	5	BOGR	.	1	
								KOSC	.	1	
								LITT	⌈	8	
ESA		8-05		G	1	5	4	KOSC	.	1	
								BARE	.	1	
								LITT	⌈	8	
ESA		8-05		G	1	5	3	KOSC	::	4	
								LITT	⌈	6	
ESA		8-05		G	1	5	2	CRME	.	1	
								KOSC	:	2	
								LITT	⌈	7	

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Date of Collection_____

Point Frame

[illegible]

PI – Dan Milchunas

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Date of Collection 8/10/11

Point Frame

[illegible]

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Date of Collection 8/10/05

[illegible]

Recorder A. Arriaga M. J. J.

Data Entered By _____

Page 3 of 8Date of Collection 8/11/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		D	1	2	9	POUR	..	4	
								LITT	..	6	
ESA		8-05		D	1	2	8	BOUR	..	3	
								LITT	□	4	
ESA		8-05		D	1	2	7	CANE	'	1	
								LITT	□	9	
ESA		8-05		D	1	2	6	CANE	'	1	
								BOUR	..	2	
								LITT	□	4	
ESA		8-05		D	1	2	5	CANE	'	1	
								BOUR	'	1	
								LITT	□	8	
ESA		8-05		D	1	2	4	BOUR	..	3	
								BOUR	'	1	
								THUR	'	1	
								LITT	..	5	
ESA		8-05		D	1	2	3	BOUR	..	2	
								BOUR	..	2	
								LITT	..	3	

Recorder A. AronoffPage 4 of 8Data Entered By Date of Collection 8/1/00

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-00			1	1	2	LITT	10	10	
ESA		8-00			1	1	1	BAFE	3	3	
								CAVE	1	1	
								FLOR	3	3	
								FLOR	3	3	
ESA		8-00			1	3	1	FARE	2	2	
								FLOR	1	1	
								FLOR	2	2	
								LITT	5	5	
ESA		8-00		D	1	3	2	LITT	10	10	
ESA		8-00		D	1	3	3	CRME	4	4	
								FLOR	1	1	
								FLOR	1	1	
								LITT	4	4	
ESA		8-00		D	1	3	4	BAFE	3	3	
								FLOR	1	1	
								LITT	6	6	

Recorder M. H. H. H. H.Page 3 of 8

Data Entered By _____

Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		D	1	3	5	CANE	.	1	
								BOGR	.	1	
								ECVI	.	1	
								LITT	11	4	
ESA		8-05		D	1	3	6	BOGR	.	1	
								OPPO	..	2	
								CANE	.	1	
								LITT	11	6	
ESA		8-05		D	1	3	7	BOGR	..	4	
								ARLO	.	1	
								LITT	11	5	
ESA		8-05		D	1	3	8	BAKE	.	1	
								BOGR	..	3	
								SFCO	.	2	
								LITT	11	4	
ESA		8-05		D	1	3	9	BOGR	..	2	
								LITT	11	8	
ESA		8-05		D	1	3	10	OPPO	.	1	

CANE . 1
 SFCO . 1
 BOGR . 1
 LITT 11 6

Recorder A. Arment N. Milchunas

Data Entered By _____

Page 6 of 8Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		D	1	4	10	LITT	10	10	
ESA		8-05		D	1	4	9	BOGR	10	6	
								OPHO	1	1	
								LITT	10	2	
ESA		8-05		D	1	4	8	BARE	10	4	
								BOGR	1	1	
								LITT	10	5	
ESA		8-05		D	1	4	7	BUDA	10	2	
								LITT	10	8	
ESA		8-05		D	1	4	6	BOGR	10	1	
								BARE	1	1	
								LITT	10	8	
ESA		8-05		D	1	4	5	BOGR	10	2	
								BOGR	10	1	
								LITT	10	1	
ESA		8-05		D	1	4	4	BOGR	10	4	
								STOB	1	1	
								LITT	10	5	

Recorder A. Amen + M. MendezPage 7 of 8

Data Entered By _____

Date of Collection 8/10/15

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
EA		8-05		D	1	1	3	BALE	••	5	
								APLO	•	1	
								BOGR	•	1	
								3	••	100	
EA		8-05		D	1	4	2	BALE	••	5	
								LITT	••	4	
EA		8-05		D	1	4	1	SPLO	•	1	
								LITT	•	4	
ESA		8-05		D	1	5	5	APLO	•	1	
								LITT	•	9	
ESA		8-05		D	1	5	4	BOGR	•	1	
								STCO	•	1	
								LITT	•	8	
EA		8-05		D	1	5	3	CRME	•	5	
								LITT	•	1	
								BALE	••	4	
EA		8-05		D	1	5	2	ECVI	•	1	

Site: 1
 Date: 8/10/15

Recorder M. Henkel, A. Amorim

Data Entered By _____

Page 8 of 8Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		D	1	5	1	ECVI	•	1	
								BOGR	••	4	
								LITT	••	5	
ESA		8-05		D	1	5	6	BOGR	•	1	
								CAHE	•	1	
								LITT	••	8	
ESA		8-05		D	1	5	7	BOGR	••	3	
								BUDA	•	1	
								BARE	•	1	
								LITT	••	5	
ESA		8-05		D	1	5	8	BARE	••	2	
								BOGR	•	1	
								LITT	••	4	
ESA		8-05		D	1	5	9	BOGR	••	5	
								CAHE	•	1	
								LITT	••	6	
ESA		8-05		D	1	5	10	BOGR	••	2	
								SIAB	•	1	

ARD
LITT •• 6

Recorder M. J. Milchunas

Data Entered By _____

Page 1 of 7Date of Collection 8/18/15

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	1	1	1	STRO	1	3	
								LITT	1	7	
ESA		8-05		E	1	1	2	OPPO	1	5	
								LITT	1	5	
ESA		8-05		E	1	1	3	CAHE	.	1	
								LITT	1	9	
ESA		8-05		E	1	1	4	CAHE	.	1	
								CHLE	.	1	
								KOFC	.	1	
								LITT	1	7	
ESA		8-05		E	1	1	5	CAHE	1	3	
								KOFC	.	1	
								LITT	1	6	
ESA		8-05		E	1	1	6	SIAB	1	3	
								LITT	1	7	
ESA		8-05		E	1	1	7	SIAB	.	1	
								KOFC	.	1	
								LITT	1	8	

Recorder A. Amen + M. Hordick

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	1	2	2	CAHE	•	1	
								LITT	☒	1	
ESA		8-05		E	1	2	2	SIAB	•	1	
								BAKE	•	•	
								LITT	☒	1	
ESA		8-05		E	1	2	1	BIGF	••	2	
								STCO	••	•	
								LITT	••	1	
ESA		8-05		E	1	3	1	BAKE	••	3	
								LITT	☒	6	
								BOGR	•	1	
ESA		8-05		E	1	3	2	STCO	•	1	
								BAKE	•	2	
								LITT	☒	7	
ESA		8-05		E	1	3	3	STCO	••	4	
								LITT	☒	6	
ESA		8-05		E	1	3	4	CAHE	••	3	

STCO

LITT

Recorder M. H. ...Data Entered By ...Page 4 of 7Date of Collection 5/13/11

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	1	3	5	STCO	1	3	
								LITT	1	4	
ESA		8-05		E	1	3	6	LITT	2	10	
ESA		8-05		E	1	3	7	LITT	1	1	
								LITT	2	9	
ESA		8-05		E	1	3	8	STCO	1	3	
								LITT	2	7	
ESA		8-05		E	1	3	9	SEAR	1	1	
								LITT	2	9	
ESA		8-05		E	1	3	10	BARE	1	1	
								LITT	2	9	
ESA		8-05		E	1	4	10	LITT	2	10	
ESA		8-05		E	1	4	11	FLOR	1	2	
								FLOR	1	1	
								LITT	2	7	
ESA		8-05		E	1	4	8	FLOR	2	1	
ESA		8-05		E	1	4	7				

Recorder A. Amen + M. Hindrichs

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	1	4	6	BAPE	••	2	
								LITT	□□	6	
ESA		8-05		E	1	4	5	BAPE	•	1	
								KUSC	•	1	
								LITT	□□	8	
ESA		8-05		E	1	4	4	OPPO	••	3	
								LITT	••	2	
ESA		8-05		E	1	4	3	BAPE	••	2	
								CAPE	•	1	
								LITT	••	2	
ESA		8-05		E	1	4	2	STCO	••	2	
								LITT	□□	8	
ESA		8-05		E	1	4	1	STCO	•	1	
								LITT	□□	9	
ESA		8-05		E	1	5	5	STCO	•	1	
								LITT	□□	9	
ESA		8-05		E	1	5	4	CAHE	•	1	

STCO •• 2
LITT □□ 4

Recorder M. H. Anderson

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		E	1	5	3	STAB	•	1	
								STAB	•	1	
								BALE	••	3	
								LITT	••	4	
ESA		8-05		E	1	5	2	STAB	•	1	
								CAHE	•	1	
								STAB	•	1	
								LITT	••	7	
ESA		8-05		E	1	5	1	CAHE	••	2	
								LITT	••	3	
ESA		8-05		E	1	5	6	CHAL	•	1	
								BALE	•	1	
								LITT	••	3	
ESA		8-05		E	1	5	7	OPTG	•	1	
								STAB	•	1	
								LITT	••	3	
ESA		8-05		E	1	5	8	BALE	••	3	
								LITT	••	4	

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Date of Collection 1/10/85

Point Frame

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Recorder M. Hendrick, A. Amen

Data Entered By _____

Page 1 of 5Date of Collection 8-10-05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		F	1	1	1	STCO	11	4	
								LITT	11	6	
ESA		8-05		F	1	1	2	KOSC	11	6	
								LITT	11	4	
ESA		8-05		F	1	1	3	ARFR	.	1	
								CRME	.	1	
								KOSC	.	1	
								LITT	21	7	
ESA		8-05		F	1	1	4	LITT	11	8	
								KOSC	11	6	
ESA		8-05		F	1	1	5	GRNY	.		
								CRME	11	1	
								CRME	.		
								LITT	11	1	
ESA		8-05		F	1	1	6	KOSC	11	1	
								LITT	.	1	
ESA		8-05		F	1	1	7	KOSC	11	1	
								LITT	11	7	

Recorder M. Heston

Data Entered By_____

Page 2 of 4

Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05	F	1	1		8	SPCO	..	2	
								SIAB	.	1	
								BAPE	.	1	
								LITT	11	2	
ESA		8-05	F	1	1		9	LEDE	.	1	
								KLOK	11	3	
								LITT	11	6	
ESA		8-05	F	1	1		10	STCO	..	2	
								LITT	11	8	
FTF		8-05	F	1	2		10	LMD	22	10	
FTF		8-05	F	1	2		10	SPCO	22	10	
								SPCO	22	10	
ESA		8-05	F	1	2		8	SPCO	..	2	
								SPCO	.	1	
								SPCO	22	10	
								SPCO	11	10	

Recorder A. ArnoldData Entered By Page 5 of 5Date of Collection

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		F	1	2	7	LFME	11	2	
								BAKE	11	1	
								LITT	11	2	
ESA		8-05		F	1	3	6	LFME	11	1	
								BAKE	11	1	
								LITT	11	1	
ESA		8-05		F	1	2	5	LFME	11	2	
								BAKE	11	1	
								LITT	11	1	
ESA		8-05		F	1	3	4	LFME	11	1	
								BAKE	11	1	
								LITT	11	1	
ESA		8-05		F	1	2	3	LFME	11	1	
								BAKE	11	1	
								LITT	11	1	
ESA		8-05		F	1	3	2	LFME	11	1	
								BAKE	11	1	
								LITT	11	1	
ESA		8-05		F	1	2	1	LFME	11	1	
								BAKE	11	1	
								LITT	11	1	

Recorder Wardell + A. Aron

Data Entered By _____

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Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		F	1	2	1	LOSC	•	1	
								LOSC	•	1	
								LITT	2	0	
ESA		8-05		F	1	3	1	BUDA	••	2	
								OPPO	•	1	
								LITT	2	7	
ESA		8-05		F	1	3	2	LOSC	•	1	
								CAHE	•	1	
								LITT	2	8	
ESA		8-05		F	1	3	3	CHLE	•	1	
								LITT	2	9	
ESA		8-05		F	1	3	4	CAHE	•	1	
								CHLE	••	2	
								LOSC	•	1	
								LITT	2	4	
ESA		8-05		F	1	3	5	CHLE	•	1	
								LOSC	••	2	

Total Basal Area = 11.7

Recorder M. Hernandez, A. Arce

Data Entered By_____

Page 5 of 1

Date of Collection 3/10/01

Point Frame

[illegible]

Recorder A. Aranda-Munoz
Data Entered By _____Page 4 of 5
Date of Collection 8/1/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		F	1	4	9	POCO	1	1	
								POCO	2	1	
ESA		8-05		F	1	4	5	BAPE	1	3	
								POCO	2	1	
ESA		8-05		F	1	4	7	PAU	2	1	
ESA		8-05		F	1	4	6	POCO	2	1	
								POCO	1	1	
ESA		8-05		F	1	4	5	SHHY	1	1	
								ASTR	1	1	
								SHHY	2	1	
ESA		8-05		F	1	4	1	POCO	1	1	
								BOGIE	1	1	
								POCO	2	1	
ESA		8-05		F	1	4	7	SIAM	1	1	
								POCO	2	1	
ESA		8-05		F	1	4	2	POCO	1	1	
								LIT	2	1	
ESA		8-05		F	1	4	1	POCO	1	1	

LIT N

Recorder M. HendricksonData Entered By Page 7 of 7Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		F	1	5	5	ARPR	1		
								TUFR	1	1	
								LIFF	11	8	
ESA		8-05		F	1	5	4	CRME	1	1	
								SIAB	1	1	
								LITT	11	8	
ESA		8-05		F	1	5	3	OPPO	1	2	
								LIFF	1	1	
								LITT	11	8	
ESA		8-05		F	1	5	2	SIAB	1	1	
								LIFF	1	1	
								LITT	11	8	
ESA		8-05		F	1	5	1	OPPO	1	2	
								LITT	11	8	
ESA		8-05		F	1	5	6	LIFF	1	2	
								LITT	11	8	
ESA		8-05		F	1	5	7	LIFF	1	1	
								LIFF	11	8	

PI – Dan Milchunas

Page 8 of 11

Date of Collection 8/10/05

Point Frame

[illegible]

Recorder A. August 11/05

Data Entered By _____

Page 1 of 6Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	Z	1	1	LITT	2	10	
ESA		8-05		G	Z	1	2	LITT	2	10	
ESA		8-05		G	Z	1	3	STCO	0	1	
								KOSC	2	5	
								LITT	2	7	
ESA		8-05		G	Z	1	4	KOSC	2	3	
								LITT	2	7	
ESA		8-05		G	Z	1	5		0	1	
								KOSC	2	5	
								LITT	2	7	
ESA		8-05		G	Z	1	6	KOSC	0	1	
								LITT	2	9	
ESA		8-05		G	Z	1	7	KOSC	2	2	
								LITT	2	8	
ESA		8-05		G	Z	1	8	AGSM	0	1	
								KOSC	2	5	
								LITT	2	4	
ESA		8-05		G	Z	1	9	KOSC	2	5	
								LITT	2	5	

Recorder A. Aron + M. HernandezData Entered By Page 3 of 6Date of Collection 8/16/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	2	2	2	KOSC	••	2	
								LITT	■	8	
ESA		8-05		G	2	2	1	KOSC	••	5	
								LITT	••	5	
ESA		8-05		G	2	3	1	KOSC	•	1	
								LITT	■	9	
ESA		8-05		G	2	3	2	KOSC	••	2	
								LITT	••	2	
ESA		8-05		G	2	3	3	KOSC	••	2	
								LITT	■	8	
ESA		8-05		G	2	3	4	KOSC	••	4	
								LITT	■	6	
ESA		8-05		G	2	3	5	KOSC	•	2	
								LARE	•	1	
								LITT	■	7	
ESA		8-05		G	2	3	6	KOSC	•	1	
								LITT	■	9	

Recorder M. Hendrick, A. Armer

Data Entered By _____

Page 4 of 6Date of Collection 8/10/10

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	2	3	7	LITT	✗	10	
ESA		8-05		G	2	3	8	KOSC	::	3	
								LITT	W	7	
ESA		8-05		G	2	3	9	STLO	::	3	
								LITT	W	7	
ESA		8-05		G	2	3	10	LITT	✗	10	
ESA		8-05		G	2	4	10	STLO	::	5	
								LITT	::	5	
ESA		8-05		G	2	4	9	KOSC	::	2	
								LITT	W	8	
ESA		8-05		G	2	4	7	KOSC	::	2	
								POGR	::	2	
								LITT	::	6	
ESA		8-05		G	2	4	7	KOSC	::	6	
								LITT	::	4	
ESA		8-05		G	2	4	6	KOSC	::	3	
								LITT	W	7	

Recorder A. Arriaga M. H. H. H.

Data Entered By _____

Page 5 of 6Date of Collection 8/10/05

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	2	4	5	KOSC		9	
								LITT	'	1	
ESA		7-05		G		1	4	KOSC	''	3	
								LARE		1	
								LITT	''	6	
ESA		8-05		G	2	4	3	LARE	'	1	
								KOSC	'	1	
								LITT		8	
ESA		8-05		G	2	4	2	STCO	''	2	
								KOSC	'	1	
								LITT	''	7	
ESA		8-05		G	2	4	1	LARE	''	3	
								KOSC	''	3	
								ARFK	'	1	
								LITT	''	3	
ESA		8-05		G	2	5	5	KOSC	'	3	
								LITT	''	2	

Recorder M. Hendrick, A. Aronson
 Data Entered By _____

Page 6 of 6
 Date of Collection 8/10/10

Point Frame

Site	Data Type	Month	Year	Treatment	Rep	Transect	Plot	Species	Basal Dots	Cover Count	Notes
ESA		8-05		G	2	5	4	KOSC	.	1	
								LITT	W	9	
ESA		8-05		G	2	5	3	KOSC	..	4	
								LITT	W	6	
ESA		8-05		G	2	5	2	CRME	.	1	
								LITT	W	9	
ESA		8-05		G	2	5	1	LARE	..	3	
								LITT	W	7	
ESA		8-05		G	2	5	10	KOSC	..	3	
								LITT	W	7	
ESA		8-05		G	2	5	7	CIAN	.	1	
								LITT	W	1	
ESA		8-05		G	2	5	3	KOSC	.	1	
								LITT	W	9	
ESA		8-05		G	2	5	1	KOSC	..	3	
								LITT	W	7	
ESA		8-05		G	2	5	10	KOSC	..	6	
								LITT	..	4	

ESA (Ecosystem Stress Area) – ARS #03
PI – Dan Milchunas

Objective: to conduct long-term monitoring of the vegetative characteristics of an area that was nutrient stressed during the International Biome Project. Sampling is conducted once every other year.

ESA Map and Experimental Design

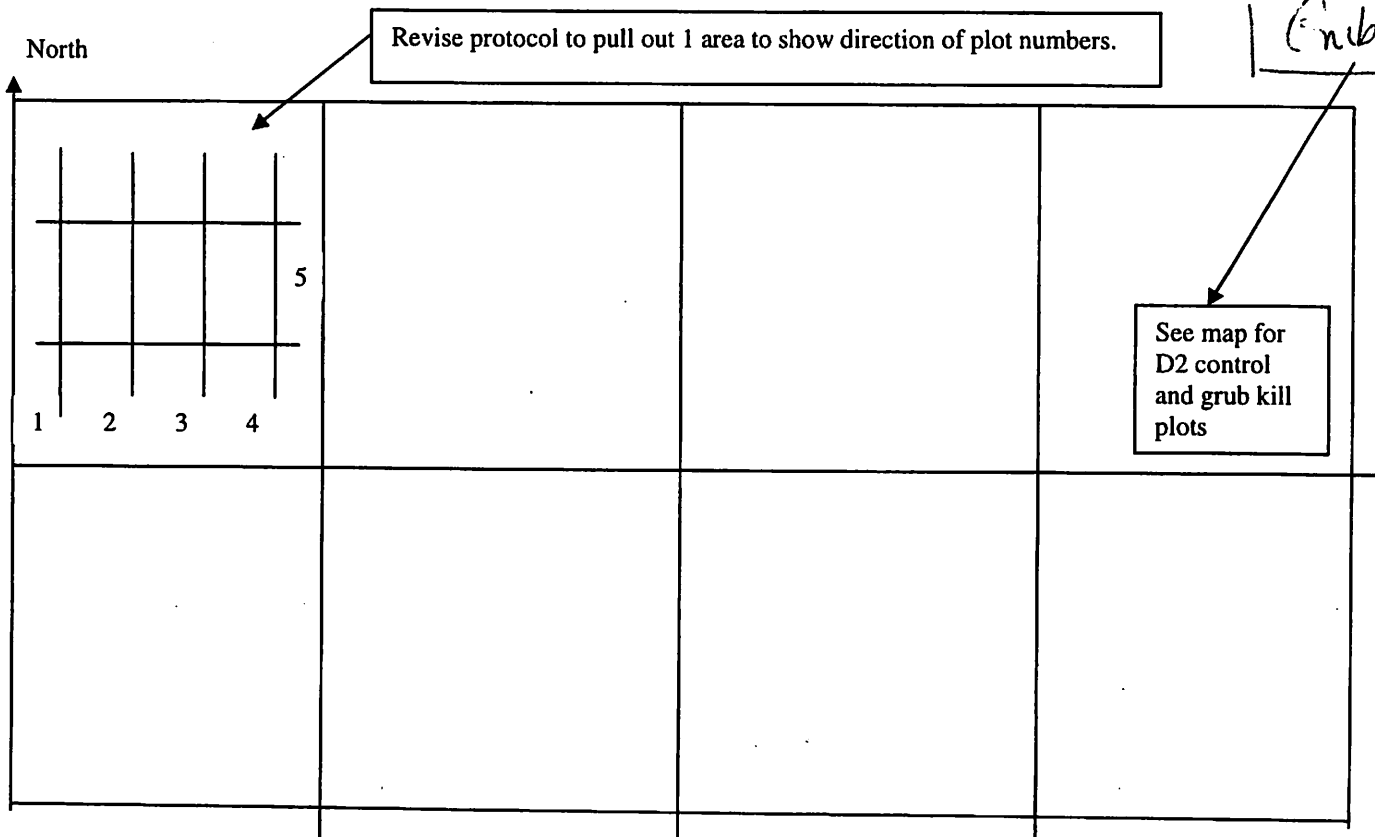
Blocks – There are 2 blocks, one to the east and one to the west. Data need to be collected in a total of 9 areas. 2 reps repeat the same treatment (D1 control, D2 control, E1 irrigation, E2 irrigation, F1 fertilization, F2 fertilization, G1 irrigation and fertilization, G2 irrigation and fertilization). In addition, there is a part of D2 that contains the grub kill. The area that contains the grub kill should be recorded as D2-G on all data sheets. The grub kill plots are marked with tent stakes rather than rebar and need to be identified with unique flagging.

Transects 1-5 – see transect lines below. The transects in the grub kill area of D2 is recorded as “G”. Plot numbers range from 1-50 in the grub kill area of D2 only. Control transects in the D2 grub kill area so no follow the standard design below. Please follow the attached map for the D2 and grub kill plots.

Plots 1-10 – see plots below. Permanent plots were established by installing transects of rebar. Each rebar has a blaze orange plastic cap. The transect and plots number need to be re-written on each cap with sharpie prior to sampling.

Important: these are permanent plots, so it is very important that plot numbers and transects are always recorded correctly.

*Please note that the Humus Experimental plots are also located within seven of the eight ESA blocks. Be careful not to tread across the Humus Plots. See Mark, Nicole, or Indy (PI) to find out how the humus plots are set up.



Sampling Protocol

Density Sampling

A 0.25 m² circular quadrat with four quarter plots is placed with the cross bars in the northeast corner. Collect data starting in the northeast quarter plot (1) and work your way around clockwise to #4. Count all of the individuals of each species rooted within each quarter plot and record the data under the appropriate quarter plot number. Use the species column to record the correct species code. If a species is not found in a quarter plot, then enter a "0" in that cell on the data sheet. We do not count the number of individuals of Bogr or Buda.

Point Frame Sampling for Basal Cover

Use the ten point frame to estimate cover at each plot location. The point frame should be placed at a random angle around the rebar. This will provide a total of 10 points of contact for each plot. The categories to record are plant species code, litter (code = litt), bare ground (code = bare), and lichen (code = pach). Be very critical about what the contact really is. If the tip intercepts dead crown, record it as litter. If the tip intercepts live crown of a plant, record the species code. The accuracy of the method is determined by how carefully contacts are identified. Record only what the exact tip of the point touches at the soil surface. Ignore hits on leaves as point move through the frame to touch what occurs at the basal level.