

BYLAE 2a

GEMEENSKAPSAMESTELLINGS-ANALISE GEBASEER OP DIE GROEIVORMS VAN DIE PLANTTAKSONS IN DIE ONDERSKEIE PLANTGEMEENSKAPPE MET DIE GRASVELDBLOOM-GEDEELTE VAN DIE OLIFANTS- RIVIERSISTEEM GEASSOSIEER

Plant community number: 1

Trees

No Trees

Total cover for species in group: 0.00%

Shrubs

No Shrubs

Total cover for species in group: 0.00%

Dwarf Shrubs

No Dwarf Shrubs

Total cover for species in group: 0.00%

Grasses

Correlation coefficient=+0.48

Standard error of the mean= 6.97

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Eragrostis plana	2 20.15	7.96	+12.19
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Normal competition range:

Cynodon dactylon	1 5.04	1.47	+3.57
Eragrostis capensis	1 0.46	1.47	-1.02
Sporobolus africanus	1 0.20	1.47	-1.27
Cyperus esculentus	1 0.20	1.47	-1.27
Eragrostis curvula	2 3.08	7.96	-4.89

Weak competitors:

Themeda triandra 2 0.66 7.96 -7.31
Total cover for species in group: 29.78%

Forbs

Correlation coefficient=+0.74
Standard error of the mean= 0.24

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Oxalis obliquifolia	2	0.91	0.59	+0.32
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Normal competition range:

Monopsis decipiens	2	0.66	0.59	+0.06
Helichrysum rugulosum	2	0.66	0.59	+0.06
Tagetes minuta	1	0.00	0.01	-0.00
Euphorbia striata	2	0.50	0.59	-0.09

Weak competitors:

Berkheya pinnatifida	2	0.25	0.59	-0.34
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Total cover for species in group: 2.98%

Plant community Structure

Growth Form	Cover
Tree	0.00%
Shrub	0.00%
Dwarf shrub	0.00%
Grass/Forb	29.78% 2.98%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 32.76%
Grass proportion= 90.90%
Forb proportion= 9.10%
Dwarf shrub proportion= 0.00%
Shrub proportion= 0.00%
Tree proportion= 0.00%

Plant community number: 2

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Trees

No Trees

Total cover for species in group: 0.00%

Shrubs

No Shrubs

Total cover for species in group: 0.00%

Dwarf Shrubs

No Dwarf Shrubs

Total cover for species in group: 0.00%

Grasses

Correlation coefficient=+0.66

Standard error of the mean= 1.82

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Themeda triandra	4	9.96	3.96	+6.00
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Normal competition range:

Harpochloa falx	1	0.23	-0.86	+1.09
Eragrostis capensis	1	0.10	-0.86	+0.96
Brachiaria serrata	1	0.10	-0.86	+0.96
Eragrostis plana	4	4.92	3.96	+0.96
Aristida bipartita	2	1.64	0.75	+0.89
Cynodon dactylon	3	2.68	2.35	+0.32
Cyperus longus var. tenuiflorus	2	1.03	0.75	+0.29
Hyparrhenia tamba	2	0.50	0.75	-0.24
Setaria sphacelata var. sphacelata	3	2.04	2.35	-0.31
Elionurus muticus	2	0.20	0.75	-0.55
Setaria incrassata	2	0.13	0.75	-0.62
Brachiaria eruciformis	3	1.36	2.35	-0.99
Eragrostis curvula	3	1.26	2.35	-1.09
Fingerhuthia sesleriiformis	4	2.80	3.96	-1.16
Setaria nigrirostris	3	1.09	2.35	-1.27
Digitaria eriantha	3	0.96	2.35	-1.40
Panicum coloratum	3	0.65	2.35	-1.70

Weak competitors:

Cymbopogon plurinodis 3 0.22 2.35 -2.13
Total cover for species in group: 31.86%

Forbs

Correlation coefficient=+0.68
Standard error of the mean= 0.64

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Haplocarpha scaposa	3	3.36	1.12	+2.24
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Normal competition range:

Tephrosia longipes	1	0.23	-0.04	+0.26
Falckia oblonga	3	1.36	1.12	+0.25
Berkheya pinnatifida	4	1.89	1.69	+0.20
Helichrysum pilosellum	1	0.10	-0.04	+0.14
Tephrosia capensis	1	0.10	-0.04	+0.14
Helichrysum rugulosum	1	0.10	-0.04	+0.14
Scabiosa columbaria	2	0.65	0.54	+0.12
Cirsium vulgare	1	0.03	-0.04	+0.06
Hibiscus trionum	1	0.03	-0.04	+0.06
Walafrida densiflora	1	0.00	-0.04	+0.04
Anthospermum pumilum subsp. rigidum	2	0.25	0.54	-0.29
Jamesbrittenia montana	2	0.20	0.54	-0.34
Berkheya radula	2	0.20	0.54	-0.34
Tagetes minuta	2	0.13	0.54	-0.41
Conyza podocephala	2	0.13	0.54	-0.41
Monsonia angustifolia	2	0.03	0.54	-0.51
Ledebouria sp	3	0.53	1.12	-0.59

Weak competitors:

Hemizygia sp.	4	0.96	1.69	-0.73
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Total cover for species in group: 10.26%

Plant community Structure

Growth Form				
Tree		0.00%		
Shrub		0.00%		
Dwarf shrub		0.00%		
Grass/Forb	BBBBBBB00	31.86%	10.26%	
% Cover:	0	2	5	7
		5	0	5
				1
				0
				0

Total class cover= 42.11%
Grass proportion= 75.64%

Forb proportion= 24.36%
Dwarf shrub proportion= 0.00%
Shrub proportion= 0.00%
Tree proportion= 0.00%

Plant community number: 3

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Trees

All coordinates on one point - no variation
Total cover for species in group: 0.05%

Shrubs

No Shrubs
Total cover for species in group: 0.00%

Dwarf Shrubs

All coordinates on one point - no variation
Total cover for species in group: 6.86%

Grasses

Correlation coefficient=+0.57
Standard error of the mean= 1.51

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Themeda triandra	2	6.30	2.66	+3.64
Setaria sphacelata var. sphacelata	2	4.28	2.66	+1.62

Normal competition range:

Phragmites australis	1	1.82	0.73	+1.09
Andropogon appendiculatus	2	3.08	2.66	+0.41
Cymbopogon plurinodis	1	0.81	0.73	+0.08
Setaria incrassata	1	0.81	0.73	+0.08
Harpochloa falx	1	0.81	0.73	+0.08
Eragrostis curvula	2	2.67	2.66	+0.01
Hyparrhenia tamba	2	2.62	2.66	-0.04
Cynodon dactylon	1	0.46	0.73	-0.27
Cyperus longus var. tenuiflorus	1	0.20	0.73	-0.53
Eragrostis capensis	1	0.20	0.73	-0.53
Panicum dregeanum	2	1.72	2.66	-0.95

Weak competitors:

<i>Brachiaria brizantha</i>	2	0.40	2.66	-2.26
<i>Setaria nigrirostris</i>	2	0.25	2.66	-2.41
Total cover for species in group: 26.40%				

Forbs

Correlation coefficient=+0.53
Standard error of the mean= 0.23

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Conyza podocephala</i>	2	0.91	0.40	+0.51
<i>Helichrysum rugulosum</i>	1	0.46	0.13	+0.33
<i>Tagetes minuta</i>	2	0.66	0.40	+0.26

Normal competition range:

<i>Oenothera erythrosepala</i>	2	0.50	0.40	+0.11
<i>Crabbea hirsuta</i>	1	0.20	0.13	+0.07
<i>Hermannia transvaalensis</i>	1	0.20	0.13	+0.07
<i>Oxalis obliquifolia</i>	2	0.40	0.40	+0.00
<i>Cirsium vulgare</i>	1	0.05	0.13	-0.08
<i>Hibiscus trionum</i>	1	0.05	0.13	-0.08
<i>Berkheya radula</i>	1	0.05	0.13	-0.08
<i>Hibiscus microcarpus</i>	1	0.00	0.13	-0.12
<i>Ipomoea crassipes</i>	1	0.00	0.13	-0.12
<i>Persicaria lapathifolia</i>	2	0.25	0.40	-0.15
<i>Commelina africana</i> var. <i>krebsiana</i>	2	0.25	0.40	-0.15

Weak competitors:

<i>Verbena bonariensis</i>	2	0.10	0.40	-0.30
<i>Berkheya pinnatifida</i>	2	0.10	0.40	-0.30
Total cover for species in group: 4.18%				

Plant community Structure

Growth Form					
Tree		0.05%			
Shrub		0.00%			
Dwarf shrub	B	6.86%			
Grass/Forb	BBBBB	26.40%	4.18%		

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 37.50%



Grass proportion= 70.41%
Forb proportion= 11.16%
Dwarf shrub proportion= 18.30%
Shrub proportion= 0.00%
Tree proportion= 0.13%

Plant community number: 4

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Trees

No Trees

Total cover for species in group: 0.00%

Shrubs

Correlation coefficient=+0.86
Standard error of the mean= 0.05

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Normal competition range:

Rubus fruticosus	1	0.13	0.09	+0.04
Rhus gerrardii	3	0.20	0.20	+0.00
Diospyros lycioides subsp. sericea	1	0.06	0.09	-0.04
Total cover for species in group: 0.39%				

Dwarf Shrubs

Correlation coefficient=+0.99
Standard error of the mean= 0.03

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Gomhocarpus physocarpus	1	0.06	0.02	+0.04
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Normal competition range:

Clutia natalensis	3	0.43	0.42	+0.02
Indigofera frondosa	1	0.01	0.02	-0.00
Gomphocarpus fruticosus	1	0.00	0.02	-0.02
Gomphostigma virgatum	2	0.19	0.22	-0.03
Total cover for species in group: 0.69%				

Grasses

Correlation coefficient=+0.57
Standard error of the mean= 1.41

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Themeda triandra	7	9.86	3.27	+6.59
Phragmites australis	3	3.95	1.13	+2.82
Aristida sp.	2	3.30	0.59	+2.70
Cynodon dactylon	6	4.89	2.74	+2.16
Cyperus latifolius	2	2.56	0.59	+1.97

Normal competition range:

Hyparrhenia tamba	3	2.50	1.13	+1.37
Leersia hexandra	1	0.71	0.06	+0.65
Paspalum scrobiculatum	1	0.52	0.06	+0.46
Microchloa caffra	1	0.52	0.06	+0.46
Cyperus longus var. tenuiflorus	7	3.61	3.27	+0.34
Urochloa panicoides	1	0.36	0.06	+0.30
Imperata cylindrica	1	0.36	0.06	+0.30
Panicum coloratum	1	0.23	0.06	+0.17
Mariscus congestus	1	0.13	0.06	+0.07
Setaria pallide-fusca	1	0.13	0.06	+0.07
Eragrostis lappula	1	0.13	0.06	+0.07
Cyperus marginatus	1	0.13	0.06	+0.07
Aristida congesta subsp. barbicollis	1	0.13	0.06	+0.07
Eragrostis racemosa	1	0.13	0.06	+0.07
Diheteropogon amplexans	1	0.13	0.06	+0.07
Brachiaria serrata	1	0.13	0.06	+0.07
Heteropogon contortus	5	2.25	2.20	+0.05
Kyllinga alba	1	0.06	0.06	-0.00
Trichoneura grandiglumis	1	0.01	0.06	-0.04
Bromus catharticus	1	0.01	0.06	-0.04
Tristachya leucothrix	1	0.00	0.06	-0.06
Hemarthria altissima	4	1.58	1.66	-0.08
Alloteropsis semialata	2	0.36	0.59	-0.23
Aristida congesta subsp. congesta	2	0.36	0.59	-0.23
Miscanthus junceus	2	0.29	0.59	-0.31
Setaria nigrirostris	3	0.78	1.13	-0.35
Cymbopogon plurinodis	2	0.19	0.59	-0.41
Cyperus fastigiatus	3	0.72	1.13	-0.41
Eragrostis planiculmis	2	0.11	0.59	-0.48
Andropogon appendiculatus	2	0.11	0.59	-0.48
Scirpus burkei	4	1.15	1.66	-0.51
Elionurus muticus	3	0.55	1.13	-0.58
Helictotrichon turgidulum	3	0.42	1.13	-0.71
Digitaria eriantha	3	0.26	1.13	-0.87
Paspalum dilatatum	3	0.20	1.13	-0.93
Setaria sphacelata var. sphacelata	4	0.60	1.66	-1.06
Harpochloa falx	4	0.55	1.66	-1.12

Aristida transvaalensis	4	0.43	1.66	-1.23
Setaria incrassata	4	0.30	1.66	-1.36
Eragrostis capensis	4	0.30	1.66	-1.36
Hyparrhenia hirta	5	0.84	2.20	-1.36

Weak competitors:

Brachiaria brizantha	5	0.65	2.20	-1.55
Eragrostis plana	5	0.58	2.20	-1.62
Eragrostis curvula	7	1.54	3.27	-1.73
Eragrostis gummiflua	5	0.43	2.20	-1.77

Total cover for species in group: 50.05%

Forbs

Correlation coefficient=+0.43
Standard error of the mean= 0.17

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Helichrysum mundtii	1	0.71	0.11	+0.60
Helichrysum rugulosum	2	0.49	0.18	+0.31
Commelina africana var. lancispatha	1	0.36	0.11	+0.25
Persicaria lapathifolia	3	0.50	0.25	+0.25
Bidens formosa	3	0.43	0.25	+0.18

Normal competition range:

Schkuhria pinnata	1	0.23	0.11	+0.12
Pteridium aquilinum	2	0.29	0.18	+0.11
Tagetes minuta	5	0.49	0.40	+0.09
Chamaecrista comosa	2	0.24	0.18	+0.06
Eriosema salignum	1	0.13	0.11	+0.02
Haplocarpha scaposa	1	0.13	0.11	+0.02
Cineraria lyrata	1	0.06	0.11	-0.05
Chenopodium ambrosioides	1	0.06	0.11	-0.05
Monsonia angustifolia	1	0.06	0.11	-0.05
Oenothera rosea	1	0.06	0.11	-0.05
Convolvulus sagittatus	1	0.06	0.11	-0.05
Rumex crispus	1	0.06	0.11	-0.05
Monopsis decipiens	1	0.06	0.11	-0.05
Ipomoea crassipes	1	0.06	0.11	-0.05
Hermannia transvaalensis	1	0.06	0.11	-0.05
Berkheya pinnatifida	1	0.06	0.11	-0.05
Mentha longifolia subsp. polyadena	1	0.01	0.11	-0.09
Verbena bonariensis	1	0.01	0.11	-0.09
Argyrolobium tuberosum	1	0.01	0.11	-0.09
Walafriida densiflora	1	0.01	0.11	-0.09
Hypoxis rigidula	1	0.01	0.11	-0.09
Hermannia depressa	1	0.01	0.11	-0.09
Geigeria burkei	1	0.00	0.11	-0.11
Polygala hottentotta	1	0.00	0.11	-0.11

Acalypha caperonioides 2 0.02 0.18 -0.16

Weak competitors:

Berkheya radula 3 0.07 0.25 -0.18
Commelina africana var. *krebsiana* 5 0.22 0.40 -0.18
Euphorbia striata 3 0.02 0.25 -0.23
 Total cover for species in group: 4.98%

Plant community Structure

Growth Form
 Tree | 0.00%
 Shrub | 0.39%
 Dwarf shrub | 0.69%
 Grass/Forb |BBBBBBBBBBBB 50.05% 4.98%

% Cover: 0 2 5 7 1
 5 0 5 0
 0

Total class cover= 56.11%
 Grass proportion= 89.19%
 Forb proportion= 8.88%
 Dwarf shrub proportion= 1.23%
 Shrub proportion= 0.69%
 Tree proportion= 0.00%

Plant community number: 5

Trees

No Trees

Total cover for species in group: 0.00%

Shrubs

All coordinates on one point - no variation

Total cover for species in group: 0.02%

Dwarf Shrubs

Correlation coefficient=+1.00
 Standard error of the mean= 0.00

(F)	Actual cover	Pred. cover	Difference
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Normal competition range:

Gomphostigma virgatum	1	0.32	0.32	-0.00
Gomhocarpus physocarpus	1	0.32	0.32	-0.00
Clutia natalensis	5	0.69	0.69	-0.00
Total cover for species in group:				1.33%

Grasses

Correlation coefficient=+0.43
Standard error of the mean= 2.14

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Eragrostis plana	5	12.88	2.34	+10.54
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Normal competition range:

Pycneus macranthus	1	0.99	-0.06	+1.05
Miscanthus junceus	1	0.99	-0.06	+1.05
Cynodon dactylon	5	3.17	2.34	+0.83
Cyperus fastigiatus	5	3.08	2.34	+0.74
Mariscus congestus	1	0.18	-0.06	+0.24
Urochloa panicoides	1	0.18	-0.06	+0.24
Harpochloa falx	1	0.18	-0.06	+0.24
Aristida transvaalensis	1	0.08	-0.06	+0.14
Brachiaria eruciformis	1	0.08	-0.06	+0.14
Setaria nigristrostris	1	0.08	-0.06	+0.14
Echinochloa crus-galli	1	0.02	-0.06	+0.08
Juncus lomatoophyllus	1	0.02	-0.06	+0.08
Cymbopogon plurinodis	1	0.00	-0.06	+0.06
Scirpus burkei	3	0.91	1.14	-0.23
Bromus catharticus	2	0.20	0.54	-0.34
Digitaria eriantha	3	0.77	1.14	-0.38
Helictotrichon turgidulum	2	0.10	0.54	-0.44
Eragrostis planiculmis	5	1.83	2.34	-0.51
Paspalum dilatatum	3	0.52	1.14	-0.62
Setaria pallide-fusca	3	0.44	1.14	-0.70
Agrostis lachnantha var. lachnantha	3	0.34	1.14	-0.80
Andropogon appendiculatus	3	0.28	1.14	-0.86
Setaria incrassata	4	0.77	1.74	-0.98
Hyparrhenia hirta	3	0.12	1.14	-1.02
Eragrostis curvula	5	1.27	2.34	-1.07
Hemarthria altissima	4	0.56	1.74	-1.18
Cyperus longus var. tenuiflorus	5	0.95	2.34	-1.39
Themeda triandra	5	0.89	2.34	-1.45
Brachiaria brizantha	5	0.68	2.34	-1.66
Setaria sphacelata var. sphacelata	5	0.44	2.34	-1.90
Total cover for species in group:				33.02%



Forbs

Correlation coefficient=+0.83
Standard error of the mean= 0.11

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:			
Berkheya pinnatifida	5 0.75	0.50	+0.25
Oenothera rosea	3 0.44	0.27	+0.18
Stachys hyssopoides	1 0.18	0.03	+0.15
Rumex crispus	4 0.53	0.38	+0.15
Normal competition range:			
Tagetes minuta	5 0.58	0.50	+0.08
Mentha longifolia subsp. polyadena	1 0.08	0.03	+0.05
Commelina africana var. lancispatha	1 0.08	0.03	+0.05
Vigna vexillata var. angustifolia	1 0.08	0.03	+0.05
Gomphrena celosioides	1 0.08	0.03	+0.05
Oxalis obliquifolia	1 0.08	0.03	+0.05
Walafrida densiflora	1 0.08	0.03	+0.05
Hermannia depressa	1 0.08	0.03	+0.05
Helichrysum rugulosum	1 0.08	0.03	+0.05
Commelina africana var. krebsiana	3 0.28	0.27	+0.02
Bidens formosa	1 0.02	0.03	-0.01
Euphorbia striata	1 0.02	0.03	-0.01
Schkuhria pinnata	1 0.02	0.03	-0.01
Conyza podocephala	3 0.24	0.27	-0.03
Argyrolobium tuberosum	1 0.00	0.03	-0.03
Helichrysum nudifolium	1 0.00	0.03	-0.03
Cirsium vulgare	3 0.20	0.27	-0.06
Persicaria lapathifolia	5 0.40	0.50	-0.10
Weak competitors:			
Monsonia angustifolia	2 0.02	0.15	-0.13
Convolvulus sagittatus	2 0.02	0.15	-0.13
Lepidium virginicum	2 0.02	0.15	-0.13
Crabbea acaulis	2 0.00	0.15	-0.14
Verbena bonariensis	3 0.10	0.27	-0.16
Berkheya radula	4 0.14	0.38	-0.24
Total cover for species in group: 4.62%			

Plant community Structure

Growth Form					
Tree					0.00%
Shrub					0.02%
Dwarf shrub					1.33%
Grass/Forb		BBBBBB			33.02% 4.62%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 39.00%
 Grass proportion= 84.68%
 Forb proportion= 11.86%
 Dwarf shrub proportion= 3.41%
 Shrub proportion= 0.05%
 Tree proportion= 0.00%

Plant community number: 6

Trees

Correlation coefficient=+1.00
 Total cover for species in group: 0.31%

Shrubs

Correlation coefficient=+1.00
 Total cover for species in group: 3.91%

Dwarf Shrubs

Correlation coefficient=+0.42
 Standard error of the mean= 0.28

	Actual	Pred.	Differ-
(F)	cover	cover	ence
	-----	-----	-----

Normal competition range:

Gomhocarpus physocarpus	3	0.84	0.59	+0.25
Clutia natalensis	5	0.81	0.72	+0.09
Indigofera frondosa	1	0.42	0.47	-0.05

Weak competitors:

Gomphostigma virgatum	4	0.37	0.66	-0.28
Total cover for species in group: 2.44%				



Grasses

Correlation coefficient=+0.74
Standard error of the mean= 0.51

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
Hemarthria altissima	6	2.94	1.63	+1.31
Eragrostis plana	5	2.32	1.32	+1.00
Digitaria eriantha	3	1.67	0.69	+0.97
Normal competition range:				
Miscanthus junceus	5	1.83	1.32	+0.51
Themeda triandra	6	2.02	1.63	+0.38
Eragrostis curvula	3	1.02	0.69	+0.33
Setaria incrassata	3	0.96	0.69	+0.26
Leersia hexandra	1	0.27	0.07	+0.20
Agrostis lachnantha var. lachnantha	2	0.57	0.38	+0.19
Aristida transvaalensis	2	0.54	0.38	+0.16
Brachiaria brizantha	6	1.76	1.63	+0.13
Setaria pallide-fusca	1	0.15	0.07	+0.09
Cyperus marginatus	1	0.15	0.07	+0.09
Urochloa panicoides	1	0.15	0.07	+0.09
Hyparrhenia hirta	3	0.76	0.69	+0.06
Cymbopogon plurinodis	2	0.42	0.38	+0.04
Eragrostis planiculmis	3	0.72	0.69	+0.03
Setaria nigrirostris	1	0.07	0.07	+0.00
Eragrostis capensis	1	0.07	0.07	+0.00
Diheteropogon amplexans	1	0.07	0.07	+0.00
Juncus lomatophyllus	1	0.02	0.07	-0.05
Hyparrhenia tamba	1	0.00	0.07	-0.06
Elionurus muticus	1	0.00	0.07	-0.06
Scirpus burkei	2	0.22	0.38	-0.16
Cynodon dactylon	3	0.28	0.69	-0.41
Cyperus fastigiatus	4	0.55	1.01	-0.45
Setaria sphacelata var. sphacelata	5	0.86	1.32	-0.46
Paspalum dilatatum	3	0.20	0.69	-0.49
Weak competitors:				
Panicum coloratum	3	0.15	0.69	-0.54
Cyperus longus var. tenuiflorus	5	0.76	1.32	-0.56
Harpochloa falx	5	0.62	1.32	-0.70
Helictotrichon turgidulum	5	0.37	1.32	-0.95
Andropogon appendiculatus	5	0.37	1.32	-0.95
Total cover for species in group: 22.85%				

Forbs

Correlation coefficient=+0.49
Standard error of the mean= 0.48

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Galium capense subsp. garipense	3	2.05	0.40	+1.65
Persicaria lapathifolia	6	1.95	0.88	+1.08
Tagetes minuta	4	1.14	0.56	+0.59
Normal competition range:				
Tephrosia capensis	1	0.27	0.08	+0.19
Helichrysum mundtii	2	0.34	0.24	+0.10
Aster squamatus	1	0.15	0.08	+0.08
Lessertia stricta	1	0.15	0.08	+0.08
Agrimonia bracteata	1	0.07	0.08	-0.01
Bidens formosa	1	0.07	0.08	-0.01
Oxalis obliquifolia	1	0.07	0.08	-0.01
Wahlenbergia undulata	1	0.02	0.08	-0.06
Convolvulus sagittatus	1	0.02	0.08	-0.06
Polygala hottentotta	2	0.13	0.24	-0.10
Berkheya pinnatifida	2	0.13	0.24	-0.10
Euphorbia striata	2	0.08	0.24	-0.15
Schkuhria pinnata	2	0.08	0.24	-0.15
Berkheya radula	3	0.22	0.40	-0.18
Monsonia angustifolia	3	0.20	0.40	-0.20
Dicliptera clinopodia	2	0.03	0.24	-0.20
Commelina africana var. krebsiana	2	0.03	0.24	-0.20
Oenothera rosea	3	0.19	0.40	-0.21
Rumex crispus	4	0.30	0.56	-0.26
Argyrolobium tuberosum	4	0.24	0.56	-0.32
Verbena bonariensis	4	0.10	0.56	-0.46
Weak competitors:				
Conyza podocephala	6	0.38	0.88	-0.49
Commelina africana var. lancispatha	6	0.30	0.88	-0.58
Total cover for species in group:		8.72%		

Plant community Structure

Growth Form				
Tree		0.31%		
Shrub		3.91%		
Dwarf shrub		2.44%		
Grass/Forb	BBBBBØ	22.85%	8.72%	
% Cover:	0	2	5	7
		5	0	5
				0

Total class cover= 38.22%
 Grass proportion= 59.78%
 Forb proportion= 22.81%
 Dwarf shrub proportion= 6.38%
 Shrub proportion= 10.24%
 Tree proportion= 0.80%

Plant community number: 7 (variant 7.1)

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Trees

No Trees

Total cover for species in group: 0.00%

Shrubs

Correlation coefficient=+0.54
 Standard error of the mean= 1.07

(F)	Actual cover	Pred. cover	Difference
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Normal competition range:

Salix mucronata subsp. wilmsii	2	1.61	0.86	+0.75
Diospyros lycioides subsp. sericea	1	0.00	0.00	+0.00
Rhus gerrardii	2	0.10	0.86	-0.76
Total cover for species in group: 1.72%				

Dwarf Shrubs

All coordinates on one point - no variation
 Total cover for species in group: 0.66%

Grasses

Correlation coefficient=+0.23
 Standard error of the mean= 3.03

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Miscanthus junceus	2	13.81	2.33	+11.48
Imperata cylindrica	1	7.26	0.94	+6.31



Normal competition range:

Ischaemum fasciculatum	2	4.29	2.33	+1.96
Cyperus latifolius	1	0.81	0.94	-0.14
Eragrostis capensis	1	0.81	0.94	-0.14
Setaria sphacelata var. sphacelata	2	2.07	2.33	-0.26
Cyperus marginatus	1	0.46	0.94	-0.49
Hyparrhenia tamba	1	0.46	0.94	-0.49
Themeda triandra	1	0.46	0.94	-0.49
Setaria nigrirostris	1	0.46	0.94	-0.49
Paspalum scrobiculatum	2	1.72	2.33	-0.61
Setaria pallide-fusca	1	0.20	0.94	-0.74
Eragrostis plana	1	0.20	0.94	-0.74
Cynodon dactylon	1	0.20	0.94	-0.74
Hyparrhenia hirta	2	1.46	2.33	-0.87
Hemarthria altissima	2	1.46	2.33	-0.87
Sporobolus africanus	1	0.05	0.94	-0.89
Eragrostis gummiflua	1	0.00	0.94	-0.94
Cyperus longus var. tenuiflorus	2	0.66	2.33	-1.67
Aristida transvaalensis	2	0.66	2.33	-1.67
Helictotrichon turgidulum	2	0.66	2.33	-1.67
Eragrostis curvula	2	0.50	2.33	-1.82
Andropogon appendiculatus	2	0.40	2.33	-1.93
Harpochloa falx	2	0.25	2.33	-2.08

Total cover for species in group: 39.26%

Forbs

Correlation coefficient=+0.04

Standard error of the mean= 0.22

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Crabbea acaulis	1	0.81	0.22	+0.59
Berkheya radula	1	0.81	0.22	+0.59
Ipomoea bathycolpos	1	0.46	0.22	+0.24
Ipomoea crassipes	1	0.46	0.22	+0.24
Helichrysum rugulosum	1	0.46	0.22	+0.24

Normal competition range:

Tagetes minuta	2	0.40	0.24	+0.16
Chamaecrista comosa	2	0.25	0.24	+0.01
Plantago virginica	1	0.20	0.22	-0.02
Vernonia oligocephala	1	0.20	0.22	-0.02
Cynoglossum lanceolatum	1	0.20	0.22	-0.02
Centella sp.	1	0.20	0.22	-0.02
Convolvulus sagittatus	1	0.20	0.22	-0.02
Crabbea hirsuta	1	0.20	0.22	-0.02
Persicaria lapathifolia	1	0.20	0.22	-0.02
Tephrosia capensis	1	0.20	0.22	-0.02
Hermannia depressa	1	0.20	0.22	-0.02

<i>Conyza podocephala</i>	1	0.20	0.22	-0.02
<i>Commelina africana</i> var. <i>krebsiana</i>	2	0.20	0.24	-0.03
<i>Monopsis decipiens</i>	2	0.10	0.24	-0.14
<i>Verbena bonariensis</i>	1	0.05	0.22	-0.17
<i>Argyrolobium tuberosum</i>	1	0.05	0.22	-0.17
<i>Acalypha caperonioides</i>	1	0.05	0.22	-0.17
<i>Helichrysum nudifolium</i>	1	0.05	0.22	-0.17
<i>Conyza albida</i>	1	0.00	0.22	-0.21
<i>Monsonia angustifolia</i>	1	0.00	0.22	-0.21
<i>Oenothera rosea</i>	1	0.00	0.22	-0.21
<i>Oxalis obliquifolia</i>	1	0.00	0.22	-0.21
<i>Polygala hottentotta</i>	1	0.00	0.22	-0.21
Total cover for species in group:				6.15%

Plant community Structure

Growth Form					
Tree		0.00%			
Shrub		1.72%			
Dwarf shrub		0.66%			
Grass/Forb		BBBBBBBBB	39.26%	6.15%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 47.78%
 Grass proportion= 82.16%
 Forb proportion= 12.88%
 Dwarf shrub proportion= 1.37%
 Shrub proportion= 3.59%
 Tree proportion= 0.00%

Plant community number: 7 (variant 7.2)

Trees

All coordinates on one point - no variation
 Total cover for species in group: 12.14%

Shrubs

Correlation coefficient=+0.87
 Standard error of the mean= 0.55

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Rhus gerrardii 4 3.00 1.89 +1.11

Normal competition range:

<i>Euclea crispa</i> subsp. <i>crispa</i>	1	0.40	-0.06	+0.46
<i>Rhus pyroides</i> var. <i>pyroides</i>	1	0.00	-0.06	+0.06
<i>Celtis africana</i>	1	0.00	-0.06	+0.06
<i>Diospyros lycioides</i> subsp. <i>sericea</i>	4	1.84	1.89	-0.06
<i>Sesbania punicea</i>	4	1.59	1.89	-0.30
<i>Maytenus heterophylla</i>	2	0.20	0.59	-0.39
<i>Salix mucronata</i> subsp. <i>wilmsii</i>	4	1.44	1.89	-0.46
<i>Vangueria cyanescens</i>	2	0.10	0.59	-0.49

Total cover for species in group: 8.58%

Dwarf Shrubs

Correlation coefficient=+0.97
Standard error of the mean= 0.11

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Normal competition range:

<i>Gomphostigma virgatum</i>	3	0.86	0.76	+0.10
<i>Ziziphus zeyheriana</i>	1	0.10	0.02	+0.08
<i>Ziziphus mucronata</i> subsp. <i>mucronata</i>	1	0.00	0.02	-0.01
<i>Acacia karroo</i>	3	0.73	0.76	-0.03

Weak competitors:

<i>Sida rhombifolia</i>	2	0.25	0.39	-0.14
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Total cover for species in group: 1.95%

Grasses

Correlation coefficient=+0.57
Standard error of the mean= 1.09

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

<i>Cyperus marginatus</i>	4	6.40	1.79	+4.61
<i>Paspalum distichum</i>	2	1.64	0.52	+1.12

Normal competition range:

<i>Cyperus latifolius</i>	4	2.47	1.79	+0.68
<i>Eragrostis curvula</i>	4	2.27	1.79	+0.48
<i>Diheteropogon amplexans</i>	1	0.23	-0.12	+0.35



Mariscus congestus	1	0.10	-0.12	+0.22
Brachiaria brizantha	1	0.10	-0.12	+0.22
Setaria pallide-fusca	1	0.10	-0.12	+0.22
Tristachya leucothrix	1	0.10	-0.12	+0.22
Eragrostis capensis	1	0.03	-0.12	+0.15
Eragrostis plana	3	1.13	1.15	-0.02
Agrostis lachnantha var. lachnantha	2	0.46	0.52	-0.06
Miscanthus junceus	4	1.64	1.79	-0.15
Typha capensis	2	0.33	0.52	-0.19
Hemarthria altissima	4	1.53	1.79	-0.26
Urochloa panicoides	2	0.23	0.52	-0.29
Setaria nigrirostris	2	0.20	0.52	-0.32
Hyparrhenia hirta	3	0.83	1.15	-0.32
Harpochloa falx	2	0.13	0.52	-0.39
Cyperus longus var. tenuiflorus	3	0.73	1.15	-0.42
Andropogon appendiculatus	2	0.05	0.52	-0.47
Digitaria eriantha	3	0.43	1.15	-0.73
Sporobolus africanus	3	0.43	1.15	-0.73
Hyparrhenia tamba	3	0.43	1.15	-0.73
Themeda triandra	4	0.96	1.79	-0.83
Ischaemum fasciculatum	4	0.78	1.79	-1.01

Weak competitors:

Setaria sphacelata var. sphacelata	4	0.45	1.79	-1.34
Total cover for species in group: 24.15%				

Forbs

Correlation coefficient=+0.53
Standard error of the mean= 0.92

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Chenopodium album	1	2.52	0.13	+2.39
Tagetes minuta	4	3.61	1.65	+1.96
Persicaria lapathifolia	4	3.53	1.65	+1.88
Bidens pilosa	2	2.47	0.64	+1.83

Normal competition range:

Commelina africana var. lancispatha	4	2.27	1.65	+0.62
Crinum bulbispermum	1	0.40	0.13	+0.27
Protasparagus virgatus	1	0.40	0.13	+0.27
Dicliptera clinopodia	3	1.26	1.14	+0.12
Centella sp.	1	0.23	0.13	+0.09
Physalis angulata	1	0.10	0.13	-0.03
Ipomoea bathycolpos	1	0.10	0.13	-0.03
Vernonia oligocephala	1	0.03	0.13	-0.11
Argyrolobium tuberosum	1	0.03	0.13	-0.11
Conyza podocephala	1	0.03	0.13	-0.11
Lippia rehmannii	1	0.00	0.13	-0.13



Hibiscus trionum	1	0.00	0.13	-0.13
Commelina erecta	1	0.00	0.13	-0.13
Chenopodium ambrosioides	2	0.33	0.64	-0.31
Oenothera rosea	2	0.20	0.64	-0.44
Berkheya radula	2	0.20	0.64	-0.44
Mentha longifolia subsp. polyadena	2	0.13	0.64	-0.51
Achyranthes aspera var. aspera	2	0.05	0.64	-0.59
Euphorbia striata	2	0.03	0.64	-0.61
Deverra sp.	3	0.53	1.14	-0.62
Ranunculus multifidus	2	0.00	0.64	-0.63
Schkuhria pinnata	3	0.45	1.14	-0.69
Verbena bonariensis	4	0.83	1.65	-0.82
Conyza albida	4	0.75	1.65	-0.89

Weak competitors:

Rumex crispus	3	0.15	1.14	-0.99
Lepidium virginicum	3	0.05	1.14	-1.09

Total cover for species in group: 20.68%

Plant community Structure

Growth Form

Tree	BB	12.14%	
Shrub	B	8.58%	
Dwarf shrub		1.95%	
Grass/Forb	BBBBB0000	24.15%	20.68%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 67.50%
Grass proportion= 35.79%
Forb proportion= 30.64%
Dwarf shrub proportion= 2.88%
Shrub proportion= 12.70%
Tree proportion= 17.99%

Plant community number: 8

Trees

Correlation coefficient=-0.52
Standard error of the mean= 2.49

	Actual (F) cover	Pred. cover	Differ- ence
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Normal competition range:

Acacia dealbata	1	3.63	1.86	+1.76
Morus alba	2	0.03	0.03	+0.00
Rhus lancea	1	0.10	1.86	-1.76
Total cover for species in group:		3.75%		

Shrubs

All coordinates on one point - no variation
Total cover for species in group: 0.25%

Dwarf Shrubs

All coordinates on one point - no variation
Total cover for species in group: 0.20%

Grasses

Correlation coefficient=+0.46
Standard error of the mean= 2.32

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Echinochloa jubata	2	10.48	1.84	+8.64
Hemarthria altissima	3	7.61	3.58	+4.03

Normal competition range:

Cyperus latifolius	2	4.03	1.84	+2.19
Paspalum distichum	3	5.59	3.58	+2.02
Phragmites australis	3	4.96	3.58	+1.39
Bromus catharticus	1	0.91	0.10	+0.81
Paspalum urvillei	1	0.63	0.10	+0.53
Miscanthus junceus	1	0.63	0.10	+0.53
Setaria sphacelata var. sphacelata	2	2.27	1.84	+0.43
Setaria pallide-fusca	1	0.23	0.10	+0.13
Eleusine coracana subsp. africana	1	0.23	0.10	+0.13
Cyperus fastigiatus	2	1.87	1.84	+0.03
Mariscus congestus	1	0.10	0.10	-0.00
Helictotrichon turgidulum	1	0.10	0.10	-0.00
Themeda triandra	1	0.03	0.10	-0.08
Eragrostis plana	2	1.13	1.84	-0.70
Brachiaria brizantha	2	0.63	1.84	-1.21
Agrostis lachnantha var. lachnantha	2	0.63	1.84	-1.21

Sporobolus africanus	2	0.50	1.84	-1.34
Cyperus marginatus	2	0.50	1.84	-1.34
Juncus effusus	2	0.33	1.84	-1.51
Eragrostis curvula	2	0.33	1.84	-1.51
Digitaria eriantha	2	0.20	1.84	-1.64
Cyperus longus var. tenuiflorus	2	0.20	1.84	-1.64
Urochloa panicoides	2	0.20	1.84	-1.64
Paspalum dilatatum	2	0.20	1.84	-1.64
Cynodon dactylon	3	1.41	3.58	-2.17

Weak competitors:

Echinochloa crus-galli	3	0.35	3.58	-3.22
Total cover for species in group: 46.27%				

Forbs

Correlation coefficient=+0.75
Standard error of the mean= 0.79

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Tagetes minuta	4	3.61	2.14	+1.47
Persicaria lapathifolia	3	2.78	1.41	+1.37

Normal competition range:

Verbena bonariensis	4	2.53	2.14	+0.39
Persicaria attenuata subsp. africana	1	0.23	-0.05	+0.28
Galium capense subsp. garipense	1	0.23	-0.05	+0.28
Bidens pilosa	1	0.10	-0.05	+0.15
Mentha longifolia subsp. polyadena	1	0.03	-0.05	+0.08
Schkuhria pinnata	1	0.03	-0.05	+0.08
Ranunculus multifidus	1	0.00	-0.05	+0.05
Cucumis zeyheri	1	0.00	-0.05	+0.05
Conyza albida	2	0.50	0.68	-0.18
Cotula anthemoides	2	0.46	0.68	-0.22
Rumex crispus	2	0.10	0.68	-0.58
Berkheya radula	2	0.05	0.68	-0.63

Weak competitors:

Cirsium vulgare	3	0.35	1.41	-1.06
Oenothera rosea	4	0.61	2.14	-1.53
Total cover for species in group: 11.58%				

Plant community Structure

Growth Form					
Tree					3.75%
Shrub					0.25%
Dwarf shrub					0.20%
Grass/Forb		BBBBBBBBBBBB	00	46.27%	11.58%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 62.07%
 Grass proportion= 74.55%
 Forb proportion= 18.66%
 Dwarf shrub proportion= 0.32%
 Shrub proportion= 0.41%
 Tree proportion= 6.05%

BYLAE 2b

GEMEENSKAPSAMESTELLINGS-ANALISE GEBASEER OP DIE GROEIVORMS VAN DIE PLANTTAKSONS IN DIE ONDERSKEIE PLANTGEMEENSKAPPE MET DIE SAVANNEBIOOM-GEDEELTE VAN DIE OLIFANTSRIVIER- SISTEEM GEASSOSIEER

Plant community number: 1
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Trees

Correlation coefficient=+0.87
Standard error of the mean= 1.05

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Acacia dealbata	4	6.09	4.45	+1.64
Normal competition range:				
Dombeya rotundifolia	1	0.18	-0.66	+0.85
Kiggelaria africana	1	0.08	-0.66	+0.74
Rhus lancea	1	0.08	-0.66	+0.74
Acacia caffra	2	0.40	1.04	-0.64
Ziziphus mucronata subsp. mucronata	2	0.36	1.04	-0.68
Celtis africana	2	0.26	1.04	-0.78
Acacia karroo	2	0.10	1.04	-0.94
Combretum erythrophyllum	3	1.79	2.74	-0.95
Total cover for species in group:		9.35%		

Shrubs

Correlation coefficient=+0.64
Standard error of the mean= 2.87

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Salix mucronata subsp. wilmsii	5	10.18	4.43	+5.76



Normal competition range:

<i>Canthium gilfillanii</i>	1	0.08	-0.00	+0.08
<i>Euclea crispa</i> subsp. <i>crispa</i>	1	0.08	-0.00	+0.08
<i>Acacia ataxacantha</i>	1	0.02	-0.00	+0.02
<i>Rhus pyroides</i> var. <i>pyroides</i>	1	0.02	-0.00	+0.02
<i>Maytenus heterophylla</i>	2	0.83	1.10	-0.28
<i>Diospyros lycioides</i> subsp. <i>sericea</i>	5	1.71	4.43	-2.71

Weak competitors:

<i>Rhus gerrardii</i>	5	1.45	4.43	-2.97
Total cover for species in group: 14.37%				

Dwarf Shrubs

Correlation coefficient=+1.00
Standard error of the mean= 0.06

(F)	Actual cover	Pred. cover	Difference
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Normal competition range:

<i>Sida rhombifolia</i>	1	0.08	0.04	+0.04
<i>Gomphostigma virgatum</i>	3	1.49	1.49	+0.00
<i>Rhoicissus tridentata</i> subsp. <i>cuneifolia</i>	1	0.00	0.04	-0.04
Total cover for species in group: 1.57%				

Grasses

Correlation coefficient=+0.52
Standard error of the mean= 0.79

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Miscanthus junceus</i>	3	3.78	0.98	+2.80
<i>Ischaemum fasciculatum</i>	3	2.48	0.98	+1.50

Normal competition range:

<i>Panicum maximum</i>	2	1.31	0.55	+0.76
<i>Imperata cylindrica</i>	1	0.50	0.13	+0.38
<i>Cyperus latifolius</i>	2	0.83	0.55	+0.27
<i>Cyperus marginatus</i>	5	1.81	1.83	-0.02
<i>Bothriochloa bladhii</i>	1	0.08	0.13	-0.05
<i>Typha capensis</i>	1	0.08	0.13	-0.05
<i>Setaria sphacelata</i> var. <i>sphacelata</i>	1	0.08	0.13	-0.05
<i>Juncus effusus</i>	1	0.08	0.13	-0.05
<i>Heteropogon contortus</i>	1	0.08	0.13	-0.05



Eleusine coracana subsp. africana	1	0.02	0.13	-0.11
Harpochloa falx	2	0.36	0.55	-0.19
Phragmites australis	4	1.17	1.40	-0.23
Hemarthria altissima	4	1.15	1.40	-0.26
Sporobolus africanus	2	0.26	0.55	-0.29
Agrostis lachnantha var. lachnantha	2	0.20	0.55	-0.35
Themeda triandra	2	0.16	0.55	-0.39
Melinis repens	2	0.16	0.55	-0.39
Eragrostis curvula	3	0.58	0.98	-0.39
Eragrostis planiculmis	3	0.44	0.98	-0.53
Cyperus longus var. tenuiflorus	3	0.22	0.98	-0.76
Hyparrhenia hirta	3	0.22	0.98	-0.76

Weak competitors:

Hyparrhenia tamba	3	0.18	0.98	-0.80
Total cover for species in group: 16.25%				

Forbs

Correlation coefficient=+0.16
Standard error of the mean= 1.27

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Hypoestes forskaolii	2	6.55	0.46	+6.09
Tagetes minuta	4	2.62	0.80	+1.82

Normal competition range:

Protasparagus virgatus	2	0.50	0.46	+0.04
Senecio gregatus	1	0.32	0.29	+0.03
Senecio spl	1	0.32	0.29	+0.03
Bidens pilosa	2	0.40	0.46	-0.06
Verbena bonariensis	4	0.68	0.80	-0.12
Senecio inoratus	2	0.26	0.46	-0.20
Centella sp.	2	0.26	0.46	-0.20
Conyza scabrida	1	0.08	0.29	-0.21
Rumex sagittatus	1	0.08	0.29	-0.21
Oenothera rosea	1	0.08	0.29	-0.21
Kedrostis foetidissima	1	0.02	0.29	-0.27
Chenopodium ambrosioides	1	0.02	0.29	-0.27
Persicaria lapathifolia	4	0.52	0.80	-0.28
Rumex crispus	1	0.00	0.29	-0.29
Cirsium vulgare	1	0.00	0.29	-0.29
Mentha longifolia subsp. polyadena	2	0.16	0.46	-0.30
Berkheya radula	2	0.16	0.46	-0.30
Dicliptera clinopodia	4	0.42	0.80	-0.38
Commelina africana var. lancispatha	5	0.54	0.98	-0.43
Mikania capensis	2	0.02	0.46	-0.44
Monopsis decipiens	2	0.02	0.46	-0.44
Sium repandum	3	0.18	0.63	-0.45

Helichrysum mundtii	2	0.00	0.46	-0.46
Lepidium virginicum	2	0.00	0.46	-0.46
Euphorbia striata	2	0.00	0.46	-0.46
Crinum bulbispermum	3	0.01	0.63	-0.63
Conyza albida	4	0.12	0.80	-0.68

Total cover for species in group: 14.39%

Plant community Structure

Growth Form					
Tree	β	9.35%			
Shrub	ββ	14.37%			
Dwarf shrub		1.57%			
Grass/Forb	βββδδ	16.25%	14.39%		

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 55.94%
Grass proportion= 29.05%
Forb proportion= 25.72%
Dwarf shrub proportion= 2.81%
Shrub proportion= 25.70%
Tree proportion= 16.72%

Plant community number: 2

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Trees

Correlation coefficient=+0.85
Standard error of the mean= 0.37

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Combretum erythrophyllum	14	3.35	2.29	+1.06
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Normal competition range:

Berchemia zeyheri	2	0.39	0.03	+0.36
Acacia caffra	2	0.28	0.03	+0.25
Ficus ingens var. ingens	2	0.27	0.03	+0.24
Olea capensis subsp. enervis	1	0.06	-0.16	+0.22
Rhus leptodictya	1	0.01	-0.16	+0.17
Rhamnus prinoides	1	0.01	-0.16	+0.17



Acacia galpinii	1	0.00	-0.16	+0.16
Acacia nigrescens	1	0.00	-0.16	+0.16
Pterocarpus rotundifolius	2	0.13	0.03	+0.10
Mimusops zeyheri	6	0.85	0.78	+0.07
Combretum molle	2	0.03	0.03	+0.00
Vepris undulata	2	0.03	0.03	-0.00
Acacia karroo	2	0.01	0.03	-0.02
Combretum apiculatum subsp. apiculatum	3	0.11	0.22	-0.10
Pappea capensis	3	0.08	0.22	-0.14
Acacia robusta subsp. clavigera	3	0.07	0.22	-0.15
Sclerocarya birrea subsp. caffra	3	0.06	0.22	-0.16
Celtis africana	3	0.04	0.22	-0.18

Weak competitors:

Acacia dealbata	7	0.57	0.97	-0.40
Ziziphus mucronata subsp. mucronata	5	0.11	0.59	-0.49
Heteropyxis natalensis	9	0.71	1.35	-0.64
Dombeya rotundifolia	7	0.29	0.97	-0.68

Total cover for species in group: 7.45%

Shrubs

Correlation coefficient=+0.82
Standard error of the mean= 0.44

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Salix mucronata subsp. wilmsii	11	3.30	1.67	+1.63
Rhus gerrardii	13	2.74	2.01	+0.73
Chaetachme aristata	2	0.65	0.11	+0.54

Normal competition range:

Bauhinia galpinii	2	0.35	0.11	+0.24
Ochna sp.	1	0.11	-0.06	+0.17
Lansea discolor	1	0.11	-0.06	+0.17
Osyris lanceolata	1	0.06	-0.06	+0.12
Flacourtia indica	2	0.23	0.11	+0.12
Scolopia zeyheri	1	0.03	-0.06	+0.09
Bridelia mollis	1	0.03	-0.06	+0.09
Brachylaena rotundata	1	0.03	-0.06	+0.09
Apodytes dimidiata subsp. dimidiata	1	0.03	-0.06	+0.09
Canthium gilfillanii	1	0.03	-0.06	+0.09
Vangueria cyanescens	1	0.03	-0.06	+0.09
Pavetta lanceolata	2	0.19	0.11	+0.08
Ricinus communis	1	0.01	-0.06	+0.07
Tapiphyllum parvifolium	1	0.01	-0.06	+0.07
Diospyros sp.	1	0.00	-0.06	+0.06
Dichrostachys cinerea	1	0.00	-0.06	+0.06
Sesbania punicea	2	0.07	0.11	-0.04
Diospyros whyteana	2	0.05	0.11	-0.06



<i>Rhus pyroides</i> var. <i>pyroides</i>	2	0.05	0.11	-0.06
<i>Acacia ataxacantha</i>	2	0.03	0.11	-0.08
<i>Ehretia rigida</i>	2	0.03	0.11	-0.08
<i>Diospyros lycioides</i> subsp. <i>sericea</i>	13	1.93	2.01	-0.08
<i>Flueggea virosa</i> subsp. <i>virosa</i>	3	0.11	0.28	-0.17
<i>Clerodendrum glabrum</i> var. <i>glabrum</i>	4	0.25	0.46	-0.21
<i>Cussonia paniculata</i>	3	0.02	0.28	-0.26
<i>Mundulea sericea</i>	3	0.00	0.28	-0.28
<i>Croton gratissimus</i> var. <i>gratissimus</i>	6	0.52	0.80	-0.29
<i>Englerophytum magalismsontanum</i>	5	0.34	0.63	-0.29
<i>Maytenus undata</i>	4	0.10	0.46	-0.36
<i>Maytenus heterophylla</i>	7	0.55	0.98	-0.43

Weak competitors:

<i>Elephantorrhiza burkei</i>	7	0.34	0.98	-0.63
<i>Euclea crispa</i> subsp. <i>crispa</i>	11	0.41	1.67	-1.26
Total cover for species in group: 12.73%				

Dwarf Shrubs

Correlation coefficient=+0.79
Standard error of the mean= 0.05

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Buxus macowanii</i>	2	0.17	0.06	+0.12
<i>Leonotis spl</i>	2	0.13	0.06	+0.08

Normal competition range:

<i>Gomphostigma virgatum</i>	7	0.30	0.25	+0.05
<i>Myrothamnus flabellifolius</i>	1	0.03	0.02	+0.01
<i>Ancylobotrys capensis</i>	1	0.03	0.02	+0.01
<i>Rhoicissus tridentata</i> subsp. <i>cuneifolia</i>	3	0.09	0.10	-0.00
<i>Secamone filiformis</i>	2	0.05	0.06	-0.01
<i>Opuntia</i> sp.	1	0.01	0.02	-0.01
<i>Barleria obtusa</i>	1	0.01	0.02	-0.01
<i>Rhus dentata</i>	1	0.01	0.02	-0.01
<i>Lippia javanica</i>	1	0.00	0.02	-0.02
<i>Zanthoxylum capense</i>	1	0.00	0.02	-0.02
<i>Senecio barbertonicus</i>	1	0.00	0.02	-0.02
<i>Cyphostemma spl</i>	1	0.00	0.02	-0.02

Weak competitors:

<i>Sida rhombifolia</i>	5	0.05	0.17	-0.12
Total cover for species in group: 0.88%				



Grasses

Correlation coefficient=+0.71
Standard error of the mean= 0.45

	Actual (F) cover	Pred. cover	Differ- ence
Strong competitors:			
<i>Cyperus marginatus</i>	9 3.01	1.08	+1.93
<i>Ischaemum fasciculatum</i>	7 1.62	0.80	+0.82
<i>Hyperthelia dissoluta</i>	2 0.65	0.10	+0.56
Normal competition range:			
<i>Paspalum scrobiculatum</i>	4 0.77	0.38	+0.39
<i>Miscanthus junceus</i>	9 1.40	1.08	+0.32
<i>Bothriochloa bladhii</i>	10 1.53	1.22	+0.31
<i>Phragmites australis</i>	13 1.89	1.64	+0.25
<i>Cyperus longus</i> var. <i>tenuiflorus</i>	1 0.11	-0.04	+0.15
<i>Cyperus albostriatus</i>	1 0.11	-0.04	+0.15
<i>Aristida transvaalensis</i>	6 0.80	0.66	+0.14
<i>Sporobolus pyramidalis</i>	1 0.06	-0.04	+0.11
<i>Pycnus polystachyos</i> var. <i>polystachyos</i>	1 0.06	-0.04	+0.11
<i>Eragrostis sclerantha</i>	1 0.06	-0.04	+0.11
<i>Typha capensis</i>	1 0.06	-0.04	+0.11
<i>Eragrostis superba</i>	1 0.03	-0.04	+0.07
<i>Leersia hexandra</i>	1 0.03	-0.04	+0.07
<i>Paspalum urvillei</i>	1 0.03	-0.04	+0.07
<i>Diheteropogon amplexans</i>	1 0.03	-0.04	+0.07
<i>Echinochloa crus-galli</i>	1 0.01	-0.04	+0.05
<i>Hyparrhenia hirta</i>	1 0.01	-0.04	+0.05
<i>Diandrochloa namaquensis</i>	3 0.28	0.24	+0.04
<i>Sorghum bicolor</i> subsp. <i>arundinaceum</i>	3 0.24	0.24	+0.01
<i>Panicum deustum</i>	3 0.23	0.24	-0.01
<i>Agrostis lachnantha</i> var. <i>lachnantha</i>	2 0.09	0.10	-0.01
<i>Cyperus latifolius</i>	3 0.13	0.24	-0.10
<i>Cynodon dactylon</i>	3 0.11	0.24	-0.12
<i>Setaria sphacelata</i> var. <i>sphacelata</i>	3 0.08	0.24	-0.16
<i>Aristida congesta</i> subsp. <i>barbicollis</i>	3 0.06	0.24	-0.18
<i>Paspalum dilatatum</i>	3 0.06	0.24	-0.18
<i>Eragrostis inamoena</i>	5 0.27	0.52	-0.25
<i>Eragrostis gummiflua</i>	8 0.66	0.94	-0.28
<i>Eragrostis curvula</i>	5 0.24	0.52	-0.28
<i>Eragrostis planiculmis</i>	6 0.37	0.66	-0.29
<i>Hyparrhenia tamba</i>	4 0.07	0.38	-0.31
<i>Juncus effusus</i>	4 0.06	0.38	-0.32
<i>Hemarthria altissima</i>	8 0.56	0.94	-0.37
Weak competitors:			
<i>Melinis repens</i>	6 0.17	0.66	-0.48
<i>Panicum maximum</i>	8 0.38	0.94	-0.56
<i>Digitaria eriantha</i>	7 0.24	0.80	-0.56



Sporobolus africanus	8	0.24	0.94	-0.70
Themeda triandra	8	0.21	0.94	-0.73
Total cover for species in group: 17.00%				

Forbs

Correlation coefficient=+0.73
Standard error of the mean= 0.16

		Actual (F) cover	Pred. cover	Differ- ence
Strong competitors:				
Dicliptera clinopodia	7	0.71	0.34	+0.37
Mikania capensis	6	0.59	0.28	+0.31
Tagetes minuta	12	0.79	0.60	+0.20
Normal competition range:				
Protasparagus virgatus	3	0.23	0.13	+0.10
Hypoestes forskaolii	1	0.06	0.02	+0.04
Conyza albida	6	0.32	0.28	+0.03
Zinnia peruviana	2	0.11	0.08	+0.03
Conyza scabrida	2	0.09	0.08	+0.01
Sium repandum	2	0.09	0.08	+0.01
Ceratotheca triloba	1	0.03	0.02	+0.00
Bidens pilosa	3	0.12	0.13	-0.01
Riocreuxia burchellii	1	0.01	0.02	-0.02
Datura stramonium	1	0.00	0.02	-0.02
Commelina africana var. lancispatha	4	0.13	0.18	-0.04
Galium capense subsp. garipense	3	0.08	0.13	-0.05
Commelina erecta	4	0.12	0.18	-0.06
Lepidium virginicum	2	0.00	0.08	-0.07
Verbena bonariensis	10	0.36	0.49	-0.14
Weak competitors:				
Schkuhria pinnata	5	0.06	0.23	-0.17
Persicaria lapathifolia	9	0.21	0.44	-0.23
Crinum bulbispermum	8	0.08	0.39	-0.31
Total cover for species in group: 4.18%				

Community Structure

Growth Form				
Tree	B	7.45%		
Shrub	BB	12.73%		
Dwarf shrub		0.88%		
Grass/Forb	BBB	17.00%	4.18%	

% Cover:	0	2	5	7
		5	0	5
				0
				0

Total class cover= 42.25%
 Grass proportion= 40.23%
 Forb proportion= 9.90%
 Dwarf shrub proportion= 2.09%
 Shrub proportion= 30.14%
 Tree proportion= 17.64%

Plant community number: 2 (variant 2.1)

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Trees

Correlation coefficient=+0.82
 Standard error of the mean= 0.59

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Combretum erythrophyllum	10	4.00	2.52	+1.48
Normal competition range:				
Pterocarpus rotundifolius	1	0.15	-0.15	+0.30
Olea capensis subsp. enervis	1	0.08	-0.15	+0.23
Combretum apiculatum subsp. apiculatum	1	0.04	-0.15	+0.19
Ficus ingens var. ingens	1	0.04	-0.15	+0.19
Mimusops zeyheri	2	0.31	0.15	+0.17
Rhus leptodictya	1	0.01	-0.15	+0.16
Rhamnus prinoides	1	0.01	-0.15	+0.16
Celtis africana	1	0.01	-0.15	+0.16
Acacia robusta subsp. clavigera	1	0.00	-0.15	+0.15
Combretum molle	2	0.05	0.15	-0.10
Acacia karroo	2	0.02	0.15	-0.13
Dombeya rotundifolia	4	0.19	0.74	-0.55
Weak competitors:				
Ziziphus mucronata subsp. mucronata	4	0.11	0.74	-0.63
Acacia dealbata	7	0.78	1.63	-0.85
Heteropyxis natalensis	6	0.40	1.33	-0.93
Total cover for species in group:		6.19%		

Shrubs

Correlation coefficient=+0.88
 Standard error of the mean= 0.61

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Salix mucronata</i> subsp. <i>wilmsii</i>	10	4.46	2.84	+1.63
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Normal competition range:

<i>Rhus gerrardii</i>	11	3.67	3.18	+0.49
<i>Scolopia zeyheri</i>	1	0.04	-0.24	+0.28
<i>Apodytes dimidiata</i> subsp. <i>dimidiata</i>	1	0.04	-0.24	+0.28
<i>Diospyros whyteana</i>	1	0.04	-0.24	+0.28
<i>Flueggea virosa</i> subsp. <i>virosa</i>	1	0.04	-0.24	+0.28
<i>Vangueria cyanescens</i>	1	0.04	-0.24	+0.28
<i>Tapiphyllum parvifolium</i>	1	0.01	-0.24	+0.25
<i>Cussonia paniculata</i>	1	0.01	-0.24	+0.25
<i>Dichrostachys cinerea</i>	1	0.00	-0.24	+0.24
<i>Sesbania punicea</i>	2	0.09	0.10	-0.01
<i>Clerodendrum glabrum</i> var. <i>glabrum</i>	2	0.07	0.10	-0.03
<i>Acacia ataxacantha</i>	2	0.05	0.10	-0.05
<i>Croton gratissimus</i> var. <i>gratissimus</i>	3	0.38	0.44	-0.07
<i>Maytenus undata</i>	2	0.02	0.10	-0.08
<i>Diospyros lycioides</i> subsp. <i>sericea</i>	10	2.52	2.84	-0.31
<i>Englerophytum magalismsontanum</i>	4	0.38	0.78	-0.40
<i>Mundulea sericea</i>	3	0.00	0.44	-0.44
<i>Maytenus heterophylla</i>	5	0.63	1.13	-0.49

Weak competitors:

<i>Elephantorrhiza burkei</i>	5	0.17	1.13	-0.95
<i>Euclea crispa</i> subsp. <i>crispa</i>	7	0.39	1.81	-1.42

Total cover for species in group: 13.04%

Dwarf Shrubs

Correlation coefficient=+0.69
Standard error of the mean= 0.09

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

<i>Buxus macowanii</i>	2	0.24	0.09	+0.15
<i>Leonotis</i> spl	2	0.18	0.09	+0.10

Normal competition range:

<i>Gomphostigma virgatum</i>	6	0.32	0.26	+0.06
<i>Myrothamnus flabellifolius</i>	1	0.04	0.04	-0.01
<i>Ancylobotrys capensis</i>	1	0.04	0.04	-0.01
<i>Rhus dentata</i>	1	0.01	0.04	-0.03
<i>Rhoicissus tridentata</i> subsp. <i>cuneifolia</i>	1	0.01	0.04	-0.03
<i>Senecio barbertonicus</i>	1	0.00	0.04	-0.04
<i>Cyphostemma</i> spl	1	0.00	0.04	-0.04



Weak competitors:

<i>Sida rhombifolia</i>	5	0.07	0.21	-0.14
Total cover for species in group:		0.91%		

Grasses

Correlation coefficient=+0.74
Standard error of the mean= 0.57

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

<i>Cyperus marginatus</i>	9	4.10	1.72	+2.39
<i>Ischaemum fasciculatum</i>	5	1.90	0.79	+1.11

Normal competition range:

<i>Paspalum scrobiculatum</i>	4	1.04	0.55	+0.49
<i>Cyperus longus</i> var. <i>tenuiflorus</i>	1	0.15	-0.14	+0.29
<i>Cyperus albostriatus</i>	1	0.15	-0.14	+0.29
<i>Sporobolus pyramidalis</i>	1	0.08	-0.14	+0.23
<i>Eragrostis sclerantha</i>	1	0.08	-0.14	+0.23
<i>Miscanthus junceus</i>	9	1.91	1.72	+0.19
<i>Bothriochloa bladhii</i>	8	1.67	1.48	+0.19
<i>Leersia hexandra</i>	1	0.04	-0.14	+0.18
<i>Paspalum urvillei</i>	1	0.04	-0.14	+0.18
<i>Diheteropogon amplexans</i>	1	0.04	-0.14	+0.18
<i>Echinochloa crus-galli</i>	1	0.01	-0.14	+0.15
<i>Hyparrhenia hirta</i>	1	0.01	-0.14	+0.15
<i>Aristida congesta</i> subsp. <i>barbicollis</i>	1	0.01	-0.14	+0.15
<i>Diandrochloa namaquensis</i>	2	0.23	0.09	+0.14
<i>Sorghum bicolor</i> subsp. <i>arundinaceum</i>	2	0.18	0.09	+0.09
<i>Phragmites australis</i>	10	2.03	1.95	+0.09
<i>Panicum deustum</i>	2	0.17	0.09	+0.08
<i>Agrostis lachnantha</i> var. <i>lachnantha</i>	2	0.12	0.09	+0.03
<i>Cyperus latifolius</i>	3	0.18	0.32	-0.14
<i>Aristida transvaalensis</i>	5	0.64	0.79	-0.15
<i>Eragrostis curvula</i>	3	0.16	0.32	-0.17
<i>Cynodon dactylon</i>	3	0.16	0.32	-0.17
<i>Setaria sphacelata</i> var. <i>sphacelata</i>	3	0.11	0.32	-0.21
<i>Eragrostis inamoena</i>	4	0.33	0.55	-0.22
<i>Paspalum dilatatum</i>	3	0.08	0.32	-0.24
<i>Digitaria eriantha</i>	4	0.26	0.55	-0.30
<i>Melinis repens</i>	4	0.16	0.55	-0.39
<i>Eragrostis planiculmis</i>	5	0.36	0.79	-0.43
<i>Hyparrhenia tamba</i>	4	0.09	0.55	-0.46
<i>Juncus effusus</i>	4	0.08	0.55	-0.47
<i>Eragrostis gummiflua</i>	7	0.75	1.25	-0.50
<i>Hemarthria altissima</i>	7	0.69	1.25	-0.56

Weak competitors:

<i>Themeda triandra</i>	6	0.22	1.02	-0.80
<i>Sporobolus africanus</i>	6	0.21	1.02	-0.81
<i>Panicum maximum</i>	7	0.44	1.25	-0.81
Total cover for species in group: 18.86%				

Forbs

Correlation coefficient=+0.76
Standard error of the mean= 0.20

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

<i>Dicliptera clinopodia</i>	7	0.96	0.53	+0.44
<i>Mikania capensis</i>	4	0.64	0.27	+0.37
<i>Tagetes minuta</i>	9	0.98	0.70	+0.28

Normal competition range:

<i>Protasparagus virgatus</i>	3	0.31	0.19	+0.13
<i>Conyza scabrida</i>	1	0.08	0.02	+0.07
<i>Ceratotheca triloba</i>	1	0.04	0.02	+0.02
<i>Galium capense</i> subsp. <i>garipense</i>	1	0.04	0.02	+0.02
<i>Sium repandum</i>	2	0.12	0.10	+0.02
<i>Riocreuxia burchellii</i>	1	0.01	0.02	-0.01
<i>Conyza albida</i>	6	0.43	0.44	-0.01
<i>Datura stramonium</i>	1	0.00	0.02	-0.01
<i>Zinnia peruviana</i>	1	0.00	0.02	-0.01
<i>Bidens pilosa</i>	3	0.17	0.19	-0.02
<i>Commelina africana</i> var. <i>lancispatha</i>	4	0.18	0.27	-0.09
<i>Lepidium virginicum</i>	2	0.00	0.10	-0.10
<i>Commelina erecta</i>	4	0.16	0.27	-0.11
<i>Schkuhria pinnata</i>	3	0.05	0.19	-0.14

Weak competitors:

<i>Verbena bonariensis</i>	9	0.45	0.70	-0.25
<i>Persicaria lapathifolia</i>	7	0.27	0.53	-0.25
<i>Crinum bulbispermum</i>	6	0.09	0.44	-0.35
Total cover for species in group: 4.99%				

Plant community Structure

Growth Form					
Tree	B	6.19%			
Shrub	BB	13.04%			
Dwarf shrub		0.91%			
Grass/Forb	BBB	18.86%	4.99%		

* Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 44.00%
 Grass proportion= 42.87%
 Forb proportion= 11.34%
 Dwarf shrub proportion= 2.06%
 Shrub proportion= 29.64%
 Tree proportion= 14.08%

Plant community number: 2 (variant 2.2)

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Trees

Correlation coefficient=+0.45
 Standard error of the mean= 1.23

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Mimusops zeyheri	2	4.28	1.53	+2.75
Berchemia zeyheri	2	2.92	1.53	+1.39

Normal competition range:

Heteropyxis natalensis	2	2.62	1.53	+1.09
Combretum erythrophyllum	2	2.07	1.53	+0.53
Acacia caffra	2	2.07	1.53	+0.53
Sclerocarya birrea subsp. caffra	1	0.20	0.14	+0.06
Ziziphus mucronata subsp. mucronata	1	0.20	0.14	+0.06
Acacia nigrescens	1	0.00	0.14	-0.13
Dombeya rotundifolia	2	0.91	1.53	-0.62
Combretum apiculatum subsp. apiculatum	2	0.66	1.53	-0.88
Acacia robusta subsp. clavigera	2	0.50	1.53	-1.03
Pappea capensis	2	0.40	1.53	-1.13

Weak competitors:

Celtis africana	2	0.25	1.53	-1.28
Vepris undulata	2	0.20	1.53	-1.33

Total cover for species in group: 17.29%

Shrubs

Correlation coefficient=+0.40
Standard error of the mean= 1.02

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Chaetachme aristata	2	4.89	1.11	+3.78
Normal competition range:				
Lannea discolor	1	0.81	0.27	+0.54
Pavetta lanceolata	2	1.46	1.11	+0.35
Clerodendrum glabrum var. glabrum	2	1.46	1.11	+0.35
Maytenus undata	1	0.46	0.27	+0.19
Osyris lanceolata	1	0.46	0.27	+0.19
Brachylaena rotundata	1	0.20	0.27	-0.07
Croton gratissimus var. gratissimus	1	0.20	0.27	-0.07
Diospyros whyteana	1	0.20	0.27	-0.07
Canthium gilfillanii	1	0.20	0.27	-0.07
Flueggea virosa subsp. virosa	1	0.20	0.27	-0.07
Rhus gerrardii	1	0.20	0.27	-0.07
Ricinus communis	1	0.05	0.27	-0.22
Diospyros sp.	1	0.00	0.27	-0.26
Maytenus heterophylla	2	0.66	1.11	-0.46
Euclea crispa subsp. crispa	2	0.40	1.11	-0.71
Rhus pyroides var. pyroides	2	0.40	1.11	-0.71
Diospyros lycioides subsp. sericea	2	0.40	1.11	-0.71
Ehretia rigida	2	0.25	1.11	-0.86
Cussonia paniculata	2	0.10	1.11	-1.01
Total cover for species in group: 12.99%				

Dwarf Shrubs

Correlation coefficient=+0.95
Standard error of the mean= 0.09

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Rhoicissus tridentata subsp. cuneifolia	2	0.66	0.53	+0.13
Normal competition range:				
Opuntia sp.	1	0.05	0.03	+0.02
Barleria obtusa	1	0.05	0.03	+0.02
Lippia javanica	1	0.00	0.03	-0.02
Zanthoxylum capense	1	0.00	0.03	-0.02



Weak competitors:

Secamone filiformis	2	0.40	0.53	-0.13
Total cover for species in group: 1.16%				

Grasses

Correlation coefficient=+0.18
Standard error of the mean= 0.25

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Eragrostis curvula	2	0.91	0.57	+0.34
Panicum deustum	1	0.81	0.48	+0.33
Eragrostis planiculmis	1	0.81	0.48	+0.33

Normal competition range:

Sporobolus africanus	1	0.46	0.48	-0.02
Panicum maximum	1	0.46	0.48	-0.02
Typha capensis	1	0.46	0.48	-0.02
Phragmites australis	1	0.46	0.48	-0.02
Digitaria eriantha	2	0.40	0.57	-0.17
Aristida congesta subsp. barbicollis	2	0.40	0.57	-0.17

Weak competitors:

Eragrostis superba	1	0.20	0.48	-0.28
Themeda triandra	1	0.20	0.48	-0.28
Total cover for species in group: 5.54%				

Forbs

Correlation coefficient=-0.76
Standard error of the mean= 0.18

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Zinnia peruviana	1	0.81	0.57	+0.23
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Normal competition range:

Galium capense subsp. garipense	2	0.40	0.24	+0.16
Schkuhria pinnata	2	0.20	0.24	-0.03
Hypoestes forskoolii	1	0.46	0.57	-0.12
Tagetes minuta	1	0.46	0.57	-0.12

Crinum bulbispermum 2 0.10 0.24 -0.14
Total cover for species in group: 2.42%

Plant community Structure

Growth Form

Tree |BBB 17.29%
Shrub |BB 12.99%
Dwarf shrub | 1.16%
Grass/Forb |B 5.54% 2.42%

§ Cover: 0 2 5 7 1
5 0 5 0
0

Total class cover= 39.40%
Grass proportion= 14.06%
Forb proportion= 6.14%
Dwarf shrub proportion= 2.96%
Shrub proportion= 32.97%
Tree proportion= 43.88%

Plant community number: 2 (variant 2.3)

Trees

Correlation coefficient=+0.06
Standard error of the mean= 0.61

Actual Pred. Differ-
(F) cover cover ence

Strong competitors:

Ficus ingens var. ingens 1 1.82 0.48 +1.34

Normal competition range:

Combretum erythrophyllum 2 1.00 0.55 +0.45
Heteropyxis natalensis 1 0.46 0.48 -0.02
Mimusops zeyheri 2 0.40 0.55 -0.15
Pappea capensis 1 0.20 0.48 -0.28
Pterocarpus rotundifolius 1 0.20 0.48 -0.28
Dombeya rotundifolia 1 0.20 0.48 -0.28
Sclerocarya birrea subsp. caffra 2 0.25 0.55 -0.30
Acacia galpinii 1 0.00 0.48 -0.47

Total cover for species in group: 4.53%



Shrubs

Correlation coefficient=+0.81
Standard error of the mean= 0.49

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Bauhinia galpinii	2	2.62	1.61	+1.01
Normal competition range:				
Ochna sp.	1	0.81	0.34	+0.47
Flueggea virosa subsp. virosa	1	0.46	0.34	+0.12
Englerophytum magalismsontanum	1	0.46	0.34	+0.12
Flacourtia indica	2	1.72	1.61	+0.10
Croton gratissimus var. gratissimus	2	1.61	1.61	-0.00
Elephantorrhiza burkei	2	1.61	1.61	-0.00
Bridelia mollis	1	0.20	0.34	-0.14
Maytenus undata	1	0.20	0.34	-0.14
Salix mucronata subsp. wilmsii	1	0.20	0.34	-0.14
Rhus gerrardii	1	0.20	0.34	-0.14
Diospyros lycioides subsp. sericea	1	0.20	0.34	-0.14
Weak competitors:				
Euclea crispa subsp. crispa	2	0.50	1.61	-1.11
Total cover for species in group: 10.78%				

Dwarf Shrubs

All coordinates on one point - no variation
Total cover for species in group: 0.46%

Grasses

Correlation coefficient=+0.63
Standard error of the mean= 1.08

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Hyperthelia dissoluta	2	4.89	2.36	+2.54
Aristida transvaalensis	1	2.47	0.64	+1.83
Normal competition range:				
Sorghum bicolor subsp. arundinaceum	1	0.81	0.64	+0.16



Diandrochloa namaquensis	1	0.81	0.64	+0.16
Eragrostis gummiflua	1	0.81	0.64	+0.16
Phragmites australis	2	2.52	2.36	+0.16
Bothriochloa bladhii	2	2.27	2.36	-0.09
Pycreus polystachyos var. polystachyos	1	0.46	0.64	-0.19
Hemarthria altissima	1	0.46	0.64	-0.19
Sporobolus africanus	1	0.20	0.64	-0.44
Eragrostis inamoena	1	0.20	0.64	-0.44
Themeda triandra	1	0.20	0.64	-0.44
Digitaria eriantha	1	0.00	0.64	-0.64
Ischaemum fasciculatum	2	1.72	2.36	-0.64

Weak competitors:

Melinis repens	2	0.40	2.36	-1.96
Total cover for species in group: 18.20%				

Forbs

Correlation coefficient=+0.27
Standard error of the mean= 0.38

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Mikania capensis	2	0.91	0.37	+0.54
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Normal competition range:

Conyza scabrida	1	0.20	0.20	+0.00
Verbena bonariensis	1	0.20	0.20	+0.00
Persicaria lapathifolia	2	0.10	0.37	-0.27
Tagetes minuta	2	0.10	0.37	-0.27
Total cover for species in group: 1.51%				

Plant community Structure

Growth Form

Tree		4.53%	
Shrub	BB	10.78%	
Dwarf shrub		0.46%	
Grass/Forb	BBB	18.20%	1.51%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 35.47%
Grass proportion= 51.31%
Forb proportion= 4.26%
Dwarf shrub proportion= 1.28%
Shrub proportion= 30.38%
Tree proportion= 12.77%

Plant community number: 3
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Trees

Correlation coefficient=+0.85
Standard error of the mean= 0.54

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Melia azedarach	4	1.89	1.05	+0.84
Populus canescens	1	0.62	0.07	+0.55
Normal competition range:				
Combretum erythrophyllum	7	2.40	2.03	+0.37
Acacia sieberiana var. woodii	7	2.02	2.03	-0.01
Sclerocarya birrea subsp. caffra	1	0.00	0.07	-0.07
Acacia karroo	7	1.84	2.03	-0.19
Morus alba	2	0.16	0.39	-0.23
Acacia galpinii	3	0.23	0.72	-0.49
Weak competitors:				
Ziziphus mucronata subsp. mucronata	4	0.28	1.05	-0.77
Total cover for species in group:		9.43%		

Shrubs

Correlation coefficient=+0.82
Standard error of the mean= 0.23

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Salix mucronata subsp. wilmsii	7	1.25	0.97	+0.28
Normal competition range:				
Pavetta lanceolata	2	0.37	0.15	+0.21
Rhus pyroides var. pyroides	5	0.82	0.64	+0.18
Flueggea virosa subsp. virosa	2	0.31	0.15	+0.16
Lantana camara	1	0.11	-0.01	+0.12
Diospyros lycioides subsp. sericea	6	0.92	0.81	+0.11
Acacia ataxacantha	2	0.05	0.15	-0.10
Maytenus heterophylla	5	0.51	0.64	-0.13
Rhus gerrardii	3	0.11	0.32	-0.20
Euclea crispa subsp. crispa	4	0.27	0.48	-0.21



Weak competitors:

Combretum hereroense	5	0.23	0.64	-0.41
Total cover for species in group:		4.95%		

Dwarf Shrubs

Correlation coefficient=+0.74
Standard error of the mean= 0.23

(F)	Actual cover	Pred. cover	Differ-ence
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Strong competitors:

Eriosema psoraleoides	4	0.92	0.50	+0.42
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Normal competition range:

Jasminum sp.	1	0.31	0.11	+0.20
Gomphostigma virgatum	1	0.11	0.11	+0.00
Protasparagus cooperi	5	0.59	0.63	-0.04
Leonotis nepetifolia	1	0.00	0.11	-0.11
Gomphocarpus fruticosus	2	0.13	0.24	-0.12
Lantana rugosa	2	0.10	0.24	-0.14
Sida rhombifolia	5	0.43	0.63	-0.21
Total cover for species in group:		2.59%		

Grasses

Correlation coefficient=+0.60
Standard error of the mean= 1.90

(F)	Actual cover	Pred. cover	Differ-ence
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Strong competitors:

Phragmites australis	8	15.57	4.74	+10.83
Cynodon dactylon	6	5.45	3.28	+2.17

Normal competition range:

Ischaemum fasciculatum	6	4.62	3.28	+1.35
Hemarthria altissima	1	0.62	-0.38	+1.00
Cyperus latifolius	1	0.45	-0.38	+0.84
Digitaria eriantha	1	0.20	-0.38	+0.58
Echinochloa jubata	1	0.20	-0.38	+0.58
Aristida junciformis	1	0.20	-0.38	+0.58
Enneapogon cenchroides	1	0.20	-0.38	+0.58
Cyperus distans	1	0.11	-0.38	+0.50
Brachiaria brizantha	1	0.11	-0.38	+0.50
Aristida transvaalensis	1	0.11	-0.38	+0.50



Panicum deustum	1	0.11	-0.38	+0.50
Setaria sphacelata var. sphacelata	1	0.11	-0.38	+0.50
Eragrostis heteromera	1	0.05	-0.38	+0.43
Andropogon eucomus	1	0.05	-0.38	+0.43
Mariscus congestus	1	0.05	-0.38	+0.43
Kyllinga melanosperma	1	0.05	-0.38	+0.43
Urochloa panicoides	1	0.05	-0.38	+0.43
Diandrochloa namaquensis	1	0.01	-0.38	+0.39
Aristida congesta subsp. barbicollis	1	0.01	-0.38	+0.39
Imperata cylindrica	2	0.67	0.35	+0.32
Panicum repens	3	1.22	1.08	+0.14
Fimbristylis dichotoma	2	0.31	0.35	-0.04
Panicum subalbidum	2	0.25	0.35	-0.10
Sporobolus pyramidalis	2	0.16	0.35	-0.19
Sporobolus africanus	2	0.16	0.35	-0.19
Tragus berteronianus	2	0.16	0.35	-0.19
Leersia hexandra	2	0.16	0.35	-0.19
Eragrostis planiculmis	2	0.16	0.35	-0.19
Digitaria debilis	3	0.84	1.08	-0.24
Cymbopogon excavatus	2	0.10	0.35	-0.25
Setaria pallide-fusca	2	0.10	0.35	-0.25
Pogonarthria squarrosa	2	0.10	0.35	-0.25
Paspalum scrobiculatum	2	0.06	0.35	-0.29
Pennisetum macrourum	2	0.06	0.35	-0.29
Hyperthelia dissoluta	3	0.71	1.08	-0.38
Cyperus sexangularis	3	0.68	1.08	-0.40
Heteropogon contortus	3	0.30	1.08	-0.78
Eragrostis curvula	3	0.21	1.08	-0.87
Cyperus marginatus	4	0.77	1.81	-1.05
Bothriochloa bladhii	5	1.31	2.55	-1.23
Pycreus polystachyos var. polystachyos	4	0.42	1.81	-1.40
Typha capensis	5	1.10	2.55	-1.45
Eragrostis inamoena	4	0.29	1.81	-1.52

Weak competitors:

Melinis repens	5	0.39	2.55	-2.16
Panicum maximum	8	2.32	4.74	-2.42
Aristida adscensionis	5	0.08	2.55	-2.47
Miscanthus junceus	6	0.64	3.28	-2.63
Themeda triandra	6	0.28	3.28	-3.00

Total cover for species in group: 42.39%

Forbs

Correlation coefficient=+0.75
Standard error of the mean= 0.44

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Verbena bonariensis	8	3.01	1.67	+1.35
Tagetes minuta	8	2.47	1.67	+0.80

Ceratotheca triloba	4	1.39	0.71	+0.67
Hydrocotyle sp.	1	0.45	-0.00	+0.45

Normal competition range:

Cleome monophylla	2	0.50	0.24	+0.27
Mikania capensis	4	0.93	0.71	+0.22
Tephrosia purpurea subsp. leptostachya	1	0.20	-0.00	+0.20
Thelypteris confluens	1	0.20	-0.00	+0.20
Ipomoea arachnosperma	2	0.43	0.24	+0.19
Riocreuxia sp.	2	0.43	0.24	+0.19
Ludwigia octovalvis subsp. octovalvis	1	0.11	-0.00	+0.11
Helichrysum athrxiifolium	1	0.11	-0.00	+0.11
Solanum panduriforme	2	0.31	0.24	+0.08
Ethulia conyzoides subsp. conyzoides	1	0.05	-0.00	+0.05
Vernonia oligocephala	1	0.05	-0.00	+0.05
Ranunculus multifidus	1	0.01	-0.00	+0.01
Cucumis zeyheri	1	0.01	-0.00	+0.01
Commelina africana var. lancispatha	1	0.01	-0.00	+0.01
Persicaria lapathifolia	1	0.01	-0.00	+0.01
Berkheya radula	2	0.21	0.24	-0.02
Conyza scabrida	2	0.16	0.24	-0.07
Conyza albida	3	0.37	0.48	-0.11
Crinum bulbispermum	2	0.13	0.24	-0.11
Cissampelos mucronata	5	0.81	0.95	-0.15
Galium capense subsp. garipense	2	0.06	0.24	-0.18
Datura stramonium	2	0.03	0.24	-0.21
Equisetum ramosissimum	3	0.25	0.48	-0.22
Polygonum meisnerianum	4	0.39	0.71	-0.32
Vigna unguiculata subsp. dekindtiana	3	0.14	0.48	-0.34
Zinnia peruviana	3	0.04	0.48	-0.44

Weak competitors:

Schkuhria pinnata	4	0.26	0.71	-0.45
Chamaecrista mimosoides	6	0.66	1.19	-0.53
Centella sp.	7	0.58	1.43	-0.85
Commelina erecta	6	0.19	1.19	-1.00

Total cover for species in group: 14.98%

Plant community Structure

Growth Form				
Tree	B	9.43%		
Shrub		4.95%		
Dwarf shrub		2.59%		
Grass/Forb	BBBBBBBBBBB	42.39%	14.98%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 74.35%
Grass proportion= 57.02%
Forb proportion= 20.15%
Dwarf shrub proportion= 3.49%

Shrub proportion= 6.66%
Tree proportion= 12.68%

Plant community number: 4

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Trees

Correlation coefficient=+0.82
Standard error of the mean= 0.56

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:			
Combretum erythrophyllum	21 3.71	2.18	+1.53
Melia azedarach	15 2.44	1.55	+0.90
Acacia galpinii	10 1.62	1.01	+0.61
Normal competition range:			
Croton megalobotrys	2 0.69	0.16	+0.53
Acacia tortilis	3 0.32	0.27	+0.05
Faidherbia albida	3 0.28	0.27	+0.01
Prosopis velutina	1 0.06	0.05	+0.00
Pterocarpus rotundifolius	1 0.06	0.05	+0.00
Peltophorum africanum	1 0.01	0.05	-0.04
Maerua angolensis	1 0.01	0.05	-0.04
Rhus leptodictya	1 0.01	0.05	-0.04
Celtis africana	1 0.01	0.05	-0.04
Combretum apiculatum subsp. apiculatum	1 0.00	0.05	-0.05
Gleditsia triacanthos	1 0.00	0.05	-0.05
Terminalia sericea	1 0.00	0.05	-0.05
Acacia caffra	1 0.00	0.05	-0.05
Acacia burkei	2 0.05	0.16	-0.11
Spirostachys africana	2 0.03	0.16	-0.13
Nicotiana glauca	2 0.02	0.16	-0.14
Acacia erioloba	6 0.17	0.59	-0.42
Morus alba	6 0.11	0.59	-0.48
Weak competitors:			
Acacia karroo	22 1.72	2.29	-0.57
Ziziphus mucronata subsp. mucronata	24 1.09	2.50	-1.41
Total cover for species in group: 12.44%			

Shrubs

Correlation coefficient=+0.85
Standard error of the mean= 0.29



	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Maytenus heterophylla	15	1.77	0.88	+0.89
Diospyros lycioides subsp. sericea	21	1.70	1.25	+0.45
Sesbania punicea	7	0.69	0.39	+0.31

	(F)	Actual cover	Pred. cover	Difference
Normal competition range:				
Lantana camara	5	0.40	0.26	+0.14
Carissa bispinosa subsp. zambesiensis	3	0.22	0.14	+0.09
Tamarix chinensis	2	0.14	0.08	+0.07
Combretum hereroense	1	0.06	0.01	+0.04
Clerodendrum sp.	1	0.03	0.01	+0.02
Maerua juncea subsp. crustata	1	0.01	0.01	+0.00
Ehretia rigida	1	0.01	0.01	+0.00
Euclea divinorum	3	0.12	0.14	-0.02
Salix mucronata subsp. wilmsii	5	0.24	0.26	-0.02
Euclea crispa subsp. crispa	2	0.05	0.08	-0.03
Solanum mauritianum	2	0.03	0.08	-0.04
Acacia mellifera	2	0.02	0.08	-0.06
Pavetta lanceolata	17	0.95	1.01	-0.06
Grewia hexamita	2	0.00	0.08	-0.07
Acacia ataxacantha	5	0.16	0.26	-0.11
Grewia flavescens var. flavescens	7	0.21	0.39	-0.18
Ricinus communis	6	0.11	0.32	-0.22
Flueggea virosa subsp. virosa	21	1.01	1.25	-0.24

	(F)	Actual cover	Pred. cover	Difference
Weak competitors:				
Dichrostachys cinerea	11	0.17	0.63	-0.47
Rhus pyroides var. pyroides	23	0.90	1.38	-0.48
Total cover for species in group:	9.00%			

Dwarf Shrubs

Correlation coefficient=+0.94
Standard error of the mean= 0.11

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Malvastrum coromandelianum	2	0.32	0.02	+0.30
Protasparagus cooperi	21	1.16	0.94	+0.22
Normal competition range:				
Tephrosia polystachya	2	0.12	0.02	+0.09
Rubus sp.	2	0.09	0.02	+0.07
Nicotiana sp.	2	0.07	0.02	+0.05



Abutilon rehmannii	1	0.01	-0.03	+0.04
Lantana rugosa	1	0.01	-0.03	+0.04
Jatropha gossypifolia	1	0.00	-0.03	+0.03
Gomphocarpus fruticosus	1	0.00	-0.03	+0.03
Solanum incanum	1	0.00	-0.03	+0.03
Combretum sp.	2	0.05	0.02	+0.02
Rubus cuneifolius	2	0.04	0.02	+0.01
Sida rhombifolia	25	1.13	1.13	-0.00
Senna italica subsp. arachoides	2	0.01	0.02	-0.01
Opuntia sp.	2	0.01	0.02	-0.01
Ehretia amoena	4	0.11	0.12	-0.01
Sida cordifolia	3	0.04	0.07	-0.03
Eriosema psoraleoides	3	0.02	0.07	-0.05
Ficus capreifolia	5	0.11	0.17	-0.06
Maytenus tenuispina	6	0.14	0.22	-0.07
Solanum seaforthianum	7	0.16	0.26	-0.10
Viscum sp.	5	0.06	0.17	-0.11

Weak competitors:

Sesbania sp.	5	0.05	0.17	-0.12
Leucas capensis	7	0.09	0.26	-0.17
Leonotis nepetifolia	9	0.17	0.36	-0.19

Total cover for species in group: 3.98%

Grasses

Correlation coefficient=+0.86
Standard error of the mean= 0.71

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Phragmites australis	27	7.88	4.46	+3.42
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Normal competition range:

Cynodon dactylon	25	4.51	4.10	+0.41
Panicum deustum	2	0.27	-0.06	+0.32
Aristida adscensionis	1	0.06	-0.24	+0.29
Ischaemum fasciculatum	2	0.22	-0.06	+0.28
Aristida congesta subsp. barbicollis	1	0.03	-0.24	+0.27
Sporobolus africanus	1	0.01	-0.24	+0.25
Kyllinga melanosperma	1	0.01	-0.24	+0.25
Cyperus marginatus	1	0.01	-0.24	+0.25
Setaria verticillata	1	0.00	-0.24	+0.24
Imperata cylindrica	1	0.00	-0.24	+0.24
Scirpus burkei	1	0.00	-0.24	+0.24
Eragrostis plana	1	0.00	-0.24	+0.24
Schmidtia pappophoroides	2	0.16	-0.06	+0.22
Sporobolus pyramidalis	2	0.15	-0.06	+0.20
Hemarthria altissima	12	1.95	1.75	+0.20
Eragrostis heteromera	2	0.12	-0.06	+0.18



Paspalum distichum	2	0.12	-0.06	+0.17
Echinochloa colona	2	0.07	-0.06	+0.13
Schoenoplectus tabernaemontani	2	0.05	-0.06	+0.10
Echinochloa crus-galli	2	0.05	-0.06	+0.10
Heteropogon contortus	2	0.05	-0.06	+0.10
Paspalum scrobiculatum	2	0.04	-0.06	+0.09
Pennisetum macrourum	2	0.00	-0.06	+0.06
Digitaria eriantha	3	0.17	0.12	+0.04
Cyperus latifolius	3	0.15	0.12	+0.02
Cyperus longus var. tenuiflorus	3	0.10	0.12	-0.02
Pycnus polystachyos var. polystachyos	3	0.10	0.12	-0.03
Dactyloctenium giganteum	4	0.28	0.30	-0.03
Setaria sphacelata var. sphacelata	3	0.09	0.12	-0.03
Themeda triandra	3	0.08	0.12	-0.05
Cyperus distans	3	0.06	0.12	-0.06
Cyperus fastigiatus	5	0.37	0.49	-0.12
Enneapogon cenchroides	4	0.15	0.30	-0.15
Andropogon appendiculatus	4	0.08	0.30	-0.22
Tragus berteronianus	4	0.08	0.30	-0.23
Melinis repens	4	0.08	0.30	-0.23
Typha capensis	7	0.59	0.85	-0.25
Sporobolus ioclados	5	0.22	0.49	-0.27
Bothriochloa bladhii	5	0.18	0.49	-0.31
Urochloa mosambicensis	6	0.30	0.67	-0.37
Eragrostis lehmanniana	6	0.24	0.67	-0.42

Weak competitors:

Eragrostis curvula	9	0.46	1.21	-0.74
Cyperus sexangularis	12	0.47	1.75	-1.28
Urochloa panicoides	14	0.58	2.11	-1.53
Panicum maximum	27	2.46	4.46	-2.00

Total cover for species in group: 23.05*

Forbs

Correlation coefficient=+0.73
Standard error of the mean= 0.22

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Rivina humilis	8	1.48	0.35	+1.12
Schistostephium heptalobum	7	0.79	0.31	+0.48
Achyranthes aspera var. aspera	16	1.05	0.66	+0.39
Teramnus labialis subsp. labialis	4	0.56	0.20	+0.36
Conyza albida	3	0.48	0.16	+0.32
Equisetum ramosissimum	8	0.64	0.35	+0.29
Tagetes minuta	24	1.20	0.98	+0.22

Normal competition range:

Tribulus terrestris	13	0.76	0.55	+0.22
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Justicia flava	9	0.55	0.39	+0.16
Datura stramonium	5	0.35	0.24	+0.12
Xanthium strumarium	3	0.27	0.16	+0.11
Alternanthera pungens	1	0.18	0.08	+0.10
Pupalia lappacea var. lappacea	2	0.21	0.12	+0.09
Dicliptera clinopodia	2	0.21	0.12	+0.09
Galium capense subsp. garipense	3	0.24	0.16	+0.09
Riocreuxia torulosa	4	0.27	0.20	+0.07
Richardia brasiliensis	1	0.13	0.08	+0.05
Pergularia daemia var. daemia	19	0.83	0.78	+0.05
Cissampelos mucronata	20	0.87	0.82	+0.05
Neonotonia wightii	2	0.15	0.12	+0.03
Chenopodium olukondae	7	0.34	0.31	+0.02
Persicaria lapathifolia	6	0.28	0.27	+0.01
Rhynchosia caribaea	5	0.24	0.24	+0.00
Ludwigia octovalvis subsp. octovalvis	2	0.12	0.12	-0.00
Hydrocotyle sp.	4	0.19	0.20	-0.01
Acanthosicyos naudinianus	2	0.10	0.12	-0.01
Achyranthes aspera var. sicula	3	0.14	0.16	-0.02
Euphorbia heterophylla	1	0.06	0.08	-0.02
Cardiospermum grandiflorum	1	0.06	0.08	-0.02
Solanum panduriforme	9	0.36	0.39	-0.04
Tragia sp.	4	0.16	0.20	-0.04
Riocreuxia sp.	14	0.54	0.59	-0.05
Alternanthera sessilis	2	0.07	0.12	-0.05
Kyphocarpa angustifolia	1	0.03	0.08	-0.05
Clematis oweniae	1	0.03	0.08	-0.05
Persicaria serrulata	1	0.03	0.08	-0.05
Ambrosia artemisiifolia	1	0.03	0.08	-0.05
Helinus integrifolius	1	0.03	0.08	-0.05
Zinnia peruviana	1	0.03	0.08	-0.05
Cleome hirta	3	0.10	0.16	-0.05
Centella sp.	11	0.41	0.47	-0.06
Mikania capensis	2	0.06	0.12	-0.06
Heliotropium lineare	1	0.01	0.08	-0.07
Crotalaria damarensis	1	0.01	0.08	-0.07
Priva meyeri var. meyeri	1	0.01	0.08	-0.07
Commelina africana var. lancispatha	1	0.01	0.08	-0.07
Momordica cardiospermoides	4	0.13	0.20	-0.07
Vernonia oligocephala	1	0.00	0.08	-0.08
Ranunculus multifidus	1	0.00	0.08	-0.08
Cirsium vulgare	1	0.00	0.08	-0.08
Cyphostemma sp2	2	0.03	0.12	-0.09
Ocimum americanum var. americanum	2	0.02	0.12	-0.10
Coccinia rehmannii	2	0.01	0.12	-0.10
Polygonum meisnerianum	3	0.04	0.16	-0.12
Ipomoea arachnosperma	6	0.15	0.27	-0.12
Vigna unguiculata subsp. dekindtiana	5	0.11	0.24	-0.12
Argemone mexicana	4	0.08	0.20	-0.12
Lepidium virginicum	3	0.00	0.16	-0.15
Chamaecrista mimosoides	5	0.06	0.24	-0.18
Crinum bulbispermum	5	0.02	0.24	-0.22

Weak competitors:

Schkuhria pinnata	8	0.13	0.35	-0.22
Gomphrena celosioides	12	0.28	0.51	-0.23

Verbena bonariensis	12	0.27	0.51	-0.24
Commelina erecta	23	0.61	0.94	-0.33
Hibiscus calyphyllus	16	0.31	0.66	-0.35
Conyza scabrida	17	0.24	0.70	-0.47
Total cover for species in group: 17.20%				

Community Structure

Growth Form

Tree	BB	12.44%		
Shrub	B	9.00%		
Dwarf shrub		3.98%		
Grass/Forb	BBBBBBB	23.05%	17.20%	

# Cover:	0	2	5	7	1
		5	0	5	0
					0
					0

Total class cover= 65.66%
 Grass proportion= 35.10%
 Forb proportion= 26.19%
 Dwarf shrub proportion= 6.06%
 Shrub proportion= 13.70%
 Tree proportion= 18.94%

Plant community number: 4 (variant 4.1)

Trees

Correlation coefficient=+0.64
 Standard error of the mean= 1.78

	Actual (F)	Pred. cover	Differ- ence	
Strong competitors:				
Melia azedarach	2	6.86	3.28	+3.58
Normal competition range:				
Acacia galpinii	1	1.26	0.62	+0.64
Combretum erythrophyllum	2	3.73	3.28	+0.45
Acacia erioloba	1	0.81	0.62	+0.18
Pterocarpus rotundifolius	1	0.81	0.62	+0.18
Celtis africana	1	0.20	0.62	-0.42
Terminalia sericea	1	0.05	0.62	-0.57
Weak competitors:				
Ziziphus mucronata subsp. mucronata	2	1.26	3.28	-2.02



Acacia karroo 2 1.26 3.28 -2.02
Total cover for species in group: 16.23%

Shrubs

Correlation coefficient=+0.35
Standard error of the mean= 0.87

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Diospyros lycioides subsp. sericea	2	3.28	1.51	+1.77
Maytenus heterophylla	2	2.52	1.51	+1.01

Normal competition range:

Rhus pyroides var. pyroides	2	2.07	1.51	+0.56
Salix mucronata subsp. wilmsii	1	1.26	0.90	+0.36
Combretum hereroense	1	0.81	0.90	-0.09
Lantana camara	1	0.81	0.90	-0.09
Flueggea virosa subsp. virosa	1	0.81	0.90	-0.09
Acacia ataxacantha	1	0.81	0.90	-0.09
Pavetta lanceolata	2	0.91	1.51	-0.60
Carissa bispinosa subsp. zambesiensis	2	0.66	1.51	-0.85
Euclea crispa subsp. crispa	2	0.66	1.51	-0.85

Weak competitors:

Solanum mauritianum	2	0.46	1.51	-1.05
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Total cover for species in group: 15.02%

Dwarf Shrubs

Correlation coefficient=+0.77
Standard error of the mean= 0.32

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Rubus sp.	2	1.26	0.81	+0.45
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Normal competition range:

Sida rhombifolia	2	0.91	0.81	+0.10
Protasparagus cooperi	1	0.20	0.13	+0.07
Eriosema psoraleoides	1	0.05	0.13	-0.08
Combretum sp.	2	0.66	0.81	-0.15

Weak competitors:

Viscum sp.	2	0.40	0.81	-0.41
Total cover for species in group:		3.48%		

Grasses

Correlation coefficient=+0.60
Standard error of the mean= 2.09

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Phragmites australis	2	10.08	4.54	+5.54
Normal competition range:				
Panicum deustum	1	2.47	0.98	+1.49
Ischaemum fasciculatum	1	1.82	0.98	+0.83
Bothriochloa bladhii	1	1.26	0.98	+0.28
Dactyloctenium giganteum	1	1.26	0.98	+0.28
Cynodon dactylon	1	1.26	0.98	+0.28
Cyperus latifolius	1	0.81	0.98	-0.18
Themeda triandra	1	0.81	0.98	-0.18
Typha capensis	1	0.46	0.98	-0.53
Setaria sphacelata var. sphacelata	1	0.46	0.98	-0.53
Hemarthria altissima	1	0.20	0.98	-0.78
Imperata cylindrica	1	0.05	0.98	-0.93
Panicum maximum	2	2.52	4.54	-2.02

Weak competitors:

Cyperus sexangularis	2	1.00	4.54	-3.53
Total cover for species in group:		24.44%		

Forbs

Correlation coefficient=+0.46
Standard error of the mean= 0.64

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Galium capense subsp. garipense	2	2.62	1.14	+1.48
Riocreuxia sp.	1	1.26	0.52	+0.74
Centella sp.	1	1.26	0.52	+0.74

Normal competition range:

Achyranthes aspera var. sicula	2	1.72	1.14	+0.58
Rhynchosia caribaea	2	1.61	1.14	+0.47
Equisetum ramosissimum	1	0.81	0.52	+0.29
Cissampelos mucronata	2	1.26	1.14	+0.12
Helinus integrifolius	1	0.46	0.52	-0.06
Priva meyeri var. meyeri	1	0.20	0.52	-0.32
Crinum bulbispermum	1	0.05	0.52	-0.47
Chamaecrista mimosoides	1	0.05	0.52	-0.47
Vernonia oligocephala	1	0.05	0.52	-0.47
Conyza albida	2	0.66	1.14	-0.48
Hibiscus calyphyllus	2	0.66	1.14	-0.48
Verbena bonariensis	2	0.66	1.14	-0.48
Tagetes minuta	2	0.66	1.14	-0.48

Weak competitors:

Commelina erecta	2	0.40	1.14	-0.74
Total cover for species in group: 14.35%				

Plant community Structure

Growth Form

Tree	BBBB	16.23%		
Shrub	BBBB	15.02%		
Dwarf shrub		3.48%		
Grass/Forb	BBBBBB	24.44%	14.35%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 73.51%
 Grass proportion= 33.24%
 Forb proportion= 19.53%
 Dwarf shrub proportion= 4.73%
 Shrub proportion= 20.43%
 Tree proportion= 22.07%

Plant community number: 4 (variant 4.2)

Trees

Correlation coefficient=+0.82
 Standard error of the mean= 1.98

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Melia azedarach	4	9.85	5.93	+3.93
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Normal competition range:

Rhus leptodictya	1	0.10	-0.51	+0.61
Acacia erioloba	1	0.10	-0.51	+0.61
Spirostachys africana	1	0.10	-0.51	+0.61
Acacia galpinii	3	4.36	3.78	+0.58
Combretum erythrophyllum	3	2.77	3.78	-1.01
Morus alba	2	0.13	1.63	-1.51
Ziziphus mucronata subsp. mucronata	4	4.18	5.93	-1.74

Weak competitors:

Acacia karroo	3	1.69	3.78	-2.09
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Total cover for species in group: 23.28%

Shrubs

Correlation coefficient=+0.63
Standard error of the mean= 1.21

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Diospyros lycioides subsp. sericea	4	5.63	3.18	+2.45
Sesbania punicea	2	3.28	1.42	+1.86

Normal competition range:

Maytenus heterophylla	2	2.45	1.42	+1.02
Carissa bispinosa subsp. zambesiensis	1	1.24	0.55	+0.69
Acacia ataxacantha	1	0.63	0.55	+0.08
Lantana camara	3	2.37	2.30	+0.07
Ricinus communis	1	0.23	0.55	-0.32
Clerodendrum sp.	1	0.23	0.55	-0.32
Salix mucronata subsp. wilmsii	2	1.03	1.42	-0.39
Pavetta lanceolata	4	2.67	3.18	-0.51
Euclea divinorum	2	0.63	1.42	-0.79
Flueggea virosa subsp. virosa	3	1.49	2.30	-0.81

Weak competitors:

Rhus pyroides var. pyroides	3	1.03	2.30	-1.27
Dichrostachys cinerea	3	0.56	2.30	-1.75

Total cover for species in group: 23.46%



Dwarf Shrubs

Correlation coefficient=+0.72
Standard error of the mean= 0.34

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Sida rhombifolia</i>	4	1.36	0.86	+0.50
Normal competition range:				
<i>Protasparagus cooperi</i>	3	0.73	0.60	+0.13
<i>Solanum seforthianum</i>	3	0.68	0.60	+0.09
<i>Viscum sp.</i>	1	0.10	0.08	+0.02
<i>Eriosema psoraleoides</i>	1	0.10	0.08	+0.02
Weak competitors:				
<i>Sesbania sp.</i>	3	0.22	0.60	-0.37
<i>Leonotis nepetifolia</i>	4	0.45	0.86	-0.40
Total cover for species in group: 3.65%				

Grasses

Correlation coefficient=+0.64
Standard error of the mean= 2.45

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Phragmites australis</i>	4	13.99	5.41	+8.57
Normal competition range:				
<i>Panicum deustum</i>	1	0.63	-0.45	+1.08
<i>Ischaemum fasciculatum</i>	1	0.63	-0.45	+1.08
<i>Cyperus latifolius</i>	1	0.23	-0.45	+0.68
<i>Cyperus sexangularis</i>	1	0.10	-0.45	+0.55
<i>Cyperus marginatus</i>	1	0.10	-0.45	+0.55
<i>Echinochloa crus-galli</i>	1	0.10	-0.45	+0.55
<i>Digitaria eriantha</i>	1	0.03	-0.45	+0.48
<i>Paspalum scrobiculatum</i>	1	0.03	-0.45	+0.48
<i>Typha capensis</i>	1	0.03	-0.45	+0.48
<i>Themeda triandra</i>	1	0.03	-0.45	+0.48
<i>Cynodon dactylon</i>	2	0.50	1.50	-1.00
<i>Pycnus polystachyos</i> var. <i>polystachyos</i>	2	0.46	1.50	-1.05
<i>Setaria sphacelata</i> var. <i>sphacelata</i>	2	0.43	1.50	-1.08
<i>Cyperus distans</i>	2	0.33	1.50	-1.18



Melinis repens	2	0.33	1.50	-1.18
Pennisetum macrourum	2	0.03	1.50	-1.48
Hemarthria altissima	3	1.03	3.46	-2.42

Weak competitors:

Panicum maximum	4	2.67	5.41	-2.74
Bothriochloa bladhii	3	0.60	3.46	-2.85

Total cover for species in group: 22.25%

Forbs

Correlation coefficient=+0.57
Standard error of the mean= 1.09

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Rivina humilis	4	6.40	2.00	+4.40
Teramnus labialis subsp. labialis	4	3.91	2.00	+1.91
Equisetum ramosissimum	2	2.27	0.78	+1.49

Normal competition range:

Cissampelos mucronata	4	2.85	2.00	+0.84
Dicliptera clinopodia	2	1.46	0.78	+0.68
Centella sp.	2	1.13	0.78	+0.36
Neonotonia wightii	2	1.03	0.78	+0.25
Euphorbia heterophylla	1	0.40	0.17	+0.23
Rhynchosia caribaea	1	0.40	0.17	+0.23
Galium capense subsp. garipense	1	0.40	0.17	+0.23
Gomphrena celosioides	1	0.23	0.17	+0.06
Cleome hirta	1	0.23	0.17	+0.06
Zinnia peruviana	1	0.23	0.17	+0.06
Commelina africana var. lancispatha	1	0.10	0.17	-0.07
Riocreuxia torulosa	4	1.89	2.00	-0.11
Vigna unguiculata subsp. dekindtiana	1	0.03	0.17	-0.14
Mikania capensis	1	0.03	0.17	-0.14
Lepidium virginicum	1	0.03	0.17	-0.14
Justicia flava	2	0.63	0.78	-0.15
Pergularia daemia var. daemia	2	0.63	0.78	-0.15
Achyranthes aspera var. aspera	3	1.24	1.39	-0.16
Ranunculus multifidus	1	0.00	0.17	-0.17
Hibiscus calyphyllus	2	0.33	0.78	-0.45
Ipomoea arachnosperma	3	0.86	1.39	-0.53
Riocreuxia sp.	3	0.86	1.39	-0.53
Cyphostemma sp2	2	0.20	0.78	-0.58
Polygonum meisnerianum	2	0.20	0.78	-0.58
Hydrocotyle sp.	4	1.31	2.00	-0.70
Tagetes minuta	4	0.96	2.00	-1.05

Weak competitors:

<i>Conyza scabrida</i>	3	0.22	1.39	-1.17
<i>Commelina erecta</i>	4	0.83	2.00	-1.17
<i>Verbena bonariensis</i>	4	0.78	2.00	-1.22
<i>Chamaecrista mimosoides</i>	4	0.40	2.00	-1.60
Total cover for species in group: 32.46%				

Plant community Structure

Growth Form

Tree	BBBB	23.28%		
Shrub	BBBB	23.46%		
Dwarf shrub		3.65%		
Grass/Forb	BBBBBDDDDDD	22.25%	32.46%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover=105.09%
 Grass proportion= 21.17%
 Forb proportion= 30.89%
 Dwarf shrub proportion= 3.47%
 Shrub proportion= 22.32%
 Tree proportion= 22.15%

Plant community number: 4 (variant 4.3)

Trees

Correlation coefficient=+0.65
 Standard error of the mean= 1.74

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

<i>Combretum erythrophyllum</i>	4	5.69	3.33	+2.37
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Normal competition range:

<i>Melia azedarach</i>	2	1.34	0.38	+0.96
<i>Acacia galpinii</i>	3	2.07	1.85	+0.22
<i>Ziziphus mucronata</i> subsp. <i>mucronata</i>	2	0.13	0.38	-0.25
<i>Morus alba</i>	3	0.22	1.85	-1.63
<i>Acacia karroo</i>	4	1.66	3.33	-1.66

Total cover for species in group: 11.11%



Shrubs

Correlation coefficient=+0.75
Standard error of the mean= 0.40

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Flueggea virosa subsp. virosa	4	1.97	1.18	+0.79
Normal competition range:				
Pavetta lanceolata	2	0.81	0.42	+0.38
Maerua juncea subsp. crustata	1	0.10	0.05	+0.05
Sesbania punicea	1	0.10	0.05	+0.05
Maytenus heterophylla	2	0.46	0.42	+0.03
Acacia ataxacantha	1	0.03	0.05	-0.02
Ricinus communis	2	0.33	0.42	-0.10
Dichrostachys cinerea	2	0.20	0.42	-0.22
Weak competitors:				
Diospyros lycioides subsp. sericea	3	0.35	0.80	-0.45
Rhus pyroides var. pyroides	4	0.66	1.18	-0.52
Total cover for species in group:		4.98%		

Dwarf Shrubs

Correlation coefficient=+0.82
Standard error of the mean= 0.98

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Protasparagus cooperi	4	3.91	2.49	+1.41
Normal competition range:				
Ehretia amoena	1	0.10	-0.05	+0.15
Solanum seaforthianum	1	0.10	-0.05	+0.15
Eriosema psoraleoides	1	0.03	-0.05	+0.07
Rubus cuneifolius	2	0.25	0.80	-0.55
Weak competitors:				
Sida rhombifolia	4	1.26	2.49	-1.23
Total cover for species in group:		5.64%		



Grasses

Correlation coefficient=+0.78
Standard error of the mean= 2.10

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Phragmites australis	4	12.85	6.47	+6.38
Normal competition range:				
Hemarthria altissima	3	5.57	4.36	+1.21
Urochloa panicoides	1	0.91	0.14	+0.77
Sporobolus pyramidalis	1	0.63	0.14	+0.49
Cyperus latifolius	1	0.40	0.14	+0.26
Eragrostis heteromera	1	0.23	0.14	+0.09
Heteropogon contortus	1	0.23	0.14	+0.09
Cyperus longus var. tenuiflorus	1	0.10	0.14	-0.04
Themeda triandra	1	0.10	0.14	-0.04
Melinis repens	1	0.10	0.14	-0.04
Eragrostis curvula	1	0.10	0.14	-0.04
Scirpus burkei	1	0.03	0.14	-0.11
Cyperus sexangularis	2	1.84	2.25	-0.41
Typha capensis	2	1.54	2.25	-0.71
Cyperus fastigiatus	2	0.63	2.25	-1.62
Weak competitors:				
Panicum maximum	4	3.55	6.47	-2.92
Cynodon dactylon	4	3.13	6.47	-3.34
Total cover for species in group: 31.93%				

Forbs

Correlation coefficient=+0.55
Standard error of the mean= 0.70

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Rivina humilis	2	3.43	0.81	+2.62
Normal competition range:				
Equisetum ramosissimum	1	0.91	0.39	+0.52
Pergularia daemia var. daemia	3	1.49	1.23	+0.26
Riocreuxia sp.	3	1.49	1.23	+0.26
Tagetes minuta	4	1.89	1.65	+0.24

Persicaria lapathifolia	3	1.36	1.23	+0.13
Justicia flava	2	0.86	0.81	+0.05
Cardiospermum grandiflorum	1	0.40	0.39	+0.01
Ludwigia octovalvis subsp. octovalvis	2	0.81	0.81	-0.01
Schistostephium heptalobum	4	1.59	1.65	-0.06
Cissampelos mucronata	3	1.09	1.23	-0.15
Crinum bulbispermum	1	0.10	0.39	-0.29
Coccinia rehmannii	1	0.10	0.39	-0.29
Ipomoea arachnosperma	1	0.10	0.39	-0.29
Achyranthes aspera var. aspera	1	0.10	0.39	-0.29
Schkuhria pinnata	1	0.10	0.39	-0.29
Centella sp.	2	0.50	0.81	-0.31
Rhynchosia caribaea	2	0.46	0.81	-0.36
Verbena bonariensis	2	0.46	0.81	-0.36
Commelina erecta	4	1.26	1.65	-0.39

Weak competitors:

Conyza scabrida	3	0.23	1.23	-1.01
Total cover for species in group: 18.70%				

Plant community Structure

Growth Form				
Tree	BB	11.11%		
Shrub		4.98%		
Dwarf shrub	B	5.64%		
Grass/Forb	BBBBBBB000	31.93%	18.70%	

% Cover:	0	2	5	7
		5	0	5
				0
				0

Total class cover= 72.37%
 Grass proportion= 44.12%
 Forb proportion= 25.84%
 Dwarf shrub proportion= 7.80%
 Shrub proportion= 6.89%
 Tree proportion= 15.35%

Plant community number: 4 (variant 4.4)

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Trees

Correlation coefficient=+0.75
 Standard error of the mean= 1.51

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Combretum erythrophyllum	4	6.68	4.00	+2.67
Acacia galpinii	3	4.32	2.73	+1.59

Normal competition range:

Morus alba	1	0.40	0.19	+0.21
Acacia erioloba	1	0.23	0.19	+0.04
Maerua angolensis	1	0.10	0.19	-0.09
Spirostachys africana	1	0.10	0.19	-0.09
Combretum apiculatum subsp. apiculatum	1	0.03	0.19	-0.17
Acacia caffra	1	0.00	0.19	-0.19
Acacia karroo	3	2.47	2.73	-0.26
Melia azedarach	3	2.27	2.73	-0.46

Weak competitors:

Ziziphus mucronata subsp. mucronata	4	0.75	4.00	-3.25
Total cover for species in group: 17.34%				

Shrubs

Correlation coefficient=+0.88
Standard error of the mean= 0.37

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Maytenus heterophylla	2	1.13	0.52	+0.62
Flueggea virosa subsp. virosa	4	2.12	1.61	+0.51

Normal competition range:

Euclea divinorum	1	0.23	-0.03	+0.25
Ricinus communis	1	0.10	-0.03	+0.13
Ehretia rigida	1	0.10	-0.03	+0.13
Salix mucronata subsp. wilmsii	1	0.00	-0.03	+0.03
Pavetta lanceolata	4	1.64	1.61	+0.03
Diospyros lycioides subsp. sericea	4	1.46	1.61	-0.15
Rhus pyroides var. pyroides	3	0.83	1.06	-0.23
Dichrostachys cinerea	2	0.20	0.52	-0.32

Weak competitors:

Grewia hexamita	2	0.03	0.52	-0.49
Acacia ataxacantha	2	0.03	0.52	-0.49
Total cover for species in group: 7.86%				



Dwarf Shrubs

Correlation coefficient=+0.84
Standard error of the mean= 0.47

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Sida rhombifolia</i>	4	2.44	1.74	+0.70
Normal competition range:				
<i>Leucas capensis</i>	1	0.40	-0.02	+0.43
<i>Tephrosia polystachya</i>	2	0.81	0.57	+0.24
<i>Lantana rugosa</i>	1	0.10	-0.02	+0.12
<i>Opuntia sp.</i>	1	0.10	-0.02	+0.12
<i>Protasparagus cooperi</i>	4	1.79	1.74	+0.05
<i>Leonotis nepetifolia</i>	1	0.00	-0.02	+0.03
<i>Sesbania sp.</i>	2	0.13	0.57	-0.44
<i>Viscum sp.</i>	2	0.13	0.57	-0.44
Weak competitors:				
<i>Solanum seafortianum</i>	3	0.35	1.15	-0.80
Total cover for species in group: 6.25%				

Grasses

Correlation coefficient=+0.77
Standard error of the mean= 2.00

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Phragmites australis</i>	4	15.17	7.05	+8.12
Normal competition range:				
<i>Schmidtia pappophoroides</i>	1	0.91	-0.09	+1.00
<i>Sporobolus pyramidalis</i>	1	0.40	-0.09	+0.49
<i>Aristida adscensionis</i>	1	0.40	-0.09	+0.49
<i>Cyperus longus var. tenuiflorus</i>	1	0.40	-0.09	+0.49
<i>Digitaria eriantha</i>	1	0.23	-0.09	+0.32
<i>Eragrostis lehmanniana</i>	1	0.23	-0.09	+0.32
<i>Paspalum scrobiculatum</i>	1	0.23	-0.09	+0.32
<i>Echinochloa crus-galli</i>	1	0.23	-0.09	+0.32
<i>Cyperus fastigiatus</i>	1	0.23	-0.09	+0.32
<i>Hemarthria altissima</i>	1	0.23	-0.09	+0.32
<i>Cyperus sexangularis</i>	1	0.10	-0.09	+0.19



Sporobolus africanus	1	0.10	-0.09	+0.19
Cyperus distans	1	0.10	-0.09	+0.19
Kyllinga melanosperma	1	0.10	-0.09	+0.19
Melinis repens	1	0.10	-0.09	+0.19
Heteropogon contortus	1	0.10	-0.09	+0.19
Setaria verticillata	1	0.03	-0.09	+0.12
Eragrostis plana	1	0.03	-0.09	+0.12
Cynodon dactylon	4	6.53	7.05	-0.52
Dactyloctenium giganteum	2	1.31	2.29	-0.98
Urochloa mosambicensis	2	1.13	2.29	-1.15
Urochloa panicoides	2	0.93	2.29	-1.36
Enneapogon cenchroides	2	0.73	2.29	-1.56
Echinochloa colona	2	0.50	2.29	-1.79

Weak competitors:

Panicum maximum	4	4.14	7.05	-2.91
Eragrostis curvula	3	1.03	4.67	-3.63

Total cover for species in group: 35.61

Forbs

Correlation coefficient=+0.37
Standard error of the mean= 0.78

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Schistostephium heptalobum	2	3.73	0.67	+3.06
Pergularia daemia var. daemia	3	2.68	0.95	+1.73
Alternanthera pungens	1	1.24	0.39	+0.85
Pupalia lappacea var. lappacea	2	1.46	0.67	+0.79

Normal competition range:

Tagetes minuta	4	1.97	1.23	+0.74
Justicia flava	3	1.54	0.95	+0.59
Richardia brasiliensis	1	0.91	0.39	+0.52
Acanthosicyos naudinianus	1	0.63	0.39	+0.24
Mikania capensis	1	0.40	0.39	+0.01
Commelina erecta	4	1.18	1.23	-0.04
Kyphocarpa angustifolia	1	0.23	0.39	-0.16
Xanthium strumarium	1	0.23	0.39	-0.16
Centella sp.	1	0.23	0.39	-0.16
Alternanthera sessilis	2	0.50	0.67	-0.17
Rivina humilis	2	0.50	0.67	-0.17
Cleome hirta	2	0.50	0.67	-0.17
Argemone mexicana	1	0.10	0.39	-0.29
Crotalaria damarensis	1	0.10	0.39	-0.29
Achyranthes aspera var. sicula	1	0.10	0.39	-0.29
Polygonum meisnerianum	1	0.10	0.39	-0.29
Persicaria lapathifolia	3	0.60	0.95	-0.34
Verbena bonariensis	1	0.03	0.39	-0.36



Cissampelos mucronata	4	0.86	1.23	-0.37
Cirsium vulgare	1	0.00	0.39	-0.39
Hibiscus calyphyllus	2	0.25	0.67	-0.42
Achyranthes aspera var. aspera	2	0.23	0.67	-0.44
Schkuhria pinnata	3	0.43	0.95	-0.52
Ipomoea arachnosperma	2	0.13	0.67	-0.54
Gomphrena celosioides	2	0.10	0.67	-0.57
Riocreuxia sp.	4	0.66	1.23	-0.57
Conyza scabrida	4	0.66	1.23	-0.57
Tribulus terrestris	3	0.35	0.95	-0.59
Lepidium virginicum	2	0.00	0.67	-0.66

Total cover for species in group: 22.61%

Plant community Structure

Growth Form

Tree	BBB	17.34%		
Shrub	B	7.86%		
Dwarf shrub	B	6.25%		
Grass/Forb	BBBBBBBBB	35.61%	22.61%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 89.68%
Grass proportion= 39.71%
Forb proportion= 25.21%
Dwarf shrub proportion= 6.97%
Shrub proportion= 8.77%
Tree proportion= 19.34%

Plant community number: 4 (variant 4.5)

Trees

Correlation coefficient=+0.85
Standard error of the mean= 0.27

(F)	Actual cover	Pred. cover	Differ-ence
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Strong competitors:

Acacia karroo	4	1.18	0.80	+0.38
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Normal competition range:

Nicotiana glauca	1	0.10	0.04	+0.06
Acacia erioloba	1	0.10	0.04	+0.06



Gleditsia triacanthos	1	0.03	0.04	-0.01
Ziziphus mucronata subsp. mucronata	4	0.66	0.80	-0.15

Weak competitors:

Melia azedarach	3	0.20	0.55	-0.35
Total cover for species in group:		2.27%		

Shrubs

Correlation coefficient=+0.72
Standard error of the mean= 0.43

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Tamarix chinensis	2	1.01	0.44	+0.57
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Normal competition range:

Sesbania punicea	4	1.46	1.15	+0.31
Maytenus heterophylla	1	0.23	0.08	+0.15
Grewia flavescens var. flavescens	1	0.00	0.08	-0.08
Flueggea virosa subsp. virosa	1	0.00	0.08	-0.08
Dichrostachys cinerea	2	0.20	0.44	-0.24

Weak competitors:

Rhus pyroides var. pyroides	3	0.15	0.79	-0.64
Total cover for species in group:		3.05%		

Dwarf Shrubs

Correlation coefficient=+1.00
Standard error of the mean= 0.02

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Normal competition range:

Gomphocarpus fruticosus	1	0.03	0.01	+0.02
Sida rhombifolia	4	0.83	0.82	+0.01
Protasparagus cooperi	1	0.00	0.01	-0.00

Weak competitors:

Sida cordifolia	2	0.25	0.28	-0.03
Total cover for species in group:		1.11%		



Grasses

Correlation coefficient=+0.46
Standard error of the mean= 2.05

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Cynodon dactylon</i>	4	8.52	3.54	+4.98
<i>Hemarthria altissima</i>	2	6.07	1.42	+4.65
Normal competition range:				
<i>Typha capensis</i>	2	2.14	1.42	+0.72
<i>Digitaria eriantha</i>	1	0.91	0.36	+0.55
<i>Cyperus fastigiatus</i>	2	1.71	1.42	+0.29
<i>Eragrostis heteromera</i>	1	0.63	0.36	+0.27
<i>Tragus berteronianus</i>	1	0.40	0.36	+0.04
<i>Pycurus polystachyos</i> var. <i>polystachyos</i>	1	0.23	0.36	-0.13
<i>Cyperus longus</i> var. <i>tenuiflorus</i>	1	0.23	0.36	-0.13
<i>Dactyloctenium giganteum</i>	1	0.00	0.36	-0.36
<i>Paspalum distichum</i>	2	0.81	1.42	-0.61
<i>Eragrostis lehmanniana</i>	2	0.73	1.42	-0.69
<i>Sporobolus ioclados</i>	2	0.63	1.42	-0.79
<i>Urochloa panicoides</i>	2	0.46	1.42	-0.96
<i>Schoenoplectus tabernaemontani</i>	2	0.33	1.42	-1.09
<i>Panicum maximum</i>	3	0.81	2.48	-1.67
<i>Phragmites australis</i>	3	0.43	2.48	-2.05
Weak competitors:				
<i>Cyperus sexangularis</i>	4	0.53	3.54	-3.01
Total cover for species in group: 25.56%				

Forbs

Correlation coefficient=-0.04
Standard error of the mean= 0.95

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Conyza albida</i>	1	3.05	0.63	+2.42
<i>Tribulus terrestris</i>	2	2.24	0.59	+1.65
Normal competition range:				
<i>Tagetes minuta</i>	3	1.43	0.56	+0.87
<i>Datura stramonium</i>	1	0.63	0.63	+0.00



Hibiscus calyphyllus	4	0.33	0.53	-0.20
Conyza scabrida	4	0.30	0.53	-0.23
Verbena bonariensis	3	0.28	0.56	-0.28
Ambrosia artemisiifolia	1	0.23	0.63	-0.40
Pergularia daemia var. daemia	2	0.10	0.59	-0.49
Centella sp.	2	0.10	0.59	-0.49
Gomphrena celosioides	1	0.10	0.63	-0.53
Schkuhria pinnata	1	0.10	0.63	-0.53
Commelina erecta	2	0.03	0.59	-0.57
Crinum bulbispermum	1	0.00	0.63	-0.62
Coccinia rehmannii	1	0.00	0.63	-0.62
Total cover for species in group:				8.93%

Plant community Structure

Growth Form					
Tree		2.27%			
Shrub		3.05%			
Dwarf shrub		1.11%			
Grass/Forb		BBBBBØ	25.56%	8.93%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 40.91%
Grass proportion= 62.47%
Forb proportion= 21.82%
Dwarf shrub proportion= 2.71%
Shrub proportion= 7.46%
Tree proportion= 5.54%

Plant community number: 4 (variant 4.6)

Trees

Correlation coefficient=+0.67
Standard error of the mean= 0.85

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Croton megalobotrys	2	1.95	0.51	+1.44
Combretum erythrophyllum	8	3.59	2.18	+1.41

Normal competition range:

Acacia karroo	6	1.77	1.62	+0.15
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Acacia tortilis	3	0.90	0.79	+0.11
Faidherbia albida	3	0.78	0.79	-0.01
Prosopis velutina	1	0.16	0.23	-0.07
Peltophorum africanum	1	0.04	0.23	-0.19
Nicotiana glauca	1	0.01	0.23	-0.22
Melia azedarach	1	0.00	0.23	-0.23
Acacia burkei	2	0.13	0.51	-0.38
Acacia erioloba	2	0.13	0.51	-0.38

Weak competitors:

Ziziphus mucronata subsp. mucronata	8	0.52	2.18	-1.65
Total cover for species in group:		9.98%		

Shrubs

Correlation coefficient=+0.60
Standard error of the mean= 0.70

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Maytenus heterophylla	6	2.74	0.85	+1.89
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Normal competition range:

Lantana camara	1	0.00	0.00	-0.00
Salix mucronata subsp. wilmsii	1	0.00	0.00	-0.00
Diospyros lycioides subsp. sericea	8	1.13	1.19	-0.06
Acacia mellifera	2	0.05	0.17	-0.12
Ricinus communis	2	0.04	0.17	-0.13
Rhus pyroides var. pyroides	8	1.04	1.19	-0.15
Dichrostachys cinerea	2	0.01	0.17	-0.16
Pavetta lanceolata	5	0.42	0.68	-0.26
Grewia flavescens var. flavescens	6	0.57	0.85	-0.28

Weak competitors:

Flueggea virosa subsp. virosa	8	0.44	1.19	-0.74
Total cover for species in group:		6.45%		

Dwarf Shrubs

Correlation coefficient=+0.57
Standard error of the mean= 0.24

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Malvastrum coromandelianum	2	0.90	0.17	+0.73
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Normal competition range:

Sida rhombifolia	7	0.62	0.49	+0.13
Protasparagus cooperi	8	0.63	0.55	+0.08
Nicotiana sp.	2	0.20	0.17	+0.03
Ehretia amoena	3	0.26	0.23	+0.03
Leonotis nepetifolia	4	0.28	0.30	-0.01
Maytenus tenuispina	6	0.39	0.43	-0.03
Ficus capreifolia	5	0.31	0.36	-0.05
Abutilon rehmannii	1	0.04	0.10	-0.06
Jatropha gossypifolia	1	0.01	0.10	-0.09
Solanum incanum	1	0.00	0.10	-0.10
Sida cordifolia	1	0.00	0.10	-0.10
Opuntia sp.	1	0.00	0.10	-0.10
Senna italica subsp. arachoides	2	0.04	0.17	-0.13

Weak competitors:

Leucas capensis	6	0.09	0.43	-0.33
Total cover for species in group:		3.79%		

Grasses

Correlation coefficient=+0.82
Standard error of the mean= 0.79

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Cynodon dactylon	10	4.90	2.65	+2.25
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Normal competition range:

Phragmites australis	10	3.07	2.65	+0.42
Schmidtia pappophoroides	1	0.09	-0.22	+0.31
Typha capensis	1	0.09	-0.22	+0.31
Aristida congesta subsp. barbicollis	1	0.09	-0.22	+0.31
Bothriochloa bladhii	1	0.01	-0.22	+0.23
Hemarthria altissima	2	0.25	0.10	+0.15
Enneapogon cenchroides	2	0.13	0.10	+0.03
Cyperus sexangularis	2	0.08	0.10	-0.02
Sporobolus ioclados	3	0.35	0.42	-0.07
Eragrostis lehmanniana	3	0.29	0.42	-0.13
Eragrostis curvula	5	0.85	1.06	-0.21
Urochloa mosambicensis	4	0.38	0.74	-0.36
Tragus berteronianus	3	0.06	0.42	-0.36
Andropogon appendiculatus	4	0.23	0.74	-0.51
Panicum maximum	10	1.90	2.65	-0.75



Weak competitors:

<i>Urochloa panicoides</i>	9	0.71	2.33	-1.62
Total cover for species in group: 13.51%				

Forbs

Correlation coefficient=+0.72
Standard error of the mean= 0.34

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

<i>Achyranthes aspera</i> var. <i>aspera</i>	10	2.33	1.12	+1.21
<i>Xanthium strumarium</i>	2	0.66	0.13	+0.52
<i>Datura stramonium</i>	4	0.74	0.38	+0.36

Normal competition range:

<i>Tribulus terrestris</i>	8	1.10	0.87	+0.23
<i>Justicia flava</i>	2	0.34	0.13	+0.21
<i>Chenopodium olukondae</i>	7	0.95	0.75	+0.20
<i>Clematis oweniae</i>	1	0.09	0.01	+0.08
<i>Persicaria serrulata</i>	1	0.09	0.01	+0.08
<i>Schistostephium heptalobum</i>	1	0.09	0.01	+0.08
<i>Tragia</i> sp.	4	0.44	0.38	+0.07
<i>Heliotropium lineare</i>	1	0.04	0.01	+0.03
<i>Acanthosicyos naudinianus</i>	1	0.04	0.01	+0.03
<i>Solanum panduriforme</i>	9	1.00	0.99	+0.00
<i>Equisetum ramosissimum</i>	4	0.37	0.38	-0.01
<i>Tagetes minuta</i>	7	0.73	0.75	-0.02
<i>Momordica cardiospermoides</i>	4	0.35	0.38	-0.03
<i>Vigna unguiculata</i> subsp. <i>dekindtiana</i>	4	0.31	0.38	-0.07
<i>Ocimum americanum</i> var. <i>americanum</i>	2	0.05	0.13	-0.08
<i>Argemone mexicana</i>	3	0.17	0.26	-0.08
<i>Crinum bulbispermum</i>	2	0.00	0.13	-0.13
<i>Centella</i> sp.	3	0.12	0.26	-0.14
<i>Schkuhria pinnata</i>	3	0.12	0.26	-0.14
<i>Conyza scabrida</i>	3	0.10	0.26	-0.15
<i>Riocreuxia</i> sp.	3	0.06	0.26	-0.20
<i>Hibiscus calyphyllus</i>	6	0.38	0.62	-0.24
<i>Gomphrena celosioides</i>	8	0.61	0.87	-0.26

Weak competitors:

<i>Commelina erecta</i>	7	0.30	0.75	-0.45
<i>Cissampelos mucronata</i>	7	0.26	0.75	-0.49
<i>Pergularia daemia</i> var. <i>daemia</i>	9	0.36	0.99	-0.63
Total cover for species in group: 12.21%				

Plant community Structure

Growth Form				
Tree	B	9.98%		
Shrub	B	6.45%		
Dwarf shrub		3.79%		
Grass/Forb	BBB	13.51%	12.21%	

% Cover:	0	2	5	7
		5	0	5
				0

Total class cover= 45.94%
 Grass proportion= 29.40%
 Forb proportion= 26.58%
 Dwarf shrub proportion= 8.25%
 Shrub proportion= 14.04%
 Tree proportion= 21.72%

Plant community number: 5

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Trees

Correlation coefficient=+0.84
 Standard error of the mean= 1.08

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

Acacia karroo	3	5.51	3.37	+2.14
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Normal competition range:

Acacia tortilis	1	0.84	0.08	+0.76
Faidherbia albida	1	0.30	0.08	+0.22
Acacia burkei	1	0.13	0.08	+0.05
Croton megalobotrys	3	3.33	3.37	-0.04
Boscia albitrunca	1	0.00	0.08	-0.08
Peltoporum africanum	1	0.00	0.08	-0.08
Melia azedarach	1	0.00	0.08	-0.08

Weak competitors:

Ziziphus mucronata subsp. mucronata	3	2.05	3.37	-1.32
Combretum erythrophyllum	2	0.17	1.73	-1.56

Total cover for species in group: 12.34%

Shrubs

Correlation coefficient=+0.64
Standard error of the mean= 0.83

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Diospyros lycioides subsp. sericea	3	2.79	1.46	+1.33
Rhus pyroides var. pyroides	3	2.42	1.46	+0.96
Normal competition range:				
Acacia mellifera	2	1.38	0.75	+0.63
Sesbania punicea	1	0.13	0.04	+0.10
Grewia hexamita	1	0.03	0.04	-0.00
Ricinus communis	1	0.00	0.04	-0.03
Maytenus heterophylla	3	0.97	1.46	-0.49
Grewia flavescens var. flavescens	3	0.87	1.46	-0.59
Flueggea virosa subsp. virosa	2	0.01	0.75	-0.74
Weak competitors:				
Dichrostachys cinerea	3	0.31	1.46	-1.15
Total cover for species in group:		8.92%		

Dwarf Shrubs

Correlation coefficient=+0.72
Standard error of the mean= 0.22

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Senna occidentalis	2	0.84	0.44	+0.40
Normal competition range:				
Lycium cinereum	1	0.30	0.16	+0.14
Ficus capreifolia	1	0.30	0.16	+0.14
Leonotis nepetifolia	2	0.34	0.44	-0.10
Senna italica subsp. arachoides	1	0.03	0.16	-0.13
Verbesina encelioides var. encelioides	3	0.57	0.72	-0.15
Indigofera circinnata	1	0.00	0.16	-0.16
Maytenus tenuispina	1	0.00	0.16	-0.16
Total cover for species in group:		2.39%		



Grasses

Correlation coefficient=+0.88
Standard error of the mean= 0.34

		Actual (F) cover	Pred. cover	Differ- ence
Strong competitors:				
Urochloa mosambicensis	3	1.81	1.34	+0.47
Normal competition range:				
Cynodon dactylon	3	1.65	1.34	+0.31
Eragrostis pseudosclerantha	3	1.61	1.34	+0.27
Digitaria eriantha	2	0.84	0.64	+0.20
Aristida congesta subsp. barbicollis	1	0.13	-0.05	+0.18
Tragus berteronianus	3	1.45	1.34	+0.11
Tragus racemosus	1	0.03	-0.05	+0.08
Eragrostis curvula	1	0.03	-0.05	+0.08
Eragrostis nindensis	1	0.00	-0.05	+0.05
Panicum maximum	3	1.38	1.34	+0.04
Brachiaria deflexa	2	0.61	0.64	-0.04
Phragmites australis	3	1.28	1.34	-0.06
Weak competitors:				
Setaria verticillata	2	0.17	0.64	-0.48
Dactyloctenium giganteum	2	0.17	0.64	-0.48
Urochloa panicoides	3	0.60	1.34	-0.74
Total cover for species in group: 11.76%				

Forbs

Correlation coefficient=+0.24
Standard error of the mean= 0.67

		Actual (F) cover	Pred. cover	Differ- ence
Strong competitors:				
Tribulus terrestris	3	2.79	0.71	+2.08
Alternanthera pungens	1	1.65	0.31	+1.34
Normal competition range:				
Xanthium strumarium	3	1.35	0.71	+0.63
Gisekia pharnacioides var. pharnacioides	3	1.11	0.71	+0.39
Portulaca quadrifida	1	0.54	0.31	+0.23
Cleome angustifolia subsp. petersiana	1	0.54	0.31	+0.23
Justicia flava	2	0.67	0.51	+0.16



Coccinia rehmannii	2	0.57	0.51	+0.06
Rivina humilis	2	0.44	0.51	-0.07
Achyranthes aspera var. aspera	3	0.57	0.71	-0.14
Cleome rubella	2	0.31	0.51	-0.20
Cissampelos mucronata	3	0.44	0.71	-0.27
Acalypha indica	1	0.03	0.31	-0.28
Momordica cardiospermoides	1	0.03	0.31	-0.28
Sesamum sp.	1	0.00	0.31	-0.31
Datura stramonium	2	0.14	0.51	-0.37
Hibiscus calyphyllus	2	0.07	0.51	-0.44
Pavonia senegalensis	2	0.04	0.51	-0.47
Tragia sp.	2	0.01	0.51	-0.50
Tagetes minuta	3	0.17	0.71	-0.54
Commelina erecta	3	0.17	0.71	-0.54

Weak competitors:

Tragia rupestris	3	0.04	0.71	-0.67
Total cover for species in group: 11.65%				

Plant community Structure

Growth Form

Tree	βββ	12.34%	
Shrub	β	8.92%	
Dwarf shrub		2.39%	
Grass/Forb	βββββ	11.76%	11.65%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 47.06%
Grass proportion= 24.98%
Forb proportion= 24.76%
Dwarf shrub proportion= 5.09%
Shrub proportion= 18.95%
Tree proportion= 26.23%

Plant community number: 6

Trees

Correlation coefficient=+0.88
Standard error of the mean= 0.33

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

<i>Ficus sycomorus</i>	12	2.11	1.01	+1.10
<i>Diospyros mespiliformis</i>	13	2.06	1.11	+0.95
<i>Breonadia salicina</i>	4	0.82	0.22	+0.60

Normal competition range:

<i>Faidherbia albida</i>	13	1.33	1.11	+0.22
<i>Croton megalobotrys</i>	20	2.01	1.80	+0.22
<i>Lonchocarpus capassa</i>	11	1.08	0.91	+0.17
<i>Ficus cf. thonningii</i>	2	0.13	0.03	+0.11
<i>Trimeria grandifolia</i> subsp. <i>grandifolia</i>	2	0.13	0.03	+0.11
<i>Schrebera alata</i>	1	0.03	-0.07	+0.10
<i>Albizia anthelmintica</i>	1	0.03	-0.07	+0.10
<i>Pappea capensis</i>	1	0.01	-0.07	+0.09
<i>Gardenia volkensii</i> subsp. <i>volkensii</i>	1	0.01	-0.07	+0.09
<i>Lanea schweinfurthii</i> var. <i>stuhlmannii</i>	1	0.00	-0.07	+0.08
<i>Berchemia zeyheri</i>	1	0.00	-0.07	+0.08
<i>Ekebergia capensis</i>	1	0.00	-0.07	+0.08
<i>Berchemia discolor</i>	1	0.00	-0.07	+0.08
<i>Boscia albitrunca</i>	1	0.00	-0.07	+0.07
<i>Dombeya rotundifolia</i>	1	0.00	-0.07	+0.07
<i>Mimusops zeyheri</i>	2	0.08	0.03	+0.06
<i>Karomia speciosa</i> forma <i>speciosa</i>	2	0.04	0.03	+0.02
<i>Acacia nilotica</i> subsp. <i>kraussiana</i>	3	0.12	0.12	-0.00
<i>Balanites maughamii</i>	2	0.00	0.03	-0.02
<i>Trichilia emetica</i> susp. <i>emetica</i>	4	0.19	0.22	-0.03
<i>Nicotiana glauca</i>	27	2.40	2.48	-0.08
<i>Peltoporum africanum</i>	3	0.02	0.12	-0.10
<i>Acacia nigrescens</i>	5	0.21	0.32	-0.12
<i>Acacia karroo</i>	9	0.54	0.71	-0.17
<i>Strychnos madagascariensis</i>	4	0.04	0.22	-0.18
<i>Ficus ingens</i> var. <i>ingens</i>	4	0.04	0.22	-0.18
<i>Ziziphus mucronata</i> subsp. <i>mucronata</i>	21	1.69	1.89	-0.21
<i>Schotia brachypetala</i>	10	0.58	0.81	-0.23
<i>Combretum erythrophyllum</i>	8	0.34	0.62	-0.28
<i>Celtis africana</i>	5	0.03	0.32	-0.29
<i>Sclerocarya birrea</i> subsp. <i>caffra</i>	6	0.12	0.42	-0.30

Weak competitors:

<i>Combretum imberbe</i>	7	0.17	0.52	-0.34
<i>Spirostachys africana</i>	7	0.10	0.52	-0.42
<i>Melia azedarach</i>	6	0.00	0.42	-0.42
<i>Acacia robusta</i> subsp. <i>clavigera</i>	11	0.46	0.91	-0.45
<i>Acacia tortilis</i>	13	0.54	1.11	-0.56

Total cover for species in group: 17.53%

Shrubs

Correlation coefficient=+0.67
Standard error of the mean= 0.35

Actual Pred. Differ-



	(F)	cover	cover	ence
		-----	-----	-----
Strong competitors:				
<i>Acacia ataxacantha</i>	18	2.48	0.79	+1.69
<i>Rhus pyroides</i> var. <i>pyroides</i>	15	1.38	0.64	+0.73
<i>Maytenus heterophylla</i>	24	1.52	1.07	+0.45
Normal competition range:				
<i>Euphorbia tirucalli</i>	2	0.23	0.03	+0.20
<i>Carissa bispinosa</i> subsp. <i>zambesiensis</i>	10	0.53	0.41	+0.13
<i>Acalypha glabrata</i> var. <i>glabrata</i>	4	0.24	0.12	+0.12
<i>Acacia erubescens</i>	1	0.05	-0.02	+0.07
<i>Acacia mellifera</i>	1	0.05	-0.02	+0.07
<i>Capparis tomentosa</i>	2	0.09	0.03	+0.06
<i>Dalbergia armata</i>	2	0.08	0.03	+0.05
<i>Duvernoia aconitiflora</i>	1	0.03	-0.02	+0.05
<i>Croton menyhartii</i>	1	0.03	-0.02	+0.05
<i>Senna petersiana</i>	2	0.07	0.03	+0.04
<i>Plectroniella armata</i>	13	0.58	0.55	+0.04
<i>Bridelia cathartica</i> subsp. <i>melanthesoides</i>	1	0.01	-0.02	+0.03
<i>Commiphora africana</i> var. <i>africana</i>	1	0.01	-0.02	+0.03
<i>Ehretia rigida</i>	1	0.01	-0.02	+0.03
<i>Carissa edulis</i>	1	0.00	-0.02	+0.02
<i>Croton gratissimus</i> var. <i>gratissimus</i>	1	0.00	-0.02	+0.02
<i>Dombeya autumnalis</i>	3	0.10	0.08	+0.02
<i>Euphorbia</i> sp.	1	0.00	-0.02	+0.02
<i>Mundulea sericea</i>	1	0.00	-0.02	+0.02
<i>Mystroxydon aethiopicum</i> subsp. <i>schlechteri</i>	3	0.09	0.08	+0.01
<i>Teclea natalensis</i>	2	0.03	0.03	-0.00
<i>Obetia tenax</i>	2	0.01	0.03	-0.02
<i>Scolopia zeyheri</i>	7	0.24	0.27	-0.02
<i>Cordia</i> cf. <i>monoica</i>	2	0.00	0.03	-0.03
<i>Salix mucronata</i> subsp. <i>wilmsii</i>	2	0.00	0.03	-0.03
<i>Commiphora glandulosa</i>	3	0.05	0.08	-0.03
<i>Chaetachme aristata</i>	3	0.05	0.08	-0.03
<i>Pavetta catophylla</i>	7	0.23	0.27	-0.04
<i>Hippocratea longipetiolata</i>	13	0.50	0.55	-0.04
<i>Rhus engleri</i>	3	0.02	0.08	-0.06
<i>Terminalia prunioides</i>	3	0.02	0.08	-0.06
<i>Combretum hereroense</i>	4	0.03	0.12	-0.09
<i>Pavetta lanceolata</i>	4	0.02	0.12	-0.10
<i>Euclea divinorum</i>	7	0.10	0.27	-0.16
<i>Grewia bicolor</i> var. <i>bicolor</i>	10	0.18	0.41	-0.23
<i>Ximenia americana</i> var. <i>microphylla</i>	9	0.06	0.36	-0.30
<i>Diospyros lycioides</i> subsp. <i>sericea</i>	12	0.19	0.50	-0.31
<i>Grewia hexamita</i>	11	0.12	0.45	-0.34
Weak competitors:				
<i>Grewia flavescens</i> var. <i>flavescens</i>	13	0.17	0.55	-0.38
<i>Dichrostachys cinerea</i>	19	0.39	0.83	-0.44
<i>Flueggea virosa</i> subsp. <i>virosa</i>	21	0.33	0.93	-0.59
<i>Ricinus communis</i>	22	0.36	0.97	-0.62
Total cover for species in group: 10.69%				

Dwarf Shrubs

Correlation coefficient=+0.75
Standard error of the mean= 0.10

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Aloe globuligemma	1	0.34	0.00	+0.33
Ficus capreifolia	15	0.44	0.27	+0.18
Verbesina encelioides var. encelioides	21	0.53	0.38	+0.14

Normal competition range:

Pyrenacantha grandiflora	9	0.21	0.15	+0.06
Phoenix reclinata	1	0.03	0.00	+0.03
Lycium cinereum	1	0.01	0.00	+0.01
Senna occidentalis	15	0.27	0.27	+0.00
Aloe sp.	1	0.00	0.00	+0.00
Tephrosia polystachya	1	0.00	0.00	+0.00
Grewia villosa var. villosa	5	0.08	0.08	-0.00
Solanum kwebense	1	0.00	0.00	-0.00
Rhus dentata	1	0.00	0.00	-0.00
Hibiscus praeteritus	2	0.02	0.02	-0.00
Commicarpus pilosus	2	0.02	0.02	-0.00
Secamone parvifolia	2	0.02	0.02	-0.00
Sansevieria hyacinthoides	3	0.03	0.04	-0.01
Ehretia amoena	2	0.01	0.02	-0.01
Sida cordifolia	2	0.01	0.02	-0.01
Leucas capensis	2	0.01	0.02	-0.01
Senna italica subsp. arachoides	2	0.00	0.02	-0.02
Indigofera circinnata	2	0.00	0.02	-0.02
Solanum incanum	3	0.00	0.04	-0.04
Leonotis nepetifolia	3	0.00	0.04	-0.04
Sesbania sp.	4	0.02	0.06	-0.04
Gomphocarpus fruticosus	5	0.00	0.08	-0.07
Solanum nigrum	6	0.02	0.10	-0.08
Lantana rugosa	6	0.01	0.10	-0.09

Weak competitors:

Grewia flava	14	0.11	0.25	-0.14
Malvastrum coromandelianum	15	0.09	0.27	-0.18

Total cover for species in group: 2.29%

Grasses

Correlation coefficient=+0.76
Standard error of the mean= 0.35



		Actual (F) cover	Pred. cover	Differ- ence
		-----	-----	-----
Strong competitors:				
<i>Panicum maximum</i>	30	2.88	1.24	+1.64
<i>Phragmites australis</i>	27	1.75	1.11	+0.64
<i>Cynodon dactylon</i>	29	1.73	1.20	+0.53
Normal competition range:				
<i>Schmidtia pappophoroides</i>	4	0.30	0.04	+0.26
<i>Eragrostis rigidior</i>	1	0.03	-0.10	+0.13
<i>Eragrostis biflora</i>	1	0.01	-0.10	+0.11
<i>Cyperus longus</i> var. <i>tenuiflorus</i>	1	0.01	-0.10	+0.11
<i>Cyperus obtusiflorus</i> var. <i>obtusiflorus</i>	1	0.00	-0.10	+0.10
<i>Sorghum versicolor</i>	1	0.00	-0.10	+0.10
<i>Pycnus polystachyos</i> var. <i>polystachyos</i>	1	0.00	-0.10	+0.10
<i>Kyllinga alba</i>	1	0.00	-0.10	+0.10
<i>Eragrostis aspera</i>	1	0.00	-0.10	+0.10
<i>Leptocarydion vulpiastrum</i>	1	0.00	-0.10	+0.10
<i>Enteropogon macrostachyus</i>	1	0.00	-0.10	+0.10
<i>Oplismenus hirtellus</i>	1	0.00	-0.10	+0.10
<i>Eragrostis nindensis</i>	1	0.00	-0.10	+0.10
<i>Aristida adscensionis</i>	1	0.00	-0.10	+0.10
<i>Eragrostis superba</i>	1	0.00	-0.10	+0.10
<i>Eragrostis curvula</i>	2	0.02	-0.05	+0.07
<i>Dinebra retroflexa</i> var. <i>condensata</i>	2	0.00	-0.05	+0.06
<i>Cyperus fastigiatus</i>	3	0.05	-0.01	+0.05
<i>Sorghum bicolor</i> subsp. <i>arundinaceum</i>	2	0.00	-0.05	+0.05
<i>Brachiaria eruciformis</i>	2	0.00	-0.05	+0.05
<i>Aristida bipartita</i>	2	0.00	-0.05	+0.05
<i>Melinis repens</i>	2	0.00	-0.05	+0.05
<i>Acrachne racemosa</i>	3	0.04	-0.01	+0.04
<i>Brachiaria nigropedata</i>	3	0.02	-0.01	+0.02
<i>Sporobolus ioclados</i>	4	0.05	0.04	+0.01
<i>Typha capensis</i>	3	0.00	-0.01	+0.01
<i>Paspalum distichum</i>	13	0.44	0.46	-0.02
<i>Digitaria velutina</i>	4	0.02	0.04	-0.02
<i>Urochloa panicoides</i>	4	0.02	0.04	-0.02
<i>Hemarthria altissima</i>	5	0.03	0.09	-0.06
<i>Cenchrus ciliaris</i>	5	0.02	0.09	-0.07
<i>Panicum deustum</i>	6	0.03	0.13	-0.11
<i>Chloris virgata</i>	6	0.01	0.13	-0.12
<i>Enneapogon cenchroides</i>	7	0.03	0.18	-0.15
<i>Aristida canescens</i>	8	0.01	0.23	-0.22
<i>Dactyloctenium giganteum</i>	9	0.04	0.27	-0.23
<i>Cyperus rotundus</i> subsp. <i>rotundus</i>	19	0.48	0.74	-0.25
<i>Setaria sagittifolia</i>	12	0.15	0.41	-0.26
<i>Digitaria eriantha</i>	14	0.20	0.50	-0.30
Weak competitors:				
<i>Echinochloa colona</i>	12	0.02	0.41	-0.40
<i>Eragrostis pseudosclerantha</i>	20	0.35	0.78	-0.43
<i>Setaria verticillata</i>	16	0.16	0.60	-0.43



Urochloa mosambicensis	29	0.74	1.20	-0.46
Tragus berteronianus	21	0.14	0.83	-0.69
Brachiaria deflexa	24	0.22	0.97	-0.75

Total cover for species in group: 10.01%

Forbs

Correlation coefficient=+0.46

Standard error of the mean= 0.62

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
Xanthium strumarium	29	5.65	1.09	+4.56
Normal competition range:				
Abutilon ramosum	1	0.21	-0.16	+0.37
Nidorella resedifolia subsp. resedifolia	1	0.21	-0.16	+0.37
Achyranthes aspera var. sicula	4	0.15	-0.02	+0.17
Cissus rotundifolia	1	0.01	-0.16	+0.17
Gisekia pharnacioides var. pharnacioides	1	0.01	-0.16	+0.17
Rhynchosia caribaea	1	0.01	-0.16	+0.17
Conyza podocephala	1	0.01	-0.16	+0.17
Coccinia sessilifolia	1	0.00	-0.16	+0.16
Peponium caledonicum	1	0.00	-0.16	+0.16
Limeum viscosum	1	0.00	-0.16	+0.16
Riocreuxia torulosa	1	0.00	-0.16	+0.16
Neonotonia wightii	1	0.00	-0.16	+0.16
Tragia rupestris	1	0.00	-0.16	+0.16
Heliotropium lineare	1	0.00	-0.16	+0.16
Ceratotheca triloba	1	0.00	-0.16	+0.16
Gomphrena celosioides	1	0.00	-0.16	+0.16
Commelina africana var. krebsiana	1	0.00	-0.16	+0.16
Alternanthera sessilis	2	0.03	-0.11	+0.14
Cyphostemma sulcatum	2	0.02	-0.11	+0.13
Cucumis zeyheri	2	0.02	-0.11	+0.13
Hermannia boraginiflora	2	0.00	-0.11	+0.11
Chenopodium ambrosioides	3	0.04	-0.07	+0.11
Momordica balsamina	3	0.04	-0.07	+0.10
Limeum fenestratum var. fenestratum	4	0.05	-0.02	+0.08
Commicarpus plumbagineus var. plumbagineus	6	0.14	0.07	+0.08
Oenothera rosea	3	0.01	-0.07	+0.07
Withania somnifera	3	0.00	-0.07	+0.07
Cleome angustifolia subsp. petersiana	3	0.00	-0.07	+0.07
Leucas sexdentata	4	0.05	-0.02	+0.07
Kyphocarpa angustifolia	3	0.00	-0.07	+0.07
Monechma debile	6	0.05	0.07	-0.02
Pupalia lappacea var. lappacea	12	0.31	0.33	-0.02
Cissampelos mucronata	8	0.11	0.16	-0.04
Bidens bipinnata	6	0.01	0.07	-0.05
Tragia sp.	6	0.01	0.07	-0.06
Portulaca quadrifida	6	0.01	0.07	-0.06



Momordica cardiospermoides	8	0.09	0.16	-0.07
Xanthium spinosum	7	0.01	0.11	-0.11
Secamone sp.	12	0.22	0.33	-0.12
Hydrocotyle sp.	8	0.01	0.16	-0.15
Chenopodium album	8	0.01	0.16	-0.15
Bidens pilosa	8	0.01	0.16	-0.15
Citrullus lanatus	9	0.04	0.20	-0.16
Achyranthes aspera var. aspera	21	0.57	0.73	-0.17
Cleome rubella	9	0.02	0.20	-0.18
Conyza bonariensis	10	0.06	0.24	-0.18
Amaranthus viridus	9	0.01	0.20	-0.18
Melhania rehmannii	9	0.01	0.20	-0.18
Conyza albida	13	0.16	0.38	-0.22
Tagetes minuta	11	0.07	0.29	-0.22
Solanum panduriforme	11	0.04	0.29	-0.24
Persicaria lapathifolia	16	0.24	0.51	-0.27
Schkuhria pinnata	11	0.02	0.29	-0.27
Phyla nodiflora var. nodiflora	13	0.07	0.38	-0.30
Flaveria bidentis	25	0.58	0.91	-0.33
Justicia flava	14	0.09	0.42	-0.33
Datura stramonium	17	0.22	0.56	-0.34
Verbena bonariensis	13	0.03	0.38	-0.35
Tribulus terrestris	14	0.05	0.42	-0.37
Hibiscus calyphyllus	20	0.30	0.69	-0.39
Alternanthera pungens	17	0.11	0.56	-0.44
Acalypha indica	21	0.24	0.73	-0.49
Waltheria indica	19	0.13	0.64	-0.52
Argemone mexicana	17	0.03	0.56	-0.52
Chenopodium olukondae	20	0.08	0.69	-0.61

Weak competitors:

Commelina erecta	23	0.14	0.82	-0.68
Total cover for species in group: 10.86%				

Community Structure

Growth Form

Tree	BBB	17.53%	
Shrub	BB	10.69%	
Dwarf shrub		2.29%	
Grass/Forb	BBBØ	10.01%	10.86%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 51.38%
Grass proportion= 19.49%
Forb proportion= 21.13%
Dwarf shrub proportion= 4.46%
Shrub proportion= 20.81%
Tree proportion= 34.12%

Plant community number: 6 (variant 6.1)

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Trees

Correlation coefficient=+0.91
Standard error of the mean= 0.46

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
Faidherbia albida	9	2.96	1.98	+0.97
Ziziphus mucronata subsp. mucronata	12	3.52	2.79	+0.73
Normal competition range:				
Nicotiana glauca	12	3.18	2.79	+0.39
Albizia anthelmintica	1	0.07	-0.16	+0.23
Combretum imberbe	1	0.03	-0.16	+0.19
Pappea capensis	1	0.03	-0.16	+0.19
Peltophorum africanum	1	0.03	-0.16	+0.19
Ficus ingens var. ingens	1	0.03	-0.16	+0.19
Acacia nigrescens	1	0.03	-0.16	+0.19
Boscia albitrunca	1	0.00	-0.16	+0.16
Dombeya rotundifolia	1	0.00	-0.16	+0.16
Acacia robusta subsp. clavigera	2	0.20	0.11	+0.09
Celtis africana	2	0.04	0.11	-0.07
Melia azedarach	2	0.00	0.11	-0.11
Ficus sycomorus	3	0.26	0.37	-0.12
Diospyros mespiliformis	3	0.23	0.37	-0.14
Spirostachys africana	3	0.15	0.37	-0.23
Schotia brachypetala	6	0.80	1.18	-0.38
Combretum erythrophyllum	6	0.77	1.18	-0.41
Weak competitors:				
Acacia tortilis	6	0.71	1.18	-0.47
Acacia karroo	7	0.73	1.45	-0.72
Croton megalobotrys	9	0.92	1.98	-1.06
Total cover for species in group: 14.68%				

Shrubs

Correlation coefficient=+0.61
Standard error of the mean= 0.60

	Actual (F) cover	Pred. cover	Differ- ence



Strong competitors:

<i>Acacia ataxacantha</i>	7	2.61	0.77	+1.84
<i>Rhus pyroides</i> var. <i>pyroides</i>	10	2.83	1.19	+1.64

Normal competition range:

<i>Plectroniella armata</i>	5	0.83	0.49	+0.34
<i>Carissa bispinosa</i> subsp. <i>zambesiensis</i>	8	1.16	0.91	+0.25
<i>Acacia mellifera</i>	1	0.12	-0.08	+0.20
<i>Acalypha glabrata</i> var. <i>glabrata</i>	1	0.03	-0.08	+0.11
<i>Ehretia rigida</i>	1	0.03	-0.08	+0.11
<i>Commiphora glandulosa</i>	1	0.01	-0.08	+0.09
<i>Croton gratissimus</i> var. <i>gratissimus</i>	1	0.01	-0.08	+0.09
<i>Euphorbia</i> sp.	1	0.00	-0.08	+0.08
<i>Rhus engleri</i>	2	0.04	0.06	-0.03
<i>Grewia flavescens</i> var. <i>flavescens</i>	2	0.01	0.06	-0.06
<i>Salix mucronata</i> subsp. <i>wilmsii</i>	2	0.01	0.06	-0.06
<i>Hippocratea longipetiolata</i>	3	0.09	0.20	-0.11
<i>Ximena americana</i> var. <i>microphylla</i>	3	0.09	0.20	-0.12
<i>Combretum hereroense</i>	3	0.07	0.20	-0.14
<i>Grewia bicolor</i> var. <i>bicolor</i>	3	0.04	0.20	-0.17
<i>Pavetta lanceolata</i>	3	0.02	0.20	-0.19
<i>Scolopia zeyheri</i>	7	0.56	0.77	-0.21
<i>Euclea divinorum</i>	4	0.10	0.35	-0.24
<i>Dichrostachys cinerea</i>	7	0.36	0.77	-0.41
<i>Grewia hexamita</i>	5	0.04	0.49	-0.45
<i>Maytenus heterophylla</i>	10	0.64	1.19	-0.55
<i>Ricinus communis</i>	10	0.60	1.19	-0.59

Weak competitors:

<i>Diospyros lycioides</i> subsp. <i>sericea</i>	8	0.27	0.91	-0.64
<i>Flueggea virosa</i> subsp. <i>virosa</i>	9	0.25	1.05	-0.80

Total cover for species in group: 10.83%

Dwarf Shrubs

Correlation coefficient=+0.83
Standard error of the mean= 0.16

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Senna occidentalis</i>	4	0.54	0.25	+0.29
<i>Ficus capreifolia</i>	8	0.90	0.62	+0.28

Normal competition range:

<i>Verbesina encelioides</i> var. <i>encelioides</i>	9	0.81	0.72	+0.10
<i>Pyrenacantha grandiflora</i>	2	0.15	0.06	+0.09
<i>Commicarpus pilosus</i>	1	0.03	-0.03	+0.06
<i>Lycium cinereum</i>	1	0.03	-0.03	+0.06



Leucas capensis	1	0.01	-0.03	+0.04
Aloe sp.	1	0.01	-0.03	+0.04
Senna italica subsp. arachoides	1	0.01	-0.03	+0.04
Tephrosia polystachya	1	0.01	-0.03	+0.04
Solanum kwebense	1	0.00	-0.03	+0.03
Secamone parvifolia	2	0.04	0.06	-0.02
Ehretia amoena	2	0.03	0.06	-0.03
Sida cordifolia	2	0.03	0.06	-0.03
Sesbania sp.	2	0.03	0.06	-0.03
Indigofera circinnata	2	0.00	0.06	-0.06
Lantana rugosa	2	0.00	0.06	-0.06

Weak competitors:

Solanum nigrum	4	0.03	0.25	-0.22
Grewia flava	5	0.05	0.34	-0.29
Malvastrum coromandelianum	6	0.11	0.44	-0.32

Total cover for species in group: 2.83%

Grasses

Correlation coefficient=+0.58
Standard error of the mean= 0.68

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Panicum maximum	13	4.41	1.20	+3.21
Phragmites australis	12	2.07	1.09	+0.98

Normal competition range:

Schmidtia pappophoroides	2	0.19	-0.01	+0.21
Digitaria velutina	1	0.03	-0.12	+0.15
Eragrostis biflora	1	0.03	-0.12	+0.15
Setaria sagittifolia	2	0.12	-0.01	+0.14
Sorghum versicolor	1	0.01	-0.12	+0.13
Eragrostis curvula	1	0.01	-0.12	+0.13
Enteropogon macrostachyus	1	0.00	-0.12	+0.12
Oplismenus hirtellus	1	0.00	-0.12	+0.12
Eragrostis nindensis	1	0.00	-0.12	+0.12
Aristida adscensionis	1	0.00	-0.12	+0.12
Paspalum distichum	8	0.75	0.65	+0.10
Cyperus rotundus subsp. rotundus	8	0.70	0.65	+0.06
Dinebra retroflexa var. condensata	2	0.01	-0.01	+0.02
Aristida canescens	2	0.00	-0.01	+0.02
Brachiaria eruciformis	2	0.00	-0.01	+0.02
Aristida bipartita	2	0.00	-0.01	+0.02
Cyperus fastigiatus	3	0.11	0.10	+0.01
Cynodon dactylon	12	1.09	1.09	-0.00
Sporobolus ioclados	3	0.08	0.10	-0.02
Brachiaria nigropedata	3	0.04	0.10	-0.06
Urochloa panicoides	3	0.04	0.10	-0.06



Enneapogon cenchroides	4	0.05	0.21	-0.15
Hemarthria altissima	4	0.05	0.21	-0.15
Panicum deustum	4	0.03	0.21	-0.18
Chloris virgata	5	0.02	0.32	-0.30
Echinochloa colona	5	0.01	0.32	-0.31
Digitaria eriantha	8	0.33	0.65	-0.31
Dactyloctenium giganteum	7	0.06	0.54	-0.48
Eragrostis pseudosclerantha	10	0.29	0.87	-0.58
Urochloa mosambicensis	13	0.54	1.20	-0.66

Weak competitors:

Setaria verticillata	12	0.30	1.09	-0.79
Brachiaria deflexa	12	0.23	1.09	-0.85
Tragus berteronianus	12	0.14	1.09	-0.95

Total cover for species in group: 11.76%

Forbs

Correlation coefficient=+0.46
Standard error of the mean= 1.01

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Xanthium strumarium	13	8.18	1.64	+6.54
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Normal competition range:

Limeum fenestratum var. fenestratum	1	0.12	-0.32	+0.45
Gisekia pharnacioides var. pharnacioides	1	0.03	-0.32	+0.35
Rhynchosia caribaea	1	0.03	-0.32	+0.35
Peponium caledonicum	1	0.01	-0.32	+0.33
Limeum viscosum	1	0.01	-0.32	+0.33
Tragia sp.	1	0.01	-0.32	+0.33
Riocreuxia torulosa	1	0.01	-0.32	+0.33
Neonotonia wightii	1	0.01	-0.32	+0.33
Commicarpus plumbagineus var. plumbagineus	1	0.00	-0.32	+0.32
Tragia rupestris	1	0.00	-0.32	+0.32
Heliotropium lineare	1	0.00	-0.32	+0.32
Ceratotheca triloba	1	0.00	-0.32	+0.32
Commelina africana var. krebsiana	1	0.00	-0.32	+0.32
Chenopodium ambrosioides	2	0.06	-0.16	+0.22
Pupalia lappacea var. lappacea	3	0.20	0.01	+0.20
Cucumis zeyheri	2	0.04	-0.16	+0.20
Momordica cardiospermoides	2	0.01	-0.16	+0.17
Kyphocarpa angustifolia	2	0.00	-0.16	+0.16
Chenopodium album	2	0.00	-0.16	+0.16
Leucas sexdentata	3	0.11	0.01	+0.10
Momordica balsamina	3	0.09	0.01	+0.08
Tagetes minuta	3	0.03	0.01	+0.03
Melhania rehmannii	3	0.02	0.01	+0.02
Oenothera rosea	3	0.02	0.01	+0.01



Cleome angustifolia subsp. petersiana	3	0.01	0.01	+0.00
Secamone sp.	6	0.42	0.50	-0.08
Citrullus lanatus	4	0.08	0.17	-0.09
Solanum panduriforme	4	0.02	0.17	-0.15
Cleome rubella	4	0.01	0.17	-0.16
Schkuhria pinnata	4	0.00	0.17	-0.17
Flaveria bidentis	11	1.12	1.31	-0.19
Cissampelos mucronata	6	0.22	0.50	-0.27
Tribulus terrestris	5	0.05	0.33	-0.28
Amaranthus viridus	5	0.02	0.33	-0.31
Xanthium spinosum	5	0.01	0.33	-0.32
Portulaca quadrifida	5	0.01	0.33	-0.32
Hydrocotyle sp.	5	0.00	0.33	-0.33
Justicia flava	6	0.12	0.50	-0.38
Datura stramonium	8	0.41	0.82	-0.41
Bidens pilosa	6	0.01	0.50	-0.48
Acalypha indica	7	0.14	0.66	-0.52
Persicaria lapathifolia	9	0.45	0.99	-0.54
Achyranthes aspera var. aspera	10	0.54	1.15	-0.61
Verbena bonariensis	7	0.05	0.66	-0.61
Alternanthera pungens	7	0.04	0.66	-0.62
Waltheria indica	7	0.03	0.66	-0.63
Hibiscus calyphyllus	8	0.16	0.82	-0.66
Phyla nodiflora var. nodiflora	8	0.07	0.82	-0.75
Argemone mexicana	8	0.04	0.82	-0.78
Conyza albida	10	0.35	1.15	-0.80
Commelina erecta	8	0.02	0.82	-0.80

Weak competitors:

Chenopodium olukondae	10	0.14	1.15	-1.01
Total cover for species in group: 13.54%				

Plant community Structure

Growth Form

Tree	ββ	14.68%	
Shrub	ββ	10.83%	
Dwarf shrub		2.83%	
Grass/Forb	ββββ	11.76%	13.54%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 53.64%
Grass proportion= 21.92%
Forb proportion= 25.24%
Dwarf shrub proportion= 5.28%
Shrub proportion= 20.19%
Tree proportion= 27.37%



Plant community number: 6 (variant 6.2)

Trees

Correlation coefficient=-0.14
Standard error of the mean= 1.10

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Lonchocarpus capassa	1	2.47	0.89	+1.58
Acacia nigrescens	1	2.47	0.89	+1.58
Normal competition range:				
Schotia brachypetala	1	1.82	0.89	+0.93
Nicotiana glauca	2	1.00	0.55	+0.45
Acacia tortilis	2	0.10	0.55	-0.45
Faidherbia albida	1	0.20	0.89	-0.69
Croton megalobotrys	1	0.05	0.89	-0.84
Spirostachys africana	1	0.05	0.89	-0.84
Ziziphus mucronata subsp. mucronata	1	0.05	0.89	-0.84
Melia azedarach	1	0.00	0.89	-0.88
Total cover for species in group: 8.22%				

Shrubs

Correlation coefficient=+0.38
Standard error of the mean= 0.71

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
Euphorbia tirucalli	2	3.42	1.16	+2.27
Dombeya autumnalis	1	1.26	0.50	+0.76
Capparis tomentosa	1	1.26	0.50	+0.76
Dichrostachys cinerea	1	1.26	0.50	+0.76
Normal competition range:				
Grewia bicolor var. bicolor	1	0.81	0.50	+0.30
Mystroxydon aethiopicum subsp. schlechteri	1	0.81	0.50	+0.30
Acalypha glabrata var. glabrata	1	0.81	0.50	+0.30
Croton menyhartii	1	0.46	0.50	-0.05
Acacia ataxacantha	1	0.46	0.50	-0.05
Terminalia prunioides	1	0.20	0.50	-0.30
Commiphora africana var. africana	1	0.20	0.50	-0.30
Euclea divinorum	1	0.20	0.50	-0.30



Diospyros lycioides subsp. sericea	1	0.20	0.50	-0.30
Rhus engleri	1	0.05	0.50	-0.45
Ricinus communis	1	0.05	0.50	-0.45
Flueggea virosa subsp. virosa	1	0.05	0.50	-0.45
Rhus pyroides var. pyroides	1	0.00	0.50	-0.50
Commiphora glandulosa	2	0.66	1.16	-0.50
Hippocratea longipetiolata	2	0.66	1.16	-0.50
Plectroniella armata	2	0.66	1.16	-0.50

Weak competitors:

Grewia hexamita	2	0.40	1.16	-0.76
Total cover for species in group: 13.85%				

Dwarf Shrubs

Correlation coefficient=-0.07
Standard error of the mean= 1.43

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Aloe globuligemma	1	5.04	0.61	+4.43
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Normal competition range:

Grewia villosa var. villosa	2	0.86	0.40	+0.45
Hibiscus praeteritus	2	0.25	0.40	-0.15
Grewia flava	1	0.46	0.61	-0.16
Sansevieria hyacinthoides	1	0.46	0.61	-0.16
Verbesina encelioides var. encelioides	2	0.10	0.40	-0.30
Commicarpus pilosus	1	0.05	0.61	-0.56
Ficus capreifolia	1	0.05	0.61	-0.56
Lantana rugosa	1	0.05	0.61	-0.56
Senna occidentalis	1	0.00	0.61	-0.61
Senna italica subsp. arachoides	1	0.00	0.61	-0.61
Malvastrum coromandelianum	1	0.00	0.61	-0.61
Sesbania sp.	1	0.00	0.61	-0.61

Total cover for species in group: 7.32%

Grasses

Correlation coefficient=+0.39
Standard error of the mean= 1.08

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Panicum maximum	2	5.49	0.97	+4.52
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Normal competition range:

<i>Urochloa mosambicensis</i>	2	1.87	0.97	+0.89
<i>Cynodon dactylon</i>	2	1.72	0.97	+0.74
<i>Digitaria eriantha</i>	1	0.20	0.09	+0.11
<i>Paspalum distichum</i>	1	0.20	0.09	+0.11
<i>Panicum deustum</i>	1	0.20	0.09	+0.11
<i>Eragrostis curvula</i>	1	0.20	0.09	+0.11
<i>Brachiaria deflexa</i>	2	1.00	0.97	+0.03
<i>Phragmites australis</i>	2	1.00	0.97	+0.03
<i>Cenchrus ciliaris</i>	1	0.05	0.09	-0.04
<i>Chloris virgata</i>	1	0.05	0.09	-0.04
<i>Schmidtia pappophoroides</i>	1	0.05	0.09	-0.04
<i>Eragrostis pseudosclerantha</i>	1	0.05	0.09	-0.04
<i>Dactyloctenium giganteum</i>	1	0.05	0.09	-0.04
<i>Sorghum bicolor</i> subsp. <i>arundinaceum</i>	1	0.00	0.09	-0.08
<i>Eragrostis superba</i>	1	0.00	0.09	-0.08
<i>Melinis repens</i>	1	0.00	0.09	-0.08
<i>Acrachne racemosa</i>	2	0.50	0.97	-0.47
<i>Setaria sagittifolia</i>	2	0.40	0.97	-0.57
<i>Cyperus rotundus</i> subsp. <i>rotundus</i>	2	0.25	0.97	-0.72
<i>Setaria verticillata</i>	2	0.10	0.97	-0.87
<i>Tragus berteronianus</i>	2	0.10	0.97	-0.87
<i>Enneapogon cenchroides</i>	2	0.10	0.97	-0.87
<i>Aristida canescens</i>	2	0.05	0.97	-0.92
<i>Echinochloa colona</i>	2	0.05	0.97	-0.92

Total cover for species in group: 13.72%

Forbs

Correlation coefficient=+0.31
Standard error of the mean= 0.30

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Xanthium strumarium</i>	1	0.81	0.17	+0.64
<i>Achyranthes aspera</i> var. <i>aspera</i>	1	0.81	0.17	+0.64
<i>Hibiscus calyphyllus</i>	2	0.91	0.36	+0.55
<i>Commelina erecta</i>	2	0.86	0.36	+0.50

Normal competition range:

<i>Achyranthes aspera</i> var. <i>sicula</i>	1	0.46	0.17	+0.29
<i>Waltheria indica</i>	2	0.50	0.36	+0.15
<i>Pupalia lappacea</i> var. <i>lappacea</i>	2	0.40	0.36	+0.04
<i>Persicaria lapathifolia</i>	1	0.20	0.17	+0.03
<i>Cyphostemma sulcatum</i>	2	0.25	0.36	-0.11
<i>Flaveria bidentis</i>	2	0.25	0.36	-0.11
<i>Phyla nodiflora</i> var. <i>nodiflora</i>	1	0.05	0.17	-0.12
<i>Chenopodium olukondae</i>	1	0.05	0.17	-0.12
<i>Conyza albida</i>	1	0.05	0.17	-0.12



Hydrocotyle sp.	1	0.05	0.17	-0.12
Solanum panduriforme	2	0.20	0.36	-0.15
Kyphocarpa angustifolia	1	0.00	0.17	-0.16
Portulaca quadrifida	1	0.00	0.17	-0.16
Argemone mexicana	1	0.00	0.17	-0.16
Chenopodium album	1	0.00	0.17	-0.16
Verbena bonariensis	1	0.00	0.17	-0.16
Gomphrena celosioides	1	0.00	0.17	-0.16
Tagetes minuta	1	0.00	0.17	-0.16
Schkuhria pinnata	2	0.10	0.36	-0.26

Weak competitors:

Alternanthera pungens	2	0.05	0.36	-0.30
Acalypha indica	2	0.05	0.36	-0.30
Total cover for species in group: 6.09%				

Plant community Structure

Growth Form

Tree	β	8.22%		
Shrub	ββ	13.85%		
Dwarf shrub	β	7.32%		
Grass/Forb	βββ	13.72%	6.09%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 49.19%
Grass proportion= 27.88%
Forb proportion= 12.37%
Dwarf shrub proportion= 14.89%
Shrub proportion= 28.16%
Tree proportion= 16.70%

Plant community number: 6 (variant 6.3)

Trees

Correlation coefficient=+0.76
Standard error of the mean= 0.71

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

Ficus sycomorus	9	4.00	1.86	+2.14
Diospyros mespiliformis	10	3.92	2.11	+1.80
Croton megalobotrys	10	3.22	2.11	+1.10



Breonadia salicina 4 1.64 0.58 +1.06

Normal competition range:

Acacia karroo	2	0.46	0.07	+0.39
Schrebera alata	1	0.06	-0.19	+0.25
Gardenia volkensii subsp. volkensii	1	0.03	-0.19	+0.22
Ficus cf. thonningii	2	0.27	0.07	+0.20
Trimeria grandifolia subsp. grandifolia	2	0.27	0.07	+0.20
Lanea schweinfurthii var. stuhlmannii	1	0.01	-0.19	+0.20
Berchemia zeyheri	1	0.01	-0.19	+0.20
Ekebergia capensis	1	0.01	-0.19	+0.20
Berchemia discolor	1	0.01	-0.19	+0.20
Mimusops zeyheri	2	0.17	0.07	+0.10
Karomia speciosa forma speciosa	2	0.09	0.07	+0.02
Peltoporum africanum	2	0.01	0.07	-0.05
Combretum erythrophyllum	2	0.01	0.07	-0.05
Balanites maughamii	2	0.01	0.07	-0.06
Acacia nilotica subsp. kraussiana	3	0.24	0.32	-0.08
Schotia brachypetala	3	0.24	0.32	-0.09
Trichilia emetica susp. emetica	4	0.38	0.58	-0.19
Faidherbia albida	3	0.07	0.32	-0.25
Spirostachys africana	3	0.07	0.32	-0.25
Ficus ingens var. ingens	3	0.05	0.32	-0.27
Acacia nigrescens	3	0.05	0.32	-0.27
Lonchocarpus capassa	10	1.83	2.11	-0.28
Celtis africana	3	0.03	0.32	-0.29
Melia azedarach	3	0.00	0.32	-0.32
Acacia tortilis	5	0.46	0.83	-0.37
Strychnos madagascariensis	4	0.09	0.58	-0.49

Weak competitors:

Combretum imberbe	6	0.32	1.09	-0.77
Sclerocarya birrea subsp. caffra	6	0.24	1.09	-0.85
Nicotiana glauca	13	1.91	2.88	-0.97
Acacia robusta subsp. clavigera	9	0.75	1.86	-1.11
Ziziphus mucronata subsp. mucronata	8	0.32	1.60	-1.29

Total cover for species in group: 21.24%

Shrubs

Correlation coefficient=+0.66
Standard error of the mean= 0.46

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Acacia ataxacantha	10	2.63	0.89	+1.74
Maytenus heterophylla	14	2.47	1.30	+1.18



Normal competition range:

<i>Acalypha glabrata</i> var. <i>glabrata</i>	2	0.35	0.07	+0.28
<i>Hippocratea longipetiolata</i>	8	0.84	0.68	+0.16
<i>Acacia erubescens</i>	1	0.11	-0.04	+0.14
<i>Dalbergia armata</i>	2	0.17	0.07	+0.10
<i>Duvernoia aconitiflora</i>	1	0.06	-0.04	+0.10
<i>Senna petersiana</i>	2	0.13	0.07	+0.07
<i>Bridelia cathartica</i> subsp. <i>melanthesoides</i>	1	0.03	-0.04	+0.06
<i>Pavetta lanceolata</i>	1	0.03	-0.04	+0.06
<i>Carissa edulis</i>	1	0.01	-0.04	+0.04
<i>Capparis tomentosa</i>	1	0.01	-0.04	+0.04
<i>Combretum hereroense</i>	1	0.00	-0.04	+0.04
<i>Mundulea sericea</i>	1	0.00	-0.04	+0.04
<i>Rhus pyroides</i> var. <i>pyroides</i>	4	0.30	0.27	+0.03
<i>Euclea divinorum</i>	2	0.09	0.07	+0.02
<i>Myroxylon aethiopicum</i> subsp. <i>schlechteri</i>	2	0.07	0.07	+0.00
<i>Carissa bispinosa</i> subsp. <i>zambesiensis</i>	2	0.06	0.07	-0.01
<i>Teclea natalensis</i>	2	0.05	0.07	-0.01
<i>Obetia tenax</i>	2	0.03	0.07	-0.04
<i>Dombeya autumnalis</i>	2	0.03	0.07	-0.04
<i>Diospyros lycioides</i> subsp. <i>sericea</i>	3	0.11	0.17	-0.05
<i>Terminalia prunioides</i>	2	0.01	0.07	-0.06
<i>Cordia</i> cf. <i>monoica</i>	2	0.01	0.07	-0.06
<i>Chaetachme aristata</i>	3	0.09	0.17	-0.07
<i>Plectroniella armata</i>	6	0.36	0.48	-0.11
<i>Pavetta catophylla</i>	7	0.46	0.58	-0.12
<i>Grewia hexamita</i>	4	0.14	0.27	-0.13
<i>Grewia bicolor</i> var. <i>bicolor</i>	6	0.22	0.48	-0.26
<i>Ximenia americana</i> var. <i>microphylla</i>	6	0.04	0.48	-0.43

Weak competitors:

<i>Flueggea virosa</i> subsp. <i>virosa</i>	11	0.44	0.99	-0.54
<i>Grewia flavescens</i> var. <i>flavescens</i>	11	0.32	0.99	-0.67
<i>Dichrostachys cinerea</i>	11	0.30	0.99	-0.68
<i>Ricinus communis</i>	11	0.18	0.99	-0.81

Total cover for species in group: 10.15%

Dwarf Shrubs

Correlation coefficient=+0.70
Standard error of the mean= 0.07

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Pyrenacantha grandiflora</i>	7	0.30	0.13	+0.17
<i>Verbesina encelioides</i> var. <i>encelioides</i>	10	0.34	0.19	+0.14

Normal competition range:

<i>Phoenix reclinata</i>	1	0.06	-0.01	+0.07
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Leucas capensis	1	0.01	-0.01	+0.01
Sesbania sp.	1	0.01	-0.01	+0.01
Rhus dentata	1	0.00	-0.01	+0.01
Grewia villosa var. villosa	3	0.04	0.04	+0.00
Ficus capreifolia	6	0.10	0.10	-0.00
Solanum nigrum	2	0.01	0.02	-0.01
Sansevieria hyacinthoides	2	0.01	0.02	-0.01
Lantana rugosa	3	0.01	0.04	-0.03
Grewia flava	8	0.12	0.15	-0.03
Solanum incanum	3	0.00	0.04	-0.04
Leonotis nepetifolia	3	0.00	0.04	-0.04
Malvastrum coromandelianum	8	0.08	0.15	-0.07
Gomphocarpus fruticosus	5	0.01	0.08	-0.07

Weak competitors:

Senna occidentalis	10	0.07	0.19	-0.12
Total cover for species in group:		1.16%		

Grasses

Correlation coefficient=+0.80
Standard error of the mean= 0.31

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Cynodon dactylon	15	2.29	1.18	+1.11
Phragmites australis	13	1.56	1.00	+0.56
Schmidtia pappophoroides	1	0.43	-0.06	+0.49

Normal competition range:

Eragrostis rigidior	1	0.06	-0.06	+0.12
Sporobolus ioclados	1	0.03	-0.06	+0.09
Cyperus longus var. tenuiflorus	1	0.03	-0.06	+0.09
Dactyloctenium giganteum	1	0.03	-0.06	+0.09
Cyperus obtusiflorus var. obtusiflorus	1	0.01	-0.06	+0.07
Pycurus polystachyos var. polystachyos	1	0.01	-0.06	+0.07
Acrachne racemosa	1	0.01	-0.06	+0.07
Kyllinga alba	1	0.01	-0.06	+0.07
Enneapogon cenchroides	1	0.01	-0.06	+0.07
Hemarthria altissima	1	0.01	-0.06	+0.07
Eragrostis aspera	1	0.00	-0.06	+0.06
Leptocarydion vulpiastrum	1	0.00	-0.06	+0.06
Sorghum bicolor subsp. arundinaceum	1	0.00	-0.06	+0.06
Panicum deustum	1	0.00	-0.06	+0.06
Urochloa panicoides	1	0.00	-0.06	+0.06
Melinis repens	1	0.00	-0.06	+0.06
Panicum maximum	15	1.21	1.18	+0.03
Setaria verticillata	2	0.05	0.03	+0.02
Paspalum distichum	4	0.20	0.21	-0.01
Digitaria velutina	3	0.01	0.12	-0.10



<i>Typha capensis</i>	3	0.00	0.12	-0.12
<i>Cenchrus ciliaris</i>	4	0.03	0.21	-0.18
<i>Eragrostis pseudosclerantha</i>	9	0.45	0.65	-0.20
<i>Aristida canescens</i>	4	0.00	0.21	-0.20
<i>Digitaria eriantha</i>	5	0.09	0.30	-0.21
<i>Echinochloa colona</i>	5	0.02	0.30	-0.28

Weak competitors:

<i>Urochloa mosambicensis</i>	14	0.77	1.09	-0.33
<i>Cyperus rotundus</i> subsp. <i>rotundus</i>	9	0.32	0.65	-0.33
<i>Tragus berteronianus</i>	7	0.14	0.47	-0.33
<i>Setaria sagittifolia</i>	8	0.15	0.56	-0.41
<i>Brachiaria deflexa</i>	10	0.10	0.74	-0.64
Total cover for species in group: 8.00%				

Forbs

Correlation coefficient=+0.44
Standard error of the mean= 0.53

	Actual (F) cover	Pred. cover	Differ- ence
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Strong competitors:

<i>Xanthium strumarium</i>	15	4.11	0.87	+3.24
<i>Abutilon ramosum</i>	1	0.43	-0.14	+0.57
<i>Nidorella resedifolia</i> subsp. <i>resedifolia</i>	1	0.43	-0.14	+0.57

Normal competition range:

<i>Achyranthes aspera</i> var. <i>sicula</i>	3	0.24	0.00	+0.24
<i>Cissus rotundifolia</i>	1	0.03	-0.14	+0.17
<i>Chenopodium ambrosioides</i>	1	0.03	-0.14	+0.17
<i>Conyza podocephala</i>	1	0.03	-0.14	+0.17
<i>Coccinia sessilifolia</i>	1	0.01	-0.14	+0.15
<i>Leucas sexdentata</i>	1	0.00	-0.14	+0.14
<i>Commicarpus plumbagineus</i> var. <i>plumbagineus</i>	5	0.28	0.15	+0.13
<i>Alternanthera sessilis</i>	2	0.05	-0.07	+0.12
<i>Pupalia lappacea</i> var. <i>lappacea</i>	7	0.40	0.29	+0.10
<i>Cissampelos mucronata</i>	2	0.03	-0.07	+0.10
<i>Conyza albida</i>	2	0.01	-0.07	+0.08
<i>Xanthium spinosum</i>	2	0.00	-0.07	+0.07
<i>Hermannia boraginiflora</i>	2	0.00	-0.07	+0.07
<i>Hydrocotyle</i> sp.	2	0.00	-0.07	+0.07
<i>Bidens pilosa</i>	2	0.00	-0.07	+0.07
<i>Achyranthes aspera</i> var. <i>aspera</i>	10	0.56	0.51	+0.05
<i>Phyla nodiflora</i> var. <i>nodiflora</i>	4	0.08	0.08	+0.00
<i>Withania somnifera</i>	3	0.01	0.00	+0.00
<i>Limeum fenestratum</i> var. <i>fenestratum</i>	3	0.00	0.00	-0.00
<i>Momordica cardiospermoides</i>	6	0.17	0.22	-0.05
<i>Amaranthus viridus</i>	4	0.01	0.08	-0.06
<i>Solanum panduriforme</i>	5	0.04	0.15	-0.11
<i>Cleome rubella</i>	5	0.03	0.15	-0.12



Monechma debile	6	0.10	0.22	-0.12
Schkuhria pinnata	5	0.02	0.15	-0.13
Citrullus lanatus	5	0.01	0.15	-0.14
Tragia sp.	5	0.01	0.15	-0.14
Chenopodium album	5	0.01	0.15	-0.14
Verbena bonariensis	5	0.01	0.15	-0.14
Persicaria lapathifolia	6	0.07	0.22	-0.15
Secamone sp.	6	0.07	0.22	-0.15
Hibiscus calyphyllus	10	0.33	0.51	-0.18
Alternanthera pungens	8	0.18	0.37	-0.18
Tagetes minuta	7	0.11	0.29	-0.18
Bidens bipinnata	6	0.03	0.22	-0.19
Melhania rehmannii	6	0.01	0.22	-0.21
Justicia flava	8	0.08	0.37	-0.29
Acalypha indica	12	0.35	0.65	-0.31
Argemone mexicana	8	0.03	0.37	-0.34
Waltheria indica	10	0.17	0.51	-0.34
Datura stramonium	9	0.08	0.44	-0.36
Tribulus terrestris	9	0.07	0.44	-0.37
Conyza bonariensis	10	0.12	0.51	-0.39
Chenopodium olukondae	9	0.02	0.44	-0.41
Flaveria bidentis	12	0.16	0.65	-0.50

Weak competitors:

Commelina erecta	13	0.15	0.73	-0.57
Total cover for species in group:	9.17%			

Plant community Structure

Growth Form

Tree	BBBB	21.24%		
Shrub	BB	10.15%		
Dwarf shrub		1.16%		
Grass/Forb	BB	8.00%	9.17%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 49.71%
Grass proportion= 16.10%
Forb proportion= 18.44%
Dwarf shrub proportion= 2.32%
Shrub proportion= 20.42%
Tree proportion= 42.72%

Plant community number: 7
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Trees

Correlation coefficient=+0.70
Standard error of the mean= 0.78

	Actual (F)	Pred. cover	Differ- ence
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Strong competitors:			
Diospyros mespiliformis	6 4.57	2.03	+2.54
Ficus sycomorus	6 3.96	2.03	+1.93
Lonchocarpus capassa	5 2.38	1.57	+0.81
Normal competition range:			
Albizia versicolor	1 0.15	-0.27	+0.42
Acacia nilotica subsp. kraussiana	1 0.07	-0.27	+0.34
Faidherbia albida	1 0.07	-0.27	+0.34
Mimusops zeyheri	1 0.07	-0.27	+0.34
Trichilia emetica susp. emetica	3 0.96	0.65	+0.31
Olea europaea subsp. africana	1 0.02	-0.27	+0.29
Dombeya rotundifolia	1 0.02	-0.27	+0.29
Celtis africana	1 0.02	-0.27	+0.29
Ficus abutilifolia	1 0.00	-0.27	+0.27
Ficus ingens var. ingens	1 0.00	-0.27	+0.27
Karomia speciosa forma speciosa	2 0.13	0.19	-0.06
Strychnos madagascariensis	2 0.08	0.19	-0.11
Berchemia discolor	2 0.08	0.19	-0.11
Acacia tortilis	2 0.08	0.19	-0.11
Pappea capensis	2 0.07	0.19	-0.12
Berchemia zeyheri	2 0.07	0.19	-0.12
Combretum imberbe	2 0.02	0.19	-0.17
Sterculia rogersii	2 0.02	0.19	-0.17
Peltoporum africanum	2 0.02	0.19	-0.17
Spirostachys africana	2 0.02	0.19	-0.17
Euphorbia ingens	2 0.02	0.19	-0.17
Combretum apiculatum subsp. apiculatum	2 0.00	0.19	-0.19
Melia azedarach	2 0.00	0.19	-0.19
Acacia robusta subsp. clavigera	4 0.64	1.11	-0.47
Acacia nigrescens	4 0.39	1.11	-0.72
Croton megalobotrys	4 0.35	1.11	-0.76
Weak competitors:			
Ziziphus mucronata subsp. mucronata	4 0.17	1.11	-0.94
Nicotiana glauca	6 0.94	2.03	-1.09
Sclerocarya birrea subsp. caffra	5 0.32	1.57	-1.25
Lannea schweinfurthii var. stuhlmannii	5 0.27	1.57	-1.30
Total cover for species in group: 15.97%			



Shrubs

Correlation coefficient=+0.45
Standard error of the mean= 0.60

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
Acacia ataxacantha	4	2.79	0.53	+2.26
Maytenus heterophylla	5	1.29	0.69	+0.60
Normal competition range:				
Mystroxydon aethiopicum subsp. schlechteri	1	0.15	0.05	+0.10
Grewia hexamita	1	0.15	0.05	+0.10
Plectroniella armata	2	0.22	0.21	+0.00
Obetia tenax	1	0.02	0.05	-0.04
Antidesma venosum	1	0.02	0.05	-0.04
Pavetta lanceolata	1	0.02	0.05	-0.04
Flueggea virosa subsp. virosa	6	0.81	0.85	-0.04
Solanum mauritianum	1	0.00	0.05	-0.05
Senna petersiana	2	0.13	0.21	-0.08
Combretum hereroense	2	0.03	0.21	-0.18
Terminalia prunioides	2	0.02	0.21	-0.20
Bridelia cathartica subsp. melanthesoides	5	0.42	0.69	-0.27
Grewia bicolor var. bicolor	3	0.10	0.37	-0.27
Pavetta catophylla	3	0.10	0.37	-0.27
Ricinus communis	4	0.20	0.53	-0.33
Grewia flavescens var. flavescens	6	0.49	0.85	-0.36
Hippocratea longipetiolata	5	0.32	0.69	-0.37
Dichrostachys cinerea	5	0.18	0.69	-0.51
Total cover for species in group:		7.45%		

Dwarf Shrubs

Correlation coefficient=+0.63
Standard error of the mean= 0.09

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
Verbesina encelioides var. encelioides	5	0.38	0.16	+0.22
Normal competition range:				
Ficus capreifolia	4	0.15	0.12	+0.03
Senna italica subsp. arachoides	1	0.02	-0.01	+0.03
Malvastrum coromandelianum	1	0.02	-0.01	+0.03
Pyrenacantha grandiflora	3	0.10	0.07	+0.03



Grewia flava	1	0.00	-0.01	+0.02
Solanum incanum	1	0.00	-0.01	+0.02
Solanum nigrum	2	0.02	0.03	-0.01
Sesbania sp.	3	0.02	0.07	-0.05
Senna occidentalis	5	0.10	0.16	-0.06
Leonotis nepetifolia	3	0.00	0.07	-0.07
Grewia villosa var. villosa	4	0.04	0.12	-0.08

Weak competitors:

Gomphocarpus fruticosus	4	0.02	0.12	-0.10
Total cover for species in group: 0.88%				

Grasses

Correlation coefficient=+0.71

Standard error of the mean= 0.57

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Panicum maximum	6	2.98	1.35	+1.63
Cynodon dactylon	6	2.74	1.35	+1.39

Normal competition range:

Cenchrus ciliaris	1	0.07	-0.21	+0.28
Setaria verticillata	1	0.07	-0.21	+0.28
Phragmites australis	6	1.58	1.35	+0.23
Schmidtia pappophoroides	1	0.02	-0.21	+0.23
Cyperus obtusiflorus var. obtusiflorus	1	0.00	-0.21	+0.21
Eragrostis aspera	1	0.00	-0.21	+0.21
Eragrostis superba	1	0.00	-0.21	+0.21
Panicum deustum	1	0.00	-0.21	+0.21
Kyllinga alba	1	0.00	-0.21	+0.21
Digitaria velutina	2	0.03	0.10	-0.07
Aristida canescens	2	0.02	0.10	-0.08
Tetrapogon tenellus	2	0.02	0.10	-0.08
Tragus berteronianus	2	0.02	0.10	-0.08
Melinis repens	2	0.02	0.10	-0.08
Heteropogon contortus	2	0.02	0.10	-0.08
Leptocarydion vulpiastrum	2	0.00	0.10	-0.10
Enneapogon cenchroides	2	0.00	0.10	-0.10
Acrachne racemosa	3	0.09	0.41	-0.33
Digitaria eriantha	3	0.09	0.41	-0.33
Setaria sagittifolia	4	0.39	0.72	-0.34
Echinochloa colona	3	0.00	0.41	-0.41
Eragrostis pseudosclerantha	4	0.17	0.72	-0.56

Weak competitors:

Brachiaria deflexa	5	0.35	1.04	-0.68
Cyperus rotundus subsp. rotundus	5	0.17	1.04	-0.87



Urochloa mosambicensis 6 0.44 1.35 -0.91
Total cover for species in group: 9.27%

Forbs

Correlation coefficient=+0.36
Standard error of the mean= 0.80

	(F)	Actual cover	Pred. cover	Difference

Strong competitors:				
<i>Xanthium strumarium</i>	6	5.04	0.76	+4.28
Normal competition range:				
<i>Cocculus hirsutus</i>	1	0.15	-0.20	+0.35
<i>Abutilon ramosum</i>	2	0.28	-0.01	+0.29
<i>Commicarpus plumbagineus</i> var. <i>plumbagineus</i>	3	0.42	0.19	+0.23
<i>Momordica cardiospermoides</i>	1	0.02	-0.20	+0.21
<i>Phyla nodiflora</i> var. <i>nodiflora</i>	1	0.00	-0.20	+0.20
<i>Leucas sexdentata</i>	1	0.00	-0.20	+0.20
<i>Verbena bonariensis</i>	1	0.00	-0.20	+0.20
<i>Tagetes minuta</i>	2	0.08	-0.01	+0.09
<i>Flaveria bidentis</i>	5	0.62	0.57	+0.05
<i>Citrullus lanatus</i>	2	0.02	-0.01	+0.02
<i>Chenopodium album</i>	2	0.02	-0.01	+0.02
<i>Justicia flava</i>	3	0.20	0.19	+0.01
<i>Argemone mexicana</i>	2	0.00	-0.01	+0.01
<i>Tragia</i> sp.	2	0.00	-0.01	+0.01
<i>Euphorbia heterophylla</i>	3	0.17	0.19	-0.02
<i>Alternanthera pungens</i>	3	0.05	0.19	-0.14
<i>Schkuhria pinnata</i>	3	0.02	0.19	-0.17
<i>Monechma debile</i>	4	0.19	0.38	-0.19
<i>Amaranthus viridus</i>	4	0.17	0.38	-0.21
<i>Coccinia sessilifolia</i>	4	0.17	0.38	-0.21
<i>Datura stramonium</i>	4	0.12	0.38	-0.26
<i>Secamone</i> sp.	4	0.10	0.38	-0.28
<i>Achyranthes aspera</i> var. <i>aspera</i>	5	0.27	0.57	-0.30
<i>Chenopodium olukondae</i>	5	0.25	0.57	-0.32
<i>Melhania rehmannii</i>	4	0.05	0.38	-0.33
<i>Bidens bipinnata</i>	4	0.04	0.38	-0.34
<i>Hibiscus calyphyllus</i>	5	0.22	0.57	-0.35
<i>Conyza albida</i>	4	0.02	0.38	-0.36
<i>Tribulus terrestris</i>	4	0.02	0.38	-0.36
<i>Pupalia lappacea</i> var. <i>lappacea</i>	6	0.37	0.76	-0.39
<i>Conyza bonariensis</i>	5	0.17	0.57	-0.40
<i>Acalypha indica</i>	5	0.12	0.57	-0.45
<i>Commelina erecta</i>	5	0.10	0.57	-0.47
<i>Waltheria indica</i>	6	0.15	0.76	-0.61
Total cover for species in group: 9.63%				

Plant community Structure

Growth Form					
Tree	BBB				15.97%
Shrub	B				7.45%
Dwarf shrub					0.88%
Grass/Forb	BØ				9.27%
					9.63%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 43.20%
 Grass proportion= 21.45%
 Forb proportion= 22.30%
 Dwarf shrub proportion= 2.03%
 Shrub proportion= 17.25%
 Tree proportion= 36.97%

Plant community number: 8

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Trees

Correlation coefficient=+0.80
 Standard error of the mean= 0.86

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Ficus sycomorus</i>	14	5.99	3.02	+2.97
<i>Nicotiana glauca</i>	14	4.76	3.02	+1.73

Normal competition range:

<i>Acacia galpinii</i>	1	0.07	-0.58	+0.65
<i>Karomia speciosa forma speciosa</i>	1	0.01	-0.58	+0.59
<i>Sterculia rogersii</i>	1	0.01	-0.58	+0.59
<i>Spirostachys africana</i>	7	1.53	1.08	+0.44
<i>Colophospermum mopane</i>	2	0.12	-0.30	+0.42
<i>Faidherbia albida</i>	2	0.09	-0.30	+0.40
<i>Berchemia zeyheri</i>	2	0.04	-0.30	+0.34
<i>Breonadia salicina</i>	7	1.28	1.08	+0.20
<i>Acacia robusta subsp. clavigera</i>	12	2.58	2.47	+0.11
<i>Combretum erythrophyllum</i>	4	0.32	0.25	+0.07
<i>Ziziphus mucronata subsp. mucronata</i>	3	0.03	-0.03	+0.06
cf. <i>Manilkara mochisia</i>	3	0.02	-0.03	+0.04
<i>Ficus abutilifolia</i>	3	0.02	-0.03	+0.04
<i>Pappea capensis</i>	3	0.00	-0.03	+0.03
<i>Combretum apiculatum subsp. apiculatum</i>	4	0.19	0.25	-0.06



Berchemia discolor	5	0.45	0.53	-0.08
Cassia abbreviata subsp. beareana	4	0.04	0.25	-0.21
Lonchocarpus capassa	10	1.70	1.92	-0.22
Combretum imberbe	11	1.96	2.19	-0.23
Trichilia emetica susp. emetica	5	0.25	0.53	-0.28
Diospyros mespiliformis	12	2.04	2.47	-0.43
Peltophorum africanum	5	0.09	0.53	-0.43
Melia azedarach	5	0.00	0.53	-0.52
Acacia nigrescens	11	1.60	2.19	-0.59
Schrebera alata	7	0.24	1.08	-0.84

Weak competitors:

Xanthocercis zambesiaca	7	0.22	1.08	-0.87
Lanea schweinfurthii var. stuhlmannii	8	0.38	1.36	-0.98
Sclerocarya birrea subsp. caffra	9	0.34	1.64	-1.30
Croton megalobotrys	13	1.14	2.75	-1.61

Total cover for species in group: 27.47%

Shrubs

Correlation coefficient=+0.57
Standard error of the mean= 0.53

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Maytenus heterophylla	13	2.68	1.01	+1.67
Ricinus communis	11	2.21	0.84	+1.37

Normal competition range:

Nuxia oppositifolia	5	0.72	0.30	+0.42
Grewia sulcata var. sulcata	10	1.01	0.75	+0.26
Acacia erubescens	1	0.18	-0.05	+0.23
Bridelia cathartica subsp. melanthesoides	6	0.58	0.39	+0.19
Acacia ataxacantha	3	0.26	0.13	+0.13
Lantana camara	7	0.61	0.48	+0.13
Gossypium herbaceum subsp. africanum	1	0.03	-0.05	+0.08
Euclea divinorum	1	0.01	-0.05	+0.06
Rhus pyroides var. pyroides	1	0.01	-0.05	+0.06
Maclura africana	4	0.21	0.22	-0.01
Commiphora glandulosa	2	0.03	0.04	-0.01
Grewia monticola	6	0.38	0.39	-0.01
Pavetta catophylla	2	0.00	0.04	-0.04
Ximenia americana var. microphylla	2	0.00	0.04	-0.04
Solanum mauritianum	2	0.00	0.04	-0.04
Combretum hereroense	4	0.17	0.22	-0.05
Capparis tomentosa	3	0.03	0.13	-0.10
Flueggea virosa subsp. virosa	10	0.50	0.75	-0.24
Grewia bicolor var. bicolor	10	0.40	0.75	-0.35
Terminalia prunioides	8	0.14	0.57	-0.43
Grewia hexamita	8	0.11	0.57	-0.46



<i>Cordia</i> cf. <i>monoica</i>	11	0.32	0.84	-0.52
<i>Dichrostachys cinerea</i>	13	0.49	1.01	-0.52

Weak competitors:

<i>Hippocratea longipetiolata</i>	8	0.03	0.57	-0.54
<i>Grewia flavescens</i> var. <i>flavescens</i>	12	0.32	0.92	-0.60
<i>Combretum</i> cf. <i>mossambicense</i>	10	0.10	0.75	-0.65

Total cover for species in group: 11.52%

Dwarf Shrubs

Correlation coefficient=+0.91
Standard error of the mean= 0.05

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

<i>Ficus capreifolia</i>	10	0.33	0.24	+0.09
<i>Grewia flava</i>	2	0.09	0.02	+0.07

Normal competition range:

<i>Verbesina encelioides</i> var. <i>encelioides</i>	13	0.38	0.32	+0.05
<i>Phoenix reclinata</i>	1	0.03	-0.00	+0.03
<i>Senna italica</i> subsp. <i>arachoides</i>	1	0.03	-0.00	+0.03
<i>Melhania acuminata</i> var. <i>acuminata</i>	2	0.04	0.02	+0.01
<i>Lantana rugosa</i>	1	0.01	-0.00	+0.01
<i>Grewia villosa</i> var. <i>villosa</i>	9	0.22	0.21	+0.01
<i>Senna occidentalis</i>	6	0.13	0.13	-0.01
<i>Lippia javanica</i>	2	0.01	0.02	-0.01
<i>Sesbania bispinosa</i> var. <i>bispinosa</i>	8	0.17	0.19	-0.02
<i>Solanum nigrum</i>	2	0.00	0.02	-0.02
<i>Solanum incanum</i>	2	0.00	0.02	-0.02
<i>Malvastrum coromandelianum</i>	3	0.00	0.05	-0.05

Weak competitors:

<i>Gomphocarpus fruticosus</i>	12	0.23	0.30	-0.06
<i>Leonotis nepetifolia</i>	6	0.01	0.13	-0.12

Total cover for species in group: 1.68%

Grasses

Correlation coefficient=+0.62
Standard error of the mean= 0.74

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:



Panicum maximum	14	4.05	1.40	+2.65
Cynodon dactylon	14	3.43	1.40	+2.03
Phragmites australis	14	2.91	1.40	+1.51

Normal competition range:

Cyperus articulatus	1	0.07	-0.32	+0.38
Typha capensis	1	0.01	-0.32	+0.32
Chloris virgata	1	0.00	-0.32	+0.32
Acrachne racemosa	1	0.00	-0.32	+0.32
Enteropogon macrostachyus	1	0.00	-0.32	+0.32
Digitaria velutina	1	0.00	-0.32	+0.32
Paspalum distichum	2	0.03	-0.18	+0.21
Setaria verticillata	2	0.01	-0.18	+0.19
Eleusine coracana subsp. africana	2	0.00	-0.18	+0.19
Heteropogon contortus	2	0.00	-0.18	+0.19
Schmidtia pappophoroides	6	0.52	0.34	+0.18
Setaria sagittifolia	3	0.02	-0.05	+0.07
Cyperus sexangularis	5	0.24	0.21	+0.03
Echinochloa colona	4	0.06	0.08	-0.02
Hemarthria altissima	4	0.04	0.08	-0.04
Dactyloctenium giganteum	4	0.02	0.08	-0.06
Leptocarydion vulpiastrum	4	0.02	0.08	-0.06
Melinis repens	4	0.01	0.08	-0.07
Tragus berteronianus	4	0.00	0.08	-0.08
Cyperus rotundus subsp. rotundus	5	0.08	0.21	-0.13
Eragrostis aspera	5	0.07	0.21	-0.14
Urochloa mosambicensis	14	1.26	1.40	-0.14
Chloris pycnothrix	5	0.01	0.21	-0.20
Paspalum urvillei	6	0.02	0.34	-0.32
Brachiaria deflexa	6	0.01	0.34	-0.33
Enneapogon cenchroides	8	0.27	0.61	-0.33
Eragrostis superba	7	0.11	0.48	-0.37
Sporobolus ioclados	7	0.05	0.48	-0.42
Bothriochloa insculpta	8	0.03	0.61	-0.58
Eriochloa meyeriana subsp. meyeriana	10	0.22	0.87	-0.66
Eragrostis pseudosclerantha	12	0.43	1.13	-0.70

Weak competitors:

Aristida canescens	10	0.10	0.87	-0.78
Digitaria eriantha	13	0.40	1.27	-0.87
Sporobolus pyramidalis	12	0.26	1.13	-0.88
Sorghum bicolor subsp. arundinaceum	11	0.07	1.00	-0.94
Cenchrus ciliaris	13	0.17	1.27	-1.10

Total cover for species in group: 14.98%

Forbs

Correlation coefficient=+0.50
Standard error of the mean= 0.47

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Xanthium strumarium	14	3.45	0.72	+2.74
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Normal competition range:

Abutilon ramosum	11	0.83	0.53	+0.30
Hypoestes forskaolii	1	0.07	-0.11	+0.17
Commicarpus plumbagineus var. plumbagineus	9	0.54	0.40	+0.14
Plectranthus tetensis	1	0.03	-0.11	+0.14
Acalypha indica	1	0.01	-0.11	+0.12
Achyranthes aspera var. sicula	1	0.01	-0.11	+0.12
Cleome maculata	1	0.00	-0.11	+0.11
Conyza canadensis	1	0.00	-0.11	+0.11
Amaranthus viridus	1	0.00	-0.11	+0.11
Senna obtusifolia	1	0.00	-0.11	+0.11
Kyphocarpa angustifolia	1	0.00	-0.11	+0.11
Tragia sp.	1	0.00	-0.11	+0.11
Gomphrena celosioides	1	0.00	-0.11	+0.11
Hibiscus trionum	1	0.00	-0.11	+0.11
Schkuhria pinnata	1	0.00	-0.11	+0.11
Persicaria lapathifolia	5	0.22	0.15	+0.08
cf. Cocculus	2	0.03	-0.04	+0.07
Conyza albida	2	0.01	-0.04	+0.05
Hibiscus calyphyllus	2	0.01	-0.04	+0.05
Tribulus terrestris	2	0.00	-0.04	+0.05
Hydrocotyle sp.	2	0.00	-0.04	+0.05
Bidens bipinnata	3	0.00	0.02	-0.02
Cissus rotundifolia	6	0.14	0.21	-0.07
Coccinia sessilifolia	4	0.01	0.08	-0.07
Chenopodium album	4	0.00	0.08	-0.08
Solanum panduriforme	5	0.07	0.15	-0.08
Flaveria bidentis	14	0.63	0.72	-0.09
Pupalia lappacea var. lappacea	5	0.05	0.15	-0.10
Phyla nodiflora var. nodiflora	5	0.02	0.15	-0.13
Alternanthera pungens	5	0.02	0.15	-0.13
Melhania rehmannii	5	0.00	0.15	-0.14
Achyranthes aspera var. aspera	10	0.26	0.46	-0.21
Datura stramonium	7	0.05	0.27	-0.22
Commelina erecta	7	0.05	0.27	-0.23
Secamone sp.	7	0.03	0.27	-0.24
Verbena bonariensis	8	0.05	0.34	-0.28
Abutilon angulatum var. angulatum	11	0.24	0.53	-0.28
Withania somnifera	9	0.10	0.40	-0.30
Justicia flava	8	0.04	0.34	-0.30
Argemone mexicana	8	0.01	0.34	-0.33
Tagetes minuta	9	0.07	0.40	-0.33
Conyza bonariensis	12	0.15	0.59	-0.44

Weak competitors:

Waltheria indica	11	0.05	0.53	-0.48
Chenopodium olukondae	13	0.15	0.66	-0.51

Total cover for species in group: 7.40%



Community Structure

Growth Form					
Tree	BBBBB				27.47%
Shrub	BB				11.52%
Dwarf shrub					1.68%
Grass/Forb	BBØ				14.98%
					7.40%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 63.05%
 Grass proportion= 23.75%
 Forb proportion= 11.74%
 Dwarf shrub proportion= 2.67%
 Shrub proportion= 18.27%
 Tree proportion= 43.57%

Plant community number: 8 (variant 8.1)

Trees

Correlation coefficient=+0.79
 Standard error of the mean= 1.04

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

Nicotiana glauca	9	6.21	3.48	+2.74
Ficus sycomorus	9	5.96	3.48	+2.48
Acacia robusta subsp. clavigera	7	3.62	2.43	+1.18

Normal competition range:

Faidherbia albida	1	0.10	-0.70	+0.80
Acacia galpinii	1	0.10	-0.70	+0.80
cf. Manilkara mochisia	1	0.00	-0.70	+0.70
Pappea capensis	1	0.00	-0.70	+0.70
Trichilia emetica susp. emetica	2	0.29	-0.18	+0.47
Combretum erythrophyllum	2	0.29	-0.18	+0.47
Colophospermum mopane	2	0.18	-0.18	+0.36
Cassia abbreviata subsp. beareana	2	0.01	-0.18	+0.19
Melia azedarach	2	0.00	-0.18	+0.18
Berchemia discolor	3	0.15	0.34	-0.20
Spirostachys africana	4	0.65	0.87	-0.22
Peltophorum africanum	3	0.10	0.34	-0.24
Acacia nigrescens	7	2.17	2.43	-0.26
Ziziphus mucronata subsp. mucronata	3	0.05	0.34	-0.30
Ficus abutilifolia	3	0.02	0.34	-0.32



Combretum apiculatum subsp. apiculatum	4	0.29	0.87	-0.58
Xanthocercis zambesiaca	4	0.23	0.87	-0.63
Breonadia salicina	4	0.16	0.87	-0.71
Combretum imberbe	7	1.63	2.43	-0.80
Lonchocarpus capassa	7	1.51	2.43	-0.92

Weak competitors:

Schrebera alata	5	0.32	1.39	-1.06
Lanea schweinfurthii var. stuhlmannii	5	0.27	1.39	-1.12
Sclerocarya birrea subsp. caffra	5	0.21	1.39	-1.18
Diospyros mespiliformis	7	1.24	2.43	-1.19
Croton megalobotrys	8	1.60	2.96	-1.36

Total cover for species in group: 27.39%

Shrubs

Correlation coefficient=+0.59
Standard error of the mean= 0.64

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

Ricinus communis	8	3.37	1.11	+2.26
Maytenus heterophylla	8	2.27	1.11	+1.16

Normal competition range:

Grewia sulcata var. sulcata	8	1.51	1.11	+0.40
Acacia erubescens	1	0.28	-0.06	+0.34
Bridelia cathartica subsp. melanthesoides	2	0.38	0.11	+0.27
Maclura africana	1	0.10	-0.06	+0.16
Lantana camara	5	0.75	0.61	+0.14
Acacia ataxacantha	3	0.40	0.28	+0.13
Gossypium herbaceum subsp. africanum	1	0.04	-0.06	+0.10
Commiphora glandulosa	1	0.04	-0.06	+0.10
Nuxia oppositifolia	1	0.01	-0.06	+0.07
Euclea divinorum	1	0.01	-0.06	+0.07
Ximenia americana var. microphylla	1	0.00	-0.06	+0.06
Grewia monticola	3	0.32	0.28	+0.05
Capparis tomentosa	2	0.05	0.11	-0.06
Pavetta catophylla	2	0.00	0.11	-0.11
Combretum hereroense	3	0.16	0.28	-0.12
Flueggea virosa subsp. virosa	7	0.67	0.94	-0.27
Hippocratea longipetiolata	4	0.02	0.44	-0.42
Terminalia prunioides	5	0.17	0.61	-0.44
Grewia bicolor var. bicolor	6	0.32	0.78	-0.45
Dichrostachys cinerea	8	0.51	1.11	-0.60

Weak competitors:

Grewia hexamita	6	0.12	0.78	-0.65
Combretum cf. mossambicense	6	0.11	0.78	-0.66



<i>Cordia</i> cf. <i>monoica</i>	7	0.24	0.94	-0.71
<i>Grewia</i> <i>flavescens</i> var. <i>flavescens</i>	8	0.30	1.11	-0.81
Total cover for species in group: 12.19%				

Dwarf Shrubs

Correlation coefficient=+0.87
Standard error of the mean= 0.08

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
<i>Ficus</i> <i>capreifolia</i>	8	0.49	0.35	+0.15
<i>Grewia</i> <i>flava</i>	2	0.15	0.05	+0.09
Normal competition range:				
<i>Grewia</i> <i>villosa</i> var. <i>villosa</i>	6	0.33	0.25	+0.08
<i>Phoenix</i> <i>reclinata</i>	1	0.04	0.00	+0.04
<i>Senna</i> <i>italica</i> subsp. <i>arachoides</i>	1	0.04	0.00	+0.04
<i>Melhaniania</i> <i>acuminata</i> var. <i>acuminata</i>	1	0.01	0.00	+0.01
<i>Lantana</i> <i>rugosa</i>	1	0.01	0.00	+0.01
<i>Solanum</i> <i>incanum</i>	1	0.00	0.00	-0.00
<i>Senna</i> <i>occidentalis</i>	5	0.19	0.20	-0.01
<i>Verbesina</i> <i>encelioides</i> var. <i>encelioides</i>	8	0.33	0.35	-0.02
<i>Sesbania</i> <i>bispinosa</i> var. <i>bispinosa</i>	4	0.11	0.15	-0.04
<i>Solanum</i> <i>nigrum</i>	2	0.00	0.05	-0.05
<i>Leonotis</i> <i>nepetifolia</i>	2	0.00	0.05	-0.05
Weak competitors:				
<i>Malvastrum</i> <i>coromandelianum</i>	3	0.00	0.10	-0.10
<i>Gomphocarpus</i> <i>fruticosus</i>	7	0.15	0.30	-0.15
Total cover for species in group: 1.87%				

Grasses

Correlation coefficient=+0.59
Standard error of the mean= 0.92

		Actual (F) cover	Pred. cover	Differ- ence

Strong competitors:				
<i>Panicum</i> <i>maximum</i>	9	4.93	1.54	+3.39
<i>Cynodon</i> <i>dactylon</i>	9	3.78	1.54	+2.24
<i>Phragmites</i> <i>australis</i>	9	3.24	1.54	+1.70



Normal competition range:

Paspalum distichum	1	0.04	-0.38	+0.42
Setaria verticillata	1	0.01	-0.38	+0.39
Chloris virgata	1	0.00	-0.38	+0.38
Acrachne racemosa	1	0.00	-0.38	+0.38
Enteropogon macrostachyus	1	0.00	-0.38	+0.38
Echinochloa colona	1	0.00	-0.38	+0.38
Cyperus sexangularis	2	0.15	-0.14	+0.28
Setaria sagittifolia	2	0.02	-0.14	+0.16
Tragus berteronianus	2	0.00	-0.14	+0.14
Eleusine coracana subsp. africana	2	0.00	-0.14	+0.14
Heteropogon contortus	2	0.00	-0.14	+0.14
Schmidtia pappophoroides	5	0.71	0.58	+0.13
Urochloa mosambicensis	9	1.58	1.54	+0.04
Dactyloctenium giganteum	3	0.03	0.10	-0.07
Chloris pycnothrix	3	0.01	0.10	-0.09
Hemarthria altissima	3	0.01	0.10	-0.09
Melinis repens	3	0.01	0.10	-0.09
Enneapogon cenchroides	5	0.40	0.58	-0.18
Leptocarydion vulpiastrum	4	0.02	0.34	-0.32
Paspalum urvillei	4	0.02	0.34	-0.32
Brachiaria deflexa	4	0.01	0.34	-0.33
Aristida canescens	5	0.12	0.58	-0.46
Cyperus rotundus subsp. rotundus	5	0.12	0.58	-0.46
Eragrostis aspera	5	0.11	0.58	-0.47
Eragrostis superba	5	0.11	0.58	-0.47
Sporobolus ioclados	5	0.07	0.58	-0.51
Bothriochloa insculpta	5	0.02	0.58	-0.57
Sporobolus pyramidalis	7	0.23	1.06	-0.83
Eragrostis pseudosclerantha	8	0.44	1.30	-0.86

Weak competitors:

Sorghum bicolor subsp. arundinaceum	7	0.03	1.06	-1.03
Eriochloa meyeriana subsp. meyeriana	8	0.22	1.30	-1.08
Digitaria eriantha	9	0.42	1.54	-1.11
Cenchrus ciliaris	9	0.21	1.54	-1.32

Total cover for species in group: 17.11%

Forbs

Correlation coefficient=+0.53
Standard error of the mean= 0.48

	Actual	Pred.	Differ-
(F)	cover	cover	ence
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Strong competitors:

Xanthium strumarium	9	3.26	0.79	+2.47
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Normal competition range:

Abutilon ramosum	7	1.01	0.55	+0.46
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Plectranthus tetensis	1	0.04	-0.18	+0.22
Acalypha indica	1	0.01	-0.18	+0.19
Achyranthes aspera var. sicula	1	0.01	-0.18	+0.19
Conyza canadensis	1	0.00	-0.18	+0.18
Amaranthus viridus	1	0.00	-0.18	+0.18
Kyphocarpa angustifolia	1	0.00	-0.18	+0.18
Gomphrena celosioides	1	0.00	-0.18	+0.18
Commnicarpus plumbagineus var. plumbagineus	7	0.69	0.55	+0.15
Phyla nodiflora var. nodiflora	2	0.01	-0.06	+0.07
Conyza albida	2	0.01	-0.06	+0.07
Hibiscus calyphyllus	2	0.01	-0.06	+0.07
Bidens bipinnata	2	0.00	-0.06	+0.06
Tribulus terrestris	2	0.00	-0.06	+0.06
Cissus rotundifolia	3	0.07	0.06	+0.00
Coccinia sessilifolia	3	0.01	0.06	-0.05
Verbena bonariensis	3	0.01	0.06	-0.05
Melhania rehmannii	3	0.00	0.06	-0.06
Solanum panduriforme	4	0.10	0.19	-0.08
Pupalia lappacea var. lappacea	4	0.07	0.19	-0.12
Persicaria lapathifolia	4	0.07	0.19	-0.12
Commelina erecta	4	0.07	0.19	-0.12
Secamone sp.	4	0.03	0.19	-0.15
Alternanthera pungens	4	0.02	0.19	-0.16
Datura stramonium	4	0.02	0.19	-0.16
Achyranthes aspera var. aspera	6	0.26	0.43	-0.17
Argemone mexicana	4	0.01	0.19	-0.17
Chenopodium album	4	0.00	0.19	-0.18
Withania somnifera	5	0.06	0.31	-0.25
Tagetes minuta	5	0.02	0.31	-0.29
Flaveria bidentis	9	0.49	0.79	-0.30
Abutilon angulatum var. angulatum	8	0.28	0.67	-0.39
Conyza bonariensis	7	0.16	0.55	-0.39
Justicia flava	6	0.04	0.43	-0.39

Weak competitors:

Waltheria indica	7	0.05	0.55	-0.50
Chenopodium olukondae	8	0.05	0.67	-0.62

Total cover for species in group: 6.97%

Plant community Structure

Growth Form

Tree	BBBBB	27.39%	
Shrub	BB	12.19%	
Dwarf shrub		1.87%	
Grass/Forb	BBBØ	17.11%	6.97%

* Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 65.52%
Grass proportion= 26.11%
Forb proportion= 10.63%
Dwarf shrub proportion= 2.85%

Shrub proportion= 18.61%
Tree proportion= 41.80%

Plant community number: 8 (variant 8.2)

Trees

Correlation coefficient=+0.56
Standard error of the mean= 1.28

	(F)	Actual cover	Pred. cover	Difference
Strong competitors:				
<i>Ficus sycomorus</i>	5	6.05	2.40	+3.65
<i>Breonadia salicina</i>	3	3.31	1.09	+2.22
<i>Spirostachys africana</i>	3	3.11	1.09	+2.02
Normal competition range:				
<i>Diospyros mespiliformis</i>	5	3.49	2.40	+1.09
<i>Lonchocarpus capassa</i>	3	2.04	1.09	+0.95
<i>Combretum imberbe</i>	4	2.54	1.74	+0.80
<i>Berchemia discolor</i>	2	0.99	0.43	+0.56
<i>Faidherbia albida</i>	1	0.08	-0.22	+0.30
<i>Karomia speciosa forma speciosa</i>	1	0.02	-0.22	+0.24
<i>Sterculia rogersii</i>	1	0.02	-0.22	+0.24
<i>Combretum erythrophyllum</i>	2	0.36	0.43	-0.07
<i>Nicotiana glauca</i>	5	2.14	2.40	-0.26
<i>Berchemia zeyheri</i>	2	0.10	0.43	-0.33
<i>Schrebera alata</i>	2	0.10	0.43	-0.33
<i>Cassia abbreviata subsp. beareana</i>	2	0.08	0.43	-0.35
<i>Peltophorum africanum</i>	2	0.08	0.43	-0.35
cf. <i>Manilkara mochisia</i>	2	0.04	0.43	-0.39
<i>Pappea capensis</i>	2	0.00	0.43	-0.43
<i>Lanea schweinfurthii var. stuhlmannii</i>	3	0.59	1.09	-0.50
<i>Xanthocercis zambesiaca</i>	3	0.18	1.09	-0.91
<i>Trichilia emetica susp. emetica</i>	3	0.16	1.09	-0.93
<i>Melia azedarach</i>	3	0.01	1.09	-1.08
<i>Acacia nigrescens</i>	4	0.57	1.74	-1.18
<i>Sclerocarya birrea subsp. caffra</i>	4	0.56	1.74	-1.18
Weak competitors:				
<i>Acacia robusta subsp. clavigera</i>	5	0.71	2.40	-1.69
<i>Croton megalobotrys</i>	5	0.30	2.40	-2.09
Total cover for species in group: 27.62%				



Shrubs

Correlation coefficient=+0.55
Standard error of the mean= 0.67

		Actual (F) cover	Pred. cover	Differ- ence
Strong competitors:				
Maytenus heterophylla	5	3.43	1.14	+2.29
Nuxia oppositifolia	4	2.00	0.82	+1.18
Normal competition range:				
Combretum hereroense	1	0.18	-0.16	+0.34
Lantana camara	2	0.36	0.17	+0.20
Rhus pyroides var. pyroides	1	0.02	-0.16	+0.18
Commiphora glandulosa	1	0.00	-0.16	+0.16
Capparis tomentosa	1	0.00	-0.16	+0.16
Ximenia americana var. microphylla	1	0.00	-0.16	+0.16
Bridelia cathartica subsp. melanthesoides	4	0.95	0.82	+0.13
Grewia monticola	3	0.48	0.49	-0.01
Grewia sulcata var. sulcata	2	0.10	0.17	-0.07
Grewia hexamita	2	0.08	0.17	-0.08
Maclura africana	3	0.40	0.49	-0.09
Solanum mauritianum	2	0.00	0.17	-0.16
Flueggea virosa subsp. virosa	3	0.20	0.49	-0.29
Grewia bicolor var. bicolor	4	0.52	0.82	-0.29
Cordia cf. monoica	4	0.46	0.82	-0.35
Ricinus communis	3	0.12	0.49	-0.37
Terminalia prunioides	3	0.08	0.49	-0.41
Grewia flavescens var. flavescens	4	0.36	0.82	-0.45
Weak competitors:				
Dichrostachys cinerea	5	0.44	1.14	-0.70
Combretum cf. mossambicense	4	0.06	0.82	-0.75
Hippocratea longipetiolata	4	0.04	0.82	-0.77
Total cover for species in group: 10.32%				

Dwarf Shrubs

Correlation coefficient=+0.80
Standard error of the mean= 0.11

		Actual (F) cover	Pred. cover	Differ- ence
Strong competitors:				
Verbesina encelioides var. encelioides	5	0.47	0.32	+0.14



Normal competition range:

Melhania acuminata var. acuminata	1	0.08	-0.02	+0.10
Gomphocarpus fruticosus	5	0.38	0.32	+0.06
Sesbania bispinosa var. bispinosa	4	0.27	0.24	+0.03
Senna occidentalis	1	0.00	-0.02	+0.02
Solanum incanum	1	0.00	-0.02	+0.02
Lippia javanica	2	0.04	0.07	-0.03
Ficus capreifolia	2	0.04	0.07	-0.03

Weak competitors:

Grewia villosa var. villosa	3	0.04	0.15	-0.11
Leonotis nepetifolia	4	0.03	0.24	-0.21
Total cover for species in group: 1.35%				

Grasses

Correlation coefficient=+0.61
Standard error of the mean= 0.60

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Cynodon dactylon	5	2.80	1.05	+1.75
Panicum maximum	5	2.46	1.05	+1.41
Phragmites australis	5	2.32	1.05	+1.27

Normal competition range:

Cyperus articulatus	1	0.18	-0.12	+0.30
Schmidtia pappophoroides	1	0.18	-0.12	+0.30
Hemarthria altissima	1	0.08	-0.12	+0.20
Setaria sagittifolia	1	0.02	-0.12	+0.14
Typha capensis	1	0.02	-0.12	+0.14
Paspalum distichum	1	0.00	-0.12	+0.12
Digitaria velutina	1	0.00	-0.12	+0.12
Setaria verticillata	1	0.00	-0.12	+0.12
Dactyloctenium giganteum	1	0.00	-0.12	+0.12
Melinis repens	1	0.00	-0.12	+0.12
Eriochloa meyeriana subsp. meyeriana	2	0.20	0.17	+0.03
Cyperus sexangularis	3	0.42	0.46	-0.04
Eragrostis superba	2	0.10	0.17	-0.07
Sporobolus ioclados	2	0.02	0.17	-0.15
Paspalum urvillei	2	0.02	0.17	-0.15
Chloris pycnothrix	2	0.00	0.17	-0.17
Brachiaria deflexa	2	0.00	0.17	-0.17
Tragus berteronianus	2	0.00	0.17	-0.17
Echinochloa colona	3	0.16	0.46	-0.30
Eragrostis pseudosclerantha	4	0.42	0.76	-0.33
Urochloa mosambicensis	5	0.68	1.05	-0.37
Digitaria eriantha	4	0.36	0.76	-0.39
Bothriochloa insculpta	3	0.04	0.46	-0.42



Enneapogon cenchroides 3 0,04 0,46 -0,42

Weak competitors:

Sorghum bicolor subsp. arundinaceum 4 0.14 0.76 -0.62
Cenchrus ciliaris 4 0.08 0.76 -0.68
Sporobolus pyramidalis 5 0.30 1.05 -0.75
Aristida canescens 5 0.05 1.05 -1.00

Total cover for species in group: 11,14

Forbs

Correlation coefficient=+0.40
Standard error of the mean= 0.61

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

Xanthium strumarium 5 3.81 0.66 +3.15

Normal competition range:

Persicaria lapathifolia	1	0.50	-0.04	+0.55
Hypoestes forskaolii	1	0.18	-0.04	+0.23
Flaveria bidentis	5	0.88	0.66	+0.22
Commicarpus plumbagineus var. plumbagineus	2	0.26	0.13	+0.13
Pupalia lappacea var. lappacea	1	0.02	-0.04	+0.06
Cleome maculata	1	0.00	-0.04	+0.05
Bidens bipinnata	1	0.00	-0.04	+0.05
Senna obtusifolia	1	0.00	-0.04	+0.05
Coccinia sessilifolia	1	0.00	-0.04	+0.05
Alternanthera pungens	1	0.00	-0.04	+0.05
Tragia sp.	1	0.00	-0.04	+0.05
Solanum panduriforme	1	0.00	-0.04	+0.05
Hibiscus trionum	1	0.00	-0.04	+0.05
Schkuhria pinnata	1	0.00	-0.04	+0.05
Abutilon ramosum	4	0.50	0.48	+0.02
Cissus rotundifolia	3	0.28	0.31	-0.03
cf. Cocculus	2	0.08	0.13	-0.05
Justicia flava	2	0.04	0.13	-0.09
Melhania rehmannii	2	0.00	0.13	-0.13
Hydrocotyle sp.	2	0.00	0.13	-0.13
Abutilon angulatum var. angulatum	3	0.18	0.31	-0.13
Datura stramonium	3	0.10	0.31	-0.21
Achyranthes aspera var. aspera	4	0.26	0.48	-0.22
Phyla nodiflora var. nodiflora	3	0.02	0.31	-0.28
Secamone sp.	3	0.02	0.31	-0.28
Commelina erecta	3	0.01	0.31	-0.30
Withania somnifera	4	0.18	0.48	-0.30
Tagetes minuta	4	0.16	0.48	-0.32
Chenopodium olukondae	5	0.32	0.66	-0.34
Waltheria indica	4	0.06	0.48	-0.42
Argemone mexicana	4	0.01	0.48	-0.48



<i>Conyza bonariensis</i>	5	0.14	0.66	-0.52
<i>Verbena bonariensis</i>	5	0.12	0.66	-0.54
Total cover for species in group: 8.19%				

Plant community Structure

Growth Form

Tree	BBBBB	27.62%		
Shrub	BB	10.32%		
Dwarf shrub		1.35%		
Grass/Forb	BBØ	11.14%	8.19%	

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 58.61%
 Grass proportion= 19.00%
 Forb proportion= 13.98%
 Dwarf shrub proportion= 2.30%
 Shrub proportion= 17.61%
 Tree proportion= 47.12%

Plant community number: 9

Trees

Correlation coefficient=+0.59
 Standard error of the mean= 1.40

(F)	Actual cover	Pred. cover	Difference
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Strong competitors:

<i>Diospyros mespiliformis</i>	9	5.74	2.40	+3.34
<i>Acacia robusta</i> subsp. <i>clavigera</i>	9	4.90	2.40	+2.50
<i>Ficus sycomorus</i>	10	4.86	2.77	+2.09

Normal competition range:

<i>Acacia galpinii</i>	3	1.58	0.20	+1.38
<i>Breonadia salicina</i>	5	2.29	0.93	+1.36
<i>Combretum imberbe</i>	8	2.65	2.03	+0.62
<i>Pappea capensis</i>	1	0.01	-0.54	+0.55
<i>Peltophorum africanum</i>	1	0.01	-0.54	+0.55
<i>Combretum apiculatum</i> subsp. <i>apiculatum</i>	1	0.00	-0.54	+0.54
<i>Spirostachys africana</i>	4	0.75	0.56	+0.18
<i>Combretum erythrophyllum</i>	4	0.46	0.56	-0.10
<i>Schrebera alata</i>	4	0.22	0.56	-0.34



Ziziphus mucronata subsp. mucronata	4	0.10	0.56	-0.46
Xanthocercis zambesiaca	6	0.84	1.30	-0.46
Acacia tortilis	4	0.10	0.56	-0.46
Trichilia emetica susp. emetica	5	0.21	0.93	-0.72
Faidherbia albida	5	0.16	0.93	-0.77
Lonchocarpus capassa	6	0.27	1.30	-1.03
Sclerocarya birrea subsp. caffra	6	0.23	1.30	-1.07
Lannea schweinfurthii var. stuhlmannii	7	0.42	1.67	-1.24

Weak competitors:

Acacia nigrescens	8	0.46	2.03	-1.57
Nicotiana glauca	10	1.17	2.77	-1.60
Melia azedarach	7	0.04	1.67	-1.62
Croton megalobotrys	9	0.75	2.40	-1.65

Total cover for species in group: 28.24%

Shrubs

Correlation coefficient=+0.58
Standard error of the mean= 0.46

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

Maytenus heterophylla	10	2.64	0.93	+1.71
Acacia ataxacantha	9	1.43	0.82	+0.61

Normal competition range:

Rhus gueinzii	4	0.53	0.26	+0.27
Grewia sulcata var. sulcata	5	0.63	0.37	+0.25
Mystroxydon aethiopicum subsp. schlechteri	3	0.33	0.15	+0.18
Rhus pyroides var. pyroides	3	0.29	0.15	+0.14
Dalbergia armata	1	0.04	-0.07	+0.11
Carissa edulis	1	0.04	-0.07	+0.11
Plectroniella armata	1	0.04	-0.07	+0.11
Nuxia oppositifolia	1	0.00	-0.07	+0.07
Terminalia prunioides	4	0.33	0.26	+0.07
Euclea divinorum	2	0.04	0.04	-0.00
Ximena americana var. microphylla	2	0.02	0.04	-0.02
Cordia cf. monoica	4	0.18	0.26	-0.08
Dichrostachys cinerea	8	0.54	0.71	-0.16
Combretum hereroense	6	0.31	0.48	-0.17
Bridelia cathartica subsp. melanthesoides	7	0.40	0.60	-0.19
Hippocratea longipetiolata	6	0.20	0.48	-0.28
Grewia flavescens var. flavescens	6	0.20	0.48	-0.28
Grewia bicolor var. bicolor	7	0.30	0.60	-0.29
Pavetta catophylla	5	0.07	0.37	-0.30
Grewia hexamita	5	0.07	0.37	-0.30
Ricinus communis	9	0.45	0.82	-0.36



Weak competitors:

Combretum cf. mossambicense	8	0.24	0.71	-0.46
Flueggea virosa subsp. virosa	10	0.21	0.93	-0.72
Total cover for species in group:		9.57%		

Dwarf Shrubs

Correlation coefficient=+0.53
Standard error of the mean= 0.05

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

Pyrenacantha grandiflora	4	0.14	0.06	+0.08
Grewia flava	4	0.13	0.06	+0.07
Grewia villosa var. villosa	4	0.11	0.06	+0.05

Normal competition range:

Senna occidentalis	5	0.12	0.08	+0.05
Phoenix reclinata	2	0.04	0.03	+0.01
Solanum incanum	1	0.00	0.02	-0.02
Lantana rugosa	1	0.00	0.02	-0.02
Ficus capreifolia	4	0.04	0.06	-0.02
Sesbania sp.	2	0.01	0.03	-0.02
Senna italica subsp. arachoides	2	0.00	0.03	-0.03
Leonotis nepetifolia	2	0.00	0.03	-0.03
Verbesina encelioides var. encelioides	8	0.08	0.12	-0.04

Weak competitors:

Gomphocarpus fruticosus	6	0.02	0.09	-0.07
Total cover for species in group:		0.70%		

Grasses

Correlation coefficient=+0.59
Standard error of the mean= 0.53

(F)	Actual cover	Pred. cover	Differ- ence
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Strong competitors:

Panicum maximum	10	3.48	0.96	+2.52
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Normal competition range:

Dactyloctenium giganteum	1	0.01	-0.21	+0.22
Aristida diffusa	1	0.00	-0.21	+0.22



Paspalum distichum	1	0.00	-0.21	+0.22
Aristida adscensionis	1	0.00	-0.21	+0.22
Panicum deustum	2	0.09	-0.08	+0.18
Cynodon dactylon	10	1.13	0.96	+0.16
Setaria sagittifolia	2	0.02	-0.08	+0.10
Leptocarydion vulpiastrum	2	0.02	-0.08	+0.10
Phragmites australis	10	1.06	0.96	+0.09
Sporobolus ioclados	2	0.01	-0.08	+0.09
Heteropogon contortus	2	0.01	-0.08	+0.09
Eragrostis rigidior	3	0.14	0.05	+0.09
Eragrostis superba	2	0.00	-0.08	+0.09
Paspalum urvillei	2	0.00	-0.08	+0.09
Melinis repens	2	0.00	-0.08	+0.09
Schmidtia pappophoroides	4	0.14	0.18	-0.04
Aristida canescens	3	0.00	0.05	-0.04
Digitaria velutina	3	0.00	0.05	-0.04
Tragus berteronianus	3	0.00	0.05	-0.04
Brachiaria deflexa	4	0.04	0.18	-0.13
Eragrostis pseudosclerantha	5	0.17	0.31	-0.14
Sorghum bicolor subsp. arundinaceum	4	0.02	0.18	-0.16
Setaria verticillata	4	0.00	0.18	-0.17
Cenchrus ciliaris	5	0.10	0.31	-0.21
Eriochloa meyeriana subsp. meyeriana	5	0.04	0.31	-0.27
Bothriochloa insculpta	5	0.02	0.31	-0.29
Sporobolus pyramidalis	5	0.00	0.31	-0.30
Cyperus rotundus subsp. rotundus	6	0.06	0.44	-0.38
Urochloa mosambicensis	10	0.44	0.96	-0.52

Weak competitors:

Digitaria eriantha	8	0.13	0.70	-0.57
Enneapogon cenchroides	8	0.13	0.70	-0.57
Echinochloa colona	8	0.01	0.70	-0.69

Total cover for species in group: 7.31%

Forbs

Correlation coefficient=+0.56
Standard error of the mean= 0.52

	Actual	Pred.	Differ-
(F)	cover	cover	ence

Strong competitors:

Commnicarpus plumbagineus var. plumbagineus	10	3.01	0.91	+2.10
Xanthium strumarium	8	2.31	0.68	+1.63

Normal competition range:

Hibiscus calyphyllus	8	1.05	0.68	+0.37
Philyrophyllum schinzii	1	0.16	-0.14	+0.30
Xanthium spinosum	2	0.20	-0.02	+0.22
Abutilon ramosum	6	0.61	0.45	+0.16
cf. Cocculus	1	0.01	-0.14	+0.15



Persicaria lapathifolia	1	0.01	-0.14	+0.15
Amaranthus viridus	1	0.00	-0.14	+0.14
Phyla nodiflora var. nodiflora	1	0.00	-0.14	+0.14
Tribulus terrestris	1	0.00	-0.14	+0.14
Hydrocotyle sp.	1	0.00	-0.14	+0.14
Solanum panduriforme	1	0.00	-0.14	+0.14
Schkuhria pinnata	1	0.00	-0.14	+0.14
Achyranthes aspera var. aspera	10	1.05	0.91	+0.14
Cissus rotundifolia	2	0.05	-0.02	+0.07
Coccinia sessilifolia	2	0.02	-0.02	+0.04
Cleome maculata	2	0.00	-0.02	+0.02
Verbena bonariensis	2	0.00	-0.02	+0.02
Gomphrena celosioides	2	0.00	-0.02	+0.02
Justicia flava	4	0.15	0.21	-0.06
Momordica cardiospermoides	3	0.03	0.10	0.07
Euphorbia heterophylla	3	0.01	0.10	-0.08
Argemone mexicana	3	0.01	0.10	-0.08
Melhania rehmannii	4	0.09	0.21	-0.12
Pupalia lappacea var. lappacea	8	0.47	0.68	-0.20
Acalypha indica	4	0.00	0.21	-0.21
Secamone sp.	5	0.06	0.33	-0.27
Datura stramonium	5	0.06	0.33	-0.27
Withania somnifera	5	0.05	0.33	-0.28
Bidens bipinnata	5	0.04	0.33	-0.28
Conyza albida	5	0.02	0.33	-0.31
Tagetes minuta	5	0.02	0.33	-0.31
Chenopodium album	5	0.00	0.33	-0.32
Alternanthera pungens	6	0.02	0.45	-0.42
Chenopodium olukondae	7	0.09	0.56	-0.47

Weak competitors:

Commelina erecta	8	0.14	0.68	-0.54
Waltheria indica	8	0.06	0.68	-0.61
Flaveria bidentis	10	0.25	0.91	-0.66
Conyza bonariensis	9	0.13	0.79	-0.66

Total cover for species in group: 10.24%

Plant community Structure

Growth Form

Tree	BBBBB	28.24%	
Shrub	B	9.57%	
Dwarf shrub		0.70%	
Grass/Forb	BdB	7.31%	10.24%

% Cover:	0	2	5	7	1
		5	0	5	0
					0

Total class cover= 56.06%
Grass proportion= 13.04%
Forb proportion= 18.27%
Dwarf shrub proportion= 1.25%
Shrub proportion= 17.06%
Tree proportion= 50.37%