

Supplementary Information

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A comparison of aquatic macroinvertebrate and large branchiopod community composition between temporary pans of a conservation area and surrounding communal area in South Africa

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Table S1: The principal component loadings of the environmental variables for the first three principal components

Variable	PCA1	PCA2	PCA3
Conductivity	0.10	0.41	0.62
NO2	0.70	-0.32	0.18
PO4	0.75	-0.04	-0.05
NH4	0.80	0.07	0.25
NO3	0.72	-0.17	-0.18
TP	0.78	0.02	0.30
TN	0.68	0.35	0.07
DO	-0.03	0.79	0.14
Turbidity	0.24	0.53	-0.57
Temperature	0.07	0.74	0.39
pH	-0.45	0.46	0.20
Chlorophyll a	-0.11	0.67	-0.58
Cyanobacteria	0.56	0.38	-0.40
Macrophytes	-0.75	-0.09	0.09
Surface Area	-0.50	0.01	-0.12
Mean Depth	-0.49	0.29	0.28

Table S2: Continued

Species name	ES1	ES2	ES3	ES4	ES5	ES6	ES7	ES8	ES9	ES10	ES11	ES12	ES13	ES14	EM1	EM2	EM3	EM4	EM5	EL1	EL2	EL4	EL5	EL6	EL7	EL8	EL10	
<i>Malaya</i> sp										1															16	5	7	
<i>Marocoris</i>											2																	
<i>Mesovelia vittergera</i>				1			1	1			7	4		7	9		6		1				1		2			
<i>Naboandelis africanus</i>		1																			1							
<i>Naucoris obscuratus</i>								2			6						2		3						2		3	
<i>Neohydronomus affinus</i>										1	3	8												3		2		
<i>Neritina pulligera</i>											3													1		1		
<i>Notonecta lactitans</i>								4									1		2					1				
<i>Nymphulinae</i>																	1									42	2	
<i>Oligochaeta</i>										2	1	6	1				5	11	21		2	1	4	1	15			
<i>Orthoclaadiinae</i>												5	1							17								
<i>Pantala flavescens</i>		2						12			1	91	1		6		3	4	95						9	31	3	
<i>Parasthetops</i>														1					1									
<i>Plea</i>											2				1		1		13		11				8	3		
<i>Pseudobagous</i>											2								1						9			
<i>Ranatra</i>								1			1			4	1				1									
<i>Regimbartia</i>												1						16									1	
<i>Rhagadotarsus hutchinsonii</i>													1															
<i>Rhantaticus congestus</i>				2	2		2	2			3				2	2		2	2									
<i>Sigara</i>			1	1					1		1				1	1	3		1		1		6		1	1		
<i>Spercheus</i>		6	1							2					2						1			2	5	1	2	
<i>Stenolophus</i> sp								4				4														6		
Stratyomyidae				1																					4	1		
Tabanidae											2															1	1	
Tanypodinae											2										3		1		2	1	18	
Tanypodinae											2										3		1		2	1	18	

Table S3: The abundance of macroinvertebrates sampled from temporary pans in Ndumo Communal Area, South Africa.

Species name	M1	M3	M4	M10	M11	M12	M13	M14	M15	M16	M17
<i>Agraptocorixa</i>				4	8		4	1		4	9
<i>Allocnemis leucosticta</i>										9	
<i>Allocotocerus</i>			1						8	1	
<i>Anax</i>				6			2		2	5	
<i>Anisops</i>	1		12	34	187	2	29	1	14	175	63
<i>Anopheles</i>		2		2		1			1		
<i>Appasus</i>			2	1					3	2	
<i>Berosus</i>						1					
<i>Bezzia sp</i>				1							
<i>Brachydeutera</i>	2										
<i>Bulinus</i>				2			8		25	24	
<i>Canthydrus</i>			2	1			4		11	3	5
<i>Cloeon and Procloeon</i>	1		8	22			1		5	2	
<i>Coquilettidia</i>			2								
<i>Crambidae</i>			4	6					8	1	
<i>Culex</i>		4		4					2	1	
<i>Cybister</i>			2	1			1				
<i>Dytiscid larvae</i>								6	7	8	
<i>Enallagma</i>		4	15	64			2		17	1	
<i>Eretes</i>					1						
<i>Helochares</i>	2	4									
<i>Hirudinae</i>			1	1	1		2	1			
<i>Hydroglyphus</i>											1
<i>Hydrovatus</i>							1				
<i>Laccophilus</i>			7	5			4		2	3	

Table S3: continued

Species name	M1	M3	M4	M10	M11	M12	M13	M14	M15	M16	M17
<i>Laccotrepes</i>		1			1		1				
<i>Lestes</i>			3	4			1			4	
<i>Malaya sp</i>				6							
<i>Mansonia</i>			1								
<i>Mesovelia vittergera</i>			2		1	1	2		2		1
<i>Neohydrocoptus</i>									3		1
<i>Neohydronomus affinus</i>			1	1							
<i>Nerthra grandicollis</i>					1						
<i>Nychia limpida</i>									1		
Nymphulinae											
<i>Oligochaeta</i>			12	1			1	1			
<i>Orthoclaadiinae</i>				4							
<i>Pantala flavescens</i>		3	9	4	2	39			12	19	
<i>Plea</i>			4	4					5		2
<i>Ranatra</i>	1		4	1			4		2	1	1
<i>Rhantaticus congestus</i>		2						1			1
<i>Sigara</i>					2			1			
<i>Spercheus</i>		2		1						3	
Syrphidae								1			
Tanypodinae			3	1			2		17		
Tipulidae - Limnophila										1	
Tanypodinae			3	1			2		17		

Table S4: The abundance of large branchiopods sampled from temporary pans in Ndumo Game Reserve (NGR) and Communal Area (NCA), South Africa.

Genera	Ndumo Game Reserve (NGR)																				NCA									
	ES 1	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES 10	ES 11	ES 12	ES 13	ES 14	EM 1	EM 2	EM 3	EM 4	EM 5	EL 1	EL 2	EL 4	EL 5	EL 6	EL 7	EL 8	EL 10	M3	M16	
<i>Branchiopodopsis sp.</i>																								1						
<i>Leptestheria sp.</i>						1																								
<i>Triops granarius</i>	2															4								9		4				
<i>Eulimnidae</i>																								1					28	
<i>Cyzicus sp.</i>		2	6			16	28		8						1	2		5				3						1		
<i>Cyzicus.australis</i>															4		3				1	2							69	
<i>Streptocephalus bidentatus</i>				5								1			16		4							59	1					
<i>Eulimnadia africana</i>																													114	26
<i>Streptocephalus cafer</i>	36		8	5	11	45	31		46	27					16					9		4	1	281	9			44		