

Assessment of disturbance at three spatial scales in two large tropical reservoirs

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Supplementary Tab. 1. Summary of benthos biological metrics obtained from Eckman-Birge grab and kick-net samples, and land use metrics for Três Marias and São Simão reservoirs.

Sampler	Biological metrics	Três Marias					São Simão				
		Min	25 th	Median	75 th	Max	Min	25 th	Median	75 th	Max
Eckman-Birge Grab	Benthos abundance	3	10	18	33	86	0	13	52	146	339
	Benthos richness*	1	3	4	5	11	0	2	2	4	7
	Abundance of EPT individuals	0	0	2	6	18	0	0	1	2	9
	% EPT individuals	0	0	10.4	22.8	66.7	0	0	1.4	4.8	56.2
	EPT richness*	0	0	1	3	4	0	0	1	1	3
	% EPT richness	0	0	33.3	50.0	80.0	0	0	33.3	50.0	50.0
	Abundance of resistants	0	6	14	27	76	0	12	47	143	334
	% resistants	0	59.1	81.5	88.2	100	0	86.6	95.1	97.9	100
	Abundance of non native	0	0	0	0	9	0	0	0	0	0
	% Non native individuals	0	0	0	0	60.0	0	0	0	0	0
	Chironomidae abundance	0	4	12	24	73	0	12	46	143	334
	Chironomidae richness**	0	2	4	7	11	0	4	7	9	11
% Chironomidae individuals	0	41.2	75.4	85.1	100	0	85.2	95.1	97.8	100	
Kick-net	Benthos abundance	11	37	69	136	637	14	98	202	325	756
	Benthos richness*	2	4	6	8	12	3	7.5	7	6	10
	Abundance of EPT individuals	0	1	4	6	46	0	4	13	28	265
	% EPT individuals	0	1.9	4.5	15.7	46.5	0	2.0	8.6	14.8	65.8
	EPT richness*	0	1	2	2	4	0	1	2	2	3
	% EPT richness	0	20.0	33.3	38.5	50.0	0	15.5	25.0	33.3	42.9
	Abundance of resistants	4	24	56	123	612	3	72	143	262	672
	% resistants	9.3	68.4	84.9	94.9	98.6	21.4	67.2	80.8	91.1	99.0
	Abundance of non native	0	0	0	0	2	0	0	0	0	1
	% Non native individuals	0	0	0	0	18.2	0	0	0	0	3.8
	Chironomidae abundance	4	21	40	96	299	3	72	140	262	659
	Chironomidae richness**	2	4	6	7	12	NI	NI	NI	NI	NI
% Chironomidae individuals	9.3	43.4	68.4	90.2	98.6	21.4	67.2	79.5	89.8	99.0	

Land use metrics	Três Marias					São Simão				
Forest	0	1.0	19.1	36.7	100	0	0	0	6.4	76.7
Natural Savanna	0	0	13.4	57.4	90.1	0	0	0	0	41.0
Flooded vegetation	0	0	0	0	41.7	0	0	0	0	6.0
Agriculture	0	0	0	0	100	0	0	0	47.2	100
Pasture	0	0	0	7.8	64.5	0	0	45.2	85.6	96.7
Eucalyptus	0	0	0	35.0	100	-	-	-	-	-
Bare soil	-	-	-	-	-	0	4.2	12.8	24.3	100
Constructions	0	0	0	0	12.2	0	0	0	0	32.2
Mean disturbance indexes scores	Três Marias					São Simão				
BDI	0	0.07	0.53	0.92	2.00	0	0.85	1.06	1.58	2.00
LDI	0	0	0	0.34	0.86	0	0.07	0.26	0.58	0.84
IDI	0	0.08	0.28	0.50	1.24	0	0.37	0.64	0.89	1.16

Abundance: number of individuals; *number of Families; **number of Genera; land use metrics in percent; -, data absence; BDI, buffer disturbance index; LDI, local disturbance index; IDI, integrated disturbance index; N,: not identified.

Supplementary Tab. 2. Benthos families occurrence and Chironomidae genera total abundance for Três Marias and São Simão reservoirs.

Benthos taxa (Family)	Taxa occurrence		Chironimidae (Genera)	Total abundance	
	Três Marias	São Simão		Três Marias	São Simão
Arachnoidea (Hidracarina)	x	-	Ablabesmyia	22	0
Baetidae	x	x	Asheum	28	236
Caenidae	x	x	Axarus	3	3
Ceratopogonidae	x	x	Beardius	0	3
Ceratopogonidae	x	x	Caladomyia	101	384
Chaoboridae	x	x	Cardiocladius	0	2
Chironomidae	x	x	Chironomus	204	567
Coenagrionidae	x	x	Cladopelma	0	3
Coenagrionidae	x	x	Coelotanypus	15	0
Corbicula fluminea	x	-	Corynoneura	0	315
Corixidae	x	x	Cricotopus	0	99
Culicidae	x	x	Cryptochironomus	2	23
Decapoda (Macrobrachium)	x	x	Demicrochironomus	0	1
Dryopidae	-	x	Dicrotendipes	42	526
Dytiscidae	x	x	Djalmabatista	16	0
Elateridae	-	x	Endotribelos	0	11
Elmidae	-	x	Fissimentum	11	1
Empididae	-	x	Goeldichironomus	153	244
Gomphidae	x	x	Labrudinia	5	0
Gyrinidae	x	-	Lauterborniella	2	0
Hidracarina	-	x	Metriocnemus	0	1
Hirudinea	x	x	Nilothauma	1	11
Hydrophilidae	x	x	Oukuriella	0	2
Leptoceridae	x	x	Parachironomus	11	48
Leptohyphidae	x	x	Paratanytarsus	1	1
Leptohyphidae	x	x	Paratendipes	1	0
Libellulidae	x	x	Pelomus	3	0
Melanoides tuberculata	x	-	Polypedilum	57	907
Notonectidae	x	x	Pseudochironomus	3	1
Oligochaeta	x	x	Riethia	1	0
Palaemonetes sp	x	-	Tanypodinae	0	105
Philopotamidae	x	-	Tanypus	1	0
Physidae	-	x	Tanytarsus	3	6
Planariidae	x	-	Zavreliella	12	0
Planorbidae	x	x			
Polycentropodidae	x	x			
Polymitarcyidae	x	-			
Pyralidae	-	x			
Total	31	30	Total	698	3500

x, present; -, absent.