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Marine and Freshwater Research

Supplementary Material

Influence of abiotic factors on the fecundity and ecological plasticity of a freshwater prawn in estuary and river environments

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Table S1. Biometric dataset for *M. amazonicum* females in estuaries and rivers during seasonal periods.

Area	Fecundity	Periods	Total length (mm)	Mass (g)
Estuary	1936	Rainy-Dry	91	4.92
Estuary	2235	Rainy-Dry	88	6.37
Estuary	962	Rainy-Dry	67	2.37
Estuary	834	Rainy-Dry	81	4.57
Estuary	864	Rainy-Dry	71	2.71
Estuary	1401	Rainy-Dry	78	3.37
Estuary	517	Rainy-Dry	90.0	6.45
Estuary	1783	Rainy-Dry	92	5.38
Estuary	1312	Rainy-Dry	91	6.47
Estuary	604	Rainy-Dry	86	4.95
Estuary	1777	Rainy-Dry	90.0	5.15
Estuary	667	Rainy-Dry	89	5.18
Estuary	1026	Rainy-Dry	83	4.71
Estuary	225	Rainy-Dry	98	8.96
Estuary	2600	Rainy-Dry	94	6.66
Estuary	1671	Rainy-Dry	90.0	5.01
Estuary	2125	Rainy-Dry	96	6.16
Estuary	1967	Rainy-Dry	100.0	7.53
Estuary	1597	Rainy-Dry	97	6.87
Estuary	1220	Dry	105	8.38
Estuary	770	Dry	63	2
Estuary	729	Dry	58	1.55
Estuary	1378	Dry	92	5.63
Estuary	1142	Dry	78	3.98
Estuary	1202	Dry	76	2.91
Estuary	1094	Dry	78	3.45
Estuary	618	Dry	73	3.07
Estuary	1545	Dry	76	4.18
Estuary	914	Dry	66	2.3
Estuary	1114	Dry	68	2.45
Estuary	3805	Dry	109	9.74
Estuary	638	Dry	62	1.57
Estuary	1379	Dry	78	3.27
Estuary	2375	Dry	101	5.8
Estuary	1041	Dry	76	3.11
Estuary	508	Dry	70	2.13
Estuary	1177	Dry	71	3.14
Estuary	587	Dry	66	2.17
Estuary	549	Dry	68	1.72
Estuary	915	Dry	63	2.12
Estuary	2403	Dry	93	5.76
Estuary	2414	Dry	85	6.54
Estuary	1235	Dry	78	3.7
Estuary	1260	Dry	83	4.9
Estuary	2182	Dry	75	4
Estuary	899	Dry	69	2.9
Estuary	1190	Dry	74	2.78
Estuary	1997	Dry	83	4.65
Estuary	2920	Dry	88	6.73
Estuary	2388	Dry	84	4.69
Estuary	2442	Dry	84	5.25
Estuary	1639	Dry	85	5.45
Estuary	1498	Dry	73	3.24
Estuary	1680	Dry	85	5.11
Estuary	3264	Dry-Rainy	104	7.61
Estuary	965	Dry-Rainy	74	2.53
Estuary	1242	Dry-Rainy	55	2.89

Area	Fecundity	Periods	Total length (mm)	Mass (g)
Estuary	1656	Dry-Rainy	91	5.08
Estuary	1887	Dry-Rainy	86	4.62
Estuary	738	Dry-Rainy	81	3.74
Estuary	1015	Dry-Rainy	81	4.09
Estuary	908	Dry-Rainy	67	2.25
Estuary	883	Dry-Rainy	64	2.37
Estuary	1603	Dry-Rainy	75	3.84
Estuary	1096	Dry-Rainy	75	3.16
Estuary	1303	Dry-Rainy	79	3.18
Estuary	1671	Dry-Rainy	85	4.42
Estuary	1605	Dry-Rainy	76	3.23
Estuary	1364	Dry-Rainy	76	3.46
Estuary	1524	Dry-Rainy	80	3.78
Estuary	792	Dry-Rainy	58	1.97
Estuary	637	Dry-Rainy	56	1.66
Estuary	2494	Dry-Rainy	98	6.14
Estuary	3008	Dry-Rainy	87	6.58
Estuary	1638	Dry-Rainy	73	3.59
Estuary	1948	Dry-Rainy	81	5.07
Estuary	1721	Dry-Rainy	78	4.23
Estuary	1393	Dry-Rainy	69	3.29
Estuary	613	Dry-Rainy	78	3.9
Estuary	784	Dry-Rainy	64	2.34
Estuary	1311	Dry-Rainy	73	2.99
Estuary	1290	Dry-Rainy	89	5.01
Estuary	4997	Dry-Rainy	111	9.68
Estuary	2946	Dry-Rainy	96	7.74
Estuary	1725	Dry-Rainy	76	3.97
Estuary	1866	Dry-Rainy	99	8.05
Estuary	932	Dry-Rainy	61	2.23
Estuary	1235	Dry-Rainy	68	2.74
Estuary	1652	Dry-Rainy	76	3.72
Estuary	1743	Dry-Rainy	79	4.33
Estuary	1644	Dry-Rainy	89	5.1
Estuary	1445	Dry-Rainy	81	4.19
Estuary	1096	Dry-Rainy	83	3.96
Estuary	1658	Dry-Rainy	71	3.19
Estuary	3209	Dry-Rainy	94	6.27
Estuary	2492	Dry-Rainy	91	5.49
Estuary	5024	Dry-Rainy	99	8.7
Estuary	1101	Dry-Rainy	67	2.17
Estuary	2360	Dry-Rainy	83	5.14
Estuary	1933	Dry-Rainy	102	7.79
Estuary	2196	Dry-Rainy	75	3.75
Estuary	2926	Dry-Rainy	88	5.5
Estuary	2118	Dry-Rainy	83	4.9
Estuary	1198	Dry-Rainy	63	2.82
Estuary	1499	Dry-Rainy	74	3.7
Estuary	2635	Dry-Rainy	84	5.35
Estuary	2300	Rainy	89	4.78
Estuary	2460	Rainy	88	6.67
Estuary	1213	Rainy	77	3.74
Estuary	2248	Rainy	87	4.76
Estuary	1430	Rainy	74	3.5
Estuary	2491	Rainy	99	6.62
Estuary	1646	Rainy	69	2.8
Estuary	3234	Rainy	91	6.12

Area	Fecundity	Periods	Total length (mm)	Mass (g)
Estuary	1780	Rainy	72	2.92
Estuary	1554	Rainy	75	3.73
Estuary	1868	Rainy	77	3.01
Estuary	2272	Rainy	79	4.28
Estuary	1290	Rainy	72	2.92
Estuary	1487	Rainy	95	7.26
Estuary	4624	Rainy	106	7.95
Estuary	4572	Rainy	101	8.14
Estuary	3052	Rainy	84	5.52
Estuary	2622	Rainy	85	5.23
Estuary	4999	Rainy	98	7.33
Estuary	2063	Rainy	86	5.6
Estuary	3789	Rainy	96	6.81
Estuary	2538	Rainy	77	4.98
Estuary	4348	Rainy	97	7.84
Estuary	3759	Rainy	92	7.07
Estuary	4629	Rainy	101	7.87
Estuary	2790	Rainy	84	6.15
Estuary	4980	Rainy	101	8.2
Estuary	3590	Rainy	95	7.61
Estuary	2929	Rainy	84	5.43
Estuary	1524	Rainy	75	3.41
Estuary	4810	Rainy	96	8.74
Estuary	3197	Rainy	91	6.39
Estuary	2984	Rainy	89	6.48
Estuary	1281	Rainy	71	2.9
Estuary	1338	Rainy	73	3.9
Estuary	1158	Rainy	93	5.8
Estuary	2371	Rainy	90	5.98
Estuary	2195	Rainy	94	6.78
Estuary	1276	Rainy	85	4.97
Estuary	1144	Rainy	85	4.68
Estuary	2636	Rainy	93	5.94
Estuary	2095	Rainy	93	6.52
Estuary	700	Rainy	82	4.28
Estuary	1716	Rainy	83	5.53
Estuary	2520	Rainy	93	6.8
Estuary	928	Rainy	71	3.87
Estuary	1581	Rainy	78	4.23
Estuary	943	Rainy	86	5.2
Estuary	2063	Rainy	87	6.9
Estuary	986	Rainy	80	4.9
Estuary	2223	Rainy	91	5.9
Estuary	3752	Rainy-Dry	99	8.12
Estuary	4097	Rainy-Dry	104	9.88
Estuary	2228	Rainy-Dry	88	5.42
Estuary	2671	Rainy-Dry	91	5.62
Estuary	3080	Rainy-Dry	91	6.49
Estuary	6118	Rainy-Dry	115	12.57
Estuary	1147	Rainy-Dry	92	6.36
Estuary	2564	Rainy-Dry	86	6.31
Estuary	2516	Rainy-Dry	95	7.77
Estuary	3679	Rainy-Dry	99	7.56
Estuary	3270	Rainy-Dry	95	7.4
Estuary	2675	Rainy-Dry	92	5.94
Estuary	965	Rainy-Dry	98	7.1
Estuary	2176	Rainy-Dry	92	5.62
Estuary	2754	Rainy-Dry	110	10.03
Estuary	2392	Rainy-Dry	109	9.1
Estuary	887	Rainy-Dry	86	4.28
Estuary	3529	Rainy-Dry	98	7.94

Area	Fecundity	Periods	Total length (mm)	Mass (g)
Estuary	1356	Rainy-Dry	88	4.52
Estuary	2228	Rainy-Dry	89	5.31
Estuary	873	Rainy-Dry	79.4	4.2
Estuary	472	Rainy-Dry	97	6.6
Estuary	844	Rainy-Dry	64	2.23
Estuary	644	Rainy-Dry	91	4.3
River	649	Dry	55	1.78
River	246	Dry	55	1.43
River	243	Dry	57	1.65
River	329	Dry	55	1.58
River	272	Dry	45	0.91
River	701	Dry	69	2.42
River	636	Dry	65	2.67
River	533	Dry	60	2.05
River	631	Dry	64	1.68
River	156	Dry	50	0.91
River	508	Dry	52	1.17
River	576	Dry	59	1.44
River	741	Dry	65	2
River	567	Dry	53	1.19
River	821	Dry	70	2.54
River	275	Dry	52	0.9
River	281	Dry	56	1.2
River	481	Dry	50	1.26
River	196	Dry	45	0.75
River	438	Dry	55	1.8
River	293	Dry	50	1.11
River	284	Dry	55	1.08
River	370	Dry	60	1.69
River	285	Dry	50	1.04
River	623	Dry	61	1.95
River	190	Dry-Rainy	44	1.1
River	157	Dry-Rainy	43	0.68
River	210	Dry-Rainy	44	0.71
River	544	Dry-Rainy	59	1.3
River	363	Dry-Rainy	51	1.1
River	257	Dry-Rainy	40	0.53
River	485	Dry-Rainy	54	1.4
River	727	Dry-Rainy	57	1.56
River	359	Dry-Rainy	50	0.97
River	188	Dry-Rainy	35	0.58
River	201	Rainy	40	0.51
River	402	Rainy	50	1.03
River	304	Rainy	40	0.7
River	708	Rainy	61	1.7
River	364	Rainy	49	1.01
River	476	Rainy	55	1.39
River	376	Rainy	45	0.84
River	158	Rainy	48	0.87
River	301	Rainy	45	0.9
River	215	Rainy	45	0.6
River	342	Rainy	48	0.896
River	406	Rainy	57	1.2
River	426	Rainy	56	1.21
River	338	Rainy	52	1.08
River	325	Rainy	49	0.696
River	692	Rainy	64	1.92
River	281	Rainy	53	1.29
River	467	Rainy	49	1.17
River	436	Rainy	58	1.51
River	635	Rainy	63	1.77

Area	Fecundity	Periods	Total length (mm)	Mass (g)
River	493	Rainy	50	1.14
River	510	Rainy	56	1.27
River	422	Rainy	60	1.27
River	330	Rainy	54	1.28
River	265	Rainy	53	1.28
River	368	Rainy	53	1.38
River	132	Rainy	49	1.12
River	771	Rainy	59	1.89
River	315	Rainy	58	1.46
River	324	Rainy	42	1.2

Area	Fecundity	Periods	Total length (mm)	Mass (g)
River	284	Rainy-Dry	49	0.9
River	415	Rainy-Dry	54	1.4
River	653	Rainy-Dry	57	1.8
River	760	Rainy-Dry	60	2.1
River	721	Rainy-Dry	62	2.2
River	446	Rainy-Dry	55	1.4
River	573	Rainy-Dry	55	1.5
River	151	Rainy-Dry	56	1.4
River	530	Rainy-Dry	56	1.6

Table S2. Correlation of abiotic variables.

	pH	OD	Temp	Turb	Prec	Cond	TDS
pH	1.00						
OD	-0.45	1.00					
Temp	-0.32	0.34	1.00				
Turb	-0.22	-0.06	-0.60	1.00			
Prec	0.23	-0.24	-0.70	0.56	1.00		
Cond	-0.27	-0.16	-0.11	0.16	-0.42	1.00	
TDS	-0.27	-0.16	-0.11	0.16	-0.42	1.00	1.00

Temperature (Temp), pH, total dissolved solids (TDS), dissolved oxygen (OD), precipitation (Prec), conductivity (Cond), turbidity (Turb).

Table S3. Mean diameter of egg for areas

Mean diameter (µm)	Stage	Areas
493.805	III	Estuary
404.345	III	Estuary
468.245	III	Estuary
474.81	III	Estuary
426.96	III	Estuary
475.15	III	Estuary
469.72	III	Estuary
451.15	III	Estuary
469.935	III	Estuary
461.965	III	Estuary
407.65	I	Estuary
380.78	I	Estuary
415.895	I	Estuary
384.42	I	Estuary
420.575	I	Estuary
407.8	I	Estuary
399.69	I	Estuary
432.235	I	Estuary
381.85	I	Estuary
414.475	I	Estuary
423.72	II	Estuary
418.43	II	Estuary
423.37	II	Estuary
435.76	II	Estuary
460.335	II	Estuary

Mean diameter (µm)	Stage	Areas
418.575	II	Estuary
416.81	II	Estuary
448.12	II	Estuary
475.295	II	Estuary
434.66	II	Estuary
439.895	III	River
506.31	III	River
446.195	III	River
343.545	III	River
412.085	III	River
415.815	III	River
450.99	III	River
423.515	III	River
392.28	III	River
429.295	III	River
366.56	I	River
362.95	I	River
359.25	I	River
359.895	I	River
392.745	I	River
382.15	I	River
374.67	I	River
374.18	I	River
373.145	I	River
379.845	I	River

Mean diameter (μm)	Stage	Areas
402.355	II	River
383.71	II	River
378.07	II	River
391.545	II	River
392.86	II	River

Mean diameter (μm)	Stage	Areas
411.84	II	River
433.37	II	River
466.325	II	River
413.57	II	River
432.28	II	River