

**The role of the hydrological cycle on the temporal patterns of macroinvertebrate assemblages
in an Andean foothill stream in Colombia**

**María I. RÍOS-PULGARÍN,^{1,2} Mario BARLETTA,²
María C. ARANGO-JARAMILLO,¹ Néstor J. MANCERA-RODRÍGUEZ^{3*}**

¹Limnology and Water Resources Group, Laboratory of Limnology, Environmental Management Unit, Universidad Católica de Oriente, Rionegro, Colombia

²Department of Forestry Sciences, Research group Ecology and Wildlife Conservation, Universidad Nacional de Colombia, Sede Medellín, Calle 59A No. 63-20, Bloque 20, oficina 211, Medellín, Colombia

³Laboratory of Ecology and Management of Estuarine and Aquatics Ecosystems. Department of Oceanography, Federal University of Pernambuco, 50740-550 Recife, Pernambuco, Brazil

*Corresponding author: njmancer@unal.edu.co

Supplementary Tab. 1. Totals and accumulated density of macroinvertebrates taxa caught in of the Guarinó river during dry and rainy seasons occurred between 2007 and 2010.

Order	Family	Taxa	Density			Year 1				Year 2				Year 3				FFG	Life habits
			Ind m ²	% (acum)	Freq (%)	D1	R1	D2	R2	D1	R1	D2	R2	D1	R1	D2	R2		
Diptera	Chironomidae	Chironomidae (taxa 1)	14.89	22.915	86.11	0.09	0.05	0.98	0.11	0.91	0.02	0.29	0.19	9.25	1.25	1.56	0.19	CG/CF	Bu
Ephemeroptera	Baetidae	<i>Camelobaetidius</i>	11.6	40.766	66.67	0.31	0.02	0.17		0.06		0.19		5.01	0.69	4.94	0.21	CG/SC	Cg-Sw-Di
Ephemeroptera	Leptohyphidae	<i>Leptohyphes</i>	4.87	48.261	86.11	0.05	0.02	0.48	0.13	0.55	0.22	1.08	0.77	0.32	0.28	0.52	0.45	CG	Cg
Trichoptera	Hydropsychidae	<i>Smicridea</i>	3.78	54.078	94.44	0.07	0.07	0.31	0.06	0.16	0.19	0.29	0.11	0.25	0.26	1.73	0.28	PR/CF/SH	Cg
Hemiptera	Veliidae	<i>Rhagovelia</i>	3.63	59.665	83.33	0.12	0.19	0.17	0.11	0.82	0.24	0.21	0.05	0.11	0.98	0.31	0.32	PR	Sk
Ephemeroptera	Baetidae	<i>Baetodes</i>	2.76	63.912	58.33	0.03		0.12	0.01	0.1	0.05	0.19		1.31	0.23	0.69	0.03	SC	Cg
Plecoptera	Perlidae	<i>Anacronuria</i>	2.58	67.882	91.67	0.18	0.05	0.34	0.06	0.14	0.07	0.23	0.23	0.07	0.2	0.72	0.29	PR	Cg
Ephemeroptera	Leptophlebiidae	<i>Thraulodes</i>	2.48	71.699	88.89	0.22	0.03	0.49	0.14	0.09	0.13	0.51	0.1	0.05	0.09	0.54	0.09	CG/SC	Cg-Cw-Sp
Coleoptera	Elmidae	<i>Heterelmis</i>	2.19	75.069	88.89		0.03	0.08	0.1	0.12	0.07	0.17	0.33	0.2	0.74	0.18	0.17	CG/SC	Cg
Ephemeroptera	Baetidae	Baetidae (taxa 1)	1.96	78.086	50	0.02	0.01	0.04	0.02	0.13		0.01		0.16	0.05	1.23	0.29		
Megaloptera	Corydalidae	<i>Corydalis</i>	1.85	80.933	94.44	0.16	0.03	0.11	0.04	0.11	0.04	0.12	0.08	0.51	0.11	0.43	0.11	PR	Cg-Cb
Trichoptera	Trichoptera	Hydropsychidae	1.05	82.548	75	0.03	0.04	0.06	0.05	0.01	0.02	0.05	0.08	0.14	0.16	0.38	0.03	CF/SH	Cg
Diptera	Psychodidae	<i>Maruina</i>	0.71	83.641	25	0.07	0.01	0.3		0.02		0.01		0.08	0.01	0.21		CG/SC	Cg
Coleoptera	Staphylinidae	Staphylinidae (taxa 1)	0.62	84.595	22.22						0.01		0.02	0.48	0.1	0.01		PR/CG	Cg-Cb-Bu
Ephemeroptera	Leptohyphidae	<i>Tricorythodes</i>	0.52	85.396	58.33	0.01	0.01	0.02		0.05		0.15	0.05	0.1	0.06	0.06	0.01	CG/SH	Cg-Cw-Sp
Trichoptera	Leptoceridae	<i>Grumichella</i>	0.52	86.196	55.56	0.01	0.05	0.08	0.05	0.04	0.01	0.05	0.17		0.06			SC	Cg-Cw-Sp
Diptera	Simuliidae	<i>Simulium</i>	0.51	86.981	47.22		0.06	0.02	0.02	0.02	0.01		0.01	0.15	0.07	0.01	0.14	CF	Cg
Coleoptera	Dryopidae	<i>Dryops</i>	0.5	87.75	44.44	0.07		0.01	0.03	0.06	0.03		0.01	0.24	0.01	0.01	0.03		
Trichoptera	Leptoceridae	<i>Nectopsyche</i>	0.45	88.443	44.44	0.01	0.05	0.03	0.09	0.02		0.05		0.04	0.06	0.06	0.04	CG/SH	Cb-Sw-Di
Coleoptera	Elmidae	<i>Macrelmis</i>	0.4	89.058	55.56			0.02		0.04	0.05	0.1	0.04	0.02	0.01	0.08	0.04	CG/SC	Cg
Rhynchohellida	Glossiphoniidae	Glossiphoniidae (taxa 1)	0.38	89.643	19.44			0.01				0.01	0.02	0.26	0.07		0.01	PR	Bu-Sp-Cw
Hemiptera	Naucoridae	<i>Limnocoris</i>	0.33	90.151	44.44	0.01	0.04	0.02	0.01	0.02	0.03	0.03	0.04		0.09		0.04	PR	Cg
Diptera	Empididae	<i>Hemerodromia</i>	0.27	90.566	33.33			0.02		0.05		0.01		0.12	0.06	0.01		PR/CG	Bu-Sp-Cw
Diptera	Blephariceridae	<i>Limnicola</i>	0.27	90.982	33.33			0.04	0.03		0.03	0.04	0.03	0.01	0.08	0.01		SC	Cg
Trichoptera	Glossosomatidae	<i>Mortoniella</i>	0.25	91.367	22.22		0.04	0.08	0.06		0.07							CG/SC	Cg
Coleoptera	Elmidae	<i>Huleechius</i>	0.25	91.751	44.44	0.01	0.04	0.04	0.02	0.03	0.03		0.03		0.03	0.02		CG/SC	Cg

Order	Family	Taxa	Density			Year 1				Year 2				Year 3				FFG	Life habits
			Ind m ²	% (acum)	Freq (%)	D1	R1	D2	R2	D1	R1	D2	R2	D1	R1	D2	R2		
Trichoptera	Glossosomatidae	<i>Culoptila</i>	0.24	92.121	11.11									0.23	0.01			SC	Cg
Coleoptera	Elmidae	<i>Cylloepus</i>	0.24	92.49	27.78			0.01			0.02	0.06		0.09	0.06			CG/SC	Cg
Trichoptera	Glossosomatidae	Glossosomatidae (taxa 1)	0.2	92.798	16.67						0.01			0.14	0.05			SC	Cg
Coleoptera	Elmidae	<i>Microcylloepus</i>	0.2	93.106	27.78				0.05		0.04	0.03		0.03	0.02	0.01	0.02	CG/SC	Cg-Cb-Bu
Trichoptera	Calamoceratidae	<i>Phylloicus</i>	0.19	93.398	25	0.02	0.01	0.09			0.03				0.04			SH	Sp
Coleoptera	Elmidae	<i>Disersus</i>	0.19	93.69	27.78		0.01	0.02	0.05		0.01	0.1						CG	Cg-Sw-Di
Coleoptera	Elmidae	<i>Phanocerus</i>	0.19	93.983	30.56			0.02	0.02		0.01	0.02		0.03	0.05	0.01	0.03	CG/SC	Cg-Cb
Hemiptera	Mesoveliidae	<i>Mesoveloidea</i>	0.18	94.26	25					0.02	0.01	0.01		0.05	0.07	0.01	0.01	PR	Cb
Trichoptera	Hydrobiosidae	<i>Atopsyche</i>	0.16	94.506	22.22		0.01					0.02	0.02	0.05	0.05	0.01		PR	Cg-Bu
Odonata	Libellulidae	<i>Elasmothemis</i>	0.16	94.752	8.33	0.03	0.01	0.12										PR	Bu-Sp-Cw
Coleoptera	Hydrophilidae	<i>Tropisternus cf.</i>	0.16	94.998	8.33									0.05	0.11			PR/CG	Cb-Sw-Di
Seriata	Dugesiidae	<i>Girardia</i>	0.14	95.214	19.44			0.08		0.01	0.01	0.01			0.02	0.01		CG	Bu-Sp-Cw
Lepidoptera	Crambidae	Crambidae (taxa 1)	0.13	95.414	11.11				0.01	0.06				0.04	0.02			SC	Cb-Sw-Di
Diptera	Tipulidae	<i>Molophilus</i>	0.13	95.614	25			0.01	0.02		0.03	0.02		0.01	0.03	0.01		CG	Bu
Trichoptera	Philopotamidae	<i>Chimarra</i>	0.12	95.799	13.89						0.01			0.01	0.08	0.02		CF	Cg
Coleoptera	Ptilodactylidae	<i>Tetraglossa</i>	0.12	95.983	30.56		0.02	0.01	0.03		0.01	0.02	0.01				0.02		
Trichoptera	Hydroptilidae	<i>Hydroptila</i>	0.09	96.122	11.11	0.01		0.03						0.01	0.04			PR/SC	Cg
Ephemeroptera	Baetidae	<i>Mayobaetis</i>	0.08	96.245	13.89					0.01	0.01	0.05				0.01		SC	Sw-Cw-Sp
Odonata	Coenagrionidae	<i>Argia</i>	0.08	96.368	16.67			0.01	0.01	0.01					0.04	0.01		PR	Cg-Cb-Sp
Trichoptera	Helicopsychidae	<i>Helicopsyche</i>	0.08	96.491	16.67	0.01		0.01		0.01	0.03				0.01	0.01		CG/SC	Cg
Ephemeroptera	Baetidae	<i>Moribaetis</i>	0.07	96.599	8.33			0.01				0.06						CG	Sw
Coleoptera	Dryopidae	Dryopidae (taxa 1)	0.07	96.707	2.78						0.07								
Coleoptera	Psephenidae	<i>Psephenops</i>	0.07	96.814	13.89			0.02		0.01	0.02					0.02		SC	Cg
Coleoptera	Ptilodactylidae	Ptilodactylidae (taxa 1)	0.07	96.922	13.89			0.01	0.02		0.04							SH	Bu
Ephemeroptera	Leptophlebiidae	<i>Terpides</i>	0.06	97.014	13.89	0.01		0.02	0.01	0.01				0.01				CG/SH/SC	Sw-Cw-Sp
Trichoptera	Trichoptera	Trichoptera (taxa 1)	0.06	97.107	13.89									0.02	0.01	0.03			
Trichoptera	Hydroptilidae	Hydroptilidae (taxa 1)	0.06	97.199	5.56										0.06				
Diptera	Tipulidae	<i>Limonia</i>	0.06	97.291	8.33			0.01						0.01	0.04			SH	Bu-Sp-Cw

Order	Family	Taxa	Density			Year 1				Year 2				Year 3				FFG	Life habits
			Ind m ²	% (acum)	Freq (%)	D1	R1	D2	R2	D1	R1	D2	R2	D1	R1	D2	R2		
Ephemeroptera	Leptophlebiidae	<i>Hydrosmilodon</i>	0.05	97.368	11.11			0.03	0.01				0.01					CG/SC	Cg-Sw-Di
Odonata	Calopterygidae	<i>Hetaerina</i>	0.05	97.445	13.89	0.01				0.01				0.01		0.01	0.01	PR	Cg-Cb
Coleoptera	Elmidae	Elmidae (taxa 1)	0.05	97.522	11.11				0.01	0.03			0.01						
Coleoptera	Hydrophilidae	Hydrophilidae (taxa 1)	0.05	97.599	13.89					0.02	0.03								
Coleoptera	Hydrophilidae	Hydrophilidae (taxa 2)	0.05	97.676	8.33									0.04	0.01				
Coleoptera	Ptilodactylidae	Ptilodactylidae (taxa 2)	0.05	97.753	11.11		0.02						0.02		0.01				
Diptera	Empididae	<i>Chelifera</i>	0.05	97.83	11.11		0.01							0.03	0.01			PR/CG	Bu-Sp-Cw
Diptera	Tipulidae	<i>Hexatoma</i>	0.05	97.907	11.11					0.01				0.03		0.01		PR	Cg-Bu-Sp
Diptera	Ceratopogonidae	<i>Alluaudomyia</i>	0.05	97.984	8.33									0.04		0.01		PR	Bu
Trombidiformes	Trombidiformes	Trombidiformes	0.04	98.046	8.33							0.01		0.02		0.01		PR	Sw-Cw-Sp
Ephemeroptera	Oligoneuriidae	<i>Lachlania</i>	0.04	98.107	11.11		0.01							0.01	0.02			CF	Cg
Odonata	Libellulidae	Libellulidae (taxa 1)	0.04	98.169	11.11			0.01		0.01			0.01					PR	Sp
Odonata	Libellulidae	<i>Dythemis</i>	0.04	98.23	2.78	0.04												PR	Sp
Hemiptera	Belostomatidae	<i>Belostoma</i>	0.04	98.292	11.11			0.01				0.01	0.01			0.01		PR	Cb-Sw-Di
Coleoptera	Elmidae	<i>Pseudodisersus</i>	0.04	98.353	11.11									0.01	0.01	0.01	0.01	CG	Cg
Diptera	Muscidae	<i>Limnophora</i>	0.04	98.415	8.33							0.01		0.03				PR	Bu
Ephemeroptera	Leptohyphidae	<i>Haplohyphes</i>	0.03	98.461	8.33						0.01		0.01				0.01	CG	Cg-Cw-Sp
Trichoptera	Glossosomatidae	<i>Protophila</i>	0.03	98.507	8.33	0.01		0.01	0.01									SC	Cg
Odonata	Libellulidae	<i>Macrothemis</i>	0.03	98.553	8.33								0.01			0.01	0.01	PR	Sp
Odonata	Libellulidae	<i>Brechmorhoga</i>	0.03	98.6	5.56	0.03												PR	Sp
Hemiptera	Naucoridae	<i>Ambrysus</i>	0.03	98.646	8.33							0.01		0.01			0.01	PR	Cg-Sw-Di
Hemiptera	Hebridae	<i>Hebrus</i>	0.03	98.692	5.56					0.02	0.01							PR	Bu-Cb
Coleoptera	Hydrophilidae	<i>Paracymus cf.</i>	0.03	98.738	2.78									0.03				CG	Bu
Coleoptera	Lampyridae	Lampyridae (taxa 1)	0.03	98.784	8.33		0.01					0.01	0.01						
Coleoptera	Staphylinidae	<i>Stenus</i>	0.03	98.83	8.33		0.01	0.01						0.01				PR/CG	Sk
Coleoptera	Scarabaeidae	Scarabaeidae (taxa 1)	0.03	98.877	5.56					0.03									
Lepidoptera	Crambidae	<i>Ostrinia cf.</i>	0.03	98.923	5.56		0.02	0.01											
Diptera	Diptera	Diptera (taxa 1)	0.03	98.969	5.56									0.03					

Order	Family	Taxa	Density			Year 1				Year 2				Year 3				FFG	Life habits
			Ind m ²	% (acum)	Freq (%)	D1	R1	D2	R2	D1	R1	D2	R2	D1	R1	D2	R2		
Diptera	Psychodidae	<i>Psychoda</i>	0.03	99.015	5.56									0.01	0.02			CG	Bu
Trichoptera	Leptoceridae	<i>Oecetis</i>	0.02	99.046	5.56	0.01		0.01										PR	Cg-Cb-Sp
Trichoptera	Hydroptilidae	<i>Metrichia</i>	0.02	99.077	2.78									0.02				CG/SC	Cg-Cw-Sp
Trichoptera	Hydroptilidae	<i>Ochrotrichia</i>	0.02	99.107	2.78									0.02				CG	Cg
Trichoptera	Philopotamidae	<i>Wormaldia</i>	0.02	99.138	5.56							0.01		0.01				CF	Cg
Odonata	Gomphidae	<i>Progomphus</i>	0.02	99.169	5.56							0.01	0.01					PR	Bu
Odonata	Gomphidae	<i>Erpetogomphus</i>	0.02	99.2	5.56										0.02			PR	Bu
Hemiptera	Naucoridae	<i>Cryphocricos</i>	0.02	99.231	5.56				0.01			0.01						PR	Cg
Hemiptera	Gerridae	<i>Trepobates</i>	0.02	99.261	5.56	0.02												PR	Sk
Hemiptera	Hebridae	<i>Merragata</i>	0.02	99.292	2.78									0.02				PR	Sk-Cb
Coleoptera	Carabidae (terrestrial)	Harpalinae (taxa 1)	0.02	99.323	5.56						0.01			0.01					
Coleoptera	Elmidae	<i>Narpus</i>	0.02	99.354	5.56				0.02									CG/SC	Cg
Coleoptera	Elmidae	<i>Austrolimnius</i>	0.02	99.384	5.56							0.02						CG/SC	Cg-Cw-Sp
Coleoptera	Lutrochidae	<i>Lutrochus</i>	0.02	99.415	5.56						0.02							CG	Cg
Coleoptera	Ptilodactylidae	<i>Anchytarsus</i>	0.02	99.446	2.78				0.02									SH	Cg
Lepidoptera	Crambidae	<i>Petrophila</i>	0.02	99.477	5.56	0.01	0.01											SC	Cg
Diptera	Tipulidae	<i>Tipula</i>	0.02	99.508	5.56									0.02				SH/CG/SC/PR	Bu
Diptera	Tipulidae	Tipulidae (taxa 1)	0.02	99.538	5.56									0.02					
Diptera	Ceratopogonidae	Ceratopogonidae (taxa 1)	0.02	99.569	5.56				0.01										0.01
Diptera	Ephydriidae	Ephydriidae (taxa 1)	0.02	99.6	5.56									0.01	0.01				
Basommatophora	Ancylidae	Ancylidae (taxa 1)	0.02	99.631	5.56											0.01	0.01	SC	Cg-Bu
Ephemeroptera	Leptophlebiidae	<i>Traverella</i>	0.01	99.646	2.78	0.01												CF	Cg
Ephemeroptera	Leptophlebiidae	Leptophlebiidae (taxa 1)	0.01	99.661	2.78										0.01			CG/SC	Cg-Sw-Di
Ephemeroptera	Euthyplociidae	<i>Euthyplocia</i>	0.01	99.677	2.78		0.01											CG	Bu
Trichoptera	Odontoceridae	<i>Marilia</i>	0.01	99.692	2.78										0.01			CG/SC	Sp
Odonata	Gomphidae	<i>Stylogomphus</i>	0.01	99.708	2.78				0.01									PR	Bu-Sp-Cw
Odonata	Gomphidae	<i>Phyllogomphoides</i>	0.01	99.723	2.78									0.01				PR	Bu
Coleoptera	Coleoptera	Coleoptera (taxa 1)	0.01	99.738	2.78									0.01					

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			Ind m ²	% (acum)	Freq (%)	D1	R1	D2	R2	D1	R1	D2	R2	D1	R1	D2	R2		
Coleoptera	Elmidae	<i>Hexacylloepus</i>	0.01	99.754	2.78					0.01							CG/SC	Cg	
Coleoptera	Elmidae	<i>Neocylloepus</i>	0.01	99.769	2.78											0.01	CG/SC	Cg	
Coleoptera	Elmidae	<i>Stenhelmoides</i>	0.01	99.785	2.78										0.01		CG/SC	Cg-Cw-Di	
Coleoptera	Dryopidae	<i>Helichus</i>	0.01	99.8	2.78	0.01											CG/SH/SC	Cg	
Coleoptera	Dryopidae	<i>Pelonomus</i>	0.01	99.815	2.78					0.01							CG/SC	Cb	
Coleoptera	Dytiscidae	Dytiscidae (taxa 1)	0.01	99.831	2.78	0.01											PR	Cg-Sw-Di	
Coleoptera	Hydrophilidae	<i>Hydrobius</i>	0.01	99.846	2.78	0.01											CG/SC	Cg-Cb-Sp	
Coleoptera	Curculionidae	Curculionidae (taxa 1)	0.01	99.861	2.78									0.01					
Diptera	Ceratopogonidae	<i>Probezzia</i>	0.01	99.877	2.78					0.01							PR	Bu	
Diptera	Ceratopogonidae	<i>Forcipomyia</i>	0.01	99.892	2.78								0.01				SC	Sp	
Diptera	Tabanidae	<i>Chrysops</i>	0.01	99.908	2.78					0.01							PR	Bu-Sp-Cw	
Diptera	Stratiomyidae	Stratiomyidae (taxa 1)	0.01	99.923	2.78	0.01											CG	Sw-Cw-Sp	
Diptera	Stratiomyidae	Stratiomyidae (taxa 2)	0.01	99.938	2.78	0.01											CG	Sw-Cw-Sp	
Diptera	Stratiomyidae	<i>Hermetia</i>	0.01	99.954	2.78							0.01					CG		
Diptera	Dolichopodidae	<i>Aphrosylus</i>	0.01	99.969	2.78							0.01					PR	Cg	
Veneroida	Sphaeriidae	Sphaeriidae (taxa 1)	0.01	99.985	2.78									0.01			SC	Bu-Cb	
Neotaenioglossa	Hydrobiidae	Hydrobiidae (taxa 1)	0.01	100	2.78											0.01	SC	Cg-Cw-Sp	
Total			64.98			1.7	1.04	4.67	1.4	3.78	1.72	4.27	2.64	19.78	6.48	14.45	3.05		
Taxa number			127			32	36	52	32	36	39	41	37	57	46	52	40		
Individuals number			6498			170	104	467	140	378	172	427	264	1978	648	1445	305		

D1. Dry 1; R. Rainy 1; D2. Dry 2; R2. Rainy 2; FFG, Functional feeding group; CG, collectors-gatherers; CF, collectors-filterers; SH, shredders; SC, scrapers; PR, predators; Bu, Burrowers; Cb, climbers; Sp, sprawlers; Sw, swimmers; Di, divers; Cg, clingers; Cw, crawlers; Sk, skaters.