ANEXO 1. Variables ambientales de sitios de muestreo en los ríos de la cuenca alta del río Chipiriri

N°	Sitio	Latitud	Longitud	Arroyo	Intermitencia	Distancia a la fuente (km)	Cobertura vegetal (%)	Profundidad (cm)	Velocidad ($m\ s^{-1}$)	Número de refugios	Diversidad de sustrato (Índice de Shannon-Wiener)	Ancho (m)
1	R-1	-16,8676	-65,4013	Chipiriri	Intermitentes (1)	1.48	90.00	40.98	0.00	13.00	0.05	4.56
2	R-115	-16,8845	-65,3471	Raya	Intermitentes (1)	1.03	81.90	7.38	0.07	2.00	1.35	3.53
3	R-116	-16,8590	-65,3872	Chipiriri	Permanentes (0)	6.56	90.40	26.00	0.00	21.00	1.76	13.88
4	R-14	-16,8395	-65,3699	Carrillo	Permanentes (0)	11.99	91.50	27.32	0.23	32.00	1.27	7.27
5	R-16	-16,8513	-65,3614	Blanco	Permanentes (0)	5.57	90.70	14.74	0.08	27.00	1.37	9.40
6	R-17	-16,8509	-65,3639	Blanco	Intermitentes (1)	4.95	94.80	29.09	0.00	74.00	0.17	6.37
7	R-19	-16,8629	-65,3696	Blanco	Permanentes (0)	3.49	83.20	33.62	0.25	36.00	1.57	8.97
8	R-23	-16,8274	-65,3678	Carrillo	Permanentes (0)	13.90	91.20	35.75	0.18	16.00	1.25	9.70
9	R-28	-16,8459	-65,3323	Raya	Permanentes (0)	6.54	93.50	18.23	0.28	15.00	1.69	9.03
10	R-3	-16,8623	-65,3993	Chipiriri	Permanentes (0)	1.67	89.30	39.33	0.01	25.00	1.32	6.04
11	R-30	-16,8283	-65,3261	Raya	Permanentes (0)	8.58	92.90	32.59	0.04	18.00	1.07	8.94
12	R-31	-16,8596	-65,3307	Raya	Permanentes (0)	4.76	87.10	29.48	0.03	23.00	1.53	6.73
13	R-38	-16,8992	-65,389	Carrillo	Intermitentes (1)	2.42	93.00	14.10	0.01	5.00	1.64	4.46
14	R-39a	-16,9066	-65,3852	Carrillo	Intermitentes (1)	1.41	92.70	18.93	0.00	24.00	1.44	5.87
15	R-39b	-16,9089	-65,3863	Carrillo	Intermitentes (1)	1.23	95.20	17.49	0.02	5.00	1.94	8.16
16	R-40	-16,9154	-65,3807	Carrillo	Intermitentes (1)	0.16	79.50	22.69	0.13	13.00	1.40	5.51
17	R-41	-16,8947	-65,3845	Carrillo	Intermitentes (1)	3.18	91.00	12.24	0.25	2.00	1.26	4.75
18	R-43	-16,8848	-65,3843	Carrillo	Intermitentes (1)	4.88	80.60	18.68	0.05	9.00	1.25	7.36
19	R-45	-16,8667	-65,3902	Chipiriri	Permanentes (0)	4.61	93.30	13.70	0.00	9.00	1.84	3.75
20	R-46	-16,8723	-65,378	Chipiriri	Permanentes (0)	5.42	91.00	18.77	0.02	16.00	1.47	9.23
21	R-47	-16,8728	-65,3864	Carrillo	Permanentes (0)	6.87	87.60	41.10	0.00	38.00	0.89	6.26
22	R-48	-16,8703	-65,3332	Raya	Permanentes (0)	3.46	83.50	28.36	0.01	30.00	1.28	6.83
23	R-49	-16,8577	-65,3469	Raya	Intermitentes (1)	3.74	94.20	20.52	0.00	52.00	1.46	5.41
24	R-50	-16,8662	-65,3493	Raya	Intermitentes (1)	2.78	74.00	35.97	0.00	32.00	1.37	7.38
25	R-52	-16,8575	-65,3534	Raya	Intermitentes (1)	1.92	91.20	46.83	0.00	80.00	0.89	7.55
26	R-54	-16,8529	-65,3359	Raya	Permanentes (0)	5.64	87.00	13.95	0.19	30.00	1.53	8.88
27	R-55	-16,8676	-65,3378	Raya	Permanentes (0)	3.79	76.80	29.69	0.09	6.00	1.77	7.55
28	R-57	-16,8772	-65,3423	Raya	Intermitentes (1)	1.91	79.00	50.90	0.00	40.00	1.49	6.74
29	R-6	-16,8453	-65,3957	Chipiriri	Permanentes (0)	4.42	72.20	28.12	0.00	6.00	1.27	5.36
30	R-60	-16,8523	-65,3273	Raya	Permanentes (0)	5.79	92.00	25.71	0.00	15.00	1.67	6.69
31	R-61	-16,8446	-65,3163	Raya	Permanentes (0)	1.06	85.80	38.21	0.00	39.00	0.25	4.38
32	R-66	-16,8384	-65,3084	Raya	Permanentes (0)	0.26	95.90	43.39	0.00	24.00	0.56	4.64
33	R-67	-16,8328	-65,3105	Raya	Permanentes (0)	0.93	91.70	16.35	0.13	19.00	0.89	3.94
34	R-68	-16,8158	-65,3052	Raya	Permanentes (0)	2.94	78.00	65.32	0.00	42.00	0.77	5.07
35	R-69	-16,8053	-65,3042	Raya	Intermitentes (1)	4.13	86.90	56.22	0.00	46.00	0.75	7.06
36	R-97	-16,8561	-65,3292	Raya	Permanentes (0)	5.20	80.60	21.08	0.00	16.00	1.49	6.83

ANEXO 2. Abundancia de especies por sitio, códigos de especie y grupos tróficos (G.Trófico). D-H = Detretívoros-herbívoros; O = Omnívoros; IN = Invertívoros; I = Ictiófagos

ORDEN / Familia / Especie	Código	G.Trófico	R-1	R-3	R-6	R-14	R-16	R-17	R-19	R-23	R-28	R-30	R-31	R-38	R-39a	R-39b	R-40	R-41	R-43	R-44	R-45	R-46	R-48	R-49	R-50	R-52	R-54	R-55	R-57	R-60	R-61	R-66	R-67	R-68	R-69	R-97	R-115	R-116
CHARACIFORMES																																						
Parodontidae																																						
1 *Parodon* cf. *buckleyi*	pbu	D-H					7		1	5	3	20											2				9	14				1		3	1			15
Curimatidae																																						
2 *Cyphocharax spiluropsis*	csp	D-H		3																																		
3 *Steindacherina dobula*	sdo	D-H		10	8				1	2		13	7										8					2	1	8	5	15		5	18	43		4
4 *Steindacherina guentheri*	sgu	D-H		26	30	2			2	2		1										13	4	7	7			2	1		7	2		3	7			1
Prochilodontidae																																						
5 *Prochilodus nigricans*	pni	D-H		1		1					18	1	4															12			5	1		7	26			
Anostomidae																																						
6 *Leporinus* gr. *friderici*	lfr	D-H		1																																		
7 *Leporinus striatus*	lst	O		1		6	5		2	8	5	23	4						5		15	1	17				13	50	3	2	6				5	19		54
Crenuchidae																																						
9 *Characidium Bolivianum*	csb	IN					12				5																7											
8 *Characidium* sp.*A*	csa	IN				8	29		3	12	20	27	20								36						58	3		9			4		1	9		24
10 *Characidium* sp.*B*	csc	IN			2					11	18												2															
Gasteropelecidae																																						
11 *Carnegiella myersi*	cmy	IN			25							3																						1	1			
Characidae																																						
Genera Incerta Sedis																																						
12 *Astyanacinus multidens*	amu	O				20	4			3	19		5								33	33					1		1	22	6		3			32	4	15
13 *Astyanax abramis*	aab	O	4	46	229	171	81	25	64	79	51	204	202	7			1	14	26	51	432	64	163	5	14		189	148	57	492	61	48	57	50	66	374		487
14 *Astyanax lineatus*	ali	O					10			8	18	5						4	1		186	1	20				114	3	57	10			1	1		63	3	27
15 *Bryconops sp.*	bsp	IN		1	7																																	
16 *Creagrutus pearsoni*	cpe	O																															7		13		21	
17 *Ctenobrycon* cf. *hauxweillianus*	cha	O																			4														1			
18 *Gymnocorymbus* sp.	gsp	IN																		20																		
19 *Hemibrycon* sp.	hsp	IN				8	83		4	2	25	3							1		24	6	2				93	3			3		3			11	21	
20 *Hemmigrammus* cf. *bellottii*	hbe	IN			5										6																							7
21 *Hemmigrammus* cf. *lunatus*	hlu	IN	41	16	87	44		3	42	1		23				2	22		12	12	28	166	24	83	503	240	9	32	57		69		4	6	1	40	2	1
22 *Hyphessobrycon gr. heterorhabdus*	hhe	IN			67																																	
23 *Knodus sp.*	ksp	O										17							17														15					
24 *Moenkhausia oligolepis*	mol	O	21	19	38	28	8	6	18	28		7	9		16	8	10	1	16	41	25	25	38	46	143	7	6	76	25	2	33	16	27	27	17	28		21
Characinae																																						
25 *Phenacogaster pectinatus*	ppe	IN	9	4	26	17			41	8		19	99						64	3	22	173	235	2	113	7	31	31	8	24	26		43		10	163		
Stethaprioninae																																						
26 *Brachychalcinus copei*	bco	IN										1										1												1	10			
27 *Poptella compresa*	pco	IN																				1																
Cheirodontinae																																						
28 *Serrapinnus* spp.	ssp	IN		7		11				18			1												83	4		3			23				6	6		
29 *Cheirodon piaba*	cpi	O																				8																
30 *Odontostilbe dierythrura*	odi	D-H			317					4			2						326		80	8	3				4				5	13	1	570	242	52		15
31 *Prodontocharax melanotus*	pme	IN																																				
Glandulocaudinae																																						
32 *Gephyrocharax chaparae*	gch	IN				1	58		2	15	9			5	1	22		16	124	10	69	44	6				11	10			34		11			22	12	
33 *Tyttocharax* cf. *madeirae*	tma	IN	10	33	12	14	20	2	34	8	12	10	17	22	10	3	8	14	40	59	44			1		42	18	7	1	5	33	1	23	12	6	2	136	8
Acestrorhynchidae																																						
34 *Acestrorhynchus* cf. *pantaneiro*	apa	I		1	1																								2						1			
Erithrynidae																																						
35 *Hoplias* gr. *malabaricus*	hma	I		1	4	4	4	1		1	1	1	3	1		3	2		7	4	2	4	2	2	9	4	3	2	2		3	1	4	1	1	3		3

ORDEN / Familia / Especie	Código	G.Trófico	R-1	R-3	R-6	R-14	R-16	R-17	R-19	R-23	R-28	R-30	R-31	R-38	R-39a	R-39b	R-40	R-41	R-43	R-44	R-45	R-46	R-48	R-49	R-50	R-52	R-54	R-55	R-57	R-60	R-61	R-66	R-67	R-68	R-69	R-97	R-115	R-116
Lebiasinidae																																						
36 *Pyrrulina vittata*	pvi	IN	126	18	4			9										3		109		27		32	7	29		9	1		8	4			1			1
SILURIFORMES																																						
Aspredinidae																																						
37 *Pterobunocephalus depressus*	pde	O			1																													1				
Trichomycteridae																																						
38 *Ituglanis* cf. *amazonicus*	iam	IN			3		2		3		3					1		1	1		1		41				1	1									7	
Callichthyidae																																						
39 *Callichthys callichthys*	cca	O					1							1										1			1											
40 *Corydoras* cf. *aeneus*	cae	O		5	113		14		15	9		9							108		37				22		27	22	3				4			25		49
41 *Corydoras* cf. *napoensis*	cna	O																		6																		
42 *Corydoras* cf. *stenocephalus*	cst	O	10							3				2		6	116	14		57											8							
Loricariidae																																						
Loricariinae																																						
43 *Farlowella oxyrrhyncha*	fox	D-H								1																												
44 *Hemiodontichthys acipenserinus*	hac	IN																													1							
45 *Rineloricaria beni*	rbe	D-H	1	2	5				2	7			1														5	7	4						1	2		2
46 *Rineloricaria lanceolata*	rla	D-H				1	2		1	3	5	1		3			1		4		2				10		2						1			3	1	6
Hypostominae																																						
47 *Hypostomus* gr. *cochliodon*	hco	D-H												21											1												1	
Ancistrinae																																						
Ancistrinae																																						
48 *Ancistrus bolivianus*	abo	D-H					9																															6
49 *Ancistrus* cf. *dubius*	adu	D-H	1	1	22		13		12		43	7	9			1	4		11		30		11		17		75	34	4	6	2	2	11	1		6	5	48
50 *Ancistrus* cf. *hoplogenys*	aho	D-H	1		2			1			1	1										3			1		4											
Pseudopimelodidae																																						
51 *Batrochoglanis raninus*	bra	I	1			2			1	1				1							1		2		1			1										12
52 *Microglanis* sp.	msp	IN					4		1		2								6		12						2										1	1
Heptapteridae																																						
53 *Imparfinis* cf. *guttatus*	igu	IN									11							2																				
54 *Imparfinis* cf. *stictonotus*	ist	IN					3			1	2								3		3						14										7	
55 *Pimelodella* cf. *gracilis*	pgr	O					6					1									5																	
56 *Pimelodella* cf. *mucosa*	pmu	IN									1																											
57 *Rhamdia quelen*	rqu	D-H	2	9	2	2	31		9	2	6	17	18	14	1	5	18	3	20	17	19	1	28	7	6	1	28	7	2	4	6		4	2	1	13	11	10
Auchenipteridae																																						
58 *Tatia* sp.	tal	IN																	1																			
GYMNOTIFORMES																																						
Gymnotidae																																						
59 *Gymnotus* cf. *carapo*	gca	I			3	1		1											1									1										1
Hypopomidae																																						
60 *Brachyhypopomus* cf. *brevirostris*	bbr	IN		2	6																																	
CYPRINIFORMES																																						
Rivulidae																																						
61 *Aphyolebias* cf. *obliquus*	aob	O														1																						
BELONIFORMES																																						
Belonidae																																						
62 *Potamorraphis eigenmanni*	pei	IN		1				2		1			2									4			5					1	1					1		
SYNBRANCHIFORMES																																						
Synbranchidae																																						
63 Synbranchus marmoratus	sma	I	3		2	1		3		1									4			4	1		4		1	1	3					1				1
PERCIFORMES																																						
Cichlidae																																						
64 *Aequidens* sp.	asp	O			3							1																										
65 *Apistogramma* sp.	aps	O	44	66	59	35	18	127	12	16	1	10	59	2				12	19		4	177	22	57	49	50	6	13	13	40	26	13	16	6	14	33	2	28
66 *Cichasoma boliviense*	cbo	O	4		6		2	4	4	6	1		4	5	1	10	1	25	13	100	5	28	24	9	35	7		15	4	4	1		3			13	2	7
67 *Crenicichla* cf. *semicincta*	cse	O	21	28	12	12	17	12	17	11	9	34	90	4	2	5	2	39	49	7	38	21	81	39	30	2	23	25	28	39		3	2		1	31	11	42
68 *Mikrogeophagus altispinosus*	mal	O	3	6	4	1																			2						9				4	1		
69 *Satanoperca jurupari*	sju	IN		1		1						1	3									2	1							3	5	1				7		