

Additional File 1: Details of the specimens used in the phylogenetic analysis.

Group/species	Voucher	Specimen	16S	CytB	Myh6	Rag1	Rag2
Acestrorhynchidae							
<i>Acestrorhynchus cf. nasutus</i> ¹	LBP 7035	34110	HQ171379	HQ289666	HQ289087	HQ289280	-
<i>Acestrorhynchus falcatus</i> ¹	LBP 4191	23707	HQ171312	HQ289601	HQ289022	HQ289214	HQ289408
<i>Acestrorhynchus lacustris</i> ¹	LBP 2158	15173	HQ171250	HQ289541	HQ288960	HQ289157	HQ289348
<i>Acestrorhynchus pantaneiro</i> ¹	LBP 3755	22014	HQ171288	HQ289577	HQ288998	HQ289192	HQ289385
<i>Gilbertolus maracaiboensis</i> ¹	LBP 6107	29552	HQ171362	HQ289649	HQ289070	HQ289263	HQ289456
<i>Gnathocharax steindachneri</i> ¹	LBP 4496	24494	HQ171325	-	HQ289034	-	HQ289421
<i>Heterocharax macrolepis</i> ¹	LBP 4494	24485	HQ171323	HQ289612	HQ289032	HQ289225	HQ289419
<i>Hoplocharax goethei</i> ¹	LBP 4495	24489	HQ171324	HQ289613	-	HQ289226	-
<i>Roestes ogilviei</i> ¹	LBP 8157	38066	HQ171410	HQ289697	HQ289118	HQ289311	HQ289503
Alestidae							
<i>Alestes sp.</i> ¹	LBP 7530	35376	HQ171390	HQ289677	HQ289098	HQ289291	HQ289483
<i>Alestopetersius caudalis</i> ³			AY788019	AY791401	-	-	AY804078
<i>Bathyaethiops breuseghemi</i> ³	AMNH 233422		AY788068	AY791430	-	-	AY804113
<i>Brycinus caroliniae</i> ³	AMNH 233628		AY787960	AY791357	-	-	-
<i>Brycinus longipinnis</i>	LBP 7529	35375	HQ171389	HQ289676	HQ289097	HQ289290	HQ289482
<i>Bryconaethiops sp.</i> ³			AY787983	AY791374	-	-	AY804047
<i>Hydrocynus brevis</i> ³	AMNH 22644		AY788018	AY791400	-	-	AY804077
<i>Ladigesia roloffi</i> ³	AMNH 233394		AY788046	AY791417	-	-	AY804097
<i>Micralestes sp.</i>	LBP 2342	15946	HQ171258	HQ289549	HQ288968	HQ289165	HQ289356
<i>Phenacogrammus interruptus</i>	LBP 2637	17293	HQ171263	HQ289554	HQ288973	HQ289170	HQ289361
Anostomidae							
<i>Anostomus ternetzi</i> ¹	LBP 4375	24146	HQ171317	HQ289606	HQ289026	HQ289219	HQ289413
<i>Leporinus fasciatus</i> ¹	LBP 4459	24381	HQ171321	HQ289610	HQ289030	HQ289223	HQ289417
<i>Schizodon fasciatus</i> ¹	LBP 3046	19130	HQ171270	HQ289559	HQ288980	HQ289177	HQ289367
<i>Schizodon fasciatus</i> ¹	LBP 3994	23098	HQ171308	HQ289597	HQ289018	HQ289210	HQ289404
Bryconidae							
<i>Brycon amazonicus</i> ¹	LBP 2187	15565	HQ171251	HQ289542	HQ288961	HQ289158	HQ289349
		15567	KF779969	KF780010	KF780046	KF780085	KF780117
<i>Brycon amazonicus</i>	LBP 2859	18988	KF779970	KF780011	KF780047	KF780086	KF780118
<i>Brycon amazonicus</i>	LBP 834	8835	KF779968	KF780009	-	KF780084	KF780116
<i>Brycon aff. atrocaudatus</i>	LBP 1356	17096	KF779971	KF780012	-	-	KF780119
<i>Brycon chagrensis</i>	LBP 2749	18510	KF779972	KF780013	KF780048	KF780087	KF780120
<i>Brycon falcatus</i>	LBP 2668	15563	KF779973	KF780014	KF780049	KF780088	KF780121
<i>Brycon falcatus</i>	LBP 5146	26278	KF779974	KF780015	KF780050	KF780089	KF780122
<i>Brycon falcatus</i>	LBP 6878	32395	KF779975	KF780016	KF780051	KF780090	KF780123
<i>Brycon cf. falcatus</i>	LBP 8109	37580	KF779976	KF780017	KF780052	KF780091	KF780124
		37581	KF779977	KF780018	KF780053	KF780092	KF780125
<i>Brycon ferox</i>	LBP 2855	18979	KF779978	KF780019	KF780054	KF780093	KF780126
<i>Brycon ferox</i>	LBP 8099	37528	KF779979	KF780020	KF780055	KF780094	KF780127
<i>Brycon ferox</i>	LBP 8100	37529	KF779980	KF780021	KF780056	KF780095	KF780128
<i>Brycon gouldingi</i>	LBP 3130	19203	KF779981	KF780022	KF780057	KF780096	KF780129
<i>Brycon henni</i>	LBP 2857	18984	KF779982	-	KF780058	KF780097	KF780130
<i>Brycon hilarii</i>	LBP 3805	21895	KF779983	KF780023	KF780059	KF780098	KF780131
<i>Brycon hilarii</i>	LBP 2766	17634	KF779984	KF780024	KF780060	KF780099	KF780132
<i>Brycon hilarii</i>	LBP 4676	24810	KF779985	KF780025	KF780061	KF780100	KF780133
<i>Brycon insignis</i> ¹	LBP 2369	16075	HQ171260	HQ289551	HQ288970	HQ289167	HQ289358
<i>Brycon melanopterus</i>	LBP 9778	38906	KF779986	KF780026	KF780062	KF780101	KF780134
		38907	KF779987	KF780027	KF780063	KF780102	KF780135
<i>Brycon moorei</i>	LBP 2858	18986	KF779988	KF780028	KF780064	-	KF780136
<i>Brycon moorei</i>	LBP 12817	55010	KF779989	KF780029	-	-	KF780137
<i>Brycon nattereri</i>	LBP 2856	18981	KF779990	KF780030	KF780065	-	KF780138
		18982	KF779991	KF780031	KF780066	-	KF780139
<i>Brycon nattereri</i>	LBP 8101	37541	KF779992	KF780032	KF780067	KF780103	KF780140
<i>Brycon orbignyanus</i>	LBP 2746	18004	KF779993	KF780033	KF780068	KF780104	KF780141
<i>Brycon opalinus</i>	LBP 6303	29001	KF779994	KF780034	KF780069	KF780105	KF780142
<i>Brycon opalinus</i>	LBP 6306	29349	KF779995	KF780035	KF780070	KF780106	KF780143
<i>Brycon orthotaenia</i>	LBP 249	4215	KF779996	KF780036	KF780071	KF780107	KF780144
<i>Brycon pesu</i>	LBP 8111	37578	KF779997	KF780037	KF780072	-	KF780145
		37579	KF779998	KF780038	KF780073	-	KF780146
<i>Brycon pesu</i>	LBP 5320	26930	KF779999	KF780039	KF780074	-	KF780147
<i>Brycon pesu</i>	LBP 9409	42567	KF780000	KF780040	KF780075	KF780108	KF780148
<i>Brycon petrosus</i>	LBP 2750	18504	KF780001	KF780041	KF780076	KF780109	KF780149
<i>Brycon vermelha</i>	LBP 9066	42508	KF780002	-	KF780077	KF780110	-
<i>Brycon sp.</i>	LBP 5837	28350	KF780008	KF480045	KF780083	KF780115	KF780155
<i>Chilobrycon deuterodon</i>	LBP 9334	45001	KF780003	KF780042	KF780078	-	KF780150

<i>Henochilus wheatlandii</i> ¹	LBP 1221	45002	KF780004	KF480043	KF780079	KF780111	KF780151
<i>Salminus affinis</i>	LBP 12817	25846	HQ171335	HQ289624	HQ289044	HQ289237	HQ289431
<i>Salminus brasiliensis</i> ¹	LBP 850	55009	KF780005	-	KF780080	KF780112	KF780152
<i>Salminus franciscanus</i> ¹	LBP 8090	9025	HQ171437	HQ289722	HQ289145	HQ289336	HQ289528
<i>Salminus hilarii</i>	LBP 84	37503	HQ171401	HQ289688	HQ289109	HQ289302	HQ289494
<i>Salminus iquitensis</i>	LBP 8160	7615	KF780006	-	KF780081	KF780113	KF780153
		38065	KF780007	KF480044	KF780082	KF780114	KF780154
Chalceidae							
<i>Chalceus epakros</i> ¹	LBP 5443	26504	HQ171341	HQ289630	-	-	HQ289436
<i>Chalceus erythrurus</i> ¹	LBP 4211	22727	HQ171297	HQ289586	HQ289007	HQ289201	HQ289394
Characidae/Stevardiinae							
<i>Bryconadenos tanaothoros</i> ²	MCP 40399		FJ748980	-	-	-	FJ749089
<i>Bryconamericus emperador</i> ¹	LBP 2754	18528	HQ171266	HQ289557	HQ288976	HQ289173	HQ289363
<i>Bryconamericus exodon</i> ¹	LBP 7123	34200	HQ171380	HQ289667	HQ289088	HQ289281	HQ289474
<i>Ceratobranchia cf. delotaenia</i> ¹	LBP 3257	20042	HQ171278	HQ289567	HQ288988	HQ289183	HQ289375
<i>Corynopoma riisei</i> ²			FJ749009	-	-	-	FJ749095
<i>Creagrutus peruanus</i> ¹	LBP 3267	20057	HQ171279	HQ289568	HQ288989	HQ289184	HQ289376
<i>Cyanocharax alburnus</i> ¹	LBP 4746	25516	HQ171333	HQ289622	HQ289042	HQ289235	HQ289429
<i>Gephyrocharax atracaudatus</i> ¹	LBP 2753	18519	HQ171265	HQ289556	HQ288975	HQ289172	HQ289362
<i>Glandulocauda melanogenys</i> ¹	LBP 4507	24538	HQ171320	HQ289609	HQ289029	HQ289222	HQ289416
<i>Hemibrycon taeniurus</i> ¹	LBP 6847	33168	HQ171369	HQ289656	HQ289077	HQ289270	HQ289463
<i>Hypobrycon maromba</i> ¹	LBP 6750	33174	HQ171375	HQ289662	HQ289083	HQ289276	HQ289469
<i>Knodus meridae</i> ¹	LBP 7569	15818	HQ171257	HQ289548	HQ288967	HQ289164	HQ289355
<i>Lophiobrycon weitzmani</i> ¹	LBP 1225	38090	HQ171411	HQ289698	HQ289119	HQ289312	HQ289504
<i>Markiana nigripinnis</i> ¹	LBP 663	8038	HQ171432	-	HQ289140	HQ289331	HQ289524
<i>Mimagoniates inequalis</i> ¹	LBP 3383	21274	HQ171282	HQ289571	HQ288992	HQ289186	HQ289379
<i>Mimagoniates microlepis</i> ¹	LBP 1225	11077	HQ171240	HQ289531	HQ288950	HQ289147	HQ289338
<i>Odontostoechus lethostigmus</i> ¹	LBP 6752	33171	HQ171372	HQ289659	HQ289080	HQ289273	HQ289466
<i>Piabarchus analis</i> ¹	LBP 8514	38382	HQ171412	HQ289699	HQ289120	HQ289313	HQ289505
<i>Piabina argentea</i> ¹	LBP 3509	21306	HQ171283	HQ289572	HQ288993	HQ289187	HQ289380
<i>Planaltina britskii</i>	LBP 2598	17243	HQ171262	HQ289553	HQ288972	HQ289169	-
<i>Pseudocorynopoma heterandria</i> ¹	LBP 2862	18570	HQ171268	-	HQ288978	HQ289175	HQ289365
<i>Tyttocharax madeirae</i> ¹	LBP 5145	33166	HQ171368	HQ289655	HQ289076	HQ289269	HQ289462
<i>Xenobrycon pteropus</i> ¹	LBP 9054	42218	HQ171423	HQ289709	HQ289131	HQ289324	HQ289516
Characidae/Clade B							
Aphyocharacinae							
<i>Aphyocharacidium bolivianum</i> ¹	LBP 9055	42219	HQ171424	HQ289710	HQ289132	HQ289325	HQ289517
<i>Aphyocharax alburnus</i> ¹	LBP 1587	11774	HQ171242	HQ289533	HQ288952	HQ289149	-
<i>Aphyocharax anisitsi</i> ¹	LBP 3764	22190	HQ171292	HQ289581	HQ289002	HQ289196	HQ289389
<i>Aphyocharax pusillus</i> ¹	LBP 4046	22920	HQ171301	HQ289590	HQ289011	HQ289203	HQ289397
<i>Leptagoniates steindachneri</i> ¹	LBP 4137	23661	HQ171311	HQ289600	HQ289021	HQ289213	HQ289407
<i>Paragoniates alburnus</i> ¹	LBP 9208	43156	HQ171426	HQ289712	HQ289134	HQ289326	HQ289519
<i>Phenagoniates macrolepis</i> ¹	LBP 6105	35623	HQ171391	HQ289678	HQ289099	HQ289292	HQ289484
<i>Prionobrama paraguayensis</i> ¹	LBP 3230	19465	HQ171272	HQ289261	HQ288982	-	HQ289369
<i>Prionobrama paraguayensis</i> ¹	LBP 3230	19468	HQ171273	HQ289262	HQ288983	HQ289179	HQ289370
<i>Xenagoniates bondi</i> ¹	LBP 3074	19694	HQ171274	HQ289563	HQ288984	-	HQ289371
Characinae							
<i>Acestrocephalus sardina</i> ¹	LBP 6876	33172	HQ171373	HQ289660	-	HQ289274	HQ289467
<i>Charax leticiae</i> ¹	LBP 1480	12700	HQ171244	HQ289535	HQ288954	HQ289151	HQ289342
<i>Cynopotamus kincaidi</i> ¹	LBP 3225	19449	HQ171271	HQ289560	HQ288981	HQ289178	HQ289368
<i>Cynopotamus venezuelae</i> ¹	LBP 6132	29515	HQ171359	HQ289648	HQ289068	HQ289261	HQ289454
<i>Galeocharax knerii</i> ¹	LBP 3496	20164	HQ171280	HQ289569	HQ288990	-	HQ289377
<i>Phenacogaster calverti</i> ¹	LBP 5582	27299	HQ171347	HQ289636	HQ289056	HQ289249	HQ289442
<i>Roeboides guatemalensis</i> ¹	LBP 2755	18529	HQ171267	-	-	-	HQ289364
Cheirodontinae							
<i>Aphyocheiroduon hemigrammus</i> ¹	LBP 8306	40025	HQ171413	HQ289700	HQ289121	HQ289314	-
<i>Cheirodon ibicuiensis</i> ¹	LBP 4777	25598	HQ171334	HQ289623	HQ289043	HQ289236	HQ289430
<i>Cheirodon killiani</i> ¹	LBP 3115	19803	HQ171275	HQ289564	-	-	HQ289372
<i>Compsura heterura</i> ¹	LBP 4733	24984	HQ171332	HQ289621	HQ289041	HQ289234	HQ289428
<i>Ctenocheiroduon pristis</i> ¹	LBP 5699	27603	HQ171350	HQ289639	HQ289059	HQ289252	HQ289445
<i>Heterocheiroduon yatai</i> ¹	LBP 4872	24954	HQ171330	HQ289619	HQ289039	HQ289232	HQ289426
<i>Kolpotocheiroduon theloura</i> ¹	LBP 5033	25982	HQ171336	HQ289625	HQ289045	HQ289238	HQ289432
<i>Macropsobrycon uruguayanae</i> ¹	LBP 6039	29061	HQ171355	HQ289644	HQ289064	HQ289257	HQ289450
<i>Nanocheiroduon insignis</i> ¹	LBP 6104	27476	HQ171349	HQ289638	HQ289058	HQ289251	HQ289444
<i>Odontostilbe fugitiva</i> ¹	LBP 4052	22932	HQ171302	HQ289591	HQ289012	HQ289204	HQ289398
<i>Odontostilbe sp.1</i> ¹	LBP 4650	22626	HQ171296	HQ289585	HQ289006	HQ289200	HQ289393
<i>Prodontocharax melanotus</i> ¹	AMNH	233264	HQ 171239	HQ289530	HQ288949	HQ289146	HQ289337
<i>Pseudocheiroduon arnoldi</i> ¹	STRI	5	HQ171430	HQ289715	HQ289138	HQ289329	HQ289522
<i>Saccoderma melanostigma</i> ¹	LBP 6103	27475	HQ171348	HQ289637	HQ289057	HQ289250	HQ289443
<i>Serrapinnus calliurus</i> ¹	LBP 3731	22121	HQ171291	HQ289580	HQ289001	HQ289195	HQ289388
<i>Serrapinnus heterodon</i> ¹	LBP 9039	37551	HQ171403	HQ289690	HQ289111	HQ289304	HQ289496

<i>Serrapinnus piaba</i> ¹	LBP 8972	41813	HQ171416	HQ289703	HQ289124	HQ289317	HQ289509
<i>Spintherobolus ankoseion</i> ¹	LBP 4725	24957	HQ171331	HQ289620	HQ289040	HQ289294	HQ289427
<i>Spintherobolus broccae</i> ¹	LBP 3916	22558	HQ171294	HQ289583	HQ289004	HQ289233	HQ289391
<i>Spintherobolus leptoura</i> ¹	LBP 7544	36098	HQ171393	HQ289680	HQ289101	HQ289198	HQ289486
Tetragonopterinae							
<i>Tetragonopterus argenteus</i> ¹	LBP 3758	22029	HQ171289	HQ289578	HQ288999	HQ289193	HQ289386
<i>Tetragonopterus chalceus</i> ¹	LBP 8268	37556	HQ171405	HQ289692	HQ289113	HQ289306	HQ289498
Clade B Incertae sedis							
<i>Microschemobrycon casiquiare</i> ¹	LBP 8161	38058	HQ171409	HQ289696	HQ289117	HQ289310	HQ289502
<i>Exodon paradoxus</i> ¹	LBP 4006	23040	HQ171306	HQ289595	HQ289016	HQ289208	HQ289402
<i>Roeboexodon guyanensis</i> ¹	LBP 5315	26921	HQ171345	HQ289634	HQ289054	HQ289247	HQ289440
Characidae/Clade C Rhoadsiinae							
<i>Carlana eigenmanni</i> ¹	LBP 3300	19864	HQ171276	HQ289565	HQ288986	HQ289181	-
<i>Carlana eigenmanni</i> ¹	LBP 3301	19865	HQ171277	HQ289566	HQ288987	HQ289182	-
Stethaprioninae							
<i>Brachychalcinus copei</i> ¹	LBP 192	8853	HQ171435	HQ289720	HQ289143	HQ289334	HQ289527
<i>Orthospinus franciscensis</i> ¹	LBP 8105	37555	HQ171404	-	HQ289112	HQ289305	HQ289497
<i>Poptella paraguayensis</i> ¹	LBP 3732	21986	HQ171286	HQ289575	HQ288996	HQ289190	-
<i>Stethaprion crenatum</i> ¹	LBP 4078	22994	HQ171305	HQ289594	HQ289015	HQ289207	HQ289401
Clade C Incertae sedis							
<i>Aphyodite grammica</i> ¹	LBP 9050	42214	HQ171421	HQ289707	HQ289129	HQ289322	HQ289514
<i>Astyanacinus moorii</i> ¹	LBP 5783	28195	HQ171352	HQ289641	HQ289061	HQ289254	HQ289447
<i>Astyanax aeneus</i> ¹	LBP 8938	42019	HQ171418	-	HQ289126	HQ289319	HQ289511
<i>Astyanax jordani</i> ¹	LBP 4527	24599	HQ171327	HQ289616	HQ289036	HQ289229	HQ289423
<i>Astyanax mexicanus</i> ¹	LBP 8937	42016	HQ171417	-	HQ289125	HQ289318	HQ289510
<i>Bario steindachneri</i> ¹	LBP 4389	24187	HQ171319	HQ289608	HQ289028	HQ289221	HQ289415
<i>Bramocharax baileyi</i> ¹	LBP 8940	42025	HQ171420	HQ289706	HQ289128	HQ289321	HQ289513
<i>Bramocharax caballeri</i> ¹	LBP 8939	42022	HQ171419	HQ289705	HQ289127	HQ289320	HQ289512
<i>Bryconella pallidifrons</i> ¹	LBP 4646	24696	HQ171329	HQ289618	HQ289038	HQ289231	HQ289425
<i>Coptobrycon bilineatus</i> ¹	LBP 3809	33169	HQ171370	HQ289657	HQ289078	HQ289271	HQ289464
<i>Ctenobrycon hauxwellianus</i> ¹	LBP 4095	23538	HQ171310	HQ289599	HQ289020	HQ289212	HQ289406
<i>Deuterodon iguape</i> ¹	LBP 6827	33065	HQ171366	HQ289653	HQ289074	HQ289267	HQ289460
<i>Gymnocorymbus ternetzi</i> ¹	LBP 3737	21989	HQ171287	HQ289576	HQ288997	HQ289191	HQ289384
<i>Hasemanina sp.</i> ¹	LBP5967	28455	HQ171354	HQ289643	HQ289063	HQ289256	HQ289449
<i>Hemigrammus marginatus</i> ¹	LBP 6292	29419	HQ171357	HQ289646	HQ289066	HQ289259	HQ289452
<i>Hemigrammus ulreyi</i> ¹	LBP 7604	36267	HQ171394	HQ289681	HQ289102	HQ289295	HQ289470
<i>Hollandichthys multifasciatus</i> ¹	LBP 698	8791	HQ171434	-	HQ289142	HQ289333	HQ289526
<i>Hyphessobrycon eques</i> ¹	LBP 7615	36278	HQ171395	HQ289682	HQ289103	HQ289296	HQ289488
<i>Hyphessobrycon megalopterus</i> ¹	LBP 7613	36932	HQ171397	HQ289684	HQ289105	HQ289298	HQ289490
<i>Hyphessobrycon reticulatus</i> ¹	LBP 1049	8939	HQ171436	HQ289721	HQ289144	HQ289335	HQ289487
<i>Inpaichthys kerri</i> ¹	LBP 4526	24597	HQ171326	HQ289615	HQ289035	HQ289228	HQ289422
<i>Jupiaba anteroides</i> ¹	LBP 7067	34380	HQ171381	HQ289668	HQ289089	HQ289282	HQ289475
<i>Jupiaba cf. acanthogaster</i> ¹	LBP 7935	37269	HQ171399	HQ289686	HQ289107	HQ289300	HQ289492
<i>Moenkhausia xinguensis</i> ¹	LBP 6101	28443	HQ171353	HQ289642	HQ289062	HQ289255	HQ289448
<i>Myxiops aphos</i> ¹	LBP 7184	33173	HQ171374	HQ289661	HQ289082	HQ289275	-
<i>Nematobrycon palmeri</i> ¹	LBP 6124	33165	HQ171367	HQ289654	HQ289075	HQ289268	HQ289461
<i>Nematocharax venustus</i> ¹	LBP 8106	37557	HQ171406	HQ289693	HQ289114	HQ289307	HQ289499
<i>Oligosarcus paranensis</i> ¹	LBP 3926	22582	HQ171295	HQ289584	HQ289005	HQ289199	HQ289392
<i>Oligosarcus hepsetus</i> ¹	LBP 2377	16055	HQ171259	HQ289550	-	-	HQ289357
<i>Paracheirodon axelrodi</i> ¹	LBP 4472	24425	HQ171322	HQ289611	HQ289031	HQ289224	HQ289418
<i>Parecbasis cyclolepis</i> ¹	LBP 9053	42217	HQ171422	HQ289708	HQ289130	HQ289323	HQ289515
<i>Pristella maxillaris</i> ¹	LBP 2221	15637	HQ171255	HQ289546	HQ288965	HQ289162	HQ289353
<i>Probolodus heterostomus</i> ¹	LBP 6454	29141	HQ171356	HQ289645	HQ289065	HQ289258	HQ289451
<i>Psellogrammus kennedyi</i> ¹	LBP 6578	31813	HQ171365	HQ289652	HQ289073	HQ289266	HQ289459
<i>Rachoviscus crassiceps</i> ¹	LBP 7146	33170	HQ171371	HQ289658	HQ289079	HQ289272	HQ289465
<i>Stygichthys typhlops</i> ¹	LBP 8107	37558	HQ171407	HQ289694	HQ289115	HQ289308	HQ289500
<i>Thayeria obliqua</i> ¹	LBP 5743	26891	HQ171344	HQ289633	HQ289053	HQ289246	HQ289439
Characidae Gen. & sp. nov. ¹	LBP 7243	33196	HQ171376	HQ289663	-	-	HQ289470
Chilodontidae							
<i>Chilodus punctatus</i> ¹	LBP 4090	23527	HQ171309	HQ289598	-	-	-
<i>Caenotropus labyrinthicus</i> ¹	LBP 1828	12912	HQ171247	HQ289538	-	-	HQ289345
<i>Caenotropus labyrinthicus</i> ¹	LBP 9216	43161	HQ171428	-	HQ289136	HQ289327	-
Citharinidae							
<i>Citharinus sp.</i> ¹	LBP 7528	35374	HQ171388	HQ289675	-	-	HQ289481
Crenuchidae							
<i>Characidium laterale</i> ¹	LBP 7614	36938	HQ171398	HQ289685	HQ289106	HQ289299	HQ289491
<i>Characidium pterostictum</i> ¹	LBP 2132	21388	HQ171284	HQ289573	HQ288994	HQ289188	HQ289381

<i>Crenuchus spilurus</i> ¹	LBP 6907	33264	HQ171377	HQ289664	HQ289085	HQ289278	HQ289471
<i>Melanocharacidium sp.</i> ³	AMNH 233321		AY788083	AY791439	-	-	AY804126
<i>Poecilocharax weitzmani</i> ¹	LBP 7078	40500	HQ171414	HQ289701	HQ289122	HQ289315	HQ289507
Ctenoluciidae							
<i>Boulengerella lateristriga</i> ¹	LBP 7094	34623	HQ171382	HQ289669	-	-	-
<i>Boulengerella maculata</i> ¹	LBP 3996	23092	HQ171307	HQ289596	-	-	-
<i>Boulengerella maculata</i> ¹	LBP 4241	22733	HQ171298	HQ289587	-	-	-
<i>Ctenolucius hujeta</i> ¹	LBP 6131	29532	HQ171360	-	-	-	-
<i>Ctenolucius hujeta</i> ¹	LBP 6131	29533	HQ171361	-	-	-	-
Curimatidae							
<i>Curimatella dorsalis</i> ¹	LBP3759	22034	HQ171290	HQ289579	HQ289000	HQ289194	HQ289387
<i>Cyphocharax gouldingi</i> ¹	LBP 1537	11889	HQ171243	HQ289534	HQ288953	HQ289150	HQ289342
<i>Cyphocharax magdalenae</i> ¹	LBP6109	29560	HQ171363	HQ289650	HQ289071	HQ289264	-
<i>Potamorhina altamazonica</i> ¹	LBP2571	17020	HQ171261	HQ289552	HQ288971	HQ289168	HQ289359
<i>Steindachnerina insculpta</i> ¹	LBP5185	26336	HQ171339	HQ289628	HQ289048	HQ289241	HQ289435
Cynodontidae							
<i>Cynodon gibbus</i> ¹	LBP 1619	11672	HQ171241	HQ289532	HQ288951	HQ289148	HQ289339
<i>Hydrolycus scomberoides</i> ¹	LBP 3031	19115	HQ171269	HQ289558	HQ288979	HQ289176	HQ289366
<i>Rhaphiodon vulpinus</i> ¹	LBP 4064	22942	HQ171303	HQ289592	HQ289013	HQ289205	-
Distichodontidae							
<i>Distichodus sp.</i> ¹	LBP 7526	35371	HQ171385	HQ289672	HQ289093	HQ289286	HQ289478
<i>Distichodus sp.</i> ¹	LBP 7526	35372	HQ171386	HQ289673	HQ289094	HQ289287	HQ289479
<i>Hemigrammocharax multifasciatus</i> ³	RUSI63497		AY788029	AY791407	-	-	AY804085
<i>Ichthyoborus sp.</i> ³	AMNH 233626		AY788038	AY791412	-	-	AY804092
<i>Neolebias trilineatus</i> ³	AMNH 233439		AY788063	AY791425	-	-	AY804108
<i>Xenocharax spilurus</i> ³	AMNH 231548		AY788085	AY791441	-	-	-
Erythrinidae							
<i>Erythrinus erythrinus</i> ¹	LBP 5212	26378	HQ171340	HQ289629	HQ289049	HQ289242	-
<i>Hoplerethrinus unitaeniatus</i> ¹	LBP 8025	37723	HQ171408	-	HQ289116	HQ289309	-
<i>Hoplias aimara</i> ¹	LBP 7837	36847	HQ171396	HQ289683	HQ289104	HQ289248	-
<i>Hoplias malabaricus</i> ¹	LBP 5539	27219	HQ171346	HQ289635	HQ289055	HQ289297	-
<i>Hoplias microlepis</i> ¹	LBP 2763	18503	HQ171264	HQ289555	HQ288974	HQ289171	-
Gasteropelecidae							
<i>Carnegiella marthae</i> ¹	LBP 4199	23793	HQ171313	HQ289602	HQ289023	HQ289216	HQ289409
<i>Carnegiella strigata</i> ¹	LBP 4200	23798	HQ171314	HQ289603	-	HQ289215	HQ289410
<i>Gasteropelecus sternicla</i> ¹	LBP 4070	22975	HQ171304	-	HQ289014	HQ289206	HQ289400
<i>Thoracocharax stellatus</i> ¹	LBP 7534	35343	HQ171384	HQ289671	HQ289092	HQ289285	-
Iguanodectidae							
<i>Bryconops affinis</i> ¹	LBP 262	4168	HQ171415	HQ289702	HQ289123	HQ289316	HQ289508
<i>Iguanodectes geisleri</i> ¹	LBP 4266	23840	HQ171316	HQ289605	-	-	HQ289412
<i>Piabucus melanostomus</i> ¹	LBP 5109	26150	HQ171338	HQ289627	HQ289047	-	-
Hemiodontidae							
<i>Anodus orinocensis</i>	LBP 2210	15614	HQ171254	HQ289545	HQ288964	HQ289161	HQ289352
<i>Argonectes robertsi</i>	LBP 1804	13167	HQ171249	HQ289540	HQ288959	HQ289156	HQ289347
<i>Bivibranchia velox</i>	LBP 5757	28123	HQ171351	HQ289640	-	-	HQ289446
<i>Hemiodus immaculatus</i>	LBP1725	12849	HQ171246	HQ289537	HQ288956	HQ289153	HQ289344
Hepsetidae							
<i>Hepsetus odoe</i>	LBP 7527	35373	HQ171387	HQ289674	HQ289095	HQ289288	HQ289480
Lebiasinidae							
<i>Copella nattereri</i>	LBP 4377	24148	HQ171431	HQ289607	HQ289027	HQ289220	HQ289414
<i>Copella nattereri</i>	LBP 536	7140	HQ171318	HQ289716	HQ289139	HQ289330	HQ289523
<i>Pyrrhulina australis</i>	LBP 3784	22333	HQ171293	-	-	HQ289197	HQ289390
<i>Pyrrhulina cf. zigzag</i>	LBP 8005	37473	HQ171400	HQ289687	HQ289108	HQ289301	HQ289493
Parodontidae							
<i>Apareiodon affinis</i> ¹	LBP 4591	24665	HQ171328	HQ289617	HQ289037	HQ289230	HQ289424
<i>Parodon nasus</i> ¹	LBP 1135	5635	HQ171429	HQ289714	HQ289137	HQ289328	HQ289521
Prochilodontidae							
<i>Prochilodus reticulatus</i> ¹	LBP 6127	29514	HQ171358	HQ289647	HQ289067	HQ289260	HQ289453
<i>Semaprochilodus laticeps</i> ¹	LBP 1383	12728	HQ171245	HQ289536	HQ288955	HQ289152	HQ289343
Serrasalminidae							
<i>Catoprion mento</i> ¹	LBP 7556	35624	HQ171392	HQ289679	HQ289100	HQ289293	-
<i>Colossoma macropomum</i> ¹	LBP 5173	26648	HQ171343	HQ289632	HQ289052	HQ289245	HQ289438

<i>Metynnis mola</i> ¹	LBP 667	8050	HQ171433	HQ289718	-	-	HQ289525
<i>Metynnis lippincottianus</i> ¹	LBP 6282	29688	HQ171364	HQ289651	HQ289072	HQ289265	HQ289458
<i>Myloplus rubripinnis</i> ¹	LBP 2184	15570	HQ171252	HQ289543	HQ288962	HQ289159	HQ289350
<i>Mylossoma duriventre</i> ¹	LBP 1823	12921	HQ171248	HQ289539	HQ288958	HQ289155	HQ289346
<i>Piaractus mesopotamicus</i> ¹	LBP 4255	23803	HQ171315	HQ289604	HQ289024	HQ289217	HQ289411
<i>Pygocentrus cariba</i> ¹	LBP 2229	15662	HQ171256	HQ289547	HQ288966	HQ289163	HQ289354
<i>Serrasalmus maculatus</i> ¹	LBP 3698	21836	HQ171285	-	HQ288995	HQ289189	HQ289382
<i>Serrasalmus spilopleura</i> ¹	LBP 3499	20169	HQ171281	HQ289570	HQ288991	HQ289185	HQ289378
<i>Tometes trilobatus</i> ¹	LBP 9072	42585	HQ171425	HQ289711	HQ289133	-	HQ289518
Triporthidae							
<i>Agoniates anchovia</i> ¹	LBP 6740	33471	HQ171378	HQ289665	-	-	HQ289472
<i>Agoniates halecinus</i> ¹	LBP 5503	26594	HQ171342	HQ289631	HQ289051	HQ289280	HQ289437
<i>Clupeacharax anchoveoides</i> ¹	LBP 5046	26012	HQ171337	HQ289626	HQ289046	HQ289239	HQ289433
<i>Engraulisoma taeniatum</i> ¹	LBP 4038	22896	HQ171299	HQ289588	HQ289009	-	-
<i>Engraulisoma taeniatum</i> ¹	LBP 4038	22897	HQ171300	HQ289589	HQ289010	-	-
<i>Lignobrycon myersi</i> ¹	LBP 8094	37519	HQ171402	HQ289689	HQ289110	HQ289303	-
<i>Triporthus nematurus</i> ¹	LBP 39	3503	HQ171383	HQ289670	HQ289091	HQ289284	HQ289476
<i>Triporthus orinocensis</i> ¹	LBP 2663	15580	HQ171253	HQ289544	HQ288963	HQ289160	HQ289351
Cypriniformes							
<i>Carassius auratus</i> ¹	LBP 9215	43160	HQ171427	HQ289713	HQ289135	-	-
<i>Gyrinocheilus sp.</i> ³	AMNH 233433		AY788015	AY791399	-	-	AY804074

1- Oliveira *et al.* [1]; 2-Javonillo *et al.* [20]; 3- Calcagnotto *et al.* [19]