

Supplementary material

Headwater–river gradient: trait-based approaches show functional dissimilarities among tropical fish assemblages

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Table S1. List of orders, families and species found in headwater streams (HS), rivers (R) and headwater streams and rivers (HS/R) of the upper section of the Tocantins–Araguaia River basin

Code refers to species code used in Fig. 2b of the main paper for the RLQ analysis

Order	Family	Species	Code	Habitat		
Characiformes	Acestrorhynchidae	<i>Acestrorhynchus falcatus</i>	AceFal	R		
		<i>Acestrorhynchus microlepis</i>	AceMic	R		
	Anostomidae	<i>Anostomus ternetzi</i>	AnoTer	HS		
		<i>Laemolyta fernandesi</i>	LaeFer	R		
		<i>Leporinus affinis</i>	LepAff	R		
		<i>Leporinus friderici</i>	LepFri	HS/R		
		<i>Leporinus</i> sp.	Lepsp	HS/R		
		<i>Leporinus trifasciatus</i>	LepTri	R		
		Bryconidae		<i>Brycon falcatus</i>	BryFal	R
<i>Salminus hilarii</i>	SalHil			R		
Characidae		<i>Aphyocharax</i> sp.	Aphsp	HS/R		
		<i>Astyanax abramis</i>	AstAbr	HS		
		<i>Astyanax fasciatus</i>	AstFas	HS/R		
		<i>Astyanax</i> sp.1	Astsp1	HS		
		<i>Astyanax</i> sp.2	Astsp2	HS/R		
		<i>Astyanax</i> sp.3	Astsp3	HS		
		<i>Bryconamericus</i> sp.	Brysp	R		
		<i>Bryconamericus</i> sp.2	Brysp2	HS		
		<i>Bryconamericus</i> sp.3	Brysp3	HS		
		<i>Chalceus epakros</i>	ChaEpa	R		
		<i>Charax gibbosus</i>	ChaGib	HS/R		
		<i>Creagrutus</i> sp.	Cresp	HS/R		
		<i>Cynopotamus</i> sp.	Cynsp	R		
		<i>Galeocharax gulo</i>	GalGul	HS/R		
		<i>Hemigrammus</i> sp.	Hemisp	HS/R		
		<i>Hyphessobrycon</i> sp.	Hyphsp	HS/R		
		<i>Jupiaba</i> cf. <i>polylepis</i>	JupPol	HS/R		
		<i>Knodus</i> sp.	Knosp	HS/R		
		<i>Moenkhausia collettii</i>	MoeCol	HS/R		
		<i>Moenkhausia dichrourea</i>	MoeDic	HS/R		
		<i>Moenkhausia lepidura</i>	MoeLep	HS/R		
		<i>Moenkhausia oligolepis</i>	MoeOli	HS		
		<i>Moenkhausia</i> sp.2	Moesp2	HS/R		
		<i>Moenkhausia</i> sp.3	Moesp3	R		
		<i>Moenkhausia</i> sp.4	Moesp4	R		
		<i>Moenkhausia</i> sp.5	Moesp5	HS/R		
		<i>Moenkhausia</i> sp.6	Moesp6	R		
		<i>Odontostilbe</i> sp.	Odosp	HS/R		
		<i>Phenacogaster</i> sp.	Phesp	HS/R		
		Characidae		<i>Poptella longipinnis</i>	PopLon	HS/R
				<i>Pristella maxillaris</i>	PriMax	HS/R
				<i>Psellogrammus</i> sp.	Pselsp	HS
<i>Roeboexodon geryi</i>	RoeGer			HS/R		
<i>Serrapinnus</i> cf. <i>kriege</i>	SerKri			HS		
<i>Serrapinnus</i> sp.	Sersp			HS		
<i>Tetragonopterus argenteus</i>	TetArg			HS/R		
<i>Tetragonopterus chalceus</i>	TetCha	HS/R				
Chilodontidae		<i>Thayeria boehlkei</i>	ThaBoe	HS		
		<i>Caenotropus labyrinthicus</i>	CaeLab	R		
Crenuchidae		<i>Characidium zebra</i>	ChaZeb	HS/R		
Ctenoluciidae		<i>Boulengerella cuvieri</i>	BouCuv	HS/R		

Order	Family	Species	Code	Habitat
	Curimatidae	<i>Curimata acutirostris</i>	CurAcu	R
		<i>Curimata cyprinoides</i>	CurCyp	R
		<i>Curimatella</i> sp.	Cursp	HS
		<i>Cyphocharax</i> cf. <i>spiluropsis</i>	CypSpi	HS
		<i>Psectrogaster amazonica</i>	PseAma	R
		<i>Steindachnerina</i> sp.	Steisp	HS/R
		<i>Steindachnerina</i> sp.2	Steisp2	HS
	Cynodontidae	<i>Hydrolycus armatus</i>	HydArm	R
		<i>Hydrolycus tatauaia</i>	HydTat	R
		<i>Rhaphiodon vulpinus</i>	RhaVul	R
	Erythrinidae	<i>Hoplias lacerdae</i>	HopLac	R
		<i>Hoplias malabaricus</i>	HopMal	HS/R
	Gasteropelecidae	<i>Thoracocharax stellatus</i>	ThoSte	HS/R
	Hemiodontidae	<i>Hemiodus microlepis</i>	HemMic	R
		<i>Hemiodus unimaculatus</i>	HemUni	R
	Iguanodectidae	<i>Bryconops caudomaculatus</i>	BryCau	HS/R
		<i>Iguanodectes spilurus</i>	IguSpi	HS/R
	Parodontidae	<i>Apareiodon</i> sp.	Apasp	HS
		<i>Apareiodon</i> sp.2	Apasp2	HS/R
	Prochilodontidae	<i>Prochilodus nigricans</i>	ProNig	R
	Serrasalmidae	<i>Metynnis lippincottianus</i>	MetLip	HS
		<i>Myleus setiger</i>	MylSet	R
		<i>Myleus torquatus</i>	MylTor	R
		<i>Mylossoma duriventre</i>	MyloDur	R
		<i>Pygocentrus nattereri</i>	PygNat	R
		<i>Serrasalmus eigenmanni</i>	SerEig	R
		<i>Serrasalmus gibbus</i>	SerGib	R
		<i>Serrasalmus rhombeus</i>	SerRho	HS/R
Characiformes	Triportheidae	<i>Triportheus auritus</i>	TriAur	R
		<i>Triportheus trifurcatus</i>	TriTri	R
Cupleiformes	Pristigasteridae	<i>Pellona castelnaeana</i>	PelCas	R
		<i>Pristigaster cayana</i>	PrisCay	R
Cyprinodontiformes	Poeciliidae	<i>Pamphorichthys</i> sp.	Pamsp	HS
Gymnotiformes	Hypopomidae	<i>Brachyhypopomus brevirostris</i>	BraBre	HS
	Sternopygidae	<i>Eigenmannia virescens</i>	EigVir	HS/R
		<i>Sternopygus macrurus</i>	SteMac	R
Osteoglossiformes	Osteoglossidae	<i>Osteoglossum bicirrhosum</i>	OstBic	R
Perciformes	Cichlidae	<i>Aequidens tetramerus</i>	AeqTet	HS
		<i>Apistogramma</i> sp.	Apisp	HS
		<i>Biotodoma cupido</i>	BioCup	R
		<i>Cichla kelberi</i>	CicKel	R
		<i>Cichla piquiti</i>	CicPiq	R
		<i>Crenicichla labrina</i>	CreLab	HS/R
		<i>Crenicichla strigata</i>	CreStr	R
		<i>Geophagus proximus</i>	GeoPro	R
		<i>Retroculus lapidifer</i>	RetLap	HS/R
		<i>Satanoperca acuticeps</i>	SatAcu	HS/R
		<i>Satanoperca jurupari</i>	SatJur	R
	Sciaenidae	<i>Pachyurus</i> sp.	Pacsp	R
		<i>Plagioscion squamosissimus</i>	PlaSqu	R
Pleuronectiformes	Achiridae	<i>Hypoclinemus mentalis</i>	HypMen	R
Siluriformes	Aspredinidae	<i>Bunocephalus coracoideus</i>	BunCor	HS
	Auchenipteridae	<i>Ageneiosus brevifilis</i>	AgeBre	R
		<i>Ageneiosus ucayalensis</i>	AgeUca	R
		<i>Auchenipterichthys coracoideus</i>	AucCor	R
		<i>Auchenipterus nuchalis</i>	AucNuc	R
		<i>Trachelyopterus galeatus</i>	TraGal	HS/R
	Callichthyidae	<i>Aspidoras</i> sp.	Aspsp	HS
		<i>Corydoras</i> sp.	Corsp	HS

Order	Family	Species	Code	Habitat	
Siluriformes	Doradidae	<i>Hassar wilderi</i>	HasWil	R	
		<i>Leptodoras</i> sp.	Leptsp	R	
		<i>Oxydoras niger</i>	OxyNig	R	
		<i>Platydoras costatus</i>	PlaCos	R	
	Heptapteridae	<i>Imparfinis</i> sp.	Impsp	HS	
		<i>Pimelodella cristata</i>	PimCri	HS/R	
		<i>Pimelodella</i> sp.	Pimsp	HS/R	
		<i>Rhamdella</i> sp.	Rhamsp	HS	
	Loricariidae	<i>Farlowella</i> cf. <i>amazona</i>	FarAma	HS	
		<i>Hemiancistrus</i> sp.	Hemsp	R	
		<i>Hemiodontichthys acipenserinus</i>	HemiAci	R	
		<i>Hypoptopoma</i> sp.	Hyposp	R	
		<i>Hypostomus faveolus</i>	HypFav	R	
		<i>Hypostomus plecostomus</i>	HypPle	HS/R	
		<i>Hypostomus</i> sp.1	Hypsp1	HS/R	
		<i>Hypostomus</i> sp.2	Hypsp2	R	
		<i>Hypostomus</i> sp.3	Hypsp3	R	
		<i>Leporacanthicus</i> sp.	Leposp	R	
		<i>Loricaria cataphracta</i>	LorCat	HS/R	
		<i>Otocinclus tapirape</i>	OtoTap	HS	
		<i>Panaque nigrolineatus</i>	PanNig	R	
		<i>Panaque</i> sp.1	Pansp1	R	
		<i>Panaque</i> sp.2	Pansp2	R	
		<i>Panaque</i> sp.3	Pansp3	R	
		<i>Peckoltia oligospila</i>	PecOli	R	
		<i>Pseudacanthicus</i> sp.	Pseusp	R	
		<i>Pseudancistrus barbatus</i>	PseuBar	R	
		<i>Pterygoplichthys</i> sp.	Ptesp	R	
		<i>Rineloricaria</i> sp.	Rinsp	HS/R	
		<i>Rineloricaria</i> sp.2	Rinsp2	HS	
		<i>Squaliforma emarginata</i>	SquEma	R	
		<i>Sturisoma rostratum</i>	StuRos	R	
		Pimelodidae	<i>Hemisorubim plathyrhyncus</i>	HemPla	R
			<i>Pimelodus blochii</i>	PimeBlo	R
			<i>Pimelodus ornatus</i>	PimeOrn	R
			<i>Pseudoplatystoma fasciatum</i>	PseuFas	R
	<i>Sorubim lima</i>		SorLim	R	
	<i>Zungaro zungaro</i>		ZunZun	R	
	Tetraodontiformes	Tetraodontidae	<i>Colomesus aselus</i>	ColAse	R