

Additional file 2. Investigated Neotropical cichlids.

Major groups and species	Origin of samples	2n	5S rDNA number and position	Chromosomal arm	Reference	45S rDNA number and position	Chromosomal arm	References
Cichlinae								
Retroculini								
<i>Retroculus lapidifer</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(p)	L	This work	2t/a(t)	S	[24]
Astronotini								
<i>Astronotus ocellatus</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2m/sm(t)+2t/a(i)	2S+2L	This work	2m/sm(i)	S	[24]
Cichlini								
<i>Cichla piquiti</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(p)	L	This work			
<i>Cichla kelberi</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work, [35]	2t/a(t)	L	[35, 24]
Chaetobranchini								
<i>Chaetobranchius flavescens</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work	2m/sm(i)	S	[24]
Geophagini								
<i>Geophagus brasiliensis</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work, [27]	2t/a(t)	S	[27]
<i>Geophagus proximus</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work			
<i>Geophagus surinamensis</i>	Orinoco river, Caicara, Venezuela	48	2t/a(i)	L	This work			
<i>Bitodoma cupido</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work	2m/sm(t)	S	[24]
<i>Crenicichla lepidota</i>	São Gonçalo stream and Polegar lake, RS, Brazil	48	4t/a(i)	L	[30]	2m/sm(i)	S	[30]
<i>Satanoperca jurupari</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work	2t/a(t)	S	[24]
Cichlasomatini								
<i>Aequidens tetramerus</i>	Araguaia river, Barra do Garças, MT, Brazil	48	4t/a(i)	L	This work	2t/a(t)	S	[24]
<i>Aequidens plagiozonatus</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work			

<i>Cichlasoma facetum</i>	Tarumã river, Ponta Grossa, PR, Brasil	48	2t/a(i)	L	[27]	2t/a(t)	S	[27]
<i>Cichlasoma nigrofasciatum</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work			
<i>Cichlasoma paranaense</i>	Carrapato stream, Penápolis, SP, Brazil	48	2t/a(i)	L	This work			
<i>Laetacara dorsigera</i>	Araguaia river, Barra do Garças, MT, Brazil	44	2t/a(p)+2t/a(i)+10t/a(p)	2L+12CC	This work	2t/a(t)	S	[24]
Heroini								
<i>Heros efasciatus</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work	2t/a(t)	S	[24]
<i>Mesonauta festivus</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work	6t/a(t)	S	[24]
<i>Pterophyllum scalare</i>	Araguaia river, Barra do Garças, MT, Brazil	48	2t/a(i)	L	This work	2m/sm(t)	S	[24]
<i>Symphysodon aequifasciatus</i> [#]	Tefê river, AM, Brazil	60	2m/sm(t)	S	[28]	2m/sm(t); 3m/sm(t)	S	[28]
<i>Symphysodon discus</i> [#]	Negro river, AM, Brazil	60	2m/sm(t)	S	[28]	2m/sm(t); 3m/sm(t); 4m/sm(t); 5m/sm(t)	S	[28]
<i>Symphysodon haraldi</i> [#]	Manacapuru river, AM, Brazil	60	2m/sm(t)	S	[28]	2m/sm(t); 2m/sm(t)+1t/a(i); 2m/sm(t)+1m/sm(i)	S; 2S+1L; S	[28]

2n, diploid number; t/a, telo/acrocentric; m/sm, meta/submetacentric; L, long arm; S, short arm; CC, closely associated to centromeric region; (p), proximal; (i), interstitial; (t), terminal. The (#) indicates species with polymorphism for 45S rDNA. The polymorphic conditions are separated by (;).