

TABLE S1 | Geographical coordinates (latitude and longitude) of sampling sites in the Itaipu Reservoir, Paraná River basin, Brazil, sampled from March 1988 to October 2023.

Fishing site	Municipality	Coordinates	
		Latitude (S)	Longitude (W)
1	Foz do Iguaçu	25°23'22.04"	54°30'38.75"
2	Foz do Iguaçu	25°24'22.94"	54°29'49.69"
3	Santa Terezinha de Itaipu	25°23'13.85"	54°28'44.57"
4	Santa Terezinha de Itaipu	25°22'4.52"	54°29'33.71"
5	Santa Terezinha de Itaipu	25°21'31.30"	54°27'59.54"
6	Santa Terezinha de Itaipu	25°22'28.14"	54°25'56.23"
7	Santa Terezinha de Itaipu	25°22'18.46"	54°25'57.58"
8	Santa Terezinha de Itaipu	25°24'10.26"	54°24'3.30"
9	São Miguel do Iguaçu	25°22'26.72"	54°21'34.21"
10	São Miguel do Iguaçu	25°18'46.94"	54°28'25.83"
11	São Miguel do Iguaçu	25°18'3.17"	54°20'20.75"
12	São Miguel do Iguaçu	25°23'14.08"	54°23'5.32"
13	São Miguel do Iguaçu	25°20'58.65"	54°23'24.87"
14	São Miguel do Iguaçu	25°15'36.23"	54°20'59.20"
15	São Miguel do Iguaçu	25°14'51.49"	54°19'54.45"
16	São Miguel do Iguaçu	25°13'40.24"	54°16'5.67"
17	São Miguel do Iguaçu	25°14'7.60"	54°14'7.70"
18	Itaipulândia	25°12'17.95"	54°22'13.67"
19	Itaipulândia	25°12'0.02"	54°23'21.08"
20	Itaipulândia	25°8'39.40"	54°23'7.69"
21	Itaipulândia	25°5'51.86"	54°23'15.52"
22	Itaipulândia	25°4'37.23"	54°24'14.62"
23	Missal	25°3'24.22"	54°18'56.37"
24	Missal	25°2'18.50"	54°17'38.41"
25	Santa Helena	25°1'6.53"	54°23'31.64"
26	Santa Helena	25°0'12.24"	54°23'42.69"
27	Santa Helena	24°58'49.18"	54°23'11.32"
28	Santa Helena	24°56'53.72"	54°23'53.86"
29	Santa Helena	24°52'51.99"	54°21'16.52"
30	Santa Helena	24°50'49.30"	54°19'32.02"
31	Santa Helena	24°51'43.97"	54°18'8.18"
32	Santa Helena	24°52'25.46"	54°15'57.52"
33	Santa Helena	24°49'10.85"	54°17'49.92"
34	Santa Helena	24°48'18.95"	54°18'54.78"
35	Santa Helena	24°46'9.05"	54°19'37.46"
36	Santa Helena	24°44'10.94"	54°19'6.91"
37	Santa Helena	24°43'30.90"	54°17'15.00"
38	Entre Rios do Oeste	24°42'17.48"	54°16'52.81"
39	Entre Rios do Oeste	24°41'40.05"	54°17'13.84"
40	Entre Rios do Oeste	24°41'1.17"	54°15'51.20"
41	Entre Rios do Oeste	24°41'10.56"	54°14'30.37"
42	Entre Rios do Oeste	24°41'35.06"	54°12'30.19"
43	Entre Rios do Oeste	24°41'38.22"	54°10'16.93"
44	Pato Bragado	24°40'23.93"	54°10'30.02"



TABLE S1 | (Continued)

Fishing site	Municipality	Coordinates	
		Latitude (S)	Longitude (W)
45	Pato Bragado	24°40'18.25"	54°13'58.46"
46	Pato Bragado	24°36'12.73"	54°17'49.18"
47	Pato Bragado	24°35'4.27"	54°16'2.72"
48	Marechal Cândido Rondon	24°32'2.19"	54°18'52.93"
49	Mercedes	24°25'18.48"	54°15'51.21"
50	Mercedes	24°23'13.32"	54°15'5.64"
51	Guaíra	24°20'31.78"	54°14'41.99"
52	Guaíra	24°16'22.75"	54°16'31.48"
53	Guaíra	24°16'21.77"	54°16'28.94"
54	Guaíra	24°15'6.69"	54°18'23.74"
55	Guaíra	24°13'3.10"	54°18'56.18"
56	Guaíra	24°11'19.94"	54°19'4.53"
57	Guaíra	24°10'18.35"	54°19'40.68"
58	Guaíra	24°10'7.13"	54°19'58.33"
59	Guaíra	24° 9'57.14"	54°20'7.44"
60	Guaíra	24° 8'26.33"	54°19'51.11"
61	Guaíra	24° 7'43.41"	54°19'36.59"
62	Guaíra	24° 7'25.85"	54°19'33.42"
63	Guaíra	24° 5'55.59"	54°17'15.20"

TABLE S2 | List of fish species caught by professional fishers in the Itaipu Reservoir, Paraná River basin, Brazil, from March 1988 to October 2023, used to estimate length at first maturity (L_{50}), along with corresponding voucher specimens. Ichthyological collection: NUP = Núcleo de Pesquisas em Limnologia, Ictiologia e Aqüicultura, Universidade Estadual de Maringá, Paraná State, Brazil.

Species	Voucher (NUP)
ELASMOBRANCHII	
Myliobatiformes	
Potamotrygonidae	
<i>Potamotrygon amandae</i> Loboda & Carvalho, 2013	23153
<i>Potamotrygon falkneri</i> Castex & Maciel, 1963	4543
ACTINOPTERYGII	
Characiformes	
Acestrorhynchidae	
<i>Acestrorhynchus lacustris</i> (Lütken, 1875)	08, 4504, 19695, 23100
Serrasalminidae	
<i>Piaractus mesopotamicus</i> (Holmberg, 1887)	23106, 23148
<i>Metynnis lippincottianus</i> (Cope, 1870)	4499, 4693, 4799, 5670, 23022, 23131
<i>Serrasalmus maculatus</i> Kner, 1858	4559, 23134
<i>Serrasalmus marginatus</i> Valenciennes, 1837	3130, 23028, 23169
Hemiodontidae	
<i>Hemiodus orthonops</i> Eigenmann & Kennedy, 1903	1473, 2434, 23027, 25014



TABLE S2 | (Continued)

Species	Voucher (NUP)
Prochilodontidae	
<i>Prochilodus lineatus</i> (Valenciennes, 1837)	1762, 11179, 23045, 23138
Anostomidae	
<i>Leporinus friderici</i> (Bloch, 1794)	4595, 5666, 11180, 11181, 11313, 22710, 23146
<i>Megaleporinus macrocephalus</i> (Garavello & Britski, 1988)	23109, 23135
<i>Megaleporinus obtusidens</i> (Valenciennes, 1837)	1756, 1900, 7515, 23036, 23145
<i>Schizodon borellii</i> (Boulenger, 1900)	1470, 1925, 23037, 23144
Bryconidae	
<i>Brycon hilarii</i> (Valenciennes, 1850)	1747, 5956
<i>Brycon orbignyanus</i> (Valenciennes, 1850)	2026, 13728
<i>Salminus brasiliensis</i> (Cuvier, 1816)	1507, 2470, 23137
Cynodontidae	
<i>Rhaphiodon vulpinus</i> Spix & Agassiz, 1829	1513, 23136, 24069, 24070
Erythrinidae	
<i>Hoplias mbigua</i> Azpelicueta, Benítez, Aichino & Mendez, 2015	23044
Siluriformes	
Loricariidae	
<i>Hypostomus ternetzi</i> (Boulenger, 1895)	1765, 15198, 23163, 24414
<i>Megalancistrus parananus</i> (Peters, 1881)	529, 4545, 4802, 23164
<i>Pterygoplichthys ambrosettii</i> (Holmberg, 1893)	23162
<i>Rhinelepis aspera</i> Spix & Agassiz, 1829	2005, 4528, 5638
Auchenipteridae	
<i>Ageneiosus inermis</i> (Linnaeus, 1766)	2007, 2008, 2013, 23025, 23128, 24413
<i>Ageneiosus ucayalensis</i> Castelnau, 1855	531, 535, 536, 4640, 4671, 4690, 23032, 23161
<i>Auchenipterus osteomystax</i> (Miranda Ribeiro, 1918)	1468, 1471, 2015, 2627, 23156, 24002, 24003, 24349
<i>Trachelyopterus galeatus</i> (Linnaeus, 1766)	1745, 6974, 23171
Doradidae	
<i>Pterodoras granulosus</i> (Valenciennes, 1821)	1855, 4568, 4642, 23057, 23160
Pimelodidae	
<i>Hemisorubim platyrhynchos</i> (Valenciennes, 1840)	1512, 2491, 4511
<i>Hypophthalmus oremaculatus</i> Nani & Fuster de Plaza, 1947	23635, 24035, 24036, 24037, 24374
<i>Iheringichthys labrosus</i> (Lütken, 1874)	671, 678, 1882, 4632, 22711, 22721, 23071, 23129, 24039, 24415
<i>Pimelodus misteriosus</i> Azpelicueta, 1998	19655
<i>Pirirampus pirinampu</i> (Spix & Agassiz, 1829)	666, 2493, 4487, 4659, 23058, 23149, 23157
<i>Pseudoplatystoma corruscans</i> (Spix & Agassiz, 1829)	1514, 23158, 23250
<i>Sorubim lima</i> (Bloch & Schneider, 1801)	2494, 23088
<i>Zungaro jahu</i> (Ihering, 1898)	23331



TABLE S2 | (Continued)

Species	Voucher (NUP)
Carangiformes	
Achiridae	
<i>Catathyridium jenynsii</i> (Günther, 1862)	2848, 11912, 23024, 24012, 24013, 24014, 24015, 24016, 24017
Cichliformes	
Cichlidae	
<i>Astronotus crassipinnis</i> (Heckel, 1840)	4670, 23096, 23113
<i>Cichla kelberi</i> Kullander & Ferreira, 2006	1746, 2014, 7172, 7187, 23133, 23141
<i>Cichla piquiti</i> Kullander & Ferreira, 2006	4635, 4797, 19675, 23150
<i>Geophagus sveni</i> Lucinda, Lucena & Assis, 2010	23116, 2317
<i>Satanoperca setepele</i> Ota, Deprá, Kullander, Graça & Pavanelli, 2022	4644, 23111
Acanthuriformes	
Sciaenidae	
<i>Plagioscion squamosissimus</i> (Heckel, 1840)	1924, 4628, 4669, 4672, 23132, 23154

Proportion mature

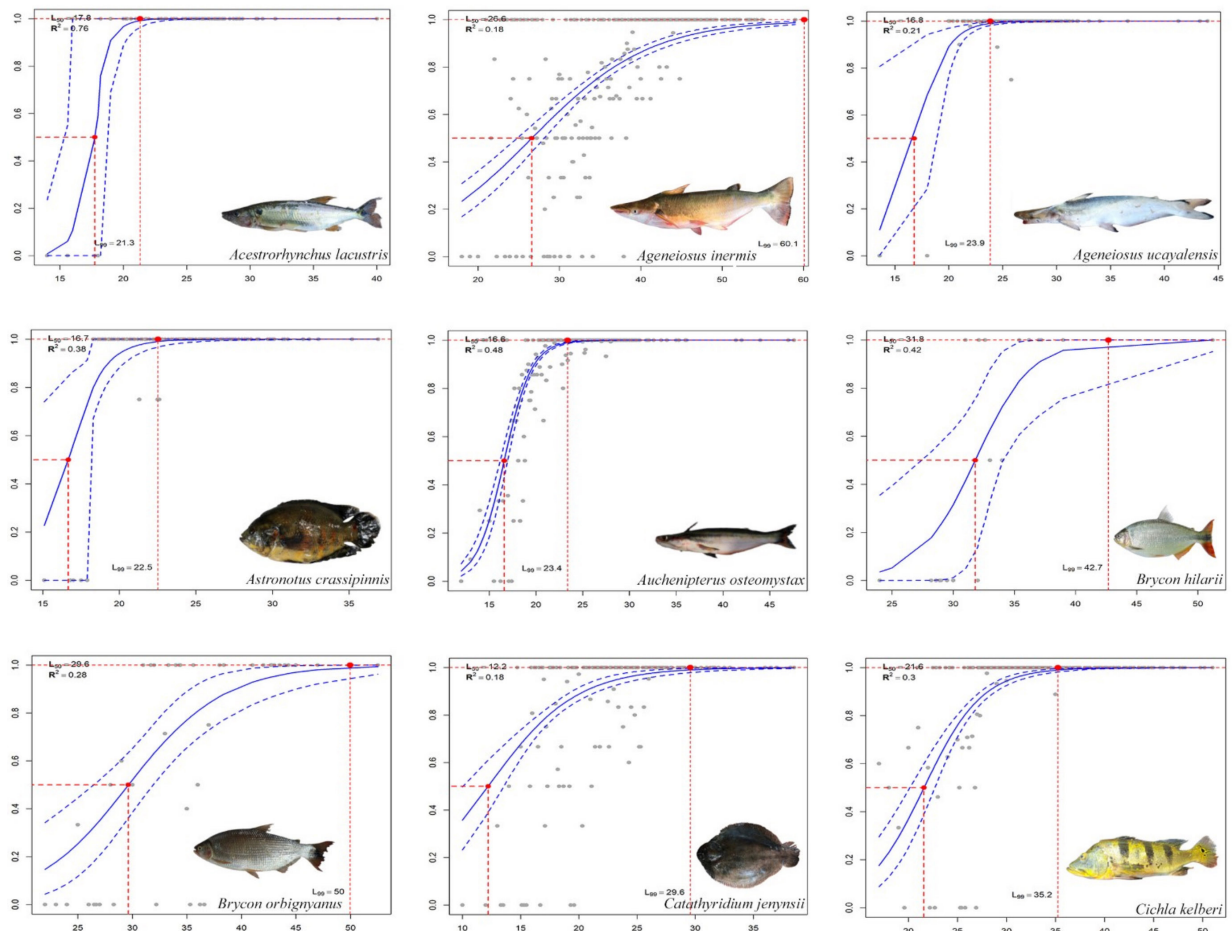


FIGURE S3 | Length at first maturity (L_{50}) of fish species caught by professional fishers in the Itaipu Reservoir, Paraná River basin, Brazil, from March 1988 to October 2023.

Proportion mature

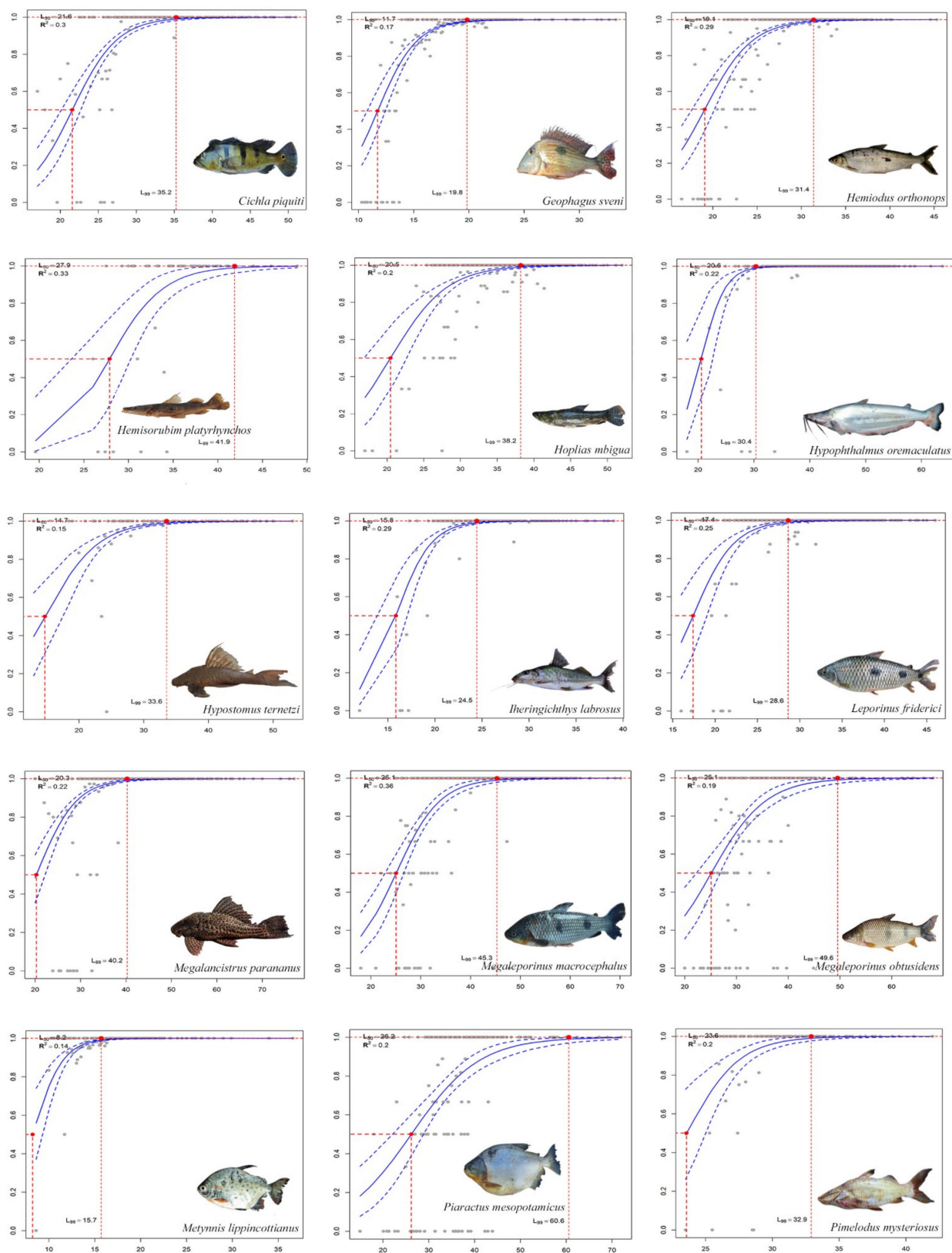


FIGURE S3 I (Continued)

Proportion mature

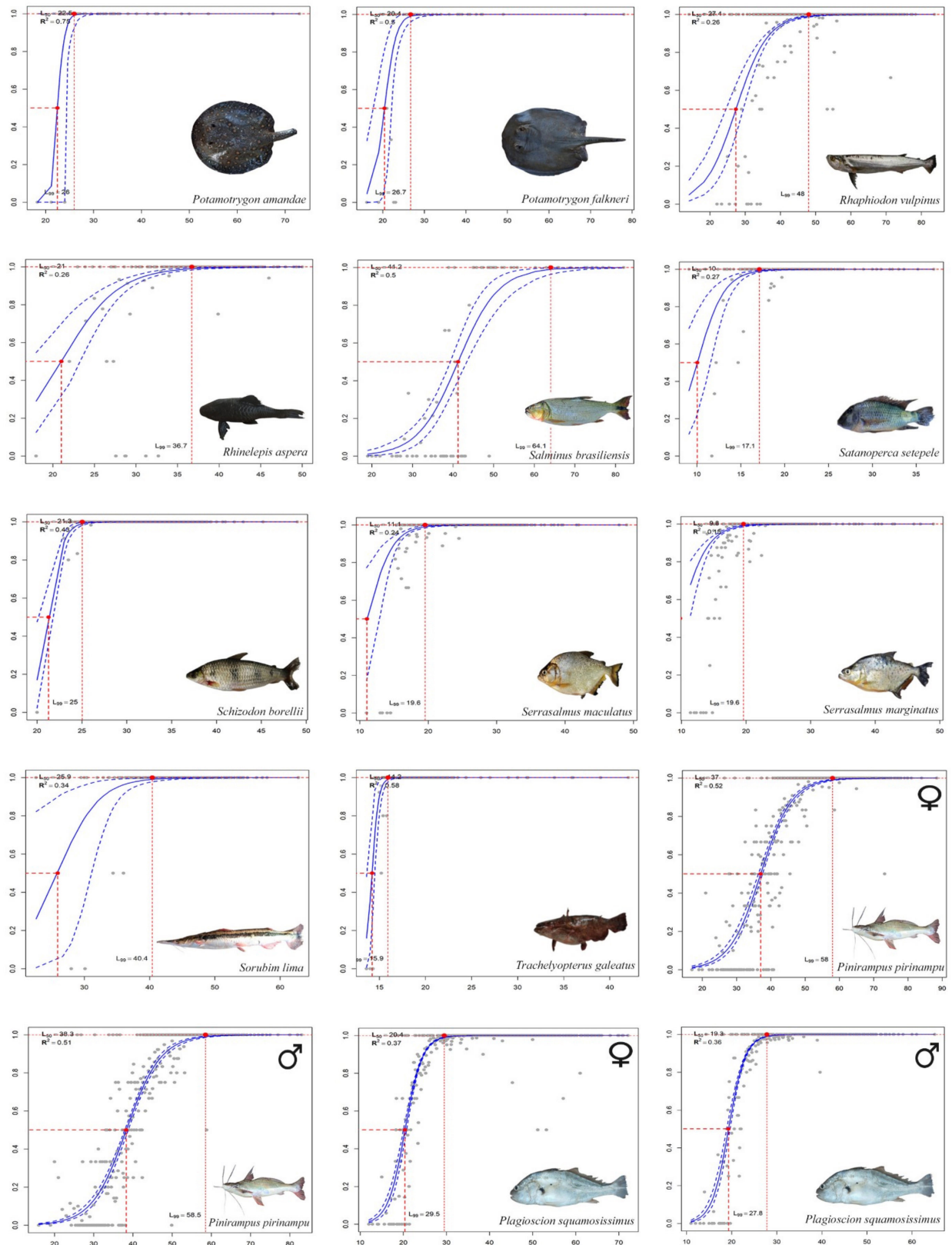


FIGURE S3 | (Continued)

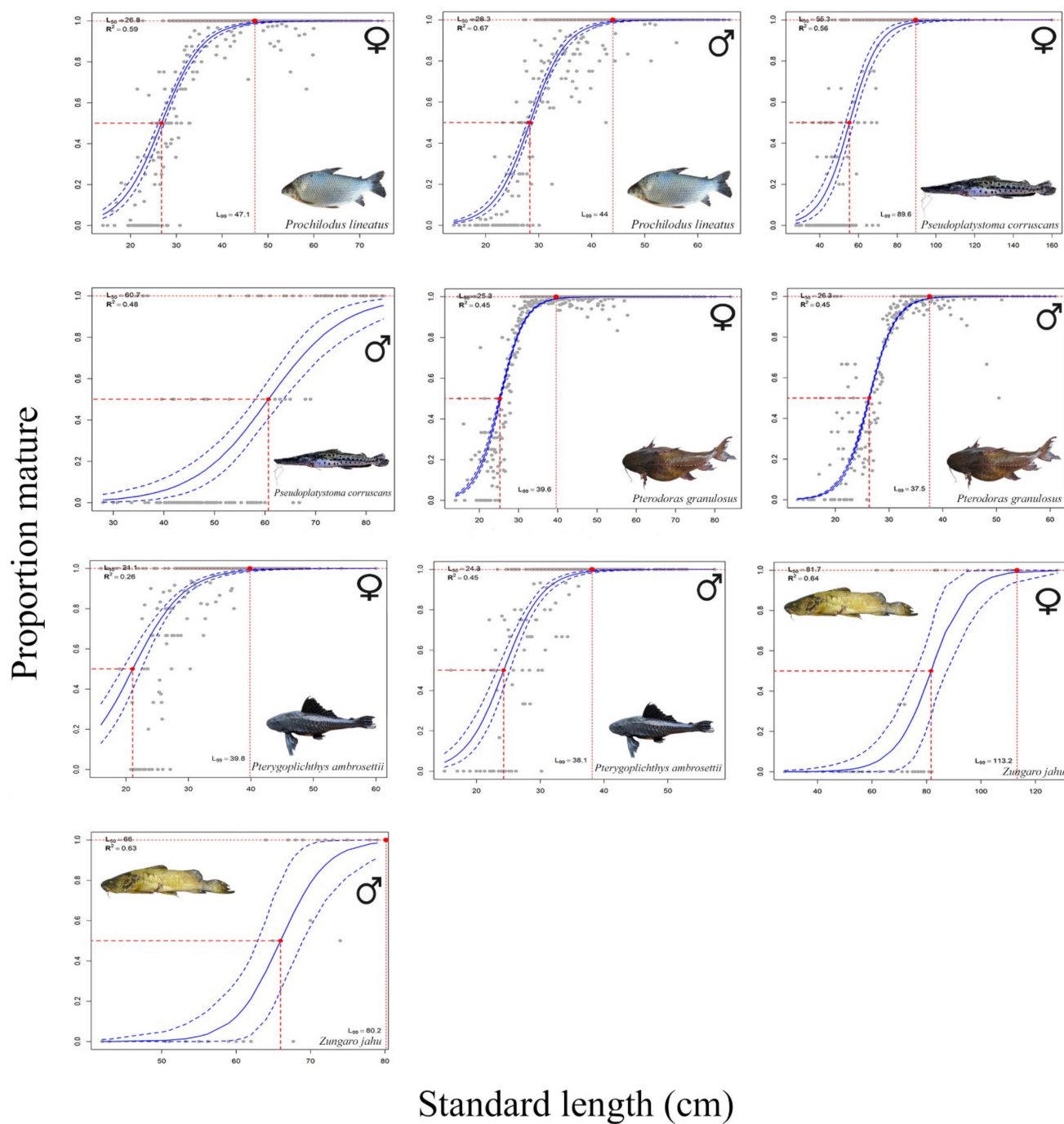


FIGURE S3 | (Continued)

Neotropical Ichthyology



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