

TABLE S1 | Methodology applied to identify potamodromous species in the Tocantins-Araguaia basin. Following Dagosta, de Pinna (2019) and Chamon *et al.* (2022), we compiled a broad species list for the Tocantins-Araguaia basin (761 species – Step 1). From the general species list, potential potamodromous species were identified (124 species – Step 2), based on Carolsfeld *et al.* (2003), Agostinho *et al.* (2008), Van Damme *et al.* (2011), Barthem *et al.* (2017), Doria *et al.* (2018), and Duponchelle *et al.* (2021), in addition to our own experience (Researcher). The list was then revised (Step 3) to confirm the migratory status of each species, classifying each according to a migration scale: 1 = Sedentary, 2 = < 50 km, 3 = 50 to 99 km, 4 = 100 to 1000 km and 5 = >1000 km. We then excluded species with uncertain status, sedentary and short migrants (class 1 and 2). A total of 77 species was classified as potamodromous.

ID	Species	Step 1 (occurrence +in the basin)	Step 2 (potential potamodromous)	Step 3 (migration scale)	Step 3 (potamodromous species)
1	<i>Ageneiosus dentatus</i>	Both	Researcher	3	x
2	<i>Ageneiosus inermis</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
3	<i>Ageneiosus lineatus</i>	Chamon <i>et al.</i>	Researcher	3	x
4	<i>Ageneiosus ucayalensis</i>	Both	Doria <i>et al.</i> (2018)	3	x
5	<i>Ageneiosus vittatus</i>	Both	Researcher	3	x
6	<i>Aguarunichthys tocantinsensis</i>	Both	Researcher	4	x
7	<i>Anodus orinocensis</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
8	<i>Argonectes robertsi</i>	Both	Agostinho <i>et al.</i> (2009)	3	x
9	<i>Astyanax bimaculatus</i>	Both	Van Damme <i>et al.</i> (2011)	2	
10	<i>Auchenipterus osteomystax</i>	Both	Researcher	2	
11	<i>Brachyplatystoma filamentosum</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
12	<i>Brachyplatystoma platyneum</i>	Both	Duponchelle <i>et al.</i> (2021)	5	x
13	<i>Brachyplatystoma rousseauxii</i>	Both	Duponchelle <i>et al.</i> (2021)	5	x
14	<i>Brachyplatystoma vaillantii</i>	Chamon <i>et al.</i>	Doria <i>et al.</i> (2018)	5	x
15	<i>Brycon falcatus</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
16	<i>Brycon gouldingi</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
17	<i>Brycon nattereri</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
18	<i>Brycon pesu</i>	Both	Duponchelle <i>et al.</i> (2021)	2	
19	<i>Brycon polylepis</i>	Both	Duponchelle <i>et al.</i> (2021)	2	
20	<i>Bryconops alburnoides</i>	Both	Researcher	1	
21	<i>Colossoma macropomum</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
22	<i>Curimata acutirostris</i>	Both	Agostinho <i>et al.</i> (2009)	3	x
23	<i>Curimata cyprinoides</i>	Both	Agostinho <i>et al.</i> (2009)	3	x
24	<i>Curimata inornata</i>	Both	Agostinho <i>et al.</i> (2009)	3	x
25	<i>Curimata ocellata</i>	Both	Researcher	3	x
26	<i>Curimata vittata</i>	Both	Researcher	3	x
27	<i>Curimatella alburnus</i>	Dagosta, De Pinna	Van Damme <i>et al.</i> (2011)	3	x
28	<i>Curimatella dorsalis</i>	Both	Van Damme <i>et al.</i> (2011)	3	x
29	<i>Curimatella immaculata</i>	Both	Van Damme <i>et al.</i> (2011)	3	x
30	<i>Curimatopsis macrolepis</i>	Both	Van Damme <i>et al.</i> (2011)	3	x
31	<i>Cynodon gibbus</i>	Both	Duponchelle <i>et al.</i> (2021)	2	
32	<i>Cyphocharax plumbeus</i>	Both	Van Damme <i>et al.</i> (2011)	2	
33	<i>Hemisorubim platyrhynchos</i>	Both	Van Damme <i>et al.</i> (2011)	4	x
34	<i>Hoplosternum littorale</i>	Both	Duponchelle <i>et al.</i> (2021)	1	



TABLE S1 | (Continued)

ID	Species	Step 1 (occurrence +in the basin)	Step 2 (potential potamodromous)	Step 3 (migration scale)	Step 3 (potamodromous species)
35	<i>Hydrolycus armatus</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
36	<i>Hydrolycus tatauaia</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
37	<i>Hypomasticus pachycheilus</i>	Both	Researcher	1	
38	<i>Hypophthalmus marginatus</i>	Both	Doria <i>et al.</i> (2018)	4	x
39	<i>Leporinus affinis</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
40	<i>Leporinus bimaculatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
41	<i>Leporinus bistriatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
42	<i>Leporinus desmotes</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
43	<i>Leporinus fasciatus</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
44	<i>Leporinus friderici</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
45	<i>Leporinus geminis</i>	Both	Duponchelle <i>et al.</i> (2021)	2	
46	<i>Leporinus maculatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
47	<i>Leporinus nattereri</i>	Dagosta, De Pinna	Duponchelle <i>et al.</i> (2021)	2	
48	<i>Leporinus ortomaculatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
49	<i>Leporinus parae</i>	Both	Duponchelle <i>et al.</i> (2021)	2	
50	<i>Leporinus santosi</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
51	<i>Leporinus taeniofasciatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
52	<i>Leporinus tigrinus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
53	<i>Leporinus tristriatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
54	<i>Leporinus unitaeniatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
55	<i>Leporinus venerei</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
56	<i>Lithodoras dorsalis</i>	Chamon <i>et al.</i>	Researcher	3	x
57	<i>Megaloporinus trifasciatus</i>	Both	Researcher	4	x
58	<i>Megalodoras uranoscopis</i>	Both	Agostinho <i>et al.</i> (2009)	4	x
59	<i>Metynnis anisurus</i>	Dagosta, De Pinna	Researcher	1	
60	<i>Metynnis cuiaba</i>	Both	Researcher	1	
61	<i>Metynnis fasciatus</i>	Both	Researcher	1	
62	<i>Metynnis guaporensis</i>	Both	Researcher	1	
63	<i>Metynnis lippincottianus</i>	Both	Researcher	1	
64	<i>Metynnis luna</i>	Both	Researcher	1	
65	<i>Mylesinus paucisquamatus</i>	Both	Researcher	3	x
66	<i>Myleus setiger</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
67	<i>Myleus torquatus</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
68	<i>Myloplus arnoldi</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
69	<i>Myloplus asterias</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
70	<i>Myloplus nigrolineatus</i>	Chamon <i>et al.</i>	Researcher	3	x
71	<i>Myloplus rubripinnis</i>	Chamon <i>et al.</i>	Researcher	3	x
72	<i>Myloplus schomburgkii</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
73	<i>Mylossoma duriventre</i>	Both	Doria <i>et al.</i> (2018)	3	x
74	<i>Mylossoma unimaculatum</i>	Both	Researcher	3	x



TABLE S1 | (Continued)

ID	Species	Step 1 (occurrence +in the basin)	Step 2 (potential potamodromous)	Step 3 (migration scale)	Step 3 (potamodromous species)
75	<i>Oxydoras niger</i>	Both	Doria <i>et al.</i> (2018)	4	x
76	<i>Pellona castelnaeana</i>	Both	Doria <i>et al.</i> (2018)	4	x
77	<i>Pellona flavipinnis</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
78	<i>Phractocephalus hemioliopterus</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
79	<i>Piaractus brachypomus</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
80	<i>Piaractus mesopotamicus</i>	Chamon <i>et al.</i>	Agostinho <i>et al.</i> (2009)	4	x
81	<i>Pimelodina flavipinnis</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
82	<i>Pimelodus albofasciatus</i>	Both	Researcher	3	x
83	<i>Pimelodus blochii</i>	Both	Duponchelle <i>et al.</i> (2021)	3	
84	<i>Pimelodus luciae</i>	Both	Researcher	3	x
85	<i>Pimelodus ornatus</i>	Both	Researcher	3	x
86	<i>Pimelodus quadratus</i>	Both	Researcher	3	x
87	<i>Pimelodus speciosus</i>	Both	Researcher	3	x
88	<i>Pimelodus tetramerus</i>	Both	Researcher	3	x
89	<i>Pinirampus pinirampu</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
90	<i>Platynemichthys notatus</i>	Both	Doria <i>et al.</i> (2018)	4	x
91	<i>Platystomichthys sturio</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
92	<i>Prochilodus nigricans</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
93	<i>Psectrogaster amazonica</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
94	<i>Pseudoplatystoma fasciatum</i>	Chamon <i>et al.</i>	Doria <i>et al.</i> (2018)	4	x
95	<i>Pseudoplatystoma punctifer</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
96	<i>Pseudoplatystoma reticulatum</i>	Chamon <i>et al.</i>	Researcher	4	x
97	<i>Pterodoras granulatus</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
98	<i>Rhamdia foina</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
99	<i>Rhamdia itacaiunas</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
100	<i>Rhamdia muelleri</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
101	<i>Rhamdia poeyi</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
102	<i>Rhamdia quelen</i>	Both	Duponchelle <i>et al.</i> (2021)	2	
103	<i>Rhaphiodon vulpinus</i>	Both	Doria <i>et al.</i> (2018)	3	x
104	<i>Salminus hilarii</i>	Both	Agostinho <i>et al.</i> (2009)	4	x
105	<i>Salminus iquitensis</i>	Dagosta, De Pinna	Researcher	4	x
106	<i>Semaprochilodus brama</i>	Both	Agostinho <i>et al.</i> (2009)	4	x
107	<i>Serrasalmus eigenmanni</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
108	<i>Serrasalmus geryi</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
109	<i>Serrasalmus gibbus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
110	<i>Serrasalmus humeralis</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
111	<i>Serrasalmus maculatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
112	<i>Serrasalmus rhombeus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
113	<i>Serrasalmus serrulatus</i>	Both	Duponchelle <i>et al.</i> (2021)	1	
114	<i>Serrasalmus spilopleura</i>	Both	Duponchelle <i>et al.</i> (2021)	1	



TABLE S1 | (Continued)

ID	Species	Step 1 (occurrence +in the basin)	Step 2 (potential potamodromous)	Step 3 (migration scale)	Step 3 (potamodromous species)
115	<i>Sorubim lima</i>	Both	Doria <i>et al.</i> (2018)	4	x
116	<i>Sorubimichthys planiceps</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x
117	<i>Steindachnerina leucisca</i>	Both	Van Damme <i>et al.</i> (2011)	2	
118	<i>Tometes ancyloirhynchus</i>	Both	Researcher	4	x
119	<i>Tometes siderocarajensis</i>	Both	Researcher	4	x
120	<i>Trachelyopterus galeatus</i>	Both	Doria <i>et al.</i> (2018)	2	
121	<i>Triportheus albus</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
122	<i>Triportheus auritus</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
123	<i>Triportheus trifurcatus</i>	Both	Duponchelle <i>et al.</i> (2021)	3	x
124	<i>Zungaro zungaro</i>	Both	Duponchelle <i>et al.</i> (2021)	4	x

REFERENCES

- **Agostinho CS, Pelicice FM, Marques EE.** Reservatório de Peixe Angical: bases ecológicas para o manejo da ictiofauna. São Carlos: RiMa; 2008.
- **Barthem RB, Goulding M, Leite RG, Cañas C, Forsberg B, Venticinque E *et al.*** Goliath catfish spawning in the far western Amazon confirmed by the distribution of mature adults, drifting larvae and migrating juveniles. *Sci Rep.* 2017; 7(41784):1–13. <https://doi.org/10.1038/srep41784>
- **Carolsfeld J, Harvey B, Ross C, Baer A.** Migratory fishes of South America: biology, fisheries and conservation status. British Columbia, Canada: World Fisheries Trust; 2003.
- **Chamon CC, Serra JP, Camelier P, Zanata AM, Fichberg I, Marinho MMF.** Building knowledge to save species: 20 years of ichthyological studies in the Tocantins-Araguaia River basin. *Biota Neotrop.* 2022; 22(2):e20211296. <https://doi.org/10.1590/1676-0611-BN-2021-1296>
- **Dagosta FCP, de Pinna M.** The fishes of the Amazon: distribution and biogeographical patterns, with a comprehensive list of species. *Bull Am Museum Nat Hist.* 2019; 2019(431):1–163. <https://doi.org/10.1206/0003-0090.431.1.1>
- **Doria CR, Duponchelle F, Lima MAL, Garcia A, Carvajal-Vallejos FM, Méndez CC *et al.*** Review of fisheries resource use and status in the Madeira River basin (Brazil, Bolivia, and Peru) before hydroelectric dam completion. *Rev Fish Sci Aquac.* 2018; 26(4):494–514. <https://doi.org/10.1080/23308249.2018.1463511>
- **Duponchelle F, Isaac VJ, Doria C, Van Damme PA, Herrera-R GA, Anderson EP *et al.*** Conservation of migratory fishes in the Amazon basin. *Aquat Conserv Mar Freshw Ecosyst.* 2021; 31(5):1087–105. <https://doi.org/10.1002/aqc.3550>
- **Van Damme PA, Carvajal-Vallejos FM, Camacho J, Munoz H, Coronel J.** Peces migratorios de la Amazonía boliviana. In: Van Damme PA, Carvajal-Vallejos FM, Molina Carpio J, editors. Los peces y delfines de la Amazonía boliviana: hábitats, potencialidades y amenazas. Cochabamba, Bolivia: Edit. INI; 2011. p.149–200.

HOW TO CITE THIS ARTICLE

- **Campos TNS, Pereira HR, Perônico PB, Chamon CC, Soares PT, Pelicice FM.** Diversity of potamodromous fishes in the Tocantins-Araguaia basin. *Neotrop Ichthyol.* 2025; 23(1):e240098. <https://doi.org/10.1590/1982-0224-2024-0098>

Neotropical Ichthyology

OPEN ACCESS



This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

Distributed under Creative Commons CC-BY 4.0

© 2025 The Authors. Diversity and Distributions Published by SBI



Official Journal of the Sociedade Brasileira de Ictiologia