

Checklist of freshwater fishes from Loreto, Peru

Lista de especies de peces de agua dulce de Loreto, Perú

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Citación

Meza-Vargas V, Faustino-Fuster DR, Chuctaya J, Hidalgo M, Ortega Torres H. 2021. Checklist of freshwater fishes from Loreto, Peru. *Revista peruana de biología* 28(especial): e21911 001-028 (Diciembre 2021). doi: <http://dx.doi.org/10.15381/rpb.v28iespecial.21911>

Presentado: 09/02/2021

Aceptado: 10/08/2021

Publicado online: 30/12/2021

Editor: Leonardo Romero

Abstract

This study presents an extensive review of published and unpublished occurrence records of fish species in the Loreto department. Located in the northeast of the country, Loreto is the most geographically extensive region in the Peruvian territory. Despite the increase in fish collections in Loreto in recent years, the ichthyofauna of this department needs to be more documented. Based on a database of scientific collections and bibliographic information, an updated checklist of the freshwater fishes from Loreto is presented. The results reveal a rich and diversified ichthyofauna, with 873 species distributed in 331 genera, 50 families and 15 orders. The main groups are Characiformes (42.6%), Siluriformes (34.8%), Gymnotiformes (8.6%) and Cichliformes (7.4%). Part of the ichthyofauna has restricted distribution for Loreto (4.7%). In addition, 9.0% of species from Loreto are used in fisheries. Meanwhile, 219 species (25%) were categorized according to the IUCN criteria where only six species (0.7%) are currently considered threatened species (CR, EN or VU). The results presented in this work indicate that this department needs more studies to know the biodiversity of fish, likewise, the information presented constitutes a contribution to the knowledge of fish diversity that would support environmental management actions and decision-making aimed at conserving one of the most diverse departments of Peru.

Resumen

Este trabajo presenta una revisión de los registros de especies de peces, publicados y no publicados, del departamento de Loreto. Localizado al noreste del país, Loreto es el departamento más extenso del territorio peruano. A pesar del incremento en el número de las colectas de peces en Loreto en años recientes, la ictiofauna de este departamento necesita ser más documentada. Sustentado en los registros en bases de datos de colecciones científicas e información bibliográfica, se presenta una actualización de la lista de peces de agua dulce de Loreto. Los resultados revelaron una ictiofauna rica y diversificada, con 873 especies, distribuidas en 331 géneros, 50 familias y 15 órdenes. Los principales taxones fueron Characiformes (42.6%), Siluriformes (34.8%), Gymnotiformes (8.6%) y Cichliformes (7.4%). Parte de la ictiofauna tiene distribución restricta para Loreto (4.7%). Además, 9.0% de las especies son usadas en pesquerías de Loreto. Mientras tanto, 219 (25%) especies fueron categorizadas de acuerdo con los criterios de la IUCN, donde sólo seis especies (0.7%) son consideradas actualmente especies amenazadas (CR, EN o VU). Los resultados presentados en este trabajo señalan que este departamento necesita más estudios para conocer la biodiversidad de peces, así mismo, la información presentada constituye un aporte al conocimiento de la biodiversidad íctica que respaldaría las acciones de gestión ambiental y toma de decisiones destinados a conservar uno de los departamentos más diversos del Perú.

Keywords:

Amazon basin; ichthyofauna; Marañón River; species inventory; Ucayali River.

Palabras claves:

Cuenca del Amazonas; ictiofauna; río Marañón; inventario de especies; río Ucayali.

Journal home page: <http://revistasinvestigacion.unmsm.edu.pe/index.php/rpb/index>

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Introduction

The Amazon drainage is the largest basin in the world and the major component of the Neotropical region. It includes a vast area of 7.3 million km², crosses South America from the eastern Andes Mountains to the Atlantic coast crossing the shields of Brazil and Guyana (Venticinque et al. 2016, Leite & Rogers 2013). Besides its vastness in area, the Amazon basin possesses distinct physiognomies formed by geological backgrounds, diversity of rivers and soils (Dagosta & de Pinna 2018); and overall warm and humid Amazonian climate (Leite & Rogers 2013). In turn, these factors are associated with an enormous diversity of flora and fauna, comprising the richest ecosystem on the planet (Dagosta & de Pinna 2019).

The freshwater fish diversity of South America encompasses 5160 species; however, despite already being the most diverse freshwater ichthyofauna, estimates point to actual diversity between 8000 – 9000 species (Reis et al. 2016). The Amazon basin harbors the highest fish diversity in the world with 2406 described species (Jézéquel et al. 2020). Several efforts have been made to describe species and update lists of species by countries (Ortega & Vari 1986, Maldonado et al. 2008, Matamorros et al. 2009, Ortega et al. 2012, Mol et al. 2012, Le Bail et al. 2012, Barriga 2012, Angulo et al. 2013, Koerber & Litz 2014, Sarmiento et al. 2014, Mirande & Koerber 2015, Koerber et al. 2017, DoNascimiento et al. 2017) basins (Lasso et al. 2016, Ohara et al. 2017, Beltrão et al. 2019), regions (Jimenez-Prado et al. 2015, Van Der Sleen & Albert 2017, Dagosta & de Pinna 2019), and states (Bertacco et al. 2016, Dos Reis et al. 2020, Teixeira et al. 2020) along the Neotropical region.

The last checklist of freshwater native fishes from Peru registered 1064 species (Ortega et al. 2012), but

with additions of new species, new records and taxonomic revisions, this diversity reached 1141 species (MINAM 2019). Peru is made up of 24 departments and a constitutional province (Callao); however, fish diversity studies were never carried out by department and the main fish checklists were directed to sub-basins, (Ortega et al. 2006, Rengifo 2007, Palacios et al. 2008, Carvalho et al. 2009, Correa & Ortega 2010, Carvalho et al. 2011, Quezada et al. 2017, Armas et al. 2021).

Important ichthyological material deposited in peruvian fish collections comes from fieldwork associated to their environmental impact studies requested by law, to evaluate their potential impacts. In Loreto, some examples of these kind of activities are the exploration, exploitation, processing, and transportation of hydrocarbons (oil, gas) and Hidrovia projects. On the other hand, Rapid Biological Inventories conducted by the Field Museum during last 20 years have made possible to register the diversity from several areas in Loreto, particularly the fishes (Table 1).

Extensive biodiversity in Loreto is not limited to freshwater systems. Pitman et al. (2013) have done the first biodiversity compilation including plants and terrestrial vertebrates. As a result, Loreto has probably the highest species richness among Peruvian Departments, with 7959 plant species, 914 bird species, 267 mammal species, 216 amphibian species and 170 reptile species. Of these, the number of threatened species ranges between 1.7% (plants) to 7.5% (mammals) depending on the groups, and the number of endemics between 0.2% (birds) and 5.5% (amphibian).

In contrast, the knowledge of fish diversity from Loreto is far from complete. By this point, it is an important task to be done. Accordingly, this study aims to provide the first checklist of freshwater fishes recorded in Lore-

Table 1. Previous fish inventories in different basins in Loreto. NP=National Park, NR=National Reserve, RAC=Regional area of conservation.

Inventories	Total species	Possible new species	Conservation status	Reference
Biabo Cordillera Azul	93	10	NP	de Rham, Hidalgo & Ortega, 2001
Yavarí	240	10		Ortega, Hidalgo & Bértiz, 2003
Ampiyacu, Apayacu, Yaguas, Medio Putumayo	207	5	RAC	Hidalgo & Olivera, 2004
Matsés	177	9	NR	Hidalgo & Velásquez, 2006
Sierra del Divisor	109	14	NP	Hidalgo & Pezzi, 2006
Nanay-Mazán-Arelaba	154	12	RAC	Hidalgo & Willink, 2007
Cuyabeno-Güeppí	184	3	NP	Hidalgo & Rivadeneira, 2008
Maijuna	132	7	RAC	Hidalgo & Sipión, 2010
Yaguas-Cotuhé	337	7	NP	Hidalgo & Ortega-Lara, 2011
Cerros de Kampankis	60	6		Quispe & Hidalgo, 2012
Ere-Campuya-Algodón	210	4		Maldonado-Ocampo, Quispe & Hidalgo, 2013
Cordillera Escalera	30	2		Hidalgo & Aldea-Guevara, 2014
Tapiche-Blanco	180	4		Corahua, Aldea-Guevara & Hidalgo 2015
Medio Putumayo-Algodón	232	12		Hidalgo & Maldonado-Ocampo, 2016
Bajo Putumayo-Yaguas-Cotuhé	150	2		Faustino-Fuster, Patarroyo & de Souza, 2021

to to improve scientific information for guiding policy and management decisions for conservation and fishery management.

Material and methods

Study area. - Loreto is the largest department in Peru located northeast of the country, representing 28% of the Peruvian territory with an area of 368 851, 950 km² (CONAM 2005). Its borders are with Ecuador in the northwest, with Colombia in the northeast, Brazil in the east, Amazonas and San Martin departments in the west, and the Ucayali department in the south (Fig. 1).

Loreto is part of the Amazon rainforest, belonging to the Amazon Lowland ecoregion (Abell et al. 2008) with remnants of the Andes in the west border, as well as the Cerros del Kampankins (Pitman et al. 2012), Cordillera Escalera (Pitman et al. 2014) and Cordillera Azul (Alverson et al. 2000). In the heart of the department, the Amazon River is formed by the confluence of Marañón and Ucayali rivers, close to Nauta City.

The Marañón River is born in the Andes, in the Raura snow peak in Pasco Department about more than 5800 meters above sea level (m a.s.l.). According to the elevation gradient, the Marañón River can be split into the upper and lower basin. The upper Marañón River flows from the Raura snow peak to the Manseriche Pongo at 190 m a.s.l., and from approximately the middle of this geomorphological zone this river flows crossing the Loreto region. The lower Marañón River comprises Manseriche Pongo as it joins with Ucayali River in Nauta City. The lower Marañón River flows from west to east in the Amazonian lowlands in Loreto, presenting a meandering channel, covered by sand and sparse rocks. During the flood

season, it floods extensive areas frequently abandoning its old channel, opening a new one. The abandoned channels form the "cochas" lagoons or ox bow lakes, which - due to the shape they present - are called horseshoe lakes. The main tributaries of the lower Marañón River are Morona, Pastaza, Tigre, and Huallaga rivers (MINAM 2011).

The Ucayali River headwater is in the Eastern Andes, in the Mismi snow peak 5597 m a.s.l. in Arequipa, but is formally named by the junction of Urubamba and Tambo rivers, in the south of Ucayali Department. It can be separated into the upper and lower basin as well. The Upper Ucayali River flows from the Mismi snow peak to confluence between Ucayali and Pachitea rivers. The Lower Ucayali River goes from Pachitea River mouth to the confluence with Marañón River. The lower Ucayali River flows from south to north in Loreto; it also has meandering course forming "cochas" or lagoons and islands which constantly change shape and size. The tributaries of the lower Ucayali River are Aguaytia, Pisqui, Cushabatay and Tapiche rivers (MINAM 2011).

It is worth mentioning that both Lower Marañón and Ucayali rivers are navigable during the year. Once the Peruvian Amazon River is formed, it receives the contribution of tributaries like Nanay, Itaya, Napo, Ampiyacu-Apayacu, and Yavarí rivers (Peru); and Putumayo River (Colombia).

Data collection. - This study was based on bibliographic information. The record of species were obtained from collection data available on iDigBio (<https://www.idigbio.org/portal/search>), speciesLink (<http://www.splink.org.br/>) and mainly from Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima (MUSM) database from fishes sampled in Loreto department.

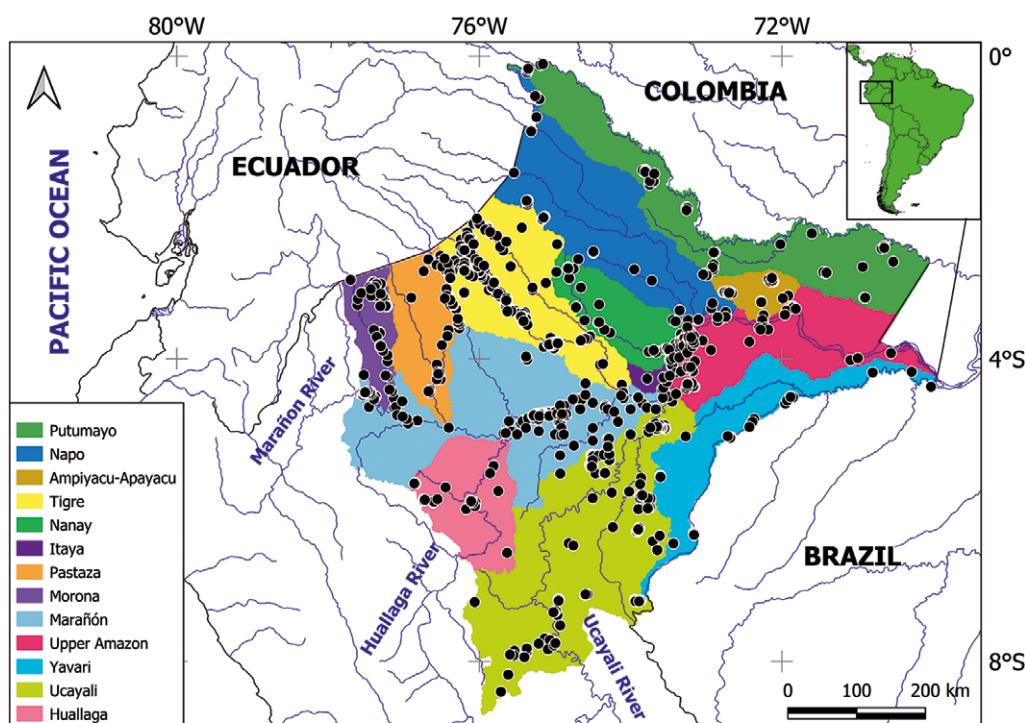


Figure 1. Loreto department showing main tributaries of the Amazon basin, sampling localities (black dots) taken from available databases.

The databases formed belongs to scientific collection, namely Academy of Natural Science of Philadelphia, Philadelphia (ANSP), California Academy of Sciences, San Francisco (CAS), Field Museum of Natural History, Chicago (FMNH), Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (MCP), Muséum national d'Histoire naturelle, Paris (MNHN), Museum of Comparative Zoology, Harvard University, Cambridge (MCZ), Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima (MUSM), Museu de Zoologia da Universidade de São Paulo, São Paulo (MZUSP), University of Florida, Florida Museum of Natural History, Gainesville (UF), University of Michigan Museum of Zoology, Ann Arbor (UMMZ), Museu de Zoologia da Universidade Estadual de Campinas "Adão José Cardoso", Campinas (ZUEC). Doubtful information, like no coordinates localities or unlikely coordinates, were discarded. Additionally, information was also compiled from available literature including species descriptions, taxonomic revision, and fish inventories and checklist (Appendix 1). This compilation covers 262 years of ichthyological information (Fig. 2).

The taxonomic nomenclature for order and families follows Betancur et al. (2017); valid names were confirmed following Eschmeyer Catalog of Fishes (Fricke et al. 2021). The use of *aff.* and *cf.* were avoided to try to get a precise number of species; in the same way, the use of "sp." was avoided except by few genera with no more species to represent. Nonnative species recorded from the natural environment in the Loreto department, with or without vouchers in fish collections were considered in a separate list and commented on in the discussion. Commercial species were taken from available information (García-Davila et al. 2018).

The conservation status of each species was taken from the last assessment following the IUCN criteria in 2014 available in <https://www.iucnredlist.org/>.

Results

Taxonomic composition. - Of the total information analysed, 21527 batches deposited in 10 scientific collections were registered. This annotated checklist reveals that the ichthyofauna in Loreto is composed of 873 valid species (Appendix 2), which included 38 new species described in the last eight years (Ortega et al. 2012) and taxonomic changes like transfers, synonyms, and distribution range extensions.

The species are distributed in 15 orders, 50 families and 331 genera (Table 2). Most of the ichthyofauna belongs to Otophysi (Cypriniformes, Characiformes, Siluriformes, and Gymnotiformes) representing 86.0% (750 species), with Characiformes being the most diverse order (372, species, 42.6%), followed by Siluriformes (304, species, 34.8%), and Gymnotiformes (75, species, 8.6%); and with addition of Cichliformes (65, species, 7.4%). The remaining 11 orders were represented by 57 species (6.5%) (Fig. 3A).

Table 2. Number of family, genera, and species for each order of fishes registered in Loreto.

Order	Family	Genera	Species
Myliobatiformes	1	3	5
Lepidosteniiformes	1	1	1
Osteoglossiformes	2	2	2
Clupeiformes	2	7	15
Characiformes	19	122	372
Gymnotiformes	5	25	75
Siluriformes	11	133	304
Batrachoidiformes	1	1	1
Cyprinodontiformes	1	3	11
Beloniformes	1	3	6
Synbranchiformes	1	1	3
Perciformes	2	4	8
Cichliformes	1	22	64
Carangiformes	1	3	5
Tetraodontiformes	1	1	1
Total	50	331	873

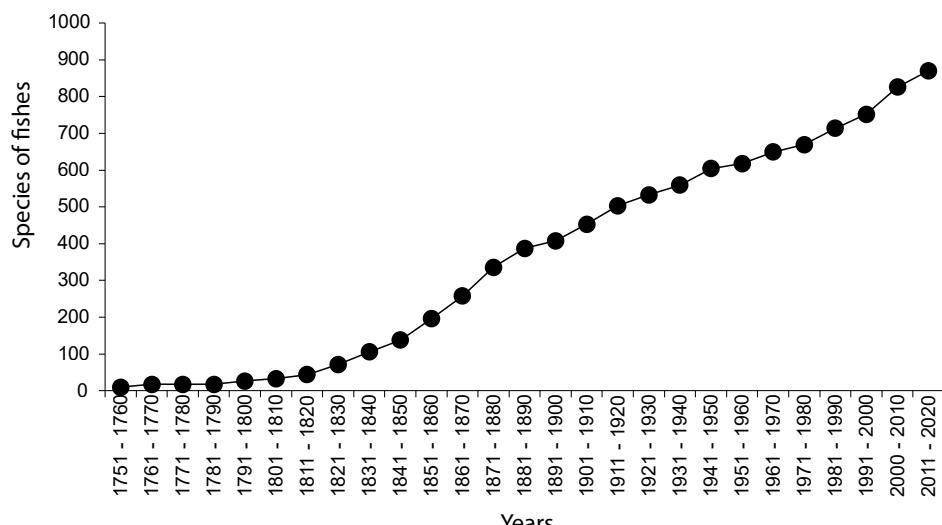


Figure 2. Cumulative curve of fish species described from Loreto department between 1758 – 2020, based on bibliographic information.

In terms of family richness, Characidae is the richest with 178 species (20.4%) followed by Loricariidae with 89 species (10.2%), Cichlidae with 64 species (7.3%), Pimelodidae with 41 species (4.7%), Callichthyidae and Doradidae with 40 each (4.6%) (Fig. 3B).

The most species-rich genera are found in Characidae; among them are *Creagrutus*, *Hemigrammus*, *Hyphe-*

sobrycon, *Moenkhausia*. Among Loricariidae *Hypostomus* with 9 species, also *Corydoras* concentrated the most species in Callichthyidae with 33 of 40 species. In the same way, *Aristogramma* and *Crenicichla* together sum half of Cichlidae with 31 of 66 species. In Gymnotiformes, *Brachyhypopomus* and *Gymnotus* are represented by 21 species combined (Fig. 3C).

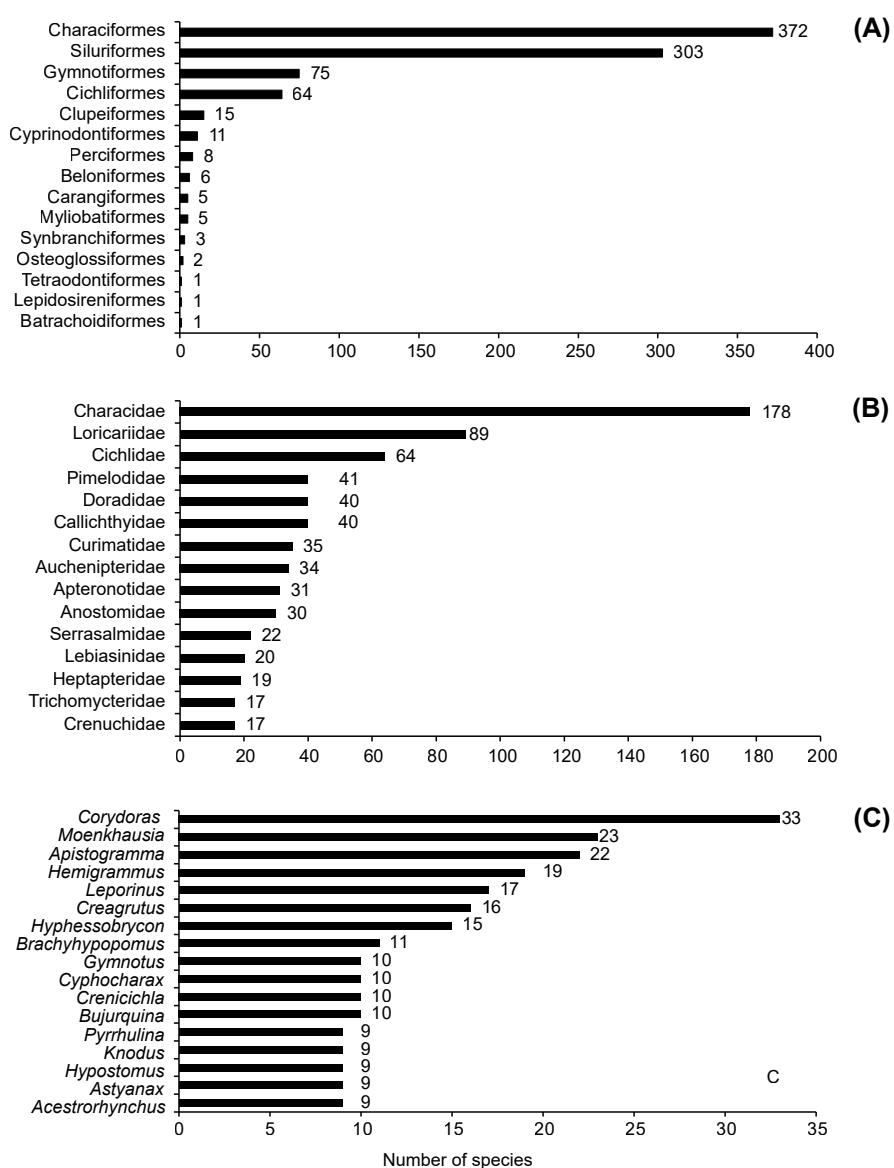


Figure 3. Richest taxa of fishes in number of species. A, orders; B, families; C, genera.

New species records. - New registers were added compared to the last list due recent taxonomic revisions, as *Copella nattereri* (Steindachner 1876), *Astyanax symmetricus* Eigenmann 1908, *Jupiaba anterior* (Eigenmann 1908), *Knodus septentrionalis* Géry 1972, *Moenkhausia intermedia* Eigenmann 1908, *Trachelyopterus porosus* (Eigenmann & Eigenmann 1888), *Tridensimilis brevis* (Eigenmann & Eigenmann 1889), *Hypoptopoma brevirostratum* Aquino & Schaefer 2010.

Others registers omitted in the last lists were added as, *Pellona altamazonica* Cope 1872, *Pyrrhulina melanosa*

(Cope 1870), *Mylossoma albiscopum* (Cope 1872), *Knodus borki* Zarske 2008, *Spinipterus acsi* Akama & Ferraris 2011, *Aphanotorulus phrixosoma* (Fowler 1940), *Limatulichthys petleyi* (Fowler 1940), *Moema hellneri* Costa 2003, *Moema schleseri* Costa 2003, *Aristogramma amoena* (Cope 1872).

Species with restricted distribution. - A total of 41 species (4.7%) has restricted distribution for Loreto. Most of them are cichlids, belonging to *Aristogramma*, followed by the rivulids: *Moema* and *Anablepsoides* (Fig. 4, Appendix 2).

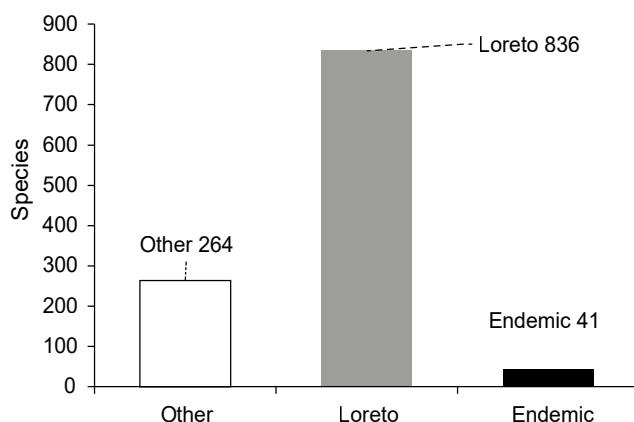


Figure 4. Freshwater fish species in Peru. Species distributed in other departments (white); species distributed in Loreto (gray) and species endemic from Loreto (black).

Commercially important species. - Large species that can surpass 1 m of standard length (SL), includes Arapaimidae, Osteoglossidae and mainly Pimelodidae (*Brachyplatystoma*, *Pseudoplatystoma*, *Zungaro*) which are known as migratory species. Some medium body-size species up to 30 cm belongs to Anostomidae (*Leporinus*, *Megaleporinus*), Auchenipteridae (*Auchenipterus*, *Tetranemichthys*), Bryconidae (*Brycon*, *Salminus*), Curimatidae (*Potamorhina*), Cynodontidae (*Hydrolycus*, *Rhaphiodon*), Loricariidae (*Panaque*, *Pterygoplichthys*), etc. Most of the communities harbor small species; that is, individuals with SL up to 10 cm, represented by 366 species (41%). Those species belong to Characidae (*Bryconamericus*, *Moenkhausia*), Iguanodectidae (*Bryconops*), Heptapteridae (*Mastiglanis*), Loricariidae (*Aphanotorulus*), Gymnotidae (*Gymnotus*), etc. Also, species up to 26 mm SL known as miniature species are present in this list, represented in Engraulidae (*Amazonsprattus scintilla*), Characidae (*Axelrodia stigmatias*, *Priocharax pygmaeus*, *Tytobrycon hamatus*, *Xenurobrycon heterodon*), Crenuchidae (*Odontocharacidium aphanes*), Callichthyidae (*Corydoras pygmaeus*), Doradidae (*Physopyxis ananas*), Pseudopimelodidae (*Microglanis zonatus*), Trichomycteridae (*Tridentopsis pearsoni*), etc.

In terms of commercial importance, small and medium species are used for aquarists (*Aristogramma*, *Corydoras*, *Hemigrammus*, etc.); medium and large-sized species are for human consumption (*Pseudoplatystoma*, *Prochilodus*, *Potamorrhina*, etc.) (Appendix 2).

Non-native species. - Exotic species are reported. *Coptodon rendalli* and *Oreochromis niloticus* (Tilapia), the livebearers *Poecilia* and *Gambusia affinis* and *Trichopodus trichopterus* are represented in collections (Table 3).

Threatened species. - Currently, a total of 217 species (24.9%) are categorized following the IUCN criteria (Appendix 2). Only six species (0.7%) are considered threatened species ("Critical Endangered" (CR), "Endangered" (EN) and "Vulnerable" (VU)). Additionally, two species were considered "Near Threatened" (NT) and 36 species as "Data Deficient" (DD). Finally, 173 species are considered as "Least Concern" (LC).

Table 3. Non-native species introduced in Loreto.

Order / Family	Species	IUCN
Cypriniformes		
Cyprininae	<i>Cyprinus carpio</i> Linnaeus 1758	VU
Danionidae	<i>Danio rerio</i> (Hamilton 1822)	LC
Cyprinodontiformes		
Poeciliidae	<i>Gambusia affinis</i> (Baird & Girard 1853)	LC
	<i>Poecilia latipinna</i> (Lesueur 1821)	LC
	<i>Poecilia reticulata</i> Peters 1859	
Cichliformes		
Cichlidae	<i>Coptodon rendalli</i> (Boulenger 1897)	LC
	<i>Oreochromis niloticus</i> (Linnaeus 1758)	LC
Anabantiformes		
Osphronemidae	<i>Trichopodus trichopterus</i> (Pallas 1770)	LC

Discussion

Taxonomic composition. - The diversity of fishes in Loreto is high, corresponding to 76.4% (873 spp.) of species known to occur in Peru (1141 spp.; MINAM 2019). Fifteen years ago, there were 597 recorded species (CONAM 2005), and in the last checklist 724 species were reported. This represents an increase of 20%. This value is incredibly high; over 76.4% of the species are recorded for only 28.7% (368.851 km²) of the Peruvian territory (1 285 000 km²). Compared to terrestrial vertebrates (Pitman et al 2013), fishes of Loreto have the highest percentage of IUCN species (25.1% vs. 19% or less) and the highest percentage of the total species reported for Peru (76.4% vs. 49.2% or less). Furthermore, fishes of Loreto have the second highest number of endemics species (4.9%) following amphibia (5.6%). This clearly shows the relevance of fish diversity in this region.

As in other lists or inventories in the Neotropical region, the most species-rich orders belong to Otophysi representing around 80% of species in total. In the same way, the most species-rich families follow the typical pattern for Amazonia fish composition: dominated for Characidae, Loricariidae, Cichlidae, Pimelodidae, Doradidae and Callichthyidae (Beltrão et al. 2019, Dagosta & de Pinna 2019).

New species records. - Although the list provided here considers species-level names only, there were some genera that could represent new species (*Scorpiodoras*, *Phenacorhamdia*, *Astroblepus*), even some of them are in the description process. Also, the species *Rhamdia cf. quelen* and *Trichomycterus cf. rivulatus* present some doubts related with its taxonomic status and need to be reviewed in detail. Besides that, *Astroblepus*, *Chaetostoma* and *Trichomycterus* are genera with typical distribution along an elevational gradient in the Andes, collected in the lowest slopes of Andes belonging to Loreto. Overall, those genera are diverse and endemic for sub basins; they can represent potential new species.

The Field Museum Rapid Biological Inventories have contributed to the knowledge of fishes from Loreto due to most of them being carried out in places with difficult access (Table 1). A total of 45 potential new species is

estimated from 15 inventories in Loreto. Of these, only 11% have been described (*Panaque schaeferi*, *Hypostomus fonschii*, *Corydoras ortegai*, *Hemibrycon divisoriensis*, *Mastiglanis yaguas* and *Cetopsorhamdia hidalgoi*). This demonstrates there still is more effort to make in taxonomic and systematic studies.

Species with restricted distribution. - Four point seven percent of the species (4.7%, 41 spp. of 873 spp.) have restricted distribution in Loreto (Appendix 2). Most available information of fish endemicity is expressed by basin, for instance, Marañón and Ucayali basins have high levels of endemism with 25% and 16% respectively (Dagosta & de Pinna 2019). For this reason, our results are not comparable with previous studies because they are regional. However, we believe that the lower portion of each basin can contribute to the richness of Piedmont species which are different from lowland species.

Commercially important species. - Fishing is one of the main economic activities in Peruvian Amazon; 79 species are part of fisheries resources (García-Dávila et al. 2018), representing 9% of the total species from Loreto. Thus, most species are not used for fisheries or any commercial purposes (91%). As was mentioned before, there is an enormous diversity of fishes in terms of size, body shape, colour pattern, etc., which are of interest of researchers with different focuses (systematic, taxonomy, ecology, genetic, phylogeny, etc.). However, the Peruvian government considers all freshwater fishes as fisheries or hydro-biological resources, which are under the supervision of the Ministry of Production, rather than being considered as fauna under the management of the Ministry of the Environment. This misconception of fisheries resources is problematic for research (i.e.: permission for collecting fishes, permission for exportation, of individuals as well DNA analysis) and conservation (IUCN categorization). Several countries in the Neotropical region manage freshwater fishes as fauna that allow them to make research about checklists by basin or departments, conservation status and red list (IUCN), scientific expeditions, etc. This kind of management politics can improve the knowledge and conservation of freshwater fish diversity in Peru.

Finally, the present study can contribute to the management of fisheries to get precise catchment for species as well as for fauna since it contains an update of the fish list for Loreto.

Non-native species. - Exotic fishes have been introduced into natural habitats in Peru for different purposes since 1930s. For example, the tilapia (*Coptodon rendalli*) was introduced repeatedly into coastal and central Amazon basin to increase food availability to local community. Livebearers (*Poecilia latipinna* and *Gambusia affinis*) were introduced to control malaria insects during the 1950s (Ortega et al. 2007). Additionally, other introductions, such as *Cyprinus carpio*, *Oreochromis niloticus* and *Poecilia reticulata* also were registered for lower Huallaga River (Ortega et al. 2007).

Trichopodus trichopterus can be found around Iqui-

tos streams and recently was collected next to Quistococha by H. Sánchez (Pers. Comm. 2019). Many decades ago (1980-1990), there was some ornamental activity around this group from Moronacocha, a lagoon very close to the city and connected to Nanay River. In addition, *Danio rerio* (Cypriniformes) known as zebra fish, were registered in a consulting work in a lentic body of water between Nauta and Iquitos (Urku & Briell 2016). The introduction of exotic species into natural habitats caused several problems such as predation, competition for resources and for niches. The species reported herein are adapted to warm water, and that facilitated their dispersion (Ortega et al. 2012, Ortega et al. 2007). Some of these species do not have vouchers in collections but as mentioned before, they are already in natural habitats (Table 3) and it is necessary to take some control actions to minimize the effects.

Incidental presence of shark has been recorded in Iquitos. *Carcharhinus leucas* was registered the first time in 1952 by Myers who identified a single specimen by a photo (Gausmann 2018, unpublished report). Although the bull shark has been registered in several rivers in different continents, the farthest penetration and longest movement into freshwater is provided for the Amazon River, more than 5000 km away from the mouth of the river at the coastline of the Atlantic Ocean. The distribution of this species is limited by water temperature, not only in coastal, but even in freshwater systems (Castro 2010).

Gaps of information. - Even though, almost all the sub-basins of the department have been studied, there still are some gaps to fill. For instance, the middle Napo River, some tributaries of Marañón River, Yavarí River, and some tributaries between Huallaga River and Ucayali River (Fig. 1). These areas should be prioritized for ichthyological surveys.

Conservation. - Several threats have been identified in Loreto derived from economic activities such as deforestation, illegal logging, artisanal fluvial gold mining, pollution, road constructions, hydroelectric dam and Hidrovía projects. All of these threats have affected the environment in the past but might especially affect aquatic habitats and their fish fauna in the future.

Although the time for the collections were limited, the information obtained in biological inventories was valuable. Not only to know the diversity in those places at the time, but also to know the conservation state of the area and the local communities that live there. It is important to mention that the most remarkable thing of those inventories was that they were taken as a baseline to propose national protected areas (NPA) where 53% of them led to the creation of an NPA in some category (Pitman et al. 2021) (Table 1).

It is worth mentioning that the last meeting of categorization of Peruvian fishes was focused on Andean fishes (IUCN, 2014). "Near threatened" and "Data deficient" indicate lack of information about distribution, natural history, size or density population and ecology of those species (Bertaco et al. 2016), hence encourag-

ing more studies to be made on those species. Besides that, species considered as “Least concern” can give an appearance of the stability of the conservation status of those species; however, they need to be updated due new threats, which can appear. Overall, more efforts need to be made to complete the assessment of Peruvian fish species and particularly from the Loreto department.

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Agradecimientos / Acknowledgments:

We are grateful to all researchers and ichthyologists who have contributed increase knowledge about the ichthyofauna in Loreto over the time. This work has been possible due to database available from different institutions/collections, Academy of Natural Science of Philadelphia, Philadelphia (ANSP), California Academy of Sciences, San Francisco (CAS), Field Museum of Natural History, Chicago (FMNH), Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (MCP), Muséum national d'Histoire naturelle, Paris (MNHN), Museum of Comparative Zoology, Harvard University, Cambridge (MCZ), Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima (MUSM), Museu de Zoologia da Universidade de São Paulo, São Paulo (MZUSP), University of Florida, Florida Museum of Natural History, Gainesville (UF), University of Michigan Museum of Zoology, Ann Arbor (UMMZ), Museu de Zoologia da Universidade Estadual de Campinas "Adão José Cardoso", Campinas (ZUEC).

Conflictos de intereses / Competing interests:

The authors declare no conflict of interest.

Rol de los autores / Authors Roles:

VMV, DRFF, JC, MH: conceptualization, investigation, methodology, data curation. VMV, DRFF, JC: formal analysis. VMV: writing original draft. VMV, DFF, JC, MH, HO: writing, review and editing.

Fuentes de financiamiento / Funding:

Wildlife Conservation Society (WCS).

Aspectos éticos / legales; Ethics / legal:

Authors declare that they did not violate or omit ethical or legal norms in this research.

Appendix 1. Literature sources for distributional data on Amazonian fishes from Loreto, Peru.

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Appendix 2. List of fish species of the department of Loreto. Columns are organized by Order, family, valid name, restricted distribution (RD) = x, commercial species (C) = * following Garcia-Dávila et al. (2018) and, IUCN categorization (LC=Least Concern, DD= Data Deficient, NT= Near Threatened, CR=Critically Endangered, EN=Endangered, VU=Vulnerable).

Order / Family	Species	RD	C	IUCN
Myliobatiformes				
Potamotrygonidae	<i>Plesiotrygon nana</i> Carvalho & Ragno 2011			
	<i>Paratrygon aiereba</i> (Müller & Henle 1841)			
	<i>Potamotrygon motoro</i> (Müller & Henle 1841)			
	<i>Potamotrygon orbignyi</i> (Castelnau 1855)			LC
	<i>Potamotrygon tigrina</i> Carvalho, Sabaj Pérez & Lovejoy 2011			EN
Lepidosireniformes				
Lepidosirenidae	<i>Lepidosiren paradoxa</i> Fitzinger 1837			
Osteoglossiformes				
Arapaimidae	<i>Arapaima gigas</i> (Schinz 1822)		*	DD
Osteoglossidae	<i>Osteoglossum bicirrhosum</i> (Cuvier 1829)		*	
Clupeiformes				
Engraulidae	<i>Amazonaprattus scintilla</i> Roberts 1984			LC
	<i>Anchoviella allenii</i> (Myers 1940)			LC
	<i>Anchoviella carrikeri</i> Fowler 1940			LC
	<i>Anchoviella guianensis</i> (Eigenmann 1912)			LC
	<i>Anchoviella hernanni</i> Loeb, Varella & Menezes 2018			LC
	<i>Anchoviella jamesi</i> (Jordan & Seale 1926)			LC
	<i>Anchoviella juruasanga</i> Loeb 2012			LC
	<i>Jurengraulis juruensis</i> (Boulenger 1898)			LC
	<i>Lycengraulis batesii</i> (Günther 1868)			LC
Pristigasteridae	<i>Ilisha amazonica</i> (Miranda Ribeiro 1920)			LC
	<i>Pellona altamazonica</i> Cope 1872	x		
	<i>Pellona castelnaeana</i> Valenciennes 1847		*	LC
	<i>Pellona flavipinnis</i> (Valenciennes 1837)		*	LC
	<i>Pristigaster cayana</i> Cuvier 1829			LC
	<i>Pristigaster whiteheadi</i> Menezes & de Pinna 2000			LC
Characiformes				
Hemiodontidae	<i>Anodus elongatus</i> Agassiz 1829		*	
	<i>Bivibranchia fowleri</i> (Steindachner 1908)			
	<i>Hemiodus argenteus</i> Pellegrin 1909			
	<i>Hemiodus atranalis</i> (Fowler 1940)			
	<i>Hemiodus gracilis</i> Günther 1864			

Order / Family	Species	RD	C	IUCN
	<i>Hemiodus microlepis</i> Kner 1858		*	
	<i>Hemiodus semitaeniatus</i> Kner 1858			
	<i>Hemiodus unimaculatus</i> (Bloch 1794)			
Parodontidae	<i>Parodon pongoensis</i> (Allen 1942)			
Curimatidae	<i>Curimata aspera</i> Günther 1868			
	<i>Curimata cisandina</i> (Allen 1942)			
	<i>Curimata knerii</i> Steindachner 1876			
	<i>Curimata roseni</i> Vari 1989			
	<i>Curimata vittata</i> (Kner 1858)		*	LC
	<i>Curimatella alburnus</i> (Müller & Troschel 1844)			
	<i>Curimatella dorsalis</i> (Eigenmann & Eigenmann 1889)		*	
	<i>Curimatella immaculata</i> (Fernández-Yépez 1948)			
	<i>Curimatella meyeri</i> (Steindachner 1882)		*	
	<i>Curimatopsis macrolepis</i> (Steindachner 1876)			
	<i>Curimatopsis microlepis</i> Eigenmann & Eigenmann 1889			
	<i>Cyphocharax derhami</i> Vari & Chang 2006	x		LC
	<i>Cyphocharax festivus</i> Vari 1992			
	<i>Cyphocharax leucostictus</i> (Eigenmann & Eigenmann 1889)			
	<i>Cyphocharax nigripinnis</i> Vari 1992			
	<i>Cyphocharax notatus</i> (Steindachner 1908)			
	<i>Cyphocharax pantostictos</i> Vari & Barriga Salazar 1990			LC
	<i>Cyphocharax plumbeus</i> (Eigenmann & Eigenmann 1889)			
	<i>Cyphocharax spilurus</i> (Eigenmann & Eigenmann 1889)			
	<i>Cyphocharax spilurus</i> (Günther 1864)			
	<i>Cyphocharax vexillapinnus</i> Vari 1992			
	<i>Potamorhina altamazonica</i> (Cope 1878)		*	
	<i>Potamorhina latior</i> (Spix & Agassiz 1829)		*	
	<i>Potamorhina pristigaster</i> (Steindachner 1876)			
	<i>Psectrogaster amazonica</i> Eigenmann & Eigenmann 1889		*	
	<i>Psectrogaster essequibensis</i> (Günther 1864)			
	<i>Psectrogaster rhombooides</i> Eigenmann & Eigenmann 1889			
	<i>Psectrogaster rutiloides</i> (Kner 1858)		*	
	<i>Steindachnerina bimaculata</i> (Steindachner 1876)			
	<i>Steindachnerina dobula</i> (Günther 1868)			
	<i>Steindachnerina guentheri</i> (Eigenmann & Eigenmann 1889)			
	<i>Steindachnerina hypostoma</i> (Boulenger 1887)			
	<i>Steindachnerina leucisca</i> (Günther 1868)			
	<i>Steindachnerina planiventris</i> Vari & Vari 1989			
	<i>Steindachnerina quasimodoi</i> Vari & Vari 1989			
Prochilodontidae	<i>Prochilodus nigricans</i> Spix & Agassiz 1829		*	
	<i>Semaprochilodus insignis</i> (Jardine 1841)		*	
Anostomidae	<i>Abramites hypselonotus</i> (Günther 1868)			
	<i>Anostomoides atrianalis</i> Pellegrin 1909			
	<i>Anostomus anostomus</i> (Linnaeus 1758)			
	<i>Laemolyta garmani</i> (Borodin 1931)			
	<i>Laemolyta proxima</i> (Garman 1890)			
	<i>Laemolyta taeniata</i> (Kner 1858)			
	<i>Leporellus vittatus</i> (Valenciennes 1850)			
	<i>Leporinus agassizii</i> Steindachner 1876		*	
	<i>Leporinus amazonicus</i> Santos & Zuanon 2008			
	<i>Leporinus aripuanaensis</i> Garavello & Santos 1981			
	<i>Leporinus bimaculatus</i> Castelnau 1855			
	<i>Leporinus desmotes</i> Fowler 1914			
	<i>Leporinus ecuadorensis</i> Eigenmann & Henn 1916			
	<i>Leporinus fasciatus</i> (Bloch 1794)			
	<i>Leporinus friderici</i> (Bloch 1794)		*	
	<i>Leporinus jamesi</i> Garman 1929			
	<i>Leporinus jatuncochi</i> Ovchynnyk 1971			
	<i>Leporinus moralesi</i> Fowler 1942			
	<i>Leporinus multimaculatus</i> Birindelli, Teixeira & Britski 2016			
	<i>Leporinus niceforoi</i> Fowler 1943			LC

Order / Family	Species	RD	C	IUCN
	<i>Leporinus parae</i> Eigenmann 1907			
	<i>Leporinus striatus</i> Kner 1858			LC
	<i>Leporinus y-ophorus</i> Eigenmann 1922		*	
	<i>Megaleporinus trifasciatus</i> (Steindachner 1876)		*	
	<i>Pseudanos gracilis</i> (Kner 1858)			
	<i>Pseudanos trimaculatus</i> (Kner 1858)			
	<i>Rhytiodus argenteofuscus</i> Kner 1858			
	<i>Rhytiodus microlepis</i> Kner 1858		*	
	<i>Schizodon fasciatus</i> Spix & Agassiz 1829		*	
	<i>Schizodon isognathus</i> Kner 1858			
Chilodontidae	<i>Caenotropus labyrinthicus</i> (Kner 1858)			
	<i>Chilodus punctatus</i> Müller & Troschel 1844			
Erythrinidae	<i>Erythrinus erythrinus</i> (Bloch & Schneider 1801)			
	<i>Hoplerythrinus unitaeniatus</i> (Spix & Agassiz 1829)		*	
	<i>Hoplias malabaricus</i> (Bloch 1794)		*	LC
Lebiasinidae	<i>Copeina guttata</i> (Steindachner 1876)			
	<i>Copeina osgoodi</i> Eigenmann 1922			
	<i>Copella callolepis</i> (Regan 1912)			
	<i>Copella nattereri</i> (Steindachner 1876)			
	<i>Copella vilmæ</i> Géry 1963			
	<i>Nannostomus digrammus</i> (Fowler 1913)			
	<i>Nannostomus eques</i> Steindachner 1876			
	<i>Nannostomus marginatus</i> Eigenmann 1909			CR
	<i>Nannostomus mortenthaleri</i> Paepke & Arendt 2001	x		CR
	<i>Nannostomus trifasciatus</i> Steindachner 1876			
	<i>Nannostomus unifasciatus</i> Steindachner 1876			
	<i>Pyrrhulina brevis</i> Steindachner 1876			
	<i>Pyrrhulina eleanorae</i> Fowler 1940			LC
	<i>Pyrrhulina laeta</i> (Cope 1872)			
	<i>Pyrrhulina melanostomus</i> (Cope 1870)			
	<i>Pyrrhulina obermulleri</i> Myers 1926			DD
	<i>Pyrrhulina semifasciata</i> Steindachner 1876			
	<i>Pyrrhulina spilota</i> Weitzman 1960			LC
	<i>Pyrrhulina vittata</i> Regan 1912			
	<i>Pyrrhulina zigzag</i> Zarske & Géry 1997			
Gasteropelecidae	<i>Carnegiella marthae</i> Myers 1927			
	<i>Carnegiella myersi</i> Fernández-Yépez 1950			
	<i>Carnegiella schererii</i> Fernández-Yépez 1950			
	<i>Carnegiella strigata</i> (Günther 1864)			
	<i>Gasteropelecus sternicla</i> (Linnaeus 1758)			
	<i>Thoracocharax securis</i> (De Filippi 1853)			
	<i>Thoracocharax stellatus</i> (Kner 1858)			
Ctenoluciidae	<i>Boulengerella cuvieri</i> (Spix & Agassiz 1829)			
	<i>Boulengerella maculata</i> (Valenciennes 1850)			
	<i>Boulengerella xyrekes</i> Vari 1995			LC
Acestrorhynchidae	<i>Acestrorhynchus abbreviatus</i> (Cope 1878)			
	<i>Acestrorhynchus altus</i> Menezes 1969			
	<i>Acestrorhynchus falcatus</i> (Bloch 1794)			
	<i>Acestrorhynchus falcirostris</i> (Cuvier 1819)		*	
	<i>Acestrorhynchus heterolepis</i> (Cope 1878)			
	<i>Acestrorhynchus lacustris</i> (Lütken 1875)			
	<i>Acestrorhynchus microlepis</i> (Jardine 1841)			
	<i>Acestrorhynchus minimus</i> Menezes 1969			
	<i>Acestrorhynchus nasutus</i> Eigenmann 1912			
	<i>Gnathocharax steindachneri</i> Fowler 1913			
	<i>Heterocharax macrolepis</i> Eigenmann 1912			
Cynodontidae	<i>Cynodon gibbus</i> (Spix & Agassiz 1829)			
	<i>Hydrolycus scomberoides</i> (Cuvier 1819)		*	
	<i>Hydrolycus tatauaia</i> Toledo-Piza, Menezes & Santos 1999			
	<i>Rhaphiodon vulpinus</i> Spix & Agassiz 1829		*	
Serrasalmidae	<i>Colossoma macropomum</i> (Cuvier 1816)		*	
	<i>Metynnis argenteus</i> Ahl 1923			

Order / Family	Species	RD	C	IUCN
	<i>Metynnis hypsauchen</i> (Müller & Troschel 1844)			
	<i>Metynnis lippincottianus</i> (Cope 1870)			
	<i>Metynnis luna</i> Cope 1878			
	<i>Metynnis maculatus</i> (Kner 1858)			
	<i>Myloplus levis</i> (Eigenmann & McAtee 1907)			*
	<i>Myloplus rubripinnis</i> (Müller & Troschel 1844)			*
	<i>Myloplus schomburgkii</i> (Jardine 1841)			*
	<i>Myloplus torquatus</i> (Kner 1858)			
	<i>Mylossoma albiscopum</i> (Cope 1872)			*
	<i>Mylossoma aureum</i> (Spix & Agassiz 1829)			*
	<i>Mylossoma duriventre</i> (Cuvier 1818)			
	<i>Piaractus brachypomus</i> (Cuvier 1818)			*
	<i>Pristobrycon striolatus</i> (Steindachner 1908)			
	<i>Pygocentrus nattereri</i> Kner 1858			*
	<i>Serrasalmus eigenmanni</i> Norman 1929			
	<i>Serrasalmus elongatus</i> Kner 1858			*
	<i>Serrasalmus humeralis</i> Valenciennes 1850			
	<i>Serrasalmus maculatus</i> Kner 1858			
	<i>Serrasalmus rhombeus</i> (Linnaeus 1766)			*
	<i>Serrasalmus spilopleura</i> Kner 1858			
Characidae	<i>Acestrocephalus boehlkei</i> Menezes 1977			LC
	<i>Aphyocharax nattereri</i> (Steindachner 1882)			
	<i>Aphyocharax pusillus</i> Günther 1868			
	<i>Astyanax abramis</i> (Jenyns 1842)			
	<i>Astyanax bimaculatus</i> (Linnaeus 1758)			
	<i>Astyanax gandiae</i> Ruiz-C., Román-Valencia, Taphorn, Buckup & Ortega 2018			
	<i>Astyanax kennedyi</i> Géry 1964	x		DD
	<i>Astyanax longior</i> (Cope 1878)			DD
	<i>Astyanax maximus</i> (Steindachner 1876)			
	<i>Astyanax multidens</i> (Pearson 1924)			
	<i>Astyanax symmetricus</i> Eigenmann 1908			
	<i>Astyanax vilwocki</i> Zarske & Géry 1999			DD
	<i>Attonitus irisae</i> Vari & Ortega 2000			LC
	<i>Axelrodia stigmatias</i> (Fowler 1913)			
	<i>Bario steindachneri</i> (Eigenmann 1893)			
	<i>Boehlkea fredcochui</i> Géry 1966			
	<i>Brachychalcinus copei</i> (Steindachner 1882)			
	<i>Brachychalcinus nummus</i> Böhlke 1958			LC
	<i>Brachychalcinus orbicularis</i> (Valenciennes 1850)			
	<i>Bryconamericus boliviensis</i> Pearson 1924			LC
	<i>Bryconamericus diaphanus</i> (Cope 1878)			LC
	<i>Bryconamericus pachacuti</i> Eigenmann 1927			LC
	<i>Bryconamericus phoenicopterus</i> (Cope 1872)			LC
	<i>Bryconella pallidifrons</i> (Fowler 1946)			
	<i>Ceratobranchia binghami</i> Eigenmann 1927			LC
	<i>Ceratobranchia obtusirostris</i> Eigenmann 1914			LC
	<i>Charax caudimaculatus</i> Lucena 1987			
	<i>Charax gibbosus</i> (Linnaeus 1758)			
	<i>Charax michaeli</i> Lucena 1989			
	<i>Charax niger</i> Lucena 1989			
	<i>Charax tectifer</i> (Cope 1870)			LC
	<i>Cheirodon luelingi</i> Géry 1964			DD
	<i>Cheirodon ortegai</i> Vari & Géry 1980			LC
	<i>Chrysobrycon eliasi</i> Vanegas-Ríos, Azpelicueta & Ortega 2011			DD
	<i>Chrysobrycon guahibo</i> Vanegas-Ríos, Urbano-Bonilla & Azpelicueta 2015			
	<i>Chrysobrycon hesperus</i> (Böhlke 1958)			LC
	<i>Chrysobrycon myersi</i> (Weitzman & Thomerson 1970)			LC
	<i>Creagrutus amoenus</i> Fowler 1943			LC
	<i>Creagrutus anary</i> Fowler 1913			
	<i>Creagrutus barrigai</i> Vari & Harold 2001			
	<i>Creagrutus changae</i> Vari & Harold 2001			LC
	<i>Creagrutus cochui</i> Géry 1964			

Order / Family	Species	RD	C	IUCN
	<i>Creagrus flavescens</i> Vari & Harold 2001			LC
	<i>Creagrus gephyrus</i> Böhlke & Saul 1975			LC
	<i>Creagrus gracilis</i> Vari & Harold 2001			LC
	<i>Creagrus holmi</i> Vari & Harold 2001			LC
	<i>Creagrus kunturus</i> Vari, Harold & Ortega 1995			LC
	<i>Creagrus muelleri</i> (Günther 1859)			LC
	<i>Creagrus occidaneus</i> Vari & Harold 2001			LC
	<i>Creagrus ortegai</i> Vari & Harold 2001			LC
	<i>Creagrus peruanus</i> (Steindachner 1876)			LC
	<i>Creagrus pila</i> Vari & Harold 2001			LC
	<i>Creagrus ungulus</i> Vari & Harold 2001			LC
	<i>Ctenobrycon hauxwellianus</i> (Cope 1870)			
	<i>Cynopotamus amazonum</i> (Günther 1868)			
	<i>Galeocharax gulo</i> (Cope 1870)			
	<i>Gephyrocharax major</i> Myers 1929			LC
	<i>Gymnocraspedon ternetzi</i> (Boulenger 1895)			
	<i>Gymnocraspedon thayeri</i> Eigenmann 1908			
	<i>Hemibrycon divisorensis</i> Bertaco, Malabarba, Hidalgo & Ortega 2007	x		DD
	<i>Hemibrycon huambonicus</i> (Steindachner 1882)			LC
	<i>Hemibrycon jacobinoi</i> Schultz 1944			
	<i>Hemibrycon jelskii</i> (Steindachner 1876)			
	<i>Hemibrycon polyodon</i> (Günther 1864)			LC
	<i>Hemigrammus aguaruna</i> Lima, Correa & Ota 2016			
	<i>Hemigrammus analis</i> Durbin 1909			
	<i>Hemigrammus bellottii</i> (Steindachner 1882)			
	<i>Hemigrammus geisleri</i> Zarske & Géry 2007			
	<i>Hemigrammus hyanuary</i> Durbin 1918			LC
	<i>Hemigrammus levis</i> Durbin 1908			
	<i>Hemigrammus luelingi</i> Géry 1964			LC
	<i>Hemigrammus lunatus</i> Durbin 1918			
	<i>Hemigrammus marginatus</i> Ellis 1911			
	<i>Hemigrammus megaceps</i> Fowler 1945			DD
	<i>Hemigrammus microstomus</i> Durbin 1918			
	<i>Hemigrammus neptunus</i> Zarske & Géry 2002			
	<i>Hemigrammus newboldi</i> (Fernández-Yépez 1949)			
	<i>Hemigrammus ocellifer</i> (Steindachner 1882)			
	<i>Hemigrammus pulcher</i> Ladiges 1938			LC
	<i>Hemigrammus rodwayi</i> Durbin 1909			
	<i>Hemigrammus schmidti</i> (Steindachner 1882)			
	<i>Hemigrammus unilineatus</i> (Gill 1858)			
	<i>Hemigrammus vorderwinkleri</i> Géry 1963			
	<i>Heterocharax macrolepis</i> Eigenmann 1912			
	<i>Hyphessobrycon aguinha</i> Fowler 1913			
	<i>Hyphessobrycon bentosi</i> Durbin 1908			LC
	<i>Hyphessobrycon chiribiquete</i> García-Alzate, Lima, Taphorn, Mojica, Urbano-Bonilla & Teixeira 2020			
	<i>Hyphessobrycon copelandi</i> Durbin 1908			
	<i>Hyphessobrycon eques</i> (Steindachner 1882)			
	<i>Hyphessobrycon erythrostigma</i> (Fowler 1943)			
	<i>Hyphessobrycon frankei</i> Zarske & Géry 1997			LC
	<i>Hyphessobrycon jackrobertsi</i> Zarske 2014	x		
	<i>Hyphessobrycon loretoensis</i> Ladiges 1938			LC
	<i>Hyphessobrycon margitae</i> Zarske 2016	x		
	<i>Hyphessobrycon minimus</i> Durbin 1909			
	<i>Hyphessobrycon peruvianus</i> Ladiges 1938			LC
	<i>Hyphessobrycon robustulus</i> (Cope 1870)			LC
	<i>Hyphessobrycon taphorni</i> García-Alzate, Román-Valencia & Ortega 2013			
	<i>Hyphessobrycon tenuis</i> Géry 1964			LC
	<i>Jupiaba anterior</i> (Eigenmann 1908)			
	<i>Jupiaba anteroides</i> (Géry 1965)			
	<i>Jupiaba asymmetrica</i> (Eigenmann 1908)			
	<i>Jupiaba scologaster</i> (Weitzman & Vari 1986)			
	<i>Jupiaba zonata</i> (Eigenmann 1908)			

Order / Family	Species	RD	C	IUCN
	<i>Knodus borki</i> Zarske 2008		X	
	<i>Knodus breviceps</i> (Eigenmann 1908)			LC
	<i>Knodus gamma</i> Géry 1972			LC
	<i>Knodus hypopterus</i> (Fowler 1943)			LC
	<i>Knodus megalops</i> Myers 1929			LC
	<i>Knodus orteguasae</i> (Fowler 1943)			LC
	<i>Knodus savannensis</i> Géry 1961			
	<i>Knodus septentrionalis</i> Géry 1972			
	<i>Knodus smithi</i> (Fowler 1913)			
	<i>Leptagoniates steindachneri</i> Boulenger 1887			
	<i>Microschombrycon geisleri</i> Géry 1973			
	<i>Microschombrycon melanotus</i> (Eigenmann 1912)			
	<i>Moenkhausia agnesae</i> Géry 1965			
	<i>Moenkhausia atahualpiana</i> (Fowler 1907)			LC
	<i>Moenkhausia barbouri</i> Eigenmann 1908			
	<i>Moenkhausia ceros</i> Eigenmann 1908			
	<i>Moenkhausia chrysargyrea</i> (Günther 1864)			
	<i>Moenkhausia colletti</i> (Steindachner 1882)			
	<i>Moenkhausia comma</i> Eigenmann 1908			
	<i>Moenkhausia copei</i> (Steindachner 1882)			
	<i>Moenkhausia cotinho</i> Eigenmann 1908			
	<i>Moenkhausia dichroura</i> (Kner 1858)			
	<i>Moenkhausia grandisquamis</i> (Müller & Troschel 1845)			
	<i>Moenkhausia intermedia</i> Eigenmann 1908			
	<i>Moenkhausia jamesi</i> Eigenmann 1908			
	<i>Moenkhausia latissima</i> Eigenmann 1908			
	<i>Moenkhausia lepidura</i> (Kner 1858)			
	<i>Moenkhausia margitae</i> Zarske & Géry 2001			NT
	<i>Moenkhausia megalops</i> (Eigenmann 1907)			
	<i>Moenkhausia melogramma</i> Eigenmann 1908			
	<i>Moenkhausia mikia</i> Marinho & Langeani 2010			
	<i>Moenkhausia naponis</i> Böhlke 1958			
	<i>Moenkhausia oligolepis</i> (Günther 1864)			
	<i>Moenkhausia robertsi</i> Géry 1964			
	<i>Moenkhausia simulata</i> (Eigenmann 1924)			LC
	<i>Odontostilbe ecuadorensis</i> Bührnheim & Malabarba 2006			LC
	<i>Odontostilbe euspirurus</i> (Fowler 1945)			
	<i>Odontostilbe fugitiva</i> Cope 1870			
	<i>Othonocheirodon eigenmanni</i> Myers 1927			LC
	<i>Oxybrycon parvulus</i> Géry 1964			
	<i>Paracheirodon innesi</i> (Myers 1936)			
	<i>Paragoniates alburnus</i> Steindachner 1876			
	<i>Parecbasis cyclolepis</i> Eigenmann 1914			
	<i>Petitella georgiae</i> Géry & Boutière 1964			
	<i>Phenacogaster capitulata</i> Lucena & Malabarba 2010			
	<i>Phenacogaster megalostictus</i> Eigenmann 1909			
	<i>Phenacogaster pectinata</i> (Cope 1870)			
	<i>Poptella compressa</i> (Günther 1864)			
	<i>Priobarbus pygmaeus</i> Weitzman & Vari 1987			LC
	<i>Prionobrama filigera</i> (Cope 1870)			
	<i>Prodontocharax allenii</i> Böhlke 1953			
	<i>Prodontocharax melanotus</i> Pearson 1924			
	<i>Protocheirodon pi</i> (Vari 1978)			
	<i>Psalidodon fasciatus</i> (Cuvier 1819)			
	<i>Rhinobrycon negrensis</i> Myers 1944			
	<i>Roeboides affinis</i> (Günther 1868)			LC
	<i>Roeboides biserialis</i> (Garman 1890)			
	<i>Roeboides myersii</i> Fowler 1932		*	
	<i>Scopaeocharax atopodus</i> (Böhlke 1958)			LC
	<i>Scopaeocharax rhinodus</i> (Böhlke 1958)			LC
	<i>Serrapinnus heterodon</i> (Eigenmann 1915)			
	<i>Serrapinnus piaba</i> (Lütken 1875)			

Order / Family	Species	RD	C	IUCN
	<i>Stethaprion erythrops</i> Cope 1870			
	<i>Stichonodon insignis</i> (Steindachner 1876)			
	<i>Tetragonopterus argenteus</i> Cuvier 1816			
	<i>Tetragonopterus chalceus</i> Spix & Agassiz 1829			
	<i>Thayeria boehlkei</i> Weitzman 1957			
	<i>Thayeria obliqua</i> Eigenmann 1908			
	<i>Tytto'brycon hamatus</i> Géry 1973			DD
	<i>Tyttocharax cochui</i> (Ladiges 1949)			
	<i>Tyttocharax madeirae</i> Fowler 1913			
	<i>Tyttocharax tambopatensis</i> Weitzman & Ortega 1995			LC
	<i>Varicharax nigrolineatus</i> Vanegas-Ríos, Faustino-Fuster, Meza-Vargas & Ortega 2020	x		
	<i>Xenurobrycon heterodon</i> Weitzman & Fink 1985			LC
Bryconidae	<i>Brycon amazonicus</i> (Agassiz 1829)	*		LC
	<i>Brycon falcatus</i> Müller & Troschel 1844			
	<i>Brycon hilarii</i> (Valenciennes 1850)			
	<i>Brycon melanopterus</i> (Cope 1872)		*	
	<i>Brycon pesu</i> Müller & Troschel 1845			
	<i>Salminus affinis</i> Steindachner 1880			
	<i>Salminus hilarii</i> Valenciennes 1850			
Triportheidae	<i>Agoniates anchovia</i> Eigenmann 1914			
	<i>Clupeocharax anchovoides</i> Pearson 1924			
	<i>Engraulisoma taeniatum</i> Castro 1981			
	<i>Triportheus albus</i> Cope 1872			
	<i>Triportheus angulatus</i> (Spix & Agassiz 1829)		*	
	<i>Triportheus auritus</i> (Valenciennes 1850)		*	
	<i>Triportheus culter</i> (Cope 1872)			
	<i>Triportheus curtus</i> (Garman 1890)			
	<i>Triportheus pictus</i> (Garman 1890)			
	<i>Triportheus rotundatus</i> (Jardine 1841)			LC
Iguanodectidae	<i>Bryconops alburnoides</i> Kner 1858			
	<i>Bryconops caudomaculatus</i> (Günther 1864)			
	<i>Bryconops inpa</i> Knöppel, Junk & Géry 1968			
	<i>Bryconops melanurus</i> (Bloch 1794)			
	<i>Iguanodectes purusii</i> (Steindachner 1908)			
	<i>Iguanodectes spilurus</i> (Günther 1864)			
	<i>Piabucus dentatus</i> (Koelreuter 1763)			
	<i>Piabucus melanostoma</i> Holmberg 1891			
Chalceidae	<i>Chalceus epakros</i> Zanata & Toledo-Piza 2004			
	<i>Chalceus erythrurus</i> (Cope 1870)			
	<i>Chalceus macrolepidotus</i> Cuvier 1818			
Crenuchidae	<i>Ammocryptocharax elegans</i> Weitzman & Kanazawa 1976			
	<i>Ammocryptocharax minutus</i> Buckup 1993			
	<i>Characidium etheostoma</i> Cope 1872			
	<i>Characidium geryi</i> (Zarske 1997)			
	<i>Characidium pellucidum</i> Eigenmann 1909			
	<i>Characidium pteroides</i> Eigenmann 1909			LC
	<i>Characidium purpuratum</i> Steindachner 1882			LC
	<i>Characidium steindachneri</i> Cope 1878			
	<i>Characidium sterbai</i> (Zarske 1997)			
	<i>Characidium zebra</i> Eigenmann 1909			
	<i>Crenuchus spilurus</i> Günther 1863			
	<i>Elachocharax pulcher</i> Myers 1927			
	<i>Klausewitzia ritae</i> Géry 1965			
	<i>Melanocharacidium dispiloma</i> Buckup 1993			
	<i>Melanocharacidium pectorale</i> Buckup 1993			
	<i>Melanocharacidium rex</i> (Böhlke 1958)			LC
	<i>Odontocharacidium ophanes</i> (Weitzman & Kanazawa 1977)			
Gymnotiformes				
Sternopygidae	<i>Distocyclus conirostris</i> (Eigenmann & Allen 1942)			LC
	<i>Eigenmannia humboldtii</i> (Steindachner 1878)			
	<i>Eigenmannia loretana</i> Waltz & Albert 2018	x		
	<i>Eigenmannia limbata</i> (Schreiner & Miranda Ribeiro 1903)			

Order / Family	Species	RD	C	IUCN
	<i>Eigenmannia macrops</i> (Boulenger 1897)			
	<i>Eigenmannia virescens</i> (Valenciennes 1836)			
	<i>Rhabdolichops caviceps</i> (Fernández-Yépez 1968)			
	<i>Rhabdolichops eastwardi</i> Lundberg & Mago-Leccia 1986			
	<i>Rhabdolichops electrogrammus</i> Lundberg & Mago-Leccia 1986			
	<i>Rhabdolichops troscheli</i> (Kaup 1856)			
	<i>Sternopygus macrurus</i> (Bloch & Schneider 1801)			
Apteronotidae	<i>Adontosternarchus balaenops</i> (Cope 1878)			
	<i>Adontosternarchus clarkae</i> Mago-Leccia, Lundberg & Baskin 1985			
	<i>Adontosternarchus nebulosus</i> Lundberg & Cox Fernandes 2007			
	<i>Adontosternarchus sachsi</i> (Peters 1877)			
	<i>Apteronotus albifrons</i> (Linnaeus 1766)			
	<i>Apteronotus bonapartii</i> (Castelnau 1855)			
	<i>Compsaraia samueli</i> Albert & Crampton 2009			
	<i>Melanosternarchus amaru</i> Bern, Crampton, Orfinger & Albert 2018			
	<i>Orthosternarchus tamandua</i> (Boulenger 1898)			
	<i>Parapteronotus hasemani</i> (Ellis 1913)			
	<i>Platyurosternarchus macrostoma</i> (Günther 1870)			LC
	<i>Porotergus duende</i> de Santana & Crampton 2010			
	<i>Porotergus gibbeli</i> Ellis 1912			
	<i>Sternarchella calhamazon</i> Lundberg, Cox Fernandes, Campos-da-Paz & Sullivan 2013			
	<i>Sternarchella duccis</i> (Lundberg, Cox Fernandes & Albert 1996)			
	<i>Sternarchella orthos</i> Mago-Leccia 1994			
	<i>Sternarchella raptor</i> (Lundberg, Cox Fernandes & Albert 1996)			
	<i>Sternarchella rex</i> Evans, Crampton & Albert 2017			
	<i>Sternarchella schotti</i> (Steindachner 1868)			
	<i>Sternarchella sima</i> Starks 1913			
	<i>Sternarchogiton nattereri</i> (Steindachner 1868)			
	<i>Sternarchogiton porcinum</i> Eigenmann & Allen 1942			
	<i>Sternarchorhamphus muelleri</i> (Steindachner 1881)			
	<i>Sternarchorhynchus cramptoni</i> de Santana & Vari 2010			
	<i>Sternarchorhynchus goeldii</i> de Santana & Vari 2010			
	<i>Sternarchorhynchus montanus</i> de Santana & Vari 2010			
	<i>Sternarchorhynchus mormyrus</i> (Steindachner 1868)			LC
	<i>Sternarchorhynchus oxyrhynchus</i> (Müller & Troschel 1849)			
	<i>Sternarchorhynchus retzii</i> de Santana & Vari 2010			
	<i>Sternarchorhynchus stewarti</i> de Santana & Vari 2010			LC
	<i>Tenebrosternarchus preto</i> (de Santana & Crampton 2007)			
Rhamphichthyidae	<i>Gymnorhamphichthys hypostomus</i> Ellis 1912			
	<i>Gymnorhamphichthys rondoni</i> (Miranda Ribeiro 1920)			
	<i>Hoplopogon lepturus</i> Hoedeman 1962			
	<i>Hoplopogon ortegai</i> de Santana & Crampton 2011	x		LC
	<i>Rhamphichthys lineatus</i> Castelnau 1855			
	<i>Rhamphichthys pantherinus</i> Castelnau 1855			
	<i>Rhamphichthys rostratus</i> (Linnaeus 1766)			
	<i>Steatogenys diadema</i> (LaMonte 1929)			
	<i>Steatogenys elegans</i> (Steindachner 1880)			LC
Hypopomidae	<i>Brachyhypopomus beebei</i> (Schultz 1944)			
	<i>Brachyhypopomus benjamini</i> Crampton, de Santana, Waddell & Lovejoy 2017	x		
	<i>Brachyhypopomus bennetti</i> Sullivan, Zuanon & Cox Fernandes 2013			
	<i>Brachyhypopomus brevirostris</i> (Steindachner 1868)			
	<i>Brachyhypopomus flavipomus</i> Crampton, de Santana, Waddell & Lovejoy 2017			
	<i>Brachyhypopomus hamiltoni</i> Crampton, de Santana, Waddell & Lovejoy 2017			
	<i>Brachyhypopomus pinnicaudatus</i> (Hopkins, Comfort, Bastian & Bass 1990)			
	<i>Brachyhypopomus regani</i> Crampton, de Santana, Waddell & Lovejoy 2017			
	<i>Brachyhypopomus sullivanii</i> Crampton, de Santana, Waddell & Lovejoy 2017			
	<i>Brachyhypopomus verdii</i> Crampton, de Santana, Waddell & Lovejoy 2017			
	<i>Brachyhypopomus walteri</i> Sullivan, Zuanon & Cox Fernandes 2013			
	<i>Microsternarchus bilineatus</i> Fernández-Yépez 1968			
Gymnotidae	<i>Electrophorus electricus</i> (Linnaeus 1766)			LC
	<i>Electrophorus multivalvulus</i> Nakashima 1941			
	<i>Gymnotus anguillaris</i> Hoedeman 1962			

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	<i>Gymnotus carapo</i> Linnaeus 1758			LC
	<i>Gymnotus chaviro</i> Maxime & Albert 2009			LC
	<i>Gymnotus coatesi</i> LaMonte 1935			
	<i>Gymnotus curupira</i> Crampton, Thorsen & Albert 2005			
	<i>Gymnotus javari</i> Albert, Crampton & Hagedorn 2003			
	<i>Gymnotus jonasi</i> Albert & Crampton 2001			LC
	<i>Gymnotus tigre</i> Albert & Crampton 2003			
	<i>Gymnotus ucamara</i> Crampton, Lovejoy & Albert 2003	x		
	<i>Gymnotus varzea</i> Crampton, Thorsen & Albert 2005			
Siluriformes				
Doradidae	<i>Acanthodoras cataphractus</i> (Linnaeus 1758)			
	<i>Acanthodoras spinosissimus</i> (Eigenmann & Eigenmann 1888)			
	<i>Agamyxis pectinifrons</i> (Cope 1870)			
	<i>Amblydoras affinis</i> (Kner 1855)			
	<i>Amblydoras monitor</i> (Cope 1872)			LC
	<i>Amblydoras nauticus</i> (Cope 1874)			LC
	<i>Anadoras grypus</i> (Cope 1872)			LC
	<i>Hassar orestis</i> (Steindachner 1875)			
	<i>Hemidoras morrisi</i> Eigenmann 1925			
	<i>Hemidoras stenopeltis</i> (Kner 1855)			
	<i>Hemidoras stuebelii</i> (Steindachner 1882)			
	<i>Hypodoras forficulatus</i> Eigenmann 1925			DD
	<i>Leptodoras acipenserinus</i> (Günther 1868)			
	<i>Leptodoras catanai</i> Sabaj Pérez 2005			
	<i>Leptodoras copei</i> (Fernández-Yépez 1968)			
	<i>Leptodoras juruensis</i> Boulenger 1898			
	<i>Leptodoras myersi</i> Böhlke 1970			
	<i>Lithodoras dorsalis</i> (Valenciennes 1840)			
	<i>Megalodoras uranoscopus</i> (Eigenmann & Eigenmann 1888)		*	
	<i>Nemadoras elongatus</i> (Boulenger 1898)			
	<i>Nemadoras hemipeltis</i> (Eigenmann 1925)			
	<i>Nemadoras humeralis</i> (Kner 1855)			
	<i>Ossancora asterophysa</i> Birindelli & Sabaj Pérez 2011			
	<i>Ossancora eigenmanni</i> (Boulenger 1895)			
	<i>Ossancora punctata</i> (Kner 1855)			
	<i>Oxydoras niger</i> (Valenciennes 1821)		*	
	<i>Physopyxis ananas</i> Sousa & Rapp Py-Daniel 2005			
	<i>Physopyxis lyra</i> Cope 1872			
	<i>Platydoras armatus</i> (Valenciennes 1840)			
	<i>Platydoras costatus</i> (Linnaeus 1758)			
	<i>Pterodoras granulosus</i> (Valenciennes 1821)		*	
	<i>Rhinodoras boehlkei</i> Glodek, Whitmire & Orcés V. 1976			LC
	<i>Rhynchodoras woodsi</i> Glodek 1976			
	<i>Scorpiodoras</i> sp.			
	<i>Tenellus cristinae</i> (Sabaj Pérez, Arce H., Sousa & Birindelli 2014)			
	<i>Tenellus ternetzi</i> (Eigenmann 1925)			
	<i>Tenellus trimaculatus</i> (Boulenger 1898)			
	<i>Trachydoras gephardtii</i> Sabaj Pérez & Arce H. 2017			
	<i>Trachydoras nattereri</i> (Steindachner 1881)			
	<i>Trachydoras steindachneri</i> (Perugia 1897)			
Auchenipteridae	<i>Ageneiosus inermis</i> (Linnaeus 1766)		*	
	<i>Ageneiosus ucayalensis</i> Castelnau 1855			
	<i>Ageneiosus uranophthalmus</i> Ribeiro & Rapp Py-Daniel 2010			
	<i>Auchenipterichthys coracoideus</i> (Eigenmann & Allen 1942)			LC
	<i>Auchenipterichthys longimanus</i> (Günther 1864)			
	<i>Auchenipterichthys thoracatus</i> (Kner 1858)			
	<i>Auchenipterus ambyiacus</i> Fowler 1915			
	<i>Auchenipterus brachyurus</i> (Cope 1878)			
	<i>Auchenipterus fordicei</i> Eigenmann & Eigenmann 1888			
	<i>Auchenipterus nuchalis</i> (Spix & Agassiz 1829)		*	
	<i>Balroglanis macracanthus</i> (Soares-Porto 2000)			
	<i>Centromochlus existimatus</i> Mees 1974			

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	<i>Centromochlus heckelii</i> (De Filippi 1853)			
	<i>Duringlanis altae</i> (Fowler 1945)			
	<i>Duringlanis perugiae</i> (Steindachner 1882)			
	<i>Epapterus dispilurus</i> Cope 1878			
	<i>Gelanoglanis travieso</i> Rengifo & Lujan 2008			DD
	<i>Liosomadoras morrowi</i> Fowler 1940			LC
	<i>Pseudopapterus hasemani</i> (Steindachner 1915)			
	<i>Spinipterus acsi</i> Akama & Ferraris 2011			
	<i>Spinipterus moiijiri</i> Rocha, Rossoni, Akama & Zuanon 2019			
	<i>Tatia dunnii</i> (Fowler 1945)			
	<i>Tatia gyrina</i> (Eigenmann & Allen 1942)			
	<i>Tatia intermedia</i> (Steindachner 1877)			
	<i>Tetranemichthys quadrifilis</i> (Kner 1858)			
	<i>Tetranemichthys wallacei</i> Vari & Ferraris 2006			
	<i>Trachelyichthys exilis</i> Greenfield & Glodek 1977	x		LC
	<i>Trachelyopterus galeatus</i> (Linnaeus 1766)		*	
	<i>Trachelyopterus porosus</i> (Eigenmann & Eigenmann 1888)			
	<i>Trachycorystes trachycorystes</i> (Valenciennes 1840)			
	<i>Tympanopleura atronasus</i> (Eigenmann & Eigenmann 1888)			
	<i>Tympanopleura brevis</i> (Steindachner 1881)			
	<i>Tympanopleura cryptica</i> Walsh, Ribeiro & Rapp Py-Daniel 2015			
	<i>Tympanopleura piperata</i> Eigenmann 1912			
Pimelodidae	<i>Brachyplatystoma capapretum</i> Lundberg & Akama 2005		*	
	<i>Brachyplatystoma filamentosum</i> (Lichtenstein 1819)		*	
	<i>Brachyplatystoma juruense</i> (Boulenger 1898)		*	
	<i>Brachyplatystoma platynemum</i> Boulenger 1898		*	
	<i>Brachyplatystoma rousseauxii</i> (Castelnau 1855)		*	LC
	<i>Brachyplatystoma vaillantii</i> (Valenciennes 1840)		*	
	<i>Calophysus macropterus</i> (Lichtenstein 1819)		*	
	<i>Cheirocerus eques</i> Eigenmann 1917			
	<i>Cheirocerus goeldii</i> (Steindachner 1908)			
	<i>Duopalatinus peruanus</i> Eigenmann & Allen 1942			
	<i>Exallodontus aguanai</i> Lundberg, Mago-Leccia & Nass 1991			
	<i>Hemisorubim platyrhynchos</i> (Valenciennes 1840)		*	
	<i>Hypophthalmus celiae</i> Littman, Lundberg & Rocha 2021			
	<i>Hypophthalmus edentatus</i> Spix & Agassiz 1829		*	
	<i>Hypophthalmus donascimientoi</i> Littman, Lundberg & Rocha 2021			
	<i>Hypophthalmus fimbriatus</i> Kner 1858			
	<i>Leiarius marmoratus</i> (Gill 1870)		*	
	<i>Megalonema amaxanthum</i> Lundberg & Dahdul 2008			
	<i>Megalonema platycephalum</i> Eigenmann 1912			
	<i>Phractocephalus hemioliopterus</i> (Bloch & Schneider 1801)		*	
	<i>Pimelodina flavipinnis</i> Steindachner 1876		*	
	<i>Pimelodus altissimus</i> Eigenmann & Pearson 1942			
	<i>Pimelodus blochii</i> Valenciennes 1840		*	
	<i>Pimelodus jivaro</i> Eigenmann & Pearson 1942			
	<i>Pimelodus maculatus</i> Lacepède 1803			
	<i>Pimelodus ornatus</i> Kner 1858			
	<i>Pimelodus pictus</i> Steindachner 1876			
	<i>Pimelodus tetramerus</i> Ribeiro & Lucena 2006			
	<i>Pinirampus pirinampu</i> (Spix & Agassiz 1829)		*	
	<i>Platynemichthys notatus</i> (Jardine 1841)		*	
	<i>Platysilurus mucosus</i> (Vaillant 1880)			
	<i>Platystomatichthys sturio</i> (Kner 1858)			
	<i>Propimelodus caesius</i> Parisi, Lundberg & DoNascimento 2006			
	<i>Pseudoplatystoma fasciatum</i> (Linnaeus 1766)			
	<i>Pseudoplatystoma punctifer</i> (Castelnau 1855)		*	
	<i>Pseudoplatystoma tigrinum</i> (Valenciennes 1840)		*	
	<i>Sorubim elongatus</i> Littmann, Burr, Schmidt & Isern 2001			
	<i>Sorubim lima</i> (Bloch & Schneider 1801)		*	
	<i>Sorubim maniradii</i> Littmann, Burr & Buitrago-Suarez 2001			
	<i>Sorubimichthys planiceps</i> (Spix & Agassiz 1829)		*	

Order / Family	Species	RD	C	IUCN
	<i>Zungaro zungaro</i> (Humboldt 1821)		*	
Pseudopimelodidae	<i>Batrochoglanis raninus</i> (Valenciennes 1840)			
	<i>Microglanis poecilus</i> Eigenmann 1912			
	<i>Microglanis zonatus</i> Eigenmann & Allen 1942			LC
	<i>Pseudopimelodus bufofomus</i> (Valenciennes 1840)			
	<i>Rhyacoglanis pulcher</i> (Boulenger 1887)			
Heptapteridae	<i>Cetopsorhamdia hidalgoi</i> Faustino-Fuster & Souza 2021			
	<i>Chasmocranus peruanus</i> Eigenmann & Pearson 1942			DD
	<i>Gladioglanis conquistador</i> Lundberg, Bornbusch & Mago-Leccia 1991			
	<i>Goeldiella eques</i> (Müller & Troschel 1849)			
	<i>Imparfinis guttatus</i> (Pearson 1924)			
	<i>Imparfinis pseudonemacheir</i> Mees & Cala 1989			
	<i>Mastiglanis yaguas</i> Faustino-Fuster & Ortega 2020	x		
	<i>Myoglanis koepckeae</i> Chang 1999			
	<i>Nemuroglanis lanceolatus</i> Eigenmann & Eigenmann 1889			
	<i>Pariolius armillatus</i> Cope 1872			
	<i>Phenacorhamdia</i> sp.			
	<i>Pimelodella buckleyi</i> (Boulenger 1887)			DD
	<i>Pimelodella cristata</i> (Müller & Troschel 1849)			LC
	<i>Pimelodella cyanostigma</i> (Cope 1870)			DD
	<i>Pimelodella gracilis</i> (Valenciennes 1835)			
	<i>Pimelodella hasemani</i> Eigenmann 1917			
	<i>Pimelodella lateristriga</i> (Lichtenstein 1823)			
	<i>Pimelodella serrata</i> Eigenmann 1917			
	<i>Rhamdia</i> cf. <i>queelen</i>			
Cetopsidae	<i>Cetopsis candiru</i> Spix & Agassiz 1829			
	<i>Cetopsis coecutiens</i> (Lichtenstein 1819)			
	<i>Cetopsis montana</i> Vari, Ferraris & de Pinna 2005			LC
	<i>Cetopsis oliveirai</i> (Lundberg & Rapp Py-Daniel 1994)			
	<i>Cetopsis parma</i> Oliveira, Vari & Ferraris 2001			
	<i>Cetopsis plumbea</i> Steindachner 1882			
	<i>Denticetopsis seducta</i> Vari, Ferraris & de Pinna 2005			
	<i>Helogenes marmoratus</i> Günther 1863			
Aspredinidae	<i>Amaralia hypsiura</i> (Kner 1855)			
	<i>Bunocephalus aleuropis</i> Cope 1870			
	<i>Bunocephalus coracoideus</i> (Cope 1874)			LC
	<i>Bunocephalus knerii</i> Steindachner 1882			LC
	<i>Bunocephalus verrucosus</i> (Walbaum 1792)			
	<i>Pseudobunocephalus amazonicus</i> (Mees 1989)			
	<i>Pseudobunocephalus bifidus</i> (Eigenmann 1942)			
	<i>Pterobunocephalus depressus</i> (Haseman 1911)			
	<i>Pterobunocephalus dolichurus</i> (Delsman 1941)			
	<i>Xyliophis sofiae</i> Sabaj Pérez, Carvalho & Reis 2017	x		
Trichomycteridae	<i>Acanthopoma annectens</i> Lütken 1892			
	<i>Apomatoberos allenii</i> Eigenmann 1922			
	<i>Henonemus macrops</i> (Steindachner 1882)			
	<i>Henonemus punctatus</i> (Boulenger 1887)			
	<i>Ituglanis amazonicus</i> (Steindachner 1882)			
	<i>Megalocentor echthrurus</i> de Pinna & Britski 1991			
	<i>Ochmacanthus reinhardtii</i> (Steindachner 1882)			
	<i>Pareiodon microps</i> Kner 1855			
	<i>Plectrochilus diabolicus</i> (Myers 1927)			
	<i>Potamoglanis hasemani</i> (Eigenmann 1914)			
	<i>Pseudostegophilus nemurus</i> (Günther 1869)			
	<i>Schultzichthys bondi</i> (Myers 1942)			
	<i>Trichomycterus</i> cf. <i>rivulatus</i>			
	<i>Tridensimilis brevis</i> (Eigenmann & Eigenmann 1889)			
	<i>Tridentopsis pearsoni</i> Myers 1925			
	<i>Vandellia cirrhosa</i> Valenciennes 1846			
	<i>Vandellia sanguinea</i> Eigenmann 1917			
Callichthyidae	<i>Callichthys callichthys</i> (Linnaeus 1758)			
	<i>Corydoras acutus</i> Cope 1872			LC

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	<i>Corydoras aeneus</i> (Gill 1858)			
	<i>Corydoras agassizii</i> Steindachner 1876			
	<i>Corydoras ambiacus</i> Cope 1872			
	<i>Corydoras amphibelus</i> Cope 1872			LC
	<i>Corydoras arcuatus</i> Elwin 1938			
	<i>Corydoras armatus</i> (Günther 1868)			
	<i>Corydoras atropersonatus</i> Weitzman & Nijssen 1970			DD
	<i>Corydoras copei</i> Nijssen & Isbrücker 1986			LC
	<i>Corydoras coriatae</i> Burgess 1997			LC
	<i>Corydoras elegans</i> Steindachner 1876			
	<i>Corydoras eques</i> Steindachner 1876			
	<i>Corydoras fowleri</i> Böhlke 1950			LC
	<i>Corydoras lamberti</i> Nijssen & Isbrücker 1986			LC
	<i>Corydoras leopardus</i> Myers 1933			
	<i>Corydoras leucomelas</i> Eigenmann & Allen 1942			LC
	<i>Corydoras loretoensis</i> Nijssen & Isbrücker 1986			LC
	<i>Corydoras melini</i> Lönnberg & Rendahl 1930			LC
	<i>Corydoras multiradiatus</i> (Orcés V. 1960)			LC
	<i>Corydoras napoensis</i> Nijssen & Isbrücker 1986			LC
	<i>Corydoras ortegai</i> Britto, Lima & Hidalgo 2007			LC
	<i>Corydoras pastazensis</i> Weitzman 1963			LC
	<i>Corydoras pygmaeus</i> Knaack 1966			
	<i>Corydoras rabauti</i> LaMonte 1941			
	<i>Corydoras reticulatus</i> Fraser-Brunner 1938			
	<i>Corydoras semiaquilus</i> Weitzman 1964			
	<i>Corydoras sodalis</i> Nijssen & Isbrücker 1986			
	<i>Corydoras splendens</i> (Castelnau 1855)			
	<i>Corydoras stenocephalus</i> Eigenmann & Allen 1942			LC
	<i>Corydoras sychri</i> Weitzman 1960	x		LC
	<i>Corydoras trilineatus</i> Cope 1872			
	<i>Corydoras weitzmani</i> Nijssen 1971			LC
	<i>Corydoras zygatus</i> Eigenmann & Allen 1942			LC
	<i>Dianema longibarbis</i> Cope 1872		*	
	<i>Hoplosternum littorale</i> (Hancock 1828)			
	<i>Leptoplosternum altamazonicum</i> Reis 1997			LC
	<i>Leptoplosternum ucumara</i> Reis & Kaefer 2005			
	<i>Megalechis picta</i> (Müller & Troschel 1849)			
	<i>Megalechis thoracata</i> (Valenciennes 1840)			
Loricariidae	<i>Acanthicus adonis</i> Isbrücker & Nijssen 1988			
	<i>Ancistrus alga</i> (Cope 1872)			
	<i>Ancistrus hoplogeus</i> (Günther 1864)			
	<i>Ancistrus malacops</i> (Cope 1872)			LC
	<i>Ancistrus sericeus</i> (Cope 1872)			LC
	<i>Ancistrus tamboensis</i> Fowler 1945			LC
	<i>Ancistrus variolus</i> (Cope 1872)			DD
	<i>Aphanotorulus emarginatus</i> (Valenciennes 1840)		*	
	<i>Aphanotorulus horridus</i> (Kner 1854)			
	<i>Aphanotorulus phrixosoma</i> (Fowler 1940)	x		
	<i>Aphanotorulus unicolor</i> (Steindachner 1908)			
	<i>Chaetostoma lineopunctatum</i> Eigenmann & Allen 1942			LC
	<i>Farlowella amazonum</i> (Günther 1864)			
	<i>Farlowella knerii</i> (Steindachner 1882)			LC
	<i>Farlowella nattereri</i> Steindachner 1910			
	<i>Farlowella odontotumulus</i> Retzler & Page 1997			
	<i>Farlowella oxyrryncha</i> (Kner 1853)			
	<i>Farlowella smithi</i> Fowler 1913			
	<i>Hemiodontichthys acipenserinus</i> (Kner 1853)			
	<i>Hypoptopoma brevirostratum</i> Aquino & Schaefer 2010			
	<i>Hypoptopoma gulare</i> Cope 1878			
	<i>Hypoptopoma psilogaster</i> Fowler 1915			
	<i>Hypoptopoma steindachneri</i> Boulenger 1895			
	<i>Hypoptopoma thoracatum</i> Günther 1868			

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	<i>Hypostomus carinatus</i> (Steindachner 1881)			
	<i>Hypostomus cochliodon</i> Kner 1854			
	<i>Hypostomus ericius</i> Armbruster 2003			LC
	<i>Hypostomus fowichi</i> Weber & Montoya-Burgos 2002			LC
	<i>Hypostomus hemicochliodon</i> Armbruster 2003			
	<i>Hypostomus levis</i> (Pearson 1924)			DD
	<i>Hypostomus niceforoi</i> (Fowler 1943)			DD
	<i>Hypostomus oculatus</i> (Fowler 1943)			DD
	<i>Hypostomus pyrineusi</i> (Miranda Ribeiro 1920)			
	<i>Lamontichthys filamentosus</i> (LaMonte 1935)			
	<i>Lasiancistrus heteracanthus</i> (Günther 1869)			LC
	<i>Lasiancistrus schomburgkii</i> (Günther 1864)			LC
	<i>Limatulichthys griseus</i> (Eigenmann 1909)			
	<i>Limatulichthys petleyi</i> (Fowler 1940)			
	<i>Loricaria cataphracta</i> Linnaeus 1758			
	<i>Loricaria clavipinna</i> Fowler 1940			
	<i>Loricaria similima</i> Regan 1904			
	<i>Loricariichthys acutus</i> (Valenciennes 1840)			
	<i>Loricariichthys chanjoo</i> (Fowler 1940)			DD
	<i>Loricariichthys hauxwelli</i> Fowler 1915			LC
	<i>Loricariichthys maculatus</i> (Bloch 1794)			
	<i>Loricariichthys nudirostris</i> (Kner 1853)			
	<i>Loricariichthys stuebelii</i> (Steindachner 1882)			
	<i>Loricariichthys ucayalensis</i> Regan 1913			LC
	<i>Nannoptopoma spectabile</i> (Eigenmann 1914)			
	<i>Nannoptopoma sternoptychum</i> Schaefer 1996			
	<i>Otocinclus batmani</i> Lehmann A. 2006			
	<i>Otocinclus cocama</i> Reis 2004	x		EN
	<i>Otocinclus huaorani</i> Schaefer 1997			LC
	<i>Otocinclus macrospilus</i> Eigenmann & Allen 1942			LC
	<i>Otocinclus vestitus</i> Cope 1872			
	<i>Otocinclus vittatus</i> Regan 1904			
	<i>Oxyropsis carinata</i> (Steindachner 1879)			
	<i>Oxyropsis wrightiana</i> Eigenmann & Eigenmann 1889			LC
	<i>Panaqolus changei</i> (Chockley & Armbruster 2002)	x		LC
	<i>Panaqolus dentex</i> (Günther 1868)			LC
	<i>Panaqolus gnomus</i> (Schaefer & Stewart 1993)			LC
	<i>Panaqolus nocturnus</i> (Schaefer & Stewart 1993)			LC
	<i>Panaque bathyphilus</i> Lujan & Chamón 2008			
	<i>Panaque schaeferi</i> Lujan, Hidalgo & Stewart 2010			
	<i>Peckoltia brevis</i> (LaMonte 1935)			
	<i>Peckoltia vittata</i> (Steindachner 1881)			
	<i>Peckoltichthys bachi</i> (Boulenger 1898)			
	<i>Planiloricaria cryptodon</i> (Isbrücker 1971)			
	<i>Pseudohemiodon apithanos</i> Isbrücker & Nijssen 1978			LC
	<i>Pseudohemiodon lamina</i> (Günther 1868)			LC
	<i>Pseudorinelepis genibarbis</i> (Valenciennes 1840)		*	
	<i>Pterosturisoma microps</i> (Eigenmann & Allen 1942)			
	<i>Pterygoplichthys gibbiceps</i> (Kner 1854)			
	<i>Pterygoplichthys pardalis</i> (Castelnau 1855)		*	
	<i>Pterygoplichthys punctatus</i> (Kner 1854)			
	<i>Pterygoplichthys scrophus</i> (Cope 1874)	x		LC
	<i>Rhadinoloricaria bahauja</i> (Chang & Castro 1999)			
	<i>Rhadinoloricaria macromystax</i> (Günther 1869)			DD
	<i>Rhadinoloricaria ommation</i> (Nijssen & Isbrücker 1988)			
	<i>Rhadinoloricaria rhami</i> (Isbrücker & Nijssen 1983)			
	<i>Rineloricaria konopickyi</i> (Steindachner 1879)			
	<i>Rineloricaria lanceolata</i> (Günther 1868)			
	<i>Rineloricaria morrowi</i> Fowler 1940			LC
	<i>Rineloricaria phoxocephala</i> (Eigenmann & Eigenmann 1889)			
	<i>Rineloricaria wolfei</i> Fowler 1940	x		LC
	<i>Spatularicaria evansi</i> (Boulenger 1892)			LC

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	<i>Sturisoma guentheri</i> (Regan 1904)			LC
	<i>Sturisoma nigrirostrum</i> Fowler 1940			LC
	<i>Sturisoma rostratum</i> (Spix & Agassiz 1829)			
Astroblepididae	<i>Astroblepus</i> sp.			
Batrachoidiformes				
Batrachoididae	<i>Thalassophryne amazonica</i> Steindachner 1876			
Cyprinodontiformes				
Rivulidae	<i>Anablepsoides atratus</i> (Garman 1895)			
	<i>Anablepsoides intermittens</i> (Fels & de Rham 1981)	x		NT
	<i>Anablepsoides ophiomimus</i> (Huber 1992)			LC
	<i>Anablepsoides ornatus</i> (Garman 1895)			
	<i>Anablepsoides rubrolineatus</i> (Fels & de Rham 1981)			LC
	<i>Anablepsoides speciosus</i> (Fels & de Rham 1981)	x		CR
	<i>Anablepsoides urophthalmus</i> (Günther 1866)			
	<i>Laimosemion rectocaudatum</i> (Fels & de Rham 1981)	x		DD
	<i>Moema hellneri</i> Costa 2003	x		
	<i>Moema peruvensis</i> (Myers 1954)	x		DD
	<i>Moema schleseri</i> Costa 2003	x		
Beloniformes				
Belonidae	<i>Belonion dibranchodon</i> Collette 1966			
	<i>Potamorrhaphis eigenmanni</i> Miranda Ribeiro 1915			
	<i>Potamorrhaphis guianensis</i> (Jardine 1843)			
	<i>Potamorrhaphis labiata</i> Sant'Anna, Delapieve & Reis 2012			
	<i>Pseudotylosurus angusticeps</i> (Günther 1866)			
	<i>Pseudotylosurus microps</i> (Günther 1866)			
Synbranchiformes				
Synbranchidae	<i>Synbranchus lampreia</i> Favorito, Zanata & Assumpção 2005			
	<i>Synbranchus madeirae</i> Rosen & Rumney 1972			
	<i>Synbranchus marmoratus</i> Bloch 1795			LC
Perciformes				
Sciaenidae	<i>Pachyrops fourcroi</i> (Lacepède 1802)			LC
	<i>Pachyrops trifilis</i> (Müller & Troschel 1849)			LC
	<i>Pachyurus gabrielensis</i> Casatti 2001			LC
	<i>Pachyurus schomburgkii</i> Günther 1860			LC
	<i>Pachyurus stewarti</i> Casatti & Chao 2002			DD
	<i>Plagioscion auratus</i> (Castelnau 1855)			LC
	<i>Plagioscion squamosissimus</i> (Heckel 1840)	*		LC
Polycentridae	<i>Monocirrhus polyacanthus</i> Heckel 1840			
Cichliformes				
Cichlidae	<i>Acarichthys heckelii</i> (Müller & Troschel 1849)			
	<i>Acaronia nassa</i> (Heckel 1840)			
	<i>Aequidens diadema</i> (Heckel 1840)			
	<i>Aequidens tetramerus</i> (Heckel 1840)			
	<i>Apistogramma agassizii</i> (Steindachner 1875)			
	<i>Apistogramma allpahuayo</i> Römer, Beninde, Duponchelle, Díaz, Ortega, Hahn et al. 2012	x		LC
	<i>Apistogramma amoena</i> (Cope 1872)			
	<i>Apistogramma barlowi</i> Römer & Hahn 2008	x		LC
	<i>Apistogramma bitaeniata</i> Pellegrin 1936			
	<i>Apistogramma cacatuoides</i> Hoedeman 1951			
	<i>Apistogramma cinilabrum</i> Römer, Duponchelle, Diaz, Dávila, Sirvas, Catchay & Renno 2011	x		VU
	<i>Apistogramma cruzi</i> Kullander 1986			LC
	<i>Apistogramma eremnopyge</i> Ready & Kullander 2004	x		LC
	<i>Apistogramma eunotus</i> Kullander 1981			
	<i>Apistogramma feconat</i> Römer, Soares, Dávila, Duponchelle, Renno & Hahn 2015	x		
	<i>Apistogramma huascar</i> Römer, Pretor & Hahn 2006	x		DD
	<i>Apistogramma martini</i> Römer, Hahn, Römer, Soares & Wöhler 2003	x		LC
	<i>Apistogramma megastoma</i> Römer, Römer, Estivals, Díaz, Duponchelle, Dávila, Hahn & Renno 2017			
	<i>Apistogramma njissenii</i> Kullander 1979	x		DD
	<i>Apistogramma norberti</i> Staack 1991	x		DD
	<i>Apistogramma ortegai</i> Britzke, Oliveira & Kullander 2014	x		
	<i>Apistogramma pantalone</i> Römer, Römer, Soares & Hahn 2006	x		DD

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	<i>Apiogramma paulmuelleri</i> Römer, Beninde, Duponchelle, Dávila, Vela Díaz, & Renno 2013	x		DD
	<i>Apiogramma payaminonis</i> Kullander 1986			DD
	<i>Apiogramma rositae</i> Römer, Römer & Hahn 2006	x		DD
	<i>Apiogramma wolli</i> Römer, Soares, Dávila, Duponchelle, Renno & Hahn 2015			
	<i>Apistogrammoides pucallpaensis</i> Meinken 1965		*	
	<i>Astronotus ocellatus</i> (Agassiz 1831)			
	<i>Biotodoma cupido</i> (Heckel 1840)			
	<i>Bujurquina apoparauana</i> Kullander 1986			LC
	<i>Bujurquina hophrys</i> Kullander 1986			LC
	<i>Bujurquina huallagae</i> Kullander 1986			LC
	<i>Bujurquina labiosa</i> Kullander 1986			LC
	<i>Bujurquina moriorum</i> Kullander 1986			LC
	<i>Bujurquina ortegai</i> Kullander 1986			DD
	<i>Bujurquina pardus</i> Arbour, Barriga Salazar & López-Fernández 2014			DD
	<i>Bujurquina peregrinabunda</i> Kullander 1986			
	<i>Bujurquina robusta</i> Kullander 1986			DD
	<i>Bujurquina syspilus</i> (Cope 1872)			LC
	<i>Chaetobranchus flavesiensis</i> Heckel 1840		*	
	<i>Cichla monoculus</i> Spix & Agassiz 1831		*	
	<i>Cichlasoma amazonarum</i> Kullander 1983			
	<i>Crenicara punctulata</i> (Günther 1863)			
	<i>Crenicichla anthurus</i> Cope 1872			LC
	<i>Crenicichla cincta</i> Regan 1905		*	LC
	<i>Crenicichla cyanonotus</i> Cope 1870			
	<i>Crenicichla johanna</i> Heckel 1840		*	
	<i>Crenicichla lucius</i> Cope 1870			
	<i>Crenicichla proteus</i> Cope 1872			
	<i>Crenicichla reticulatus</i> (Heckel 1840)			
	<i>Crenicichla sedentaria</i> Kullander 1986			LC
	<i>Crenicichla semicincta</i> Steindachner 1892			
	<i>Heroina isonycterina</i> Kullander 1996			LC
	<i>Heros efasciatus</i> Heckel 1840		*	
	<i>Hypselecara temporalis</i> (Günther 1862)		*	
	<i>Laetacara flavilabris</i> (Cope 1870)			
	<i>Laetacara thayeri</i> (Steindachner 1875)			
	<i>Mesonauta festivus</i> (Heckel 1840)			
	<i>Mesonauta insignis</i> (Heckel 1840)			
	<i>Mesonauta mirificus</i> Kullander & Silfvergrip 1991			LC
	<i>Pterophyllum scalare</i> (Schultze 1823)			
	<i>Satanopercajurupari</i> (Heckel 1840)		*	
	<i>Syphodus tarzoo</i> Lyons 1959			
	<i>Tahuantinsuyoa macantatza</i> Kullander 1986			DD
Carangiformes				
Achiridae	<i>Achirus achirus</i> (Linnaeus 1758)			LC
	<i>Apionichthys finis</i> (Eigenmann 1912)			
	<i>Apionichthys nattereri</i> (Steindachner 1876)			LC
	<i>Apionichthys seripierriae</i> Ramos 2003			
	<i>Hypoclinemus mentalis</i> (Günther 1862)			
Tetraodontiformes				
Tetraodontidae	<i>Colomesus asellus</i> (Müller & Troschel 1849)			