

LISTS OF SPECIES

Fish, Manso Reservoir region of influence, Rio Paraguai basin, Mato Grosso State, Brazil

Samuel Veríssimo¹
Carla Simone Pavanelli¹
Heraldo Antonio Britski²
Milena Mathilde Monaco Moreira¹

¹Universidade Estadual de Maringá, Núcleo de Pesquisas em Limnologia, Ictiologia e Aqüicultura (Nupélia), Av. Colombo, 5790, CEP 87020-900 Maringá, Paraná, Brazil. E-mail: carlasp@nupelia.uem.br

²Museu de Zoologia da Universidade de São Paulo, Seção de Peixes, Caixa Postal 42694, CEP 04299-970 São Paulo, São Paulo, Brazil

Abstract

The Rio Manso, a tributary to Rio Cuiabá, Rio Paraguai basin, is situated upstream from the Brazilian Pantanal and its ichthyofauna has many species in common with the typical fishes from the Pantanal and with those from the Rio Paraguai proper. The Manso Reservoir region of influence was sampled up to the Pantanal, including different environments, such as rivers, streams, lagoons, and the Reservoir itself, in the Rio Manso. Fish species were collected from March 2000 to February 2005, using different fishing gear, such as gill nets, seines, casting nets, and electro fishing. Considering the entire period, 250 fish species were collected, and are distributed in three Classes, 11 Orders, and 37 Families, from which 33 species do not yet correspond to any formal description, indicating that they should be new.

Introduction

The Rio Manso, a tributary to Rio Cuiabá, Rio Paraguai basin, is situated upstream from the Brazilian Pantanal and its ichthyofauna has many species in common with the typical fishes from the Pantanal and with those from the Rio Paraguai proper. Regarding the Pantanal ichthyofauna, the most current work was published by Britski et al. (1999), which present keys to species identification, comparative descriptions of the species, in addition to colorful illustrations and

remarks about nomenclatural problems of some groups less studied from a taxonomic point of view.

Material and Methods

The Manso Reservoir region of influence was sampled, including the region downstream, which reaches the Pantanal (Figure 1). Sample environments include rivers (Manso and Casca – upstream from the reservoir, Quilombo and Palmeira – affluents of the reservoir, and Manso, Cuiabazinho, and Cuiabá – downstream from the reservoir), streams (São Joaquim and Lajinha – affluents of the reservoir, Forquilha – affluent of the Rio Manso, downstream from the reservoir, Cancela, Custódio, and Imbaúba – affluents of Rio Cuiabá, downstream from the reservoir), lagoons (Chacororé and Sinhá Mariana – connected to Rio Cuiabá, in the Pantanal region, downstream from the reservoir), and the Reservoir itself, in the Rio Manso.

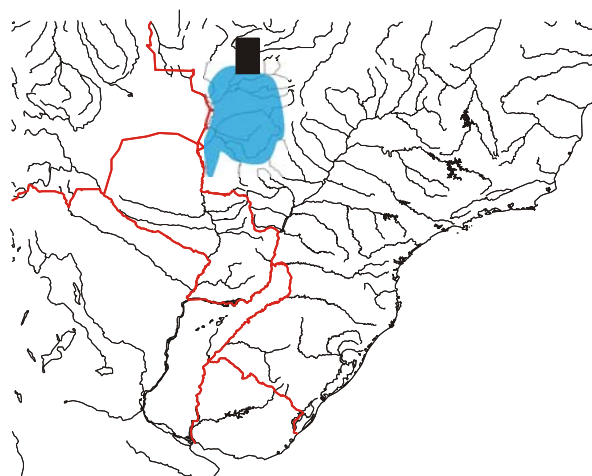


Figure 1. Partial map of Brazil and adjoining countries showing sampled region (black rectangle) – 14°45'18"S/55°31'41"W to 16°20'16"S/56°00'34"W - and Pantanal (blue object).

Fish species were collected from March 2000 to February 2005, using different fishing gear, such as gill nets, seines, casting nets, and electro fishing. They were collected according to IBAMA (Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis) authorization numbers 74/99 and 48/02. To identify the species, Britski et al. (1999) was decisive, as well as contacts with experts on some fish groups.

LISTS OF SPECIES

Voucher specimens of each species are deposited in the fish collection of Nupélia (Núcleo de Pesquisas em Limnologia, Ictiologia e Aqüicultura) of the Universidade Estadual de Maringá.

The classification presented is based on Reis et al. (2003), which gives a classification based on current phylogenetic works, and nomenclatural changes, like new synonymic lists and new combinations of names. These were obeyed in the present study whenever other works corroborating the proposed alterations had been formally published. Some taxonomic changes published after Reis et al. (2003) were also considered herein.

Results and discussion

Superior categories follow Eschmeyer (1990) and families are presented according to Reis et al. (2003). The species first recorded in the region are

marked with an asterisk and those that had some nomenclatural alteration based on Reis et al. (2003) have two asterisks. The local common names of the species are provided in simple quotes.

Considering the entire period, 250 fish species were collected, and are distributed in three Classes, 11 Orders, 37 Families, and 155 Genera (Table 1). Compared to the inventory presented by Britski et al. (1999) for the entire Pantanal, from the 263 species they reported, 206 (78.3 %) were captured at the region studied here, but 37 (18.0 %) had their names changed (considering current publications). In addition, 44 (21.4 %) species were recorded by the present study for the first time in the sampled region and, from them, 32 (72.7 %) do not yet correspond to any formal species description, indicating that they should be new.

Table 1. Fish species collected in the Rio Manso Reservoir region of influence, from March 2000 to February 2005. Superior categories follow Eschmeyer (1990) and families follow Reis et al. (2003). * species first recorded in the region; ** species that had some nomenclatural alteration based on Reis et al. (2003). Simple quotes present local common names of the species.

ELASMOBRANCHII

MYLIOBATIFORMES

Potamotrygonidae

- Potamotrygon brachyura* (Günther, 1880) ‘arraia’
- Potamotrygon cf. falkneri* Castex & Maciel, 1963 ‘arraia’
- Potamotrygon motoro* (Müller & Henle, 1841) ‘arraia’
- Potamotrygon cf. schuhmacheri* Castex, 1964 ‘arraia’*

ACTINOPTERYGII

CLUPEIFORMES

Pristigasteridae

- Pellona flavipinnis* (Valenciennes, 1836) ‘sardinhão’

CHARACIFORMES

Parodontidae

- Apareiodon affinis* (Steindachner, 1879) ‘duro-duro’
- Parodon nasus* Kner, 1859 ‘duro-duro’
- Apareiodon* sp. ‘duro-duro’*

LISTS OF SPECIES

- Curimatidae**
Curimatella dorsalis (Eigenmann & Eigenmann, 1889) ‘curimbatazinho’
Cyphocharax gillii (Eigenmann & Kennedy, 1903) ‘curimbatazinho’
Potamorhina squamoralevis (Braga & Azpelicueta, 1983) ‘sairu-liso’
Psectrogaster curviventris Eigenmann & Kennedy, 1903 ‘sairu-cascudo’
Steindachnerina brevipinna (Eigenmann & Eigenmann, 1889) ‘curimbatazinho’
Steindachnerina conspersa (Holmberg, 1891) ‘curimbatazinho’
Steindachnerina nigrotaenia (Boulenger, 1902) ‘curimbatazinho’
- Prochilodontidae**
Prochilodus lineatus (Valenciennes, 1836) ‘curimbatá’
Abramites hypselonotus (Günther, 1868) ‘zebrinha’
Leporellus vittatus (Valenciennes, 1850) ‘piava’
Leporinus friderici (Bloch, 1794) ‘piau’
Leporinus lacustris Campos, 1945 ‘piau’
Leporinus macrocephalus Garavello & Britski, 1988 ‘piavuçu’
Leporinus obtusidens (Valenciennes, 1836) ‘piapara’
- Anostomidae**
Leporinus striatus Kner, 1858 ‘piava’
Leporinus sp. 1 ‘piau’*
Leporinus sp. 2 ‘piau’*
Leporinus sp. 3 ‘piau’*
Leporinus sp. 4 ‘piau’
Schizodon borellii (Boulenger, 1900) ‘piava’
Schizodon isognathus Kner, 1858 ‘peixe-rei’
- Crenuchidae**
Characidium laterale (Boulenger, 1895) ‘piquira’
Characidium aff. *zebra* Eigenmann, 1909 ‘piquira’
Characidium sp. 1 ‘piquira’*
Characidium sp. 2 ‘piquira’*
- Hemiodontidae**
Hemiodus orthonops Eigenmann & Kennedy, 1903 ‘peixe-banana’
Hemiodus semitaeniatus Kner, 1858 ‘peixe-banana’**
- Gasteropelecidae**
Gasteropelecus sternicla (Linnaeus, 1758) ‘peixe-borboleta’*
Thoracocharax stellatus (Kner, 1858) ‘papudinho’
- Characidae**
Genera *Incertae Sedis*
Aphyocharacidium sp. ‘piquira’*
Astyanacinus moorii (Boulenger, 1892) ‘lambari’
Astyanax abramis (Jenyns, 1842) ‘lambari’
Astyanax asuncionensis Géry, 1972 ‘tambiu’**
Astyanax lineatus (Perugia, 1891) ‘lambari’
Astyanax marionae Eigenmann, 1911 ‘lambari’
Astyanax sp. 1 ‘lambari’*
Astyanax sp. 2 ‘lambari’*
Bryconamericus exodon Eigenmann, 1907 ‘lambari’
Bryconamericus sp. ‘lambari’*
Bryconops melanurus (Bloch, 1794) ‘piquirão’
Creagrutus meridionalis Vari & Harold, 2001 ‘lambari’*
Ctenobrycon alleni (Eigenmann & McAtee, 1907) ‘lambari’
Engraulisoma taeniatum Castro, 1981 ‘lambari’
Gymnocorymbus ternetzi (Boulenger, 1895) ‘tetra-preto’
Hemigrammus lunatus Durbin, 1918 ‘piquira’
Hemigrammus marginatus Ellis, 1911 ‘piquira’

LISTS OF SPECIES

- Hemigrammus ulreyi* (Boulenger, 1895) 'piquira'
Hyphessobrycon anisitsi (Eigenmann, 1907) 'lambari'
Hyphessobrycon elachys Weitzman, 1984 'piquira'
Hyphessobrycon eques (Steindachner, 1882) 'mato-grosso'
Hyphessobrycon sp. 1 'piquira'*
Hyphessobrycon sp. 2 'piquira'*
Jupiaba acanthogaster (Eigenmann, 1911) 'lambari'**
Knodus chapadae (Fowler, 1906) 'piquira'**
Markiana nigripinnis (Perugia, 1891) 'lambari-campo'
Microchemobrycon sp. 1 'piquira'*
Moenkhausia dichrourea (Kner, 1858) 'lambari'
Moenkhausia intermedia Eigenmann, 1908 'lambari'
Moenkhausia lopesi Britski & Silimon, 2001 'lambari'*
Moenkhausia sanctaefilomenae (Steindachner, 1907) 'lambari'
Oligosarcus oligolepis (Steindachner, 1867) 'peixe-cachorro'*
Piabarchus analis (Eigenmann, 1914) 'manjubinha'
Prionobrama paraguayensis (Eigenmann, 1914) 'piquira'
Psellogrammus kennedyi (Eigenmann, 1903) 'lambari'
Salminus brasiliensis (Cuvier, 1816) 'dourado'**
Triportheus nematurus (Kner, 1858) 'sardinha'
Triportheus pantanensis Malabarba, 2004 'sardinha'**
- Species inquirendae** *Astyanax pelegri* Eigenmann, 1907 'lambari'
- Other Characidae**
- Clupeacharacinae *Clupeacharax anchoveoides* Pearson, 1924 'piquira'
- Iguanodectinae *Piabucus melanostoma* Holmberg, 1891 'sardinha-de-gato'
- Bryconinae *Brycon hilarii* (Valenciennes, 1850) 'piraputanga'**
- Catoprion mento* (Cuvier, 1819) 'piranha'
Colossoma macropomum (Cuvier, 1818) 'tambaqui'*
C. macropomum x *P. mesopotamicus* 'tambacu'*
Metynniss maculatus (Kner, 1858) 'pacu-peva'
Metynniss mola Eigenmann & Kennedy, 1903 'pacu-peva'
Myleus levis Eigenmann & McAtee, 1907 'pacu-peva'**
Mylossoma duriventre (Cuvier, 1818) 'pacu-peva'**
Piaractus mesopotamicus (Holmberg, 1887) 'pacu'
Pygocentrus nattereri Kner, 1858 'piranha'
Serrasalmus maculatus Kner, 1858 'piranha'**
Serrasalmus marginatus Valenciennes, 1837 'piranha'
- Serrasalminae
- Aphyocharacinae *Aphyocharax anisitsi* Eigenmann & Kennedy, 1903 'piquira'
Aphyocharax dentatus Eigenmann & Kennedy, 1903 'piquirão'
Aphyocharax nattereri (Steindachner, 1882) 'piquirão'**
Aphyocharax sp. 1 'piquirão'*
- Characinae *Charax leticiae* Lucena, 1987 'saicanga'
Cynopotamus kincaidi (Schultz, 1950) 'saicanga'
Galeocharax humeralis (Valenciennes, 1834) 'saicanga'

LISTS OF SPECIES

- Phenacogaster jancupa* Malabarba & Lucena, 1995 'piaba'
Phenacogaster tegatus (Eigenmann, 1911) 'piaba'
Roeboides microlepis (Reinhardt, 1851) 'saicanga'**
Roeboides paranensis Pignalberi, 1975 'saicanga'
Roeboides prognathus (Boulenger, 1895) 'saicanga'
- Stethaprioninae *Brachychalcinus retrospina* Boulenger, 1892 'saia-branca'
Poptella paraguayensis (Eigenmann, 1907) 'saia-branca'
- Tetragonopterinae *Tetragonopterus argenteus* Cuvier, 1816 'sauá'
- Cheirodontinae *Odontostilbe paraguayensis* Eigenmann & Kennedy, 1903 'piquira'
Odontostilbe pequirá (Steindachner, 1882) 'piquira'**
Serrapinnus calliurus (Boulenger, 1900) 'piquira'**
Serrapinnus microdon (Eigenmann, 1915) 'piquira'**
- Glandulocaudinae *Xenurobrycon macropus* Myers & Ribeiro, 1945 'piquira'
- Acestrorhynchidae** *Acestrorhynchus pantaneiro* Menezes, 1992 'peixe-cachorro'
- Cynodontidae** *Rhaphiodon vulpinus* Spix & Agassiz, 1829 'peixe-cachorro'
- Erythrinidae** *Erythrinus erythrinus* (Bloch & Schneider, 1801) 'jeju'
Hoplerythrinus unitaeniatus (Agassiz, 1829) 'jeju'
Hoplías aff. *malabaricus* (Bloch, 1794) 'rubafó'
- Lebiasinidae** *Pyrrhulina australis* Eigenmann & Kennedy, 1903 'charutinho'

SILURIFORMES

- Cetopsidae** *Cetopsis gobioides* Kner, 1857 'candiru'
- Aspredinidae** *Amaralia hypsiura* (Kner, 1855) 'rabeca'
Bunocephalus doriae Boulenger, 1902 'rabeca'
Bunocephalus rugosus Eigenmann & Kennedy, 1903 'rabeca'**
- Trichomycteridae** *Ituglanis* spp. 'candiru'*
Ochmacanthus batrachostoma (Ribeiro, 1912) 'candiru'
Parastegophilus maculatus (Steindachner, 1879) 'candiru'**
Paravandellia oxyptera Ribeiro, 1912 'candiru'
Trichomycterus spp. 'candiru'
- Callichthyidae** *Callichthys callichthys* (Linnaeus, 1758) 'tamboatá'
Corydoras aeneus (Gill, 1858) 'camboatazinho'
Corydoras areio Knaack, 2000 'camboatazinho'**
Corydoras ellisae Gosline, 1940 'camboatazinho'**
Corydoras hastatus Eigenmann & Eigenmann, 1888 'camboatazinho'
Corydoras latus Pearson, 1924 'camboatazinho'**
Corydoras polystictus Regan, 1912 'camboatazinho'
Corydoras splendens (Castelnau, 1855) 'camboatazinho'
Hoplosternum littorale (Hancock, 1828) 'camboatá'
- Loricariidae**

LISTS OF SPECIES

- Hypoptopomatinae *Hisonotus* sp. 1 'limpa-vidro'*
Hypoptopoma inexpectatum (Holmberg, 1893) 'cascudo'**
Otocinclus vittatus Regan, 1904 'limpa-vidro'
- Loricariinae *Brochyloricaria macrodon* (Kner, 1853) 'rapa-canoa'
Farlowella paraguayensis Retzer & Page, 1997 'rapa-canoa'
Hemiodontichthys acipenserinus (Kner, 1853) 'rapa-canoa'
Loricaria apeltogaster Boulenger, 1895 'rapa-canoa'
Loricaria sp. 1 'rapa-canoa'*
Loricaria sp. 2 'rapa-canoa'*
Loricariichthys labialis (Boulenger, 1895) 'rapa-canoa'
Loricariichthys platymetopon Isbrücker & Nijssen, 1979 'rapa-canoa'
Pyxiloricaria menezesi Isbrücker & Nijssen, 1984 'rapa-canoa'
Rineloricaria cacerensis (Ribeiro, 1912) 'rapa-canoa'
Rineloricaria hoehnei (Ribeiro, 1912) 'rapa-canoa'
Rineloricaria parva (Boulenger, 1895) 'rapa-canoa'
Spatuloricaria evansii (Boulenger, 1892) 'rapa-canoa'
Sturisoma barbatum (Kner, 1853) 'acari-espada'
- Hypostominae *Hypostomus boulengeri* (Eigenmann & Kennedy, 1903) 'cascudo'
Hypostomus cochliodon Kner, 1854 'cascudo'**
Hypostomus latifrons Weber, 1986 'cascudo'
Hypostomus piratatu Weber, 1986 'cascudo'
Hypostomus regani (Ihering, 1905) 'cascudo'*
Hypostomus ternetzi (Boulenger, 1895) 'cascudo'*
- Hypostomus* sp. 1 'cascudo'*
Hypostomus sp. 2 'cascudo'*
Hypostomus sp. 3 'cascudo'*
Hypostomus sp. 4 'cascudo'*
Hypostomus sp. 5 'cascudo'*
Pterygoplichthys anisitsi Eigenmann & Kennedy, 1903 'cascudo'
Rhinelepis strigosa Valenciennes, 1840 'cascudo-preto'
- Ancistrinae *Ancistrus cuiabae* Knaack, 1999 'cascudo'*
Megalancistrus parananus (Peters, 1881) 'cascudo-abacaxi'**
- Pseudopimelodidae** *Microglanis cottoides* (Boulenger, 1891) 'bagre-sapo'
Batrochoglanis sp. 1 'bagre-sapo'*
Pseudopimelodus mangurus (Valenciennes, 1835) 'bagre-sapo'**
- Heptapteridae** *Imparfinis guttatus* (Pearson, 1924) 'bagrinho'*
Imparfinis stictonotus (Fowler, 1940) 'bagrinho'*
Phenacorhamdia hoehnei (Ribeiro, 1914) 'bagrinho'
Pimelodella gracilis (Valenciennes, 1835) 'chum-chum'
Pimelodella griffini Eigenmann, 1917 'chum-chum'
Pimelodella megalura Ribeiro, 1918 'chum-chum'
Pimelodella mucosa Eigenmann & Ward, 1907 'chum-chum'
Pimelodella taenioptera Ribeiro, 1914 'chum-chum'
Pimelodella sp. 1 'chum-chum'*
Rhamdia quelen (Quoy & Gaimard, 1824) 'bagre'

LISTS OF SPECIES

- Hemisorubim platyrhynchos* (Valenciennes, 1840) ‘jurupoca’
Hypophthalmus edentatus Spix & Agassiz, 1829 ‘mapará’
Iheringichthys labrosus (Lütken, 1874) ‘mandi-beiçudo’
Luciopimelodus pati (Valenciennes, 1836) ‘fidalgo’
Megalonema platanum (Günther, 1880) ‘fidalgo’
Pimelodus absconditus Azpelicueta, 1995 ‘bagre’**
Pimelodus argenteus Perugia, 1891 ‘bagre’
Pimelodidae *Pimelodus maculatus* Lacépède, 1803 ‘bagre’
Pimelodus ornatus Kner, 1858 ‘cabeçudo’
Pimelodus sp. 1 ‘bagre’*
Pinirampus pirinampu (Spix & Agassiz, 1829) ‘barbado-branco’
Pseudoplatystoma corruscans (Spix & Agassiz, 1829) ‘pintado’
Pseudoplatystoma fasciatum (Linnaeus, 1766) ‘cachara’
Pseudoplatystoma corruscans x *Pseudoplatystoma fasciatum* ‘híbrido’*
Sorubim lima (Bloch & Schneider, 1801) ‘jurupensém’
Zungaro zungaro (Humboldt, 1821) ‘jaú’**
- Anadoras weddellii* (Castelnau, 1855) ‘rique-rique’
Doras eigenmanni (Boulenger, 1895) ‘rique-rique’
Doras punctatus Kner, 1853 ‘rique-rique’*
Doradidae *Oxydoras kneri* Bleeker, 1862 ‘abotoado’
Platydoras armatulus (Valenciennes, 1840) ‘roque-roque’
Pterodoras granulatus (Valenciennes, 1821) ‘abotoado’
Rhinodoras dorbignyi (Kner, 1855) ‘abotoado’
Trachydoras paraguayensis (Eigenmann & Ward, 1907) ‘rique-rique’
- Ageneiosus brevifilis* Valenciennes, 1840 ‘palmito’
Ageneiosus ucayalensis Castelnau, 1855 ‘palmito’
Auchenipterus nigripinnis (Boulenger, 1895) ‘palmitinho’
Auchenipterus osteomystax (Ribeiro, 1918) ‘palmitinho’**
Auchenipteridae *Entomocorus benjamini* Eigenmann, 1917 ‘palmitinho’
Epapterus dispilurus Cope, 1878 ‘palmitinho’**
Parauchenipterus galeatus (Linnaeus, 1766) ‘jauzinho’
Tatia neivai (Ihering, 1930) ‘jauzinho’
Tatia sp. 1 ‘jauzinho’*
- GYMNOTIFORMES
- Gymnotidae** *Gymnotus inaequilabiatus* (Valenciennes, 1839) ‘tuvira’**
Gymnotus paraguensis Albert & Crampton, 2003 ‘tuvira’**
- Sternopygidae** *Eigenmannia trilineata* López & Castello, 1966 ‘tuvira’
Eigenmannia virescens (Valenciennes, 1836) ‘tuvira’
Eigenmannia sp. 1 ‘tuvira’*
Sternopygus macrurus (Bloch & Schneider, 1801) ‘tuvira’
- Rhamphichthyidae** *Gymnorhamphichthys hypostomus* Ellis, 1912 ‘tuvira’
Rhamphichthys hahni (Meinken, 1937) ‘tuvira-bicuda’

LISTS OF SPECIES

- Hypopomidae** *Brachyhypopomus* sp. 1 'tuvira'**
Brachyhypopomus sp. 2 'tuvira'**
Brachyhypopomus sp. 3 'tuvira'**
- Apteronotidae** *Apteronotus albifrons* (Linnaeus, 1766) 'ituí'
Apteronotus caudimaculosus Santana, 2003 'ituí'*
Apteronotus ellisi (Arámburu, 1957) 'ituí'*
Sternachorhynchus curvirostris (Boulenger, 1887) 'ituí-bicudo'

CYPRINODONTIFORMES

- Rivulidae** *Neofundulus paraguayensis* (Eigenmann & Kennedy, 1903) 'peixe-anual'
Pterolebias phasianus Costa, 1988 'peixe-anual'
Rivulus punctatus Boulenger, 1895 'peixe-anual'
- Poeciliidae** *Pamphorichthys hasemani* (Henn, 1916) 'barrigudinho'

BELONIFORMES

- Belonidae** *Pseudotylorus angusticeps* (Günther, 1866) 'peixe-agulha'

SYNBRANCHIFORMES

- Synbranchidae** *Synbranchus marmoratus* Bloch, 1795 'mussum'

PERCIFORMES

- Sciaenidae** *Pachyurus bonariensis* Steindachner, 1879 'corvina'
Plagioscion ternetzi Boulenger, 1895 'corvina'
- Cichlidae** *Apistogramma borellii* (Regan, 1906) 'cará'
Apistogramma commbrae (Regan, 1906) 'cará'
Apistogramma trifasciata (Eigenmann & Kennedy, 1903) 'cará'
Astronotus crassipinnis (Heckel, 1840) 'cará-açu'**
Bujurquina vittata (Heckel, 1840) 'cará'
Chaetobranchopsis australis Eigenmann & Ward, 1907 'cará'
Cichlasoma dimerus (Heckel, 1840) 'cará'
Crenicichla lepidota Heckel, 1840 'joana-guensa'**
Crenicichla semifasciata (Heckel, 1840) 'joana-guensa'
Crenicichla vittata Heckel, 1840 'joana-guensa'
Gymnogeophagus balzanii (Perugia, 1891) 'cará'
Laetacara dorsigera (Heckel, 1840) 'cará'
Satanoperca pappaterra (Heckel, 1840) 'cará'

PLEURONECTIFORMES

- Achiridae** *Catathyridium jenynsii* (Günther, 1862) 'arraia-sem-ferrão'

LISTS OF SPECIES

SARCOPTERYGII

LEPIDOSIRENIFORMES

Lepidosirenidae

Lepidosiren paradoxa Fitzinger, 1837 'pirambóia'

Acknowledgements

Thanks are due to Cláudio H. Zawadzki (UNICENTRO), Weferson J. Graça (UEM/Nupélia), Flávio A. Bockmann and Marcelo R. Carvalho (LIRP/USP), Alberto A. Akama, Flávio C. T. Lima, Mário C. C. de Pinna, Gizelani M. Guazelli, and Osvaldo T. Oyakawa (MZUSP), Ricardo Campos-da-Paz (MNRJ), and Oscar A. Shibatta (UEL) for identifying some fish species, to Weferson J. Graça and Angelo A. Agostinho (UEM/Nupélia) for critically reading the manuscript, and to John J. Stanley for revising the English. We are also indebted to Nupélia (Núcleo de Pesquisas em Limnologia, Ictiologia e Aqüicultura) and Furnas Centrais Elétricas for collecting the material and giving logistical support. This study was partially supported by grants from CNPq (Conselho Nacional de

Desenvolvimento Científico e Tecnológico) to CSP and HAB.

Literature cited

- Britski, H. A., K. S. Silimon, and B. S. Lopes. 1999. Peixes do Pantanal: manual de identificação. Brasília. Embrapa. 184 p.
- Eschmeyer, W. N. 1990. Catalog of the genera of recent fishes. San Francisco. California Academy of Sciences. 697 p.
- Reis, R. E., S. O. Kullander, and C. J. Ferraris Jr. 2003. Check list of the freshwater fishes of South and Central America. Porto Alegre. EDIPUCRS. 742 p.

Received June 2005

Accepted July 2005

Published online September 2005