

# Fish, Tatuí river basin, state of São Paulo, Brazil

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**ABSTRACT:** The Tatuí river hydrographic basin locates in low Sorocaba river basin in São Paulo state, Brazil. A relatively high diversity of fish species was noticed at that place, whose habitats are also presumed to be diversified. The Tatuí river is an important tributary of Sorocaba river, with great number of smaller streams and marginal lagoons. Fishes were collected using gill-nets, purse seines, sieves and traps, line and hook, every month during one year (from May 2009 to April 2010). Fish species were 51, including seven orders and 18 families. Characiformes and Siluriformes were the most represented with respectively 26 and 14 species.

## INTRODUCTION

The Tatuí hydrographic basin is located in low Sorocaba river basin in São Paulo state, known as Medium Superior Tietê (Figure 1). The Tatuí river is an important tributary of Sorocaba river and is surrounded by Tatuí city. A relatively diverse fish fauna lives in these waters. The importance of this region to be studied is implemented by some small streams and marginal lagoons presence result to enlarge the environmental variability. The Tatuí river width varies from 5 to 15 m and its profundity measures around 2 m, but varies from 50 cm in its rapids to 3 meters at the pools.

## MATERIALS AND METHODS

The study was made at the sub-region of the low Sorocaba river basin, near to Tatuí city (23°19'59" S 47°47'01" W).

Fish were caught using gill-nets, purse seines, sieves and traps, and captures were also complemented by using line and hook. Collections were made during one year from May 2009 to April 2010. Fish identification was made using the study of Bristki *et al.* (1999), Smith *et al.* (2003), Villares Junior and Goitein (2006) and Graça and Pavanelli (2007). Specimens were fixed and deposited in the Zoology Department Collection of the Instituto de Biociências Unesp - Rio Claro.

## RESULTS AND DISCUSSION

During this period 51 species were collected, included in seven orders, 18 families and 39 genera. From the species recorded 26 are Characiformes, 14 Siluriformes, five Perciformes, one Gymnotiformes, two Cyprinodontiformes, two Cypriniformes and one Synbranchiformes (Table 1). Most are native and common to Tietê Basin, but some are allochthonous, *Poecilia reticulata* Peters, 1859, *Pterygoplichthys* sp., and exotic, such as the *Oreochromis niloticus* (Linnaeus 1758), *Tilapia*

*rendalli* (Boulenger, 1897), *Cyprinus carpio* Linnaeus, 1758, and *Ctenopharyngodon idella* (Valenciennes, 1844).

Langeani *et al.* (2007) registered 310 species of fishes in upper Paraná river. Castro and Menezes (1998) report more than 260 fish species for the state of São Paulo, distributed in 25 families. Siluriformes, followed by Characiformes are the most important in species numbers. At present 71 species were registered to the Sorocaba river basin, distributed in 22 families and seven orders, with 39 species of Characiformes, 21 Siluriformes, three Gymnotiformes, four Perciformes, two Cyprinodontiformes and one Synbranchiformes (Smith *et al.* 2007).

The presence of allochthonous and exotic species may be due to pisciculture ponds and some sport fishing ponds in the region, from which they sometimes escape, when heavy rains occur and some floods happen. This may be the main cause of exotic species dispersion in Brazil (Langeani *et al.* 2007). The mishandling of these systems may cause the main problems of such "invasions" of natural environments by these exotic species. During all these years such activities have not been controlled either by the land owners or the environmental authorities (Fernandez, *et al.* 2003). People with no ecological principles also introduce some exotic species.

In this study, four species which were not formerly registered for the Sorocaba river basin were observed. They were *Crenicichla britskii*, *Pterygoplichthys* sp., *Cetopsis gobooides* and *Ctenopharyngodon idella*. It should also be considered that many of these environments are unexplored, and so, much more research could be made, namely in some streams and the upper waters of The Guarapó, Tatuí and Sarapuí rivers, where other species may potentially appear (Villares Junior and Goitein 2006). In general terms it has been observed that in Tatuí river basin there is a considerably diverse fish fauna, exploring diverse aquatic environments.

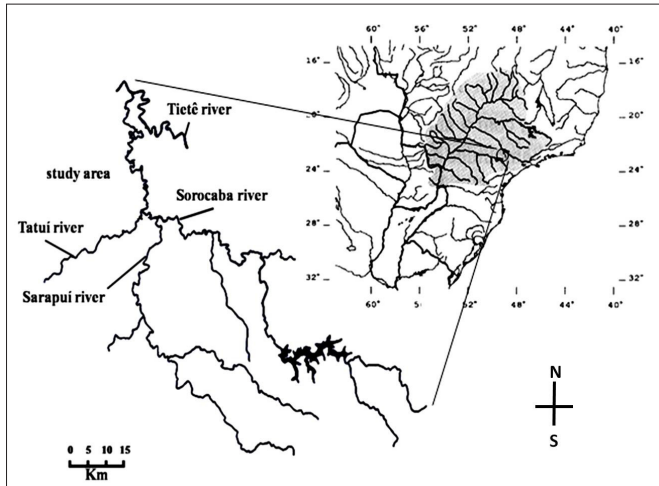


FIGURE 1. Partial map of Brazil showing the location of the Sorocaba river basin and Tatuí river basin.

TABLE 1. Fish species from the Tatuí river Basin.

<b>CHARACIFORMES</b>	
ERYTHRINIDAE	
<i>Hoplias malabaricus</i> (Bloch, 1794) – “trafa”	
PROCHILODONTIDAE	
<b><i>Prochilodus lineatus</i> (Valenciennes, 1836) – “curimatá”</b>	
<b>CURIMATIDAE</b>	
<i>Steindachnerina insculpta</i> (Fernández-Yépez, 1948) – “saguaru”	
<i>Cyphocharax modestus</i> (Fernández-Yépez, 1948) – “saguaru”	
PARODONTIDAE	
<i>Parodon nasus</i> Kner, 1859 – “bananinha”	
ANOSTOMIDAE	
<i>Leporinus obtusidens</i> (Valenciennes, 1836) – “piapara”	
<i>Leporinus friderici</i> (Bloch, 1794) – “piau”	
<i>Leporinus octofasciatus</i> (Steindachner, 1915) – “piava ferreira”	
<i>Leporinus lacustris</i> (Campos, 1945) – “piau”, “piava”	
<i>Leporinus striatus</i> Kner, 1858 – “piau-listrado”	
<i>Schizodon nasutus</i> Kner, 1858 – “shimborê”	
CHARACIDAE	
Serrasalminae	
<i>Piaractus mesopotamicus</i> (Holmberg, 1887) – “pacu”	
<i>Metynnis maculatus</i> (Kner, 1858) – “pacu-peva”	
<i>Serrasalmus maculatus</i> (Kner, 1858) – “pirambeba”	
Salmininae	
<i>Salminus hilarii</i> (Valenciennes, 1850) – “tabarana”	
Cheirodontinae	
<i>Serrapinnus notonelas</i> (Eigenmann, 1915) – “lambarizinho”	
<i>Serrapinnus</i> sp. – “lambarizinho”	
<i>Odontostilbe</i> sp. – “pequira”	
CHARACIDAE <i>Incertae Sedis</i>	
<i>Astyanax altiparanae</i> Garutti & Britski, 2000 – “tambiu”	
<i>Astyanax fasciatus</i> (Cuvier, 1819) – “lambari de rabo vermelho”	
<i>Astyanax</i> sp. – “lambari”	
<i>Bryconamericus stramineus</i> Eigenmann, 1908 – “pequira”	
<i>Bryconamericus</i> sp. – “pequira”	

TABLE 1. CONTINUED.

<i>Hemigrammus marginatus</i> Ellis, 1911 – “lambarizinho de rabo vermelho”	
<i>Oligosarcus paranensis</i> Menezes e Géry, 1983 – “saicanga”, “peixe cadela”	
ACESTORRHYNCHIDAE	
<i>Acestorhynchus lacustris</i> (Lütken, 1875) – “saicanga”, “peixe cadela”	
<b>SILURIFORMES</b>	
PIMELODIDAE	
<i>Pimelodus maculatus</i> La Cèpede, 1803 – “mandi”	
CETOPSIDAE	
<i>Ceptosis goboidea</i> (Kner, 1858) – “candiru”	
HEPTAPTERIDAE	
<i>Rhamdia quelen</i> (Quoy & Gaimard, 1824) – “bagre”	
<i>Pimelodella gracilis</i> (Valenciennes, 1835) – “cõen-cõen”, “mandizinho”	
PSEUDOPIMELODIDAE	
<i>Pseudopimelodus</i> cf. <i>mangurus</i> (Valenciennes, 1835) – “bagre-sapo”	
LORICARIDAE	
Hypostominae	
<i>Hypostomus</i> cf. <i>regani</i> (Ilhering, 1905) – “cascudo”	
<i>Hypostomus ancistroides</i> (Ilhering, 1911) “cascudo”	
<i>Hypostomus margaritifera</i> (Regan, 1908) “cascudo”	
<i>Hypostomus</i> sp.A – “cascudo”	
<i>Hypostomus</i> sp.B – “cascudo”	
<i>Pterygoplichthys</i> sp. “cascudo”	
CALLICHTHYIDAE	
Callichthyinae	
<i>Callichthys callichthys</i> (Linnaeus, 1758) – “caborja”	
<i>Hoplosternum littorale</i> (Hancock, 1828) – “caborja”	
Corydoradinae	
<i>Corydoras aeneus</i> (Gill, 1858) – “caborja”	
<b>GYMNOTIFORMES</b>	
GYMNOTIDAE	
<i>Gymnotus</i> cf. <i>carapo</i> (Linnaeus, 1758) – “tuvira”	
<b>CYPRINODONTIFORMES</b>	
POECILIDAE	
<i>Phalloceros caudimaculatus</i> (Hensel, 1868) – “barrigudinho”	
<i>Poecilia reticulata</i> Peters, 1860 – “guaruzinho”	
<b>PERCIFORMES</b>	
CICHLIDAE	
<i>Geophagus brasiliensis</i> (Quoy & Gaimard, 1824) – “cará”	
<i>Australoheros facetus</i> (Jenyns, 1842) – “cará”	
<i>Tilapia rendalli</i> (Boulenger, 1897) – “tilápia”	
<i>Oreochromis niloticus</i> (Linnaeus, 1758) – “tilápia-do-nilo”	
<i>Crenicichla britskii</i> (Kulllander, 1982) – “jacundá”, “sabonete”	
<b>SYNBRANCHIFORMES</b>	
SYNBRANCHIDAE	
<i>Synbranchus marmoratus</i> (Bloch, 1795) – “mussum”, “piramboia”	
<b>CYPRINIFORMES</b>	
CYPRINIDAE	
<i>Cyprinus carpio</i> (Boulenger, 1897) – “carpa”	
<i>Ctenopharyngodon idella</i> (Valenciennes, 1844) – “carpa-capim”	

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