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Vitule JRS, da Costa AP, Frehse FA, Bezerra LAV, Occhi TVT, Daga VS, Padial AA. Comments on 'Fish biodiversity and conservation in South America by Reis *et al.* (2016)'. J Fish Biol. 2017; 90(4):1182-1190. https://doi.org/10.1111/jfb.13239

Vitule JRS, Occhi TVT, Kang B, Matsuzaki S, Bezerra LA, Daga VS, Faria L, Frehse FA, Walter F, Padial AA. Intra-country introductions unraveling global hotspots of alien fish species. Biodivers Conserv. 2019; 28(11): 3037-3043. https://doi.org/10.1007/s10531-019-01815-7

Zaniboni-filho E, Schulz UH. *in press.*, Migratory fishes of the Uruguay river. In Carolsfeld J, Harvey B, Baer A, Ross C, editors. Migratory fishes of the South America: biology, social importance and conservation status. The World Bank; 2000. p.135-168.

Zawadzki CH, Renesto E, Bini LM. Genetic and morphometric analysis of three species of the genus *Hypostomus* Lacépède, 1803 (Osteichthyes: Loricariidae) from the Rio Iguaçu basin (Brazil). Rev Suisse de Zool. 1999; 106(1):91-105.

DESTAQUES

São Carlos, março de 2020

LEP-UFRRJ

THE FISH COLLECTION OF THE LABORATÓRIO DE ECOLOGIA DE PEIXES OF THE UNIVERSIDADE FEDERAL RURAL DO RIO DE JANEIRO

AUTORES ASSOCIADOS

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The fish collection of the Universidade Federal Rural of Rio de Janeiro is part of the Laboratório de Ecologia de Peixes and began to be organized with specimens collected from the Paraíba do Sul River and Sepetiba Bay in the early 1980s. Fishes incorporated in the collection are mainly voucher

specimens from marine and freshwater research projects that received financial support from CNPq and FAPERJ. The specimens were fixed in water with 10% formaldehyde and then preserved in a solution of 75% ethyl alcohol and 25% distilled water. The collection comprises 2510 lots of 300 species, including the Chondrichthyes, several orders of Actinopterygii, and fossils of Crato Formation (ancient freshwaters and marine forms as *Dastilbe crandalli* (Jordan, 1910) and *Mawsonia gigas* (Mawson & Woodward, 1907) from the Ceará State. A great number of specimens are representants of the superorder Ostariophysi (mainly Characiformes and Siluriformes), and the families Cichlidae, Sciaenidae, Carangidae and Gerreidae. Fish species are from several habitats, including freshwater, brackish and marine habitats, of Atlantic Forest rivers and streams, and coastal areas (bays, coastal lagoons and oceanic beaches) from Southeastern Brazil. However, others basins of South America (Orinoco, Essequibo), Central America and other Brazilian basins (São Francisco and Paraná) are also represented (Figure 1).

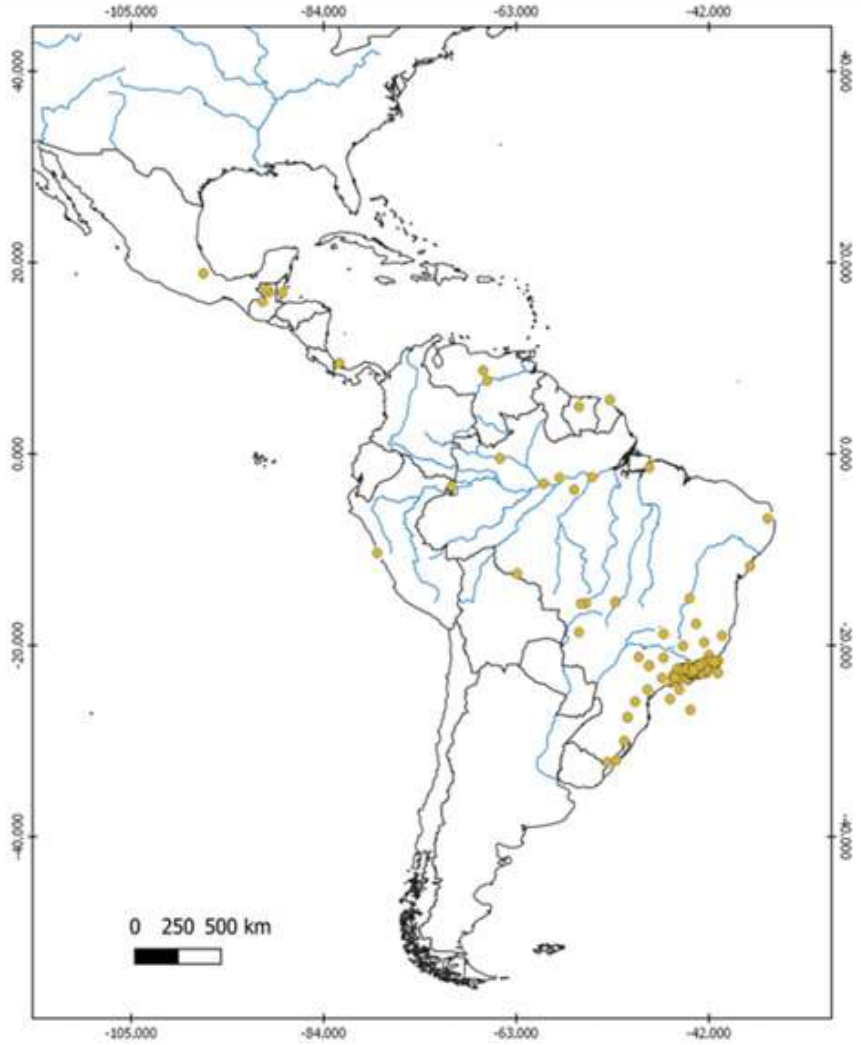

Figure 1. *Map of South and Central America showing collecting localities (yellow dots) of catalog georeferenced lots of LEP-UFRRJ. Each point may represent more than one sample.*

Besides the ordinary fish specimens, the collection has a list of endangered and endemic species. There are about 20 endangered species, some of those are endemic from coastal rivers of Rio de Janeiro State, such as *Characidium grajahuensis* Travassos, 1944, *Cheirodon parahybae* (Eigenmann, 1915), *Hyphessobrycon flammeus* (Myers, 1924) and *Listrura nematopteryx* de Pinna, 1988. Other species listed in this collection, although not endangered, have overfished populations, such as *Hippocampus erectus* Perry, 1810, *H. reidi* Ginsburg 1933 and *Sardinella brasiliensis* (Steindachner, 1879). The LEP-UFRRJ has also species from other Brazilian basins (*allochthonous*), and from other continents (exotic) such as the ornamental *Hyphessobrycon eques* (Steindachner, 1882), and *Pterophyllum scalare* (Cuvier, 1816). Some species have economic values, such as the tilapias *Oreochromis niloticus* (Linnaeus, 1758), *Coptodon rendalli* (Boulenger, 1897), and the sport fish *Cichla kelberi* Kullander & Ferreira, 2006 and *Colossoma macropomum* (Cuvier, 1816). The invasive species in coastal areas of Southeastern Brazil *Opsanus beta* (Goode & Bean, 1880) was also incorporated in the LEP-UFRRJ fish collection.

The entire collection is digitalized and information on the lots, including a map of the site occurrence is available at the collection **url: http://r1.ufrrj.br/lep/colecao.html.** Although this collection is relatively new, it has specimens collected from 1980. All these lots are distributed in a map, according to their geographic coordinates and the information related to them is in a single table, following the background support of the software Specify 7.0.2 (**specifyx.specifysoftware.org**). Recognizing the importance of stimulating scientific dissemination through dialogue between scientists and society, student Laura Rosa de Oliveira from the UFRRJ Undergraduate Journalism course was included in the LEP-UFRRJ team, under the supervision of the researcher post doc DSc. Magda Fernandes de Andrade-Tubino. This aims to improve the process of mediation between science and society and to increase its dialogue with citizens, since there has been a growing perception that knowledge must go beyond academia and reach society. This intern is responsible for entering information on the LEP-UFRRJ webpage and Specify software.

Threatened, over-exploited, exotic and fossil species are organized into lists, distributed in different tables and by clicking on the name of species, to get unique technical details from each one. The collection has contributed to the development of numerous papers, doctoral theses, master degree dissertations, and undergraduate studies, mainly in Ecology and nowadays in Taxonomy.

The collection is accommodated in two rooms (one for the collection itself and the other is the curation room), where the material is first examined and screened, in which res. The professor Francisco Gerson Araujo is the Coordinator of Laboratory of the Fish Ecology that support the Fish Collection. The Msc. Fernando Luiz Kilesse Salgado is the Curator (Figure 2).

Figure 2. The Curator Fernando Luiz Kilesse Salgado (left) and the Coordinator of LEP-UFRRJ, Francisco Gerson Araújo (right) in the Fish Collection.

Name and acronym	Collection of Fishes of the Laboratório de Ecologia de Peixes da Universidade Federal Rural do Rio de Janeiro – LEP-UFRRJ
Institution	Universidade Federal Rural do Rio de Janeiro
Address	BR 465, Km 7, Campus da UFRRJ, 23897-030, Seropédica, RJ, Brazil
Coordinator	Francisco Gerson Araújo – gersonufrrj@gmail.com
Curator	Fernando Luiz Kilesse Salgado – flksalgado@yhoo.com.br
Website	http://r1.ufrrj.br/lep/colecao.html
Year of Foundation	2013
Facilities and area of the collection	2 rooms
Total number of lots and number of lots from Neotropical region	2510, all from the Neotropical region
Total number of specimens and number of specimens from Neotropical region	10240, all from the Neotropical region
Number of type species/specimens	1 species/3 specimens
Registers/habitat	1582 freshwater registers/928 marine or brackish registers
Registers origin	Brazil: 2489 registers; Other few register from Peru, Guiana, Suriname and Central America
Current cataloging method	® Specify 7.0.2- http://specifysoftware.org
Web Site data technical manager	Laura Rosa de Oliveira – laurarosadeoliveira@gmail.com