

CARTILAGINOUS FISHES (CLASS CHONDRICHTHYES) FROM THE ICHTHYOLOGICAL COLLECTION AT THE FEDERAL UNIVERSITY OF PARAÍBA, BRAZIL

PEIXES CARTILAGINOSOS (CLASSE CHONDRICHTHYES) DA COLEÇÃO ICTIOLÓGICA DA UNIVERSIDADE
FEDERAL DA PARAÍBA, BRASIL

PECES CARTILAGINOSOS (CLASSE CHONDRICHTHYES) DE LA COLECCIÓN ICTIOLÓGICA DE LA
UNIVERSIDAD FEDERAL DE PARAÍBA, BRASIL

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Abstract

Federal University of Paraíba (UFPB) ichthyological collection comprises over 11,000 lots of species of cartilaginous and bony fishes from marine, estuarine and freshwater realms. Due to the collection size, rarity of some specimens, taxonomic and geographical scope, this collection represents a substantial archive of the Neotropical fish fauna, especially concerning the Northeast Brazilian region. Currently, UFPB fish collection is under bioinformatization and curatorial transitions. Hence, the present study aimed to provide a detailed taxonomic synthesis of the Chondrichthyan collection database in which the systematic, spatial and chronological coverages are discussed. Full list of collection objects, updated nomenclature and type collection extent are given for public consultation. There are 504 lots of sharks, batoids and chimaeras that are classified within 10 orders, 22 families, 34 genera, and 64 species. Myliobatiformes and Carcharhiniformes represent taxa with higher number of lots in which freshwater stingrays (Potamotrygonidae) and requiem sharks (Carcharhinidae) stand out. Specimens were mostly collected in the marine coastline off Paraíba state and lower Amazonian region, which set UFPB fish collection as an outstanding scientific collection of the regional genetic heritage.

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Keywords: Elasmobranchii; chimaeras; taxonomy; ichthyological collection; Northeast Brazil.

Resumo

A coleção ictiológica da Universidade Federal da Paraíba (UFPB) compreende mais de 11.000 lotes de espécies de peixes cartilaginosos e ósseos de ambientes marinhos, estuarinos e dulcícolas. O tamanho, a raridade dos espécimes, e os escopos taxonômico e geográfico fazem desta coleção um significativo acervo da fauna de peixes neotropicais, especialmente relativo a região do Nordeste brasileiro. Atualmente, a coleção de peixes da UFPB está sob bioinformatização e transição curatorial. Assim, o presente estudo objetivou sintetizar a base de dados referente a coleção de Chondrichthyes e discutir a distribuição sistemática, espacial e cronológica da coleção. Uma lista completa dos objetos da coleção, nomenclatura atualizada e extensão da coleção-tipo são divulgadas aqui para consulta pública. Existem 504 lotes de tubarões, raias e quimeras que estão classificadas em 10 ordens, 22 famílias, 34 gêneros e 64 espécies. Myliobatiformes e Carcharhiniformes representam taxa com maior número de lotes, sendo as raias de água doce (Potamotrygonidae) e os tubarões réquiem (Carcharhinidae) mais notados. Os espécimes foram coletados majoritariamente no Estado da Paraíba e na região do baixo Amazonas, reiterando a coleção de peixes da UFPB como uma coleção científica de renome do patrimônio genético regional.

Palavras-chave: Elasmobranchii; quimeras; taxonomia; coleção ictiológica; Nordeste do Brasil.

Resumen

La Colección Ictiológica de la Universidad Federal de Paraíba (UFPB) comprende más de 11,000 lotes de especies de peces cartilaginosos y óseos de ambientes marinos, estuarinos y de agua dulce. Debido al tamaño, la rareza de los especímenes, los ámbitos taxonómico y geográfico, esta colección representa un archivo sustancial de la fauna de peces Neotropicales, especialmente en relación a la región noreste de Brasil. Actualmente, la colección de peces de la UFPB está bajo bioinformatización y transición curatorial. Por lo tanto, el presente estudio tuvo como objetivo sintetizar la base de datos de los Chondrichthyes y analizar la distribución sistemática, espacial y cronológica de la colección. Aquí se presenta una lista completa de los objetos de colección, la nomenclatura actualizada y la extensión de la colección de tipos para consulta pública. Hay 504 lotes de tiburones, rayas y quimeras que se clasifican en 10 órdenes, 22 familias, 34 géneros y 64 especies. Myliobatiformes y Carcharhiniformes representan los taxones más comunes, con las rayas de agua dulce (Potamotrygonidae) y los tiburones réquiem (Carcharhinidae) siendo los más notables. Los especímenes se recolectaron principalmente en el estado de Paraíba y en la región del bajo Amazonas, lo que estableció la colección de peces de la UFPB como una colección científica reconocida del patrimonio genético regional.

Palabras clave: Elasmobranchii; quimeras; taxonomia; colección ictiológica; Nordeste de Brasil.

INTRODUCTION

The Ichthyological collection at the Federal University of Paraíba (UFPB), Campus I, João Pessoa, Paraíba, represents an important zoological archive of Neotropical fish fauna and more particularly from the Brazilian Northeastern region. Established in 1977 at the Zoology Division of the Department of Systematics and Ecology (DSE) through the efforts of the former professor Dr. Graciela Cannella and Dr. Ricardo de Souza Rosa. Currently, the collection holdings comprise 11,836 catalogued lots from 692 fish species of marine and estuarine (6,097 lots, 409 species) and freshwater (5,739 lots, 283 species) realms. Myxini, Petromyzonti, Chondrichthyes and Euteleostomi (=Osteichthyes) are taxonomically classified within 39 orders, 98 families and 389 genera at total in the collection (Carvalho-Rocha et al. 2019).

Collection materials were incorporated through oceanographic and inland scientific expeditions, purchase in local fish markets, donations and/or exchange with national and international museums and institutions. These are mostly derived from adjacent Neotropical biogeographical regions such as the Tropical Atlantic Marine Bioregion within the Brazilian Northeast Exclusive Economic Zone as well as the Atlantic Forest, Caatinga and Amazonia biomes. Marine and estuarine holdings were also obtained from national marine environmentally protected areas including Fernando de Noronha, Atol das Rocas, Abrolhos, Trindade, and São Pedro and São Paulo Islands, and marine national parks such as Areia Vermelha in Paraíba State and Parcel of Manuel Luís in Maranhão State as well as artificial ecosystems (e.g. Alice and Queimado shipwrecks, Paraíba State; Ana Cristina shipwreck, Maranhão State; São Luiz shipwreck, Rio Grande do Norte State) and underwater formations (e.g. Risca do Zumbi and Parrachos de Maracajú, Rio Grande do Norte State) (Carvalho-Rocha et al. 2019). UFPB fish collection hence maintains a variety of taxonomic and ecological regional data that rarely exists worldwide.

National and foreign researchers and students have visited the fish collection annually for examining specimens, collaborating in scientific manuscripts with local scientists or obtaining biodiversity data as part of related research projects. With over 40 years of dedicated curation and maintenance, UFPB fish collection has underwritten to distinctive research fields in Biology, including systematic accounts (e.g. Ramos 2003; Rosa and Gadig 2014), biogeographic studies (e.g. Feitoza et al. 2005; Francini-Filho et al. 2019), feeding ecology (e.g. Shibuya et al. 2006; Moro et al. 2012), and conservation (e.g. Rosa and Menezes 1996; Ramos et al. 2018) of fishes. Special attention to the cartilaginous fishes (sharks, batoids and chimaeras) has been performed as target taxa due to research interests of Prof. Ricardo Rosa, concurrent curator together with Dr. Robson Tamar da Costa Ramos.

Diversity of Brazilian Chondrichthyan fauna today involves 13 orders, 37 families, 83 genera and approximately 200 recognized species, although many taxa are still awaiting systematic revision (Viana et al. 2018). The taxonomic impediment it represents is intrinsically due to unavailability of collection data and restricted accession of representatives in national zoological archives. Biodiversity collection databases thus are eminent for revealing regional knowledge gaps, speeding up project aims, and facilitate accession and exchange of related information for research, conservation and management purposes. As UFPB fish collection is still under bioinformatization process, the present study aimed to provide a detailed taxonomic synthesis and account of the Chondrichthyan collection database. Full list of collection objects, updated nomenclature and type collection extent are given for public consultation as well as systematic, geographical and chronological coverages are discussed.

MATERIAL AND METHODS

Collection data

Collection data were compiled from three catalog books of the UFPB ichthyological collection. Data were digitalized into Excel software spreadsheet. Collection data were standardized according to Wieczorek et al. (2012). Collection data consist of catalogue number, taxon full name, determiner, event number, locality name, geography, geographical coordinates, depth, collection date, collectors name, collection method, specimen count, sex, size, type status, preservation method, collection storage, and general remarks for each lot/specimen. Each original collection object and label were verified at the collection. Specimen lots are arranged in numerical system by order and family according to the fish classification of Nelson (2006), and stored in glass jars, containers and tanks of diverse sizes and shapes. Collection objects comprise whole, disarticulated (e.g. claspers) or partial (e.g. skeleton) wet specimens usually preserved in 70% ethanol. Dry material (e.g. cranium, jaws, egg capsule), and clearing and staining specimens in double-distilled glycerin are also part of the collection holdings. Each specimen was classified according to different life stages (e.g. larvae, embryos, neonates, juveniles and adults) whenever possible. Incomplete, incorrect or mismatched collection data were verified in the historical catalog books alongside invoices and/or original curatorial documents (e.g. collecting event logbooks). Collection data is herein summarized as Appendix 1 for consultation. Type specimens are indicated in a separate list along with reference of associated original description of the nominal species and/or subsequent nomenclatural act.

Biodiversity data

Chondrichthyan biodiversity data held at the UFPB fish collection were classified by subclass, order, family and species level. High clade nomenclature follows Naylor et al. (2012) and Last et al. (2016) for sharks and chimaeras, and batoids respectively. Doubtful species identifications were certified, and re-identifications were undertaken at the Laboratório de Ictiologia da Universidade Federal da Paraíba (LabIct-UFPB) through both expert consultation and/or using relevant identification keys, including: Gomes et al. (2010), Lasso et al. (2016), Last et al. (2016). Nomenclature was checked against Fricke et al. (2019) for updating. Vernacular names of species follow original description of nominal species or Froese and Pauly (2019) whenever available.

Spatial and temporal coverage

Locality name, geography and associated geographical coordinates for each lot/specimen were verified using Google Earth (http://www.google.co.uk/intl/en_uk/earth). Whenever these are not denoted in the collection database, latitude and longitude are estimated to the nearest locality and are given under the section “estimated coordinates”. Map of geographical coverage of the UFPB ichthyological collection holdings from the Neotropical region was generated through QGIS 3.2.1 Bonn (QGIS 2018). Specimen coordinates from beyond the American continent were excluded from the map but full geographical information is provided under Appendix 1. Temporal coverage was verified according to the registered collection event and/or collecting date.

RESULTS AND DISCUSSION

Chondrichthyan data at UFPB Ichthyological Collection

Sharks, batoids and chimaeras represent a total of 504 lots and 652 catalogued specimens. These are classified within 10 orders, 22 families, 34 genera, and 64 species (Table 1; Appendix 1). It thus represents approximately 0.04% of the total specimen holdings from the UFPB Ichthyological Collection (vs. 99.06% Osteichthyes in Carvalho-Rocha et al. 2019). Batoids comprise the most representative taxa with 76.59% of the total Chondrichthyan collection whereas sharks and chimaeras have, respectively, 23.21% and 0.20%. Collecting efforts were neglected for the latter two groups probably due to the difficulty on accessing material through oceanographic scientific expeditions and/or appropriate academic funding and infrastructure it requires.

Table 1. Diversity of Chondrichthyes holdings at the UFPB Ichthyological collection.
Number of lots is given in units per genus.

	Order	Family	Genus	Number of lots		
Sharks	Carcharhiniiformes	Carcharhinidae	<i>Carcharhinus</i>	21		
			<i>Galeocerdo</i>	3		
			<i>Prionace</i>	1		
			<i>Rhizoprionodon</i>	57		
				Sphyrnidae	<i>Sphyrna</i>	11
				Scyliorhinidae	<i>Scyliorhinus</i>	4
					<i>Schroederichthys</i>	2
				Tryakidae	<i>Mustelus</i>	2
			Lamniformes	Lamnidae	<i>Isurus</i>	1
				Pseudocarcharhidae	<i>Pseudocarcharias</i>	2
			Orectolobiformes	Ginglymostomatidae	<i>Ginglymostoma</i>	4
			Squatiniiformes	Squatinaidae	<i>Squatina</i>	1
			Squaliformes	Squalidae	<i>Squalus</i>	1
					<i>Cirrhigaleus</i>	4
		Dalatiidae		<i>Isistius</i>	1	
		Somniosidae		<i>Centroscymnus</i>	1	
Batoids	Myliobatiformes	Aetobatidae	<i>Aetobatus</i>	3		
			<i>Fontitrygon</i>	1		
		Dasyatidae	<i>Hypanus</i>	64		
			<i>Gymnura</i>	43		
		Gymnuridae	<i>Potamotrygon</i>	194		
			<i>Paratrygon</i>	10		
			<i>Plesiotrygon</i>	2		
			<i>Styracura</i>	5		
		Rhinopteridae	<i>Rhinoptera</i>	1		
			Urotrygonidae	<i>Urotrygon</i>	16	
				<i>Urobatis</i>	1	
		Rajiformes	Arhynchobatidae	<i>Rioraja</i>	1	
				<i>Sympterygia</i>	1	
		Rhinopristiformes	Rhinobatidae	<i>Pseudobatos</i>	20	
Trygonorrhinidae	<i>Zapteryx</i>		1			
Torpediniiformes	Narcinidae	<i>Narcine</i>	24			
Chimaeras	Chimaeriformes	Chimaeridae	<i>Hydrolagus</i>	1		
TOTAL				504		

All four orders of batoids occurring in Brazil are available at UFPB fish collection in which Myliobatiformes are by far the most common taxa of the total Chondrichthyan collection followed by Torpediniiformes, Rhinopristiformes and Rajiformes, respectively (Figure 1). Potamotrygonidae is amongst the family with the highest number of collection objects (41.87% of total records) within Myliobatiformes

and comprehends the common freshwater rays of the genera *Potamotrygon* Garman, 1877, *Paratygon* Duméril, 1865 and *Plesiotrygon* Rosa, Castello & Thorson, 1987 as well as marine rare species, for instance, *Styracura schmarda* (Werner, 1904). Dasyatidae, Gymnuridae and Urotrygonidae represent 12.90%, 8.53% and 3.37%, respectively, and denote an extensive number of specimens of *Hypanus guttatus* (Bloch & Schneider, 1801) and *H. marianae* Gomes, Rosa & Gadig, 2000, *Gymnura micrura* (Bloch & Schneider, 1801), and *Urotrygon microphthalmum* Delsman, 1941 (Table 1). Electric rays of Torpediniformes are exclusively from the family Narcinidae representing 4.76% with two species available: *N. brasiliensis* (Olfers, 1831) and *N. bancroftii* (Griffith & Smith, 1834). Specimens of these species from the Brazilian Northeast region are extremely rare in fish collections which makes UFPB ichthyological collection a reference database for future systematics and ecological studies. A total of 21 records of Rhinopristiformes are available in which 95.24% of them belong to the South American guitarays of the family Rhinobatidae, more particularly *Pseudobatos percellens* (Walbaum, 1792), whilst Trygonorrhinidae represents 4.76% of the group with a single specimen of the regional endemic, *Zapteryx brevirostris* (Müller & Henle, 1841). *Aetobatus narinari* (Euphrasen, 1790) (Aetobatidae), *Rhinoptera bonasus* (Mitchill, 1815) (Rhinopteridae) as well as two deep-water skates *Rioraja agassizi* (Müller & Henle, 1841) and *Sympterygia acuta* Garman, 1877 (Arrhynchobatidae) denote less than 1.0% of the total lots.

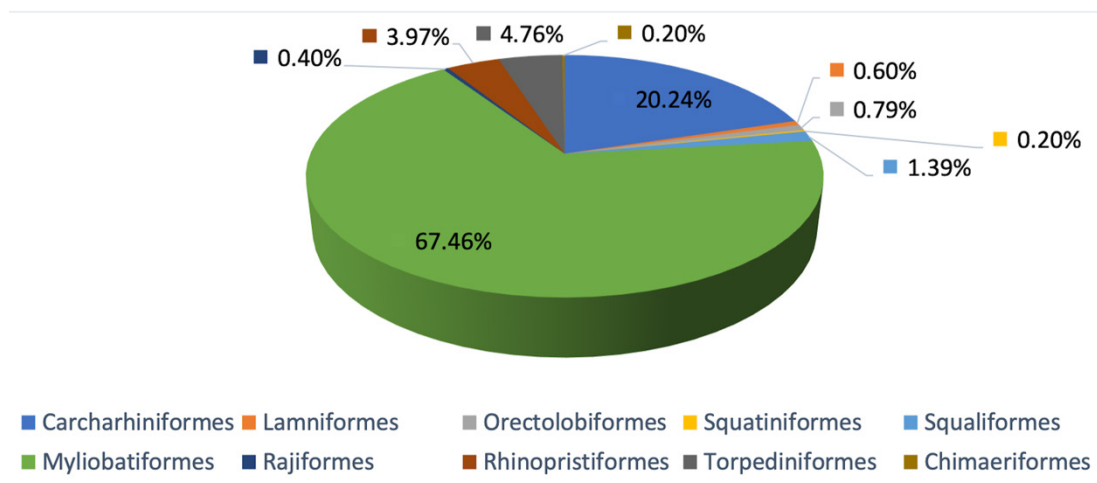


Figure 1. Number of lots by order at UFPB Chondrichthyan collection expressed in percentage.

All seven orders of sharks occurring in Brazil are represented in the collection with exception to Hexanchiformes. Carcharhiniformes is the order with the highest number of lots while Squaliformes, Squatiniformes, Orectolobiformes, Lamniformes represent near or less than 1.0% (Figure 1). Carcharhinidae has the second highest number of collection objects within Chondrichthyan families (16.47% of total lots)

and prevails within Carcharhiniformes with 81.93% of total specimens in which *Carcharhinus acronotus* (Poey, 1860), *C. limbatus* (Valenciennes, 1839), *C. plumbeus* (Nardo, 1827) and *Rhizoprionodon porosus* (Poey, 1861) are the most common species. Scyliorhinidae and Sphyrnidae bear, respectively, 12.65% and 4.22% of total specimens of Carcharhiniformes with *Scyliorhinus haeckelii* (Miranda-Ribeiro, 1907) and *Sphyrna tiburo* (Linnaeus, 1758) as the species with the greatest specimen counts. Despite Triakidae exhibits only 0.40% of total lots, *Mustelus higmani* Springer & Lowe, 1963 and *M. canis* (Mitchill, 1815) represent one of the few records collected from the Brazilian Northeastern region. A single specimen of *Isurus oxyrinchus* Rafinesque, 1810 (Lamnidae) is also available. Species rarely found in scientific collections such as *Pseudocarcharias kamoharai* (Matsubara, 1936) (Pseudocarcharidae) are also represented in the fish collection with two specimens collected from Natal, Rio Grande do Norte State through landings of the local industrial fishing fleets. There are only three families of Squaliformes: Squalidae, Dalatiidae and Somniosidae that comprise seven specimens at total. *Cirrhigaleus asper* (Merrett, 1973), *Isistius brasiliensis* (Quoy & Gaimard, 1824) and *Centroscymnus owstonii* Garman, 1906 whose specimens were all collected in the country are deep-water dogfish species that are also rarely found in Brazilian Ichthyological collections. *Squatina guggenheim* Marine, 1936 is the only species of angel sharks verified herein with one collection object from Rio de Janeiro, Brazil. Two specimens of the spotted ratfish *Hydrolagus colliei* (Lay & Bennett, 1839) from Washington State, USA represents the Chimaeriformes and were obtained as a donation from the Museum of Zoology, University of Alberta, Canada.

Ten paratypes are deposited at UFPB fish collection belonging to two endemic species, the Brazilian large-eyed stingray *H. marianae* and the “raia cururu” *Potamotrygon wallacei* Carvalho, Rosa & Araújo, 2016 (Table 2). These paratypes were designated through collaborative taxonomic studies of Prof. Ricardo Rosa and a number of other national shark experts. Type material are currently stored in a separate metal cabinet for safety and better preservation of specimens.

Table 2. List of type material from UFPB Chondrichthyan collection. N: number of specimens.

Nominal species	Authorship	Catalog number	Type status	N
<i>Hypanus marianae</i>	(Gomes, Rosa & Gadig, 2000)	UFPB 663	Paratype	1
		UFPB 2661	Paratype	1
		UFPB 2790	Paratype	1
		UFPB 3283	Paratype	1
		UFPB 4238	Paratype	1
<i>Potamotrygon wallacei</i>	Carvalho, Rosa & Araújo, 2016	UFPB 3543	Paratype	1
		UFPB 4866	Paratype	1
		UFPB 4867	Paratype	1
		UFPB 9017	Paratype	2
TOTAL				9

Spatial coverage

Collection material were caught more exclusively from the Neotropical region between Colombia, Venezuela, North and South Brazil to Argentina (Figure 2a). Brazilian specimens conquer other localities, denoting 97.02% of the total Chondrichthyan collection. Collection holdings are predominantly from the Northeast Brazil following by North and Southeast regions, respectively. South and Central-Western Brazil represent less than 1% (Figure 2b). Paraíba, Pará and Piauí States contribute, respectively, with 37.63%, 22.70% and 21.68% which makes UFPB fish collection the richest biodiversity archive concerning the Brazilian Tropical South America Chondrichthyan fauna when compared to other national institutes with online database available on GBIF (2019) and speciesLink (CRIA, 2019).

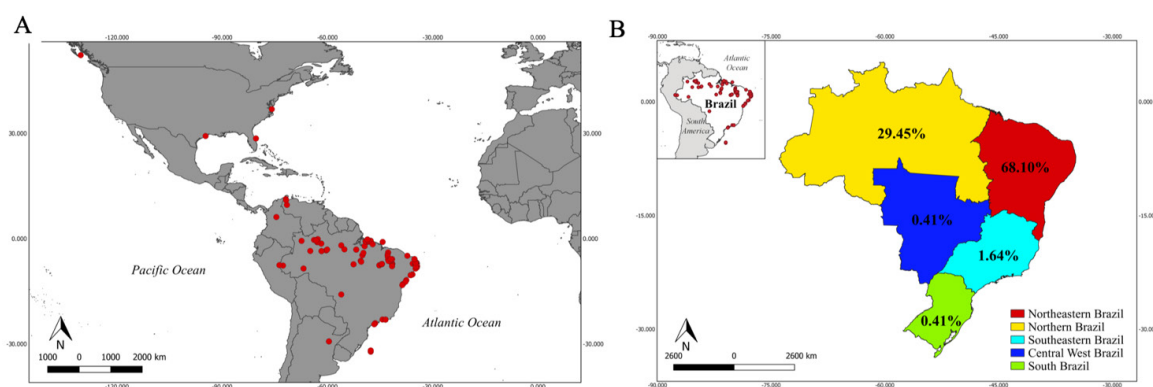


Figure 2. Locality records (red circles) of specimens from UFPB Chondrichthyan collection in the American continent (a) and number of lots by political region from Brazil (b) expressed in percentage.

Colombia, Venezuela and Argentina specimens represent less than 1% and usually are for regional endemic species. *Potamotrygon magdalenae* (Duméril, 1865) has one lot with two specimens caught from Rio Magdalena Basin in Colombia. Three lots with two specimens each of *Potamotrygon yepezi* Castex & Castello, 1970, a species endemic to Venezuela and Colombia, are also available in the collection. *Potamotrygon motoro* (Müller & Henle, 1841) is represented by three specimens collected from Rio Geronimo, Argentina and more three others with no specific locality and geography. Specimens from the United States of America comprise 1.23% such as a single specimen of the yellow stingray *Urobatis jamaicensis* (Cuvier, 1916) collected off Florida coast. These collection objects were all obtained as a gift or exchange from different foreign institutions and experts.

Temporal coverage and collecting method

The first specimen (UFPB 1358) acquired dates back to 1976, one year prior to the foundation of UFPB fish collection, and it belongs to *P. magdalenae* collected by Thomas B. Thorson (University of Nebraska-Lincoln). After that, most of the specimens that were aggregated came from donations and/or sent as gift by local scientists, including Alfredo Langguth and Carmen Alonso (UFPB), Michael Goulding (INPA), and Juraci de Melo Peixoto. Collecting efforts were more apparent between 1990 and 2010 with over 300 lots of sharks and batoids indexed in the collection (Figure 3). These results uncover the project achievements that were conducted at the LabIct-UFPB in the last 40 years of research in which most of them came from individual projects of local students and fish experts. Others came from projects in partnership with other labs, more importantly, the shrimp and shark projects from NEPREMAR expedition between 1994–2000. Many specimens were also obtained from fish markets and/or collaboration with local fishermen from the artisanal fisheries sector. Fishing gears comprised beach seine, longlines, pelagic trawls, demersal traps, and gill nets.

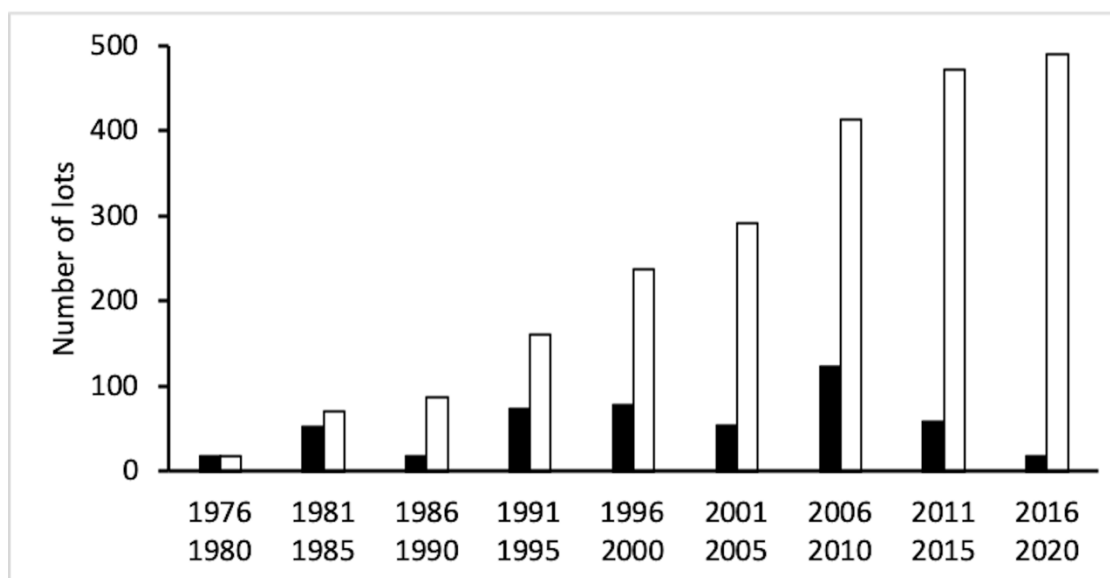


Figure 3. Collecting efforts from UFPB fish collection database, showing the number of Chondrichthyan lots with registered collection date that were obtained in the last 40 years. Collection expansion showed as absolute (black bars) and cumulative (white bars) values in 5-year accession.

Curatorial framework and bioinformatization

As a principle from the Convention on Biological Diversity (CBD) signed by the parties during the Eco Rio 1992 event and consolidated by the Brazilian law through the “*Decreto Legislativo nº 2, de 1994*”, the *ex situ* complementary conservation has its basis in the maintenance of biological collections and the associated data. Starting in 2016, UFPB fish collection data has been under migration to Specify 6 *software* in order to guarantee the availability of biodiversity data for worldwide consultation. It is expected to accomplish this goal the soonest as it will strengthen the scientific and educational practices of the collection by engaging new visitors including scientists, students, teachers, conservationists and decision-makers from Brazil and abroad. Besides, it will guarantee permanent data quality through accurate taxonomic identification of specimens. Currently, there are more than 250 collection objects of sharks and batoids still to be incorporated to the database in which over 100 specimens are awaiting taxonomic determination.

The Brazilian Northeast region has suffered the worse marine environmental disaster of all times since last September. Mysterious spills of crude oil from uncertain origin have reached over 2,000km of the coastline and no emergency actions have been carried out by the federal government to address this crisis and measure its extent. The massive environmental impact behind it hampers the local biodiversity as it will possibly induce to extinction risks of many species that are native, rare or endemic and yet little known to Science. Curatorial initiatives like the above set the UFPB fish collection, thus, as a reference database with unique historical value of the Brazilian diversity heritage. Its associated data are empirical for the regional conservation assessments that are now critical, and improvement of the biodiversity knowledge (including systematics, ecology and biology) of these taxa.

CONCLUSION

A total of 504 lots from 10 orders, 22 families, 34 genera, and 64 species of sharks, batoids and chimaeras are available at UFPB ichthyological collection. Batoids comprise the most common collection holdings (lots/specimens) when compared to sharks and chimaeras, and Myliobatiformes and Carcharhiniformes represent taxa with higher number of lots. The collection encompasses Brazilian specimens collected in the marine coastline off Paraíba State and freshwater river basins from the lower Amazonian region in its majority. Thus, UFPB fish collection houses one of the most significant archives of the Chondrichthyan fauna from the Tropical South America due to the rarity of the specimens it houses and the geographical coverage it presents. The cultural and genetic heritage behind it reveal the substantial value of this institution and that establishing and caring of zoological collections in Brazil are fundamental for different purposes that go beyond the scientific point

of view, including food security, preservation of natural resources, community engagement and educational activities. Currently, UFPB fish collection is under transitional curatorial process regarding its infrastructure and management with the bioinformatization of the database as well as curation replacement due to the retirement of the latter author of this study. Forty-years collection efforts indubitably consolidated UFPB as a highly renowned academic environment in Ichthyology for future generation of researchers to come.

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Appendix 1. Summarized database from the UFPB Chondrichthyan collection given in increasing order of catalog number. CN: catalog number; S: State; C: count.

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
13	Carcharhinidae	<i>Carcharhinus porosus</i>	Praia do Bessa	PB	Brazil			1
193	Aetobatidae	<i>Aetobatus narinari</i>	Cabedelo	PB	Brazil			1
194	Dasyatidae	<i>Hypanus guttatus</i>	Cabedelo	PB	Brazil			1
233	Narcinidae	<i>Narcine brasiliensis</i>	Cabedelo	PB	Brazil			1
320	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Cabedelo	PB	Brazil			1
321	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Cabedelo	PB	Brazil			1
323	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Cabedelo	PB	Brazil			3
538	Narcinidae	<i>Narcine brasiliensis</i>	Rio Paraíba, Costinha, Município de Lucena	PB	Brazil			1
578	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Tibau, Município de Areia Branca	RN	Brazil			1
663	Dasyatidae	<i>Hypanus marianae</i>	Rio Paraíba do Norte, Cabedelo	PB	Brazil			1
771	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Costinha, Lucena	PB	Brazil			1
841	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Cabedelo	PB	Brazil			1
842	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia da Penha, João Pessoa	PB	Brazil			5
985	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			10
1099	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Camboinha, Cabedelo	PB	Brazil			1
1100	Carcharhinidae	<i>Carcharhinus porosus</i>	Praia de Costinha, Lucena	PB	Brazil			1
1110	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1111	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Lucena, Lucena	PB	Brazil			1
1112	Gymnuridae	<i>Gymnura micrura</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1113	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
1117	Carcharhinidae	<i>Carcharhinus porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1118	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Baía da Traição	PB	Brazil			1
1119	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1133	Sphyrnidae	<i>Sphyrna lewini</i>	Praia de Cabedelo, Cabedelo	PB	Brazil			1
1207	Narcinidae	<i>Narcine brasiliensis</i>	Praia do Poço, Cabedelo	PB	Brazil			1
1210	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Poço, Cabedelo	PB	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
1230	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Cabo Branco, João Pessoa	PB	Brazil			2
1231	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Praia de Tambaú, João Pessoa	PB	Brazil			2
1232	Potamotrygonidae	<i>Potamotrygon falkineri</i>	Rio Cuiabá, Volta Grande, Santo Antônio de Leverger	MT	Brazil			1
1282	Narcinidae	<i>Narcine brasiliensis</i>	Praia do Cabo Branco, João Pessoa	PB	Brazil			1
1358	Potamotrygonidae	<i>Potamotrygon magdalenae</i>	Bacia do Rio Magdalena, próximo a San Cristobal	-	Colombia			2
1427	Potamotrygonidae	<i>Potamotrygon yepezi</i>	Lago de Maracaibo	-	Venezuela			2
1428	Potamotrygonidae	<i>Potamotrygon yepezi</i>	Ciénaga Gran Eneal, NW of Sinamaica, Zulia	-	Venezuela			2
1429	Potamotrygonidae	<i>Potamotrygon yepezi</i>	Rio Limon, El Sargento, SW de Carrasquero, Zulia	-	Venezuela			2
1442	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Lucena, Lucena	PB	Brazil			1
1443	Sphyrnidae	<i>Sphyrna tiburo</i>	Praia de Jacumã, Conde	PB	Brazil			1
1444	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, , João Pessoa	PB	Brazil			1
1445	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			6
1447	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Lucena, Lucena	PB	Brazil			1
1448	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Lucena, Lucena	PB	Brazil			1
1449	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
1450	Potamotrygonidae	<i>Paratrygon aiereba</i>	sem local	-	-			1
1451	Potamotrygonidae	<i>Paratrygon aiereba</i>	sem local	-	-			1
1452	Potamotrygonidae	<i>Paratrygon aiereba</i>	sem local	-	-			1
1453	Potamotrygonidae	<i>Paratrygon aiereba</i>	Souzel, Rio Xingu	PA	Brazil			1
1454	Potamotrygonidae	<i>Potamotrygon henlei</i>	Pedral, Rio Itacaiúnas	PA	Brazil			1
1455	Potamotrygonidae	<i>Potamotrygon henlei</i>	sem local	-	-			2
1463	Potamotrygonidae	<i>Potamotrygon henlei</i>	Rio Tocantins, 36km ao Sul de Tucuruí	PA	Brazil			2
1464	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Baía da Traição, Baía da Traição	PB	Brazil			2
1465	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
1466	Gymnuridae	<i>Gymnura micrura</i>	Praia de Tambaú, João Pessoa	PB	Brazil			2
1467	Gymnuridae	<i>Gymnura micrura</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
1468	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
1469	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1470	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
1471	Narcinidae	<i>Narcine brasiliensis</i>	Praia do Forte, Cabedelo	PB	Brazil			1
1472	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Costa da Paraíba	PB	Brazil			11
1473	Potamotrygonidae	<i>Potamotrygon falkneri</i>	Serra do Moa, Rio Moa	AC	Brazil			1
1474	Potamotrygonidae	<i>Potamotrygon motoro</i>	Volta Grande, Município de Santo Antônio do Leverger	MT	Brazil			1
1475	Potamotrygonidae	<i>Potamotrygon</i> sp.	Rio Juruá, Cruzeiro do Sul	AC	Brazil			1
1480	Squalidae	<i>Squalus acanthias</i>	Costa da Virgínia, Virgínia	-	USA			1
1481	Urotrygonidae	<i>Urobatis jamaicensis</i>	Costa da Flórida, Flórida	-	USA			1
1517	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1518	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, afluente do Rio Poti, Fazenda Lagoa do Saco, Aroazes	PI	Brazil			1
1519	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, afluente do Rio Poti, Fazenda Lagoa do Saco, Aroazes	PI	Brazil			1
1520	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1521	Sphyrnidae	<i>Sphyrna tiburo</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1530	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1742	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1753	Ginglymostomatidae	<i>Ginglymostoma cirratum</i>	Praia de Coqueirinho, Conde	PB	Brazil			1
1761	Squatinae	<i>Squatina guggenheim</i>	Angra dos Reis	RJ	Brazil			1
1762	Chimaeridae	<i>Hydrolagus colliei</i>	Costa do Estado de Washington	-	USA			2
1767	Sphyrnidae	<i>Sphyrna tiburo</i>	Praia do Jacarapé, João Pessoa	PB	Brazil			1
1929	Dasyatidae	<i>Hypanus guttatus</i>	Praia do Sol, João Pessoa	PB	Brazil			1
1971	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
1972	Ginglymostomatidae	<i>Ginglymostoma cirratum</i>	Praia de Coqueirinho, Conde	PB	Brazil			1
2100	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú	PB	Brazil			1
2216	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Gramame, João Pessoa	PB	Brazil			1
2217	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Gramame, João Pessoa	PB	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
2563	Scyliorhinidae	<i>Schroederichthys tenuis</i>	Costa do Amapá, Oceano Atlântico	AP	Brazil	04°40'N	50°03'W	2
2564	Scyliorhinidae	<i>Schroederichthys tenuis</i>	Costa do Amapá, Oceano Atlântico	AP	Brazil	04°40'N	50°03'W	1
2661	Dasyatidae	<i>Hypanus marianae</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
2663	Sphyrnidae	<i>Sphyrna media</i>	Costa do Amapá, Oceano Atlântico	AP	Brazil	04°40'N		10
2664	Sphyrnidae	<i>Sphyrna media</i>	Costa do Amapá, Oceano Atlântico	AP	Brazil	04°40'N		2
2665	Sphyrnidae	<i>Sphyrna tudes</i>	Costa do Amapá, Oceano Atlântico	AP	Brazil	04°40'N		1
2666	Scyliorhinidae	<i>Scyliorhinus haeckeli</i>	Litoral São Paulo	SP	Brazil			1
2667	Narcinidae	<i>Narcine brasiliensis</i>	Litoral São Paulo	SP	Brazil			3
2668	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
2669	Dalatiidae	<i>Isistius brasiliensis</i>	Litoral de São Paulo, aprox. 90 milhas da costa	SP	Brazil			1
2732	Carcharhinidae	<i>Carcharhinus acronotus</i>	Baía da Traição	PB	Brazil			1
2733	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Jacumã, Conde	PB	Brazil			2
2734	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Jacumã, Conde	PB	Brazil			1
2735	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Jacumã, Conde	PB	Brazil			1
2736	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Baía da Traição	PB	Brazil			4
2737	Gymnuridae	<i>Gymnura micrura</i>	Baía da Traição	PB	Brazil			6
2738	Gymnuridae	<i>Gymnura micrura</i>	Praia de Jacumã, Conde	PB	Brazil			1
2739	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Jacumã, Conde	PB	Brazil			3
2788	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Lucena, Lucena	PB	Brazil			1
2789	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Lucena, Lucena	PB	Brazil			1
2790	Dasyatidae	<i>Hypanus marianae</i>	Praia de Lucena, Lucena	PB	Brazil			1
2845	Potamotrygonidae	<i>Potamotrygon schroederi</i>	Alto Rio Negro	AM	Brazil			1
2884	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Costa da Paraíba	PB	Brazil	07°02.24'S	34°33.64'W	1
2923	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Costa da Paraíba	PB	Brazil	06°48.000'S	34°37.658'W	1
2924	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Costa da Paraíba	PB	Brazil	06°47.631'S	34°38.679'W	1
2925	Carcharhinidae	<i>Galeocerdo cuvier</i>	Costa da Paraíba	PB	Brazil	06°54.821'S	34°39.980'W	1
2926	Sphyrnidae	<i>Sphyrna zygaena</i>	Costa da Paraíba	PB	Brazil	06°54.714'S	34°40.021'W	1
2927	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Costa da Paraíba	PB	Brazil	06°48.509'S	34°37.690'W	1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
2928	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Costa da Paraíba	PB	Brazil	07°02.24'S	34°33.64'W	1
2929	Carcharhinidae	<i>Galeocerdo cuvier</i>	Costa da Paraíba	PB	Brazil	06°50.785'S	34°40.395'W	1
3040	Gymnuridae	<i>Gymnura micrura</i>	Lucena	PB	Brazil			1
3041	Gymnuridae	<i>Gymnura micrura</i>	Lucena	PB	Brazil			1
3042	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3043	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3044	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Lucena	PB	Brazil			1
3045	Gymnuridae	<i>Gymnura micrura</i>	Lucena	PB	Brazil			1
3046	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			2
3047	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3048	Narcinidae	<i>Narcine bancroftii</i>	Lucena	PB	Brazil			1
3049	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Lucena	PB	Brazil			1
3050	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3051	Narcinidae	<i>Narcine brasiliensis</i>	Lucena	PB	Brazil			2
3052	Narcinidae	<i>Narcine brasiliensis</i>	Lucena	PB	Brazil			1
3053	Potamotrygonidae	<i>Potamotrygon motoro</i>	Puerto Reconquista, Rio Geronimo, Santa Fe	-	Argentina			1
3054	Potamotrygonidae	<i>Potamotrygon motoro</i>	Puerto Reconquista, Rio Geronimo, Santa Fe	-	Argentina			1
3055	Potamotrygonidae	<i>Potamotrygon motoro</i>	Puerto Reconquista, Rio Geronimo, Santa Fe	-	Argentina			1
3249	Gymnuridae	<i>Gymnura micrura</i>	Lucena	PB	Brazil			1
3250	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Lucena	PB	Brazil			1
3251	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Lucena	PB	Brazil			1
3252	Narcinidae	<i>Narcine brasiliensis</i>	Lucena	PB	Brazil			1
3253	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3254	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3255	Narcinidae	<i>Narcine brasiliensis</i>	Lucena	PB	Brazil			1
3256	Dasyatidae	<i>Hypanus guttatus</i>	Lucena	PB	Brazil			1
3283	Dasyatidae	<i>Hypanus marianae</i>	Praia de Tabatinga, Conde	PB	Brazil			1
3305	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú	PB	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
3306	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú	PB	Brazil			1
3307	Carcharhinidae	<i>Carcharhinus acronotus</i>	Cabedelo	PB	Brazil			1
3308	Scyliorhinidae	<i>Scyliorhinus haeckeli</i>	Praia de Tambaú	PB	Brazil			1
3309	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú	PB	Brazil			1
3310	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú	PB	Brazil			1
3311	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Barra de Gramame	PB	Brazil			1
3312	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Jacumã, Conde	PB	Brazil			1
3313	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Cabedelo	PB	Brazil			1
3314	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Cabedelo	PB	Brazil			6
3320	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Cabedelo	PB	Brazil			1
3467	Potamotrygonidae	<i>Potamotrygon motoro</i>	Igarapé Cururú, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3468	Potamotrygonidae	<i>Potamotrygon scobina</i>	Igarapé Cururú, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3469	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Igarapé Cururú, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3470	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Igarapé Cururú, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3471	Potamotrygonidae	<i>Potamotrygon motoro</i>	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3472	Potamotrygonidae	<i>Potamotrygon</i> sp.	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3473	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3474	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3475	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3476	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
3477	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Igarapé Salito, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3478	Potamotrygonidae	<i>Paratrygon aiereba</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3479	Potamotrygonidae	<i>Paratrygon aiereba</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3480	Potamotrygonidae	<i>Potamotrygon scobina</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3481	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3482	Potamotrygonidae	<i>Potamotrygon</i> sp.	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3483	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3484	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Lucena, Lucena	PB	Brazil	00°53'S	34°52'W	1
3485	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Lucena, Lucena	PB	Brazil			1
3486	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Lucena, Lucena	PB	Brazil			1
3487	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Lucena, Lucena	PB	Brazil	00°53'S	34°52'W	1
3488	Gymnuridae	<i>Gymnura micrura</i>	Praia de Lucena, Lucena	PB	Brazil	00°53'S	34°52'W	1
3513	Dasyatidae	<i>Hypanus americanus</i>	Naufrágio Queimado, João Pessoa	PB	Brazil	07°05'S	35°44'W	3
3515	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3516	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3517	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3518	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3519	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3520	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3521	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Jorooca, Rio Tocantins, Cametá	PA	Brazil			1
3522	Potamotrygonidae	<i>Potamotrygon motoro</i>	Jorooca, Rio Tocantins, Cametá	PA	Brazil			1
3523	Potamotrygonidae	<i>Potamotrygon limai</i>	Jorooca, Rio Tocantins, Cametá	PA	Brazil			1
3524	Potamotrygonidae	<i>Paratrygon aiereba</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3525	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
3526	Potamotrygonidae	<i>Potamotrygon motoro</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3527	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3528	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			–
3529	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			
3530	Potamotrygonidae	<i>Potamotrygon humerosa</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3531	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Praia Malhada, Cachoeira do Arari, Rio Arari, Ilha de Marajó	PA	Brazil			1
3532	Potamotrygonidae	<i>Potamotrygon falkneri</i>	Rio Guamá, Ourém	PA	Brazil			1
3533	Potamotrygonidae	<i>Paratrygon aiereba</i>	Ilha Guariba, Rio Negro	AM	Brazil	01°21'51"S	61°47'34"W	1
3534	Potamotrygonidae	<i>Paratrygon aiereba</i>	Ilha Guariba, Rio Negro	AM	Brazil	01°21'51"S	61°47'34"W	1
3535	Potamotrygonidae	<i>Paratrygon aiereba</i>	Ilha em frente ao Igarapé Corimbaú, Rio Branco	AM	Brazil			1
3536	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Ilha em frente ao Igarapé Corimbaú, Rio Branco	AM	Brazil			1
3537	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Ilha Guariba, Rio Negro	AM	Brazil	01°21'51"S	61°47'34"W	1
3538	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Praia do Defunto, Rio Negro, acima de Barcelos	AM	Brazil			1
3539	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Praia do Defunto, Rio Negro	AM	Brazil			1
3540	Potamotrygonidae	<i>Plesiotrygon iwamae</i>	Paraná Janamaca, Rio Solimões	AM	Brazil			1
3541	Potamotrygonidae	<i>Potamotrygon motoro</i>	Paraná Janamaca, Rio Solimões	AM	Brazil			1
3542	Potamotrygonidae	<i>Potamotrygon scobina</i>	Paraná Janamaca, Rio Solimões	AM	Brazil			1
3543	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Barcelos, Rio Negro	AM	Brazil			1
3544	Potamotrygonidae	<i>Potamotrygon</i> sp.	Altamira, Rio Xingu	PA	Brazil			–
3546	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Poti na confluência com Rio Parnaíba, Teresina	PI	Brazil			2
3734	Dasyatidae	<i>Hypanus guttatus</i>	Rio Mamanguape, Barra de Mamanguape, Rio Tinto	PB	Brazil			1

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3735	Gymnuridae	<i>Gymnura micrura</i>	Rio Mamanguape, Barra de Mamanguape, Rio Tinto	PB	Brazil			1
3823	Narcinidae	<i>Narcine brasiliensis</i>	Rio Mamanguape, Barra de Mamanguape, Rio Tinto	PB	Brazil			1
3824	Gymnuridae	<i>Gymnura micrura</i>	Rio Mamanguape, Barra de Mamanguape, Rio Tinto	PB	Brazil			1
4204	Carcharhinidae	<i>Carcharhinus perezii</i>	Parcel Manoel Luiz	MA	Brazil			3
4238	Dasyatidae	<i>Hypanus marianae</i>	Costa da Paraíba, Oceano Atlântico, Naufrágio Alice, João Pessoa	PB	Brazil			1
4239	Aetobatidae	<i>Aetobatus narinari</i>	Praia da Penha, João Pessoa	PB	Brazil			1
4750	Dasyatidae	<i>Hypanus guttatus</i>	Rio Mamanguape, estuário próximo a gamboa do macaço, Rio Tinto	PI	Brazil			1
4758	Dasyatidae	<i>Hypanus marianae</i>	Trebaúma	BA	Brazil			1
4780	Dasyatidae	<i>Hypanus guttatus</i>	Subaúma	BA	Brazil			1
4810	Sphyrnidae	<i>Sphyrna lewini</i>	Poças, Conde	BA	Brazil			1
4811	Carcharhinidae	<i>Carcharhinus acronotus</i>	Poças, Conde	BA	Brazil			1
4827	Carcharhinidae	<i>Rhizoprionodon lalandii</i>	Poças, Conde	BA	Brazil			1
4865	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluyente do Rio Negro, Barcelos	AM	Brazil	00°56'S	62°54'W	36
4866	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluyente do Rio Negro, Barcelos	AM	Brazil	00°56'S	62°54'W	1
4867	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluyente do Rio Negro, Barcelos	AM	Brazil	00°56'S	62°54'W	1
5214	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Igarapé Zamula, afluyente do Rio Negro, 20 km abaixo de Barcelos	AM	Brazil	00°05'54"S	62°46'41"W	4
5215	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluyente do Rio Negro, ca.70km acima de Barcelos	AM	Brazil	00°28'39"S	63°15'30"W	3
5216	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluyente do Rio Negro, ca.70km acima de Barcelos	AM	Brazil	00°28'39"S	63°15'30"W	1
5217	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluyente do Rio Negro, ca.70km acima de Barcelos	AM	Brazil	00°28'39"S	63°15'30"W	1
5218	Gymnuridae	<i>Gymnura micrura</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°5'19,3"W	1
5219	Dasyatidae	<i>Hypanus marianae</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°5'19,3"W	1

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5226	Potamotrygonidae	<i>Potamotrygon schroederi</i>	Rio Itú, afluyente do Rio Negro	AM	Brazil			1
5294	Scyliorhinidae	<i>Scyliorhinus ugoi</i>	Cruzeiro 5/01 est.19 1	AL	Brazil	10°05'245"S	35°46'709"W	1
5298	Triakidae	<i>Mustelus higmani</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
5308	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Acaú, Pitimbu	PB	Brazil			1
5309	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Acaú, Pitimbu	PB	Brazil			1
5310	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Acaú, Pitimbu	PB	Brazil			1
5312	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia da Pedra Furada, Ribeira, Salvador	BA	Brazil			1
5355	Pseudocarcharidae	<i>Pseudocarcharias kamoharai</i>	Natal	RN	Brazil			1
5356	Pseudocarcharidae	<i>Pseudocarcharias kamoharai</i>	Natal	RN	Brazil			1
5360	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia da Pedra Furada, Ribeira, Salvador	BA	Brazil			2
5368	Rhinopteridae	<i>Rhinoptera bonasus</i>	Barra do Rio Mamanguape	PB	Brazil			1
5369	Dasyatidae	<i>Hypanus marianae</i>	Praia do Amor, Jacumã, Conde	PB	Brazil			1
5552	Dasyatidae	<i>Hypanus guttatus</i>	Barra de Mamanguape	PB	Brazil			2
5558	Potamotrygonidae	<i>Potamotrygon henlei</i>	Cachoeira do Caldeirão, Carreira Comprida, Rio Itacaiúnas, Serra dos Carajás, Poço de Pedral	PA	Brazil			1
5559	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte	PA	Brazil			7
5560	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte	PA	Brazil			5
5565	Arhynchobatidae	<i>Sympterygia acuta</i>	Ponta do Recreio dos Bandeirantes, Rio de Janeiro	RJ	Brazil			1
5566	Arhynchobatidae	<i>Rioraja agassizi</i>	Ponta do Recreio dos Bandeirantes, Rio de Janeiro	RJ	Brazil			1
5567	Trygonorrhinidae	<i>Zapteryx brevirostris</i>	Ponta do Recreio dos Bandeirantes, Rio de Janeiro	RJ	Brazil			1
5568	Lamnidae	<i>Isurus oxyrinchus</i>	Ponta do Recreio dos Bandeirantes, Rio de Janeiro	RJ	Brazil			1
5649	Dasyatidae	<i>Hypanus marianae</i>	Praia do Amor, Conde	PB	Brazil			1
5651	Urotrygonidae	<i>Urotrygon microphthalmum</i>	Praia de Tambaú, João Pessoa	PB	Brazil			2
5652	Dasyatidae	<i>Hypanus americanus</i>	Praia do Amor, Conde	PB	Brazil			1
5656	Potamotrygonidae	<i>Plesiотrygon iwamae</i>	Baía de Marajó, Colares	PA	Brazil			1
5917	Sphyrnidae	<i>Sphyrna lewini</i>	Pontal do Peba	AL	Brazil			1
5918	Sphyrnidae	<i>Sphyrna lewini</i>	Pontal do Peba	AL	Brazil			1
5930	Carcharhinidae	<i>Carcharhinus limbatus</i>	Pontal do Peba	AL	Brazil			1

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5931	Carcharhinidae	<i>Carcharhinus limbatus</i>	Pontal do Peba	AL	Brazil			1
5932	Triakidae	<i>Mustelus canis</i>	Pontal do Peba	AL	Brazil			1
5933	Carcharhinidae	<i>Carcharhinus limbatus</i>	Pontal do Peba	AL	Brazil			1
5934	Carcharhinidae	<i>Carcharhinus limbatus</i>	Pontal do Peba	AL	Brazil			1
5935	Carcharhinidae	<i>Carcharhinus limbatus</i>	Pontal do Peba	AL	Brazil			1
5936	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Conde	PB	Brazil			1
5964	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
5965	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
5966	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia da Ribeira, Salvador	BA	Brazil			1
5986	Aetobatidae	<i>Aetobatus narinari</i>	Praia de Campina, Município de Rio Tinto	PB	Brazil			1
5987	Narcinidae	<i>Narcine brasiliensis</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
5988	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
6033	Gymnuridae	<i>Gymnura micrura</i>	Praia de Manaíra, João Pessoa	PB	Brazil	07°06'28,8"S	34°49'30,1"W	1
6034	Gymnuridae	<i>Gymnura micrura</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
6035	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Manaíra, João Pessoa	PB	Brazil			1
6042	Dasyatidae	<i>Hypanus americanus</i>	Naufrágio Pirapama, Oceano Atlântico, costa de Pernambuco	PE	Brazil	08°03'S	34°46'W	1
6075	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	3
6076	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
6077	Gymnuridae	<i>Gymnura micrura</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
6078	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
6079	Potamotrygonidae	<i>Potamotrygon</i> sp.	Lago Arari, Município de Santa Cruz do Arari, Ilha do Marajó	PA	Brazil	0°43'35,5"S	48°08'39,1"W	1
6080	Potamotrygonidae	<i>Potamotrygon</i> sp.	Lago Arari, Município de Santa Cruz do Arari, Ilha de Marajó	PA	Brazil	0°42'41,6"S	49°09'18,6"W	1
6081	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Barcelos, Rio Negro	AM	Brazil			1
6082	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
6083	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	3
6084	Ginglymostomatidae	<i>Ginglymostoma cirratum</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1

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6085	Gymnuridae	<i>Gymnura micrura</i>	Praia do Amor, Jacumã, Conde	PB	Brazil	07°16'24,4"S	34°58'19,3"W	1
6086	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Cabedelo	PB	Brazil			6
6087	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha, João Pessoa	PB	Brazil			1
6091	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Uraricoera, Ilha do Maracá, Igarapé do Cujubim	RR	Brazil			1
6092	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Uraricoera, Ilha do Maracá, Igarapé do Cujubim	RR	Brazil			1
6093	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte, Poço de Praia	PA	Brazil			1
6094	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte, Poço de Praia	PA	Brazil			1
6095	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte, Poço de Praia	PA	Brazil			1
6096	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte, Poço de Praia	PA	Brazil			1
6097	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte, Poço de Praia	PA	Brazil			1
6098	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Xingu, Belo Monte, Poço de Praia	PA	Brazil			1
6099	Potamotrygonidae	<i>Potamotrygon</i> sp.	Rio Tefé, Ressaca da Paula	AM	Brazil			1
6100	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluente do Rio Negro, cerca de 70km acima de Barcelos	PA	Brazil	00°28'39"S	63°15'30"W	1
6188	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Uraricoera, Ilha de Maracá, Igarapé de Cujubim	RR	Brazil			1
6356	Potamotrygonidae	<i>Potamotrygon</i> sp.	Fé em Deus, Lago Arari, Município de Santa Cruz do Arari, Ilha de Marajó	PA	Brazil	00°44'51,2"S	49°08'45,1"W	1
6357	Potamotrygonidae	<i>Potamotrygon</i> sp.	Fé em Deus, Lago Arari, Município de Santa Cruz do Arari, Ilha de Marajó	PA	Brazil	00°44'50,5"S	49°10'01,6"W	1
6358	Potamotrygonidae	<i>Potamotrygon</i> sp.	Fazendinha, Lago Arari, Município de Santa Cruz do Arari, Ilha de Marajó	PA	Brazil	00°44'50,5"S	49°10'01,6"W	1
6359	Potamotrygonidae	<i>Potamotrygon</i> sp.	Igarapé de Tucunaré, próximo ao Rio Arari, Município de Cachoeira do Arari, Ilha de Marajó	PA	Brazil	00°56'00,3"S	49°02'36,1"W	1
6360	Potamotrygonidae	<i>Potamotrygon</i> sp.	Igarapé de Tucunaré, próximo ao Rio Arari, Município de Cachoeira do Arari, Ilha de Marajó	PA	Brazil	00°56'00,3"S	49°02'36,1"W	1
6490	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°08'12,22"S	41°31'24,91"W	1
6491	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°08'7,81"S	41°31'28,06"W	1

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6492	Potamotrygonidae	<i>Potamotrygon schumacheri</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	41°35'48,7"W	1
6493	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	041°35'48,7"W	1
6494	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	41°35'48,7"W	1
6495	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	41°35'48,7"W	1
6496	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	41°35'48,7"W	1
6497	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	41°35'48,7"W	1
6498	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°10'11,9"S	41°35'48,7"W	1
6499	Potamotrygonidae	<i>Potamotrygon rex</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°08'28,09"S	42°02'42,54"W	1
6500	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°08'28,09"S	42°02'42,54"W	1
6501	Potamotrygonidae	<i>Potamotrygon rex</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°08'28,09"S	42°02'42,54"W	1
6502	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°08'28,09"S	42°02'42,54"W	1
6503	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°08'28,09"S	42°02'42,54"W	1
6504	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°08'28,09"S	42°02'42,54"W	1
6505	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, próximo a Barragem Mesa de Pedra, Valença do Piauí	PI	Brazil	06°11'32,09"S	41°59'37,34"W	1
6506	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio São Nicolau, Santa Cruz dos Milagres	PI	Brazil	05°80'11,72"S	41°95'1,48"W	1
6507	Potamotrygonidae	<i>Potamotrygon schumacheri</i>	Rio São Nicolau, Santa Cruz dos Milagres	PI	Brazil	05°80'11,72"S	41°95'1,48"W	1
6508	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Poti, Prata do Piauí	PI	Brazil	05°80'11,72"S	41°95'1,48"W	1
6509	Potamotrygonidae	<i>Potamotrygon falkneri</i>	Rio Parnaíba, União	PI	Brazil	05°80'11,72"S	41°95'1,48"W	1
6525	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha, João Pessoa	PB	Brazil			1
6528	Gymnuridae	<i>Gymnura micrura</i>	Praia do Seixas, João Pessoa	PB	Brazil	07°08'58,1"S	34°47'45,0"W	1
6588	Gymnuridae	<i>Gymnura micrura</i>	Praia do Cabo Branco, João Pessoa	PB	Brazil			2
6619	Dasyatidae	<i>Hypanus guttatus</i>	Praia da Penha, João Pessoa	PB	Brazil			1
6620	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha, João Pessoa	PB	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
6624	Narcinidae	<i>Narcine brasiliensis</i>	Praia de Jacarapé, João Pessoa	PB	Brazil			1
6628	Narcinidae	<i>Narcine brasiliensis</i>	Praia da Penha , João Pessoa	PB	Brazil			1
6672	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha , João Pessoa	PB	Brazil			1
6674	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha , João Pessoa	PB	Brazil			1
7450	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Barra de Mamanguape, Rio Tinto	PB	Brazil			1
7451	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Barra de Mamanguape, Rio Tinto	PB	Brazil			1
7452	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Barra de Mamanguape, Rio Tinto	PB	Brazil			1
7453	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município de Uruçuí	PI	Brazil	07°11'56,7"S	44°32'52,9"W	1
7454	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município de Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7547	Dasyatidae	<i>Fontitrygon geijskesi</i>	Praia de Camará, Marapanim	PA	Brazil			1
7548	Potamotrygonidae	<i>Styracura schmardae</i>	Praia de Camará, Marapanim	PA	Brazil			1
7704	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°09'56,64"S	41°36'6,8"W	1
7705	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Guaribas, Picos	PI	Brazil	07°09'56,64"S	41°36'6,8"W	1
7706	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, Valença do Piauí	PI	Brazil	05°48'6,2"S	41°36'2,5"W	1
7707	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, Valença do Piauí	PI	Brazil	05°48'6,2"S	41°36'2,5"W	1
7708	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, Valença do Piauí	PI	Brazil	05°48'6,2"S	41°36'2,5"W	1
7709	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio São Nicolau, Santa Cruz dos Milagres	PI	Brazil	05°48'6,2"S	41°57'6,53"W	1
7710	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, Santa Cruz dos Milagres	PI	Brazil	05°55'39,0"S	42°44'7,5"W	1
7711	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7712	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7713	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7714	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7715	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7716	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7717	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7718	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7719	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7720	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
7721	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7722	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7723	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7724	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7725	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7726	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7727	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7728	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7729	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7730	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7731	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7732	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7733	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7734	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7735	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7736	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7737	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7738	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7739	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7740	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7741	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7742	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7743	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7744	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7745	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7746	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7747	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7748	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
7749	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7750	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7751	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7752	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7753	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7754	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7755	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, Valença do Piauí	PI	Brazil	07°48'6,2"S	41°36'2,5"W	1
7756	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Sambito, Valença do Piauí	PI	Brazil	07°48'6,2"S	41°36'2,5"W	1
7757	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°33'02,3"S	45°14'10,6"W	1
7758	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°33'02,3"S	45°14'10,6"W	1
7759	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°33'02,3"S	45°14'10,6"W	1
7760	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°33'02,3"S	45°14'10,6"W	1
7761	Potamotrygonidae	<i>Potamotrygon schumacheri</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7762	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7763	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7764	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7765	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°10'33,6"S	44°29'11,4"W	1
7766	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7767	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7768	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°11'56,7"S	44°30'58,8"W	1
7769	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7770	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7771	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7772	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7773	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7774	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7775	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7776	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
7777	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7778	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7779	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7780	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7781	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7782	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
7783	Potamotrygonidae	<i>Potamotrygon orbignyi</i>	Rio Parnaíba, Município Uruçuí	PI	Brazil	07°13'41,8"S	44°32'52,9"W	1
8090	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Povoado Beira Rio, Buriti	MA	Brazil	03°53'39,9"S	42°43'25,7"W	1
8546	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Povoado Correntes, Caxias	MA	Brazil	04°33'42,3"S	42°52'01,8"W	1
8547	Potamotrygonidae	<i>Potamotrygon signata</i>	Rio Parnaíba, Povoado Beira Rio, Buriti	MA	Brazil	03°53'22,4"S	42°43'01'25,1"W	1
9017	Potamotrygonidae	<i>Potamotrygon wallacei</i>	Rio Itú, afluente do Rio Negro, ca. 70 Km acima de Barcelos	AM	Brazil	00°28'39"S	63°15'30"W	2
9022	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pitimbu, Pitimbu	PB	Brazil			1
9023	Carcharhinidae	<i>Rhizoprionodon terraenovae</i>	Galveston, Texas	-	USA			4
9029	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Jacumã, Conde	PB	Brazil			1
9031	Carcharhinidae	<i>Carcharhinus porosus</i>	Praia de Camará, Marapanim	PA	Brazil			1
9032	Carcharhinidae	<i>Carcharhinus limbatus</i>	Praia de Camará, Marapanim	PA	Brazil			1
9033	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Lucena, Lucena	PB	Brazil			1
9034	Narcinidae	<i>Narcine brasiliensis</i>	Praia da Penha, João Pessoa	PB	Brazil			2
9035	Narcinidae	<i>Narcine brasiliensis</i>	Praia da Penha, João Pessoa	PB	Brazil			1
9036	Urotrygonidae	<i>Urotrygon microphtalmum</i>	Praia de Lucena, Lucena, próximo a Foz do Rio Miriri	PB	Brazil			1
9037	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
9038	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Tambaú, João Pessoa	PB	Brazil			1
9196	Dasyatidae	<i>Hypanus cf. americanus</i>	Praia de Camará	PA	Brazil			1
9197	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9198	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
9199	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9200	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
9201	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
9202	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9203	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
9204	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
9205	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9206	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'18,79"S	47°41'17,85"W	1
9207	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil			1
9208	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil			1
9209	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil			1
9210	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil			1
9211	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil			1
9212	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
9213	Gymnuridae	<i>Gymnura micrura</i>	Praia de Camará, Marapanim	PA	Brazil			1
9214	Potamotrygonidae	<i>Styracura schmardae</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9215	Potamotrygonidae	<i>Styracura schmardae</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9216	Potamotrygonidae	<i>Styracura schmardae</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9217	Potamotrygonidae	<i>Styracura schmardae</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
9229	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia de Camará, Marapanim	PA	Brazil			1
9603	Rhinobatidae	<i>Pseudobatos percellens</i>	Praia do Amor, Jacumã, Conde	PB	Brazil			1
9860	Dasyatidae	<i>Hypanus guttatus</i>	Praia do Amor, Conde	PB	Brazil			1
10950	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10951	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10952	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10953	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10954	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10955	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10956	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10957	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
10958	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10959	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10960	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°35'18,79"S	47°41'17,85"W	1
10961	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10962	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10963	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10964	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10965	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10966	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10967	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'47,76"S	47°40'59,19"W	1
10968	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10969	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10970	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10971	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10972	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10973	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10974	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10975	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10976	Dasyatidae	<i>Hypanus guttatus</i>	Praia de Camará, Marapanim	PA	Brazil	00°34'46,81"S	47°41'01,10"W	1
10977	Somniosidae	<i>Centroscymnus owstonii</i>	Oceano Atlântico, talude continental de Pernambuco	PE	Brazil			1
11362	Scyliorhinidae	<i>Scyliorhinus haeckeli</i>	Oceano Atlântico, costa do Rio Grande do Sul	RS	Brazil	32°10'43,8"S	47°40'53,9"W	1
11363	Carcharhinidae	<i>Prionace glauca</i>	Oceano Atlântico, costa do Rio Grande do Sul	RS	Brazil	31°42'438"S	47°40'539"W	5
11686	Ginglymostomatidae	<i>Ginglymostoma cirratum</i>	Praia do Bessa, João Pessoa	PB	Brazil			1
11687	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Jacumã, Conde	PB	Brazil			1
11688	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Jacumã, Conde	PB	Brazil			3
11689	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11690	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1

CN	Family	Taxon (full name)	Locality	S	Country	Latitude	Longitude	C
11691	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11692	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11693	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11694	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11695	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11696	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11697	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11698	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11699	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11700	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11701	Carcharhinidae	<i>Rhizoprionodon porosus</i>	Praia de Pau Amarelo, Município de Paulista	PE	Brazil			1
11862	Squalidae	<i>Cirrhigaleus asper</i>	Oceano Atlântico, Costa de Pernambuco	PE	Brazil	08°05'41,5"S	34°32'07,6"W	1
11863	Squalidae	<i>Cirrhigaleus asper</i>	Oceano Atlântico, Costa de Pernambuco	PE	Brazil	08°10'19,4"S	34°33'57,7"W	1
11864	Squalidae	<i>Cirrhigaleus asper</i>	Oceano Atlântico, Costa de Pernambuco	PE	Brazil	08°12'20,9"S	34°34'42,4"W	1
11865	Squalidae	<i>Cirrhigaleus asper</i>	Oceano Atlântico, Costa de Pernambuco	PE	Brazil	07°49'30,2"S	34°27'33 0"W	1
11871	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha, João Pessoa	PB	Brazil			1
11872	Gymnuridae	<i>Gymnura micrura</i>	Praia da Penha, João Pessoa	PB	Brazil			1
11885	Carcharhinidae	<i>Carcharhinus acronotus</i>	Oceano Atlântico, Costa da Paraíba	PB	Brazil	06°47,987'S	34°42,076'W	1
11886	Carcharhinidae	<i>Carcharhinus plumbeus</i>	Oceano Atlântico, Costa da Paraíba	PB	Brazil	06°48,509'S	34°37,690'W	1
11887	Carcharhinidae	<i>Galeocerdo cuvier</i>	Oceano Atlântico, Costa da Paraíba	PB	Brazil	06°50.785'S	34°40.395'W	1