

TABLE S1 | Collected samples locations and accession numbers at the University of Florida and GenBank. CA: Caribbean Sea, EA: Eastern Atlantic, EP: Eastern Pacific, GM: Gulf of Mexico, NEP: Northeastern Pacific, NWA: Northwestern Atlantic, SWA: Southwestern Atlantic, SWP: Southwestern Pacific, WP: Western Pacific. ¹Samples collected and identified by the authors; ²Vouchers deposited at the Ichthyological Collection of the Universidade Federal do Rio Grande do Norte (CIUFRN 4442, 4449 4450); ³Samples collected and identified by Costa *et al.* (2022).

Nominal species ID	Ocean Basin	Sampling location	Collected/donated by	Tissue accession number (GN)	GenBank accession number
<i>Hypanus americanus</i>	NWA	Sandshoal Inlet, Virginia, USA	Dean Grubbs (FSU)	4645	MT326602
<i>H. americanus</i>	GM	Horn Island, Mississippi, USA	Janine Caira (U. Connecticut)	6232	MT326603
<i>H. americanus</i>	NWA	Charleston Harbor, Morris Island, South Carolina, USA	Kirsten Jensen (U. Kansas)	13493	MT326596
<i>H. americanus</i>	NWA	Edisto, South Carolina, USA	Kirsten Jensen (U. Kansas)	13494	MT326597
<i>H. americanus</i>	NWA	Edisto, South Carolina, USA	Kirsten Jensen (U. Kansas)	13495	MT326598
<i>H. americanus</i>	CA	Inner Channel, Stann Creek, Belize	Janine Caira (U. Connecticut)	13934	MT326599
<i>H. americanus</i>	NWA	Florida to Massachusetts	Janine Caira (U. Connecticut)	1594	MT326601
<i>H. americanus</i>	CA	Nicaragua	Ross Robertson, Cristina Castillo (Smithsonian Inst.)	14618	MT326600
<i>H. berthaltutzae</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Carolina Puppim (UFRN)	18461 ¹	MT326604
<i>H. berthaltutzae</i>	SWA	Caiçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18471 ¹	MT326605
<i>H. berthaltutzae</i>	SWA	Caiçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18472 ¹	MT326606
<i>H. berthaltutzae</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Carolina Puppim (UFRN)	18494 ¹	MT326607
<i>H. berthaltutzae</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Carolina Puppim (UFRN)	18495 ¹	MT326608
<i>H. berthaltutzae</i>	SWA	Porto Seguro, Bahia, Brazil	Flávia Petean	18496 ¹	MT326609
<i>H. berthaltutzae</i>	SWA	Porto Seguro, Bahia, Brazil	Flávia Petean	18497 ¹	MT326610
<i>H. berthaltutzae</i>	SWA	Porto Seguro, Bahia, Brazil	Flávia Petean	18498 ¹	MT326611
<i>H. berthaltutzae</i>	SWA	Pará, Brazil	João B.L. Sales (UFPA)	18504	MT326612
<i>H. berthaltutzae</i>	SWA	Pará, Brazil	João B.L. Sales (UFPA)	18505	MT326613
<i>H. berthaltutzae</i>	SWA	Pará, Brazil	João B.L. Sales (UFPA)	18506	MT326614
<i>H. berthaltutzae</i>	SWA	Pará, Brazil	João B.L. Sales (UFPA)	18507	MT326615
<i>H. berthaltutzae</i>	SWA	Pará, Brazil	João B.L. Sales (UFPA)	18508	MT326616
<i>H. berthaltutzae</i>	SWA	Galinhos, Rio Grande do Norte, Brazil	Tiego Costa (UFRN) (UFRN)	18533	MT326617
<i>H. berthaltutzae</i>	SWA	Bitupitá, Ceará, Brazil	Tiego Costa (UFRN)	18534	MT326618
<i>H. berthaltutzae</i>	SWA	Bitupitá, Ceará, Brazil	Tiego Costa (UFRN)	18535	MT326619
<i>H. berthaltutzae</i>	SWA	João Pessoa, Paraíba, Brazil	Otto Gadig (UNESP)	19072	MT326620
<i>H. berthaltutzae</i>	SWA	João Pessoa, Paraíba, Brazil	Otto Gadig (UNESP)	19073	MT326621
<i>H. berthaltutzae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19456	MT326622
<i>H. berthaltutzae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19457	MT326623
<i>H. berthaltutzae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19458	MT326624



TABLE S1 | (Continued)

Nominal species ID	Ocean Basin	Sampling location	Collected/donated by	Tissue accession number (GN)	GenBank accession number
<i>H. berthallutzae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19459	MT326625
<i>H. berthallutzae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19460	MT326626
<i>H. dipterurus</i>	NEP	Bahia de Los Angeles, Baja California, Mexico	Janine Caira (U. Connecticut)	1598	MZ381286
<i>H. dipterurus</i>	NEP	Bahia de Los Angeles, Baja California, Mexico	Janine Caira (U. Connecticut)	5196	MZ381285
<i>H. dipterurus</i>	NEP	Loreto, Baja California Sur, Mexico	Janine Caira (U. Connecticut)	5266	MZ381284
<i>H. dipterurus</i>	NEP	Santa Rosalia, Baja California Sur, Mexico	Janine Caira (U. Connecticut)	5379	MZ381283
<i>H. geijskesi</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19471	MZ489590
<i>H. geijskesi</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19472	MZ489587
<i>H. geijskesi</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19473	MZ489586
<i>H. geijskesi</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19474	MZ489588
<i>H. geijskesi</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19475	MZ489585
<i>H. geijskesi</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19476	MZ489589
<i>H. geijskesi</i>	SWA	Demerara Estuary, Guyana	Matthew Kolmann (U. Louisville)	17902	OR264361
<i>H. guttatus</i>	CA	Inner Channel, Gales Point Manatee, Belize	Janine Caira (U. Connecticut)	13939	MZ489602
<i>H. guttatus</i>	CA	Inner Channel, Gales Point Manatee, Belize	Janine Caira (U. Connecticut)	13946	MZ489603
<i>H. guttatus</i>	SWA	Baía Formosa, Rio Grande do Norte, Brazil	Mônica Oliveira (UFRN)	18434 ¹	MZ489628
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Mônica Oliveira (UFRN)	18435 ¹	MZ489626
<i>H. guttatus</i>	SWA	Natal, Rio Grande do Norte, Brazil	Mônica Oliveira (UFRN)	18436 ¹	MZ489617
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Carolina Puppín	18443 ¹	MZ489599
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Flávia Petean, Carolina Puppín (UFRN)	18451 ²	MZ489627
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Carolina Puppín (UFRN)	18453 ¹	MZ489615
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Carolina Puppín (UFRN)	18454 ¹	MZ489610
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Carolina Puppín (UFRN)	18458 ²	MZ489612
<i>H. guttatus</i>	SWA	São Cristóvão, Rio Grande do Norte, Brazil	Carolina Puppín (UFRN)	18459 ²	MZ489600
<i>H. guttatus</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Carolina Puppín (UFRN)	18463 ¹	MZ489607
<i>H. guttatus</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18466 ¹	MZ489621
<i>H. guttatus</i>	SWA	Caiçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18473 ¹	MZ489629
<i>H. guttatus</i>	SWA	Caiçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18474 ¹	MZ489630



TABLE S1 | (Continued)

Nominal species ID	Ocean Basin	Sampling location	Collected/donated by	Tissue accession number (GN)	GenBank accession number
<i>H. guttatus</i>	SWA	Caçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18475 ¹	MZ489618
<i>H. guttatus</i>	SWA	Caçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18476 ¹	MZ489611
<i>H. guttatus</i>	SWA	Caçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18477 ¹	MZ489619
<i>H. guttatus</i>	SWA	Caçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18478 ¹	MZ489616
<i>H. guttatus</i>	SWA	Caçara do Norte, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18479 ¹	MZ489620
<i>H. guttatus</i>	SWA	Mucuri, Bahia, Brazil	Paulo Affonso (UESB)	18501	MZ489624
<i>H. guttatus</i>	SWA	Mucuri, Bahia, Brazil	Paulo Affonso (UESB)	18502	MZ489609
<i>H. guttatus</i>	SWA	Mucuri, Bahia, Brazil	Paulo Affonso (UESB)	18503	MZ489625
<i>H. guttatus</i>	SWA	Guamare, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18536	MZ489613
<i>H. guttatus</i>	SWA	Bitupitá, Ceará, Brazil	Tiego Costa (UFRN)	18537	MZ489623
<i>H. guttatus</i>	SWA	Baía Formosa, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18538	MZ489631
<i>H. guttatus</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19461	MZ489608
<i>H. guttatus</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19462	MZ489622
<i>H. guttatus</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19463	MZ489601
<i>H. guttatus</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19464	MZ489605
<i>H. guttatus</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19465	MZ489606
<i>H. guttatus</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19468	MZ489614
<i>H. guttatus</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19469	MZ489604
<i>H. guttatus</i>	SWA	Pará, Brazil	Vicente Faria, Patrícia Charvet (UFC)	19470	MT326627
<i>H. longus</i>	NEP	Loreto, Baja California Sur, Mexico	Janine Caira (U. Connecticut)	1599	MT326628
<i>H. longus</i>	NEP	San Jose del Cabo, Baja California Sur, Mexico	Janine Caira (U. Connecticut)	5281	MT326629
<i>H. longus</i>	NEP	San Jose del Cabo, Baja California Sur, Mexico	Janine Caira (U. Connecticut)	5282	MT326630
<i>H. longus</i>	NEP	San Jose del Cabo, Baja California Sur, Mexico	Janine Caira (U. Connecticut)	5283	MT326631
<i>H. marianae</i>	SWA	Baía Formosa, Rio Grande do Norte, Brazil	Mônica Oliveira (UFRN)	18437	MZ399188
<i>H. marianae</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18465 ¹	MZ399182
<i>H. marianae</i>	SWA	Macau, Rio Grande do Norte, Brazil	Flávia Petean, Marcelo Carvalho, Mônica Oliveira (UFRN)	18467 ¹	MZ399185
<i>H. marianae</i>	SWA	Abrolhos, Bahia, Brazil	Tiego Costa (UFRN)	18509 ³	MZ399175
<i>H. marianae</i>	SWA	Abrolhos, Bahia, Brazil	Tiego Costa (UFRN)	18510 ³	MZ399176



TABLE S1 | (Continued)

Nominal species ID	Ocean Basin	Sampling location	Collected/donated by	Tissue accession number (GN)	GenBank accession number
<i>H. marianae</i>	SWA	Abrolhos, Bahia, Brazil	Tiego Costa (UFRN)	18511 ³	MZ399179
<i>H. marianae</i>	SWA	Abrolhos, Bahia, Brazil	Tiego Costa (UFRN)	18512 ³	MZ399180
<i>H. marianae</i>	SWA	Abrolhos, Bahia, Brazil	Tiego Costa (UFRN)	18513 ³	MZ399181
<i>H. marianae</i>	SWA	Abrolhos, Bahia, Brazil	Tiego Costa (UFRN)	18514 ³	MZ399177
<i>H. marianae</i>	SWA	Ponta de Pedras, Pernambuco, Brazil	Tiego Costa (UFRN)	18515 ³	MZ399173
<i>H. marianae</i>	SWA	Ponta de Pedras, Pernambuco, Brazil	Tiego Costa (UFRN)	18516 ³	MZ399174
<i>H. marianae</i>	SWA	Ponta de Pedras, Pernambuco, Brazil	Tiego Costa (UFRN)	18517 ³	MZ399178
<i>H. marianae</i>	SWA	Ponta de Pedras, Pernambuco, Brazil	Tiego Costa (UFRN)	18518 ³	MZ399194
<i>H. marianae</i>	SWA	Ponta de Pedras, Pernambuco, Brazil	Tiego Costa (UFRN)	18519 ³	MZ399166
<i>H. marianae</i>	SWA	Ponta de Pedras, Pernambuco, Brazil	Tiego Costa (UFRN)	18520 ³	MZ399183
<i>H. marianae</i>	SWA	Caíçara do Norte, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18521 ³	MZ399189
<i>H. marianae</i>	SWA	Caíçara do Norte, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18522 ³	MZ399184
<i>H. marianae</i>	SWA	Caíçara do Norte, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18523 ³	MZ399190
<i>H. marianae</i>	SWA	Caíçara do Norte, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18524 ³	MZ399187
<i>H. marianae</i>	SWA	Caíçara do Norte, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18525 ³	MZ399191
<i>H. marianae</i>	SWA	Caíçara do Norte, Rio Grande do Norte, Brazil	Tiego Costa (UFRN)	18526 ³	MZ399186
<i>H. marianae</i>	SWA	Salvador, Bahia, Brazil	Tiego Costa (UFRN)	18527 ³	MZ399167
<i>H. marianae</i>	SWA	Salvador, Bahia, Brazil	Tiego Costa (UFRN)	18528 ³	MZ399168
<i>H. marianae</i>	SWA	Salvador, Bahia, Brazil	Tiego Costa (UFRN)	18529 ³	MZ399171
<i>H. marianae</i>	SWA	Salvador, Bahia, Brazil	Tiego Costa (UFRN)	18530 ³	MZ399170
<i>H. marianae</i>	SWA	Salvador, Bahia, Brazil	Tiego Costa (UFRN)	18531 ³	MZ399169
<i>H. marianae</i>	SWA	Salvador, Bahia, Brazil	Tiego Costa (UFRN)	18532 ³	MZ399172
<i>H. marianae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19466	MZ399192
<i>H. marianae</i>	SWA	Mucuripe, Ceará, Brazil	Vicente Faria (UFC)	19467	MZ399193
<i>H. rudis</i>	EA	Mbour, Senegal	Janine Caira (U. Connecticut)	3295	MT326633
<i>H. rudis</i>	EA	Mbour, Senegal	Janine Caira (U. Connecticut)	6061	MT326634
<i>H. rudis</i>	EA	Mbour, Senegal	Janine Caira (U. Connecticut)	6063	MT326635
<i>H. rudis</i>	EA	Ghana	Peter Psomadakis	17700	MT326632
<i>H. sabinus</i>	GM	Horn Island, Mississippi, USA	Janine Caira (U. Connecticut)	6226	MZ381287
<i>H. sabinus</i>	GM	Biloxi Ship Channel, Mississippi, USA	Janine Caira (U. Connecticut)	6229	MZ381288
<i>H. sabinus</i>	NWA	Charleston harbor, South Carolina, USA	Kirsten Jensen (U. Kansas)	13503	MZ381289
<i>H. sabinus</i>	NWA	Charleston harbor, South Carolina, USA	Kirsten Jensen (U. Kansas)	13516	MZ381290



TABLE S1 | (Continued)

Nominal species ID	Ocean Basin	Sampling location	Collected/donated by	Tissue accession number (GN)	GenBank accession number
<i>H. say</i>	GM	Horn Island, Mississippi, USA	Janine Caira (U. Connecticut)	6221	MZ489577
<i>H. say</i>	GM	Horn Island, Mississippi, USA	Janine Caira (U. Connecticut)	6230	MZ489578
<i>H. say</i>	GM	East Ship Island, Mississippi, USA	Janine Caira (U. Connecticut)	6234	MZ489579
<i>H. say</i>	NWA	North Carolina, USA	Ruth Gibbons, Natalia Agudelo (Smithsonian Inst.)	12768	MZ489583
<i>H. say</i>	NWA	North Carolina, USA	Ruth Gibbons, Natalia Agudelo (Smithsonian Inst.)	12769	MZ489582
<i>H. say</i>	NWA	North Carolina, USA	Ruth Gibbons, Natalia Agudelo (Smithsonian Inst.)	12770	MZ489584
<i>H. say</i>	NWA	South Carolina, USA	Kirsten Jensen (U. Kansas)	13502	MZ489580
<i>H. say</i>	NWA	South Carolina, USA	Kirsten Jensen (U. Kansas)	13504	MZ489581
<i>Bathytoshia lata</i>	NP	Hawai, USA	Vibha Thakur (U. Auckland)	15451	MZ489596
<i>Dasyatis hypostigma</i>	SWA	Uruguay	Samuel Iglésias (Muséum National d'Histoire Naturelle)	16151	MZ489595
<i>Fontitrygon garouaensis</i>	EA	Kwara, Nigeria	Arinze Uche (U. Port Harcourt)	19480	MZ562568
<i>Fontitrygon margarita</i>	EA	Djifere, Senegal	Janine Caira (U. Connecticut)	6072	MZ489632
<i>Fontitrygon margaritella</i>	EA	Mbour, Senegal	Janine Caira (U. Connecticut)	6066	MZ489633
<i>Hemistrygon akajei</i>	NWP	Ariake Bay, Japan	Will White (CSIRO)	12904	MZ489592
<i>Neotrygon orientale</i>	SWP	Tanjung Manis, Sarawak, Malaysia	Janine Caira (U. Connecticut)	3636	MZ489598
<i>Pteroplatytrygon violacea</i>	NEP	California, USA	Laura Jordan (U. California)	6498	MZ489591
<i>Taeniura lymma</i>	SWP	Tanjung Batu, East Kalimantan, Indonesia	Janine Caira (U. Connecticut)	4818	MZ489597
<i>Taeniurops grabatus</i>	EA	Mbour, Senegal	Janine Caira (U. Connecticut)	6065	MZ489594
<i>Telatrygon acutirostra</i>	NWP	Ariake Bay, Japan	Will White (CSIRO)	12930	MZ489593

REFERENCE

- Costa TLA, Petean FF, Berbel-Filho WM, Solé-Cava AM, Mendes LF, Lima SMQ. Molecular testing of the São Francisco River as an ecological filter for the Brazilian large-eyed stingray *Hypanus marianae* (Dasyatidae, Myliobatiformes). *Hydrobiologia*. 2022; 849:2435–48. <https://doi.org/10.1007/s10750-022-04828-6>

HOW TO CITE THIS ARTICLE

- Petean FF, Yang L, Corrigan S, Lima SMQ, Naylor GJP. How many lineages are there of the stingrays genus *Hypanus* (Myliobatiformes: Dasyatidae) and why does it matter? *Neotrop Ichthyol*. 2024; 22(1):e230046. <https://doi.org/10.1590/1982-0224-2023-0046>

Neotropical Ichthyology



This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

Distributed under Creative Commons CC-BY 4.0

© 2024 The Authors. Diversity and Distributions Published by SBI



Official Journal of the Sociedade Brasileira de Ictiologia