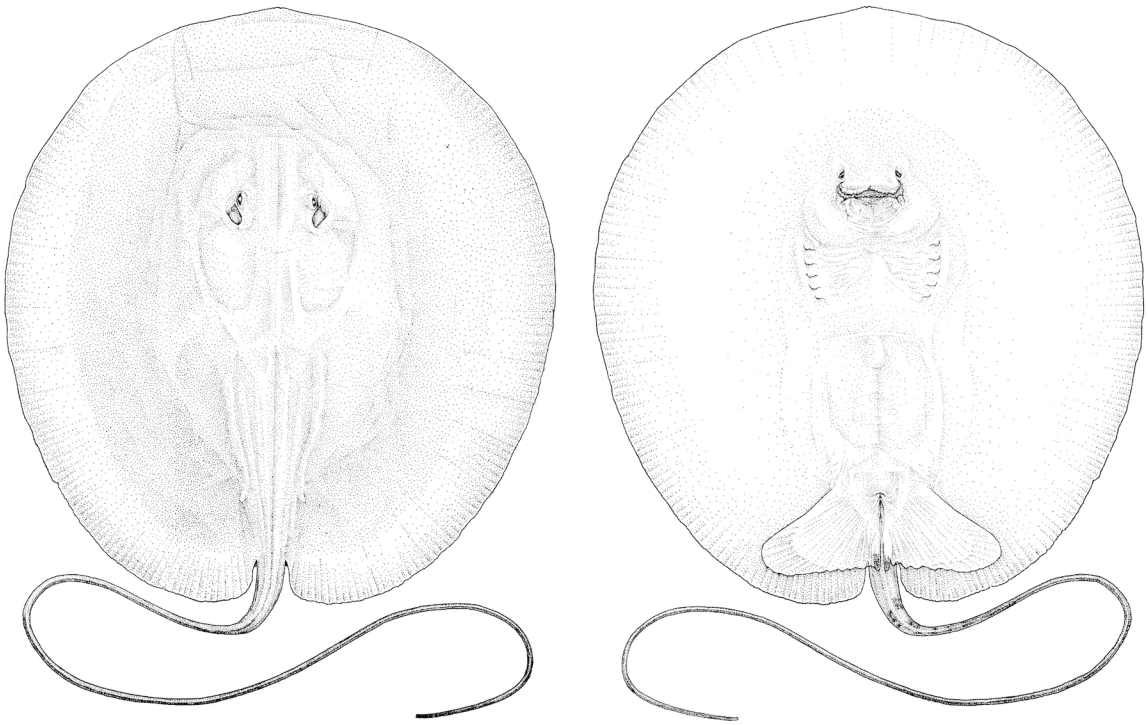
Order MYLIOBATIFORMES

Neotropical Stingrays

Family **POTAMOTRYGONIDAE**

Garman 1877



Heliotrygon rosai, juvenile male, 231 mm disc width, dorsal (left) and ventral (right) views. Illustration by Ian Hart. From: Carvalho, M. R. de and N. R. Lovejoy. 2011. Morphological and phylogenetic relationships of a remarkable new genus and two new species of Neotropical freshwater stingrays from the Amazon basin (Chondrichthyes: Potamotrygonidae). Zootaxa 2776: 13–48.

Whiptail Stingrays
Subfamily STYRACURINAE
Carvalho, Loboda & da Silva 2016

Styracura

Carvalho, Loboda & Silva 2016
*stýrax (*στύραξ), spike at the lower end of a spear-shaft; *ourá* (οὐρά), tail, referring to its greatly elongated caudal stingers

***Styracura pacifica* (Beebe & Tee-Van 1941)** *-ica* (L.), belonging to: Pacific Ocean, referring to its distribution off the Pacific coast from Oaxaca, Mexico, to Costa Rica and around the Galapagos Islands

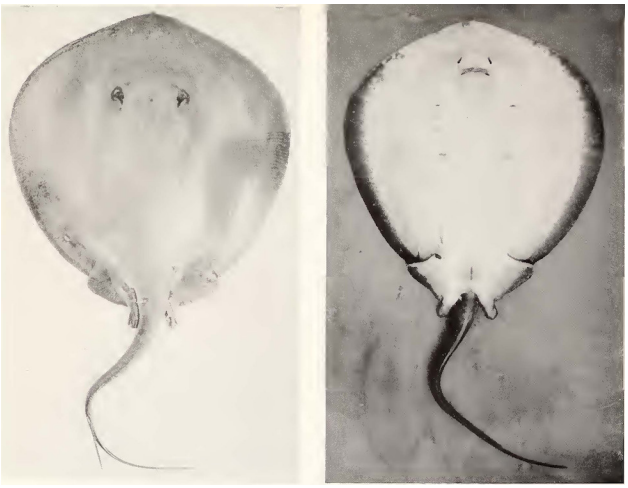
***Styracura schmardae* (Werner 1904)** in honor of Austrian naturalist and traveler Ludwig K. Schmarda (1819–1908), who collected holotype [although named after a man, "*ae*" is, per Latin grammar, a nomenclaturally acceptable way to form a genitive from nouns that end in "a"]

River Stingrays
Subfamily POTAMOTRYGONINAE
Garman 1877

Heliotrygon

Carvalho & Lovejoy 2011
hḗlios (ἥλιος), sun, referring to distinctively arranged pectoral disc radials that appear to "radiate" outward; *trygṓn* (τρυγών), stingray, originating from *ptérýx* (πτέρυξ), wing[1], referring to the wing-like resemblance (and flying-like movement) of their pectoral fins

***Heliotrygon gomesi* Carvalho & Lovejoy 2011** in honor of Ulisses L. Gomes (b. 1955), a "pioneer in the study of elasmobranch morphology and systematics in Brazil, and an esteemed colleague and collaborator of the first author"



Styracura pacifica, holotype, male, 622 mm disc width, dorsal (left) and ventral (right) views. From: Beebe, W. and J. Tee-Van. 1941. Eastern Pacific expeditions of the New York Zoological Society. XXVIII. Fishes from the tropical eastern Pacific. [From Cedros Island, Lower California, south to the Galápagos Islands and northern Peru.] Part 3. Rays, Mantas and Chimaeras. Zoologica, Scientific Contributions of the New York Zoological Society 26 (pt 3, no. 26): 245–280, Pls. 1 –4.

[1] Le Feuvre, C. 2011. Gr. τρυγών '1. turtledove; 2. stingray (fish)': one word or two words? Studia Etymologica Cracoviensia 16 (1): 23–31. Some references say *trygṓn* means turtle dove. Le Feuvre presents evidence that *trygṓn* was originally two distinct words, meaning both stingray and turtle dove, that merged into one through the vicissitudes of phonological change; the semantic link between the two animals is accidental.

Heliotrygon rosai **Carvalho & Lovejoy 2011** in honor of Ricardo S. Rosa (b. 1954), whose "excellent" 1985 revision of potamotrygonids "represents a landmark in our understanding of the taxonomy and diversity of this family"

Paratrygon

Duméril 1865

pará (παρά), near, referring to what was presumed to be a close relationship to the catch-all stingray genus *Trygon* (=*Dasyatis*)

Paratrygon aiereba **(Müller & Henle 1841)** presumably a Brazilian vernacular for an unidentified species of ray; its original pre-Linnaean usage likely referred to a marine species, which the authors applied to this freshwater species

Paratrygon araguaia **Loboda 2026** named for the rio Araguaia of Brazil, where it is endemic [spelled *araguaiaensis* in the etymology section]

Paratrygon lucindai **Loboda 2026** in honor of Brazilian ichthyologist Paulo Lucinda (Universidade Federal do Tocantins), who "kindly received the author in his laboratory and also provided and loaned a considerable number of specimens of this endemic species of Paratrygon from the Tocantins River"

Paratrygon munduruku **Loboda 2026** named for the Munduruku indigenous communities who live along the rio Tapajós (Pará State, Brazil), where this stingray occurs

Paratrygon orinocensis **Loboda, Lasso, Rosa & Carvalho 2021** *-ensis*, Latin suffix denoting place: main rivers of the Orinoco basin, Colombia and Venezuela, where it is endemic

Paratrygon orinocensis, holotype, adult female, 286 mm disc width, dorsal (left) and ventral (right) views. From: Loboda, T. S., C. A. Lasso, R. S. Rosa and M. R. de Carvalho. 2021. Two new species of freshwater stingrays of the genus *Paratrygon* (Chondrichthyes: Potamotrygonidae) from the Orinoco basin, with comments on the taxonomy of *Paratrygon aiereba*. Neotropical Ichthyology 19 (2): 1–80.

Paratrygon parvaspina **Loboda, Lasso, Rosa & Carvalho 2021** *parvus* (L.), small; *spina* (L.), thorn or spine, referring to its reduced caudal stinger (or spine)

Paratrygon raonii **Loboda 2026** in honor of Raoni Metuktire (b. 1932), an indigenous Kayapo leader, environmentalist and activist who has fought for decades to preserve the rio Xingu (where this stingray occurs) and its indigenous people, as well as the Amazon rainforest

Plesiotrygon

Rosa, Castello & Thorson 1987

plḗsios (πλήσιος), near, root word of plesiomorph, i.e., a primitive character state; *trygṓn* (τρυγών), stingray, originating from *ptérýx* (πτέρυξ), wing[1], referring to the wing-like resemblance (and flying-like movement) of their pectoral fins, i.e., "close to trygon," referring to its possible phylogenetic position as the most primitive potamotrygonid stingray

Plesiotrygon iwamae **Rosa, Castello & Thorson 1987** in honor of the late zoologist Satoko Iwama (d. 1987), Instituto de Botânica, São Paulo, Brazil

Plesiotrygon nana **Carvalho & Ragno 2011** from *nanus* (L.), dwarf (a noun, but apparently treated as an adjective), referring to small adult size, probably not surpassing 250 mm disc width

Potamotrygon

Garman 1877

potamós (ποταμός), river, referring to their occurrence in the rivers of South America; *trygṓn* (τρυγών), stingray, originating from *ptérýx* (πτέρυξ), wing[1], referring to the wing-like resemblance (and flying-like movement) of their pectoral fins

Potamotrygon adamastor **Fontenelle & Carvalho 2017** named after Adamastor, a giant in Greek mythology who opposed Zeus and Thetis and was thereby sent to Earth, acting as a raging storm over the Cape of Storms; the name was chosen because this stingray is a strong and violent fish, with a stinger that can pierce plastic boxes when caught[2]

Potamotrygon albimaculata **Carvalho 2016** *albus* (L.) white; *maculata* (L.), spotted, referring to conspicuous white-spotted color pattern

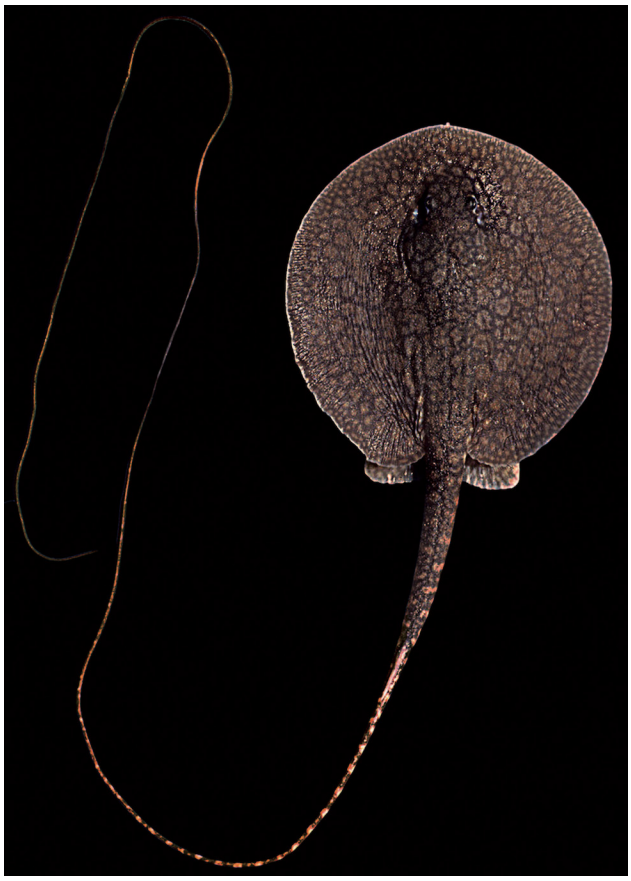
Potamotrygon amandae **Loboda & Carvalho 2013** in memory of Amanda Lucas Gimeno (1984–2006), who was an undergraduate colleague of the senior author (she died from severe head trauma when a balcony collapsed at the State University of Londrina during the first day of the 26th Brazilian Congress of Zoology)

Potamotrygon amazona **Fontenelle & Carvalho 2017** named after the Amazonas, female warriors of Greek mythology, daughters of the god of war and goddess of harmony; this name was chosen because this stingray is strong, muscular, and covered with armor-like denticles[2]

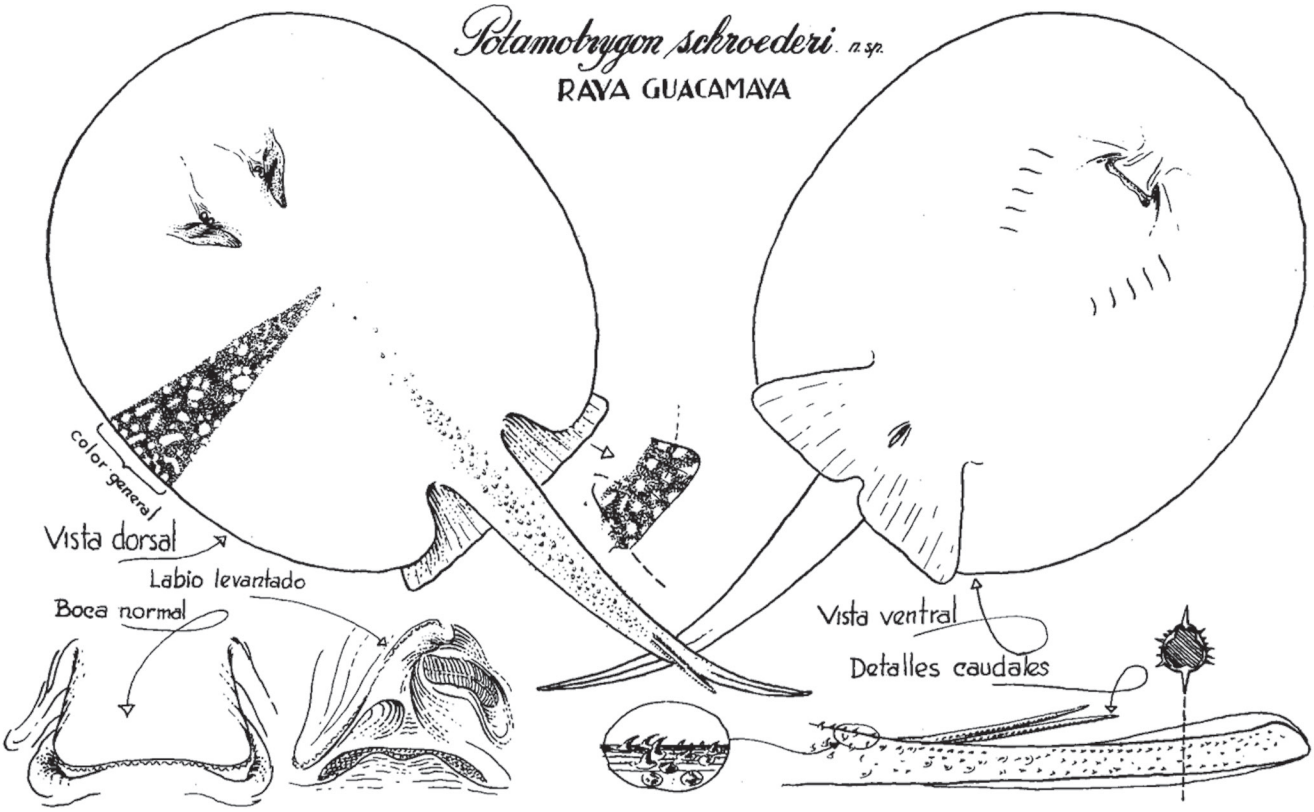
Potamotrygon boesemani **Rosa, Carvalho & Wanderley 2008** in honor of the late Marinus Boeseman (1916–2006), Leiden University, "who contributed substantially to our knowledge of both South American ichthyology (including chondrichthyans) and zoological history"

Potamotrygon brachyura **(Günther 1880)** short-tailed, from *brachýs* (βραχύς), short, and *ourá* (οὐρά), tail, referring to its tail much shorter than its body

[2] J. P. Fontenelle, pers. comm.



Plesiotrygon nana, living specimen, juvenile or preadult female, 118 mm disc width. From: Carvalho, M. R. de and M. P. Ragno. 2011. An unusual, dwarf new species of Neotropical freshwater stingray, *Plesiotrygon nana* sp. nov., from the upper and mid Amazon basin: the second species of *Plesiotrygon* (Chondrichthyes: Potamotrygonidae). Papéis Avulsos de Zoologia, Museu de Zoologia da Universidade de São Paulo 51 (7): 101–138.



Potamotrygon schroederi. From: Fernández-Yépez, A. 1958. Nueva raya para la ciencia: *Potomatrygon* [*sic*] *schroederi* n. sp. Boletin del Museo de Ciencias Naturales. Caracas, Venezuela. 2-3: 8–11.

Potamotrygon constellata **(Vaillant 1880)** Latin for studded with stars, referring to stellate-based spines on tail, which appear white on the ray's dark skin and thus resemble a "carte sidérale" (sidereal map, or map of stars)

Potamotrygon falkneri **Castex & Maciel 1963** in honor of British Jesuit missionary Tomas Falkner (1707–1784, also spelled Thomas Falconer), for his apostolic and scientific work in 18th-century Argentina

Potamotrygon garmani **Fontenelle & Carvalho 2017** in honor of American ichthyologist-herpetologist Samuel Garman (1843–1927), Museum of Comparative Zoology, Harvard University, whose works on sharks and rays "remain among the most impressive and important contributions to the field"; he proposed the genus *Potamotrygon*, the family Potamotrygonidae, and described five species of Neotropical stingrays (three remain valid)

Potamotrygon henlei **(Castelnau 1855)** eponym not identified but clearly in honor of Friedrich Gustav Jacob Henle (1807–1885), German physician, pathologist and anatomist, who, along with Johann Müller (honored by Castelnau in a preceding description in the same publication, now a junior synonym of *P. motoro*) produced the first authoritative work on elasmobranch fishes (1839–1841) and published the first valid description of *P. motoro* in 1841

Potamotrygon histrix **(Müller & Henle 1834)** from *hýstrix* (ὕστριξ) or *hystrix* (L.), porcupine, referring to stellate-based spines on dorsal surface, larger toward the middle and absent from the margins [often spelled *hystrix*, dating to Müller & Henle 1841]

Potamotrygon humerosa **Garman 1913** *-osa*, Latin suffix connoting fullness or abundance: *humerus* (L.), shoulder or bone of the upper arm, allusion not explained nor evident

Potamotrygon jabuti **Carvalho 2016** Portuguese name for this species, from the Portuguese name for common land-dwelling tortoises (Testudinidae) of Brazil, referring to similarity in dorsal color, especially when disc is arched

Potamotrygon leopoldi **Castex & Castello 1970** in honor of Leopold III (1901–1983), King of the Belgians (1934–1951), sponsor of scientific studies at the Institut Royal des Sciences Naturelles de Belgique

Potamotrygon limai **Fontanelle, Silva & Carvalho 2014** in honor of "highly esteemed" ichthyologist José Lima de Figueiredo (b. 1943), Universidade de São Paulo, known as Zé Lima, who has contributed "immensely" to the development of ichthyology in South America and a "valued mentor and friend" of the authors

Potamotrygon magdalenae **(Duméril 1865)** of Rio de la Magdalena, Colombia, type locality

Potamotrygon marinae **Deynat 2006** in honor of Deynat's daughter Marina

Potamotrygon marquesi **Silva & Loboda 2019** in honor of Fernando Portella de Luna Marques, Instituto de Biociências, Universidade de São Paulo, who has contributed "immensely" to systematic studies of freshwater stingrays in South America, especially their parasites; he increased the number of potamotrygonins deposited at the university and "gave an improved and new perspective to the Department of Zoology during his time as a member of the post-graduate committee"

Potamotrygon motoro **(Müller & Henle 1841)** local name for this ray in Cuyaba, Brazil (type locality)

Potamotrygon ocellata **(Engelhardt 1912)** Latin for having little eyes, referring to numerous red spots with black rings on dorsal surface

Potamotrygon orbignyi **(Castelnau 1855)** in honor of Alcide d'Orbigny (1802–1857), "learned and intrepid traveler" (translation) and naturalist who traveled in South America, collecting thousands of specimens for the Muséum national d'Histoire naturelle (Paris)[3]

Potamotrygon pantanensis **Loboda & Carvalho 2013** *-ensis*, Latin suffix denoting place: northern Pantanal region (Paraná-Paraguay basin), only

[3] This species is a provisional senior synonym of *Potamotrygon roulini* Roberts 2021, considered a name of "doubtful application." See: Silva, J. P. C. B. Da, R. De S. Rosa, T. S. Loboda and C. A. Lasso. 2021. Taxonomy needs rigor: a response to Roberts' (2020 [2021]). Zootaxa 5052 (4): 597–600. *P. roulini* was named in honor of François-Désiré Roulin (1796–1874), French naturalist, vertebrate biologist, medical doctor, painter, and first scientist to collect specimens of the freshwater stingray family Potamotrygonidae.

known area of occurrence

***Potamotrygon rex* Carvalho 2016** Latin for king, referring to its large, bulky size and striking color pattern, "king of the rio Tocantins *Potamotrygon* species"

***Potamotrygon schroederi* Fernández-Yépez 1958** in honor of American ichthyologist William C. Schroeder (1895–1977), Woods Hole Oceanographic Institution (Falmouth, Massachusetts, USA), for his contributions to the knowledge of rays

***Potamotrygon schuhmacheri* Castex 1964** in honor of Castex' former high-school student and collaborator Roberto Schümacher (1947–1964), who died in an accident

***Potamotrygon scobina* Garman 1913** Latin for rasp, referring to "very small fine closely set stellate-based spines intermixed with larger" spines on disc and upper surface of tail

***Potamotrygon signata* Garman 1913** Latin for marked, referring to light and dark spots on dorsal surface and outer edge of disc

***Potamotrygon siponinmorok* Hemraj-Naraine, Fontenelle, Acosta-Santos, Lovejoy, Liverpool & Kolmann 2026** from *si ponin moro*, Akawaio (indigenous community historically occupying coastal Guyana, near where holotype was collected) phrase meaning "fish that stings"

***Potamotrygon tatianae* Silva & Carvalho 2011** in honor of Tatiana Raso de Moraes Possato (1978–2006), "a late student of biology" at Universidade de São Paulo, and an "enthusiastic researcher of chondrichthyans, in particular potamotrygonids"

***Potamotrygon tigrina* Carvalho, Sabaj Perez & Lovejoy 2011** Latin for tiger-like, referring to conspicuous dorsal disc color and vertically striped color pattern on distal tail region

***Potamotrygon wallacei* Carvalho, Rosa & Araújo 2016** in honor of Alfred Russel Wallace (1823–1913), the first naturalist to collect, observe and illustrate this species while on his travels in the Rio Negro in the early 1850s

***Potamotrygon yepezi* Castex & Castello 1970** in honor of Agustín Fernández Yépez (1916–1977), for his contributions to Venezuelan ichthyology