Order RHINOPRISTIFORMES

Guitarfishes

Family **RHINOBATIDAE**

Bonaparte 1835

Rhinobatos austini, non-type specimen, 1030 mm TL. From: Ebert, D. A. and O. Gon. 2017. *Rhinobatos austini* n. sp., a new species of guitarfish (Rhinopristiformes: Rhinobatidae) from the southwestern Indian Ocean. Zootaxa 4276 (2): 204–214.

Acroteriobatus

Giltay 1928

acroterio, etymology not explained, perhaps from *akrōtḗrion* (ἀκρωτήριον), an architectural ornament placed on a flat pedestal and mounted at the apex or corner of the pediment of a building in the classical style, perhaps referring to the expanded nasal flaps (the main diagnostic character of the genus), which could be seen as an additional ornamental curtain[1]; *batus*, from *bátos* (βάτος) or *batís* (βατίς), a flat fish, usually applied to a skate or ray

Acroteriobatus andysabini **Weigmann, Ebert & Séret 2021** in honor of American philanthropist Andy Sabin, for his "gracious support" of the Lost Sharks project at the Pacific Shark Research Center

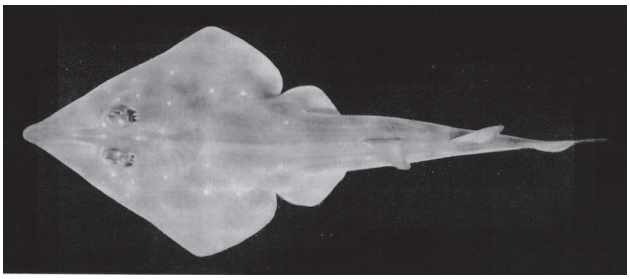
Acroteriobatus annulatus **(Smith 1841)** Latin for ringed, referring to white annular rings around body and tail [authorship often attributed to Müller & Henle, who published Smith's description]

Acroteriobatus blochii **(Müller & Henle 1841)** in honor of German physician-ichthyologist Marcus Elisier Bloch (1723–1799), whose collection furnished the authors with a preserved specimen of this ray

Acroteriobatus leucospilus **(Norman 1926)** white-spotted, from *leukós* (λευκός), white, and *spílos* (σπίλος), mark or spot, referring to blue-gray spots on snout and pectoral fins

Acroteriobatus ocellatus **(Norman 1926)** Latin for having little eyes (ocelli), referring to numerous blue-gray eyespots, or ocelli, on back

[1] Simon Weigmann, Elasmo-Lab, Hamburg, and Chair of the Integrative Taxonomy Working Group of the IUCN SSC Shark Specialist Group, pers. comm.



Acroteriobatus salalah, holotype, 540 mm TL. From: Randall, J. E. and L. J. V. Compagno. 1995. A review of the guitarfishes of the genus *Rhinobatos* (Rajiformes: Rhinobatidae) from Oman, with description of a new species. Raffles Bulletin of Zoology 43 (2): 289–298.

Acroteriobatus omanensis **Last, Henderson & Naylor 2016** *-ensis*, Latin suffix denoting place: Gulf of Oman, presumed type locality (obtained at a fish market in Muscat, Oman)

Acroteriobatus salalah **(Randall & Compagno 1995)** named for Salalah, Oman, where holotype was obtained at a fish market

Acroteriobatus stehmanni **Weigmann, Ebert & Séret 2021** in honor of German ichthyologist Matthias Stehmann (b. 1943), Institut für Seefischerei (Hamburg), for his "invaluable contributions to chondrichthyan taxonomy, particularly with respect to skates"; he taught the first and third authors chondrichthyan taxonomy, collected all type specimens, and "kindly" provided photographs

Acroteriobatus variegatus **(Nair & Lal Mohan 1973)** Latin for "of different sorts," particularly colors, referring to variegated markings of pectoral and pelvic margins

Acroteriobatus zanzibarensis **(Norman 1926)** *-ensis*, Latin suffix denoting place: Zanzibar, Tanzania, type locality

Pseudobatos

Last, Séret & Naylor 2016

pseudo-, from *pseúdēs* (ψεύδης), false; *bátos* (βάτος), a flat fish, usually applied to a skate or ray but used here as an abbreviated surrogate for *Rhinobatos*, referring to previous inclusion of most of its species in that genus, i.e., false *Rhinobatos*[2]

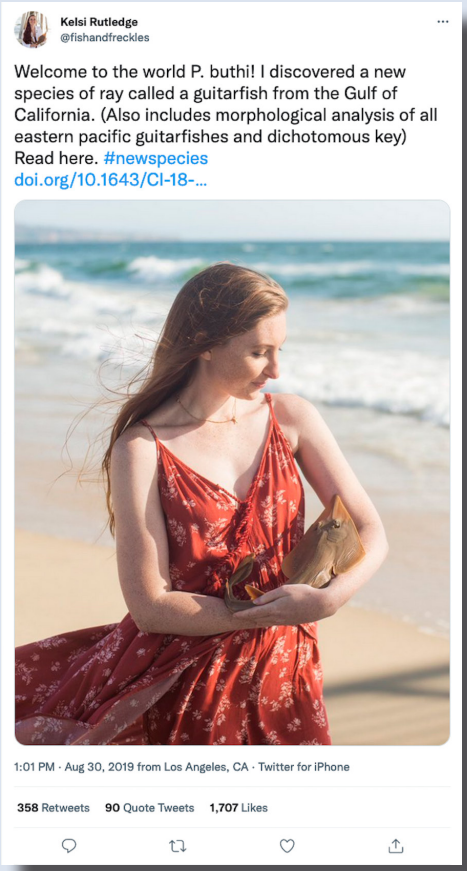
Pseudobatos buthi **Rutledge 2019** in honor of ichthyologist Donald Buth (1949–2022), University of California, Los Angeles, who provided Rutledge the opportunity to describe this species and whose support and guidance has been instrumental in her scientific career (see box, next page)

Pseudobatos glaucostigma **(Jordan & Gilbert 1883)** *glaucus*, from *glaukós* (γλαυκός), bluish-green or gray, sea-colored, or hoary blue; *stígma* (στίγμα), mark or spot, referring to numerous slate-colored spots on disc

Pseudobatos horkelii **(Müller & Henle 1841)** in honor of German physician-botanist Johann Horkel (1769–1846), who provided a preserved specimen from the University of Berlin

[2] Peter R. Last (lead author), pers. comm.

Announcing the "birth" of a new species, *Pseudobatos buthi*



In the 1940s and 1950s, ichthyologist Boyd Walker (University of California, Los Angeles) and colleagues caught 80 individuals of guitarfish during various collecting trips in the Gulf of California. Walker recognized these specimens as a possible new species but never examined them for quantifiable differences. In 2019, UCLA Ph.D. student Kelsi M. Rutledge quantified those differences and described a new species, *Pseudobatos buthi*, named in honor of her mentor and advisor, Donald Buth. The description appeared in the September 2019 issue of *Copeia*.

As the online version of *Copeia* became available, Rutledge decided to have some fun. She grabbed one of the museum specimens (preserved, not alive!) of her new species, went to the beach, and posed for several photographs of her and her new "baby." She posted the photos on Twitter, writing "Welcome to the world *P. buthi*! I discovered a new species of ray called a guitarfish from the Gulf of California."

Reaction was positive. "This could be the start of a brilliant new trend in scientific publication announcements," wrote physicist David Mills.

"We're starting to see more and more people taking creative approaches to getting the word out there," David Shiffman told Smithsonian.com. He's a marine conservation biologist and elasmobranch specialist who runs the Twitter account Why Sharks Matter. "Her photoshoot was one of the most hilarious things I've ever seen in that space." Rutledge says her "silly" birth announcement has a serious objective. About 55 percent of guitarfishes are either threatened or near threatened for extinction. "I am trying to raise awareness about this understudied group of fishes," she says. She also wanted to draw more attention to taxonomy.

"Other scientists see [taxonomy] as boring or low impact, but I wanted to highlight that taxonomy can be fun, and it is important."

***Pseudobatos lentiginosus* (Garman 1880)** Latin for full of freckles, referring to dense freckling of small pale spots on upper surface of body

***Pseudobatos leucorhynchus* (Günther 1867)** white-snouted, from *leukós* (λευκός), white, and *rhýnchos* (ῥύγχος), snout, referring to pale areas on snout

***Pseudobatos percellens* (Walbaum 1792)** Latin for smiting, allusion not explained, perhaps referring to Walbaum's mistaken belief that it can produce an electric shock when held in the hand ("Quando manu tangitur ictu electrico ferit.")

***Pseudobatos planiceps* (Aarman 1880)** *planus* (L.), flat; *-ceps* (Neo-Latin), headed, referring to its broad, flat head

***Pseudobatos prahli* (Acero P. & Franke 1995)** in honor of Henry von Prahl (1948–1989), Colombian marine biologist who studied Gorgona Island (type locality), and martyr of national biology ("mártir de la biología nacional"), presumably referring to his death in the bombing of Avianca Airlines Flight 203 over Bogotá

***Pseudobatos productus* (Ayres 1854)** Latin for produced, referring to its pointed snout

Rhinobatos

Linck 1790

presumably tautonymous with *Raja rhinobatos* Linnaeus 1758 (no species mentioned): *rhino-*, possibly from *rhinus,* an ancient name for sharks, from *rhinós* (ῥινός), skin or hide of a beast, or *rhínē* (ῥίνη), rasp, both apparently alluding to a shark's rasp-like skin; *bátos* (βάτος), a flat fish, usually applied to a skate or ray, referring to body form intermediate between that of a shark and ray

***Rhinobatos albomaculatus* Norman 1930** *albus* (L.), white; *maculatus* (L.), spotted, referring to white eye spots or ocelli on dorsal surface

***Rhinobatos annandalei* Norman 1926** in honor of British zoologist-anthropologist Thomas Nelson Annandale (1876–1924), Director, Indian Museum (Calcutta), who had published many papers on the fishes of India, including a 1909 account of this species

***Rhinobatos austini* Ebert & Gon 2017** in honor of "flat" shark enthusiast Austin Ebert (the senior author's nephew) on the occasion of his graduation from the University of Southern California (his sister is similarly honored; see *Pristiophorus lanae*, Pristiophoridae)

***Rhinobatos borneensis* Last, Séret & Naylor 2016** *-ensis*, Latin suffix denoting place: Malaysian Borneo (South China Sea), type locality, where specimens were first observed in a fish market

***Rhinobatos holcorhynchus* Norman 1922** ridge-snouted, from *holkós* (ὁλκός), furrow, groove or track, and *rhýnchos* (ῥύγχος), snout, allusion not explained, presumably referring to widely separated rostral ridge

***Rhinobatos hynnicephalus* Richardson 1846** plow-headed, from *hýnis* (ὕνις), plowshare, and *kephalḗ* (κεφαλή), head, translation of its Chinese name, *Lae tow sha* ("Plough-headed *sha*"), referring to the shape of its head and acuminated snout

***Rhinobatos irvinei* Norman 1931** in honor of British botanist Frederick Robert Irvine (1898–1962), who collected many fishes off the coast of West Africa, including holotype of this one

***Rhinobatos jimbaranensis* Last, White & Fahmi 2006** *-ensis*, Latin suffix denoting place: Jimbaran Bay, Indonesia, type locality

Rhinobatos lionotus **Norman 1926** smooth-backed, from *leĩos* (λεῖος), smooth, and *nṓtos* (νῶτος), back, referring to minute skin denticles, presumably on dorsal surface, which are "smooth to the touch"

Rhinobatos manai **White, Last & Naylor 2016** in honor of Ralph Mana, University of Papua New Guinea, whose "invaluable work on the BioPapua projects throughout Papua New Guinea has led to a considerable increase in our knowledge of the deepwater fish fauna of this region"

Rhinobatos nudidorsalis **Last, Compagno & Nakaya 2004** *nudus* (L), bare or naked; *dorsalis* (L.), of the back, referring to smooth, denticle-free upper surface of body

Rhinobatos penggali **Last, White & Fahmi 2006** Indonesian for shovel, referring to head shape of this and other "shovelnose rays"

Rhinobatos punctifer **Compagno & Randall 1987** *punctum* (L.), spot; *-ifer*, from *fero* (L.), to have or bear, referring to prominent regular pattern of white spots on dorsum

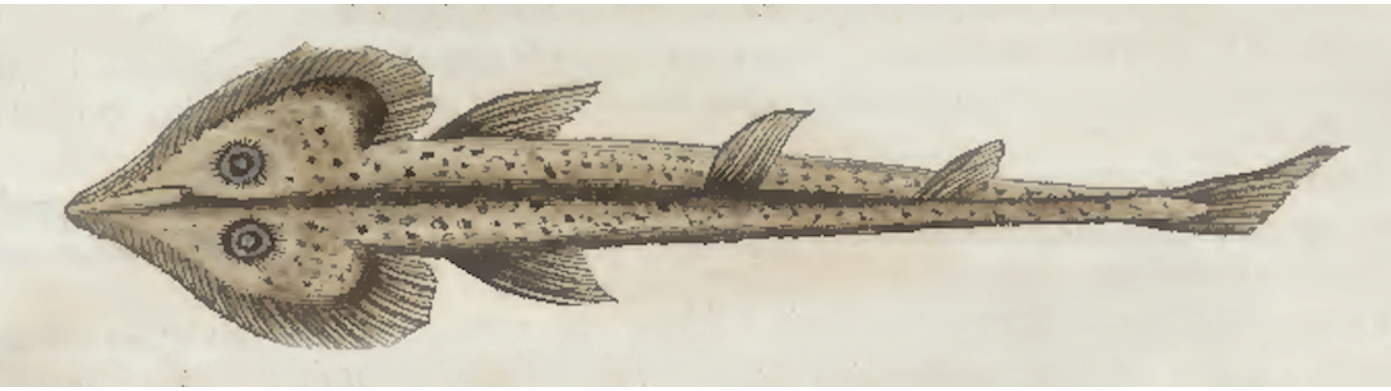
Rhinobatos ranongensis **Last, Séret & Naylor 2019** *-ensis*, Latin suffix denoting place: Ranong fish landing (western Thailand), where first specimen was collected in 1994 and subsequently most of the types

Rhinobatos rhinobatos **(Linnaeus 1758)** *rhino-*, possibly from *rhinus,* an ancient name for sharks, from *rhinós* (ῥινός), skin or hide of a beast, or *rhínē* (ῥίνη), rasp, both apparently alluding to a shark's rasp-like skin; *bátos* (βάτος), a flat fish, usually applied to a skate or ray, referring to body form intermediate between that of a shark and ray

Rhinobatos sainsburyi **Last 2004** in honor of marine biologist Keith Sainsbury (b. 1952), for planning and managing the initial trawl surveys of the continental shelf of northwestern Australia, for recognizing the need to document the fauna before addressing more management-oriented questions, and for "pioneering research [that] provided an excellent regional biological baseline that would otherwise be unavailable for regional marine management"

Rhinobatos schlegelii **Müller & Henle 1841** in honor of German ornithologist-herpetologist Hermann Schlegel (1804–1884), for his willing support ("bereitwillige Unterstützung") of the authors' work

Rhinobatos whitei **Last, Corrigan & Naylor 2014** in honor of the authors' colleague, Australian ichthyologist William T. White (b. 1977), for his contributions to the taxonomic and biological knowledge of sharks and rays of the Western Central Pacific



"Puraque," upon which decription of *Pseudobatos percellens* is based. From: Markgraf von Liebstadt, G. 1648. Historiæ rerum naturalium brasiliæ libri octo. *In*: Historiae naturalis brasiliae, auspicio et beneficio illustriss. F. Hackius, Lugduni Batavorum (Leiden) and L. Elzevir (Elsevier), Amstelodami (Amsterdam). i–xii (unnumbered) + 1–327 + i–ii (unnumbered) + 1–39 + 1–226 + i (unnumbered). [Author's name spelled Georgvs Marcgravus de Liebstad, also seen as Marcgrave or Marcgravus.]