The ETYFish Project

COMMENTS: = v. 9.0- 2 June 2024

Order LABRIFORMES (part 2 of 3)

Family LABRIDAE Wrasses and Parrotfishes (Iniistius through Xyricthys)

Taxonomic note: includes taxa traditionally placed in the families Scaridae (parrotfishes) and Odacidae (cales), now nested in Labridae.

Iniistius Gill 1862

inion, back of head; istius, sail, referring to first dorsal fin on nape of I. pavo

Iniistius aneitensis (Günther 1862)

-ensis, suffix denoting place: Aneiteum (Aneityum) Island, Vanuatu, southwestern Pacific, type locality (widely occurs elsewhere in Indo-West Pacific)

Iniistius auropunctatus Randall, Earle & Robertson 2002

aur[antium], orange; punctatus, spotted, referring to numerous tiny orange spots on both males and females

Iniistius bakunawa Sorgon, Tea, Meren & Nañola 2023

named for Bakunawa, a serpentine or draconic figure in Visayan mythology believed to be responsible for causing an eclipse by devouring the moon, referring to eclipse-like ocellus on posteriormost edge of dorsal fin

Iniistius baldwini (Jordan & Evermann 1903)

in honor of Albertus Baldwin (1865-1935), employed by the U.S. Government's Departments of Agriculture, Interior and Commerce to illustrate scientific reports, for his paintings of American and Hawaiian fishes

Iniistius bimaculatus (Rüppell 1829)

bi-, two; maculatus, spotted, referring to dark-brown spot (slightly larger than eye) on middle sides of males (females unspotted)

Iniistius brevipinnis Randall 2013

brevis, short; pinnis, fin, having shorter fins (in general) compared to congeners

Iniistius celebicus (Bleeker 1856)

-icus, belonging to: Makassar, Celebes (now Sulawesi), Indonesia, type locality (widely occurs elsewhere in western and central Pacific)

Iniistius cyanifrons (Valenciennes 1840)

cyano-, blue; frons, front or forehead, described as having a blue band over entire edge of muzzle and forehead, up to the dorsal fin

Iniistius dea (Temminck & Schlegel 1845)

Latin for goddess, allusion not explained; a name usually given to spectacular animals (e.g., color, size, beauty), so perhaps referring to its "beautiful shades" (translation) of color in life

Iniistius evides (Jordan & Richardson 1909)

pretty, allusion not explained, perhaps reflecting the authors' opinion of its appearance

Iniistius geisha (Araga & Yoshino 1986)

geisha, a Japanese hostess trained to entertain men with conversation, dance and song, referring to this wrasse's black-and-white coloration, reminiscent of an "elderly" geisha dressed in a traditional costume

Iniistius griffithsi Randall 2007

in honor of Jeremy Griffiths, one of two fishermen who captured type via handline; named at the request of Jeremy's father, Owen Griffiths, Australian malacologist and conservationist, who noted that the wrasse was undescribed and arranged for a photograph to be taken and a second specimen to be collected

Iniistius jacksonensis (Ramsay 1881)

-ensis, suffix denoting place: Manly Beach, Port Jackson, New South Wales, Australia, type locality; Ramsay believed it was the first *Novacula* (original genus, =*Xyrichtys*) recorded from Port Jackson

Iniistius melanopus (Bleeker 1857)

melanos, black; opus, foot, referring to horizontally elongate black spot on posterior anal fin of males (although opus is usually homologous to the ventral or pelvic fin, Bleeker clearly used it for the anal fin for this species)

Iniistius naevus Allen & Erdmann 2012

blemish or birthmark, referring to dark-brown to blackish spot on upper body of both males and females

Iniistius opalus Fukui 2018

opal, referring to small milky white blotches on middle of body

Iniistius pavo (Valenciennes 1840)

peacock, referring to small peacock-like ocellus, or eyespot, below forward portion of dorsal fin (name does not refer to two ocelli on dorsal fin of juveniles)

Iniistius pentadactylus (Linnaeus 1758)

penta-, five; *dactylus*, fingered, allusion not explained, possibly referring to 4-6 (but often 5) red spots (black underwater) along lateral line behind head of terminal-phase males; the spots are not finger-shaped, but they appear as if the fish had been touched by five human fingers stained with paint or ink (the anterior spot, like a thumbprint is separate from the other four)

Iniistius rajagopalani (Venkataramanujam, Venkataramani & Ramanathan 1987)

in honor of V. Rajagopalan, Central Marine Fisheries Institute (India), whose "dedicated and devoted service to the Institute in building [it] up as a centre of national importance will always be remembered"

Iniistius spilonotus (Bleeker 1857)

spilos, spot; notos, back, presumably referring to one or two series of small brown spots between soft dorsal fin and lateral line

Iniistius trivittatus (Randall & Cornish 2000)

tri-, three; vittatus, banded, referring to three blackish bars on upper half of body

Iniistius twistii (Bleeker 1856)

in honor of Albertus Jacobus Duymaer van Twist (1809-1887), Governor-General of the Dutch East Indies, "in tribute to the support that civilization and science have been able to experience from him during his five-year rule [1851-1856] of the Dutch East Indies" (translation)

Iniistius umbrilatus (Jenkins 1901)

etymology not explained, perhaps *umbra*, shade, or *umbrinus*, umber, and -atus, adjectival suffix, referring to "large dark-brown blotch, large as head, on middle portion of body"

Iniistius verrens (Jordan & Evermann 1902)

trailing or sweeping, presumably referring to produced outer ray of ventral fins, reaching past front of anal fin

Labrichthys Bleeker 1854

Labrus, similar to and/or closely related to both Labrus and Labroides; ichthys, fish

Labrichthys unilineatus (Guichenot 1847)

uni-, one; lineatus, lined, referring to single mid-lateral white stripe on juveniles

Labroides Bleeker 1851

-oides, having the form of: Labrus, but with a pair of curved, erect fangs in each jaw

Labroides bicolor Fowler & Bean 1928

bi-, two, i.e., two-colored, referring to its "greatly contrasted" color pattern of males, anterior half "vandyke-brown" (blue-black in life) and posterior half "rather abruptly white" (pale yellow in life)

Labroides dimidiatus (Valenciennes 1839)

halved or divided in two, referring to broad, black longitudinal stripe dividing body color into two separate sections

Labroides pectoralis Randall & Springer 1975

pectoral, referring to large black spot below pectoral-fin base

Labroides phthirophagus Randall 1958

phtheiros, louse; phagous, eat, referring to its habit of feeding on external parasites of fishes

Labroides rubrolabiatus Randall 1958

ruber, red; labiatus, lipped, referring to color of lips in life

Labropsis Schmidt 1931

opsis, appearance, allusion not explained, presumably referring to similarity to Labrichthys and Labroides

Labropsis alleni Randall 1981

in honor of Gerald R. Allen (b. 1942), Western Australia Museum (Perth), who collected six of the 14 type specimens

Labropsis australis Randall 1981

southern, referring to southern location of islands where it has been taken, all lying between latitudes 9° and 23.5°S

Labropsis manabei Schmidt 1931

in honor of Mr. Manabe (forename not given), director of the Electrical Station of Naze, to whom Schmidt was "very much indebted for the success of [his] collecting work on the Amami-Oshima island" of Japan

Labropsis micronesica Randall 1981

-ica, belonging to: Micronesia, known only from the Marshall Islands, Mariana Islands, Caroline Islands, and

Palau Islands, the major archipelagoes of Micronesia [also, description appeared in the journal Micronesica]

Labropsis polynesica Randall 1981

-ica, belonging to: Polynesia, referring to its known localities, all islands of Polynesia

Labropsis xanthonota Randall 1981

xanthus, yellow; nota, back, referring to yellow of upper back and dorsal fin of females, its most conspicuous color marking underwater

Labrus Linnaeus 1758

a name taken by Artedi from Pliny and Ovid, thought by Artedi (1738) to be from labrum, lip, referring to thick lips

Labrus bergylta Ascanius 1767

from berggylt, Norwegian word for wrasse (described from Stavanger, Norway)

Labrus merula Linnaeus 1758

Latin for blackbird, applied to this wrasse since at least Aldrovandi's *De Piscibus libri V* (1638), perhaps referring to blackish-blue color of older adults

Labrus mixtus Linnaeus 1758

mixing (i.e., varied), perhaps referring to varied blue and orange colors ("e flavo caeruleoque varius"), especially males, which have blue heads and orange bodies streaked with blue

Labrus viridis Linnaeus 1758

green, referring to bright-green body color

Lachnolaimus Cuvier 1829

lachnos, wooly; laimos, throat, referring to part of surface pharyngeal covered with a velvety membrane

Lachnolaimus maximus (Walbaum 1792)

largest or greatest, based on "The great Hog Fish" of Catesby (1771), reaching to over a meter in length

Lappanella Jordan 1890

etymology not explained, possibly a local Italian name for *L. fasciata*, itself a diminutive of *Lappana*, a local Italian name for *Labrus merula*

Lappanella fasciata (Cocco 1833)

banded, presumably referring to six reddish-orange bands traversing silvery lower body

Lappanella guineensis Bauchot 1969

-ensis, suffix denoting place: Gulf of Guinea, type locality (although actually collected from the Atlantic Ocean off Freetown, Sierre Leone, just north of the Gulf)

Larabicus Randall & Springer 1973

an "arbitrary combination of letters," possibly a combination of *La*-, from *Labrus* (original genus), and *arabicus*, referring to occurrence of *L. quadrilineatus* in the Red Sea, Gulf of Aden and Persian Gulf

Larabicus quadrilineatus (Rüppell 1835)

quadri-, four; lineatus, referring to four blue stripes (two on each side of body) on juveniles and females

Leptojulis Bleeker 1862

leptos, thin, presumably referring to more slender body compared to many other labrids; *julis*, from *ilus*, ancient name for a red labrid dating to at least Aristotle (perhaps from *ion*, violet), sometimes used as a general suffix for wrasses

Subgenus Leptojulis

Leptojulis chrysotaenia Randall & Ferraris 1981

chrysos, gold; taenia, ribbon, referring to broad, midlateral, ribbon-like orange-yellow stripe on sides

Leptojulis cyanopleura (Bleeker 1853)

cyano-, blue; *pleura*, sided, presumably referring to two blue-edged stripes flanking an orange-yellow stripe passing from front of snout to caudal peduncle on terminal-phase males

Leptojulis lambdastigma Randall & Ferraris 1981

lambda, 11th letter of Greek alphabet; stigma, mark, referring to conspicuous ∧-shaped mark on nape

Leptojulis urostigma Randall 1996

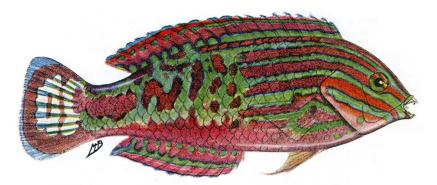
[o]ura, tail; stigma, mark, referring to large black spot on base of caudal fin, its most distinctive feature

Subgenus Neojulis Randall 1996

neo-, new, i.e., a new subgenus; *julis*, from *ilus*, ancient name for a red labrid dating to at least Aristotle (perhaps from *ion*, violet), sometimes used as a general suffix for wrasses but probably used here as an abridgement of *Leptojulis*, or to convey Randall's initial belief that *L. polylepis* represented a new genus

Leptojulis polylepis Randall 1996

poly, many; lepis, scale, referring to 46 lateral-line scales, compared to 27 in the nominate subgenus



Macropharyngodon bipartitus. Smith, J. L. B. 1957. List of the fishes of the family Labridae in the western Indian Ocean with new records and five new species. Ichthyological Bulletin, Department of Ichthyology, Rhodes University No. 7: 99-114, Pls. 1-2.

Leptoscarus Swainson 1839

leptos, thin or slender, proposed as a "slender, elongated, fusiform" subgenus of Scarus

Leptoscarus vaigiensis (Quoy & Gaimard 1824)

-ensis, suffix denoting place: Pulau Waigeo (or Vaigiou), Papua Barat, Indonesia, type locality (but widely occurs in Red-Sea and elsewhere in the Indo-West Pacific)

Macropharyngodon Bleeker 1862

macro-, large; pharynx, throat; odon, tooth, referring to posterior canine teeth on upper jaw

Macropharyngodon bipartitus Smith 1957

consisting of two parts, presumably referring to color pattern, with curved bands over front part of body and irregular dark blotches over posterior half

Macropharyngodon choati Randall 1978

in honor of marine biologist J. Howard Choat, James Cook University (Queensland, Australia), for his studies of labrid fishes; when Choat collected the paratype in 1967, he suspected it was an undescribed species

Macropharyngodon cyanoguttatus Randall 1978

cyano-, blue; guttatus, spotted, referring to bright-blue spots on both sexes

Macropharyngodon geoffroy (Quoy & Gaimard 1824)

in honor of French naturalist Étienne Geoffroy Saint-Hilaire (1772-1844) [presumably a noun in apposition, without the patronymic "i"]

Macropharyngodon kuiteri Randall 1978

in honor of Australian underwater photographer Rudolf "Rudie" Kuiter (b. 1943), who raised type specimen from juvenile to adult in his home aquarium

Macropharyngodon marisrubri Randall 1978

maris, sea; rubrus, red, referring to the Red Sea, where it is endemic

Macropharyngodon meleagris (Valenciennes 1839)

guinea fowl, probably referring to small blue-green spots on body of males, which can be said to resemble the color pattern of a guinea fowl

Macropharyngodon moyeri Shepard & Meyer 1978

in honor of marine biologist Jack T. Moyer (1929-2004), director of the Tatsuo Tanaka Memorial Biological Station at Miyake-jima, Japan, who offered "extensive support" to the authors during their research there [biographical footnote: Moyer committed suicide; in 2014, The American School in Japan, where Moyer had taught, admitted that as many as 32 girls had been sexually abused by Moyer, starting as early as 1964, abuse that had been covered up by faculty and administration]

Macropharyngodon negrosensis Herre 1932

-ensis, suffix denoting place: Oriental Negros, Philippines, type locality (occurs in eastern Indian Ocean and western Pacific from Andaman Sea, Christmas Island and Indonesia east to Marshall Islands and Samoa, north to Ryukyu Islands and Ogasawara Islands, south to northern Australia)

Macropharyngodon ornatus Randall 1978

decorated, referring to "striking" color pattern (females with orange-red head, thorax, and abdomen, with greenish-yellow bands and spots, shading to blackish over most of the body with yellow-green spots; males generally darker)

Macropharyngodon pakoko Delrieu-Trottin, Williams & Planes 2014

named for the Marquesan warrior Pakoko (d. 1984), the last chieftain who led the Marquesan resistance to the

French; he is still celebrated in the Marquesas (where this wrasse is endemic) and an important figure in the community [a noun in apposition, without the patronymic "i"]

Macropharyngodon vivienae Randall 1978

in honor of marine biologist Mireille L. Rarmelin-Vivien (b. 1947), who collected (with dynamite) and illustrated holotype

Malapterus Valenciennes 1839

malakos, soft; pterus, fin, presumably referring to three soft, flexible spines of dorsal fin, with membranous appendages at the tip of each ray [not to be confused with the electric catfish genus Malapterurus]

Malapterus reticulatus Valenciennes 1839

netted, referring to net-like appearance of scales lined with brown

Minilabrus Randall & Dor 1981

mini-, small; labrus, referring to the family Labridae, probably the smallest genus of wrasse

Minilabrus striatus Randall & Dor 1981

striped, referring to dark stripes on head and body of both color forms

Neoodax Castelnau 1875

neo-, new, i.e., a new genus related to Odax

Neoodax balteatus (Valenciennes 1840)

belted, referring to dark midlateral band or stripe typical of juveniles and initial-phase adults

Nicholsina Fowler 1915

-ina, belonging to: John Treadwell Nichols (1883-1958), curator of fishes, American Museum of Natural History

Nicholsina collettei Schultz 1968

in honor of Bruce B. Collette (b. 1935), Schultz' ichthyological colleague at the Smithsonian Institution (and now Senior Systematic Zoologist, National Marine Fisheries Service), who collected type

Nicholsina denticulata (Evermann & Radcliffe 1917)

small-toothed or denticulate (finely toothed or notched), allusion not explained but distinguished in part by its incisor-like teeth, which do not form a solid beak

Nicholsina usta (Valenciennes 1840)

burned or scorched, allusion not explained, described as exhibiting a "beautiful aurora red" (translation) in alcohol, with some specimens having brown at the base of each scale, and dried specimens taking on a grayish color

Notolabrus Russell 1988

notos, south, referring to southern distribution (Indian Ocean and southwestern Pacific) of genus; Labrus, type genus of family but used here as a general suffix for wrasse

Notolabrus celidotus (Bloch & Schneider 1801)

adjectival form of *celidos*, spot, stain or blemish, presumably referring (per the original Forster manuscript on which description is based) to any or all of the following: roundish black spot high on sides opposite anus, three brown-black streaks towards tail, 2-3 black spots on anal fin, and ill-defined spots on dorsal fin (Graham, in *A Treasury of New Zealand Sea Fishes*, 1956, 2nd ed., suggests name is derived from *celidos*, stain or spot, and *otos*, ear, referring to dark markings behind eyes, but these markings are not mentioned in description)

Notolabrus cinctus (Hutton 1877)

belt or girdle, presumably referring to broad, black transverse bar on body behind tips of pectoral fins, passing on to dorsal fin between the 6th and 8th spines

Notolabrus fucicola (Richardson 1840)

Fucus, genus of brown algae or seaweed; -icola, dweller or inhabitant, allusion not explained but probably referring to its occurrence over kelp beds on rocky reefs

Notolabrus gymnogenis (Günther 1862)

gymnos, bare or naked; genys, cheek, referring to nearly scaleless cheeks, with only a single row of scales

Notolabrus inscriptus (Richardson 1848)

written or inscribed, referring a "pale mark on each scale, bearing some resemblance to the characters of the Persian alphabet"

Notolabrus parilus (Richardson 1850)

adjectival form of Paril, aboriginal name for this wrasse given by the natives of King George Sound, Western Australia, type locality

Notolabrus tetricus (Richardson 1840)

grim; Richardson (1844) called it the "Grim Wrasse," allusion not explained, possibly referring to its "short and rather bluff head" ("bluff" is an early 18th-century adjective meaning surly or abrupt in manner); Russell (1988)

suggests that the name refers to the "rather forbidding appearance" of large terminal-phase individuals

Novaculichthys Bleeker 1862

novacula, razor, but in this case probably referring to similarity with Novacula (=Xyrichthys), especially laterally compressed body, but lacking carinated ridge on anterior head; ichthys, fish

Novaculichthys taeniourus (Lacepède 1801)

taenia, ribbon or band; oura, tailed, referring to white bar at caudal-fin base of adults

Novaculoides Randall & Earle 2004

-oides, having the form of: similar to and previously placed in Novaculichthys

Novaculoides macrolepidotus (Bloch 1791)

macro-, large; lepidotus, scaled, allusion not explained; Bloch described the scales as "thin, smooth and rounded" (translation)

Novaculops Schultz 1960

ops, appearance, probably referring to similarity to and/or previous placement of type species, N. woodi, in Novaculichthys

Novaculops alvheimi Randall 2013

in honor of Oddgeir Alvheim (b. 1944), Institute of Marine Research (Bergen, Norway), who recognized the two type specimens from the trawl hauls of the research vessel *Dr. Fridtjof Nansen* as a probable new species and took a color photograph of each

Novaculops compressus Fukui 2020

compressed, referring to body shape, moderately compressed posteriorly

Novaculops halsteadi (Randall & Lobel 2003)

in honor of dive instructor and underwater photographer Robert "Bob" A. Halstead, who observed this wrasse in Papua New Guinea and suspected it was undescribed; he took the senior author to the locality and collected two specimens

Novaculops koteamea (Randall & Allen 2004)

Rapanui (Easter Island) name for this species, from kotea, local name for three species of wrasses, and mea, red

Novaculops pastellus (Randall, Earle & Rocha 2008)

pastel, referring to "soft and subdued" colors of holotype

Novaculops sciistius (Jordan & Thompson 1914)

scio-, shadow; istius, sail, presumably referring to row of black spots on membranes of spinous dorsal fin

Novaculops woodi (Jenkins 1901)

in honor of Thomas Denison Wood (1865-1951), professor of hygiene and physical training (i.e., health education) at Stanford University (California, USA), who obtained two specimens at Honolulu, Hawai'i

Odax Valenciennes 1840

biting, presumably referring to jaw with front margin modified into a sharp cutting edge that replaces teeth

Odax cyanoallix Ayling & Paxton 1983

cyano-, blue; allix, a man's coat, referring to "spectacular" blue-bordered dorsal, anal and pelvic fins of terminal-phase males

Odax pullus (Forster 1801)

dark-colored, referring to coloration of adults, with some large terminal-phase males a bright blue (juveniles are reddish to golden brown)

Olisthops Richardson 1850

olisthos, slippery; ops, appearance, referring to scaleless head, "covered with smooth integument"

Olisthops cyanomelas Richardson 1850

cyano-, blue; melas, black, described as "blackish-green" (but contemporary photos show terminal-phase males that are largely bluish-black)

Ophthalmolepis Bleeker 1862

ophthalmus, eye; lepis, scale, referring to patch of scales behind eye

Ophthalmolepis lineolata (Valenciennes 1839)

lined, presumably referring to distinctive blue lines on head of adults

Oxycheilinus Gill 1862

oxy, sharp, i.e., a sharp *Cheilinus*, allusion not explained nor evident; the only characters Gill used to distinguish this genus from *Cheilinus* were dorsal and anal fins of *O. arenatus* "angulated at end" rather than "acutely angulated near end"

Oxycheilinus arenatus (Valenciennes 1840)

sanded, referring to black sandy background on back of dried holotype

Oxycheilinus bimaculatus (Valenciennes 1840)

bi-, two; *maculatus*, spotted, described as having two "rather strong" (translation) spots, one behind eye (pale blue, surrounded by green), the other on the side, on sixth row of scales (very black, without a border)

Oxycheilinus celebicus (Bleeker 1853)

-icus, belonging to: Makassar, Celebes (now Sulawesi), Indonesia, type locality (widely occurs elsewhere in Indo-West Pacific)

Oxycheilinus digramma (Lacepède 1801)

di-, two; gramma, line, referring to lateral line interrupted below posterior portion of dorsal-fin base

Oxycheilinus lineatus Randall, Westneat & Gomon 2003

lined, referring to "strong" linear pattern: body below lateral line with 12 narrow, slightly irregular, dark brown stripes separated by white lines, and above lateral line with similar but more irregular bands

Oxycheilinus mentalis (Rüppell 1828)

relating to the chin, referring to slightly protruding lower jaw

Oxycheilinus nigromarginatus Randall, Westneat & Gomon 2003

nigro-, black; marginatus, margined, referring to conspicuous black posterior margin on caudal fin, the only obvious color marking persisting in preservative

Oxycheilinus orientalis (Günther 1862)

eastern, allusion not explained, perhaps referring to its occurrence in Indonesia, east of *Cheilinus orientalis* (=*Oxycheilinus digramma*), described from the Red Sea, with which it had been confused

Oxycheilinus samurai Fukui, Muto & Motomura 2016

Japanese warrior, referring to its reddish head and greenish nape, reminiscent of the reddish face and bluish shaved area on either side of the chonmage (topknot) of Japanese samurai

Oxycheilinus unifasciatus (Streets 1877)

uni-, one; fasciatus, banded, referring to white bar or band across caudal-fin base

Paracheilinus Fourmanoir 1955

para-, near, referring to its superficial resemblance to Cheilinus and Pseudocheilinus, to the former in having the second anal-fin spine shorter than the third, and to the latter in having recurved outward pointing canines

Paracheilinus alfiani Allen, Erdmann & Yusmalinda 2016

in honor of dive guide Rahmad "Yann" Alfian (Lombok, Indonesia), who collected type

Paracheilinus amanda Tea & Walsh 2023

in honor of Amanda Hay, ichthyology collections manager at the Australian Museum (Sydney); with "over 25 years of experience in ichthyological collections and research, she has not only contributed significantly towards the study of Australasian fishes, but also supported and assisted the research endeavors of many ichthyologists of all career stages working at the Australian Museum" [a noun in apposition, without the matronymic "ae"]

Paracheilinus angulatus Randall & Lubbock 1981

angled, referring to pointed posterior portions of dorsal and anal fins

Paracheilinus attenuatus Randall 1999

drawn out or tapering, referring to lanceolate caudal fin with strongly concave upper and lower posterior margins in adults (rounded in juveniles)

Paracheilinus bellae Randall 1988

in honor of marine biologist Lori Jane Bell, wife of coral-reef biologist Patrick L. Colin and later Co-Director, Manager and Research Scientist, Coral Reef Research Foundation (Koror, Palau), for her research on Marshall Islands fishes (she also helped collect type)

Paracheilinus carpenteri Randall & Lubbock 1981

in honor of ichthyologist Kent E. Carpenter, now at Old Dominion University (Virginia, USA), principal collector of type specimens; "he also assisted the authors in many other ways"

Paracheilinus cyaneus Kuiter & Allen 1999

blue, referring to "spectacular" courtship color of males

Paracheilinus filamentosus Allen 1974

filamentous, referring to numerous (always four or more) filamentous soft dorsal-fin rays of terminal-phase males

Paracheilinus flavianalis Kuiter & Allen 1999

flavus, yellow; analis, anal, referring to anal-fin color of both sexes

Paracheilinus hemitaeniatus Randall & Harmelin-Vivien 1977

hemi-, partial; taeniatus, banded, referring to six longitudinal dark-brown lines on anterior third of body

Paracheilinus lineopunctatus Randall & Lubbock 1981

lineo-, line; punctatus, spotted, referring to longitudinal rows of dark dots and short dashes on body

Paracheilinus mccoskeri Randall & Harmelin-Vivien 1977

in honor of John E. McCosker (b. 1945), California Academy of Sciences, who collected type and described behavior of large males, which swam "jerkily about 1 to 3 feet above the bottom, occasionally turning broadside and momentarily elevating the median fins in an absolutely spectacular display"; because of this, McCosker bestowed the common name "flasher wrasse" used for the genus

Paracheilinus nursalim Allen & Erdmann 2008

in honor of Sjamsul and Itjih Nursalim, "beloved" parents of philanthropists Cherie Nursalim and Michelle Liem, who successfully bid to help conserve this species at a charity auction, and who financially supported Conservation International's efforts to preserve its habitat [a noun in apposition, without the commemorative plural suffix -orum]

Paracheilinus octotaenia Fourmanoir 1955

octo-, eight; taenia, band, referring to eight uninterrupted longitudinal dark lines (blue in life) on body of males (females with four or five)

Paracheilinus paineorum Allen, Erdmann & Yusmalinda 2016

-orum, commemorative suffix, plural: in honor of the Paine family (Dexter, Susan, Mercy, Sam, and Honor), who have "generously" supported the authors' reef-fish taxonomic efforts since 2009 and have frequently joined them for field investigations

Paracheilinus piscilineatus (Cornic 1987)

piscis, fish; lineatus, lined, referring to how blue lines on side form a stylized shape of a fish [Cornic, in a field guide to the fishes of Mauritius, did not intend to name this wrasse but did so anyway when he suggested Cirrhilabrus (now Paracheilinus) piscilineatus would be an appropriate name]

Paracheilinus rennyae Allen, Erdmann & Yusmalinda 2013

in honor of Renny Kurnia Hadiaty (1960-2019), Curator of Fishes, Indonesian Institute of Sciences, for her "valuable" contributions to our knowledge of Indonesian freshwater and marine fishes, and her "many years of productive ichthyological collaboration with the authors"

Paracheilinus rubricaudalis Randall & Allen 2003

ruber, red; caudalis, tailed, referring to red caudal fin of males

Paracheilinus togeanensis Kuiter & Allen 1999

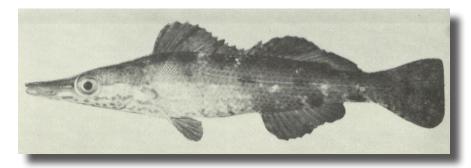
-ensis, suffix denoting place: Togean (sometimes spelled Togian) Islands, Indonesia, where type locality (Batudaka Island) is situated

Paracheilinus walton Allen & Erdmann 2006

named for the Walton Family Foundation (begun by Walmart founders Sam and Helen Walton) for their "generous support of the Bird's Head marine biological surveys and substantial financial contribution to Conservation International's Bird's Head Seascape marine conservation initiative"

Paracheilinus xanthocirritus Allen, Erdmann & Yusmalinda 2016

xanthos, yellow; cirritus, thread, referring to yellow, thread-like filaments of dorsal fin of terminal-phase males



Parodax caninis. From: Scott, J. K. 1976. A review of the fish genus Neoodax (Odacidae) of Western Australia with description of a closely allied new genus and species. Records of the Western Australian Museum v. 4 (pt 4): 349-373.

Parajulis Bleeker 1879

para-, near, presumably referring to similarity to and/or previous placement of *P. poecilepterus* in *Julis* [authorship often and incorrectly given as Bleeker 1865]

Parajulis poecilepterus (Temminck & Schlegel 1845)

poecilio-, varicolored; *pterus*, fin, referring to its "painted" (translation) fins: pectorals bluish gray and yellow at the base, ventrals ashy gray mixed with red-to-yellow in the rays, caudal golden yellow with vermillion-red stripes, dorsal reddish at the base and yellow in the middle with reddish spots, anal like the dorsal but bordered by a three-colored band (bluish, reddish, lilac)

Parodax Scott 1976

para-, near, presumably referring to similarity to and/or close affinity with Odax, from which it differs in having canine teeth

Parodax caninis Scott 1976

canine, referring to prominent anterior canine teeth on upper and lower jaws

Pictilabrus Gill 1891

pictilis, painted and Labrus, type genus of family but probably used here as a general term for wrasse; "If the meaning of the name Pictilabrus is demanded," Gill wrote, "imagination may play that the painting of the brilliantly colored [P. laticlavius] has been completed and that the painter's brushes and pencils have disappeared"

Pictilabrus brauni Hutchins & Morrison 1996

in honor of John Braun (Perth, Australia), who collected type (Braun, who ran a marine aquarium-fish business from his home, was Allen's friend and dive buddy; he died "long before his time" after suffering a heart attack while playing racquetball [Gerald R. Allen, pers. comm.])

Pictilabrus laticlavius (Richardson 1840)

lati-, etymology not explained, perhaps from *latus*, wide; *clavius*, a woven or embellished strip of cloth, referring to "ornamental blue studs [spots] on the fins resembling the clavi on the borders of the Roman patrician dress" (per Richardson [1844]), prompting Richardson to call this species the "Patrician Wrasse"

Pictilabrus viridis Russell 1988

green, referring to predominantly green body color

Polylepion Gomon 1977

poly, many; lepion, small scales, referring to relatively numerous lateral-line scales occurring in both species

Polylepion cruentum Gomon 1977

spotted with blood, referring to blood-red marks on caudal peduncle and pectoral-fin base of adults in life

Polylepion gilmorei Baldwin, Arcila, Robertson & Tornabene 2023

in honor of Richard Grant Gilmore, Jr., for contributions to the knowledge of the western Atlantic and Caribbean deep-reef fishes, including the discovery of this species

Polylepion russelli (Gomon & Randall 1975)

in honor of Peter E. Russell (Kaneoke, Oahu, Hawai'i), who collected type and presented it to the Bishop Museum, and has provided the museum with other "valuable" specimens of fishes (per Gomon & Randall 1978)

Pseudocheilinops Schultz 1960

ops, appearance, similar to Pseudocheilinus

Pseudocheilinops ataenia Schultz 1960

a-, without; taenia, ribbon or band, referring to absence of dark streaks on upper sides

Pseudocheilinus Bleeker 1862

pseudo-, false, i.e., although this genus may resemble Cheilinus, with its type species, P. hexataenia, previously placed in it, such an appearance is false

Pseudocheilinus citrinus Randall 1999

citrus, referring to its color in life, suggesting the color of fruit of trees of the genus Citrus

Pseudocheilinus dispilus Randall 1999

di-, two; spilos, mark or spot, referring to two conspicuous purple spots on opercle of fresh specimens that persist as deep-blue spots in preserved specimens

Pseudocheilinus evanidus Jordan & Evermann 1903

vanishing, referring to dull brick-red body color with three narrow yellowish streaks in life turning to a light brownish-blue with no trace of the streaks after a year in spirits; color of holotype in spirits is "wholly different from that which it possessed in life, and it would be difficult to believe that such changes had taken place except that the specimen was carefully tagged in the field when the color note in life was taken"

Pseudocheilinus hexataenia (Bleeker 1857)

hexa-, six; taenia, band or ribbon, referring to six orange stripes on sides

Pseudocheilinus ocellatus Randall 1999

having eye-like spots, referring to distinctive ocellated black spot posteriorly on body (numerous small blue spots on caudal fin and soft portions of dorsal and anal fins are also ocellated)

Pseudocheilinus octotaenia Jenkins 1901

octo-, eight; taenia, band or ribbon, referring to eight stripes following middle of longitudinal scale rows along body

Pseudocheilinus tetrataenia Schultz 1960

tetra-, four; taenia, band or ribbon, referring to streak in front of dorsal fin and three streaks on upper side of body (streaks are brown in alcohol, dark-blue in life)

Pseudocoris Bleeker 1862

pseudo-, false, i.e., although this genus may resemble Coris, such an appearance is false (according to Randall et al. 2015, Pseudocoris is an evolutionary offshoot of Coris adapted to feeding on zooplankton in the water column whereas Coris are benthic feeders on hard-shelled invertebrates]

Pseudocoris aequalis Randall & Walsh 2008

equal or uniform, referring to near-uniform height of dorsal fin of terminal-phase males, a feature distinguishing it from other species of *Pseudocoris*

Pseudocoris aurantiofasciata Fourmanoir 1971

aurantia, orangish; fasciata, banded, referring to six orange-red vertical bands placed on anterior half of body of males

Pseudocoris bleekeri (Hubrecht 1876)

in honor of Pieter Bleeker (1819-1878), Dutch medical doctor and ichthyologist, "who has introduced into science such a considerable number of new fishes from the [Molucca] archipelago already"

Pseudocoris hemichrysos Randall, Connell & Victor 2015

hemi-, partial; chrysos, gold, presumably referring to large patch of orange-yellow on rear upper body of terminal-phase males

Pseudocoris heteroptera (Bleeker 1857)

hetero-, different; *pterus*, fin, referring to elongate first and second dorsal-fin spines of terminal-phase males [although Bleeker consistently treated *pterus* as a noun, name is treated as an adjective per prevailing usage]

Pseudocoris occidentalis Randall, Connell & Victor 2015

western, referring to distribution in western Indian Ocean, west of its Pacific congeners

Pseudocoris ocellata Chen & Shao 1995

having eye-like spots, referring to dumbbell-shaped ocellus on midbody of males

Pseudocoris petila Allen & Erdmann 2012

thin or slender, referring to elongate body shape

Pseudocoris yamashiroi (Schmidt 1931)

in honor of Mr. A. Yamashiro, professor of English in Naha, Japan, to whom Schmidt was "very much indebted for the success of [his] collecting work on the Okinawa Island" (Yamashiro apparently served as a guide and interpreter)

Pseudodax Bleeker 1861

pseudo-, false, i.e., although this genus may resemble Odax, with its one species previously placed in it, such an appearance is false

Pseudodax moluccanus (Valenciennes 1840)

-anus, belonging to: Molucca Islands, Indonesia, type locality (widely occurs in Red Sea and Indo-West Pacific)

Pseudojuloides Fowler 1949

-oides, having the form of: similar to *Pseudojulis* but differing in having greatly larger scales on chest, breast and space before pectoral fins (which are shorter), and caudal fin broadly scaled to about its basal third

Pseudojuloides argyreogaster (Günther 1867)

argyreos, silvery; gaster, belly, presumably referring to color in spirits, featuring a broad pearl-colored band along each side of belly commencing at base of pectorals (perhaps, per Randall & Randall 1981, as a result of initial preservation in alcohol)

Pseudojuloides atavai Randall & Randall 1981

Tahitian word for pretty, referring to attractive color pattern of both sexes

Pseudojuloides cerasinus (Snyder 1904)

cherry red, allusion not explained, perhaps referring to any or all of the following: reddish-orange dorsal area fading ventrally to light orange; reddish-orange spot at lower edge of pectoral-fin base; spinous dorsal fin suffused with red; scaled portion of caudal fin reddish orange

Pseudojuloides crux Tea, Gill & Senou 2020

named for the Crux Constellation or Southern Cross, referring to this wrasse's southern distribution (Western Australia), and for the numerous metallic-blue spots on the dark upper body of males, reminiscent of stars in the night sky

Pseudojuloides edwardi Victor & Randall 2014

in honor of Jason Edward, Greenwich Aquaria (Riverside, Connecticut, USA), who was instrumental in obtaining male type specimens and supplying them to the authors

Pseudojuloides elongatus Ayling & Russell 1977

elongate, referring to very elongate body form, the depth 4.2-5.6 in SL

Pseudojuloides erythrops Randall & Randall 1981

erythros, red; ops, eye, referring to red eye of both sexes

Pseudojuloides kaleidos Kuiter & Randall 1995

kalos, beauty; eidos, form, referring to the varied colors of the kaleidoscope; "Few fishes display such a broad range of colors as this wrasse"

Pseudojuloides labyrinthus Victor & Edward 2016

labyrinthine, referring to maze-like pattern of lines on head and body

Pseudojuloides mesostigma Randall & Randall 1981

mesos, middle; stigma, mark or spot, referring to large black spot in middle of body and dorsal fin of males

Pseudojuloides paradiseus Tea, Gill & Senou 2020

paradise, referring to the "arresting live coloration of the males"

Pseudojuloides pluto Tea, Greene, Earle & Gill 2020

Pluto, god and king of the underworld in Roman mythology, referring to "nefarious and sinister" appearance of males (see also *P. proserpina*)

Pseudojuloides polackorum Connell, Victor & Randall 2015

-orum, commemorative suffix, plural: in honor of Dennis and Sally Polack (Gauteng, South Africa), whose underwater photographs first brought this species to the authors' attention

Pseudojuloides polynesica Victor 2017

Polynesian, referring to French Polynesia, type locality (also occurs at Austral Islands west of Cook Islands and the Line Islands)

Pseudojuloides proserpina Tea, Greene, Earle & Gill 2020

Proserpina, goddess and queen of the underworld in Roman mythology, referring to both its "haunting" coloration and close relationship to *P. pluto*

Pseudojuloides pyrius Randall & Randall 1981

fiery, referring to flame-like colors of both sexes

Pseudojuloides severnsi Bellwood & Randall 2000

in honor of dive guide R. Michael "Mike" Severns, who organized the collection and deposition of type material from Alor, Indonesia

Pseudojuloides splendens Victor 2017

shining, brilliant, or splendid, referring to "splendid" color pattern of terminal-phase males

Pseudojuloides xanthomos Randall & Randall 1981

xanthos, yellow; omos, shoulder, referring to horizontal lemon-yellow band extending posteriorly from upper end of gill opening to end of pectoral fin

Pseudojuloides zeus Victor & Edward 2015

named for the Greek god Zeus, who cast bolts of lightning at unsuspecting mortals, referring to jagged blue stripes on sides, which resemble lightning bolts

Pseudolabrus Bleeker 1862

pseudo-, false, i.e., although this genus may resemble Labrus, and its type species, P. rubiginosus (=eoethinus), previously placed in it, such an appearance is false

Subgenus Pseudolabrus

Pseudolabrus biserialis (Klunzinger 1880)

bi-, two; serialis, rowed, referring to two distinct rows of scales on cheeks

Pseudolabrus eoethinus (Richardson 1846)

of the morning or dawn, described from a drawing showing an "aurora-red" body "passing into hyacinth-red on the back"

Pseudolabrus gayi (Valenciennes 1839)

in honor of Claude (or Claudio) Gay (1800-1873), French botanist and illustrator, who collected type from the Juan Fernandez Islands off the coast of Chile

Pseudolabrus guentheri Bleeker 1862

in honor of ichthyologist-herpetologist Albert Günther (1830-1914), who, at this time, was negotiating with Bleeker via correspondence the sale of parts of Bleeker's massive collection of Indo-Pacific fishes to the British Museum

Pseudolabrus luculentus (Richardson 1848)

full of light, allusion not explained but probably referring to "somewhat oblique descending silvery bar" which on scales below lateral line "shines through" the "integument beneath the scale" (Russell [1988] translates name as "splendid," apparently referring to its bright colors, but Richardson's specimen was faded after "several years of maceration in spirits")

Pseudolabrus semifasciatus (Rendahl 1921)

semi-, half; fasciatus, banded, referring to wedge-shaped bars on upper half of body

Pseudolabrus sieboldi Mabuchi & Nakabo 1997

in honor of Philipp Franz von Siebold (1796-1866), German physician and traveler, the first to provide an illustration of a Japanese species of *Pseudolabrus*

Pseudolabrus torotai Russell & Randall 1981

native Rapan name for this species on Rapa Island in the South Pacific, where it is endemic

Subgenus Lunolabrus Whitley 1933

luno-, lunate, referring to "markedly lunate" caudal fin of *P. miles*; Labrus, type genus of family and original genus of *P. miles*, probably used here as a general suffix for wrasse

Pseudolabrus fuentesi (Regan 1913)

in honor of botanist Maturana Francisco Fuentes (1876-1934), University of Chile, who made a collection of fishes from Easter Island in 1911, including type of this wrasse

Pseudolabrus miles (Schneider & Forster 1801)

soldier, referring to scarlet body color, resembling the uniforms of 19th-century soldier-sailors

Pseudolabrus rubicundus (Macleay 1881)

reddish, referring to yellowish-red color in spirits, with basal portion of all scales a "brilliant" pinkish red

Pteragogus Peters 1855

ptera-, fin; agogos, leading, guiding or attracting, referring to very long pelvic fins of the male (due to prolongation of the first soft ray)

Pteragogus aurigarius (Richardson 1845)

-ius, adjectival suffix: auriga, coachman, allusion not explained, possibly referring to filamentous first and second dorsal-fin spines of males (i.e., like the whip of a carriage driver)

Pteragogus clarkae Randall 2013

in honor of ichthyologist Eugenie Clark (1922-2015), University of Maryland (USA), "not only for her collection of most of the type specimens [in 1951], but also in recognition of her major contribution to the classification and biology of fishes"

Pteragogus cryptus Randall 1981

hidden or secretive, referring to how it exposes itself only briefly as it moves from one area of cover (generally soft coral or benthic algae) to another (this tendency to remain hidden applies to the genus in general)

Pteragogus enneacanthus (Bleeker 1853)

ennea-, nine; acanthus, thorn or spine, presumably referring to nine spines in spinous portion of dorsal fin

Pteragogus flagellifer (Valenciennes 1839)

flagellum, whip; fero, to bear, referring to prolonged filamentous tips on first two dorsal-fin spines of adults

Pteragogus guttatus (Fowler & Bean 1928)

dotted, presumably referring to usually 4-5 widely spaced, small dark spots in horizontal row along middle of side

Pteragogus pelycus Randall 1981

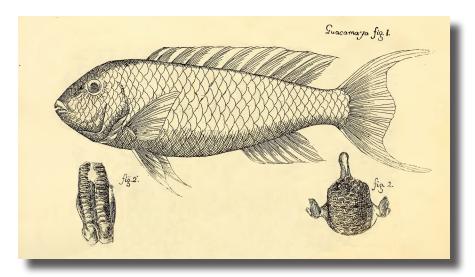
Greek for pelvis, referring to very long pelvic fins of males (due to prolongation of first soft ray)

Pteragogus taeniops (Peters 1855)

taenia, ribbon or band; ops, eye, referring to vertical brown band (violet in life) on head, through eye towards throat

Pteragogus trispilus Randall 2013

tri-, three; spilos, mark or spot, referring to three black spots anteriorly on dorsal fin of males, one on each of the first three membranes (usually just two on females)



Scarus guacamaia, named by Cuvier based on account and this illistratation from: Parra, A.1787. Descripción de diferentes piezas de Historia Natural, las más del ramo maritimo, representadas en setenta y cinco láminas. Havana, Cuba: Imprenta de la Capitanía General. 1-195 + i-v (unnumbered).

Pteragogus turdus lino & Motomura 2022

Latin for thrush, referring to white stripe extending from tip of snout tip to upper end of opercle, and an indistinct reticulated pattern on the body, both reminiscent of the Dusky Thrush *Turdus eunomus*

Pteragogus variabilis Randall 2013

variable, referring to its "great" variation in color, not only in different specimens but also on the same individual

Scarus Forsskål 1775

skaros, ancient Greek name of Sparisoma cretense, said by Rondelet (1554) to be from skairon, to pasture (i.e., graze), possibly alluding to Aristotle's belief that Sparisoma cretense was the only known fish to "chew cud like a quadruped" (possibly based on fact that food in the alimentary canal of a parrotfish is often reduced to a pulp by its molar-like pharyngeal teeth)

Scarus altipinnis (Steindachner 1879)

altus, high; pinnis, fin, presumably referring to spinous portion of dorsal fin distinctly higher than soft portion

Scarus arabicus (Steindachner 1902)

Arabian, described from Mukalla, Yemen, Arabian Peninsula (endemic to Indian Ocean)

Scarus caudofasciatus (Günther 1862)

caudo-, tail; fasciatus, banded, referring to three brown crossbands on caudal fin

Scarus chameleon Choat & Randall 1986

named for its chameleon-like ability to rapidly change color

Scarus chinensis (Steindachner 1867)

-ensis, suffix denoting place: Ningpo, Zhejiang Province, China, type locality

Scarus coelestinus Valenciennes 1840

celestial or heavenly (i.e., sky-blue), referring to the "most beautiful celestial blue" (translation) of its scales

Scarus coeruleus (Edwards 1771)

blue, referring to uniformly blue body color

Scarus collana Rüppell 1835

Italian for necklace, presumably referring to "round emerald green patch that resembles a string of pearls" between each dorsal-fin ray

Scarus compressus (Osburn & Nichols 1916)

compressed, referring to its "much compressed" body

Scarus dimidiatus Bleeker 1859

halved or divided, referring to male coloration, front half of body light, back half dark

Scarus dubius Bennett 1828

doubtful, expressing Bennett's "considerable doubt" as to the "propriety" of naming this parrotfish without furnishing "characters more clearly distinctive [i.e., colors in life] than are afforded by the specimen" at hand, "long preserved in spirit"

Scarus falcipinnis (Playfair 1868)

falcatus, sickle-shaped; pinnis, fin, referring to falcate caudal fin of terminal-phase males

Scarus ferrugineus Forsskål 1775

rust-colored, referring to reddish-brown to dark-brown color of juveniles and initial-phase females

Scarus festivus Valenciennes 1840

cheerful, gay or merry, allusion not explained, probably referring to coloration of males (including pink, green, blue and yellow)

Scarus flavipectoralis Schultz 1958

flavus, yellow; *pectoralis*, pectoral, referring to yellow pectoral fin (with blue base)

Scarus forsteni (Bleeker 1861)

in honor of Dutch naturalist Eltio Alegondas Forsten (1811-1843), who collected type (per Bleeker 1862)

Scarus frenatus Lacepède 1802

bridled, referring to bands, one above and one below snout of males, joined near eye and extending to posterior edge of operculum

Scarus fuscocaudalis Randall & Myers 2000

fuscus, dark or dusky; caudalis, of the tail, referring to dark color of large central portion of caudal fin of initial-phase females; "name is also appropriate for the terminal male which can have a dark purple area centrally in the caudal fin"

Scarus fuscopurpureus (Klunzinger 1871)

fuscus, dark or dusky; purpureus, purple, referring to reddish to purplish-brown color of initial-phase females

Scarus ghobban Fabricius 1775

Arabic name for this parrotfish along the Red Sea [authorship often credited to Forsskål]

Scarus globiceps Valenciennes 1840

globus, globe or sphere; cephalus, head, referring to slight convexity in forehead profile of terminal-phase males

Scarus gracilis (Steindachner 1869)

slender, body height described as same as HL and a little more than 3-2.3 times TL (known only from type material; may prove to be initial phase of *S. chinensis*)

Scarus guacamaia Cuvier 1829

latinization of *guacamaya*, Spanish word for macaw and local Cuban name for this species, dating to Parra (1787), who ascribed name to both its macaw-like beak and coloration (hence the common name parrotfish)

Scarus hoefleri (Steindachner 1881)

in honor of Steindacher's "dear friend" (translation) W. Höfler (no other information available), who collected or provided type, and was one of Steindachner's best suppliers of fishes from Africa

Scarus hypselopterus Bleeker 1853

hypselos, high; pterus, fin, referring to higher dorsal fin compared to S. psittacus and Hipposcarus harid (presumed congener at the time)

Scarus iseri (Bloch 1789)

in honor of German botanist Paul Erdmann Isert (1756-1789), who provided type [some ichthyologists have emended spelling to "isteri" but since Bloch consistently used "Iser" original spelling is retained]

Scarus koputea Randall & Choat 1980

native Marquesan name for female color form (this name is the same for all the islands of the Marquesas; native name for the male, however, is not the same at all islands)

Scarus longipinnis Randall & Choat 1980

longus, long; *pinnis*, fin, referring to elevated dorsal fin and long pelvic fins (dorsal fin higher and pelvics longer in males than in females)

Scarus maculipinna Westneat, Satapoomin & Randall 2007

maculatus, spotted; pinnis, fin, referring to three distinctive black spots on initial-phase females, one on anterior dorsal fin, one on anterior anal fin from third anal spine to second anal ray, and a small one at base of anterior pectoral-fin ray

Scarus niger Forsskål 1775

black, referring to swarthy ("nigro-fuscus") body color (actually dark-green in life) of terminal-phase males

Scarus obishime Randall & Earle 1993

local name for this parrotfish in Chichi-jima, Ogasawara Islands, Japan (type locality), from Japanese word for a colorful sash of traditional costume that the Japanese wear around their waists, referring to bright-yellow bar of terminal-phase males

Scarus oviceps Valenciennes 1840

ovi-, oval; ceps, head, referring to head "almost the shape of an egg" (translation)

Scarus ovifrons Temminck & Schlegel 1846

ovi-, oval; frons, forehead, referring to knob-shaped forehead of older adults

Scarus perrico Jordan & Gilbert 1882

local name for parrotfishes with green teeth in Mazatlán, Sinaloa, México (type locality), presumably an alternate spelling of *perico*, Spanish word for parrot or parakeet, presumably referring to fused teeth that form beak-like plates, giving them a parrot-like appearance and/or parrot-like coloration

Scarus persicus Randall & Bruce 1983

Persian, referring to Persian Gulf, type locality

Scarus prasiognathos Valenciennes 1840

prasios, leek-green; gnathos, jaw, referring to its jaws (actually its teeth, fused to form a plate), which "still have a nice green color" in alcohol

Scarus psittacus Forsskål 1775

parrot, an allusion dating to at least Aristotle, who called *Sparisoma cretense* a "parrot-wrasse," presumably referring to fused teeth that form beak-like plates, giving them a parrot-like appearance and/or parrot-like coloration (hence the common name parrotfish)

Scarus quoyi Valenciennes 1840

in honor of surgeon-naturalist Jean René Constant Quoy (1790-1869), who, with Joseph Paul Gaimard (1793-1858), provided field notes, painting and underlying specimen(s) upon which description is based

Scarus rivulatus Valenciennes 1840

rivulated, i.e., marked by irregular streaks, referring to wavy bands or lines on snout and cheek of males

Scarus rubroviolaceus Bleeker 1847

ruber, red; violaceus, violet-colored, referring to red-violet edges of the scales (presumably of terminal-phase males)

Scarus russelii Valenciennes 1840

in honor of surgeon-herpetologist Patrick Russell (1726-1805), who illustrated and described (but did not name) this species in 1803 (Valenciennes consistently misspelled Russell's name by omitting an "l")

Scarus scaber Valenciennes 1840

rough, described as similar in form to Scarus capitaneus (=Chlorurus enneacanthus) but with rougher scales

Scarus schlegeli (Bleeker 1861)

in honor of ornithologist-herpetologist Hermann Schlegel (1804-1884), who (per Bleeker 1862) supplied type from the Rijksmuseum van Natuurlijke Historie (Leiden, Netherlands)

Scarus spinus (Kner 1868)

spine or thorn, allusion not explained, possibly referring to single conical tooth on side of lower dental plate in females (1-2 on both plates in terminal-phase males)

Scarus taeniopterus Lesson 1829

taenio-, band or ribbon; pterus, fin, referring to yellow stripes on dorsal and anal fins of initial-phase females

Scarus tricolor Bleeker 1847

tri-, three, i.e., tricolored, described as having an olive-violet head and back, blue sides and violet-red belly, presumably referring to a terminal-phase male

Scarus trispinosus Valenciennes 1840

tri-, three; *spinosus*, spiny or thorny, referring to "three strong points one behind the other at the angle of the upper [jaw]" (translation), allusion not clear, perhaps referring to three posterior canines on each side of upper jaw

Scarus vetula Bloch & Schneider 1801

old woman or old wife, Latin cognate of the Cuban name *Vieja* as recorded by Parra (1787), apparently following a Portuguese tradition of giving labrids (and other larger fishes, e.g., cichlids and balistids) vernacular names alluding to women

Scarus viridifucatus (Smith 1956)

viridis, green; fucatus, painted or colored, allusion not explained, presumably referring to greenish body color

Scarus xanthopleura Bleeker 1853

xanthos, yellow; pleura, side, referring to "beautiful yellow" (translation) of lower sides

Scarus zelindae Moura, Figueiredo & Sazima 2001

in honor of Zelinda Margarida Andrade Nery Leão, Universidade Federal da Bahia, a "prominent geologist and enthusiastic conservationist" of Brazilian reefs

Scarus zufar Randall & Hoover 1995

Zufar, older name for Dhofar, Oman, type locality (occurs in Indian Ocean from Oman to Pakistan)

Semicossyphus Günther 1861

semi-, half, i.e., similar to Cossyphus (=Bodianus), original genus of S. reticulatus, but differing in scaleless membrane of soft dorsal fin vs. scaly at the base [Cossyphus Valenciennes 1839, a name borrowed from Aristotle, is preoccupied in beetles]

Semicossyphus darwini (Jenyns 1842)

in honor of English naturalist Charles Darwin (1809-1882), whose "researches in the Galapagos Archipelago, where he obtained [type of this wrasse], have been so productive in bringing to light new forms"

Semicossyphus pulcher (Ayres 1854)

beautiful, presumably referring to color of terminal-phase males, black with a red-pink midsection

Semicossyphus reticulatus (Valenciennes 1839)

net-like, referring to appearance of its scales, which "form a tight mesh network all over the body" (translation)

Sheardichthys Whitley 1947

in honor of Keith Sheard (1903-1965), assistant in zoology at the South Australian Museum (1933-1942) and later employed by CSIRO Division of Fisheries and Oceanography (1942-1961), where he specialized in crustaceans; *ichthys*, fish

Sheardichthys attenuatus (Ogilby 1897)

thin or tapered, referring to the "great tenuity" of head and body

Sheardichthys beddomei (Johnston 1885)

in honor of businessman and amateur malacologist Capt. Charles Edward Beddome (1839-1898), who "presented" type to Johnston (Beddome later became a Fisheries Commissioner in Tasmania ca. 1889)

Sheardichthys radiatus (Quoy & Gaimard 1834)

rayed, allusion not explained, perhaps referring to long dorsal fin, with the first segmented ray prolonged in larger individuals, nearly reaching anal-fin origin

Sheardichthys tanyourus (Gomon & Paxton 1986)

tany, long; oura, tail, referring to elongate caudal peduncle

Siphonognathus Richardson 1858

siphon, tube; gnathus, jaw, referring to "tubular elongation of the palate"

Siphonognathus argyrophanes Richardson 1858

argyros, silver; phanes, visible, referring to bright silvery stripe under lateral line

Sparisoma Swainson 1839

Sparus, original genus of type species S. abildgaardi (=chrysopterum); soma, body, allusion not explained, perhaps referring to superficial resemblance to porgies (Acanthuriformes: Sparidae)

Sparisoma amplum (Ranzani 1841)

large, referring to larger body size compared to other parrotfishes included in Valenciennes' *Histoire naturelle des poissons* (vol. 14, 1840)

Sparisoma atomarium (Poey 1861)

marked with atoms or dots, presumably referring to sides of head dotted with black and/or dots on soft rays of dorsal and anal fins

Sparisoma aurofrenatum (Valenciennes 1840)

aurum, gold; frenatus, bridled, referring to "beautiful orange" (translation; actually scarlet in life) band from mouth, under eye to upper operculum

Sparisoma axillare (Steindachner 1878)

axillaris, of the armpit or axil, referring to large black spot at base of upper pectoral-fin rays

Sparisoma choati Rocha, Brito & Robertson 2012

in honor of marine biologist J. Howard Choat, James Cook University (Queensland, Australia), for "many significant contributions to our knowledge of parrotfish taxonomy, ecology, reproductive biology, demography, evolution and historical biogeography"

Sparisoma chrysopterum (Bloch & Schneider 1801)

chrysos, golden; pterus, finned, referring to orange-to-red dorsal, pelvic and anal fins of terminal-phase males

Sparisoma cretense (Linnaeus 1758)

-ensis, suffix denoting place: Mediterranean Sea of Crete, Greece, type locality (also occurs in Sea of Marmara and eastern Atlantic from Portugal south to Senegal)

Sparisoma frondosum (Agassiz 1831)

branched, referring to branched pores of each lateral-line scale

Sparisoma griseorubrum Cervigón 1982

griseo-, gray; ruber, red, presumably referring to uniform grayish color of terminal-phase males and reddish color of terminal-phase females

Sparisoma radians (Valenciennes 1840)

radiating, presumably referring to how four posterior canines on each side of upper jaw radiate horizontally, the anterior canines pointing forward and the lateral curved back

Sparisoma rocha Pinheiro, Gasparini & Sazima 2010

in honor of colleague and friend Luiz A. Rocha, Associate Curator, Fishes, California Academy of Sciences, who "pioneered molecular genetics and phylogeography of Brazilian reef fishes"; in addition, *rocha* means rock in Portuguese, alluding to the volcanic rocky formation of Trindade Island, off southeast Brazil, type locality [a noun in apposition, without the patronymic "i"]

Sparisoma rubripinne (Valenciennes 1840)

ruber, red; pinnis, finned, referring to red anal and pelvic fins of initial-phase females

Sparisoma strigatum (Günther 1862)

streaked with different colors, allusion not explained, described as having "black, shining violet" scales along lateral line

Sparisoma tuiupiranga Gasparini, Joyeux & Floeter 2003

Tupí (native American language once spoken all along the Brazilian coast, where this parrotfish occurs) word meaning "red parakeet," referring to "splendid" red color of initial-phase adults

Sparisoma viride (Bonnaterre 1788)

green, referring to vivid green body color of terminal-phase males

Stethojulis Günther 1861

stethos, breast or chest, referring to thoracic scales as large as, or larger, than those on sides; Julis, original genus of several species Günther moved to Stethojulis

Stethojulis albovittata (Bonnaterre 1788)

albus, white; *vittata*, banded, referring to three longitudinal white stripes on body (probably a terminal-phase male, which has four longitudinal dark-edged blue lines on body that appear pale in alcohol)

Stethojulis balteata (Quoy & Gaimard 1824)

banded or belted, referring to wide, bright-orange band, edged with purple, extending from operculum to tail on terminal-phase males

Stethojulis bandanensis (Bleeker 1851)

-ensis, suffix denoting place: Banda Neira, Banda Islands, Indonesia, type locality (widely occurs in eastern Indian Ocean and western Pacific)

Stethojulis interrupta (Bleeker 1851)

interrupted, presumably referring to upper and lower halves of body of terminal males separated by a dark-edged blue line that is usually interrupted on anterior half of body

Stethojulis maculata Schmidt 1931

spotted, presumably referring to four "cross-bandlike large blackish spots" on sides under lateral line (described from a single specimen, probably a terminal-phase male)

Stethojulis marquesensis Randall 2000

-ensis, suffix denoting place: Marquesas Islands, where it is endemic

Stethojulis notialis Randall 2000

southern, referring to its occurrence in the southwestern Pacific

Stethojulis strigiventer (Bennett 1833)

striga, stripe or streak; venter, belly, allusion not explained, perhaps referring to 5-6 narrow white stripes on lower half of body of initial-phase individuals

Stethojulis terina Jordan & Snyder 1902

exquisite, described as a "beautiful" species

Stethojulis trilineata (Bloch & Schneider 1801)

tri-, three; *lineatus*, lined, referring to three pale, narrow stripes along body of terminal-phase males (a fourth stripe on head extends to above pectoral fin)

Suezichthys Smith 1958

Suez, presumably referring to Gulf of Suez (Red Sea), type locality of S. caudavittatus; ichthys, fish [replacement name

for Suezia Smith 1957, preoccupied by Suezia Gurney 1927 in Copepoda]

Suezichthys arquatus Russell 1985

Latin for rainbow, referring to its "beautiful, vivid, and many-hued coloration"

Suezichthys aylingi Russell 1985

in honor of Australian marine biologist Anthony M. Ayling (b. 1947), who first recognized this wrasse as a new species and collected most of the type specimens

Suezichthys bifurcatus Russell 1986

bi-, two; furcatus, pronged, referring to lateral-line scales with bifurcate laterosensory canal tube

Suezichthys caudavittatus (Steindachner 1898)

cauda-, tail; vittatus, banded, referring to dark diagonal band on upper half of caudal fin

Suezichthys cyanolaemus Russell 1985

cyanos, blue; laimos, throat, referring to distinctive strap of blue color on throats of terminal-phase males

Suezichthys devisi (Whitley 1941)

in honor of zoologist-clergyman Charles Walter De Vis (1829-1915), who "described many Queensland parrot fishes many years ago"

Suezichthys gracilis (Steindachner & Döderlein 1887)

thin or slender, presumably referring to "very strongly compressed" (translation) head and body

Suezichthys notatus (Kamohara 1958)

marked, presumably referring to large brownish blotch above posterior margin of eye and/or brownish blotch on base of membrane between first and second dorsal-fin spines

Suezichthys ornatus (Carmichael 1819)

decorated, described as having azure stripes or bars on sides, head, and dorsal, anal and caudal fins

Suezichthys rosenblatti Russell & Westneat 2013

in honor of Richard H. Rosenblatt (1930-2014), Scripps Institution of Oceanography, for contributions to Eastern Pacific ichthyology, and who drew the senior author's attention to the existence of this species in the SIO collection

Suezichthys russelli Randall 1981

in honor of Barry C. Russell, then with the Australian Museum, for his research on labrid fishes and the assistance he has given Randall in the study of *Suezichthys*

Suezichthys soelae Russell 1985

of the Australian fisheries research vessel Soela, from which most of the type specimens were trawled

Symphodus Rafinesque 1810

sym[physis], grown together; -odes, having the form of, referring to "toraciche" (i.e., pelvic fins) of S. fulvescens (=rostratus) joined together by a small transverse membrane

Symphodus bailloni (Valenciennes 1839)

in honor of naturalist Louis Antoine François Baillon (1778-1851), who studied fishes from the English Channel and provided type of this one

Symphodus caeruleus (Azevedo 1999)

blue, referring to "distinctive" nuptial coloration of males

Symphodus cinereus (Bonnaterre 1788)

ash-colored, referring to grayish body color of both sexes

Symphodus doderleini Jordan 1890

in honor of "our excellent friend" Pietro Doderlein (1809-1895), professor of zoology, University of Palermo; he founded the zoological museum there in 1862

Symphodus mediterraneus (Linnaeus 1758)

referring to its occurrence in the Mediterranean Sea (also occurs in Sea of Marmara and eastern Atlantic from Portugal to northern Morocco)

Symphodus melanocercus (Risso 1810)

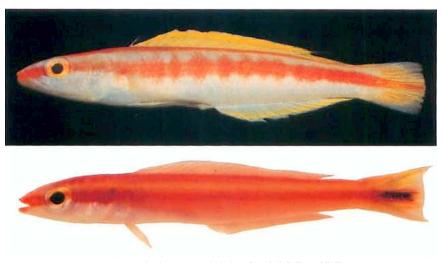
melas, black; cercus, tail, referring to black caudal fin of both sexes

Symphodus melops (Linnaeus 1758)

melas, black; ops, eye, referring to comma-shaped spot behind eye

Symphodus ocellatus (Linnaeus 1758)

with an eye-like spot, referring to blue-ringed ocellus at base of caudal fin [originally spelled *ocellaris*, but *ocellatus* is retained due to prevailing usage]



Terelabrus rubrovittatus, male above, juvenile below. Randall, J. E. and P. Fourmanoir. 1998. Terelabrus rubrovittatus, a new genus and species of labrid fish from New Caledonia and New Guinea. Bulletin of Marine Science v. 62 (no. 1): 247-252.

Symphodus roissali (Risso 1810)

patronym not identified but probably in honor of friend and fellow Niçois, painter Clément Honoré Claude Roassal (also spelled Roissal, 1781-1850)

Symphodus rostratus (Bloch 1791)

beaked, referring to its elongated and pointed snout

Symphodus tinca (Linnaeus 1758)

referring to the Tench, Tinca tinca (Cypriniformes: Tincidae), which this wrasse slightly resembles

Symphodus trutta (Lowe 1834)

Latin for trout, allusion not explained nor evident

Tautoga Mitchill 1814

latinization of Tautog, Native American name for T. onitis in New York (USA)

Tautoga onitis (Linnaeus 1758)

Greek for oregano (or some other kind of mint), allusion not explained nor evident

Tautogolabrus Günther 1862

proposed as a North American subgenus of the European *Ctenolabrus*, a combination of *Tautoga* (Native American name for *T. onitis*) and *Labrus*

Tautogolabrus adspersus (Walbaum 1792)

speckled or besprinkled, referring to sulphur-colored (but usually brassy) dotted lines on head and back

Terelabrus Randall & Fourmanoir 1998

teres, terete or cylindrical, referring to body shape of *T. rubrovittatus*, a "unique" body shape for a labrid fish; *Labrus*, type genus of family but probably used here as a general term for wrasse

Terelabrus dewapyle Fukui & Motomura 2015

conjunction of the surnames of Shin-ichi Dewa (Kagoshima, Japan) and Richard L. Pyle (b. 1967), Bishop Museum (Honolulu), who collected all type specimens

Terelabrus flavocephalus Fukui & Motomura 2016

flavus, yellow; cephalus, head, referring to vivid yellow stripe and blotch on head of living specimens

Terelabrus rubrovittatus Randall & Fourmanoir 1998

rubrum, red; vittatus, striped, referring to two red stripes in life

Terelabrus toretore Shepherd, Pinheiro, Phelps, Siu & Rocha 2023

Tahitian word (described from Tahiti, French Polynesia) for striped, referring to its color pattern

Terelabrus zonalis Fukui 2018

belt or girdle (but in this case meaning stripe), referring to 18 faint silver vertical bands on body in preserved specimens

Thalassoma Swainson 1839

thalassinus, sea-green; soma, body, allusion not explained, possibly referring to dominant body color (females greenish, males greenish-blue with pinkish-purple markings) of type species, *T. purpureum*

Thalassoma amblycephalus (Bleeker 1856)

amblys, blunt; *cephalus*, head, referring to its blunt and rounded profile compared with *T. cupido* [often declined as an adjective, *amblycephalum*, but Bleeker consistently treated *cephalus* as a noun]

Thalassoma ascensionis (Quoy & Gaimard 1834)

-is, genitive singular of: Ascension Island, South Atlantic Ocean, where it is endemic

Thalassoma ballieui (Vaillant & Sauvage 1875)

in honor of Pierre Étienne Théodore Ballieu (1828-1885), French consul to the Sandwich Islands (Hawaiʻi), who provided Muséum national d'Histoire naturelle (Paris) with many specimens from Hawaiʻi, including type of this wrasse (see also *Coris ballieui*, Labriformes part 1)

Thalassoma bifasciatum (Bloch 1791)

bi-, two; *fasciatum*, banded, referring to two black bars (divided by a white band) behind blue head of terminal-phase males

Thalassoma cupido (Temminck & Schlegel 1845)

etymology not explained, perhaps named for Cupid, Roman god of erotic love and desire, or generically meaning "desire" or "longing," perhaps alluding to the desirable nature of its "beautiful" (translation) color pattern

Thalassoma duperrey (Quoy & Gaimard 1824)

in honor of Louis Isidore Duperrey (1786-1865), French naval officer and marine hydrologist, aboard *L'Uranie* during its 1817-1820 voyage around the world [presumably a noun in apposition, without the patronymic "i"]

Thalassoma genivittatum (Valenciennes 1839)

genys, cheek; vittatus, banded, referring to green stripes on cheek

Thalassoma grammaticum Gilbert 1890

streaked or lined, referring to four narrow greenish streaks or bands across cheek and radiating from eye

Thalassoma hardwicke (Bennett 1830)

in honor of soldier and naturalist Thomas Hardwicke (1755-1835), "for whose ready and able assistance in this work, the Author is desirous to record his gratitude" [presumably a noun in apposition, without the patronymic "i"]

Thalassoma hebraicum (Lacepède 1801)

Hebrew, referring to arrangement of lines on cheek, said to resemble letters of the Hebrew alphabet

Thalassoma heiseri Randall & Edwards 1984

in honor of marine biologist and underwater photographer John B. Heiser, Director of the Shoals Marine Laboratory in the Gulf of Maine (1979-1994), who wrote his 1981 Ph.D. thesis on the classification of *Thalassoma*

Thalassoma jansenii (Bleeker 1856)

in honor of Albert Jacques Frédéric Jansen (d. 1861), an administrator in the Dutch East Indies (now Indonesia) and resident of Sulawesi, who provided type

Thalassoma loxum Randall & Mee 1994

slanting, referring to three down-curving, salmon-pink bands on cheek and operculum

Thalassoma lucasanum (Gill 1862)

-anus, belonging to: Cabo San Lucas, Baja California, México, type locality

Thalassoma lunare (Linnaeus 1758)

of the moon, referring to caudal fin, shaped like a half-moon or crescent

Thalassoma lutescens (Lay & Bennett 1839)

yellowish, presumably referring to yellow-green body of initial-phase females

Thalassoma newtoni (Osório 1891)

in honor of Col. Francisco Xavier Aguilar O'Kelly Azeredo Newton (1864-1909), "vaillant et distingué" Portuguese explorer and naturalist, who collected type

Thalassoma nigrofasciatum Randall 2003

nigro-, black; fasciatum, banded, referring to black bars on bodies of adults

Thalassoma noronhanum (Boulenger 1890)

-ana, belonging to: Fernando de Noronha, an archipelago of 21 islands and islets in the Atlantic Ocean off Brazil, type locality

Thalassoma pavo (Linnaeus 1758)

peacock, name dating to Hasselquist (1749), presumably referring to its varied and vivid coloration, like that of a peacock

Thalassoma purpureum (Forsskål 1775)

purple, referring to pinkish-purple markings (on otherwise greenish-blue body) of terminal-phase males

Thalassoma quinquevittatum (Lay & Bennett 1839)

quinque, five; vittatus, banded, described from a painting, showing five bands, two on back and sides, two on head, one on dorsal fin

Thalassoma robertsoni Allen 1995

in honor of ichthyologist David Ross Robertson (b. 1946), Smithsonian Tropical Research Institute, Panama, for his contributions to the knowledge of both eastern Pacific and Caribbean reef fishes; he also helped collect type specimens

Thalassoma rueppellii (Klunzinger 1871)

patronym not identified but clearly in honor of explorer-naturalist Eduard Rüppell (1794-1884), whose 1828-30 work on fishes of the Red Sea (where this wrasse is endemic) is cited many times by Klunzinger

Thalassoma sanctaehelenae (Valenciennes 1839)

of Saint Helena Island, South Atlantic, type locality (also occurs at Ascension Islands, where it may have been introduced)

Thalassoma septemfasciatum Scott 1959

septem, seven; fasciatus, banded, referring to seven blue bands, six on body and one on caudal peduncle

Thalassoma trilobatum (Lacepède 1801)

tri-, three; lobatus, lobed, allusion not explained but probably referring to trilobed caudal fin of terminal-phase males

Thalassoma virens Gilbert 1890

green, referring to uniform bright-green coloration

Wetmorella Fowler & Bean 1928

-ella, diminutive connoting endearment: in honor of ornithologist Alexander Wetmore (1886-1978), assistant secretary, U.S. National Museum, for his interest in Fowler and Bean's work on Philippine ichthyology

Wetmorella albofasciata Schultz & Marshall 1954

albus, white; fasciata, banded, referring to white slightly diagonal bands on body

Wetmorella nigropinnata (Seale 1901)

nigro-, black; pinnata, finned, referring to large black spot on three anterior rays of dorsal and anal fins, and covering most of pectoral fin

Wetmorella tanakai Randall & Kuiter 2007

in honor of Hiroyuki Tanaka, physician and aquarist, who provided paratypes from his aquaria and photographs of them

Xenojulis de Beaufort 1939

xenos, strange or foreign (i.e., different); julis, perhaps an abridgement of Stethojulis, described as related to that genus but differing in dentition

Xenojulis margaritacea (Macleay 1883)

pearly, described as having a "broad pearly stripe more or less edged with black, extending from the operculum to, or nearly to, the tail," perhaps referring to whitish scales

Xyrichtys Cuvier 1814

xyron, razor, apparently named for X. novacula (=razor), referring to razor- or knife-like shape of body; ichthys, fish [Cuvier emended spelling to Xyrichthys (1829) but original spelling stands]

Xyrichtys blanchardi (Cadenat & Marchal 1963)

in honor of H. Blanchard, captain of the research vessel *Reine-Pokou* from which type was collected, and "without whose skill the expedition could not have been carried out" (translation)

Xyrichtys incandescens Edwards & Lubbock 1981

glowing, referring to areas of bright-red coloration on terminal-phase individuals

Xyrichtys martinicensis Valenciennes 1840

-ensis, suffix denoting place: Martinique, French West Indies, type locality (occurs in western Atlantic from Bermuda to the southern Caribbean, including Gulf of Mexico)

Xyrichtys mundiceps Gill 1862

mundus, neat; *ceps*, head, allusion not explained, perhaps referring to "laterally rhomboid" head, "the profile in front of the eyes descending downwards in a nearly straight and oblique line at an angle of about 43° to the longitudinal axis of the body, and nearly parallel with the preoperculum"

Xyrichtys novacula (Linnaeus 1758)

Latin for razor, presumably referring to razor- or knife-like shape of dorsal fin and/or body, which is laterally

compressed, deepest behind the occiput, thence tapering backward

Xyrichtys sanctaehelenae (Günther 1868)

of Saint Helena Island, South Atlantic, type locality (also occurs at Ascension Islands, straying to São Tomé Island)

Xyrichtys splendens Castelnau 1855

beautiful, described as "jolie espèce," a pretty species

Xyrichtys victori Wellington 1992

in honor of Benjamin Č. Victor (b. 1957), ichthyologist, pathologist, medical laboratory director, and CEO of Ocean Science Foundation, for his Ph.D. work on the population biology and ecology of labrid fishes; he also discovered this species with Wellington in 1990

Xyrichtys wellingtoni Allen & Robertson 1995

in honor of marine biologist Gerard M. Wellington (d. 2014), University of Houston (Texas, USA), who assisted with the collection of the type specimens (he also described *X. victori*)