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Family Malacanthidae

Body elongate, rather slender, tapering back in rather long tail. Head moderate, pointed. Snout rather long. Eye lateral. Mouth large. Teeth small, in bands in jaws. Preopercle entire. Opercle with spine. Gill membranes separate. Gill rakers few, short, rudimentary. Vertebrae 24, of which 14 caudal. Scales very small, none on muzzle or fins. ~~Left~~ Dorsal and anal with very long bases, alike, low, continuous. Dorsal with first 4 to 6 rays, simple. Pectoral moderate, rays branched. Ventral thoracic, fin rather short.

(One genus)

Amphacanthus vermicularis Bleeker,<sup>1289</sup>  
Nat. Tijds. Ned. Indië, deel 17, 1858-59,  
p. 130 (Atafoepe, Timor). — Beaufort,  
Bijd. Dierk. Amsterdam, deel 19, 1913,  
p. 126 (Halmahera and Ambonia).  
Xenthis vermiculata Günther, Cat. Fish.  
Brit. Mus., vol. 3, 1861, p. 317 (Philippines,  
Amboina). — Bleeker, Ned. Tijds. Dierk.,  
deel 1, 1863, p. 152 (Batjan), p. 270 (Atafoepe,  
Timor). — Day, Fishes of Malabar, 1865, p.  
123. — Alleyne and Macleay, Proc. Linn.  
Soc. New South Wales, vol. 1, 1877, p. 339  
(Trinity Bay, Queensland). — Day, Fishes  
of India, pt. 1, 1875, p. 166, plate 40, fig. 1. —  
Károli, Termesz. Füzetek, Budapest, vol. 5,  
1881, p. 15-8 (Singapore). — Meyer, Ann.  
Soc. Espan. Hist. Nat. Madrid, vol. 14, 1885,  
p. 22 (Manado, Celebes; Tabukan, Songi).  
— Day, Faun. British India, vol. 2, 1889,  
p. 88. — Elera, Cat. Faun. Filip., vol. 1, 1895,

Genus Malacanthus Cuvier

92

Malacanthus Cuvier, Règne Animal,  
ed. 2, vol. 2, p. 264, 1829. (Type  
Coryphaena plumieri Bloch, monotypic.)

Oceanofis Jordan and Seale, Bull.  
Burr. Fisher., vol. 25, p. 277, 1906.  
(Type <sup>Labrus</sup> ~~Malacanthus~~ latovittatus  
Lacépède, orthotypic.)

1288

Siganus vermiculatus (Valenciennes).

Amphacanthus vermiculatus (Kuhl and  
Van Hasselt) Valenciennes, Hist. Nat. Poiss.,  
vol. 10, 1825, p. 92. <sup>126</sup> New Guinea, Java, Lawituis.  
Schlegel and Hüller, Verh. Nat. Ges. Zool., 1839-44, p. 11, plate 3, fig. 2 (Java Sea).  
— Bleeker, Nat. Tijds. Ned. Indië, deel 3, 1852,  
p. 741 (Boeloekomba); l.c., deel 5, 1853, p. 319  
(Amboina); l.c., deel 6, 1854, p. 517 (Delabam);  
l.c., deel 9, 1855, p. 559 (Siboga); l.c., deel 13,  
1857, p. 479 (Prigi, Java). — Bleeker, Act.  
Soc. Sci. Ind. Néerl., vol. 1, no. 3, 1856, pp. 4, 31  
(Manado); l.c., vol. 1, no. 5, 1856, p. 6 (Amboina);  
l.c., vol. 2, no. 7, 1857, p. 5 (Amboina); l.c., vol. 3,  
no. 9, 1857-58, p. 4 (Trusmi), p. 5 (Priaman);  
l.c., vol. 5, no. 8, 1858-59, p. 2 (Manado); l.c.,  
vol. 8 (Sumatra), 1859, p. 10 (Priaman), p.  
12 (Benculan). — Bleeker, Verslagen  
Reisd. Wet. Amsterdam, deel 12, 1861, p. 31  
(Singapore). — Weber, Siboga Exped., bund  
65, 1913, p. 326 (Ternate).

93

Body little compressed. Head with upper profile inclined from snout tip to above nostrils or front of eye, then more or less horizontal. Snout attenuated. Eye high. Mouth large, nearly horizontal, jaws equal. Maxillary not quite reaching eye. Jaws with bands of villiform teeth, outer series stronger, some canine-like and canine at hind end of premaxillary. No teeth on palate. Interorbital low, level. Scales very small, minutely ciliated. Dorsal and anal with long bases, rays 40 or more. Caudal forked, lobes sometimes elongate and extended in filament. Pectoral low, less than head. Ventral origin slightly behind pectoral origin, rather small.

95

Malacanthus plumieri (Bloch)

Coryphaena plumieri Bloch, Naturg.  
Ausland. Fische, vol. 11, p. 146, pl.  
175, 1788 (type locality, "Antillischen  
Inseln").

Coryphaena plumieri Bonnaterre,  
Tabl. Ichth., p. 60, pl. 34, fig. 131,  
1788 (les Antilles). — Gmelin,  
Syst. Nat. Linn., pt. 1, p. 1191,  
1789 (copied). — Schneider,  
Syst. Ichth. Bloch, p. 298, 1801  
(copied). — Lacépède, Hist. Nat.  
Pois., vol. 3, pp. 175, 201, 1802  
(Antilles); vol. 4, pl. 8, fig. 1,  
1803.

1277  
p. 529 (Luzon, Manila, Batangas,  
Zasingbu). — Ishikawa and Matsuura,  
Prelim. Cat. Fish. Mus. Tokyo, 1897, p. 34.

Xiganus albopunctatus Seale Philippine  
Journ. Sci., vol. 5, no. 4, 1910, p. 284  
(Sandakan, north Borneo).

Amphacanthus aurantiacus Schlegel, Fauna  
Japon., Poiss., dec. 7-9, 1845, p. 128. Yagasaki.

— Richardson, Ichth. Chin. Jap., 1846, p. 244  
(copied). — Bleeker, Verh. Batav. Genoot.  
(Japan), deel 25, 1853, p. 15.

Amphacanthus margaritiferus (non Valenciennes)  
Richardson, l.c., p. 243 (Canton).

Xenthis brevirostris Gray, Cat. Fish. Gronow,  
vol. 2, 1854, p. 142. "Mediterranean," Indian.  
Ocean, Red Sea.

Xenthis nigromaculata (Döderlein) Steindachner  
and Döderlein, Denks. Akad. Wiss. Wien, band  
48, 1884, p. 25. Kayoshima (name in text).

Malacanthus plumieri Valenciennes,

Hist. nat. Poiss., vol. 13, pp. 319, 380,

1839 (San Domingo, Martinique, Brazil).

— Castelnau, Ann. Mus. Hist. Nat. Poiss.,  
p. 29, <sup>1855</sup>

— Günther, Cat. Fish. Brit. Mus.,

vol. 3, p. 359, 1861 (Cuba, West

Indies, Jamaica)

— Swainson, Nat. Hist. Animals, vol. 2, p.

— Jordan and Rutter, Proc. Acad. Nat.

Sci. Philadelphia, p. 133, 1897 (Kingston,

Jamaica). — Jordan and Evermann,

Bull. U. S. Nat. Mus., no. 47, pt. 3, p.

2276, 1898 (Havana). — Ribeiro,

Arch. Mus. Nat. Rio de Janeiro, vol. 12,

haulac., p. 5, pl. (upper fig.), 1915 (Fernando

de Noronha). — Fowler, Proc. Acad. Nat. Sci. Philadelphia,

p. 149, 1919 (Jamaica), p. 151 (New Providence

and Grand Cayman, Bahamas); vol.

82, p. 274, 1930 (Grenada, West Indies).



12638. Santiago River, Pagapas Bay,  
Luzon. February 20, 1909. Length 95 mm.

19874. Stream at Maagnas Lagonoy,  
Gulf of Luzon. June 17, 1909. Length 105-  
mm.

8320 and 8321. Subig Bay, Subig.  
January 7, 1908. Length 115 to 120 mm.

A 992. Jozian Bay, Jozian Island.  
November 19, 1909. Length 263 mm.

5072. Sandakan Bay, Borneo. February  
9, 1908. Length 320 mm.

55950. U.S.N.M. San Fabian, Philippines.  
Bureau of Fisheries [4027]. Length 285 mm.

55962. U.S.N.M. Zamboanga. Bureau of  
Fisheries [3251]. Length 90 mm.

55971. U.S.N.M. Zamboanga. Bureau of  
Fisheries [3252]. Length 103 mm.

Malacanthus plumieri Swanson,  
Nat. Hist. Animals, vol. 2, p.  
225, 1839 (reference).

Sparus oblongus Schneider, Syst.  
Fichth. Bloch, p. 283, 1801 (on  
Matejuelo blanco Parra, Hist. Cuba,  
p. 22, pl. 13, fig. 2, 1787, Cuba)  
type locality,

~~Handwritten scribble~~

1278

Siganus albopunctatus (Schlegel).

Amphecanthus albopunctatus Schlegel,  
Fauna Japon. Poiss., -dec. 7-9, 1845, p. 128.

Nagasaki Bay, Japan. — Kner, Reise.

Koovara, Fischer, 1866, p. 206 (Java and Manila).

— Von Martens, Preuss. Exped. Ost Asien,  
1876, p. 394 (Nagasaki Bay and Singapore).

Xenthis albopunctata Sinther, Cat. Fish. Brit.

Mus., vol. 3, 1861, p. 318 (Amoy, China,

Philippines). — Schmeltz, Mus. Godeffroy

Cat., vol. 5, 1874, p. 30 (Bowen). — Sauvage,

Bull. Soc. Philomath. Paris, vol. 5, series 7,

1881, p. 106 (Swatow, China). — Károli,

Termesz. Füzetek, Budapest, vol. 5, 1881, p.

158 (Singapore). — Steindachner and Döderlein,

Denks. Akad. Wiss. Wien, band 48, 1884, p. 25

(Kagoshima). — Meyer, Ann. Soc. Espan.

Hist. Nat. Madrid, vol. 14, 1885, p. 22 (North

Celebes). — Elera, Cat. Fauna Filip., vol. 1, 1895,

Malacanthus latovittatus (Lacépède)

Labrus latovittatus Lacépède, Hist. nat.  
Poiss., vol. 3, pp. 455, 526, pl. 28, fig. 2,  
1802 (type locality, Great Equatorial  
Ocean [= Indo Pacific]). — Duoy  
and Gaimard, Voy. Astrolabe, Zool.,  
vol. 3, p. 701, pl. 20, fig. 3, 1834  
(Port Dorey, New Guinea).

Taenianotus lato-vittatus Lacépède,  
op. cit., vol. 4, pp. 303, 304 (not pl. 3,  
fig. 2), 1802 (Mauritius).

1284

7573. Agojo Point, Catanduanes Island.  
June 10, 1909. Length 155 mm.

8960. Alibijaban Island, Ragay Gulf,  
Luzon. March 6, 1909. Length 219 mm.

8962. Between Paron and Jesus Points,  
Albany Gulf, Luzon. June 21, 1909. Length  
218 mm.

7478. Bolalo Bay. December 21, 1908.  
Length 224 mm.

11478. Masbate reef, Masbate. April 26, 1908.  
Length 200 mm.

7243 and 7244. Masinloc Bay, Zambales.  
November 23, 1908. Length 273 to 285 mm.  
Body seal brown above, lighter below. Each  
scale with small whitish spot. Fins largely  
like body color. Caudal with fine spots  
over its whole area except broad terminal  
margin. Pectorals hyaline.

7966. Pagapas Bay, Luzon. February 20, 1909.  
2 examples. Length 213 to 218 mm.

Malacanthus latovittatus Bleeker,

Act. Soc. Sci. Ind. Neerl., no. 2, vol. 6, p. 5, 1859 (New Guinea); Verslag.

Akad. Wet. Amsterdam, vol. 15, p. 266, 1863 (Ternate); Ned. Tijds. Dierk., vol. 1, p. 249, 1863 (Flores); Verslag. Akad. Wet. Amsterdam, ser. 2, vol. 2, p. 273 (Ternate), p. 276, 1868 (Batjan).

— Günther, Cat. Fish. Brit. Mus., vol. 3, p. 360, 1861 (no locality).

— Günther, Journ. Mus. Godeffroy, <sup>Bleeker</sup> vol. 5, pt. 11, p. 160, 1876 (Pelew Islands).

— Schmeltz, Cat. Mus. Godeffroy, no. 8, p. 6, 1881 (Palau).

— Macleay, Proc. Linn. Soc. New South Wales, vol. 7, p. 360, 1882 (New Guinea); vol. 8, p. 266, 1883 (Goldie River, New Guinea).

— Pöhl, Cat. Mus. Godeffroy, no. 10, p. 32, 1884 (Pelew Islands).

1213

spots on the head and those on the body  
greatly larger than in any of our  
specimens. The present species may  
be known by extremely minute, <sup>and numerous</sup> grey or  
whitish dots on the body and <sup>soft vertical fins</sup> ~~caudal~~  
basally, in combination with its deeply  
emarginate caudal fin. In no species  
known to us are the spots so fine and  
in such great numbers. Known only  
from the materials listed below.



— Hervey, Philippine Journ. Sci., vol. 3, no. 2, p. 217, 1926 (Santo Domingo de Basco, Batan Island, Batanes Province).

— Fowler, Mem. Bishop Mus., vol. 10, p. 236, 1928 (compiled); vol. 11, no. 5, p. 337, 1931 (Mortlock Group); vol. 12, no. 6, p. 422, 1934 (Antang Java; New Britain; Port Moresby; Hawaiian Islands).

Malacanthus latevittatus Schmeltz, Cat. Mus. Godeffroy, no. 6, p. 15, 1877 (Pelew Islands).

Oceanops latevittata Jordan and Seale, Bull. Bur. Fisher., vol. 25, p. 277, pl. 39, 1905 (1906) (Pago Pago).

1272

Depth 2 to  $2\frac{1}{8}$ ; head  $3\frac{1}{3}$  to  $3\frac{4}{5}$ , width  $2\frac{1}{8}$  to  $2\frac{1}{4}$ .  
Snout 2 to  $2\frac{1}{5}$ ; eye  $2\frac{3}{4}$  to  $3\frac{1}{3}$ ,  $1\frac{1}{4}$  to  $1\frac{3}{4}$  in  
snout, 1 to  $1\frac{1}{5}$  in interorbital; teeth about  
 $3\frac{1}{2}$  in each jaw; maxillary  $3\frac{1}{3}$  to 4 in  
head; interorbital  $2\frac{3}{4}$  to 3, broadly convex;  
preorbital, preopercle limb, opercle  
and scapular arch striate. Gill rakers  
6 + 16, short, small, bifid points.

Scales very minute, ovoid, cycloid,  
40 to 45 circuli. Cheek covered with  
small scales.

D. XIII, 10, I, fifth spine  $1\frac{3}{4}$  to  $1\frac{4}{5}$  in head,  
third ray  $1\frac{2}{5}$  to  $1\frac{3}{4}$ ; A. VII, 9, I, third spine  
 $1\frac{2}{3}$  to  $2\frac{1}{5}$ , third ray  $1\frac{1}{2}$  to  $1\frac{4}{5}$ ; caudal deeply  
emarginate lobes angularly pointed, 3 to 4  
in combined head and body; least  
depth of caudal peduncle  $3\frac{1}{2}$  to  $4\frac{1}{2}$  in  
combined head; pectoral  $1\frac{1}{5}$  to  $1\frac{1}{4}$ ; ventral  
 $1\frac{1}{4}$  to  $1\frac{1}{2}$ .

Body largely uniform deep brownish,  
everywhere with minute gray dots and  
extending on bases of vertical fins.  
Iris pale yellowish to olivaceous.  
Vertical fins brownish like general  
body color. ~~Pectoral base with pale~~  
Pectoral dull olivaceous,  
uniform. Ventral pale, with brownish  
blotches. Young with dusky or blackish  
rounded blotch at shoulder, little less  
than eye, which also invaded by pale  
dots.

East Indian region. Bloch's figure  
of Chaetodon guttatus shows a specimen without

? Labrus vittatus (not Walbaum)  
Griffith, Animal Kingdom, Cuvier,  
 vol. 10, pl. 45 (opposite p. 254, 1834  
 no description).

Malacanthus taeniatus Valenciennes,  
Hist. Nat. Poiss., vol. 13, p. 327, pl.  
 381, 1839 (Doreh Harbor, New Guinea).

Bleeker, Act. Soc. Sci. Ind. Neerl.,  
 no. 2, vol. 6, p. 3, 1859 (Doreh; Nat. Tijds  
ned. Indie, vol. 20, p. 204, 1859-60  
 (Marsoek, Amboina).

Nat. Tijds. ned. Indie, vol. 2, p. (210) 218,  
 1851 (Boelochomba, Celebes);

Malacanthus wichthys Fowler, Journ.  
Acad. Nat. Sci. Philadelphia, ser. 2,  
 vol. 12, p. 549, pl. 16, lower fig., 1904  
 (type locality, Padang, Sumatra).

Brownish olive, with small, scattered, roundish, whitish spots on back and sides, which much smaller than the interspaces between. Dark brown shoulder blotch about size of eye, less distinct with age. (Günther.)

Red Sea, East Indies, Philippines, China, Japan, Queensland, Micronesia.

Depth 6; head  $3\frac{1}{4}$ , width  $2\frac{2}{5}$ .  
 Snout  $2\frac{1}{6}$  in head from snout tip; eye  $6\frac{1}{3}$ ,  $2\frac{2}{3}$  in snout; mouth cleft 4; maxillary reaches  $\frac{2}{3}$  to eye, length  $3\frac{1}{4}$  in head from snout tip; lips large, thick, fleshy, plicate; teeth fine, pointed, in bands in jaws; interorbital  $3\frac{4}{5}$ , slightly elevated, flattened medially. Gill rakers 1+5, rudimentary; gill filaments  $1\frac{1}{2}$  in orbit.

Scales 122 + 6 in lateral line; 11 above, 25 below. Cheek, postocular region, opercle, occiput, back above and anteriorly, also chest covered with elongate scales. Scales on abdomen and upper pectoral region rounded and cycloid.

Scales along middle of side rather narrowly imbricated. Caudal base covered with small scales, other fins scaleless. Tubes in lateral line small, simple.

D. 48, spines small and much shorter than rays, fin origin ~~over~~ little behind pectoral origin, fin height  $4\frac{7}{8}$  in total head length; A. 38, origin nearly opposite depressed pectoral tip, fin height  $4\frac{1}{4}$ ; caudal  $2\frac{1}{4}$ , slightly emarginate behind; least depth of caudal peduncle 5; pectoral  $1\frac{5}{6}$ , rays I, 15; ventral rays I, 5, fin  $3\frac{1}{6}$  in total head length, origin opposite pectoral origin.

Olive gray above, side and lower surface whitish. Broad blackish band from pectoral along side of body back over caudal to its hind edge; upper and lower edges of caudal dark gray, fin otherwise whitish. Iris pale yellowish. Dorsal dark gray brown basally, margin paler. Anal whitish, with slightly dusky margin. Other fins whitish.

Mauritius, East Indies, Philippines, Melanesia, Micronesia, Polynesia, Hawaii.

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A. N. S. P., No. 27783, Padang,  
Sumatra. 1901. A. C. Harrison  
and H. M. Heller. Length 355 mm.  
Type of Malacanthus wichthys.



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Malacanthus hoedtii Bleeker

Malacanthus hoedtii Bleeker, Act.  
Soc. Sci. Ind. Neerl., no. 2, vol. 6, p.  
3) 18, 1859 (type locality, Doreh,  
New Guinea). — Günther, Cat. Fish.  
Brit. Mus., vol. 3, p. 361, 1861  
(Lousiade Archipelago; Mauritius);  
Journ. Mus. Godeffroy, vol. 5, pt. 11,  
p. 160, pl. 98, fig. 15, 1876 (Tahiti;  
Yap; Hawaii; Lousiades).

— Steindachner, Denks. Akad. Wiss.  
Wien, vol. 70, p. 497, 1901 (Honolulu).  
— Seale, Cicar. Pap. Bishop Mus.,  
vol. 1, no. 5, p. 5, 1902 (Hilo).

1287

Siganus labyrinthodes (Bleeker).

Amphacanthus labyrinthodes Bleeker, Nat.  
 Tijds. Ned. Indië, deel 4, 1853, p. 471. Batavia,  
Java. - Günther, Cat. Fish. Brit. Mus.; vol. 3, 1861, p. 317 (copied).

Xenthis labyrinthodes Bleeker, Verslagen  
Akad. Wet. Amsterdam, deel 2, series 2, 1868,  
p. 275 (Obi).

Depth  $2\frac{1}{2}$  in total. Caudal emarginate. Red,  
with numerous undulated and reticulated  
transverse and longitudinal short blue lines.  
Vertical fins immaculate. (Günther.)

— Fowler, Copeia, no. 112, p. 84, Nov. 20, 1922 (Hawaii); Bull. Bishop Mus., no. 22, p. 26, 1925 (Honolulu), Mem.

Bishop Mus., vol. 10, p. 236, pl. 21B, 1928 (Hawaii, Maui, Honolulu, Hilo).

— Herre, Philippine Journ. Sci., vol. 31, no. 2, p. 221, 1926 (Santo Domingo de Basco, Batan Island, Batanes Province). — Fowler,

1286  
A 1387 and 22668. Labuandata Bay,  
Celebes. December 18, 1909. Length 145 to  
233 mm.

14501 and 19943. Game Road, Gillolo  
Island. December 1, 1909. Length 147 to 180 mm.

109

Malacanthus hoedti Bleeker, Nat. Tijds.  
Ned. Indie, vol. 20, p. 93, 1859-60 (New  
Guinea).

Malacanthus parvipinnis Vaillant and  
Sauvage, Rev. Mag. Zool., ser. 3, vol. 3,  
p. 283, 1875 (type locality; Hawaiian  
Islands). — Jenkins, Bull. U. S. Fish  
Comm., vol. 22, p. 497, 1902 (1903) (Hono-  
lulu). — Snyder, Bull. U. S. Fish Comm.,  
vol. 22, p. 536, 1902 (1904) (Honolulu;  
Lahaina). — Jordan and Evermann, Bull.  
U. S. Fish Comm., vol. 23, pt. 1, p. 275, fig.  
118, 1903 (1905) (Honolulu; Hilo). — Jordan  
and Jordan, Mem. Carnegie Mus., vol. 10,  
no. 1, p. 53, Dec. 1922 (Honolulu).

11584. Port Usan, west of Pinak.

December 17, 1908. Length 127 mm.

5705. Pujada Bay, Mindanao. May 10, 1908. Length 183 mm.

19917 and 19918 [454, 453]. Rumbun Harbor. March 25, 1908. Length 68 to 95 mm.

8086. Sacol Island. September 9, 1909. Length 177 mm.

22064. San Miguel Harbor, Ticao Island. April 21, 1908. Length 148 mm.

A613. Singaan Island. September 21, 1909. Length 223 mm.

A673 and A674. Vitambi Reef. September 24, 1909. Length 229 to 233 mm.

A833 and 18217. Talisse Island. November 9, 1909. Length 204 to 260 mm.

A460 and A466. Tubalutan Island. September 9, 1909. Length 214 to 265 mm.

22640.

Length 62 mm.

110

Depth  $6\frac{1}{2}$  to  $6\frac{4}{5}$ ; head  $4\frac{1}{2}$  to 5, width 2. Snout 3 in head; eye  $4\frac{3}{5}$  to  $5\frac{2}{3}$ ,  $1\frac{1}{3}$  in snout; maxillary reaches  $\frac{1}{3}$  in eye,  $2\frac{3}{5}$  to  $2\frac{5}{6}$  in head; teeth in broad bands in jaws; interorbital broad 3 to  $3\frac{1}{8}$  in head.

Scales 137 to 148 + 4 in lateral line; 7 or 8 above, 26 to 28 below; 18 to 25 predorsal. Head scaly behind eyes. Scales ctenoid, very small in lateral line.

D.  $\overline{\text{V}}$ , 54 or 55, spines short, simple; flexible soft fin height  $2\frac{1}{2}$  in head; A. 49 to 53, fin height  $2\frac{1}{2}$ , origin of fin opposite tip of depressed pectoral; caudal  $1\frac{2}{5}$  to  $1\frac{3}{4}$  in head, little convex behind; least depth

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of caudal peduncle  $3\frac{2}{3}$  to  $3\frac{3}{4}$ ;  
pectoral  $1\frac{1}{4}$  to  $1\frac{1}{3}$ , rays 16;  
ventral rays I, 4, fin  $2\frac{1}{3}$  to  
 $2\frac{1}{2}$  in head.

Pale greenish on back,  
belly silvery white. Side with  
20 to 24 short transverse  
greenish bands. Iris blue.  
Dorsal pink or rosy, narrowly  
edged yellow. Anal pale.  
Caudal gray, in alcohol upper  
and lower portions broadly  
bordered blackish.

Mauritius, East Indies, Philippines,  
Melanesia, Polynesia, Hawaii.