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# STUDIES IN ICHTHYOLOGY.

No. 15.\*

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(Figures 1-14.)

Family GEOTRIIDAE.

Genus *Mordacia* Gray, 1851.

*Mordacia mordax* (Richardson, 1846.)

*Mordacia mordax* (Richardson) Whitley, Austr. Zool. vii, 1932, p. 262, pl. xiii, figures 9 and 10 and text-figures a (3 and 4).

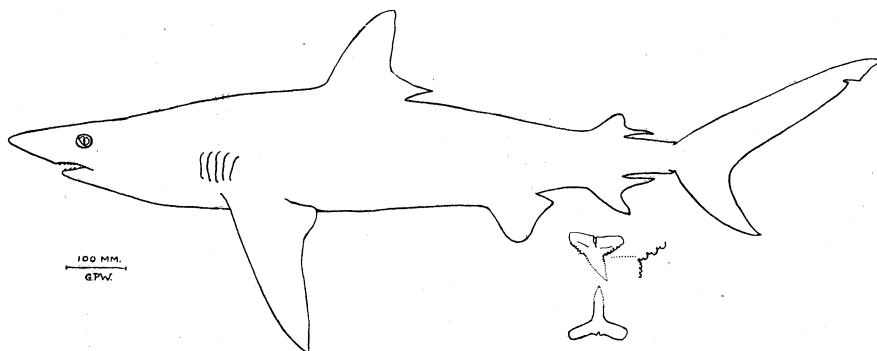
Add to synonymy: *Petromyzon tasmaniensis* Lauterer (Australien and Tasmanien, 1900, p. 252), a hitherto overlooked name.

Family GALEIDAE.

Genus *Galeolamna* Owen, 1853.

*Galeolamna tufiensis* Whitley, 1949.

(Figure 1.)



Whaler Shark, *Galeolamna tufiensis* Whitley.  
Holotype from Tufi, Papua. G.P.W. del.

*Galeolamna tufiensis* Whitley, Proc. Roy. Zool. Soc. N.S. Wales 1947-8 (Jan., 1949) p. 24, Tufi (type) and Port Moresby.

Head normal, predorsal profile not gibbous. Eyes rather large, subcircular, with nictitating membrane; pupil a vertical slit. Interorbital flat, slightly convex. Snout broadly rounded. Head 3.7 in total length. Preoral length less than width of mouth. No spiracle. Dental formula:  $\frac{10? \quad 1 \quad 11}{13 \quad 1 \quad 12} = c. \frac{22}{26}$  Teeth of upper jaw deflected; deeply notched on outer margin, shallowly on inner; strongly serrated on shoulders and serrated on cusps; generally broader than high. Teeth of lower jaw erect, entire, rather peg-shaped, higher than broad. A small symphyseal tooth in each jaw; teeth on either side of the symphyseal ones slightly smaller than other lateral ones. Nostrils nearer mouth than end of snout and nearer eye than end of snout. No nasal cirrus. Labial folds very short. Endolymphatic openings inconspicuous. Last two gill-slits over pectoral.

\* For No. 14, see RECORDS OF THE AUSTRALIAN MUSEUM, Vol. xxii, no. 3, 27 January, 1950, p. 234.

Build heavy anteriorly and tapering posteriorly. Lateral line without flexure. No interdorsal ridge. Caudal peduncle rounded in transverse section with lunate pit above and below. Pit organs inconspicuous. No umbilical scar. Shagreen; denticles imbricate, each with several carinae.

Referring to the symbols listed in *Proc. Linn. Soc. N. S. Wales* (Whitley, 1943), the dimensions in mm. are as follow:—

Specimen.	A. Female Holotype.	B. Male Paratype.	C. Male Paratype.	D. Female Paratype.	E. Male Paratype.
H.1	320	144	143	143	500
2	392	172	170	166	630
3	123	54	63	64	207
4	171	75	71	72	330
5	385	170	165	163	c545
6	795	355	315	345	c1.340
7	28	16	17	17	22
8	24	15	15	17	25
9	168	74	72	76	308
10	—	—	—	—	(no spiracle) —
11	21	11	11	10	34
12	99	45	43	43	165
13	104	59	56	56	153
14	143	62	60	60	270
15	8	4	2	2.5	10
16	9	5	3	2.5	10
17	48	23	20	20	99
18	43	23	16	18	96
B.1	1,101	522	485	495	1,890
2	850	365	350	360	1,430 ?
3	535	235	210	219	813
4	220	103	93	92	330 ?
5	c200	80	80	64	260 ?
6	49	27	24	26	99
7	49	25	22	24	101
8	—	14	14	—	185
9	—	18	14	—	260
F.1	178	97	95	94	390
2	139	63	62	64	300
3	57	28	30	29	110
4	320	164	138	139	560
5	65	31	32	31	145
6	56	26	27	26	130
7	58	26	28	25	82
8	95	53	41	48	185
9	90	38	38	36	160
10	64	28	29	30	120
11	54	26	25	26	80
12	82	49	39	45	130
13	—	—	—	—	—
14	296	123	120	119	510
15	83	36	33	34	205 ?
16	465	195	160	190	780
17	82	36	32	36	172
18	92	30	32	30	190
19	50	20	19	18	92
20	200	98	85	86	360
21	380	216	188	200	655
22	199	105	96	98	330

Additional measurements are: Total length, 1,481 mm. or about 4 ft. 10 in. overall. Second to fourth gill-slits subequal, about 54 mm. Eye to first gill-opening, 179 mm. Tip of snout to outer angle of nostril, 81 mm.; inner angle of nostril to mouth, 66 mm. Middle of vent to end of tail, 670 mm., and thus in posterior half of shark.

Fins as usual in Galeidae. First dorsal origin nearer pectoral (230 mm.) than ventrals (340 mm.). Second dorsal fin rather large, but smaller than anal. Origin of second dorsal slightly behind that of anal, and the end of its base slightly before that of anal (but in paratypes B and C, the origins and ends are about opposite). Pectoral angle reaching below first dorsal origin. Upper caudal lobe shorter than the head, the lower somewhat pointed.

Liver dark, weight 6 oz. Stomach contents too digested for identification, apparently some finely chopped seaweed. Spiral valve of the scroll type. Uteri flaccid; no embryos, so evidently had bred.

Colour, grey above, white below, the junction between the two on level of lowest part of eye and gradated along body. Fins dark grey above. Pupil dark blue with

slight brassy ring and a smoky and brassy iris surrounded by grey rings. Nictitating membrane grey.

Described and figured from the holotype, a spent female, 1,481 mm. or 4 ft. 10 in. long and weighing 40 lb. 4oz. Austr. Mus. regd. no. IB.2334.

*Locality* : Off Tufi Harbour, North-eastern Division of Papua; hooked on long line, 1 October, 1948. M.V. "Fairwind" Fisheries Survey.

*Variation*.—The larger of two male paratypes (specimen B), with same data, is much smaller than the female holotype but agrees with it in most characters. However, the snout is more gothic-arched from the ventral aspect, there is a small pointed nasal lobe, the head goes 4.29 in total length and there is an umbilical scar, so it is probably a first-year immature shark. Total length, 738 mm. Weight, 4 lb. 3 oz. Liver weight, 7 oz. Stomach empty. Median rostral cartilage bifurcate ventro-anteriorly.

The smaller of the two male paratypes with same data as holotype (specimen C), is 673 mm. long. Weight, 3 lb. 3 oz. Head nearly 4 in total length. Very like specimen B but has almost lost the umbilical scar. Stomach empty. Liver whitish, weight 3 oz.

A small female paratype (specimen D), was actually caught on a line trolled at 4 to 4½ knots with garfish bait outside Feiaba Bay, near Tufi, Papua, on 4 October, 1948. Total length, 695 mm. Weight, 3 lb. 8 oz. Head 4.18 in total length. Dental formula  $\frac{12. 1. 13}{13. 1. 13} = \frac{26}{27}$  Umbilical scar present. Liver weight, 5 oz. Epigonal organ developed. Uteri mere strips. For heterogonic variation, see table of dimensions above.

An adult male paratype (specimen E), was caught on a meat bait at Port Moresby, Papua, on 5 November, 1948. It was 2,545 mm. or about 8 ft. 8 in. long. General characters as in Tufi specimens. Head 4 in total length, predorsal profile slightly gibbous; pupil lenticular; interorbital convex; endolymphatic openings well separated, 275 mm. from snout; nictitating membrane white; pit organs conspicuous. Dental formula  $\frac{13. 1. 13}{10. 1. 13} = \frac{27}{24}$  Origin and end of anal base behind levels of those of second dorsal.

Upper caudal lobe longer than head. No interdorsal ridge. No umbilical scar. Claspers well developed. Liver weight, 35 lb., light-brown and in good condition. Stomach contained a pink, soft oily substance. Testes festooned all along coelome. Vesiculæ seminales spent. Spiral valve of scroll type. Skin about 5 mm. thick; flesh tough and red at periphery. Eye to first gill-opening, 310 mm.; tip of snout to outer angle of nostril, 100 mm.; inner angle of nostril to mouth, 91 mm.; ramal length, 190 mm.

On 7 July, 1948, a "White Shark" was caught at Port Moresby but was not preserved. It was a female, doubtless of this species. Length, 9 ft. 2 in. Contained about a dozen embryos, 23 inches long, with yolk-sacs 2 inches in diameter. Liver very oily, weighed 42 lb. (Mr. A. M. Rapson, MS.).

This new species, which may be called the Tufi Whaler Shark, is distinguished from others in the genus mainly by its dentition (up to 27 teeth across jaw) and absence of an interdorsal ridge. The flesh is white and free from blood-streaks in small specimens and the species should be a potential food-fish.

### Family RHENOPTERIDAE.

Genus *Rhenoptera* Van Hasselt, 1823.

#### *Rhenoptera neglecta* Ogilby.

*Rhinoptera polyodon* (?) Krefft, Industr. Progress N. S. Wales, 1871, p. 778. Australian coast (listed only). Not of Gunther.

*Rhinoptera javanica* De Vis, Proc. Roy. Soc. Qld. ii, 1886, p. 12. Moreton Bay, Queensland. Not of Muller and Henle.

*Rhinoptera neglecta* Ogilby, Mem. Qld. Mus. i, 27 Nov., 1912, p. 32, and of authors. Moreton Bay, Queensland. *Id.*, Whitley, Fish Austr., i, 1940, pp. 221 and 225, figs. 251 and 258.

*Rhenoptera* sp., Whitley, Austr. Zool. xi, 1945, p. 40. Carnarvon, W. Austr.

Three selected male specimens of this species were presented by Mr. Athel D'Ombrain who obtained them off Stockton near Newcastle, in April and May, 1949, and May, 1950. (Austr. Mus. regd. nos. IB. 2339, 2512 and 2513.) New Record for New South Wales.

Total length	...	...	990 mm.	1,060 mm.	1,130 mm.
Width of disc	...	...	890 mm.	880 mm.	936 mm.
Length of tail	...	...	460 mm.	510 mm.	580 mm.
Interorbital	...	...	120 mm.	142 mm.	151 mm.
Width of mouth	...	...	93 mm.	94 mm.	97 mm.
Precoral length	...	...	94 mm.	90 mm.	95 mm.
Internarial	...	...	75 mm.	75 mm.	74 mm.
Weight	...	...	24½ lb.	36 lb.	30 lb.
Liver weight	...	...	—	3½ lb.	4 lb. 5 oz.

Skin smooth. Six or seven rows of teeth. 39 to 56 papillae along upper lip.

### Family OPHICHTHYIDAE.

Genus *Malvoliophis* Whitley, 1934.

*Cyclophichthys*, subgen. nov.

Orthotype, *Ophichthus cyclorhinus* Fraser-Brunner, Ann. Mag. Nat. Hist., (10) xiii, 1934, p. 466, figs. 1a-c. Low Isles, Qld. = *M. (C.) cyclorhinus*.

A Snake Eel with pectoral fins present, gill-openings lateral, well separated, and snout short. Dorsal commencing before pectorals, instead of behind as in *Ophichthus*. Anterior nostrils cup-shaped; no fringe along upper lip. Anal fin ending just before tail-tip. Teeth conic, some on vomer. Crossbands on head and body.

Similar to *Malvoliophis (pinguis)*, but that genotype has a perforated cone or tube for each anterior nostril and has the head spotted.

### Family MURAENIDAE.

*Lycodontis rhodocephalus* (Bleeker, 1865.)

*Gymnothorax rhodocephalus* Bleeker, Ned. Tijdschr. Dierk., ii, 1865, pp. 50, 134 and 292. Amboina.

Two Queensland specimens (from Lindeman and High Islands) are in The Australian Museum. New record for Australia.

### Family SYNGNATHIDAE.

Genus *Leptonotus* Kaup, 1853.

*Kaupus*, subgen. nov.

Orthotype, *Leptonotus costatus* Waite and Hale, Rec. South Austr. Mus., i, 1921, p. 301, fig. 43. South Australia.

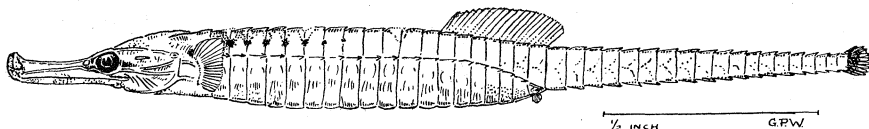
Differs from the type of the genus (*Syngnathus blainvillaeus* Eydoux and Gervais, 1837) in having shorter snout and a ridge on the operculum anteriorly. It also apparently matures at about half the size of the more typical species of the genus.

Genus *Choeroichthys*.*Choeroichthys suillus*, sp. nov.

(Figure 2.)

D.21. A.5. P.18. C.10. Rings 18 plus 20. Subdorsal rings 5 plus 1. Brood-rings, 14, thoracic.

Eyes and nostrils projecting. Two complete opercular keels each side. No keels on shields between the body- or tail-ridges. Sculpture of shields striate, not reticulate. Spines on rings not serrate.

Pipefish, *Choeroichthys suillus* Whitley.

Holotype from Port Denison, Queensland. G.P.W. del.

Colour brown. Light and dark pattern on snout, chin and throat. Dark-brown bar through eye. A row of reddish spots along upper sides anteriorly. Three pairs of light blotches across back. Brood-pouch with dark scalloping over the light margin. Anterior two-thirds of caudal fin dusky-brown, posterior third yellowish. Other fins light yellowish.

Length, 2 inches. Port Denison, Queensland. Holotype, Austr. Mus. regd. no. IA.1806.

Differs from other species (see Weber and Beaufort, 1922, p. 60) in ring-counts and in lacking keels on rings between ridges.

## Family HEMIRAMPHIDAE.

Genus *Reporhamphus* Whitley, 1931.*Reporhamphus caudalis*, sp. nov.

Two small garfishes bore the manuscript name *Hemirhamphus caudalis* in The Australian Museum, probably having been so labelled by De Vis or Saville-Kent.

D. 16. A. 15.

Length of pectoral, 13 mm. Head (without beak), 21 mm. Preorbital, nearly 4 mm. Eye, 6 mm. Upper jaw about twice as wide as long.

Tricuspid teeth in up to four rows. Nostril openings large, without long barbel. Beak about one-sixth of total length. Dorsal originating before anal. Base of ventrals midway between root of tail and front part of operculum. Body rather compressed. Scales deciduous. Lower caudal lobe long, like that of a flying fish.

Colour in alcohol greyish to silvery. A silver patch around vent and stripe along side.

Length, 5¼ inches. Austr. Mus. regd. no. I.444 (holotype, larger, and paratype).

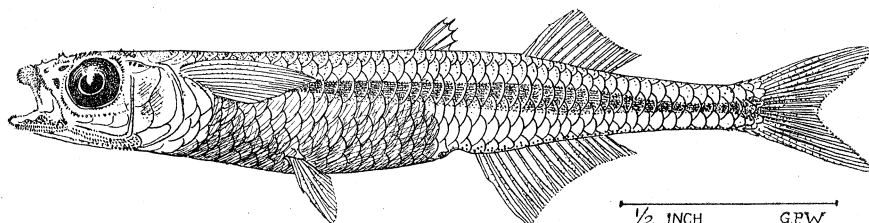
Cape York, Queensland.

Family **ATHERINIDAE**.Genus **Atherion** Jordan & Starks, 1901.

*Atherion* Jordan and Starks, Proc. U.S. Nat. Mus., xxiv, 4 Oct., 1901, pp. 199 and 203.  
Haplotype, *A. elymus* Jordan and Starks from Misaki, Japan.

**Atherion maccullochi** Jordan & Hubbs.

(Figure 3.)

Hardyhead, *Atherion maccullochi* Jordan and Hubbs.

A specimen from Low Isles, Queensland G.P.W. del.

? *Atherina villosa* Duncker and Mohr, Mitt. Zool. Mus. Hamburg, xlii, 1926, p. 135,  
fig. 10. New Pomerania and New Guinea.

*Atherion maccullochi* Jordan and Hubbs, Stud. Ichth. Monogr. Silversides (Stanford Univ.), 18 Dec., 1919, p. 30. Lord Howe Island. Types in Stanford Univ. *Id.*, Whitley, Sci. Rept. Gt. Barr. Reef Exped., iv, 9, 1932, p. 278 (Low Isles, Queensland). Here figured from one of the Queensland specimens recorded by me in 1932.

Genus **Atherinason** Whitley, 1934.

*Atherinason* Whitley, Vict. Nat., 50, 1934, p. 242. Orthotype, *Atherina dannevigii* McCulloch. *Id.*, Schultz, Proc. U.S. Nat. Mus., 98, 1948, p. 19.

**Atherinason dannevigii verae**, subsp. nov.

This is a hitherto unnamed northern form with D. viii/i, 12 and fewer lateral scales (sixty-three to seventy) than the Tasmanian type. Types (regd. no. IA.3247) in Australian Museum, from Port Jackson, New South Wales.

Family **MUGILIDAE**.**Mugil catalarum**, sp. nov.

D. iv/i, 9; A.iii, 8; P.i, 16; Sc.39 to hypural. Tr.16 below first dorsal to 9 on caud. ped. Predorsal sc.c. 22.

Head (37 mm.) 3·7, depth (41 mm.) 3·3 in standard length (138 mm.) or 4·2 in total length (175 mm.). Snout, measured obliquely, 9·5 mm.; eye, 10 mm.; interorbital, 17 mm.; postorbital, 19 mm.; pectoral, 26 mm.; depth of caudal peduncle, 15 mm.; axillary pectoral scale, 8·5 mm. Nostrils nearly 3 mm. apart.

Adipose eyelids well developed, partly overlapping pupil. Snout shorter than eye. Interorbital convex. Scales extend well forward on snout. Nostrils not widely separated, the distance between them equals rear end of preorbital which is denticulated. Maxillary exposed, reaching beyond free edge of preorbital and below front of eye. Upper lip terminal, slightly thickened; lower lip thin. Both lips with a row of simple teeth along edges. No palatal teeth. Lower jaw with symphysial crest.

Rostro-dorsal profile convex. Back not keeled. Scales cycloid with narrow membranous edges over which circuli extend; about 9 radii. Origin of first dorsal nearer caudal base than end of snout; origin of second dorsal about level of twenty-fifth scale;

second dorsal origin and end behind levels of those of anal; both these fins scaly anteriorly. First dorsal, pectorals and probably ventrals with axillary scales. Pectoral base level with eye, the fin much shorter than head and not reaching level of first dorsal, only extending to ninth or tenth body-scale. Ventrals more than half head. Caudal forked.

Colour in formalin greyish above, golden to yellowish on sides and white below. Scales each with a median dusky streak (above) or spot (below). Adipose eyelids pale yellowish; gold area on operculum. Fins mostly white with grey infuscations. A blue blotch over pectoral base. Eye bluish. Some yellow at anal and ventral bases and encircling vent.

Described from the holotype, a specimen 138 mm. in standard length or 175 mm. (nearly 7 inches) overall. Austr. Mus. regd. No. IB.2242.

*Loc.*—La Foa, River Bogny, west coast of New Caledonia; July, 1948. Dr. René A. Catala. Named in honour of Dr. and Madame Catala to whose collecting The Australian Museum is indebted for many interesting New Caledonian Fishes.

This species is near the "Frog-mouth Mullet" (*Mugil* sp.) figured from Kapakapa, Papua (Whitley, 1949, p. 342), but the mouth-opening is more acutely angled, snout shorter than eye, body deeper and the scales have narrow membranous edges.

The Papuan mullet is near *Mugil cephalus* Linné, 1758, and of authors, but differs from Cuvier and Valenciennes' plate 307 in having nostrils closer together and below upper level of orbit and in proportions (notably the broad interorbital); it also has most fins scaly. From *M. dobula* Gunther, 1861, it is distinguished by the obtuse (instead of acute) angle of the mouth-opening, has chin-space broader, fewer predorsal scales, etc. This Papuan variety may be described as follows:—

D.iv/i, 8; A.iii, 8; P.2, 14. Sc. 40 to hypural. Tr. 15 below first dorsal to 9 on caudal peduncle. Predorsal sc. 21.

Head (99 mm.) 3.7, depth (85 mm.) 4.4 in standard length (375 mm.) or 5.4 in total length. Snout (measured obliquely), 29 mm.; eye, 21 mm.; interorbital, 54 mm.; postorbital, 62 mm.; pectoral, 64 mm.; depth of caudal peduncle, 35 mm.

Adipose eyelids well developed, partly covering pupil. Maxillary not concealed. Snout longer than eye. Anterior nostril pore-like, posterior small, lunate, 10 mm. away. Interorbital convex. Preorbital serrae minute. Upper lip terminal, not particularly thick, protractile. Lower jaw with symphysial crest. Bands of fine "teeth" (cilia) in jaws and on palate. Cleft of mouth extending nearly to below eye. Chin-space wide. A broad opercular flap formed by the branchiostegal membrane.

Rostro-dorsal profile gently convex. Scales cycloid with broad membranous edges (or cilia may extend to edge) and few closely-bunched radii. Origin of first dorsal fin slightly nearer snout than root of caudal. Second dorsal, anal, pectoral and caudal fins scaly. Anal origin slightly before level of soft dorsal origin which is above the twenty-third or twenty-fourth lateral scale. Pectoral much shorter than head, reaching ninth body-scale, not reaching below first dorsal. Axillary scales present at first dorsal, pectorals and ventrals, that of pectoral (25 mm.) 2.5 in that fin; that of ventral about half that fin.

Colours in formalin greyish above, white below. Dark streaks along middle of lateral scales form stripes along body. Eye bluish with pale yellowish adipose membranes. A blue mark over pectoral base. Fins mostly dark grey. Pectoral and anal with whitish margins, ventrals white. Upper lip and maxillary grey.

Described from a specimen, 440 mm. in length to caudal fork, or a little over 18 inches (460 mm.) overall; weight, 1 lb. 15 oz. This was figured in "Australian Museum Magazine" (Whitley, 1949, p. 342).



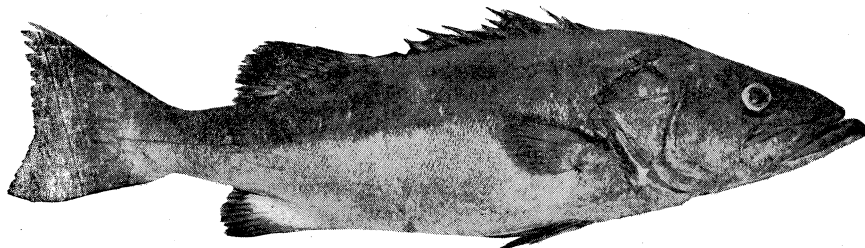
*Loc.*—Kapakapa, Papua; seine net haul in creek at village; 11 October, 1948. M.V. "Fairwind" Fisheries Survey. Field No. C.53. Another specimen, L.C.F. 24 cm. Same data. No. C.52.

Does not agree with any species in Weber and de Beaufort's "The Fishes of the Indo-Australian Archipelago", whose key-characters distinguish it.

Family EPINEPHELIDAE.

*Polyprionum oxygeneios* (Bloch & Schneider, 1801.)

(Figure 4.)



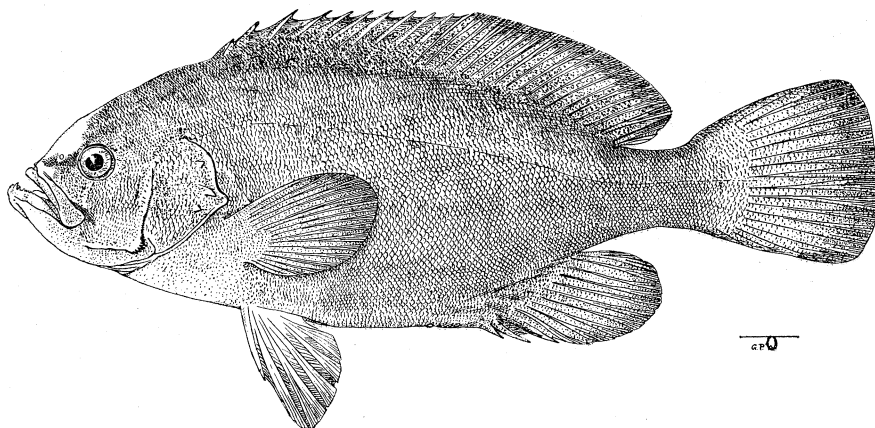
Hapuku, *Polyprionum oxygeneios* (Bloch and Schneider).

A specimen from Port Augusta, South Australia. South Austr. Museum photo.

The "Groper" or Hapuku of New Zealand is an important food fish which is occasionally caught in Australian waters. A 53-lb. specimen was recorded from the Hippolyte Rocks, Tasmania, by Saville-Kent in 1886. The F.I.V. "Endeavour" trawled specimens in the Great Australian Bight, between 100 and 200 fathoms, in Western Australia in March, 1912, and off the continental shelf of eastern Bass Strait, the latter constituting a new record for Victoria. The Hapuku may also be added to the South Australian fauna as a 3-foot specimen weighing 22 lb. was caught in Port Augusta in September, 1948, and was kindly sent to Sydney for my inspection by the Director of the South Australian Museum (Mr. H. M. Hale); this is the specimen figured here.

*Altiserranus woorei*, sp. nov.

(Figure 5.)



Rock Cod, *Altiserranus woorei* Whitley.

Holotype from off Laurieton, New South Wales. G.P.W. del.

A uniformly coloured rock cod with the compressed habit of *Alphestes*, *Aethaloperca*, *Altiserranus* and *Aulacocephalus*, but with 19 dorsal rays, an extraordinarily high number in the family, and diagnostic for the species.

D.xi, 19; A.iii, 10; V.i, 5.

Three opercular spines, upper one further removed from middle one than the latter is from the lowermost. Mouth reaching half-way below eye. Maxillary scaly, without distinct supplemental bone. Villiform teeth on vomer, palatines and jaws, slightly enlarged near symphyses, particularly two short blunt canines in lower jaw. Inner teeth depressible. Mandibular teeth uniserial. Both nostrils rounded.

Form compressed. Scales very small, ctenoid, those of l.lat. with simple tube. Third anal spine longest. Caudal truncate, other fins rounded.

Colour fairly uniform brownish-grey, not much lighter below, and darkest towards ends of fins. Eye dull blue with yellow ring and brown iris. Inside of mouth greyish-white. Interorbital grey, gelatinous.

Described from the holotype, a gutted specimen  $14\frac{1}{2}$  inches from snout to middle caudal rays. Austr. Mus. regd. no. IB.2489.

Loc.—Off Laurieton, New South Wales, late March, 1950.

Named after Mr. J. C. Woore, who has supplied The Australian Museum with rarities from the Sydney Fish Markets over many years, in appreciation of his services.

#### Family TERAPONTIDAE.

Genus *Leiopotherapon* Fowler, 1931.

*Archerichthys*, subgen. nov.

Orthotype, *Archeria jamesonoides* Nichols, 1949.

New name to replace *Archeria* Nichols (Nichols, 1949, p. 5) which is preoccupied by *Archeria* Case (Case, 1915, p. 170), a genus of reptiles. *A. jamesonoides* Nichols, although differing slightly in formulae, is evidently synonymous with my *Leiopotherapon suavis* (Whitley, 1948) from the same river system in northern Queensland. An illustration (Figure 6) of the holotype of *Leiopotherapon (Archerichthys) suavis* is here supplied.

#### *Scortum ogilbyi*, sp. nov.

The following description of a species near *S. hillii* (Castelnau, 1878), about 9 inches long, from the Norman River, Queensland, was originally prepared by the late James Douglas Ogilby, after whom it is now named. It was not separated from *hillii* in Ogilby and McCulloch's "Revision of the Australian Therapons" (Ogilby and McCulloch, 1916, p. 121, Norman River specimens only).

Jaws with a broad band of villiform teeth, and an outer series of close-set, recurved, movable teeth; a small patch of minute teeth on the vomer and an elongate triangular band of similar teeth along each palatine; pterygoids and tongue smooth. Preorbital and preoperculum both coarsely serrated. D.xiii, 12; A.iii, 8 to 10; P.16 to 17. Gill-rakers of moderate length, slender and numerous (8 + 16 to 11 + 24). As for *hillii*, the other differences between the Norman River fish and Castelnau's description are: His "back straight," ours ordinarily convex; his depth 3 in length (s.c.), ours 2.66; his eye 4.5 in head, ours 3.85 to 4; his l.lat. 61, ours 50 with sc. 73 to 75, and tr. 15 to 17/1/28 to 31; his caudal forked, ours probably subtruncate; his second anal spine as long as but stronger than the third, ours with second spine enormously enlarged, and one-fifth longer than third.

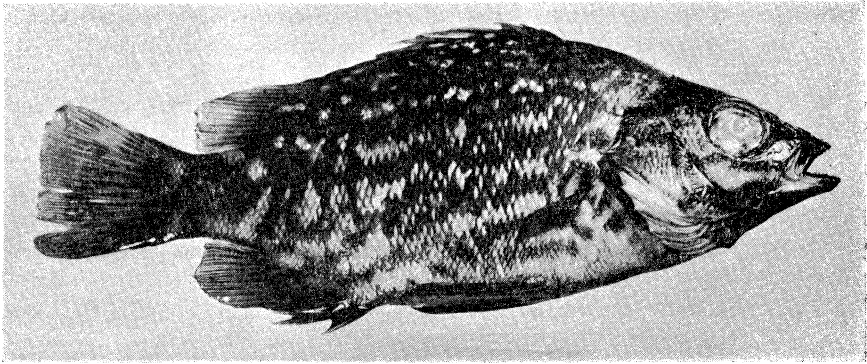


Fig. 6. — Grunter, *Leiotherapon (Archerichthys) suavis* Whitley  
Holotype from Coen district, Queensland. H. Hughes photo.

#### Family AMTHIDAE

##### *Anthias pulchellus caesiopercula*, subsp. nov.

The typical *Anthias pulchellus* Waite, 1899, from deep water off New South Wales and Victoria, has D.x, 16 to 17; A.iii, 8; P. 15-16; l.lat. 41 to 45 and tr. about 5/1/13. From southern Queensland comes a new subspecies which I name *caesiopercula*. It was trawled by the F.I.V. "Endeavour,"  $5\frac{1}{4}$  miles N.E. of Cape Moreton in 50 fathoms, 5 September, 1910, and approaches the genus *Caesioperca* in its formulae which are: D.x, 18-21; A.iii, 7-8; P.14 (rarely 15); l.lat. 42-45 and tr. 6 to 8/1/16 to 18. The holotype (no. E.2878) and thirteen paratypes are unspotted, yellowish-brown in preservative with blue eyes, and range from 4 to 5 inches in length.

##### *Lepidoperca occidentalis*, sp. nov.

D.x, 15; A.iii, 7; P.15; C.15; l.lat. 43. Depth (30 mm.) 3.1, head (36 mm.) 2.6 in standard length (95 mm.). Snout about half eye (13 mm.) which is nearly 2.8 in head. Interorbital (9 mm.) 4.3 in head. Preorbital scaly. Maxillary barely reaching middle of eye, its width more than pupil. More than 23 gill-rakers. Second anal spine less than half head. Caudal emarginate, upper lobe longer. Colour in preservative pale-brown with blue eyes. In some there is a black blotch at tips of soft dorsal and anal fins.

Described from the holotype, the larger of two (no. E.2493) trawled by the F.I.V. "Endeavour" in Western Australia (between Cape Naturaliste and Geraldton in 20 to 100 fathoms). A paratype (Austr. Mus. regd. no. I.12494) with same data and another (I.12400) taken 80 miles west of the meridian of Eucla, Western Australia, 80 to 120 fathoms, March, 1912.

Reaches  $4\frac{3}{4}$  inches in length. Differs in proportions, more concave caudal, more gill-rakers, and fewer fin-rays, etc., from its congeners: *L. coatsii* (Regan, 1913) from Gough Island; *L. inornata* Regan, 1914, from New Zealand; and *L. tasmanica* Norman, 1937, from Tasmania.

#### Family ACINACEIDAE.

##### Genus *Acinacea* Bory de St. Vincent.

*Acinacea* Bory de St. Vincent, Voy. iles Afriq., i, 1804, p. 93 (*vide* Sherborn) and Dict. Class. Hist. Nat., i, 1822, p. 93, pl. cv. Haplotype, *A. notha* Bory, 1804, from tropical Atlantic Ocean.

- Gempylus* Cuvier, Règne Anim. ed. 2, ii, April, 1829, p. 200. Haplotype, *G. serpens* Cuvier. Variants: *Gempris* Voigt, 1832 and *Gempylus* Swainson, 1839.
- Lemnisoma* Lesson, Voy. Coquille, Zool. ii, 1, 1830, p. 160. Haplotype, *L. thyrsoitoides* Less. from Paumotus.
- Acinaces* Agassiz, Nomencl. Zool. 1846, Index Univ. Emend. of *Acinacea*, not *Acinaces* Gerstaecker, 1858, in Coleoptera.
- Lemnisosoma* Agassiz, Nomencl. Zool. 1846, Index Univ. Emend. for *Lemnisoma*.
- Lucoscombrus* Van der Hoeven, Handb. Dierkunde, Amsterdam, ii, 1855, p. 367 (*vide* Neave); Handbk. Zool. (trans. Clark) ii, 1858, p. 161. Logotype, *L. serpens* (Cuv.), selected by Whitley, Rec. Austr. Mus., xvii, 1929, p. 119.
- The 27 to 32 dorsal spines distinguish this genus from all other "Gempylidae."

#### *Acinacea notha* Bory.

- "*Serpens marinus*" Sloane, Voy. Jamaica, i, 1707, p. 26, pl. i, fig. 2. About Tropic of Cancer—*vide* Fowler, Acad. Nat. Sci. Phil. Monogr. vi, 1944, pp. 75, 295, 422, 463 and 499, pl. II (q.v. for synonymy, etc.).
- Acinacea notha* Bory de St. Vincent, Voy. iles Afriq., 1804, p. 93; Diet. Class. Hist. Nat., i, 1822, p. 93, pl. cv. Tropical Atlantic Ocean.
- Gempylus serpens* Cuvier, Règne Anim. ed 2, ii, April, 1829, p. 200. On Sloane. *Id.*, Valenciennes, Discip. ed., 1841, p. 121, pl. xlix, f.2. *Id.*, Gunther, J. Mus. Godeffr., 1873, pl. LXVIII, Figure B, and later authors.
- Lemnisoma thyrsoitoides* Lesson, Voy. Coquille, Zool. ii, i, "1830" = 1831, p. 160. Paumotus.
- Scomber serpeas* Cuvier and Valenc., Hist. Nat. Poiss., viii, "1831" = Jan., 1832, p. 208. *Ex* Solander, ms, Near Canary Islands, 22nd Sept., 1786.
- Gempylus coluber* Cuvier and Valenc., Hist. Nat. Poiss., viii, "1831" = Jan., 1832, p. 211. Tahiti.
- Lucoscombrus serpens* Van der Hoeven, Handb. Dierkunde (Amsterd.), ii, 1855, p. 367.
- Gempylus ophidianus*, Poey, Mem. Hist. Nat. Cuba ii, 1861, p. 246, pl. xviii, fig. 1. Cuba, *vide* Fowler, Proc. Acad. Nat. Sci. Philad. 1904, p. 767.
- Acinacea notha* has priority over the later synonymy.

#### Genus *Leionura* Bleeker, 1860.

The generic name *Thyrsoites* was first formally introduced by Lesson (Voy. Coquille Zool. ii, 1, "1830" = 1831, p. 158, pl. xv. Haplotype, *T. lepidopodea* Cuvier MS. from Brazil and Atlantic Ocean), the earlier "Les Thyrsoites" of Cuvier's Règne Animal (Ed. 2, ii, April, 1829, p. 200) being a vernacular name only.

*Thyrsoites* is usually quoted from Cuvier and Valenciennes (Hist. Nat. Poiss., viii, "1831" = Jan., 1832, p. 196, with *Scomber atun* Euphrasen as type) but Lesson's name, with *T. lepidopodea* (Cuv. and Val. "1831" = Jan., 1832, p. 205, pl. 220) as genotype

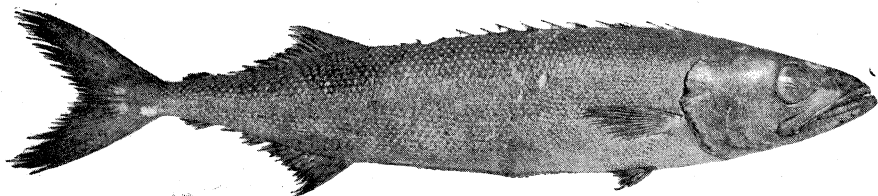
is earlier. *Thyrsitops* Gill, 1862 (type also *T. lepidopoidea*) thus falls as a synonym of *Thyrsites* Lesson and the *Thyrsites* of Cuvier and Valenciennes and authors (*non* Lesson), with genotype *T. atun*, may be called *Leionura* Bleeker (Nat. Tijdschr. Ned. Ind., xxi, 1860, p. 68, *ex* Kuhl and Van Hasselt, MS. Haplotype *L. esox* Bleeker = *Thyrsites atun* sensu lato); see Whitley (Rec. Austr. Mus., xviii, 1931, p. 150) for other synonymy.

Forest and Legendre, Bull. Inst. Oceanogr. Monaco, 966, 1950, pp. 5 *et seq.*, have given a modern account of "*Thyrsitops lepidopoides*", which should now be called *Thyrsites lepidopodea* (Lesson).

#### Family RUVETTIDAE.

#### *Ruvettus tydemani* Weber, 1913

(Figure 7.)



Oil Fish, *Ruvettus tydemani* Weber.  
A specimen from Victoria. H. Hughes photo.

*Ruvettus tydemani* Weber, Siboga Exped., lvii, Fische 1913, p. 401, pl. viii, fig. 4, Binongka Island, East Indies.

An Oil Fish or Palu was trawled in 50 fathoms, about 100 miles south of Gabo Island, Victoria, in March, 1948. It has been recorded and illustrated in the Australian Museum Magazine (ix, 1948, p. 256 and figures) but the following technical characters are noteworthy.

D. xv, 17 plus 2; A.18 plus 2, its origin below second dorsal ray; P.2, 12, reaching below seventh dorsal spine; V.i, 5; C. with 15 branched rays. L.lat. c, 93; l.tr. c, 43 (14/1/28 behind pectoral); 34 abdominal scutes.

Head (203 mm.) 3.9 in length to caudal fork (805 mm.), height (148 mm.) 5.4 in same. Total length 34 $\frac{3}{4}$  inches, weight 8 $\frac{1}{4}$  lb. Depth of posterior nostril (6 mm.) about 6 in orbit. Twenty-six teeth in upper jaw.

Left eye: Horizontal diameter, 36 mm.; vertical diameter, 39 mm.

Right eye: Horizontal diameter, 37 mm.; vertical diameter, 41 mm.

Thus eye about 5 in head. Maxillary (111 mm.) barely reaching below posterior margin of eye; its depth, 18 mm. Snout, 70 mm.; interorbital (53 mm.) 3.8 in head; caudal peduncle 31 mm. wide and 35 mm. deep.

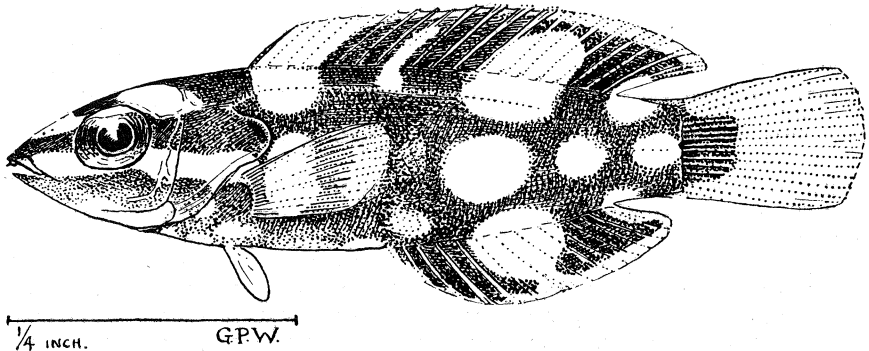
Austr. Mus. regd. no. IB.2039.

It differs from *R. whakari* (Griffin), 1927, p. 146, pl. xv, fig. 7. Bay of Plenty, New Zealand) in fin and scale-counts, in having a keel of abdominal scutes, spines extending some distance before the eyes, ventrals farther back in relation to pectoral base, and slightly different proportions.

## Family CORIDAE.

Genus *Coris* Lacepede, 1802.*Coris cyanea* Macleay.

(Figure 8.)



Double Head, *Coris cyanea* Macleay.  
 Juvenile from Lord Howe Island. G.P.W. del.

*Coris cyanea* Macleay, Proc. Linn. Soc. N.S. Wales, vii, April, 1883, p. 588. New Guinea: Type in Australian Museum. *Id.*, Whitley, Austr. Zool., viii, 1937, p. 227, pl. xiii, Figure 3 (Middleton Reef).

*Coris ayyula* Ogilby, Mem. Austr. Mus., ii, 1889, p. 68. (Lord Howe Island; changes with growth.) Not *C. ayyula* Lacépède, 1802, from Mauritius.

The accompanying figure shows the smallest known Doublehead from Lord Howe Island. It is 0.73 inches overall and has the following characters.

D.ix, 12; A.iii, 12; P.2, 12; C.13. Though scales are developed, the l.lat. is not complete. Head (5.8 mm.) 2.5, depth (4 mm.) 3.6 in standard length (14.6 mm.). Eye (1.8 mm.) longer than snout depth of caudal peduncle, 2.3 mm.; pectoral, 3.5 mm.; total length, 18.5 mm. The ground-colour, after long preservation in alcohol, is chocolate-brown with light yellow spots on top of head, sides of body, and fins, as figured, and light yellow bands along sides of head. The ventral fin is inserted well forward and does not reach half-way to vent; the last anal rays are rather short. Austr. Mus. regd. no. IA.2419 (smaller specimen).

The Australian Museum has several larger specimens showing that this juvenile colour-phase, with some variation in pattern, occurs in fish up to at least 66 mm. in total length. These have D. viii to ix, 12; A.iii, 12; P.2, 12; C.12 to 13. L.lat. 63 to 65 to hypural (46 to 47 along top portion of l.lat.); l.tr. 4 to 5/1/25 to 28. There is of course no bump on the head. Ogilby (1889, p. 69), in an excellent review of the colour-variation with growth, mentions a 4-inch specimen which is not very different from the above juveniles.

It seems then that the Doublehead starts life in rock-pools and maintains this juvenile coloration until about 10 cm. long. The colouring is more uniform at 20 cm. or so, and the bump on the head probably does not develop before about 40 cm. The adult may reach 142.5 cm. and exceed 100 lb. in weight, a very different animal from the juvenile.

The Doublehead of Lord Howe Island has usually been named *Coris ayygula*, one of Lacépède's species from Mauritius which has a number of nominal synonyms (see Weber and Beaufort, 1940, p. 247). The Australasian counterpart has been named *cyanea* by Macleay.

Klunzinger (1871, p. 539) was of the opinion that *Labrus cingulum* Lacépède was the young of *Coris ayygula* and his lead has been followed by later authors except Ogilby, and Gunther (1909, pp. 279–280), so that two very differently coloured fishes, with identical fin and scale-counts, have been regarded as the young of *Coris ayygula*, sensu lato. They differ as follows:—

- A. Generally light-coloured with a couple of red saddle-marks on back and head dark-spotted. Dorsal fins with dark ocelli and other ornamentation ..... *cingulum*  
 AA. Dark-coloured with large light blotches. No dark spots on head. No marked ocelli on dorsal ..... Lord Howe I. juveniles.

According to Klunzinger, the *cingulum* form reached about 26 cm. and became *ayygula* at about 30 cm., but Gunther (l.c.) gave *cingulum* a maximum of 10 inches and Bennett, in his "Fishes of Ceylon" says his *Labrus aureovittatus* (a synonym of *cingulum*) grows to 18 inches. J. L. B. Smith, in "The Sea Fishes of Southern Africa" (1949, p. 292, pl. 101, figure 806 and text-figure as juvenile *Coris angulata*) figures the *cingulum* form in colour and in line from specimens  $4\frac{1}{2}$  and 5 inches long. The smallest New Caledonian example of this form, from Dr. Catala, is about  $\frac{3}{4}$  inch long and has the dark spots on the head, two red patches on the back each with black ocellus above on the dorsal fin, and a black crescent down the caudal base. Both *cingulum* and the juveniles I identify as *cyanea* are found at Lord Howe Island and specimens of the same length show the two very distinct patterns so that they are evidently separate species, and I consider that *cingulum* is a "good" species which should be removed from the synonymy of *ayygula*, whereas the Lord Howe juvenile here figured is evidently the young of the Doublehead as identified by Ogilby. The late A. R. McCulloch, who collected this and other specimens, was of the same opinion.

Genus *Hemicoris* Bleeker, 1861.

*Hemicoris pallida* (Macleay).

*Coris pallida* Macleay, Proc. Linn. Soc. N.S. Wales, vi, July, 1881, p. 100. Endeavour River, Queensland.

*Coris papuensis* Macleay, Proc. Linn. Soc. N.S. Wales, viii, July, 1883, p. 275. Southeast New Guinea.

*Coris coronata* De Vis, Proc. Linn. Soc. N.S. Wales, ix, March, 1885, p. 883. Murray Island, Queensland.

*Hemicoris pallida* Whitley, Gt. Barrier Reef Exped. Sci. Rept., iv, 9, 1932, p. 294, figure 4.

*Coris papuensis* and *C. coronata* are evidently hitherto unnoticed synonyms of the above species.

Family KRAEMERIIDAE.

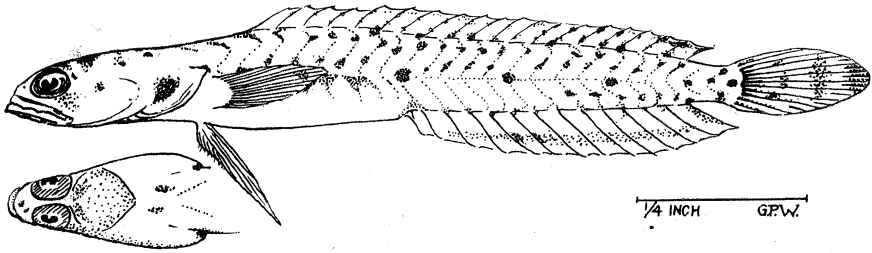
*Parkraemia*, gen. nov.

Orthotype, *P. ornata*, sp. nov.

A genus of small sand-inhabiting fishes which comes down to *Kraemia* in Schultz's key to the family Trichonotidae (Schultz, 1943, pp. 261–262) but differs from that genus in having the chin normal in form, not produced like a scoop, in having many more pectoral rays, and in its ornate coloration. Since Schultz's revision, Fowler (Fowler 1943, p. 86, figure 22) has named *Gobitrichinotus*, which has a longer trunk than *Parkraemia* and other differences in proportions and pattern, and Beaufort (1948, p. 476) has described *Apodocreedia* which has no ventral fins and is very different in all respects.

*Parkraemia ornata*, sp. nov.

(Figure 9.)

Sand Fish, *Parkraemia ornata* Whitley.

Holotype from Narrabeen, New South Wales. G.P.W. del.

Head (7 mm.) 3·8, depth (3·3 mm.) 8·1 in standard length (27 mm.). Trunk and head (14 mm.) more than tail without caudal (11·5 mm.). Pectoral length, 4 mm. Eye little over 1 mm. D.c. 4, 16; A.c. 12? P.c. 15. V.i, 5. C.c. 10. Myomeres 23. No l.lat.

Upper profile rounded, lower rather flat. Head naked. Eyes large. Interorbital very narrow with a mucus tube occupying almost all of it. Preoperculum round, spineless, striated; operculum with acute tip. Lower jaw projecting beyond upper. Mouth extending to behind eye, with a row of fine teeth in each jaw. No enlarged canines. Gill-slits wide, restricted to sides, separated by narrow isthmus. Form elongate, rounded anteriorly, compressed posteriorly. Body naked. No lateral line. Dorsal originating over hinder half of pectoral, ceasing before caudal peduncle. Paired and caudal fins pointed. Fifth (innermost) ventral rays longest.

Colour, pale brownish-yellow with conspicuous dark reddish-brown spots, widely spaced and irregularly shaped on head, body and fins, as figured. Four spots between mandibular rami, otherwise ventral surface is nearly all plain pale-yellowish. Five or six dark round spots along median line of side.

Described (and figured) from the holotype, a specimen 27 mm. in standard length or 33 mm. (1·3 inches) overall. Austr. Mus. regd. no. IA.3777.

*Loc.*—Narrabeen lagoon, near Sydney, New South Wales; netted by the author, December, 1928.

A slightly larger paratype (regd. no. I.8099), 1½ inches long, was obtained in the same lagoon by A. F. Basset Hull in 1907.

## Family DIADEMICHTHYIDAE.

Genus *Diademichthys* Pfaff, 1942.

*Diademichthys* Pfaff, Vidensk. Medd. Dansk. nat. Foren., cv, 9 May, 1942, p. 413. Orthotype, *D. deversor* Pfaff.

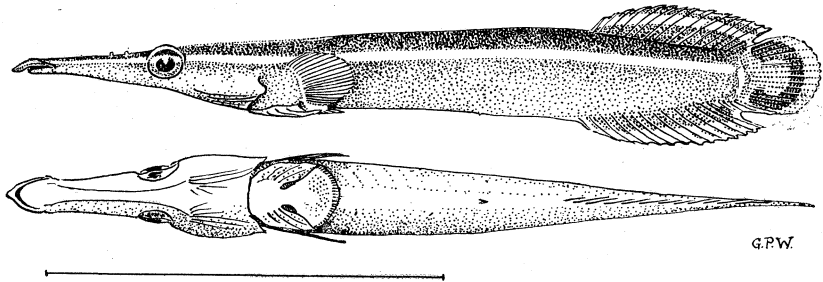
*Coronichthys* Herre, Stanford Ichth. Bull., ii, 4, 24 August, 1942, p. 120. Orthotype, *C. ornata* Herre.

Pfaff's name has three months' priority over Herre's for this remarkable Clingfish which lives in the protection of sea-urchins.



**Diademichthys lineatus** (Sauvage).

(Figure 10.)



Clingfish, *Diademichthys lineatus* (Sauvage).  
A specimen from New Caledonia. G.P.W. del.

*Crepidogaster lineatum* Sauvage, Bull. Soc. Philom. Paris, (7) vii, 1882, p. 158. New Caledonia.

? *Diademichthys deversor* Pfaff, *loc. cit.*, p. 413, pl. iii and text-figures 1-3. Java Sea and Mauritius.

? *Coronichthys ornata* Herre, *loc. cit.*, p. 122, figure 1. Coron, Philippines.

*Diademichthys lineatus* Whitley, Austr. Mus. Mag., x, 1950, p. 127 and figure.

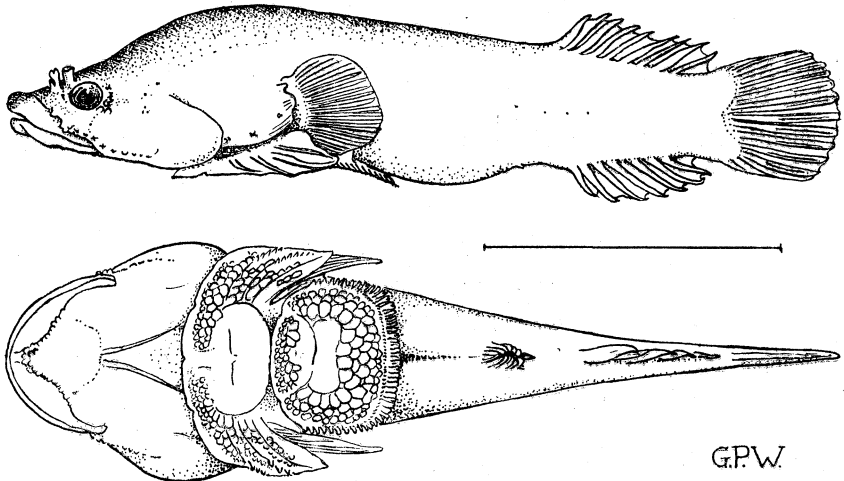
This species is here figured from a virtual topotype, 2 inches long, from Anse Vata, Noumea, New Caledonia (Dr. R. Catala); Austr. Mus. regd. no. IB.2319. It has D.15, A.14, V.4 and C.2 plus 15 plus 2. It appears to differ from *deversor* and *ornatus* as follows:—

- A. 15 to 16 dorsal and more than 20 pectoral rays. Anal origin before that of dorsal. No mark on chin ... *lineatus*  
 AA. 12 dorsal and 18 pectoral rays. Anal and dorsal origins opposite. A dark mark below chin ..... *ornatus*  
 AAA. 13 to 14 dorsal and more than 19 pectoral rays. Anal origin behind that of dorsal. No chin mark. Tail crescent-mark faint ..... *deversor*

## Family GOBIESOCIDAE.

**Trachelochismus pinnulatus** (Bloch & Schneider.)

(Figure 11.)



Clingfish, *Trachelochismus pinnulatus* (Bloch and Schneider).  
Topotypical specimen from New Zealand. G.P.W. del.

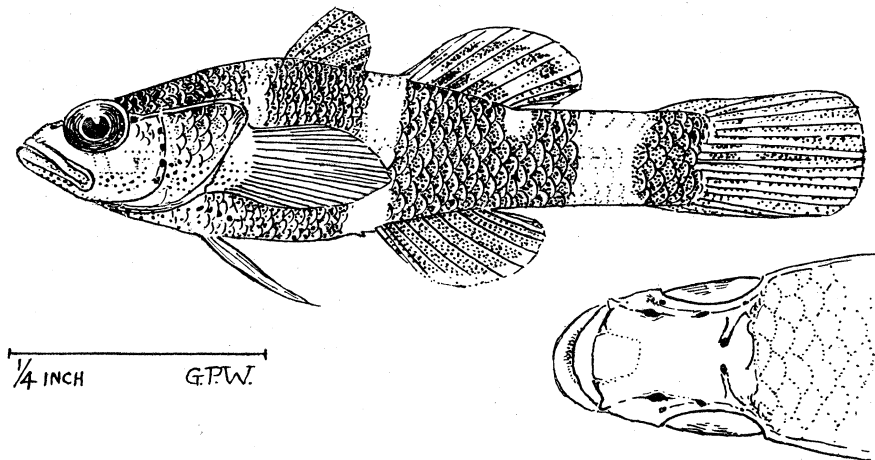
This New Zealand species is figured from a Queen Charlotte Sound topotype (Austr. Mus. regd. no. IB.2439), 70 mm. long, with D.9, A.7, V.4, C.10 plus short lateral rays.

Family ELEOTRIDAE.

Genus *Lindemanella* Whitley, 1935.

*Lindemanella iota* Whitley.

(Figure 12.)



Gudgeon, *Lindemanella iota* Whitley.

Holotype from Lindeman Island, Queensland. G.P.W. del.

*Lindemanella iota* Whitley, Rec. Austr. Mus., xix, 1935, p. 241. Lindeman Island, Queensland; freshwater. Holotype in Australian Museum. *Id.*, Koumans, Zool. Meded., xxii, 1940, p. 170.

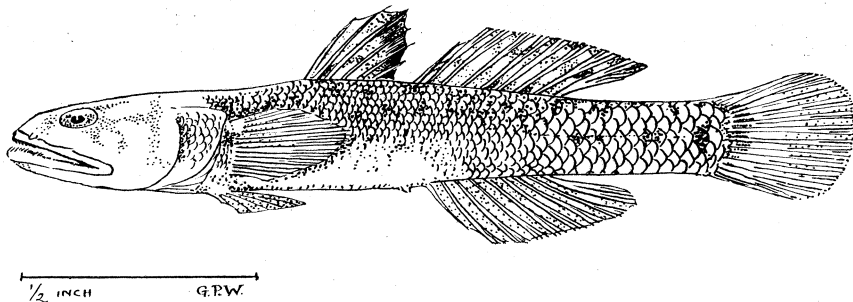
The holotype of this species is now figured for the first time. Koumans thought this might be the young of *Ophiocara aporos* (Bleeker) but the coloration (recalling that of *Brachyogobius* spp.) is very different, scales do not extend far forward over the interorbital, and there are more than two preopercular pores on each side.

Family GOBIIDAE.

Genus *Waiteopsis* Whitley, 1930.

*Waiteopsis paludis* Whitley.

(Figure 13.)



Goby, *Waiteopsis paludis* Whitley.

Holotype from Port Hacking, New South Wales. G.P.W. del.

*Waiteopsis paludis* Whitley, Austr. Zool., vi, 1930, p. 122. Gundamaian, Port Hacking, N.S. Wales. Types in Australian Museum. *Id.*, Koumans, Prelim. Revis. Gobioid, 1931, p. 162. *Id.*, Whitley, Fish. N.S.W. (McCulloch), ed. 3, 1934, supplement. *Id.*, Koumans, Zool. Meded., xxii, 1940, p. 169. *Id.*, Ivey, Proc. Roy. Zool. Soc. N.S. Wales, 1949-50 (2 April, 1951), p. 55 (habits).

*Ellogobius abascantus* Whitley, Rec. Austr. Mus., xx, 1937, p. 17, figure 4. Bateman's Bay, N.S. Wales. Types in Australian Museum. *Id.*, Koumans, Zool. Meded., xxii, 1940, p. 171.

The holotype of *Waiteopsis paludis* is illustrated here; apparently *Ellogobius abascantus* is generically and specifically synonymous, the differences in scale-counts, extent of maxillary, and shape of dorsal fin, etc., evidently being due to growth and variation or sex.

#### Family ECHENEIDAE.

##### *Echeneis squalipeta* Daldorf.

*Echeneis squalipeta* Daldorf, Skr. nat. Selsk. (Copenhagen), ii, 2, 1793, p. 157.

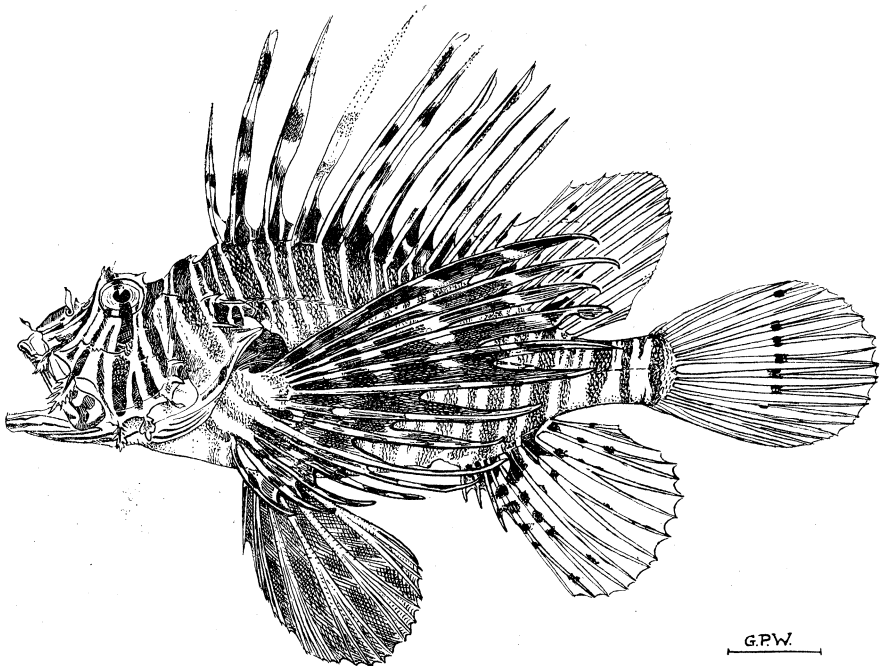
Add to synonymy the overlooked name: *Echeneis tropicus* Andrew Murray, Edinb. New Philos. Journ., (n.s.) iv., 1856, p. 287, figures 1-3, preoccupied by *E. tropica* Donndorff, Zool. Beytr., iii, 1798, p. 321, which is a *Phtheirichthys*.

#### Family SCORPAENIDAE.

##### Subfamily PTEROINAE.

##### *Pterois volitans castus*, subsp. nov.

(Figure 14.)



Butterfly Cod, *Pterois volitans castus* Whitley.

Holotype of subspecies from Port Hedland, Western Australia. G.P.W. del.

The Butterfly Cod *Pterois volitans* (Linné) is a very well-known fish but its geographical variations have been little studied. In The Australian Museum, Western Australian specimens are easily distinguishable from typical *volitans* by having few (2 to 13) spots on the tail fin instead of very numerous ones. This new subspecies has D, xii, i, II; A, iii, 7; P.14; C.14 and general appearance as here figured from a specimen 180 mm. in standard length or  $9\frac{1}{2}$  inches overall, the largest of a series of six.

The development of supraorbital tentacles and the length of pectoral fins vary considerably, but the constantly plainer posterior fins indicate that a subspecies has developed in Western Australia. Most of the specimens are from Broome but one (with an abnormal left ventral fin of a spine and only three rays) came from the Abrolhos Islands; the figured specimen came from Port Hedland (holotype of subspecies; regd. no. I.12941). All the fourteen pectoral rays are simple and the nape and interorbital are scaly. Japanese specimens of *P. lunulatus* Temminck and Schlegel in The Australian Museum have much lighter ventral fins with dark spots, and have dark lunate marks on the pectorals.

#### **Ranipterois**, gen. nov.

Orthotype, *Brachypterois serrulifer* Fowler = *Ranipterois serrulifer*.

New name for *Brachypterois* Fowler (Proc. U.S. Nat. Mus., lxxxv, 1938, pp. 51 and 79) which is preoccupied by *Brachypterois* Jordan and Seale (Bull. U.S. Bur. Fish., xxv, 1905 (1906), p. 189) which Fowler (Mem. Bern. Bish. Mus., x, 1928, p. 67) made synonymous with *Bathypterois* Gunther.

#### NEW GENERIC NAMES.

The following generic names of fishes are preoccupied. References to literature will be found in Neave's "Nomenclator Zoologicus". The genotypes of the new genera are those of the ones they replace.

*Todarus* Grassi and Calandruccio, 1896 = *Nettodarus*, gen. nov. (Todaridae *olim* = Nettodaridae, nov.). Type, *Nettastoma brevirostre* Facciola, 1887 = *Nettodarus brevirostris*.

*Xiphostoma* Spix, 1829 = *Spixostoma*, gen. nov. (Xiphostomatidae *olim* = Spixostomatidae nov.) Type, *S. cuvieri* (Spix).

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