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STUDIES IN AUSTRALIAN FISHES.

No. 8.*

By

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(Plate i.)

Family SYNGNATHIDAE.

HIPPOCAMPUS *Rafinesque*.

Hippocampus Rafinesque, Caratteri Alc. Gen. Spec. Sicilia, Apr. 1810, p. 18 (type *heptagonus* Rafinesque)—*vide* Jordan, Gen. Fish., i, 1917, p. 79.

Hippocampus Perry, Arcana, May 1810, pl. xviii (*foliatus*)—*vide* Mathews & Iredale, Vict. Nat., xxix, 1, 1912, p. 15.

Authorship and Genotype.—In their paper on Perry's "Arcana" quoted above, Mathews & Iredale gave "a resume of its contents," and drew attention to a number of generic and specific names which had been generally overlooked by later writers. They drew attention to the genus *Hippocampus* which they erroneously believed to have been first published by Perry, with *H. foliatus* as its type. According to Jordan (*supra*), however, the name was used by Rafinesque in his "Caratteri" which was published on 1st April, and therefore preceded Perry's work by one month. Credit of the name *Hippocampus* accordingly remains with Rafinesque, and his species *heptagonus* is its genotype.

Mr. T. Iredale has been good enough to secure for me, through his friend Mr. F. C. Griffin of the British Museum, a typed copy of Perry's notes upon *Hippocampus* in the letterpress relating to plate xviii. These are more curious than useful, and lead one to conclude that this author of last century classified animals by way of external appearances rather than the slower and more tedious study of comparative anatomy. He suggested that *Hippocampus* could scarcely be regarded as a true fish, but might "with more exactitude" be "not improperly" described "as a marine insect." Its head and neck were likened to those parts of a horse, and its tail was compared with the nether end of a mermaid, resemblances which perhaps induced consideration by this erudite naturalist of possible affinities with the mammalia.

Family PEGASIDAE.

PARAPEGASUS NATANS *Linnaeus*.

Parapegasmus natans (Linnaeus) McCulloch, Biol. Res. "Endeavour," iii. 3, 1915, p. 110, fig. 2.

*For No. 7, see "Records," xiii, No. 4, 1921, p. 123.

Locality.—Young Island, Queensland; collected by Dr. W. E. J. Paradise, R.A.N.

A tropical species extending southward to the Swan River in the west, and to Lake Macquarie, New South Wales in the east.

Specimens are in the Australian Museum from Swan River, Western Australia; Gulf of Carpentaria, N. Australia; Bowen, off Double Island Point, Moreton Bay, Queensland; Tuggerah Lakes, New South Wales; Malay Archipelago.

Length to 126 mm.

Family ATHERINIDAE.

RHADINOCENTRUS ORNATUS *Regan*.

Rhadinocentrus ornatus Regan, Trans. Zool. Soc. London, xx, 6, 1914, p. 280, pl. xxxi, fig. 1. *Id.*, Cockerell, Mem. Qld. Mus., iii, 1915, p. 38—scales only. *Id.*, Ogilby, Mem. Qld. Mus., vi, 1918, p. 99—record only. *Id.*, Jordan & Hubbs, Stanford Univ. Series, Monogr. Atherinidae, 1919, p. 27. *Id.*, Messmer, Qld. Nat., iv, 5, 1924, p. 95.

Four specimens of this very interesting fish, 31-39 mm. long, have been presented to the Australian Museum by Mr. H. E. Finckh. They were collected at Boambie Creek, five miles south of Coff's Harbour, New South Wales, and are the first representatives of the species to be made known from the mainland. Those described by Regan were only 25-37 mm. long, and were captured in a pond on Moreton Island, south Queensland. Others have been collected recently from small streams on the same island by Mrs. C. A. Messmer who describes their life-colours in a paper quoted above.

Family BREGMACEROTIDAE.

BREGMACEROS MACCLELLANDI *Thompson*.

Bregmaceros macclellandi (Thompson) Gunther, Challenger Rept., Zool., xxxi, 1889, pp. 22, 25, pl. iii, figs. a-b. *Id.*, Kent, Proc. Roy. Soc. Qld., vi, 1889, p. 240.

In the year 1888, Captain Foley Vereker of H.M.S. "Myrmedon" invited Mr. Saville Kent, Commissioner of Fisheries for Queensland, to accompany him to the Cambridge Gulf, north-western Australia on a surveying cruise. The collections made were examined and recorded by Messrs. C. W. De Vis, C. Hedley, and W. Saville Kent, and in a mere list compiled by the last named author, *B. macclellandi* is recorded from the Cambridge Gulf. The inclusion of this interesting species in the Australian faunal list has remained dependent upon this single unsatisfactory record, the fish having been recognised by no later writer from our waters. It is therefore of special interest to record a second example collected by Dr. W. E. J. Paradise, R.A.N., during a surveying cruise of H.M.A.S. "Geranium."

The single specimen is unfortunately very young, being only 33 mm. long, but the following characters can be made out. D.i/50; the 15th to 30th rays are short but apparently united with the others by membrane. A.53; the 20th to 30th short like those of the dorsal. 5 ventral rays; the two anterior short and branched, the three others simple and very elongate. About 73 scales between the shoulder and the base of the tail. Depth of body 4.5 mm.; length of head 5.5 mm., and diameter of eye 1.5 mm. The eye is largely covered by a transparent membrane. Colour white in formalin, with a narrow grey band which extends backward from the occiput to the base of the tail near the back; fins colourless.

This specimen resembles *B. japonicus* as figured by Tanaka,¹ but the variations recorded in Gunther's excellent study of the species in the Challenger report quoted above, suggest that the Japanese species is not distinct from *B. maccllellandi*.

Locality.—Darwin, Northern Territory; coll. Dr. W. E. J. Paradiice, R.A.N.

Family SERRANIDAE.

CENTROGENYS WAIGIENSIS *Quoy & Gaimard*.

Centrogenys waigiensis (Quoy & Gaimard) Bleeker, Atlas Ichth., vii, 1875, p. 68, pl. 297, fig. 1.

Locality.—Darwin, Northern Territory; collected by Dr. Paradiice. This species has been recorded from various localities on northern coasts, between Freycinet Harbour, Western Australia and Port Mollé, Queensland.

Specimens are in the Australian Museum from Shark Bay; Mapoon (Hedley); Port Curtis (McCulloch); Port Denison (Rainford); and Moreton Bay (Ogilby). Length 124 mm.

Family RACHYCENTRIDAE.

RACHYCENTRON PONDICERIANUM *Cuvier & Valenciennes*.

Elacate nigra (Bloch) Gunther, Brit. Mus. Cat. Fish., iii, 1860, p. 375—part. *Id.*, Day, Fish. India, pt. 2, 1876, p. 256, pl. lv, fig. 2.

Elacate pondiceriana Ruppell, Neue Wirbelth., Fische, 1835, p. 43, pl. xii, fig. 3.

Variation with growth.—A large specimen, 975 mm. long to the end of the middle caudal rays, only differs from smaller examples in the form of its fins, which, because of the prolongation of some anterior or exterior rays, alter in shape with growth. The anterior dorsal and anal rays form a pointed lobe on each fin which is not developed in the young; the pectorals of large specimens are more falcate and the caudal more deeply

¹Tanaka—Fishes of Japan, xi, 1913, p. 190, pl. li, fig. 197.

forked than in smaller ones. These differences are indicated in the figures published by Day of the young and by Ruppell of the adult. The light and dark bands extending along each side of the body, which are so characteristic of younger examples of this species, are scarcely discernible in the large one under discussion, but the sharply defined light area on the abdominal surface is very distinct.

Localities.—The species is not rare, but being largely an inhabitant of the open seas, is not often captured. Specimens are in the Australian Museum from various localities on the coast of New South Wales; Fremantle, Western Australia; and Madras, India—Dr. F. Day's collection. The large example collected by Dr. Paradice was caught between 17° and 19° S. lat., Great Barrier Reef, Queensland.

R. pondicerianum has been recorded from Queensland, New South Wales, and Western Australia.

Family CARANGIDAE.

CARANX GYMNOSTETHOIDES Bleeker.

Carangoides gymnostethoides Bleeker, Nat. Tijdschr. Ned. Ind., i, 1851, p. 364.

Caranx gymnostethoides Gunther, Brit. Mus. Cat. Fish., ii, 1860, p. 431. *Id.*, Day, Fish. India, pt. 2, 1876, p. 217, pl. xlviii, fig. 6.

An example, 455 mm. long from the snout to the end of the middle caudal rays, agrees with Day's description and figure in all but a few unimportant details. The head is tilted a little upward in his figure, which makes the abdominal curve appear greater instead of less than that of the back. In my specimen, the head, including the opercular membrane is 3.3 in the length to the end of the middle caudal rays; depth at the origin of the second dorsal fin 3.6 in the same. D.viii, i/32; A.ii/26.

Locality.—Great Barrier Reef, Queensland, between 17° and 19° S. lat.; Dr. W. E. J. Paradice, R.A.N. coll.

CARANX OBLONGUS Cuvier & Valenciennes.

Caranx oblongus Cuvier and Valenciennes, Hist. Nat. Poissons, ix, 1833, p. 128. *Id.*, Day, Fish. India, pt. 2, 1876, p. 222, pl. li, fig. 1. *Id.*, Ogilby, Mem. Qld. Mus., iii, 1915, p. 134.

Caranx auriga De Vis, Proc. Linn. Soc. N.S. Wales, ix, 1884, p. 539.

Citula gracilis Ogilby, Mem. Qld. Mus., iii, 1915, p. 75, pl. xxiii.

D.viii, i/22; A.ii, i/18; P.i/19; V.i/5; C.17. About 38 scutes on the lateral line.

Length to the end of the middle caudal rays 236 mm. Depth at the origin of the second dorsal (82 mm.) 2.6 in the length to the hypural joint (216); head (60) 3.6 in the same. Eye (15) 1.2 in the snout (18); inter-orbital space (13) 4.6 in the head. Pectoral fin (93) 0.5 longer than the head. Third dorsal spine (27) 8.0, filamentous dorsal ray (126) 1.7, longest gill-raker (7) 30.8 in the length to the hypural joint.

Body much compressed; the upper profile from the snout to the caudal peduncle forms a convex arch, the lower is almost an oblique line from the chin to the origin of the anal fin. Hinder angle of the maxillary reaching beyond the vertical of the anterior border of the eye when the mouth is closed; it is obliquely truncate posteriorly with a large supplemental bone above it. Adipose eyelid forming a narrow rim around the eye which is broadest above the antero-superior angle. Preopercular edge minutely crenulate, its hinder margin subvertical, and the angle broadly rounded. Cheek, upper portion of the operculum, and the temporal region with small scales; the remainder of the head and a median area reaching backward to the first dorsal spine naked.

Each premaxillary with a band of small teeth which is broadest anteriorly and becomes narrower posteriorly, a few of the outer teeth are fixed, conical, and larger than the others, among which they are irregularly scattered, but there are no canines. Mandible with a band of small teeth on each side, of which a few outer are rather larger than the others anteriorly. A triangular patch of small teeth on the vomer, a band on each palatine, and others on the tongue. Nineteen gill-rakers on the lower limb of the first gill-arch, they are tuberculiform and spinose anteriorly, but increase in length backward, one at the angle being about half as long as the eye.

The body is almost entirely covered with small scales, but the breast is naked backward to the ventral fin; this naked area is sharply defined above by a patch of scales which extends forward below the base of the pectoral fin to the margin of the gill-opening. The bases of the pectoral fins are naked; the dorsal and anal fins have scaly sheaths covering the bases of the anterior rays. Lateral line arched anteriorly, becoming straight below the eighth dorsal ray; the straight portion is slightly longer than the curved portion. The whole of the straight portion of the lateral line is armed with scutes, which are broadest between the posterior dorsal and anal rays.

Dorsal spines slender, the third longest and a little longer than the post-orbital portion of the head; the eighth spine is isolated between the two dorsal fins and, with the others preceding it, lies in a groove. Seven anterior dorsal rays forming a falciform lobe; the second ray is longest and produced into a filament which reaches backward to a little beyond the middle of the upper caudal lobe. Anal spines small; six anterior anal rays forming a falciform lobe, the first ray is considerably longer than the others. Pectoral falcate, reaching beyond the angle of the lateral line. Ventral fin inserted behind the base of the pectoral, and a little in advance of the vertical of the origin of the first dorsal; the spine is slender and much shorter than the first ray. Caudal broadly forked.

Colouration.—Silvery below, light brownish-grey above; short dark oblique streaks, becoming broader posteriorly, along the top of the sides, they correspond to the spaces between the dorsal rays and fade out on the sheath of the dorsal fin; a row of similar, but very faint, streaks immediately above the anal, each streak corresponding to a ray. Anal, ventral, and pectoral fins white; dorsal fins whitish suffused with smoky-grey, the

edges of the rays dark-tipped, an irregular black blotch at the ends of the third to sixth dorsal rays. Caudal smoky-grey, the ends of the rays darker on the upper lobe than those of the lower. Inner axil of pectoral dusky.

Described from a specimen, 236 mm. long to the end of the middle caudal rays.

Synonymy.—While working at various Carangids in the collection of the Queensland Museum, Ogilby examined the holotype of *Caranx auriga* De Vis and identified it as *C. oblongus* Cuvier & Valenciennes. At the same time, he described and figured a fish from Darnley Island, for which he proposed the new name *gracilis*. This is of rather more slender form than is usual in *C. oblongus*, but is so similar to that species in all other details that I believe it to be referable to the same species.

Localities.—The type of *auriga* was collected at Cairns, Queensland, and that of *gracilis* at Darnley Island, Torres Strait. A fine specimen, 246 mm. long, from the snout to the end of the middle caudal rays, was collected for the Australian Museum at Great Palm Island, near Cairns, by Dr. W. E. J. Paradise, of H.M.A.S. "Geranium."

CARANX STELLATUS *Eydoux & Souleyet*.

Caranx stellatus Eydoux & Souleyet, Voy. Bonite, Poiss., 1841, p. 167, pl. iii., fig. 2. *Id.*, Jordan & Jordan, Mem. Carneg. Mus., x, 1, 1922, p. 40.

Caranx melampygyus Gunther, Brit. Mus. Cat. Fish., ii, 1860, p. 446, and Fische Südsee, v, 1876, p. 133, pl. lxxxvi. *Id.*, Day, Fish. India, 1876, p. 214, pl. 1, fig. 3. *Id.*, Jordan & Evermann, Bull. U.S. Nat. Mus., xxiii, 1, 1903, p. 192, fig. 73. *Id.*, McCulloch, Mem. Qld. Mus., viii, 1, 1924, p. 70, pl. xi, fig. 2.

Record.—Two young examples, 174-203 mm. long to the end of the middle caudal rays, were secured on the Great Barrier Reef, near Townsville, Queensland, by Dr. W. E. J. Paradise, R.A.N., during a surveying cruise of H.M.A.S. "Geranium." The species has not been recognised hitherto from Australian waters.

Nomenclature.—This species has been generally identified as *C. melampygyus* but, according to Jordan and Jordan, the fish which Cuvier and Valenciennes first described under that name is another species. If that supposition be correct, the specimen here recorded from Queensland must be referred to *C. stellatus* Eydoux and Souleyet.

C. stellatus is near *C. forsteri*, but differs in having a smaller eye; it is shorter than the snout in specimens about nine inches long instead of longer than in *forsteri*. The maxillary bone only just reaches the vertical of the middle of the eye in *stellatus* and its breadth is less than half the length of the snout, whereas in *forsteri*, it reaches backward to below the posterior half of the eye and its width is equal to about two-thirds the length of the snout. The interorbital width is much greater and the snout much more obtuse in *forsteri* than in *stellatus*.

NAUCRATES DUCTOR *Linnaeus*.

(Plate i.)

Gasterosteus ductor Linnaeus, Syst. Nat., 10th ed., 1758, p. 295.*Xystophorus* Richardson, Ichth. "Erebus" & "Terror," 1844, p. 52, pl. xxx, fig. 2.*Naucrates ductor* Lutken, "Spolia Atlantica," 1880, p. 504, pl. iii, figs. 14-15.*Seriola quinqueradiata* Lutken, *Ibid.* p. 528, pl. iv, figs. 8-9.

Four young specimens, 22.5–42 mm. long, exhibit remarkable variation and show that the keel on each side of the caudal peduncle which has been regarded as a generic character is not developed in the young. The smallest specimen is a little more advanced than that figured by Lutken (*Spolia Atlantica*, pl. iii, fig. 15). The larger examples are very similar to his fig. 8, pl. iv which he identifies as *Seriola quinqueradiata*, and indicate that his specimen was really the young of *Naucrates*.

Description of youngest specimen.—D. iv, 29; A. ii, 18; V. i, 5; P. 19; C. 17. Depth before ventrals (7 mm.) 2.5 in length to base of middle caudal rays (18); head (7) also 2.5 in the same, its length being equal to the height of the body. Eye very large (3) 2.3 in the head. Height of the longest of the anterior dorsal rays a trifle greater than the length of the eye; first ventral ray (5) 1.4 in the head.

Head brown above, silvery on the sides. Greater part of the body brown, with broad and well-defined silver bands, which are very striking anteriorly but become less conspicuous towards the tail; they do not extend across the dorsal and ventral surfaces as in later stages, but are separated by the brown ground-colour. Black areas are present on the dorsal and anal fins arranged as shown in the figure. A large black patch on each ventral fin, and narrow dark lines extend along single rays in the upper and lower halves of the caudal fin.

Two or three prominent teeth project obliquely forward from the premaxillaries near their symphysis, which is notched on the median line; microscopic teeth form a row on each side of the lower jaw. A bony crest immediately above the supraorbital rim bears two flat spines, and a moveable bone above the shoulder has a basal spine directed obliquely upward and another pointing backward. Preopercular angle produced into a large spine; there is a smaller one above it on the hinder margin, and two in advance of it on the lower margin; an inner crest bears two small spines near the angle. A large, smooth, and concentrically striated bony boss is present on each side of the upper surface of the head near the occiput. Lateral line consisting of a row of simple pores, arched anteriorly, thence descending obliquely to the middle of the sides. Caudal peduncle strongly compressed, without trace of any lateral keel.

This differs from the two younger stages figured by Lutken² from

²Lutken—*Spolia Atlantica*, 1880, pl. iii, figs. 14-15.

specimens 9 and 14 mm. long, only in the reduction of its cephalic spines and development of its colour-marking.

Described and figured (Plate i, fig. 1) from the youngest specimen, 22.5 mm. long, from Shell Harbour, New South Wales.

Localities.—Maroubra Bay, near Sydney; found stranded on the beach by Mr. Thomas Whitelegge (Plate i, fig. 2).

Shell Harbour, New South Wales; collected by Mr. G. McAndrew (Plate i, fig. 1).

Family CHAETODONTIDAE.

CHAETODON SETIFER Bloch.

Chaetodon setifer (Bloch) McCulloch, Rec. Austr. Mus., xiv, 1, 1923, p. 3 (references).

Variation.—A series of eighteen specimens, 57-172 mm. long, shows but little variation in colour-marking, only the dark-edged band on the caudal fin changing its position with growth. In the smaller specimens, it is within the anterior half of the fin, but moves backward as the fish increases in size towards the posterior margin, and remains there even in the largest specimens. The rounded black spot on the dorsal fin, characteristic of *C. setifer*, is fully developed in all my specimens. The filamentous prolongation of the fifth or sixth dorsal ray first appears in specimens about 95 mm. long.

Synonymy.—The relationship of this species and *C. auriga* Forskal has been much discussed, some authors considering it a mere colour-variation of the latter, while others regard the two as distinct species. In a recent paper on some fishes of the Red Sea, Miss R. C. Bamber³ recorded "seven specimens, forming a complete series from *C. setifer*, Bloch, with a distinct black spot on soft dorsal, to *C. auriga* Forskal, with no trace of a spot." On the other hand, Jordan and Seale,⁴ maintained that the dorsal ocellus of *setifer*, and other characters, separated that species from *auriga*. My series supports the latter authors' contention. It is possible that the *auriga* form is merely a geographical subspecies restricted to the Red Sea and Indian Ocean.

Localities.—Peart Reef, off Innisfail, Queensland; "Geranium" coll. Holbourne Island, off Port Denison; coll. E. H. Rainford. Iluka, Clarence River estuary, New South Wales; coll. State Fisheries Dept. Specimens are in the Australian Museum from the New Hebrides, Solomon Islands, Samoa, Friendly Islands, Funafuti, and Papua.

C. setifer has been recorded from Sydney by Kner,⁵ Port Jackson by Steindachner,⁶ and as *nesogallicus* from Botany Bay by Gunther⁷; Castelnau⁸ recognised it from Cape York.

³Bamber—Journ. Linn. Soc., Zool., xxxi, 1915, p. 481.

⁴Jordan and Seale—Bull. U.S. Fish. Bureau, xxv, 1906, p. 338.

⁵Kner—Voy. Novara Fische, 1865, p. 98.

⁶Steindachner—Sitzb. Akad. Wiss. Wien., liii, 1866, p. 435.

⁷Gunther—Voy. Challenger, i, 6, 1880, p. 27.

⁸Castelnau—Res. Fish. Austr., 1875, p. 13.

GONOGHAETODON TRIANGULUM *Cuvier & Valenciennes.*

Tetragonopterus (Gonochaetodon) triangulum (Cuv. & Val.) Bleeker, Atlas Ichth., ix. 1878, p. 53, pl. cccclxxiv, fig. 1.

Locality.—Three specimens, 105-125 mm. long, were collected by Dr. Paradise on Peart Reef, off Innisfail, Queensland. They are the only representatives of this monotypic genus so far made known from Australian waters. Numerous specimens are in the museum collection from Papua, New Hebrides, Solomon Islands, and New Britain.

Family AMMODYTIDAE.BLEEKERIA VAGA *McCulloch & Waite.*

Bleekeria vaga McCulloch & Waite, Trans. Roy. Soc. S. Austr., xl, 1916, p. 447, pl. xliii, fig. 1.

A young example, 65 mm. long, is probably referable to this species. It is unfortunately somewhat shrivelled and the rays of the dorsal and anal fins cannot be satisfactorily counted. Comparison with the typical specimen, which is from Lord Howe Island, leads to the belief that the two specimens represent the same species, though the latter is robust and subcylindrical, while the young specimen, being shrunken, is compressed.

Locality.—Shell Harbour, New South Wales.

No species of the family Ammodytidae has been previously recognised from Australia.

Family SCORPAENIDAE.SCORPAENA CRUENTA *Richardson.*

Scorpaena cruenta Richardson, Ann. Mag. Nat. Hist., ix, 1842, p. 217.
Id., McCulloch, Rec. W. Austr. Mus., i, 2, 1912, p. 94.

Scorpaena militaris Richardson, Ichth. "Erebus" & "Terror," 1845, p. 22, pl. xiv, figs. 1-2.

I have stated in the paper quoted above (1912) that this species is not common in New South Wales waters. Several small specimens, 46-58 mm. long, were collected by Mr. G. McAndrew at Shell Harbour, where the species is common in rock-pools. Another was collected by Mr. Charles Hedley at Narooma, New South Wales. A fine series of eighteen specimens, the largest of which is 155 mm. long, was collected by Mr. Hedley at various localities on the eastern coast of Tasmania.

SCORPAENA BYNOENSIS *Richardson.*

Scorpaena bynoensis Richardson, Ichth. "Erebus" & "Terror," 1845, p. 22, pl. xiv, figs. 3-4.

Sebastapistes laotale Jordan & Seale, Bull. U.S. Fish. Bur., xxv, 1906, p. 376, fig. 72.

Locality.—Cape Wessel, Arnheim Land; collected by Dr. Paradise.

A common species in North and West Australia. Numerous specimens are in the Australian Museum from Port Darwin, Gulf of Carpentaria, Murray Island, St. Crispin Reef, Dunk Island, New Hebrides, and Samoa.

Family CONGIOPODIDAE.

CONGIOPODUS *Perry*.

Congiopodus Perry, *Arcana*, 1810, pl. lv and letter-press (*C. percatus* Perry), *vide* Marschall, *Nomencl. Zool.*, 1873, p. 71, and Mathews & Iredale, *Vict. Naturalist*, xxix, 1, 1912, p. 15.

Congiopodus (Perry) *vel Agriopus* (Cuvier) Gunther, *Proc. Zool. Soc.*, 1871, p. 659.

Congiopodus Gill, *Mem. Acad. Sci. Wash.*, vi, 1893, p. 118—name only.

Les Agriopes Cuvier, *Regne Anim.* (2), ii, 1829, p. 168 (*Blennius torvus* Walbaum).

Agriopus Gunther, *Brit. Mus. Cat. Fish.*, ii, 1860, p. 137.

Cephalinus (Gronow) Gray, *Cat. Gronow's Fish. Brit. Mus.*, 1854, p. 159 (*Blennius torvus*).

Congiopus Regan, *Ann. Mag. Nat. Hist.*, (8), xi, 1913, p. 179. *Id.*, Jordan, *Gen. Fish.*, ii, 1919, p. 170. *Id.*, Waite, *Rec. S. Austr. Mus.*, ii, 2, 1922, p. 215.

Congiopodus vel Congiopus.—The confusion which brought about such an imposing array of synonyms as is set forth above is largely due to the great rarity of Perry's "*Arcana*," which, so far as is known, is the earliest publication including any reference to this genus. In their resumé of Perry's work, Mathews and Iredale record the following note.—

"Plate LV., figuring *Congiopodus percatus*, appears to introduce a new generic name which has not hitherto been noticed."

Being unfamiliar with ichthyological literature, they overlooked Gunther's paper in 1871 (*supra*) in which the validity of *Congiopodus* was discovered in association with *Agriopus*, and Gill's use of Perry's name for a New Zealand species in 1893. Jordan⁹ unfortunately quoted *Congiopus* under his notice of Perry's paper, while Waite¹⁰ definitely refers to *Congiopodus* as a mis-spelling. Gunther's notes upon Perry's "*Arcana*" show clearly that he had a copy of that work before him, while Mr. Iredale informs me that he examined the volume in the British Museum as well as that in Mr. Mathews' library. Under these circumstances, it is evident that *Congiopodus* must be accepted as the name originally used by Perry.

⁹Jordan—*Genera of Fishes*, ii (Leland Stanford Jr. Univ.), 1919, p. 170.

¹⁰Waite—*Rec. S. Austr. Mus.*, ii, 2, 1922, p. 215.

Family GOBIIDAE.RHINOGOBIUS NEBULOSUS *Forsk.*

Rhinogobius nebulosus (Forsk.) McCulloch & Ogilby, Rec. Austr. Mus., xii, 10, 1919, p. 245.

Locality.—Thursday Island; collected by Dr. Paradise.

Distribution.—Northern Australia, from Shark Bay, W. Australia to Cape York and Torres Strait. Specimens in the Australian Museum from Shark Bay, Port Darwin, Cape York, Thursday Island, Murray Island Cooktown, Madras.

Length 117 mm.

Family BLENNIIDAE.SALARIAS BELEMNITES *De Vis*.

Salarias nitidus Gunther (part), Fische Südsee, vi, 1877, p. 200, pl. cxiii, fig. g. *Id.*, Seale, Occ. Pap. Bishop Museum, i, 3, 1901, p. 127 (not *S. nitidus* Gunther, Brit. Mus. Cat. Fish., iii, 1861, p. 243, and—part—Fische Südsee, vi, 1877, p. 200, pl. cxiii, fig. f.).

Salarias belemnites De Vis, Proc. Linn. Soc. N.S. Wales, ix, 1884, p. 695.

Alticus evermanni Jordan & Seale, Bull. U.S. Fish. Bureau, xxv, 1905, p. 422.

Identity.—The holotype of *Salarias belemnites*, which is preserved in the Queensland Museum, is a dried skin, very badly filled out, and with all its fins much broken and incomplete. So few specific characters are retained that, in the absence of a second Queensland representative of the species, its identity could not be determined. I now have a fine example, 157 mm. long, from the "Geranium" collection, which I regard as certainly referable to De Vis' species; and comparison with others from Samoa and the New Hebrides further establishes its identity with the species figured by Gunther as *S. nitidus* (part—*loc. cit.*, pl. cxiii, fig. g).

Synonymy.—The name *S. nitidus* was originally based upon Chinese specimens described by Gunther in 1861, in which the margin of the dorsal fin is without a notch between the spinous and rayed portions. Gunther later, 1877, identified Samoan specimens as the same species, although they had a deep notch in the dorsal margin and their colour-marking was somewhat different from that of the Chinese types. He fortunately published notes and figures of both typical Chinese and Samoan specimens in his "Fische Südsee," 1877, p. 200, pl. cxiii, figs. f and g. An examination of these notes and figures led Jordan and Seale to the conviction that two distinct species were represented, and they accordingly proposed the name *evermanni* for the Samoan form. As stated above, however, the Queensland species, *S. belemnites*, 1884, proves to be identical with the Samoan *evermanni*, 1905, and as De Vis' name appeared over twenty years before that of Jordan & Seale, it must take precedence.

Locality.—Gibson Reef, near Townsville, Queensland; collected by Dr. W. E. J. Paradise.

SALARIAS MELEAGRIS *Cuvier & Valenciennes*.

Salaria meleagris (Cuv. & Val.) Gunther, Fische Südsee vi, 1877, p. 208, pl. 116, fig. d. *Id.*, McCulloch & McNeill, Rec. Austr. Mus., xii, 2, 1918, p. 16.

Locality.—Cape Wessel, Arnheim Land; collected by Dr. W. E. J. Paradise.

The species is recorded from Port Darwin and various localities in Queensland south to Caloundra.

Length 124 mm.

Family BATRACHOIDIDAE.

CORYZICHTHYS DIEMENSIS *Le Sueur*.

Batrachus diemensis Richardson, Ichth. "Erebus" & "Terror," ii, 1845, p. 17, pl. viii, figs. 1-2.

Locality.—Port Darwin; collected by Dr. Paradise.

A common species recorded from many localities on the northern Australian coasts, extending southward to Houtman's Abrolhos on the west and Moreton Bay on the east. Specimens are in the Australian Museum from Fremantle, Port Hedland, Port Darwin, Gulf of Carpentaria, Murray Island, and Brisbane River.

It attains a length of 165 mm.

EXPLANATION OF PLATE I.

Naucrates ductor Linnaeus.

- Fig. 1. A young specimen, 22.5 mm. long, from Shell Harbour,
New South Wales.
- „ 2. An older specimen, 42 mm. long, from Maroubra, New
South Wales.

