

R. M. JOHNSTON'S MEMORANDA RELATING TO THE
FISHES OF TASMANIA.

By
GILBERT P. WHITLEY,

Ichthyologist, Australian Museum, Sydney. (1)

Plates II-IV.

(Communicated by L. F. Giblin.)

(Read 13th August, 1928.)

Thanks to the kindly interest of Professor T. T. Flynn, I have been allowed to examine and report upon an interesting note-book inscribed "Memoranda relating to the Fishes of Tasmania examined by Robt. M. Johnston." This is an old exercise book, belonging to the library of the University of Tasmania, which contains the original notes from which Robert Mackenzie Johnston wrote his invaluable paper, (2) "General and Critical Observations on the Fishes of Tasmania; with a Classified Catalogue of all the known Species," and is especially important because some sketches therein illustrate the types of Johnston's new species which have not been figured in scientific publications. Most of the notes and drawings were made in the early 'eighties, but one entry, dated 14th March, 1918, concerning the Nannygai (*Trachichthodes affinis*), shows that Johnston was keenly interested in fishes up to the year of his death.

Johnston's notes are mostly still legible and many are transcribed in this paper. Descriptions which have already been published are not however repeated, though quotations are made from some of the newspaper cuttings which had been pasted in the note-book. Such additions and annotations as have been thought advisable are enclosed in square brackets to distinguish them from Johnston's actual notes. I have brought the nomenclature of the species up to date, whilst including the original identifications. References to literature have been added and the notes arranged in an order more in conformity with modern classifications.

(1) By permission of the Trustees of the Australian Museum.

(2) Pap. Proc. Roy. Soc. Tasm. 1882 (1883), pp. 53-144; the description of *Coryphaenoides tasmanica* on p. 143 did not appear in reprints.

Isurus glaucus (Müller & Henle).

Oxyrhina glauca, Müller & Henle, Syst. beschr. Plagiost. 1839, p. 69, pl. xxix. Java.

Isurus glaucus, Waite, Rec. S. Austr. Mus. ii., 1921, p. 21, fig. 27.

[A good pencil sketch of a Blue Pointer Shark is unfortunately without data. This species was first recorded from Tasmania by Cross (3) as *Oxyrhina gomphodon*.]

Clupea bassensis, McCulloch.

Clupea sprattus, Günther, Proc. Zool. Soc. Lond. 1871, p. 672. Not *C. sprattus*, Linn.

Clupea (Pomolobus) bassensis, McCulloch, Zool. Res. Endeavour i., 1911, p. 16, pl. iv., fig. 2. Bass Strait & Tasmania.

Clupea sprattus. D. 15-18. A. 18-20. There are about 11 scutes behind base of ventral fin. Opercular striæ almost obsolete. Pectorals reaching half distance from base to root of V. Head contained in length of body 3 2-3 times, and depth 4 2-3 times. Eye 1-3 length of head. No spots along median band visible. Silvery iridescent. Belly silvery with violet shade; dorsal darker, of a steel-gray colour. Total length 67, body 56, eye 5, depth 12, com. of dorsal 29½, vent. 41. One specimen caught, 6½ inches long, and 1 1-8 deep; sp. of that size preserved. Tamar River, caught at Bar, Launceston, in shrimp-net, March 16, 1880.

Salmo eriox, Linnæus.

Salmo eriox, Linnæus, Syst. Nat., ed. 10, 1753, p. 308; ed. 12, 1766, p. 509. Ex Artedi. Rivers of Sweden.

Salmo trutta, Jordan, Copeia 155, 1926, p. 140.

Salmo fario. A specimen caught in Latrobe Creek, Tasmania, 27 Jan. 1880. 22½ lbs. in weight, 2'9" long, girth 2 feet. Pale pinkish fully developed ova.

Retropinna tasmanica, McCulloch.

Retropinna tasmanica, McCulloch, Rec. Austr. Mus. xiii., 1920, p. 54, pl. xi., fig. 4. Huon River, Tasmania.

Retropinna richardsoni. B. 9. P. 11. D. 12-13. A. 17-19. C. art. long rays 19. Greatest length 3 7-8. Head 5-8. Greatest depth 7-8. Caught in abundance in shrimp-nets in the Tamar, near Launceston, Dec., Jan., Feb.

(3) Cross, Proc. Roy. Soc. V. Diem. Land iii., 1, 1855, p. 81.

Galaxias weedoni, Johnston.

(Pl. II., Fig. 1.)

Galaxias weedoni, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 131. Mersey R., Tas.*Galaxias atkinsoni*, Johnston, *ibid.*, p. 131. Pieman River, Tasmania.*Galaxias weedoni*, Regan, Proc. Zool. Soc. Lond. 1905 (1906), p. 377, pl. xi., fig. 1.*Galaxias weedoni*. D. 11. A. 14. P. 15. Length of head 22; Body 97; Depth, max. 20, least (tail) 8½. Snout 7. Eye 4. Distance from snout to commencement of Pectoral, 25½; Ventral 51; Dorsal 73; Anal 75.*G. atkinsoni*. Pieman River, Tasmania, 28th Nov. '79. T. R. Atkinson.[Note added later:—] Mr. Irving in early May 1894 sent me from Great Lake one of several specimens almost identical with the above, as regards dusky bar markings, but close to the characters of *G. attenuatus* in other respects.*Galaxias truttaceus* (Cuvier).*Esox truttaceus*, Cuvier, Règne Anim., ed. 1, 1816, p. 184, footnote. No loc.*Galaxias truttaceus*, Regan, Proc. Zool. Soc. Lond. 1905 (1906), p. 378, pl. xiii., fig. 4. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1908 (1909), p. iv. (double-mouthed).*G. truttaceus*. D. 11, last nearly double. A. 13. [P.] 15. V. 7. Head broad, depressed. Mr. Seal tells me that this variety is always found high up the mountain slope in broken water, generally seen under stones or lying upon them, not swimming about in still pools as is the habit of the spotted trout found lower down. He is of opinion that the head also is more depressed, while the colour markings are very distinct. The position and rays of fins do not however seem to differ and, if like the Mountain Lake Trout (*G. auratus*), may be hardly [more than] a racial variety.*G. truttaceus* var.? or a distinct species. [This specimen is referable to the "*Forma typica*" of Regan, *loc. cit.* p. 379.] D. 11. A. 14. P. 15-16. V. 7. B. 9. C. long rays 17. Length of head 27, body 118. Depth, max. 26, min. at tail 11. Eye 4½. Snout 6. Distance from snout to commencement of dorsal 80, pectoral 28½, ventral 65½, anal 84. George's Bay.*Galaxias auratus*, Johnston.*Galaxias auratus*, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), pp. 62 & 131. Great Lake, Tasmania. *Id.* Regan, Proc. Zool. Soc. Lond. 1905 (1906), p. 379, pl. xiii., fig. 1.

B. 9. P. 14. D. 11. A. 14. This fish attains a size of about 10 inches. It is of a bright golden hue and almost transparent. The spots too become fewer, rounder, and very light. Mountain Trout, Lake Sorell. Total length 9½, body 8 3-8, head 2½, snout ¾, eye 3-8. Greatest breadth behind orbit nearly 1¼. Maxillary extending to a vertical below posterior of eye. Longest pectoral ray 1 1-8. Longest dorsal ray, the first, 1 1-8; least and last ½. Longest anal ray 1 3-16; least and last ½, nearly.

Prototroctes maræna, Günther.*Prototroctes maræna*, Günther, Cat. Fish. Brit. Mus. v., 1864, p. 382. Southern Australia. *Id.* Saville-Kent, Proc. Roy. Soc. Tasm. 1885 (1886), p. cv. (eggs & development). *Id.* Waite, Rec. Austr. Mus. iv., 1902, p. 265, pl. xli.

B. 6. D. 11. A. 20. P. 14. C. 18 long art. rays. Scales become larger and more regular as they approach the tail; about 17 transverse rows of scales from termination of dorsal to commencement of adipose fin. There appear to be only 6 articulated rays in the ventral fin in Tas. species.

School reported from Kingston by Mr. Swan (about 300), 20 Nov. 1882. One sent has the following characters: D. 11. A. 19. P. 14. V. 6 *branched rays!* as noted above.*Tinca tinca* (Linnæus).*Cyprinus tinca*, Linnæus, Syst. Nat., ed. 10, 1758, p. 321; ed. 12, 1766, p. 526. *Ex* Artedi, Europe.

"La Tanche vulgaire," Cuvier, Règne Anim., ed. 1, ii., 1816, p. 193. Vernacular only.

Tinca vulgaris. B. 3. D. 11. P. 16. A. 9. V. 11. Head 2¾ inches. Length of body, 11 5-8. Total length 13.6 inches. Greatest depth 4 inches; greatest girth 9; depth at narrowest part of tail 1 7-8, girth at do. 4.

Pectorals reaching nearly to origin of ventrals. Ventrals extending to posterior margin of vent. Anal reaching to commencement of caudal rays. Dorsal rays 2½ inches in depth. Commencement of dorsal distant 6 inches from snout.

Contents of stomach—remains of *Bettupnella legrandiana* and *Lymnæa huonensis*.

Specimen 2/2/80 from Longford [sent] by Mr. Wilson, who informs me that they are very abundant there in back-water reaches of the South Esk. I am also informed that the Brown Trout frequently attacks them. The fins are sometimes nearly destroyed by their voracity. I have frequently seen the fins of the Blackfish, *Gadopsis marmoratus*, destroyed in this manner.

[Transportation of Tench from Tasmania to Sydney is mentioned in Proc. Roy. Soc. Tasm., August, 1863, p. 3.]

Seriotelella dobula (Günther).

Neptonemus dobula, Günther, Proc. Zool. Soc. Lond. 1869, p. 429. Tasmania.

Neptonemus dobula. The Mackerel Snotgall or Mackerel Trevally. Large shoals at Dunkley's Point, July 5th, 1884. Four dozen caught, made up of the two species which seem to run together in schools. They are also reported to be abundant on the same day at Kangaroo Pt. where they were found the year previously in numbers.

A great shoal now in the bay, caught 2 or 3 dozen on Garth's Bank; fine size. 14 & 19 May 1883. D.7/1/37-39; A. 2/1/23.

Ten dozen of these fish caught by one man during one evening on Queen's Birthday, 1883. There were thirty boats fishing at Kangaroo Bay, besides large numbers fishing from the wharves. All catching fish in abundance. They move about in schools, bite freely, and when hooked fight spiritedly in a zig-zag movement.

Derwent 28 March 1882. They are tender in the mouth. Large individuals must then be played easily. They were not accompanied by the snotgall [*S. brama*, Günther] as upon the former occasion.

[On another page] D.7/1/37; A.2/1/23. Tip of pectoral not reaching to anus, shorter than head, somewhat rounded. Body elongate, tapering to tail. Eye deep. Total length 8 3-8; Body 7; Head 2; Snout $\frac{1}{2}$; Eye $\frac{1}{2}$; length of Pectoral $1\frac{1}{2}$; height of Body 1 7-8. Caudal deeply cleft.

Paramacrurus australis (Richardson).

Lepidoleprus australis, Richardson, Proc. Zool. Soc. Lond. 1839, p. 100. Port Arthur, Tasmania.

Cælorhynchus mortoni, Ogilby, Proc. Roy. Soc. Tas. 1896 (1897), p. 83. Derwent Estuary, Tasmania.

Cælorhynchus, *Paramacrurus*, *australis*, McCulloch, Biol. Res. Endeavour v., 1926, p. 177.

Macrurus australis. D. 13/88; A. 87; V. 7; L. Lat. 130; L. tr. 4/15; Vert. 14/53.

Trachichthodes affinis (Günther).

Beryx affinis, Günther, Cat. Fish. Brit. Mus. i., 1859, p. 13. Australia.

Austroberyx affinis, McCulloch, Zool. Res. Endeavour i., 1911, p. 43, fig. 11.

Beryx affinis. A fine specimen of *Beryx affinis* (Nannegai). D. 7/12; A. 4/13; V. 1/7; L. tr. 6/12; L. Lat. 43. Caught in Derwent 10 April, 1895. Examined by me and found to be in all characters identical with those caught more abundantly near Sydney.

[Note added much later, in shaky handwriting:—] 4 specimens in Fish Shop, Elizabeth [Street, Hobart]. Caught in Derwent Estuary, 14th March, 1918. One of the specimens about 15 inches long. Evidently this is about the season when the "Nannegai" *Beryx affinis* enters the estuary of the Derwent. R.M.J.

Lampris regius (Bonnaterre).

(Pl. II., Fig. 2.)

Pleuronectes regius, Bonnaterre, Tabl. Encycl. Meth., Ichth., 1788, p. 79. "L'Océan" (Duhamel).

Zeus guttatus, Brunnich, Nye Saml. K. Danske Skrift. iii., 1788, p. 403 (*vide* Sherborn, Ind. Anim.).

Zeus luna, Gmelin, Syst. Nat. (Linnæus), ed. 13, 1789, p. 1225. "In mari Normanniam" (Duhamel).

Lampris luna, Morton, Proc. Roy. Soc. Tasm. 1896 (1897), p. 99. *Id.* Lord & Scott, Vert. Anim. Tasm. 1924, p. 39.

[A photograph by J. W. Beattie of a specimen found washed ashore at Port Arthur is inserted in Johnston's notebook, and is reproduced here.]

Lophotes guntheri, Johnston.

Lophotes guntheri, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), pp. xlv., 142, & 177. North-west coast of Tasmania.

[Details printed in a newspaper cutting gummed in the note-book are:—]

"A singular fish, closely allied to, but distinct from, the ribbon fish family, has been received by Mr. John Swan, and presented by him to the Fisheries Exhibition Commission. The fish was captured in the neighbourhood of Emu Bay, north-west coast. We are indebted to Mr. R. M. Johnston for following description:—Although measuring 3 feet 8 inches in total length, and 7 $\frac{3}{4}$ inches in greatest depth, the fish is very thin, not exceeding 1.5-8 inches at any part along the sides of the body. Its snout projects beyond the mouth—upwards and outwards, like the stem of a ship. A fin of 257 pinkish rays extends continuously along the dorsal, from snout to caudal fin, which latter is very much attenuated. The sides are uniformly silvery. The eyes are extremely large—black centre and yellow margin. The anal fin is very much reduced, and placed far back near the caudal. Ventral fin thoracic, elementary. The following are the symbols of the general character:—B. 6. D. 221/36. A. 16-14th. P. 14. V. 1/5. L. Lat. 208. L. tr. 25/40; teeth feeble on maxillaries and mandibles; two series; a few on vomer and palatines. It is closely allied to *Lophotes cepedianus*, the only other species known, and only hitherto reported as captured in the Mediterranean and Japanese seas."

Nannoperca tasmanica (Johnston).

(Pl. III., Fig. 3.)

? *Nannoperca australis*, Günther, Proc. Zool. Soc. Lond. 1861, p. 116, pl. xix., fig. 2. Murray River.

Microperca tasmanica, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 110. Esk River.

Nannoperca tasmanica, McCulloch & Waite, Rec. S. Austr. Mus. i., 1918, p. 45.

Microperca tasmanica. B. 5. D. 8/1/7-8; A. 3/8; V. 1/5; L. trans. 3/9; long. 28-30.

Total 3 3-16. Head 13 $\frac{1}{2}$ sixteenths. Eye 3-16. Height 3-8. Snout 2 $\frac{1}{2}$ sixteenths. Body oblong, compressed. Pierced scales in two somewhat irregular series, the first 9 in number from shoulder to below sixth spine of first dorsal, the second consisting of 4 indefinite distant scales along middle of body to tail, commencing from about middle of soft dorsal. Lower margin of operculæ simple. Dark olive, with a distinct pinkish longitudinal streak along middle from shoulder to tail. Base of dorsal, anal, and caudal pinkish, with blackish margins. Belly silvery, tinged with gold. Eye dark blue with gold streak around eye-ball. Scales ctenoid. North and South Esk, Tasmania; descends sometimes to brackish waters near Launceston.

D. 7/1/9; A. 3/7; V. 1/5; L. tr. 3/9; long. 28. D. 8/1/8; A. 3/7; V. 1/5. Body compressed. Preoperculum not serrated. Scales relatively large, ctenoid. Dorsal deeply cleft; anterior part composed of eight spines, 2 & 3 being longest. The posterior [dorsal] consists of 1 spine and 7 soft rays, scarcely as high as the anterior spinous portion. Ventrals thoracic, consisting of 1 spine and 5 soft rays. Anal situated immediately under soft dorsal, consisting of 3 spines and 3 soft rays; the second spine of anal is the longest, and the first is short and stout. Pectorals of thirteen rays.

The pierced scales of the lateral line are in two somewhat irregular series; the first 9 in number from the shoulder to a line drawn through 6 spine of dorsal; the second series consisting of about 4 indefinite distant pierced scales, lower and running along the middle of the body and caudal peduncle.

The young of these are frequently found dead, when the brackish water lagoons of the North and South Esk are beginning to dry up in summer.

Trachinops caudimaculatus, McCoy.

Trachinops caudimaculatus, McCoy, Prodr. Zool. Vict. ii., dec. 20, 1890, p. 341, pl. cxciv. Hobson's Bay, Victoria.

Pseudochromis rodwayi, Johnston, Roy. Soc. Tasm. Abstract 29 April, 1902 (published May, 1902), p. 6. George's Bay, Tasmania.

Trachinops tæniatus & caudimaculatus, Hall, Roy. Soc. Tasm. Abstr. 10 April, 1911 (May, 1912), p. xi.; Proc. Roy. Soc. Tasm. 1911 (1912), p. 32; *ibid.* 1912 (1913), p. 83.

[The type of *Pseudochromis rodwayi*, Johnston, is preserved in the Tasmanian Museum. A newspaper cutting gives the following information:—]

"New Tasmanian Fish. Mr. R. M. Johnston read the following notes on a new Tasmanian fish:—Mr. Rodway, who takes a keen interest in all branches of the natural history of Tasmania, besides that of his loved science of botany, of which he is now our chief local authority, has recently submitted for my examination a small fish, preserved in spirits. Unfortunately, there was only one specimen obtained, and it is so shrivelled up that some of the ray characters cannot be very exactly determined. This specially applies to the anterior portion of the dorsal rays, which for nearly half the length of this fin are rudimentary or undeveloped, and closely enveloped in a somewhat thick and (now) opaque skin. However, the principal dental, scale, and other characters leave no doubt in my mind as to its true generic position, viz., the genus *Pseudochromis* of the family *Trachinidæ*. The following contains a fuller description:—Family *Trachinidæ*. Genus *Pseudochromis*, Rupp. Head and body rather compressed, more or less elongate; cleft of the mouth slightly oblique, with the lower jaw longest; eye lateral. Scales of moderate size, ciliated; lateral line interrupted. One dorsal with a few spines anteriorly; ventrals thoracic; the lower pectoral rays branched. Jaws with cardiform teeth, anterior with canines; vomer and palatine bones toothed. Præoperculum entire. Six branchiostegals; the gill-membranes joined inferiorly; pseudo-branchiæ and air-bladder present; pyloric appendages, none. Indian Seas, Port Darwin, George's Bay, Tasmania. *Pseudochromis rodwayi*, R. M. Johnston. D. 3/26-27. A. 3/17. P. 17. L. lat. 50? L. tr. 11. The height of the body is nearly five times in the total length; the length of the head four and a half. In front of both jaws there are markedly curved canine teeth, the three in the lower jaw the stronger; there are, besides narrow bands of small canine teeth on jaws, vomer and palatine bones; no spines on the operculum. Dorsal and anal produced posteriorly; half of the anterior portion of the former undeveloped or rudimentary, and enveloped for the most part in a somewhat thick, (now) opaque, skinny integument. The number of spines on dorsal probably three, but not determined satisfactorily. Diameter of the eye nearly equal to width of interorbital space, and greater than

"the length of the snout. Colour in spirits a uniform darkish brown. This interesting little fish is only about 3½ in. in length, and is somewhat of the general appearance of one of our common shore blennies. Mr. Rodway informs me that the fish was captured by Mr. Hinsby, an enthusiastic collector, in or near George's Bay. It is to be hoped that he may soon obtain a few more specimens, in order to settle a few doubtful points in some of the characters. It is remarkable that, with the exception of a single member of the genus (*P. muelleri*), described by Klunzinger from Port Darwin, this is the first member of the genus caught in Australian waters. The specific name is given by me in honour of our own distinguished botanist, Mr. L. Rodway."

[Johnston has added a few MS. notes.] Read before the Royal Society of Tasmania at the opening meeting of the session on 30th April, 1902.

D. 3/27? A. 3/17? P. 17. Scales moderately large, finely ciliate. Total length 29. Head 6½. Eye 1½. Caught about first week in April, 1902, or latter part of March, 1902.

Apogon lemprieri, Johnston.

(Pl. III., Fig. 4.)

Apogon lemprieri, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 142. Dunkley's Point, Tasmania.

[Johnston's drawing of the type, a specimen, four inches long, from Sandy Bay, Dunkley's Point, is here reproduced.]

Arripis trutta (Bloch & Schneider).

Sciæna trutta, Bloch & Schneider, Syst. Ichth. 1801, p. 532. Ex Forster MS. Queen Charlotte Sound, New Zealand.

Centropristis salar, Richardson, Proc. Zool. Soc. Lond. 1839, p. 95. Port Arthur. *Id.* Zool. Voy. Erebus & Terror, Fish. 1845, p. 29, pl. xx., figs. 4-6.

Arripis truttaceus, Johnston, Proc. Roy. Soc. Tas. 1882 (1883), p. 110.

Arripis salar. D. 9/18. P. 16-17. V. 1/5. A. 3/11. Length of body 6 3-8. Head 1 5-8. Total 7½. Greatest depth 1 5-8; least at tail 3½ eighths. Greatest girth 4.

Handsome compressed body and head. Silvery sides and belly, leaden blue on back, dull brownish or golden spots above lateral line. Pectorals yellow. Caudal dullish yellow. Membrane of other fins pale white, the rays somewhat yellow-

ish. Five rows of apparently pierced scales above the regularly well-defined lateral line, and fifteen rows of [similar ones below it.] The latter have a bright sheen of silver.

Perca fluviatilis, Linnæus.

Perca fluviatilis, Linnæus, Syst. Nat., ed. 10, 1758, p. 289; ed. 12, 1766, p. 481. *Ex* Artedi. Europe.

River Perch, introduced from England. D. 15/2/14. V. 1/5. A. 2/8. P. 13. Length of body 10½ inches. Head 4½. Total length 11½. Greatest depth 4. Depth at narrowest part of tail 1 inch nearly. Greatest girth 8 inches. Ventral, caudal, and anal fins, in contrast to prevailing dark brown of body and other fins, are decidedly pinkish in colour.

Specimen obtained from Campbell Town where they were introduced from Hobart some years ago. Donor, Mr. Hardwicke Weedon. Localities where they are known to have been introduced: Reservoir, Hobart Town; Lake Dulverton; Campbell Town; Early Rises, Corra Lynn, near Launceston. Specimen very fat and full of immature ova. Contents of stomach in an advanced stage of decomposition—pulpy fatty matter—unknown.

Cheilodactylus spectabilis, Hutton.

Cheilodactylus spectabilis, Hutton, Fish. N. Zeal., Cat. diagn., 1872, p. 8. Cook Straits, New Zealand.

Sea Carp. B. 5. D. 17/27. P. 14, 6 simple. A. 3/9. V. 1/5. C. 17. L. lat. 58. L. tr. 5/13-15. Hobart, 21/3/81.

Six simple pectoral rays, the second uppermost of which is the longest and nearly reaches to vent. Dorsal fin notched; 4th, 5th, and 6th spines (nearly equal) longest, not so high as soft dorsal. The second anal spine very strong, not so long as the third. Length equal to 3 3-5 that of the head or 2½ that of the height of the body. Eye reddish. Diameter of eye scarcely one-sixth of the length of the head. Soft spine of operculum greatly produced, enveloped in a fleshy marginal skin. Back and sides dark reddish brown with six or seven transverse lighter broad equidistant bands directed slightly backwards; eight black bands including shoulder and caudal shades. Spinous dorsal, base of pectoral, ventral, and anal, reddish; lower parts of belly, hollow space behind gill-openings and protractile mouth mottled with brilliant red. Total length 19 inches. Body 16. Head 4 3-8. Longest pectoral ray 4; longest soft dorsal 1½; longest soft anal 2½,

decreasing toward tail. Snout 1 5-8. Snout to junct. P.O. 3 inches. P.O. posterior margin vertical and forming a right angle to body. Eye ¾. Girth, max. 14, and min. 4. Greatest depth 7, least 1 5-8. Dorsal situated in a groove, shielded by about two rows of smaller scales.

Dactylopagrus macropterus (Bloch & Schneider).

(Pl. IV., Fig. 5.)

Cichla macropterus, Bloch & Schneider, Syst. Ichth. 1801, p. 342. *Ex* *Sciæna macroptera*, Forster MS. New Zealand.

Sciæna macroptera, Forster, Descr. Anim. mar. Australis (ed. Lichtenstein) 1844, p. 136. South Island of New Zealand.

Dactylosparus macropterus, McCulloch, Zool. Res. Endeavour i., 1911, p. 66, pl. xii.

A double-mouthed Sea Perch (*Chilodactylus macropterus*). [Fishes with two mouths are rarely encountered. Johnston (4) recorded a specimen of *Galaxias truttaceus* with this abnormality, but the existence of a second Tasmanian case of this sort is of considerable interest.]

The singular specimen figured was captured in the estuary of the Derwent on the sixth Feby. 1885. The ordinary mouth was perfectly sealed, and a new deformed mouth had been developed under the lower jaw at the base of the triangular area between the lower mandibles near the junction with the gill-openings. The abnormal mouth was not armed with bony jaws or teeth, but the tongue was perfectly developed and protruded slightly. The tongue and mouth were of an inky black colour like the interior part of mouth and throat of the ordinary species. It is difficult to say whether the normal mouth was permanently sealed or otherwise, but it is quite possible that the aperture was accidentally formed under the jaw and under such circumstances that] the necessity of existence rendered it necessary to close the normal mouth, and [led to] the formation of a new one at the accidentally formed aperture. The abnormally formed mouth seemed to answer its purpose satisfactorily, for the animal otherwise appeared perfectly formed, and was in a healthy condition.

(4) Johnston, Proc. Roy. Soc. Tasm. 1908 (1909), p. iv.

Dactylopagrus morwong (Ramsay & Ogilby).

Chilodactylus carponemus, Richardson, Proc. Zool. Soc. 1850, p. 61. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1883 (1884), p. lviii. *Id.* Ogilby, Ed. Fish. N.S. Wales 1893, p. 55, pl. xviii.; and of most authors dealing with eastern Australian specimens. Not *C. carponemus*, Cuvier, Règn. Anim., ed. 2, ii., 1829, p. 177 (= *Cichla macropterus*, Bl. Schn.).

Chilodactylus polyacanthus, Ramsay & Ogilby, Abstr. Proc. Linn. Soc. N.S. Wales 25 Aug. 1886, p. iv., & Proc. Linn. Soc. N.S.W. (2) i., 1886, p. 880. *Nom. nud.*

Chilodactylus morwong, Ramsay & Ogilby, Proc. Linn. Soc. N.S. Wales (2) i., 1886, pp. 879 & 881. Botany Bay

Chilodactylus carponemus, Parkinson. The Old Man Perch. Oct. 3rd, 1883. [A species which] on examination proved to be *Chilodactylus carponemus* referred to by Dr. Richardson in his first contribution to our knowledge of Tasmanian fishes, but which was subsequently supposed to be an error, as a specimen had not been recorded as captured in Tasmanian waters since that time. Moreover, the original specimen described had lost its colour in spirits, and it is inferred that the references to colour taken from the descriptions of other writers were not altogether to be relied upon, as there seems to be no satisfactory proof that colours noted by local observers referred to the specimen described by Dr. Richardson.

The species hereafter described is therefore unusually interesting, as the colour was noted when the fish was in life and the other characters carefully examined and noted immediately after being taken from the well of the fisherman's boat.

The following is the description:—

B. 6 (7). D. 17/1/32; A. 3/18; L. lat. 64. [L. tr.] 7/16-8/17. Length of head is one-fourth of the total length. Seven rays of the pectoral simple, the longest of which—the second—reached to about a vertical drawn through the eighth ray of anal fin in mature specimens and about one-third of the total length. Dorsal fin notched; the fifth, sixth, and seventh spines of anterior are the longest. The posterior soft dorsal with a sheath covered with three rows of scales. Scales on the sides silvery, with pinkish margins. Upper part of snout, occiput, shoulder, and a patch at root of pec-

toral fin above long ray, deep violet blue, with undulating furcate streaks of gold, radiating irregularly outwards from the upper posterior and anterior margins of the eye. Soft rays of anal and dorsal ornamented with fainter alternating longitudinal streaks of pink and gold. The caudal, ventral, and spinous fins yellowish with tinge of pink.

	8 Oct. 1883.	20 Sept. 1888.
Greatest length	29 inches	36 inches
Length of body	25½ inches	35 inches
Length of head	7¼ inches	9½ inches
Length of snout	4 inches	—
Diameter of eye	1½ inches	1¼ inches
Greatest depth	8¼ inches	12 inches
Least depth	1¾ inches	3 inches
Longest pectoral ray . .	9½ inches	10 inches
Snout to root of pectoral	7¾ inches	—
Snout to vent. . . .	14½ inches	—
Girth	—	26 inches

Two of *C. carponemus* caught 14 miles off Tasman Island on what is described as a beach coral bottom (26 fathoms). [23 Oct., 1883.]

20 Sept., 1888. To-day examined a fine specimen of *C. carponemus* of much larger dimensions than the two captured near the same spot on October 23rd, 1883, a description of which is given above. B. 6. D. 17/31-32 (31Y); A. 3/17-18 (17Y); P. 15; L. lat. 64; L. tr. 7/18. The description is similar to the above.

Latridopsis ciliaris (Bloch & Schneider).

Anthias ciliaris, Bloch & Schneider, Syst. Ichth. 1801, p. 310.
Ex Sciaena ciliaris, Forster MS. New Zealand.

Sciaena ciliaris, Forster, Descr. Anim. mar. Australis (ed. Lichtenstein), 1844, p. 137. South Island of New Zealand.

Latris ciliaris, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 113; *ibid.*, 1884 (1885), p. 254.

Latris ciliaris. B. 6. D. 17/19; A. 3/32; L. lat. 84; P. 9/8. Length of head nearly a fifth of total length of body. Total length 23. Head nearly 5 inches.

Caught at George's Bay, Tasmania, where it is stated to be a stranger, and is known as Blue Bastard Trumpeter. Caught 18/8/1884. This is the first specimen seen by me.

Formerly I inferred, not having seen any representative, that the reference to Tasmania was erroneous, and that it had been mistaken for the mature form of the abundant *L. forsteri*.

Latridopsis forsteri (Castelnau).

Latris forsteri, Castelnau, Proc. Zool. Acclim. Soc. Vict. i., 1872, p. 77. Gippsland Coast, Victoria. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 72 (detailed account).

Latridopsis forsteri, McCulloch, Biol. Res. Endeavour iii., 1915, p. 146, pl. xxvii.

The Bastard Trumpeter; Red Bastard. 31 March, 1882. *Latris forsteri?* B. 6. D. 16/1/42; A. 3/34; P. 10/8. I have to-day examined the Red and Silver Bastard. There is now little doubt in my mind that the Red is the immature form of the White Bastard. The opinion among fishermen that the Bastard red or white are all barren fish is erroneous. I invariably found well-developed genital organs in the silver or mature form which is in a very fat and well condition. The white generally is more rounded; the bony obsolete ridges seen in the red form cease to be seen in the more mature and well conditioned white form. The latter has a large mass of pure white fat enveloping the genital organs, and their concealment, or part concealment, may have led to the commonly received opinion that they are sterile, and so explain the origin of the name "Bastard" as a term.

Mendosoma allporti, Johnston.

Mendosoma allporti, Johnston, Proc. Roy. Soc. Tasm. 1880 (1881), pp. 11 & 54. Derwent estuary.

The second specimen seen by me differs from the type by 1 spine less, thus proving the force of my comment as regards variability of species within certain limits. D. 23/26; A. 3/19; Lat. 73. Mouth very protractile. Sent by Mr. B. Webb. P. 17. L. tr. 5-6/15-14. The Real Bastard Trumpeter.

Neodax balteatus (Cuv. & Val.).

Odax balteatus, Cuvier & Valenciennes, Hist. Nat. Poiss. xiv. 1839, p. 303. No locality (Péron); probably Tasmania.

Two fish caught in fresh water in the Jordan by Mr. Lovett. The Kelp Fish. The Ground Mullet. Total 6 3-8; depth 14. D. 17/12; A. 14 or 15; B. 4; P. 13-14; V. 1/5; Lat.

39. L. tr. 5/11. Body elliptical, compressed. Scales minutely dented. Dorsal composed of 29 feeble rays; the first 17 of which are flexible, unarticulated and unbranched; the latter articulate and bifurcate. The 29th ray is cleft to the base. Anal composed of about 15 rays, all feeble and similar to the soft dorsal. The first two rays are simple, unarticulated and feeble. Pectoral 13-14 soft; anterior bifurcated ray. Opercle with a soft laminate spine at upper posterior angle, below which there is a small integumentary expanse with a truncate posterior margin which is distinctly dentate. Teeth in single series in upper and lower jaws. P.O. with a [finely] dentate posterior margin which is vertical. Bones of jaws with median sutures. Teeth apparently continuous into the bone and becoming distinctly longer as they approach the suture. Head pointed, depressed, contained 4 times in the total length. Depth of body 4 1-3 times, Pyloric ap[pendages] 2.

Siphonognathus beddomei (Johnston).

(Pl. IV., Fig. 6.)

?? *Siphonognathus argyrophanes*, Richardson, Proc. Zool. Soc. Lond. 1857 (1858), p. 238, pl. vi. King George's Sound, West Australia.

Odax beddomei, Johnston, Proc. Roy. Soc. Tasm. 1884 (1885), p. 231. Derwent River.

Neodax beddomei, Lord & Scott, Vert. Anim. Tasm. 1924, p. 76.

[After examining the sketch and manuscripts of Johnston, the late A. R. McCulloch recognised the resemblance of *Odax beddomei* to *Siphonognathus*, and wrote to Mr. Clive Lord about the type. Mr. Lord replied, *in lit.*, 21/5/24, "The type of *Odax beddomei* is not preserved in our collections, nor can I find any further trace of same in Johnston's manuscript. In revising our specimens here recently and adding to the collections, I failed to secure any species which would conform with Johnston's description."

Johnston's sketch is here reproduced; his notes have already been printed.]

Gadopsis marmoratus, Richardson.

? *Gadopsis breviceps*, Agassiz, Rept. 14th meet. Brit. Assn. Adv. Sci. 1844 (1845), p. 308. *Nom. nud.*

Gadopsis marmoratus, Richardson, Zool. Voy. Erebus & Terror, Fish. 1848, p. 122, pl. lix., figs. 6-11. Rivers of southern Australia. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 124. *Id.* Noetling, *ibid.* 1910 (1911), p. 253 & footnote. *Ex* Johnston, MS. *Id.* Ogilby, Mem. Qld. Mus. ii., 1913, p. 69, pl. xx.

	D.	A.	P.	Total length.	Head in Head length.	Head length.
(1)	13/26	3/19	17	7 5-8	1 3/4	4.3
(2)	12/26	3/18	17	6 1-8	1 1/2	4.0
(3)	12/26	3/18	17	5 1-4	1 3-16	4.4
(4)	12/28	3/18	17	10 3-4	2 1/2	4.7
(5)	12/26	3/18	17	8	1 5-8	4.9
(6)	13/26	3/18	17	8 1-4	1 7-8	4.3
(7)	11/27	3/17	17	5 3-8	1 3-16	4.5

D. 10-13/26-28; A. 3/17-19; B. 6. V. 1. Dorsal invariably 13/26 in Corra Lynn specimens.

Pseudaphritis urvillii (Cuv. & Val.).

Aphritis urvillii, Cuvier & Valenciennes, Hist. Nat. Poiss. viii., 1831, p. 484, pl. ccxliii. No locality (D'Urville); probably Tasmania.

Pseudaphritis urvillii, Waite, Rec. Austr. Mus. ii., 1924, p. 482, pl. xxx., fig. 1.

D. 7/0/20; A. 2/22; P. 17; D. 8/19; A. 24; P. 17. From River Jordan.

Gasterochisma melampus, Richardson.

Gasterochisma melampus, Richardson, Ann. Mag. Nat. Hist. xv., 1845, p. 346. Port Nicholson, New Zealand. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), pp. xxxi. & 118. *Id.* Waite, Trans. N.Z. Inst. xlv., 1913, p. 220, pl. viii.

The Butterfly Fish of New Zealand, *Gasterochisma melampus*. B. 5. D. 17/1/10/vi.; A. 2/10/vi.; P. 21; V. 1/5; L. lat. 64; L. tr. 25-27. Caught 22nd May, 1882, by Captain Langworthy of the schooner *Malcolm* while fishing

for 'coota at the mouth of the Derwent. Total length 39 inches, or, without caudal, 33. Snout 4; Pectoral 5 1/2; Ventral 5 3/4. Vomerine and palatine teeth.

[Johnston's notes, which also include a number of measurements now difficult to decipher, are accompanied by a newspaper cutting which states:—] "Captain Langworthy, of the schooner *Malcolm*, presented a very strange fish to the Royal Society's Museum on Monday. It measured 40 in. long; has something of the appearance of the tunny, and belongs to the mackerel family group *Nomeina*. The fish has only been seen heretofore on rare occasions off the coast of New Zealand. This seems to be the first caught in Tasmanian waters, and for the benefit of ichthyologists, it may be as well to give its general description:—Total length 40 1/4 inches; length of body 35 in.; length of head 8 3/4 in.; snout 4 in.; depth of body at shoulder 9 in., at tail 1 in. Tail widely forked, 12 inches across from tips. Anterior dorsal composed of 17 somewhat feeble spines, the posterior dorsal of one spinous ray, 10 soft branched rays, and six detached finlets. The anal fin is composed of two spinous, 10 soft rays, and six detached finlets. Ventral fins one-five, blackish, 5 3/4 in. long, can be received in a groove; pectoral fin 21 rays, longest 5 1/2 in.; branchiostegals 7. It is known as the 'butterfly fish,' because of the great development of the ventral fins, especially in young individuals."

Lepidopus caudatus (Euphrasen).

Trichiurus caudatus, Euphrasen, K. Vet. Acad. Nya. Handl. ix., 1788, p. 52 (*vide* Sherborn, Ind. Anim.).

[A sketch by Johnston is accompanied by the following dimensions:—Operculum 9 inches; depth behind head 5; at middle 6, and fourteen inches from tail, 4 inches; caudal peduncle 3-8 in. and caudal fin 3 1/4 in. long between parallels, in a specimen whose total length was 5 feet 6 inches.]

Gobius tamarensis, Johnston.

Gobius tamarensis, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 120. *Id.* McCulloch & Ogilby, Rec. Austr. Mus. xii., 1919, p. 229. Tamar River, Tasmania.

[Johnston's notes are practically the same as the text of the published description, except for the measurements given below.]

Head $10\frac{1}{2}$ sixteenths of an inch; eye 1-8; snout 3-16. Greatest breadth between orbits and first dorsal 7-16. Snout to first spine of anterior dorsal 13-16, to first ray of posterior dorsal $1\frac{1}{4}$, to first spine of anal 1 3-8. Total length 2 11-16.

Gobius tasmanicus, nov. sp.

Gobius tasmanicus, Johnston, MS.

B. 5. D. $6\frac{1}{8}$; A. $1\frac{1}{8}$. The height of the body is fully one-seventh of the total length. The length of the head is fully one-fourth. The head is depressed, much broader than high. Snout obtuse, convex. Eyes close together, their diameter one-fourth of the length of the head. Cleft of mouth oblique. All the teeth are small. Lower jaw scarcely exceeds upper. Head naked. The second dorsal equals the body in height, and is higher than the first. Pectoral yellowish, reaching to vertical from third ray of second dorsal. Dull brown above, greyish under belly. Dorsal and caudal fins irregularly marked with bars and spots of pinkish brown. Anal and ventral fins dullish white, extremities blackish. Total length about three inches.

Total 69; body 56; head 16; snout 4; Eye $3\frac{1}{2}$; depth 10; length of first dorsal 6; second dorsal 10.

Tamar, Launceston. Brackish water. Jan., Feb., & Mar., 1880. Common.

[Genus *Nesogobius*, nov.

Orthotype.—(*Gobius*) *hinsbyi*, McCulloch & Ogilby.

The genotype differs from all the other Australian gobies in having seven or eight dorsal spines instead of six.]

Nesogobius hinsbyi (McCulloch & Ogilby).

Gobius pictus, Castelnau, Proc. Zool. Aclim. Soc. Vict. i., 1872, p. 124. St. Kilda, Victoria. Preoccupied by *G. pictus*, Malm., 1865.

Gobius hinsbyi, Johnston, Abstr. Proc. Roy. Soc. Tasm., 13 May, 1902 (1903), p.x. *Nom. nud.*

(*Gobius*) *hinsbyi*, McCulloch & Ogilby, Rec. Austr. Mus. xii., 1919, p. 215, pl. xxxiii., fig. 1. *Ex* Johnston MS. Wedge Bay, Tasmania.

D. 9 or $10\frac{1}{10}$; A. $1\frac{1}{10}$; P. 19; L. lat. 40? L. tr. 11. Head $4\frac{1}{2}$ [in] length. Greatest depth $5\frac{1}{2}$ [in] length. Light brown, dotted and streaked with red. 11-12 dark brownish crossbands from head to tail. A few streaks of red near bases of both dorsals and caudal. May 5, 1902.

[Newspaper Cutting:—] "Mr. R. M. Johnston tabled a "scientific description of a new species of goby which he "named in honour of Mr. George Hinsby, who has contri- "buted many natural history novelties to the Museum, *Gobius "hinsbyi*."

[Johnston's chirotype, in the Tasmanian Museum, was examined by the late A. R. McCulloch who noted its characters as follows:—D. viii./? A. 11. P. 18, upper rays not silk-like. V. $i\frac{1}{5}$; C.?.; L. lat.? Depth $12\frac{1}{4}$ mm. Head $17\frac{1}{4}$ mm. Eye $4\frac{3}{4}$ mm. Ventrals $11\frac{1}{2}$ mm. Depth of caudal peduncle $4\frac{3}{4}$ mm. Body compressed, covered with moderately large scales which extend forward to the interorbital space, and on the operculum; cheeks apparently naked. Interorbital space very narrow. Eyes large and close together. Scales of the upper half with brown marginal spots which tend to form bands. The body is crossed by numerous narrow brown bars. A darker one is placed just behind the preoperculum, and there are some blotches on the preorbital. Caudal with a dark basal blotch. Ventrals and pectorals large, the latter pointed.]

Scorpxena ergastulorum, Richardson.

Scorpxena ergastulorum, Richardson, Ann. Mag. Nat. Hist. ix., 1842, p. 217. Port Arthur.

Scorpxena cruenta, Richardson, *ibid.* p. 217. *Ex* Solander MS. Cape Kidnappers, N.Z. *Id.* Meredith, Tasm. Friends & Foes 1880, p. 248, pl. viii. *Id.* McCulloch, Rec. Austr. Mus. xv., 1926, p. 36.

Scorpxena cruenta, Soland.?? Total length $4\frac{3}{4}$; body $3\frac{3}{4}$; head 1 1-3; depth 1 5-16; snout $\frac{3}{4}$; eye $\frac{3}{4}$. Colour reddish brown marbled and speckled with darker. Belly, ventral, anal, caudal, and pectoral fins tinged to a bright red. Pectoral reaching nearly to first spine of anal. Second spine of anal longest.

D. $11\frac{1}{10}$; A. $3\frac{1}{5}$; P. 16; L. lat. 25; L. tr. $9\frac{1}{8}$. Space between orbits $\frac{1}{4}$ [in.]; second spine of anal $\frac{3}{4}$; longest soft dorsal [ray] 11-16; fourth to six dorsal 9-16; first dorsal $\frac{1}{2}$; soft rays of anal $\frac{3}{4}$; last spine of anterior dorsal 5-16; first spine of anal 5-16.

The *Scorpxena* thus described is the common one about Sandy Bay. Either Solander's species is wrongly described as regards lateral scales or this is a new species.

[This species was first described from a drawing made by a Port Arthur convict for Dr. Lhotsky, a remarkable scientist whose exploits have formed the subject of an article by

Iredale (5) entitled "Lhotsky's Lament." The name *Scorpæna cruenta* was appended to the description of the conspecific *S. ergastulorum* by Richardson with a few lines of descriptive matter, but the latter name has precedence through line-priority; it is derived from the Latin, *ergastulum*, "a house of correction for slaves."]

Gnathanacanthus goetzei, Bleeker.

Gnathanacanthus goetzei, Bleeker, Verh. K. Akad. Wet. Amst. ii., 1855, p. 21, pl. —, fig. 1. Spelt *Gnathanacanthus goetzei* on "verklaring der afbeeldingen" opposite plate. Tasmania.

Holoæenus cutaneus, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 114. Tasmania.

Holoæenus guntheri, Johnston, *ibid.*, p. 115. Tasmania.

Gnathanacanthus goetzei, Ogilby, *ibid.*, 1896 (1897), p. 82 (synonymy).

Gnathanacanthus goetzei, Waite, Rec. S. Austr. Mus. ii., 1924, p. 484, pl. xxxi.

The Velvet Fish. Possibly *Holoæenus cutaneus*, Günther, although [it has] D. 8/5/10; A. 3/9; P. 11, simple; sometimes 12; C. 6.6 or 7.6 simple; V. 1/5. Total length 10 [inches]; body 7½; head 3½; snout 1 1-8; eye scarcely ¾. Uniform purple red. Uniform red.

[The notes are scattered around a rough pencil sketch. The fin-formulæ show that they relate to the species named *H. guntheri* by Johnston.]

Patæcus maculatus, Günther, var. *armatus*, Johnston.

Patæcus maculatus, Günther, Cat. Fish. Brit. Mus. iii., 1861, p. 292. Fremantle, W.A.

Patæcus armatus, Johnston, Proc. Roy. Soc. Tasm. 1890 (1891), p. 33. *Lapsus calami*. Tasmania.

Patæcus maculatus, Waite, Rec. Austr. Mus. vi., 1905, p. 75, pl. xv.

D. 32; A. 12; P. 8; B. 6. Teeth on jaws and vomer. Body mottled and speckled with reddish and dark or greyish brown rounded spots which vary in size. Fine interspaces crowded with minute dots of the same colour on a lighter or whitish ground. Warts, distribution and size of larger spots on body and fins as in example described p. 292 of Günther's Catalogue referred to above species.

Although the typical example from Fremantle, Western Australia, has an olive colour with black spots and the following ray characters:—D. 31; A. 12; P. 8, every other character corresponds, and I am therefore of opinion that the example here described is only a local variety which probably varies slightly in colour and in the number of dorsal and anal rays. Greatest length 5, length of head 1½; length of pectoral 1½; greatest depth 1½. Caught off Tamar Heads and forwarded to me by Mr. R. Irving, July, 1888.

Blennius tasmanianus, Richardson.

Blennius tasmanius, Richardson, Proc. Zool. Soc. Lond. 1839, p. 99. *Nom. nud.*

Blennius tasmanianus, Richardson, Trans. Zool. Soc. Lond. iii., 1849, p. 129. Tasmania. *Id.* Waite, Rec. Austr. Mus. vi., 1906, p. 205, pl. xxxvi., fig. 5. *Id.* Hall, Proc. Roy. Soc. Tasm. 1912 (1913), p. 79 (variation).

D. 12/18; A. 2 soft head/19; P. 14; B. 6. Description in Günther, p. 214, good.⁽⁶⁾ Abundant, Government House jetty, 11/1/1881.

Gillias clarkei (Morton).

Tripterygium clarkei, Morton, Proc. Roy. Soc. Tasm. 1887 (1888), pp. xlvii. & 78. Clarke I., Bass Strait. *Id.* Hall, *ibid.*, 1912 (1913), p. 82.

Blenny. *Tripterygium sp.* B. 4. D. 21/8; A. 2/19; P. 13; V. 2. Length scarcely 3 3-5 times length of head, which is nearly equal to height of body. Eye large. Snout 1½ times diameter of eye, surmounted by a long tentacle which has three or four branchlets. A bifurcate tentacle at nostril. Interorbital space less than diameter of eye and 1-3 length of head. Dorsal in three divisions. Black spot in interspace between first two spinous rays. Lateral line conspicuous al[ong] curvature of [back], descends at point below termination of first dorsal and follows the line along middle of body with more distant pores. Nasal tentacle bifurcate. Body reddish brown, mottled with darker; lighter below. Leven.

Clinus perspicillatus, Cuv. & Val.

Clinus perspicillatus, Cuvier & Valenciennes, Hist. Nat. Poiss. xi., 1836, p. 372. Westernport, Victoria. *Id.* McCulloch, Rec. Austr. Mus. vii., 1908, p. 43, pl. xi., fig. 4. *Id.* Hall, Proc. Roy. Soc. Tasm. 1912 (1913), p. 81.

(5) Iredale, Austr. Zoologist, iii., 1924, pp. 223-226.

(6) Günther, Cat. Fish. Brit. Mus. iii., 1861, p. 214.

Clinus despicillatus, Richardson, Proc. Zool. Soc. Lond. 1839, p. 99. Port Arthur. *Id.* Barnard, Proc. Roy. Soc. V. Diem. Land i., 1851, p. 170. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), pp. xliii & 170.

Clinus despicillatus, Rich. B. 4; P. 14; D. 3/33, 4 soft; A. 2/25; V. 2 bifid. Length equal to four times that of head which is nearly equal to height of body. Coast at the Leven or Fisk, also Port Arthur.

[Another specimen] B. 6. D. 3/33/5; A. 1/26; V. 2.

Rhombosolea monopus, Günther.

Rhombosolea monopus, Günther, Cat. Fish. Brit. Mus. iv., 1862, p. 459. New Zealand.

B. 5. D. 60; V. 6; A. 43. Total length 10½; body 8½; head 2 11-16; depth nearly 5 inches. [Johnston's notes and sketches evidently refer to *R. monopus*, a species not definitely known from Australia; unfortunately he did not state the locality of this specimen, so doubt must still be expressed as to whether *R. monopus* occurs in Tasmania.]

Rhombosolea tapirina, Günther.

Rhombosolea tapirina, Günther, Cat. Fish. Brit. Mus. iv., 1862, p. 459. Norfolk Bay specimens. *Id.* Norman, Biol. Res. Endeavour v., 1926, p. 284.

? *Rhombosolea leporina*, Günther, Cat. Fish. Brit. Mus. iv., 1862, p. 460. "Australia."

Rhombosolea flesoides, Günther, Ann. Mag. Nat. Hist. (3) xi., 1863, p. 117. Victoria.

Rhombosolea leporina? perhaps *tapirina*; a species of Brill. 5 Jan., 1882. B. 6-7; D. 64; A. 46. Head 1 13-16 (29); body 6 1-8 (98); height 3 3-16 (51); eye nearly 7; caudal 1½; caudal peduncle (end of dorsal to commencement of caudal) 3-8. Uniform brownish, not marbled or spotted.

This fish seems to bridge the difference between *R. leporina* and *tapirina*. May the former not be a young var. of the latter?

[*R. leporina*, Günther, was regarded as a distinct species by Norman, 1926, who had access to Günther's types when preparing his report on the Flatfishes collected by the *Endeavour*.]

Brachionichthys hirsutus (Lacépède).

Lophius hirsutus, Lacépède, Ann. Mus. d'Hist. Nat. iv., 1804, pp. 202 & 210, pl. lv., fig. 3. New Holland (Baudin); probably Tasmania.

"Fish caught at Port Arthur," Bock, Ross's Hobart Town Almanack, 1835, frontisp.

Brachionichthys hirsutus, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 121.

17 May, 1882. I also examined a small specimen of *Brachionichthys hirsutus* just brought to the Museum. It has fine spots and short linear streaks of dark brownish red all over the body and fins; deeper blotches towards anterior and posterior extremities of dorsal. Characters:—D. 1/2/18; A. 9; P. 7; V. 1/4. The first spine of second dorsal, and first of pectoral and ventral with fine hooked spines. The body also is covered with minute spines. The colour and rays appear to vary to a great extent in different individuals, and I am now inclined to believe that *B. hirsutus* and *B. lævis* are not specifically distinct.

Brachionichthys politus (Richardson).

Cheironectes politus, Richardson, Trans. Zool. Soc. Lond. iii., 1849, p. 133. Port Arthur. *Id.* Meredith, Tasm. Friends & Foes 1880, p. 249, pl. vii.

Brachionichthys politus, Bleeker, Verh. K. Akad. Wet. Amst. ii., 1855, p. 12. *Id.* Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 121.

[A painting of the Red Hand Fish made by Lady Lefroy and presented to R. M. Johnston is coloured a uniform light red, overlaid with spaced irregularly shaped brown blotches which are largest as they approach the back.]

Cantherhines spilomelanurus (Quoy & Gaimard).

Balistes spilomelanurus, Quoy & Gaimard. Voy. Uranie & Physicienne, Zool. 1824, p. 217. Port Jackson.

Aleuterius paragaudatus, Richardson, Zool. Voy. Erebus & Terror, Fish, 1846, p. 66, pl. xxxix., figs. 1-4. Port Arthur, Tasmania, & Port Jackson, N.S. Wales.

Monocanthus spilomelanurus, Johnston, Proc. Roy. Soc. Tasm. 1882 (1883), p. 135.

[A sketch accompanies the notes:—"Sandy Bay, 7th April, 1882. D. 33; A. 29," and indicates a black transverse bar on the caudal, bluish spots on the sides, a yellow or gold bar on the chin, and "blackish band with blue mark" on the face.]

EXPLANATION OF PLATES.

PLATE II.

Figure

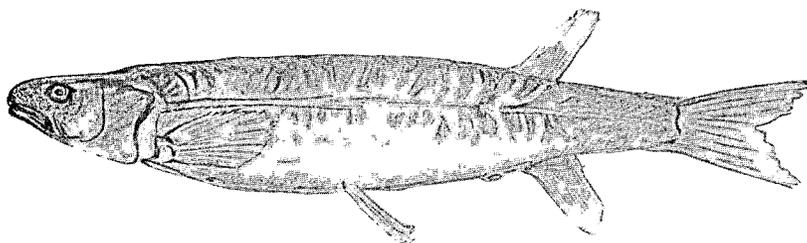
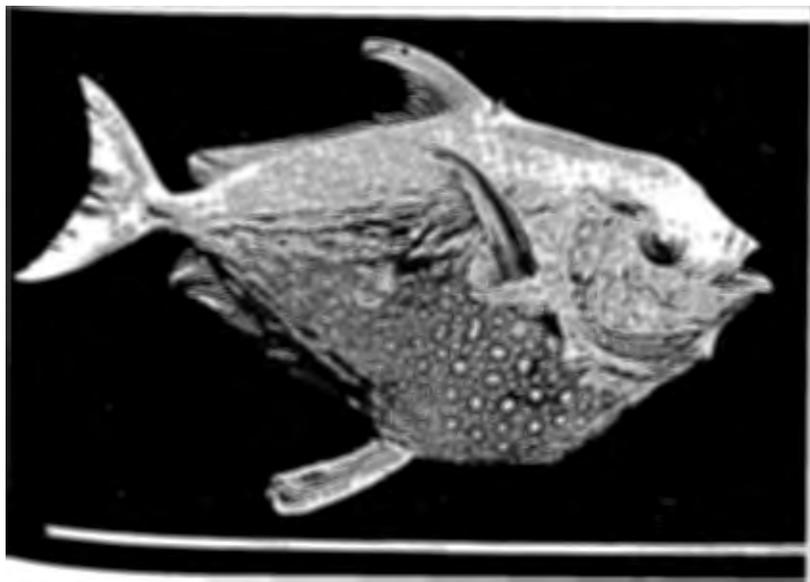
1. *Galaxias weedoni*, Johnston. Type. R. M. Johnston del.
2. *Lampris regius* (Bonnaterre). A specimen from Port Arthur, Tasmania. J. W. Beattie photo.

PLATE III.

3. *Nannoperca tasmaniæ* (Johnston). Type of *Microperca tasmaniæ*, Johnston. R. M. Johnston del.
4. *Apogon lemprieri*, Johnston. Type. R. M. Johnston del.

PLATE IV.

5. *Dactylopagrus macropterus* (Bloch and Schneider). A Tasmanian specimen with two mouths. R. M. Johnston del.
6. *Siphonognathus beddomei* (Johnston). Type of *Odax beddomei*, Johnston. R. M. Johnston del.

FIG. 1. *Galaxias weedoni*.FIG. 2. *Lampris regius*.

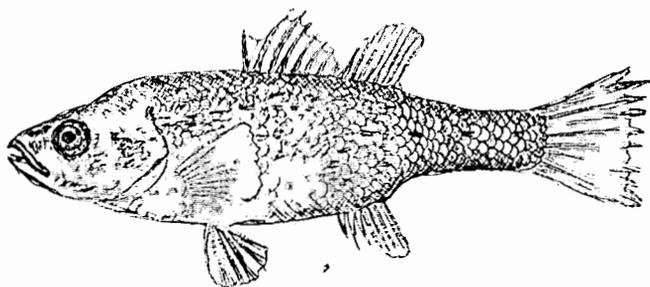


Fig. 3. *Nannoperca tasmaniae*.



Fig. 4. *Apogon lemprieri*.

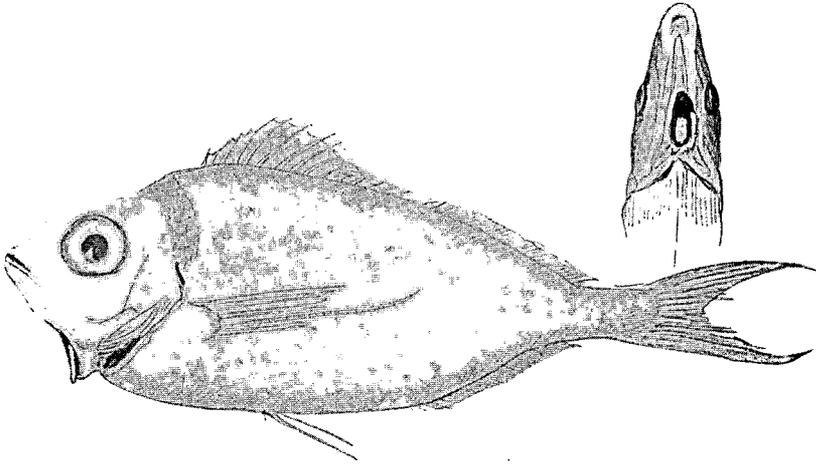


Fig. 5. *Dactylopagrus macropterus*.



Fig. 6. *Siphonognathus beddomei*.