## SOME NEW OR RARE FISHES OF THE INDO-AUSTRALIAN ARCHIPELAGO VI ${ }^{1}$ )

by<br>Dr. J. D. F. HARDENBERG.<br>(Laboratorium voor het Onderzoek der Zee, Batavia).<br>\section*{Fam. SILURIDAE.}<br>BELODONTICHTHYS Bleeker.

Belodontichthys javanensis nov. spec.
B.15; D.4; A.60; P.I.14; V.9.

Head depressed, body compressed. Height about 3.8, head 3.9 in length ${ }^{2}$ ). Eye 7.5 in head, 4 in postorbital part. Eye above corner of mouth. Anterior nostrils, near upperlip, tubular. Tubes of posterior ones very short. Breadth of head about as long as postorbital part. Dorsal profile of preserved specimen somewhat convex with a small concavity above the eyes. Lower jaw longer than upper. Teeth in jaws widely set, slender, in five to six irregular rows. The innermost ones are the largest. Teeth on vomer very few, in a single transverse row, ve:y small. None on palatines. Maxillary barbels long and slender, slightly surpassing pectorals. Mandibulary barbels situated far backwards, not so long as diameter of eye. Pectorals as long as head without half the snout. Pectoral spine, which is rather strong, somewhat shorter than postocular part of head. Ventrals about as long as snout. Length of anal more than half the length of head and body. Caudal deeply forked, the lobes pointed, equally long. Dorsal as long as postorbital part of head. Colouration a mottled black above, whitish below. All fins powdered with black. Faint black bloteh on lateral line behind gillopening.

One specimen of a total length of 215 mm , from freshwater. Fishmarket of Batavia, 7-9-'36. Easily distinguishable from Belodontichthys dinema (Вцкв.) by the low number of anal rays.

## Fam. THERAPONIDAE.

## HELOTES C.V.

Helotes sexlineatus (Q. and G.).
D.XII.10; A.III.10; P.14; V.I.5; L.1.85; L.tr.15-1-'28.

Height 3.5, head 3.8 in length. Rostro-dorsal profile slightly convex. Eye rather large, somewhat more than thrice in head, more than once in snout. Praeorbital entire, covering langest part of maxillary when mouth is closed.

[^0]Nostrils approximate, the anterior tubulate, the posterior triangulate. Gape of mouth small, jaws equal, lips thin. Maxillary not quite reaching to eye. Praeoperculum denticulate, stronger at the rounded angle. Operculum with two spines, the lower one the strongest, surpassing the opercular lobe. Coracoid truncate and roughly denticulate. Teeth in jaws, brown coloured, in several irregular series. The outer series enlarged, brown aud trilobate. None on vomer and palatines. Spinous dorsal emarginate, the ultimate spine longer than the penultimate, about half as long as the fourth and fifth rays, which are longest and which are somewhat larger than eye and snout, much higher than the soft dorsal, which is somewhat concave. Third anal spine subequal to second. Soft anal as long and as high as soft dorsal. Each fin with a low scaly basal sheath Caudal faintly emarginated, the lobes more or less rounded. Pectorals obtuse, somewhat shorter than ventrals and somewhat shorter than head without snout. Colour when alive greyish-brownish above, silvery below, 4-5 dark longitudinal bands. The first one along the back just below the spinous dorsal. The second from the shoulder, just above the lateral line to the middle of soft dorsal. The third one from tip of snout through eye to upper half of caudal. The fourth one from end of maxillary to lower half of caudal, just above pectorals. The fifth one which is more or less incomplete begins below the pectorals. A black spot on shoulder. Top of dorsal more or less blackish and also its base. Caudal with a dark border and a faint intermediate and basal transverse band. Other fins more or less hyaline.

Rather common in the Bay of Batavia. The same seems to be the case in the vicinity of Singapore. The species has probably a much wider distribution in the archipelago than one would judge from literature. It is easily mistaken for a Therapon species.

Literature:

1. Terapon sexlineatus. Quoy and Gaimard. Voy. Uranie et Physicienne 1824, p. 340.
2. Helotes sexlineatus Bleeker, Nat. Tijdschr. Ned. Indië II, 1851, p. 171.
3. Helotes sexlineatus Günther, Cat. Brit. I. 1859, p. 285.
4. Therapon, (Helotes) sexlineatus Bleeker, Révis. Therap. Ned. Tijdschr. Dierk. IV, 1873, p. 392.
5. Therapon (Helotes) sexlineatus Bleeker, Atl. Ichth. VII, 1873-1876, p. 118.
6. Helotes sexlineatus Weber and de Beaufort, Fishes of the Indo Australian Archipelago VI, 1931, p. 166.

## Fam. EMMELICHTHYIDAE.

DIPTERYGONOTUS BLkr.

## Dipterygonotus leucogrammicus Blkr.

D.XIV.I.9; A.III.8; P.15; L.l. $\pm 80$; L.tr.10-1-18.

Oblong. Height 5.1 in length, head 3.7, conical. Eyes about 4 in head, about once in snout and in interorbital space. A narrow adipose eyelid present.

Nostrils distant, the anterior somewhat tubular, the posterior quite near vertical through frontborder of eye. Praeoperculum with a vertical hindborder, the rounded angle finely denticulate. Operculum with a flat spine. First dorsal originating above middle of pectorals. The 10 anterior spines of dorsal united by a membrane, the second, third and fourth longest. The four posterior spines short, isolated, with a short triangular membrane. Soft rayed dorsal much shorter than spiny dorsal and less high. First spine of anal short, the second and third longer and subequal. Anal rays as high as dorsal ones. Pectorals as long as postorbital part of head and half eye. Ventrals originating below anterior half of pectorals, as long as postorbital part of head. Caudal deeply incised, somewhat shorter than head without snout. Colour of specimen in formaline grayishbrownish above, silverish below. Two or three faint longitudinal whitish bands on body. The upper one just above the lateral line and continued on head to the eye.

One specimen with a total length of 95 mm from the Java Sea, west of the island Bawean. May 1936. Found in a catch consisting mainly of Decapterus. A few others of about the same length from Sabang and the island Buton.

Literature:

1. Dipterygonotus leucogrammicus Bleeker, Journ. Ind. Archipelago III, 1849, p. 71.
2. Emmelichthys leucogrammicus Bleeker, Nat. Tijdschr. Ned. Indië I, 1850, p. 103.
3. Erythrychthys leucogrammicus Günther, Cat. Brit. Mus. I, 1859, p. 396.
4. Dipterygonotus leucogrammicus Bleeker, Arch. neérl. Sc. nat. VIII 1873, p. 158 .
5. Dipterygonotus leucogrammicus Bleeker, Atlas Ichthyologique VIII, 187677, p. 42.
6. Emmelichthys léucogrammicus Evermann and Seale, Bull. Bureau Fishes XXVI, 1906, p. 71.
7. Emmelichthys leucogrammicus M. Weber, Siboga Exp. Fische, 1913, p. 275.

## Fam. IEIOGNATHIDAE.

LEIOGNATHUS Lacépède.
Leiognathus elongatus (GTHR.).
D.VIII.16; A.III.14; P.I.16; V:I.5.

Body elongate. Dorsal and ventral profile about equally convex. Height 3.2 in length, head 3.5. Eye about 3.5 in head, about once in postorbital part of head. Minute spine above the anterior margin of the orbit. Tube of snout directed downwards when protracted. Cheeks scaly, opercles naked. Lower praeopercular margin very finely serrated. Body totally scaled. Lateral line conspicuous, its course somewhat more flattened than dorsal profile. Second and third dorsal spine longest, 2.2 in greatest height of body. Total length of dorsal
somewhat less than twice in length of head and body. Second and third anal spine subequal in length. Second spine by far the strongest, longer than postorbital part of head. Pectoral spine very wieak. Pectoral somewhat shorter than head without snout. Ventral spine strong, about as long as eye.

Two specimens of about 8 and 14 cm (tail damaged), from an old collection of the fisheries-investigation steamer "Gier". Date 24-2-1907. Locality $5^{\circ} 5^{\prime}$ S.L. and $107^{\circ} 38^{\prime}$ E.L. (Java Sea).

## Literature:

1. Equula elongata Günther, Ann. Mag. Nat. Hist. (4) XIV, 1874, p. 369.
2. Leiognathus stercorarius Evermann and Seale, Bull. Bur. Fish. XXVI (1906) 1907, p. 67.
3. Leiognathus elongatus Weber and de Beaufort, Fishes of the Indo-Austr. Archip. VI, 1931, p. 318.

## Fam. MULLIDAE.

## PARUPENEUS Bleeker.

Parupeneus trifasciatus (LAc.) bimaculatus new colour variety.
D ${ }^{1}$ VIII, D² I.8; A.I.6; P.I.15; L.1.30; L.tr. $21 / 2-1-6 \frac{1}{2} / 2$.
Oblong and compressed. Dorsal profile more convex than ventral, especially between snout and first dorsal. Height below origin of first dorsal 3.2 in length. Rostrodorsal profile nearly straight, with a slight concavity, ascending and continued in convex dorsal profile. Head 3.2 in length, rather acute, much longer than high. Eye 5.5 in head, about 3 in snout, about 1.5 in postorbital part, situated in upper third of head. Mouth small, terminal, lower jaw somewhat included. Upper lip not very thick. Chin strong, rounded. Maxilla rounded behind, its terminal width about 1.5 the diameter of the eye. Barbels nearly reaching ventrals. Head scaly. Scales reaching to nostrils, only the praeorbitals are scaleless. First dorsal spine minute, third spine longest about 1.4 in head, when depressed surpassing origin of second dorsal. Interspace between both dorsals covered by two scales, its length more than thrice in length of first dorsal. Second dorsal as long as first, its last ray produced, reaching caudal. Anal as long as second dorsal its last ray produced. Ventrals shorter than head but much longer than pectorals. Caudal much shorter than head, the lobes rather obtuse. Colour when fresh brownish with a yellowish hue. A blackish bloteh behind eye. A faint black stripe from eye to point of snout. Pectorals transparent, yellowish. Ventrals with a blackish outer border. Dorsal with a black base, the upper part with horizontal yellow lines, the prolonged ray black. Anal with longitudinal blackish and yellowish lines. Caudal with a small black dorsal and ventral border. A black blotch on caudal peduncle confluent over the dorsal profile with the blotch on the other side, reaching 1.5 to 2 scales below lateral line, three to four scales broad and two scales apart from second dorsal. A second black blotch below second dorsal reaching 0.5 to 1 scale below lateral line, extending from third to seventh dorsal ray.

One specimen from the Straits of Macassar, (exact locality unknown) bought from Japanese fishermen at the fishmarket of Batavia. Total length 21 cm . September 1936.

This specimen is exactly alike to Parupeneus trifasciatus, only the first black band or blotch is lacking. Yet it is not the variety atrocingulatus KNER, which is figured by Günther is his „Fische der Südsee" as the two black bands in the lastnamed are situated in quite other parts of the body. My specimen is also quite distinct from Parupeneus bifasciatus; having the maxillary broader than the eye and the last dorsal and anal rays prolonged.

Literature:

1. Mullus trifasciatus Lacépedè, Hist. Nat. Poissons III, 1802, p. 404.
2. Parupeneus trifasciatus Weber and de Beaufort, Fishes of the Indo-Australian Archipelago VI, 1931, p. 382.

## Fam. LUTJANIDAE.

## APHAREUS Cuvier and Valenciennes.

## Aphareus rutilans C.V.

D.X.11; A.III.8; P.2.14; V.I.5; L.t.73; L.tr.8-1-19.

Oblong. Height 3.5. Head 3.2 in length. Eye 4.5 in head, about 1.5 in snout. Mouth large oblique. Chin strong, prominent. Maxillary reaching to below hindborder of pupil. A few rows of very small teeth anteriorly in upper jaw, one row in lower jaw and on sides of upper jaw. Palate toothless. Scales beginning on head, above posterior part of eyes with a median triangular prolongation, the blunt point of which is directed forwards and wedged in between the two supratemporal scaly patches. Eight transverse rows of scales on praeoperculum, the posterior and inferior limb of which is naked. Hindborder of praeoperculum smooth. 22 scales before dorsal. Dorsal spines weak and flexible but pungent. First spine about half as long as second. Third spine somewhat shorter than postorbital part of head. Last dorsal ray prolongated, about as long as snout and eye. First anal spine short, shorter than second. Third spine somewhat longer than second, about 1.5 the diameter of the eye. Last anal ray extended like last dorsal ray. Pectorals pointed, somewhat falcate, somewhat shorter than head. Ventrals pointed, as long as head without snout. Caudal forked. Least height of caudal peduncle about twice in its length. 32 gillrakers on lower branch of first gillarch. Colour blackishreddish when alive.

One specimen of an approximated length of 38 mm (tail damaged from Pelabuan Ratu) Wijnkoopsbay, Southcoast of Java. August 1933. The paired fins of my specimen are somewhat longer than as mentioned in literature.

Literature:

1. Aphareus rutilans Cuvier and Valesciennes, Hist. Nat. Poissons VI, 1830, p. 490 .
2. Aphareus rutilans Klunzinger, Fische des rothen Meeres I, 1884, p. 45.
3. Aphareus furcatus Bleeker, Atl. Ichth. VIII, 1873, p. 80.
4. Aphareus rutilans Fowler, Mem. B. P. Bishop Mus. X, 1928, p. 195.
5. Aphareus rutinans Weber and de Beaufort, Fishes of the Indo-Australian Archipelago VII, 1936, p. 320.

## LUTJANUS Bloch.

## Lutjanus semicinctus Q.G.

D.X.13; A.III.8; P.2.14; V.I.5; L.1.48; L.tr.51/2-1-17.

Height 3.2, head 2.6 in length. Eye 5 in head, 1.9 in snout, about once in interorbital space. Mouth somewhat oblique. Maxillary reaching to below frontborder of eye or somewhat before it. Small teeth in narrow bands in jaws with an outer series of enlarged ones. In the upper jaw anteriorly one canine on each side. Temporal region naked. Scales on occiput beginning far behind eye. About six transverse rows of scales on praeoperculum. Posterior and inferion preopercular limb naked. Posterior and inferior border of preoperculum smooth or with very fine denticulations. Preopercular notch shallow. Longitudinal rows of scales on body above lateral line running obliquely, ascending to dorsal profile; parallel to axis of body below lateral line. Fourth dorsal spine longest, about equal to snout. Soft dorsal low, rounded. Second and third anal spine subequal, somewhat longer than eye, much less high than almost truncate soft anal. Pectorals about as long as head without half•snout. Ventrals equal to postorbital part of head. Caudal only slightly emarginate. Eight broad transverse bands on back, tapering towards belly. The last very broad one on caudal peduncle.

On specimen with a total length of 260 mm from Macassar (Celebes) 1932.
Literature:

1. Lutjanus semicinctus Quoy and Gaimard, Voyage de l'Uranie et de la Physicienne, Zool. 1824, p. 303.
2. Mesoprion semicinctus Bleeker, Nat. Tijdschr. Ned. Indië V, 1853, p. 331.
3. Mesoprion semicinctus Günther, Fische der Südsee I, 1873-1875, p. 15.
4. Lutjanus semicinctus Bleeker, Atl. Ichth. VIII, p. 63.
5. Lutjanus semicinctus Fowler, Mem. B. P. Bishop Mus. X, 1928, p. 198.

## Lutjanus rangus (C.V.).

## D.X.13; A.III.8; P.2.14; V.I.5; L.l.50; L.tr.61/2-1-28.

Height 3.0 in length. Head 2.7. Eye 3.7, 1.2 in snout, its long axis oblique. Mouth oblique. Maxillary reaching to below frontborder of eye. Small teeth in narrow bands in jaws with an outer row of enlarged ones, in upper jaw one canine on each side. Teeth on vomer in a more or less diamond shaped patch, with short lateral prolongations. A single row of very small teeth on palatines. Head naked anteriorly. Scales on occiput beginning behind eye. Six transverse rows of scales on preoperculum. Posterior and inferior border of preoperculum naked. Preopercular notch shallow. Preoperculum finely dentated.

Longitudinal rows of scales above lateral line running obliquely and ascending to dorsal profile, those below lateral line parallel to axis of body. Fourth and fifth dorsal spine longest, equal to postorbital part of head. Soit dorsal rounded. Second and third anal spine subequal, somewhat shorter than snout. Pectorals somewhat longer than head without snout. Ventrals equal to postorbital part of head and half eye. Caudal slightly emarginate. Colour when alive reddish brownish with yellow longitudinal lines.

One specimen of a total length of 215 mm from Pelabuan Ratu (Wijn-koopsbay-South coast of Java) 1933.

Literature:

1. Mesoprion rangus Cuvier and Valenciennes, Hist. Nat. Poissons II, 1828, p. 482 .
2. Mesoprion ranguis Bleeker, Nat. Tijdschr. Ned. Indië XVII, 1858-1859, p. 154.
3. Mesoprion rangus Güvther, Cat. Brit. Museum I, 1859, p. 199.
4. Lutjanus rangus Bleeker, Verh. Akad. Amsterdam XIII, 1873, p. 59 Atl. Ichth. VIII, 1876-1877, p. 65.
5. Lutjanus rangus Weber and de Beaufort, Fishes of the Indo-Australian Archipelago VII, 1936.

## SCOLOPSIS Cuvier.

## Scolopsis inermis Schl.

## D.X.9; A.III.7; P.2.14; V.I.5; L.1.36; L.tr.212-1-11.

Height 2.8, head 3.1 in length. Eye 3 in head, somewhat more than snout. Interorbital space flat, 1.2 in eye. Scales beginning above posterior part of eyes. Maxillary smooth, reaching to below frontborder of eye. Slender teeth in bands in jaws, the outer row somewhat enlargened. Six rows of scales on preoperculum, the hindborder of which is not scaled and is finely denticulated. Suborbital spine small but distinct. Five or six minute spines below it. First dorsal spine more than half of second. Third and fourth spine largest, equal to snout and half eye. Tenth spine somewhat longer than snout. Soft dorsal rounded, slightly higher than spinous part. First anal spine about half as long as second. Second and third spines subequal, slightly more than eye. Soft anal higher than spinous part, rounded. Pectorals longer than head without half of snout. Ventrals with the first ray produced, somewhat longer than head without snout. Caudal emarginate. Least height of caudal peduncle 1.7 in its length. Colour of specimen in formaline, brownish with faint indications of darker longitudinal bands.

One specimen of a total length of 200 mm . Pelabuan Ratu (Wijnkoopsbay, Southcoast of Java) 1933.

Literature:

1. Scolopsides inermis Schlegel, Fauna Japonica, Poissons, 1843, p. 63.
2. Scolopsides inermis Bleeker, Verh. Bat. Gen. XXVI, 1854-1857 Nieuwe nalez. Ichthyol. Japan, p. 83.
above posterior half of eye. Dorsal spines flexible, not pungent, the first and second longest, produced in a very long and soft filament. Soft part of dorsal higher than spinous part (filaments excepted), pointed behind and rounded above. Anal rounded behind, pointed above, less deep than soft dorsal. Pectorals pointed almost as long as head. Ventrals with the produced outer ray almost as long as pectorals. Caudal deeply forked. Upper lobe produced into a filament. Least height of caudal peduncle 1.6 in its length, Colouration of alcohol-specimen entirely faded.

One specimen of a total length of 140 mm in an old collection from the fisheries investigation steamer "Gier" 19-10-'08. Locality $5^{0} 39^{\prime}$ S.L., $111^{0} 19^{\prime}$ E.L. (Eastern part of the Java Sea).

## Literature:

1. Dentex nematophorus Bleeker, Nat. Tijdschr. Ned. Indië V, 1853, p. 500. 2. Synagris nematophorus Güvther, Cat. Brit. Mus. I, 1859, p. 379.
2. Dentex nematophorus Bleeker, Verh. Akad. Amsterdam XIII (1872) 1873, Révision Dentex•p. 23. Atl. Icht. VIII, 1876-1877, p. 90.
3. Synagris nematophorus Fowler, Bull. U.S. Nat. Mus. Vol. XII, 1933, p. 113.
4. Nemipterus nematophorus Weber and de Beaufort, Fishes of the IndoAustralian Archipelago VII, 1937, p. 366.

[^0]:    ${ }^{1}$ ) Cf. Treubia XIII, p. 411; XIV, p. 215; XIV, p. 287; XV, p. 131; XV, p. 367.
    ${ }^{2}$ ) With length is always meant the length of head and body, with the caudal fin excluded.

