

SOME NEW OR RARE FISHES OF THE INDO AUSTRALIAN  
ARCHIPELAGO II <sup>1)</sup>)

By

Dr. J. D. F. HARDENBERG.

(Laboratorium voor het Onderzoek der Zee, Batavia).

Family **CLUPEIDAE**.

**SPRATELLOIDES BLEEKER.**

**Spratelloides gracilis (SCHL.)**

B. 6, D. 12 — 13, A. 13, P. 11 — 12, V. 8, L. 1. about 45, L.tr. 8 — 9.

Height about 8, head 4.2 — 4.4 in length without caudal. Eye 4 in head. Snout pointed, longer than eye. Maxillary reaching to frontmargin of eye. Origin of dorsal in the midst between snout and caudal or somewhat nearer to snout. Anal as long as  $1\frac{1}{2}$  eye, nearer to caudal than to ventrals. Ventrals below second half of dorsal. Pectorals somewhat shorter than eye and snout. Caudal 7 in length of body and head. About 30 gillrakers. A silvery lateral band. Fins hyaline.

Six specimens, with a length of  $5\frac{1}{2}$  —  $6\frac{1}{2}$  cm. from the island of Temiang, Lingga Archipelago (Sumatra). Date November 1928.

My specimens quite agree with the original description. The species is rather common in the clear and deep waters of the Moluccas and on the coast of Celebes, but as far as yet has not been recorded west of the Kangean Archipelago. The occurrence so far to the West on the Sunda-shelf (near Singapore) is therefore quite unexpected.

Literature:

1. *Clupea gracilis* SCHLEGEL. Fauna Japonica. Poissons 1847 pag. 238.
2. *Clupea argyrotaenia* BLEEKER. Journal Ind. Arch. III 1849 pag. 72.
3. *Spratelloides argyrotaenia* BLEEKER. Verh. Bat. Gen. XXIV 1852 pag. 29.
4. *Spratelloides gracilis* GUENTHER. Cat. Brit. Mus. VI 1868 pag. 465.
5. *Spratelloides gracilis* BLEEKER. Atl. Ichth. VI. 1866 — 1872 pag. 96.
6. *Stolephorus japonicus* JORDAN and SEALE. Proc. U. S. Nat. Mus. XXVIII. 1905 pag. 770.
7. *Stolephorus gracilis* EVERMANN and SEALE. Bull. Bur. Fish. XXVI 1906 p. 53.

<sup>1)</sup> Part I: cf. Treubia XIII, p. 411.

8. *Stolephorus japonicus* JORDAN and HERRE. Proc. U. S. Nat. Museum XXXI 1907 pag. 629.
9. *Spratelloides gracilis* GÜNTHER, Fische der Südsee 1909 pag. 384.
10. *Spratelloides gracilis* WEBER and DE BEAUFORT, Fishes of the Indo-Australian Archipelago Vol II 1913 pag. 21.

***Spratelloides delicatulus* (BENN.).**

B. 6, D. 11, A. 11, P. 12, V. 8, L. 1. 35 — 37; L. tr. 7.

Elongate, subcylindrical, somewhat compressed. Height 5.4, head 3.6 — 4 in length without caudal. Eye 3 in head about as long as snout. Maxillary reaching to somewhat farther than frontmargin of eye. Origin of dorsal much nearer to snout than to caudal. Anal somewhat longer than eye. Origin of ventrals nearer to anal than to pectorals. Pectorals longer than eye and snout. Caudal 5.4 in length of head and body, 33 gillrakers on lower branch of first gillarch. Back bluish. Sides and belly silverish. Fins hyaline.

12 specimens of 5 — 6.5 cm. from the Thousand Islands near Batavia. Date November 1929.

These specimens agree with the original description, but for having 11 anal rays instead of 9 and 33 gillrakers instead of about 26. These seem to be racial differences.

Furthermore I got 2 specimens from Karimon Djawa (in the midst of the Java-sea), with a length of 6 and 5 cm. Date 6 - 4 - '28. These specimens have 11 anal rays but 30 — 31 gillrakers.

One specimen from Bawean (eastern part of the Java-sea) of 4 cm. has 9 anal rays and 29 gillrakers. Date 4 - 4 - '28.

Furthermore many specimens from the Kangean Archipelago, again east of Bawean. These specimens (3 — 6.3 cm.) had 9 anal rays too and about 29 gillrakers.

Thus going from West to East we see diminish the number of anal rays and the number of gillrakers. The differences are not sufficient to create two different species. It seems most probable that they are of a racial character.

Literature:

1. *Spratelloides delicatulus* BENNETT. Proc. Comm. Zoöl. Soc. I 1831 pag. 68.
2. *Clupea maccassariensis* BLEEKER. Journal. Ind. Arch. III 1849 pag. 72.
3. *Clupeoides maccassariensis* BLEEKER. Verh. Bat. Gen. XXIV 1852 pag. 17.
4. *Spratelloides delicatulus* GUENTHER. Cat. Brit. Mus. VII 1868 pag. 464.
5. *Spratelloides delicatulus* BLEEKER. Atl. Ichth. VI. 1866 — 1872 pag. 96.

6. *Stolephorus delicatulus* JORDAN and SEALE. Bull. Bur. of Fisheries XXV 1906 pag. 186.
- 7 *Spratelloides delicatulus* GUENTHER. Fische der Südsee Heft VIII 1906 p. 383.
8. *Spratelloides delicatulus* WEBER and DE BEAUFORT. Fishes of the Indo-Australian Archipelago Vol II 1913 pag. 20.

## COILIA GRAY.

**Coilia lindmani** BLKR.

For description and figure see HARDENBERG „Some new or rare fishes of the Indo-Australian Archipelago” Treubia Vol. XIII, 1931, page 411. One specimen, with a length of 12 cm. captured near Sunsang in the estuary of the river Musi, in brackish water of about 10 ‰. It fully agrees with the above-named description made after specimens caught in the middle-course of the same river.

**Coilia macrognathus** BLKR.

B. 10, D. 1 — 14, A. 83, P. 16, V. 7, L.I. 64, L. tr. 11.

Elongate and compressed body. Height 4.7, head 4.9 in length without caudal. Eye 6.3 in head. Snout prominent, somewhat longer than eye. Maxillary strong, reaching far beyond root of pectorals, with a row of alternating smaller and stronger teeth along the whole of its border. Distance origin of dorsal-snout 2.3 in distance origin of dorsal-caudal. Ventrals inserted somewhat behind origin of dorsal. Distance origin of ventral-anal 1.2 in distance origin of ventral-chin. Anal 2.1 in length without caudal. 5 free pectoral rays, surpassing origin of anal. 49 abdominal scutes, 12 of which are proventral. 22 gillrakers on the lower branch of first gillarch. Paired fins hyaline. Anterior half of dorsal and the border of anal and caudal black. Body yellowish, with a golden hue when alive.

One specimen with a length of 23 cm., 21.5 cm. without caudal. Caught in the Kumairiver, at about 10 miles from the mouth in water with a salinity of about 25 ‰.

Date, 1 October 1930.

This specimen differs from the original description as given by BLEEKER by the high number of anal rays (by which it resembles *Coilia grayi* RICHARDSON), by the somewhat smaller eye and by the high number of keeled scutes.

## Literature:

1. *Coilia macrognathus* BLEEKER. Nat. Tijdschr. Ned. Indië III 1852 pag. 436.
- 2 *Coilia macrognathus* GUENTHER. Cat. Brit. Mus. VII 1868 pag. 106.
3. *Coilia macrognathus* BLEEKER. Atl. Ichth. VI 1872 pag. 138.

4. *Coilia macrognathus* VON MARTENS. Exped. nach Ost-Asien Zoöl. Teil. Band I 1876 pag. 201, 204.
5. *Coilia macrognathus* VINCIGUERRA. Catalogo d. Pesci raccolti a Borneo d. S. M. G. Doria e Dott. O. Beccari 1926 pag. 89 (620).
6. *Coilia macrognathus* WEBER and DE BEAUFORT. The Fishes of the Indo-Australian Archipelago II 1913 pag. 49.

#### CLUPEOIDES BLEEKER.

##### **Clupeoides borneensis** BLKR.

B. 6, D. 15 — 16, A. 17, P. 12, V. 8, L.I. 35 — 36, L. tr. 11 — 12.

Elongate, compressed. Height 4.3 in length without caudal, 5.3 — 5.4 with caudal. Head 4.3 in length, 4.8 — 5.0 with caudal. Eyes 3.0 in head, longer than snout. Chin subprominent. Maxillary reaches to below first half of eye, 2.8 — 3 in head. Origin of dorsal fin nearer to snout than to caudal. Pectorals about as long as head without snout. Ventrals opposite to dorsal. Very minute teeth on jaws and palatum, 18 — 20 abdominal scutes, 10 of which are proventral. First spine is inserted behind the pectorals. About 20 gillrakers on the lower half of the first gillarch. Colour whitish. Chin, nose, back and anal fin faintly powdered with black. Two faint black lines from dorsal to caudal. Caudal with a black margin.

Two specimens, 5.8 and 6.0 cm., found among a sample of *Corica pseudopterus* caught in the estuary of the river, Musi (Sumatra) in brackish water with a salinity of about 10 ‰. These specimens are somewhat different from the original description given by BLEEKER, the height being somewhat lower and the maxillary somewhat longer. Furthermore the situation of the dorsal fin is more to the forward and the number of scales in the linea lateralis is somewhat less. These differences however are not sufficient to establish a new variety or species. This species, thus far known from South Borneo only, has been found now in Sumatra also.

##### Literature:

1. *Clupeoides borneensis* BLEEKER. Nat. Tijdschrift Ned. Indië I 1851 pag. 275.
2. *Clupeoides borneensis* GUENTHER Cat. Brit. Mus. VII 1868 p 452.
3. *Clupea (Clupeoides) borneensis* BLEEKER. Atl. Ichth. VI 1872 pag. 101.
4. *Clupeoides borneensis* WEBER and DE BEAUFORT. The Fishes of the Indo-Australian Archipelago II 1913 pag. 60.

#### CLUPEA L.

##### **Clupea (Harengula) dispilonotus** (BLKR).

B. 6, D. 19, A. 17, P. 16, V. 8, L.I. 37, L. tr. 11.

Oblong and compressed. Abdominal and dorsal profile evenly convex.

Height 3.2, head 3.8 in length without caudal. Eye 3 in head, somewhat longer than snout and somewhat shorter than postorbital part of head. Maxillary reaches to below pupil. Origin of dorsal much nearer to snout than to caudal. Anal as long as dorsal and about half as high, 6.4 in length without caudal. Distance origin of ventrals-anus equal to distance anus-first rays of caudal. Origin of ventrals in the midst between snout and caudal. Scales with a few vertical lines. 15 praeventral abdominal scutes, 12 post-ventral. 37 gillrakers. Colour dark greenish on back, sides silvery. An ocellus at posterior end of dorsal, a second one 4 or 5 scales more backwards. A black patch between them, a similar patch behind occiput. Snout and chin dark. Dorsal and caudal blackish, other fins hyaline.

One specimen with a length of 8 cm. Fishmarket of Batavia, 17 - 2 - '30. The specimen quite agrees with the original description of BLEEKER.

Literature:

1. *Harengula dispilonotus* BLEEKER. Nat. Tijdschrift Ned. Indië III 1852 pag. 456.
2. *Clupea dispilonotus* GUENTHER. Cat. Brit. Mus. VII 1868 pag 429
3. *Clupea dispilonotus* BLEEKER. Atl. Ichth. VI 1872 pag. 112.
4. *Clupea dispilonotus* MAX WEBER. Siboga Exp. Fische 1913 pag. 9.
5. *Clupea dispilonotus* WEBER and DE BEAUFORT. Fishes of the Indo-Australian Archipelago II 1913, pag. 69.

PELLONA C. V.

**Pellona kampeni** WEBER and DE BEAUFORT.

B. 6, D. 17, A. 42, P. 15, V. 7, L.I. 46, L.tr. 13.

Oblong and compressed. Upper and lower profile about evenly convex. Height 3.8, head 3.4 in length without caudal. Profile of nape straight. Eye 3.0 in head, somewhat shorter than snout. Two pairs of diverging ridges on head, the posterior portions of them about parallel. Each pair converging into one at the posterior end. Maxillary reaching to anterior half of eye, no supplemental bone in oral border. Chin very prominent. Origin of dorsal behind ventrals, a little nearer to end of snout than to caudal. Ventrals much nearer to anal than to suboperculum. Ventrals short. Anal 3 in length without caudal, its anterior part opposite to posterior half of dorsal. Scales deciduous, almost smooth. 27 abdominal scutes, 5 behind ventrals. 22 gillrakers, finely spinulated on anterior side only.

The description given above is made after a specimen with an approximate length of 16 cm (tail damaged). Kumai (South-West Borneo) 1 October 1930. Salinity of the water about 25 ‰.

Through the kindness of Dr. E. BANKS, Curator of the Sarawak Museum, I got one specimen from Muara Kebas, North Borneo. Date 5 - 6 - '96. Length about 18 cm.

Finformulae: B. 6, D. 16, A. 42, P. 15, V. 7.

Height 3.4, head 3.3 and anal 3 in length without caudal. 28 abdominal scutes, 8 behind ventrals. 21 gillrakers.

Furthermore I got a third specimen from the mouth of the Paneiriver in October 1929, caught in a fishtrap. Length 17 cm.

Finformulae: B. 6, D. 16, A. 42, P. 16, V. 7.

Height 3.3, head 3.3, anal 3 in length without caudal. 30 abdominal scutes. 21 gillrakers.

Each of my specimens agrees fairly well with the original description of WEBER and DE BEAUFORT, the chief difference being the fact, that the gillrakers are spinulated on the anterior side only and not all around as given by the authors.

Literature:

1. *Pellona kampeni* WEBER and DE BEAUFORT. The Fishes of the Indo-Australian Archipelago Vol II pag. 87, 1913.
2. *Pellona kampeni* VINCIGUERRA. Catalogo d. Pesci raccolti a Borneo 1926. pag. 87.

#### Family SCOPELIDAE.

#### SAURIDA C. V.

##### *Saurida grandisquamis* GTHR.

B. 14, D. 12 — 13, A. 11, P. 14 — 15, V. 9, L.l. 49 — 50 L. tr. 3 6 — 7.

Height 8.2 — 9.1, head 3.6 — 3.9 in length without caudal. Eye 4.5 — 4.6 in head. Eyelids moderately developed, the posterior larger than the anterior one. Interorbital space concave. Concavity extending only to some distance behind eye. Distance origin of dorsal-end of snout a little longer than distance origin of dorsal-adipose fin, its longest ray equal to distance between nostril and hindborder of operculum. Base of dorsal shorter than postorbital part of head. Adipose fin shorter than eye, situated above posterior half of anal. Pectorals somewhat longer than postorbital part of head, extending to eleventh or twelfth scale of lateral line and to the vertical through origin of dorsal. Ventrals shorter than head without snout. Distance origin of ventrals-anus equal to distance origin of ventral-nostrils. Caudal deeply forked, 5.1 in length of body and head, about equal to height of dorsal. 15 — 16 scales between occiput and head. Cheeks scaled. A conspicuous ridge along lateral line. Pointed, alternating teeth in both jaws, directed forward. Two bands of teeth on each side of palate, the inner band the shortest. Teeth on tongue and branchial arches. Blackish-greenish above, silvery below. First ray of dorsal and superior ray of caudal with black spots.

3 specimens from Tjiparage (North Coast of Java) with a length of 9.5 — 10 cm. Date 11 - 12 - 1930.

My specimens differ from the original description by the higher number of pectoral rays, the smaller height and the larger head. Furthermore by the concavity of the head, which extends only to some distance behind the eyes instead of to the occiput, by the shorter dorsal fin, by the pectorals which are longer and by the ventrals which are shorter than in the type. All these differences however, are of little value as my specimens are 9.5 — 10 cm. and the type specimens of GUENTHER 25—30 cm and the differences may be due to age therefore. Only the high number of pectoral-rays has perhaps some value, but not sufficient to establish a new species, the more so as my specimens from the Java-sea have been caught at a very great distance from the type-locality (Louisiade Archipelago) so that it may be a local difference only.

## Literature:

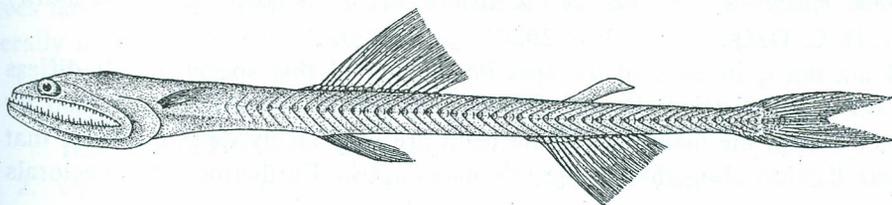
1. *Saurida grandisquamis* GUENTHER. Cat. Brit. Mus. V 1864, pag. 400.
2. *Saurida grandisquamis* GUENTHER. Challenger Rep. VI Shore Fishes 1880 pag. 50.
3. *Saurida grandisquamis* GUENTHER. Fische der Südsee 1909 pag. 377.
4. *Saurida grandisquamis* MAX WEBER. Abh. Senckenb. Naturf. Gesellsch. XXXIV 1911, pag. 22.
5. *Saurida grandisquamis* WEBER and DE BEAUFORT. Fishes of the Indo-Australian Archipelago Vol II 1913 pag. 141.

## HARPODON LESUEUR.

**Harpodon mortenseni** nov. spec.

B. 14, D. 13, A. 15, P. 12, V. 9, L.I. uncertain (60 — 70?).

Long slender fish, with greatest depth behind head. Height 9 in length without tail. Head 5 in length without tail. Eye 8 in head, 1.5 in snout. Distance anus-caudal 1.7 in distance anus-head. Distance origin of dorsal-eye 1.4 in distance origin of dorsal-origin of caudal. Yaws provided with strong canine-like teeth, all bent somewhat backwards. Whole visceral skeleton armed with small teeth. Vomer not toothed. Mouth opening very large. Eye situated above anterior third part of mouth. Four gills. Pseudobranch indistinct. Gillmembranes not connected with isthmus. Membranous flap of operculum reaching beyond insertion of pectoral fin,



*Harpodon mortenseni*, nov. spec.

which goes twice in head. Dorsal much higher than body slightly behind ventrals. Ventrals 1.5 in head. Adipose fin above anal, midway between caudal and dorsal. Caudal 6.0 total length, anal 9.0. Body naked, only lateral line and caudal peduncle with scales. Colour whitish, except the caudal fin which is powdered with black.

The above description is made after the type specimen which has a length of 8 cm. It was caught by trawl in a depth of 300 m. by Dr. Th. MORTENSEN, Copenhagen, after whom the species has been named. Locality Bali Sea 8° 36' S, 114° 34' E. Date 7-4-'29.

Together with the type specimen four other ones, 8, 9, 9 and 10.5 cm. long were captured. Examination furnished the following figures: Height 9 — 9.5, head 5.0 — 5.3, anal 9.0 in length. Distance anus-caudal 1.5 — 1.6 in distance anus-head. Eye 7 — 8 in head, about 1.5 in snout. Distance origin of dorsal-eye 1.4 — 1.6 in distance origin of dorsal-caudal. Caudal 6.3 — 6.6 in total length. D. 13 — 14, A. 15 — 16.

#### Family OPHICHTHYIDAE.

#### CIRRHIMURAENA KAUP.

#### *Cirrhimuraena chilopogon* (BLKR). (♂)

Height 30 in total length, somewhat less than 3 in head. Head 10.6 in length and about 3 in trunk. Head and trunk 1.6 in tail. Eye small above the middle of cleft of mouth. Cleft of mouth 3.8 in head. Anterior nostril just behind snout in upperlip, looking downwards. Posterior nostril hidden in membranous flap of upper lip, below anterior part of eye. Three barbels between first and second nostril, seven behind second nostril. 7 pores on top of head. First pair just behind snout, second pair in the midst between eye and lip of snout. Third pair just above anterior part of eyes and the seventh unpaired pore just between posterior border of eyes. Mandibular teeth very feebly developed. Maxillary teeth in a broad band, becoming broader posteriorly. No teeth in intermaxillaries. Pectorals situated at upper border of gillopening, 5.2 in head, longer than snout and eye. Dorsal and anal show a slight indication of becoming broader at posterior ends. Tip of tail free. Body dark above, lighter below.

One specimen, acquired at the fishmarket of Belawan Deli (Sumatra) by Dr. H. C. DELSMAN, 3-10-'29.

I am not quite sure of the specific identity of this specimen. It differs from the original description of *C. chilopogon* by the smaller mouth and by the fact that in the mandibular the teeth are only feebly developed and that they are lacking altogether in the intermaxillaries. Furthermore the pectorals are much smaller.

If we judge these differences to be of specific value then my species does not belong to one of the five known species of *Cirrhimuraena* in the Indo-Pacific. In accordance however with the uncertainty of the systematics of this genus, I think it wiser to delay the decision, whether we are dealing here with a new species or not, until more material has been collected.

## Literature:

1. *Ophisurus cheilopogon* BLEEKER. Act. Soc. Sc. Indo-neerl. VIII, 1860 pag. 59.
2. *Cirrhimuraena chilopogon* BLEEKER. Atl. Ichth. IV 1864 pag. 42.
3. *Ophichthys chilopogon* GUENTHER. Cat. Brit. Mus. VIII 1870, pag. 76.
4. *Cirrhimuraena cheilopogon* MAX WEBER. Siboga Exp. Fische 1913 pag. 51.
5. *Cirrhimuraena chilopogon* WEBER and DE BEAUFORT. The Fishes of the Indo-Australian Archipelago III 1916 pag. 293.

## Family SYNBRANCHOIDAE.

## MACROTREMA REGAN.

**Macrotrema caligans** (CANT.).

Body naked and elongate, somewhat compressed. Head about  $8\frac{1}{2}$  in total length. Lips well developed. Height of head 2.4 — 2.5 in length of head. Tail 5 — 5.6 in total length. Eyes small, nearly invisible. Small posterior nostril situated obliquely above the eye. Anterior nostril near tip of snout. Cleft of mouth about 4 in length of head. Maxillary teeth small, in a single series, forming a triangular figure near symphysis, palatal teeth strong, in a single series. Mandibular teeth strong, in a single series too, near symphysis in three or four rows. Gillmembranes united, extending upwards to lateral line, which is conspicuous and situated in upper half of body. Gillopenings form a single aperture. Ventrals and pectorals absent. Dorsal and anal consisting of cutaneous folds. Dorsal about as long as anal. Caudal with 6 — 12 rays (mostly 11 — 12). Whole body lackcoloured.

10 specimens with a length of 12 — 14 cm. I got these specimens through the courtesy of Dr. H. C. DELSMAN, who had acquired them from Pemalang on the North coast of Java. They seem to be rather common there, as the natives have a name for it, viz. „Tunang”, and the less common species have generally no proper name. Date 26 June 1926.

## Literature:

1. *Synbranchus caligans* CANTER. Journ. Asiat. Soc. Bengal, XVII 1850 pag. 1316.
2. *Ophisternon caligans* BLEEKER. Act. Soc. Sc. Indo-Neerl. VI 1859 pag. 180.

3. *Symbranchus caligans* GUENTHER. Cat. Brit. Mus. VIII 1870 pag. 17.
4. *Symbranchus caligans* VON MARTENS. Preussische Exp. nach Ost-Asien. Zoöl. Theil I 1876 pag. 405.
5. *Macrotrema caligans* TATE REGAN. Ann. Mag. Nat. Hist. IX 1912 pag. 390.
6. *Macrotrema caligans* WEBER and DE BEAUFORT. Fishes of the Indo-Australian Archipelago III 1916 pag. 415.

#### Family POLYNEMIDAE.

#### ELEUTHERONEMA BLEEKER.

##### *Eleutheronema tridactylum* (BLKR.).

B. 7, D<sub>1</sub>. VIII, D<sub>2</sub>. I. 13, A. III. 15, P.I. 17 + 3 liberi, V. 1.5, L.I. 82, L. tr. 12/1/14.

Elongate. Height 4.0 in length without and 5.3 with caudal. Head 3.3 without and 4.4 with caudal. Eyes totally covered by a gelatinous membrane, 4 in head. Snout shorter than eye, prominent and blunt. Tip of lower jaw behind nostrils, but in front of eyes. Mouth opening larger, reaching to far behind eyes. Maxillary and mandibular scaly. Distance back end of maxillary-tip of snout 1.7 in length of head. Head scaled to tip of snout. Anterior and posterior nostrils close together, halfway between tip of snout and eye. Praeoperculum serrated, its lower angle produced and rounded. Upper lip not developed, lower lip only near corner of mouth. Each jaw with a broad villiform band of minute teeth, covering even the outer side of the jaws. Similar teeth on head of vomer and palatines. Origin of first dorsal between pectorals and ventrals. Second dorsal above anal. Distance origin of anal-caudal 1.2 in distance origin of anal-tip of snout. Anal and second dorsal totally scaly. First dorsal with a scaly sheath. Caudal 4.2 in total length, totally covered with scales. Height of second dorsal and anal about the same, as long as pectorals and longer than postorbital part of head. Second dorsal and anal concave. Pectorals falciform, three free filaments, the longest (upper) one exceeding tip of ventrals, second one somewhat shorter and third one much shorter. Caudal deeply forked, with acute lobes. Scales with crenulated hindborder. Pectorals and dorsal darkish, also the caudal, which has a black border. Back greenish, lower side of body whitish to yellowish, all with a golden hue when alive.

One specimen with a length of 13 cm. Kumai, 1 October 1930, in water with a salinity of about 25‰. The description given above differs only in some minor points from the original description of BLEEKER. The eyes and the pectorals in my specimen are much larger, but these differences are probably due to age as BLEEKER's type-specimen was 32 cm.

I got a second specimen, with a length of 19 cm. from the Banju-asin, one of the original finding places of BLEEKER. It showed no differences from the description given above. Date 19 - 12 - '31. Brackish water.

Literature:

1. *Polynemus tridactylus* BLEEKER. Nat. en Geneesk. Arch. Ned. Indië II 1845 pag. 524.
2. *Polynemus tridactylus* BLEEKER. Verh. Bat. Gen. XXII 1849 pag. 57.
3. *Eleutheronema tridactylum* BLEEKER. Versl. en Mededeelingen Kon. Akad. Amsterdam XIV 1862 pag. 124.
4. *Polynemus tridactylus* VOLZ. Zoöl. Jahrb. Abth. Syst. XIX 1903 pag. 359.
5. *Eleutheronema tridactylum* WEBER and DE BEAUFORT. The Fishes of the Indo-Australian Archipelago IV 1922 pag. 198.
6. *Eleutheronema tridactylum* VINCIGUERRA. Catalogo d. Pesci raccolti a Borneo 1926 pag. 65.

POLYNEMUS L.

*Polynemus longipectoralis* WEBER and DE BEAUFORT.

B. VII, D<sub>1</sub> VIII, D<sub>2</sub> I. 16, A. II 12, P. 16 + 7 liberi, V. I. 5, L.I. 87, L. tr. 6/1/13.

Height 4.1 in length without caudal, 6 in length with caudal. Head 3.8 and 5.5 respectively. Eyes rather small, 8.2 in head, less than snout, 5.7 in postorbital part of head. Mouth inferior, large, reaching behind eyes. Maxillary scaly. Distance back end of maxillary- tip snout 1.8 in head. Anterior and posterior nostrils close together, close to eyes. Praeoperculum finely serrated, its lower angle bluntly rounded and produced. A narrow band of very minute teeth in jaws. Similar teeth on vomer and palatines. Operculum protruded in a membranous flap, not reaching to origin of pectorals. Origin of first dorsal behind origin of pectorals and in front of origin of ventrals, spines soft and flexible, the first one minute. The longest, third one, as long as postorbital part of head. Origin of second dorsal in front of anal. Distance origin of anal-caudal 1.3 in distance origin of anal-chin. Caudal deeply forked with elongated, pointed lobes, 3.3 in total length. Dorsals, anal and caudal scaled. Pectorals pointed, surpassing origin of anal, 1.4 as long as head. The seven free filaments very conspicuously separated from the pectoral. Upper one about  $2\frac{1}{2}$  times as long as total length. The second one somewhat shorter, third one just exceeding tips of caudal, fourth one reaching to midst of anal, fifth one just reaching anal, sixth one surpassing anus and seventh one not reaching anus. Ventrals somewhat longer than postorbital part of head. Distance between origin of anal and origin of ventrals about as long as head. Colour greenish above, yellowish beneath. Fins hyaline to yellowish.

One specimen of 18 cm. length, taken at the fishmarket of Bandjermasin (Borneo) 1 - 5 - '30. The type-specimen was collected in the same locality by the staff of the Fisheries-steamer „Gier”. Finformulae and linea lateralis as in the individual described above. Only the eyes in my specimen are much smaller, the pectorals much larger, and the lengths of the free pectoral rays do not agree with those given in the description.

Literature:

1. *Polynemus longipectoralis* WEBER and DE BEAUFORT. Fishes of the Indo-Australian Archipelago IV 1922 pag. 213.

**Polynemus sextarius** BL. SCHN.

I have given a detailed description and a figure of this species in a previous paper (See HARDENBERG in Treubia Vol XIII 1931 pag. 414). Since then I got some more specimens from other localities, which quite agree with the above-named description.

One specimen, with a length of 10 cm. from the Banjuasin (near the mouth of the river Musi), 10 - 12 - '31. Seven specimens, with a length of 7.5 — 11.5 cm., from Bagan si Api Api, near the mouth of the Rokan (Sumatra), February 1932.