

ZOOLOGISCHE MEDEEELINGEN

UITGEGEVEN DOOR

's RIJKS MUSEUM VAN NATUURLIJKE HISTORIE

Deel XV.	te LEIDEN	Aflevering 1—2.
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I. — NOTES ON GOBIOID FISHES (1—5)

BY DR. F. P. KOUMANS.

Introduction.

The measurements given in this note and following notes are expressed in hundredths of length and are made by means of dividers. They are taken about in the same way as used by the American authors.

The length is measured from the tip of the snout to the end of the last vertebra.

The depth is taken at the deepest part of the body, the depth of caudal peduncle halfway the peduncle. Length of head from tip of snout to the upper end of the posterior edge of operculum. Length of snout from its tip to the anterior margin of the orbit. Width of interorbital space is measured with the dividers pinched tightly between the bony orbits. Diameter of orbit is measured longitudinally. Distance from snout to D 1 from the tip of the snout to the insertion of the first dorsal spine, distance from snout to D 2 and A from the tip of the snout to the insertion of the first ray of D 2 and A. Length of caudal peduncle from the insertion of the last anal ray to the end of the last vertebra. Length of the caudal fin from the end of the last vertebra to the end of the longest caudal ray. Length of P and V from the insertion of the fin to the end of the longest ray. Length of D 1 from the insertion of the first spine to the insertion of the last spine, not to the end of the membrane! Length of D 2 and A from the insertion of the first ray to the insertion of the last ray of each fin.

The last ray of D 2 and A, which is mostly split to the base, is counted as one ray, in the same way the first ray of D 2 and A, which is mostly unbranched, is counted as one ray.

The scales in lateral series are counted from the upper end of the posterior edge of operculum to the base of caudal fin. The scales in

transverse series before A (l. tr. 1) are counted in a line beginning at the insertion of the first anal ray upwards. The scales in transverse series behind D₂ (l. tr. 2) are counted in a line beginning at the end of D₂ downwards. The predorsal scales are counted from the insertion of the first dorsal spine to the eyes in a median line on the nape. It is clear that these numbers do not pretend to be of mathematical exactness, they only indicate the probable size of the measurements.

1. Note on the genus *Stigmatogobius* Bleeker.

BLEEKER has given in his "Description des espèces insulindiennes du genre *Stigmatogobius*" (Versl. Med. Kon. Ak. Wet. Amsterdam (2) XII 1878 p. 199—208) descriptions of 5 species of this genus: *sadanundio*, *isognathus*, *singapurensis*, *gastrospilus* and *amblyrhynchus*.

In my "A preliminary revision of the genera of the Gobioid Fishes with united ventral fins" 1931, I stated already on p. 50 and 102 that BLEEKER has brought a number of species into other genera, which I consider to be synonymes of *Stigmatogobius*. Therefore I intend to give a new revision of *Stigmatogobius*, giving a reexamination of the types and specimens of BLEEKER of the 5 species, which he brought into this genus, and of the species of which I am sure that they belong to it.

Stigmatogobius Bleeker.

Stigmatogobius Bleeker Esquisse, Arch. neerl. sc. ex. et nat. IX 1874
p. 323. (*Gobius pleurostigma* Blkr.).

Pseudogobius Bleeker (Museum name).

" Popta Zool. Med. VII 1922 p. 36 (*P. penango* Popta and
javanicus Blkr.).

" Koumans Zool. Med. XIII 1930 p. 2 (*Gobius javanicus*
Blkr.).

Microgobius Bleeker (not Poey) (Museum name).

Body elongate, a little compressed, covered with 25—30 scales, ctenoid on the posterior part of the body, becoming cycloid on the anterior part. Breast and belly scaled. Head a little compressed to depressed, scaled above behind the eyes; the foremost scale is a large unpaired one in the median line. Preoperculum and operculum, or only operculum mostly scaled. Eyes well developed, in anterior half of the head, bony interorbital $\frac{1}{3}$ — $1\frac{1}{2}$ diameter of eye. Snout short, blunt, shorter than the eye. Anterior nostril in a short tube. Mouth oblique, lower jaw or upper jaw prominent. Teeth in both jaws in several rows, the outer of which is enlarged. The outer row of mandible extends only to the half of the jaw, the last

tooth is not stronger developed. In lower jaw sometimes on each side of symphysis a canine of inner row, lateral sometimes some larger teeth of inner row. Tongue rounded. Gillopenings not wide, as long as the breadth of the base of pectoral fin, isthmus broad. Inner edge of shoulder-girdle without fleshy flaps. Dorsal fins separate, D₁ with 6 spines, D₂ with 7—9, A with 6—9 rays. V united, under P. P without free silklike rays, base scaled. C obtuse.

Key to the species of *Stigmatogobius*

1a. 6 to 9 predorsal scales.	2
b. 10 to 11 predorsal scales, jaws subequal, interorbital less than $\frac{1}{2}$ diameter of eye.	<i>S. penango</i>
c. 11 to 13 predorsal scales, interorbital more than $\frac{1}{2}$ diameter of eye.	8
2a. Lower jaw prominent	3
b. Jaws equal, interorbital $\frac{1}{2}$ diameter of eye	<i>S. isognathus</i>
c. Upper jaw prominent	5
3a. Teeth of inner row of lower jaw laterally enlarged	4
b. Teeth of inner row of lower jaw laterally not enlarged	<i>S. neglectus</i>
4a. Interorbital broader than eye	<i>S. sadanundio</i>
b. Interorbital less than $\frac{1}{2}$ diameter of eye.	<i>S. tambujon</i>
5a. Preoperculum and operculum scaled	<i>S. gastrospilus</i>
b. Preoperculum naked, operculum scaled.	6
6a. Teeth of inner row of lower jaw laterally enlarged	<i>S. poicilosoma</i>
b. Teeth of inner row of lower jaw laterally not enlarged	7
7a. Maxillary extends to a vertical from posterior margin of pupil.	<i>S. amblyrhynchus</i>
b. Maxillary extends to a vertical from anterior margin of pupil.	<i>S. javanicus</i>
8a. Head depressed	<i>S. hoeveni</i>
b. Head compressed	<i>S. borneensis</i>

Stigmatogobius sadanundio (Ham. Buch.).

Gobius sadanundio Ham. Buch. Fishes Ganges 1822 p. 52.

" " Bleeker Verh. Bat. Gen. XXV 1853 p. 102 t.

2 fig. 2.

" " Günther Cat. Fishes III 1861 p. 29.

Gobius sadanundio Day Fishes India 1878 p. 296 t. 63 fig. 10.

Gobius pleurostigma Bleeker Verh. Bat. Gen. XXII 1849 p. 28.

Günther Cat. Fishes III 1861 p. 43

Stigmatogobius sadanundio Bleeker Versl. K. Ak. Wet. Amsterdam (2) XII 1878 p. 201.

Head subcylindrical, scaled above behind the eyes, operculum scaled with large scales. Eye large. Snout obtuse. Mouth a little oblique, lower jaw prominent. Maxillary extends to a vertical from centre of eye. Teeth in several rows, outer a little enlarged, in lower jaw inner row enlarged forming a canine on each side of symphysis and caninoid teeth laterally. Tongue rounded. Some short mucous canals radiating under the eyes. A canal along the mandible. Body elongate, compressed. Scales ctenoid, becoming cycloid before D1. Dorsal fins close together. D2 and A short. C obtuse. Color in spirits: yellowish. Body with a number of black spots in one line or in a few lines longitudinal in the middle of the sides. A few black spots at the insertion of the caudal rays. Spines of D1 sometimes filiform. In D1 a large black spot between the 4th and 6th spine. A few small dark spots on D2 and A.

Measurements in % of length of a specimen of BLEEKER's collection, Rijks Mus. Nat. Hist. Leiden number 6173.

Length	42 m. m.	Length V	16,7
Depth of body	26,2	Length D1	10,7
Depth caudal ped.	16,7	Length D2	14,3
Head	27,4	Length A	14,3
Snout	7,1	D1 number spines	6
Interorbital	9,5	D2 number rays	8
Orbit	7,8	A number rays	9
Snout to D1	40,5	P number rays	19
Snout to D2	60,7	Scales l. l.	± 28
Snout to A	60,7	Scales l. tr. 1	9
Length caudal ped.	25,0	Scales l. tr. 2	7
Length caudal fin	30,9	Predorsal scales	9
Length P	25,0		

The figure of the species, which BLEEKER gives in Verh. Bat. Gen. XXV 1853 t. 2 fig. 2 is not quite correct. He gives the preoperculum fully scaled to the edge of the mouth. In the description Versl. K. Ak. Wet. Amsterdam (2) XII 1878 p. 201 he gives "squamis rostro, genis et capite inferne nullis". In the specimens, which I have seen the preoperculum was not scaled. Dr. S. L. HORA has published in Memoirs of the Indian

Museum IX no. 4 1929 pl. XVIII fig. 3 the figure of BUCHANAN, which is, however not quite correct.

The species is recorded from India over Malay Peninsula through the Indo-Australian Archipelago to the Viti Islands. It is recorded from fresh and brackish water.

Stigmatogobius neglectus (Blkr. Museum name) Koumans.

Pseudogobius neglectus coll. Bleeker in Rijks Mus. Nat. Historie Leiden.
Stigmatogobius neglectus Koumans Preliminary revision 1931 p. 102.

Head subcylindrical, scaled above behind the eyes, operculum scaled with large scales. Snout obtuse. Mouth a little oblique, lower jaw a little prominent. Maxillary extends to a vertical from centre of eye. Teeth in each jaw in front in several rows; laterally the number of rows decrease to one, outer row a little enlarged, no caninoid teeth. Tongue rounded. Two mucous canals run longitudinally over preoperculum. Body elongate, a little compressed. Scales ctenoid, becoming cycloid before D 1. Dorsal fins close together. D 2 and A short.

Color in spirits: brownish without markings.

Measurements in % of length of two specimens of BLEEKER's collection, Rijks Mus. Nat. Historie Leiden number 4550.

Length	34 m.m.	32 m.m.	Length V	22,1	21,9
Depth of body	19,1	18,8	Length D 1	13,2	14,1
Depth caudal ped.	14,7	12,5	Length D 2	14,7	15,6
Head	27,2	27,2	Length A	11,7	12,5
Snout	5,9	6,2	D 1 number spines	6	6
Interorbital	2,9	3,1	D 2 number rays	7	7
Orbit	8,8	7,8	A number rays	6	7
Snout to D 1	38,3	39,1	P number rays	18	18
Snout to D 2	58,8	59,4	Scales l. l	± 26	± 26
Snout to A	64,7	62,5	Scales l. tr. 1	7	7
Length caudal ped.	27,6	28,1	Scales l. tr. 2	7	7
Length caudal fin	22,1?	25,0	Predorsal scales	7	7
Length P	25,0	25,0			

I found 16 specimens in 's Rijks Museum van Natuurlijke Historie Leiden no. 4550 from BLEEKER's collection, belonging according to the label on the bottle to *Pseudogobius neglectus*, they were collected in Western Java in fresh and brackish estuaries of rivers.

Stigmatogobius isognathus Bleeker.

Stigmatogobius isognathus Bleeker Versl. K. Ak. Wet. Amsterdam (2)
XII 1878 p. 203.

Pseudogobius isognathus coll. Bleeker in Rijks Mus. Nat. Historie
Leiden.

” ” Koumans Preliminary revision 1931 p. 102.

Head compressed, scaled above behind the eyes, operculum scaled with large scales. Eye large. Snout very obtuse. Mouth a little oblique, jaws equal. Maxillary extends to a vertical from the anterior margin of pupil. Teeth in each jaw in front in several rows, laterally the number of rows decrease to a few, outer row a little enlarged, inner row in lower jaw a little enlarged, no caninoid teeth. Tongue rounded. A mucous canal runs from the eye to the edge of the mouth and is divided into two branches running longitudinally over preoperculum; one canal along the mandible; 3 short canals over operculum. Body elongate, compressed. Scales ctenoid, becoming cycloid before D1. Dorsal fins close together. D2 and A short.

Color in spirits: uniform brown without markings.

Measurements in % of length of two specimens of BLEEKER's collection, Rijks Mus. Nat. Historie Leiden number 4551.

Length	40 m.m.	32 m.m.	Length V	21,3	23,1
Depth of body	17,5	20,3	Length D1	13,8	14,1
Depth caudal ped.	13,8	15,6	Length D2	15,0	15,6
Head	26,3	26,6	Length A	11,3	12,5
Snout	6,3	6,3	D1 number spines	6	6
Interorbital	2,5	2,3	D2 number rays	7	7
Orbit	7,5	8,6	A number rays	7	7
Snout to D1	35,0	37,5	P number rays	17	17
Snout to D2	57,5	56,3	Scales l. l.	± 26	± 25
Snout to A	60,0	57,8	Scales l. tr. 1	7	8
Length caudal ped.	25,0	25,0	Scales l. tr. 2	7	7
Length caudal fin	20,0	—	Predorsal scales	7	7?
Length P	27,5	28,6			

In my "A preliminary revision of the genera of the Gobioid Fishes with united ventral fins", 1931, I wrote on p. 102: "*Pseudogobius isognathus* of Blkr. is not synonymous with *Gobius isognathus* Blkr. from Madagascar, which belongs to *Awaous*, perhaps it is identical with *Stigmatogobius isognathus* Blkr." The type of *Stigmatogobius isognathus* Blkr.

is apparently lost. The two specimens of *Pseudogobius isognathus* differ from the description of his *Stigmatogobius isognathus* in a few points:

Description <i>S. isognathus</i>	Specimens <i>P. isognathus</i>
interorbital: $\frac{1}{2}$ of eye	$\frac{1}{3} \frac{3}{11}$ of eye
predorsal scales: 9	7
scales 1. l.: 28?	25—26
scales 1. tr. 1: 8—9	7—8
P number rays: 15—16	17

This deviation, however, is not of such importance, that it is allowed to make a new species, therefore I unite *Pseudogobius isognathus* Blkr. (Museum name) and *Stigmatogobius isognathus* Blkr.

BLEEKER recorded *S. isognathus* from Singapore, in sea; the specimens of *Pseudogobius isognathus* were collected in Batavia in estuaries.

Stigmatogobius borneensis (Bleeker).

Gobius borneensis Bleeker Nat. Tijdschr. Ned. Ind. I 1851 p. 10.

" " Günther Cat. Fishes III 1861 p. 33.

Stigmatogobius singapurensis Bleeker Versl. K. Ak. Wet. Amsterdam (2) XII 1878 p. 204.

Head compressed, scaled above behind the eyes, operculum scaled with large scales. Eye large. Snout very obtuse. Mouth a little oblique, lower jaw prominent. Maxillary extends in some specimens to a vertical from the anterior margin, in other specimens to a vertical from the posterior margin of pupil. Teeth in several rows in front, outer row enlarged; laterally in lower jaw the inner row of teeth is a little enlarged. No canines. Tongue rounded. A number of mucous canals radiate under the eye. Body elongate, scales ctenoid, becoming cycloid before D 1.

Color in spirits: body brownish with a dark spot at the base of the caudal fin and a dark transverse stripe at the insertion of D 1, this dark stripe ends in a spot behind the pectoral fin. A dark stripe from the eye to behind the maxillary. D 1 with a dark spot at the base between 3rd and 6th spine. D 2 and C with dark cross stripes.

Measurements in % of length of 3 specimens of BLEEKER's collection of *Gobius borneensis* and of the type of *S. singapurensis*.

Length	38 m.m.	43 m.m.	45 m.m.	37 m.m.
Depth of body	22,4	25,6	25,6	23,0
Depth caudal ped.	13,2	14,5	14,4	13,5
Head	26,3	26,7	25,6	25,7
Snout	7,9	7,0	6,7	7,4

Interorbital	6,6	7,0	6,7	6,75
Orbit	7,9	8,1	7,8	8,1
Snout to D 1	40,8	39,5	38,9	39,2
Snout to D 2	59,2	58,1	58,9	58,1
Snout to A	60,5	60,5	61,1	59,5
Length caudal ped.	23,7	26,7	25,6	25,7
Length caudal fin	19,7	26,7	—	—
Length P	19,7	23,3	20,4	18,9
Length V	21,1	22,1	21,1	20,3
Length D 1	11,8	10,5	12,2	12,2
Length D 2	13,2	16,3	15,6	13,5
Length A	13,2	15,1	14,4	13,5
D 1 number spines	6	6	6	6
D 2 number rays	8	8	8	8
A number rays	8	9	9	9
P number rays	15?	14	16	16
Scales l. l.	± 28	28	30	28
Scales l. tr. 1	8	8	8	8
Scales l. tr. 2	7	7	7	7
Predorsal scales	14?	13	13	13
	<i>Gobius</i>		type S.	
	<i>borneensis</i>		<i>singapurensis</i>	

According to the labels on the bottles which contain specimens of BLEEKER's collection in 's Rijks Museum van Natuurlijke Historie Leiden no. 6175 and 4537, BLEEKER brought *Gobius borneensis* to *Deltentosteus*. I compared the type of *S. singapurensis* (no. 4460) with the specimens of *Gobius borneensis*, but do not find differences which allow to separate these species, so I propose to regard *Stigmatogobius singapurensis* as a synonym of *S. borneensis*.

This species is recorded from Borneo, Banjermasin and Sumatra, Palembang, both in fresh water and Singapore in brackish water.

Stigmatogobius gastrospilus (Bleeker).

Gobius gastrospilus Bleeker Nat. Tijdschr. Ned. Ind. IV 1853 p. 477.

Günther Cat. Fishes III 1861 p. 43.

"*Stigmatogobius gastrospilus* Blkr. Versl. K. Ak. Wet. Amsterdam (2)
XII 1878 p. 206.

Head subcylindrical, scaled above behind the eyes and on preoperculum and operculum. Eye large. Snout obtuse. Mouth a little oblique,

upper jaw prominent. Maxillary extends to a vertical from the posterior margin of pupil. Teeth indistinct. Body elongate, compressed, scales ctenoid, becoming cycloid before D 1. Dorsal fins close together. D 2 and A short.

Color in spirits: uniform brownish.

Measurements in % of length of the type of *S. gastrospilus* Blkr. from BLEEKER's collection Rijks Mus. Nat. Historie Leiden number 4676.

Length	30 m.m.	Length P	21,7
Depth of body	18,3	Length V	16,7
Depth caudal ped.	9,0	D 1 number spines	6
Head	25,0	D 2 number rays	8
Snout	6,7	A number rays	8
Interorbital	3,3	P number rays	15
Orbit	6,7	Scales l. l.	± 26
Snout to D 1	33,3	Scales l. tr. 1	7
Snout to D 2	53,3	Scales l. tr. 2	7
Length caudal ped.	26,7	Predorsal scales	7
Length caudal fin	28,3		

The type specimen was collected at Batavia in sea.

Stigmatogobius poecilosoma (Bleeker).

Gobius poecilosoma Bleeker Verh. Bat. Gen. XXII 1849 p. 31.

Head subcylindrical, scaled above behind the eyes, operculum probably scaled. Mouth a little oblique, upper jaw prominent. Maxillary extends to a vertical from centre of eye. Teeth in front in several rows, laterally the number of rows decrease. Outer row a little enlarged, laterally inner row of lower jaw a little enlarged. No canines. Tongue rounded. Body elongate, compressed, scales ctenoid, becoming cycloid before D 1. Dorsal fins close together. D 2 and A short.

Color in spirits: yellowish. Two brown spots placed in a vertical line at the base of the caudal fin.

Measurements in % of length of a specimen of BLEEKER's collection, Rijks Mus. Nat. Historie Leiden number 4488.

Length	29 $\frac{1}{2}$, m.m.	Snout to D 1	35,6
Depth caudal ped.	12,7	Snout to D 2	55,9
Head	21,2	Length caudal ped.	27,1
Interorbital	3,4	Length caudal fin	25,4
Orbit	6,8	D 1 number spines	6

D 2 number rays	7	Scales l. tr. 1	7?
A number rays	7	Scales l. tr. 2	7?
P number rays	14?	Predorsal scales	7?
Scales l. l.	± 26		

The species was recorded by BLEEKER from Pasuruan in brackish water. According to the label on the bottle BLEEKER intended to bring this species to *Deltentosteus*.

Stigmatogobius tambujon (Bleeker).

Gobius tambujon Bleeker Nat. Tijdschr. Ned. Ind. VII 1854 p. 319.
 " " Günther Cat. Fishes III 1861 p. 32.

Head a little compressed, scaled above behind the eyes, operculum scaled? Mouth a little oblique, lower jaw prominent. Maxillary extends to a vertical from the posterior margin of pupil. Teeth in front in several rows, in lower jaw laterally in a few rows, inner row in lower jaw laterally a little enlarged. No canines. Tongue truncate. Two longitudinal mucous canals over preoperculum. Body elongate, compressed, scales ctenoid, becoming cycloid before D 1. Dorsal fins close together. D 2 and A short.

Color in spirits: brown without markings.

Measurements in % of length of the single specimen in BLEEKER's collection Rijks Mus. Nat. Historie Leiden number 4458.

Length	26 m. m.	Length caudal ped.	21,1
Depth of body	19,2	Length caudal fin	25,0
Depth caudal ped.	12,5	D 1 number spines	6
Head	37,7	D 2 number rays	7
Snout	6,7	Scales l. l.	± 26
Interorbital	2,9	Scales l. tr. 1	7
Orbit	7,7	Scales l. tr. 2	6
Snout to D 1	40,4	Predorsal scales	8?
Snout to D 2	61,5		

According to the label on the bottle containing the single specimen which is preserved now, BLEEKER intended to place this species into a genus *Microgobius* (not of POEY).

BLEEKER recorded this species from Perdana, Batavia on Java and from Bali in fresh water, M. WEBER recorded it from Merauke (New Guinea) in brackish water and from a brook of Obi.

JORDAN & SEALE recorded this species from Buitenzorg. They bring it

in Proc. U. S. Nat. Mus. 33 1908 p. 542 to *Glossogobius*. I am not sure that the determination is right.

Stigmatogobius hoeveni (Bleeker).

Gobius hoevenii Bleeker Nat. Tijdschr. Ned. Ind. II 1851 p. 456.
 " " Günther Cat. Fishes III 1861 p. 32.

Head depressed, scaled above behind the eyes, operculum scaled. Mouth a little oblique. Maxillary extends to a vertical from the posterior margin of pupil. Teeth of inner row of lower jaw laterally enlarged. Tongue rounded. Body elongate, compressed, scales ctenoid, becoming cycloid before D1. Dorsal fins close together. D2 and A short.

Color in spirits: uniform dark brown.

Measurements in % of length of the single specimen of BLEEKER's collection, Rijks Mus. Nat. Historie Leiden number 4457. The specimen has the mouth mutilized.

Length	32'm. m.	Snout to A	59,4
Depth of body	21,9	Length caudal ped.	28,6
Depth caudal ped.	17,2	D1 number spines	6
Head	26,6	D2 number rays	8
Snout	6,3	Scales l. l.	28
Interorbital	9,4	Scales l. tr. 1	8
Orbit	7,8	Scales l. tr. 2	7
Snout to D1	40,6	Predorsal scales	11
Snout to D2	59,4		

According to the label on the bottle, BLEEKER intended to place this species into a genus *Microgobius* (not of POEY).

This species is recorded by BLEEKER from Sambas river, Borneo, fresh water, M. WEBER recorded it from New Guinea, Aroe islands from fresh water, M. WEBER & DE BEAUFORT from Nias.

Stigmatogobius javanicus (Bleeker).

Gobius javanicus Bleeker Nat. Tijdschr. Ned. Ind. XI 1856 p. 88.
 " " Günther Cat. Fishes III 1861 p. 33.

Head subcylindrical, scaled above behind the eyes, operculum with large scales. Mouth a little oblique, upper jaw prominent. Maxillary extends to a vertical from the anterior margin of pupil. Teeth in front in several rows, laterally the number of rows decrease in lower jaw, outer row a little enlarged, no canines. Tongue rounded. Two mucous canals run

longitudinally over preoperculum. Body elongate, compressed, scales ctenoid, becoming cycloid before D 1. Dorsal fins separated. D 2 and A short.

Color in spirits: yellowish brown. Head with a dark stripe from eye to maxillary, dark oblong spot on preoperculum. Body with two longitudinal rows of 5 blotches on the dorsal half; breadth of each blotch is the breadth of one scale, length of each blotch is the length of 3 scales. D 1 with a black spot between 3rd and 5th spine. D 2 and C with dark transverse stripes. V and A uncolored.

Measurements in % of length of 3 specimens of BLEEKER's collection, Rijks Museum Nat. Historie Leiden number 4549 and of a specimen collected by Dr. F. KOPSTEIN Haroekoe near Amboen Dec. 1923, number 11835.

Length	32 m.m.	34 m.m.	34 m.m.	34 m.m.
Depth of body	26,6	—	23,5	23,5
Depth caudal ped.	15,6	17,6	16,2	14,7
Head	23,4	23,5	23,5	23,5
Snout	4,7	5,9	5,9	5,9
Interorbital	3,1	2,9	2,9	2,9
Orbit	7,8	7,4	7,4	7,4
Snout to D 1	35,9	38,2	35,3	35,3
Snout to D 2	56,3	57,4	55,9	56,5
Snout to A	54,7	57,4	54,4	57,4
Length caudal ped.	31,3	27,9	27,9	27,9
Length caudal fin	25,0	26,5	—	25,0
Length P	26,6	23,5	—	25,0
Length V	21,9	20,6	—	23,5
Length D 1	14,1	—	10,3	10,3
Length D 2	15,6	—	14,7	14,7
Length A	14,1	—	14,7	—
D 1 number spines	6	6	6	6
D 2 number rays	8	8	8	8
A number rays	8	8	8	8
P number rays	15	15	15	15
Scales l. l.	± 25	25	26—27	25
Scales l. tr. 1	7	7	7	7
Scales l. tr. 2	7	7	7	7
Predorsal scales	6	6	6	6
	BLEEKER		KOPSTEIN	
	n° 4549		n° 11835	

According to the label on the bottle containing the specimens, BLEEKER

intended to place this species into a genus *Pseudogobius*. The species is recorded by BLEEKER from Java, freshwater, Boeroe freshwater. M. WEBER recorded it from Celebes, Flores in rivers, Amboin in river, New Guinea in fresh and brackish water, Aroe Islands in river, Lombok in sea, Obi in freshwater. DE BEAUFORT records it from W. Ceram in river, M. WEBER & DE BEAUFORT from Nias. 's Rijks Museum van Natuurlijke Historie has got, besides the specimens of BLEEKER, specimens from Boeton freshwater, Amboin, Haroekoe and Ondolean.

Stigmatogobius amblyrhynchus Bleeker.

Stigmatogobius amblyrhynchus Bleeker Versl. K. Ak. Wet. Amsterdam
(2) XII 1878 p. 207.

The type specimen of this species is evidently lost. This species I believe is close allied to *S. javanicus* (Blkr.) and differs in having a maxillary which extends to a vertical from the posterior margin of pupil and in pattern of colouring. The species was recorded from Java (Batavia, Tjisekat) in rivers and brackish water.

Stigmatogobius penango (Popa).

Gobius (Pseudogobius) penango Popa Zool. Med. VII 1922 p. 36.

Head subcylindrical, scaled above behind the eyes, operculum scaled. Snout obtuse. Mouth a little oblique, jaws subequal. Maxillary extends to a vertical from centre of eye. Teeth of outer row a little enlarged. Tongue truncate. Two mucous canals longitudinally over preoperculum. Body elongate anteriorly subcylindrical, posteriorly compressed. Scales very weakly ctenoid to cycloid.

Color in spirits: violet brownish, each scale with a dark margin.

Measurements in % of length of the type specimen, Rijks Mus. Nat. Historie Leiden number 10666 from Rumbia S. O. Celebes.

Length	30 m.m.	Snout to A	60,0
Depth of body	20,8	Length caudal ped.	21,7
Depth caudal ped.	13,3	D 1 number spines	6?
Head	30,0	D 2 number rays	7?
Snout	6,7	A number rays	7?
Interorbital	3,2	Scales l. l.	± 26
Orbit	8,3	Scales l. tr. 1	7
Snout to D 1	40,0	Scales l. tr. 2	7
Snout to D 2	60,0	Predorsal scales	10

The species was recorded from Penango and Rumbia (S. O. Celebes).

2. Description of *Callogobius liolepis* (Blkr. Museum name) Koumans.

Callogobius liolepis collection Bleeker in Rijks Mus. Nat. Historie Leiden.

" " Koumans Preliminary revision 1931 p. 75

Head depressed, scaled above behind the eyes, preoperculum and operculum naked. Mouth small, a little oblique. Maxillary extends to a vertical just behind the eye. Teeth in several rows, outer a little enlarged. In lower jaw laterally two canines of inner row. Tongue rounded. A mucous canal is divided at the end of maxillary into two branches, which run longitudinally over preoperculum. Two short curved canals on operculum. A row of papils round the eyes, along maxillary and along lower jaw. Body elongate, subcylindrical anteriorly, compressed posteriorly. Scales cycloid. Bases of ventral fins united, basal membrane very weakly developed, membrane between the inner rays torn or wanting.

Color in spirits: uniform brownish.

Measurements in % of length of two specimens of BLEEKER's collection, Rijks Mus. Nat. Historie Leiden number 4411.

Length	45 m.m.	43 m.m.	Length P	20,0	—
Depth of body	13,3	12,8	Length V	20,0	—
Depth caudal ped.	12,2	11,6	D 1 number spines	6	6
Head	30,0	29,1	D 2 number rays	9?	9?
Snout	7,8	7,0	A number rays	9?	9?
Interorbital	5,0	4,7	Scales l.l.	± 45	± 45
Orbit	6,7	7,0	Scales l. tr. 1	± 12	± 12
Snout to D 1	41,1	40,7	Scales l. tr. 2	± 11	± 11
Length caudal ped.	17,8	17,4	Predorsal scales	14?	15?

I found in the collection of 's Rijks Museum van Natuurlijke Historie Leiden a bottle of BLEEKER's collection, containing two specimens from Ambon, to which BLEEKER intended to give the name *Callogobius liolepis*. The species differs from *Callogobius hasselti* in having preoperculum and operculum naked, interorbital broader, all scales cycloid etc.

3. Note on *Quisquilius profundus* M. Weber.

After examination 3 specimens of this species, which I found in the collection of undetermined gobies in British Museum (Natural History), it is necessary to alter the description, which I have given in my Preliminary revision 1931 in a few points.

The teeth are not placed in two rows, but in many rows of very small ones, of which the outer is enlarged, the inner row is also enlarged. Therefore it seems that the teeth are placed in two rows. I have examined

the types of this species with a compound microscope and found the same state. The tongue is not truncate but truncate to slightly bilobate.

I shall give here a description of the specimens of British Museum, which agree in all points with the types of Prof. WEBER.

Head compressed, scaled above behind the eyes, rest naked. Eye in anterior half of the head. Anterior nostril in a short tube. Lips thick. Mouth oblique, lower jaw prominent. Maxillary extends to a vertical from the anterior margin of pupil. Teeth in both jaws apparently in two rows, outer row enlarged, inner row a little enlarged, between these rows many rows of very small teeth, often hidden in the gum. Laterally in lower jaw a caninoid tooth. Tongue truncate to slightly bilobate. Gill-openings continued forward below, isthmus narrow. No fleshy flaps on inner edge of shouldergirdle. Some mucous canals radiating under the eyes, crossed by two longitudinal ones. Two longitudinal canals over operculum, crossed by one along the anterior margin. Some short canals in interorbital space. Body elongate, compressed. Scales ctenoid, scales on neck ctenoid, on breast cycloid. Dorsal fins close together. V united, basal membrane totally wanting. P without free rays, base scaled. C rounded.

Color in spirits: yellowish, head and body are dotted with small black spots. There are 12 transverse bands: 4 on the head, 1 from the insertion of 1st spine of D 1 over base of P, 1 from middle of D 1, 1 from beginning of D 2, 1 from middle of D 2, 1 from end of D 2, 3 on caudal peduncle.

The 4 transverse bands on the head are placed: 1 from eye obliquely to maxillary, 1 from eye vertical downward, 1 from halfway the head bent to the eye, from here downward, 1 over operculum.

Measurements in % of length of the types of *Quisquilius profundus* M. Weber and of 3 specimens from the collection of British Museum (N. H.) 1929. 6. 12. 3—5.

Length	28 m.m.	26 m.m.	24 m.m.	23 m.m.	34 m.m.	26 m.m.	22 m.m.
Depth of body	25,0	25,0	26,0	—	29,4	25,0	—
Depth caudal ped.	14,3	15,4	14,6	14,1	16,2	15,4	13,6
Head	30,4	32,7	31,3	30,4	30,9	32,7	31,8
Snout	8,0	7,7	8,3	8,7	7,4	7,7	9,1
Interorbital	3,6	3,9	4,2	4,9	4,4	3,9	4,5
Orbit	8,9	9,6	9,4	9,8	8,8	9,6	9,1
Snout to D 1	35,7	38,5	37,5	39,1	35,8	38,5	36,4
Snout to D 2	55,4	57,7	56,3	56,5	57,4	57,7	56,8
Snout to A	60,7	57,7	58,3	58,7	58,8	61,5	61,3
Length caudal ped.	19,6	23,1	20,8	21,7	22,1	23,1	18,2
Length caudal fin	23,2	—	27,1	—	23,5	26,9	22,7
Length P	21,4	—	—	—	32,4	—	25,0

Length V	25,0	26,9	29,2	26,1	23,5	26,9	22,7
Length D 1	14,3	15,4	—	15,2	13,2	15,4	—
Length D 2	23,2	25,0	22,9	21,7	25,0	25,0	22,7
Length A	17,9	19,2	20,8	—	20,6	19,2	15,9
D 1 number spines	6	6	6	6	6	6	6
D 2 number rays	11	11	—	—	11?	11	—
A number rays	9?	9	—	—	9?	9	—
P number rays	—	—	—	—	19	19	—
Scales l. l.	32	32	32	± 31	± 32	32	32
Scales l. tr. 1	10	10	10	10	10	11	10
Scales l. tr. 2	9	9	9	9	9	9	9
Predorsal scales	± 15	15	15	± 15	15	15	± 15
	Siboga-expedition				$6^{\circ},00\text{ N. }98^{\circ},00\text{ E}$		
	Sapeh-strait				East. Ass. Tel. Co.		

The specimens collected by the Siboga Expedition were found in Sapeh-strait, 70 meter and Dongala, Palos-bay, 36 meter. The specimens of British Museum (N.H.) have the label 1929.6.12.3—5 $6^{\circ},00\text{ N. }98^{\circ},00\text{ E}$, 60 faths East. Ass. Tel. Co. (c/s "Patrol").

4. Note on the name *Herreichthys*.

In "A preliminary revision of the genera of the Gobioid Fishes with united ventral fins" 1931 p. 163 I proposed to alter the name *Herrea* H. M. Smith, which was preoccupied, into *Herreichthys*. This publication was distributed November 13th 1931. In Journal of the Siam Society, Natural History Supplement vol. VIII, No. 3, 1931 H. M. SMITH has altered his name *Herrea* into *Herreolus*. As this publication was distributed September 7th 1931 the name *Herreolus* antedates my name *Herreichthys*.

5. Note on the distribution of *Apocryptichthys cantoris* (Day).

This species was described by DAY from Madras and Andamans in Proc. Zool. Soc. London 1870 p. 693 and Fishes of India 1878 vol. I p. 302.

H. M. SMITH recorded it from the Gulf of Siam off the mouth of the Meklong in Journal of the Siam Soc. Nat. Hist. Suppl. vol. VIII, No. 3 1931 p. 189.

The late Mr. P. BUITENDIJK collected 24 specimens of this species in the eastern part of Java in 1929 and 1930 in estuaries and 1 specimen at Soerabaia. These specimens are preserved in the collection of 's Rijks Museum van Natuurlijke Historie, Leiden numbers 12091, 12092, 12433 and 12570.