

Descriptions of One New Genus
and Ten New Species of Japanese Fishes.

By

Shigeho Tanaka, *Rigakushi.*

Zoological Institute, Science College, Imperial University of Tokyo.

With one plate.

1. **Scyliorhinus macrorhynchus**, n. sp.

Height of body behind base of pectoral $9\frac{2}{3}$, head as measured to upper edge of first gill-opening 4 in total length as measured to root of lower lobe of caudal. Eye $5\frac{2}{3}$, interorbital $2\frac{2}{3}$, snout from anterior rim of eye $1\frac{3}{8}$, distance between tip of snout to anterior tip of mouth slightly less than 2, width of mouth between angles $2\frac{1}{4}$, shortest distance between nostrils about 6, length of base of first or second dorsal $3\frac{5}{7}$, length of base of anal $1\frac{1}{2}$, in head.

Body elevated, rather slender, compressed; nape slightly elevated. Head large, depressed. Eye lateral, high up, midway between tip of snout and middle of base of pectoral, but its anterior rim midway between the former and third gill-opening; no nictitating membrane. Spiracles subcircular, very small, much smaller than pupil, directly behind eye. Interorbital broad, gently convex. Snout long, acutely pointed, but rather rounded when viewed from above; its lateral outline gently concave posteriorly and pronouncedly concave for some distance

anteriorly from a point nearer eye than tip of snout. Mouth large, moderately curved; a distinct labial fold at each corner, the fold extending along the lower jaw a little less than $\frac{1}{2}$ the distance to the symphysis; the fold along upper jaw $1\frac{1}{2}$ times as long as that along the lower, running toward posterior edge of nostril, but which it does not reach. Lips rather thin; the lower lip not overlapped by the upper at mouth corner. Teeth on both jaws subequal, in a narrow band, tricuspid, median cusp the largest. Anterior nasal valves well separated from each other and from mouth, each with a cirrus anteriorly. Gill-openings 5, small, middle one the largest, the last two closer to each other than others, the last one above base of pectoral. Dorsals subequal in size, small, slender, oblong in form; distance between two dorsals slightly less than snout length as measured from anterior rim of eye. First dorsal inserted above posterior end of base of ventral; posterior end of base of second dorsal before posterior end of base of anal by a distance of two-thirds the diameter of eye. Anal long, higher anteriorly, continuous with caudal but with a deep notch extending almost to fin-base. Pectoral moderate, not reaching ventral by a distance equal to that from eye to first gill-opening. Ventrals separate, its origin slightly nearer to origin of anal than to last gill-opening. Caudal rather long; lower lobe higher anteriorly, much more developed than the upper; continuous with the upper, without notch near tip.

Scales of body small, tricuspid, giving finely velvety feeling to the touch; those on caudal peduncle slightly enlarged, without keel or pit; those of head smallest. Mucous system well developed. Lateral line distinct, nearer back than belly, concurrent with back; its upward curvature above base of ventral and its downward curvature above anterior part of lower lobe of

caudal, where it runs nearer lower outline than the upper; extending to tip of tail.

Colour in formalin dark gray, paler beneath; every fin with blackish anterior and whitish posterior edge; interior of mouth as well as edge of gill-openings and of nasal valves blackish.

The species is distinguished from all others of the genus by having longer snout, equal dorsals, and much larger anal.

The species is not rare in the neighbourhood of Misaki, Province Sagami. The type, a young male, was captured by Mr. AOKI in April 1909; it is registered in the University collection under No. 2153. A second larger skin is also preserved in the collection; it is altogether similar in configuration to the type.

MEASUREMENTS OF SCYLIORHINUS MACRORHYNCHUS.

Total length as measured to root of lower caudal lobe	...	...	32.5	cm.
Total length as measured to tip of caudal fin	...	...	47.0	"
Height of body behind base of pectoral	...	...	3.5	"
Height of body at origin of anal	...	...	3.1	"
Height of caudal peduncle at end of anal	...	...	2.0	"
Length of head from upper edge of first gill-opening	...	...	8.1	"
Diameter of eye	...	...	1.5	"
Length of snout from anterior rim of eye	...	...	5.0	"
Interorbital width	...	...	3.0	"
Distance between spiracles	...	...	3.5	"
Width of mouth at angles	...	...	3.6	"
Distance between tip of snout and anterior rim of mouth	...	...	4.4	"
Distance from nostril to anterior rim of mouth	...	...	1.1	"
Shortest distance between nostrils	...	...	1.4	"
Distance between tip of snout and origin of first dorsal	...	...	22.0	"
Distance between tip of snout and origin of second dorsal	...	...	29.0	"

Width of first gill-opening	...	...	...	...	...	0.9 cm.
Distance from tip of snout to pectoral	...	...	...	...	...	10.7 „
Distance from tip of snout to ventral	...	...	...	...	...	18.0 „
Length of base of first or second dorsal	...	...	...	...	...	2.2 „
Length of base of anal	...	...	...	...	...	7.2 „

2. *Scyliorhinus platyrhynchus*, n. sp.

Height of body at a point just behind pectoral $8\frac{2}{3}$, and head $4\frac{3}{5}$ in total length as measured to root of lower caudal lobe. Eye $5\frac{1}{5}$, interorbital $3\frac{1}{3}$, snout from anterior margin of eye a trifle less than 2 in head.

Body thick, moderately elongate, compressed and gradually tapering behind. Head large, depressed. Eye lateral, high up, midway between tip of snout and fourth gill-opening; no nictitating membrane. Spiracle small, circular, just behind eye, its diameter about one half that of pupil. Interorbital very broad, gently convex. Snout pointed, depressed above, broadly curved; its lateral outline with strong concavity at a point midway between tip of snout and anterior margin of eye. Mouth moderately curved, its anterior tip nearer that of snout than first gill-opening, but its angle much farther removed from the former than from the latter. Lips rather thin; lower lip not overlapped by the upper at corner of mouth. Labial fold extending along the lower jaw for $\frac{2}{5}$ of the distance to symphysis; that along upper jaw extending toward posterior end of anterior nasal valve for a length slightly less than $\frac{1}{2}$ the distance to the latter. Teeth tricuspid, the median cusp largest, set at rather wide intervals than in *Scyliorhinus macrorhynchus*. Anterior nasal valves well

separated from each other and from mouth, with a cirrus anteriorly. Gill-openings small, subequal, equidistant; last one above base of pectoral. First dorsal small, inserted slightly in advance of origin of anal; second dorsal inserted above end of anterior three-fifths of base of anal, its base about $\frac{2}{3}$ as long as that of first dorsal. Anal long, but not high, highest in anterior parts, continuous with lower lobe of caudal but with a deep notch extending to fin base. Pectoral rather large, but not extending to ventral, posterior margin nearly straight. Ventrals separate from each other, extending a little beyond halfway between their origin and that of anal. Caudal not turned upward, its lower lobe continuous with lower part of upper lobe with a slight notch, the length of base of the former 4 times as long as that of the latter.

Scales very small, much smaller than in *Scyliorhinus macrorhynchus*, giving much more finely velvety feeling to the touch. Scales on head slightly less rough; those on caudal peduncle scarcely enlarged; not forming a distinct ridge; without pit or lateral keel. Lateral line evident, runs high, concurrent with back, with a downward curve above end of the anterior fourth of base of lower caudal lobe, whence backward it takes a course near base of that lobe to tip of tail. Mucous pores well developed on head, much more so on under-surface of snout.

Colour in formalin blackish brown, paler beneath; posterior edge of all the fins, edges of gill-openings and inside of mouth black.

The species is closely allied to *Scyliorhinus macrorhynchus*, but differs from this in having stouter body, unequal dorsals, shorter snout, and finer scales. The species is not very rare in the Japanese waters. The type, a male, captured by Mr. AOKI

in May 1909, is numbered 2154 in the Imperial University collection.

MEASUREMENTS OF SCYLIORHINUS PLATYRHYNCHUS.

Total length as measured to root of lower caudal lobe	...	...	...	56.0	cm.
Total length as measured to tip of caudal	...	...	...	80.0	"
Height of body behind base of pectoral	...	...	...	6.5	"
Height of body at origin of first dorsal	...	...	...	6.7	"
Length of head as measured to upper edge of first gill-opening	...	...	...	12.5	"
Diameter of eye	...	...	...	2.4	"
Interorbital width	...	...	...	3.8	"
Length of snout from anterior margin of eye	...	...	...	6.8	"
Longitudinal diameter of spiracle	...	...	...	0.4	"
Distance between spiracles	...	...	...	5.2	"
Length of mouth cleft as measured from its anterior tip to the corner	...	...	...	3.6	"
Distance between mouth corners	...	...	...	5.2	"
Distance from tip of snout to anterior margin of mouth	...	...	...	5.7	"
Shortest distance between nostrils	...	...	...	2.3	"
Longest distance between nostrils	...	...	...	5.1	"
Distance from tip of snout to first dorsal	...	...	...	40.0	"
Distance from tip of snout to second dorsal	...	...	...	51.0	"
Distance from tip of snout to pectoral	...	...	...	16.0	"
Distance from tip of snout to ventral	...	...	...	28.5	"
Distance from tip of snout to anal	...	...	...	40.0	"
Length of base of first dorsal	...	...	...	2.2	"
Length of base of second dorsal	...	...	...	3.4	"
Length of base of anal	...	...	...	14.4	"
Length of base of pectoral	...	...	...	5.4	"
Length of lower caudal lobe	...	...	...	18.8	"

Anteliochimæra, n. g.(Type: *A. chætirhamphus*, n. sp.)

Snout very long, depressed. Two dorsals separated from each other by a wide interval; second dorsal well separated from upper caudal lobe; edge of the latter fin smooth, but much lower than lower caudal lobe. Caudal filament moderately long. The dentition resembles that of *Chimæra* much more than that of *Rhinochimæra*. Claspers slender, unbranched, similar in form to that of *Rhinochimæra*.

3. *Anteliochimæra chætirhamphus*, n. sp.

(Pl. I.)

Height of body slightly more than 4, head as measured from anterior margin of eye to upper edge of gill-opening $6\frac{1}{2}$ in length as measured from anterior margin of eye to posterior end of base of second dorsal. Eye $1\frac{1}{2}$, interorbital $1\frac{3}{4}$ in length of the postorbital part of head.

Body elongate, compressed, gradually tapering posteriorly; back not elevated. Head moderate, slightly compressed. Eye large, high, slightly oblique, not projecting beyond upper profile. Interorbital space slightly narrower than diameter of eye, gently convex. Snout flat, projecting into a long beak; short and blunt dermal prickles irregularly arranged near lateral edge for a distance equal to diameter of eye backward from tip of snout. Mouth small, inferior, straight, confluent with nostrils. Teeth confluent into laminae; all laminae with sinuate cutting edge (as in *Chimæra*, but unlike *Rhinochimæra* in which the edge is smooth). Upper jaw with an anterior and lateral lamina

on each side; anterior lamina containing 6 or 7 rods, highest at the median (anterior) end where the cutting edge forms a sharp beak-like cusp; rest of the cutting edge straight though sinuate; median ends of right and left anterior lamina in touch with each other at tip of the above cusp, but separate at base; lateral lamina very low, with outer and inner cutting edges; these edges altogether separated off from edge of anterior lamina by some space. Lower jaw with one mandibular lamina on each side; the lamina included within those of upper jaw; along the cutting edge there are three distinct angular prominences, of which the middle lies at where the lamina is highest and the anteriormost not far from the median terminal edge of the latter; the cutting edge adjoining the middle prominence on both sides distinctly concave; 6 distinct rods occur on both sides of the same prominence. Dorsals 2 in number, separated from each other by a space slightly less than diameter of eye; dorsal spine broken, inserted just behind anterior end of base of pectoral; first dorsal slightly emarginate, adnate to body behind last ray by a long membrane, its anterior rays not reaching to origin of second dorsal when folded posteriorly; second dorsal even in margin, posterior end of its base at a point half the diameter of eye before origin of lower caudal lobe; highest rays at middle of its base, their length equal to diameter of eye. No anal. Pectoral large, pointed, its posterior margin nearly straight, reaching far beyond base of ventral. Ventrals close together but separate, inserted midway between anterior end of fleshy base of pectoral and origin of lower caudal lobe, reaching a little beyond half the distance from external end of fleshy base of ventral to origin of lower caudal lobe, its posterior margin broadly rounded. Lower lobe of caudal originates at a point the diameter of eye

before upper lobe and ends posteriorly some distance behind end of the latter, continued behind into a long slender caudal filament about $4\frac{1}{3}$ times as long as a diameter of eye; upper lobe even, very smooth in margin, its height as measured along rays contained $2\frac{1}{3}$ times in diameter of eye. Lower lobe smooth at edge, slightly longer than diameter of eye when measured as above.

Body naked; sensory canal system well developed; lateral canal begins with a curve with the convexity facing backward, runs much nearer back than belly, is almost straight and concurrent with back; it bends abruptly downward at a point slightly farther than eye diameter beyond origin of upper caudal lobe and then proceeds along lower side of body into caudal filament. Nuchal canal originates from supraorbital canal behind eye, curves backward with convexity facing forward, and passes slightly backward across nape to join its fellow of the other side. On head jugular branch given off from the suborbital at a short distance behind the maxillo-mandibular.

Cephalic organ directed forward and downward, situated on snout above anterior margin of eye; distance from its tip to root of its axis $\frac{3}{4}$ the diameter of eye; numerous, recurved, spinous denticles on the under surface of its distal two-thirds. Claspers rather slender, unbranched, extending to near posterior margin of ventral, its distal end enlarged, with about three oblique rows of small slender spinules. Anterior ventral clasping organ armed with 3 spinous denticles on the inner side.

Colour in formalin brownish; darker on lower and under surface of head. All the fins of the same colour as body, narrowly edged with blackish. Above the lateral canal there are about 30 transverse broken lines, of which the posterior ones are scarcely visible.

The characters of the species are included in the diagnosis before given of the new genus established to receive it. The type and the only existing specimen was obtained by Mr. AOKI in Outside Okinose from a depth of about 400 fathoms in December 1908. It is contained in the University museum under No. 2155.

MEASUREMENTS OF ANTELIOCHIMÆRA CHÆTIRHAMPHUS.

Length from anterior margin of eye to posterior end of base of second dorsal	32.5 cm.
Length from tip of snout to tip of caudal filament	80.0 „
Height of body at pectorals	8.0 „
Height of body at origin of ventral	7.3 „
Height of body at origin of lower caudal lobe	2.5 „
Length of head as measured from anterior margin of eye to upper edge of gill-opening	5.0 „
Length of head as measured from tip of snout to upper edge of gill-opening	21.5 „
Horizontal diameter of eye	2.3 „
Interorbital width	2.0 „
Length of snout as measured from anterior margin of eye to tip of its long beak	16.5 „
Width of head	4.5 „
Distance from tip of snout to posterior end of base of second dorsal ...	49.0 „
Distance from tip of snout to origin of lower caudal lobe	50.0 „
Distance from tip of snout to origin of upper caudal lobe	53.0 „
Distance from posterior end of base of second dorsal to origin of upper caudal lobe	4.2 „

4. **Rhodeus tanago**, n. sp.

Height of body $2\frac{4}{5}$, head about 4 in total length as measured to root of middle caudal rays. Eye $2\frac{1}{2}$, interorbital $2\frac{1}{4}$, snout $3\frac{1}{3}$ in head.

Body oblong, compressed; caudal peduncle also compressed; nape slightly elevated. Head small, deep; eye lateral, high; interorbital broad, flat, slightly wider than diameter of eye; snout short, pointed in profile, rounded when seen from above. Mouth slightly oblique, upper jaw rather included. Maxillary extending to anterior margin of orbit; its barbel short, in length equal to one half eye's diameter. Dorsal inserted midway between tip of snout and root of middle caudal rays; highest ray of the fin equal to length of head without snout. Anal below seventh ray of dorsal, its highest ray shorter than length of postorbital part of head by half diameter of eye. Rays of both dorsal and anal far from base of caudal. Pectoral inserted low, scarcely extending to base of ventral. Ventrals close together, scarcely extending to base of anal. Caudal deeply forked.

Scales large, cycloid; nape scaled; head entirely naked. Lateral line incomplete, decurved, ceasing at 12th scale on one side and at 25th scale on the other side of the type (in another specimen at 12th scale on one side and at about 9th scale on the other).

Colour in spirit reddish yellow, paler beneath; opercles and cheeks silvery and iridescent. No markings. All the fins pale; anal narrowly edged with blackish brown.

The species resembles *Rhodeus oryzae* JORDAN & SEALE originally described from seven specimens from Kawatana (near Nagasaki), but differs from it in having lower body, rather less number of anal rays, and in the position of dorsal fin.

Two specimens of the new species were taken in a pond in the Botanical Garden of the Imperial University, Tokyo, of which the type is registered under No. 1710 in the University collection. The species seems to be rather rare, occurring together

with a very common species of *Acheilognathus*; both the species are thrown together under the popular name "tanago", from which I have taken the specific name of the new species.

MEASUREMENTS OF *RHODEUS TANAGO*.

Specimen.	A (Type).	B.
Total length as measured to root of middle caudal rays ...	4.2 cm.	4.3 cm
Height of body	1.5 "	1.5 "
Length of head	1.0 "	1.1 "
Diameter of eye	0.4 "	0.4 "
Interorbital width	0.45 "	0.4 "
Length of snout	0.3 "	0.3 "
Length of pectoral	0.8 "	0.9 "
Length of ventral	0.65 "	0.7 "
Number of rays of dorsal	10	10
Number of rays of anal	11	10
Number of rays of pectoral	12 or 13	12
Number of rays of ventral	7	7
Number of scales in longitudinal series	35	34
Number of scales in transverse series counted downward and backward	10	10

5. *Rhodeus miobuta*, n. sp.

Height of body about 3, head about $4\frac{1}{2}$ in length as measured to root of middle caudal rays. Eye about 3, interorbital $2\frac{3}{4}$, snout $3\frac{2}{3}$ in head.

Body oblong, compressed; caudal peduncle also compressed; upper and lower outlines evenly curved. Head small; eye moderately large, lateral, high. Interorbital broadly convex. Snout short, bluntly pointed in profile, rounded when seen from above.

Nostrils close together; anterior nostril with a flap on posterior edge. Mouth subinferior, oblique; lower jaw slightly longer than the upper; maxillary extending to anterior nostril, its barbel equal in length to half diameter of eye. Dorsal inserted midway between tip of snout and root of middle caudal rays. Anal below eighth ray of dorsal. Rays of both dorsal and anal far from base of caudal. Pectoral inserted low, scarcely extending to base of ventral. Ventral not reaching to anal. Caudal bilobed.

Scales large, cycloid. Lateral line incomplete, not infrequently interrupted in its course by scales without pore; the last pore on about the 17th scale; pores sometimes restricted to a few anterior scales only.

Colour in formalin brownish, with darker edge to each scale, paler beneath; blackish-punctate throughout body. A brown shoulder spot slightly smaller than pupil of eye very distinct. A very narrow lateral stripe faintly visible. A longitudinal stripe on top of back before dorsal fin. Dorsal closely black-punctate so that the fin appears dark brown; a white band near the margin, with very narrow black margin. Anal same in pattern as dorsal, the brown colour being fainter and the black edge more distinct and broader. Pectoral and ventral pale, the latter with black tip. Caudal brownish; the middle of its posterior margin sometimes, but not always, blackish.

The species very closely resembles *Rhodeus tanago* TANAKA, but differs from it in having more slender body, distinct shoulder spot, and black-tipped ventral.

Three specimens were collected by Mr. SUZUKI at Obama in Province Kadsusa (southeast of Tokyo) in February 1908. One of these specimens is registered as the type under No. 1860 in the University collection. One more specimen was captured by

the same gentleman at the same locality in August of the same year. The species is locally known by the name "miobuta"; hence the specific name.

MEASUREMENTS OF RHODEUS MIOBUTA.

Specimen.	A (Type).	B.	C.
Total length as measured to root of middle caudal rays	4.5 cm.	4.0 cm.	4.4 cm.
Height of body	1.6 "	1.4 "	1.4 "
Height of caudal peduncle	0.5 "	0.5 "	0.5 "
Length of head	1.1 "	1.0 "	1.1 "
Diameter of eye	0.35 "	0.35 "	0.4 "
Length of snout	0.3 "	0.25 "	0.3 "
Interorbital width	0.4 "	0.4 "	0.4 "
Number of rays of dorsal	10	10	10
Number of rays of anal	11	10	10
Number of rays of pectoral	12 or 13	13	12 or 13
Number of rays of ventral	7	7	7
Number of scales in longitudinal series ...	36	34	35
Number of scales in transverse series counted downward and backward	11	11	11

6. *Aleposomus watasei*, n. sp.

Head about $4\frac{2}{3}$, height of body $6\frac{1}{3}$ in total length as measured to root of middle caudal rays. Eye about $3\frac{3}{4}$, interorbital $5\frac{1}{2}$, snout $6-4\frac{1}{3}$ in head. Branchiostegals 6 in number.

Body elongate, not elevated, compressed; caudal peduncle much more compressed. Head moderate, anterior profile begin-

ning with steep convex curve, even behind occipital part, very gradually sloping posteriorly. Eye lateral, high up. Interorbital very convex, narrower than diameter of orbit. Snout rather small, the upper profile broadly curved, the tip acute when viewed from side. Mouth oblique, lower jaw slightly projecting; maxillary extending to posterior edge of pupil. Teeth very slender, in one row; none on vomer, palatines and tongue. Gill-openings very wide, but quite separate; gills 4 in number; gill-rakers long, 8+10; pseudobranchiæ well developed. Dorsal inserted a little in front of posterior third of space from tip of snout to base of middle caudal rays. Anal inserted below 4th ray of dorsal, the tip not reaching to base of caudal; posterior end of base of both dorsal and anal on same vertical. Pectoral placed very low, small. Ventrals close together, inserted midway between base of pectoral and posterior end of base of anal, their tip extending slightly past halfway between their origin and that of anal. Vent immediately in advance of anal. Caudal strongly emarginate. Body naked; lateral line complete, slightly decurved, running slightly nearer back than belly.

Body jet-black, all the fins slightly paler. Black nodules sparsely scattered throughout body.

The species very closely resembles *Xenodermichthys squamilateralis* ALCOCK, but differs from this in having smaller head, lower body, and probably a little smaller eye.

Two specimens were taken by Mr. AOKI at Outside Okinose, in about 700 fathoms, in February 1908. One of them, the type, is 23.5 cm. long as measured to root of middle caudal rays; it is registered in the University collection under No. 2147. The species is named in honour of Prof. WATASE, of the Imperial University of Tokyo.

MEASUREMENTS OF *ALEPOSOMUS WATASEI*.

Specimen.	A (Type).	B.
Total length as measured to root of middle caudal rays ...	23.5 cm.	26.5 cm.
Height of body	3.7 "	4.3 "
Height of caudal peduncle	1.5 "	1.7 "
Length of head	4.9 "	6.1 "
Diameter of eye	1.3 "	1.6 "
Length of snout	0.8 "	1.4 "
Interorbital width	0.9 "	1.2 "
Length of maxillary	2.0 "	2.9 "
Distance from tip of snout to origin of dorsal	13.8 "	16.5 "
Distance from tip of lower jaw to origin of anal	16.0 "	? "
Distance from tip of lower jaw to origin of ventral	12.0 "	14.5 "
Height of highest rays of dorsal	2.2 "	2.6 "
Length of base of dorsal	4.0 "	3.9 "
Height of highest rays of anal	1.7 "	2.2 "
Length of base of anal	3.5 "	? "
Length of pectoral	1.8 "	? "
Length of ventral	2.3 "	2.4 "
Number of rays of dorsal	18	19
Number of rays of anal	17	? "
Number of rays of pectoral	8	8
Number of rays of ventral	6	7 or 6

7. *Holacanthus albofasciatus*, n. sp.

Head $3\frac{3}{5}$, height of body $1\frac{2}{3}$ in total length as measured to root of middle caudal rays. Eye 3, interorbital $2\frac{1}{2}$, snout 3, height of caudal peduncle about 2 in head.

Body deep, much compressed; caudal peduncle short, much more compressed. Head rather small, upper profile very steep,

almost straight. Eye lateral, high up, almost midway between tip of snout and upper edge of gill-opening; interorbital very convex, slightly wider than diameter of eye; nostrils close together, immediately in front of eye; anterior nostril with low tube, but the posterior without tube. Snout length about equal to diameter of eye. Mouth almost vertical, lower jaw projecting; maxillary short, not reaching to vertical through anterior nostril. Teeth slender, sharp, close-set. Preoperculum serrated on edge of upper limb, with a sharp compressed spine at angle below, the spine equal to two-thirds diameter of eye, but not extending to base of pectoral. Gill-openings oblique, running forward below, the membrane united to isthmus; width of the latter slightly longer than half diameter of eye. Spinous dorsal growing gradually higher backward from front; soft dorsal high, its middle rays the highest, the edge rounded. Anal spines strong, the third one the longest; soft anal similar in form to soft dorsal, longest rays of the former slightly shorter than same of the latter. Pectoral placed low; upper edge of its base slightly above base of preopercular spine; its posterior margin rounded, not reaching to posterior tip of ventral. Ventrals close together, below lower edge of base of pectoral, the first ray somewhat filiform, scarcely extending to origin of anal. Caudal broadly rounded. Scales very small, rough; head and vertical fins closely scaled. Lateral line high, concurrent with back, extending to base of caudal.

Colour in formalin dark brown, the caudal whitish; vertical fins blackish, darker posteriorly, their posterior parts narrowly edged with whitish; side of body with 8 longitudinal dark bands equal in width to diameter of pupil, the first band entering into dorsal behind fourth dorsal spine. A broad pale band immediately behind eye, uniting with its fellow of the opposite side at

nape directly in advance of origin of dorsal and above base of pectoral; the band widest at a point immediately above pectoral where it stretches out to opercle, its width in this part equal to half length of head. Top of head with a rather broad white band, extending from behind posterior edge of pupil to tip of snout, without uniting with the cross-band of nape. Pectoral pale, slightly dusky posteriorly. Ventral dusky on outer rays, paler on inner rays, tip of first filiform ray much more dusky.

The species is very closely allied to *Holacanthus septentrionalis* SCHLEGEL and also to *Holacanthus ronin* JORDAN & FOWLER, but differs from both in showing a less number of longitudinal bands and in having a white band behind eye as well as on the upper median part of head.

A single specimen was taken at Nagasaki by Mr. T. CHIBA. It is preserved in the University collection, registered under No. 2146.

MEASUREMENTS OF *HOLACANTHUS ALBOFASCIATUS*.

Total length as measured to root of middle caudal rays	...	...	5.4 cm.
Height of body	...	...	3.1 "
Length of head	...	...	1.5 "
Diameter of eye	...	...	0.5 "
Interorbital width	...	...	0.6 "
Length of snout	...	...	0.5 "
Height of caudal peduncle	...	...	0.7 "
Length of longest spine of dorsal	...	...	1.1 "
Length of longest ray of dorsal	...	...	1.0 "
Length of second spine of anal	...	...	0.8 "
Length of third spine of anal	...	...	0.9 "
Length of longest ray of anal	...	...	0.8 "
Length of pectoral	...	...	1.1 "
Length of ventral	...	...	1.3 "

Length of middle caudal rays	...	...	...	...	...	1.1 cm.
Number of spines and rays of dorsal	...	...	...	...	...	XIII, 18
Number of spines and rays of anal	...	...	...	...	...	III, 18
Number of rays of pectoral	...	...	...	...	...	17
Number of spine and rays of ventral	...	...	...	...	...	I, 5

8. *Ophiocara gracilis*, n. sp.

Height of body $3\frac{1}{3}$, head $3\frac{2}{3}$ in total length as measured to root of middle caudal rays. Eye about 4, interorbital about 4, snout $4\frac{1}{5}$, height of caudal peduncle 2 in head.

Body rather elongate, compressed; dorsal outline slightly elevated, the highest part of body at vertical through origin of first dorsal; caudal peduncle much more compressed than body, moderately high. Head rather small, somewhat broad, depressed above, its height at posterior edge of opercle less than length of head by half diameter of eye; upper profile almost straight. Eye small, lateral, high. Interorbital slightly convex, equal in width to diameter of eye; snout short, pointed when viewed from side, but broadly rounded when viewed from above; posterior nostril circular, tubeless, just in front of eye; anterior nostril with a low flap, near anterior edge of preorbital. Mouth terminal, oblique, lower jaw projecting. Maxillary nearly reaching to anterior edge of orbit, its distal end very slightly exposed. Teeth in jaws small, slender, but sharp, in a band of several rows, the band being wider anteriorly; teeth of outer series larger. No teeth on vomer and palatines. No spine on preopercle. Gill-openings lateral, width of isthmus equal to half diameter of eye; gill-rakers long, pointed, 4+12; pseudobranchiæ well developed. Dorsals well separated from each other; first dorsal inserted

somewhat nearer posterior end of base of second dorsal than tip of snout; third and fourth spines longest, projecting beyond others when depressed; the fin adnate to body behind last spine by a membrane; second dorsal inserted midway between tip of snout and that of upper caudal lobe, all its rays of nearly same length, not adnate to body behind last ray. Anal inserted below origin of second dorsal, similar in form to second dorsal, not adnate to body; both anal and second dorsal extend behind to same vertical far before base of caudal (both second dorsal and anal slightly shorter in female than in male). Pectoral placed low, pointed behind, extending to vent (in female much shorter). Ventrals close together, behind posterior end of base of pectoral, reaching to vent (in female not so long). Caudal broadly rounded. Scales large, strongly ctenoid, those on nape slightly smaller; opercle and preopercle scaled, the latter with some four rows of scales. Tip of snout, jaws, mandible and all the fins naked except caudal, the basal one-fourth of which is closely covered with very small ctenoid scales. Base of pectoral, suborbital, preopercle, interorbital, snout, and anterior parts of breast with cycloid scales. No lateral line.

Colour in alcohol: male—reddish yellow above, brownish beneath; scales on lower parts dark at edge; sparsely black-punctate throughout body, the punctation being much closer on the lower parts; a dark brown patch above pectoral across the upper part of that fin. Base of pectoral with a narrow brown streak. First dorsal blackish brown, with a narrow whitish band near its anterior edge and with one or two whitish spots near base; second dorsal brown, with about 2 longitudinal rows of whitish spots, narrowly edged with blackish (in some specimens the edge is whitish); anal pale, narrowly edged with

brownish (in the type there occur, besides, in the posterior parts two brownish patches situated one above the other). Pectoral and ventral pale; caudal slightly dusky and narrowly edged with brown posteriorly.

Female — reddish yellow, paler beneath, sparsely black-punctate throughout body. Dorsals and anal dusky, outer edge of both slightly darker. Pectoral and ventral pale; a brownish patch at base of pectoral extending to parts of body above that fin. Caudal dusky, with some indistinct brownish bands, narrowly edged with brown posteriorly.

The species is distinguished from all others of the genus by having interorbital equal in width to diameter of eye, by higher body and rather shorter maxillary and by different markings especially in regard to males.

Several specimens of the species, both male and female, were collected (probably in freshwater) in Yaëyama, a town in Ishigakishima, Riukiu Islands, by Mr. G. OGAWA in August (year uncertain). In these sexual elements as well as secondary sexual characters were very distinctly developed. The type, a male, is in the University collection with register number 1737.

MEASUREMENTS OF *OPHIOCARA GRACILIS*.

Specimen.	A (Type).	B.	C.	D.
Sex	male	female	female	male
Total length as measured to root of middle				
caudal rays	4.4 cm.	5.9 cm.	5.6 cm.	5.0 cm.
Height of body	1.4 "	1.6 "	1.7 "	1.5 "
Length of head	1.2 "	1.6 "	1.6 "	1.4 "
Diameter of eye	0.3 "	0.45 "	0.4 "	0.4 "
Interorbital width	0.3 "	0.45 "	0.4 "	0.4 "
Length of snout	0.25 "	0.3 "	0.3 "	0.3 "

Height of caudal peduncle	...	...	0.6 cm.	0.8 cm.	0.8 cm.	0.8 cm.
Length of longest spine of first dorsal	...	...	0.6 "	0.9 "	0.8 "	0.6 "
Length of longest ray of second dorsal	...	...	0.9 "	0.95 "	0.9 "	0.9 "
Length of highest ray of anal	...	...	0.8 "	0.8 "	0.8 "	0.9 "
Length of pectoral	...	...	0.95 "	1.0 "	1.0 "	1.0 "
Length of ventral	...	...	1.0 "	1.0 "	1.1 "	1.0 "
Length of caudal	...	...	1.0 "	1.4 "	1.3 "	1.1 "
Number of spines and rays of dorsal	...	...	VI-10	VI-9	VI-9	IV*-9
Number of rays of anal	...	...	11	11	12	10
Number of rays of pectoral	...	...	12 or 13	14	13 or 14	14 or 13
Number of spine and rays of ventral	...	...	I, 5	I, 5	I, 5	I, 5
Number of scales in longitudinal series	...	...	27	29	29	28
Number of scales in transverse series	...	...		
counted downward and backward	...	...	12	12	11	11

9. *Sicydium japonicum*, n. sp.

Head $4\frac{1}{2}$ – $4\frac{3}{4}$, height of body about $4\frac{1}{2}$ in total length as measured to root of middle caudal rays. Eye 6–5, interorbital $2\frac{1}{2}$ –2, snout $2\frac{1}{2}$ –2, height of caudal peduncle $1\frac{2}{3}$ – $1\frac{1}{2}$, pectoral $1\frac{1}{3}$, ventral 2– $1\frac{1}{2}$ in head.

Body subcylindrical, only slightly compressed; caudal peduncle high, very much compressed. Head rather small, broad, slightly depressed. Eye small; in middle of length of head; its upper margin on dorsal profile. Interorbital broad, being $2\frac{1}{3}$ times diameter of eye in breadth, slightly concave. Snout rather abrupt in profile, its tip pointed when viewed from side, broadly rounded when viewed from above. Mouth horizontal, beneath overhanging snout; lips wide, fleshy. Maxillary completely concealed beneath preorbital and lips, extending to vertical passing through

* This number of the fin spines seems to be abnormal.

posterior edge of pupil. Teeth in upper jaw movable, very small, acute, close-set, in one row; behind this another row of large teeth more or less concealed in gum; teeth in lower jaw much larger, canine-like, very few in number, in one row; no teeth on vomer and palatines. Tongue rounded, free anteriorly. Gill-openings lateral, slightly oblique, directly in front of base of pectoral, the width being scarcely greater than length of the latter; gill-membranes united to throat, free from isthmus; the distance between both gill-openings slightly greater than inter-orbital width; gill-arch almost smooth, so that gill rakers on it are not perceptible. First dorsal inserted above posterior half of pectoral and nearer to origin of second dorsal than to tip of snout; third spine filiform; either reaching beyond or not reaching origin of second dorsal; web between last two spines broader than preceding ones; the fin united to back behind last spine by a membrane. Second dorsal above vent; distance between origin of the fin and base of last spine of first dorsal equal to length of snout; the rays subequal in height except first ray, about $1\frac{2}{3}$ in head; the fin without a membrane behind last ray. Anal inserted below third ray of second dorsal, similar in form to second dorsal, not adnate to body behind last ray; both fins extending posteriorly to same vertical some distance before base of caudal. Pectoral rather short, posteriorly rounded, extending midway between origin of ventral and vent; without silky rays above. Ventral adnate to body, small, its disc almost circular, extending beyond anterior half of pectoral. Caudal rounded.

Scales small, strongly ctenoid; those on anterior parts of body and on base of caudal much smaller, cycloid; nape closely covered with small cycloid scales. Head, breast and belly naked. No lateral line.

Colour in formalin gray, pale beneath; about 11 cross bands of brown colour, some of the bands forked above or even entirely split into two; colour of the bands gradually fading out beneath middle of side of body; the first band across nape, the second immediately in front of dorsal, the third to fifth below first dorsal, the sixth to ninth below second dorsal, the tenth on caudal peduncle and the last on base of caudal. In the middle of caudal a more or less distinct spot. Interorbital band very indistinct, extending from below eye to angle of mouth. First dorsal brownish, with a few rows of indistinct spots; second dorsal as well as anal much darker, the former with several wavy rows of brown spots and with very narrow blackish edge; anal with or quite without several indistinct rows of spots, near its edge a blackish line somewhat wider than that of second dorsal, edge itself whitish. Both pectoral and ventral dusky, without distinct markings (in one specimen anterior edge of ventral brown). Caudal dusky, with several rows of indistinct spots on proximal parts.

The species seems to be very closely allied to *Sicydium halei* DAY from Ceylon known to me only from its original description, but differs from it in having stouter body, longer caudal, and smaller eye.

The type, 7.7 cm. long as measured to root of middle caudal rays, was obtained by Mr. ODA in Tosa (Shikoku); its register number in the University collection is 2138. Another specimen, 9 cm. long measured in the same way as above, was collected by Mr. H. NAKAJIMA, in the Prefecture of Wakayama. That specimen differs from the type in the following points: mouth extending to anterior edge of pupil; first dorsal much more filiform, extending to second ray of second dorsal; caudal whitish at posterior angles.

MEASUREMENTS OF *SICYDIUM JAPONICUM*.

Specimen.	A (Type).	B.
Total length as measured to root of middle caudal rays ...	7.7 cm.	9.0 cm.
Height of body... ..	1.7 "	2.1 "
Length of head	1.6 "	2.0 "
Diameter of eye	0.3 "	0.3 "
Interorbital width	0.8 "	0.8 "
Length of snout	0.8 "	0.8 "
Height of caudal peduncle	1.1 "	1.2 "
Length of maxillary	0.8 "	1.0 "
Distance between angles of mouth	1.0 "	1.3 "
Length of first spine of first dorsal	1.0 "	1.2 "
Length of third spine of first dorsal	1.7 "	2.4 "
Length of first ray of second dorsal	0.8 "	1.0 "
Length of longest ray of second dorsal	1.2 "	1.2 "
Length of longest ray of anal	0.8 "	1.0 "
Length of pectoral	1.4 "	1.6 "
Longitudinal diameter of ventral disc	0.9 "	1.0 "
Transverse diameter of ventral disc	1.1 "	1.3 "
Length of middle caudal rays	1.6 "	1.8 "
Number of spines and rays of dorsal	vi-11	vi-11
Number of rays of anal	11	11
Number of rays of pectoral	18	18
Number of scales in longitudinal series	60	58
Number of scales in transverse series	15	16

10. *Aspasma laticephala*, n. sp.

Height of body $7\frac{4}{5}$, head $2\frac{6}{7}$, its width about 4 in length as measured to root of middle caudal rays. Eye $4\frac{2}{3}$, interorbital $3\frac{1}{2}$, snout $3\frac{1}{2}$ in head.

Body rather short, much wider than high, the posterior

parts greatly depressed. Head depressed. Eye lateral, high. Interorbital wide, flat. Snout pointed in profile, rounded when viewed from above. Nostrils close together, just in front of eye. Mouth subinferior, lower jaw included; maxillary extending to vertical from anterior margin of iris of eye; lips broad. Teeth in jaws villiform, in several rows anteriorly, but in one row laterally. Tongue free anteriorly, broadly rounded at tip. Gill-openings lateral, isthmus broad across. Dorsal inserted at the beginning of the last fourth of body-length as measured to root of middle caudal rays; its hind end adnate to body by a membrane a very short distance before base of caudal. Anal also posteriorly adnate to body by a membrane in the vertical of the adnate membrane of dorsal; both anal and dorsal reaching base of caudal when folded posteriorly. Pectoral extending beyond posterior end of ventral disc. Ventral extending to middle of ventral disc. Caudal rounded posteriorly.

Colour in alcohol reddish yellow, paler beneath; vertical fins dark; caudal yellow, darker posteriorly. Pectoral as well as ventral yellowish. No markings.

The species is very closely allied to *Aspasma minima* (DÖDERLEIN), but differs from it in having vertical fins adnate to body very close to base of caudal, in the much wider body which abruptly narrows in front and behind (in *minima*, the body gently narrows both anteriorly and posteriorly from the posterior part of head which is the widest part of body), and in the shorter ventral (in *minima*, ventral fins extend to near posterior margin of disc).

The type, which is the only specimen as yet acquired, was taken at Kōdsushima (one of the Seven Islands of Idsu); it is registered in the University collection under No. 2158.

MEASUREMENTS OF ASPASMA LATICEPHALA.

Total length as measured to root of middle caudal rays	...	...	3.9 cm.
Height of body	...	...	0.5 „
Length of head	...	...	1.4 „
Width of head	...	...	0.95 „
Diameter of eye	...	...	0.3 „
Interorbital width	...	...	0.4 „
Length of snout	...	...	0.4 „
Number of rays of dorsal	...	...	7
Number of rays of anal	...	...	6
Number of rays of pectoral	...	...	16 or 17
Number of rays of ventral	...	...	4

May 21, 1909.



S. TANAKA.
DESCRIPTIONS OF ONE NEW GENUS
AND TEN NEW SPECIES OF JAPANESE FISHES.

PLATE I.

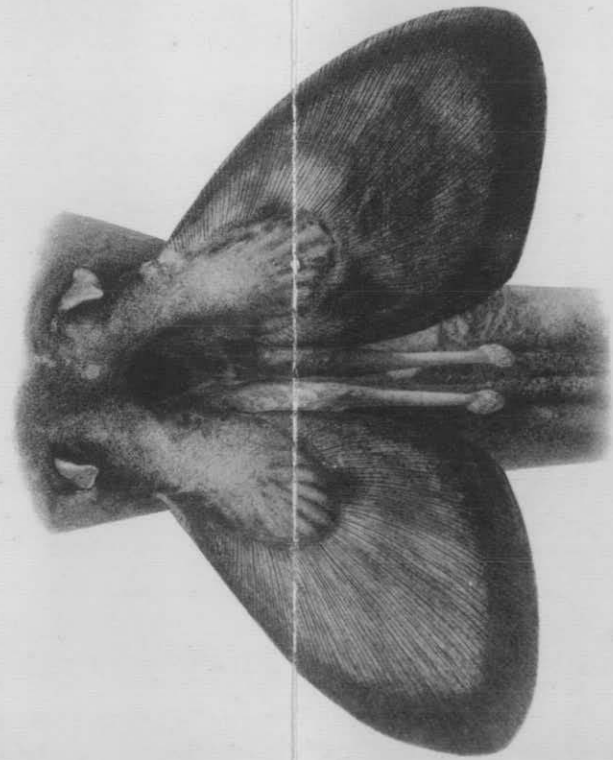
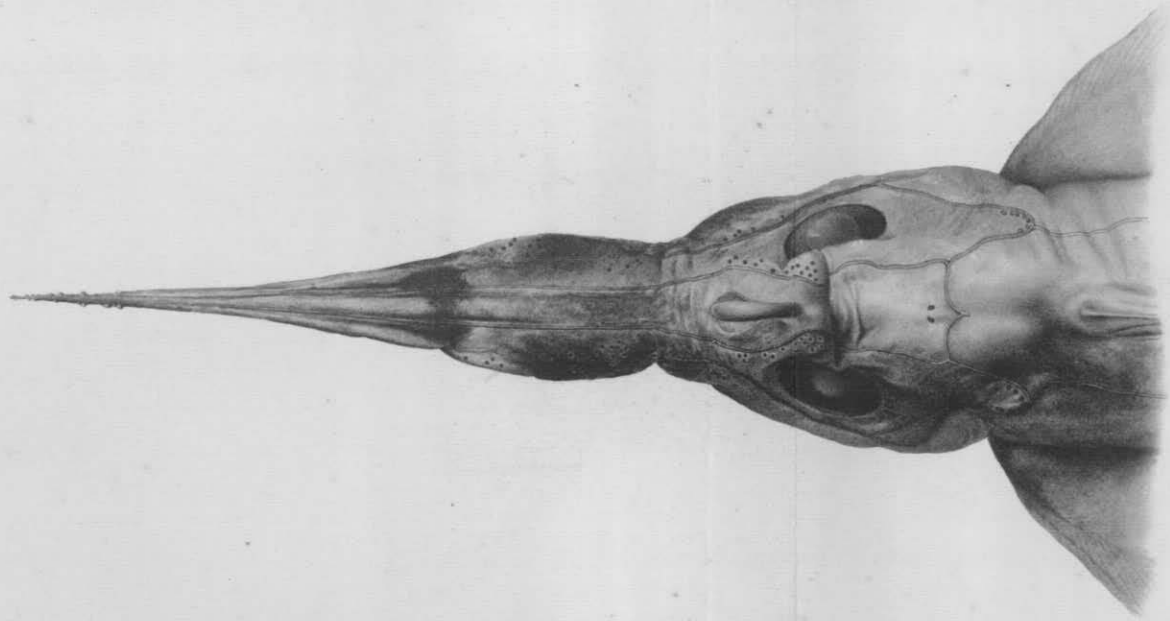
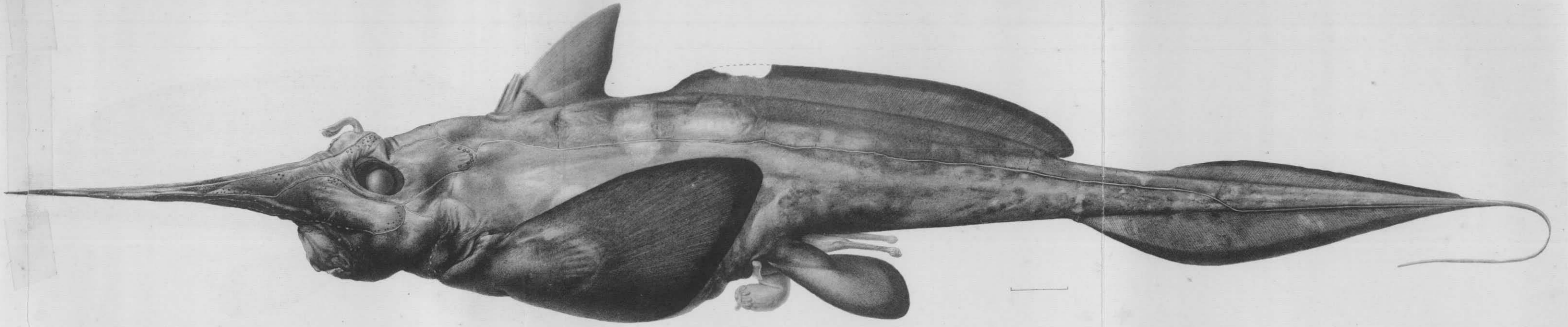
Explanation of figures.

Anteliochimæra chætirhamphus.

Upper figure, the side view of the entire fish; about $\frac{2}{3}$ natural size.

Lower left figure, the head in dorsal view; about $\frac{2}{3}$ natural size.

Lower right figure, the ventral fins and claspers in ventral view; about $\frac{2}{3}$ natural size.



Anteliochinæra chætirhamphus, n. gen., n. sp.