

LIST OF FISHES COLLECTED IN 1882-83 BY PIERRE
LOUIS JOUY AT SHANGHAI AND HONGKONG, CHINA.

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During the winter of 1882-83, the late Mr. Pierre Louis Jouy, then assistant to the United States National Museum, made a collection of fishes at Shanghai and Hongkong, in connection with a visit to Japan. He was accompanied and assisted by Dr. Frank C. Dale, U. S. N. In the present paper is given a list of the species contained in the collection with descriptions of the new species. Fifteen additional species, none of them new, are omitted from the list on account of the loss of the record of locality. The plates accompanying the paper are the work of Mrs. Chloe Lesley Starks and William Sackston Atkinson. The new species are the following: *Coilia ectenes*, *Zezera rathbuni*, *Fistularia starksi*, *Collichthys fragilis*, *Prosopodasys leuryunis*, and *Eleotris balia*.

For the opportunity of studying this collection we are indebted to the courtesy of Mr. Richard Rathbun, Assistant Secretary of the Smithsonian Institution.

Family ENGRAULIDÆ.

COILIA ECTENES Jordan and Seale, new species.

Head, 5.75 in length; depth, 6.10; maxillary reaching to base of pectoral; D. I, 13; A. 123; six pectoral filaments greatly prolonged, 2.70 in length of fish without caudal; snout, 3.75 in head; eye, 5.10 in head; interorbital width, 3.50 in head; scales, 65 to 70.

Body elongate, compressed, tapering evenly from dorsal and ventral fins to a point at caudal; tip of snout prolonged into a short projection; upper edge of the greatly prolonged maxillary serrated; a single row of small sharp teeth in jaws and on palatines, none on vomer; gill-rakers long and slender, 26 on lower limb of outer arch; ventral surface of abdomen sharp and serrated; origin of dorsal directly in line with origin of ventrals, its base, 3 in head, its longest ray, about

1.25 in head; base of anal extending from anterior third of fish to caudal, its rays short, about 3 in head; ventrals short and small, 2.50 in head; pectorals (not pectoral filaments) about equal to head, and about half the length of the filaments; caudal pointed, 3 in head.

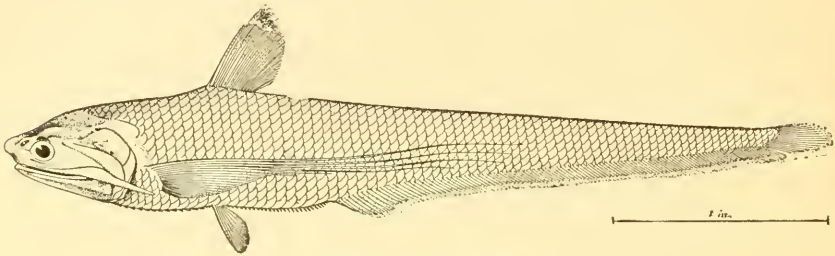


FIG. 1.—*COILIA ECTENES*.

Color in spirits, uniform silvery white; fins unmarked.

Two specimens from Shanghai, China. Length 2.30 to 3.75 inches. Type is Cat. No. 52077, U.S.N.M. Length 3.75 inches.

Family CYPRINIDÆ.

RHODEUS OCELLATUS Kner.

Head, 4 in length; depth, 2; D. 14; A. I, 13; scales, 2-33; lateral line showing only on the anterior three scales.

Color in spirits, uniform silvery, with no trace of ocellus.

Four specimens from Shanghai. Length, 2 to 2.20 inches.

ZEZERA RATHBUNI Jordan and Seale, new species.

Head, 4.50 in length; depth, 4.20; eye, 6 in head; D. I, 8; A. II, 7; scales about 7-57-6; snout, 3 in head, equal to interorbital width; a single long barbel at posterior end of maxillary, this barbel reaching to angle of preopercle.

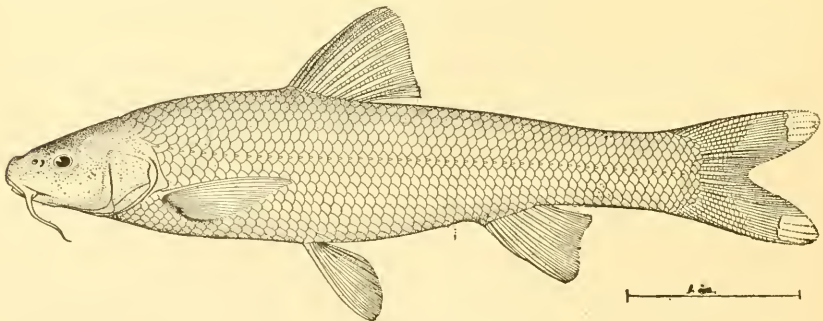


FIG. 2.—*ZEZERA RATHBUNI*.

Body elongate, compressed, not deep; depth of caudal peduncle, 2 in head; head naked, rather blunt, the upper lip thick and somewhat projecting; depth of head, 1.50 in its length; pharyngeal teeth 5 + 5

short and blunt, rather rounded on top, with but little grinding surface; gill-rakers short and blunt, 10 on lower limb of outer arch; about 17 series of scales between head and origin of dorsal; base of dorsal, 1.75 in its length, its longest ray, 1.10 in head; ventrals inserted directly below the first to fourth rays of dorsal, their length, 1.50 in head; origin of anal midway between tip of pectorals and base of caudal; base of anal, 1.50 in its longest ray; pectorals, 1.10 in head.

Color in spirits, yellowish white with some silvery reflections; dorsal with three anterior rays dusky; pectorals with slight wash of dusky on their middle portion; caudal grayish, anal and ventral uniform yellowish white.

One specimen (Cat. No. 52078, U.S.N.M.) from Shanghai, China. Length, 4.50 inches.

CARASSIUS AURATUS (Linnæus).

One small specimen of the common gold-fish from Hongkong. Length, 3 inches.

Family COBITIDÆ.

MISGURNUS ANGUILLICAUDATUS (Cantor).

Head, 5.50 in length; barbels, 10, three on upper and two on lower jaw of each side.

Color in spirits, yellowish brown, some indistinct darker markings on upper half of body, usually a black spot on upper half of base of caudal, the spot sometimes extending to lower base of fin also. Two specimens from Shanghai. Length, 5-5.75 inches. These seem fully identical with our specimens from Japan.

Family SILURIDÆ.

FLUVIDRACO FULVIDRACO (Richardson).

Head, 3.50 in length; depth, 4.50; D. I, 6; A. 20; pectoral spine serrated on both edges; barbels, 8; caudal deeply forked.

Color in spirits, brownish, with a wash of yellowish on under parts.

One specimen from Shanghai. Length, 6.25 inches.

LIOCASSIS LONGIROSTRIS Günther.

Head, 3.50 in length; depth, 4.75; D. I, 7; A. 15; P. I, 9; caudal deeply forked; barbels, four on upper jaw, four on lower jaw; numerous sharp teeth in jaws, vomer, and palatines; a roughened bony plate on nuchal region and at origin of dorsal; pectoral and dorsal spines very strong and armed with barbs; upper jaw projecting.

One specimen from China, "probably Hongkong." Length, 10 inches. This species was described from a specimen from Jamrach's collection, said to come from "Japan." It is doubtless Chinese, and should be omitted from Japanese lists.

Family FISTULARIIDÆ.

FISTULARIA STARKSI Jordan and Seale, new species.

Head, 2.50 in length; snout, 3.15; depth much less than width of body; mandible, 5.20 in snout; eye, 9 in snout, 1.45 in postocular portion of head; maxillary, 2 in mandible; the depth of head at nuchal region is greater than its width. The ridges on top of head are as in *Fistularia petimba (depressa)*, as described by Günther, the median ridges being at all points farther apart than their distance from upper lateral ridge; lower lateral ridges scarcely roughened; the posterior two-thirds of lateral ridges strongly spinous; D. 15; A. 14; about 23 minute separate spinelets in front of dorsal.

Body very elongate, flattened, the anterior bones of head projected into a long beak; thoracic portion of body formed of large plates, the upper with 3 smooth longitudinal raised lines; postorbital bones promi-

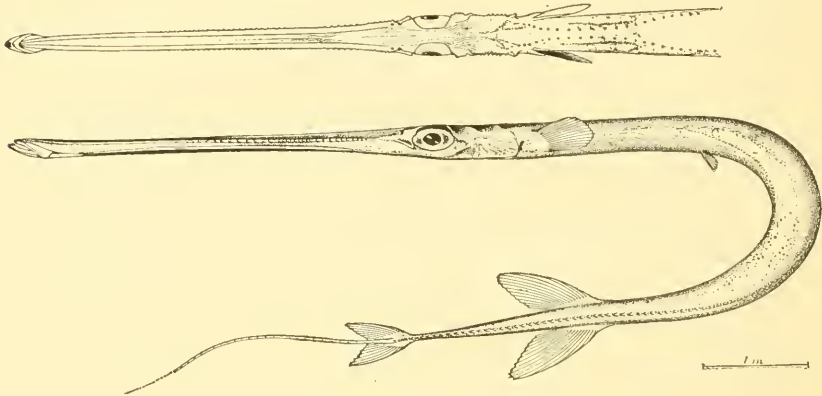


FIG. 3.—FISTULARIA STARKSI.

nent, strongly denticulate; interorbital space concave, equal to width of pupil; a prominent, strongly serrated, bony ridge at upper margin of opercles; a row of lateral spines or barbs along the sides of body from head to caudal; these are very strong and barb-like on posterior third of body, much larger and stronger than in any other known species of *Fistularia*, the longest barb being about one-half width of pupil; other portions of body smooth, unscathed. Insertion of dorsal directly over anal, the two fins being similar and about equal in size, the distance between their origin and base of caudal, 2 in length of snout; pectorals, 7.20 in snout; ventrals small, 1.50 in eye; caudal small, deeply forked with one median projecting filament which is about 2 in length of snout.

Color in spirits, uniform yellow, with wash of red; fins unmarked.

One specimen from Hongkong. Cat. No. 52079, U.S.N.M. Length, 14.50 inches.

Family SYNGNATHIDÆ.

SYNGNATHUS SCHLEGELI Kaup.

Head, 7.50 in length; snout rather long and slender, its length one-half greater than postorbital part of head; rings 20 + 34; D. 37; interorbital space concave, narrow, equaling one-half of eye; eye, 4 in snout; top of head and snout smooth; a small rounded caudal fin equal in length to postorbital part of head; body, about 1.30 in tail; opercle without a distinct ridge; width of body greater than depth.

One specimen from Shanghai, identical with this common Japanese species.

Family MUGILIDÆ.

MUGIL CEPHALUS Linnæus.

Mugil aur FORSKÅL.

Head, 4 in length; depth, 4.30; eye, 4 in head, a very broad adipose eyelid; lips thin, the upper with a single row of small fringes. D. IV-9; A. III, 8; scales 37.

One specimen from Hongkong, China, 10 inches long; another from Shanghai, 5.50 inches long.

Family SERRANIDÆ.

LATEOLABRAX JAPONICUS (Cuvier and Valenciennes).

Head, 3 in length; depth, 3.40; eye, 5 in head; D. X, 12; A. III, 7; scales about 80 in lateral series; maxillary extending to below posterior border of eye; villiform teeth in jaws, vomer, and palatines.

Color in spirits, silvery, slightly darker above, with scattered black spots above the lateral line.

One specimen from Shanghai. Length, 8 inches.

DIPLOPRION BIFASCIATUS (Kuhl and Van Hasselt).

Head, 3 in length; depth, 2.20; D. VIII, 14; A. II, 12.

One specimen of this well-marked species from Hongkong. Length, 7.50 inches.

Family PRIACANTHIDÆ.

PRIACANTHUS TAYENUS Richardson.

Head, 3 in length; depth, 3; D. X, 12; A. III, 13.

Color in spirits, yellowish white, ventral membrane with round black spots, the one nearest the body very much larger than the others.

One specimen, length, 2.50 inches, from Hongkong, China.

Family LUTIANIDÆ.

LUTIANUS ERYTHROPTERUS (Bloch).

Head, 2.50 in length; depth, 2.25; D. XI, 13; A. III, 8; scales about 46; sharp pointed fixed teeth in jaws, a single row with a patch in front in lower jaw, two or three rows in upper jaw with one or more curved canines in front; posterior limb of preopercle strongly denticulate, with a stronger spine at angle; opercle with a single sharp spine at posterior tip; maxillary reaching to below anterior margin of pupil.

Color in spirits, yellow, about 12 narrow longitudinal brown bands; a large dark brown white-edged ocellus occupying the entire caudal peduncle; a brown stripe from dorsal to eye; caudal white, ventrals black.

One young specimen from Hongkong. Length, 1.55 inches.

LUTIANUS JOHNII (Bloch).

Head, 2.75 in length; depth, 2.50; eye, 4.50 in head; D. XI, 14; A. III, 8, scales, 48.

Color in spirits, yellowish white, a large oval black spot under anterior portion of soft dorsal; notch of preopercle shallow.

One specimen from China, probably Shanghai. Length, 8.50 inches.

Family SCLENIDÆ.

PSEUDOSCIÆNA POLYACTIS Bleeker.

D. X, 35. Second anal spine very short, less than eye. Color in spirits, uniform yellowish white. One specimen from China, probably Shanghai. Length, 10.50 inches.

The species is notable for the great length of the dorsal fin.

COLLICHTHYS FRAGILIS Jordan and Seale, new species.

Head, 3.75 in length; depth, 3.50; D. IX, 28; A. II, 13; scales of moderate size, very deciduous; eye small, 6 in head; snout, 4 in head; interorbital space, 3 in head; three spines on middle of nuchal region, one directed forward, one directed back. A broad fringed flap on shoulders above posterior portion of opercles.

Body moderately elongate, compressed, the fish becoming rather abruptly slender at origin of anal; caudal peduncle slender, its depth about equal to orbit; head large, scaled, roughened with ridges; mouth large, oblique, only the distal portion of maxillary exposed; end of maxillary under the posterior margin of eye, a notch at symphysis of upper jaw; teeth in villiform bands in jaws, with a cluster of slightly larger ones along front of lower jaw; opercles and preopercles apparently entire, several small bony ridges extending

from vertical limb of preopercle; origin of dorsal directly above origin of pectorals; longest dorsal spine, 2 in head; the longest ray, about 2.50 in head; base of anal, 1.25 in head, its longest ray, 1.75 in head; ventrals, 1.50 in head; pectorals, 1.50 in head; caudal rounded, about 1.25 in head.

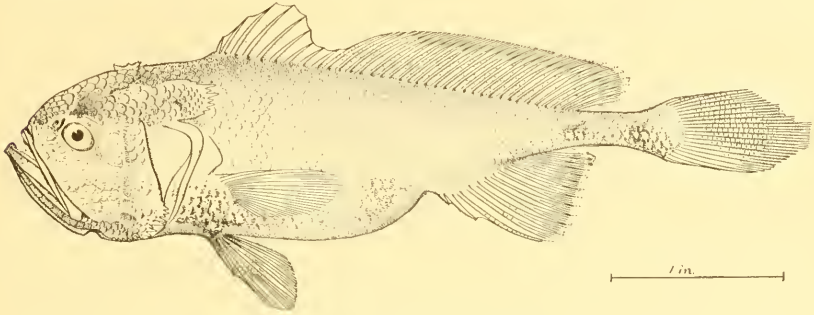


FIG. 4.—COLLICHTHYS FRAGILIS.

Color in spirits, uniform, dull yellowish white, with slight wash of brown on back and caudal peduncle; fins uniform.

One mutilated specimen, Cat. No. 52080, U.S.N.M., from Shanghai. Length, 4.75 inches.

Family OPHICEPHALIDÆ.

OPHICEPHALUS PEKINENSIS Basilewsky.

? *Ophicephalus miliaris* CUVIER and VALENCIENNES.

Head, 2.80 in length; depth, 6.30; eye, 4.50 in head; ventral fins small. D. 49; A. 32; scales about 64; villiform teeth in jaws, vomer, and palatines with larger teeth among them; cheeks and head scaled; maxillary reaching to posterior part of eye; three distinct mucous pores on under part of jaw and three on lower limb of subopercle. Color in spirits brownish, with 12 or 13 indistinct darker stripes or bands on sides and back, taking the form of dusky blotches, two indistinct longitudinal lines on sides of head.

Two specimens from Shanghai. Length, 2.75–3 inches.

This fish may be identical with *O. miliaris* Cuvier and Valenciennes, but as the fins and teeth are not described, it is impossible to make a certain identification.

Family POMACENTRIDÆ.

AMPHIPRION POLYMNUS (Linnæus).

Amphiprion Japonicus (SCHLEGEL).

One fine specimen, probably from Hongkong, corresponding fully to the account of *Amphiprion japonicus*. It is very closely allied to *Amphiprion Snyderi* Ishikawa, lately described from the Bonin Islands.^a

^a Proc. Nat. Hist., Imp. Mus., Tokyo, I, 1904, p. 11.

The nuchal band is, however, narrower and more deeply defined than in *A. snyderi*. It is less directed backward and does not involve the bases of the first two dorsal spines. The second band is also narrower and sharper, and the third forms a sharp pearly streak in front of the yellow of the tail and caudal fin. The ventrals and anal are yellow, both with a black edge.

The figure of *Prochilus polytmus* in Bleeker's Atlas fits our Hongkong specimen perfectly. We give a colored figure of the latter specimen in another paper, On the fishes collected at Hongkong by William Finch.^a

Family LABRIDÆ.

THALASSOMA LUNARE (Linnæus).

Head, 3.75 in length; depth, 3.50; eye, 6.50 in head; caudal lunate, the lobes prolonged.

Color in spirits yellowish; head blue, with several bands; pectorals with a blue-black area running parallel with rays on the upper third of fin.

One specimen from China, probably Shanghai. Length, 8.25 inches.

STETHOJULIS INTERRUPTA (Bleeker).

Head, 2.75 in length; depth, 3.25; D. IX, 12; A. III, 11; scales, 27.

Color in spirits yellowish; the position of lines and markings are as in Bleeker's figure, but the lines are whitish in spirits, doubtless red in life.

One specimen in the Jouy Collection labeled China (probably from Hongkong).

Family CHÆTODONTIDÆ.

CHÆTODON COLLARIS Bloch.

Head, 3.75 in length; depth, 1.50; D. XI, 23; A. III, 20.

One fine specimen from Hongkong; length, 5.20 inches. This example agrees perfectly with the specimen from Japan, described and figured by Jordan and Fowler.^b

Family MONACANTHIDÆ.

MONACANTHUS CHINENSIS (Bloch).

Head, 3.50 in length; depth, 2; D. 28; A. 29.

Two specimens from Hongkong. Length, 3.25-7.75. The small specimen has the barbs on the dorsal spine stronger than on the large example.

^a Proc. Davenport Acad. Sci. 1905.

^b Proc. U. S. Nat. Mus., XXV, p. 534.

MONACANTHUS JAPONICUS (Tilesius).

Head, 3.50 in length; depth, 1.50; D. I, 27; A. 27; spine barbed, rather strong; color in spirits brownish, with two indistinct dusky bands from base of dorsal and anal.

One specimen from Shanghai. Length, 1.50, similar to others from Japan.

Family TETRAODONTIDÆ.

SPHEROIDES RUBRIPES (Schlegel).

Head, 2.80 in length; interorbital width, 2.50 in head; caudal truncate. Color in spirits yellowish, a brownish wash on back with some indistinct cross-bands, a large blackish ocellus with a white ring on anal and one on base of dorsal, also a dusky or brownish blotch under posterior portion of pectorals.

One young specimen from Shanghai. Length, 1.50 inches.

Family SCORPÆNIDÆ.

PROSOPODASYS LEURYNNIS Jordan and Seale, new species.

Head, 3 in length; depth, 3; D. III-IX, 8; A. 1, 7; snout equal to eye; interorbital space, two-thirds width of eye; preorbital with two very large spines directed backward; preopercle with four large spines



FIG. 5.—PROSOPODASYS LEURYNNIS.

directed backward, the upper one the largest; head without tubercles; no teeth on palatines.

Body oblong, compressed, the snout almost straight in profile, the lower jaw slightly the longer; depth of caudal peduncle 3.20 in head; body apparently naked; mouth moderate, the maxillary reaching to below posterior margin of pupil; small teeth on jaws and vomer, no teeth on palatines; gill-rakers consisting of small prickly clusters, 7 of these on lower limb; the first dorsal spine long and strong, situated

directly over posterior margin of orbit, its length equal to postorbital part of head; the three anterior spines graduated, connected by membrane, but separated from the fourth spine; the last two dorsal spines also somewhat separated from the others; anal fin rather short, its longest ray, 3.50 in head; ventrals small, short, 2.20 in head; pectorals entire, equal to length of head; caudal rounded, 1.20 in head.

Color in spirits, mottled everywhere with yellowish brown; anterior half of caudal white, posterior portion of pectorals brown with a dusky blotch on posterior third; other fins mottled with brown.

Two specimens from Hongkong, China. Length, 0.85-1.15 inches. The type is Cat. No. 52081, U.S.N.M. From the absence of palatine teeth it is perhaps a representative of a subgenus distinct from *Prosopodusys*.

Family GOBIIDÆ.

BOSTRYCHUS SINENSIS Lacépède.

Head, 3.75 in length; depth, 6.05; eye, 6.50 in head; villiform teeth on jaws, vomer, and palatines; D. VI-I, 12; A. I, 9; a brown ocellus on upper base of the caudal fin; brownish in spirits.

Two specimens of the widely diffused species, from Shanghai. Length 4.75-5.50 inches.

MOGURNDA OBSCURA (Schlegel).

Head, 2.80 in length; depth, 6; eye, 6 in head; D. VII-9; A. 9; scales, 38; bands of small teeth in jaws, none on vomer or palatines; head scaled; maxillary reaching to below middle of eye.

Color in spirits, brownish, with blotches and black dots; fins with brown bands.

One specimen from Shanghai, China. Length, 5 inches. It is identical with Japanese specimens. We can not separate the Asiatic genus called *Odontobutis* Bleeker from the Australian *Mogurnda*, of Gill.

ELEOTRIS BALIA Jordan and Seale, new species.

Head, 3.20 in length; depth, 4.50; D. VI-9; A. 9; scales, about 47 to end of last caudal vertebra; 48 scales between origin of dorsal and snout; eye, 6.50 in head, 1.75 in snout, 2 in interorbital space; maxillary extending to below middle of eye.

Body moderately elongate, slightly compressed; caudal peduncle deep, 2.90 in head; head rather flat, depressed, the interorbital space almost flat; scales very small on top of head and on cheeks, minute on belly and thorax, larger on sides and largest on caudal peduncle; bands of small teeth in jaws, none on vomer or palatines; a rather distinct spine directed downward on the posterior margin of preopercle; origin of spinous dorsal over the posterior third of ventrals, the longest dorsal spine, 2.75 in head; six series of scales between base of

spinous and soft dorsal; base of soft dorsal, 2 in head, its longest ray 2.90 in head; origin of anal about one ray posterior to origin of soft dorsal, its base, 2.50 in head; pectorals, 1.20 in head; ventrals 1.75, in head; caudal rounded, 1.20 in head.

Color in spirits, brown, a wide black stripe, made up of small black dots, extending from opercle to caudal; a distinct narrow black line through eye from snout to origin of dark stripe on body; another short black line from posterior margin of orbit to posterior margin of preopercle; some small scattered black dots below the anterior half of the dark body stripe; the centers of the scales a little lighter in color, this giving an indistinct striped appearance to the body; some white

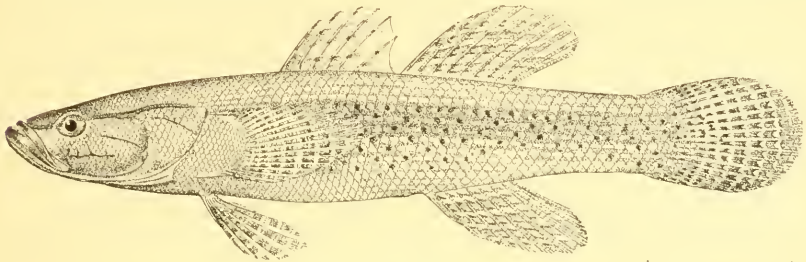


FIG. 6.—ELEOTRIS BALIA.

spots on under side of head; dorsal fins each with four longitudinal brown lines, darkest on the soft rays, the one at base of spinous dorsal indistinct; pectorals with several narrow irregular brown lines; ventrals with four or five brown bands; anal banded with brown; caudal with irregular lines or blotches of brown.

One specimen from China, probably from Hongkong; Cat. No. 52082, U.S.N.M.

PERIOPHTHALMUS CANTONENSIS (Osbeck).

Head, 4 in length; depth, 5.50; D. XIV, 12; A. 12; scales, about 75.

Color in spirits, grayish with a wash of brown on upper part; small dark specks scattered over body; dorsal grayish dusky at top; the soft dorsal with dark specks at base and a dark submarginal band.

Eighteen specimens from Shanghai. Length, 0.75–2.50 inches.

RHINOGOBIUS PLATYCEPHALUS (Peters).

Head, 3.20 in length; depth, 5.25; eye, 6.50 in head; D. VI–9; A. 6; scales, about 29; teeth in villiform bands in jaws.

Color in spirits, yellowish white; a small black opercular spot.

Six specimens. Length, 1–3 inches. From Shanghai.

ACANTHOGOBIUS OMMATURUS (Richardson).

Head, 3.50 in length; depth, 6.10; eye, 5.10 in head; D. IX-20; A. 16; scales, about 77; head naked except nuchal region, upper half of opercles and the cheeks which bear a few small scales near upper margin of preopercle; in lower jaw a single irregular row of rather large sharp-pointed teeth, upper jaw with two or three rows, with some larger curved teeth intermingled.

Color in spirits, uniform yellowish white; dorsal with brownish oblique stripes; caudal with a dusky shade.

Two specimens from Shanghai. Length, 4-4.50 inches.

GOBIICHTHYS MICROLEPIS (Bleeker).

Head, 4 in length; depth, 6; interorbital width one-half pupil; D. VI-13; A. 14; scales, about 55, larger on posterior part of body; head naked; opercles and preopercles entire; a single row of sharp curved teeth in upper jaw, two rows of slightly smaller ones in lower jaw; maxillary extending to below anterior third of eye; lower jaw the longer; anterior dorsal ray longest; caudal elongate.

Color in spirits, yellowish, a tint of dusky on tip of posterior rays of spinous dorsal.

Five specimens from Hongkong. Length, 4.50-5 inches.

PARACHÆTURICHTHYS POLYNEMUS (Bleeker).

Head, 3.95 in length; depth, 5.20; D. VI-11; A. 10; scales, 27; head and cheeks scaled; teeth in several rows, with some enlarged outer ones; caudal elongate, sharp; dorsal not elongate; numerous barbels on lower margin of subopercles, isthmus and lower jaw.

Color in spirits, yellowish brown; the fins all have a wash of dusky; a large black, white-edged ocellus on upper rays of caudal, not extending on caudal peduncle or on base of fin; scales on top of head rather large.

Three specimens from Hongkong. Length, 2.20-3 inches.

Family **PLEURONECTIDÆ**.**ARNOGLOSSUS TENUIS** Günther.

Head, 4 in length; depth, 2.75; D. 90; A. 70; small sharp teeth on each jaw; eyes close together on left side.

Two small specimens of this most fragile of flounders, from Hongkong. Length 2.50 inches. They agree well with Günther's description.^a

^aShore Fishes, Challenger, p. 55.

PSEUDORHOMBUS ARSIUS (Hamilton-Buchanan).

Head on left side: head, 3.85 in length; depth, 2.05; interorbital narrow, less than pupil. D. 71; A. 55; scales about 75; curved portion of lateral line 3 in the straight portion; maxillary reaching to anterior margin of pupil.

Color in spirits, yellowish, with numerous lighter spots and dots, an indistinct dusky blotch on lateral line; scales ctenoid on both sides.

One specimen from Hongkong. Length, 8.50 inches.

Family **SOLEIDÆ**.**CYNOGLOSSUS AREL** (Bloch and Schneider).

Head, 4.50 in length; depth, 4.25; eye, 3.20 in snout; D. 120; scales 96.

One specimen from Hongkong. Length, 10.50 inches.

Family **CALLIONYMIDÆ**.**CALLIONYMUS OLIDUS** Günther.

Head, 2.75 in length; depth, 11; D. IV-10; A. 9; three anterior dorsal spines elongate, filiform, the fourth short; preopercular spine strong, equal to length of eye, with four hooked barbs on the posterior arm and one spine directed forward at base.

One small specimen. Length, 2.50 inches, from Shanghai. It agrees very well with the account given by Günther