

No. 8. — *Some Fishes from Australasia.* By SAMUEL GARMAN.

THE notes and descriptions subjoined are based on specimens taken by Mr. Alexander Agassiz and members of his party on his recent expeditions to the Islands and Coral Reefs of Fiji and to the Great Barrier Reefs of Eastern Australia. Owing to the fact that no special attempts were made to collect fishes, the collection is not very large. Such individuals as came in the way while collecting invertebrates were preserved. Among them are some that belong to species ranging throughout Polynesia, to China and the Red Sea; there are others that probably have been identified with species tolerably well known on account of close affinities, but which, because of differences lost sight of under former arrangement, are now given descriptions and names, and still others that have escaped notice hitherto. Only species inhabiting the shoals around the islands or the reefs or the upper waters of the open sea are represented.

Epinephelus merra BLOCH.

D. 11 + 17; A. 3 + 9; V. 6; P. 16; Ll. 91.

Taken on the reef at Suva, Fiji Islands. The markings vary some from those of the published figure. Certain of the spots are darker than the others and their arrangement is such as to form transverse bands, of which one crosses the nape and descends to the operculum, another passes downward, including the second to the fifth spinous rays of the dorsal, across the flank, a third goes down from the hindmost three of the same spines and a fourth crosses from the middle rays of the soft portion of this fin to the anal. Three or four larger and blacker spots are to be seen on the basal portions of the pectoral rays.

Apogon nubilus, sp. nov.

Plate 1, Fig. 1.

Br. r. 7; D. 7 + 10; A. 2 + 8; V. 6; P. 12; Ll. 26; Ltr. 2 + 6.

Form short, stout, compressed; depth nearly one-third of total length. Head deep, short, in length equal to depth of body; crown depressed, nearly flat. Snout blunt, short, half as long as the eye. Eye large, two-sevenths as

long as head. Mouth large, rising obliquely forward; maxillary widened backward, bearing a low ridge, reaching below the middle of the eye. Teeth very small, in narrow villiform bands on the jaws, in a single doubly curved series on the vomer, and in groups of a few each on the ends of the palatines. The space between the dorsals is nearly equal to the length of the snout. The anterior dorsal spine is short, the second is not quite as long as the third, and the last is equal to the spine of the second dorsal, to the second spine of the anal, or to the length of the eye. Scales broad, minutely spinose on and near the hind margin, those of the lateral line with a rounded ridge and separated from the dorsals by the width of a single scale or from the vertebral line of the caudal pedicel by two scales. Caudal notch shallow, fin appearing truncate when spread.

Color brownish, head darker, darker on crown and back; with seven silvery bands across the flanks below the dorsals and a blackish spot on the lateral line about three scales from its end, forward from the bases of the caudal rays. A dark streak passes from below the middle of the eye backward and down to the hinder angle of the preoperculum.

Allied to *A. monochrous* of Bleeker, but readily distinguished by the markings. From *A. lineatus* of Schlegel it differs in the larger eye, shorter maxillary, the notch in the caudal, the shapes of the fins, and the caudal spot.

Taken at Suva, Fiji Islands.

***Apogon crassiceps*, sp. nov.**

D. 6, 1 + 9; A. 2 + 9; V. 6; P. 13; Ll. 23; Ltr. 9.

To some extent the shape of this species resembles that of *A. nubilus*, but the lower jaw is shorter, the caudal region is longer, and the foremost portions of the fins are longer and more angular. The outline from the snout to the dorsal is slightly arched at the crown of the head. Head large, thick, equal in length to the depth of the body, little less than one-third of the total, convex on the occiput. Snout blunt, three-fourths as long as the eye. Eye large, more than one-third of the head. Mouth large, cleft rising forward, jaws about equally prominent, maxillary wider backward and reaching to or beyond a vertical from the hind margin of the eye. Teeth small, equal, in villiform bands on jaws, vomer, and palatines. A weak opercular spine. Space between dorsal fins short, one-third the length of the snout. First ray of spinous dorsal short, second ray stronger and longer than any of the other rays; hinder spines decreasing rapidly in length and strength. Spine of soft dorsal slender, three-fifths of the length of the first soft ray in dorsal or anal, one-third shorter than longest ray of first dorsal. As the lengths of the soft rays in anal and soft dorsal decrease rapidly backward, these fins have an angular appearance. Caudal notch deep, lobes rather sharp. Preopercle with a ridge near the finely serrated posterior margin. Scales large, ctenoid, about

twenty-three in a longitudinal and about nine in a transverse series ; two rows above the lateral line.

Color whitish (in life reddish or yellowish), dark on the crown and along the back, with punctulations of dark along the middle of the side in the hinder half of the caudal region and on the outer extremity of the caudal fin ; fins light.

From Suva Reef, Viti Levu, Fiji Islands.

Scorpaena erinacea, sp. nov.

Plate 1, Fig. 2.

Br. r. 7 ; D. 13 + 9 ; A. 3 + 6 ; V. 6 ; P. 19 ; Ll. 43.

Body stout, depth equal length of head or two-sevenths of the total length, back subregularly and strongly curved from snout to end of dorsal fin. Cephalic ridges and spines strong and sharp ; no depressed space on the crown ; top of head covered by scales ; orbital ridges high ; interorbital space narrow, deep. Snout shorter than the eye, less than one-fourth of the head, blunt. Eye large, little less than one-third of the head. Mouth large ; maxillary reaching to a vertical from the hind border of the orbit, hind margin strongly curved ; lower jaw little longer. Anterior nostril tubular, inner edge with a broadened flap bearing numerous filaments. Prominent filaments appear at and behind the spines of the head and the dorsal fin. Scales of the lateral line with a ridge and a filament. Scales ctenoid, large on the body, smaller on the top and sides of the head. Pectorals about as long as the head, rays scaly on the basal half. Posterior edge of caudal very convex.

Color brown (reddish in life), mottled and blotched with darker ; a dark blotch on the operculum ; a transverse band, more or less completely divided into two, at the bases of the caudal rays ; a similar band across the flank from soft dorsal to anal ; a series of four to six spots at each side of the dorsum extends on the dorsal fin ; caudal, anal, and dorsal with irregular narrow transverse bands or transverse series of spots or blotches of brown ; pectorals and ventrals with numerous small spots of brown, basal portions dark ; breast and belly spotted ; flanks with numerous more or less indistinct and irregular spots and blotches. The spots on the fins are separated by areas of lighter ground color. There are less distinct indications of bands below and behind the eye and behind the operculum ; these may be described as a narrow darker band from the interorbital space through the eye to the branchiostegal rays, another parallel with it at the hind edge of the orbit and a third passing in front of the dorsal to the base of the pectoral. There are several indistinct spots along the lower edge of the gill cover and some small spots of white on the lateral line.

Suva Reef, Viti Levu, Fiji Islands.

Pterois zebra C. V.

D. 12 + 9 ; A. 3 + 6 ; V. 6 ; P. 17 ; Ll. 50 ; Ltr. 8 + 20.

Of this specimen the dermal flaps and filaments are especially prominent. The flap at the inner side of each anterior nostril is long and pointed ; there are two barbel-like flaps, and a symphysial flap, above the edge of the intermaxillary ; below the orbit above the angle of the mouth above the maxillary there is a broad leaf-like flap ; at the lower edge of the preopercle there are two broad fan-shaped narrow based ones ; and above the orbit on each side there is a prominent flap with fringes.

Suva, Fiji Islands.

Synanceia verrucosa BL. SCHN.

On a large and apparently very old specimen of this species taken at Thuvu, Fiji Islands, the extremities of the rays on the pectoral, ventral, and anal fins are encased in hardened callosities. The skin is thick and so rough and warty over body and fins, and the coloration is such, that the fish bears a close resemblance to a piece of coral rock.

Caranx parasitus, sp. nov.¹

Br. r. 7 ; D. 8 + 23-24 ; A. 2 + 20 ; Ll. 43 (on the straight portion).

Several individuals of this *Caranx* at Cairns, Barrier Reef, Australia, "from among the tentacles of *Rhizostome* Medusa, *Crambessa mosaica* Haeck." In shape they approach *C. hippos*. The lower outline is rather more arched than the upper. Height of body equal length of head, or two-sevenths of the total length. Eye large, near one-third of the head. Teeth on the jaws in a single series. Lateral line strongly curved anteriorly, straight from below the fifth ray of the soft dorsal, keeled plates rather small.

Body and head yellow ; back and top of head tinted with olive ; chest and lower part of abdomen white ; a large black opercular spot ; anterior dorsal blackish ; margin of second dorsal and margins and ends of caudal black.

From the formulae this species appears closely allied to *Caranx calla* C. V. It differs in coloration.

Caranx regularis, sp. nov.

Br. r. 7 ; D. 8 + 23 ; A. 2 + 20 ; P. 21 ; Ll. 35 (in the straight portion).

The upper outline of this species differs little from the lower in curvature. The body is greatly compressed, the depth being more than one-third of the total length. Head as deep as long, one-fourth of the total ; snout longer than

¹ Recorded as *Trichiurus declivis* Jenyns, Bull. Mus. Comp. Zoöl., XXXII., p. 18.

the eye, blunt; mouth medium, maxillary hardly reaching a vertical from the front border of the orbit; teeth small in narrow bands on jaws and vomer and in a single series on the palatines; eye large, one-fourth of the head. The curve of the lateral line is moderately strong and regular until it reaches the straight portion, near a vertical from the sixth ray of the second dorsal; there are thirty-seven broad, sharply keeled plates in the posterior section. Fins of medium size; longest ray of either spinous dorsal, soft dorsal or anal less than twice the orbital length; excepting half a dozen of the anterior soft ones, the rays of dorsals and anal are short. Breast naked.

Color olivaceous to grayish yellow on the back, lighter below; back crossed by five broad vertical bands of black, descending to about the middle of the flank, the posterior one of which continues back on the top of the caudal pedicel to a dark area on the bases of the caudal rays. The first band crosses the spinous dorsal, which is black; the second passes through the space between the two dorsals; the third lies below the highest portion of the second dorsal, and the fourth and fifth lie below the short rays of the same fin. The fins, except the first dorsal, are light colored with dusky margins. There is a small and comparatively faint spot at the upper angle of the operculum. No band through the eye.

Captured at Suva, Fiji Islands.

Percis tetracanthus LA C.

Br. r. 6; D. 3 + 20; A. 17; V. 5; P. 18; Ll. 63; Ltr. 8 + 14.

The orbits are black; there is a large spot of black below the base of each pectoral and a black spot in the anterior part of the lower half of the caudal.

Suva Reef, Fiji Islands.

Gobius atriclypeus, sp. nov.

Plate 2, Fig. 1.

D. 6 + 12; A. 12; Ll. 25; Ltr. 10.

Body compressed, elongate, depth one-seventh and caudal fin near two-sevenths of the total length. Head about one-fifth of the total; interorbital space very narrow. Snout short, two-thirds as long as the eye, pointed as seen from the side, subtruncate as seen from above. Mouth wide, oblique, rising steeply forward; maxillary subtending anterior one-third of eye. Teeth small, in bands, with one or two canines at each side above and below. Eyes large, more than one-third of the head, prominent, very close together on the top of the head, longer than the snout. Occiput covered with scales, to the ridges behind the orbits. Scales large, ctenoid with minute teeth. Fin rays flexible, elongate. First dorsal spine above the axil of the pectoral; depth of first dorsal less than that of the body; height of second dorsal greater than

that of the first. Caudal long pointed, ending in a filament. Anal origin below that of soft dorsal. Pectorals long, ending in a filament above the fourth or fifth ray of the anal.

Color light brownish, fins darker; ventrals black; a series of small spots of brown along the middle of the flank from the cheek to a black spot on the bases of the caudal rays.

Secured in the Bay of Moala, Fiji Islands, on the east side, in twenty-five fathoms depth.

Gobius waitii, sp. nov.

Plate 3, Fig. 3.

D. 6 + 10; A. 10; Ll. 27; Ltr. 10.

Body short and thick, depth nearly one-fourth of the total length. Head short and broad, five-seventeenths of the total length. Snout short, little longer than the eye. Mouth medium, nearly vertical; canine teeth rather small. Eye one-fourth as long as the head. Bases of dorsal fins united by membranes. Caudal of moderate length, pointed. Ventrals short, disk broader than long, subcircular. Scales large and ctenoid on the body, hidden on the head by dermal growths that give the appearance of being roughened by short sharp points or flaps of skin.

Color yellowish, slightly browned toward the back, lighter below head and abdomen and near the edges of the fins. Caudal apparently with an edging of dark. No spots or bands.

From Cairns, Great Barrier Reef, Australia.

Specific name given in honor of the Australian ichthyologist, Edgar R. Waite, F. L. S.

Gobiodon atrangulatus, sp. nov.

Plate 2, Fig. 2.

D. 7 + 11; A. 10; P. 19.

Body much compressed, deeper anteriorly, tapering backward; width two-fifths of the depth; depth more than one-third of the total length. Head three-fifths as long as deep, narrow above the orbits, swollen on the cheeks, strongly arched from mouth to nape. Snout short, blunt, rounded, as long as the orbit. Eye less than one-fourth of the length of the head. Nostrils with raised margins. Gill openings as wide as the bases of the pectorals and situated immediately in front of them. Dorsal origin above the base of the pectoral. First dorsal short, little if any more than half as high as the second; second larger and higher than the first, from which it is not separated, angles rounded or blunt. Anal rounded, deeper than first dorsal. Caudal deep, hind margin convex. Pectorals broad, subround. Ventrals twice as long as the eye.

Color brownish, probably light red or yellow in life. The only spot or

mark appears to be a small black one on the upper angle of the gill cover. This spot resembles that in the same position on *G. citrinus* and may indicate kinship, but there are no traces of the characteristic vertical streaks of that species, and the dorsals are not separated.

Found off Nairai, Fiji Islands.

Gobioides totoyensis, sp. nov.

Plate 3, Figs. 1 and 2.

Br. r. 4; D. 6 + 45; A. 45; V. 5; P. 7 + 6.

Body compressed, depth one-eighth and body cavity one-third of the total length. A fold below the abdomen behind the ventrals, somewhat like the tropeic fold in certain sharks. Head short, about one-sixth of the entire length, narrow above, apparently with a swollen tract or cushion on the forehead, from occiput to mouth. Snout short, upper jaws shorter, lower jaws stronger, chin protruding. Mouth medium, cleft rising obliquely forward; maxillary reaching to a point below the eye; lips thick; teeth small, in villiform bands, a very small canine at each side above and below. Eyes minute. No barbels. Gill openings wider than the bases of the pectorals, upper angle of each opening forward of the middle of the base of the fin. Dorsal, anal, and caudal continuous; the skin enveloping them not especially thick. Anterior dorsal spine above the mid-length of the pectoral fin; first six rays of the fin lower and closer together than the following rays, but not separated from the balance of the fin by a space. Caudal elongate, one-seventh of the total, pointed, united by membrane with dorsal and anal. Anal origin below the eleventh ray of the dorsal. Ventrals short, longer than the pectorals, subtruncate, parallel, close together, with inner edges joined together and to the body, appearing externally as if containing but four rays each. Pectorals not extending as far backward as the ventrals, twice as wide as long, with protruding rays, in two sections of which the lower—six rays—is truncate, and the upper, of eight or nine rays, is longer and pointed. Lateral line distinct on the head, in a median tube anteriorly on the flank and backward to the scaly portion, below the thirty-fifth ray of the dorsal, where in a series of larger scales it has the ordinary appearance on bony fishes. Scales cycloid, appearing to be absent from the anterior three-fifths of the body; backward they are comparatively large.

Color uniform brownish white, probably yellowish or flesh color in life.

Taken in Totoya, Fiji Islands, outside of Kini-kini and inside of thirty fathoms depth.

Periophthalmus schlosseri PALL.; BL. SCHN.

D. 8 + 13; A. 11.

The descriptions of *P. schlosseri* do not mention several transverse bands which cross the back, passing down and obliquely forward on the flanks of

these specimens. The first dorsal is dark brown and has a light edging. Second dorsal, pectorals, and caudal have transverse series of small elongate spots of brown. The ventral disk is similar to that figured by Pallas on his type, from Amboyna. On immature specimens of an inch and a quarter in length the disk is as perfect as on the large ones.

Suva, Fiji Islands; Keppel Bay, Australia.

***Periophthalmus koelreuteri* PALL. ; C. V.**

D. 7-13 + 12-13 ; A. 12-13 ; Ll. 64-78 ; Ltr. 18.

The fishes placed here were captured on the Great Barrier Reef, Australia. Apparently of a single species, they exhibit a wide range in variation. The rays in the first dorsal number seven in the smallest individuals, and eight, nine, ten, and fourteen on larger ones. The largest have a black band in the upper half of the same fin; it is represented by a black spot on the hinder rays in the smallest of the lot. There are seven or eight scales between the dorsals on the larger and nearly twice as many on the smallest specimens. Commonly there are seven or eight bands of brown separated by spaces of lighter color about equal in width, crossing the back and passing down and forward on the flank. The ventrals are separate at all ages.

***Blennius canescens*, sp. nov.**

Plate 4, Fig. 1.

D. 10 + 16; A. 17; V. 2; P. 15.

Outlines in some degree resembling those of *B. maoricus* Kner, 1867, but the head is more pointed and less convex in the frontal region, and the filament above the orbits is shaped differently. Body compressed, robust, depth equal to length of head and contained three and two-thirds times in the length without the caudal. Head short, blunt-pointed at the snout, with a low arch above the orbits. Snout short, half as long as the eye. Mouth medium, cleft rising slightly forward, maxillary reaching below the anterior one-fourth of the eye. A canine on each of the lower jaws and two smaller ones near the symphysis on each upper jaw. Eye large, less than three times in the length of the head. A short slender filament above each eye (not shown in figure); no filament and no crest on the nape; a short nasal filament on each side. Dorsal notched, spinous portion originating above the base of the pectoral; rays in spinous portion shorter. Pectorals broad, rounded on hind margin. Caudal slightly notched, little shorter than the head. Lateral line extending to a point below the first spine of the second dorsal.

Color uniform light brownish, white or yellow; a brown band across the occiput from eye to eye; a brown spot above the orbits.

From the eastern entrance of Mbengha Passage, Fiji Islands.

Petroscirtes obliquus, sp. nov.

Plate 4, Fig. 3.

D. 12 + 19 ; A. 22 ; V. 2 ; P. 13.

Moderately elongate, compressed, depth nearly one-sixth and length of head nearly one-fifth of the total length. Head deeper than wide ; cheeks swollen ; crown rising somewhat high on the interorbital space longitudinally and rather flattened transversely ; without either crest or filaments. Snout rounded, blunt, half as long as the eye. Margins of nostrils prominent. Mouth comparatively narrow, maxillary reaching little below the forward part of the orbit. Teeth strong, fixed, in a single series, with very strong canines behind each series ; those of the lower jaws a little stronger than those of the upper series. Eye large, one-third as long as the head, very prominent above the forehead. Gill openings small, above the bases of the pectorals. Rays of soft dorsal longer than the spinous rays. First dorsal ray above the gill opening. First ray of the anal below the eleventh ray of the dorsal. Caudal subtruncate, free from dorsal and anal. Pectorals medium, pointed, lower rays averaging longer than the upper. Ventrals slender, of two rays which are separate for half their length, inner ray one-third longer than the outer. Lateral line marked by three or four pores, the hindmost of which is below the third ray of the dorsal.

Color light olivaceous brown ; a black spot behind the eye and several transverse bands on the lower half of the head ; a series of bars of brown on the flanks, the anterior of which incline forward, the posterior, backward ; a couple of spots at the base of the tail ; a series of small spots near the bases of the dorsal ; first dorsal clouded or spotted ; anal fin with spots along its base and with a darker margin ; ventrals, white ; pectorals, dusky ; abdominal cavity showing dark through its walls.

Locality, Suva, Fiji Islands.

Salarias sertatus, sp. nov.

Plate 4, Fig. 2.

D. 15 + 23 ; A. 2 + 27 ; V. 3 (4) ; P. 14.

The outlines of body and fins have a remote resemblance to those of *S. periophthalmus* ; the most prominent differences appear in the length of the caudal, in the depth of the notch between the dorsals, and in the frontal filaments. Body elongate, slender, depth or length of head one-seventh of the total length. Head short, as wide as deep, very blunt, nearly vertical in front of the eyes. A low crest on the nape. Eyes large, prominent, one-fourth as long as the head. Mouth wide, inferior. Teeth very numerous, small, movable, in single series ; no canines. Gill membranes continuous and free across

the throat, extending higher than the bases of the pectorals. A short, flattened, fringed postorbital tentacle; no other filaments. Dorsal origin above bases of pectorals; dorsal notch very shallow; extremities of rays protruding beyond the membrane. Anal origin below the tenth ray of the dorsal, rays of the fin exerted; the membranes descend from ray to ray, forming a serrated margin. Pectorals broad, nearly straight on the upper border, convex on the hinder edge, broadly rounded on the lower margin. Caudal one-fifth of the total length, medium rays longest, separated from dorsal and anal. The rays protrude on all the fins.

Color uniform dark olivaceous, lighter on the belly, anal, ventrals, and pectorals; each of the fins except the caudal with a whitish edge. Very young with more of light color on lower surfaces and fins.

Found "hopping about on the rocks above high tide" on Solo Island, North Astrolabe Reef, Fiji Islands.

***Salarias fasciatus* BL.; C. V.**

D. 12 + 17; A. 21; V. 2 (3); P. 14.

In all likelihood this fish belongs to Bloch's species, though the figure given by that author neglects the fringed filaments on the nape, the nasal filaments, and the short barbel below each angle of the mouth. The bands on our fish are less numerous and extend but halfway up on the dorsal; thence they are broken into small spots.

Near Suva, Fiji Islands.

***Dascyllus aruanus* LINN.; C. V.**

D. 12 + 12; A. 12; V. 6; P. 16; Ll. 25; Ltr. 3 + 10.

Suva, Fiji Islands.

***Glyphidodon uniocellatus* Q. G.**

D. 13 + 13; A. 2 + 12; V. 6; P. 18; Ll. 26 (17 pores); Ltr. 2 + 9.

Suva, Fiji Islands.

***Hemirhamphus laticeps* GÜNT.**

D. 15; A. 15.

On the middle of the flank of very young specimens of this fish there is a longitudinal streak of brown, becoming wider and more noticeable from the ventrals to the base of the caudal. Another streak of brown extends along the median line of the ventral surface. On the middle of the back there is a vertebral line of very small dots with a line of similar dots immediately

at each side of it, and at each side of the three there is a line of much larger dots. The beak is black and the black extends back on each side of the head to below the eye. The upper jaw and the orbits are black. The crown is dotted and punctulate with black.

Suva, Fiji Islands.

Zenarchopterus maculosus, sp. nov.

Plate 5, Fig. 4.

D. 11; A. 10; Ll. 44; Ltr. 8.

Length of head two and two-fifths times in the total length, or two and one-sixth times in the length to the caudal. Length of lower jaws, forward of intermaxillary, one-fourth of the total without the caudal. Intermaxillaries as wide as the eye, wider than long, rounded in front. A tubular nostril. Eye large, one-eighth of the entire head, little less than supraorbital width, equal width of upper jaws. Beak with a dermal expansion below and a prolongation at the tip. Dorsal in the hindmost one-fourth of the total length; first ray forward of that of the anal; base less than two-thirds as long as the head. Base of anal little more than half the length of that of the dorsal; first ray of the fin below second ray of dorsal. First ray of ventral at hindmost one-third of the total; fin not reaching the anal. Bases of ventrals little nearer to bases of pectorals than to base of caudal. Caudal rounded.

Black of jaws extending on the side of the face to below the eye. A broad band of blackish from opercle to base of caudal on the middle of the flank, inferiorly fading to round spots in each of which there is a central dot of light color, white or bluish. Back and belly lighter, dotted with brown. Dorsal blackish toward its margins.

Suva, Fiji Islands.

Gymnothorax nebulosus AHL; BL. SCHN.

Suva Reef, Fiji Islands.

Gymnothorax pictus AHL; BL. SCHN.

Suva Reef; Nukulau Island, Fiji Islands.

Syngnathus conspicillatus JEN.

Plate 5, Fig. 2.

Three miles south of Suva lightship.

Ichthyocampus sp.

Plate 5, Fig. 3.

Six miles east of Suva.

Balistes aculeatus LINN.

Suva Reef, Fiji Islands.

Alutera armata, sp. nov.

Plate 5, Fig. 1.

D. 2 + 44; A. 46; P. 14; C. 14.

Elongate, slender, much compressed, deep in front of dorsal and anal; greatest depth equal length of caudal, little less than one-third of the total length. Length of head hardly one-fourth of the total. Snout blunt, slightly concave in upper outline as seen from the side, two and one-third times as long as the eye. Eye large, three and one-half times in the head. Gill opening as wide as the eye, oblique, below the orbit, above the base of the pectoral. Lower edge of breast and belly thin, blade-like, very convex. Squamation villiform. Both dorsal spines above the orbit; anterior strong, long, more than twice the length of the eye, with four series of sharp hooks directed toward the base, the anterior two of which are close together; second spine very small, close to the first. Second dorsal and anal opposed, latter originating by several rays farther forward. Caudal pedicel slender; fin long, pencil-shaped, wide. Pelvic bone rather rigid; pelvic spine continuous with the bone, immovable. Pectorals small, broad, and short, as long as the eye, longer in their upper halves.

Light yellowish or olivaceous brown, darker on head and back; with transverse blotches of brown on forehead, first spine, and back; with irregular subvertical series of brown blotches on flanks and tail, arranged in pairs, the first pair being below the space between first dorsal and second, the second pair below the anterior twelve or fourteen rays of the soft dorsal, and the third farther back toward the end of the fin, while the fourth is on the caudal pedicel. The spots on the caudal are comparatively large; the tip of the fin is dark.

Suva, Fiji Islands.

EXPLANATION OF PLATES.

PLATE 1.

- Fig. 1. *Apogon nubilus*, sp. nov.
 Fig. 2. *Scorpaena erinacea*, sp. nov.

PLATE 2.

- Fig. 1. *Gobius atriclypeus*, sp. nov.
 Fig. 2. *Gobiodon atrangulatus*, sp. nov.

PLATE 3.

- Fig. 1. *Gobioides totoyensis*, sp. nov.
 Fig. 2. *G. totoyensis*, lower surface.
 Fig. 3. *Gobius waitii*, sp. nov.

PLATE 4.

- Fig. 1. *Blennius canescens*, sp. nov.
 Fig. 2. *Salarias sertatus*, sp. nov.
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PLATE 5.

- Fig. 1. *Alutera armata*, sp. nov.
 Fig. 2. *Syngnathus conspicillatus* Jen.
 Fig. 3. *Ichthyocampus* sp.
 Fig. 4. *Zenarchopterus maculosus*, sp. nov.



Garman, Samuel. 1903. "Some fishes from Australasia." *Bulletin of the Museum of Comparative Zoology at Harvard College* 39, 229–241.

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