

NEW RECORDS OF FISH FROM PAPUA

PATRICIA KAILOLA*

ABSTRACT

A series of trawls at Yule Island in Papua produced 22 new species records for Papua, and confirmed the occurrence of one other species. A brief description and photograph of each specimen is provided.

INTRODUCTION

BETWEEN November, 1969, and the end of January, 1970, a series of experimental trawls was made by the Department of Agriculture, Stock and Fisheries' Research and Surveys Division at Yule Island in Papua (146° 30' E., 8° 50' S.) (Figure). Over this period, two sunk nets were set and 24 trawls made, to the south-west of the island at depths between 2 $\frac{3}{4}$ fathoms and 26 fathoms over a sandy-mud bottom.

A representative collection of the fishes trawled was kept for identification. Besides the 80 known Papuan species identified, the collection contained 22 Indo-Australian species not previously recorded from Papua New Guinea and confirmed the occurrence of one other species in Papua. Of these 22 species, eight have been recorded previously from, or near, West Irian.

The purpose of this paper is to record these species as new for Papua and also to provide a brief description of each.

FAMILY BOTHIDAE

Genus *Bothus* Rafinesque

Bothus myriaster (Temminck and Schlegel)
(Plate I, A and B)

Rhombus myriaster Temminck and Schlegel, Fauna Japonica, Poissons, 1846, p. 181.

D. 89-95. A. 60-70. P. sin. 9. P. dextr. 8-9. L. lat. 93-105.

Depth 1.4-1.5, 1.7-1.8 in length with caudal. Head 3.6-3.8, 4.2-4.5 in length with caudal. Eye 3.0, 1.0-1.3 in interorbital space. Maxilla 3.6 in head, reaching to below front border of eye. Rostral spines present in some. Each

eye with a round flat tentacle. Second to fifth pectoral rays produced into long filaments in 5 of the 7 specimens.

Colour of preserved specimens reddish-brown, with numerous black-centred white ocelli and a large black blotch in middle of lateral line. A variable number of bent brown cross-bars separate the pale anterior from the brown posterior section of the blind side. The blind sides of the two remaining specimens are pale with no cross-bars. (Note: Perhaps these two represent a different sex to the others as they have neither developed rostral spines nor filamentous pectoral rays.)

Seven examples, 73-103 mm total length.

Previously unknown from Papua New Guinea, although recorded from West Irian (Munro 1967). A new record for Papua.

Genus *Engyprosopon* Gunther

Engyprosopon grandisquamma Schlegel
(Plate I, C)

Rhombus grandisquamma Temminck and Schlegel, Siebold's Fauna Japonica, Pisces, 1842-1850, p. 183.

D. 87-95. A. 65-70. P. sin. 11. P. dextr. 9. V. 6. L. lat. 44-48.

Depth 1.8-1.86, 2.2 in length with caudal. Head 3.9-4.2, 4.6-5.0 in length with caudal. Eye 3.0-3.6, equal to interorbital in two specimens (male) and 2.5 times interorbital in the other. Snout about half as long as eye. Maxilla reaching to below pupil of lower eye. Longest dorsal and anal rays equal to postorbital head length. Pectorals nearly as long as head, shorter in female. Origin of right ventral just behind fourth ray of left ventral.

*Biologist, Fisheries Research Station, Kanudi

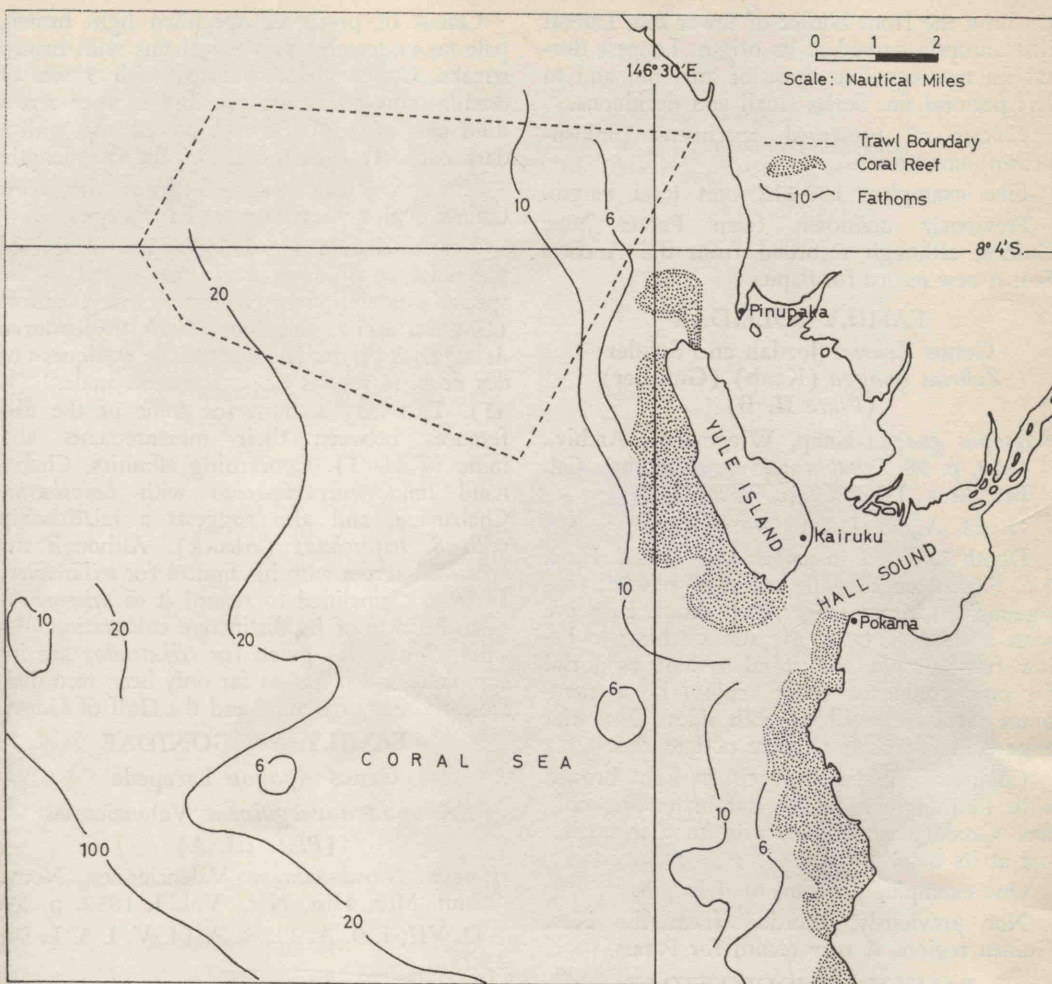


Figure.—Map of Yule Island with the trawling area marked

Colour of preserved specimens brown. Blind side with a longitudinal orange band below dorsal and another above anal. Caudal with a black spot at middle of upper and lower margin. Anal, dorsal and pectorals finely banded with numerous brown spots.

Three examples, 78-91 mm total length.

Previously unknown from Papua New Guinea, although recorded from West Irian and south of New Guinea. A new record for Papua.

Genus *Laeops* Gunther
Laeops parviceps Gunther
 (Plate II, A)

Laeops parviceps Gunther, Challenger Rep. Zool., I, Part VI, Shorefishes, 1880, p. 29. D. 94-107. A. 76-85. P. sin. 13-14. P. dextr. 11-12. L. lat. 85-98.

Depth 2.5-2.65, 2.9-3.2 in length with caudal. Head 5.6-6.5, 6.8-7.0 in length with caudal. Eye 2.1-2.6, and close together, the lower eye a little in front of the upper. Maxilla

reaching the front border of lower eye. Lateral line abruptly curved at its origin. Longest dorsal fin rays equal to those of anal fin, and to left pectoral fin. Scales small and deciduous.

Colour of preserved specimens pinkish-brown; fins brown.

Five examples, 100-112 mm total length.

Previously unknown from Papua New Guinea, although recorded from the Arafura Sea. A new record for Papua.

FAMILY SOLEIDAE

Genus *Zebrias* Jordan and Snyder

Zebrias quagga (Kaup) (Gunther)

(Plate II, B)

?*Aesopia quagga* Kaup, Wiegmann's Archiv., 1858, p. 98. *Synaptura quagga* Gunther, Cat. Brit. Mus., IV, 1862, p. 485.

D. 68. A. 58. L. lat. 99.

Depth 2.68, 3.1 in length with caudal. Head 5.6, 6.6 in length with caudal. Eye 4.25, contiguous, 2.5 times longer than snout. Each eye with a short tentacle. Maxilla reaching to below front of pupil. Pectoral as long as dorsal fin rays, connected to operculum by a membrane. Scales ctenoid on both sides. Opercular edge on left side has fringe of tentacles.

Colour of preserved specimen light brown, with 11 transverse double bars extending onto fins. Caudal dark brown, with another smaller bar at its base.

One example, 120 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY CYNOGLOSSIDAE

Genus *Symphurus* Rafinesque

Symphurus microrhynchus (M. Weber)

(Plate II, C)

Aphoristia microrhynchus M. Weber, Siboga Exped. Fische, 1913, p. 444.

D. 87. A. 76. V. 4. C. 12. Sc. 86. Tr. 33.

Depth 3.76, 4.17 in length with caudal. Head 4.41, 4.9 in length with caudal. Eye 8.5, contiguous, the upper slightly in advance of the lower. Maxilla reaches to below hind half of eye. Body depth 1.2 times head length. Dorsal and anal fin heights 2.0 in head length and 2.4 in body depth. Scales ctenoid on both sides. Scales with 7 or 8 basal radiating striae, and 16 slender apical denticles.

Colour of preserved specimen light brown, pale on undersurface. Vertical fins with brown streaks. Upper surface crossed with 5 sets of double transverse bars; possibly another across hind half of head. Base of caudal also with a dark bar. One example, 71 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

Note.—Chabanaud (1955) has examined the holotype of *S. microrhynchus* used in the species' description by Weber and de Beaufort (1929, p. 211), and found that it "depourvu de sa nageoire caudale et aussi de quelques-uns des derniers rayons de sa nageoire anale." (p. 45). This may account for some of the differences between their measurements and mine (Table 1). Concerning affinities, Chabanaud links *microrhynchus* with *holothuriae* Chabanaud, and also suggests a relationship with *S. trifasciatus* (Alcock). Although my specimen agrees with his figures for *trifasciatus*, I am more inclined to regard it as *microrhynchus*, because of its distinctive colouration. Besides, the figures given for *trifasciatus* are incomplete, and it has so far only been recorded from the Bay of Bengal and the Gulf of Oman.

FAMILY APOGONIDAE

Genus *Apogon* Lacepede

Apogon novae-guineae Valenciennes

(Plate III, A)

Apogon Novae-guineae Valenciennes, Nouv. Ann. Mus. Hist. Nat., Vol. I. 1832, p. 53.

D. VII; I, 9. A. 11, 8. P. 14. V. I, 5. L. lat. 23-25.

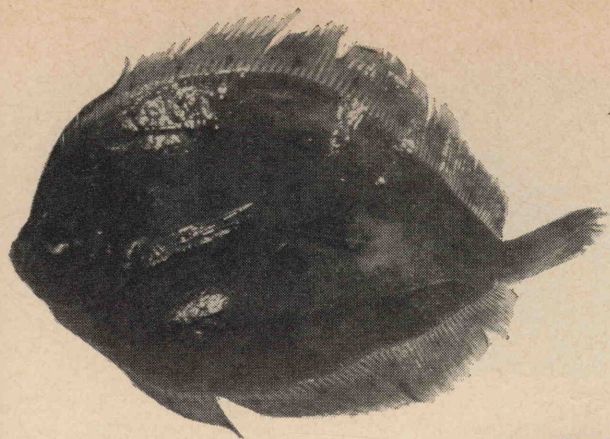
Depth 2.6-2.7, 3.3-3.4 in length with caudal. Head 2.4-2.5, 3.0 in length with caudal. Eye 3.2-3.7, 1.5 times interorbital. Maxilla reaching posterior margin of pupil. Outer margin of preoperculum finely serrated, preopercular ridge entire. Predorsal and body scales ctenoid.

Colour of preserved specimens brownish, with 7 to 15 distinct vertical brown bars across back and sides. Sometimes a brown diagonal bar from eye to preopercular angle. Subbasal brown bar on soft dorsal; anal hyaline. Upper part of first dorsal dusky.

Eleven examples, 45-83 mm total length.

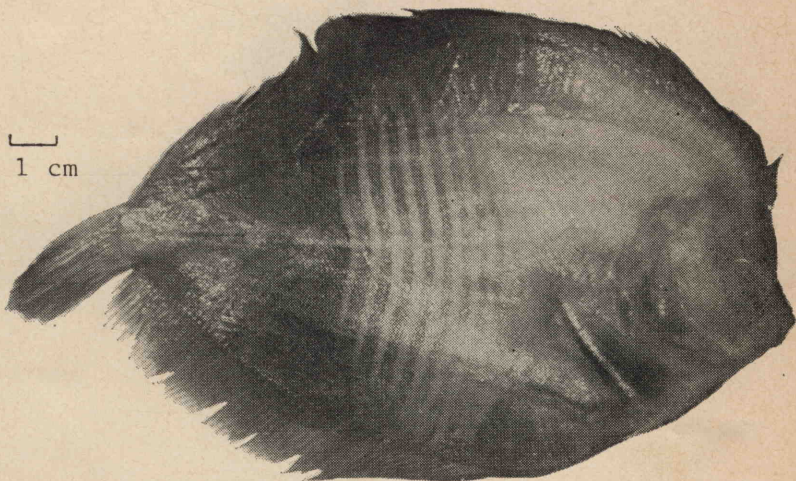
Previously unknown from Papua New Guinea, although recorded from West Irian. A new record for Papua.

Plate I.—



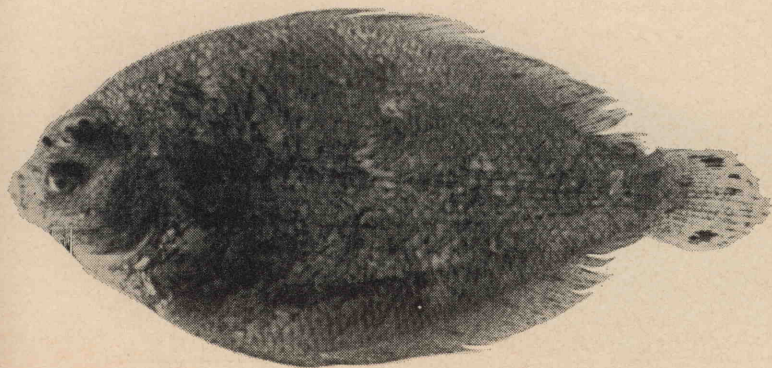
A. *Botbus myriaster*
(Temminck and Schlegel).
77 mm.

1 cm



1 cm

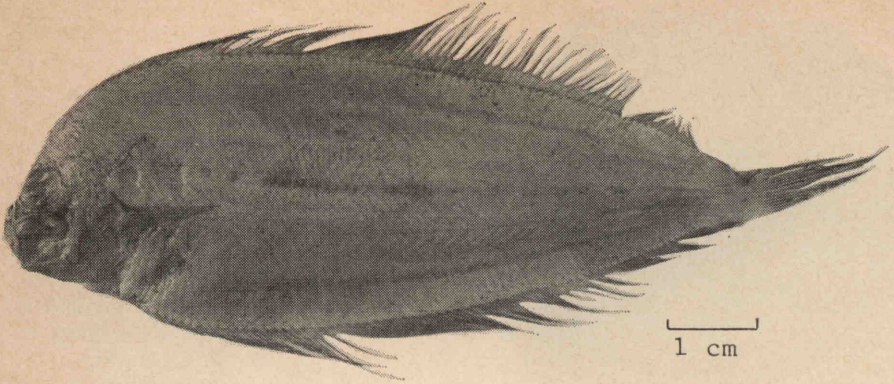
B. *Botbus myriaster*
(Temminck and Schlegel). 103 mm. Blind side.



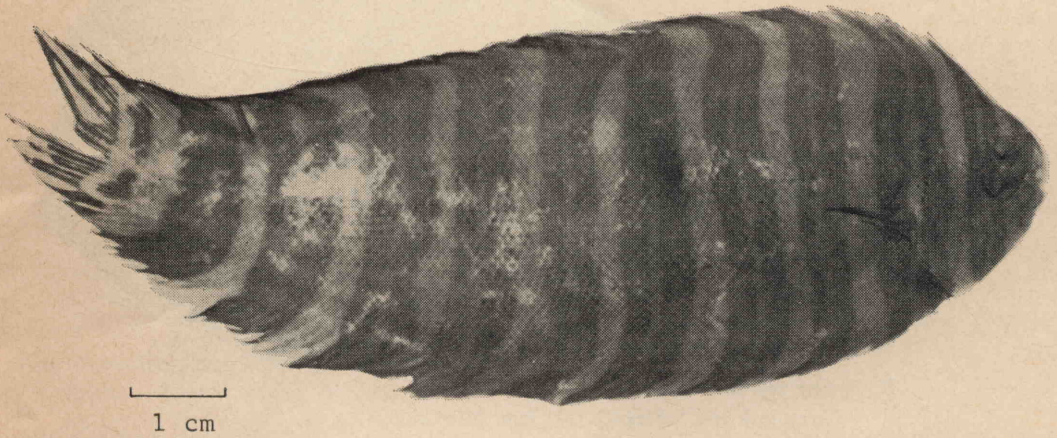
1 cm

C. *Engyprosopon grandisquamma* Schlegel.

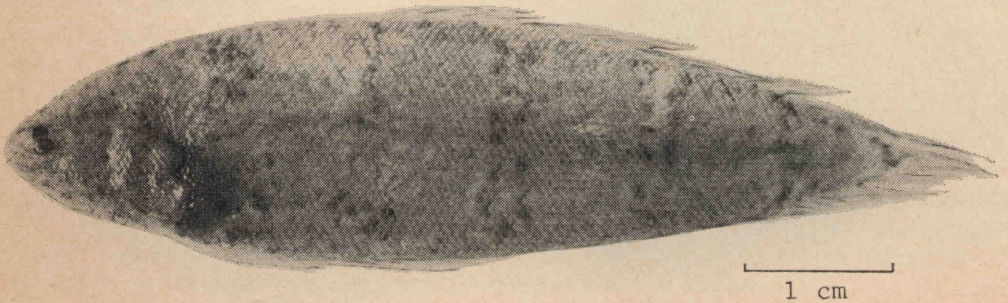
Plate II.—



A. *Lacops parviceps* Gunther.

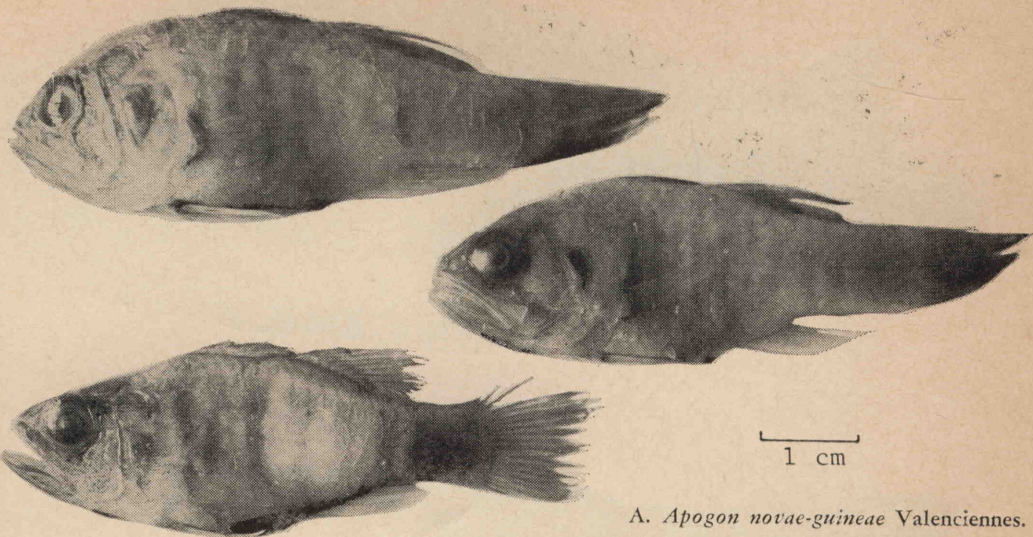


B. *Zebrias quagga* (Kaup) (Gunther).

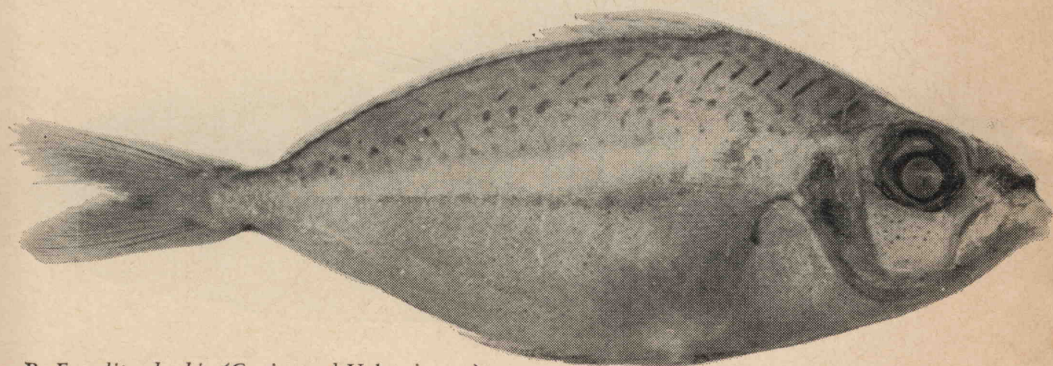


C. *Symphurus microrhynchus* (M. Weber).

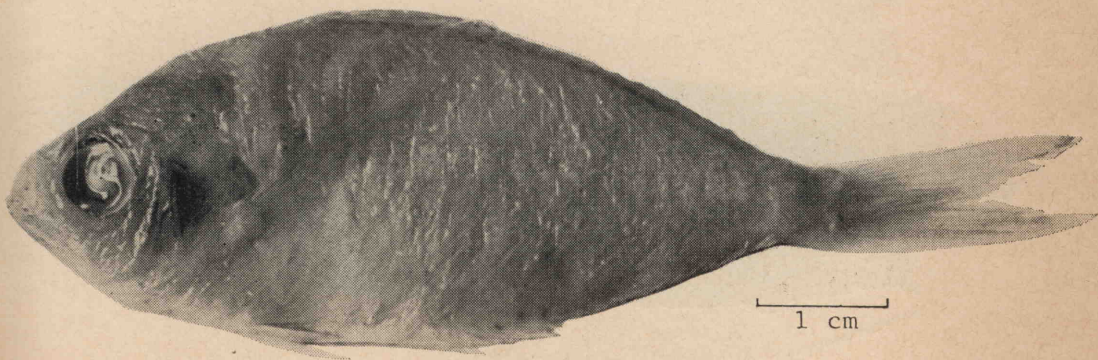
Plate III.—



A. *Apogon novae-guineae* Valenciennes.

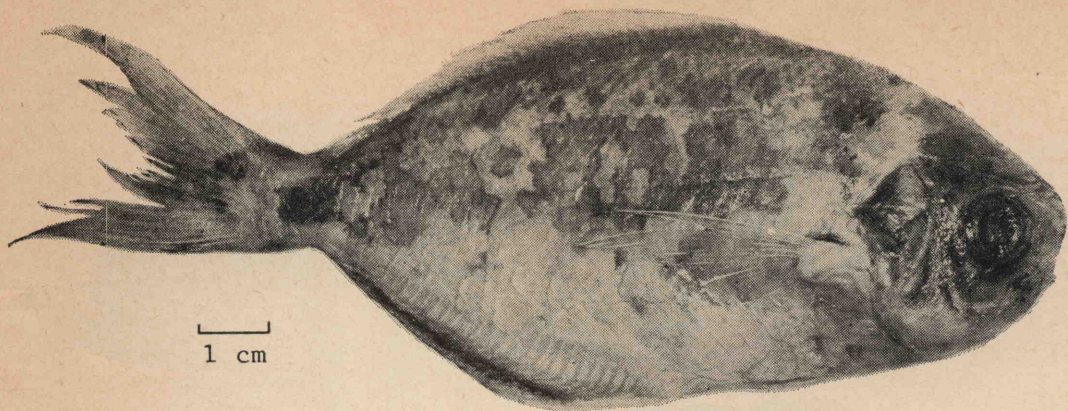


B. *Equulites berbis* (Cuvier and Valenciennes).

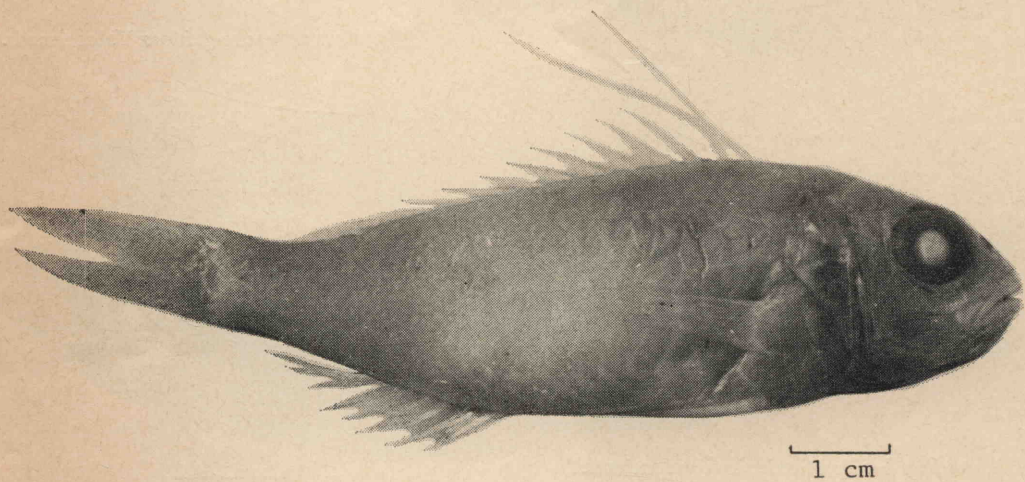


C. *Pentaprion longimanus* (Cantor).

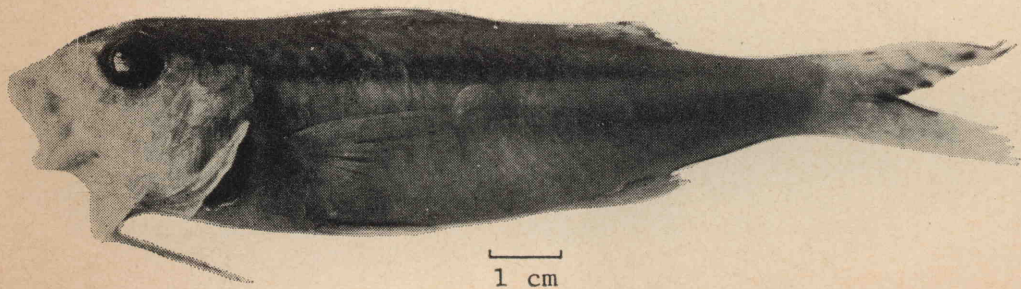
Plate IV.—



A. *Psenopsis humerosus* Munro.

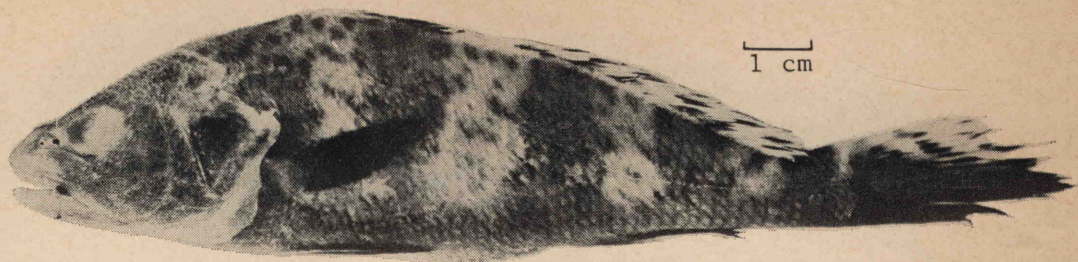


B. *Nemipterus nematophorus* Bleeker.

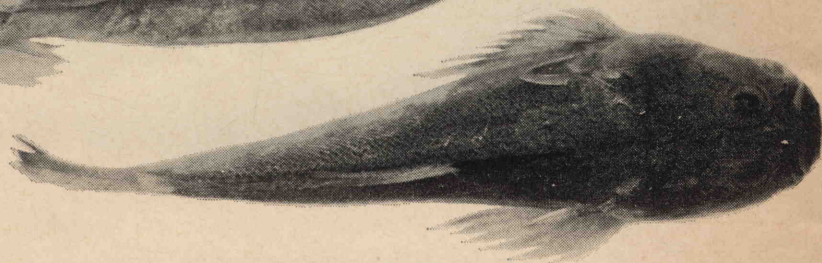
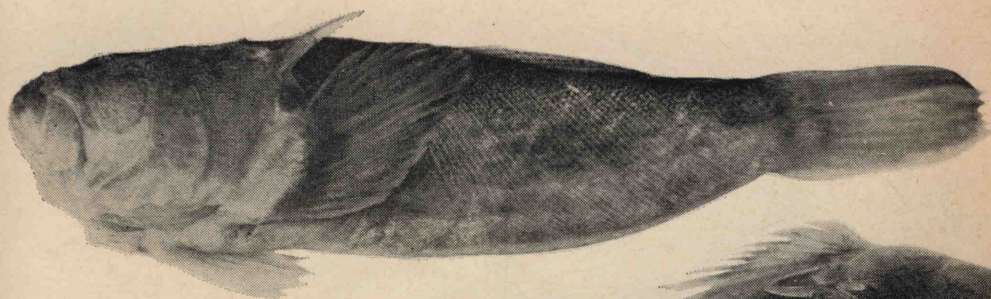


C. *Upeneus moluccensis* (Bleeker).

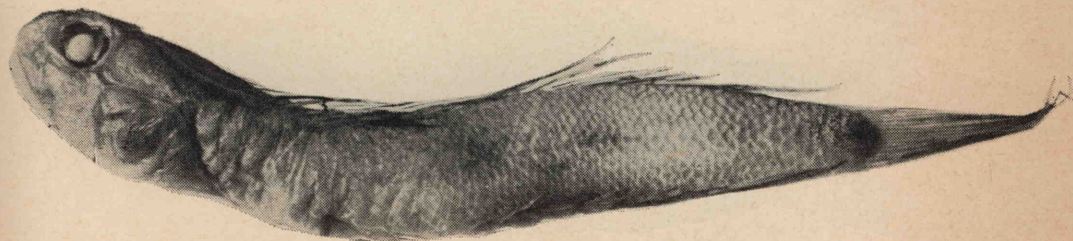
Plate V.—



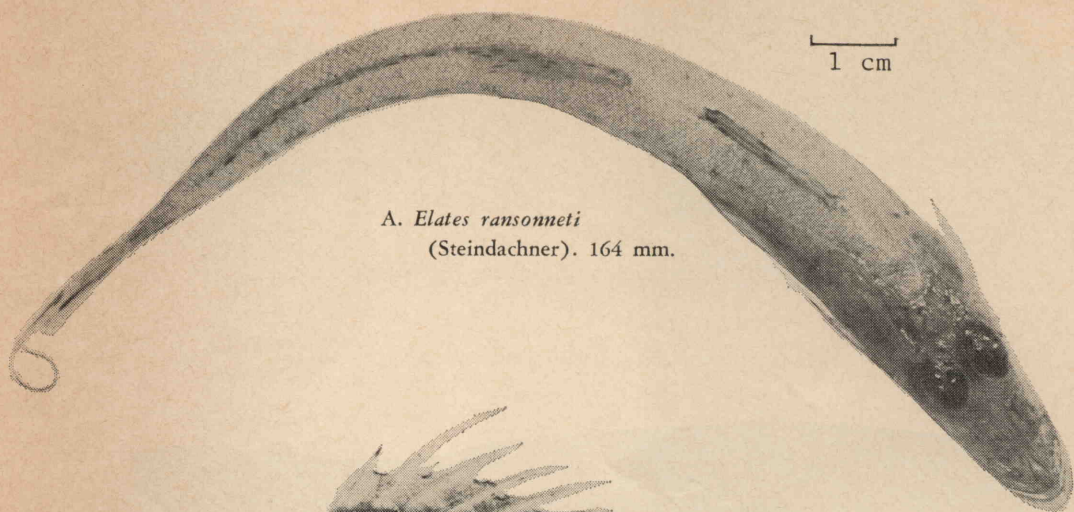
A. *Pseudosciaena diacanthus* (Lacepede).



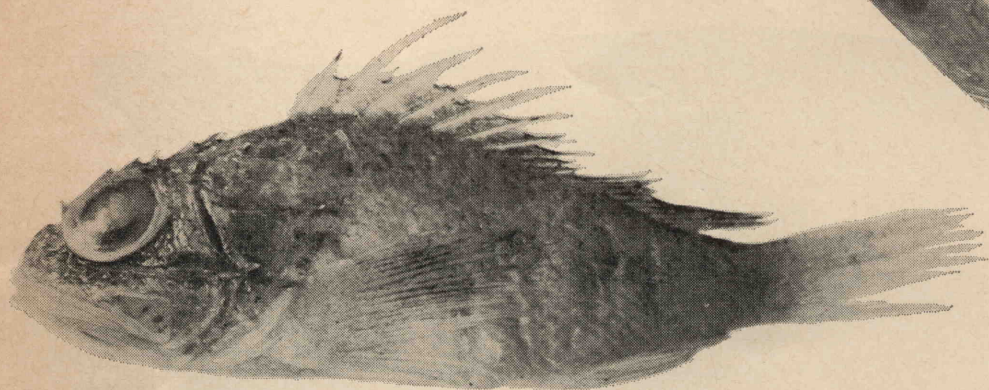
B. *Uranoscopus cognatus* Cantor. 140 mm and 113 mm.



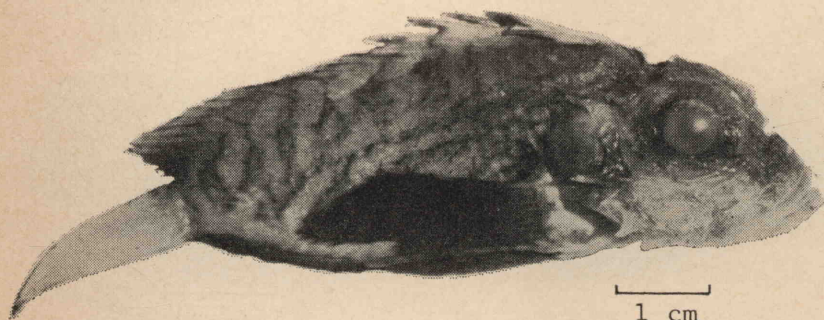
C. *Oxyurichthys papuensis* (Cuvier and Valenciennes).



A. *Elates ransonneti*
(Steindachner). 164 mm.

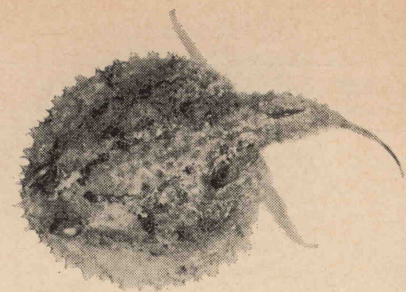


B. *Sebastapistes amplisquamiceps* (Fowler).

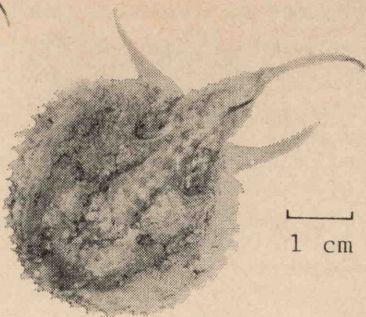


C. *Minous trachycephalus* (Bleeker).

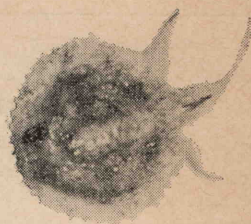
Plate VII.—



A. *Halietaea indica*
Ann. and Jenk.

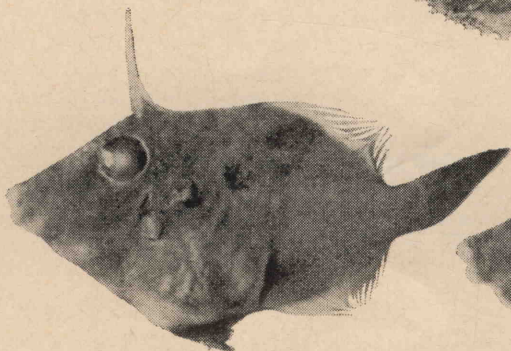


B.
Halietaea coccinea
Alcock.

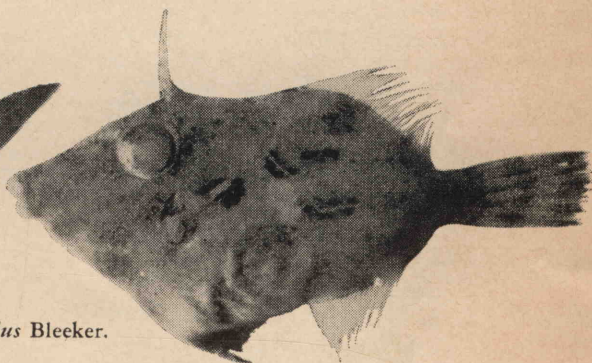


C.
Halietaea stellata
(Vahl).

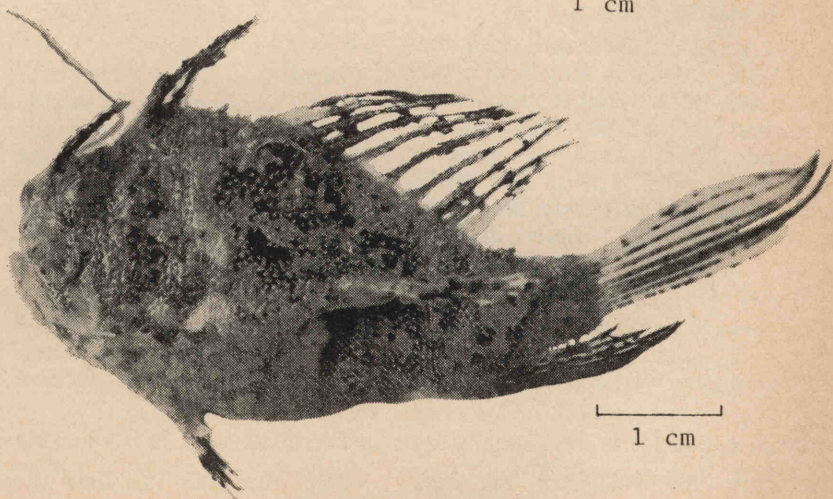
1 cm



D. *Monacanthus choirocephalus* Bleeker.



1 cm



1 cm

E. *Tatbicarpus butleri* Ogilby.

Table 1.—A comparison between different *Symphurus* spp. based on Chabanaud (1955)

Character	<i>S. regani</i> (Weber)	<i>S. microrhynchus</i> (Weber)	<i>S. holothuriae</i> (Chabanaud)	<i>S. trifasciatus</i> (Alcock)	Yule I. Specimen
Dorsal Fin	101-104; 100*	84; about 88-90*	80	84-91	87
Anal fin	89-92	72; about 68*	70	70-75	76
Ventral fin	4	4	....	....	4
Caudal fin	14	?	11	10-12	12
Scutes	± 100; 80-90*	68*	± 70	79-88	86
Depth:					
Ratio	4.3*	4.5*	....	....	3.76
Per cent standard length	22-27	....	....	....	26.5
Head:					
Ratio	Almost 6*	4.5*	....	....	4.41
Per cent standard length	16-18	23.3	....	....	21.9
Eye:					
Ratio	7*	7*	....	....	8.5
Per cent head length	14-16	10	....	....	12.14
Caudal:					
Per cent head length	± 65	47	....	....	50
Locality	Flores Sea	Java Sea	NW. coast of Australia	Bay of Bengal, Gulf of Oman	Papua

*Figures from Weber and de Beaufort (1929), pp. 210-211.

FAMILY LEIOGNATHIDAE

Genus *Equulites* Fowler

Equulites berbis (Cuvier and Valenciennes) (Plate III, B)

Equula berbis Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, p. 85.

D. VIII; 16. A. III, 14.

Depth 2.3-2.5, 2.9-3.2 in length with caudal. Head 3.2-3.4, 4.0-4.3 in length with caudal. Eye 2.7-2.8, 1.1-1.2 longer than snout. Maxilla reaches to below front border of pupil. Body scales small to moderate sized; breast fully scaled. Lateral line 40-43, terminating below end of soft dorsal fin. Second dorsal spine longest, $1\frac{1}{2}$ -2 times in body depth. Longest anal spine three quarters of length of second dorsal spine.

Colour of preserved specimens pinkish-grey, back darker with series of angulated vertical lines from nape to end of dorsal. Snout black-tipped.

Eight examples, 64-83 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY GERRIDAE

Genus *Pentaprion* Bleeker

Pentaprion longimanus (Cantor) (Plate III, C)

Equula longimana Cantor, J. Asiat. Soc. Bèng., XVIII, 1850, p. 1134.

D. IX-X, 14-15. A. V-VI, 12-13. L. lat. 44-46.

Depth 2.5, 3.3 in length with caudal. Head 3.1, 4.2 in length with caudal. Eye 3.0, 1.4 times longer than snout and subequal to inter-orbital. Maxilla reaches to below front border of eye. Third dorsal spine longest, as long as head without postorbital. Pectorals reaching first or second anal ray, 2.6 in standard body length.

Colour of preserved specimens pinkish-white to silvery, with white median lateral streak through eye to tail base. Another dark streak just below dorsal, following dorsal profile.

Four examples, 73-103 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY STROMATEIDAE

Genus *Psenopsis* Gill*Psenopsis humerosus* Munro

(Plate IV, A)

Psenopsis humerosus Munro, Handbook of Australian Fishes, No. 29, p. 18. Canberra, 1958.

D. VII, 29. A. III, 26. P. 22. L. lat. 51 or 52. L. Tr. 9 + 15. G.R. 6-12 or 13.

Depth 2.17, 2.8 in length with caudal. Head 3.3, 4.3 in length with caudal. Eye 3.5, 1.34 times snout. Snout blunt; maxilla reaches to below anterior of eye, 4.0 in head length. Operculum pointed with entire edges. Dorsal spines short and almost embedded in skin, graduating to the dorsal rays. Pectoral fin falcate, subequal (0.9) to head length. Ventral fins 0.81 times eye, inserted below pectoral base. Scales moderate, deciduous.

Colour of preserved specimen dark reddish-brown above, mottled in places, and cream below. Indications of a large dark humeral blotch. Fins pale, vertical fins dark brown at base.

One example, 155 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

Note.—More recently, two specimens of *P. humerosus* have been received from Orangerie Bay in Papua. Table 2 compares counts and measurements of the three Papuan fish with those given by Munro (1958) for *P. humerosus* and those given by Tate Regan (1902) and by Ochiai and Mori (1965) for *Psenopsis anomala* (Temm. & Schl.).

No appreciable difference between *P. humerosus* and *P. anomala* on the basis of body counts and proportions is apparent from this table. Although neither Tate Regan nor Ochiai and Mori specifically mention a humeral blotch for *P. anomala*, it can be discerned on the specimens in Plate I of the latter's paper. In the Japanese Encyclopaedia Zoologica II, *P. anomala* is again depicted with a humeral blotch.

Obviously, many more specimens need to be examined. However, it seems probable that any definite distinction between the two described species of *Psenopsis* is only due to geographical variation.

FAMILY NEMIPTERIDAE

Genus *Nemipterus* Swainson*Nemipterus nematophorus* (Bleeker)

(Plate IV, B)

Dentex nematophorus Bleeker, Nat. Tijdschr. Ned. Indie, V, 1853, p. 500.

D. X, 9. A. III, 7. P. 2, 15. L. lat. 47.

Depth 3.1-3.25, 4.0-4.2 in length with caudal. Head 3.0-3.1, 4.0 in length with caudal. Eye 2.8-2.9, nearly 1.5 times snout. Sub-orbital narrow, more than twice in vertical eye diameter, its hind border when produced reaching dorsal profile 6-7 scales before dorsal origin. Four curved canines anteriorly on each side of upper jaw; none in lower jaw. First and second dorsal spines longest, extending at least length of spinous dorsal (probably broken near tips). Pectorals as long as head. Caudal deeply forked.

Colour of preserved specimens pinkish-brown, the fins hyaline.

Three examples, 96-103 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY MULLIDAE

Genus *Upeneus* C.V.*Upeneus moluccensis* (Bleeker)

(Plate IV, C)

Upeneoides moluccensis Bleeker, Nat. Tijdschr. Ned. Indie, VIII, 1855, p. 409.

D. VIII; I, 8. A. I, 6. L. lat. 35-36. L. Tr. $2\frac{1}{2}$ + 5-6. G.R. 7 + 19-20 (last 5-6 rudimentary).

Depth 3.67-4.21, 4.67-5.3 in length with caudal. Head 3.19-3.4, 4.0-4.3 in length with caudal. Eye 3.8-4.0, equal to inter-orbital and less than snout. Maxilla reaching to origin of pupil. Barbels falling just short of vertical through posterior edge of preopercle, 1.6 in head length. Longest dorsal spine 1.4 in head. Caudal forked, the lobes pointed.

Colour of preserved specimens pinkish-brown above and pale below. A yellow band from eye to caudal base. Dorsal fins and upper lobe of caudal barred with dark brown; other fins and lower caudal lobe hyaline.

Five examples, 99-150 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY SCIAENIDAE

Genus *Pseudosciaena* Bleeker

Pseudosciaena diacanthus (Lacepede)

(Plate V, A)

Lutjanus diacanthus Lacepede, Hist. Nat. Poiss., IV, 1802, pp. 195, 240.

D. XI, 22-24. A. II, 7. P. 2, 17. L. lat. 52. L. Tr. 7-8 + 14.

Table 2.—A comparison between Papuan specimens of *Psenopsis humerosus* and recorded descriptions

Character	Description					
	C. Tate Regan's <i>P. anomala</i>	Ochiai's & Mori's <i>P. anomala</i> (¹)	Munro's <i>P. humerosus</i> (²)	Yule I. Specimen	Orangerie Bay Specimen No. 1	Orangerie Bay Specimen No. 2
Dorsal fin	V-VI, 29-30	?, 27-31	VII, 28	VII, 29	VII, 29	VII, 30
Anal fin	III, 26	?, 25-28	III, 25	III, 26	III, 25	III, 25
Pectoral fin	22	20-22	22	22	22	22
Lateral line	"about 50"	55-63	55	51 or 52	49	48
L. Tr.	....	....	9 + 14	9 + 15	9 + 15	9 + 15
Gill rakers	....	19-21	(lower) 12	6 + 12	6 + 12	6 + 11 or 12
Depth	(2.25)	2.0-2.4	1.9	2.17 (2.8)	2.1 (2.69)	1.9 (2.69)
Head	(3.6)	3.0-3.5	3.4	3.3 (4.3)	3.2 (4.17)	3.0 (4.15)
Eye	4.5	3.6-5.0	3.5	3.5	3.9	3.7
Eye/snout	"as long as"	....	1.4	1.34	1.25	1.2
Eye/ventral fin	....	....	"about as long as eye"	0.81	0.9	0.83
Standard length/caudal peduncle depth	....	7.8-11.0	....	8.7	7.8	7.4
Head/pectoral	"as long as"	0.94-1.2	"about as long as head"	0.9	0.85	0.88
Head/snout	....	3.9-5.0	....	4.0	4.3	4.9
Head/interorbital width	2.6	2.1-2.9	....	2.7	2.6	2.6
Head/maxillary	....	3.2-4.2	....	4.0	4.3	4.4
Standard length	....	....	....	113 mm	125 mm	133 mm
Total length	190 mm	Over 100 mm	177 mm	155 mm	167 mm	183 mm
<i>Colouration</i>						
Shoulder patch	....	present in plates	present	present	present	present
Back	"dark gleaming purple"	dusky/pale(³)	darker	brown	brown	brown
Vertical fins	....	darker/pale	....	brown basally	dusky	dusky
Mouth cavity	....	darkish/pale	dusky	dusky	brown	brown
Locality	Japanese Seas	Around Japan, east China seas	NW. Australia	Papua	Papua	Papua

(...) In total length.

(1) Based on measurements from 22-57 specimens over 100 mm long.

(2) Based on measurements from one specimen only.

(3) Ochiai and Mori distinguish pale and dark varieties.

Depth 3.76-3.43, 4.3-4.7 in length with caudal. Head 2.9-3.1, 3.7-3.94 in length with caudal. Eye 5.3-5.6, equal to interorbital. Mouth slightly oblique, maxilla reaching to below hind half of eye. Two pores on each side of groove containing symphyseal tubercle. Preopercular margin denticulate. Anal base 3.5 times in soft dorsal base. Caudal wedge-shaped.

Colour of preserved specimens light brown. Five dark brown bars on back reaching to lower part of sides, with white interspaces as wide as bars. First bar on nape, second to fourth below dorsal, and fifth on caudal peduncle. Back, sides, dorsal and upper half of caudal with scattered brown spots. Other fins and lower half of caudal dark brown.

Two examples, 167-201 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY CALLIONYMIDAE

Genus *Callionymus* Linne

Callionymus japonicus var. *japonicus* Houttuyn

Callionymus japonicus Houttuyn, Ver. Holl. Maatsch. Wet. Haarlem, XX, 1782, p. 311.

D. IV, 9. A. 8. P. 19. V. I, 5.

Depth 12.0-13.5, 24.3 in length with caudal. Head 5.1-5.3, 9.7 in length with caudal. Eye 3.0-3.2, 1.0-1.4 in snout. preopercular process slender, straight, and pointed, with 10 antrorse barbs along inner border. Lateral line bifurcates on head, one branch continuing forward, the other running down the operculum. This latter branch bifurcates again, one branch bending forwards over the preopercular spine, and the other continuing to the posterior opercular edge. First dorsal spine longer than snout plus eye. Caudal very long and pointed, 1.12 times in standard length.

Colour of preserved specimen pinkish-brown above and mottled with brown spots, forming distinct rows along sides. Underside creamy, throat mauve-shaded, with a large triangular black blotch. First dorsal with a large black blotch superiorly on membrane between third and fourth spines. Second dorsal with three rows of dark spots. Anal white with sub-

marginal brown band. Lower half of caudal dusky, upper half with transverse rows of dark spots.

One example, 225 mm total length. (One other specimen, 340 mm total length, was found in our Museum. It was trawled in the Gulf of Papua, May, 1967.)

Note.—In both specimens, the chest colouration is as that described for *Calliurichthys lineathorax* Fowler (cited in de Beaufort and Chapman 1951).

Previously unknown from Papua New Guinea, although recorded from West Irian and "south of New Guinea". A new record for Papua.

FAMILY URANOSCOPIDAE

Genus *Uranoscopus* Linne

Uranoscopus cognatus Cantor

(Plate V, B)

Uranoscopus cognatus Cantor, J. Asiat. Soc. Beng., XVIII, Part II, 1850, p. 1003.

D. III, 14. A. 13. P. 17. V. I, 5. L. lat. 57-62.

Depth 3.3-4.1, 4.3-5.5 in length with caudal. Head 2.5-3.1, 3.7-4.3 in length with caudal. Eye 4.8-6.4, 0.5-0.8 in snout, and 1.0-1.2 in interorbital. Four spines along preopercular margin. Humeral spine well developed. Two small tentacles before eyes. First dorsal short. Longest dorsal rays anteriorly, about as long as postorbital head length. Pectorals equal to head without snout. Body scaled, except for area on the back from nape to lateral line, extending past dorsal fin origin.

Colour of preserved specimens brownish-grey; back, sides and head reticulated with fine brown lines and spots. First dorsal black, with white patches on lower part of membrane around first dorsal spine and behind third spine. Dorsal rays with rows of dark streaks. Other fins brown, their fin edges white.

Thirteen examples, 43-140 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY Gobiidae

Genus *Oxyurichthys* Bleeker
Oxyurichthys papuensis (C.V.)
 (Plate V, C)

Gobius papuensis Cuvier and Valenciennes,
 Hist. Nat. Poissons, 12, 1837, p. 106.

D. VI; I, 12. A. I, 13. P. 21. L. lat. 78. L. Tr. 19.

Depth 6.5, 9.2 in length with caudal. Head 4.0, 5.2 in length with caudal. Eye 3.5 in head, equal to snout. Maxilla reaches to below the middle of eye. 16 curved pointed teeth on each side of upper jaw. Head scaled; median crest on nape naked. Membrane of first dorsal reaches only a short distance up spines. Pectorals one, and caudal one and a half times head length.

Colour of preserved specimen faded; indications of five dark blotches along middle of sides.

One example, 109 mm total length.

Previously unknown from Papua New Guinea, although recorded from West Irian. A new record for Papua.

FAMILY PLATYCEPHALIDAE

Genus *Elates* Jordan and Seale
Elates ransonneti (Steindachner)
 (Plate VI, A)

Platycephalus ransonneti Steindachner, Sber. Akad. Wiss. Wien, LXXIV, I. Abth., 1876, p. 209.

D. VI; 13. A. 13. P. 22. V. 1, 5. L. Lat. 90.

Depth 13.6, 16 in length with caudal. Head 3.45, 4.0 in length with caudal. Eye 5.0, 2.0 in snout. Interorbital 7.0 times eye. Preopercular spine one quarter of head length, reaching pectoral base. Second spine of dorsal longest, 1.5 times body depth. First four rays of second dorsal elevated, height of rays decreasing posteriorly. Caudal forked, upper lobe longest, produced into a filament as long as caudal itself.

Colour of preserved specimen yellowish, large brown spots on sides, orange spots over head and back. Dorsals and caudal black-spotted, other fins hyaline.

One example, 164 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY SCORPAENIDAE

Genus *Sebastapistes* Streets
Sebastapistes amplisquamiceps (Fowler)
 (Plate VI, B)

Scorpaena amplisquamiceps Fowler, Proc. U.S. natn. Mus., 85, 1938, p. 55.

D. XII, 9-10. A. III, 5. P. I, 9, 9. V. I, 5. Sq. I. 37. L. Tr. 5 + 9-10.

Depth 3.0, 3.8-3.9 in length with caudal. Head 2.2, 2.7-2.9 in length with caudal. Eye 3.4. Maxilla reaches to below hind border of eye. Head fairly spiny and ridged; filaments on anterior nostrils, supra-orbital spines, and on preorbital spines. Head scaled over cheeks and opercles, encroaching on interorbital space from nape. First dorsal spine nearly twice in eye, third and fourth spines longest. Anal begins opposite last dorsal spine. Scales ctenoid.

Colour of preserved specimens pinkish-brown. Pectorals, dorsal and anal with traces of dark brown.

Two examples, 46 and 78 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY SYNANCEIDAE

Genus *Minous* C.V.
Minous trachycephalus (Bleeker)
 (Plate VI, C)

Aploactis trachycephalus Bleeker, Nat. Tijdschr. Ned. Indie, VII, 1854, p. 451.

D. X-XI, 12. A. 10-11. P. 11 + 1. V. I, 5. L. lat. 19-20. G.R. 2-4 + I + 9.

Depth 2.7-3.0, 3.6-3.9 in length with caudal. Head 2.4-2.6, 3.1-3.5 in length with caudal. Eye 4.0-4.4, 1.0-1.25 in snout. Deep transverse groove across nape. Spine on preopercular margin almost as long as eye. Row of eight to ten tentacles along upper edge of eye, longest in centre, becoming very small and knob-like toward the extremities. Chin with two tentacles on each side, the posterior one larger, 1.8 in eye. First spine of

dorsal very small, 3.5 in second spine, which is 1.5 times eye diameter. Pectoral reaches to middle of anal. Caudal rounded.

Colour of preserved specimens cream variegated with brown. Dorsal with oblique brown bars. Caudal cream. Other fins dark brown.

Five examples, 51-90 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

FAMILY OGCOCEPHALIDAE

Halientaea indica Ann. & Jenk.

(Plate VII, A)

Halientaea indica Annandale and Jenkins, Mem. Indian Mus., III, No. I, 1910, p. 19.

D. I, 4. A. 4. P. 13.

Depth 5.0, 6.6 in length with caudal. Head 1.7, 2.2 in length with caudal. Eye 5.5, 1.0 in interorbital space. Snout in eye 2.0. Disc flat to convex in front. Roof of rostral cavity extends to edge of body disc. Maxilla extends to below hind half of eye. Dorsal origin halfway between gill opening and tail base. Anal fin originates opposite end of dorsal. Origin of ventrals slightly nearer symphysis of lower jaw than anal fin origin.

Colour of preserved specimen pinkish, with patches of reticulated brown lines on upper surface. Dorsal fin brown, others hyaline.

One example, 66 mm total length.

Previously unknown from Papua New Guinea, although recorded from near the west coast of West Irian. A new record for Papua.

Halientaea coccinea Alcock

(Plate VII, B)

Halientaea coccinea Alcock, Ann. Mag. nat. Hist., (6) IV, 1889, p. 382—Descr. Cat. Indian Deep-Sea Fishes, 1899, p. 61.

D. I, 5. A. 4. P. 13.

Depth 4.5, 5.9 in length with caudal. Head 1.8, 2.3 in length with caudal. Eye 6.2, 1.1 in interorbital, and twice the snout. Rostral cavity roof does not extend to the front of the body disc; illicium can be seen from above. Maxilla reaches to below middle of eye. Dorsal origin nearer gill opening than tail base, longest dorsal ray 1.3 times eye. Longest anal

ray 1.6 times eye. Ventral origin nearer lower jaw symphysis than anal fin origin. Disc convex behind eyes.

Colour of preserved specimen same as in *H. indica* Ann. & Jenk.

One example, 65 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

Genus *Halientaea* Valenciennes

Halientaea stellata (Vahl)

(Plate VII, C)

Lophius stellatus Vahl, Skr. Naturh, Kjobenh., IV, 1797, p. 214.

D. I, 4. A. 4. P. 12.

Depth 5.3, 7.0 in length with caudal. Head 1.75, 2.3 in length with caudal. Eye 6.8, a little more than interorbital space.

One example, 46 mm total length.

Previously recorded from near the west coast of New Guinea. Munro (1967) records it from the "continental shelf of New Guinea" (p. 586). Confirmation of occurrence in Papua.

FAMILY MONACANTHIDAE

Genus *Monacanthus* Cuvier, Oken

Monacanthus choircephalus Bleeker

(Plate VII, D)

Monacanthus choircephalus Bleeker, Verh. batav. Genoot. Kunst. Wet., XXIV, 1852. Bijdr. kennis Balistini, p. 11, p. 19.

D. II; 28-30. A. 29-31. P. 12.

Depth 2.0-2.4, 2.4-3.0 in length with caudal. Head 2.7-3.2, 3.4-4.0 in length with caudal. Eye 2.5-3.2, 1.75-2.2 in snout. Pectoral fin equal to two thirds of snout. Caudal rounded.

Colour of preserved specimens pinkish-brown, with two oblique bands from second dorsal and caudal. Caudal with two transverse bands.

Four examples, 62-78 mm total length.

Note.—According to de Beaufort and Briggs (1962), *M. choircephalus* is synonymous with *Paramonacanthus horae* Fraser-Brunner.

Previously unknown from Papua New Guinea, although recorded from West Irian (Munro 1967). A new record for Papua.

FAMILY ANTENNARIIDAE

Genus *Tathicarpus* Ogilby*Tathicarpus butleri* Ogilby

(Plate VII, E)

Tathicarpus butleri Ogilby, Proc. R. Soc. Qd, XX, 1907. pp. 17-25.

D. I; I; I; 11. A. 7. P. 7. V. 5. C. 9.

Depth 1.9, 2.9 in length with caudal. Head 1.8, 2.68 in length with caudal. Eye 6.25 in head, equal to interorbital. Snout 7.3 in head. Maxilla ends opposite hind border of eye, its length 2.4 in head. Illicium long and thin, 1.4 in head, extending to midway between last dorsal spine and first dorsal ray. Second spine 1.75 in illicium; third spine 1.6 in head. Length of second dorsal base 1.3 in head. Second dorsal elevated; depressed rays reach just past caudal base. Length of anal base 3.84 in head. Depressed pectoral fin reaches caudal base. Skin densely prickled, even extending on to fin rays.

Colour of preserved specimen marbled and irregularly spotted with brown over pinkish-white background. Fins irregularly barred with dark brown. Dermal filaments brown or pale. Illicium alternately barred with brown and white. Brown lines radiate from eyes.

One example, 67 mm total length.

Not previously recorded from the New Guinea region. A new record for Papua.

ACKNOWLEDGEMENTS

I am indebted to the following people for their generous assistance: Mr Rex Pyne of Fisheries Research and Surveys, who collected the specimens; Dr John R. Paxton of the Australian Museum; Dr G. F. Mees of the Rijksmuseum, Leiden, Holland; and Mr Ian S. R. Munro of the CSIRO Division of Fisheries and Oceanography, for their assistance in identification; and to the Department of Information and Extension Services for the photography.

REFERENCES

- CHABANAUD, P. (1955). Revision des *Symphurus* du Siboga. *Beaufortia*, 5 (46):43-45.
- DE BEAUFORT, L. F. WITH BRIGGS, J. C. (1962). *The Fishes of the Indo-Australian Archipelago*, Vol. XI (E. J. Brill: Leiden) 481 pp.
- DE BEAUFORT, L. F. AND CHAPMAN, W. M. (1951). *The Fishes of the Indo-Australian Archipelago*, Vol. IX (E. J. Brill: Leiden) 481 pp.
- FOWLER, H. W. (1933). Descriptions of new fishes obtained 1907-1910, chiefly in the Philippine Islands and adjacent seas. *Proc. Acad. nat. Sci. Philad.*, 85:233-367.
- FOWLER, H. W. (1933). Contributions to the biology of the Philippine Archipelago and adjacent regions. *Bull. U.S. natn. Mus.*, 100, XII: 1-438.
- FOWLER, H. W. (1938). Descriptions of new fishes obtained by the U.S. Bureau of Fisheries Steamer *Albatross*, chiefly in Philippine Seas and adjacent waters. *Proc. U.S. natn. Mus.*, 85 (3032):31-135.
- KOUMANS, F. P. (1935). Notes on Gobioid fishes. 6. On the synonymy of some species from the Indo-Australian Archipelago. *Zool. Meded., Leiden*, XVIII:121-150.
- KOUMANS, F. P. (1953). *The Fishes of the Indo-Australian Archipelago*, Vol. X (E. J. Brill: Leiden) 423 pp.
- MARSHALL, T. C. (1957). Ichthyological notes. *Ichthyol. Notes, Qd*, I (3):117-137.
- MARSHALL, T. C. (1964). *Fishes of the Great Barrier Reef and Coastal Waters of Queensland* (Angus and Robertson: Sydney) 566 pp., 72 pls.
- McCULLOCH, A. R. (1907). The results of deep-sea investigation in the Tasman Sea. II—The expedition of the "Woy-Woy". I. Fishes and Crustaceans from eight hundred fathoms. *Rec. Aust. Mus.*, 6 (5):345-355.
- MEES, G. F. (1959). Additions to the fish fauna of Western Australia—I. *Fish. Bull. West. Aust.*, 9 (1).
- MEES, G. F. (1960). The Uranoscopidae of Western Australia (Pisces, Perciformes). *J. Proc. R. Soc. West. Aust.*, 43:46-58.
- MUNRO, I. S. R. (1956). The fishes of the New Guinea region. A checklist of the fishes of New Guinea incorporating records of species collected by the Fisheries Survey Vessel "Fairwind" during the years 1948 to 1950. *Papua New Guin. agric. J.*, 10 (4):97-369. *Fish. Bull. Papua*, 1.
- MUNRO, I. S. R. (1957). Handbook of Australian fishes, No. 16. *Fish Newsl.*, 16 (10):15-18.
- MUNRO, I. S. R. (1957). Handbook of Australian fishes, No. 17. *Fish Newsl.*, 16 (11):15-18.
- MUNRO, I. S. R. (1958). Handbook of Australian fishes, No. 29. *Fish Newsl.*, 17 (11):17-20.
- MUNRO, I. S. R. (1967). *The Fishes of New Guinea* (Dept. Ag., Stock, Fish., New Guinea: Port Moresby) 650 pp., 84 pls.
- NORMAN, J. R. (1926). A report on the flatfishes (Heterosomata) collected by the F.I.S. "Endeavour", with a synopsis of the flatfishes of Australia and a revision of the subfamily Rhombosoleinae. *Zool. (bid.) Results Fish. Exp. "Endeavour"*, V: 219-308.
- OCHIAI, AKIRA AND MORI, KOICHIRO (1965). Studies on the Japanese butterflyfish referable to the genus *Psenopsis*. *Bull. Misaki mar. Biol. Inst., Kyoto Univ.*, 8.
- OGILBY, J. D. (1907). Some new Pediculate fishes. *Proc. R. Soc. Qd*, XX:17-25.
- REGAN, C. T. (1902). A revision of the fishes of the family Stromateidae. *Ann. Mag. nat. Hist.*, 7:115-131.

- SCHULTZ, L. P. and Collaborators (1953). Fishes of the Marshall and Marianas Islands. Vol. I. *Bull. U.S. natn. Mus.*, 202:1-685.
- SCHULTZ, L. P. and Collaborators (1960). Fishes of the Marshall and Marianas Islands. Vol. II. *Bull. U.S. natn. Mus.*, 202:1-438.
- SCHULTZ, L. P. and Collaborators (1966). Fishes of the Marshall and Marianas Islands. Vol. III. *Bull. U.S. natn. Mus.*, 202:1-176.
- SMITH, J. L. B. (1957). The fishes of the family Scorpaenidae in the Western Indian Ocean. Part I. The sub-family Scorpaeninae. *Ichthyol. Bull. Rhodes Univ.*, No. 4:49-72.
- SMITH, J. L. B. (1958). Fishes of the families Tetraogidae, Caracanthidae and Synanciidae from the Western Indian Ocean, with further notes on Scorpaenid fishes. *Ichthyol. Bull. Rhodes Univ.*, No. 12:167-181.
- SMITH, J. L. B. (1961). *The Sea Fishes of Southern Africa*, Fourth Edition (Central News Agency, South Africa), 580 pp., 111 pls.
- SMITH, J. L. B. (1963). Fishes of the families Dracomettidae and Callionymidae from the Red Sea and the Western Indian Ocean. *Ichthyol. Bull. Rhodes Univ.*, 28:547-564.
- SMITH, J. L. B. (1966). Interesting fishes from South Africa. *Occ. Pap. Ichthyol. Dept Rhodes Univ.*, 8.
- SUWARDJI (1965). Notes on the genus *Callionymus* (Pisces, Callionymidae) mostly from Indonesian waters, with the description of three new species and a new sub-species. *Vidensk. Meddr. dansk. naturb. Foren.*, 128:303-323.
- TOMIYAMA, I., ABE, T. AND TOKIOKA, T. (1968). *Encyclopaedia Zoologica. II—Vertebrata: Pisces, Cyclostomi, Protochordata* (Hokuryukan Publishing Co., Ltd.: Japan) 478 pp.
- WEBER, M. AND DE BEAUFORT, L. F. (1929). *The Fishes of the Indo-Australian Archipelago*, Vol. V (E. J. Brill: Leiden) 458 pp.
- WEBER, M. AND DE BEAUFORT, L. F. (1931). *The Fishes of the Indo-Australian Archipelago*, Vol. VI (E. J. Brill: Leiden) 448 pp.
- WEBER, M. AND DE BEAUFORT, L. F. (1936). *The Fishes of the Indo-Australian Archipelago*, Vol. VII (E. J. Brill: Leiden) 607 pp.
- WHITLEY, G. P. (1932). Some fishes of the family Leiognathidae. *Mem. Qd Mus.*, X (II):99-116.
- WHITLEY, G. P. (1963-1966). Illustrations and records of fishes. *Aust. Zool.*, XIII:103-120.

(Accepted for publication February, 1971.)