

FISHES FROM ONGTONG JAVA, MELANESIA.

By GILBERT P. WHITLEY, Ichthyologist, Australian Museum, Sydney.
(By permission of the Trustees of the Australian Museum.)

(Plate iii.)

[Read 24th April, 1929.]

Some time ago, I asked Mr. H. Ian Hogbin, who was leaving Sydney to study the anthropology of Ongtong Java, if he would make a collection of fishes there for the Australian Museum. My request was complied with and thanks are due to Mr. Hogbin for the well preserved series obtained. The fishes were all caught in the lagoon of the atoll of Ongtong Java and belong to East Indian or Indo-Australian species and show a marked similarity in facies to those of the Santa Cruz Archipelago. All the species, excepting *Pseudupeneus filamentosus* (Macleay), are fairly well known, so I merely list their names here, but give a detailed description and a figure of Macleay's species.

Ongtong Java is situated approximately in Lat. 5° S. and Long. 159° E., in Lord Howe's Group; this should not be confused with any other islands in the Pacific named after Lord Howe.

Native names of the fishes were supplied by Mr. Hogbin and indicate that the inhabitants of Ongtong Java recognize superficially similar species by giving them distinct appellations.

I have been unable to discover any previous account of the fish-fauna of Ongtong Java, though the occurrence of the Oil Fish or Palu (*Ruvettus*) in that region has been deduced by Gudger (*American Naturalist*, lxii, 1928, p. 476), who states: "From Tasman and Ontong Java (Lord Howe Islands) comes a wealth of hooks—eleven in the Field Museum alone (most of which I studied)—and in addition figures and descriptions from Parkinson, Thilenius, and Woodford, all of whom testify that the hooks were used only for taking the purgative fish—a favorite sport in these islands. All these hooks are huge ones, and Woodford states that these western Ruvettuses are from six to nine feet in length."

Mr. Hogbin has provided me with the words of one of the Ongtong Javanese prayers for fish. This was made once every year by the senior priest to the goddess Ke luahinge. It asked her to send (a) rough seas, because the drift logs used for canoes were washed up in storms, (b) pumice, used in making shell adzes from *Tridacna gigas*; pumice was also washed up in storms, and (c) various fish.

The following is the prayer and its translation. The italicized words in the latter refer to species of fishes, of which Mr. Hogbin notes that *save* means flying fish and *aku*, bonito. In the list (*infra*), *ngangue* is seen to be the Drummer, *Kyphosus*, but *alo* and *lupo* remain unidentified.

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" 'AHINGE, MANGAU KAI-HO HENGO
 KAI-KEKE, KAI PUPU ;
 HUKIAMAI MANGAU KAI-HUANGA,
 KO LA'AU, KO 'ALO, KO LUPO,
 KO NGANGUE, KO SAVE,
 MANGAU KO HE AKU.
 MALAMA NGA HALE MOANGA,
 NGA HALE ULIULI,
 ALUALUMIA, MAI VAVE."

"KE LUAHINGE, send for me high tides,
 rough seas, tumbling seas ;
 bring for me pumice,
 your trees, your *alo*, your *lupo*,
 your *ngangue*, your *save*,
 for me your *aku*.
 From the light of the houses of the ocean,
 from the houses of darkness,
 Bring them, bring them quickly."

Systematic list of fishes collected.

	Native name.
<i>Stolephorus delicatulus</i> (Bennett 1832)	sala
<i>Æoliscus strigatus</i> (Günther 1861)	kakau
<i>Hemiramphus dussumieri</i> Cuvier and Valenciennes 1847	polumea
<i>Caranx forsteri</i> Cuvier and Valenciennes 1833	'ipa
<i>Etagatis bipinnulatus</i> (Quoy and Gaimard 1825)	amai
<i>Scomberoides sanctipetri</i> (Cuvier and Valenciennes 1832)	lai
<i>Epinephelus merra</i> Bloch 1793	ngakala
<i>Kuhlia taeniura</i> (Cuvier and Valenciennes 1829)	kivikau
<i>Lutjanus semicinctus</i> Quoy and Gaimard 1824	kapulei
<i>Lutjanus marginatus</i> (Cuvier and Valenciennes 1828)	kaea
<i>Lutjanus fulviflamma</i> (Bonnaterre 1788)	kaimea
<i>Rastrelliger chrysozonus</i> (Rüppell 1836)	nga
<i>Gerres argyreus</i> (Bloch and Schneider 1801)	maku
<i>Chaetodon</i> (<i>Linophora</i>) <i>setifer</i> Bloch 1795	pipikau
<i>Kyphosus cinerascens</i> (Bonnaterre 1788)	ngangue
<i>Mulloides samoensis</i> Günther 1873	veke
<i>Pseudupeneus</i> (<i>Hogbinia</i>) <i>filamentosus</i> (Macleay 1883)	saokoro
<i>Oceanops latovittatus</i> (Lacépède 1802)	'olisi
<i>Glyphisodon bengalensis</i> (Bloch 1787)	mokumoku
<i>Cheilinus fasciatus</i> (Bloch 1791)	papu
<i>Thalassoma</i> (<i>Chlorichthys</i>) <i>purpureum</i> (Gmelin 1789)	kokolo
<i>Thalassoma</i> (<i>Chlorichthys</i>) <i>trilobatum</i> (Lacépède 1802)	alali
<i>Teuthis</i> (<i>Rhombotides</i>) <i>troughtoni</i> Whitley 1928	mangi
<i>Callicanthus lituratus</i> (Bloch and Schneider 1801)	umalei
<i>Balistapus aculeatus</i> (Linnaeus 1758)	simukai
<i>Balistapus rectangulus</i> (Bloch and Schneider 1801)	simukua

Family Mullidae.

Genus PSEUDUPENEUS Bleeker.

Pseudupeneus Bleeker, *Versl. Akad. Amsterdam*, xiv, 1862, p. 134. Genotype,
P. prayensis Bleeker (*vide* Jordan, *Stanford Univ. Publ.*, Biol. Ser., Genera
 Fish., iii, 1919, p. 310).

HOGBINIA, new subgenus.

Head somewhat pointed; snout long; maxillary not nearly reaching to below eye; scales extending forward on top of head to level of nostrils. A single row of spaced, stout teeth in each jaw; vomer and palatines without teeth. Third and fourth dorsal spines elongate.

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This subgenus is named in honour of Mr. Herbert Ian Hogbin who made the collection of Ongtong Java fishes which is reported upon in this paper.

Orthotype of subgenus, *Upeneus filamentosus* Macleay.

PSEUDUPENEUS (HOGBINIA) FILAMENTOSUS (Macleay). (Plate iii.)

Upeneus filamentosus Macleay, PROC. LINN. SOC. N. S. WALES, viii, 2, July 17, 1883, p. 264. Hood Bay, New Guinea. Type in Australian Museum, Sydney.—*Hypeneus filamentosus* Boulenger and Grant, *Zool. Record*, 1883 (1884), Pisces, p. 20.—*Pseudupeneus filamentosus* Jordan and Seale, *Bull. U.S. Fisher. Bureau*, xxv, 1906, p. 276; Ogilby, *Proc. Roy. Soc. Qld.*, xxi, 1908, p. 21 (name only).

Original description.—"D.S/9. A.7. L.lat.28. L.tr. 2/5. Height of body one-fourth of the total length; length of head greater than the height of the body, profile straight, space between the eyes a little convex, and as wide as two diameters of the orbit. Snout long and rather pointed, the distance from the eye to the snout being equal to four diameters of the orbit; the mouth is small; the lips thick; teeth strong and blunt. The spinous dorsal terminates in filaments, the third spine equals the height of the body. Colour pink, with yellow and blue lines about head and soft dorsal. Length, 9 inches. Mara-aga of the natives. Hood Bay."

Re-description of Macleay's type.—D.viii/9; A.i/6; P.i/16; V.i/5; C.15. L.lat.29. L.tr. 2½/1/5½.

Head (101 mm.) 3 in length to end of middle caudal rays (303). Depth (86) 3·5; depth of caudal peduncle (41) 7·4 in same. Eye (11) 9·1, interorbital (20) 5·0, snout (52) 1·9, barbel (57) 1·7, maxillary (27) 3·7, and third dorsal spine (77) 1·3, in the head.

Head longer than high; profile oblique, gently rounded. Snout long. Maxillary not nearly reaching vertical of eye. A single row of small, strong, spaced, blunt teeth in each jaw; no teeth on vomer or palatines. Upper jaw slightly the longer. Nostril small, nearer mouth than eye. Eye small, interorbital convex. Barbels with filiform extremities, reaching slightly beyond vertical of preopercular margin. Opercular edges entire; a small spine on operculum. Seven plus eighteen short, slender gill-rakers on first gill-arch; the longest is less than half the diameter of the eye. Cheek-scales in three rows.

Body moderately elongate and compressed, covered with large, weakly ctenoid scales. Lateral line tubes arborescent. First dorsal rising behind origin of pectorals and ventrals, its first spine minute but the third and fourth very long. Base of spinous dorsal subequal to interdorsal space. Soft dorsal slightly in advance of anal, its anterior rays longest and closest together. Anal similar to soft dorsal, equal to it in height, but with the last ray produced. Both dorsal and anal terminate well before the caudal. Pectorals rounded, shorter than the ventrals, which are somewhat pointed. Caudal forked, the outer rays very strong.

Colour, after long preservation in formalin, and later spirit, brown.

Described from the lectotype of *Upeneus filamentosus* Macleay from Hood Bay, New Guinea, a damaged specimen, a little more than 13 inches long, in the Australian Museum, Sydney. Registered No. I.13403.

In Macleay's original description, the length of the fish is given as 9 inches, but as no specimen of that length can now be found and as the larger one I have described is evidently one of the typical series, I designate it the lectotype. It bears a wooden label upon which is written in Macleay's handwriting: "Upeneus filamentosus."

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Colour, after long preservation in formalin, and later spirit, brown.

Described from the lectotype of *Upeneus filamentosus* Macleay from Hood Bay, New Guinea, a damaged specimen, a little more than 13 inches long, in the Australian Museum, Sydney. Registered No. I.13403.

In Macleay's original description, the length of the fish is given as 9 inches, but as no specimen of that length can now be found and as the larger one I have described is evidently one of the typical series, I designate it the lectotype. It bears a wooden label upon which is written in Macleay's handwriting: "Upeneus filamentosus."

Variation.—Besides the type, the Australian Museum has three other spirit specimens of *Pseudupeneus (Hogbinia) filamentosus*, but these show minor variations. They are better preserved than the type, however, and in each the head is scaly dorsally as far as the nostrils, though the scales are rudimentary, and the area between the eye and the snout is naked. There are two small scales between the nostrils, and four rows of scales on the cheeks. Maxillary naked, or with one or two scales. Barbels not quite extending to preopercular margin, or reaching a trifle beyond same. Pseudobranchiae well developed. Last dorsal ray sometimes somewhat produced. A rudimentary anterior anal spine in one specimen.

The colour appears to have been fairly uniform pinkish or light beetroot with greyish margins to the scales and an orange tinge on the fins. Belly whitish. The anterior dorsal spines and rays and the upper and lower caudal rays are slightly smoky, and in one specimen there is a faint smoky blotch on each side of the caudal peduncle and a small mark at the origin of the lateral line. About four oblique, olivaceous bars on soft dorsal membranes. None of the specimens shows any lines or bars on the head. The largest specimen is sixteen inches long.

D.viii/8-9; A.i-ii/6; L.lat.29-30; L.tr. $2\frac{1}{2}/1/5\frac{1}{2}-6\frac{1}{2}$.

Figured specimen.—The specimen chosen for illustration is from Ongtong Java. It is better preserved than Macleay's type and only differs from it in having the dorsal fins slightly closer together, in showing a slight prolongation of the posterior part of the last dorsal ray, and in retaining some of its original colours.

Native names.—Mara-aga (New Guinea, *vide* Macleay); saokoro (Ongtong Java, *vide* Hogbin).

Localities.—Hood Bay, New Guinea. Lectotype of *Upeneus filamentosus* Macleay, presented by the Committee of Management of the Macleay Museum, University of Sydney, to the Australian Museum in 1914. Austr. Mus. regd. No. I.13405.

South-east New Guinea; purchased from J. Cairn in 1886. Nos. I.267-268.

Ongtong Java, Melanesia; collected 6th September, 1928, by H. Ian Hogbin. No. IA.3694.

Range.—New Guinea to Ongtong Java.

Generic affinities and taxonomy.—The generic name *Upeneus*, originally employed for this species by Macleay, is generally credited to Cuvier, but reference to the first definition (Cuvier, *Regn. Anim.*, ed. 2, ii, April, 1829, p. 157) shows that the name was only proposed as a vernacular, subservient to *Mullus* Linnaeus. It was used in a latinized form contemporaneously by Cuvier and Valenciennes (*Hist. Nat. Poiss.*, iii, April, 1829, 421 and 448; vii, April, 1831, 520) who, therefore, should be quoted as authors of the name. These workers divided *Upeneus* into several "little tribes" based on the dental characters, and these are nowadays differentiated into genera, thus: 1. *Upeneoides* Bleeker, 2. *Upeneichthys* Bleeker, 3. *Mulloides* Bleeker, and 4. *Upeneus* Cuvier and Valenciennes, *sensu lato*, including *Parupeneus* Bleeker and *Pseudupeneus* Bleeker. *Upeneus filamentosus* Macleay enters the fourth tribe, "*Upénéus des Indes à dents distinctes et sur une seule rangée (ils n'en ont point au palais)*", which embraces many species, and requires further subdivision. A later use of *Upeneus* was made by Voigt (*Das Thierreich* (Cuvier), ii, 1832, 218) who evidently regarded *U. vlamingii* C. and V. as the

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Generic affinities and taxonomy.—The generic name *Upeneus*, originally employed for this species by Macleay, is generally credited to Cuvier, but reference to the first definition (Cuvier, *Regn. Anim.*, ed. 2, ii, April, 1829, p. 157) shows that the name was only proposed as a vernacular, subservient to *Mullus* Linnaeus. It was used in a latinized form contemporaneously by Cuvier and Valenciennes (*Hist. Nat. Poiss.*, iii, April, 1829, 421 and 448; vii, April, 1831, 520) who, therefore, should be quoted as authors of the name. These workers divided *Upeneus* into several "little tribes" based on the dental characters, and these are nowadays differentiated into genera, thus: 1. *Upeneoides* Bleeker, 2. *Upeneichthys* Bleeker, 3. *Mulloides* Bleeker, and 4. *Upeneus* Cuvier and Valenciennes, *sensu lato*, including *Parupeneus* Bleeker and *Pseudupeneus* Bleeker. *Upeneus filamentosus* Macleay enters the fourth tribe, "*Upénéus des Indes à dents distinctes et sur une seule rangée (ils n'en ont point au palais)*", which embraces many species, and requires further subdivision. A later use of *Upeneus* was made by Voigt (*Das Thierreich* (Cuvier), ii, 1832, 218) who evidently regarded *U. vlamingii* C. and V. as the

most important species but did not formally designate it as type. The first designation of a logotype for *Upeneus* seems to have been made by Bleeker (*vide* Jordan, *Stanford Univ. Publ.*, Biol. Ser., Genera Fish., i, 1917, 127. See also Snyder, *Proc. U.S. Nat. Mus.*, xxxii, 1907, 88, footnote *ex* Jordan MS.) who chose *Mullus bifasciatus* Lacépède. Lack of literature unfortunately prevents me from investigating this matter fully; I do not know where Bleeker nominated this species, but quote on the authority of Jordan's "Genera of Fishes". If, however, *Mullus bifasciatus* be the type of *Upeneus*, *Parupeneus* Bleeker (*Nat. Tijdschr. Dierk.*, i, 1863, 342) becomes an absolute synonym of *Upeneus*. Bleeker later (*Versl. Akad. Amsterdam*, (2), ii, 1868, 344) named *Upeneus vittatus* the type of *Upeneus* but this selection is apparently invalidated by his earlier designation. Bleeker and Pollen (Poiss. Pêches Madagasc. in Pollen and van Dam, *Rech. Faun. Madagascar*, iii, 1875, 40, Pl. xviii, fig. 2) have given a good figure of "*Parupeneus bifasciatus*", the apparent genotype of *Upeneus*, from which *U. filamentosus* differs in its much longer snout, fewer preorbital pores, and more pointed head, external characters which probably overlie skull differences.

I have not been able to consult the original definition of *Pseudupeneus* Bleeker, which *Upeneus filamentosus* seems to approach. I may mention here, however, that *Pseudupeneus preorbitalis* (Smith and Swain) from Hawaii has smaller scales than those of most of the nominal species of the genus and is probably not congeneric. Ogilby (*Proc. Roy. Soc. Q'land*, xxi, 1908, 21) has given as species of *Pseudupeneus*, *P. barberinus* (Lacépède), *rubroniger* De Vis, *jeffi* Ogilby, and *porosus* C. and V. Though *P. barberinus* is close to *P. filamentosus*, the others do not appear to me to be congeneric. *Upeneus rubroniger* De Vis is a short-snouted form. *P. jeffi* Ogilby is nearer *Upeneoides tragula* Richardson. *Upeneus porosus* C. and V. is the type of *Upeneichthys* Bleeker. I may also note here that Ogilby elsewhere (*Edib. Fish. and Crust. N. S. Wales*, 1893, 33) used *Hypeneoides* for *Upeneoides* and *Hypeneichthys* for *Upeneichthys*, but these classical emendations, which have been generally overlooked, are purely synonyms.

EXPLANATION OF PLATE III.

Pseudupeneus (Hogbinia) filamentosus (Macleay). A specimen from Ongtong Java, Melanesia. $\times \frac{1}{2}$. Gilbert P. Whitley *del.*

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