

Notes on Some Fishes of the Subfamily *Braminae*, with the Introduction of a New Genus, *Pseudotaractes*

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Fishes of the subfamily *Braminae* (or, *Lepidotinae*) caught in the Pacific and other waters are handled at the Central Wholesale Market of Tokyo* almost every day. Fish-dealers at this market call these fishes "Etchiopia" (meaning Ethiopian fish; for a legend about this name, see ABE, 1952) or, briefly, "Pia" without discriminating the genera or species one from another. Of the four species of the bramids so far collected by the present writer at the market, *Taractes raschi* (ESMARK) is the rarest, and *Steinegeria rubescens* JORDAN & EVERMANN is met with less frequently than *Taractichthys longipinnis* (LOWE) and *Brama raii* (BLOCH) [or, *Lepidotus brama* (BONNATERRE)]. Dissection of some adult specimens of the last three species and examination of radiographs of an adult of *raschi* and the young bramids (some of which belonging to additional species) from Sagami Bay have led the writer to conclude (1) that the commonest *longipinnis* is generically distinct from the other bramids so far collected by the writer at the market of Tokyo and in Sagami Bay, (2) that *Brama saussuri* LUNEL represents a new genus, *Pseudotaractes*, (3) that *Taractes platycephalus* MATSUBARA and *T. raschi* (ESMARK) may represent, respectively, young and adult stages of *Taractes asper* LOWE, the type species of the superficially well-known genus *Taractes*, and (4) that further material is much needed to clear up the synonymy of bramids. This paper is presented in the hope that it may expedite collecting of additional specimens of young bramids and adults of *Taractes asper* and the other rare species of bramids. In view of the unfavorable situation that some species of bramids are seldom met with, that the type of *Taractes asper* LOWE has almost certainly been lost (MEAD & MAUL, 1958; PALMER, personal letter dated March 2, 1961; MAUL, personal letter dated March 20, 1961) and that the present writer will not be enabled to examine the type specimens of the bramids described by CUVIER and POEY

* With the exception of *Brama raii* which is taken by hand-line, tuna long-line, trap-net or gill-net, the bramids shipped to this market taken by tuna long-line are usually of considerable size, some reaching 600 mm. in total length and treated as trash fishes (probably because they are often in bad state). But in Odawara City fishermen are very careful in handling bramids as they do for berycoids and other deep-sea fishes, and distinguish *Brama* from *Taractichthys*. The fish of the latter genus is said to be more palatable than the former.

in the near future, no pretence is made as to completeness of the following synopsis of the subfamily *Braminae* and the identification of the bramids listed below.

The writer takes pleasure in expressing here his sincere thanks to Dr. G. W. MEAD (Museum of Comparative Zoölogy, Harvard University) for his kindness in favoring the writer with an opportunity of realizing the mystery of the bramids; to Mr. D. AOKI (Manazuru Fish Market), Mr. Y. HONDA (Odawara Municipal Office) and the members of the Young Fishermen's Club in the City of Odawara for the gift specimens of young bramids (including rare species not met with at the market in Tokyo); to several middlemen at the market of Tokyo for the trouble of picking up specimens of rare species of bramids; to Dr. S. ISOKAWA (College of Dentistry, Nihon University) and Mr. Y. TOMINAGA (Zoological Institute, University of Tokyo) for the trouble of taking radiographs; to Dr. J. BÖHLKE (Academy of Natural Sciences of Philadelphia) and Mr. T. UENO (Institute of Fisheries, University of British Columbia) for the trouble of sending photocopies of old papers; to Dr. G. E. MAUL (Madeira) and Mr. G. E. PALMER (British Museum) for the information about the type specimen of *Taractes asper*; to Prof. F. TAKAI (Geological Institute, University of Tokyo) for his kindness in finding the title of a paper by the late Sir A. S. WOODWARD; to Dr. H. YABE (Nankai Regional Fisheries Research Laboratory, Kôchi) for co-operation in getting a bramid specimen from the eastern Atlantic; to Mr. M. HATA and the crew of the "No. 3 Tôsui-maru" for the trouble of bringing back bramids from fishing grounds for tunas in the central Pacific.

Synopsis of the genera of the subfamily *Braminae*

- I. Ventral fins placed low down, flush with prepelvic area (figs. 2, 5, 7, 8 & 9). Total number of vertebrae* 38** to 42. No ribs expanded. Body not very deep, its greatest depth not more than 50% of standard length† (excepting for the young of *Brama raii* and *Collybus drachme*, and the very small young of *Steinegeria rubescens*).
- A. Ventral origin never in advance of a vertical with the middle of the pectoral base. Scales never with a spine directed rearwards. Pectoral fin with 19 to 21 rays.
 1. Head compressed. Caudal fin deeply forked. Prepelvic area narrow. Lateral line fairly distinct in the adult (fig. 3). Pectoral fin long even in the young. Preoperculum without spines *Brama* BLOCH & SCHNEIDER, 1801. Type species *Sparus raii* BLOCH. (*Collybus* SNYDER, 1904, is tentatively listed here††).

* Counting the hindmost segment bearing a lateral spine on either side as one.

** Total number of vertebrae of the bramids examined by the present writer is not less than 40. The low number 38 was reported by SNYDER for *Collybus drachme*. How he counted the number is not known.

† Measured from snout tip to hind end of vertebral column (skin and muscle being removed, or examined by radiograph).

†† Although the method of the counting is not known, the low number of vertebrae, together with the low number of scales in a median series in *Collybus* may show that it differs from *Brama*.

2. Head not compressed. Caudal fin protruded medially while young. Scales thick, some with an atrorse spine. Prepelvic area broad (fig. 7). Interorbital area very broad and nearly flat. Eye close to upper profile of head. Pectoral fin short, not reaching anal origin. Preoperculum denticulated while young. Anterior fin-rays of dorsal and anal not prolonged in the young. A longitudinal row of scale spines above the midlateral line of caudal peduncle, and another similar row below the latter line, but never along it*. Ventral fin (mostly) and anterior corner of dorsal and anal fins white
 *Pseudotaractes*, new genus. Type species: *Brama saussuri* LUNEL, 1865.**
- B. Ventral fin originates in advance of a vertical with the middle of the pectoral base. At least some scales with a spine directed rearwards.
1. Three (or, rarely four) consecutive scales of the midlateral series on the caudal peduncle enlarged forming a prominent keel in the adult. A scaleless area above and before the upper edge of the gill-opening (fig. 9). Pectoral fin with 21 rays. *Steinegeria* JORDAN & EVERMANN, 1887.
 Type species: *Steinegeria rubescens* JORDAN & EVERMANN, 1887.
3. Scales of the midlateral series on the caudal peduncle not enlarged. No scaleless area above and before the upper edge of the gill-opening. Preoperculum denticulated while young. Pectoral fin with 17 or 18 rays. Dorsal and anal fins high while young†. *Taractes* LOWE, 1843. Type species: *Taractes asper* LOWE, 1843.
- II. Ventral fins small and placed distinctly above the midventral keel (fig. 13). Total number of vertebrae 45 (=20+25). Posterior ribs flattened and expanded laterally each forming a crescent plate and forming together a fine basket containing the air-bladder as in *Pterycombus brama* and suggesting *Kurtus*. Dorsal and anal fins greatly produced while young. Body very deep, its greatest depth (even in the adult) being more than 52% of standard length. Pectoral fin with 22 rays. ..
 *Taractichthys* MEAD & MAUL, 1958.
 Type species: *Brama longipinnis* LOWE, 1843.
 (*Eumegistus* JORDAN & JORDAN, 1922, may be placed here).

* In this respect and in the structure of scales, this genus resembles *Taractichthys* listed below.

** It is likely that *saussuri* turns out to be a synonym of *Brama brevorti* POEY, 1856-1861. In this case, the latter is the type species of *Pseudotaractes*.

† *T. raschi* is known only of the adult, but placed here tentatively.

†† Though not so distinctly, the ventral fins of *Pterycombus brama* FRIES of the subfamily *Pteraclinae* (defined by NORMAN, 1957) slightly resemble in position and size of the fins of *Taractichthys*.

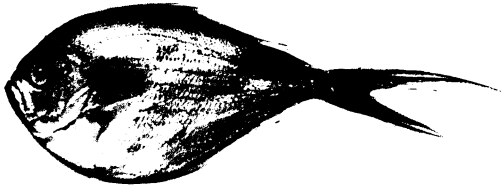


Fig. 1. *Brama raii*. Cat. No. ABE '59-129. Total length ca. 140 mm.



Fig. 2. Radiograph of the same specimen as above (fig. 1).

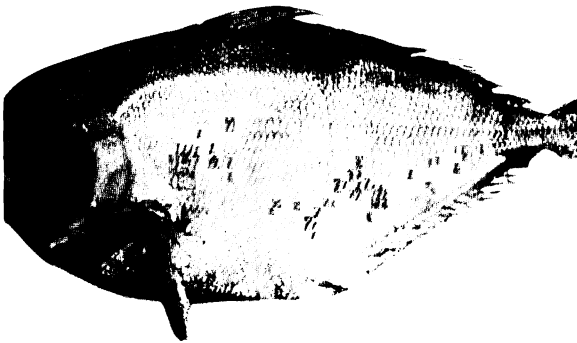


Fig. 3. *Brama raii*. Cat. No. ABE '60-1167. Total length 510 mm. Pored scales in lateral line removed.

Fig. 4. The same specimen as above (fig. 3).



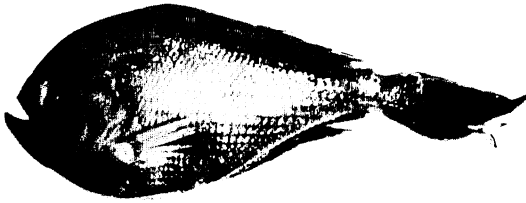


Fig. 5. *Pseudotaractes saussuri*.
Cat. No. ABE '59-39. Total
length 158 mm.



Fig. 6. Radiograph of the same specimen as above (fig. 5).



Fig. 7. Ventral view of the same
specimen as above (figs. 5 and 6).

Fig. 8. *Steinegeria rubescens*. Cat.
No. ABE '61-1497. Total length
700 mm.

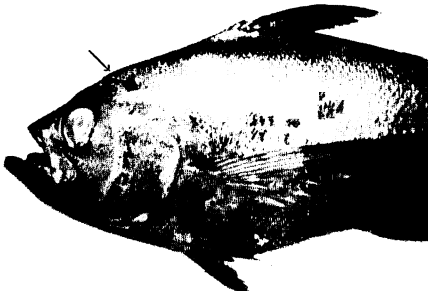
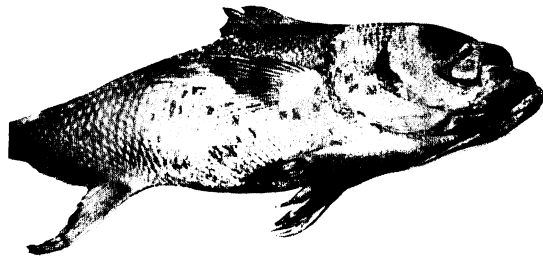


Fig. 9. *Steinegeria rubescens*. Cat. No. ABE
'60 1501. Total length ca. 650 mm.

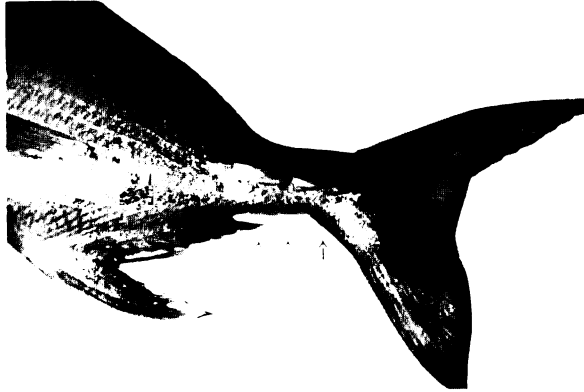


Fig. 10. The same specimen as above (fig. 9).



Fig. 11. The same specimen as above (figs. 9 and 10).

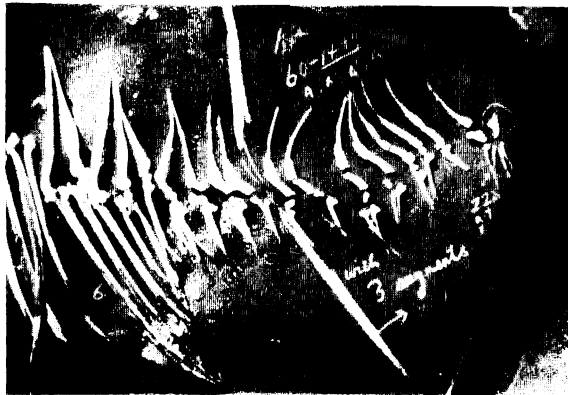


Fig. 12. *Steinegeria rubescens* Adult. Cat. No. ABE '60-1497. Total length *ca.* 800 mm.



Fig. 13. *Taractichthys longipinnis*. Young. Cat. No. ABE '59-49. Total length 250 mm.

**List of the bramid fishes collected by the writer in Japan during
December, 1958~March, 1961***

1. *Brama raii* (BLOCH)

Japanese name "Echiopia", or "Shimagatsuwo" or
"Hama-shimagatsuwo"

Figs. 1-4

The adults of this species are rather common in Japan. Only two young examples (Cat. Nos. ABE '59-129, ABE '59-501) taken by trap-net during December, 1958~April 5, 1959, have been collected at Manazuru. Total length measured to the tip of the prolonged upper lobe of the caudal fin is *ca.* 140 mm. and *ca.* 180 mm., respectively. As suggested by Mr. KANAZAWA, 1952, *Collybus drachme* SNYDER may represent a young stage of *Brama raii* or its congener (if any). The lateral line in the young of *raii* is in one specimen not conspicuous as in *Collybus*, but in the other specimen preserved in alcohol (Cat. No. ABE '59-129) it is fairly distinct.

2. *Pseudotaractes saussuri* (LUNEL)

"Tchikame-etchiopia", new Japanese name**

Figs. 5-7

Only a single small example (Cat. No. ABE '59-39) has been collected at Manazuru. Taken by trap-net during December, 1958~April 5, 1959. Total length 158 mm., and standard length *ca.* 120 mm. (hind end of vertebral column examined by radiograph). As this species seems to be very rare, a brief account of the specimen is given below. Proportional dimensions, expressed in percentages of standard length, are: greatest depth of body 50.0, greatest breadth of body (both at pectoral bases and just behind eyes) 16.7, least depth of caudal peduncle 9.3, length of head 27.5 (left) & 27.1 (right), horizontal diameter of orbit 7.5 on either side, vertical diameter of orbit 9.1 (left) & 8.8 (right), length of snout 8.2 (on either side), skinny interorbital breadth above eye-centers 12.3, greatest breadth of prepelvic area 8.3, length of longest (anteriormost) dorsal fin-rays *ca.* 15.8, length of longest (anteriormost) anal fin-rays *ca.* 12.5, length of longest (6th from top) pectoral fin-ray 22.0 (right; left fin damaged), length of longest (outermost 2 on left side; 2nd and 3rd from outside on right side) soft fin-rays of ventral 13.5 (left) & 13.9 (right), length of ventral spine 5.4 (left) &

* Specimens collected by the present writer at the Central Wholesale Market of Tokyo prior to December, 1958, have all been sent to Dr. MEAD. The specimens listed here will also be sent him in the near future. The present writer is writing for the Section of *Bramidae* in a forthcoming Japanese book, and thinks it better to publish a scientific paper in a congress language on these fishes before the specimens will be sent off.

** Tchikame means short-sighted (in reference to the peculiar position of eyes in relation to the dorsal profile of the head).

ca. 5.0 (right), length of longest (central) caudal fin-ray *ca.* 29.2, length of uppermost branched ray of caudal *ca.* 25.0, length of lowermost branched ray of caudal *ca.* 22.5, distance from ventral tip to vent 3.8, distance from vent to anal origin *ca.* 5.8, length of longest [raker at the junction of upper and lower limbs (left); raker at the junction and another just below it (right)] gill-rakers on 1st arch 9.2 on either side.

The general appearance of the present species reminds the writer of pempherids, but the number of vertebrae in the former is much higher (*ca.* 40; examined by a radiograph). The scales (and more especially of the posterior part of body) are each armed with a strong projection which is directed forwards. The postpelvic keel is very remarkable and gently arched. Eyes are not circular, but elliptical, vertical diameter being greater than the horizontal.

D. III 31 (=i+30; last fin-ray long, reaching slightly beyond the base of the anteriormost rudimentary caudal fin-ray). A. I 23 (=i+22; last fin-ray long, reaching slightly beyond the base of the anteriormost rudimentary caudal fin-ray). P. 20 (uppermost 2 rays unbranched) on either side. V. I 5 on either side. Number of scales in a longitudinal series passing just below lateral line (forwards to gill-opening) 44 (left) & 45 (right). Number of longitudinal scale rows above anal origin up to the row just below lateral line 14 on either side.

Number of branchiostegals 7 on either side. Number of gill-rakers on 1st arch $iv+2+1+8+iv$ (left) & $iv+2+i+7+v$ (right). Number of spined tubercles along the posterior side of 1st gill-arch 2+10.

Preoperculum and, more weakly, suboperculum are denticulated. Teeth are small, and present on jaws, vomer and palatines. Outer teeth of jaws are visible when the mouth is closed.

Though not certain, there is a naked area above and in advance of the upper corner of the gill-opening.

3. *Steinegeria rubescens* JORDAN & EVERMANN

“Tsurugi-etchiopia”, new Japanese name

Figs. 8-12

Thanks to the elaborate work by Drs. MEAD and MAUL, 1958, the present writer has finally been enabled to give a Japanese name, accompanied by a scientific account, to this commercial species, which, however, is believed not to have been recorded from Japan. “Tsurugi” means sword or weapon, which refers to the very remarkable enlarged, strong scales, three or four in number, along the midlateral line of the caudal peduncle. Fish-dealers who seem to wish to know the name of this species may use this Japanese name hereafter.

(to be concluded)