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Brama pauciradiata, a New Bramid Fish from the Seas off Tropical Australia and the Central Pacific Ocean

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Abstract A new tropical pomfret, *Brama pauciradiata*, is described from trawled specimens and juveniles taken from the stomachs of the lancetfish (*Alepisaurus ferox*) collected from the central Pacific, Coral Sea, and eastern Indian Ocean. It appears to be a small species and may reach sexual maturity smaller than 100 mm SL. It is distinguished from all other members of the genus in having 23–25 anal fin-rays, 7–10 scales between the lateral line and the origin of the dorsal fin, and 23–28 predorsal scales.

The pomfret genus *Brama* presently contains eight species of which four (*B. caribbea* Mead, *B. dussumieri* Cuvier, *B. orcini* Cuvier and *B. myersi* Mead) are distributed in tropical seas (Mead, 1972; Pavlov, 1991b). The species can be distinguished from each other by a combination of body shape, pectoral and anal-fin counts, and numbers of vertebrae (Mead, 1972; Pavlov, 1991b).

Independent studies of members of the family Bramidae by Japanese and Australian research teams led to the simultaneous discovery of a new tropical species of *Brama* from the Indo-central Pacific. Sixteen small juvenile specimens (30–44 mm SL) were found in stomach contents of *Alepisaurus ferox* collected by Japanese tuna-longliners near the Hawaiian Islands, in the Coral Sea, and off Western Australia in the eastern Indian Ocean. Seven slightly larger subadult specimens (61–82 mm SL), collected by trawlers off Western Australia, were found in Australian collections. These specimens were found to differ greatly from other *Brama* in body form and meristic characteristics and are described below as a new species.

Measurements and counts followed those methods proposed by Hubbs and Lagler (1958) and Mead (1972). The caudal peduncle was measured from the insertion of the anal fin to the end of the hypural plate. All measurements were made with calipers or under a microscope. Counts for vertebrae (including the urostyle) and vertical fins were made from radiographs. Counts of gill rakers were taken from the outer arch with the raker at the angle included in the lower limb count. Scales of smallest specimens were stained with cyanine (quinoline blue) solution to obtain counts. Type specimens are deposited in the National Science Museum, Tokyo (NSMT), the ISR Munro Ichthyological Collection, Hobart (CSIRO), and the Australian Museum, Sydney (AMS). An additional 140 specimens of other congeners were examined to obtain meristic details for comparison. Institutional codes follow Leviton et al. (1985).

Brama pauciradiata sp. nov.
(Figs. 1, 2)

Holotype. CSIRO-H 3145-43, subadult, 76.1 mm in standard length (SL), southwest of Imperieuse Reef, Rowley Shoals, 17°52′S, 118°16′E, caught by prawn trawl at 550 m depth, Sept. 23, 1992.

Paratypes. 16 juvenile specimens (30–44 mm SL) taken from the stomachs of *Alepisaurus ferox* caught by tuna-longline: NSMT-P 45796, 45798, 2 specimens, 41.2 and 42.3 mm SL, Coral Sea, 20°25′S, 154°38′E, 80 m depth, Oct. 23, 1977; NSMT-P 45797, 43.7 mm SL, Coral Sea, 23°17′S, 156°20′E, 80–120 m depth, Nov. 30, 1976; NSMT-P 45799, 37.7 mm SL, Coral Sea, 16°13′S, 152°15′E, depth unknown, Jan. 9, 1972; NSMT-P 45800, 45801, 2 specimens, 30.8 and 39.0 mm SL, Coral Sea, 20°11′S, 153°20′E, 100–120 m depth, Nov. 25, 1975; NSMT-P 45802, 31.2 mm SL, Coral Sea, 20°10′S, 153°6′E, 80 m depth, Oct. 26, 1977; NSMT-P 45803, 37.9 mm SL, Coral Sea, 21°37′S, 155°25′E, 80 m depth, Oct. 22, 1977; NSMT-P 45804, 32.3 mm SL, Coral Sea, 21°08′S, 153°20′E, 80–120 m depth, Dec. 5, 1976; NSMT-P 45805, 32.2 mm SL, Coral Sea, 23°45′S, 156°54′E, 80–120 m depth, Dec. 14, 1976; NSMT-P 45806, 36.3 mm SL, Coral Sea, 23°06′S, 157°37′E, 80–120 m depth, Nov. 24, 1976; NSMT-P 45807, 45808, 2 specimens, 30.9 and 33.9 mm SL, Coral Sea, 22°44′S,

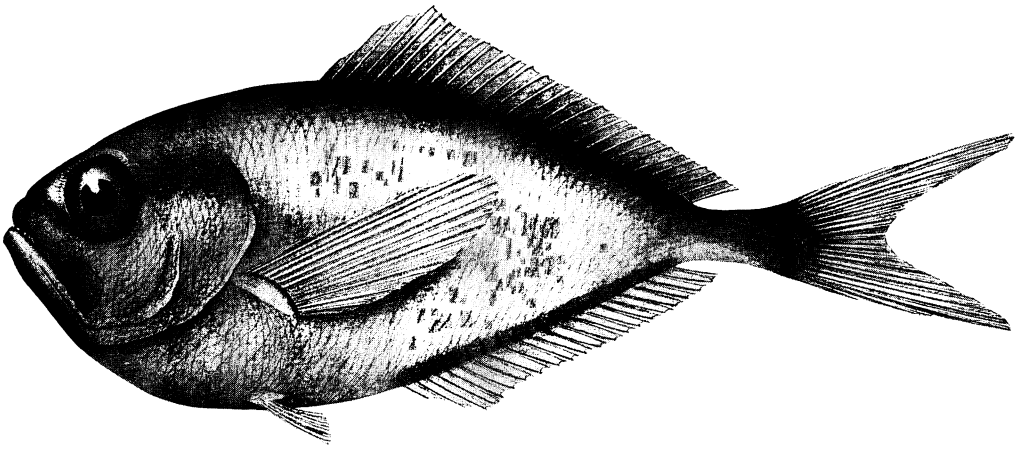

Fig. 1. *Brama pauciradiata* sp. nov., holotype, CSIRO-H 3145-43, 76.1 mm SL (K. Marlowe).

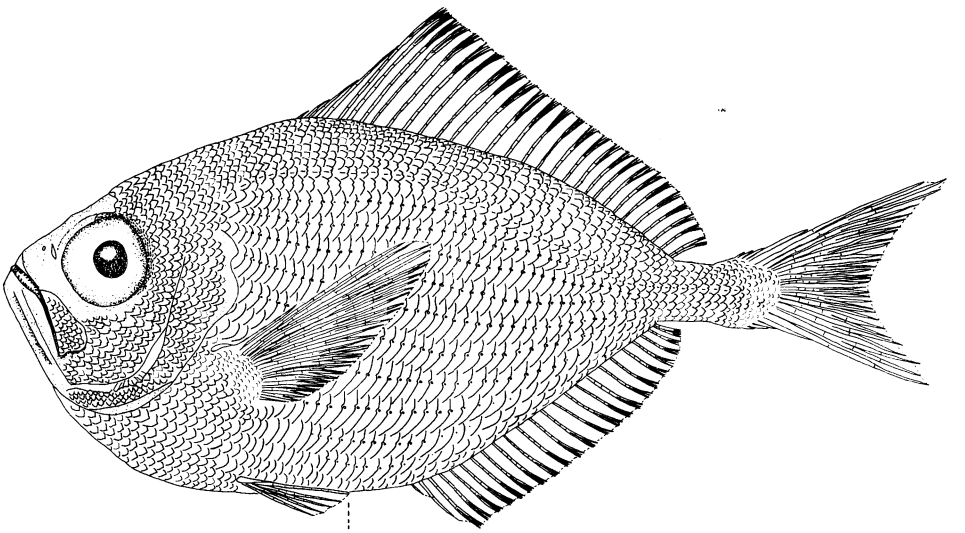

Fig. 2. *Brama pauciradiata* sp. nov., paratype, NSMT-P 45796, 41.2 mm SL. Broken line indicates position of anus (M. Moteki).

156°35′E, 80–120 m depth, Dec. 10, 1976; NSMT-P 45809, 41.7 mm SL, Coral Sea, 24°00′S, 155°59′E, 80–120 m depth, Dec. 1, 1976; NSMT-P 45810, 36.1 mm SL, off Hawaii, 25°08′N, 152°45′W, 230 m depth, May 15, 1988; NSMT-P 45811, 37.5 mm SL, eastern Indian Ocean, 17°40′S, 117°59′E, 90 m depth, Oct. 21, 1976.

Six trawled subadult specimens (61–82 mm SL): AMS-I 22822-011, 65.2 mm SL, northwest of Port Headland, 18°23′S, 117°41′E, 418 m depth, Apr. 11, 1982; CSIRO-H 3145-27, 5 specimens, 61.0–81.8 mm SL, southwest of Imperieuse Reef, Rowley Shoals, 17°52′S, 118°16′E, 550 m depth, Sept. 23, 1992.

Diagnosis. A species of *Brama* with 30–32 dorsal fin rays; 22–25 anal fin rays; 37–38 total vertebrae; 49–59 scales in longitudinal series; pored lateral line scales 56–63; 7–10 transverse scales (from the lateral line to dorsal fin origin); 12–14 scales below lateral line to origin of anal fin; 23–28 predorsal scales; a feebly arched dorsal profile; an almost flat interorbit with the eye located close to the dorsal margin of the head; a rather low pectoral-fin base (distance between lower base of pectoral fin and insertion of pelvic fin 8.3–12.9% of SL); and a sharply demarcated pale ventral saddle on the caudal peduncle.

Description. Proportional dimensions and meristic data are summarised in Tables 1 and 2, respective-

Table 1. Morphometrics of type material of *Brama pauciradiata* sp. nov.

	Holotype	Subadult paratypes ($n=6$)			Juvenile paratypes ($n=16$)		
		Range	Mean	SD	Range	Mean	SD
Standard length (mm)	76.1	61.0–81.8			30.8–43.7		
Fcrk length	112.0	110.5–113.4	112.0	1.2	110.7–118.9	115.4	2.5
Body depth	43.5	39.6–42.6	41.1	1.2	48.7–57.8	51.9	2.5
Body width	12.0	10.4–12.8	11.1	0.9	10.4–14.3	12.4	1.2
Head width	13.7	12.6–13.4	13.0	0.3	12.9–16.7	14.7	1.1
Predorsal length	43.6	40.6–43.8	41.8	1.3	41.3–49.7	45.0	2.4
Preanal length	58.0	55.2–59.9	56.8	1.7	57.7–63.7	61.4	1.9
Prepelvic length	40.7	38.7–41.4	40.1	1.1	38.3–43.5	40.8	1.4
Prepectoral length	31.4	29.1–31.3	30.3	0.9	27.7–33.3	30.4	1.3
Dorsal-fin base length	52.6	52.1–55.0	53.7	1.2	45.9–56.8	51.2	2.5
Anal-fin base length	38.2	37.7–41.9	39.1	1.5	35.7–43.9	39.7	2.1
Dorsal origin-pectoral insertion	28.9	26.9–30.1	28.3	1.4	32.7–39.0	35.1	1.9
Pectoral-fin base length	8.0	7.5–8.3	8.0	0.3	8.0–10.8	9.4	0.7
Pectoral insertion-pelvic insertion	12.7	10.3–12.9	12.1	0.9	8.3–11.8	9.9	0.9
Pelvic insertion-anal origin	20.6	18.6–21.1	19.7	1.0	20.9–29.0	25.5	2.2
Pectoral-fin length	33.2	29.7–31.6	31.0	0.8	28.2–33.1	29.9	1.2
Pelvic-fin length	11.2	12.0–12.7	12.3	0.3	15.1–21.4	17.3	2.0
Length of 5th dorsal ray	9.7	8.1–11.6	9.8	1.5	17.6–25.6	21.7	2.3
Length of 5th anal ray	6.8	7.1–8.9	7.9	0.7	10.0–14.5	11.7	1.4
Length of 5th from last dorsal ray	6.3	6.0–6.9	6.2	0.3	6.4–9.6	7.9	1.2
Length of 5th from last anal ray	6.2	5.4–7.2	5.8	0.7	4.6–8.1	6.7	1.0
Upper caudal-fin lobe length	33.5	30.2–32.3	31.3	0.8	23.6–32.1	29.0	2.3
Lower caudal-fin lobe length	33.8	30.9–32.6	31.9	0.7	27.9–33.0	29.9	1.5
Central caudal-fin ray length	12.2	11.8–13.6	12.6	0.8	13.3–18.4	16.3	1.5
Caudal peduncle length	13.7	12.7–14.9	13.7	0.9	12.9–14.7	13.7	0.6
Caudal peduncle depth	6.7	6.1–7.1	6.5	0.4	6.4–8.1	7.5	0.5
Head length	32.3	28.1–31.3	29.9	1.2	29.7–34.0	31.3	1.2
Snout length	8.4	7.5–8.5	8.1	0.4	6.5–8.8	7.7	0.6
Eye diameter, horizontal	8.8	7.7–8.5	8.2	0.4	9.8–12.6	11.1	0.8
Eye diameter, greatest	10.1	6.5–9.5	8.7	1.1	10.1–13.3	11.7	1.0
Orbit-dorsal midline (direct)	3.7	3.4–4.5	4.0	0.4	3.3–5.4	4.3	0.6
Orbit-free edge of opercle (max)	15.4	13.0–15.1	14.2	0.7	12.4–14.3	13.0	0.6
Interorbital width	8.3	6.7–7.5	7.1	0.2	7.2–10.3	8.5	0.9
Upper jaw length	16.8	14.5–16.3	15.4	0.7	12.7–16.7	14.7	1.1

ly. Body strongly compressed, width 3.6 in holotype (3.0–4.5 in paratypes) in maximum depth; body moderately deep in subadults, depth 2.3 (2.3–2.5) in SL, juveniles relatively deeper bodied (depth 1.7–2.1 in SL); body tapering rapidly behind pelvic fin, breast pronounced and keel-like. Dorsal profile of head feebly arched, supraorbital ridges visible. Interorbital space almost flat, least bony width 3.9 (2.7–4.6) in HL, relatively broader in juveniles. Head length 3.1 (2.9–3.6) in SL. Snout length 3.8 (3.5–4.7) in HL. Eye elliptical, located relatively close to dorsal surface of head, this tangential distance 2.8 (1.8–3.4) in greatest diameter of eye; horizontal axis of eye slightly shorter than vertical axis, greatest diameter 3.2 (3.2–3.3 in subadult paratypes) in HL, relatively larger in juvenile paratypes (2.5–3.0 in

Table 2. Meristics of type material of *Brama pauciradiata* sp. nov.

	Holotype	Paratypes ($n=22$)		
		Range	Mean	SD
Dorsal fin	30	30–32	31.2	0.81
Anal fin	22	23–25	23.7	0.70
Pectoral fin	20	19–21	19.8	0.51
Gill rakers-upper limb	2	2–5	3.4	0.87
Gill rakers-lower limb	12	10–13	11.2	0.83
Gill rakers-total	14	12–18	14.6	1.54
Abdominal vertebrae	16	15–16	15.9	0.25
Caudal vertebrae	21	21–22	21.6	0.50
Total vertebrae	37	37–38	37.5	0.52
Scales in horizontal series	49	50–59	53.7	2.56
Predorsal scales	25	23–28	26.5	1.62
Scales above the lateral line	7	7–10	8.6	0.87
Scales below the lateral line	12	12–14	13.6	0.65

HL). Lower jaw terminal (projecting slightly in some paratypes), mouth angle very oblique. Inner lower edges of mandibles touching posterior for a half or more of their length. Maxilla reaching just behind vertical line at middle of eye, forward of middle of eye in juvenile paratypes; upper jaw slightly longer in subadults 1.9 (1.9–2.0) in HL, slightly shorter in juveniles (2.0–2.4 in HL). Caudal peduncle length 2.4 (2.0–2.5) in HL, the least depth 4.8 (3.9–4.9) in HL. Dorsal fin originating slightly posterior to base of pectoral fin, predorsal length 2.3 (2.0–2.5) in SL. Base of pectoral fin situated relatively low, distance between lower base of pectoral fin and insertion of pelvic fin 2.5 (2.3–2.9) in HL in subadults, even lower in juveniles (2.7–3.7 in HL). Pectoral fin extending beyond origin of anal fin in subadults, over origin in juveniles, length 3.0 (3.0–3.5) in SL. Pelvic fin length short and variable, 8.2 (7.9–8.3) in SL in subadults, 4.7–6.6 in SL in juveniles, inserted below base of pectoral fin, prepelvic length 2.5 (2.3–2.6) in SL. Caudal fin forked, length of upper and lower lobes almost equal, upper lobe 3.0 (3.1–4.2) in SL, lower lobe 3.0 (3.0–3.6) in SL. Body and head mostly covered with strongly adherent scales; interorbit, snout, lower jaw, anterior suborbit, outer margin of opercle, and free edge of preopercle all naked; interorbit, snout, lower jaw covered with numerous micropores; anterior predorsal scales sharply demarcated from naked interorbit. Scales variable in size, smallest at base of caudal fin and along predorsal midline, tallest on abdomen behind pectoral-fin base; scales on caudal peduncle gradually decreasing in size over base of caudal fin rays, those below lateral line oblique and high. Scales on holotype lacking spines; predorsal scales of subadult paratypes less than 65 mm have rudimentary spines; body scales of juveniles have a single spine, except for those on the predorsal margin and over base of pectoral fin rays which have 2–5 spines. Scales on opercle and maxilla of juveniles with 1–4 spines. A single lateral line originating from upper border of gill slit, rising slightly dorsally, then running parallel close to the dorsal profile to reach the middle of caudal fin base. Anterior nostril rounded, posterior one slit-like. Preopercle with feebly serrated margin. Pseudobranchae present. Gill rakers lath-like. Teeth in upper jaw, small, conical; in a band (about 5 rows anteriorly), band becoming narrower posteriorly, those in outer row near symphysis largest. Teeth in lower jaw similar, in two rows anteriorly and one row posteriorly; 2 (2–3) greatly enlarged caniniform teeth near symphysis.

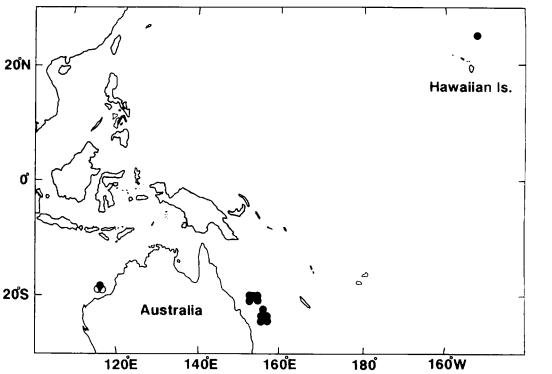

Fig. 3. Capture locations of subadult *Brama pauciradiata* (○), and *Alepisaurus ferox* from the gut contents of which juvenile *B. pauciradiata* were collected (●).

Color in alcohol.—Body mainly pale greyish brown; scales on upper quarter and caudal peduncle with dark pigmented margins, scales at base of caudal fin appearing as a dark blotch; remaining body scales translucent. Pored scaleless areas, margin of upper jaw, inner pectoral-fin base, and orbital rim black. Pectoral, anal and pelvic fins translucent. Pelvic-fin and outer pectoral-fin bases pale. Pale saddle on ventral half of caudal peduncle that is sharply demarcated from the pigmented scales above. Juveniles uniformly pale brown with slightly darker margin of dorsal fin.

Etymology. The species name, *pauciradiata*, is derived from the Latin *pauci* for few and *radiata* for fin ray, in reference to having relatively few dorsal and anal fin rays.

Remarks. *Brama pauciradiata* occurs in the Coral Sea, central Pacific near the Hawaiian Islands, and in the eastern Indian Ocean (Fig. 3). Despite its apparent narrow distribution, this species may occur throughout the tropical Indian and Pacific Oceans following the distribution patterns of *B. orcini* and *B. myersi*, or may even follow the circumtropical *B. dussumieri* (Mead, 1972). A primarily temperate species, *B. brama*, is also thought to occur in the Coral Sea (Fourmanoir, 1969).

Brama pauciradiata appears to be a small species. In the past, it may have been mistaken for the juveniles of larger *Brama* species. Three of the

largest specimens (holotype and paratypes from CSIRO H3145-27) were found to have partly developed gonads indicating a small size of maturity. These specimens are referred to as subadults in this manuscript.

The new species is distinguished from all other members of the genus by the following low meristic characters: anal fin rays 23–25 (most other *Brama* species have 27 or more; *B. dussumieri* rarely has 25, *B. australis* and *B. caribbea* rarely have 26); transverse scales from the lateral line to origin of dorsal fin 7–10 (most other *Brama* species have 11 or more; *B. dussumieri* and *B. caribbea* rarely have 10); predorsal scales 23–28 (other *Brama* species have 32 or more) (Table 3).

Pavlov (1991b) resurrected *B. australis* but considered *B.* sp. (Mead, 1972) to be distinct from other nominal species. Also, Pavlov (1991a) described an additional unidentified *Brama* from the southeastern Pacific. However, based on Pavlov's description and an examination of Mead's material (BMNH 1900.1.6:22), these specimens are likely to be synonymous with *B. australis.*

Comparative Material

Brama brama.—NSMT-P 45698, 45699, 2 specimens, 254–258 mm SL, 18°29.5′N, 16°37.7′W; NSMT-P 45700, 1 specimen, 260 mm SL, 21°20.3′N, 17°36.7′W; NSMT-P 45701, 1 specimen, 262 mm SL, 23°43.9′N, 16°49.0′W; NSMT-P 45702, 45704, 2 specimens, 304–344 mm SL, 25°24.0′N, 15°58.6′W; NSMT-P 45706, 1 specimen, 366 mm SL, 21°24′N, 17°27′W; NSMT-P 45707, 1 specimen, 375 mm SL, 26°50′N, 13°58′W; NSMT-P 45703, 45705, 45708, 45713, 4 specimens, 342–434 mm SL, 53°28.5′N, 13°16.0′W; NSMT-P 45709, 1 specimen, 405 mm SL, 43°52′N, 6°34′W; NSMT-P 45710, 1 specimen, 407 mm SL, 53°17.5′N, 14°06.5′W; NSMT-P 45711, 45712, 45714, 3 specimen, 425–435 mm SL, 44°44′N, 53°59′W.

Brama japonica.—NSMT-P 45735, 45737, 2 specimens, 36.0–46.0 mm SL, 34°17.6′N, 149°02.8′E; NSMT-P 45736, 1 specimen, 31.0 mm SL, 34°44.6′N, 149°08′E; NSMT-P 45738, 1 specimen, 77.8 mm SL, 35°28′N, 174°56′W; NSMT-P 45739, 1 specimen, 114 mm SL, 36°24′N, 175°56′W; ZUMT 40473, 1 specimen, 103 mm SL, 33°10′N, 139°50′E; ZUMT 20610, 45847, 2 specimens, 119–148 mm SL, 35°09′N, 139°38′E; ZUMT 17944, 1 specimen, 200 mm SL, Sagami Bay, Japan; FRSKU W188, FRSKU 38677, 2 specimens, 301–330 mm SL, Sea of Japan; NSMT-P 45663, 45812, 45813, 4 specimens, 367–418 mm SL, 35°00′N, 139°45′E.

Table 3. Comparison of meristic characters among species of *Brama.* Numerals in parentheses indicate the numbers of specimens examined during this study plus data taken from review of literature

Characters	*B. brama*[1,3]	*B. japonica*[1,3]	*B. australis*[2,3]	*B.* sp.[1,3]	*B. dussumieri*[1,3]
Dorsal fin	35–38 (58)	33–37 (33)	31–37 (40)	34–35 (2)	32–36 (95)
Anal fin	29–32 (58)	27–30 (43)	26–30 (40)	27–28 (2)	25–29 (81)
Pectoral fin	19–23 (52)	21–23 (48)	20–22 (40)	21–23 (2)	19–22 (99)
Total vertebrae	41–43 (36)	39–42 (42)	39–42 (21)	39–40 (2)	40–43 (59)
Scales in horizontal series	70–81 (17)	71–80 (12)	75–86 (17)	74–76 (2)	57–68 (26)
Scales above lateral line	19–25 (18)	16–20 (11)	18–24 (16)	20 (1)	12–18 (23)
Scales below lateral line	19–22 (17)	18–22 (12)	19–24 (15)	22 (1)	13–16 (24)
Predorsal scales	39–48 (17)	35–41 (11)	37–47 (16)	39 (1)	32–42 (21)
Gill rakers	15–18 (17)	15–21 (13)	18–24 (40)	20 (1)	13–17 (28)

Characters	*B. orcini*[1,3]	*B. myersi*[1,3]	*B. caribbea*[1,3]	*B. pauciradiata*[3]
Dorsal fin	33–36 (46)	32–36 (16)	32–35 (42)	30–32 (22)
Anal fin	28–31 (44)	28–31 (16)	26–30 (46)	23–25 (22)
Pectoral fin	19–22 (46)	19–20 (15)	19–21 (45)	19–21 (23)
Total vertebrae	37–40 (53)	40–42 (16)	36–38 (46)	37–38 (23)
Scales in horizontal series	48–57 (16)	52–56 (5)	49–54 (15)	51–59 (20)
Scales above lateral line	10–15 (19)	12–15 (5)	10–14 (15)	7–10 (20)
Scales below lateral line	13–16 (18)	14–16 (5)	13–15 (14)	12–14 (20)
Predorsal scales	33–43 (17)	36–40 (3)	32–38 (15)	23–28 (19)
Gill rakers	12–16 (25)	12–14 (5)	11–14 (35)	12–18 (20)

[1] Mead (1972); [2] Pavlov (1991b); [3] present study.

Brama australis.—NSMT-P 41892, 41893, 41895, 41896, 41897, 41901, 6 specimens, 325–388 mm SL, 49°05′S, 169°40′W; NSMT-P 41915, 1 specimen, 380 mm SL, 30°09′S, 83°16′W; NSMT-P 41924, 1 specimen, 285 mm SL, 38°56′S, 81°18′W; NSMT-P 41926, 1 specimen, 456 mm SL, 45°18′S, 98°06′W; NSMT-P 41939, 1 specimen, 414 mm SL, 40°04′S, 90°22′W; NSMT-P 41951, 1 specimen, 321 mm SL, 43°30′S, 118°56′W; NSMT-P 45733, 45734, 2 specimens, 407–436 mm SL, 47°03.3′S, 169°34.5′W; FRSKU 109202–109206, 5 specimens, 338–432 mm SL, 42°50′S, 75°00′W; FRSKU 109228, 109229, 2 specimens, 242–302 mm SL, FRSKU-CP 851, 1 specimen, 247 mm SL, 44°25′S, 75°20′W; FRSKU-CP 483, 1 specimen, 238 mm SL, 42°21′S, 74°58′W; FRSKU-CP 181, 1 specimen, 260 mm SL, near Isla de Chiloe, Chile; FRSKU 11210, 1 specimen, 130 mm SL, 34°05.5′S, 114°17.3′E.

Brama dussumieri.—NSMT-P 45740, 1 specimen, 23.9 mm SL, 9°30′S, 81°14′E; NSMT-P45741, 1 specimen, 28.6 mm SL, 17°40.4′S, 117°59.0′E; NSMT-P 45742, 45744, 45745–7, 45749–45751, 8 specimens, 31.3–121 mm SL, 12°42.3′S, 109°52.7′E; NSMT-P 45743, 45748, 2 spcimens, 31.9–65.4 mm SL, 14°26.0′S, 110°52.9′E; NSMT-P 45752, 1 specimen, 27.9 mm SL, 7°52′N, 172°34′W; NSMT-P 45753, 1 specimen, 34.7 mm SL, 12°03.3′N, 159°19.0′W; NSMT-P 45754, 1 specimen, 41.0 mm SL, 6°04′N, 150°22′W; NSMT-P 45755, 1 specimen, 45.0 mm SL, 4°08.0′N, 151°54.5′W; NSMT-P 45756, 1 specimen, 48.8 mm SL, 11°00′N–12°00′N, 171°00′W–175°00′W; NSMT-P 45757, 45759, 45760, 3 specimens, 52.7–82.3 mm SL, 13°00′N–15°00′N, 157°30′W–161°00′W; NSMT-P 45758, 1 specimen, 54.5 mm SL, 12°04′N, 159°31′W; NSMT-P 45761, 1 specimen, 26.2 mm SL, 19°49.5′S, 153°01.5′E; NSMT-P 45762, 1 specimen, 27.9 mm SL, 20°05′S, 153°14′E; NSMT-P 45763, 1 specimen, 30.6 mm SL, 20°10.5′S, 153°20′E; NSMT-P 45764, 1 specimen, 44.2 mm SL, 20°42.2′S, 154°56.7′E; NSMT-P 45765, 1 specimen, 40.1 mm SL, 21°53.7′S, 154°47.5′E; NSMT-P 45766, 1 specimen, 40.8 mm SL, 20°26.5′S, 154°59.5′E; NSMT-P 45767, 1 specimen, 51.0 mm SL, 22°44.2′S, 156°34.6′E; NSMT-P 45768, 1 specimen, 43.9 mm SL, Shikine I., Japan; NSMT-P 41952, 1 specimen, 123 mm SL, Miyagi Pref., Japan; ZUMT 42408, 1 specimen, 70.0 mm SL, Sagami Bay, Japan; ZUMT 24344, FRSKU 118447, 28223, 3 specimens, 140–186 mm SL, Wakasa Bay, Sea of Japan; ZUMT 38907, 1 specimen, 183 mm SL, Okinawa Pref., Japan; NSMT-P 45769, 1 specimen, 21.4 mm SL, 10°04′S, 52°49′E; NSMT-P 45770, 1 specimen, 59.1 mm SL, 10°41′S, 52°46′E; NSMT-P 45771, 1 specimen, 74.2 mm SL, 16°24.8′S, 76°36.4′E; FRSKU 38479, 38480, 2 specimens, 136–186 mm SL, Oki Is., Sea of Japan.

Brama orcini.—NSMT-P 45772, 1 specimen, 30.2 mm SL, 22°49.0′S, 157°17.0′E; NSMT-P 45773, 2 specimens, 34.0–39.7 mm SL, 20°07.7′S, 154°05.5′E; NSMT-P 45775, 1 specimen, 41.0 mm SL, 21°15.0′S, 155°11.5′E; NSMT-P 45776, 1 specimen, 42.3 mm SL, 22°14.5′S, 156°24.0′E; NSMT-P 45777, 45779, 2 specimens, 47.4–49.8 mm SL, 20°42.2′S, 154°56.7′E; NSMT-P 45778, 1 specimen, 48.3 mm SL, 20°16.1′S, 153°23.6′E; NSMT-P 45780, 1 specimen, 43.2 mm SL, 17°06.5′N, 166°04.4′W; NSMT-P 45781, 1 specimen, 70.7 mm SL, 7°18.2′N, 170°08.2′W; ZUMT-48910, 1 specimen, 138 mm SL, 10°56.0′N, 172°57.3′E; NSMT-P 45782, 45783, 2 specimens, 39.1–41.2 mm SL, 13°24.5′S, 108°55.0′E; NSMT-P 45784, 1 specimen, 51.0 mm SL, 14°04.4′S, 115°03.9′E; NSMT-P 45785–45787, 3 specimens, 154–182 mm SL, 34°31′S, 25°39′E; FRSKU 113969, 113972–113974, 113976, 113977, 6 specimens, 172–211 mm SL, 25°03.2′S, 112°04.9′E.

Brama myersi.—USNM 254386, holotype, 81.3 mm SL, 15°14′N, 159°55′E; NSMT-P 45792, 1 specimen, 67.0 mm SL, 21°15.0′S, 155°11.5′E; NSMT-P 45793, 45794, 2 specimens, 42.7–62.8 mm SL, 22°10′S, 156°09′E; NSMT-P 45795, 1 specimen, 39.4 mm SL, 11°53.2′N, 166°13.8′W.

Brama caribbea.—NSMT-P 41717, 1 specimen, 62.0 mm SL, 6°53′N, 52°27′W; NSMT-P 45349, 1 specimen, 52.2 mm SL, 7°51′N, 54°06′W; NSMT-P 45350, 1 specimen, 139 mm SL, 7°05′N, 52°47′W; NSMT-P 45351, 45362, 2 specimens, 84.5–143 mm SL, 7°40′N, 54°05′W; NSMT-P 45352–45356, 45358, 45359, 45361, 8 specimens, 122–165 mm SL, 7°44′N, 54°15′W; NSMT-P 45357, 1 specimen, 108 mm SL, 7°20′N, 53°04′W; NSMT-P 45360, 1 specimen, 66.2 mm SL, 7°37′N, 53°39′W; NSMT-P 45664, 1 specimen, 46.3 mm SL, 7°51′N, 54°25′W; NSMT-P 45665 1 specimen, 52.1 mm SL, 7°51′N, 54°21′W; NSMT-P 45666, 1 specimen, 33.7 mm SL, 7°44′N, 54°20′W; NSMT-P 45788, 1 specimen, 140 mm SL, 10°08.6′S, 59°56.3′W.

Brama sp.—BMNH 1900.1.6:22, 440 mm SL, Table Bay, South Africa (used in Mead, 1972).

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シマガツオ科シマガツオ属の1新種

茂木正人・藤田　清・Peter Last

シマガツオ科の1新種 *Brama pauciradiata* をインド洋東部よりトロールによって得られた標本と，太平洋中央部，サンゴ海，およびインド洋東部で漁獲されたミズウオの胃内容物から得られた標本に基づき記載した．本種は，生殖腺の発達程度から，シマガツオ属のなかでは比較的小型の種であり，標準体長 100 mm 以下で成熟に達することが示唆された．本種は，臀鰭鰭条数が 23–25 であること，側線上方鱗数が 7–10 であること，背鰭前方鱗数が 23–28 であることなどから同属の他種とは容易に区別される．

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訂　　正・Erratum

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Japanese Journal of Ichthyology, 41(4), on 425–426 pages, "FRSKU number" should read "FAKU number."