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A Revision of the Australian Plesiopid Fish Genus *Paraplesiops*, with Notes on Other Australian Genera

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ABSTRACT. The species of the Australian endemic genus *Paraplesiops* are reviewed. Three previously described species (*P. poweri*, *P. bleekeri* and *P. meleagris*) are recognized and *P. alisonae* is described as new. *Paraplesiops meleagris* is shown to vary geographically in scale and gill raker counts. A key is provided to Australian plesiopid genera, and characteristics are given to allow identification of genera.

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The genus *Paraplesiops* is restricted to subtropical and temperate rocky and coral reefs of Australia. Most species are cryptic, occurring in caves and under ledges. Little taxonomic work has been done on the group. Ogilby (1918) reviewed the Queensland species, and provided a key distinguishing five species, of which only three are recognized here. All the species were regarded as allopatric and little was known of their inter-relationships. Subsequently the junior author discovered a fourth undescribed species, differing considerably in morphology from other Australian species.

Also, little information was available on other Australian plesiopid genera until the works of Allen and Kuitert (1976) and Allen (1977). Recent collections have been made of *Callopleysiops* from Australia. It has also been found that *Fraudella*, originally described as a serranoid, belongs with the plesiopids. Currently six plesiopid genera are known from Australia, three endemic. Since literature on the family is scattered, a key is presented here to aid identification of the genera.

Materials and Methods

Counts and measurements follow Hubbs and Lagler (1958). Lateral line counts include pored scales from the upper lateral line running along the back, and the lower lateral line running along the midside to the base of the caudal fin. The longitudinal scale count is taken in a line from the end of the operculum to the caudal base, excluding small scales on the caudal fin. Lower gill raker counts are from the outer face of the first arch, beginning at the angle and including rudiments.

Material used for the study is deposited in the following institutions: Australian Museum, Sydney

(AMS); National Museum of Victoria, Melbourne (NMV), Queensland Museum, Brisbane (QM), South Australian Museum, Adelaide (SAM), Western Australian Museum, Perth (WAM), and Division of Fisheries, CSIRO, Cronulla (CSIRO).

The following material was used in preparing Table 1 and the key to genera: *Assessor flavissimus*—AMS I.19445-108, 1(26), Lizard Island, Queensland. *Assessor macneilli*—AMS I.15682-035, 55(13-53), One Tree Island, Queensland. *Callopleysiops altivelis*—AMS I. 15684-032, 2(85-95), One Tree Island, Queensland. *Fraudella carassiops*—AMS IA.5093, 1(43), holotype, North-west Islet, Queensland; AMS IA.6302, 7(29-43), paratypes, North-west Islet, Queensland; QM I.12388, 1(44), north of North Keppel Island, Queensland. *Trachinops brauni*—AMS I.20245-018, 23(17-45), Rottnest Island, Western Australia. *Trachinops caudimaculatus*—AMS I.17550-005, 4(49-60), Port Arthur, Tasmania. *Trachinops noarlungae*—AMS I.20181-009, 1(66), Kangaroo Island, South Australia. *Trachinops taeniatus*—AMS I.18241-020, 60(10-65), Port Hacking, New South Wales. *Plesiops oxycephala*—AMS I.15681-043, 17(37-80), One Tree Island, Queensland. *Plesiops cephalotaenia*—AMS I.15634-017, 1(70), One Tree Island, Queensland. *Plesiops coeruleolineatus*—AMS I.19460-051, 1(49), Decapolis Reef, Queensland.

Australian Plesiopid Genera

The six plesiopid genera recognized from Australia are compared in Table 1.

Whitley (1935) described *Fraudella* in the Hypoplectrodididae (= Serranidae) and recorded I, 5

Table 1. A comparison of Australian Plesiopid genera.

Character	<i>Assessor</i>	<i>Plesiops</i>
Teeth on tongue	+	-
Teeth on vomer	-	+
Maxilla scaled	+	-
Head scaled forward to snout	+	-
Preopercular margin	smooth	smooth
Second dorsal base	scaled	scaled
Pores on preoperculum	largely confined to around eye & pop margin	covers 1/3-1/2 of pop
Dorsal spine membranes incised	weakly	deeply
Lateral line pores (upper)	covered	minute lateral pores
Mandibular pores	uniserial	multiserial
Gill rakers on first arch	very elongate	short
Pelvic rays prolonged	slightly	+
Scales with distinct centres & radiating lines	-	+
Outer row of teeth enlarged	-	+
Caudal fin	forked	rounded to elongate
Dorsal spines	11	11-12
Dorsal rays	8-11	6-8
Anal rays	9-11	7-8
Pectoral rays	14-16	17-23
Upper lateral line scales	34-39	17-30
Lower lateral line scales	2-9	6-19

pelvic rays. Böhlke (1960) placed *Fraudella* with the Grammididae. Re-examination of the type material shows that all specimens have I, 4 pelvic rays and a body form characteristic of *Plesiops*. *Fraudella carassiops* Whitley is known from two localities on the Great Barrier Reef. Allen (1977) revised the Australian genus *Trachinops*. Allen and Kuitert (1976) reviewed the tropical western Pacific genus *Assessor*. McCosker (1978) recognized only a single species of *Calloplesiops*, *C. altivelis*

(Steindachner), from the Indo-west Pacific. Inger (1955) revised *Plesiops*, although there are difficulties identifying some Australian species.

Springer (1982) suggested that the family may not be monophyletic. Further studies are necessary to determine the relationships of *Assessor*, *Trachinops* and *Calloplesiops* to the three typical plesiopid genera.

Kuitert (1979) has figured all species of *Trachinops* and *Paraplesiops* in colour.

Key to Australian Plesiopid Genera

1. Preopercular margin serrated, with numerous teeth along whole margin. Dorsal spines usually XIII *Fraudella*
- Preopercular margin smooth, or rarely denticulate at angle of preoperculum. Dorsal spines XI-XV 2
2. Caudal fin forked. Maxilla scaled. Top of head scaled forward to tip of snout. No vomerine teeth *Assessor*
- Caudal with rounded margin or elongate. Maxilla naked. Top of head naked from above eye to tip of snout. Vomerine teeth present 3

<i>Paraplesiops</i>	<i>Fraudella</i>	<i>Calloplesiops</i>	<i>Trachinops</i>
+	+	-	-
+	+	+	+
-	-	-	-
-	-	-	-
smooth-denticulate at angle	serrated	smooth	smooth
naked-scaled covers 1/3-1/2 of pop	naked cover total	scaled confined to around eye & pop margin	naked confined to around eye & pop margin
deeply covered or exposed	weakly covered	weakly exposed	weakly covered, scales notched posteriorly
multiserial short	uniserial anteriorly short	uniserial elongate	uniserial very elongate
±	-	+	±
-	-	-	-
+	+	-	+
rounded to elongate	rounded	elongate	rounded to elongate
11-12	12-13	11	11-15
9-11	9	9-10	16-21
9-11	9-10	9	17-23
17-19	17	18-19	14-18
28-43	16-23	19-24	38-90
9-21	1-9	9-12	0-18

- 3. Body very elongate, body depth 4-5 in SL. Dorsal rays XI-XV, 16-21 *Trachinops*
 — Body robust, body depth 2.5 to 3.5 in SL. Dorsal rays XI-XIII, 6-11 4
- 4. Mandibular pores uniserial. Teeth in outer row of upper jaw not distinctly enlarged. Preopercular pores confined to a narrow band around eye and along preopercular margin. Dorsal membranes weakly incised *Calloplesiops*
 — Mandibular pores multiserial. Teeth in outer row of upper jaw distinctly enlarged. Preopercular pores cover 1/3-1/2 of preoperculum. Dorsal membranes deeply incised between spines 5
- 5. No teeth on tongue. Soft dorsal rays 6-8. Upper lateral line scales 17-30. Scales with unmarked centres and prominent radiating lines extending from centre ... *Plesiops*
 — Tongue with teeth. Soft dorsal rays 9-11. Upper lateral line scales 28-43. Scales with normal circulae and radiating lines posteriorly only *Paraplesiops*

Paraplesiops

Bleekeria Castelnau, 1873a: 14 (type species *Bleekeria catafracta* Castelnau, by monotypy).
Ruppelia Castelnau, 1873b: 51 (type species *Ruppelia prolongata* Castelnau, by monotypy).
Paraplesiops Bleeker, 1875: 3 (type species *Plesiops bleekeri* Günther, by original designation).

Acanthogonia Ogilby, 1918: 45 (type species *Paraplesiops poweri* Ogilby, by subsequent designation by McCulloch, 1929).

Paraplesiops is readily distinguished from other Australian plesiopid genera in characteristics given in Table 1. All species have 15 branched caudal rays and pelvics I, 4. In general body form, dentition and gill

raker size, the genus is most similar to the tropical genera *Plesiops* and *Fraudella*. Species of *Paraplesiops* are cryptic, often found in caves on coral and rocky reefs. The genus is endemic to Australia.

Although the name *Paraplesiops* has been widely accepted, Castelnau (1873a, 1873b) erected two earlier names for this genus. Unfortunately the manner in which he introduced the names has caused considerable confusion. Castelnau apparently started with two unrelated species, a plesiopid and an anthiine. In an early paper in 1873, Castelnau applied the name *Bleekeria catafracta* to the plesiopid, and then indicated in a later paper (1873b: 44 & 51) that the usage was a lapsus calami, since he had apparently intended to use this name for the anthiine. He then described the anthiine as *Lacepedia catafracta* and indicated that *Lacepedia* was a substitute name for his earlier genus (*Bleekeria*), which he considered preoccupied (by *Bleekeria* Günther). In the same paper he described the plesiopid as *Ruppelia prolongata*.

It is apparent that Castelnau intended to name the anthiine as *Bleekeria*, replace it with *Lacepedia*, and name the plesiopid as *Ruppelia*. However, he applied the name *Bleekeria* to the plesiopid, replaced it with

Lacepedia and described the anthiine as *Lacepedia* at the same time. It is questionable whether the use of *Bleekeria* represents a lapsus calami, since it is not apparent in the original publication (Castelnau, 1873a) that an error had occurred. There is also some uncertainty over the status of *Lacepedia*. *Bleekeria* is not preoccupied. *Ruppelia* is effectively regarded as preoccupied by Opinion 27 of the International Commission on Zoological Nomenclature.

Additional confusion has occurred over the placement of *Lacepedia*. Castelnau (1873b) indicated that it might be a cirrhitid, but that only one or two lower pectoral rays could have been unbranched. Jordan (1923) placed it in the Cirrhitidae, but McCulloch (1929) placed the genus in the Aplodactylidae. However, the dentition, serrated preoperculum, teeth, body form, and meristics given by Castelnau (1873b) suggest an anthiine, agreeing most closely with *Caesioperca*.

Since there is considerable confusion over the names *Bleekeria*, *Ruppelia*, and *Lacepedia*, and since none of these names has been used as a senior synonym for over 100 years we follow other workers and accept *Paraplesiops* in the interests of stability.

Key to Species of *Paraplesiops*

1. Dorsal spines usually XI. Posterior dorsal and anal rays and pelvic rays not prolonged; longest dorsal ray 22–25% of SL; pelvic fin 26–34% of SL. Body moderately slender, depth at pelvic origin 3.1 to 3.7 in SL. No scales on dorsal and anal fin bases. Eye small 7–8.6% of SL in adults. Victoria to Western Australia and northern Tasmania *P. alisonae* n. sp.
 — Dorsal spines usually XII. Posterior dorsal and anal rays and pelvic rays greatly prolonged; longest dorsal ray 29–50% of SL; pelvic fin 34–51% of SL. Body deeper, 2.3 to 2.9 in SL. Bases of dorsal and anal fins scaled. Eye larger, 8–14% of SL in adults 2
2. Preopercular margin denticulate. Pectoral rays 18–20, rarely 18. Upper lateral line scales 28–32. Body with 8–10 narrow black vertical bands. Queensland and northern New South Wales *P. poweri*
 — Preopercular margin smooth. Pectoral rays 16–19, rarely 19. Upper lateral line scales 34–43. Body uniformly dark or with 4–5 broad black vertical bands 3
3. Body distinctly banded, with 4 or 5 broad black vertical bands. Lower lateral line scales 11–14. Exposed preopercular scales in a broad patch extending from behind eye to near posterior preopercular margin, 8–11 rows between eye and angle of preoperculum. Southern Queensland and New South Wales *P. bleekeri*
 — Body uniform blue to black. Lower lateral line scales 12–21, rarely fewer than 15. Exposed preopercular scales confined to a narrow band before posterior preopercular margin, 2–7 rows between eye and angle of preoperculum. Victoria to Western Australia *P. meleagris*

Paraplesiops alisonae n. sp.

Figs 1-3

Diagnosis. Dorsal rays XI-XII (rarely XII), 9-10 (rarely 9). Anal rays III, 9-11 (rarely 9 or 11). Other meristics shown in Tables 2-9. Pelvic fin elongate, 26.4-33.8% of SL reaching to between second anal spine to third soft ray. Caudal fin rounded, 23.2-28.4% of SL. Posterior dorsal rays only slightly elongate, longest ray 21.7-25.4% of SL. Body slender, depth at pelvic origin 26.4-32.2% of SL. Preopercular margin smooth. Preopercular scales largely exposed (Fig. 1); naked along posterior preopercular margin; preopercular and cheek pores confined to narrow band along posterior preopercular margin and immediately behind and below eye.

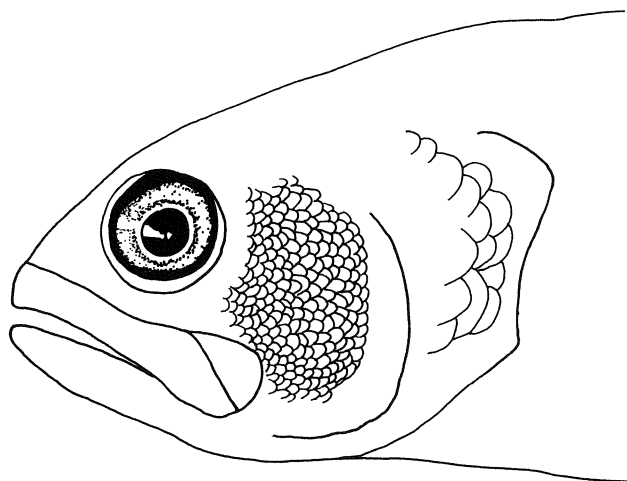


Fig. 1. Camera lucida drawing of the head of *Paraplesiops alisonae*, showing exposed preopercular scales.

Mandibular pores few, in isolated clusters (Fig. 2) Top of head scaled forward to above middle of preoperculum, ending well behind eye. No scales along bases of dorsal and anal rays.

Coloration in alcohol: Head and body light to dark brown. Head with numerous small dark brown to bluish-black widely spaced spots; spots much smaller than pupil diameter; spot on lower operculum subequal in size to other head spots. No dark line above upper lip. Body sometimes with scattered small faint brown spots. Pelvic and pectoral fins whitish to dusky. Median fins dusky to black. Dorsal and anal fins normally with three or four white longitudinal stripes.

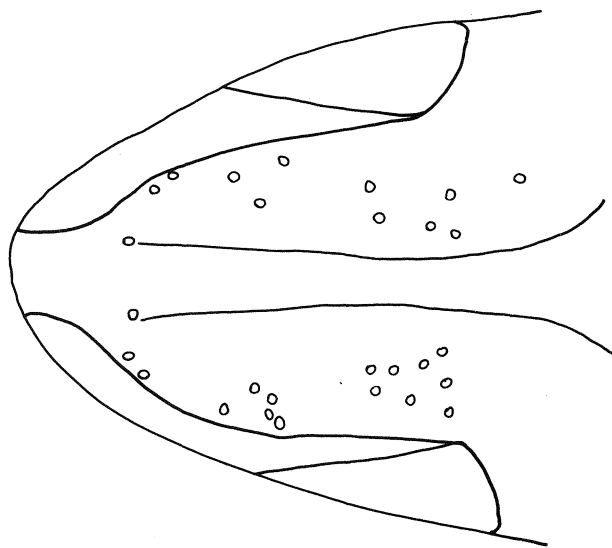


Fig. 2. Camera lucida drawing of lower surface of head of *Paraplesiops alisonae*, showing arrangement of head pores.

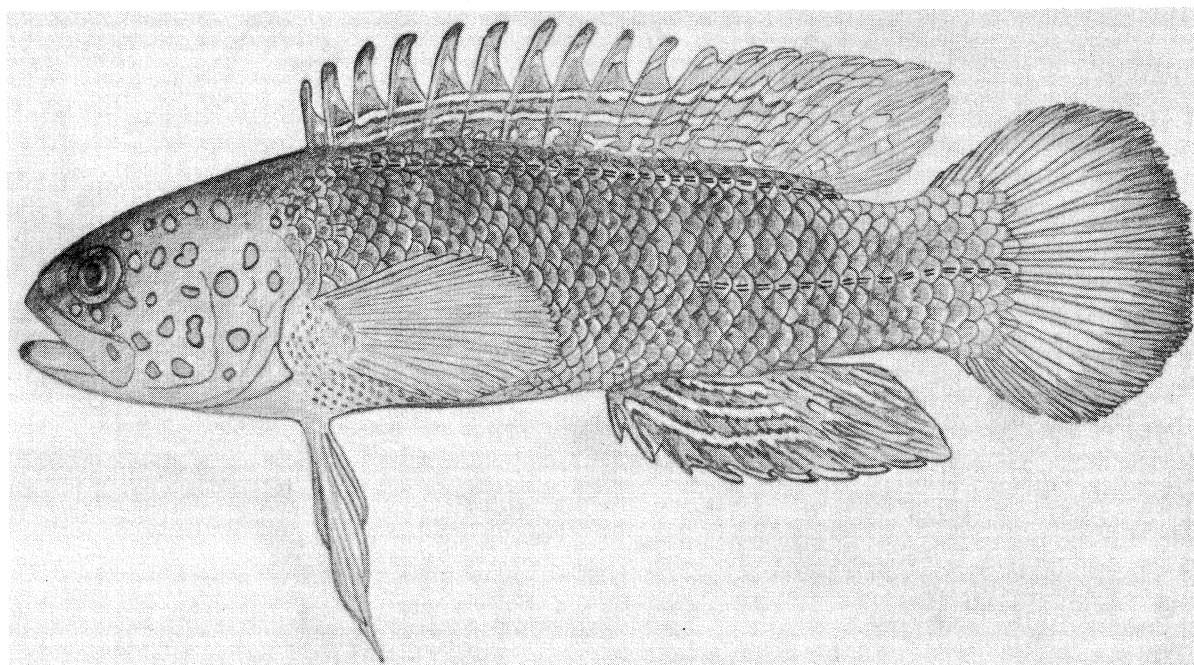


Fig. 3. Holotype of *Paraplesiops alisonae*, AMS I.19921-013, 107 mm SL. Drawing by R. Kuitert.

Live coloration: Head and body brown. Head spots iridescent blue. Body with 7–10 narrow dark brown vertical bars, most prominent in males and juveniles. Dorsal and anal fins with 2 or 3 longitudinal blue stripes; tips of rays blue. A thin blue posterior caudal margin. Females darker and with broader stripes on dorsal and anal fins.

Description. Membranes connecting dorsal spines deeply incised, connecting lower half of spines, membrane sloping downward posteriorly. Membranes between dorsal soft rays and anal rays weakly incised, connecting more than three-quarters of rays. Pectoral margin rounded. Eye subequal to snout. Mouth large, reaching below to behind end of eye. Outer row of teeth in jaws stout and short; inner teeth thinner. Tongue with a large oval patch of small teeth. Gill rakers much shorter than gill filaments. Body scales ctenoid, cycloid on belly, pectoral base, breast, top and sides of head. Jaws and lower surface of head naked. Upper lateral line extends to caudal peduncle just behind end of dorsal fin. Lower lateral line begins approximately under last dorsal spine, extending 2 or 3 scales onto caudal base; no notched scales.

Etymology. Named for Alison Kuitert.

Relationships. *Paraplesiops alisonae* differs from all other species of *Paraplesiops* in having short dorsal and caudal rays, in being more slender-bodied, with a body form superficially similar to species of *Plesiops*, and in lacking scales on the dorsal and anal bases. *Paraplesiops alisonae* is most similar to *P. bleekeri* in having the lower preopercular-mandibular pores grouped into clusters and in having the cheek scales largely exposed and not covered by pores. In *P. meleagris* and *P. poweri*, the preopercular mandibular pores are dense and more or less evenly spaced, and most of the cheek scales are embedded.

Material examined. HOLOTYPE—AMS I.19921-013, 1(107), Portsea Pier, Port Phillip Bay, Victoria; coll. R. Kuitert, 30 July 1977.

PARATYPES—AMS I.19921-014, 1(115), taken with holotype. AMS I.20078-002, 1(90), Grassy Port, King Island, Tasmania; coll. B. Russell, 5 Dec. 1977, 3–7 m. AMS I.20089-003, 1(55), Port Davies, Flinders Island, Tasmania; coll. B. Russell and C. Short, 3 Jan. 1978, 1 m. AMS I.20174-001, 1(118), Knob Point, Kangaroo Island, South Australia; coll. B. Russell, 6 Mar. 1978, 3–8 m. AMS I.21706-001, 1(93), Ricketts Point, Port Phillip Bay, Victoria; coll. R. Kuitert, Oct. 1979. NMV A.3145 2(34-106), Portsea Pier, Port Phillip Bay, Victoria; coll. R. Kuitert. SAM F.4730 1(105), The Rip, Point Lonsdale, Port Phillip Bay, Victoria; coll. R. Kuitert. WAM P.21736-005, 3(72-107), off Kings Beach, Victor Harbour, South Australia; coll. B. Hutchins.

Non-Type Material—WAM P.26006-001 2(123-123), Mondrain Island, Western Australia. WAM P.27578-001, 2(55-100), Barrell Rock, Tamar River mouth, Tasmania.

Paraplesiops bleekeri

Fig. 4

Plesiops bleekeri Günther, 1861: 364 (locality unknown).

Diagnosis. Dorsal rays XII, 10. Anal rays III, 9–10 (rarely 9). Other meristics shown in Tables 2–9. Pelvic fin very elongate, 39.4–48.4% of SL, reaching to between second anal spine to sixth soft ray. Caudal fin elongate, 32.6 to 40.5% of SL. Soft dorsal elongate in adult, longest ray 39.5–51.9% of SL. Body deep, depth at pelvic origin 32.6–38.9% of SL. Preopercular margin smooth. Preoperculum with numerous minute pores in narrow band around margin of eye and near posterior preopercular margin; most of cheek covered with medium-sized exposed scales. Pores on lower surface of lower jaw in distinct clusters as in *P. alisonae* (Fig. 2). Predorsal scaled forward to above posterior margin of eye.

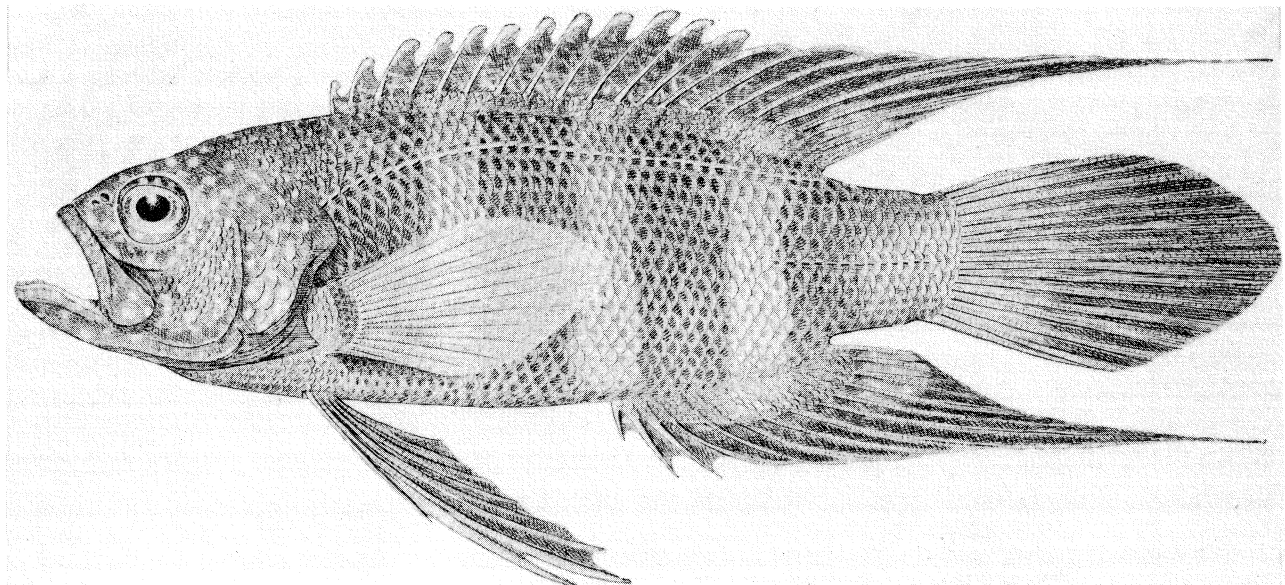


Fig. 4. *Paraplesiops bleekeri*, from Ogilby 1918.

Coloration in alcohol: Head and body tan to brown. Head with numerous small bluish-black, widely-spaced spots; spots much smaller than pupil diameter. No dark line above upper lip. Opercular spots subequal to cheek spots. Pelvic and median fins black, pectoral fin yellowish. Posterior end of dorsal and anal fins pale yellow. Caudal yellowish near base. Body with 4 broad dark brown bands, subequal to lighter interspaces.

Live coloration: Similar to preserved coloration, except as noted. Tips of median fins with a thin iridescent blue margin. Body bands black, interspaces white; bands and interspaces extending onto dorsal and anal fins. Posterior part of dorsal and anal fins yellow near base. Iridescent blue spots below and along bases of dorsal and anal fins. Pectoral fin yellow. Caudal fin bluish posteriorly, yellow near base. Caudal peduncle yellow from base of caudal to last black body band. Head spots iridescent blue. Outer margin of pelvic fin iridescent blue; rest of fin yellow, with blue along fin rays.

Juvenile coloration similar, but head spots larger; a large black spot covering posterior part of dorsal and anal fin; distal half of caudal fin black.

Günther (1861) indicated that the locality of the type was unknown, but thought that the specimen might have come from Norfolk Island. The species has not been found at Norfolk Island.

Material examined. *Queensland:* East of Palm Beach, Gold Coast—QM I.14875, 1(215). *New South Wales:* Woody Point—QM I.9899, 1(210). Newcastle—AMS IB.2621, 1(214); AMS IB.5459, 1(216); AMS IB.7541, 1(211). Terrigal—AMS IB.7540, 1(42). Austimer—AMS I.16533-001, 1(150). Avoca Beach, Sydney—AMS IB.7539, 1(157). Long Reef, Sydney—AMS I.15718-001, 1(204). Sydney area—AMS IB.7494, 1(224). Sydney Harbour—AMS A.704, 2(177-191); AMS I.12896, 1(212); AMS I.16720-002, 1(127); AMS I.16794-001, 1(151); AMS I.17272-001, 1(181). Port Hacking—AMS IB.822, 1(204); AMS I.14570, 1(202). Botany Bay—AMS I.9620, 1(200).

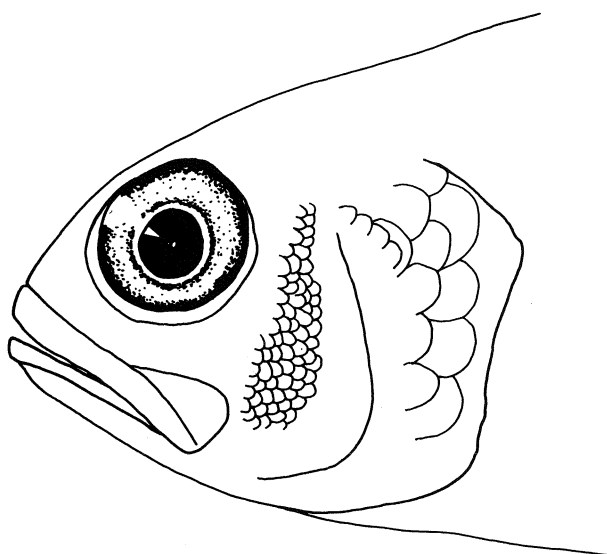


Fig. 5. Camera lucida drawing of lower surface of head of *Paraplesiops meleagris*, showing exposed preopercular scales.

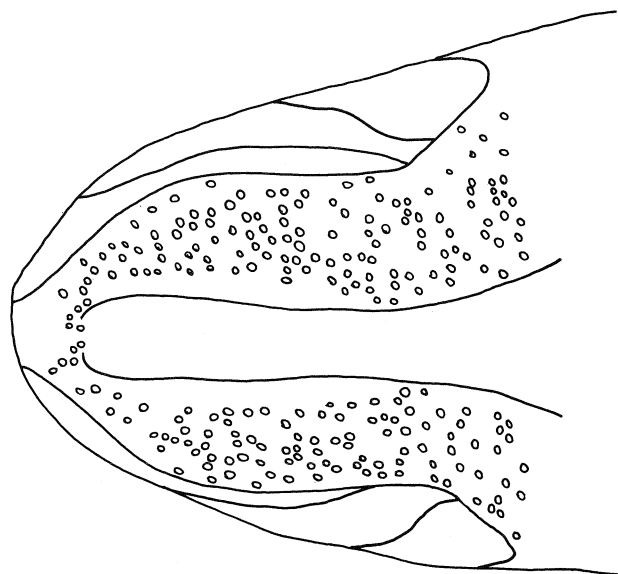


Fig. 6. Camera lucida drawing of lower surface of head of *Paraplesiops meleagris*, showing arrangement of head pores.

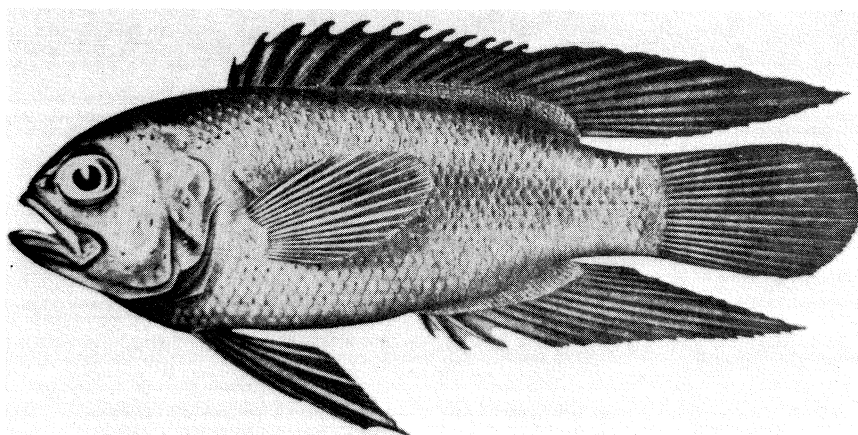


Fig. 7. *Paraplesiops meleagris*, after Waite.

Paraplesiops meleagris

Figs 5-7

Plesiops meleagris Peters, 1869: 708 (Adelaide, South Australia).

Bleekeria catafracta Castelnau, 1873a: 14 (Victoria).

Ruppelia prolongata Castelnau, 1873b: 51 (Victoria).

Plesiops gigas Steindachner, 1884: 1089 (Gulf of St. Vincent, South Australia).

Diagnosis. Dorsal rays XI-XII, 9-10 (rarely XI or 9). Anal rays III, 9-11 (rarely 9 or 11). Other meristics shown in Tables 2-9. Pelvic fin very elongate, 34.2-45.4% of SL, reaching to between sixth to ninth anal ray. Caudal fin elongate, 29.2-44.3% of SL. Soft dorsal very elongate in adult, longest ray 27-56.6% of SL. Body deep, depth at pelvic origin 34-43.3% of SL. Preopercular margin smooth. Preopercular scales largely embedded, exposed in 2-7 vertical rows (Fig. 5); preoperculum densely covered with pores. Predorsal scaled forward to above or just behind posterior end of eye. Pores on lower surface of lower jaw dense and evenly spaced (Fig. 6).

Coloration in alcohol: Head and body brown to black. Head covered with numerous bluish-black spots, much smaller than pupil diameter. An enlarged spot on ventral part of operculum subequal to pupil. Body often with numerous longitudinal rows of black spots. Base of pectoral fin often with an irregular black blotch or bar dorsally. Pectoral clear to dusky. Other fins black.

Live coloration: Head, body and fins (except pectoral) dark blue to black, covered with numerous small iridescent blue spots, which form longitudinal rows on body. Distal margins of dorsal and anal fins with a thin iridescent blue stripe. Caudal margin edged with thin iridescent blue line. Thin iridescent blue stripe along outer margin of pelvic spine. Juveniles similar in coloration to *Paraplesiops bleekeri*.

Remarks. Type material was not examined. *Plesiops gigas* was described as having scales on the bases of the dorsal and anal fins, 21 lower lateral line scales, and elongate dorsal and anal fins, characteristic of *Paraplesiops meleagris*. *Ruppelia prolongata* and *Bleekeria catafracta* were based on a single skin. Castelnau (1873b) regarded *Bleekeria* as a lapsus calami, apparently intending to use the name for an anthiine later described as *Lacepedia*. The description is brief, with the specimen having elongate dorsal and anal fins, uniform colour and being 13 inches in total length, suggesting *Paraplesiops meleagris*.

Victorian specimens of *P. meleagris* show several differences from other populations (Tables 4, 5, 6 and 9). Multiple comparisons of populations using Analysis of Variance techniques (Scheffé, 1959) indicate that the Victorian population differs significantly ($p < .01$) from South Australian and Western Australian populations in having greater lower lateral line scale counts, longitudinal scale counts, and upper lateral line scale counts. Gill raker counts are significantly higher ($p < .01$) in specimens from Victoria than the counts from Western Australian specimens.

Material examined. *Victoria:* NMV A.17, 1(210). The Rip, entrance to Port Phillip Bay—AMS I.23895-001, 3(59-113). Portsea—AMS I.19775-001, 1(167). Queenscliff—NMV A.506, 1(225); NMV A.507, 2(187-214). *South Australia:* SAM F.2946, 1(85); F.1220, 3(185-197); F.1744, 1(205); 1745, 1(200). Brighton—SAM F.444, 1(233); F.343, 1(215). Balgowan, Spencer Gulf—SAM F.2847, 1(210). St Vincents Gulf—SAM F.1773, 1(198); F.1006, 1(245). Port Pirie—SAM F.75, 1(191). *Western Australia:* AMS I.11182, 1(170). Recherche Archipelago—WAM P.25774-001, 2(141-193). Lancelin I.—WAM P.4178, 1(88). Albany District—AMS I.12041, 1(225). Geographe Bay—AMS I.19629-019, 2(197-208). Fremantle—AMS I.13155, 1(93). Perth—SAM F.2872, 1(188). Rottnest I.—CSIRO C.2353, 1(169). Abrolhos I.—WAM P.385, 1(107).

Paraplesiops poweri

Figs 8 & 9

Paraplesiops poweri Ogilby, 1908: 17 (Mud Island, Moreton Bay, Queensland).

Paraplesiops joliffei Ogilby, 1916: 112 (Green Island, Moreton Bay, Queensland).

Diagnosis. Dorsal rays XII, 9-10 (rarely 9). Anal rays III, 10. Other meristics shown in Tables 2-9. Pelvic fin very elongate, 38.4-50.6% of SL, reaching posteriorly to between seventh to tenth anal ray. Caudal fin elongate, 35.3-38.9% of SL. Soft dorsal rays very elongate in adults, longest ray 29.3-43.1% of SL. Body deep, depth at pelvic origin 35.6-44.4% of SL. Preopercular margin denticulate. Preoperculum covered with numerous small close-set pores. On preoperculum a vertical row 1 or 2 scales wide from behind upper part of eye ventrally to behind posterior margin of jaws (Fig. 8); posterior margin of preoperculum naked, with numerous pores; rest of cheek with medium-sized embedded cycloid scales, visible only upon dissection. Pores on lower surface of lower jaw evenly spaced as in *P. meleagris* (Fig. 6). Top of head scaled to above posterior end of eye.

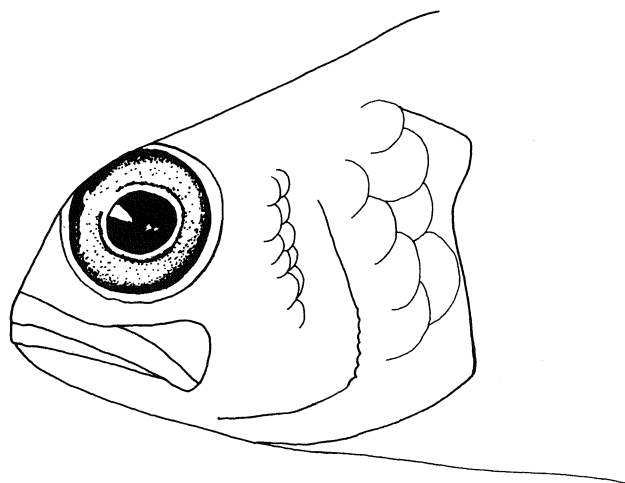


Fig. 8. Camera lucida drawing of head of *Paraplesiops poweri*, showing exposed preopercular scales.

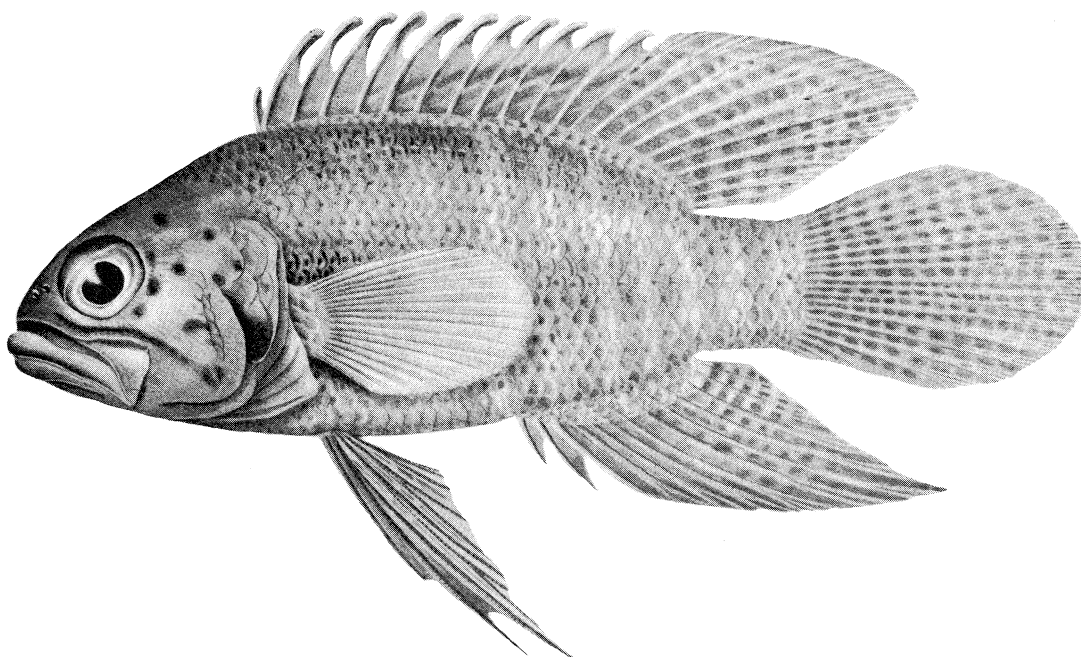


Fig. 9. *Paraplesiops poweri*, drawing of holotype of *P. jolliffei*, from Ogilby, 1918.

Coloration in alcohol: Head and body dark brown. Head with several small widely-spaced black spots, much smaller than pupil diameter. Thin black line from below middle of eye above upper jaw, extending onto preoperculum towards, but not reaching, operculum. Large black spot about equal in size to pupil diameter ventrally on operculum. Pelvic and median fins black. Pectoral fins clear to dusky. Entire body with 8-10 narrow dark brown faint vertical bands; bands wider than interspaces.

Live coloration: Similar to preserved coloration, except as follows: Tips of dorsal spines blue. Body bands distinctly contrasting with lighter interspaces. Head spots and line bluish black.

Photographs have been examined of individuals from Tweed Heads, New South Wales.

Material examined. HOLOTYPE, QM I.1548, 1(125), Mud I., Moreton Bay, Queensland. Holotype of *Paraplesiops jolliffei*, QM I.2652, 1(103), Green I., Moreton Bay, Queensland. Other material all from Queensland, arranged north to south: Bowen (Port Denison)—AMS IA.1785, 1(96); QM (unregistered), 2(90-100). Whitsunday Passage—AMS IA.858, 1(101); AMS IA.874-876, 3(84-97); AMS IA.879, 1(74). West Molle I.—QM I.5777-5778, 2(74-75). Lindeman I.—QMS IA.6687, 1(90). Great Keppel I.—AMS I.19347-002, 1(100). Humpy I.—AMS IB.7240, 1(38). Heron I.—AMS I.15482-010, 1(88); AMS I.15486-013, 1(67). One Tree I.—AMS I.15624-024, 3(75-82); AMS I.15634-018, 1(90); AMS I.15641-029, 1(77); AMS I.15647-004, 3(73-90); AMS I.15647-044, 3(72-89); AMS I.15679-026, 2(95-104). Moreton Bay—AMS I.18258-001, 1(129); QM 541, 1(146); QM 2669, 1(85); QM 11609, 1(89). Moreton I.—QM 6744, 1(136).

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References

- Allen, G.R., 1977. A revision of the plesiopid fish genus *Trachinops*, with a description of a new species from Western Australia. Records of the Western Australian Museum 5(1): 59-72.
- & R. Kuitert. 1976. A review of the plesiopid fish genus *Assessor*, with descriptions of two new species. Records of the Western Australian Museum 4(3): 201-215.
- Bleeker, P., 1875. Sur la famille des Pseudochromidoïdes et révision de ses espèces insulindiennes. Naturkundige Verhandeling der Akademie, Amsterdam 15: 1-32.
- Böhlke, J.E., 1960. Comments on serranoid fishes with disjunct lateral lines, with the description of a new one from the Bahamas. Notulae Naturae 330: 1-11.
- Castelnau, F.L., 1873a. Notes on the edible fishes of Victoria. Inter-colonial Exhibition Essays, Victorian Exhibition, 1872-73, No. 5: 1-17.
- 1873b. Contributions to the Ichthyology of Australia. No. III. Supplement to the fishes of Victoria. Proceedings of the Zoological and Acclimatisation Society, Victoria 2: 37-58.
- Günther, A., 1861. Catalogue of the Acanthopterygian fishes in the collection of the British Museum. British Museum, London. Vol. 3. 586 pp.
- Hubbs, C.L., & K.R. Lagler, 1958. Fishes of the Great Lakes region. Bulletin of the Cranbrook Institute of Science, Ann Arbor, No. 26. 251 pp.
- Inger, R.F., 1955. A revision of the fishes of the genus *Plesiops*. Pacific Science 9(3): 259-276.

Table 5. Upper lateral line scale counts in various species of *Paraplesiops*.

Species/Population	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	\bar{x}
<i>P. poweri</i>	2	3	8	9	3												30.3
<i>P. bleekeri</i>							5	4	6	2	1	1	1				35.9
<i>P. meleagris</i> Victoria										1	2	3	2		2	1	39.7
S. Australia							1	2	3	5			1				36.4
W. Australia								3	4	2	1						36.1
<i>P. alisonae</i>							5	2	1	2	1						35.2

Table 6. Lower lateral line scale counts in various species of *Paraplesiops*.

Species/Population	9	10	11	12	13	14	15	16	17	18	19	20	21	\bar{x}	
<i>P. poweri</i>	1	1	16	5	1									10.3	
<i>P. bleekeri</i>			1	8	8	3								12.7	
<i>P. meleagris</i> Victoria									1	2	1	1	5	1	18.9
S. Australia						1		2	3	3		1	2	16.8	
W. Australia				1			1	2	3	1	1	1		16.7	
<i>P. alisonae</i>				1		5		5						14.7	

Table 7. Predorsal scale count for species of *Paraplesiops*.

Species/Population	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	\bar{x}	
<i>P. poweri</i>	1	7	7	4	3	3																				9.4
<i>P. bleekeri</i>															1	3	2	5	3		1		2	1		22.2
<i>P. meleagris</i> Victoria								1	2		2	1	1	1		1	2									19.4
S. Australia					1		1	1	2		1	3	2		1											17.5
W. Australia			1			1	1	1	1	1				2	1	1										17.3
<i>P. alisonae</i>							1	4		2			1													16.9

Table 8. Transverse scale counts and oblique cheek scale rows for species of *Paraplesiops*.

Species/Population	Transverse scale count—Anal origin to upper lateral line											Oblique cheek scale rows												
	13	14	15	16	17	18	19	20	21	22		2	3	4	5	6	7	8	9	10	11	12		
<i>P. poweri</i>	7	8	6	2	—	—	—	—	—	—		17	6	1	—	1	—	—	—	—	—	—	—	—
<i>P. bleekeri</i>	—	—	—	—	3	9	3	3	—	—		—	—	—	—	—	—	2	4	5	7	—	—	
<i>P. meleagris</i> Victoria	—	—	—	—	—	2	1	—	6	2		1	2	2	3	2	1	—	—	—	—	—	—	
S. Australia	—	—	—	—	1	2	3	5	1	—		—	2	4	2	4	—	—	—	—	—	—	—	
W. Australia	—	—	—	1	—	2	2	4	—	—		1	1	1	2	1	—	—	—	—	—	—	—	
<i>P. alisonae</i>	—	1	4	3	1	—	—	—	—	—		—	—	—	—	—	—	—	—	2	4	1	1	

Table 9. Lower gill raker counts for species of *Paraplesiops*.

Species/Population	9	10	11	12	13	14	15	\bar{x}
<i>P. poweri</i>	—	—	4	20	1	—	—	11.9
<i>P. bleekeri</i>	—	—	—	—	7	8	3	13.8
<i>P. meleagris</i> Victoria	—	—	—	—	4	6	1	13.7
S. Australia	—	—	—	—	4	2	4	13.0
W. Australia	—	—	2	6	1	1	—	12.1
<i>P. alisonae</i>	4	5	1	—	—	—	—	9.7

Table 10. Comparison of selected morphometric features in species of *Paraplesiops*, expressed as percentage of standard length.

Species	N	Size range (mm)	Longest dorsal ray	Pelvic length	Caudal length	Body depth at pelvic origin
<i>P. poweri</i>	25	38–129	29.3–43.1	38.4–50.6	35.3–38.9	35.6–44.4
<i>P. bleekeri</i>	18	127–224	39.5–51.9	39.4–48.9	32.6–40.5	32.6–38.9
<i>P. meleagris</i>	24	59–245	27.0–56.6	34.2–45.4	29.2–44.3	34.0–43.3
<i>P. alisonae</i>	8	56–115	21.7–25.4	26.4–33.8	23.2–28.4	26.4–32.2

Table 11. Measurements of types of *Paraplesiops alisonae* in mm. Second specimen, AMS I.19921-013, is holotype.

Character	AMS I. 19921-014	AMS I. 19921-013	AMS I. 20078-02	AMS I. 20089-003	AMS I. 20174-001	NMV A3145	NMV A3145	SAM F.4730
Standard length	115.0	106.0	92.5	56.2	101.0	106.0	34.4	105.0
Head length	38.0	36.0	32.5	21.0	39.0	36.3	13.1	36.0
Orbit length	8.2	7.7	7.2	4.9	8.7	7.7	3.9	8.0
Snout length	8.0	7.3	8.0	4.3	9.5	7.3	2.4	6.8
Jaw length	18.0	17.2	16.9	10.2	19.7	17.8	5.6	17.3
Suborbital width	2.4	2.5	2.4	1.3	2.6	5.6	1.7	5.6
Fleshy interorbital width	7.5	6.8	4.7	2.9	5.8	5.6	2.7	6.4
Body depth at pelvic origin	32.4	32.0	24.5	15.4	32.5	28.7	10.0	29.6
Pectoral length	31.0	27.8	22.8	14.2	28.4	29.5	9.6	26.0
Pelvic length	31.0	28.0	27.5	19.0	32.7	31.0	12.0	32.5
Caudal length	28.5	27.0	24.6	15.1	26.8	28.4	10.0	24.5
Longest dorsal ray	26.0	23.0	21.8	12.2	25.7	23.4	7.5	23.0