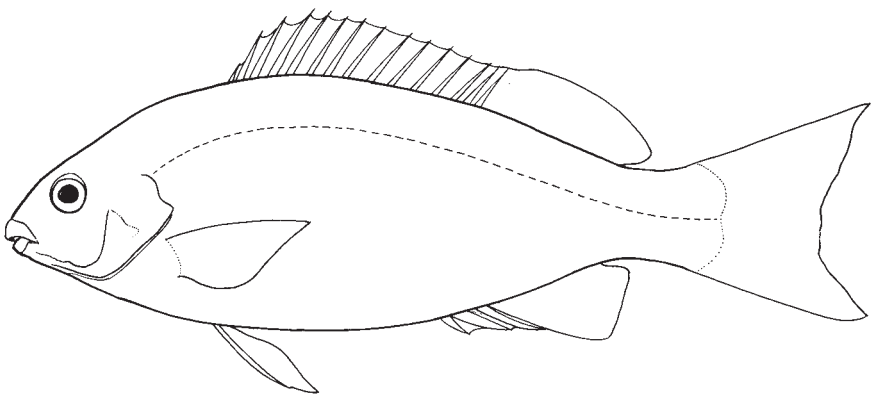
GIRELLIDAE

Nibblers

by K.E. Carpenter

Diagnostic characters (for species occurring in the area): Medium-sized fishes (to 76 cm); body oblong. Mouth small, not extending posteriorly beyond eye; **maxilla covered by suborbital; outer teeth in jaws mostly tricupsid incisors**. **Single dorsal fin with XIII to XVI spines** and 11 to 14 soft rays. **Anal fin** with III spines and **11 or 12 soft rays**. Pelvic fins inserted just under or distinctly just posterior to pectoral-fin base. Caudal fin truncate to broadly forked. **Scales** small, ctenoid, extending onto cheeks and upper part of opercles, and bases of dorsal and anal fins but **not covering most of soft portion of dorsal and anal fins**. Lateral line continuous, following upper profile of body. **Colour:** uniformly dark bluish grey to greenish grey above and silvery below, sometimes with thin dark bars on upper sides.



Habitat, biology, and fisheries: Coastal and estuarine, mostly on hard substrate bottoms that support algal growth, from the intertidal zone to a depth of about 25 m. Nibblers feed on encrusting and floating algae and incidentally on small crustaceans. Caught primarily by anglers. Girrelids are warm-temperate and subtropical fishes that are mostly excluded from the area except at the southernmost fringe in Australia. *Girella punctata* is a northwestern Pacific subtropical species that occurs as far south as Batan Island in the Philippines, which is just north of the area.

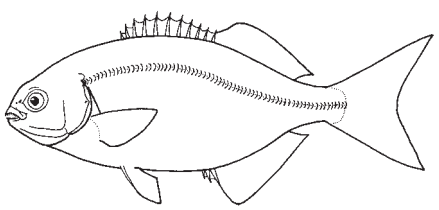
Remarks: Girellids are combined under the Kyphosidae by some authors, sometimes together with Microcanthidae and Scorpididae.

Similar families occurring in the area

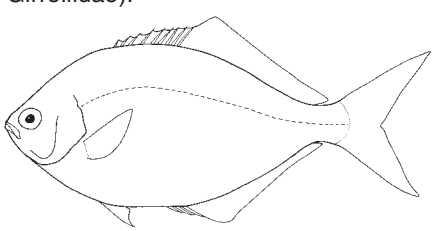
Kyphosidae: rear tip of maxilla exposed (covered by suborbital in Girrellidae); dorsal fin with XI spines (XII to XVI in Girrellidae); scales extend onto most of soft portion of dorsal and anal fins (only basally in Girrellidae).

Scorpididae: no incisiform teeth (outer teeth mostly incisiform in Girrellidae); spinous part of dorsal fin much lower than soft part of dorsal fin; dorsal fin with IX or X spines (XII to XVI in Girrellidae); scales extend onto most of soft portion of dorsal and anal fins (only basally in Girrellidae).

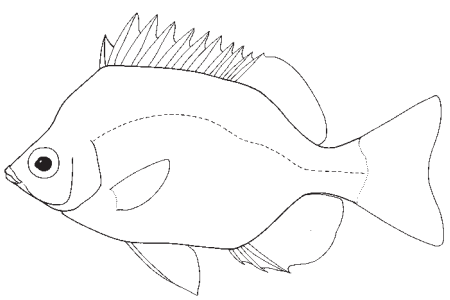
Microcanthidae: close-set brush-like teeth; dorsal fin with XI or XII spines and 16 to 18 soft rays (XII to XVI spines and 11 to 14 soft rays in Girrellidae); anal fin with 16 to 19 soft rays (11 or 12 soft rays in Girrellidae).



Kyphosidae



Scorpididae



Microcanthidae

Key to the species of Girellidae occurring in the area

1a. Dorsal fin with XIII spines and 14 soft rays; pelvic fins inserted nearly just below bases of pectoral fins; body uniformly dark . . . . . ***Girella elevata***

1b. Dorsal fin with XIV to XVI spines and 11 or 12 soft rays; pelvic fins inserted distinctly posterior to bases of pectoral fins; around 11 narrow bars along upper sides . . . ***Girella tricuspidata***

List of species occurring in the area

The symbol is given when species accounts are included.

Girella elevata Macleay, 1881
Girella tricuspidata (Quoy and Gaimard, 1824)

References

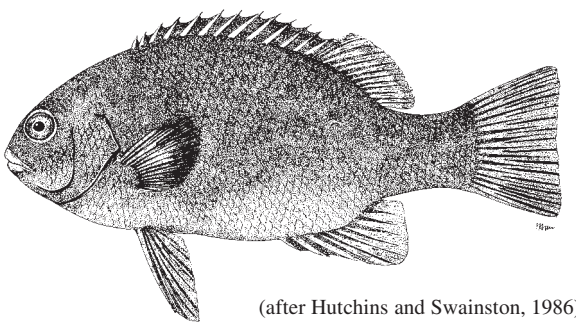
Gomon, M.F., J.C.M. Glover, and R.H. Kuiter (eds). 1994. *The fishes of Australia's south coast.* Adelaide, State Print, 992 p.

Kuiter, R.H. 1993. *Coastal fishes of south-eastern Australia*. Honolulu, University of Hawaii Press, 437 p.

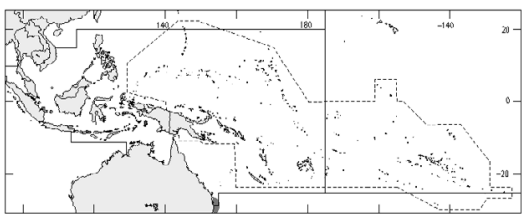
Girella elevata Macleay, 1881

En - Black drummer.

Maximum total length 76 cm. Typically schooling on rocky reefs from exposed shorelines to a depth of around 25 m. Confined to the eastern coast of Australia from southern Queensland to Wilsons Promontory in Victoria.



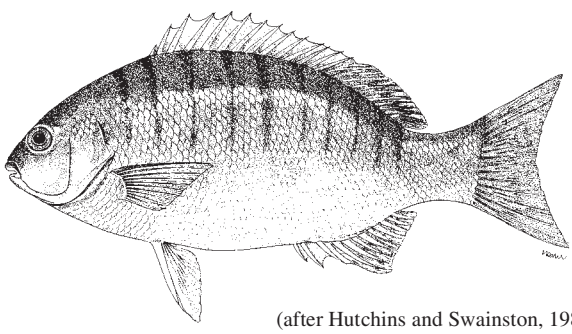
(after Hutchins and Swainston, 1986)



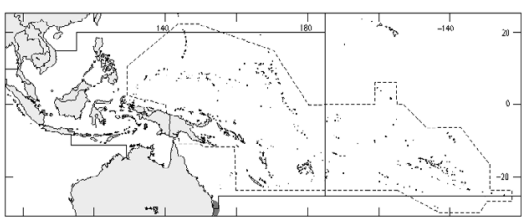
Girella tricuspidata (Quoy and Gaimard, 1824)

En - Luderick.

Maximum total length 62 cm. Schooling on rocky reefs and around hard structures in estuaries and coastal areas to a depth of around 20 m. In Australia from southern Queensland to central southern Australia, northern Tasmania, and northern New Zealand.



(after Hutchins and Swainston, 1986)



SCORPIDIDAE

Halfmoons

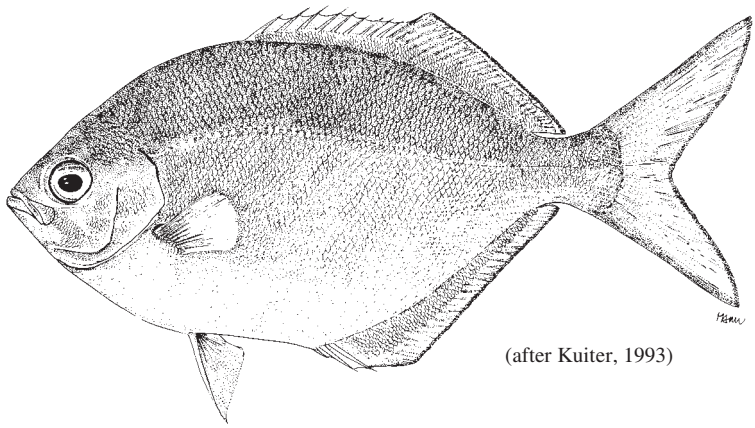
by K.E. Carpenter

A single species occurring in the area.

Scorpis lineolata Kner, 1865

Frequent synonyms / misidentifications: *Scorpis lineolatus* Kner, 1865 / *Scorpis aequipinnis* Richardson, 1848.

FAO names: En - Silver sweep.



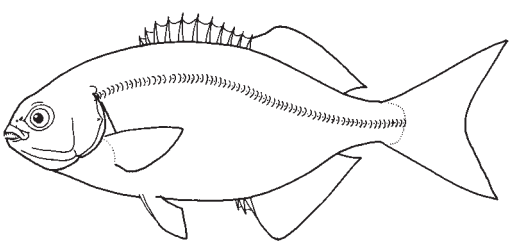
(after Kuiter, 1993)

Diagnostic character: Body compressed and deep, its depth 1.8 to 2 times in standard length. Head length 3.1 to 3.7 times in standard length; eyes 2.9 to 3.7 times in head length. Mouth terminal, oblique, and small, its posterior end just reaching anterior margin of eye; maxilla exposed; **strong conical teeth** in bands, the outer row enlarged and recurved. **Single dorsal fin with IX or X spines and 26 to 28 soft rays, the spines about 1/2 height of soft rays**. **Anal fin with** III spines and **27 or 28 soft rays**. Caudal fin broadly forked. Pelvic fins inserted distinctly just posterior to pectoral-fin base. **Scales** small, ctenoid, extending onto and **covering most of soft portion of dorsal and anal fins**. Lateral line continuous, gently curved. **Colour:** mostly greyish, darker above and whitish below; upper opercular margin with a thin black edge; base of pectoral fins black; upper and lower margins of caudal-fin lobes blackish.

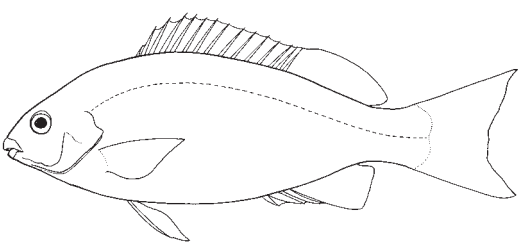
Similar families occurring in the area

Kyphosidae: incisiform teeth in jaws (no incisiform teeth in Scorpididae); dorsal fin with 12 to 15 soft rays (26 to 28 in Sorpididae), dorsal-fin spines not noticeably shorter than soft rays (noticeably shorter in Scorpididae); anal fin with 11 to 14 soft rays (27 or 28 in Scorpididae).

Girellidae: outer teeth mostly incisiform (no incisiform teeth in Scorpididae); spinous part of dorsal fin not much lower than soft part of dorsal fin; dorsal fin with XII to XVI spines and 11 to 14 soft rays (26 to 28 in Scorpididae); anal fin with 11 or 12 soft rays (27 or 28 in Scorpididae); scales not extending onto most of soft portion of dorsal and anal fins (extend onto most of soft portion of dorsal and anal fins in Scorpididae).



Kyphosidae

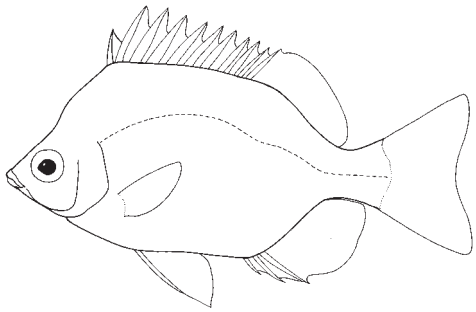


Girrellidae

Microcanthidae: close-set brush-like teeth (strong conical teeth in Scorpididae); spinous part of dorsal fin generally longer than soft part of dorsal fin (spinous portion noticeably shorter in Scorpididae); dorsal fin with 16 to 18 soft rays (26 to 28 in Scorpididae); anal fin with 16 to 19 soft rays (27 or 28 in Scorpididae); scales not extending onto most of soft portion of dorsal and anal fins (extend onto most of soft portion of dorsal and anal fins in Scorpididae).

Size: Maximum total length to 37 cm.

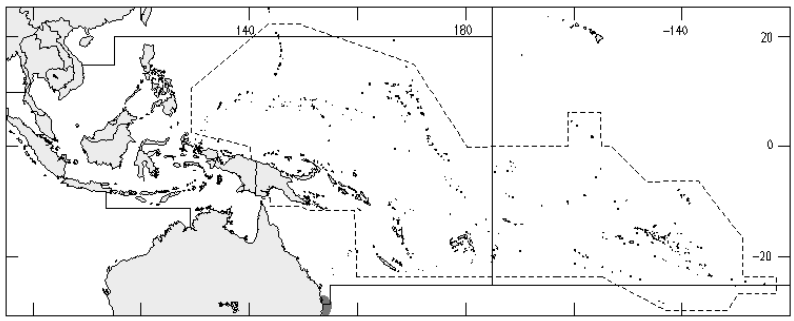
Habitat, biology, and fisheries: Coastal and estuarine, mostly on rocky reefs to a depth of about 30 m. Occurs in large schools. Feeds on zooplankton and algae in midwater. Caught mostly by anglers.



Microcanthidae

Distribution: Southeastern Australia, Lord Howe Island, and northern New Zealand.

Remarks: Scorpidids are combined under the Kyphosidae by some authors, sometimes together with Microcanthidae and Girellidae.



References

Gomon, M.F., J.C.M. Glover, and R.H. Kuiter (eds). 1994. *The fishes of Australia's south coast.* Adelaide, State Print, 992 p.

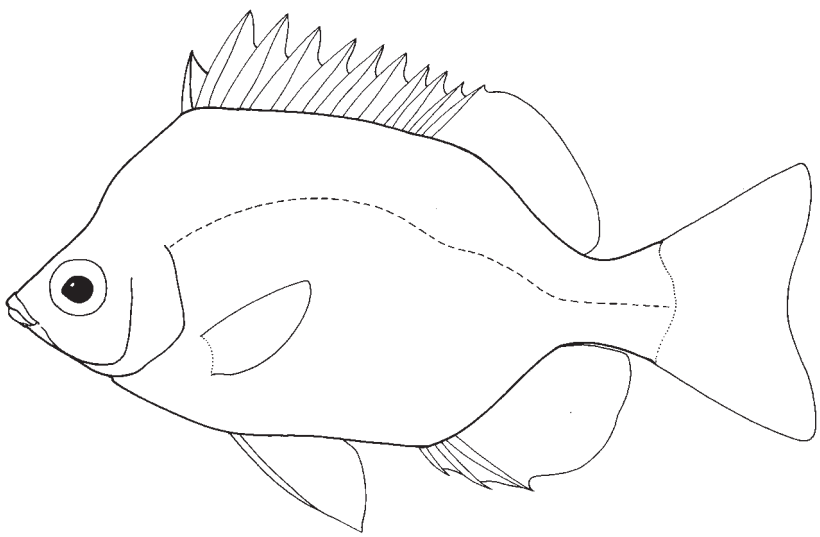
Kuiter, R.H. 1993. *Coastal fishes of south-eastern Australia*. Honolulu, University of Hawaii Press, 437 p.

MICROCANTHIDAE

Microcanthids

by K.E. Carpenter

Diagnostic character: Moderate-sized fishes (to 25 cm); body ovate to high. Mouth terminal, small, not extending posteriorly beyond anterior margin of eye; **teeth small, close-set, and pointed**, in a broad band or a single row. **Single dorsal fin with XI or XII spines and 16 to 18 soft rays. Anal fin with** III spines and **16 to 19 soft rays**. Pelvic fins inserted distinctly just posterior to pectoral-fin base. Caudal fin emarginate to forked. **Scales** small, ctenoid, extending onto cheeks and upper part of opercles, and forming a scaly sheath at bases of dorsal and anal fins and **extending onto soft portion of dorsal and anal fins**. Lateral line continuous, smoothly curved. **Colour:** yellowish or whitish with dark brown or blackish nearly horizontal or oblique stripes.



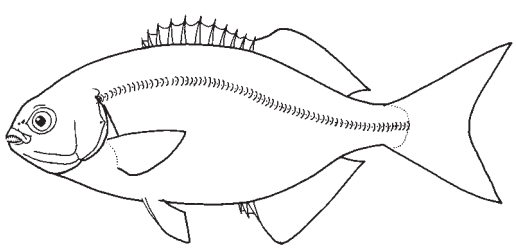
Habitat, biology, and fisheries: Shallow coastal and rocky estuarine, mostly on hard substrate, from the intertidal zone to a depth of about 30 m. Feed on small invertebrates and algae. Of little interest to fisheries except in the aquarium trade. Microcanthids are warm-temperate and subtropical fishes that are mostly excluded from the area except at the southernmost fringe in Australia.

Remarks: Microcanthids are combined under the Kyphosidae by some authors, sometimes together with Microcanthidae and Scorpididae; microcanthids are also sometimes included under the Scorpididae.

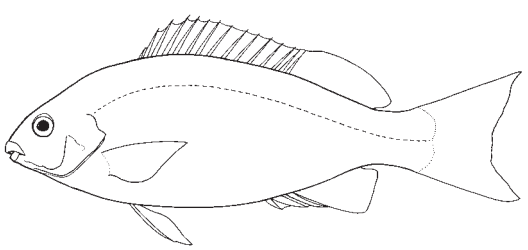
Similar families occurring in the area

Kyphosidae: teeth incisor-like (close-set pointed teeth in Microcanthidae); dorsal fin with 12 to 15 soft rays (16 to 18 in Microcanthidae); anal fin with 11 to 14 soft rays (16 to 19 in Microcanthidae).

Girellidae: outer teeth mostly tricuspid incisors (close-set pointed teeth in Microcanthidae); dorsal fin with XIII to XVI spines and 11 to 14 soft rays (XI or XII spines and 16 to 18 soft rays in Microcanthidae); anal fin with 11 or 12 soft rays (16 to 19 soft rays in Microcanthidae).



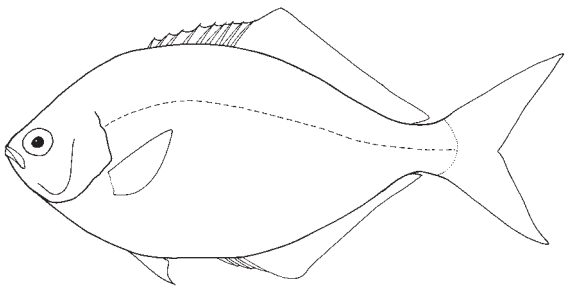
Kyphosidae



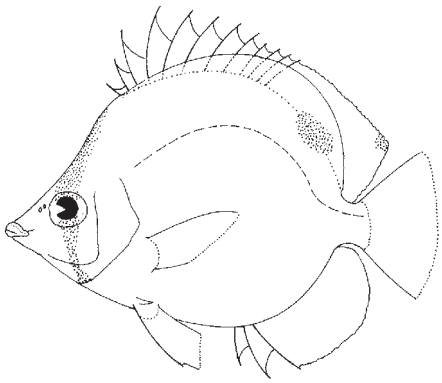
Girellidae

Scorpididae: spinous part of dorsal fin much lower than soft part of dorsal fin; dorsal fin with IX or X spines and 26 to 28 soft rays (XI or XII spines and 16 to 18 soft rays in Microcanthidae); anal fin with 27 or 28 soft rays (16 to 19 soft rays in Microcanthidae).

Chaetodontidae: caudal fin typically truncate or rounded (emarginate or forked in Microcanthidae); pelvic fins inserted just below or nearly just below pectoral-fin base (distinctly behind pectoral-fin base in Microcanthidae).



Scorpididae



Chaetodontidae

Key to the species of Microcanthidae occurring in the area

1a. Lateral stripes nearly horizontal; lateral-line scales 70 to 78 . . . . . ***Atypichthys strigatus***

1b. Lateral stripes distinctly oblique; lateral-line scales 56 to 60 . . . . . ***Microcanthus strigatus***

List of species occurring in the area

The symbol is given when species accounts are included.

Atypichthys strigatus (Günther, 1860)

Microcanthus strigatus (Cuvier, 1831)

References

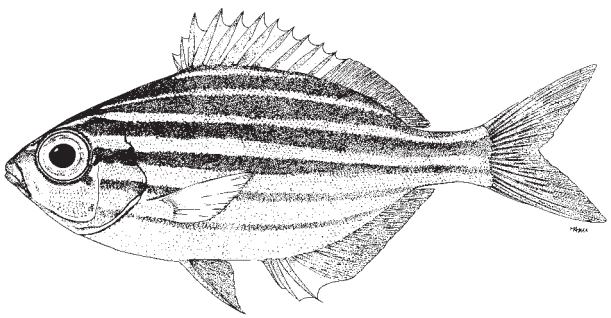
Gomon, M.F., J.C.M. Glover, and R.H. Kuiter (eds). 1994. T*he fishes of Australia's south coast.* Adelaide, State Print, 992 p.

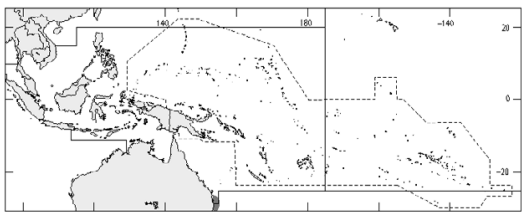
Kuiter, R.H. 1993. *Coastal fishes of south-eastern Australia*. Honolulu, University of Hawaii Press, 437 p.

Atypichthys strigatus (Günther, 1860)

En - Australian Mado.

Maximum total length about 25 cm. Schooling in coastal waters and estuaries typically over hard substrate, from the intertidal zone to a depth of about 30 m. Southern Queensland to Tasmania and Lord Howe Island.



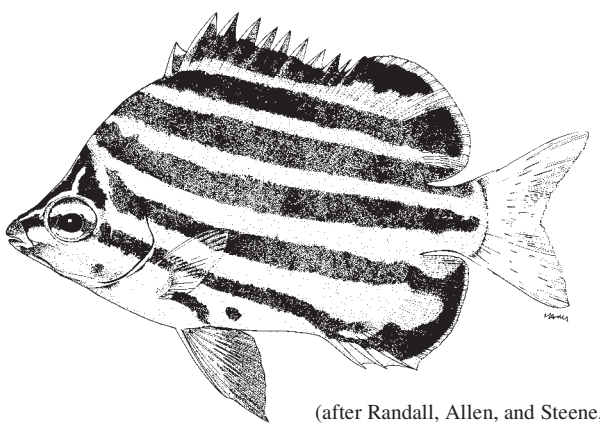


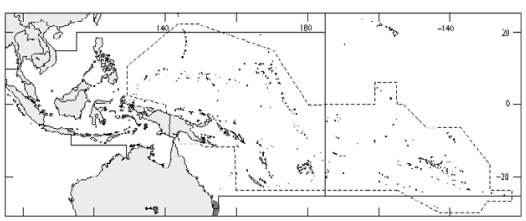
(after Hutchins and Swainston, 1986)

Microcanthus strigatus (Cuvier, 1831)

En - Stripey.

Maximum total length 16 cm. In small to large aggregations in shallow rocky coastal and estuarine areas. Japan to Taiwan Province of China and Hawaii in the northern hemisphere and in the southern hemisphere in southeastern Australia from the Capricorn Group to southern New South Wales.





(after Randall, Allen, and Steene, 1990)

ARRIPIDAE

Australian salmons

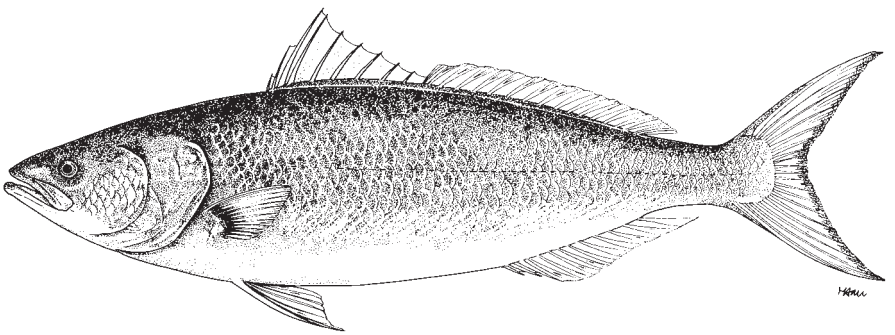
by J.B. Hutchins

A single species occurring in the area.

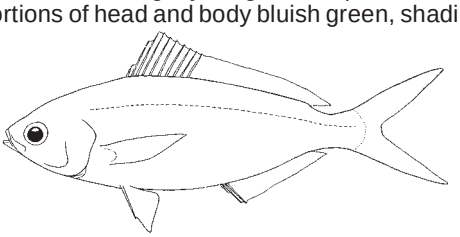
Arripis trutta (Forster in Bloch and Schneider, 1801) ASA

Frequent synonyms / misidentifications: None / *Arripis georgianus* (Valenciennes, 1831).

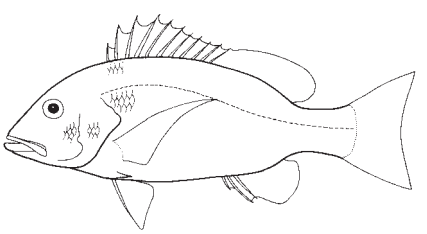
FAO names: En - Australian salmon; **Fr** - Salmon australien; **Sp** - Salmón de Australia.



Diagnostic characters: Body medium sized (to about 1 m), robust and moderately elongate (streamlined); caudal peduncle long and slender. **Head conical with oblique terminal mouth, maxilla reaching below centre of eye.** Eye small with prominent adipose tissue along front and rear margins in large fish. Teeth small, pointed, narrow bands in each jaw. Scales moderately small, very finely ctenoid, smooth to touch, covering body and head except lower jaw, snout, and above eye; lateral line nearly straight. Single dorsal fin with long base and low notch between spinous and rayed protions; **spinous portion with IX spines, noticeably higher than soft portion with 15 to 18 soft rays; anal fin small, with III spines and 9 or 10 soft rays**; caudal fin deeply forked; pelvic fins relatively short, but slightly longer than pectoral fins. **Total gill rakers on first gill arch 33 or 40. Colour:** upper portions of head and body bluish green, shading to silvery white below; juveniles with series of vertical golden bars or rows of spots on body; spots in adult relatively smaller, darker, more irregularly placed, and confined to upper sides; pectoral fins bright yellow, blackish at base, other fins clear, caudal fin with blackish posterior border.



Caesionidae



Lutjanidae

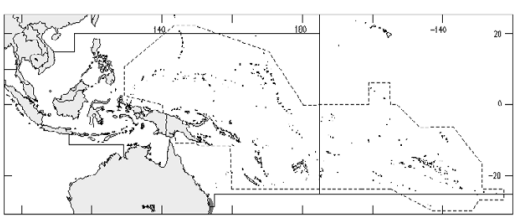
Similar families occurring in the area

Caesionidae: dorsal-fin spines X or more; no distinct notch between spinous and soft-rayed portions of dorsal fin.

Lutjanidae: dorsal-fin spines X or more.

Size: Maximum total length about 1 m.

Habitat, biology, and fisheries: Shallow coastal waters, often entering estuaries. Swims in large schools close to the shoreline, feeding on zooplankton and small fishes. Preyed upon by larger carnivores especially sharks. Popular recreational fishes that are commercially important in temperate areas, but not marketed in the Western Central Pacific.



Distribution: Southern Australia, ranging as far north on the east coast as southern Queensland. Also found in New Zealand.

Reference

Paulin, C.D. 1993. Review of the Australian fish family Arripididae (Percomorpha). *Aust. J. Mar. Freshwater Res.*, 44:459-471.

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