

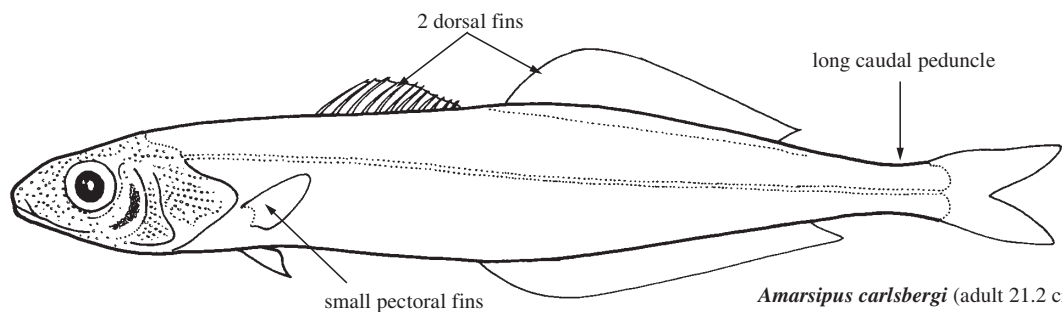
## Suborder STROMATEOIDEI

## AMARSIPIDAE

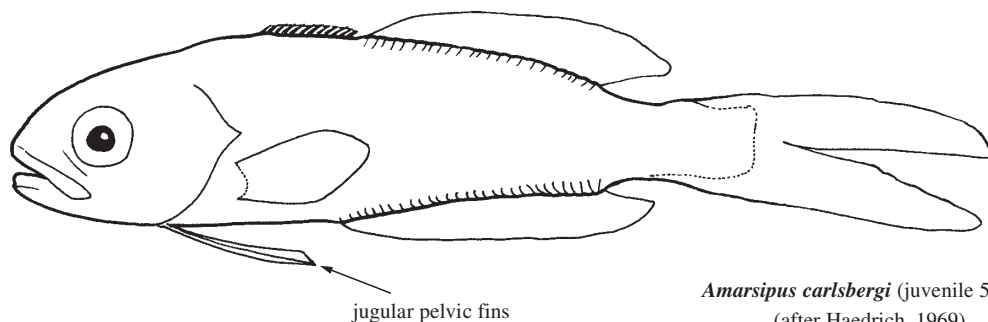
## Amarsipas

by P.R. Last

**Diagnostic characters:** Small (to 22 cm) fishes with a slender, compressed, moderately firm body (less so in young); mucous canal system well developed beneath the skin, pores scattered over entire body. **Caudal peduncle moderately long and compressed**, without lateral keels. Head moderately short, compressed. Snout bluntly pointed. Opercle thin, delicate. Eye moderately large, located close to dorsal surface, preceded by adipose tissue. **Mouth moderately large and terminal, not protractile, maxilla reaching beyond border of eye;** lacrimal (predorsal) bone partly or wholly covering upper jaw when mouth closed; **no pharyngeal sacs.** Teeth small, uniserial, and recurved; **3 or 4 teeth on vomer**, those on palatines weak. Gill rakers moderately long, stout, and flattened, about 19 to 22 on outer gill arch. **Branchiostegal rays 6.** Two distinct dorsal fins in adults, almost connected in young; first dorsal fin with IX to XII short, delicate spines, the fin origin just behind pectoral-fin base; second dorsal fin much taller than first dorsal fin, usually with 22 to 27 soft rays. Anal fin similar to second dorsal fin in size and form, with 27 to 32 soft rays. Caudal fin stiff and deeply forked. **Pectoral fins small and rounded, located low on body.** **Pelvic fins small, close together, jugular in juveniles, thoracic in adults.** **Lateral line extending along midline over hind half of body, reaching caudal-fin base;** scales small, cycloid, thin, moderately deciduous; **head naked except on opercles.** **Vertebrae 46 to 48.** **Colour:** uniformly dark brown or black; gill cavity dark.



*Amarsipas carlsbergi* (adult 21.2 cm)  
(Konovalenko and Piotrovskiy, 1988)



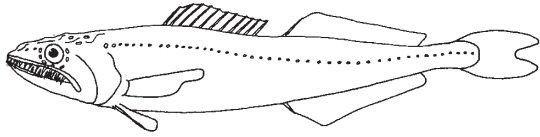
*Amarsipas carlsbergi* (juvenile 56 mm)  
(after Haedrich, 1969)

**Habitat, biology, and fisheries:** Epipelagic in the equatorial Indian and Pacific oceans. The single species of this poorly known family was only discovered recently and the first adult described less than a decade ago. Adults (up to 22 cm standard length) have been captured shallower than 130 m at night. Larvae are rare in plankton collections but juveniles are taken frequently near the surface by large midwater trawls. Nothing is known of its biology.

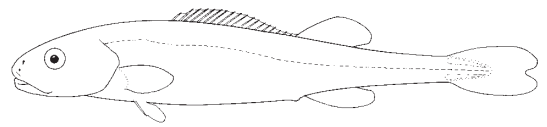
### Similar families occurring in the area

Chiasmodontidae: mouth large (rather than small) with long teeth in jaws (small teeth in Amarsipidae).

Tetragonuridae: second dorsal-fin base distinctly shorter than first (rather than the reverse); teeth flattened and knife-like in lower jaw (small and sharp in Amarsipidae); prominent scaly keels on caudal peduncle (absent in Amarsipidae).



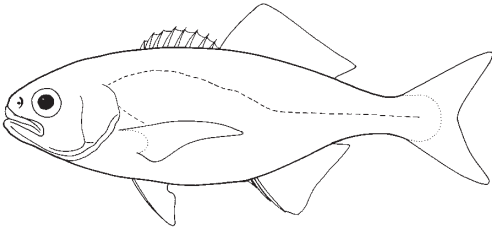
**Chiasmodontidae**



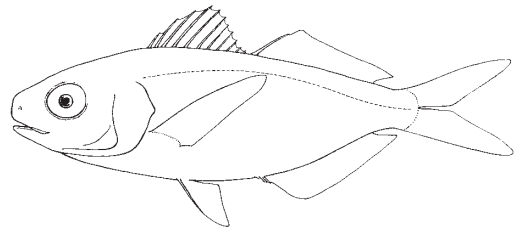
**Tetragonuridae**

Centrolophidae: dorsal fin single or with first almost connected to second (well separated in Amarsipidae); no teeth on roof of mouth (roof with small teeth in Amarsipidae); deep bodied to elongate (rather than very elongate); branchiostegal rays 7 (rather than 6).

Nomeidae: dorsal-fin origin over or before pectoral-fin base in adult (well behind base in Amarsipidae); lateral line following dorsal profile (rather than along midline posteriorly); pharyngeal sacs present (rather than absent).



**Centrolophidae**



**Nomeidae**

### A single species in this family

*Amarsipus carlsbergi* Haedrich, 1969

### References

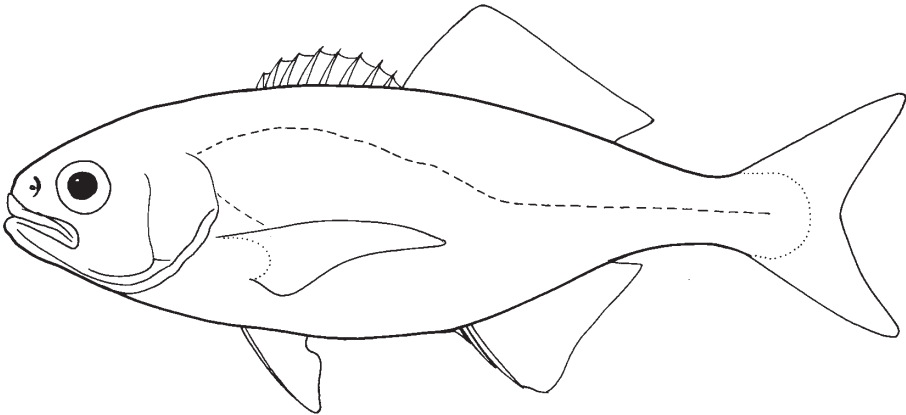
- Haedrich, R.L. 1969. A new family of aberrant stromateoid fishes from the equatorial Indo-Pacific. *Dana Rept.*, 76(3-14):14 p.
- Konovalenko, I.I. and A.S. Piotrovskiy. 1989. First description of a sexually mature Amarspa, *Amarsipus carlsbergi*. *J. Ichthyol.*, 28(5):86-89.

## CENTROLOPHIDAE

### Medusafishes (ruffs, barrellfishes)

by R.M. McDowall

**Diagnostic characters:** Shallow to deep-bodied stromateoid fishes of small to large size (to 137 cm fork length); body shape variable, from somewhat compressed and stiff to highly compressed and limp. Head large, snout often very blunt. Eyes moderately large, less than snout length, set low in head. Mouth moderate, may extend back below eyes, **lower jaw often shorter than upper and tucking inside it when closed; lacrimal bone often projects downwards outside maxilla giving centrolophids (and other stromateoids) a distinctive look. Teeth in jaws fine, uniserial; no teeth on vomer, palatines, mesopterygoids, ectopterygoids, or basihyal, but sometimes a row present on basibranchials. Pharyngeal sacs present with a profusion of complexly to simply toothed papillae.** Branchiostegal rays usually 7. Total gill rakers on first gill arch 17 to 25. **Dorsal fin long, variously beginning at back of head to behind pectoral fins**, with V to VIII soft to hard spines, followed by a soft-rayed portion with 19 to 39 soft rays (or 36 to 57 total fin elements in species where spines and rays are scarcely distinguishable); dorsal fin continuous to subcontinuous, sometimes spines distinctly and abruptly lower than branched rays, almost separated; spines and rays sometimes scarcely distinguishable and fin base invested in thick, scaly skin. Anal fin with III spines and 15 to 35 soft rays. Pectoral fins with 18 to 23 rays. Pelvic fins often very small, usually attached medially by membrane to abdomen and often folding into a shallow groove. Scales small to moderate, cycloid or occasionally weakly ctenoid, usually deciduous, **lacking from head which is usually covered profusely with small pores that may spread back onto trunk.** Lateral line usually present, follows profile of back or may be midlateral. Vertebrae often 25, but sometimes higher and reaching 60 in *Icichthys*. **Colour:** adults variously black or brown through bluish green to distinctly silvery, mostly without distinctive markings, though sometimes with dark blotches or bands; juveniles typically with a complex of vertical or horizontal bands, sometimes profuse blotches, and may be brilliantly coloured in blue, purple, or other tones, otherwise silvery.

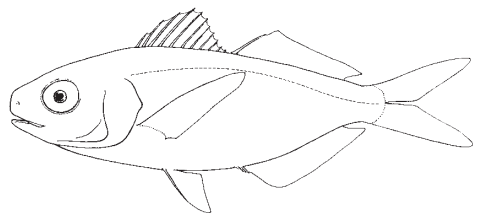


**Habitat, biology, and fisheries:** Adults variously coastal and demersal-to-pelagic, to oceanic, epipelagic-to-mesopelagic. Juveniles more often surface-living and pelagic and commonly associated with floating objects including jellyfishes and oceanic flotsam. Diet may include jellyfishes, salps, crustaceans, and small fishes. Some species are locally important in fisheries, especially around Japan, southeastern Australia, New Zealand, and temperate South America. Probably of very minor importance in the area; no catch data available.

**Remarks:** The family Centrolophidae includes about 7 genera, though the appropriateness of some of the generic allocations and groupings seems highly dubious; some genera such as *Seriolella* and *Schedophilus* seem unlikely to represent natural groupings.

#### Similar families occurring in the area

Nomeidae: 2 completely separate dorsal fins, the first with about X long, slender spines, the fin folding down into a narrow groove; bases of median fins not sheathed with scales and thick skin; teeth present in roof of mouth; distinctly large eye; lobes of tail may cross, scissor-like, when folding.

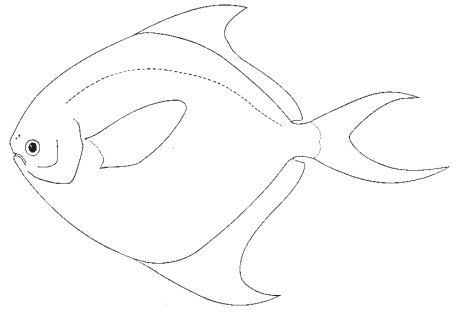


Nomeidae

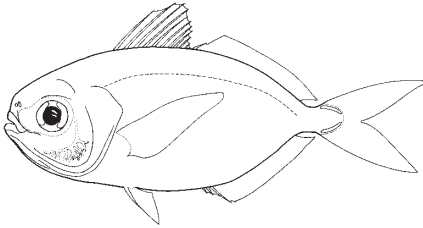
**Ariommatidae:** 2 completely separate dorsal fins, the first with X long, slender spines, the fin folding down into a narrow groove, bases of median fins not sheathed with thick skin and scales; a slender caudal peduncle with 2 low, fleshy keels on each side.

**Stromateidae:** deep bodied, compressed stromateoid fishes that lack pelvic fins as adults; a single dorsal fin that is falcate to triangular rising to greatest height on anterior half.

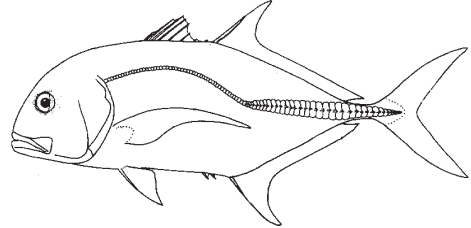
**Carangidae:** dorsal and anal fins separate; II stout, free spines on ventral abdomen in front of anal fin; often bony skutes forming a keel along slender, almost tubular caudal peduncle.



**Stromateidae**



**Ariommatidae**



**Carangidae**

**Key to the genera of Centrolophidae occurring in the area**

- 1a. Dorsal fin long and low, the spines graduating from very low and embedded in fleshy fin base to longer soft spines, and thence to longer rays without any discernible demarcation point between spines and rays; 35 or more total elements in fin; vertebrae 25 to 30 . . . *Schedophilus*
- 1b. Dorsal fin with easily discerned spines, quite stout if short, not embedded in fleshy skin, but with obvious fin membranes between spines; junction between spinous and rayed portions of dorsal fin obvious; less than 30 total elements in fin; vertebrae 25 . . . . . → 2
- 2a. Dorsal-fin spines all about the same length or middle rays a little longer; marked difference in length between last spine of anterior part of fin and rest of fin, almost 2 separate fins; dorsal-fin origin distinctly behind upper opercular opening; less than 25 dorsal-fin rays; lateral line follows profile of back to about anal-fin origin, but then descends to midlateral at about midlength of anal fin and is thereafter midlateral to base of tail. . . . . *Hyperoglyphe*
- 2b. Dorsal-fin spines increase in length from front of fin without a distinct difference between length of last spine and that of first ray; no impression of 2 separate fins; more than 25 dorsal-fin rays; dorsal-fin origin directly above upper opercular opening; lateral line follows profile of back to base of tail not midlateral from above midlength of anal -fin origin to tail base . . . . . *Psenopsis*

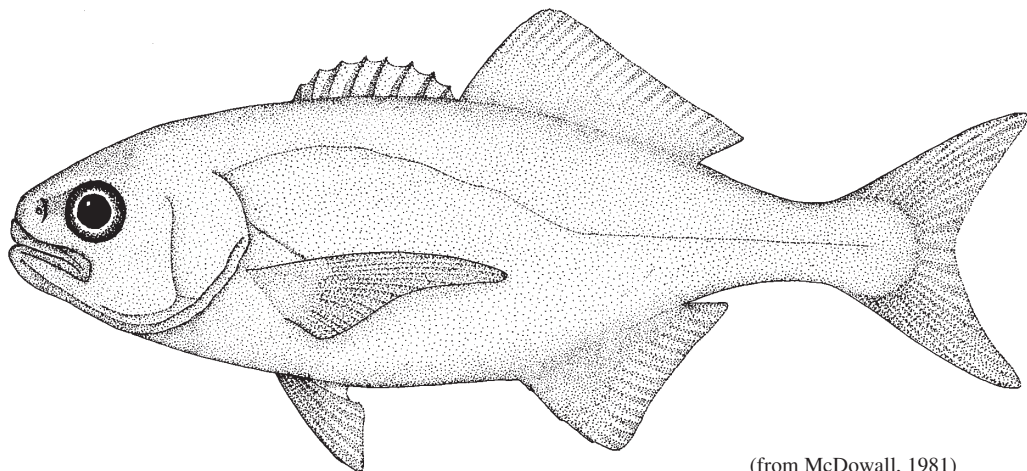
**List of species occurring in the area**

The symbol is given when species accounts are included.

- Hyperoglyphe antarctica* (Carmichael, 1818)
- Psenopsis humerosa* Munro,
- Psenopsis obscura* Haedrich, 1967
- Schedophilus maculatus* Günther, 1860

**Reference**

McDowall, R.M. 1981. The centrolophid fishes of New Zealand (Pisces: Stromateoidei). *J. R. Soc. N.Z.*, 12(2):103-142.

***Hyperoglyphe antarctica*** (Carmichael, 1818)**Frequent synonyms / misidentifications:** None / None.**FAO names:** En - Bluenose.

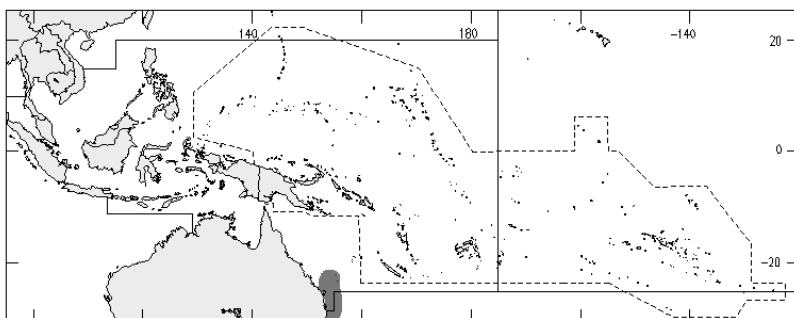
(from McDowall, 1981)

**Diagnostic characters:** **Body stout and thick, heavily built.** Head large, thick and deep. Eye large, 4.1 to 5 times in head length, less than snout length; **a single row of fine teeth in jaws, no teeth on roof of mouth or tongue but a median row of fine basibranchial teeth (an unusual feature in centrolophids).** **Dorsal fin low with XI stout spines anteriorly, middle spines longest, then abruptly higher; dorsal-fin rays 19 or 20 (occasionally as few as 15), anterior rays longest and tapering.** Anal fin with III spines and 14 or 15 (occasionally 16) soft rays. Pectoral fins falcate, with 19 or 20 (occasionally 21) rays. Bases of median fins fleshy and sheathed with scales; body scales small. Tail well forked on a stout caudal peduncle. **Colour:** dull bluish grey on back, paling to metallic grey on belly; fins dark metallic grey; no distinctive markings.

**Size:** Maximum fork length 137 cm, maximum weight 36 kg; commonly exceeds 50 cm. Small fish rarely caught and little known.

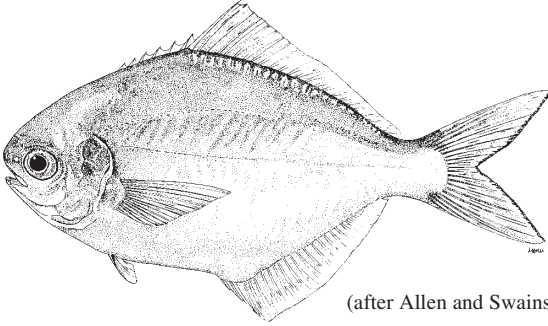
**Habitat, biology, and fisheries:** A deep-water benthic species taken on longlines and in bottom trawls down to at least 475 m, perhaps especially over rocky substrates. May leave bottom to feed at night. Has good quality, tasty, firm, if slightly dark, flesh.

**Distribution:** Widespread in cool-temperate southern hemisphere, including southern Africa, Tristan da Cunha, southern Australia, and New Zealand; spreads north along the east coast of Australia as far as about Brisbane, hence entering the southern fringes of the Western Central Pacific.

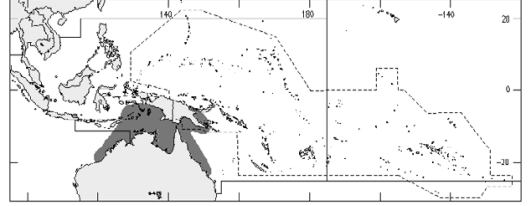


***Psenopsis humerosa* Munro, 1958****En** - Blackspot butterfish.

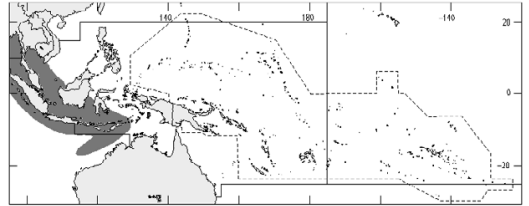
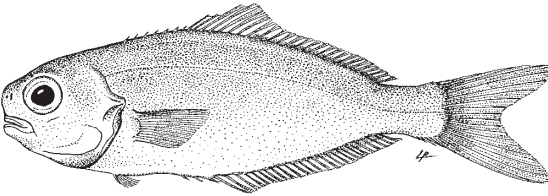
Maximum size unknown, possibly to about 20 cm fork length. Biology unknown. Minor importance to fisheries. Occurs in oceanic waters and well offshore in eastern Australian waters. Northern Australia to New Guinea and eastern Indonesia.



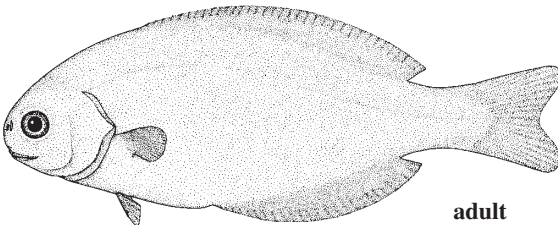
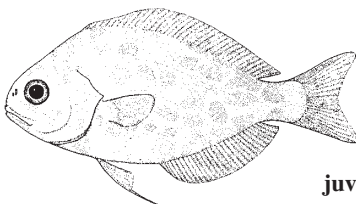
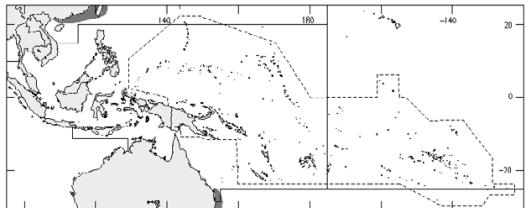
(after Allen and Swainston, 1988)

***Psenopsis obscura* Haedrich, 1967****En** - Obscure driftfish.

Maximum fork length about 20 cm. Occurs along deep continental slope. Biology little known; reportedly taken in depths of 200 to 800 m over sand and mud bottoms. Without importance to fisheries. Known from the Molucca Passage in Indonesia, as well as the Indian Ocean (Andaman Islands).

***Schedophilus maculatus* Günther, 1860****En** - Pelagic butterfish.

Maximum fork length about 28 cm. Taken from midwater in deep ocean. Biology unknown. Without importance to fisheries. Has been recorded from "China Seas", southeastern Australia, Lord Howe Island, around northern New Zealand, and so is perhaps widely tropical to temperate and oceanic.

**adult****juvenile**

(from McDowall, 1981)