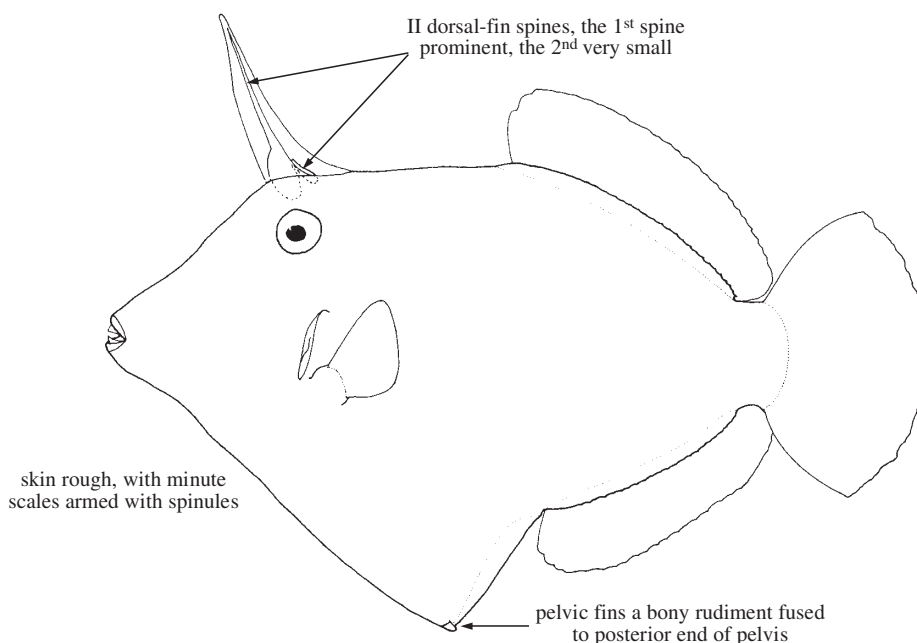


MONACANTHIDAE

Filefishes (leatherjackets)

by J.B. Hutchins

Diagnostic characters: Small to medium-sized (to 1 m) fishes, usually with deep, highly compressed bodies; body shape varies from oblong to almost circular. Mouth small, generally terminal, non-protractile; teeth pointed and not fused together, central pair usually the largest in each jaw; vomer and palatines without teeth. Gill opening a short vertical to oblique slit in front of, or above, pectoral-fin base. Two dorsal fins, **first dorsal fin consisting of a prominent spine which can be locked upright by a second very small spine**, second dorsal fin with 22 to 52 simple (unbranched) soft rays, well separated from first fin; anal fin with 20 to 62 simple (unbranched) soft rays; caudal fin with 12 branched rays; pectoral fins with 8 to 15 simple rays; **pelvic fins a bony rudiment fused to posterior end of pelvis, posterior portion movable in some species, or rudiment absent. Pelvis usually capable of vertical movement giving rise to a ventral flap.** Skin smooth to rough, shagreen-like, with minute to small scales armed with 1 to many fine spinules, spinules enlarged in some species forming bristles or spines on posterior portion of body; scales on head of some species with strong flattened spinules. Vertebrae 7+12 or 7+13. **Colour:** ground colour ranging from pale brown to dark brown (sometimes more brownish green), with or without paler and/or darker blotches; dark brown spotting occasionally present; some species colourful, often with iridescent blue markings; all species capable of changing colour quickly to blend in with the surroundings.

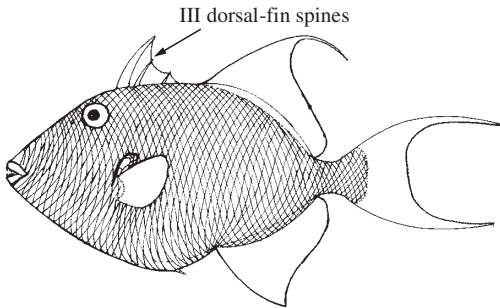


Habitat, biology, and fisheries: Shallow coral and rocky reefs, seagrass beds, and trawling grounds in depths of 10 to over 200 m. Feed by browsing on coral polyps, epiphytes attached to seagrass, or the flesh of other marine animals; many species are omnivorous and will feed on almost any food source. Some species are schooling, but most are found as individuals or in pairs. Few species are marketed outside Australia; in the latter area, these are sold fresh.

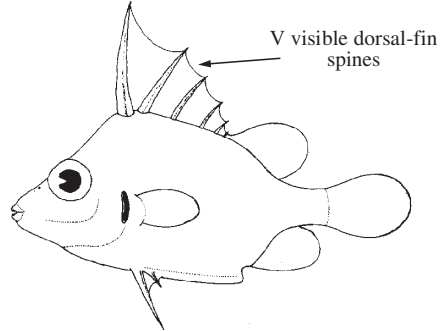
Similar families occurring in the area

Balistidae: III spines in first dorsal fin, second spine always obvious; skin tough but not shagreen-like, individual scales obvious, rectilinear, usually forming prominent, oblique rows.

Triacanthidae: VI (usually only V visible) spines in first dorsal fin; pair of strong pelvic-fin spines which can be locked in erect position.



Balistidae



Triacanthidae

Key to the genera of Monacanthidae occurring in the area

- 1a. Fleshy barbel on lower jaw (Fig. 1) *Anacanthus*
- 1b. No fleshy barbel on lower jaw → 2

- 2a. First dorsal-fin spine not fully erectile, enveloped in a loose, prominent flap of skin attached to back (Fig. 2) *Paraluteres*
- 2b. First dorsal-fin spine fully erectile, not enveloped in a loose, prominent flap of skin → 3



Fig. 1 *Anacanthus*

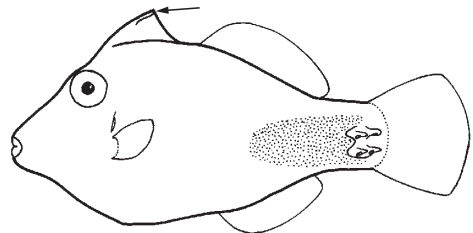


Fig. 2 *Paraluteres*

- 3a. Snout produced into a tube, turning upwards at mouth (Fig. 3) *Oxymonacanthus*
- 3b. Snout not produced into a tube → 4

- 4a. Second dorsal and anal fins with 43 or more soft rays → 5
- 4b. Second dorsal and anal fins with 39 or less soft rays → 6

- 5a. First dorsal fin originates well in advance of eye (Fig. 4) *Pseudaluteres*
- 5b. First dorsal fin originates over eye *Aluteres*

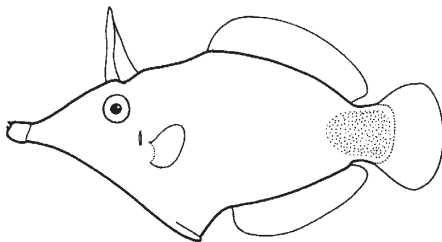


Fig. 3 *Oxymonacanthus*

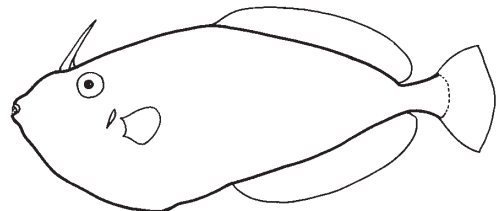


Fig. 4 *Pseudaluteres*

- 6a. Pelvic-fin rudiment absent; body circular in profile, abdomen inflatable (Fig. 5) *Brachaluteres*
- 6b. Pelvic-fin rudiment obvious (sometimes relatively small in large specimens), located at or near rear end of pelvis; body generally not circular (at least in adult), abdomen not inflatable → 7
- 7a. Pelvic-fin rudiment movably articulated with rear end of pelvis (Fig. 6a) → 8
- 7b. Pelvic-fin rudiment bound immovably to rear end of pelvis (Fig. 6b) → 15
- 8a. Posterior margin of ventral flap large, very convex in lateral profile, extending prominently rearwards of pelvic-fin rudiment; 3 pairs of spines on caudal peduncle, enlarged in adult (Fig. 7) *Monacanthus*
- 8b. Posterior margin of ventral flap small to moderate, not extending prominently rearwards of pelvic-fin rudiment; paired spines on caudal peduncle absent → 9

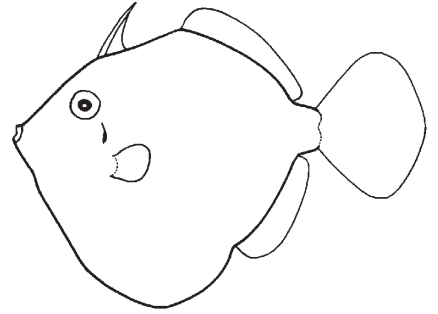


Fig. 5 *Brachaluteres*

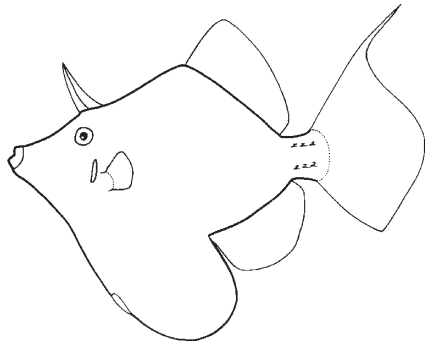


Fig. 7 *Monacanthus*

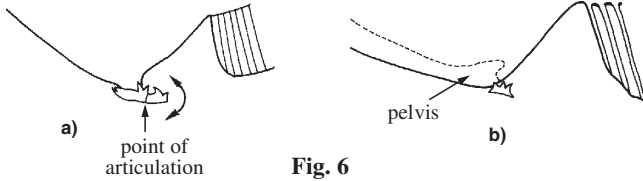


Fig. 6

- 9a. Central pair of teeth in upper and lower jaws with truncate cutting edges (Fig. 8) *Colurodontis*
- 9b. Central pair of teeth in upper and lower jaws with pointed extremities → 10
- 10a. Head and body with very large cutaneous tentacles; first dorsal-fin spine crooked in shape (Fig. 9) *Chaetodermis*
- 10b. Head and body either with small tentacles or tentacles absent; first dorsal-fin spine not crooked → 11

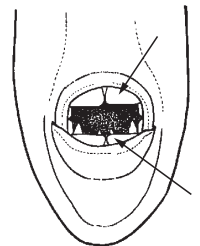


Fig. 8 *Colurodontis*

- 11a. Pelvic-fin rudiment and first dorsal-fin spine robust, with relatively large prominent barbs; posterior margin of caudal fin always convex (Figs 10 and 11) → 12
- 11b. Pelvic-fin rudiment and first dorsal-fin spine more slender, with small barbs; posterior margin of caudal fin either convex, concave, truncate, or diamond-shaped → 13

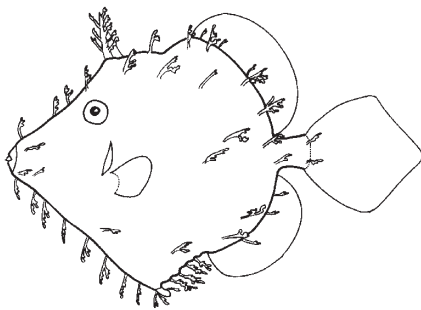


Fig. 9 *Chaetodermis*

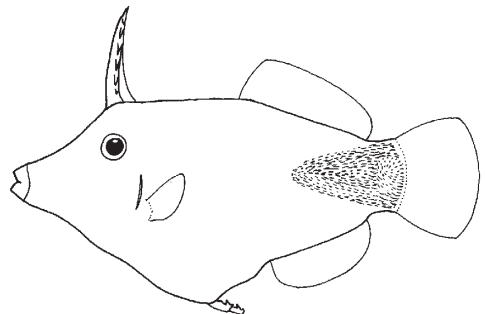


Fig. 10 *Pervagor*

- 12a. Caudal peduncle deep, its length 1.8 to 3.8 times in its depth; all scales on caudal peduncle of adult male usually developing short recurved bristles, decreasing in size anteriorly (Fig. 10) *Pervagor*
- 12b. Caudal peduncle shallow, its length 1.1 to 1.6 times in its depth; bristles on caudal peduncle of adult male confined to a well-defined central oblong patch (Fig. 11) *Acreichthys*
- 13a. Posterior margin of ventral flap usually concave, pelvic-fin rudiment generally extending rearwards of flap; caudal peduncle of male without bristles or spines (Fig. 12). . . *Paramonacanthus*
- 13b. Posterior margin of ventral flap convex, pelvic-fin rudiment generally not extending rearwards of flap; caudal peduncle of adult male with either an oblong patch of bristles or 2 small unpaired spines (Figs 13 and 14) → 14

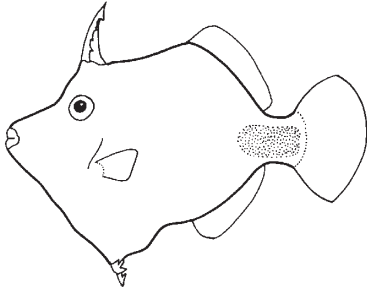


Fig. 11 *Acreichthys*

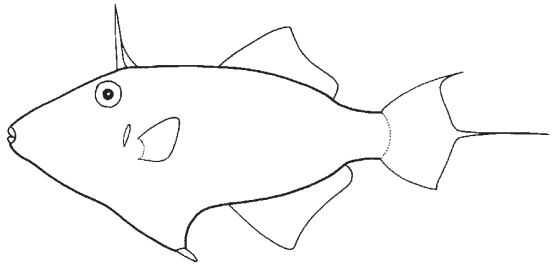


Fig. 12 *Paramonacanthus*

- 14a. Scales on middle of body each with spinules arranged as an oblong clump, the bases of spinules fused together to form a mushroom-shaped stalk; anal-fin rays 31 to 34; no elongate, filamentous rays in caudal fin, but anteriormost ray in second dorsal fin elongate and filamentous in adult male; oblong patch of bristles on caudal peduncle of adult male (Fig. 13) *Stephanolepis*
- 14b. Scales on middle of body each with a single relatively large central spinule, usually surrounded by much smaller spinules; anal-fin rays 33 to 37; uppermost caudal-fin ray of adult male elongate and filamentous; no elongate rays in second dorsal fin; no bristles on caudal peduncle, but 2 small unpaired spines present, usually more prominent in adult male (Fig. 14) *Arotrolepis*

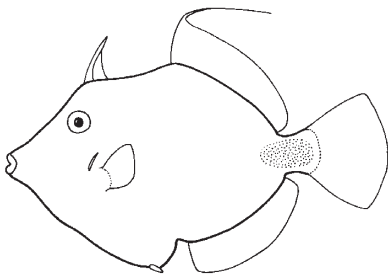


Fig. 13 *Stephanolepis*

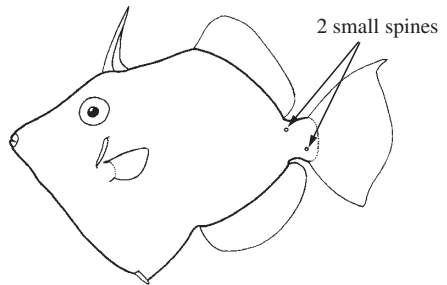


Fig. 14 *Arotrolepis*

- 15a. Size very small, maximum total length 3.5 cm or less; gill slit positioned directly above base of pectoral fins (Fig. 15) *Rudarius*
- 15b. Size larger, maximum total length 10 cm or more; gill slit positioned in advance of base of pectoral fins → 16

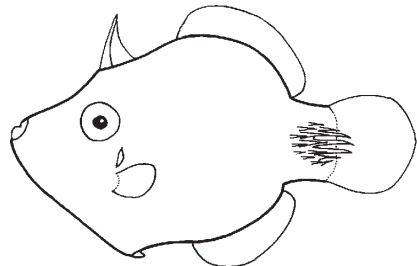


Fig. 15 *Rudarius*

16a. Anal-fin rays 22 to 25; adults with toothbrush-like patch of stout bristles or several long spines on middle of side; teeth not covered by lips when mouth closed (Fig. 16) *Amaneses*

16b. Anal-fin rays 26 to 37; stout bristles or long spines absent from side of body, although short fine bristles and/or spines sometimes present on caudal peduncle; teeth covered by lips when mouth closed → 17

17a. Ventral flap very large; gill opening mostly anterior to eye; 3 unpaired spines on lower half of caudal peduncle, larger and more prominent in male (Fig. 17) *Pseudomonacanthus*

17b. Ventral flap small to moderate in size; gill opening mostly below eye; spines on caudal peduncle either paired or absent → 18

18a. Head very long, usually longer than greatest depth of body (Fig. 18) *Nelusetta*

18b. Head not very long, depth of body equal to or greater than length of head → 19

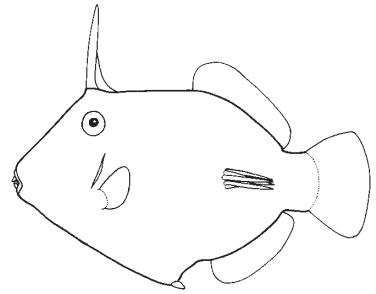


Fig. 16 *Amaneses*

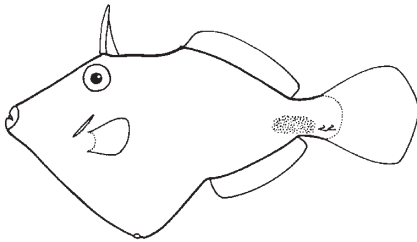


Fig. 17 *Pseudomonacanthus*

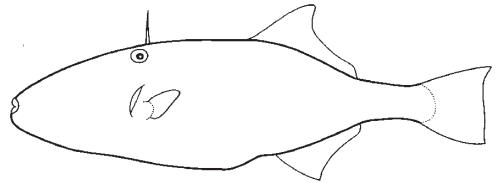


Fig. 18 *Nelusetta*

19a. Second dorsal-fin rays 27 to 31; anal-fin rays 26 to 28 *Scobinichthys*

19b. Second dorsal-fin rays 31 to 41; anal-fin rays 29 to 37. → 20

20a. Second dorsal and anal fins elevated anteriorly in adult, more prominent in male; bristles and spines absent from caudal peduncle (Fig. 19) → 21

20b. Second dorsal and anal fins evenly rounded in profile; bristles and spines on caudal peduncle either present or absent (Fig. 20) → 22

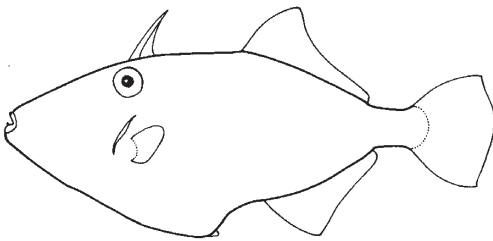


Fig. 19

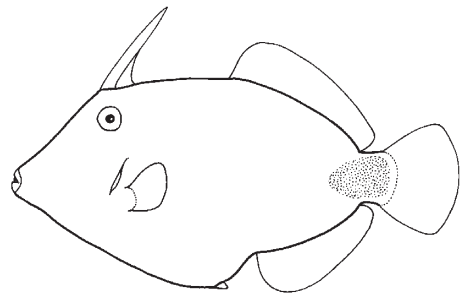


Fig. 20 *Cantherhines*

21a. Pelvic-fin rudiment moderate in size, located at posterior end of pelvis (Fig. 21a) *Thamnaconus*

21b. Pelvic-fin rudiment small, located about 1/2 to 1 eye-diameter anterior to posterior end of pelvis (Fig. 21b) *Eubalichthys*

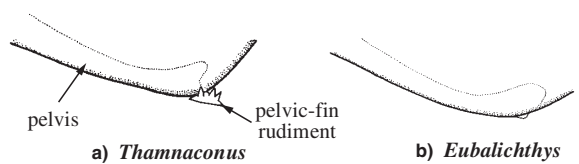


Fig. 21

- 22a.** Groove in interdorsal space for receiving first dorsal-fin spines when folded rearwards deep; pelvic-fin rudiment consisting of 3 pairs of encasing scales (Fig. 22) *Cantherhines*
- 22b.** Groove in interdorsal space for receiving first dorsal-fin spine either shallow or absent; pelvic-fin rudiment consisting of 2 pairs of encasing scales (Fig. 23) *Cantheschenia*

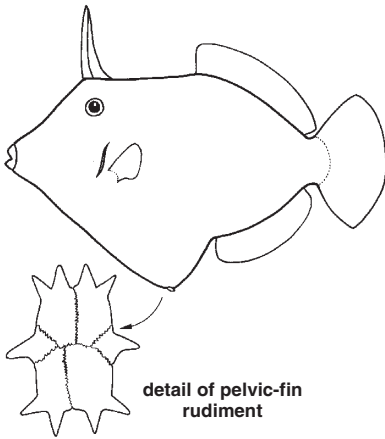


Fig. 22 *Cantherhines*

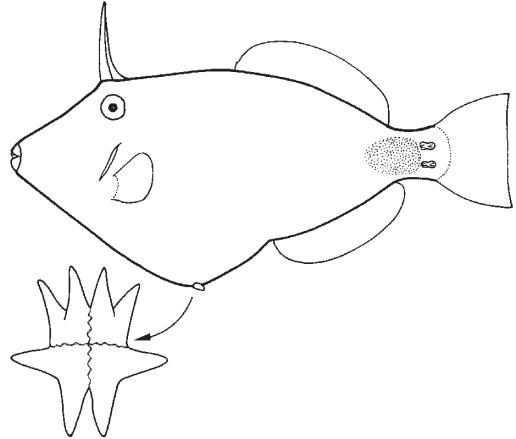



Fig. 23 *Cantheschenia*

List of species occurring in the area

The symbol  is given when species accounts are included.

- Acreichthys radiatus* (Popta, 1900)
-  *Acreichthys tomentosus* (Linnaeus, 1758)
-  *Aluterus monoceros* (Linnaeus, 1758)
-  *Aluterus scriptus* (Osbeck, 1765)
-  *Amanses scopas* (Cuvier, 1829)
-  *Anacanthus barbatus* Gray, 1831
-  *Arotrolepis filicauda* (Günther, 1880)
- Brachaluteres jacksonianus* (Quoy and Gaimard, 1824)
-  *Brachaluteres taylori* Woods, 1966
-  *Cantherhines dumerilii* (Hollard, 1854)
-  *Cantherhines fronticinctus* (Günther, 1866)
- Cantherhines longicaudus* Hutchins and Randall, 1982
-  *Cantherhines pardalis* (Rüppell, 1837)
-  *Cantheschenia grandisquamis* Hutchins, 1977
-  *Chaetodermis penicilligerus* (Cuvier, 1817)
-  *Colurodontis paxmani* Hutchins, 1977
-  *Eubalichthys mosaicus* (Ramsay and Ogilby, 1886)
-  *Monacanthus chinensis* (Osbeck, 1765)
-  *Nelusetta ayraudi* (Quoy and Gaimard, 1824)
-  *Oxymonacanthus longirostris* (Bloch and Schneider, 1801)
-  *Paraluteres prionurus* (Bleeker, 1851)

- *Paramonacanthus choirocephalus* (Bleeker, 1852)
- *Paramonacanthus japonicus* (Tilesius, 1810)
- *Paramonacanthus lowei* Hutchins, 1997
- *Paramonacanthus otisensis* Whitley, 1931
- *Paramonacanthus pusillus* (Rüppell, 1828)
- Paramonacanthus sulcatus* (Hollard, 1854)
- Pervagor alternans* (Ogilby, 1899)
- Pervagor aspricaudus* (Hollard, 1854)
- *Pervagor janthinosoma* (Bleeker, 1854)
- *Pervagor melanocephalus* (Bleeker, 1853)
- *Pervagor nigrolineatus* (Herre, 1927)
- *Pseudaluteres nasicornis* (Temminck and Schlegel, 1846)
- *Pseudomonacanthus elongatus* Fraser-Brunner, 1940
- *Pseudomonacanthus macrurus* (Bleeker, 1857)
- *Pseudomonacanthus peroni* (Hollard, 1854)
- Rudarius excelsus* Hutchins, 1977
- *Rudarius minutus* Tyler, 1970
- *Scobinichthys granulatus* (Shaw, 1790)
- *Stephanolepis cirrifer* (Temminck and Schlegel, 1850)
- Thamnaconus fijiensis* Hutchins and Matsuura, 1984
- *Thamnaconus hypargyreus* (Cope, 1871)
- Thamnaconus melanoproctes* (Boulenger, 1889)
- *Thamnaconus modestoides* (Barnard, 1927)
- *Thamnaconus tessellatus* (Günther, 1880)

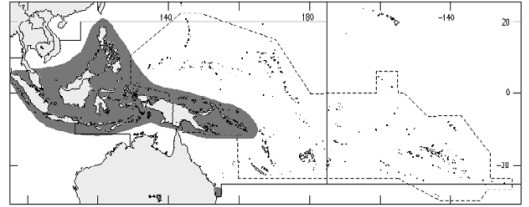
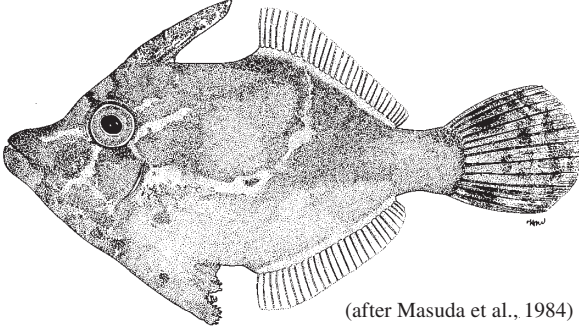
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- Hutchins, J.B. and J.E. Randall. 1982. *Cantherhines longicaudus*, a new filefish from Oceania, with a review of the species of the *C. fronticinctus* complex. *Pac. Sci.*, 36(2):175-185.
- Randall, J.E. 1964. A revision of the filefish genera *Amanses* and *Cantherhines*. *Copeia*, 1964(2):331-361.

Acreichthys tomentosus (Linnaeus, 1758)

En - Matted leatherjacket.

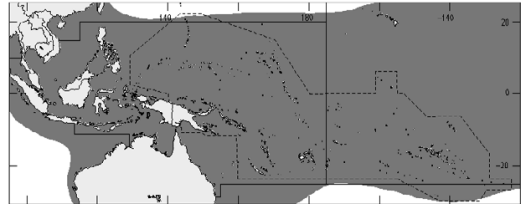
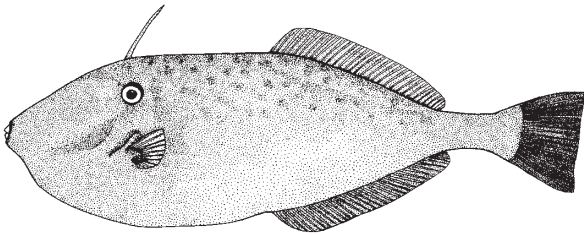
Maximum total length about 12 cm. Inhabits reef, weed, and rubble areas on shallow coral reefs. Found in Indonesia, Malaysia, Philippines, Ryukyu Islands, Palau Islands, New Guinea, Solomon Islands, and northeastern Australia (so far known only from Moreton Bay in Queensland which is possibly an error).



Aluterus monoceros (Linnaeus, 1758)

En - Unicorn leatherjacket; **Fr** - Bourse loulou; **Sp** - Lija barbuda.

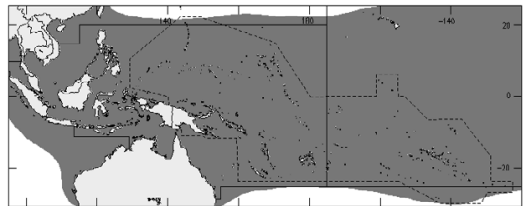
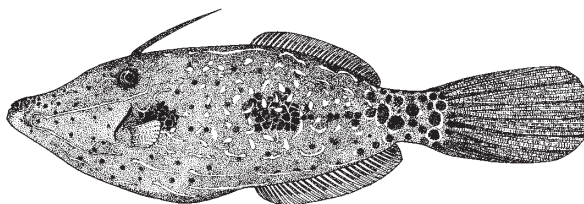
Maximum total length about 76 cm. Usually taken by bottom trawl. Marketed in Indonesia and the Philippines. Distributed in tropical and subtropical oceans of the world, preferring offshore areas.



Aluterus scriptus (Osbeck, 1765)

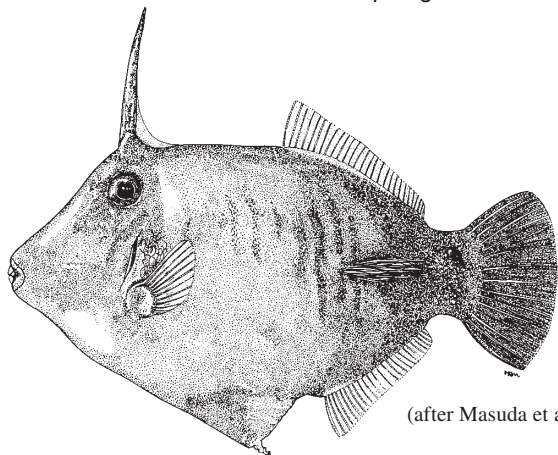
En - Scawled leatherjacket.

Maximum total length about 100 cm. Found in tropical and subtropical oceans of the world, preferring inshore areas near coral reefs.

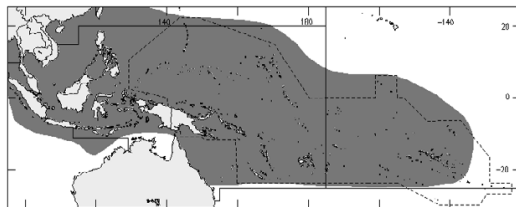


Amanses scopas* (Cuvier, 1829)*En** - Broom filefish.

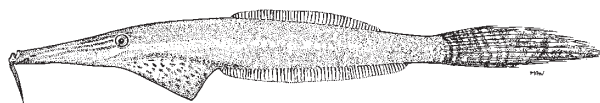
Maximum total length about 20 cm. Inhabits coral reefs. Widespread in the Indo-West Pacific, from East Africa to the Tuamoto Archipelago and from Japan to northeastern Australia.



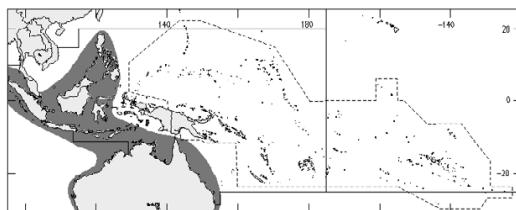
(after Masuda et al., 1984)

***Anacanthus barbatus* Gray, 1831****En** - Barbled leatherjacket.

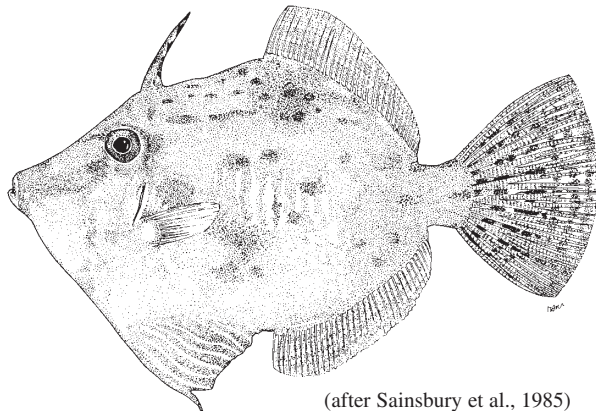
Maximum total length about 35 cm. Inhabits soft bottoms, preferring areas of weeds and seawhips. Distributed from the Indian region to northern Australia, and north to the Philippines.



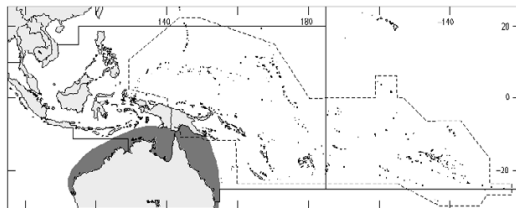
(after Gloerfelt-Tarp and Kailola, 1984)

***Arotrolepis filicauda* (Günther, 1880)****En** - Threadfin leatherjacket.

Maximum total length about 22 cm. Normally taken by bottom trawl in 18 to 125 m. Northern half of Australia to southern New Guinea.



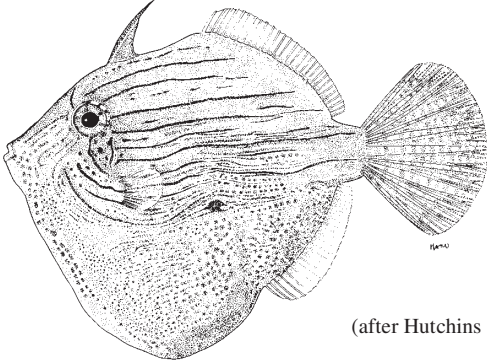
(after Sainsbury et al., 1985)



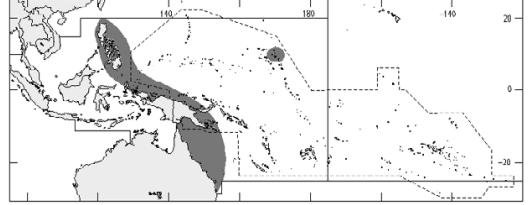
Brachaluteres taylori Woods, 1966

En - Taylor's pygmy leatherjacket.

Maximum total length about 6.2 cm. Inhabits soft bottoms at 30 to 45 m, but also found in shallow seagrass areas. Known only from the Philippines, Marshall Islands, New Guinea, northeastern Australia, and Lord Howe Island.



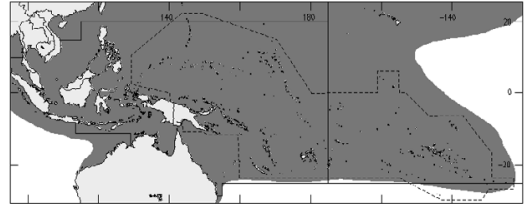
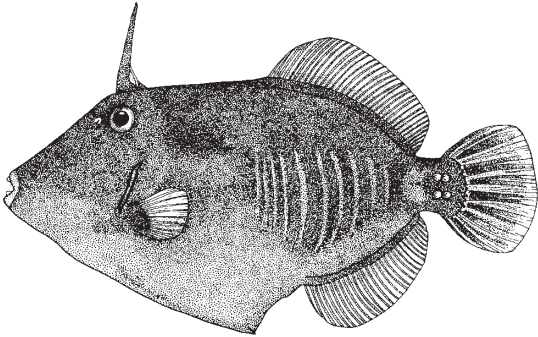
(after Hutchins and Swainston, 1985)



Cantherhines dumerilii (Hollard, 1854)

En - Whitespotted filefish; **Fr** - Bourse à taches blanches; **Sp** - Cachúa blanca nieves.

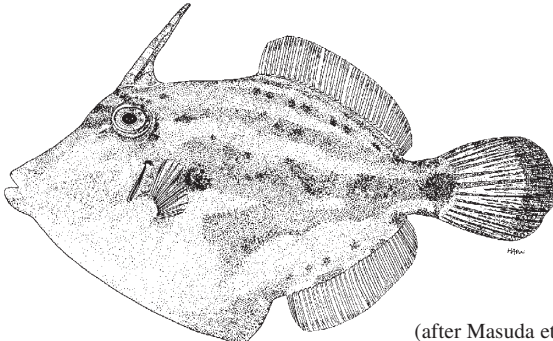
Maximum total length about 35 cm. Marketed in many countries throughout the area. Inhabits shallow coral reefs. Widespread in the Indo-Pacific region, from East Africa to Baja California, and from Japan to northern Australia.



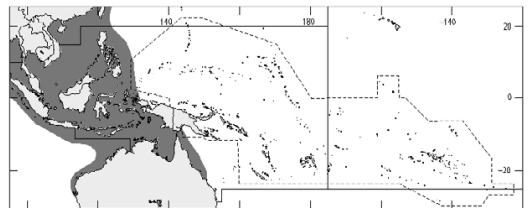
Cantherhines fronticinctus (Günther, 1866)

En - Spectacled leatherjacket; **Fr** - Bourse à lunettes; **Sp** - Cachúa anteojera.

Maximum total length about 23 cm. Inhabits shallow coral reefs. Occurs in the Indo-West Pacific, from East Africa to northern Australia, and northwards to Japan.



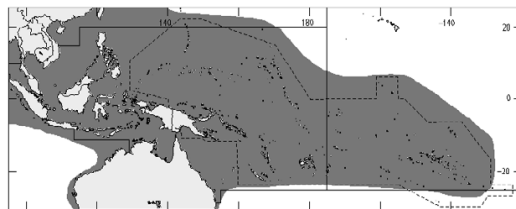
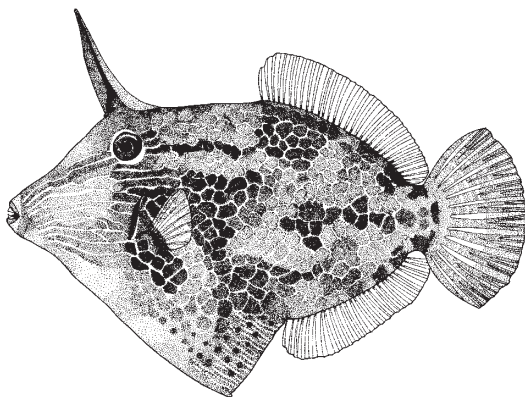
(after Masuda et al., 1984)



Cantherhines pardalis (Rüppell, 1837)

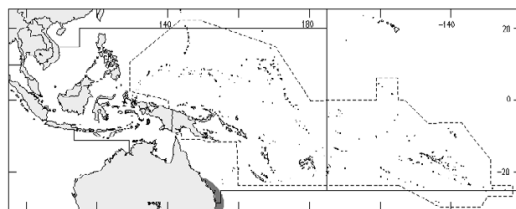
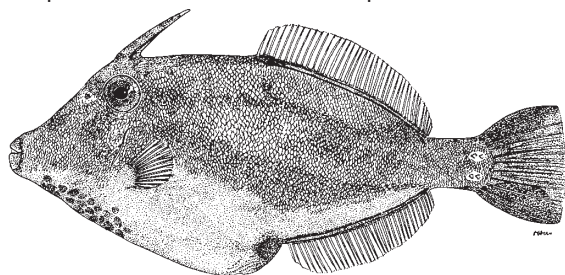
En - Honeycomb leatherjacket; **Fr** - Bourse rayon de miel; **Sp** - Cachúa de panel.

Maximum total length about 20 cm. Inhabits shallow rocky and coral reefs. Widespread in the Indo-West Pacific, from East Africa to the Marquesas, and Japan to northern Australia.

***Cantheschenia grandisquamis*** Hutchins, 1977

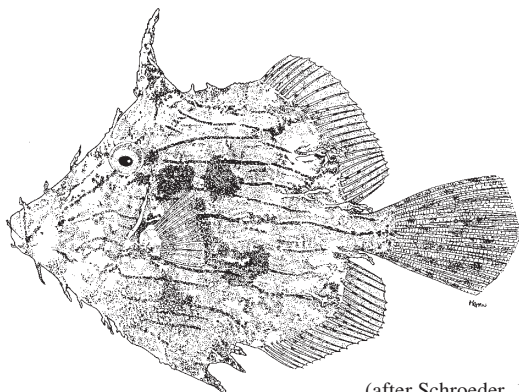
En - Largescaled leatherjacket.

Maximum total length about 27 cm. Inhabits shallow coral and rocky reefs, but has been trawled at depths to 46 m. Found in subtropical eastern Australia.

***Chaetodermis penicilligerus*** (Cuvier, 1817)

En - Prickly leatherjacket.

Maximum total length about 32 cm. Inhabits inshore seagrass beds and offshore trawling grounds to depths of 45 m. Occurs in northern Australia, New Guinea, Indonesia, Malaysia, Thailand, Philippines, Taiwan Province of China, and southern Japan.



(after Schroeder, 1980)

