Deepwater Fish Field Guide

Queensland Deepwater Fin Fish Fishery (L8)
August 2006

For use with the Queensland Reef Line Multi-Hook Fin Fish Fishery Logbook for commercial fishers operating within the L8 fishery
Deepwater Fish Field Guide

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August 2006
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About this guide

This book can be used in conjunction with the *Queensland Reef Line Multi-Hook Fin Fish Fishery Logbook*. This publication provides you with a map with coordinates of the areas accessible under the L8 symbol, along with an identification guide that includes an explanation of fish structural features used to identify the various species taken from waters greater than 200 metres. Photos and descriptions are given for common species likely to be caught in the Reef Line Multi-Hook Fin Fish Fishery.

FOR QUERIES ABOUT THE LOGBOOK PROGRAM OR ANY INFORMATION CONTAINED IN THIS DOCUMENT PLEASE CONTACT (07) 3227 6299.

Permit AND licencing requirements to engage in multiple hook fishing off the coast of Queensland

Fishing under the L8 symbol allows for the taking of fish in waters managed under Queensland fisheries legislation deeper than 200 metres using drop lines or bottom set long lines with a maximum of three hundred (300) hooks. The authorisation prohibits the capture and retention of certain fish including coral trout, red emperor and snapper using L8 fishing apparatus (more than six hooks, 300 hooks or less).

The conduct of activity using multiple hook apparatus within both the Great Barrier Reef Marine Park (GBRMP) and other Commonwealth waters outside the Queensland fisheries jurisdiction requires authorisation in addition to the L8 symbol.

For example, if you intend fishing using multiple hook gear (more than six hooks and less than 300 hooks) and you are within the boundary of the GBRMP, you will require both an L8 authority (symbol on licence) issued by DPI&F, and a permit from the Great Barrier Reef Marine Park Authority.

If you are outside the GBRMP and inside Queensland jurisdiction (see page 2) then you will require only an L8 authority issued by DPI&F to operate within the Multiple Hook fishery.

However, if you are intending to fish outside Queensland jurisdiction then you will require authorisation to fish in Commonwealth waters and would need a permit to do so from the Australian Fisheries Management Authority (AFMA).

If you intend to retain any coral reef fin fish, as listed in the *Fisheries (Coral Reef Fin Fish) Management Plan 2003,* you will need to have an RQ fishery symbol and quota attached to your L8 licence. These species are listed in the guide with (RQ) after the common name. Fish other than coral reef fin fish have been marked as (Non-RQ) after the common name. There are a number of species that cannot be taken by L8 fishers, regardless of whether or not the L8 fishers have an RQ symbol. These species include barramundi, coral trout, red emperor, snapper and Spanish mackerel.
Jurisdictional areas

Queensland Jurisdiction
Source: Queensland Government Gazette No. 23
10 February 1995
Structural features of fish

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# Glossary of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Abdomen</td>
<td>the belly of the fish containing the internal organs</td>
</tr>
<tr>
<td>Adipose fin</td>
<td>small fleshy fin-like projection on the back of some fishes between the dorsal fin and the caudal fin (tail)</td>
</tr>
<tr>
<td>Anal fin</td>
<td>fin on belly behind the anus</td>
</tr>
<tr>
<td>Anus</td>
<td>external opening to the intestine</td>
</tr>
<tr>
<td>Belly</td>
<td>the lower part of the body</td>
</tr>
<tr>
<td>Caudal fin</td>
<td>the tail fin</td>
</tr>
<tr>
<td>Caudal peduncle</td>
<td>the base of the tail between the anal fin and the caudal fin</td>
</tr>
<tr>
<td>Compressed</td>
<td>flattened laterally, from side to side</td>
</tr>
<tr>
<td>Dorsal fin</td>
<td>the median fin on the upper part of the body</td>
</tr>
<tr>
<td>Emarginate</td>
<td>slightly concave</td>
</tr>
<tr>
<td>Lateral line</td>
<td>sensory canal system usually consisting of specialised scales that runs along the sides of all fish</td>
</tr>
<tr>
<td>Median fins</td>
<td>the dorsal, anal and caudal fins</td>
</tr>
<tr>
<td>Nape</td>
<td>the region of the head above and behind the eyes, before the dorsal fin</td>
</tr>
<tr>
<td>Pelvic fin</td>
<td>paired fins on the belly before the anal fin</td>
</tr>
<tr>
<td>Rays soft/spinous</td>
<td>the rigid or flexible struts that support the fins</td>
</tr>
<tr>
<td>Scutes</td>
<td>modified spiny scales that form hard plates along the tails of some fish</td>
</tr>
<tr>
<td>Snout</td>
<td>the part of the head in front of the eye</td>
</tr>
<tr>
<td>Soft dorsal fin</td>
<td>dorsal fin supported by flexible rays rather than rigid spines</td>
</tr>
<tr>
<td>Spine</td>
<td>a sharp and stiff projection</td>
</tr>
<tr>
<td>Spinous dorsal fin</td>
<td>dorsal fin supported by rigid spines</td>
</tr>
<tr>
<td>Total length</td>
<td>the greatest distance from the tip of the snout to the end of the tail</td>
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</table>
Identification guide

Cods and Gropers
Family Serranidae

**Epinephelus ergastularius**

*Description:* Juveniles are brown with seven broad dark bars that run vertically. Adults are pinkish grey with no trace of the dark bars. Fins darker than body, with white margins (except on spinous part of dorsal fin).

*Total length:* Attains at least 157 cm

*Depth range:* Adult: 110–370 m
Juvenile: 15–130 m

**Epinephelus morrhua**

*Description:* Head and body have dark brown bands beginning as fork at rear edge of eye. The upper branch extends up to the lower gill cover, and continues on body as a mid-lateral band that forks above pectoral fin.

*Total length:* Attains at least 90 cm

*Depth range:* 80–370 m

*Deepwater Fish Field Guide*
**Eight bar groper (RQ)**

*Epinephelus octofasciatus*

**Description:** Juveniles have eight broad dark brown bars running vertically (similar in appearance to the Bar Cod). On adults, these bands tend to fade out and the fish become a dark grey colour. However, the last dark band tends to remain producing a saddle-like marking at the base of the tail.

**Total length:** Attains at least 130 cm

**Depth range:** Adult: 150–300 m  
Juvenile: shallower waters

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**Oblique-banded groper (RQ)**

*Epinephelus radiatus*

**Description:** Caudal fin convex to moderately round. Small adults have five dark edged pale bands. Large adults with dark edged bands replaced by a series of dark spots. Dorsal and caudal fins covered with spots.

**Total length:** Attains at least 70 cm

**Depth range:** Adults: 80–380 m  
Juveniles found at 20 m
**Epinephelus magniscutitis**

**Description:** Generally pale brown, with small dark brown or greyish green spots scattered on body and dorsal and caudal fins. No spots below pectoral fin. Juveniles have six or seven dark horizontal lines running along body that disappear with age.

**Total length:** Attains at least 150 cm

**Depth range:** 50–300 m

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**Polyprion moeone (americanus?)**

**Description:** Body broad for its length, almost oval shaped. Snout rounded, lower jaw not markedly protruding. Eyes relatively large and set near top of head. Caudal peduncle relatively short, tail convex. Lateral line not prominent. Fairly uniform in colour, very dark brown to black on back, grading to slightly lighter on belly.

**Total length:** Attains at least 210 cm

**Depth range:** 40–600 m
Polyprion oxygeneios

Description: Body narrow for its length. Snout pointed, lower jaw protrudes well forward of upper jaw. Eyes small, set lower in head. Tail slightly concave with angular tips. Prominent lateral line. Back mostly blue/grey (rarely very dark), with distinct change in colour near lateral line to light grey/cream on belly.

Total length: Attains a maximum of 180 cm

Depth range: 50–600 m
Snappers and Sea Perches

*Family Lutjanidae*

**Paracaesio kusakarii**

*Description:* Caudal fin emarginate with pointed cleft developing in the middle of the tail in adults. Head and body silvery white with four broad, vertical bars on upper side. Fins greyish, whitish or slightly yellow.

**Total length:** Attains at least 76+ cm

**Depth range:** 100–310 m

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**Lipocheilus carnolabrum**

*Description:* Caudal fin forked. Ten dorsal spines and 10 soft dorsal rays. Mouth large, adults with thick, fleshy protrusion at end of upper lip. Pectoral fins long reaching beyond level of anus.

**Total length:** Attains at least 77 cm

**Depth range:** 90–340 m

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*Deepwater Fish Field Guide*
Flame snapper (RQ)  

*Etelis coruscans*

**Description:** Body slender and elongate. Small head, large eyes. Caudal fin deeply forked. Back and upper sides deep pink to red. Lower sides and belly pink. Fins pink to red.

**Total length:** Attains at least 130+ cm

**Depth range:** 90–335 m

DPI&F Observer Program

Goldband snapper (RQ)  

*Pristipomoides multidens*

**Description:** Caudal fin forked. Yellowish to rosy, with about six broken golden stripes on sides. Side of snout **below the eye** has two to three golden stripes bordered with blue. Top of head has yellow bands and dorsal fin covered with yellowish stripes or rows of spots.

**Total length:** Up to 90 cm. Common to 50 cm

**Depth range:** 40–245 m

DPI&F Observer Program

Sharptooth jobfish (RQ)  

*Pristipomoides typus*

**Description:** Pectoral fins long, caudal fin forked. Body and fins rosy red. Brownish yellow bands on head **above the eye** and on spiny dorsal fin.

**Total length:** Up to 70 cm. Common to 40 cm

**Depth range:** 40–120 m

**Note:** Often mistaken for Goldband snapper

DPI&F Observer Program

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**Pristipomoides flavipinnis**

*Golden-eye jobfish (RQ)*

**Description:** Caudal fin forked. Back and upper sides pale lavender or pinkish. Lower sides and belly silvery. Network of dark spots on top of head. Dorsal fin yellow when fresh.

**Total length:** Attains at least 60 cm

**Depth range:** 90–360 m

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**Pristipomoides argyrogrammicus**

*Ornate jobfish (RQ)*

**Description:** Caudal fin forked. Upper part of head reddish, nape and area above lateral line mainly yellow. Sides and belly silvery, sometimes pinkish. Body with many bright blue spots. Dorsal and caudal fins yellowish.

**Total length:** Attains at least 40 cm

**Depth range:** 70–335 m

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**Etelis radiosus**

*Pale snapper (RQ)*

**Description:** Body slender and elongated. Head small, eye large. Caudal fin forked. Mainly red, lighter on lower sides and belly.

**Total length:** Attains at least 60 cm

**Depth range:** 90–275 m

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Lavender jobfish (RQ) *Pristipomoides sieboldii*

**Description:** Lower jaw slightly protruding. Caudal fin forked. Silvery with lavender hue, dark spots on top of head, more conspicuous in young fish. Margin of dorsal fin orange. Caudal fin purplish with inner margin of fork pale.

**Total length:** Attains at least 60 cm. Common to 40 cm

**Depth range:** 180–360 m

**Note:** Often mistaken for Rosy jobfish, but tail fins differ.

Rosy jobfish (RQ) *Pristipomoides filamentosus*

**Description:** Pectoral fins long. Caudal fin forked. Back and sides variable, ranging from brownish to lavender or reddish-purple. Around snout are narrow yellow lines and blue spots. Dorsal and caudal fins light blue or lavender with reddish-orange margins.

**Total length:** Attains at least 90 cm

**Depth range:** 40–400 m

Ruby jobfish (RQ) *Etelis carbunculus*

**Description:** Caudal fin forked. Mainly pink to red, becoming white on lower sides and belly.

**Total length:** Attains at least 110+ cm

**Depth range:** 90–400 m

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**Aphareus rutilans**

**Description:** Caudal fins deeply forked. Blue-grey or mauve to overall reddish. Fins yellowish to reddish, except pelvic and anal fins, which are sometimes whitish.

**Total length:** Attains at least 110 cm

**Depth range:** At least 100–330 m

**Note:** Also known as Ironjaw

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**Glaucosoma scapulare**

**Description:** The term ‘pearl perch’ may refer to all members of the genus *Glaucosoma* except for the West Australian Dhufish (*G. hebraicum*). Eight dorsal spines with 11 soft dorsal rays. One vertical band through eye which may disappear with an increase in size. Nine anal fin rays.

**Total length:** Attains at least 85 cm

**Depth range:** 30–150 m
**Mozambique bream (RQ)**

*Wattsia mossambica*

**Description:** Caudal fin slightly forked with broadly rounded lobes. Overall silvery-grey with yellowish tinge. Indistinct dark blotches or bars are sometimes found on body. Fins yellow. Faint brown spotting may be present on dorsal, anal and caudal fins.

**Total length:** Attains at least 55+ cm

**Depth range:** 100–290 m
**Hyperoglyphe antartica**

**Description:** Snout blunt and head broad behind the eye. Upper jaw extends back to below the eye. Eight or nine unequal spines form a distinct first dorsal fin in front of the soft dorsal fin, which has 18 to 21 soft fin rays. Silver/grey to bronze on the back grading to lighter on the belly. Eye often has a deep blue hue.

**Total length:** Attains at least 140 cm

**Depth range:** 300–500 m

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**Schedophilus labyrinthicus**

**Description:** Body much more laterally compressed. Head compressed with a very blunt snout and rounded forehead. Upper jaw shorter, barely extending past the forward margin of the eye. Eight to nine short spines precede a single dorsal fin with 26 to 29 soft rays, all of similar length. Dark blue/grey on back grading to very light, almost white on belly. Smaller fish may be much darker grey/black on the back sides, and appear to be less laterally compressed than the larger fish. The skin on the head has a purple hue.

**Total length:** Attains at least 90+ cm

**Depth range:** 200–600 m

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Acknowledgements

*Aphareus rutilans* photo courtesy of Jean-Francois Helias—http://www.anglingthailand.com

*Epinephelus ergastularius* photo courtesy of Pat Tully, New South Wales Department of Primary Industries—www.fisheries.nsw.gov.au

*Polyprion moeone (americanus?)* and *Hyperoglyphe antartica* illustrations courtesy of www.efishalbum.com

JE Randall c/o Bishop Museum, Hawaii—http://www.bishopmuseum.org

*Paracaesio kusakarii* photo courtesy of Darren Roy, Long Term Monitoring Program, Department of Primary Industries and Fisheries, Queensland

*Polyprion oxygeneios* photo courtesy of CSIRO Marine and Atmospheric Research—http://www.marine.csiro.au

Department of Primary Industries and Fisheries Queensland Observer Program/Saul Pickett, Sam McCulloch and Gavin Leese

FAO References
