



FFA



# *COMMON BAITFISH SPECIES*

*USED IN SOLOMON ISLANDS  
SKIPJACK POLE-AND-LINE FISHERY*

These identification cards provide information on the main baitfish species utilized in the skipjack pole-and-line fishery of Solomon Islands. They were developed to complement the baitfish data logsheet for the monitoring and management of the baitfish fishery in the waters of Solomon Islands. In addition to identification features, these cards provide some general information on baitfish species biology and environment.

The species are presented in their approximate order of importance, based on catch data of the *bagan* fishing trials conducted in Solomon Islands and on other available information related to their contribution to the skipjack fishery.

Copyright of all images used in this publication belongs to their authors. Black and white illustrations courtesy of the Food and Agriculture Organization of the United Nations (FAO).

---

All rights for commercial/for profit reproduction or translation, in any form, reserved. SPC and FFA authorise the partial reproduction or translation of this material for scientific, educational or research purposes, provided that SPC and FFA and the source document are properly acknowledged. Permission to reproduce the document and/or translate in whole, in any form, whether for commercial/for profit or non-profit purposes, must be requested in writing. Original artwork may not be altered or separately published without permission.

Original text: English

Secretariat of the Pacific Community cataloguing-in-publication data

Common baitfish species used in Solomon Islands skipjack pole-and-line fishery /  
produced by the Forum Fisheries Agency

1. Marine fishes – Classification – Solomon Islands.
2. Fishery management – Solomon Islands.
3. Skipjack tuna fisheries – Solomon Islands.
4. Baitfish – Solomon Islands.

I. Title II. Forum Fisheries Agency

338.372099593

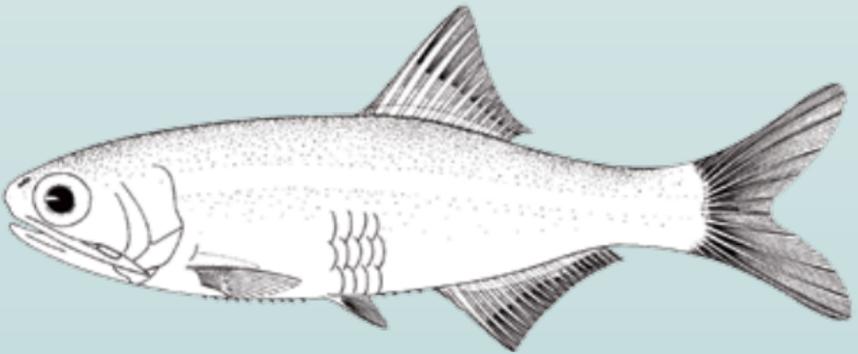
ISBN: 978-982-00-0889-2

AACR2

# FAMILY ENGRAULIDAE (*anchovies*)

## *Characteristics*

- Small silvery schooling fish
- Mostly associated with estuarine and coastal waters
- One species, *Encrasicholina punctifer*, sometimes found in schools far offshore
- A brilliant silver mid-lateral band is the common feature of this family



# *Oceanic anchovy*

*Encrasicholina punctifer*

## **Description**

- Silver lateral band very broad
- Upper jaw curved upwards
- Head rounded when viewed from above

## **Size**

- Up to 7 cm

## **Quality**

- Excellent bait
- Very strong



Image source: White et al. 2013. Market fishes of Indonesia.

# *Blue anchovy*

*Encrasicholina heteroloba*

## **Description**

- Silver lateral band usually with clear dark blue line defining its top edge
- Back blue

## **Size**

- Up to 9 cm

## **Quality**

- Very good bait
- Moderately strong



Image: David Maynard for FFA

# Gold anchovy

*Encrasicholina devisi*

## Description

- Gold lateral band with less distinct edge than this of the blue anchovy, especially near head
- Back golden

## Size

- Up to 7 cm

## Quality

- Very good bait
- Moderately strong



Image: David Maynard for FFA

# Yellowtail anchovy

*Stolephorus waitei*

## Description

- Various similar species in a complex, some of which are important food fish

## Size

- Up to 10 cm

## Quality

- Poor live bait
- Fragile



Image: David Maynard for FFA

# *Little priest*

*Thryssa baelama*

## **Description**

- Orange fins and tail
- Very hardy with strongly adherent scales

## **Size**

- Up to 10 cm

## **Quality**

- May swim away from vessel, so some doubts as bait unless stunned



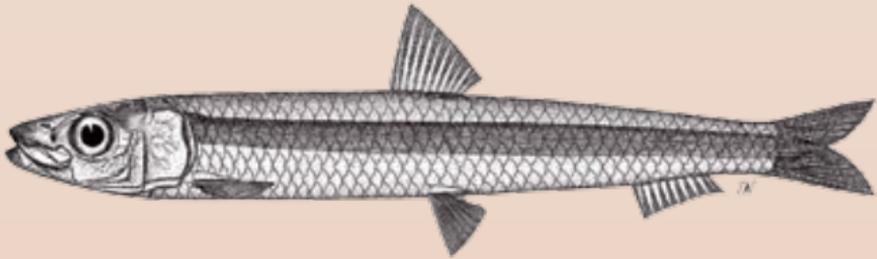
Image source: White et al. 2013. Market fishes of Indonesia.

# FAMILY DUSSUMIERIIDAE

## (sprats)

### *Characteristics*

- More rounded in cross section than anchovies
- No scutes on the belly
- Small terminal mouth
- Maxilla with two supplemental bones
- Scales large, cycloid, and easily shed



Note: Sprats are placed in the family Dussumieriidae by FishBase, but in the family Clupeidae by FAO and WoRMS.

# *Silver sprat*

*Spratelloides gracilis*

## **Description**

- Distinct silver lateral band with distinct top edge
- Back steely blue

## **Size**

- Up to 7 cm

## **Quality**

- Good active bait
- Moderately strong given good handling



Image: Antony D. Lewis

# *Lewis' round herring*

*Spratelloides lewisi*

## **Description**

- Distinguished from other species mainly by the silver band with turquoise hues on the flanks, which fades anteriorly at about tips of pectoral fins and lacks a distinct upper edge

## **Size**

- Up to 6 cm

## **Quality**

- Good bait
- More fragile than the silver sprat



Image: Antony D. Lewis

# Blue sprat

*Spratelloides delicatulus*

## Description

- No silver band along side
- Four black bands on tail base

## Size

- Up to 7 cm

## Quality

- Very good active bait
- Needs careful handling

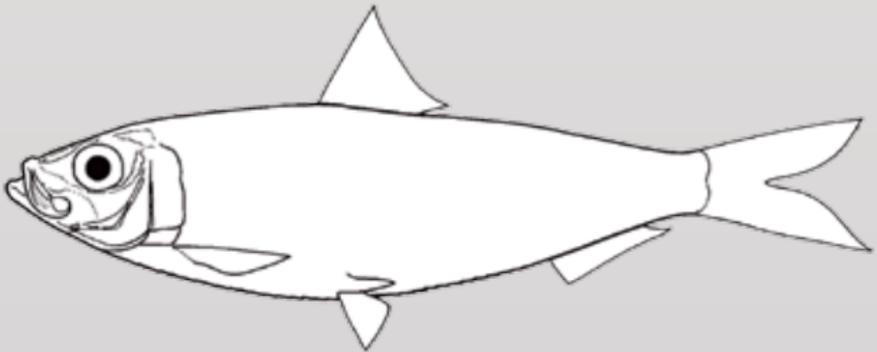


Image: David Maynard for FFA

# ***FAMILY CLUPEIDAE*** ***(sardines, herrings)***

## ***Characteristics***

- A diverse family of mostly small (10–20 cm) silvery fish
- Body shape from elongated to strongly compressed (oval)
- Scutes located along the belly
- Lower jaw short and deep
- Upper jaw (maxilla) with two supplemental bones (supramaxillae)
- Anal fin longer than dorsal fin and usually blue/green on back with silvery sides



# *Spotted sardine*

*Amblygaster sirm*

## **Description**

- Narrow body
- Row of blue/gold spots along side

## **Size**

- Up to 23 cm

## **Quality**

- Good bait if small
- Adults not strong, scales easily lost



Image: Antony D. Lewis

# Gold spot herring

*Herklotsichthys quadrimaculatus*

## Description

- Two orange spots on edge of gill cover
- Blue stripe along side

## Size

- Up to 14 cm

## Quality

- Good bait
- Strong
- Not often a dominant species



Image: David Maynard for FFA

# *Indian pellona*

*Pellona ditchela*

## **Description**

- Silvery white from midbody to the pelvic area
- Dorsal fin origin near midpoint of body
- Eye large

## **Size**

- Up to 16 cm

## **Quality**

- Excellent bait, skipping across the surface
- Very hardy



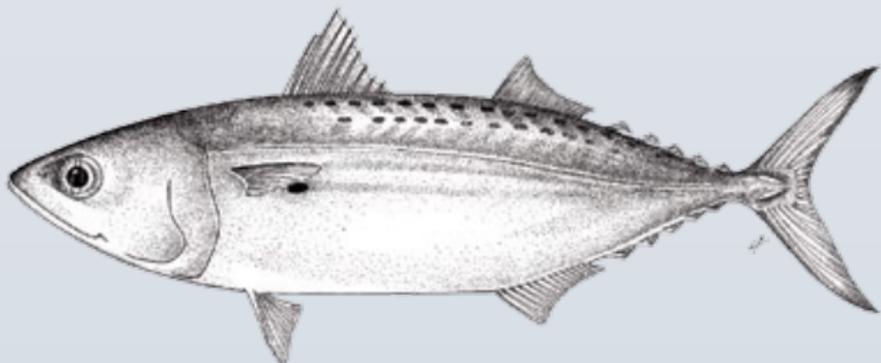
Image: David Maynard for FFA

# FAMILY SCOMBRIDAE

## (*tunas, mackerels, bonitos*)

### *Characteristics*

- A large commercially important family but only two genera of mackerels are important as baitfish: *Scomber* and *Rastrelliger*
- *Scomber* are the blue mackerels common in temperate waters of Australia and New Zealand
- *Rastrelliger* are the chub mackerels of tropical waters



# *Indian mackerel*

*Rastrelliger kanagurta*

## *Description*

- Spots and stripes on sides

## *Size*

- Up to 35 cm

## *Quality*

- Reasonable bait if small
- Tend to swim away from vessel
- Moderately strong



Image: Antony D. Lewis

# *Short-bodied mackerel*

*Rastrelliger brachysoma*

## **Description**

- Snout pointed
- Distinct fusiform body shape

## **Size**

- Up to 34.5 cm

## **Quality**

- Adult fish important food species
- Juveniles used for bait
- Generally not common in catches



Image: David Maynard for FFA

# Faughn's mackerel

*Rastrelliger faughni*

## Description

- Spots and stripes on sides

## Size

- Up to 35 cm

## Quality

- Just fair bait, swim away from vessel
- Moderately strong
- Not distinguished from other mackerel species
- Not well known



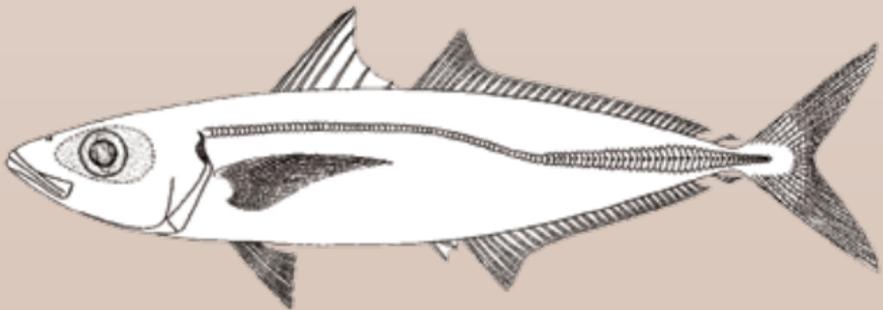
Image: David Maynard for FFA

# FAMILY CARANGIDAE

## (jacks, pompanos)

### *Characteristics*

- Widely distributed mostly marine species, but some in brackish/estuarine waters
- Body generally compressed, although body shape extremely variable from very deep to fusiform



# Bigeye scad

*Selar crumenophthalmus*

## Description

- Yellow stripe alongside
- Scutes on lateral line not reaching second dorsal origin

## Size

- Up to 30 cm

## Quality

- Good food fish
- Good bait if small
- Strong



Image source: White et al. 2013. Market fishes of Indonesia.

# *Oxeye scad*

*Selar boops*

## **Description**

- Bright orange rather than yellow stripe
- Scutes on lateral line reach front of second dorsal origin
- Very large eyes

## **Size**

- Up to 25 cm

## **Quality**

- Adults excellent food fish
- Good bait if small
- Strong



Image: David Maynard for FFA

# Round scad

*Decapterus macrosoma*

## Description

- Black spot on gill cover
- No blue lateral band

## Size

- Up to 30 cm

## Quality

- Good bait if small
- Strong



Image: Antony D. Lewis

# *Ocean scad*

*Decapterus macarellus*

## **Description**

- Black spot on gill cover
- Blue lateral band
- Adults typically occur offshore, juveniles inshore

## **Size**

- Up to 30 cm

## **Quality**

- Good bait if small
- Moderatly strong



Image: Rui P. Freitas / FishBase

# Yellow-stripe scad

*Selaroides leptolepis*

## Description

- Black spot on gill cover
- High yellow stripe

## Size

- Up to 30 cm

## Quality

- Moderately good bait
- Strong
- Rarely dominant in catches



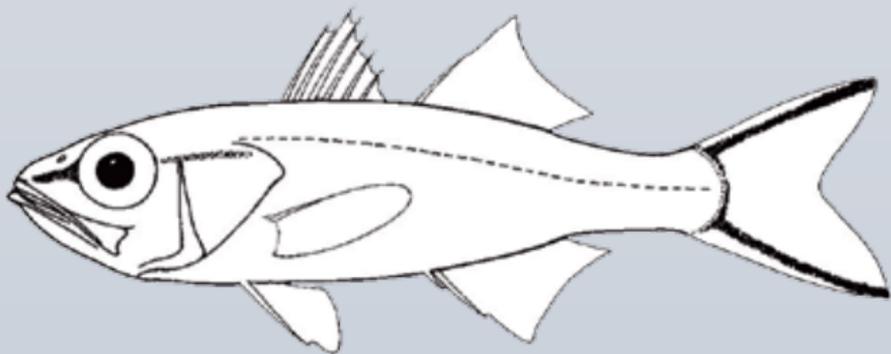
Image source: White et al. 2013. Market fishes of Indonesia.

# *FAMILY APOGONIDAE*

## *(cardinalfish)*

### *Characteristics*

- Small carnivorous fish found in a variety of habitats, but mostly common around coral reefs
- In most species, the male carry eggs and youth in its mouth
- Large head and mouth
- Usually protruding lower jaw



# Swallow tail cardinal

*Rhabdamia cypselurus*

## Description

- Pink-coloured flesh
- Strongly forked tail with bands on lobes
- Schooling in midwater
- Mouth breeder

## Size

- Up to 6 cm

## Quality

- Moderately attractive bait



Image: John E. Randall / FishBase

# *Luminous cardinalfish*

*Rhabdamia gracilis*

## **Description**

- Lighter pink than the swallow tail cardinal
- Silvery head and abdomen
- May have black caudal tips

## **Size**

- Up to 6 cm

## **Quality**

- Moderately attractive bait



Image: John E. Randall / FishBase

# *Black-belted cardinalfish*

*Archamia zosterophora*

## *Description*

- Wide black band running across the second dorsal fin down to the pelvic fins
- Often black spot at caudal fin base

## *Size*

- Up to 8 cm

## *Quality*

- Minor contribution to bait catches



Image: John E. Randall / FishBase

# Large toothed cardinalfish

*Cheilodipterus macrodon*

## Description

- Juvenile with a large black blotch at the caudal peduncle
- Adults with wider stripes and darker interspace

## Size

- Up to 25 cm

## Quality

- Minor contribution to bait catches



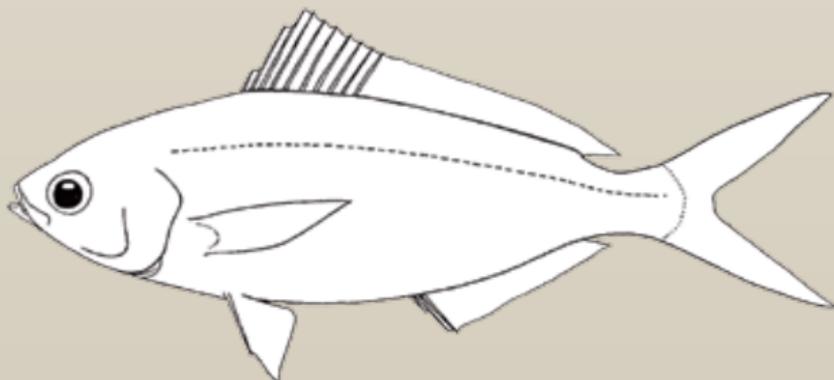
Image: John E. Randall / FishBase

# FAMILY CAESIONIDAE

## (fusiliers)

### *Characteristics*

- Small to moderate size fish often found in schools in the vicinity of coral reefs
- Usually brightly coloured
- Characterised by a single continuous dorsal fin with a distinctly forked tail
- Lateral line prominent
- Mouth small and terminal
- Upper body bluish
- Lower body white to pale bluish
- Golden band running from above the eye to caudal fin, extending to the tip of the upper lobe
- Dorsal and anal fins fully scaled



# Red fusilier

*Pterocaesio pisang*

## Description

- Usually reddish
- Distinct blood-red or blackish caudal tips

## Size

- Up to 21 cm

## Quality

- Good and strong bait
- Most common of the *Pterocaesio* species



Image: John E. Randall / FishBase

# *Slender fusilier*

*Gymnocaesio gymnopterus*

## **Description**

- Greenish red
- Narrow stripe along lateral line
- Usually dusky dorsal tips
- Dorsal fin scaleless

## **Size**

- Up to 18 cm

## **Quality**

- Very strong
- Not favoured as bait (inactive or dives)



Image: David Maynard for FFA

# Mottled fusilier

*Dipterygonotus balteatus*

## Description

- Brownish-red nearshore pelagic species
- Several narrow paler stripes along body
- Naked dorsal and anal fins

## Size

- Up to 14 cm

## Quality

- Moderately strong
- Not very active (may dive)



Image source: White et al. 2013. Market fishes of Indonesia.

# *Banded fusilier*

*Pterocaesio digramma*

## **Description**

- Two distinct yellow lines on side, one roughly following below the lateral line, the other well above the lateral line

## **Size**

- Up to 30 cm

## **Quality**

- Minor bait species as juvenile



Image: Ian V. Shaw - Reef Life Survey

# *Blue-back fusilier*

*Pterocaesio tile*

## **Description**

- Dark streak through each caudal lobe
- Prominent black mark in the pectoral axil
- Distinct brown-olive mid-lateral band

## **Size**

- Up to 30 cm

## **Quality**

- Minor bait species as juvenile



Image: Ian V. Shaw - Reef Life Survey

# Gold and blue fusilier

*Caesio caerulaurea*

## Description

- Upper body bluish
- Lower body white to pale bluish
- Golden band running from above eye to caudal fin, extending to tip of upper lobe
- Dorsal and anal fins fully scaled

## Size

- Up to 35 cm

## Quality

- Good food fish
- Minor bait species as juvenile

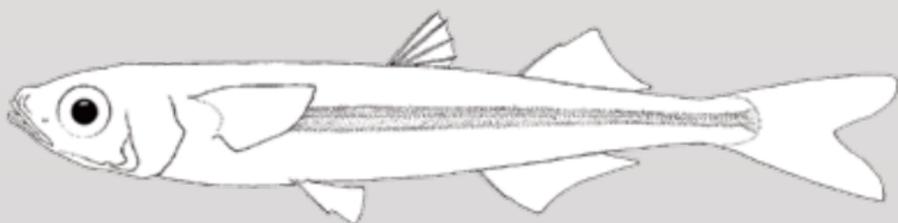


Image: John E. Randall / FishBase

# OTHER SPECIES

## *Characteristics*

- May occur but never dominant in baitfish catches
- Generally only fair quality as bait



# *Fijian silverside*

*Hypoatherina ovalaua* (Atherinidae)

## **Description**

- Bluish green
- Silvery mid-lateral stripe with a thin bluish line on upper margin
- Fins clear to dusky

## **Size**

- Up to 8 cm

## **Quality**

- Fair bait fish
- Hardy but not very active



Image source: White et al. 2013. Market fishes of Indonesia.

# *Robust silverside, hardyhead*

*Atherinomorus lacunosus* (Atherinidae)

## **Description**

- Body green, light yellow or brownish
- Upper body darker

## **Size**

- Up to 13 cm

## **Quality**

- Fair bait fish
- Hardy but not active



Image: John E. Randall / FishBase

# *Toothed ponyfish*

*Gazza minuta* (Leiognathidae)

## *Description*

- Body silvery
- Anterior part of anal fin yellow
- Dorsal, pectoral and pelvic fins colorless

## *Size*

- Up to 21 cm

## *Quality*

- Fair bait when juvenile



Image: David Maynard for FFA

# Orangefin ponyfish

*Photopectoralis bindus* (Leiognathidae)

## Description

- Silver body
- Snout with a dark band
- Dorsal and anal fins with orange tips

## Size

- Up to 11 cm

## Quality

- Fair bait



Image: Gregorio V. Hermosa / FishBase

# *Common ponyfish*

*Leiognathus equulus* (Leiognathidae)

## *Description*

- Body silvery
- Anal fin yellowish
- Protracted mouth pointed downwards

## *Size*

- Up to 28 cm

## *Quality*

- Fair bait



Image: Sahat Ratmuangkhwang / FishBase

# Deep pugnose ponyfish

*Secutor ruconius* (Leiognathidae)

## Description

- Body silvery
- Protracted mouth pointed upwards

## Size

- Up to 8 cm

## Quality

- Fair bait



Image: David Maynard for FFA

## ***FURTHER READING***

Useful publications for or more information on baitfish species, their identification and their biology:

FAO. 2001. FAO Species Identification Guide for Fishery Purposes. The Living Marine Resources of the Western Central Pacific. K.E.Carpenter & V.H.Niem (eds), FAO Rome.

- Volume 3: Bony fishes part 1 (Elopidae to Linophrynidae) includes the Engraulidae and Clupeidae
- Volume 4: Bony fishes part 2 (Mugilidae to Carangidae) includes the Atherinidae and Carangidae
- Volume 5: Bony fishes part 3 (Menidae to Pomacentridae) includes the Caesonidae
- Volume 6: Bony fishes part 4 (Labridae to Latimeriidae) includes the Scombridae

Lewis A.D. 2015. Illustrated guide to the common skipjack pole-and-line baitfishes of Eastern Indonesia (= Asosiasi Pole-and Line dan Handline Indonesia).

Lewis A.D., Smith B.R. and Ellway C.P. 1984. A guide to the common tuna baitfishes of the South Pacific Commission area. SPC Handbook 23, South Pacific Commission, Noumea, New Caledonia, 82 p.

White W.T. et al. 2013. Market fishes of Indonesia (= Jenis jenis ikan di Indonesia). ACIAR Monograph 155. Australian Centre of International Agricultural Research, Canberra. 438 p.

## ***USEFUL WEBSITES***

➤ **FishBase** ([www.fishbase.org](http://www.fishbase.org))

FishBase is a relational database with information to cater to different professionals such as research scientists, fisheries managers, zoologists and many more. FishBase on the web contains practically all fish species known to science.

➤ **WoRMS** (<http://www.marinespecies.org/>)

The World Register of Marine Species (WoRMS) provides an authoritative and comprehensive list of names of marine organisms, including information on synonymy. WoRMS has an editorial management system where each taxonomic group is represented by an expert who has the authority over the content, and is responsible for controlling the quality of the information.

## ***ACKNOWLEDGEMENTS***

This handbook has been produced with financial assistance from the Overseas Fishery Cooperation Foundation of Japan (OFCF) through the Japan Promotion Fund administered by the Forum Fisheries Agency.

The assistance provided by Antony D. Lewis throughout the design stages, the editing and for the taxonomic identification of the species has been very instrumental and is fully acknowledged.

# INDEX

<i>Amblygaster sirm</i> .....	12	Fijian silverside .....	38
Anchovies .....	1	Fusiliers .....	30
APOGONIDAE .....	25	<i>Gazza minuta</i> .....	40
<i>Archamia zosterophora</i> .....	28	Gold anchovy .....	4
<i>Atherinomorus lacunosus</i> .....	39	Gold and blue fusilier .....	36
Banded fusilier .....	34	Gold spot herring .....	13
Bigeye scad .....	20	<i>Gymnocaesio gymnopterus</i> .....	32
Black-belted cardinalfish .....	28	Hardyhead .....	39
Blue anchovy .....	3	<i>Herklotsichthys quadrimaculatus</i> ..	13
Blue sprat .....	10	Herrings .....	11
Blue-back fusilier .....	35	<i>Hypoatherina ovalaua</i> .....	38
Bonitos .....	15	Indian mackerel .....	16
<i>Caesio caerulea</i> .....	36	Indian pellona .....	14
CAESIONIDAE .....	30	Jacks .....	19
CARANGIDAE .....	19	Large toothed cardinalfish .....	29
Cardinalfish .....	25	<i>Leiognathus equulus</i> .....	42
<i>Cheilodipterus macrodon</i> .....	29	Lewis' round herring .....	9
CLUPEIDAE .....	11	Little priest .....	6
Common ponyfish .....	42	Luminous cardinalfish .....	27
<i>Decapterus macarellus</i> .....	23	Mackerel .....	15
<i>Decapterus macrosoma</i> .....	22	Mottled fusilier .....	33
Deep pugnose ponyfish .....	43	Ocean scad .....	23
<i>Dipterygonotus balteatus</i> .....	33	Oceanic anchovy .....	2
DUSSUMIERIIDAE .....	7	Orangefin ponyfish .....	41
<i>Encrasicholina devisi</i> .....	4	Other species .....	37
<i>Encrasicholina heteroloba</i> .....	3	Oxeye scad .....	21
<i>Encrasicholina punctifer</i> .....	2	<i>Pellona ditchela</i> .....	14
ENGRAULIDAE .....	1	<i>Photopectoralis bindus</i> .....	41
Faughn's mackerel .....	18	Pompanos .....	19

<i>Pterocaesio digramma</i> .....	34	<i>Selaroides leptolepis</i> .....	24
<i>Pterocaesio pisang</i> .....	31	Short-bodied mackerel .....	17
<i>Pterocaesio tile</i> .....	35	Silver sprat .....	8
<i>Rastrelliger brachysoma</i> .....	17	Slender fusilier .....	32
<i>Rastrelliger faughni</i> .....	18	Spotted sardine .....	12
<i>Rastrelliger kanagurta</i> .....	16	<i>Spratelloides delicatulus</i> .....	10
Red fusilier .....	31	<i>Spratelloides gracilis</i> .....	8
<i>Rhabdamia cypselurus</i> .....	26	<i>Spratelloides lewisi</i> .....	9
<i>Rhabdamia gracilis</i> .....	27	Sprats .....	7
Robust silverside .....	39	<i>Stolephorus waitei</i> .....	5
Round scad .....	22	Swallow tail cardinal .....	26
Sardines .....	11	<i>Thryssa baelama</i> .....	6
SCOMBRIDAE .....	15	Toothed ponyfish .....	40
<i>Secutor ruconius</i> .....	43	Tunas .....	12
<i>Selar boops</i> .....	21	Yellow-stripe scad .....	15
<i>Selar crumenophthalmus</i> .....	20	Yellowtail anchovy .....	5

---

## Forum Fisheries Agency (FFA)

PO Box 629, Honiara

Solomon Islands

Tel: +677 21124

Fax: +677 23995

[www.ffa.int](http://www.ffa.int) – [info@ffa.int](mailto:info@ffa.int)



**FFA**



Produced by the Pacific Islands Forum Fisheries Agency (FFA)  
with financial assistance from the Overseas Fishery Cooperation Foundation  
of Japan (OFCF) through the Japan Promotion Fund



**SPC**

Secretariat  
of the Pacific  
Community

Edited, laid out and prepared for publication at the Secretariat of the Pacific Community  
headquarters, Noumea, New Caledonia, and printed by Stredder Print Ltd., New Zealand

[www.spc.int](http://www.spc.int) – [spc@spc.int](mailto:spc@spc.int)