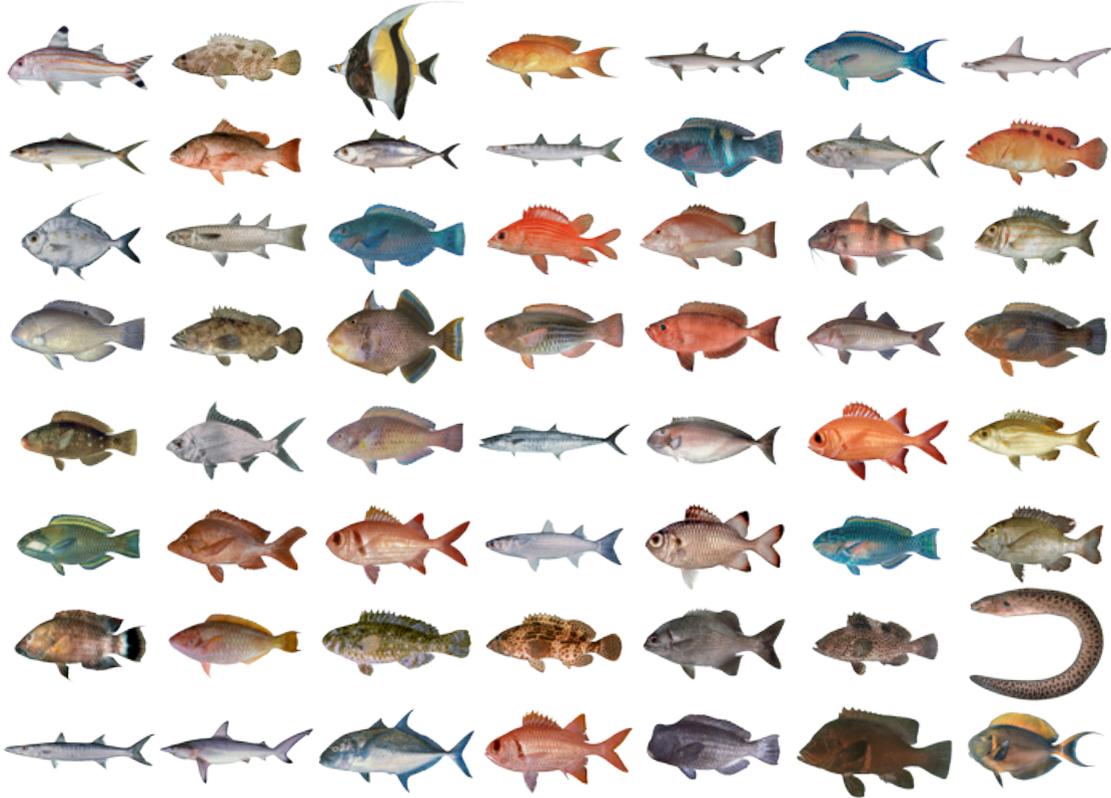

Identification guide to the common coastal food fishes of the Pacific Islands region

Brad Moore and Boris Colas



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Brad Moore and Boris Colas
Coastal Fisheries Programme
Pacific Community (SPC), Noumea, New Caledonia



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Introduction

The accurate identification of harvested species is essential for effective fisheries management. This guide has been developed to assist in the identification of the most commonly encountered species of coastal sharks, rays and bony fishes in artisanal and subsistence fisheries catches and domestic fish markets in the Pacific Islands region. While this guide has primarily been designed for Pacific Island fisheries and environmental officers tasked with undertaking surveys of catches or fish sold at market stalls, it will likely be useful for university students, non-governmental partners, fishers, and members of the public with a general interest in fish. This guide is intended to help fish surveyors working in the Pacific to more accurately identify the individual species they encounter, thereby resulting in more highly skilled surveyors, improved fisheries data collection and improved management of the region's coastal fisheries resources.

The Pacific Islands region is home to many thousands of fish species, many of which support important commercial, artisanal and subsistence fisheries, and of course, many of which do not. In this guide, we present approximately 320 of the most commonly observed coastal and nearshore finfish species encountered in catches, or sold at market stalls throughout the region. We must stress that the list of species included here is not exhaustive, and other species are likely to be observed. Moreover, with some exceptions, this guide does not cover those species targeted in oceanic purse-seine, longline or deep-bottom snapper fisheries, nor does it cover invertebrate fisheries. The Pacific Community (SPC) has produced excellent identification guides for species captured in those fisheries, and there are listed in the Further reading section on pages 132–133.

Fisheries officers should use this guide in conjunction with the approaches described in the SPC manual 'Creel and market surveys: A manual for Pacific Island fisheries officers'. Using these resources together will help to ensure the standardisation of survey approaches and species identification across the region.

The information provided in this guide is based on the best-available data at the time of writing. Greater research and survey effort in the region will undoubtedly uncover additional species of interest, expand species' distributions, or alter species taxonomy. SPC intends to keep this reference guide current. The authors invite readers to suggest updates to any of the information contained in the guide, by writing to cfpinfo@spc.int.

How to use this guide

Species included in this guide are grouped under their taxonomic family. Individuals are first grouped into either ‘Elasmobranchs’ (sharks and rays) or ‘Teleosts’ (bony fishes). Within these broad groupings, individual families are presented alphabetically by the family’s scientific name. Each family is colour-coded, allowing for quick and easy visual orientation among families. An identification guide to the families included in this book can be found on pages 8–9. This includes a line drawing of a typical representative of each family included; the family, scientific, and common names; and the page numbers that individual species of the family can be found on.

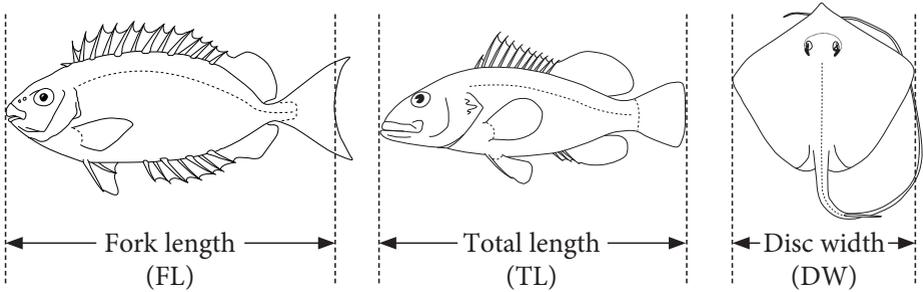
Within each family, individual species are arranged alphabetically by scientific name. The use of scientific names helps ensure standardisation across the region and globally. The first part of the scientific name refers to the genus, and the second part refers to the species.

Information for each species begins with the scientific name, family name (both scientific and common English names) and Food and Agriculture Organization of the United Nations (FAO) code. Where available, the species-specific FAO code is used. However, in some instances no such code is available, so codes relating to the genus (e.g. *Acanthurus*) or family (e.g. Acanthuridae) are used. The most frequently used common names, beginning with the FAO-nominated common English name, are provided underneath the scientific name.

A photograph of the species is provided underneath the name information, accompanied by a set of key anatomical identifiers that are linked to a brief description of the species in the boxed text. With a few exceptions, we have chosen to display dead fish because these are in the states and colours that surveyors will encounter during a creel or market survey. However, in several instances, photos of dead fish were not available, in which case photos of live fish taken in-water have been included. In some instances, drawings are used to illustrate key features. Typically, a single individual is presented for each species, although multiple images are provided for those species where considerable variation in appearance occurs among sexes, life-cycle stages, phases or variants. Species descriptions have been kept simple, focusing on the key reliable field characters to distinguish them from other similar species. To maintain consistency, the terminology used to describe the species is generally

similar to that used in other published reference guides. Diagrammatic examples of the various identifying features referred to in the species descriptions can be found on pages 6–7.

Below the species description, the maximum length (in cm) is provided to help guide identifications. It will be rare to observe a specimen that is greater than the maximum reported length, and in such cases this may indicate a species identification error. For species with rounded or truncate caudal fins (see descriptions on page 6), and for sharks, the total length (TL – generally measured from the anterior-most point of the fish [typically the tip of the lips or snout] to the end of the caudal fin) is presented. For species with emarginate, lunate or forked caudal fins, the ‘fork length’ (FL – measured from the anterior-most point of the fish to the middle or ‘V’ of the caudal fin) is presented, because the tips of these types of caudal fins are frequently damaged, thus preventing an accurate measurement of their total length. For rays, the width of the disc (DW) is given.



Information on whether the species is present in a particular Pacific Island country or territory is included below the maximum length. This information has been obtained from online databases, recent species checklists, scientific papers and selected technical reports. Here, Pacific Island countries and territories (PICTs) are represented by their two-letter International Organization for Standardization country or territory code:

AS	American Samoa	PF	French Polynesia
CK	Cook Islands	PG	Papua New Guinea
FJ	Fiji	PN	Pitcairn
FM	Micronesia, Federated States of	PW	Palau
GU	Guam	SB	Solomon Islands
KI	Kiribati	TK	Tokelau
MH	Marshall Islands	TO	Tonga
MP	Northern Mariana Islands	TV	Tuvalu
NC	New Caledonia	VU	Vanuatu
NR	Nauru	WF	Wallis and Futuna
NU	Niue	WS	Samoa

A three-shade colour code is then used to indicate whether the species has been recorded (dark shade), is potentially present (lighter shade), or is likely to be absent (white with coloured border), in each PICT.

FJ = species has been previously recorded in that PICT (in this case, Fiji)

MP = species has not been previously recorded in that PICT (in this case Northern Mariana Islands), but may occur due to the presence of suitable habitat and its reported occurrence in neighbouring PICTs

CK = species has not been previously reported in that PICT (in this case Cook Islands), and is unlikely to occur there, due to absence of suitable habitat and/or absence in neighbouring PICTs

Below certain photographs are comments on similar-looking species (where relevant), and the key identifying features that distinguish these.

A list of recommended further reading follows the individual species accounts, to assist in the identification of species in groups beyond the scope of this guide, such as ornamental species. An index is provided at the back of the guide to help the reader locate a particular grouping, family or species quickly and easily.

Family common name: Lutjanidae / Snappers

Family scientific name: *Lutjanus vitta*

Common English name(s): Brownstripe red snapper, brownstripe snapper

Scientific name: *Lutjanus vitta*

FAO code: LUJ

Maximum length: 40 cm FL

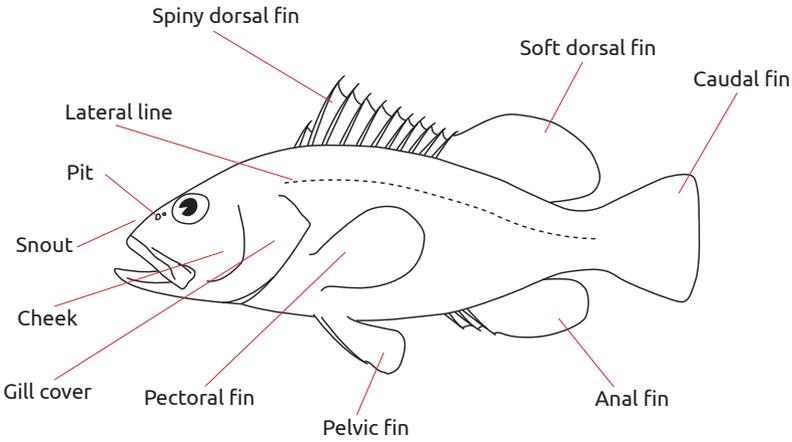
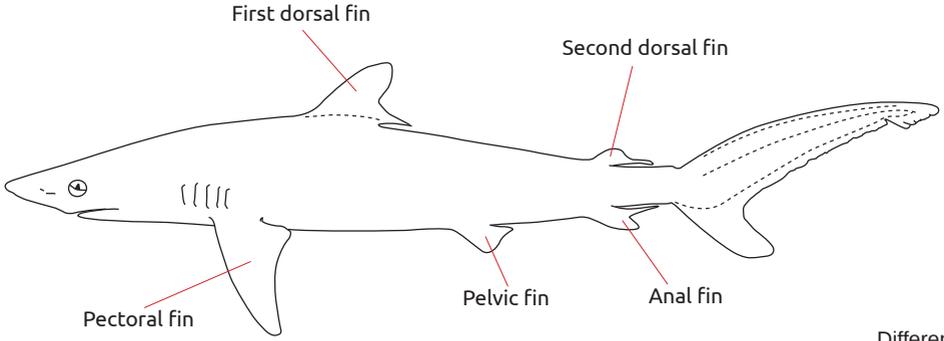
Description: Pinkish-grey to yellowish-grey upper body, turning to silvery-white on belly, with 1 a brown stripe from eyes to caudal fin. 2 Narrower diagonal brown lines above lateral line and 3 horizontal brown lines below lateral line. 4 Large yellow blotch below soft dorsal fin and on base of caudal fin.

Distribution: AS CK FJ FM CU KI MH MP NC NR NU PF PG PN PW SB TK TO TV VU WF WS

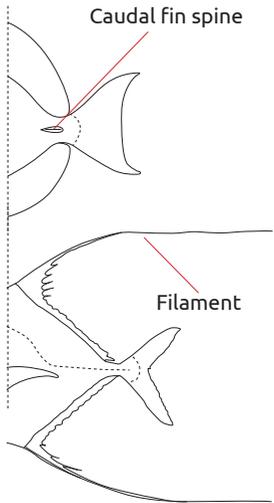
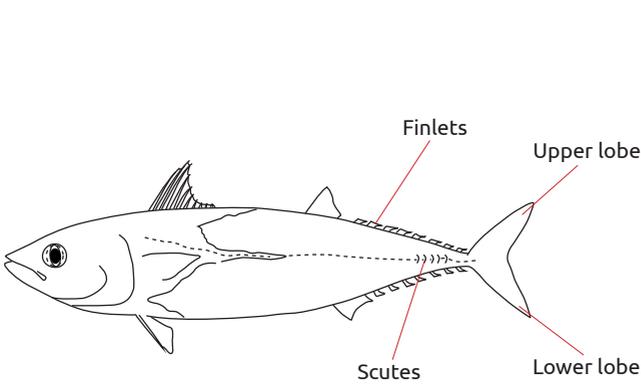
Similar species: Similar to *Lutjanus lutjanus* but with a brown stripe and lines instead of yellow, and space between eye and upper jaw is larger.

Identifiers: 1, 2, 3, 4

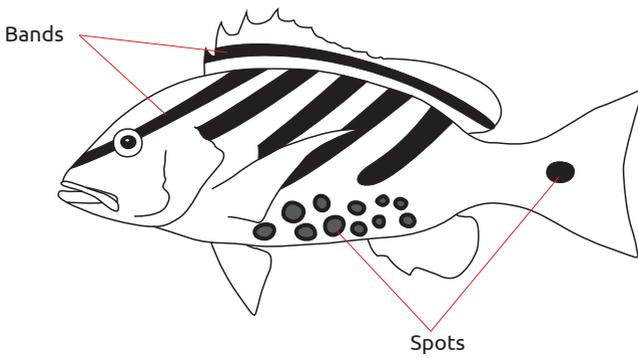
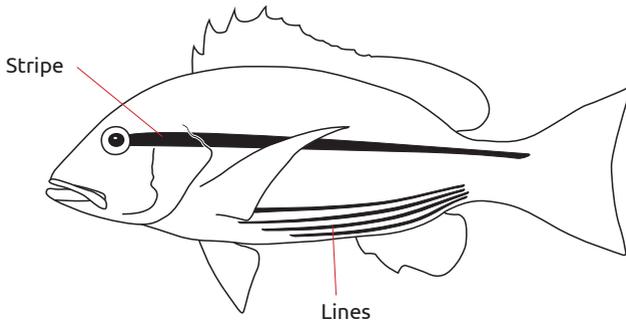
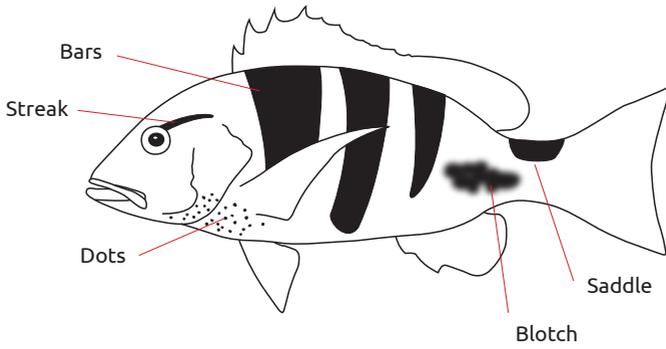
External features



Different caudal fin types

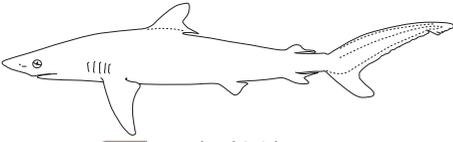


Markings

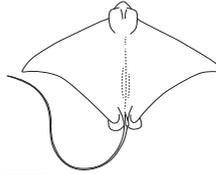


Families included in this guide

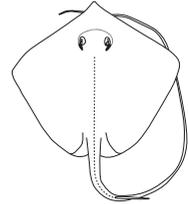
Elasmobranchs (sharks and rays)



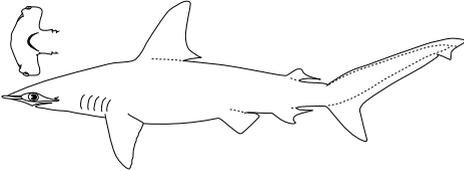
Carcharhinidae
(Requiem sharks)
p. 10–11



Aetobatidae
(Pelagic eagle rays)
p. 13

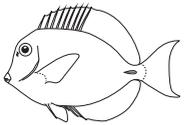


Dasyatidae
(Stingrays)
p. 14

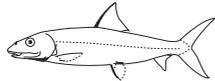


Sphyrnidae
(Hammerhead sharks)
p. 12

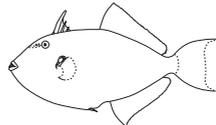
Teleosts (bony fishes)



Acanthuridae
(Surgeonfish)
p. 15–24



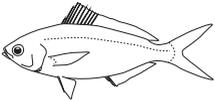
Albulidae
(Bonefish)
p. 25



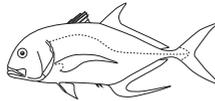
Balistidae
(Triggerfish)
p. 26



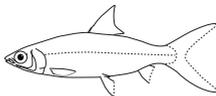
Belonidae
(Needlefish)
p. 27



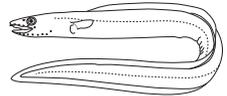
Caesionidae
(Fusiliers)
p. 28–29



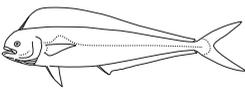
Carangidae
(Jacks)
p. 30–37



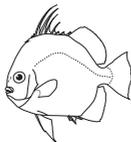
Chanidae
(Milkfish)
p. 38



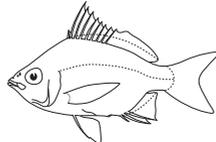
Congridae
(Conger eels)
p. 39



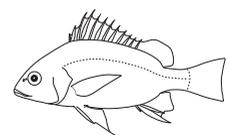
Coryphaenidae
(Dolphinfish)
p. 40



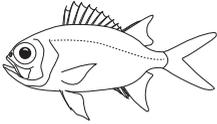
Ephippidae
(Spadefish)
p. 41



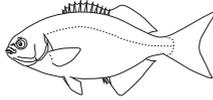
Gerreidae
(Mojarras)
p. 42–43



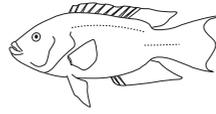
Haemulidae
(Grunts)
p. 44–47



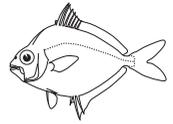
Holocentridae
(Soldierfish and Squirrelfish)
p. 48–53



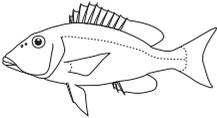
Kyphosidae
(Sea chubs)
p. 54



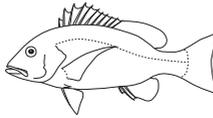
Labridae
(Wrasses)
p. 55–58



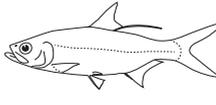
Leiognathidae
(Ponyfish)
p. 59



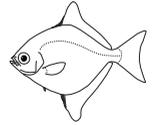
Lethrinidae
(Emperors)
p. 60–67



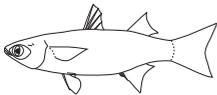
Lutjanidae
(Snappers)
p. 68–77



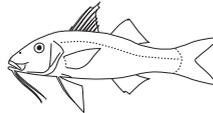
Megalopidae
(Tarpons)
p. 78



Monodactylidae
(Moonyfish)
p. 79



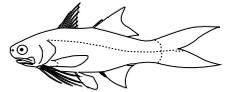
Mugilidae
(Mulletts)
p. 80–81



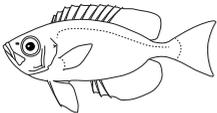
Mullidae
(Goatfish)
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Muraenidae
(Moray eels)
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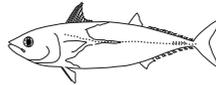
Polynemidae
(Threadfins)
p. 88



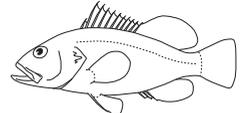
Priacanthidae
(Bigeyes)
p. 89



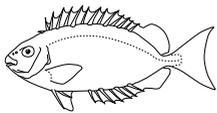
Scaridae
(Parrotfish)
p. 90–104



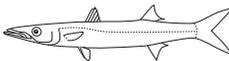
Scombridae
(Mackerels, tunas)
p. 105–107



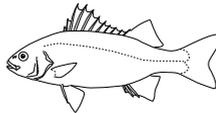
Serranidae
(Groupers)
p. 108–122



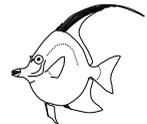
Siganidae
(Rabbitfish)
p. 123–127



Sphyraenidae
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Zanclidae
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