redmap

SPOT. LOG. MAP.

Redmap (Range Extension Database and Mapping Project) invites the fishers and divers of Tasmania to Spot, Log and Map marine species that are unusual or uncommon along Tasmania's coast.

REGISTER YOUR SIGHTINGS AT:

WWW.REDMAP.ORG.AU

or contact the Redmap team on (03) 6227 7277, or email enquiries@redmap.org.au

Don't forget your camera...

although not vital, photos allow us to confirm the species identification.

This booklet was supported by the Tasmanian Community Fund

Redmap Tasmania is hosted by IMAS

What's on the move in Tasmanian waters?

Redmap (Range Extension Database Mapping Project) is capturing information that will help to assess how our marine ecosystems may be changing.

This booklet aims to help the fishers and divers of Tasmania to identify marine species that Redmap are particularly interested in. Some species are new to Tasmania, some are shifting their range within Tasmanian waters, and the presence of others may be dependent on seasonal variations. Remember too that there are additional species listed on our website, and you can always log any other species that you know or suspect to be outside of its usual distribution. Over time data collected on the Redmap website will provide a record of what marine species are on the move.

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What's inside

Things are warming up in Tassie!

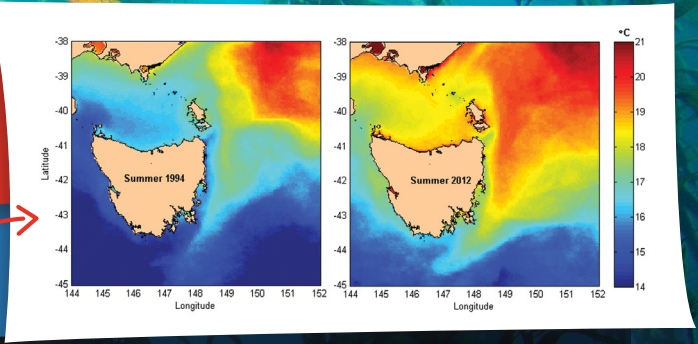

Image (Alistair Hobday, CSIRO): Average summer water temperatures 1994 and 2010

Monitoring off Maria Island and sea surface temperature satellite data, like that shown above, have demonstrated that our coastal waters are getting warmer. This is due in part to local warming as well as southerly extension of the East Australian Current.

A temperature rise of a few degrees does not really sound like a lot; it actually sounds quite nice, especially if you have ever been swimming in Tasmania. However, for our marine ecosystems, small temperature changes are having a significant impact on the distribution and physiology of our marine species.


BASS STRAIT
KING ISLAND
FLINDERS ISLAND
INDIAN OCEAN
DEVONPORT
ST HELENS
BICHENO
TASMAN SEA
QUEENSTOWN
HOBART
MARIA ISLAND
TASMAN PENINSULA
Map of Tasmania
PACIFIC OCEAN

Blue morwong

Nemadactylus valenciennesi

redmap
SPOT. LOG. MAP.

IDENTIFYING FEATURES

Adult: Silver blue with wavy lines radiating out from the eyes.

Juvenile: Look for yellow lines along the body and a black splotch on its side.

SIZE

Around 60cm

HABITAT

Exposed reef

Image: Graham Edgar

LOG IT

If spotted south of Maria Island

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Crimsonband wrasse

Notolabrus gymnogenis

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SPOT. LOG. MAP.

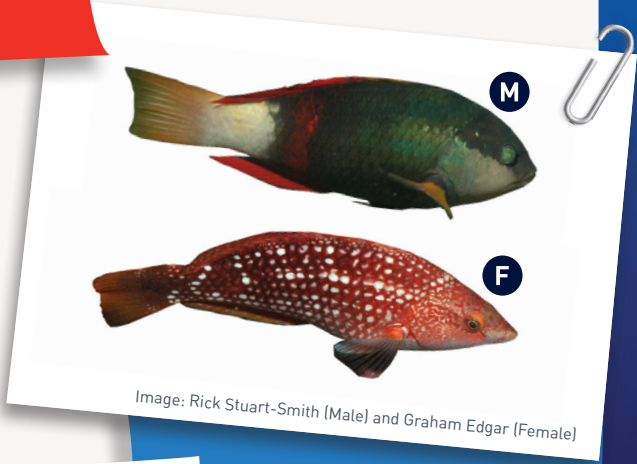

Image: Rick Stuart-Smith (Male) and Graham Edgar (Female)

IDENTIFYING FEATURES

Male: Green body and white tail with the namesake red band across the body and red fins.

Female: Red with many rows of white dots all over the body.

Juveniles: Green with white spots.

SIZE

Up to about 50cm

HABITAT

Exposed reef

LOG IT

Wherever it is spotted in Tasmanian waters

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Dusky morwong

Dactylophora nigricans

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

Adult: Uniform green-brown colour.

Juvenile: Light body colour and brown spots on its upper body and tail.

SIZE

Up to 120cm

HABITAT

Near seagrass beds

LOG IT

If spotted south of Maria Island

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Eastern blue groper

Achoerodus viridis

redmap
SPOT. LOG. MAP.

Image: NSW DPI

IDENTIFYING FEATURES

Male: Distinctive blue or blue green colour with large fleshy lips.

Female: Brown with random light spotting/blotches.

Juvenile: Grey with similar blotches.

SIZE

Big! Up to 100cm

HABITAT

Exposed reef

LOG IT

Wherever it is spotted in Tasmanian waters

WWW.REDMAP.ORG.AU

Eastern wirrah

Acanthistius ocellatus

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

The eastern wirrah has a greenish-brown body covered in blue centred spots. Count thirteen spines on its dorsal fin (back fin). Juveniles have banded patterning.

SIZE

Up to 60cm

HABITAT

Reefs

LOG IT

If spotted south of St Helens

WWW.REDMAP.ORG.AU

Frigate mackerel

Auxis thazard

redmap
SPOT. LOG. MAP.

Image: Nigel Stinger

IDENTIFYING FEATURES

Light underside with a pattern of approximately 15 narrow, oblique dark wavy lines above the lateral line.

SIZE

Up to about 60cm

HABITAT

Coastal and open waters

LOG IT

Wherever it is spotted in Tasmanian waters

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Green moray eel

Gymnothorax prasinus

redmap
SPOT. LOG. MAP.

Image: John Keane

IDENTIFYING FEATURES

Most common eel in southern Australian waters, but uncommon in Tasmania. This green eel has a yellow-brown humped head and green body.

SIZE

To about 100cm

HABITAT

Reef

LOG IT

If spotted south of Maria Island

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King George whiting

Sillaginodes punctata

redmap
SPOT. LOG. MAP.

Image: CSIRO

IDENTIFYING FEATURES

This whiting has a silvery body, and brown spots along its back.

SIZE

Up to 70cm

HABITAT

Juveniles are found near sheltered bays amongst seagrass, but larger older fish are found in open water

LOG IT

If you spot it south of St Helens

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Luderick

Girella tricuspidata

redmap
SPOT. LOG. MAP.

IDENTIFYING FEATURES

Luderick are dark brown or greenish-grey colour with 10 to 12 narrow vertical bars down their side. They have a slivery-grey underbelly.

SIZE

Approximately 60cm long and up to 3kg

HABITAT

Reef

Image: CSIRO

LOG IT

If you spot it on the east coast south of St Helens, or on the west or south coast

WWW.REDMAP.ORG.AU

Mado Sweep

Atypichthys strigatus

redmap
SPOT. LOG. MAP.

Image: Graham Edgar

IDENTIFYING FEATURES

Can be identified by brown stripes running horizontally along the length of their silvery white body (longitudinal stripes). They also have yellow fins (dorsal, anal and caudal).

SIZE

20 to 25cm

HABITAT

Reef

LOG IT

If you spot it south of Tasman Peninsula or off the mid north coast

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SPOT. LOG. MAP.

Mahi mahi

Coryphaena hippurus

IDENTIFYING FEATURES

Very bright with colourful blues and yellows which fade quickly upon death. Older male fish have a steep forehead, like a lump (hump headed).

SIZE

Up to 200cm

HABITAT

Open ocean

Image: NSW DPI

LOG IT

Wherever it is spotted in Tasmanian waters

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Maori wrasse

Ophthalmolepis lineolatus

redmap
SPOT. LOG. MAP.

Image: Erik Schlogl

IDENTIFYING FEATURES

Larger fish have bright blue tattoo markings around the eyes and face.

Females and juveniles: Have three long, coloured stripes along the length of the body. These longitudinal stripes are red-brown at the top, a thin white stripe in the middle and a green belly stripe.

SIZE

Up to 40cm

HABITAT

Exposed reef

LOG IT

Wherever it is spotted in Tasmanian waters

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Mosaic leatherjacket

Eubalichthys mosaicus

redmap
SPOT. LOG. MAP.

Image: Graham Edgar

IDENTIFYING FEATURES

Juveniles: Rounded body with yellow to orange patches and blue lines.

Adults: As leatherjackets age the body elongates, the orange and yellow spots occurring at juvenile stages becoming black and the blue lines fade.

SIZE

Up to 60cm

HABITAT

Juveniles shelter on reefs and adults in deep water

LOG IT

If spotted on the northeast, eastern and southern coasts

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Old wife

Enoplosus armatus

redmap
SPOT. LOG. MAP.

Image: Hugh Pederson

IDENTIFYING FEATURES

The body is light and silvery with 6–8 vertical black bands of varying length and width. Quite similar in appearance to boarfishes but has two separate dorsal fins as an adult.

SIZE

Up to 25cm

HABITAT

Sheltered reef and seagrass

LOG IT

If you spot it south of Maria Island

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Onespot puller

Chromis hypsilepis

redmap
SPOT. LOG. MAP.

Image: Erik Schlogl

IDENTIFYING FEATURES

This species is a blue–grey colour with yellow on the head. It is easily identified by the single spot found at the beginning of its tail.

SIZE

Up to 15cm

HABITAT

Reef

LOG IT

Wherever it is spotted in Tasmanian waters

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Rainbow cale

Heteroscarus acroptilus

redmap
SPOT. LOG. MAP.

Image: Erik Schlogl

IDENTIFYING FEATURES

The mouth is beak-like.

Male: Brightly coloured and have two elongated spines on dorsal fins. Males and larger females have dark rectangular blotches in rows along the length of their flank and purplish bands across a light orange/brown body.

Juveniles and small females: Brown/white and red/brown and speckled.

SIZE

Less than 30cm

HABITAT

Exposed reef and seagrass

LOG IT

If you spot it south of Maria Island and directly off the north coast

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Rock blackfish

Girella elevata

redmap
SPOT. LOG. MAP.

IDENTIFYING FEATURES

Dark bluish-black colour with small mouth. Juveniles mottled and banded.

SIZE

Less than 80cm

HABITAT

Reef

Image: NSW DPI

LOG IT

If you spot it in the northwest or south of St Helens on the east coast

WWW.REDMAP.ORG.AU

Rock cale

Aplodactylus lophodon

redmap
SPOT. LOG. MAP.

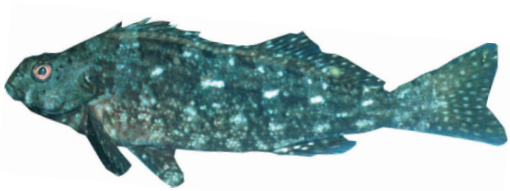

Image: Graham Edgar

IDENTIFYING FEATURES

Adult: Have a rounded nose or snout, no teeth and small white spots on its fins and sides. Colour varies in males from dark grey, to olive-brown and black. Colour varies in females from dark grey to brown.

Juvenile: Have a white patch on the gill cover (operculum) but are otherwise similar to adults.

SIZE

Under 50cm; usually approx. 35cm

HABITAT

Shallow reef

LOG IT

Wherever it is spotted in Tasmanian waters

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Sergeant baker

Aulopus purpurissatus

redmap
SPOT. LOG. MAP.

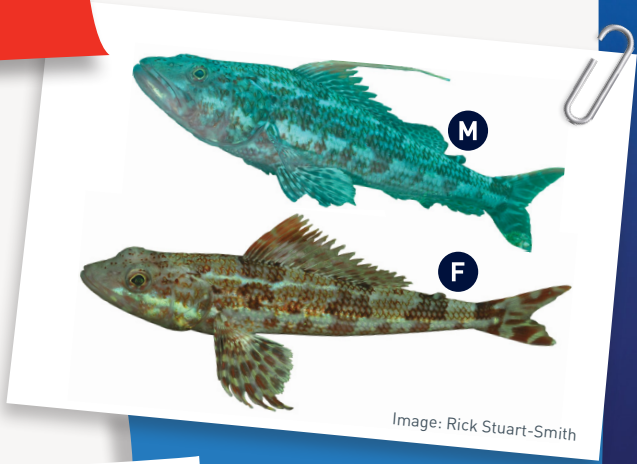

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

Both sexes have mottled red colouration. However males have a long fin ray (extending almost half the body length) which is lacking in females.

SIZE

Up to about 70cm

HABITAT

Reef

LOG IT

If spotted on the northeast, eastern and southern coasts

WWW.REDMAP.ORG.AU

Silver drummer

Kyphosus sydneyanus

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

Look for a sleek silver body with a black edged tail and small black spot below the pectoral fin.

SIZE

Up to 90cm

HABITAT

Exposed reef

LOG IT

If spotted on the northeast, eastern and southern coasts

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Snapper

Pagrus auratus

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SPOT. LOG. MAP.

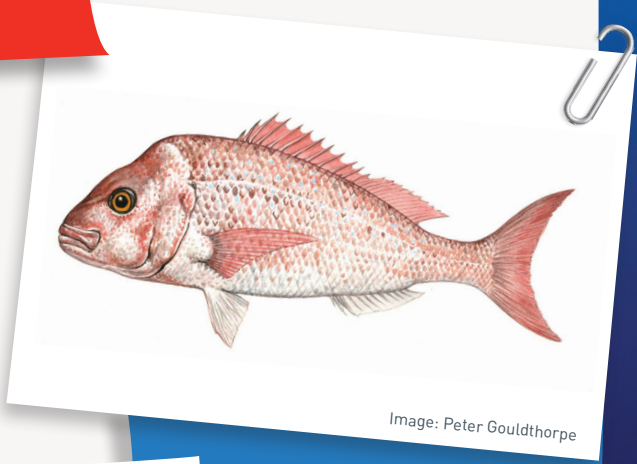

Image: Peter Gouldthorpe

IDENTIFYING FEATURES

Mature snapper are pink and appear to have a convex forehead in larger adults. Juveniles have blue spots over the body.

SIZE

Can get big, although growth is slow – over 100cm and up to 20kg

HABITAT

Reef or open ocean

LOG IT

Only if you spot it south of Maria Island

WWW.REDMAP.ORG.AU

Southern roughy

Trachichthys australis

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

The southern roughy has a rounded body and reddish-brown colour. It has white lines and dark markings along the edges of its fins and operculum (gill covering).

Usually found in caves.

SIZE

Up to 18cm

HABITAT

Reef

LOG IT Wherever it is spotted in Tasmanian waters

WWW.REDMAP.ORG.AU

Striped marlin

Tetrapturus audax

redmap
SPOT. LOG. MAP.

Image: NSW DPI

IDENTIFYING FEATURES

Marlins have the distinctive pointed snout or beak. Look for its dark blue grey back covered in dark stripes, approximately 12 to 16, along its flank. They are known to inhabit all waters from tropical to temperate.

SIZE

Up to 4.2m

HABITAT

Open ocean

LOG IT

Wherever it is spotted in Tasmanian waters

WWW.REDMAP.ORG.AU

Tailor

Pomatomus saltatrix

redmap
SPOT. LOG. MAP.

Image: NSW DPI

IDENTIFYING FEATURES

Streamlined grey body with a pale belly and a broad forked tail.

SIZE

Can grow to 120cm, commonly 60cm

HABITAT

Open ocean

LOG IT

If you spot it south of St Helens

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White-ear

Parma microlepis

redmap
SPOT. LOG. MAP.

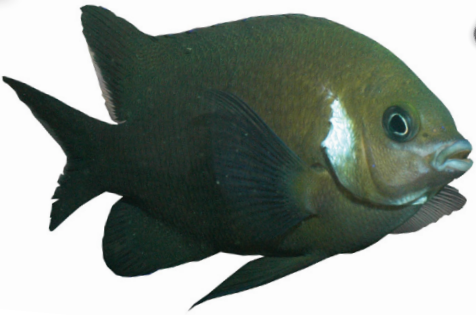

Image: Graham Edgar

IDENTIFYING FEATURES

Most distinguishing mark is a silvery-white blotch where an ear may be on a fish if fish had ears (the blotch is actually on its gill cover or operculum). Otherwise the fish is brownish-black, although juveniles are colourful. Larger adults may have blue dots on tail.

SIZE

Small fish up to 20cm although usually 14cm

HABITAT

Reef

LOG IT

If you spot it south of St Helens

WWW.REDMAP.ORG.AU

Yellowtail kingfish

Seriola lalandi

redmap
SPOT. LOG. MAP.

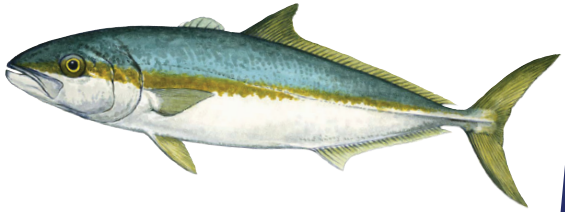

Image: Peter Gouldthorpe

IDENTIFYING FEATURES

Yellowtail kingfish are streamlined, schooling fish that grow to a large size. They are dark blue-green with a yellow stripe along the length of the body.

SIZE

Up to 200cm

HABITAT

Open water, including estuaries and inshore

LOG IT

If you spot it south of Maria Island

WWW.REDMAP.ORG.AU

Eastern king prawn

Melicertus plebejus

redmap
SPOT. LOG. MAP.

Image: Graham Edgar

IDENTIFYING FEATURES

To identify this prawn look for a pair of grooves alongside its rostrum (spikey bit on its head) to the end of its carapace (body shell). The spikey rostrum will have 10 to 11 teeth on the top and just one on the lower surface.

SIZE

Up to 30cm, with a 6cm carapace

HABITAT

Sand and silt up to 220 m depth

LOG IT

If spotted south of Georges Bay, St Helens

WWW.REDMAP.ORG.AU

Eastern rock lobster

Sagmariasuss verreauxi

redmap
SPOT. LOG. MAP.

Image: Toni Cooper

IDENTIFYING FEATURES

Very similar to southern rock lobster but the body is green and it has orange–brown legs. Occurs intermittently in Tasmania and is expected to be more common on the east coast.

SIZE

Carapace length 40cm although more commonly 15cm

HABITAT

Reefs

LOG IT Wherever it is spotted in Tasmanian waters

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Firebrick seastar

Asterodiscides truncatus

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

Distinct rounded projections on body surface with purple, red and orange colouration.

ARM RADIUS

Up to 17cm

HABITAT

Reef and silt, between 14-800m depth

LOG IT If spotted South of Bicheno

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Gloomy octopus

Octopus tetricus

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

Look for its white eyes, brown body and distinct orange underside.

SIZE

Can reach an arm span of 200cm, and weight of 3 kgs

HABITAT

Reefs

LOG IT

Wherever it is spotted in Tasmanian waters

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Long spined sea urchin

Centrostephanus rodgersii

redmap
SPOT. LOG. MAP.

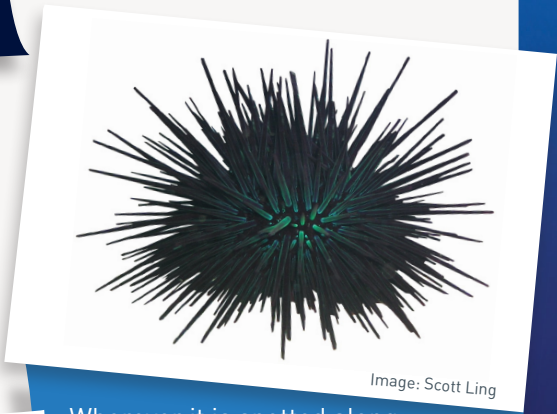

Image: Scott Ling

IDENTIFYING FEATURES

Spiky black ball with dark purple spines with iridescent blue-green sheen to spines when looking down the shaft. The spines are hollow rather than having a solid core and are longer than half of the shell diameter.

SIZE

Shell diameter of up to 130 cm, wet weight up to ~500 grams

HABITAT

Exposed reef 0-35m depth

LOG IT

Wherever it is spotted along Tasmania's western and northern coasts and also along the east coast, south of the Tasman Peninsula.

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Long spined sea urchin

Centrostephanus rodgersii

redmap
SPOT. LOG. MAP.

Long spined sea urchins have undergone a southward climate-driven habitat expansion from New South Wales and have established in Tasmanian waters over the last few decades. Long spined sea urchins have a tendency, in the absence of predation by large fish and rock lobsters, to overgraze seaweeds and algae on rocky reefs. This grazing leads to what scientists describe as 'barrens' which equates to bare rock and a habitat pretty devoid of life.

Please email Redmap, enquiries@redmap.org.au, if you see a barren in any of the regions of Tasmania described below, or follow the instructions on the species page for the long spined sea urchin:

1. Incipient barrens: holes in the kelp cover 1-100m, revealing bare rock (no understory algae or invertebrates), caused and maintained by urchins on reefs along Tasmania's western and northern coasts. Also along the east coast, south of the Tasman Peninsula.

2. Extensive barrens: holes in the kelp cover >100m, revealing bare rock (no understory algae or invertebrates), caused and maintained by urchins on reefs south of Riedle Bay on Maria Island/ Triabunna on mainland Tasmania and on any western and northern Tasmanian mainland coast.

Australian angelshark

Squatina australis

redmap
SPOT. LOG. MAP.

Image: CSIRO

IDENTIFYING FEATURES

Angelsharks appear to be a cross between a ray and a shark. Its back and large pectoral fins are light grey and covered with small white spots.

SIZE

Up to approximately 150cm

HABITAT

Likes to hide under a layer of sand near reef or seagrass bed edges

LOG IT

If spotted anywhere other than the north coast

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Eastern fiddler ray

Trygonorrhina fasciata

redmap
SPOT. LOG. MAP.

Image: Rick Stuart-Smith

IDENTIFYING FEATURES

The ray has distinct markings across its back - pale lines with brown edges across the pale brown background and there is a triangular pattern behind eyes.

SIZE

Up to 120cm

HABITAT

Sand, seagrass, reef

LOG IT

Wherever it is spotted in Tasmanian waters

WWW.REDMAP.ORG.AU

Southern fiddler ray

Trygonorrhina dumerilii

redmap
SPOT. LOG. MAP.

Image: Mick Baron

IDENTIFYING FEATURES

The ray has distinct markings across its back - pale lines with brown edges across the pale grey background. Behind the eyes it has three parallel lines (not a triangle like the eastern fiddler ray).

SIZE

Up to 120cm

HABITAT

Sand, seagrass, reef

LOG IT

If spotted on the northeast, eastern and southern coasts

WWW.REDMAP.ORG.AU

Tiger shark

Galeocerdo cuvier

redmap
SPOT. LOG. MAP.

Image: William White

IDENTIFYING FEATURES

This is a big shark, the second biggest of the predatory sharks. If you are lucky enough to see one, it will be identifiable by its big teeth and dark stripes or bands down its body. Bands are faint in adults over 3m.

SIZE

Up to 6 metres

HABITAT

Tropical and subtropical waters

LOG IT

Wherever it is spotted in Tasmanian waters

WWW.REDMAP.ORG.AU

Green turtle

Chelonia mydas

redmap
SPOT. LOG. MAP.

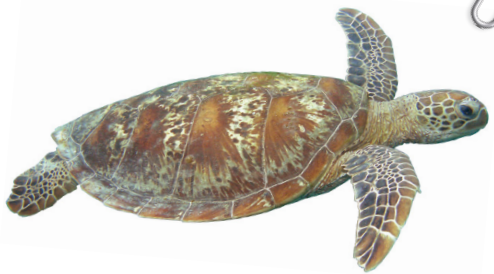

Image: Toni Cooper

IDENTIFYING FEATURES

Green turtles are recorded as occasional visitors to Tasmania, usually associated with the seasonal impact of the East Australia Current or the Leeuwin current. Adults have a smooth, high-domed shell that is an olive green colour with occasional brown, reddish-brown or black mottling. This is the largest of the hard-shelled sea turtles and the head is small compared to body size.

Hatchlings have a black carapace with white edges, white edges on their flippers and plastron (under part of shell).

SIZE

Adult carapace length averages 1m

HABITAT

Green turtles are found in tropical and subtropical waters worldwide

LOG IT

Wherever it is spotted in Tasmanian waters

WWW.REDMAP.ORG.AU

Other turtle species

Other turtles have also been recorded as occasional visitors including:

- Flatback turtle
- Leathery turtle
- Hawksbill turtle
- Loggerhead turtle
- Pacific Ridley

Please record all turtle sightings in Tasmania. For a detailed description of each turtle refer to the Redmap website, in the Turtle category of the Marine Species page at

WWW.REDMAP.ORG.AU

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SPOT. LOG. MAP.

How is a fish measured?

Brief descriptions of how to measure your catch are provided below. For a detailed description on measuring marine species refer to the Recreational Sea Fishing Guide by the Department of Primary Industries, Parks, Water and Environment (www.dpiw.tas.gov.au).

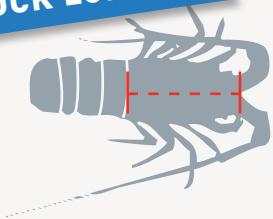
FISH

Measure total length, that is from the tip of snout to furthest point of tail (longest measurement). For forked tails, this means you would manipulate the caudal (tail) fin to get the longest measurement.

OCTOPUS

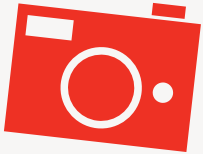
The length of octopus is not usually measured, they are weighed instead. If possible provide the whole weight of the octopus on the 'log a sighting' page.

ROCK LOBSTER



The entire length of a rock lobster is not required. A measurement of the rock lobsters carapace (shell) is used to measure its size. This measurement does not include its antenna and tail.

Tips for taking photos for fish identification purposes.



- Take the photo as soon as possible after removing the fish from the water.
- Place the fish on its side on a flat, single coloured surface that contrasts against the colour of the fish (white or black is best).
- Place an object by the fish to use as a scale, to give an indication of size (pen, watch, coin etc).
- Set the camera to take the highest quality image possible.
- Have the sun behind you and avoid shadows (including your own!).
- If you're not using flash, make sure your shutter speed is at least 1/60th of a second (you may need to use shutter priority mode instead of auto to achieve this).
- Take the photo so the fish occupies the whole of the viewfinder or preview screen but doesn't extend past the edges so that you miss parts of the fish.
- Hold out any fins (as long as it's not poisonous!).
- Take at least two photos – one of the whole fish and one of just the head. Take more photos if there are other markings on the fish you think will help with identification.

Of course, if it is not possible to do all of these things - we are still very happy to have your photo!

This booklet could not have been written without the support of the following.

TASMANIAN COMMUNITY FUND
MAKING A DIFFERENCE

The **Tasmanian Community Fund (TCF)** generously provided a grant for the development of this booklet. The Tasmanian Community Fund has provided grants to a broad range of not-for-profit organisations since 2000. The Fund was established from the sale proceeds of a community asset, the Trust Bank, to provide funds back to the community. The Fund has established itself as a significant part of the community landscape, with millions in grants allocated to Tasmanian projects.

IMAS
INSTITUTE FOR MARINE AND ANTARCTIC STUDIES

The **Institute for Marine and Antarctic Science (IMAS)** is the locus of marine and high southern latitude research at the University of Tasmania, and fosters synergetic research and education involving the entire University, the Australian Antarctic Division, the Commonwealth Scientific and Industrial Research Organisation, and other collaborators. IMAS, in collaboration with the Government of Tasmania, undertakes research and development in Tasmanian fisheries, aquaculture, marine pests, and marine environment.

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