



Fact Sheets

Beach Safety

Sting.Stab.Strike

Marine Stingers

contents

Beach Safety

Beach and conditions	4
Remember the FLAGS	5
Rip Currents	6
Waves	7
Sun Safety	8
Alcohol and Swimming	9
Rock Fishing	10
Supervision of children	11

Sting.Stab.Strike

Crocodile	12
Blue ring octopus	13
Cone Shell	14
Lionfish	15
Sea snakes	16
Sharks	17
Stingray	18
Stonefish	19
Marine stingers	20
Safety tips	21
Glossary	22

Marine Stingers

Carybdea	23
Catostylus	24
Chironex fleckeri	25
Cyanea	26
Irukandji	27
Morbakka	28
Pelagia	29
Physalia	30

Beach Safety Fact Sheets



QUEENSLAND

Beach Safety

Find out about the beach and conditions

Queensland's beautiful and iconic beaches are famous all over the world, attracting millions of local residents, interstate tourists and international guests alike. However, not all of these beachgoers are aware of the potential dangers they may encounter. The size and strength of the surf, unpredictable rips and gutters, and dangerous marine creatures call all pose a risk for swimmers and beachgoers. With that in mind, it is important to know how to protect yourself in the water and understand the warning signs and flags, to ensure you remember your trip to the beach for all the right reasons.

The red and yellow flagged area, set up by qualified surf lifesavers and lifeguards, represent the safest place to swim. Lifesavers and lifeguards consider a number of factors when determining this area, including wave height, rip currents, wind, and swell direction. When visiting a beach it is important to always swim between the red and yellow flags.

BEACH SAFETY FLAGS



RED and YELLOW FLAGS:
Always swim between the flags.



RED FLAG:
No swimming.



YELLOW FLAG:
Caution required. Potential Hazards.



RED AND WHITE FLAG:
Evacuate the water.



BLACK AND WHITE FLAG:
Surfcraft riding area boundary.

There are also a number of signs that lifesavers and/or lifeguards may use to communicate with beachgoers and warn them of any potential hazards. These may include: dangerous surf, closed beaches, and marine stingers.

BEACH SIGNS

Warning Signs (diamond shape, yellow and black are used to warn you about a hazard(s) at the beach.



WARNING NO
LIFESAVING SERVICE



SWIMMING NOT
ADVISED



UNEXPECTED
LARGE WAVES



MARINE STINGERS

How else can I enjoy the beach safely?

When at the beach, or in any aquatic environment, children must be supervised both in and around the water's edge. Learning to swim is a skill for life and one everybody should learn. Slip, Slop, Slap, Seek and Slide to protect yourself from the sun, and always remember to stay hydrated.

All beachgoers are encouraged to talk to the lifesavers or lifeguards on duty about localised conditions and beach safety before entering the water.

Beach Safety

Remember the F-L-A-G-S and stay safe!

F

IND THE FLAGS

Always swim between the red & yellow flags. They mark the safest place to swim at the beach.

L

OOK AT THE SAFETY SIGNS

Safety signs help identify potential beach dangers.

A

ASK A LIFEGUARD FOR SAFETY ADVICE

Conditions can change quickly. Talk to a lifesaver before entering the water.

G

O SWIMMING WITH A FRIEND

Look out for each other and get help if needed.

S

TICK YOUR HAND UP FOR HELP

Stay calm if you get into trouble. Raise your arm for help.

Rip Currents

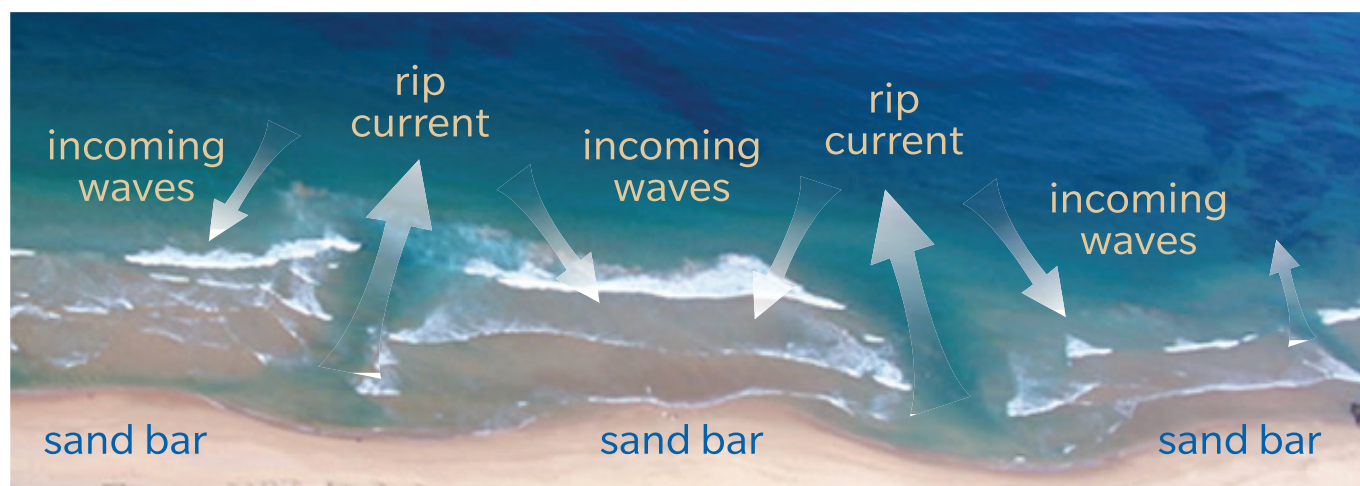
A common beach hazard

Rip currents are one of the greatest, and most common, hazards on Australian beaches. On average, rip currents are responsible for at least 21 drownings in Australia each year. In addition, lifesavers and lifeguards perform countless rescues each and every year to assist swimmers who have been caught in rip currents.

The majority of drownings traced back to rip currents have occurred after swimmers begin to panic and, contrary to recommendations to swim parallel to shore, attempt to swim against the current directly back to the shoreline.

This leaves them exhausted and unable to stay afloat. Rip currents have also been responsible for claiming the lives of non-swimmers, who were dragged from shallow and waist-deep water into deeper surf.

How do you spot a rip current?



How do you spot a rip current?

The key signs to look for are:

- Deeper and/or darker water;
- Fewer breaking waves;
- Sandy coloured water extending beyond the surf zone;
- Debris or seaweed;
- Significant water movement

Sometimes it can be easier to look for where the waves are breaking consistently, and then look to each side where they don't break consistently. Those areas are rip currents.

Waves

Waves and large surf

Waves are one of the most enjoyable features of the ocean. You can ride them, jump over them, dive under them, simply watch them gently roll in, or gasp as they crash and roar during a big swell. Different conditions affect waves and it's important to understand how the waves work, what types of waves may be present when you visit, and how you can deal with them to reduce the potential for injury.

How do waves get so big?

There are three key factors that affect the waves at the beach:

Wind Strength: the stronger the wind, the bigger the swell.

Wind Direction: the wind needs to push the waves towards the beach for there to be surf. Sometimes beaches are also protected by headlands or reefs which stop waves from reaching the beach.

Wind Duration or Fetch: the distance the wind has been blown over the ocean. The bigger the fetch, the bigger and cleaner the surf will be.

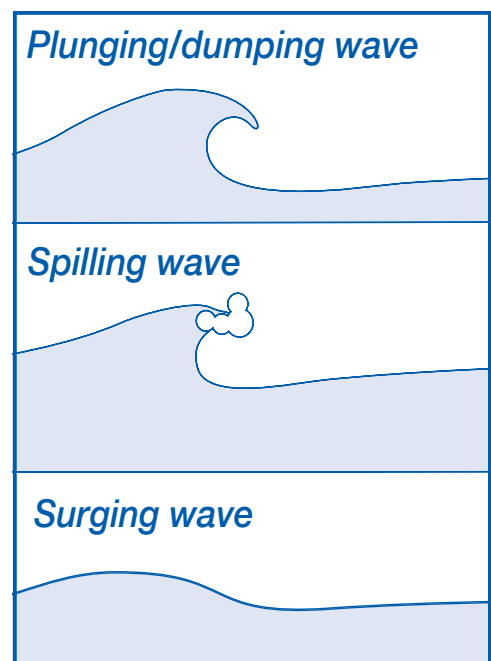
The breaking wave:

When the swell reaches shallow water it pushes itself upward until the slope of the crest cannot support itself. This is when it will break. There are three types of breaking waves described by surfers and lifesavers, each with their own key characteristics. On any beach, there will commonly be a combination of these three wave types breaking.

Spilling or rolling waves: are found where there are generally flat shorelines. These are generally safer types of waves. They occur when the crest breaks onto the wave face itself.

Plunging or dumping waves: create a hollow tube when they break. Surfers call this the 'barrel' or 'tube'. Plunging waves are particularly dangerous as they can pick people up and 'dump' them onto shallow sandbanks or reefs with great force.

Surging Waves: may never actually break as they approach the water's edge since the water is very deep. They are commonly seen around rock platforms and beaches with steep shorelines. They are dangerous because they can appear suddenly and knock people over before dragging them back into deeper water.



Sun Safety

Fun in the sun

The Australian summer is synonymous with long, hot and sunny days. This means there is an increased exposure to the heat and potentially-dangerous UV rays. To enjoy the beach it is important that you follow a number of simple steps when it comes to sun safety:

SLIP on protective clothing that:

- covers as much skin as possible, for example, shirts with long sleeves and high necks/collars
- is made from close weave materials such as cotton, polyester/cotton and linen
- is dark in colour to absorb UV radiation (white and lighter colours reflect UV radiation onto skin)
- if used for swimming, is made from materials such as lycra, which stays sun protective when wet.



SLOP on SPF30 or higher sunscreen that is:

- broad spectrum and water resistant
- applied liberally to clean, dry skin at least 20 minutes before going outside
- reapplied every two hours
- used with other forms of protection such as hats and shade
- check to see that your sunscreen has not expired.



SLAP on a hat that is:

- broad-brimmed and provides good protection for the face, nose, neck and ears, which are common sites for skin cancers (caps and visors do not provide adequate protection)
- made with closely woven fabric – if you can see through it, UV radiation will get through.
- worn with sunglasses and sunscreen to increase your level of protection.



SEEK shade by:

- making use of trees or built shade structures, or bring your own pop-up tent or umbrellas.
- making sure your shade structure casts a dark shadow and using other protection (such as clothing, hats, sunglasses and sunscreen) to avoid reflected UV radiation from nearby surfaces.



SLIDE on sunglasses:

- with a broad-brimmed hat to reduce UV radiation exposure to the eyes by up to 98 per cent
- to children as well as adults
- that are close-fitting wrap-around style that meet the Australian Standard AS 1067 and provide an Eye Protection Factor EPF) of 9 or above.



Source: Cancer Council Queensland

Alcohol & Swimming

Don't drink and drown

Why is alcohol and swimming an issue?

Some people might look to consume a few drinks while enjoying their day at the beach, but it's important to understand that swimming while under the influence of alcohol is a recipe for disaster. Alcohol not only impairs your judgement, but also significantly slows your reflexes – a dangerous and, potentially deadly, combination when it comes to the surf.

Each and every year, lifesavers and lifeguards are required to rescue swimmers from near-death situations after they entered the water after consuming alcohol. Last year 20% of all adult drownings occurred after beachgoers entered the water while intoxicated.

What are the effects of alcohol?

Consuming alcohol can lead to:

Impaired judgement

- Prompting you may to take unnecessary risks, while overrating your ability in the surf
- Adversely impacting your ability to identify and manage dangerous situations

Lack of coordination and reaction time

- It may affect your senses of sight, sound and touch
- It may take you longer to react and your ability to react due to a decrease in brain response and ability to process information

Inability to control temperature

- Overheating may result due to dehydration and unawareness of sun exposure
- Hypothermia could also result depending on conductions



Alcohol and swimming don't mix

It's simple- don't drink alcohol and swim. The risks are far too great and common sense dictates that you shouldn't drink while swimming, boating or fishing in any aquatic environment.

Rock Fishing

Don't put your life on the line

Rock fishing is arguably one of the most dangerous sports and hobbies in Australia. Every year a disproportionate number of people are killed when rock fishing around Australia. Rock fishing is undertaken in a number of locations with small and large rock formations.

While rock fishing can be a dangerous activity, there are a number of key safety tips you can follow to ensure you stay safe and remember your day on the water for all the right reasons. This also applies if you are collecting abalone, oysters and/or other molluscs off the rocks.

How can I protect myself and others when rock fishing?

If you want to rock fish, you should learn how to minimise the risks.

- Always wear a life jacket
- Stay alert to the weather conditions
- Plan an escape route in case you are washed in
- Never turn your back on the ocean
- Wear appropriate non-slip footwear and light clothing
- Do not jump in if someone is washed in - wait for assistance
- Never fish alone

What to do in an Emergency?

- Dial 000 on your mobile or go to get help
- Do NOT jump in if someone is washed into the water
- If possible use a rope of something that floats to throw to the person
- If you are swept into the water don't panic. Stay calm and swim away from the rocks
- If there is an angle ring nearby, know how to use it.



Supervision of Children

Keep an eye on kids

Surf lifesavers and lifeguards play a key role along the coastline, watching over and protecting beachgoers. However, it's also important for parents to play an active role in safeguarding their children. Young children require constant attention and supervision while nearby any body of water, including the ocean. A lack of direct adult supervision could have significant, and potentially fatal, consequences.

Most incidents involving young children at the beach occur because their parent's attention is somewhere else. An extra set of eyes could make all the difference, particularly during the peak holiday times when the water is especially busy. The best way to supervise your child is to actively interact and engage with them. You should always be within arms reach of your child while at the beach.

How can I best supervise children in an aquatic environment?

- Children should always be accompanied and supervised by an adult at all times, both in and out of the water
- Parents should always be within an arms reach of your child at all time
- Bright lycra style swimming suits make good sun sense and are easy to see



Children must be supervised
safety sign.



Sting.Stab.Strike

Fact Sheets



QUEENSLAND

Sting.Stab.Strike

Estuarine (saltwater) crocodiles

What do they look like?

Crocodiles have short limbs and a heavy muscular body covered with rough scales. They keep growing all their lives and an adult male can grow up to 5.5 metres. Crocodiles can hold their breath underwater for more than an hour, keeping very still waiting for prey. But don't be fooled —crocs can swim up to 32 kilometers per hour, and run short distances on land as fast as 17.6 kilometers per hour and can certainly catch you! Crocodiles have a long, powerful tail that helps them swim this fast. They also store fat in their tails, so they can survive for up to two years without eating if necessary.

Where do they live?

Estuarine crocodiles live in rivers and freshwater swamps across the north of Australia — northern Western Australia and Queensland and all of the Northern Territory. They like to travel and can be found up to 100km inland and sometimes visit beaches in these areas.

Why are they dangerous?

Their big teeth! Crocodiles are carnivores and eat whatever they can catch in the water or along the banks including fish, turtles, frogs, birds and pigs. Crocs don't chew their food, they either tear off large pieces or swallow their prey whole. Some species can eat up to half their body weight in one meal. As you can imagine, if a crocodile bites a person it results in massive damage and severe bleeding.

How to avoid them?

Always obey crocodile warning signs and never enter the water where crocodiles might live, even if there is no warning sign. Always stand a few metres back from the waters edge and stay well away from slide marks on the bank. Never dangle your arms and legs over the side of a boat. If you see a crocodile (even a small one), don't go near it, annoy it, touch it, poke it or feed it, you might become a crocodile snack.

What to do if you get hurt?

An adult will get the person out of the water as soon as possible, but first make sure it's safe before entering the water. Call 000 immediately and apply pressure to the wound to control the bleeding while you wait for the ambulance.



Sting.Stab.Strike

Blue ring octopus

What do they look like?

The blue-ring octopus is very small, growing to a maximum size of 20 centimetres when its tentacles are stretched out and weighing only 100 grams. Like all octopuses, it has a soft sack-like body and eight arms covered with suckers. Its beak or mouth is the only hard part of its body, so it is able to squeeze through very tiny spaces. A blue-ring octopus is usually a light-brown or dark yellow colour but rapidly changes colour when agitated. Its body becomes bright yellow and iridescent blue rings or bars appear as a warning to predators.

Where do they live?

They live in tide pools and shallow reefs all around Australia.

Why are they dangerous?

They are one of the world's most venomous animals. Despite its small size, the blue-ringed octopus carries enough venom to kill 26 adult humans within minutes. The venom is in their saliva and enters your system when they bite you.

How to avoid them?

When exploring rock pools, look but don't touch. The blue-ring octopus is so small and well camouflaged that they are difficult to see. Don't touch any small octopuses, they might be a blue-ring and by the time you see the telltale rings, it's too late!

What to do if you get hurt?

Call 000 immediately. Apply a pressure immobilisation bandage to the bite site. Start, and continue CPR. Even if it doesn't seem to be working...keep going. The patient might survive if you can keep their heart beating until the poison wears off and they will suddenly start breathing on their own again.



Sting.Stab.Strike

Cone shell

What do they look like?

The shells of the cone shell are shaped like an ice-cream cone, brightly coloured and intricately patterned. Inside the shell, is a snail. Parts of the snail that appear outside the shell are its foot used for movement, a siphon which draws in water for them to breathe and a tooth or snout used for hunting and defence.

Where do they live?

In shallow water, sand flats and reefs all around Australia.

Why are they dangerous?

Cone shells have harpoon-like darts which can deliver paralysing venom via their tooth. This venom can cause nausea, weakness, numbness, tingling and affect your movement, vision, hearing and speech. It also stops your lungs working, which can lead to death.

How to avoid them?

Do not pick up any cone-shaped shells, even if they are washed up on shore. There is no safe way to pick up a cone shell as their tooth can reach all parts of the shell.

What to do if you get hurt?

Call 000 to get urgent medical assistance. Apply a pressure immobilisation bandage and provide CPR as necessary.



Sting.Stab.Strike

Lionfish

What do they look like?

The lionfish is covered with a stripy pattern which can be red, brown, orange, yellow, black or white. They have long feathery fins which hide their large poisonous spines.

Where do they live?

Lionfish usually live on coral reefs, in caves or crevices and especially in shallow waters. They are found all around Australia.

Why are they dangerous?

Lionfish have 13 sharp and venomous spines that can produce painful puncture wounds. Their venom causes intense pain and in the worst cases gives you a headache, vomiting, stomach pains and can stop your arms, legs, lungs and heart working properly.

How to avoid them?

If you don't touch, scare or tease a lionfish, it is unlikely to injure you. Lionfish can be aggressive, so if you see one stay a safe distance away from it.

What to do if you get hurt?

Put the area, most often a hand or foot, into hot water (as hot as the rescuer can stand with their elbow) and then seek medical assistance.



Sting.Stab.Strike

Sea snakes

What do they look like?

Sea snakes look like their land-based relatives, but they have developed some adaptations to their marine life. The most obvious is a flattened, paddle-shaped tail which they use for swimming. Inside, they have a right lung almost as long as their bodies. This allows them to spend long periods underwater, but they eventually have to surface to breathe air. Sea snake species come in many different colour combinations including black and yellow, grey, pale brown and black and white.

Where do they live?

Sea snakes live close to shore in warm tropical waters. Some prefer to live on reefs, while others like mud flats. Some even swim up rivers and can be found up to 160km inland.

Why are they dangerous?

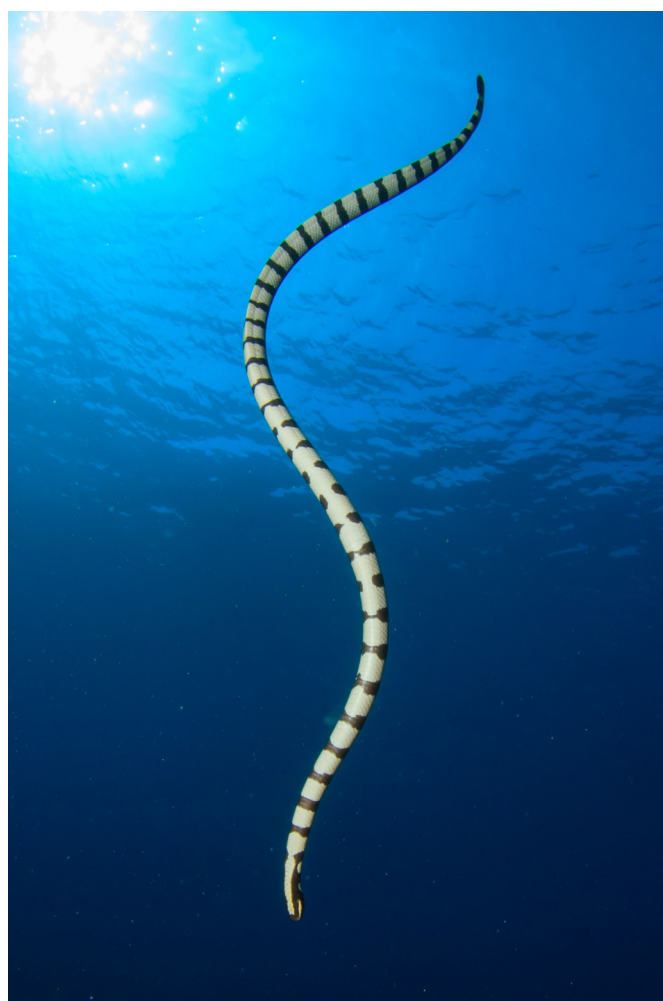
Sea snakes have a highly toxic and fast-acting venom, which they use to catch the fish they eat before they can get away. If they bite humans, they might not feel it as the bite is painless. The venom can make you feel nauseous and dizzy, give you a headache, make you vomit, make your muscles hurt and in severe cases, affect the breathing muscles.

How to avoid them?

Sea snakes are curious and are attracted to any sign of motion in the water. They may approach a diver or swimmer, but they are shy and usually keep their distance. If you see one, keep calm and move away slowly. Don't touch! The most common bites happen when fishermen catch them in their nets. Be careful when handling nets, especially at night.

What to do if you get hurt?

Treatment is the same as for ordinary snake bites. Call 000, apply a pressure immobilisation bandage, reassure the casualty and keep them still. Get medical assistance as soon as possible — there is an antivenin available.



Sting.Stab.Strike

Sharks

What do they look like?

Sharks come in a wide variety of shapes and sizes, but there are some things they all have in common. The skeleton of a shark is very different from that of other fish. It is made from rubbery cartilage, a tissue lighter and more flexible than bone. Like other fish, sharks breathe by extracting oxygen from seawater as it passes over their gills which are in a row behind its head. Their skin is tough and scratchy, covered in tiny toothlike scales. All sharks have multiple rows of teeth along the edges of their upper and lower jaws which are constantly replaced throughout the shark's life. Some sharks can lose 30,000 teeth in a lifetime.

Where do they live?

Sharks live in all depths of water, all over Australia. They are not only found at the beach but also in rivers and canals.



Why are they dangerous?

If a shark bites you, it does a lot of damage and causes you to lose a lot of blood.

How to avoid them?

Shark attacks are very rare and if you follow our safety tips, the risk is even less. The safest part of the beach is the area between the red and yellow flags where trained lifesavers keep a sharp lookout for sharks. If they spot a shark, lifesavers will sound a siren or ring a bell, put up the red and white flag and tell you to leave the water immediately. Always follow their instructions quickly. If lifesavers have seen a shark in the area, they will put up safety signs and flags. Always look out for these and obey their warnings. Don't swim after dusk, at night or before dawn when sharks are most active. Never swim alone. Never swim while bleeding or with your pets. Sharks have an excellent sense of smell and will come from far and wide to investigate these smells. There are other places that aren't good for swimming if you are trying to avoid sharks. Don't swim in murky waters, estuary mouths, canals, near schools of fish or where fish are being cleaned. Do not swim near or interfere with Shark Control Program equipment. Most patrolled beaches along the Queensland coast have nets suspended in the sea just beyond the surf line. Their job is to capture very large and possibly dangerous sharks that try to reach beaches. You might see a line of white marker buoys beyond the waves that mark the nets — stay away from them.

What to do if you get hurt?

Get the person out of the water when it is safe to do so and call 000. Apply pressure to stop the bleeding and provide CPR if necessary.

Sting.Stab.Strike

Stingray

What do they look like?

They come in a variety of shapes and sizes, but all stingrays have a triangular flat shape body with a tapering tail that is armed with one or more spines. The stingray's colours commonly reflect the sea floor's shading, camouflaging it from predators. Their eyes peer out from the top of their body, while their mouth, nostrils, and gill slits are underneath.

Where do they live?

In very shallow waters all over Australia.

Why are they dangerous?

Most stingrays have barbs on their tails that they use for defence. These barbs are venomous. When humans get stabbed, the wound bleeds, swells and is very painful. The venom can cause nausea, vomiting, muscle cramps, diarrhoea, sweating and convulsions.

How to avoid them?

Shuffle your feet — this tells them you are coming and gives them time to swim away. Always wear thick-soled shoes when walking through shallow water.

What to do if you get hurt?

Call 000. Put the affected area in hot water (as hot as the rescuer can stand) and get medical assistance. If the barb is still stuck, don't remove it.



Sting.Stab.Strike

Stonefish

What do they look like?

As the name suggests, the stonefish looks like a rock. It is a greenish brown colour and has bumpy skin which helps it camouflage itself among rocks on reefs. It has 13 grooved spines on its back and is 30 centimetres long.

Where do they live?

Its main habitat is on coral reefs, around dull coloured plants near rocks, or they can be found sleeping in the mud or sand. They are found all around the Australian coastline.

Why are they dangerous?

Its back is lined with spines that release a venomous toxin which makes it the most dangerous fish in the world. Its venom causes very severe pain and swelling and can kill your tissues, stop your arms and legs working properly and put your body into shock. Always seek medical attention quickly as the sting is very serious and in rare cases, has been fatal.

How to avoid them?

Wear thick-soled shoes and shuffle your feet when walking in the shallows. Don't pick up rocks on reefs — they might not really be a rock!

What to do if you get hurt?

Call 000. Place the affected area in hot water (as hot as the rescuer can stand with their elbow) to relieve the pain and seek urgent medical attention.



Sting.Stab.Strike

Glossary

Adaptations — changes made to make an animal better suited to a particular environment or task.

Agitated — excited, annoyed or disturbed.

Antivenin — a medicine that can undo the effects of venom.

Barb — a triangular point shaped like an arrowhead.

Camouflage — camouflage is how animals blend in with their environment to help them hide from predators or prey.

Carnivore — an animal that eats only meat.

Convulsions — muscle spasms or contractions that you cannot control.

Crevice — a crack in a rock.

Iridescent — very brightly coloured and shiny.

Nausea — a sick feeling in your stomach.

Numbness — when a part of your body loses feeling.

Paralysis — a medical condition that stops you being able to move.

Pressure immobilisation bandaging — a first aid technique where you wrap the whole arm or leg (wherever the bite is) firmly in a bandage. This can slow down the spread of venom throughout the body.

Predators — animals that hunt other animals for food.

Puncture — to make a hole by piercing or poking with something sharp.

Prey — an animal that gets eaten by a predator.

Reflex — an involuntary or automatic response.

Saliva — is the medical term for spit.

Shock — a life-threatening medical condition where not enough blood reaches all the parts of your body and they can't work properly.

Species — a group of animals that look and act in similar ways.

Tapering — becoming gradually narrower or thinner at one end.

Toxin — a poison produced by an animal.

Venomous — describes an animal that is able to inflict a poisoned bite, sting, or wound.

Marine Stingers

Fact Sheets



QUEENSLAND

marine stingers

Carybdea

Distribution

Australia-wide. Most common in South Australia, Western Australia and southern NSW.

Common name

Jimble

Size and appearance

Transparent bell 1.5-3cm in diameter. Four tentacles, one in each corner, 5-15cm long.

First aid

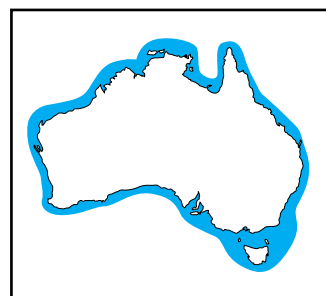
1. Remove casualty from water if safe to do so
2. DRSABCD
3. Remove any adhering tentacles
4. Wash area with sea water (not freshwater)
5. Place casualty's stung area in hot water (no hotter than the rescuer can comfortably tolerate) for 20 minutes
6. If local pain is unrelieved by heat or if hot water is not available, apply a cold pack or ice in a bag
7. If pain persists or is generalised, or if the sting area is large or involves sensitive areas (e.g. the eyes), dial triple zero (000) and seek assistance from lifesavers/lifeguards if available

Did you know?

- *Carybdea* often swarm in dense congregations in the waters off Sydney, Adelaide and Perth and may form large schools at the surface or swim over a sandy bottom
- High risk months are spring and summer



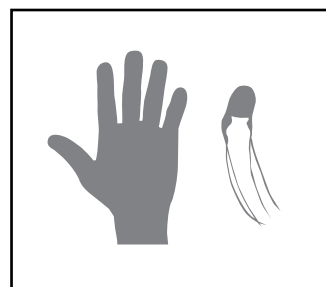
Carybdea xaymacana



Distribution in Australian waters



Carybdea sting



Size relative to human

marine stingers

Catostylus

Distribution

The Australian species is found in Queensland, Victoria and NSW and into South East Asia.

Common names

Blubber

Size and appearance

Mushroom-shaped bell 5-30cm in diameter. They are a creamy white brown colour (blue if found further north). No tentacles but eight 'fronds' or 'frills' hang underneath. The sting causes minor skin irritation.

First aid

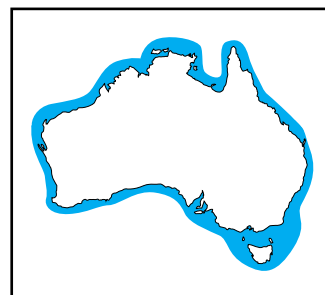
1. Remove casualty from water if safe to do so
2. DRSABCD
3. Wash area with sea water (not freshwater)
4. Keep casualty at rest and reassure
5. Do not allow rubbing of the sting area
6. Place casualty's stung area in hot water (no hotter than the rescuer can comfortably tolerate) for 20 minutes
7. If local pain is unrelieved by heat or if hot water is not available, apply a cold pack or ice in a bag
8. Send for medical aid if symptoms persist or covers a sensitive area (e.g the eyes) and seek assistance from lifesavers/lifeguards

Did you know?

- Blubbers are in a group of jellyfish called rhizostomes; other rhizostomes have been demonstrated to use a sun compass navigation to migrate
- Australia is home to many different species of blubbers — most are larger, colourful and give only minor stings
- Blubbers are often home to a lot of strange marine life including crabs, brittle stars, barnacles and fish and crustaceans



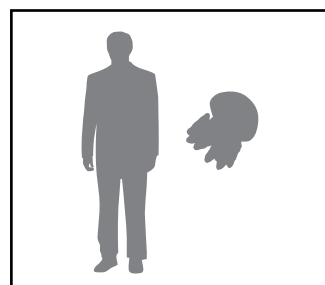
Catostylus mosaicus



Distribution in Australian waters



Catostylus sting



Size relative to human

marine stingers

Chironex fleckeri

Distribution

Shallow, tropical Australian waters north of Agnes Water, Queensland, all Northern Territory waters and Western Australia south to Exmouth. Stings from Chironex have been recorded predominantly in coastal areas.

Other common names

Box jellyfish

Size and appearance

A large but almost transparent jellyfish with a box-shaped bell up to 38cm in diameter. Up to 17 ribbon-like tentacles arise from each of the four corners. These may contract to about 10cm or may extend up to 3m.

Symptoms and signs

Its sting causes immediate severe burning pain and whip-like marks, often with tentacles remaining on the stung area. Severe stings may cause the casualty to stop breathing and suffer cardiac arrest.

First aid

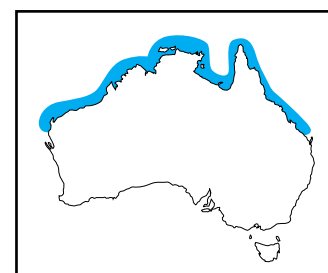
1. Remove casualty from water if safe to do so
 2. DRSABCD
 3. If casualty has more than one localised single sting or looks/feels unwell, dial triple zero (000) and seek assistance from a lifesaver/lifeguard if available
 4. Assess casualty and commence CPR immediately if required
 5. If possible, treat the sting by pouring vinegar for at least 30 seconds and then pick off the tentacles
 6. If vinegar is not available, pick off tentacles (this is not harmful to the rescuer) and rinse well with sea water. Apply a cold pack or ice in a bag for analgesia
- Anti venom is available for *Chironex fleckeri* and other multi-tentacled box jellyfish stings at hospitals and ambulance stations in tropical coastal areas
 - Casualties who initially appear stable but experience severe symptoms in the following 30 minutes may be suffering Irukandji syndrome and need urgent medical care

Did you know?

- *Chironex fleckeri* is widely regarded as the world's most venomous animal
- There have been recorded fatalities due to box jellyfish stings in Australian waters. A box jellyfish can kill an adult human in 2-3 minutes with only 2-5m of tentacles
- *Chironex fleckeri* become deadly when the bell reaches 8-10cm in size, however all sizes can still inflict significant painful stings



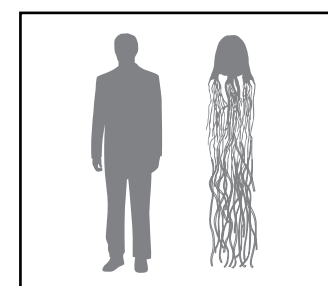
Chironex fleckeri



Distribution in Australian waters



Severe Chironex sting



Size relative to human

marine stingers

Cyanea

Distribution

Worldwide

Common names

Hair jelly, Snottie, Lion's mane

Size and appearance

Large, flat bell up to half a metre in diameter with a large 'mop' of fine hair-like tentacles 5-100cm long. The bell top is often white or brown with yellow, brown or reddish colouring underneath.

First aid

1. Remove casualty from water if safe to do so
2. DRSABCD
3. Remove any adhering tentacles
4. Wash area with seawater (not freshwater)
5. Place casualty's stung area in hot water (no hotter than the rescuer can comfortably tolerate) for 20 minutes
6. If local pain is unrelieved by heat or if no hot water available, apply a cold pack or ice in a dry plastic bag
7. If pain persists and sting area is large or involves sensitive areas (e.g. the eyes) dial triple zero (000) and seek assistance from the lifesavers/lifeguards if available
8. Administer CPR if required

As the *Cyanea* is found in tropical areas, if they cannot be easily identified as such there is a risk that the sting is from a potentially lethal jellyfish and the priority is to preserve life by treating the casualty with vinegar.

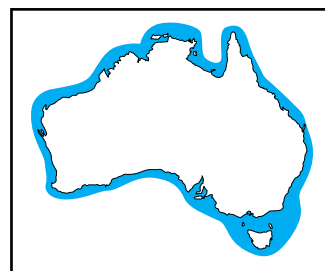
Outside the tropics, where a large number of non-life threatening stings occur, the primary objective is pain relief with heat or cold.

Did you know?

- *Cyanea* was used as the murder weapon in the Sherlock Holmes book 'Adventures of the Lion's Mane'
- There are many different species, including at least six in Australian waters
- *Cyanea* can occur on the beach in hundreds of numbers at a time
- They are called 'snottie' as they leave a huge amount of slime on stinger nets



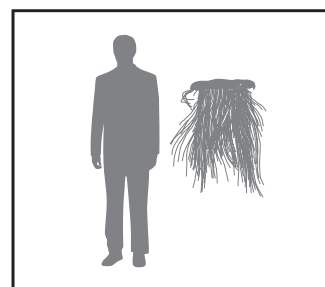
Cyanea



Distribution in Australian waters



Cyanea sting



Size relative to human

marine stingers

Irukandji

Distribution

Tropical Australian waters north of southern Fraser Island (Queensland), Northern Territory waters and Western Australia south to Exmouth.

Different species may occur in coastal areas and on the reefs and islands; at times they may occur in large numbers close to shore.

Irukandji stings are occasionally reported in subtropical and temperate regions of the world, including Moreton Bay and Fraser Island.

Irukandji jellyfish are a subset of the carybdeid jellyfish.

Size and appearance

Small transparent box jellyfish, 1-2cm in diameter, usually not seen. Some may be up to 10cm long.

Symptoms and signs

Irukandji jellyfish cause an initial minor skin sting followed 5-40 minutes later by severe generalised muscular pain, headache, vomiting and sweating. The sting from some species can cause very high blood pressure or have effects on the heart which may be life threatening. These symptoms are sometimes referred to as Irukandji Syndrome.

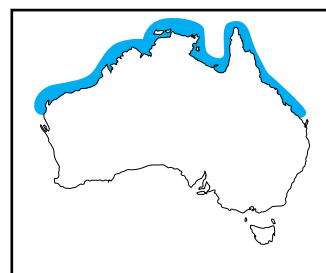
First aid

Because the symptoms of Irukandji Syndrome may take time to appear after the sting, all tropical jellyfish stings should be doused with vinegar and the casualty to remain out of the water, in a safe location with someone to monitor them for 45 minutes, as the casualty may appear stable initially.

1. Remove casualty from water if safe to do so
2. DRSABCD
3. Call for help - dial triple zero (000) for an ambulance
4. Promptly administer CPR if required
5. Treat the sting - douse the area liberally with vinegar for at least 30 seconds
6. Monitor the casualty and seek lifesaver/lifeguard assistance if available



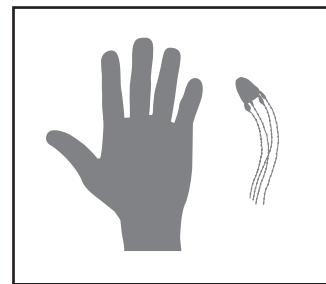
Irukandji



Distribution in Australian waters



Irukandji sting showing localised sweating



Size relative to human

marine stingers

Morbakka

Distribution

Tropical Australian waters, all Queensland and northern New South Wales coasts, often an open water jellyfish. Sub-species are more common at Mackay, Moreton Bay and northern NSW.

Common names

Fire Jelly, Moreton Bay Stinger

Size and appearance

Large transparent box-shaped bell with one tentacle in each corner. The bell can be 6-18cm wide with 4 thick, ribbon-shaped tentacles that may be up to 1m long.

Recognition

Since it is usually difficult to recognise which species of jellyfish has caused a sting, pain management is based on the risk of serious stings in known geographical distribution of dangerous species. Jellyfish able to cause life threatening stings primarily occur along the tropical coastline of Australia, from Bundaberg (Queensland), northwards across the northern coastline and down to Geraldton, Western Australia. *Morbakka* may give mild Irukandji Syndrome but stings usually result in pain only.

First aid

Tropical Australia - North of Agnes Water

1. Remove casualty from water if safe to do so
2. DRSABCD
3. If casualty has more than one localised single sting or looks/feels unwell, call triple zero (000) and seek assistance from a lifesaver/lifeguard if available
4. Assess casualty and commence CPR if necessary
5. Liberally douse stung area with vinegar for 30 seconds to neutralise invisible stinging cells
6. If vinegar is unavailable, rinse the sting well with seawater
7. Apply cold pack or ice in dry plastic bag for pain relief. Do not apply freshwater directly onto the sting as it may discharge nematocysts
8. Casualty may appear stable but experience Irukandji Syndrome - it is usually only the pain that is significant. Monitor for 45 minutes

Non-tropical - South of Agnes Water

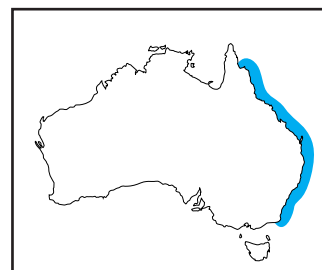
1. Do not allow rubbing of sting area
2. Rinse well with sea water
3. Place stung area in hot water (no hotter than the rescuer can comfortably tolerate) for 20 minutes
4. If local pain is unrelieved by heat or if hot water is not available, apply cold pack or ice in a dry plastic bag
5. If pain persists, is generalised or if the sting area is large or involves sensitive areas (e.g the eyes), dial triple zero (000) and seek assistance from lifesavers/lifeguards if available

Did you know?

The name *Morbakka* is derived from 'Moreton Bay Carybdeid' because it was originally discovered in Moreton Bay.



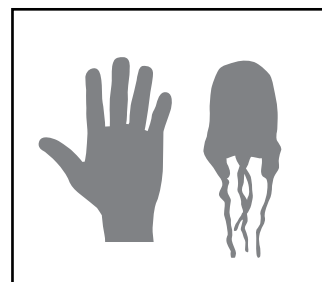
Morbakka



Distribution in Australian waters



Morbakka sting



Size relative to human

marine stingers

Pelagia

Distribution

Common in Australian waters. Occasionally large swarms invade the Sydney region.

Common names

Little Mauve Stinger

Size and appearance

A small mushroom-shaped body from 2-6cm in diameter. Unlike most jellyfish, the bell is covered with numerous warty lumps containing nematocysts (stinging capsules). The bell is usually pink or mauve with 8 pale brown tentacles 10-30cm in length.

First aid

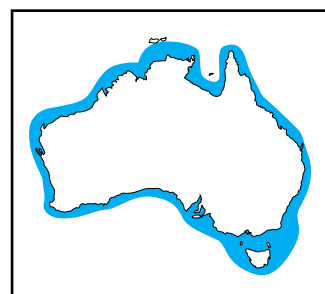
1. Remove any adhering tentacles
2. Wash area with seawater (not freshwater)
3. Place casualty stung area in hot water no hotter than the rescuer can comfortably tolerate for 20 minutes.
4. If pain is unrelieved by heat or if hot water is not available apply a cold pack or ice in a dry plastic bag.
5. Send for medical assistance if symptoms persist.

Did you know?

- It is currently unclear whether the Australian Pelagia is the same species as the Mediterranean species.
- The Pelagia can glow if stimulated at night.



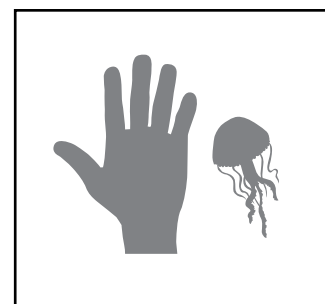
Pelagia noctiluca



Distribution in Australian waters



Pelagia sting



Size relative to human

marine stingers

Physalia

Distribution

Australia wide and in most warm oceans worldwide.

Common names

Bluebottle, Portugese man-o-war, Pacific man-o-war

Size and appearance

Air-filled sac up to 8cm in length, usually with a single, long, blue main fishing tentacle hanging underneath. This may contract to a few centimetres or extend to cover over 10 metres in length. Some may have numerous main fishing tentacles and can cause painful stinging.

First aid

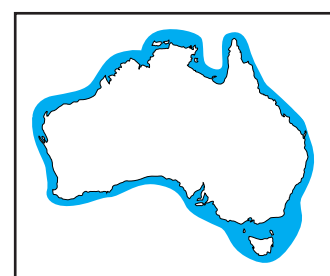
1. Do not allow rubbing of the sting area.
2. Adherent blue tentacles may be seen after a sting and are distinctive for Physalia. Remove any adhering tentacles.
3. Rinse the area well with sea water (not freshwater).
4. Place the sting area in hot water - no hotter than the rescuer can comfortably tolerate for 20 minutes.
5. If the pain is unrelieved by heat, or if hot water is not available, apply cold packs or ice in a dry plastic bag.
6. Send for medical aid if symptoms persist.

Did you know?

Bluebottles are not actually jellyfish, but a colony of four kinds of highly modified individuals (polyps). The polyps are dependent on one another for survival and each performs a different function.



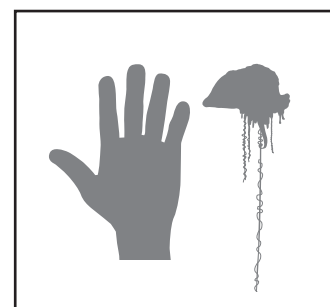
Physalia utriculus



Distribution in Australian waters



Physalia sting



Size relative to human