

to a low and the water starts spilling out of the lagoon into the ocean. This is especially true of passages that are drainage areas for large areas of lagoon. On Rarotonga, warning signs are placed adjacent to passages where swimming should be avoided. If you do find yourself being taken with a current, don't fight it, direct your path at an angle out of the fast flowing area and then attempt to swim towards land.

### Other issues

Hobbyists may dead coral and seashells collected on the beach out of the country but they must obtain a permit first. The Environment Service (*Tuaanga Taporoporo*) provides these permits for \$NZ 10.

If you are a visitor of Rarotonga, we suggest that you try various areas around the island, including the marine protected areas (*Ra'ui*), for snorkelling. The Tikioki *Ra'ui* in Titikaveka and the Nikao *Ra'ui* are wonderful places to see all sorts of different fish, invertebrates and corals. The area around the smallest islet at Muri beach and the lagoon area outside the Vaima Restaurant in Vaimaanga are also impressive spots. There are waterproof fish-cards locally produced that you can take out with you to identify what you are seeing. These are not expensive and can be found in most shops.

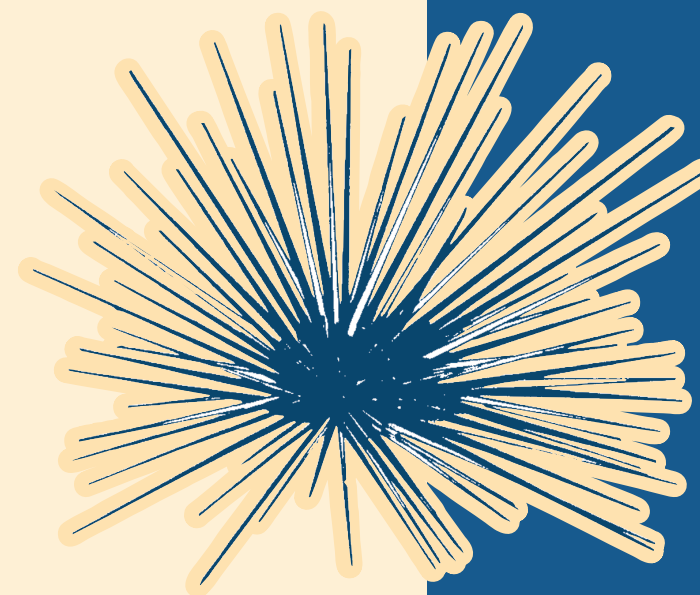
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# Things to be Careful of... in the Cook Islands

# 2000



In Cook Islands waters

there are very few things to be afraid of, especially if you exercise caution. The waters are free to all and warm, the marine life is colourful and active and the reef offers protection from ocean swells.

Problems generally arise when people tread on or pick up dangerous animals. If you are walking about in the shallows of the lagoon it is sensible to wear thick-soled shoes, both to avoid coral cuts and Stonefish stings. If you see an interesting animal it is better to just look rather than to pick it up.

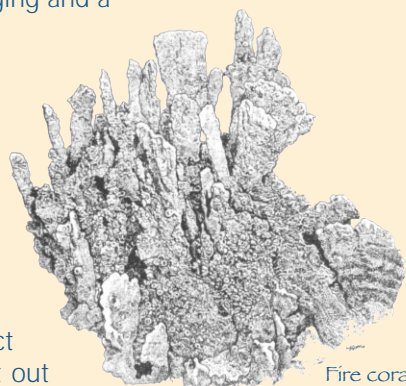
Below we list some of the potential dangers that you should be aware of when enjoying our sea life.

### Fire coral (*Kaoa ka*)

Fire coral can be recognised by its bright yellow branches. Just brushing a colony as you pass is enough to cause some stinging and a rash. It can be quite painful.

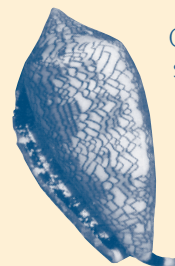
Corals have small nematocysts (stinging cells similar to those found in jellyfish) that are used to catch and kill prey. It is these that cause the pain from the fire coral.

If you do come in direct contact with fire coral you should get out



Fire coral

### Cone shells

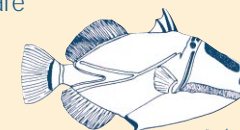


Cone shells are predatory shellfish that are found on sand or rubble in shallow waters. They have potent venom that they use to stun prey. The venom of some species can cause unbearable pain to humans if stung. Live cone shells should never be handled. To be on the safe side, it is a good idea to adhere to this rule, regardless of the size and type of cone shell you see.

### Other potentially harmful marine animals

All marine organisms have some sort of protection to be wary of, whether it be spikes on their tail-stem (Unicorn fish - *Ume*), teeth (Wahoo - *Paara*, Barracuda - *Ono*), spines (Porcupine fish - *Totara*, Sea urchins - *Vana*), sharp shells (Giant clams - *Paua*).

Some fish including Triggerfishes and Gregories may nip you, generally the bites are small but more serious bites may draw blood. These fish are busy protecting their nesting and feeding areas and it is up to you to back away out of their territory. If you keep moving away you will not be harassed. Considering how small they are and how large we are, they must be admired for their fearlessness.



Triggerfish

### Currents

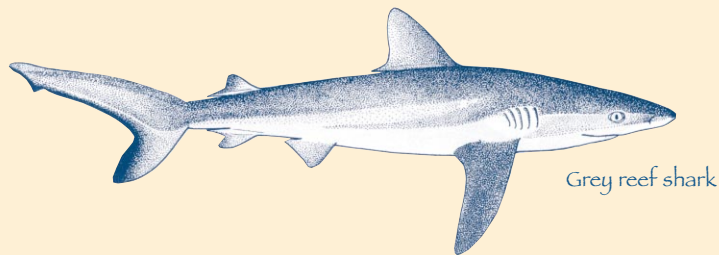
People are quite safe swimming inside the lagoon, however near and inside the passages and during rough weather the currents can potentially become quite strong. Particularly when the tide changes from a high



## Sharks (mango)

There are 18 different species of shark recorded here in Cook Island waters. The more common sharks include the white-tip reef shark, the black-tip reef shark and the grey reef shark. Other sightings include hammerhead sharks, oceanic white-tip sharks, tiger sharks and whale sharks.

Thousands and thousands of people swim, surf, work, dive or otherwise occupy themselves in our lagoons and surrounding reef areas without shark trouble. There are no known records of shark attacks in the southern group of the Cook Islands. You would be extremely unlikely to find a shark in the lagoon of Rarotonga. In the northern group the grey reef shark in particular but also the reef black tipped shark are watched carefully because there have been rare attacks on people in the past, generally while spear-fishing.



Grey reef shark

Sharks are amazing creatures and to see one is a lucky and extraordinary experience. Stay and watch them but always move on if they give warning signals, that is, if they point their pectoral fins down and arch their backs and basically take an interest in your presence.

of the water and apply lemon juice or vinegar. Regardless of which coral you scrape yourself against it is advisable that you apply disinfectant to cut or grazed areas. Coral cuts easily become infected.

Remember that in any case, all corals are fragile and should not be handled.

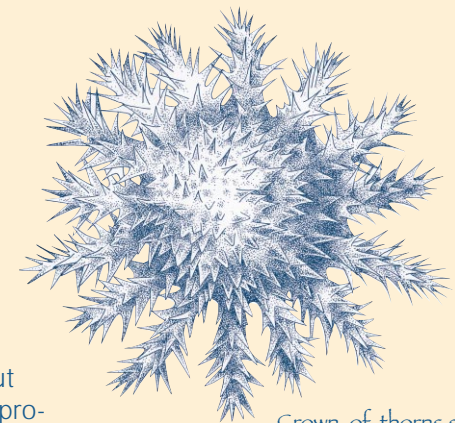
## Crown-of-thorns starfish (*Taramea*)

The Crown-of-thorns starfish are large and prickly. Generally they occur naturally in low densities but from time to time there are severe outbreaks which ultimately cause the death of large areas of coral.

The Crown-of-thorns starfish is covered by thousands of spines, those on the uppermost surface can be up to 5 cm long.

Not only are these spines extremely sharp, with three raised cutting edges on the tip, but they are also known to produce a toxic reaction, often severe, in humans.

Consequently, care must be taken at all times when handling or undertaking activities near this animal.



Crown-of-thorns starfish

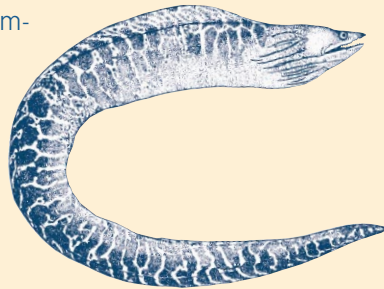


## Eels (*A'a pata*)

At this stage 29 species of eel have been described in the Cook Islands, 3 are fresh water, the rest are marine. Of this group, Moray eels are the most commonly seen in our lagoons.

Their bite, while not venomous, may be severe. Since Moray eels are carnivorous, it is very common for such bites to become infected. Bites should be treated with antiseptic as soon as possible.

Moray eels don't bite unless threatened, just be careful when you are investigating the reef.



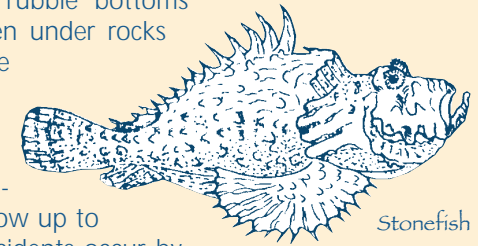
## Scorpionfishes

The *Scorpaenidae* family of fish in the Cook Islands includes:

- One species of Stonefish (*Synanceia verrucosa*); and
- Three species of Lionfish that all occur in the *Pterois* genus, the most common being the Spotfin lionfish (*Pterois antennata*).

They can all potentially give a nasty sting from their venomous fin spines. The dorsal, anal and pelvic spines are all venomous.

Stonefish occur on rubble bottoms and coral reefs, often under rocks and ledges, they are also capable of burying themselves in the sand. They are extremely well camouflaged and can grow up to 35 cm long. Most accidents occur by people unknowingly stepping on them.



Stonefish

The Lionfishes are quite different, they are colourful, obvious and active (although they do tend to lurk under rocks and large coral heads—do not ever reach under a rock, or into a hole in the reef, unless you are sure you can see what is there).

Wounds from the spines of Stonefishes and Lionfishes vary from bee-sting intensity to unbearable agony in. The best treatment is to immerse the affected area in warm water for about three-quarters of an hour. The chemical structure of the poison is broken down with heat. Do not apply pressure on the wound. Treat victim for any possible shock and seek

medical attention as soon as possible. There is no antivenin for Stonefish stings available here in the Cook Islands. Antibiotics are occasionally given to prevent secondary infections and a local anaesthetic may be given for the pain.



Lionfish

