

Almost all marine animal bites or stings are the result of defensive action on the part of the animal concerned.

At ReefDoctor in Ifaty we have had very few marine incidents, and all have been minor. However it is important to know and recognise potentially dangerous marine creatures and act responsibly in their presence.

To avoid injury when diving ensure that you are not over-weighted, that you practise good buoyancy at all times and that you do not touch or handle marine life.

All ReefDoctor volunteers undergo a buoyancy clinic to ensure that their weights are correct and to practise buoyancy skills.

There are three types of potentially dangerous marine fish - those that bite, those that sting, and others that are poisonous to eat.

#### Barracuda



Barracuda attacks mainly occur due to mistaken identity – silver jewellery or watches are taken for small fish and

attacked. These attacks can be quite serious as they are very fast moving fish with extremely sharp teeth.

If they are severe injuries should be treated by a doctor, and stitches may be required. Less serious bites should be cleaned and covered and monitored for infection. If possible see a doctor for anti tetanus.

#### Triggerfish



Triggerfish attacks occur when divers enter the territory of the fish's nest during the breeding season. Male Triggerfish guard the nest, which is a depression in the sand, and the territory spreads upwards like a

cone so always swim around, not over, the nest. The most territorial species is the Titan Triggerfish.

Triggerfish teeth are very sharp and wounds should be cleaned and covered and monitored for infection.

#### Moray eels

Moray eels bite when provoked or scared, usually because divers are too close or putting their hands on the moray's hole.

Bites have no venom and should be cleaned, covered and monitored for infection.



#### Scorpaenidae



Stonefish, Scorpionfish and Lionfish have venomous fin spines. They do not attack divers but are dangerous when stumbled upon; Stonefish and Scorpionfish are difficult to spot and most

injuries occur when they are stepped on or touched.

If contact with the fish's spines breaks the skin venom may enter the wound. The severity of an injury depends on the species that inflicts it – stonefish can be lethal.

Scorpionfish injuries should be immersed in hot water (around 45°C) for 60-90 minutes. This denatures the venom and



reduces pain and swelling (pain relief is most effective with lionfish and least effective with stonefish). Wounds should be cleaned and medical advice sought. More serious stings can cause vomiting, weakness, shortness of breath or unconsciousness.

#### Rabbitfish



Rabbitfish have venomous dorsal and anal spines so you need to take care when handling fish catches or preparing them to eat.

The sting is painful, but not life threatening. Immersion in hot water should reduce pain or swelling.

# REEF DOCTOR

## FACTSHEET

## Dangerous marine animals

### Surgeonfish



Some species of Surgeonfish have pairs of razor sharp retractable blades at the base of the tail, so take care when handling fish

catches. There is no venom so wounds can be cleaned, covered and monitored for infection.

### Squirrelfish

Squirrelfish have a spine near the cheek, like an extension of the lower jaw. These spines produce venom, so care should be taken when handling them. Injuries should be immersed in hot water to reduce any pain and swelling.



### Sting rays

Sting Rays have one or more sharp detachable spines on the basal part of a whip-like tail. They only attack when touched when they flick the tail round and inflict injury. The spines contain venom that can cause vomiting, diarrhoea, low blood pressure and cardiovascular collapse.



Wounds should be immersed in hot water (45°C) for 30-90 minutes until the pain subsides.

Gently extract

obvious pieces of the stinger and clean the wound with soap and water. Apply a dressing and seek professional medical help. Patients may require pain relief and if medical help is not readily available (12 hours or more away) start a course of antibiotics.

### Electric rays

Electric Rays are capable of delivering a dangerous electric shock. They are often almost entirely buried in sand and difficult to spot, so care should be taken where there is a sandy bottom.

If shocked divers should leave the water and treat the person concerned for shock.

### Striped catfish



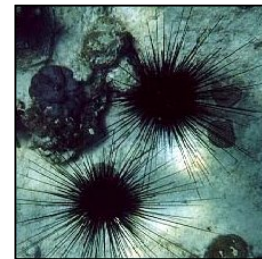
Catfish have venomous spines in the pectoral and dorsal fins. Injuries are usually caused

when divers accidentally touch the fish. Immerse injury in hot water to reduce pain and swelling.

### Sea urchins

There are many species of sea urchin and the severity of an injury depends on which species causes it.

Sea urchin punctures or stings can be extremely painful if they puncture the skin. Some contain toxins, but with others it is simply that the spines break off beneath the skin. They cause immediate pain.



If injury occurs the wound should be soaked in hot water for 60-90 minutes to reduce the pain and swelling. Clean the area thoroughly and remove readily visible spines – get medical help to remove buried spines. Apply antiseptic and dress the wound if necessary. Monitor the wound for signs of infection.

### Jellyfish

Jellyfish tentacles can carry millions of small venomous stinging cells and some species can inflict serious injury.



If affected apply a decontaminant such as vinegar, rubbing alcohol, one quarter strength household ammonia or baking soda for 30 minutes or until pain is relieved.

If a decontaminant is not available rinse with fresh or salt water – flushing the area with a forceful stream. After

decontamination apply shaving cream or soap and shave the area, then reapply decontaminant for 15 minutes. Apply hydrocortisone cream twice a day.

An ice pack may reduce pain, but ensure skin is dry before applying one. If areas affected are large or sensitive – eyes or mouth – seek medical help.

#### Sea cucumbers



Sea cucumbers have anchor-like spicules in the skin that adhere to anything they touch and may be difficult to remove from a wetsuit and can cause damage to bare skin. Some also eject a visceral liquid from the gut that can cause dermatitis and blindness if it comes into contact with the skin or eyes.

Treat the effected affected area with disinfectant if the skin is

broken. If it has come into contact with the visceral liquid it will appear similar to chemical burns, treat with copious irrigation.

#### Cone shells

Cone shells possess a dart-like radular tooth or muscular proboscis that can inject venom that causes sustained contractions and inhibits nerve excitability.

There are two species that are known to be fatal – *Conus geographus* and *Conus textile*. Other species cause less severe injuries. If you are stung, skin around the puncture may appear pale or light blue and swollen. There may be tingling, numbness or pain of the mouth and lips. In severe cases respiratory distress and even paralysis may occur.

In the case of injury, cleanse the puncture site, immobilise the limb and apply a pressure dressing. Give tetanus prevention and analgesics. Also monitor respiratory function and administer CPR as required. Professional medical assistance is recommended, as the effects may be serious.

#### Sponges



Most species of sponge are harmless to humans, although there are around 12 species thought to be toxic. These include *Micronia prolifera*, *Tedania ignis* and *Fibulila sp.* If these species are touched they cause redness and swelling

and may also cause joint pain.

The effected area should be cleansed and treated with soothing lotions and if necessary topical steroids.

#### Sea snakes

Sea snakes are not usually aggressive. They are not common in south-west Madagascar, but if encountered they should be treated with respect. The effects of a bite can become evident within 10 minutes, or it may take up to 8 hours. The casualty will begin to feel anxious and unwell. This is followed by stiffness, aching and even paralysis.

If bitten, immobilise the site of the bite and seek professional medical care. Anti venom and CPR may be required as part of the treatment.

#### Corals, hydroids and anemones



Corals can cause skin irritation and, in the case of fire corals and hydroids, painful wounds. Fire coral, hydroids and anemone injuries should be treated as for jellyfish stings.

This means that they possess the same stinging cells, neatocysts. So they will sting if touched with bare skin.

The stings should be soaked in vinegar or a decontaminant until the pain is relieved and treated with hydrocortisone if necessary.

For other coral scrapes scrub the wound with soap and water and rinse with a large amount of water. Flush wound with a half-strength mix of 3% medicinal Hydrogen peroxide and water then rinse again. Apply antiseptic, dress the wound if required and monitor for signs of infection.

