

Most Common Creatures Handout

Brief description of the most common creatures tourists can see while snorkelling or from a glass-bottom boat in Kavaratti, Kadmat, Agatti, Lakshadweep:

Do not touch anything

As a general rule, do not touch anything when you snorkel or travel in a glass-bottom boat. Just use your eyes only, be alert and move slowly.

Danger

There are a few dangerous creatures which could be harmful. Most of them would never seek your company, so if you keep a respectful distance with them you do not have to worry.

Giant Clams (*Tridacna maxima*) Kakka (Malayalam)



Giant clams are good indicators of a coral reef's health. Their mantle displays a wide variety of colours. The purpose of the coloration is still a scientific enigma.

Clams do not move, they are attached to rocks and corals. They are good indicators as they live a long time (>100 years); they can not move away from pollution or other negative effects; and they are sensitive to clean water because they get part of their food from small single cell plants (algae, endosymbiotic Zooxanthellae) living in the clam's mantle. They also filter a large amount of water through their body, catching micro-organisms and removing organic debris. So, if you see many clams it means the water quality has been quite good for a while.

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Of all the lagoons surveyed by Project Giant Clam in 2005, the biggest clam was found around Bangaram. According to our survey an average of 30 adult clams along a 100 m long transect, indicates a healthy lagoon. If you see less than 10 adult clams per transect your reef has been disturbed (like in most parts of Minicoy).

Giant clams' status is threatened globally. The three giant clam species reported in India - *Tridacna maxima*, *Tridacna squamosa*, *Hippopus hippopus* - are all under Schedule I of the Indian Wildlife Protection Act, 1972¹ and included in IUCN Invertebrate Red Data Book² as conservation dependent species, included in the CITES³ listed species, and Indian EXIM Policy.

 **Danger:** Do not put your finger or any body parts in the mantle of giant clam. You could get seriously damaged. Their instinct is to snap their powerful shells to prevent any harm to their soft body.

¹ Indian Wildlife Protection Act, 1972 <http://envfor.nic.in/legis/wildlife/wildlife1.html>

² IUCN 2004. 2004 IUCN Red List of Threatened Species www.iucnredlist.org

³ CITES Listed Species <http://www.cites.org/eng/resources/species.html>

Corals (*Favia favus*) Bara (Malayalam)



Corals are very simple animals, closely related to jellyfish and anemones. The majority of corals are colonial with many single polyps making up one large colony living for decades if not centuries. A coral colony can be thought of as being similar to an apartment building made up of several units, with each tenant holding their head out the window to catch passing food. Each polyp has its own mouth, stomach and tentacles and reproductive organs. All feed and breed individually. Like giant clams, corals also live in endosymbiosis with algae, so they are sensitive to light.

Staghorn Corals (*Acropora humilis*)



Staghorn corals include many species with delicate, beautiful branches, forming fairytale like 'underwater forests'. Their blue tip is a sign of their good health. Staghorns grow fast (20 cm per year) and regenerate quickly (relative to other corals). As staghorns provide a rich variety of micro-habitats for reef creatures, their return to life is a significant step in the regeneration of the reef.

Mushroom Corals (*Cycloseris cyclolites*)



Mushroom corals are solitary, free living single polyp corals, the only known coral which can actually move for short distances. They live a long time (40 years) as long as they do not get picked up as souvenirs by enthusiastic snorkelling tourists. If you do not see mushroom corals you can suspect uncontrolled, irresponsible impact from tourism.

Table coral (*Acropora hyacinthus*)

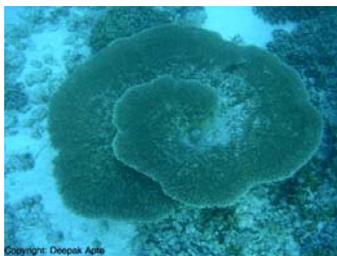


Table corals are large platform like structures. Encrustations of table corals provide ideal refuge for many fishes. Very prone to shallow water fishing by nets since nets can get easily entangled in it and they get uprooted.

Brain coral (*Symphyllia radians*)



Brain corals can grow to massive sizes. The crests on the surface of these corals appear like crests of human brain thus the name. These are some of the most beautiful looking corals. You can some times see small shrimps associated with them which help clean the coral surface.

Sea anemone (Magnificent Anemone, *Heteractis magnifica*) Kutta (Malayalam)



An anemone resembles a very large single coral polyp without a skeleton. Like hard corals, anemones' tentacles occur in multiples of six. They are loaded with stinging cells (*nematocysts*) which can paralyse fish but only a few species' nematocysts are capable of penetrating human skin. The bottom of the anemone is attached by a special disc and it is capable of moving around by sliding very slowly over rocks and dead coral. Like giant clams and corals, many anemones host *Zooxanthellae* and thus grow best in shallow, sunny waters.

⚠️ **Danger:** Nematocysts of sea anemone can give painful stings. If you are allergic to stings, then it can lead to temporary numbness and severe pain. Do not touch tentacles of sea anemones.

Christmas-tree worm (*Spirobranchus giganteus*)



The 'Christmas trees' are gills of worms that filter food from the water. The small but long living (up to 20 years) Christmas tree worms are very sensitive to shadows and vibrations – they quickly pull back into their tube and close a 'trap door' over the top. Christmas tree worms spawn during the slack tide of the first lunar quarter in October. The larvae settle on coral colonies where a polyp has been damaged (e.g. by a parrotfish scraping coral) and secrete a tube. The worm does not bore into the coral - rather the coral grows over the tube. They live embedded in corals, mostly *Porites* sp. Christmas-tree

worms feed on microscopic plankton. These animals are in fact relatives of earthworms. Most part of the animal is inside the tube which is deep embedded in the corals.

Sea cucumber (*Holothuria atra*) Koka (Malayalam)



Sea cucumbers are soft-bodied relatives of sea stars, typically combing the sea floor, feeding on organic sediment. Increased numbers of sea cucumber can be a sign of organic pollution. They have an unusual method of respiration: they take in water through their anus to breathe. When disturbed or frightened, some sea cucumbers pour out a mass of sticky white threads to confuse or trap their enemies. Others are capable of releasing toxins which in aquaria have been known to kill all the animals, including the sea cucumbers themselves. They live either on sand or under coral boulders. They

eat micro-organisms from sand, dead and decaying mater and foraminiferans. Sea cucumbers are very effective in 'recycling waste'.

Crown of Thorne Starfish (*Acanthaster planci*) Kara (Malayalam)



Among the most beautiful looking starfishes. They grow to large size and feed on live staghorn corals. Due to population explosion, they have created havoc world over by killing large colonies of staghorn corals. However, the main reason for their increase in number is excessive collection of giant triton shells by humans. Giant tritons (*Chironia tritonis*) are natural predators for this starfish and thus control their population. Nocturnal animal, during the day you can find them in coral crevices. They feed on live polyps of staghorn corals. Their vivid colours are striking.

☠️ Danger: Spiny projections can cause painful wounds. Do not handle this starfish.

Sea stars (*Linckia laevigata*) Nakshatra matsyam (Malayalam)



Sea stars are relatives of sea cucumbers and sea urchins. They come in many different colours, the most common being yellow, red, orange and pink. Sea stars are predators or detritivores (eating dead organic matter), crawling on their tube feet located on their underside. The mouth is also found on the bottom of the body. Most sea stars have five arms with an eye at each end. This eye sees only light and darkness. If one of these arms is lost, another one can grow back. You can find them on either sand flat or coral boulders with algal encrustations. They feed on small invertebrates.

Cone shells (*Conus miles*) Thengapool (Malayalam)



Cone shells are among the most beautiful and most dangerous sea shells. These are among very few invertebrates which hunt for their food, mainly fishes. They have a highly specialized harpoon which is used as a dart for killing fish. Harpoon is supplied with highly neurotoxic venom. Due to its beauty they have very high ornamental value. They live on flats or among rock and coral crevices. They feed on live fishes and invertebrates. Very colourful, attractive shells but never pick them up!

☠️ Danger: Stings from some of the cone shells such as all species of textile cones are fatal and there are several reported deaths due to cone shell stings. Never pick up live cone shells with bare hand.

Spider conches (*Lambis chiragra*) **Faykala (Malayalam)**



These are among large and heavy shells. Remain mostly burrowing in coral sand and are active at night. Interior part of some species is very colourful. They are traded in large numbers due to its beautiful colours and also have religious value in some cultures. They live on coral sand, feed on detritus & organic mater. They have finger like projections on their outer lip.

Octopus (*Octopus cyaneus*) **Appal (Malayalam)**



Octopus is a very fast moving mollusc and a master in camouflage. As name suggests it has 8 arms and each arm is laced with suckers which help animal take a strong grip of substrate. The jaws have a sharp tooth thus avoid handling. Octopus meat is considered a delicacy. They are territorial and each occupies a large territory with many hiding pits among corals. They live under rock and coral crevices, predatory and feeding on invertebrates.

☠️ **Danger:** Blue-ring Octopus from Australia are highly venomous and several human deaths have been reported. However, none of the species from Indian waters are venomous. But they can give painful bites if handled carelessly.

Seaweed **Fashi (Malayalam)**



Many species of seaweeds have important commercial value. They can be seen easily in the shallow lagoons, on coral flats and rocks. They photosynthesise, belong to the primary producers and thus provide food for variety of animals.

Seagrass **Kadal full (Malayalam)**



Seagrass meadows form important habitats of the lagoons in Lakshadweep. They are important areas for breeding of several species of fishes and invertebrates. You can find seagrass in shallow sand flats. They photosynthesise, belong to the primary producers and thus provide food for variety of animals.

Eel (*Gymnothorax permistus*) **Malanchi (Malayalam)**



Moray and Leopard eels are normally encountered with their heads sticking out from under a ledge or cave. They have long bodies and lack any pectoral or pelvic fins. Although eels have an aggressive appearance, constantly opening and closing their mouths, they are simply pumping water in through the mouth and out through a small opening on the side of the neck. Eels, like all fish, must extract oxygen from water to breath. The largest species of moray eel is the Giant Moray which may reach lengths of 2.2 metres.

☠️ **Danger:** Unnecessary provocation can lead to attacks. Their powerful jaws can rip apart chunk of flesh very easily. Observe them from distance.

Anemone fish (*Amphiprion nigripes*) **Poovan (Malayalam)**



They live in symbiotic association with sea anemones. They get protection by staying among sea anemone tentacles and instead they help keeping anemone clean. Anemone fishes come in vivid colours and have very high value as ornamental fishes. You can only find them in coral reefs among sea anemones. They feed on zooplankton and smaller invertebrates.

Lionfish (*Pterois miles*) **Fanchu kuttyi (Malayalam)**



All species in this group have many spines. You will see them usually perched on coral boulders or under coral crevices. Very popular fish for marine aquariums. They are carnivorous: feed on smaller fishes and crabs. Very elegant and slow moving fishes

☠️ **Danger:** All species of lionfishes venomous spines and can give very painful stings. If stung, immerse the wound in very hot water and consult the physician.

Butterfly fishes (*Chaetodon meyeri*) **Fakkikathiya (Malayalam)**



Among the fishes these are the most popular for marine aquaria. There are about 16 species of butterfly fishes in Lakshadweep islands. These are among most colourful fishes. They feed mostly on invertebrates and planktonic material. Few feed on coral polyps

Checkerboard Wrasse (*Halichoeres hortulanus*) Choolan (Malayalam)



These fishes give you excellent company while snorkelling. They will keep following you and if you disturb the reef floor while snorkelling, they will gather in numbers to feed on exposed substrate. They probe in sand and rock crevices for smaller invertebrates and fishes. Most males dominates a harem-like group of females and are territorial.

Cleaner wrasse (*Labroides dimidiatus*) Nolla (Malayalam)



Very common in coral reefs. These are specialized feeders, picking parasites off or attending to wounds of other fishes. Individuals choose strategic points on reef, often cave or coral boulders, to which other fishes come for service. Such places are called as 'cleaning stations'. They feed on parasites of other fishes.

Parrotfish (*Scarus frenatus*) Feesan (Malayalam)



As their name suggests they have beak like a parrot, very powerful jaws indeed. They can break shells such as cone shells, spiderconches very easily and devour the meat of the animal. They also break corals in search of food. Each parrot fish is known to make almost 5 tons of coral sand every year by breaking corals. They play vital role in producing coral sand in reef ecosystem

Surgeonfish (*Acanthurus leucosternum*) (Malayalam)



Surgeonfishes are very colourful fishes. They have one singly spine on each side of the caudal peduncle. In some species this spine is venomous. Some species such as Convict Surgeon can be seen in a school of thousands while as some such as Powder Blue surgeon (as illustrated) can be seen in small school. Few species are seen as solitary or in pairs. These are also very popular fishes for marine aquarium. They feed on plankton, invertebrates and small fishes

Red-spotted Blenny (*Istiblennius chrysopilus*) Kakkadan (Malayalam)



Blennies are bottom dwelling fishes and stays in burrows. With small disturbance, they will withdraw into burrows in rocks and corals. Blennies feed on small invertebrates and are highly territorial fishes.

Picasso Triggerfish (*Rhinecanthus aculeatus*) Karatti (Malayalam)



The Picasso Triggerfish is very colourful species. They feed on small invertebrates and fishes. You can remember them by their dorsal spine and long snout.

Hawksbill Turtle (*Eretmochelys imbricata*) Amma (Malayalam)



Turtles are ancient mariners, survived since Dinosaurs roamed the Earth. They are known to migrate several thousand miles each year. Females will come to lay eggs to the same beach where they were born. In Lakshadweep four species of turtles are seen and these are Hawksbill, Olive Ridley, Green and Leatherback. They are all pelagic (living in the open ocean). Their life span is over 70 years, just like ours, humans. Their diet shows quite a variety including grass, crabs, jellyfishes.

Photo credits:

- Sea weed & sea grass by Idrees Babu
- All others by Deepak Apte