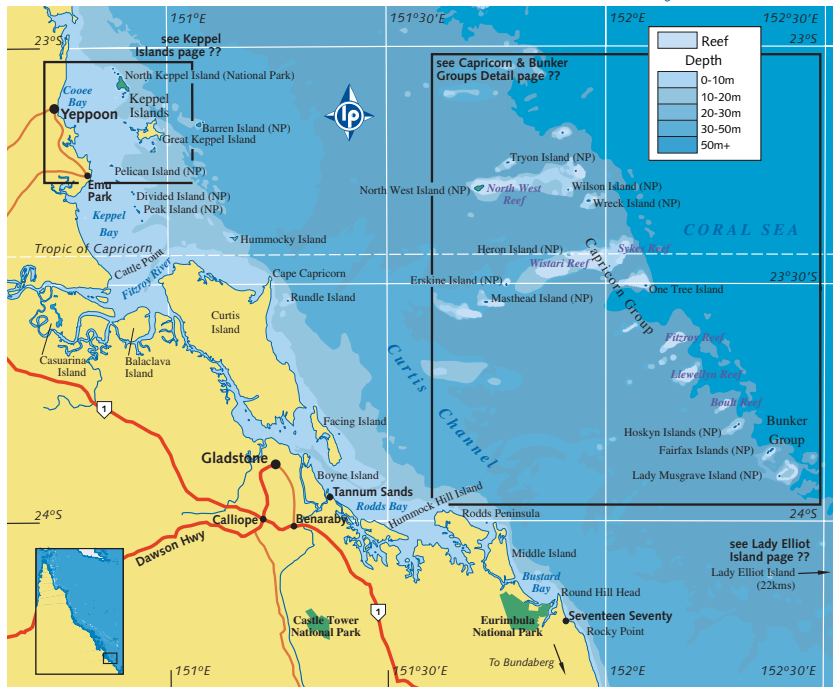




Lady Musgrave Island and Reef is one of the many jewels in the GBR crown

Capricorn & Bunker Groups Index



Capricorn & Bunker Groups Dive Sites

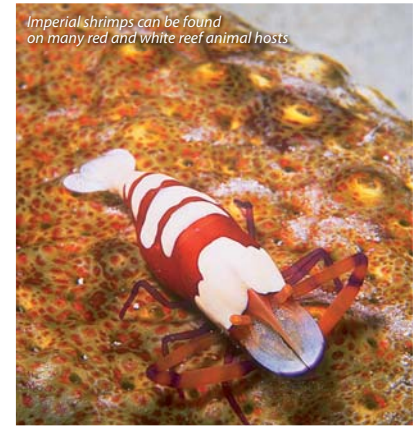
As the southern extremity of the Great Barrier Reef (GBR), the Capricorn and Bunker reefs and islands (Lady Elliot Island, which is well south of the Bunkers, is included in them for convenience) are unusual and yet excellent representations of what the GBR and Coral Sea have to offer. There are 21 reefs – 13 with vegetated cays (Fairfax and Hoskyn have two cays each on their one reef), one with a non-vegetated cay, and five significant reefal shoals.

It is possible to camp on Lady Musgrave, Masthead and North West Islands once you've obtained permits from National Parks. Tryon Island was open to camping but has been temporarily closed to allow it to recover from a massive caterpillar invasion. Heron and Lady Elliot Islands host two of the three GBR coral cay resorts – the third is Green Island off Cairns. Heron has a research station and Marine Park Ranger base and also operates a 'wilderness' camping site for 12 guests on nearby Wilson Island.

Access to the area is limited. You fly to Lady Elliot from Bundaberg, helicopter and fast catamaran to Heron from Gladstone, and fast catamaran to Lady Musgrave from Bundaberg or Seventeen Seventy (1770). Charter and day vessels depart from Bundaberg, 1770, Gladstone and Yeppoon.

All the reefs are exposed on most low tides so there are excellent opportunities to reef walk and snorkel in addition to the varied diving around all the reefs and shoals. Humpback whales frequent the area from May through October, and manta rays and turtles are seen regularly. Thousands of birds and turtles nest on these islands, especially during the warmer months.

One Tree Island and Heron Island are home to research stations operated by Sydney and the University of Queens-



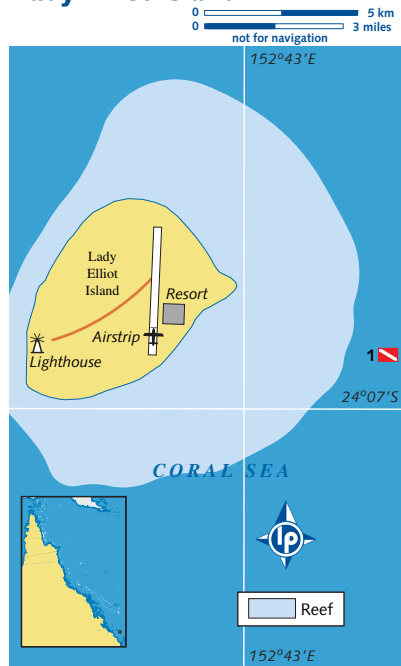
Imperial shrimps can be found on many red and white reef animal hosts

land respectively. Around all reefs, watch you don't disturb equipment set up for scientific experiments. One Tree Reef (off One Tree Island) is closed to recreational use to allow the researchers undisturbed observation.

With over 222km (120 nautical miles) of reef edges, shoal areas rich in bommies and shallow inter-reefal areas, there are plenty of diving opportunities. The resorts each have many buoyed sites and others for drift diving, while charter vessels cruise out to their favourite spots. Whatever your needs and style of diving, they will be met in this area.

Capricorn & Bunker Groups Dive Sites		GOOD SNORKELING	NOVICE	INTERMEDIATE	ADVANCED
1	LADY ELLIOT ISLAND – BLOW HOLE				•
2	LADY MUSGRAVE – ENTRANCE BOMMIE			•	
3	HERON ISLAND BOMMIE	•	•		
4	HERON ISLAND – THE GORGONIA HOLE	•	•		
5	KEPPEL ISLAND – OUTER ROCK	•	•		

Lady Elliot Island



1

LADY ELLIOT ISLAND – BLOW HOLE

Location: Outer eastern side of Lady Elliot Island

Depth Range: 15-25m (49-82ft)

Access: Boat

Expertise Rating: Advanced



The Lady Elliot resort provides the best resort-based diving on the GBR. The visibility is better – although access is more difficult – than many other sites. The near-circular reef has great snorkeling over the reef top and edge, and excellent dives at Lighthouse Bommies, Anchor Bommie, Coral Gardens and Encounters.

Manta rays are regulars here, along with a resident loggerhead turtle and visiting green turtles. Leopard sharks,

moray eels and schools of pelagics make this a very enjoyable area. Sea state and tide conditions often restrict boat diving, but most dives can be accessed from the beach and across the reef flat.

Lady Elliot's unusual dive site is the Blow Hole, a boat entry from the mooring buoy. You drop onto a reef terrace at 15m, where a hole suddenly appears in the reef. It is only about 6m across and drops vertically into the gloom below. Formed probably by freshwater erosion during the last ice age, or wave action as the sea level rose, this great L-shaped geological feature provides a superb dive. The hole turns at a right angle at the bottom and travels for 20m before opening out into another hole about 6m wide and 3m high. This opening in the wall is an exciting dive in itself, as it rises from 25m to 15m, running off both directions away from the blow hole.

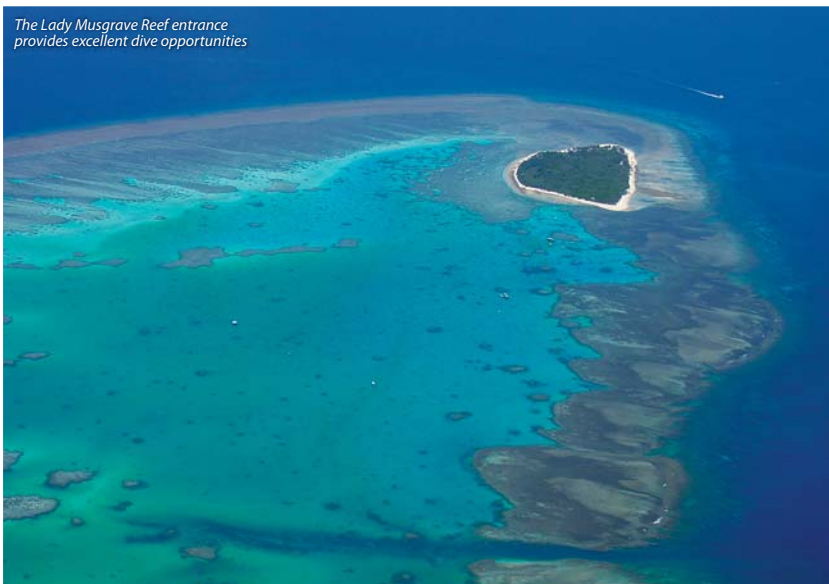
After exiting the hole at 25m, the bottom of the wall to the right offers great caves, nooks and crannies occupied by anemones, hard and soft corals, magnificent gorgonians and many fish. Keep a regular look out into the blue as passing manta, eagle and bull rays sometimes accompany the reef sharks and turtles that are regulars here. Silver tip sharks also sometimes appear. Other regular sightings include lionfish, wobbegong sharks and schooling blubberlips, while wrasse and banded coral shrimp provide cleaner services to the fish here.

During summer the hole can completely fill with bait fish, attracting predators that come crashing through the masses. Once you're in the hole, look up for superb silhouette shots and more photo opportunities as you hit the bottom of the turn. Feather stars, black, turret and soft corals all add colour to frame your shots in the tunnels. This is definitely a wide-angle lens dive that requires a computer and multi-level tables. Bring a light to enhance your discoveries.



To gaze up into the Lady Elliot blowhole is a true buzz for divers

The Lady Musgrave Reef entrance provides excellent dive opportunities



2

LADY MUSGRAVE – ENTRANCE BOMMIE

Location: 5km (3 miles) from island, outside entrance to lagoon, north-west side of reef

Depth Range: 5-22m (16-72ft)

Access: Boat

Expertise Rating: Intermediate



Lady Musgrave, one of the 13 vegetated coral cay reefs in the Capricorn and Bunker groups, is a good example of them all. It has some excellent diving along its back edge, near the island (where you can camp), in the Coral Gardens, on the Battery Bommies and Manta Ray Bommie, and at the front at The Drop-Offs. The pontoon anchored in the lagoon is an excellent base for great snorkeling to be done at this reef.

When the tide is rising or slack, the Entrance Bommie is the standout in this group of dive sites. Tides cause strong currents running in or out. A roll entry from the boat drops you onto the top of this large rich coral head. Dive to a maximum depth of 22m, then make your way up and around the bommie. Numerous small nooks and crannies and overhangs provide lots of places for small marine life to hang out.

Porites, or boulder coral, is the primary constructor of this head, with large colonies of plate and staghorn now covering much of its surface. Mushroom and brain corals are also common among the soft corals, which are well interspersed throughout the site.

The constant passing parade of fish include surgeons, painted flutemouths, clown triggerfish, batfish, sergeant majors, butterflyfish and coral trout. Clouds of blue damsels and passing schools of trevally add to the movement. If you are lucky, a lionfish, potato cod or giant moray eels may show up.

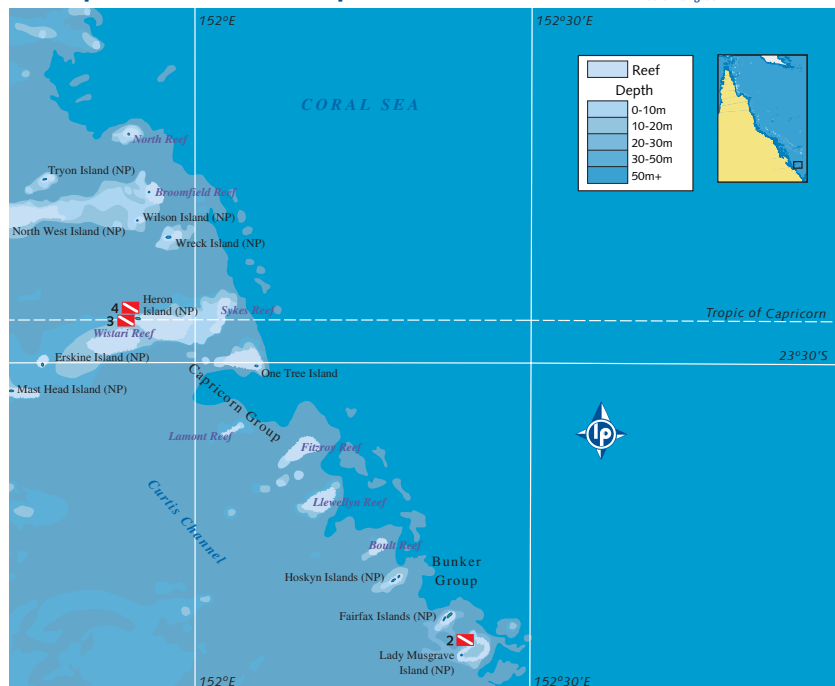
Barramundi cod, big eyes and cardinal fish can be seen hiding in and beneath the overhangs.

Less common are manta rays and sea snakes, with turtles being more regular visitors, sometimes resting under an overhang. Please don't disturb them, they can slam into you or your buddy, causing you to lose your mouthpiece or mask.

The sea snakes, if seen, are best observed from a distance – they are highly venomous and inquisitive, but harmless if you don't annoy them. Look for cuttlefish too – their constantly changing colours add to the kaleidoscope effect of the site. Parrotfish crunch at the coral and algae and at night can be found resting in their mucous cocoons. Whitetip and blacktip reef sharks can appear as well.

Capricorn & Bunker Groups Detail

0 30 km
0 20 miles
not for navigation



Yellow flute-mouths are rarely seen, voracious predators on small fish



The Turtle's Precarious Birth



Female green turtles can lay up to five times in one year but only every three to five years

Six species of marine turtle are found in the GBR and Coral Sea waters; most common are green, hawksbill and loggerheads. These species feed and mate in the waters around the islands, and the nesting females can be seen ashore at night. You can also see them from the air, from boats or when diving throughout the GBR.

A nesting female lumbering out of the water is a wonderful sight. Once on land, she first digs a body pit and then an egg chamber. If the sand temperature and moisture content is right, she will lay between 50 and 150 eggs. She then buries the whole pit area, including the egg chamber, and leaves. She will lay up to five times in one year, but only every three to five years.

Incubation takes about six or seven weeks, after which the hatchlings dig up the surface and wait until it is dark and cool (either at night or after a rain shower) before emerging. Sand temperature affects the outcomes of each nesting – hotter sand (above 30°C/86°F) results in more females, 30°C produces both males and females, and below 30°C, more males.

The dash across the beach to the sea is dangerous. Gulls and other predatory birds will swoop in for a meal. Once the turtle escapes and reaches the relative safety of the reef edge and deeper water, it becomes prey to sharks and larger fish that will happily feast on it. If it survives this start of its journey, the turtle cruises the open ocean until it is about dinner-plate size, when it returns to start living in reef waters. Adult turtles regularly travel thousands of kilometres, so turtles that are protected in Australia may be hunted and eaten in Indonesia.

If you see a turtle, consider yourself lucky and be respectful of this rare experience. Don't shine flashlights on, walk in front of, or go closer than 15m (50ft) to nesting turtles. Always be slow and careful. Never touch or hang on to turtles underwater, as this stresses them greatly especially if they are on their way to the surface to breathe.

3 HERON ISLAND BOMMIE

Location: *Between harbour mouth and western end of reef – buoyed.*

Depth Range: 3-25m (10-82ft)

Access: Boat

Expertise Rating: Novice



Heron Island is a richly vegetated coral cay and important nesting site for green turtles, black noddly terns and wedge-tailed shearwaters with a resort, research station and Marine Parks ranger base. It is serviced by helicopters (30 minutes) and high speed catamaran (2½ hours), from Gladstone.

There are more than 10 regularly dived sites with canyons, gullies, bommies, walls, drifts and sandy floors. The Bommie is one of the most famous dive sites in the world, as this area has been seen in almost every film, documentary or story ever made on the GBR, and was one of the first commercially dived sites.

It is a very reliable site with good access. Schools of hussars and sweetlip, whitetip reef sharks, moray eels and parrotfish swim against a superb backdrop of staghorn coral banks and four large (and many smaller) boulder coral heads. This is also the local cleaning station and is a great place to photograph a cleaner wrasse inside a trout's mouth.

Overhangs and several tunnels provide ideal sites for turret coral, with their brilliant yellow polyps, especially at night. Some fish can be seen at night, sleeping in the small caves and overhangs. Be careful not to disturb them.

Manta and eagle rays are occasional visitors but are hesitant to come close. You need to keep a good eye out into the blue to see them or turtles. Often the first divers to the site will see resting turtles at the base of the coral heads, along with wobbegong sharks.



Heron Island's Bommie is one of the best fish dives ever

An anchoring boat broke the top off the main head in the '70s and the constant diving pressure has removed most of the fragile corals from the site, although more diver sensitivity seems to be allowing it to slowly return.

After a giant stride entry from the boat, follow the mooring line down to an old admiralty anchor and then to the largest head at 6m. You can easily spend your whole dive here or go exploring down the sand slope and around the smaller heads. The current can be uncomfortable on big tide runs. It is a great snorkel site, but can get a bit crowded if the semi-sub shows up at the same time.

4

**HERON ISLAND –
THE GORGONIA HOLE****Location:** Due north of resort, on reef slope**Depth Range:** 3-25m (10-82ft)**Access:** Boat**Expertise Rating:** Novice

The Gorgonian Hole is a reef-edge boat dive with an excellent variety of small soft corals and, like all the sites at Heron, the fish are very familiar with divers.

You dive down the reef slope through several boulder corals and gully structures rich with plate staghorns, into a hole-like amphitheatre and then into a broken reef edge, which has numerous small caves, gullies and great coral cover. The base of the slope (at 20m), breaks into a sand rubble floor with isolated coral patches. It's best to stay

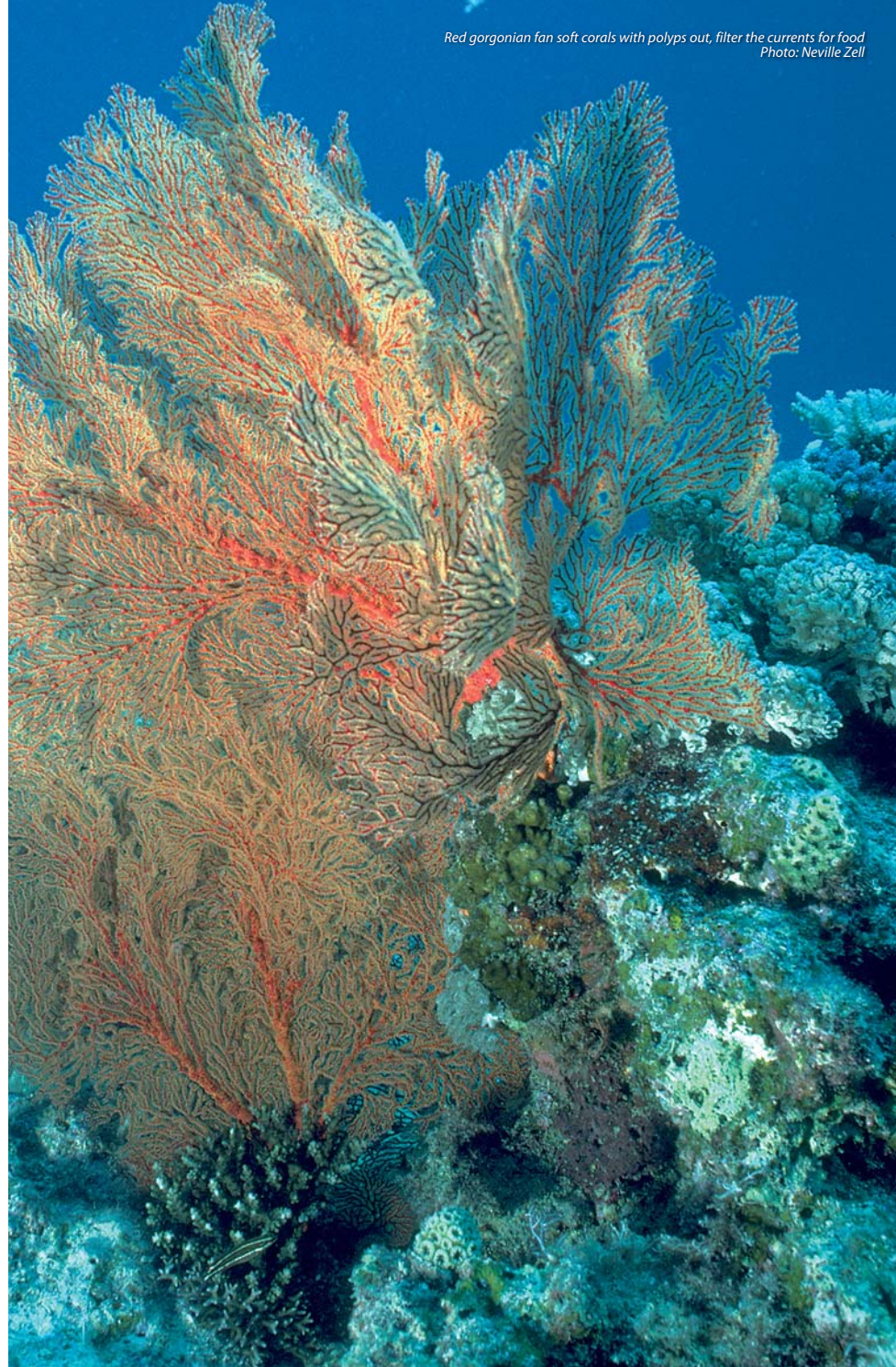
above this, where the life and scenery is much better.

It is a popular dive site, with a range of soft corals. Further east along the wall, you'll see some larger fan corals and plate staghorn coral colonies in the shallows. Fern-like stinging hydroids are quite common and if you are lucky, you'll see an octopus, shark, manta or eagle ray.

Turtles are regulars, especially in summer during mating and nesting periods. Feather stars and their small commensal gobies, shrimp and crabs provide more splashes of colour as the basslets and damselfs swarm in and out of the corals. Sea fans reach out into the current, while smaller nudibranchs, worms and crabs are seen in close. Trevally, hussars and sweetlip are common. The site suits all types of divers and photographers and is generally safe. If there is a strong current run you may get to see several other nearby sites during a drift dive.



Commensal gobies take the same colour as their hosts – here a crinoid or feather star



5

KEPPEL ISLANDS – OUTER ROCK

Location: Due east of North Keppel Island

Depth Range: 4-22m (13-72ft)

Access: Boat

Expertise Rating: Novice



Featuring two large islands, several smaller islands and rocks, the Keppels area has some great dives on fringing and 'vener' reef communities, whereby the reef life grows a veneer over island rock, inviting fish life in to occupy the site. The best dives are at Outer Rock, Barren Island, Man & Wife Rocks and Egg Rock.

The entry at Outer Rock drops to 8m, next to some superb ridges that are rich in hard and soft coral. You can dive down and over the ridges to the northeast, turn west over to the point and then back up into the shallows for your safety stop.

The ridge is known as Snake Paradise due to the resident population of olive sea snakes, which generally appear less inquisitive than fellow snakes because they are so busy searching for food. They may check you out when they start for the surface to breathe. Let them do their thing and don't annoy them.

There are many gutters to explore, some with sea cucumbers on the bottom and side ledges. A careful look under the ledges may yield a painted crayfish, sea star or nudibranch sighting. Damsels, butterflyfish, sergeant majors, fusiliers, anemones, wrasse and

parrotfish are always present here. You'll also see coral trout, wobbegong sharks, stingrays and the occasional Maori wrasse. Green and loggerhead turtles are also regular visitors, along with long toms, Spanish mackerel, and greasy and honeycomb cod.

The snorkeling and safety stop area is closer to the island, over the staghorn coral patches and up to the rocks, where

a moray eel hangs out. Be careful not to rub the oyster-encrusted rocks that are covered with water at high tides – they can cut you badly.

Stinging hydroids, stonefish and lionfish are dangers to be aware of, but aren't usually a problem. Best times of year tend to be late winter to early summer when visibility is better, and winds and waves are milder.

Coral Bleaching

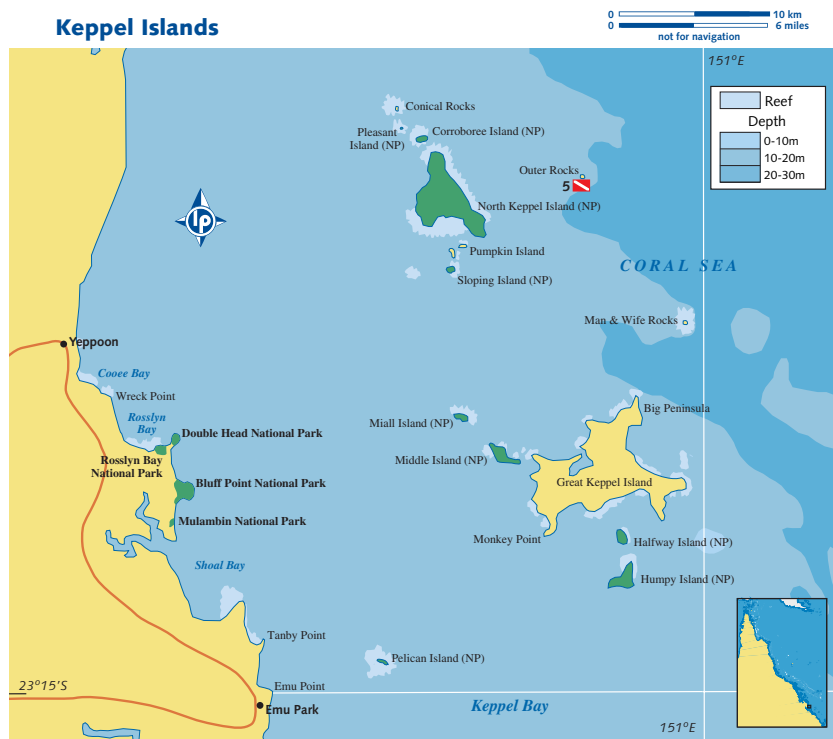


Coral bleaching occurs when corals are under severe stress, which can be induced by many factors. Extreme temperatures and increased UV rays are the two most important, but disease, chemicals, salinity and exposure to air and rain at extreme low tides can also be significant. Human influences on coastal run-off, water quality and low salinity effects can also contribute to coral bleaching.

Bleaching occurs when corals shed some or all of their zooxanthellae, the single-celled plant that lives in the coral animal tissue. These plants produce too much oxygen, which becomes toxic to the animal that then expels them. The colony appears to go white, but if you examine it closely, you'll see a thin layer of animal tissue, like a sheath, over the white calcium carbonate skeleton. Corals can recover if the stress was not extreme and if the few remaining zooxanthellae reproduce and re-establish the symbiotic relationship.

Research shows bleaching to be a regular natural phenomenon that can worsen in El Nino years, with fluctuating water temperatures and tides. Recently, on the GBR's inshore fringing reef systems, a major bleaching event was linked to high temperatures, low tides, rainfall, coastal run-off and very calm conditions. Almost 90% of inshore reefs had significant bleaching in 1998, and 25% had more than half their corals affected. The offshore reef systems of the GBR and Coral Sea had minimal or no bleaching recorded, probably due to less water from the mainland and more water movement, lessening the hot water accumulation seen in shallower coastal waters. Six bleaching events have been documented on the GBR in the last 20 years, with anecdotal evidence indicating that more have occurred in the past. There is now major evidence that coral bleaching is becoming more regular due to global warming.

Keppel Islands



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