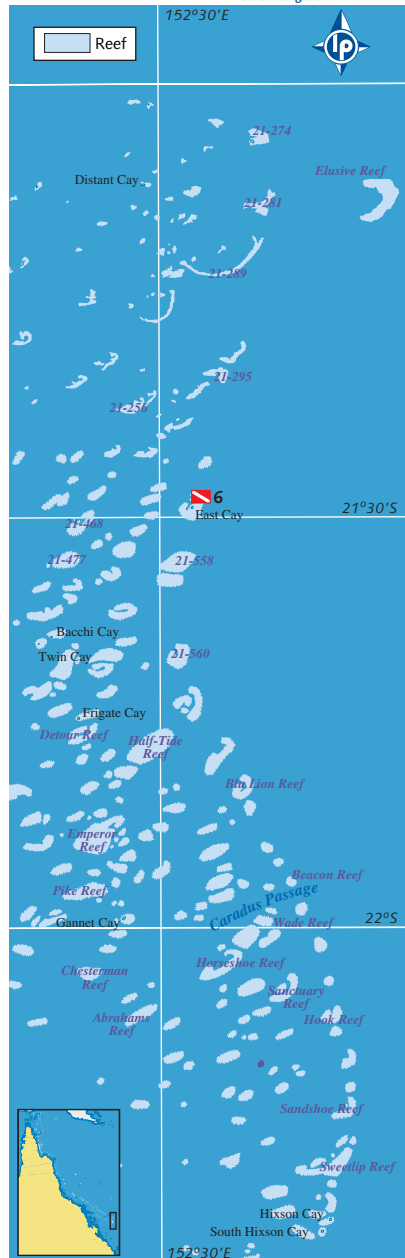


Swain Reefs



Swain Reefs Dive Sites

Olive sea snakes are common in some Swain Reef areas



The southern extension of the wilderness and adventure diving areas of the Great Barrier Reef (GBR) are called the Swain Reefs, or Swains to the locals. They are only serviced by charter boats with roving permits. The complex is 100km to 250km (62 miles to 155 miles) from the coast and has over 270 reefs, more than 25 with cays. The reefs range in size from a few hundred metres across to over 20km (12 miles) in length. Most average around 4km (2.5 miles), providing thousands of exciting, exploratory and adventure dive sites. The reefs are rich with life and the cays are important as protected sea bird rookeries and resting areas. There's an automatic weather station on one of the cays.

Today, parts of the Swain Reefs are used for preservation areas, national park, commercial trawling (some western areas only), fishing, recreational use and research. In many areas fishing has depleted numerous fish species such as trout, cod and sweetlip. The most recent marine park zoning will go a small

way towards allowing regeneration of fish stocks.

As much of the area is unexplored, each dive boat takes divers to their favoured spots, usually associated with a good anchorage in the prevailing weather. There are many anchorage sites so even if there are a few boats out, it is unlikely you will see them, as the area is so large. Depending on which harbour you started from and how long you have, you will probably cover either the northern or southern section. Either way, you will get excellent uncrowded diving and snorkeling. Usually there is no set itinerary – your trip will be determined by weather and the whim of the group.

Swain Reefs Dive Sites		GOOD SNORKELING	NOVICE	INTERMEDIATE	ADVANCED
6	EAST CAY	•	•		

Good walls, excellent reef edges, gutters, drop-offs, tunnels, swim-throughs, ledges, terraces, caves, overhangs and large coral heads occur throughout the area. In short, virtually any coral reef feature imaginable can be found. Shallow lagoonal reeftops and sandy floors host large staghorn thickets and many species of shells can be seen, especially at night. Most of the area is less than 30m (98ft) deep between the reefs, so there is not much opportunity for deep diving and visibility can be reduced during rough weather and big tides.

Sea snakes are common at some reefs and sharks, turtles and rays can be seen throughout. Fish diversity is high. The usual suites of inshore species abound, with outer-edge species becoming more common as you go east. Whales, whale sharks, dolphins and leatherback turtles have all been reported, so keep your eyes peeled.

Shipwreck remains can be seen on some reeftops but many other wrecks are yet to be found. Tales of bravery and sadness abound from ships that sailed, dived and fished this complex including many of the early divers who explored these areas in the '60s.

6

EAST CAY

Location: Northeast of back reef slope and bommie fields

Depth Range: 1-25m (3-82ft)

Access: Boat

Expertise Rating: Novice



Boat operators like this reef due to the easy-access anchorage and small sand cay, demonstrating much of what the Swains offer. It's an attractive diving reef thanks to the variety of coral structures, especially on the north and eastern ends of the reef. Complex bommies and gutters provide great swim-throughs with

sandy floored areas in between. Back in the more sheltered areas you'll find rich staghorn thickets and small coral patches. The bommies reach from sand at 20-25m to the surface.

By diving from a dinghy you can enter the water on either the outside for a drift dive, or in amongst the gutters if the weather or current is not suitable to drift. Go to your planned depth and work your way up and around the complex of structures. It is usual to see larger fish like trout, cod and whitetip reef sharks in the gutters. Small angelfish, butterflyfish, damsels and surgeonfish are common, with wrasse and parrotfish zipping around as well. Sea snakes are common – they should be treated with respect and left alone.

Feather stars sit up on the fan corals catching passing food. At night it is easier to photograph molluscs on the sand as they are seldom seen any other time. This site is good for wide-angle photography on most days but is always a great macro area as well. Numerous varied sites provide for a great snorkel or dive on this reef.

Silvertip sharks are inquisitive for short times only

**What is a coral?**

Look carefully at coral communities to see how diverse they are



Coral is a popular term used for many bottom-dwelling animals. The four main ones are, in evolutionary sequence: hydroids (or stinging corals), anthozoans (hard or stony corals), black corals, and gorgonians (including soft corals).

Hard corals are the primary reef-builders and these animals have a major waste problem. As hard corals grow, they dump their waste calcium carbonate outside their tissues. The pattern in which these crystals are laid down leads to the different shapes of hard coral skeletons seen when the coral dies and rots, or is eaten. Enormous numbers of single-celled plants, called zooxanthellae, live inside the coral tissue and absorb carbon dioxide, waste phosphates and nitrates from the coral (other animals discard the waste through their urine and faeces). They also collect sunlight and produce sugars and oxygen that the coral, uses. During this symbiotic process, calcium carbonate becomes a waste product and has to be dumped. Voila! A coral skeleton.

Each coral animal is known as a polyp, with a sac-like stomach, a ring of tentacles around the top and a mouth in the centre. They may be a single solitary coral, or a colony formed by thousands of polyps. Internal vertical ridges in the stomach determine the shape of holes in the coral skeleton, increase the surface area to help digest food and also carry the gonads.

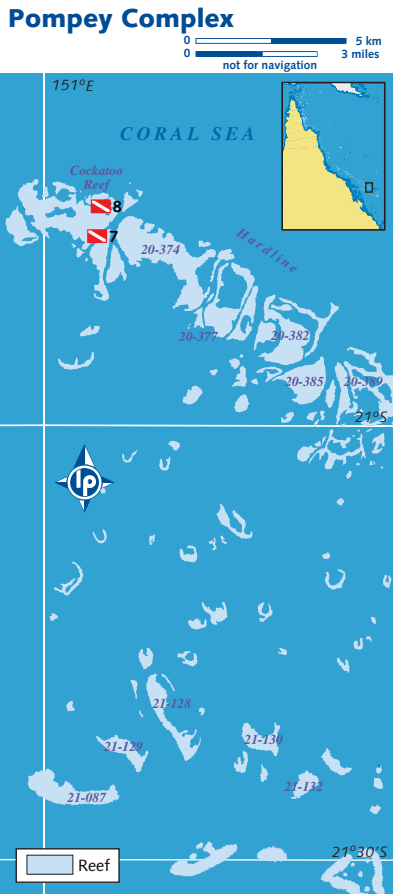
Coral tentacles are packed with stinging cells called nematocysts. These act like mini-darts, injecting toxin into prey. Corals are farmers by day, when their tentacles are retracted, allowing the zooxanthellae to absorb sunlight. They become active carnivores at night when the tentacles expand and wave around to capture any blundering creature. Prey is taken into the sac-like gut and digested. Hard waste is ejected out the central mouth, while digested food is shared amongst polyps in the colony and other waste is used by the zooxanthellae. Corals are vicious killers and will engulf one another through slow overgrowing, or by sending out sweeper tentacles, which kill or digest neighbouring corals. This is a slow process (taking months or even years) but is very effective in the measured and purposeful life of a coral.

Soft corals have multiples of eight tentacles (hard corals are multiples of six) and usually a fleshy (filled with spicules or little spines in the tissues), horny or semi-rigid skeleton, such as in sea fans and whips. There are many other corals such as the rare black, red and even 'freshwater corals', belonging to quite different groups of animals than those well known from the Indo-Pacific reefs.

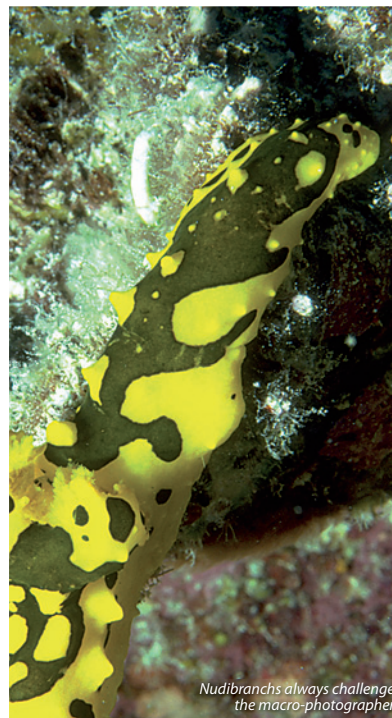
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Blue pullers are great to watch as they dash out to pluck plankton from the waters nearby



Pompey Complex Dive Sites



Nudibranchs always challenge the macro-photographer

long, others are square-shaped, up to 100 sq km (40 sq miles). The reeftops have many intricately shaped, closed and shallow lagoons and some are almost flat, abraded coral/algal surfaces. Between the reefs are channels up to 90m (295ft) deep and 200m (656ft) across. They are u-shaped and were probably formed during the last ice age. Some of the outflows and many reefs appear as deltas from the air. Their sides are vertical walls that fall to a smooth limestone floor.

The tide change inshore of the Pompeys is the largest on the east coast of Australia – almost 7m (22ft) – which means an enormous amount of water passes through four times each day (on the two rising and two falling tides). It is usual to see tide runs in excess of 15km/h (9mph), which causes whirlpools and rising water that is 10cm to 20cm (4in to 8in) higher than the adjacent reef. Tide heights range from 7m (22ft) inside and 4m (13ft) outside of the Pompeys – some of the highest tide ranges on coral reefs in the world.

As you might expect, the marine life here is rich and hardy, able to withstand intense water speeds. This is the most southern point to find the giant clam (*Tridacna gigas*). Sea snakes are common throughout much of the area, but where and when they appear is unpredictable. The currents ensure great populations of pelagic fish in the gyre and current lee eddy areas.

Between the Swain Reefs and Whitsundays is a continuation of the southern wilderness adventure diving area. The Pompey Complex (which includes the Tee Line and Hardline) has blue holes, u-shaped channels with strong currents, sheer walls, water 'falls', whirlpools, and an unbelievable diversity of reefs. Navigation is dangerous for many vessels, so the area remains under-explored. If you get the chance to get here – take it!

About 150 reefs make up this complex, which is about 200km (124 miles) north-to-south, 90km (56 miles) west-to-east and up to 185km (115 miles) from the mainland coast. Most have no names and are recognised only by their numbers on the Marine Park Zoning Plan maps. Some are 20km (12 miles)

Pompey Complex Dive Sites		GOOD SNORKELING	NOVICE	INTERMEDIATE	ADVANCED
7	COCKATOO REEF – THE SOUTHERN WALL	•			•
8	COCKATOO REEF – BLUE HOLE	•	•		

At least three blue holes occur in the complex. These are usually old caves that formed during the last ice age and collapsed as the waters rose. Just off the outer edge of these reefs is an old submerged reef front, which remains to be explored.

7 COCKATOO REEF – THE SOUTHERN WALL

Location: Channel edge of reef on southern side

Depth Range: 1-27m+ (3-90ft+)

Access: Boat

Expertise Rating: Advanced



An adrenaline rush. You need to know exactly when the tide stops running to get into the water here. Enjoy your dive and as soon as you see all the fish turn to face the changed current direction, end your dive! Know your plan and buddy well, and carry your safety sausage.

Vertical channel walls plummet from the reeftop to the scoured limestone-rock channel floor at 40m to 80m. The mid-reef wall has smaller life adapted to intense water flows. Hard corals, soft corals, sponges, coralline algae and many small fish abound. Life inside the caves and overhangs tend to be larger. Schools of pelagics also flash through.

Once you reach either a channel into the lagoon, or the end of the reef channel, drift and pop around into the lagoon or back reef area, before a rising tide, where another world awaits. Rich staghorn beds and coral gardens, abraded coralline algal surfaces and many grazing fish are the norm.

Sharks, barracuda, rays and mackerel circle in the eddies, waiting for unsuspecting fish. On the lagoon floor, many shells come out, especially at night, and feeding sea cucumbers and goatfish are common.

8 COCKATOO REEF – BLUE HOLE

Location: Inside lagoon

Depth Range: 1-30m (3-98ft)

Access: Boat

Expertise Rating: Novice



This blue hole in the reef top has the classic shape of a perfectly round coral rim that exposes at low tide and has a blue interior. It sits in a shallow 10m lagoon, with a vertical wall to 10m outside and 7m inside, that slopes inward forming a conical pool with smooth sand/sediment sides to 30m.

Snorkeling around the 200m diameter rim is fun, with rich staghorn corals of the wall. Once inside the rim, you'll find a mix of coral species with staghorns becoming more dominant. All coral stops at about 15m as it becomes buried in sediment. It is a fascinating experience to dive in what was an old cave thousands of years ago that has since collapsed, forming this pool.

Fish life is limited inside, presumably due to lower water exchange, but you'll still see stripeys, sweetlip, trout, damselfish, butterflyfish, wrasse, parrotfish and angels. Outside is a 'normal' lagoonal reef edge supporting rich life, especially in the small overhangs and caves. There you'll see worms, crabs, crayfish, shells, soft and hard corals and sea cucumbers.



Isolated coral heads offer enormous diversity of life for the observant diver.



Wall dives allow divers to see more without risking reef damage.

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