MAJESTIC GIANTS

Back from the brink

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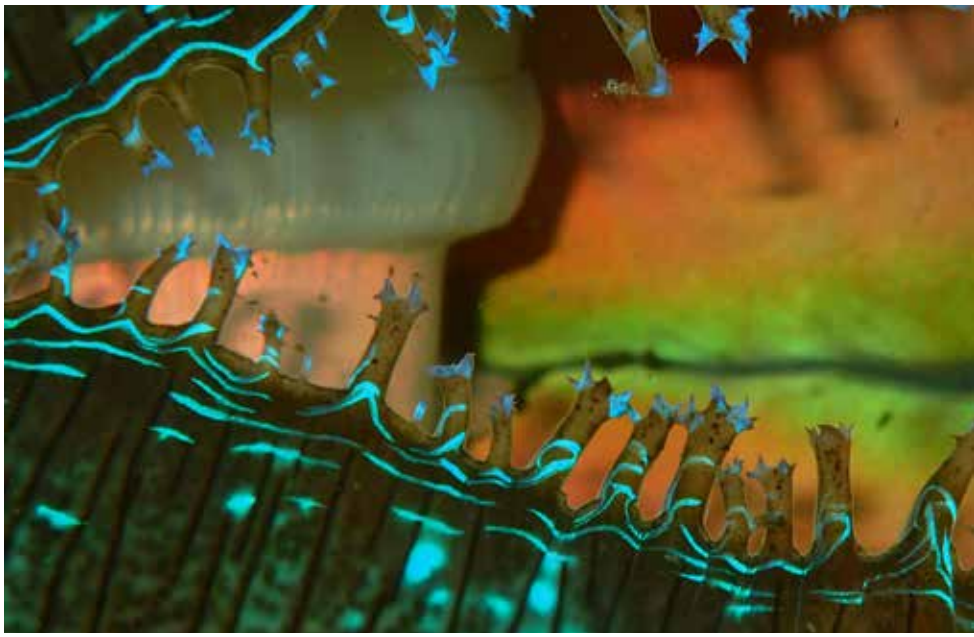
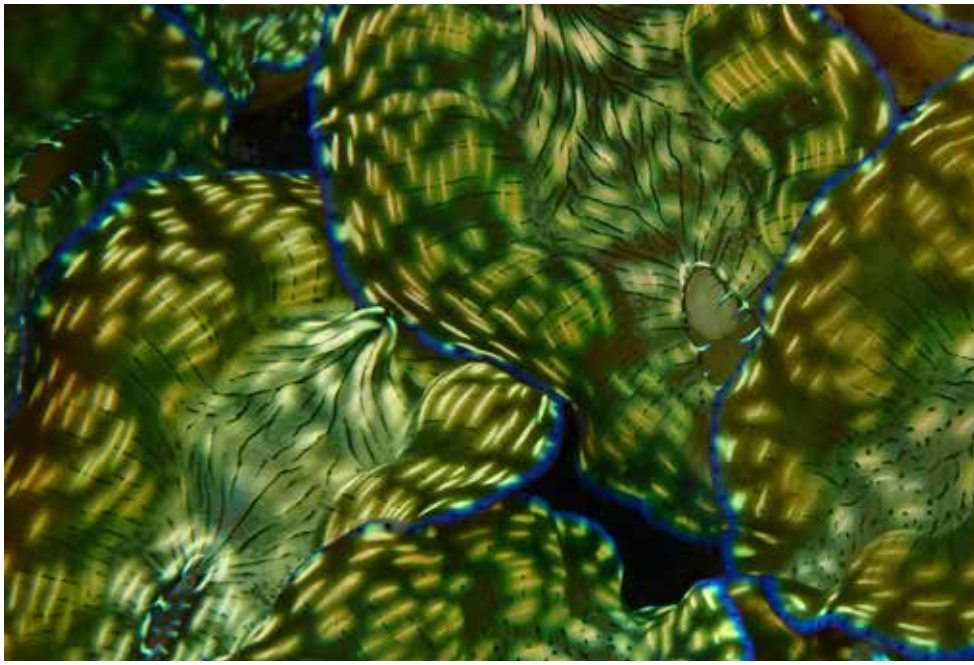




There are many magnificent creatures found on the tropical reefs of the Pacific islands, but few are as spectacular as giant clams.

Not only do some grow to extraordinary sizes – the 'true giant clam', Tridacna gigas, can be more than a metre across and weigh over 200 kilograms – but their kaleidoscopic colours rival those of any tropical fish or coral. However, giant clams were almost lost. With their tasty flesh and prized shells, and the fact that they exist in shallow water and are unable to move, they are sitting targets for passing boats and fishermen. Consequently they were harvested to near-extinction over much of the Pacific Ocean during the last century.

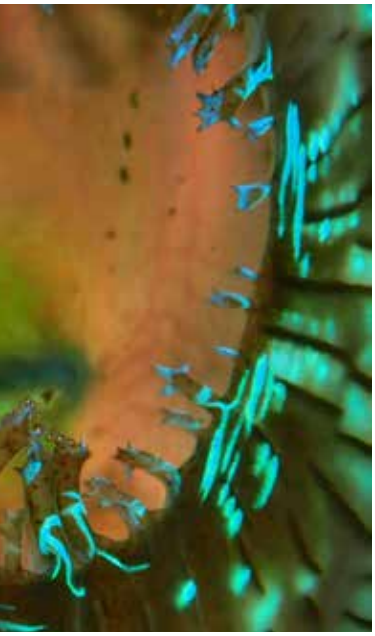
Today giant clams are back, at least in some protected areas, due to the combined efforts of many dedicated people including researchers, fisheries authorities, coastal communities and resort staff.

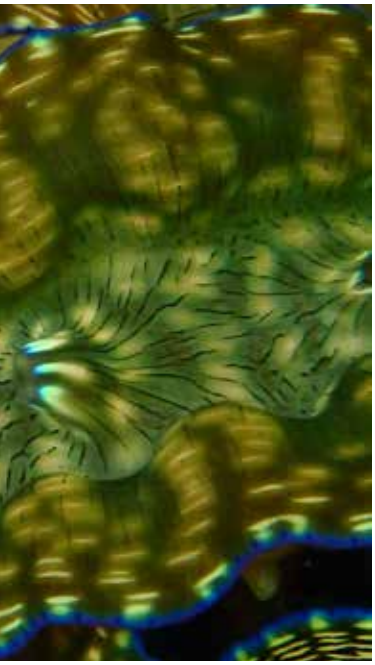
HOW THEY WERE (ALMOST) LOST

Giant clams have long been a delicacy for many coastal communities, and also serve as 'crisis' food, filling the gap when crops are destroyed, for instance by a tropical cyclone. In the past, when there were fewer people, natural reproduction of the clams kept up with harvesting for local use. The problems arose when populations grew and also foreign boats began plying the waters and taking the prized molluscs. By the 1970s, giant clams were in serious trouble.

This was just the sort of problem that the recently established Australian Centre for International Agricultural Research (ACIAR) was ready to address. Teaming up with others around the region, they came up with a solution involving artificially breeding and raising clams in hatcheries to a stage when communities could put them on their reefs and take care of them.

It was a simple idea, but it took a great deal of research and trials through the 1980s and 1990s to bring it to reality. More had to be found out about how clams lived and bred before hatcheries were set up in several Pacific island countries.





Good numbers of giant clams survived on the Australian Great Barrier Reef so some of these were brought in as 'parents' for the new generations.

The aquaculture system is still used today. Hatchery staff tend the baby giant clams in large tanks of seawater until they reach a size where they have a good chance of survival in the ocean, when communities or resort staff take over their care.

CLAM CARE

Clams need toothbrushes! Soft toothbrushes turned out to be useful for keeping the small clams clean. They also need protection from predators such as snails, so they are usually kept in cages for a few months until they are big enough to go it alone in the lagoon. Over the years, many thousands of giant clams have been nurtured in this way and returned to their natural habitat around the Pacific islands.

But perhaps even more importantly, their survival has depended on changing people's behaviour so that the farmed giant clams don't suffer the same fate as their wild cousins. For communities who witnessed the loss of their giant clams, this has often been lesson enough and many community members are committed to conserving their giant clams.

Those who fish have long known that giant clams indicate a healthy reef system, and more fish, which is another incentive for them to protect the clams. Behaviour change in others is being encouraged by laws that prevent poaching.

Tourism is also supporting the recovery of giant clams, recognised as a valuable asset to the growing ecotourism sector. Visitors who seek them on the reef to see and photograph their beauty are contributing to their future.

WHERE TO SEE GIANT CLAMS

Giant clams are still rare so you would be very lucky to sight one while snorkelling or diving. But chances are much better at resorts and marine sanctuaries where they have been restocked from the hatcheries.

In Fiji, large Tridacna gigas are guaranteed if you dive with Tokoriki Diving, based at Tokoriki Island Resort. Alex and Will, who run the operation, have been caring for the giant clams since they were brought from the Fiji hatchery in 2000. They also have some other species, including the locally endemic 'devil's clam'.

The Mamanuca Environment Society is working with several resorts in the Mamanuca group. Castaway Island Resort, Likuliku Lagoon Resort, Malolo Island Resort or Mana Island Resort staff know where visitors are most likely to find giant clams.

In Samoa, head to Savaia on the south coast of Upolu where villagers manage a giant clam sanctuary in the bay. Visitors can snorkel amongst many beautiful giant clams for a small fee paid directly to the village.

GIANT CLAM FACTS

- There are 12 species of giant clam, found across the tropical Indian and Pacific oceans.
- The mantle (the visible fleshy part) has photosynthetic algae living within it (much like coral), which give the giant clams their amazing colours.
- The photosynthetic algae produce food for the giant clams, which is why giant clams need to live in shallow water (so that sunlight reaches the algae).
- Giant clams have been proposed as the perfect food animal for space stations, because they need only sunlight to feed themselves and grow.
- No, they won't trap your foot! This is an 'urban myth' – the muscle that holds the shells together responds too slowly for this to be a risk.