



MEDIA INFORMATION

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Ocean-based nursery a first for Australia

Reef Restoration Foundation pioneered ocean-based coral nurseries in Australia after receiving the first permit to establish a pilot nursery on the Great Barrier Reef.

Chief Executive Officer Stewart Christie said the not-for-profit social enterprise collaborated with successful coral restoration projects in Florida and the Caribbean to create the first Great Barrier Reef nursery at Fitzroy Island, near Cairns in December 2017.

“Supported by scientists, our team of Reef Restoration volunteers has successfully grown our first generation of corals and in August 2018 planted them on a nearby damaged reef to support the Reef for future climate impacts,” he said.

“Coral restoration has been assisting damaged reefs overseas to regenerate for more than a decade, but was not previously allowed on the Great Barrier Reef.

“Reef Restoration Foundation’s goal is to grow 25,000 new corals on the Great Barrier Reef by 2021 as part of our vision to accelerate the recovery of damaged high-value reefs and strengthen the Reef’s resilience.

“Following the success of the pilot nursery, we are in the process of applying for permits to expand the ocean-based nursery program to four high-value reefs off Cairns.

“We have launched the Coral Crusaders campaign which allows the public to be the first generation to adopt coral grown on the World Heritage-listed Great Barrier Reef with their investment helping to grow and plant more coral on the Great Barrier Reef.

“The tax deductible investment will combine with those of other Coral Crusaders to create a multiplier effect and allow ocean-based coral nurseries to be established on high-value reefs throughout the Great Barrier Reef.

“It could be \$50 to Care for a Coral, \$500 to Build a Branch or \$10,000 to Tend a Tree, while some may consider investing in a new nursery, regenerating a reef, or making a smaller donation.”

The Reef Restoration Foundation pilot ocean-based nursery is monitored by James Cook University’s TropWATER and Reef Ecologic with the support of the Australian Government’s National Environmental Science Program.

How Reef Restoration works

The reef restoration process mimics natural processes and involves experienced members of the Reef Restoration team taking a small amount of cuttings from healthy corals that have survived the 2016 and 2017 bleaching events. These corals should be naturally more resilient to higher water temperatures and coral bleaching.

The corals are collected and cut into mother colonies and coral fragments, approximately 5-15cm long. Mother colonies are source colonies for future tree propagation. The mother colonies and coral fragments are attached to the coral tree frames in an ocean-based nursery adjacent to a damaged reef. The frames accelerate the growth of the corals. The corals are checked every 7-10 days to ensure there are no signs of disease. The coral tree frames are cleaned and the corals are regularly measured.

After 6-12 months of growth, the fragments are attached back to a reef to regenerate damaged sections and strengthen resilience. The coral tree frames are then re-stocked with coral fragments that are cut from the mother colonies. From one small cutting the team can potentially create thousands of new and hardier corals. These corals will regrow and the process will become a continuous cycle allowing thousands of new corals to be created from the initial coral cutting. The process is very similar to taking cuttings from plants to grow new plants and provides a sustainable source of corals.

The first coral cuttings, which were collected in December 2017 for the Fitzroy Island nursery, were ready for transplanting after just eight months. This first crop of corals exceeded expectations, with some increasing in size by 2.5 times. Nine out of 10 corals survived and grew into 246 new coral colonies from the 24 pieces of coral initially harvested from the fringing reef at Fitzroy Island.

In July 2018 an additional four coral trees were added to the Fitzroy Island nursery thanks to private sponsorship. The nursery has 10 coral trees with approximately 650 corals growing.

In August 2018, 100 of the new coral colonies were transplanted on damaged sections of coral reef at Fitzroy Island and the remainder retained to grow more coral. By November 2018 a total of 132 Acropora branching and bushy corals had been attached to the reef. These corals are thriving with hints of colour appearing and 25 species of fish swimming among them.

By the end of 2018 the nursery will have 1000 second generation corals growing on the coral tree frames.

Funding

For the first 18 months the Reef Restoration Foundation was entirely self-funded with more than a dozen people working pro-bono on developing the organisation and its restoration program. To establish the pilot project at Fitzroy Island, seed funding was received from Fitzroy Island Resort, the Association of Marine Park Tourism Operators, Gempearl and the Australian Government's National Environment Science Program. Thousands of volunteer hours have been provided by divers who are part of the team that regularly monitor and maintain the nursery as well as assist in its expansion.

Reef Restoration has since received a grant from the National Australia Bank Foundation, and donations from companies including JTB, Small World Journeys, Amway and Oris, which enabled expansion of the nursery. In-kind support has been provided by the Cairns Dive Centre, Cairns Turtle Rehabilitation Centre, Citizens of the Great Barrier Reef, Possible People, Reef Ecologic, Fortis One, RGG Insights, Holding Redlich, Jessups, BMT and Ports North.

Why high-value tourism reefs?

Reef Restoration Foundation needed to focus on solving a problem relevant to a defined stakeholder and the tourism industry fulfilled that requirement. The Great Barrier Reef supports a \$6 billion a year tourism industry and more than 64,000 jobs. While the Reef is vast, there are a limited number of locations used by the tourism industry. After the 2016 and 2017 coral bleaching events, the tourism industry sought to be more proactive stewards of the Great Barrier Reef. By establishing partnerships with the tourism industry, Reef Restoration can address a key problem for them while reducing the not-for-profit organisation's operational costs. The plan is to expand into other high-value locations on the Great Barrier Reef.

Why hasn't this happened before in the Great Barrier Reef Marine Park?

Until 2017, coral reef restoration techniques were not allowed in the Great Barrier Reef Marine Park. Following the second consecutive bleaching event, a summit was convened by the Great Barrier Reef Marine Park Authority to identify what measures could be undertaken to increase the health and resilience of the reef, and it was agreed that reef restoration techniques should be allowed. Reef Restoration Foundation then applied for a research permit to pilot the first ocean-based coral nursery in the Great Barrier Reef, as there is no appropriate permit currently available to establish coral nurseries for restoration purposes. Reef Restoration Foundation anticipates that a coral restoration permit will be available in the future.

More information

Become a Coral Crusader at www.refrestorationfoundation.org and follow Reef Restoration Foundation on its journey at www.facebook.com/refrestorationfoundation/ and www.instagram.com/reef_restoration_foundation.

Images and video of the Reef Restoration Foundation pilot nursery and outplanting:
<https://www.dropbox.com/sh/h2cc8xkl45ps0uh/AAAUeTqGig9h0a3ZUQeslyAea?dl=0>

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