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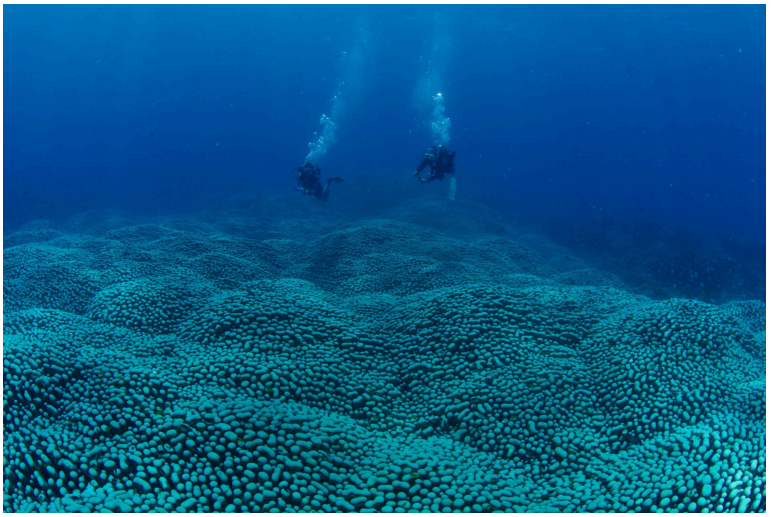
Citizen Scientists Identify the Largest Documented and Mapped Coral Colony in the World Through the Great Reef Census



A MOTHER-DAUGHTER DISCOVERY HIGHLIGHTS THE POWER OF PEOPLE-POWERED REEF CONSERVATION AT SCALE

Citizen scientists taking part in the Great Reef Census, run by Citizens of the Reef, have identified the largest known coral ever documented on the Great Barrier Reef. The discovery was made by a mother and daughter surveying reefs from their family vessel as part of the Census.

Preliminary measurements indicate the coral colony spans approximately 111 metres in maximum length and covers an estimated footprint area of 3,973 square metres - roughly the size of a soccer field - placing it among the most significant coral structures ever recorded on the Great Barrier Reef. By comparison, some of the largest individual coral colonies documented internationally of this species are typically measured in the 30–35 metre range, according to reporting by *ABC News*.

The coral was first encountered by Sophie Kalkowski-Pope, Marine Operations Coordinator at Citizens of the Reef, and her mother, Jan Pope, before being verified and mapped through coordinated in-water measurements, surface-based photogrammetry, and three-dimensional spatial modelling.

“I knew right from the minute we dropped in that it was something special,” said Sophie Kalkowski-Pope. “My mum and I dive from our family boat, and taking part in the Great Reef Census has given us the opportunity to really explore the full scale of what was there,” said Jan Pope, who first encountered the coral alongside her daughter.

"When I got in the water, I'd never seen coral growing like this before," she said. "It looked like a meadow of coral. It just went on and on."

A DISCOVERY MADE POSSIBLE BY SCALE, NOT CHANCE

The Great Reef Census was designed for large-scale spatial reconnaissance, which enables reef surveying at a tremendous scale. "The Great Reef Census helps us to locate the most important sources of reef recovery, helping scientists and managers better target their protection," said Prof. Pete Mumby from the Marine Spatial Ecology Lab at the University of Queensland. This approach is now being adopted by major reef initiatives around the world.

The Great Reef Census brings together tourism operators, Traditional Owners, research teams, recreational vessels, divers, snorkellers and community participants to collect reef imagery across vast areas of the Great Barrier Reef. More than 100 vessels take part, generating broad-scale data that helps reef managers prioritise where limited resources and protection efforts are directed.

"To drive conservation at the scale now required for reefs around the world, we need to engage local reef communities, leading scientists, and people power to target the best places for intervention and conservation impact", said Andy Ridley, CEO of Citizens of the Reef. "The Great Reef Census was developed to compliment existing monitoring programs by gathering large-scale data. This is made possible by people already out on the water, like Sophie and Jan, and thousands of citizen scientists around the world."

By combining in-water image capture with AI and structured analysis by citizen scientists, Citizens of the Reef turns community participation into reef data that can be used by reef managers and scientists.

FROM CITIZEN OBSERVATION TO POWERFUL DATA

Following the initial sighting, a team coordinated by Citizens of the Reef worked to verify the coral's dimensions using multiple independent methods. Manual underwater measurements were combined with high-resolution imagery captured from surface-based platforms, with the resulting data used to generate a detailed 3D model.

The spatial modelling was undertaken in collaboration with the Queensland University of Technology Centre for Robotics, alongside imagery capture supported by Biopixel, enabling precise measurement for long-term monitoring of the site.

“The benefit of this kind of spatial data is that we can take measurements at very high resolution,” said Serena Mou, Research Engineer at the QUT Centre for Robotics. “It also means we can return in future months and years and make direct, one-to-one comparisons to understand how the coral changes over time.”

The site is characterised by strong tidal currents and low cyclonic wave exposure compared to many parts of the Great Barrier Reef. These environmental conditions are now being examined by scientists, as part of ongoing monitoring, to better understand the context in which such large coral structures can persist.

WHY THIS MATTERS FOR REEF PROTECTION

Alongside its analysis through the Great Reef Census, the coral is being considered by reef scientists and Traditional Owners to help contextualise its ecological and cultural significance. Data collected through the Census is used to identify areas of high ecological value, including reefs that play an important role in supporting surrounding reef systems through coral spawning and larval dispersal.

Researchers emphasise that the discovery of an exceptionally large coral colony should not be interpreted as evidence that reefs are recovering or that climate impacts are diminishing. Rather, it highlights the uneven ways reef systems respond to environmental pressures, and the importance of identifying, understanding and protecting remaining strongholds across vast reef systems.

“Discoveries like this are significant because the reef still holds so many unknowns, and we don’t know what we stand to lose,” said Sophie Kalkowski-Pope. “I think this shows why reef conservation efforts like the Great Reef Census matter now more than ever.”

To reduce the risk of unintended impacts, exact location details are being withheld, imagery has been reviewed to prevent site identification, and relevant management authorities have been informed to support long-term stewardship of the site.

“Reef systems on the Great Barrier Reef and around the world are under significant pressure from climate change and local threats,” said Roger Beeden, Chief Scientist at the Great Barrier Reef Marine Park Authority. “Protecting these extraordinary places can’t sit with the government alone. The role of communities, and the people within them, is becoming increasingly critical, not just in Australia, but globally. We would like to acknowledge Sophie and Jan, and everyone contributing both on the reef and as virtual volunteers, for the time and effort they’ve put into building the knowledge needed to help protect reefs into the future.”

“This experience is a great thing. Especially given we are bringing together Western science and cultural science,” said Fred LeFoe, a Gunggandji Traditional Owner who was part of the mapping expedition.

A MODEL DESIGNED FOR SCALE

Since its launch, Citizens of the Reefs Great Reef Census has grown into one of the world's largest marine citizen science initiatives. By combining in-water image capture with structured analysis using cutting-edge AI and citizen scientists, the program generates reef data at a scale that supports long-term monitoring and management.

The Census model is now being adapted for use beyond the Great Barrier Reef, demonstrating how people-powered reef conservation can operate at the scale required to protect coral reefs worldwide.

HOW TO GET INVOLVED

The Great Reef Census is powered by everyday people; from divers, tourism operators, Traditional Owners and boat owners capturing reef imagery, to the thousands of online volunteers around the world helping analyse this data.

To join the next Great Reef Census, sign up at citizensgbr.org to be notified when registrations open. Tourism operators and vessel owners interested in participating in the in-water fleet can register their interest via Citizens of the Reef hq@citizensgbr.org

ASSETS

High-resolution images, broadcast-quality videos, and interviews are available here: https://drive.google.com/drive/folders/1lXkzKuRyHNnprtEstxpT84qPASARzpJY?usp=sharing

SOCIALS

www.instagram.com/citizensofthereef/

www.facebook.com/citizensGBR

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About Citizens of the Reef:

Citizens of the Reef is a conservation organisation on a mission to help protect the world's reefs. By combining people-power, AI and science. Citizens creates practical conservation programs that are scaling to communities all around the world and pioneered a 'shared economy' model for global conservation that empowers everyday people from all corners of the globe to help conserve reefs across the world. This practical model is revolutionising the approach to conservation on a global scale.

About the Great Reef Census:

The Great Reef Census is a Citizens of the Reef project in partnership with The University of Queensland, Great Barrier Reef Marine Park Authority, Dell Technologies, the Walt Disney Company, Mars, the Australian Institute of Marine Science and James Cook University. The project would not be possible without support from Cotton On Foundation, Prior Family Foundation, the Queensland Government's Department of the Environment, Tourism, Science and Innovation, the Australian Government's National Environment Science Program, the Reef and Rainforest Research Centre, The Special Group and Mindshare. For more information, visit citizensgbr.org.