

Press Release from Reef Renewal Foundation Bonaire  
January 25<sup>th</sup>, 2023

## Outplanting a Boulder, More Resilient Reef

### SUMMARY

- In a historic first, RRFB began outplanting 3 species of nursery-reared boulder coral back to Bonaire's reefs
- By expanding the number of species they grow and outplant, RRFB improves the diversity and overall resilience of Bonaire's reefs

**(Bonaire, Dutch Caribbean)** For the first time in history, 3 species of boulder coral have been outplanted back to Bonaire's reefs: lobed star coral (*Orbicella annularis*), mountainous star coral (*Orbicella faveolata*), and great star coral (*Montastraea cavernosa*). In late 2022, Reef Renewal Foundation Bonaire began outplanting boulder coral fragments that were propagated via fragmentation almost 2 years prior and reared in nurseries. All 3 species of boulder coral, 2 of which are endangered, are key building blocks of the marine ecosystem and will bolster the resilience of Bonaire's reefs for years to come.

At their inception in 2012, RRFB initially focused on 2 species of branching coral: staghorn coral (*Acropora cervicornis*) and elkhorn coral (*Acropora palmata*). The foundation has since expanded their restoration efforts to more species, first through their larval propagation program and now fragmentation technique, as well. It is crucial to maximize the number species that benefit from restoration to ensure that future reefs are as genetically diverse and resilient as possible.

In 2019, Reef Renewal Foundation Bonaire, with a government permit and input from STINAPA, collected a few boulder coral fragments from four wild colonies around the island. These fragments were hung on specially-designed nursery trees and closely monitored for indicators of disease, bleaching, and other stressors over the following 2 years.

In December 2022, the first "reef-ready" boulder corals were taken to various restoration sites on Bonaire and outplanted using a novel, cement-based attachment technique. Fragments are pressed into small domes of fresh cement and secured to sand or rock; once hardened, these structures become part of the reef, where they will be monitored for the coming years by the Reef Renewal team. Although RRFB has been propagating boulder coral larvae for years, this is the first time that colonies were reared and fragmented in a nursery setting before being outplanted.

Reef Renewal Bonaire will continue to grow and propagate boulder corals in nurseries and outplant them back to the reef. The Foundation's efforts guarantee that *O. annularis*, *O. faveolata*, and *M. cavernosa*, staples of Bonaire's marine ecosystem, will continue to thrive amidst growing pressures.

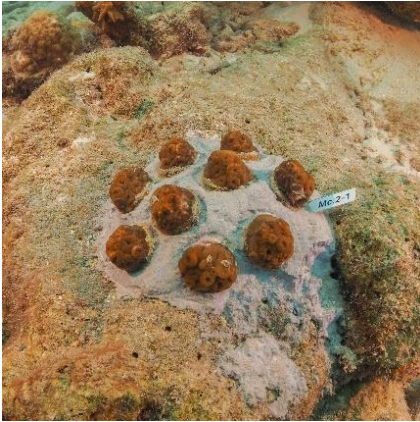
***"Outplanting these boulder coral fragments for the first time was a critical step for us, one that was necessary to fine-tune our restoration techniques and establish proper operating protocols. From now on, our focus is scaling up their production to make sure that, with the help of our incredible community of dedicated volunteers, thousands of corals will be outplanted back to our reefs every year."***

– Francesca Viridis, Chief Operating Officer | Reef Renewal Foundation Bonaire

The boulder coral project is important not only for the preservation of key species, but also for ensuring the resilience of Bonaire's reefs in the face of growing local and global threats. By expanding the quantity *and* species of coral they outplant, the Foundation introduces much needed diversity to degraded reef areas, allowing them to better withstand today's ever-changing environment and the uncertain conditions of the future.

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## PHOTOS & DESCRIPTIONS



*Outplanted colony of great star coral (*Montastraea cavernosa*). Credit: RRFB*



*Wild lobed star coral (*Orbicella annularis*) colony. Credit: RRFB*



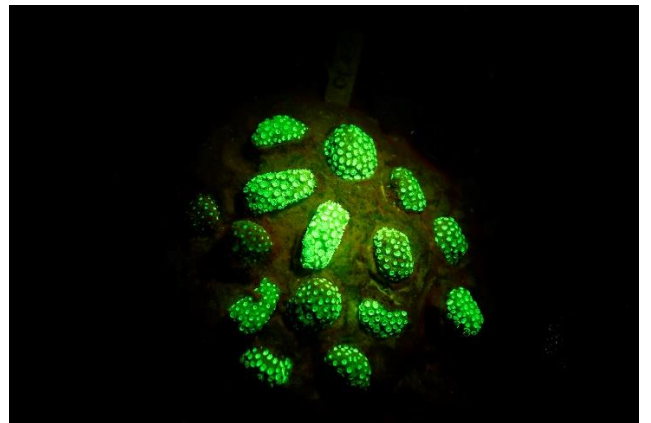
*RRFB volunteer outplants multiple colonies near the boulder coral nursery. Credit: RRFB*



*Trays of boulder coral fragments in the nursery. Credit: RRFB*



*A group of lobed star coral (*Orbicella Annularis*) colonies outplanted on the reef. Credit: RRFB*



*A colony of outplanted boulder coral fluoresces under blue light with a yellow barrier filter. Credit: Ruth Winters*



*Lobed star coral (Orbicella annularis) colony with label indicating genotype and species. Credit: RRFB*

### **About Reef Renewal Foundation Bonaire**

Reef Renewal Foundation Bonaire's (RRFB) mission is to help protect, replenish, and restore the biodiverse coral reefs of Bonaire. We focus on implementing innovative, science-based programs that expand and strengthen populations of keystone coral reef species. We do this so that the reefs of Bonaire can gain the necessary scale, genetic diversity, and resilience to thrive today and in the uncertain, ever-changing conditions of the future. Today, with the help of 11 partner diveshops around the island and a dedicated team of volunteers, Reef Renewal Foundation Bonaire has outplanted over 50,000 corals back to the reef.

To learn how to get involved or lend support, please visit [www.reefrenewalbonaire.org](http://www.reefrenewalbonaire.org) or email [info@reefrenewalbonaire.org](mailto:info@reefrenewalbonaire.org).



**Enjoy, be inspired, and, please, get involved!**