

# THE CORAL TREES™

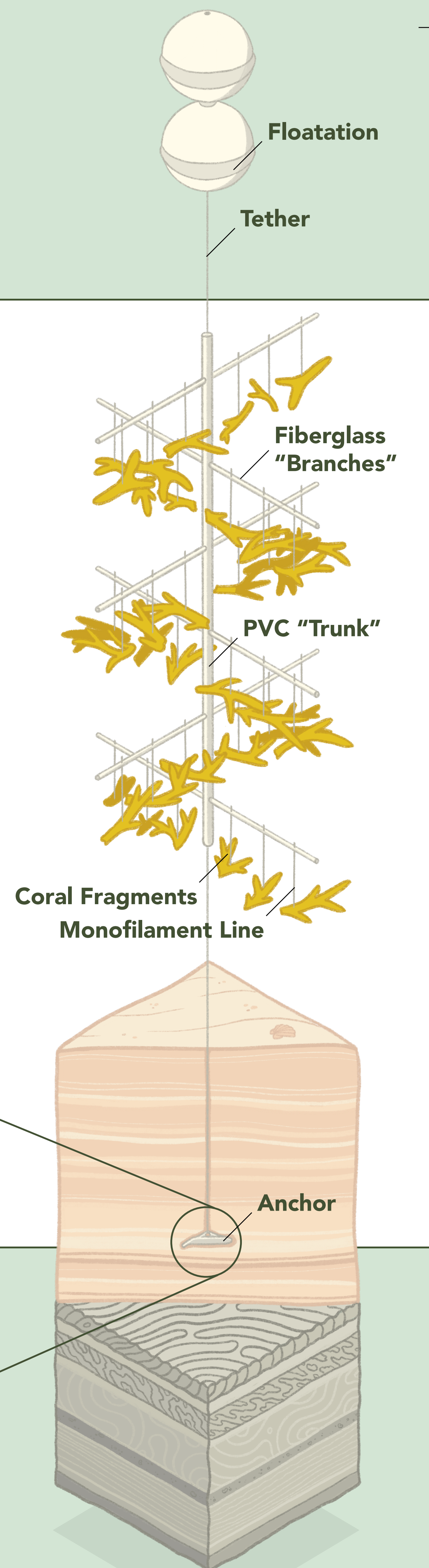
## OF CORAL RESTORATION FOUNDATION™

### Acroporid Tree

After years of R&D, CRF™ pioneered the coral tree. A simple, cost effective design, that is perfectly suited to fast growing Acroporid corals and is now used around the world. The trees are tethered to the ocean floor (see fig.1), and buoyed with a float, allowing the trees to float freely with surge and currents. This helps prevent damage to the tree structures and corals.

Coral fragments are hung from the branches of the trees using monofilament line. Suspended in the nutrient rich, sunlit water column, acroporid fragments grow into "reef ready" colonies in just six to nine months.

We clean the trees regularly to remove biofouling, so the corals do not have to compete with other marine organisms for space or food.



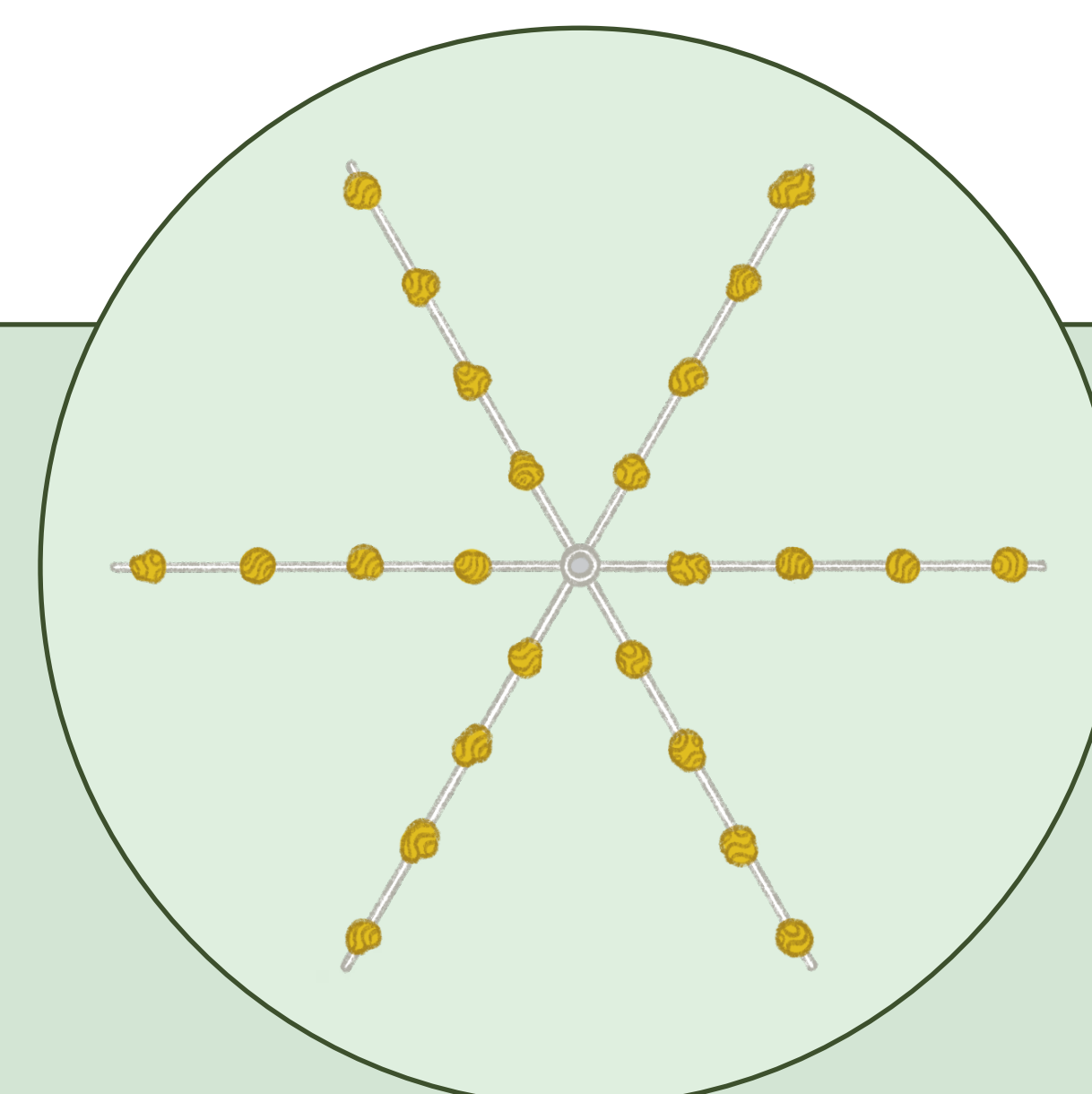
(fig.1) DUCKBILL ANCHOR keeps tree securely attached to the sea floor

### Spiral Tree

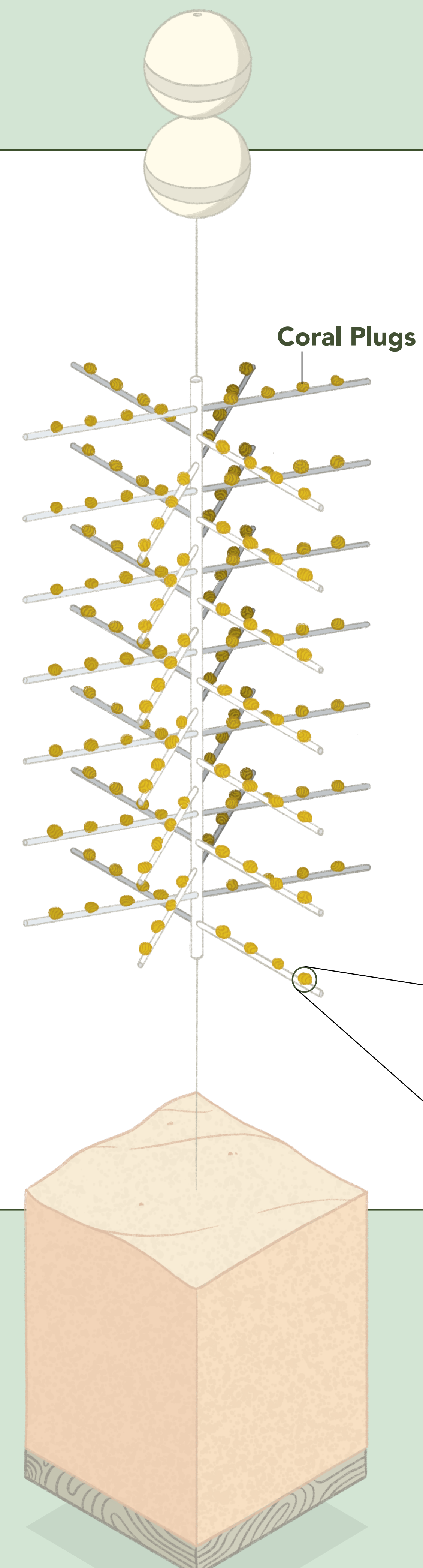
Moving into 2024, we will be transitioning to Spiral Coral Trees to produce our non-Acroporid coral stock. The Spiral Tree was developed by Mote Marine Laboratory as a new way of incorporating coral plugs into the CRF™ Coral Tree™ design. It was then refined by SeaVentures in Puerto Rico .

The Spiral Trees enhance our efficiency in non-acroporid coral production:

- With 20 straight branches available to receive plugs, our production capacity increases to 400 plugs per tree—160 more than our traditional Boulder Coral Tree.
- The lack of trays means that there is less surface area for the accumulation of biofoul. Removing this biofoul before outplanting is labor intensive, and so the Spiral Trees save us at least one additional day of diving per outplanting event.



(fig. 2) TOP VIEW



### Mega Tree

Designed by CRF™ Interns, Mega Trees will now be used as the main nursery structures for holding non-Acroporid broodstock in our ocean-based gene bank. While the Spiral Tree is built with maximized production in mind, the Mega Tree acts as a long term home for non-acroporid genotypes.

As we adapt our restoration strategies to include more coral species, we challenged our interns to modify our standard Boulder Coral Tree™ to enhance its capacity. The result was the addition of new branches to the trunk, allowing for four additional trays, which increased our capacity per tree from 240 to 480 plugs.

With large, robust surfaces for bouldering corals to grow on, this new Mega Tree is ideal for holding larger, broodstock fragments of non-Acroporid corals in the CRF™ in-situ gene bank.



(fig.3) BOULDER CORAL PLUG

A specially designed ceramic plug with a threaded stem that screws directly into the Spiral Tree, these plugs can also be placed in coral trays.

