

51% #1690

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On this week's 51%, we ... get crafty with the Tang Teaching Museum and Art Gallery in Saratoga Springs, New York, as part of a global art project drawing attention to the impact of climate change on coral reefs.

You're listening to 51%, a WAMC production dedicated to women's stories and experiences. Thanks for tuning in, I'm Jesse King.



Crochet Coral Reef workshop at the Van AbbeMuseum, Eindhoven, the Netherlands. Photo courtesy VAM and the Institute For Figuring.

We're going to get artsy now with the Frances Young Tang Teaching Museum and Art Gallery at Skidmore College in upstate New York. Earlier this week, I attended one of the museum's last workshops for its Saratoga Springs Satellite Reef — a community art project bringing together math, science, environmental activism...and coral reefs made out of yarn.

"I knew that this was the perfect project to bring to the Tang, and I was really excited to do a satellite reef as part of a big, community engagement project," says Rebecca McNamara, an assistant curator at the Tang who's been organizing the Saratoga Springs reef for over a year as part of the museum's upcoming exhibit Radical Fiber: Threads Connecting Art and Science. The reef is technically considered a satellite of a much larger project developed by Christine and Margert Wertheim in the early 2000s: the original Crochet Coral Reef. But really, McNamara says the story of crocheted coral goes back even further than that.

"So the Crochet Coral Reef project actually stems from the work of mathematician and maker Dr. Daina Taimina, who is a Latvian mathematician now based in Ithaca [New York]. She taught at Cornell for many years," she explains.

McNamara says Taimina was a college mathematics professor when she was tasked with teaching hyperbolic space to her students. Hyperbolic space is a geometric concept that, quite frankly, is very difficult to understand and put into words — and that was the case for Taimina's students as well. McNamara says Taimina thought a physical model of hyperbolic space would help her out in the classroom, but at the time, the primarily male-dominated field of mathematics believed such a model was impossible to make.

"But Dr. Taimina did not agree, she wanted to find a way to make this happen. And so she mapped out exponential growth, which is part of hyperbolic space, on paper, and she actually recognized it as a knitting or crochet pattern. And she crocheted it, and it was accepted as the first really useful model of hyperbolic space — there was one earlier model that was made with paper, and it crumbled and didn't really work," she says. "Something I love about this story is that she used this traditionally feminine handicraft of crochet to create something that the maledominated field of mathematics had said for such a long time was just not possible. And so it shows the value of cross-disciplinary learning and engagement, and it also reveals how severe our blind spots can be at times."

So what does that have to do with environmental activism and the coral reefs? Well, it turns out the ruffles found in Taimina's model look a heck of a lot like a number of things we see in nature, like leafy lettuces, sea slugs, and — you guessed it — coral. In 2005, the Wertheims saw an opportunity to take that model and use it to promote discussion around the planet's struggling coral reefs. They made hundreds of crocheted corals based on Taimina's model, taking a chain of stitches and periodically increasing the number of stitches as they went back and forth to create that floppy, wavy effect.

McNamara says it's worth noting that, unlike math, nature isn't perfect — so the Wertheims also used more freeform techniques to make pieces resembling coral pillars, kelp forests, and coral withered by climate change.

"When ocean waters temperatures rise, the corals become stressed, and they expel algae. And they turn white, and that's called bleaching," McNamara explains. "And if it's not caught and reversed immediately, they die from the bleaching. We have lost a lot of corals around the world as a direct impact of climate change. Through the Saratoga Springs Satellite Reef, we've been talking in our programming a lot about the negative impact that climate change has had on the corals."

Once you artfully arrange all of these pieces together, you've got a colorful, wooly coral reef. The Wertheims core collection of corals has traveled to various museums and galleries across the globe — but the project also has an extensive satellite program of smaller reefs worldwide. Since 2020, more than 40 satellite reefs have been constructed in cities like Chicago, New York City, Dublin, Cape Town, Sydney, and more. It's an art project that's frequently been picked up by college classrooms, community organizations, and even women's prisons.



Rebecca McNamara, Tang Teaching Museum

"Crochet is historically women's work, it's historically something that women have done — but it's great to see lots of different people creating, and the more diversity we have in all ways for the reef, the stronger our wooly ecosystem that we're creating will be,' adds McNamara.

The Tang Teaching Museum has been holding monthly workshops and weekly "craft circles" since it first announced plans for its satellite reef in December 2020. McNamara says the goal is to keep the project as accessible as possible, so any size and quality of yarn is permitted. Many established knitters and crocheters have been making their corals with odds and ends left over from other projects, saving them from the trash bin.

McNamara says she doesn't have an exact count yet on how many completed corals they've received - but they're coming from all over. The meeting I attended saw crocheters from New

York City to Florida. McNamara says it's been a great opportunity to make friends and introduce new people to the museum.

"We didn't intend the Saratoga Springs Satellite Reef to be a pandemic project, it just sort of happened that way. It gave people — and I'll say for myself as well — it gave us something to do, something to work toward. You know, even if you're sitting at home on your couch, working on a coral, you know that somebody else in another state might be sitting on their couch, working on a coral. And so even if you're physically alone, you feel really connected to other people through this project," she notes. "Another thing I'm hearing, especially from women who have been crocheting for decades — most crocheters make functional garments: socks, mittens, sweaters, all sorts of things. And this project has been the first time that a lot of makers have been invited to create something that is non-functional, that's intentionally an art object. And that has empowered women in particular to be really experimental, to be creative, to not follow a pattern, to just try something different and not worry about a mistake because the mistake is fine, because it's an artwork, and we can embrace mistakes in artwork. And we can especially embrace mistakes in this project, because we are mimicking nature in a lot of ways, and nature is filled with imperfections."

I'm admittedly more of a knitter than a crocheter, so I have a lot to learn on that front - but by workshop's end, I had at least managed a small chain of stitches to build upon. McNamara says completed corals are due to the Tang Teaching Museum by January 15. Participants are instructed to mail their handmade corals to the museum's address at 815 N. Broadway, Saratoga Springs, NY 12866.

The satellite reef will open for public viewing as part of the Radical Fiber: Threads Connecting Art and Science exhibit starting January 29. The museum has also planned a symposium on the science behind the exhibit - including discussions around sustainability in the textile industry - for that opening weekend. You can learn more about the project and find tutorials at the Tang Teaching Museum's website and <u>crochetcoralreef.org</u>.

https://www.wamc.org/show/51/2021-12-10/51-1690-watching-the-waters

^{51%} is a national production of WAMC Northeast Public Radio. Our host is Jesse King, our executive producer is Dr. Alan Chartock, and our theme is "Lolita" by the Albany-based artist Girl Blue.