



Seed Reef is an immersive, sculpted paper installation of a coral reef system threatened by bleaching and pollution and was created by artists Malcolm Zachariah and Emma Difani. The Exhibition will run January 10 through February 18 inside the John McNeese Gallery on the first floor of the City Central Building located at 400 E. Central in downtown Ponca City. Seed Reef will be open Tuesdays through Fridays, noon to 6pm and Saturdays from noon to 4pm, and is free and open to the public. This exhibition was first shown at Aha Tulsa, and most recently at Factory Obscura in Oklahoma City, and was brought to Ponca City through the foresight of the City Arts organization and the generosity of our patrons including Carl & Brenda Renfro, Blackwell Dentistry, Family Vision Care of Ponca City, Equity Bank, KR Automation, John & Mary Anne O'Neill, Stuteville Chevrolet Buick GMC, and Phillips 66. Special thanks to the City Arts Board of Directors, Factory Obscura, and the Oklahoma Visual Art Coalition.

Visitors to Seed Reef are given the opportunity to walk “underwater” through this screen-printed, sculpted paper reef as it transitions from a colorful, vibrant section full of corals, fish, and other sea life to a barren, bleached coral system. The artists, whose creative partnership formed through a shared love of material, nature, and experimentation, use their individual practices of printmaking and kirigami (cut and folded paper) to construct an immersive paper environment reflecting the consequences of climate change.

Visitors are encouraged to help restore or “seed” the damaged reef by constructing their own corals and reef inhabitants to add to the installation. This process simulates actual coral restoration efforts using nursery-grown fragments. By crafting corals, visitors are helping seed the bleached region of Seed Reef, bringing it back to a healthy, thriving state and mirroring the actions we must take to understand and remedy our complex relationship with this planet and preserve its biodiversity.

For Seed Reef at City Arts in Ponca City, the installation grew with the help of new collaborators. Local artists and City Arts members Dale Coons, Summer Walker, Andrew Hicks, and Theresa Sacket created new sculptural pieces for the installation. With sound by Dan Moyer, this exhibition will allow you to immerse yourself in this underwater spectacle.

## **ARTIST BIOS**

Emma Difani is a visual artist originally from Albuquerque, NM, living and working in Oklahoma City. She received a BFA with an emphasis in printmaking from the University of New Mexico. An arts educator as well as creator, Emma teaches paper and print arts at Oklahoma Contemporary, Artspace at Untitled, The Oklahoma Children's Theater and Oklahoma City University. She is an active member of the Factory Obscura Collective, ART GRP and the Radical Intersectional Print Guild. Emma co-founded Connect:Collect, an annual international print exchange seeking to highlight and connect printmakers in Oklahoma with artists around the world. Her work uses the obsessive layering of printmaking to examine the complex relationships between the natural and constructed environments.

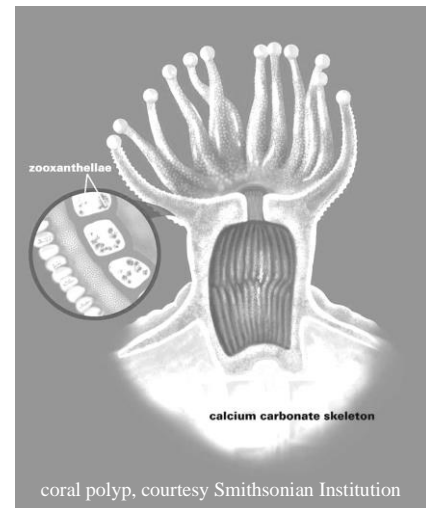
Malcolm Zachariah is a bridge-builder making connections between art and science. Based in his hometown of Oklahoma City, Malcolm experiments in several media including ink drawing, watercolor, ceramics, and over 25 years of kirigami (cut and folded paper) sculpture. Self-taught while studying biochemistry (BS, University of Oklahoma), Malcolm draws on motifs from the macroscopic (rainforests and coral reefs) and microscopic (cells and molecules) worlds. He has recently explored the diverse relationships among life forms, including our own species, through printed kirigami installations made in collaboration with Emma Difani. Malcolm is active in the Oklahoma arts community, in exhibitions and serving on the Art Group OKC collective's leadership team, while also promoting diversity and inclusion in art.

## About Coral Reefs and Bleaching

Coral reefs are some of the most diverse ecosystems found on Earth, and healthy reefs provide food, shelter, and resources to support 25% of all marine life.

### - What is a Coral?

- Corals are animals related to sea anemones and jellyfish. usually form colonies of many identical individual that look like tiny anemones. Some shallow-water corals symbiotic relationships with photosynthetic algae called zooxanthellae (zoah-zan-thel-lay), which live inside the and convert waste products into food and oxygen. The are golden-brown and give most of the coral color; corals have more colors coming from proteins used as a sunscreen.



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### - What is a Coral Reef?

- “Hard/stony” corals form a calcium-based skeleton that gradually build up into a reef, much like a rainforest. The colonies might branch like staghorn corals or form boulders like brain corals. There are also “soft” corals like sea fans that don’t form a solid calcium skeleton; they often have larger, filter-feeding polyps. While individual corals grow only about as fast as human hair, over time they can form islands. Over time, fossilized coral skeletons and sea shells became much of the world’s limestone, used in cement and other construction purposes. Hundreds of millions of years ago, there were even shallow seas and reefs in what is now Oklahoma!

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### - Why are Coral Reefs Important?

- Coral reefs support more species per square foot than any other marine environment. Like rainforests, this diversity has also been a source of new medicines like painkillers and anti-cancer drugs. Reefs support thousands of species of fish and millions of people through fisheries and tourism. The reef structure itself helps defend coastlines by absorbing up to 97% of the energy from waves.

### - What is Coral Bleaching?

- Coral reefs are threatened by pollution, increasing ocean temperatures, and habitat destruction. Many of these environmental stressors cause the coral polyps to expel their algae and starve. They appear bleached because the white calcium skeleton shows through the living tissue.

### - How are Conservationists Restoring Reefs?

- It takes many years or even centuries for reef ecosystems to recover from mass bleaching. Many corals naturally will grow from fragments broken during storms. Coral conservationists are replicating the process by putting coral fragments on artificial supports in the ocean or in the lab before replanting them in the natural reef.

## Seed Reef Creatures

- Fish:
  - Dottyback – small in three colors: purple, pink, or yellow
  - Royal Gramma – small with purple in front front and yellow in back
  - Clownfish – orange, black, and white
  - Green Chromis – small and green
  - Blue Chromis – small and blue with black stripes (no yellow)
  - Copperband Butterflyfish – medium white with orange stripes and long mouth
  - Blue Tang – medium blue with black stripe and yellow on tail
  - Lionfish – medium white with red stripes
  - Coral Grouper – big orange with blue dots
  - Panther Grouper – big white with black dots
  - Honeycomb Moray Eel – long white with black spots
  - Spotted Eagle Ray – big dark grey with white circles
  - Whale Shark – huge blue grey with white spots
  - Manta Ray
- Corals
  - Sea Fan Coral – relatively flat with many interconnected branches in purple, yellow, or maroon
  - Staghorn Coral – reef-building corals with separate branches
  - Brain Coral – round reef-building corals orange with squiggly lines
  - Porites Coral – boulder-like reef-building corals brown-green
- Others
  - Sea Anemones – brown or purplish with many tentacles, usually a clownfish inside
  - Pink Striped Jellyfish – big pink jellyfish
  - Moon Jellyfish – smaller jellyfish
  - Firefly Squid – small with glowing blue dots
  - Humboldt Squid
  - Sea Turtle