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# EARTH

## Juno Unveils Jupiter's Swirling Storms

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# Art Joins Science in Coral Communication



Scientists are not alone in their quest to observe and understand how coral reefs change through time. Artists and researchers have been creating stunning paintings, movies and even soundscapes to examine how reefs are responding to environmental pressures. Art has the power to engage viewers in scientific inquiry when they least expect it, reaching new audiences and facilitating public awareness.

A panel at the American Geophysical Union (AGU) Fall Meeting in Washington, D.C., in December 2018, entitled “[The Coral Reef Ecosystem: Observation, Configuration and Communication at the Intersection of Art and Science](#),” looked at how some artists and scientists are bringing art and science together.

One such collaboration involved Scripps Institution of Oceanography ecologist Stuart Sandin, who enlisted the help of University of California, San Diego, music professor [Lei Liang](#), whose students interpreted and communicated scientific data collected during the [100 Island Challenge](#). While the visual appeal of the colorful coral maps and three-dimensional virtual flyovers that the 100 Island Challenge team produces is undeniable, the music composition students pushed the edges of the creative envelope by, for example, sonifying the data to produce soundscapes.

Another collaboration resulted from the Netflix documentary, “[Chasing Coral](#).” At the AGU meeting, NOAA scientist [C. Mark Eakin](#) shared his experience working as a science advisor for the film, which features stunning cinematography that attempts to engage viewers who might otherwise avoid narratives related to climate change. Through this medium, Eakin’s research on coral reefs has reached viewers in more than 100 countries.

Research provides inspiration and focus for artists as well. Artist [Diane Burko](#), who convened the AGU panel, is known for creating spectacular paintings inspired by environmental change. Her work has featured subjects of climate change since 2006, and a trip to the Great Barrier Reef in 2017 drew her focus to coral reefs. Burko’s current body of work was also informed by visits to the Hawaiian Institute of Marine Biology, Scripps Institution of Oceanography and

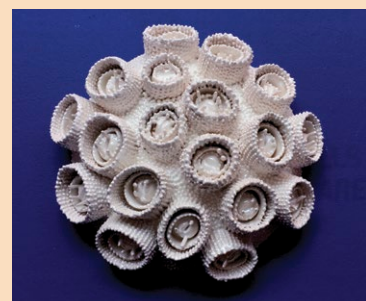
Diane Burko’s work on display at the National Academy of Sciences in Washington, D.C. (above left), includes the painting *Faga’alu* (above right; 60x60 inches, acrylic on canvas, 2018), which was inspired by her visit to coral reefs in American Samoa. Credit: above left: Kevin Allen; above right: Diane Burko

Temple University’s Center for Biodiversity. The beautiful results of this art-research collaboration have reached countless viewers at the National Academy of Sciences in Washington, D.C., where her artwork is on exhibition until March 13.

The sculptures of [Marguerita Hagan](#) were seen by millions of viewers in 2017, when her work was displayed at the Philadelphia International Airport for eight months. Hagan, another participant in the AGU panel, is a ceramicist inspired by coral reef ecosystems. Her delicate white sculptures of coral and plankton floated along the walls of the airport terminal, beckoning busy travelers to slow down and appreciate the intricacy of nature’s design. Being constantly exposed to the natural world through their research, scientists may take for granted the beauty under their microscopes, said [Molly Anne Moynihan](#), another coral researcher who presented during the panel. Artists like Hagan and Burko say they strive to share that vision with people and engender a feeling of responsibility and kinship.

Scientists like Sandin have worked with colleagues in the arts to increase the impact of their scientific research. The resulting art, panelists said, has the power to evoke an emotional response through which the public can access and process sophisticated scientific research.

**Kat Cantner**



Marguerita Hagan’s coral sculptures were on display at Philadelphia International Airport in 2017. Credit: courtesy of Marguerita Hagan