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## Building a Collaborative Fiber Art Project in the Nation's Capital

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## **Building a Collaborative Fiber Art Project in the Nation's Capital**

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On Saturday, September 22, 2012, I delivered a talk at the Textile Society of America's 13<sup>th</sup> Biennial Symposium entitled "Building a Collaborative Fiber Art Project in the Nation's Capital" as part of an Organized Session entitled "Rewind: 1960s to Now, Revolutions and Evolutions in Fiber."



*Figure 1. Detail of the Smithsonian Community Reef.  
Photo by Don Hurlbert, Smithsonian Institution.*

I was hired by the Smithsonian National Museum of Natural History in 2010 to coordinate their first-ever community fiber art project – The Smithsonian Community Reef, a locally created “satellite reef”

of the Hyperbolic Crochet Coral Reef.<sup>1</sup> Developed by the Institute For Figuring in Los Angeles in 2005, the Hyperbolic Crochet Coral Reef is a global, collaborative fiber project that raises public awareness about the threats to coral reef habitat from pollution, over-fishing, and global warming.<sup>2</sup> Project founders Margaret and Christine Wertheim clearly modeled the Hyperbolic Crochet Coral Reef on collaborative Feminist art practices that developed in the 1960s and 1970s and that continue to shape our social and artistic discourse in positive ways today.<sup>3</sup>

As a result of the scholarship I had done on Mary Walker Phillips, one of the first artists to work primarily in knitting – which, like crochet, is a non-woven, or off-loom technique – I immediately saw many connections between my research and the collaborative fiber art project I was helping a community of new and experienced crocheters to create.<sup>4</sup> In the 1960s, Phillips worked, like many of the artists trained in craft media at Cranbrook Academy of Art and other similarly progressive schools based on European models, with an experimental approach to art-making that is echoed in the Hyperbolic Crochet Coral Reef project. In fact, Phillips and her peers in the 1960s and 1970s documented and widely disseminated what they had learned by writing mass-market books on craft, and teaching university classes and workshops on craft techniques that perpetuated the democratic ideals imbuing the American Studio Craft movement in its early days, when the link between craft and Modernism’s utopian values was still strong.<sup>5</sup> Accordingly, I sought to foster an experimental and inherently democratic approach to creativity in the reef-making project that rested not only on the Hyperbolic Crochet Coral Reef project itself, but also on the foundation constructed by these craft artists of the 1960s and 1970s.<sup>6</sup> Once the makers of the Smithsonian Community Reef were inspired to approach the coral reef project creatively, they could readily apply their skills and/or acquire new skills to make pieces for the display. Further, they were willing and, indeed, eager to experiment and “play” with crochet and other techniques, in part because creativity through experimentation has become the basis of a shared cultural identity of “makers.”<sup>7</sup>

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<sup>1</sup> See images of the Smithsonian Community Reef, and learn more about the exhibition of the Hyperbolic Crochet Coral Reef at the Smithsonian National Museum of Natural History on the Museum’s dedicated web page: <http://www.mnh.si.edu/exhibits/hreef/>.

<sup>2</sup> Learn more about the Institute For Figuring, its founders, Margaret and Christine Wertheim, their mission, and their current projects by visiting the Institute For Figuring: <http://theiff.org/about/about.html>.

<sup>3</sup> See generally, the description of the inception of the Hyperbolic Crochet Coral Reef Project under “History,” on the project’s dedicated website: <http://crochetcoralreef.org/about/history.php>.

<sup>4</sup> See generally, Jennifer Lindsay, “Mary Walker Phillips: *Creative Knitting* and the Cranbrook Experience” (master’s thesis, Smithsonian Associates and Corcoran College of Art + Design, 2010).

<sup>5</sup> See, e.g., Mary Walker Phillips, *Creative Knitting: A New Art Form* (New York: Van Nostrand Reinhold, 1971). See also, Eliel Saarinen, *Search for Form: A Fundamental Approach to Art* (New York: Reinhold Publishing Corp., 1948), reprinted as *The Search for Form in Art and Architecture* (New York: Dover Publications, Inc., 1985). Phillips’s cohort at Cranbrook, spanning her two periods of study there in 1946-47 and 1960-63 included Toshiko Takaezu (ceramics and fiber), Harvey Littleton (ceramics, glass), Glen Kaufman (fiber), Ted Hallman (fiber), Jack Lenor Larsen (fiber), Brent Kington (metals), Ed Rossbach (fiber), Adela Akers (fiber), Bill Brown (sculpture) just to name a few. In addition to authoring books and establishing programs to train new generations of artists, they also taught workshops at prestigious seasonal craft schools, like Penland School of Crafts and Haystack Mountain School of Crafts, where passionate practitioners with no formal training could study with noted artists.

<sup>6</sup> Many of these artists studied at progressive American schools, like Cranbrook Academy of Art in Bloomfield Hills, Michigan and Black Mountain College in North Carolina, which were deeply influenced by European Modernism, like the Bauhaus School in Germany. Such schools taught artists of the immediate pre- and post-war eras to create new forms for contemporary life. Their pedagogy reflected educational reforms of the late 19<sup>th</sup> and early 20<sup>th</sup> century in Europe emphasizing playfulness, imagination and experimentation as essential to developing lifelong creativity.

<sup>7</sup> See generally, Jennifer Lindsay, “Mary Walker Phillips: *Creative Knitting* and the Cranbrook Experience” (master’s thesis, Smithsonian Associates and Corcoran College of Art + Design, 2010) and Eliel Saarinen, *Search for Form: A Fundamental Approach to Art* (New York: Reinhold Publishing Corp., 1948), reprinted as *The Search for Form in Art and Architecture*

Second, social justice movements in the 1960s and 1970s opened more inclusive ways to work together, expanding our perception of ourselves as part of a global community, where what we do to and for each other and for the natural world has implications that ripple beyond us into other communities. Indeed, this sense of inclusiveness and a global perspective on community is inherent in how the Wertheim sisters articulate the coral reef project, and is intrinsic to its broad appeal, involving people of all ages and levels of skill, from diverse communities around the country, and from around the world.

The Hyperbolic Crochet Coral Reef was the National Museum of Natural History's first interdisciplinary exhibition merging art, science and craft, and it is a spectacular example of how craft truly can bring people and institutions together around a common cause. (Figure 1.) The Smithsonian Community Reef was created expressly for the exhibition of the Hyperbolic Crochet Coral Reef at the National Museum of Natural History in just 5 months in 2010 by more than 800 crocheters, age 3-101 from 25 states and 3 countries.<sup>8</sup> After the exhibition opened, it received the highest superior ratings among 70 temporary exhibitions mounted across the Smithsonian in the past 8 years according to visitor surveys. Approximately 400,000 visitors saw the crocheted display while it was on view in the Museum's Sant Ocean Hall from October 16, 2010 – April 24, 2011.<sup>9</sup> The Smithsonian Community Reef is the largest of the more than 23 community-made crocheted coral reefs that have now been constructed worldwide as part of this global conservation-awareness initiative.<sup>10</sup>

At the Smithsonian, a community of men and women, children and seniors worked together for four months to create nearly 4000 pieces of healthy, bleached and toxic replicas of coral using everything from traditional fibers to household trash and recyclables. The three types of crocheted coral that comprise most reef displays dramatically illustrate the negative effects of global warming, pollution, over-fishing and plastic trash on coral reef habitat and raise awareness about reducing waste and conserving fossil fuels to help preserve these fragile ecosystems.<sup>11</sup>

The craft of crochet underpins the project's substantive content. The basic coral forms are made using "hyperbolic crochet," a technique first developed by Dr. Daina Taimina of Cornell University to make mathematically accurate models of a form of non-Euclidean geometry that replicates how corals grow.<sup>12</sup> Because no two crocheted corals are ever the same, the crocheted reefs echo the biodiversity of real

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(New York: Dover Publications, Inc., 1985). See also, Maria Elena Buszek, ed., *Extra/Ordinary Craft and Contemporary Art* (London and Durham: Duke University Press, 2011) and Claire Bishop, *Installation Art: A Critical History* (London: Tate Publishing, 2005).

<sup>8</sup> See the List of Contributors to the Smithsonian Community Reef:

<http://www.mnh.si.edu/exhibits/hreef/communityreef.html>.

<sup>9</sup> See images of the Smithsonian Community Reef, and learn more about the exhibition of the Hyperbolic Crochet Coral Reef at the National Museum of Natural History on the Institute For Figuring's dedicated web page:

<http://crochetcoralreef.org/exhibitions/smithsonian.php>.

<sup>10</sup> Visit the dedicated website for the Institute For Figuring's Hyperbolic Crochet Coral Reef, under "Satellite Reefs" to learn about all the satellite reefs that have been created, or are being created, around the globe:

<http://crochetcoralreef.org/satellite/index.php>.

<sup>11</sup> Visit the dedicated website for the Institute For Figuring's Hyperbolic Crochet Coral Reef, under "About the Project" to learn about each different area of the reef display, and why it is important to the conservation message of the project as a whole: <http://crochetcoralreef.org/about/index.php>.

<sup>12</sup> Visit Daina Taimina, Ph.D., to learn more about her approach to teaching hyperbolic math through crochet at <http://www.math.cornell.edu/~dtaimina/>. See also, Daina Taimina, *Crocheting Adventures With Hyperbolic Planes* (London: A.K. Peters, 2009) and Margaret Wertheim, *A Field Guide to Hyperbolic Space: An Exploration of Higher Geometry and Feminine Handicraft* (The Institute for Figuring, 2007).

coral reefs. It takes a community to make a crocheted coral reef -- but because crochet is easy to teach and to learn, people of all ages and abilities can participate.

The National Museum of Natural History supported the project with resources, facilities, and professional expertise in ocean science, art, exhibition coordination and installation. At Natural History, I joined a core team that included Sant Chair of Marine Science, Dr. Nancy Knowlton, Art Curator, Jane Milosch, Chief of Temporary Exhibitions, Barbara Stauffer, Exhibition Project Manager Meg Rivers, and Ocean Science Educator, Catherine Sutura. The Museum's willingness to adjust and adapt to the expanding needs of the project as it gathered steam was crucial to the Smithsonian Community Reef's success. Our sponsors Quiksilver Foundation, The Embassy of Australia and the Coral Reef Alliance bolstered the credibility and viability of the project because they all actively work in coral conservation and/or community arts. The staff from The Embassy of Australia in Washington, DC also crocheted nearly 200 pieces for the display.

My first goal as Coordinator was to make the project as accessible as possible in the five months we had to make the reef. We first established an on-line presence on the Museum's website – the Ocean Portal – and through social media (via Flickr and Ravelry) and an e-mail newsletter to share resources, guidelines, and deadlines and a growing calendar of events.<sup>13</sup> Many people found out about the project from the Museum's websites and from kick-off events we hosted at the Smithsonian Folklife Festival and World Ocean Day in 2010. But thirteen local yarn shops and several fiber guilds I recruited were hugely supportive throughout the project. They advertised the reef-making effort on their blogs and websites and hosted many of the more than thirty hands-on, free workshops I gave at the museum and in the community to relay the substantive content of the project and the basic crochet skills needed to participate. In addition, they continued to offer space, time, and free instruction to participants for the duration of the project.

Meeting the community of makers in person, via e-mail and on-line allowed me to learn about, honor and balance the expectations of both the community and the Museum staff as the project gathered momentum. Workshops in local yarn shops and at other community venues were packed – sometimes with standing room only to crochet. More than 30 community and professional groups joined in. People really enjoyed having a representative from the Smithsonian come to them. One woman expressed it best when she said “Thank you – now we feel like we are part of it!” Crocheters recruited and taught their friends, family members, colleagues and even strangers on the Metro how to crochet and how to get involved. It was very exciting to see it take off, bringing together the work of many individuals, including, for example, talented crocheters from N Street Village, a community of empowerment and recovery for homeless and low-income women, and staff in the Museum's very own Botany Department. Over the summer, I encouraged the shops and community groups to act as designated drop off points and “coral reeflets” on their way to the Smithsonian appeared all over the city.

The irresistible blend of mathematics, marine science, environmental stewardship and craft gave people rich and compelling ways to connect with the project. Making coral was fun, playful and creative. The community of makers was inspired by the some or all of these facets of the project, alone or in various combinations: the mathematics, the science, a love of the ocean and the environment, a love of crochet and crafting, the Feminist legacy of the Institute For Figuring's global project, a love of the National Museum of Natural History and its collections, and desire for a sense of connection through community activism. Many crocheters were excited just to have their work displayed in the Smithsonian. For some,

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<sup>13</sup> See, e.g., the Flickr site for the Smithsonian Community Reef: <http://www.flickr.com/groups/sicomcommunityreef/>.

it was an empowering response to the Gulf Oil Spill disaster, which was occurring at that time. For others, it was enough to learn crochet or to use one's expert skills to make something never before attempted. And most members of the community also expressed a new or developing awareness of the need to change their behaviors to improve the environment.

The outpouring of contributions we received – nearly 4000 pieces, 540 square feet, or enough to cover our 10' x 16' display platform four times over – showed the reef-making effort and the substantive way in which the Museum and its collections could support and sustain it, had really touched a chord. The Museum's Sant Ocean Hall, where the community's crocheted reef was displayed, houses the largest and most prestigious marine collection in the world, including a coral reef tank and coral specimens.<sup>14</sup> The richness and diversity of the collections on display in the Museum was a direct source of inspiration for crocheters. There were large numbers of carefully researched and easily recognizable marine species, as well as pieces of personal history like a hyperbolic disk with pearls bearing the names of women who battled breast cancer, and a group of pieces that were conservation stories embedded in crochet. For example, crocheter Nora Lockshin made one spectacular anemone from repurposed materials that included a discarded water bottle, strapping tape, and a fishing line and a hook removed from the banks of the Anacostia River.

As coral-making spiraled outward into the community, I realized the importance of the centering the activity more firmly in the Museum itself. The "Crochet in the Sant Ocean Hall" sessions I developed with Catherine Sutera in the Office of Education and Outreach at the Museum drew a packed crowd of local, national and international visitors. Volunteers taught crochet to Museum visitors, crocheters came to share coral resources and projects in progress, and Museum staff had a chance to get expert free crochet instruction or to share in the collegiality of making coral. But these sessions also did something more – something I hoped they would do – they gave crocheters direct access to the Museum's world-renowned marine collections, and the rich interactions possible in these sessions began to build an extraordinary rapport and mutual respect between the community of crocheters and Museum staff that ultimately facilitated building the reef in the gallery.

I involved members of the community in every phase of the installation process. In just a little over 2 weeks, 88 volunteers helped me sort the contributions by color, grade and measure each color group, stabilize pieces for display and develop the list of names for the donor panel. Some simple calculations told me we would need to build large mountains to hold it all. I also knew that it would be important to crocheters that we include all of the coral they made in the display. Many people subsequently visited to find the pieces they made in the Smithsonian Community Reef.

Using a favorite communally made fiber art work that was exhibited at the National Museum of Natural History in 1995 – *Homage to Nature: Landscape Kimonos of Itchiku Kubota* – along with photos of real coral reefs as sources of inspiration, I worked with Meg Rivers, Project Manager, Jane Milosch, Art Curator and Richard Gould, a talented exhibition specialist to design and build the sub-structure for our reef.<sup>15</sup> This professional collaboration was critical to the success of the display for the Museum and for

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<sup>14</sup> Learn more about the collections on display in the Smithsonian National Museum of Natural History's Sant Ocean Hall by visiting the Museum's dedicated web page: [http://www.mnh.si.edu/exhibits/ocean\\_hall/](http://www.mnh.si.edu/exhibits/ocean_hall/).

<sup>15</sup> See generally, Itchiku Kubota, *Itchiku Tsujigahana* (Arlington, VA: Virginia Lithograph, Inc., 1995). Published in conjunction with the exhibition "Homage to Nature: Landscape Kimonos of Itchiku Kubota" shown at the Canadian Museum of Civilization, Hull, Quebec, and the Smithsonian National Museum of Natural History, Washington, D.C. See also, Jack Stevens, *Living Mirrors: A Coral Reef Adventure* (New York: Umbrage Editions, 2003).

the community of makers. I also wanted the community's crocheted coral display to look natural and appropriate in the Sant Ocean Hall, a home it would share for six months with a resident community of marine scientists and thousands of the Museum's visitors. Hence, in designing the display, we drew heavily on sources indigenous to the Museum, like the coral reef tank in the Sant Ocean Hall, and a permanent exhibit called the "Permian Reef" located in the Hall of the Ancient Seas. A special challenge in bringing a community-constructed fiber art exhibition into a science and natural history museum is that the accuracy of the information relayed to museum visitors is of paramount importance to staff, curators and educators. I consulted with Museum staff and curators to make sure the crocheted species looked natural and appropriately situated on our reef structure. As a result of this concern for the accuracy of the display, the community's crocheted coral reef became a useful teaching tool for the Museum's ocean science educators and docents, who could then relate the artwork directly to the permanent collection in the Sant Ocean Hall.

Community volunteers and Museum staff worked side by side for two weeks to install all of the coral by hand on the frame. In the end, the reward of hundreds of hours of shared labor, creativity and imagination dazzled and pleased the community, the Museum's staff and the visitors. After the exhibition opened many crocheters became Museum docents. "The Crocheter Is In" docent program paralleled an established program in the Sant Ocean Hall called "The Scientist Is In." Crocheters were accorded the same expertise in interpreting the making of the Smithsonian Community Reef as scientists are accorded in interpreting the permanent collection.

Thanks to support from the National Museum of Natural History and Smithsonian Affiliations, after the exhibition closed in April of 2011, I was able to work with a group of volunteers to disassemble and pack the Smithsonian Community Reef, and to travel to the Putnam Museum of History and Natural Science in Davenport Iowa to help staff and volunteers there reinstall it outside their Ocean Experience Hall for a five-year loan. Now hundreds of schoolchildren are learning about hyperbolic math, coral conservation and the prehistoric coral reefs that once inhabited America's plains.

It is clear that a real community developed around making the Smithsonian Community Reef at the National Museum of Natural History. And it has inspired the Museum to look for new ways to make rich connections with the community in future exhibitions and programs. It is still unclear whether such craft-based projects are as educational for visitors to the National Museum of Natural History as they are for the community of makers, but I believe we are heading in a productive and interesting direction.

One challenge we had was honoring the human stories as well as the conservation story behind the reef-making effort in the short time the Smithsonian Community Reef was on display at the National Museum of Natural History. Each person who contributed pieces to the display had a special story to tell about what he or she made and why. As the Coordinator for the Smithsonian Community Reef, I became the repository for many of these stories, and I am thrilled to be working with the Putnam Museum of History and Natural Science to create a more permanent record of the stories of the makers of the Smithsonian Community Reef on their website in an on-line series called "Postcards from the Reef."<sup>16</sup>

**Reference:** Jennifer Lindsay, "Mary Walker Phillips: *Creative Knitting* and the Cranbrook Experience" (master's thesis, Smithsonian Associates and Corcoran College of Art + Design, 2010), Smithsonian Institution Libraries Digital Repository, <http://si-pddr.si.edu/jspui/handle/10088/18629>. Abstract available from CANVAS, the Corcoran Archival Network for the Visual Arts, <http://canvas.corcoran.edu/cdm/singleitem/collection/p15735coll1/id/104/rec/8>

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<sup>16</sup> Visit the "Postcards from the Reef" on-line exhibition at the Putnam Museum of History and Natural Science, documenting stories of contributors to the Smithsonian Community Reef: <http://www.putnam.org/Exhibit-Halls/Online-Exhibits/postcards>.