

# When Science and Handicraft Met on the Reef

BY HEATHER SMITH MACISAAC  
PHOTOGRAPHS BY LISA CORSON

In this, the International Year of the Reef, marine scientists are playing second-string to an upstart star: the brilliant and woolly Hyperbolic Crochet Coral Reef.

All riotous color and outlandish form, the panorama of some 4,500 hand-crocheted pieces was conceived by twin sisters Margaret and Christine Wertheim in homage to the Great Barrier Reef of their native Queensland, Australia. Here, science, math, and handicrafts come together to illustrate the terrible plight of the fragile coral reefs—Earth’s earliest and most complex ecosystems—which are threatened (by the usual suspects) with total devastation.

Each crocheted element is rooted in a geometry most mathematicians thought impossible to reproduce in physical form—though nature has no problem achieving the feat. When, in 1997, Daina Taimina, a Cornell University mathematician and lifelong practitioner of the needle arts, found a way to make models of hyperbolic space using wool and a hook, it was also the genesis of the faux reef. The Wertheim sisters quickly recognized Taimina’s crocheted forms as those of their treasured reef and set about creating a woolen tribute. Before long, crocheters from all over the world were fashioning different kinds of reef forms and sending their works to the Wertheims with a note of wonder or concern attached. “We’ve been reinvigorated in our own creative ideas by our contributors,” says Margaret. “The totality of the piece is wonderful because it contains the labor and imagination of many.”

While members of the art world have responded with rapture to the kelps and anemones and elaborate corals that form the several “sub-reefs” (red, blue, and bleached reefs; the “Ladies’ Silurian Atoll”; and a toxic reef, crocheted largely from trash), scientists have yet to take note. “The future of the coral reefs, let alone this project, depends on funding,” says Margaret, who happens to be a science writer by trade. May we suggest she sends the scientists some wool?

## Hyperbolic Crochet Coral Reef:

[theiff.org/reef](http://theiff.org/reef)

