Divining Nature: An Elemental Garden

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REBECCA KAMEN



Divining Nature: An Elemental Garden

ARTIST STATEMENT

Two years ago, the periodic table entered into my consciousness. Memory of the table took me back to eleventh grade chemistry class, a magical room full of mysterious smells, test tubes, Bunsen burners, and that rigid, gridded chart of letters and numbers hanging in the front of the room. Now decades later, this mystifying chart has re-entered my thoughts, demanding another look – but this time, through the eyes of an artist.

The genesis of this project has taken me on the most remarkable journey. Travels to India and Bhutan, as well as researching rare alchemy books at the Chemical Heritage Foundation in Philadelphia, have informed this project in ways I could never have imagined back in high school. Powerful relationships started emerging, becoming the catalyst for exploring the periodic table as a bridge between art and science.

Buddhist mandalas, representing a cosmological view of the universe, inspired the layout and the concept for an elemental garden. Because gardens have always served both functionally and metaphorically as an intersection of art and science with nature, they are sites of transformation. In these awe-inspiring places, matter changes from one state to another. Similar to the metamorphosis of an atom that becomes a new element when the number and arrangement of its parts changes, *Divining Nature: An Elemental Garden* transforms chemistry's periodic table of letters and numbers into a garden of sculptural elements based on geometry and atomic number. The exhibition has two components: a small, introductory installation based on Plato's five original elements, and a large sculptural installation inspired by the eighty-three naturally occurring elements in the periodic table. Two architects played a significant role in the development of this project. Dialogues with Jiyun Park were instrumental in thinking about the periodic table in new ways. Alick Dearie assisted in manifesting my vision of placing the elements of each column of the table on separate but overlapping Fibonacci spirals, creating the layout for the installation.

During the conceptualization phase of this project, a sound component was envisioned as part of the installation. Bio-musician Susan Alexjander, with her haunting soundscape inspired by the wave frequencies emitted from atoms in the elements, was the perfect collaborating partner for this aspect of the project. Sound adds a whole new dimension to the experience of the sculpture and installation.

Divining Nature: An Elemental Garden represents an exciting challenge for me at this stage in my development as an artist. It provides an opportunity to create a large-scale installation exploring the periodic table as a threedimensional object of beauty through sculptures inspired by the most ethereal aspect of an element – its orbital pattern. This project also celebrates the interconnectedness of the universe. Shapes created by these electron patterns are based on the same principles of sacred geometry that have inspired the Fibonacci spiral of the installation layout and are found in all aspects of nature.

Rebecca Kamen





INTRODUCTION

Divining Nature: An Elemental Garden, Rebecca Kamen's luminous installation of pure white sculptures, flows around a column and glides across the floor in synchronized beauty reminiscent of "The Kingdom of the Shades" from La Bayadere where thirty-two dancers slowly descend a ramp in precise harmony. While the ballet translates a narrative into a visual, kinetic form, Kamen transforms the periodic table of elements into a spiraling sea of delicate flowers. Like a choreographer, she has made the invisible visible and, in doing so, has illuminated the beauty and order of a scientific system.

Kamen's achievements are her expansive interpretation of the table to include imagery and references not usually associated with chemistry and her ability to condense that knowledge into an elegant, sculptural arrangement. Like Piet Mondrian, who distilled the world around him – flowers, trees, and interior space – into a grid of horizontal and vertical lines, Kamen has distilled the world of the periodic table and her own wide ranging study of alchemy, Buddhism, and sacred geometry into a lattice of planes and lines. While Mondrian used the flat surface of painting to communicate his ordered vision, Kamen has chosen the three-dimensional form of flowers in a garden to express hers.

As a garden, Divining Nature comes to life in Greater Reston Arts Center's hexagonal gallery. Laid out in a Fibonacci spiral with assistance from architect Alick Dearie, it is a landscape where flowers representing the first eighty-three elements ascend in size according to their complexity. From tiny hydrogen clinging to a column like a simple moonflower to the elaborately draped petals of the peony-shaped bismuth, each sculpture represents the unique orbital patterns of a particular element.

The work is best understood by entering the garden, strolling through its maze, and sitting amongst the atomic flowers. As composer Susan Alexjander's ethereal music floats through like a cosmic breeze, the *Elemental Garden* breathes tranquility. Gazing through the sculptures at eye level, the complexity of Kamen's work is most apparent. Each flower is an intricate scaffold of thin Mylar sheets supported by slender fiberglass rods. Together, the sculptures coalesce into a systematic thicket where art and science align. These featherweight scaffolds reference botany, geometry, and, most significantly, the periodic table as an organizing platform for understanding the chemical foundation of the universe.

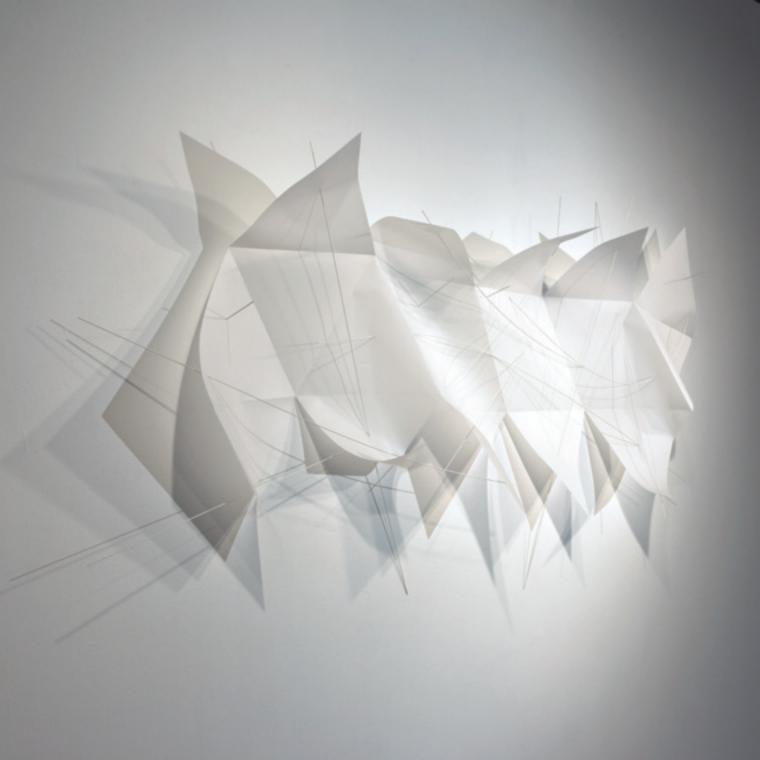
Greater Reston Arts Center is pleased to present the inaugural exhibition of Divining Nature and is grateful for the support of organizations and individuals who helped realize the project. Rebecca Kamen's multidisciplinary, collaborative approach to sculpture aptly meets the art center's mission of enriching community life by promoting involvement and excellence in contemporary visual arts. By exploring the territory where science and art converge, Divining Nature: An Elemental Garden transcends both by inviting viewers to an indoor park where serenity, contemplation, and quiet views are its greatest amenities.

Joanne Bauer Curator





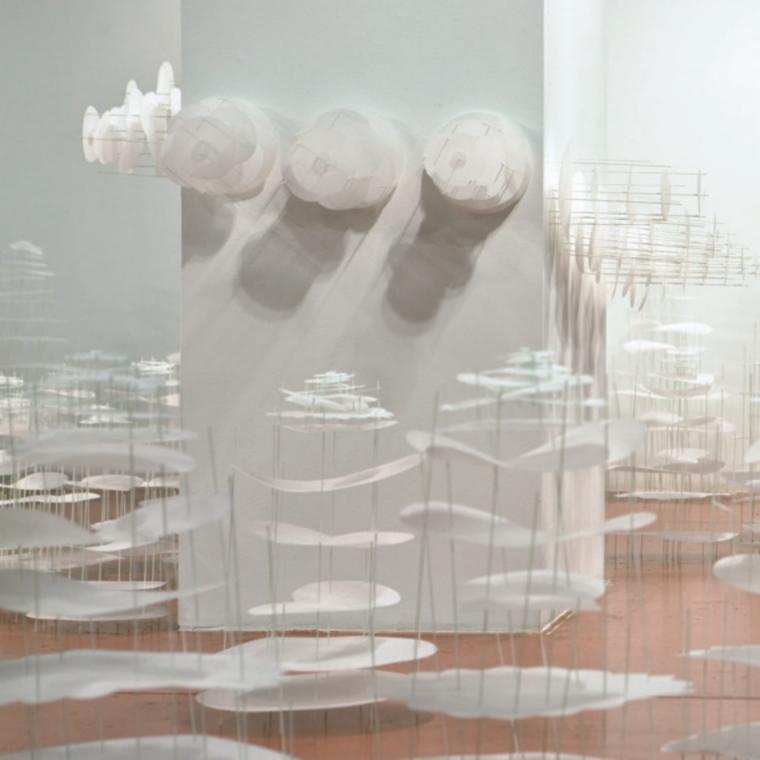




































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Rebecca Kamen's Beautiful Truth

" 'Beauty is truth, truth, beauty,'..." Ode on a Grecian Urn, John Keats, 1819

Can the truth still be beautiful?

In contemporary art these days, "truth" is often portrayed as being too real to be considered beautiful, and "beauty" is regularly framed as being delusional, transitory, intentionally seductive, or finally, existentially suspect. But what about the essentially truthful beauty a blooming orchid provides, or that in the form of any seashell, or in the elegant geometries of a crystal – or that in the personally unique formation of our own skulls? Or the potential of a truthful beauty contained in a straightforward re-formatting of a well-established set of scientific facts, such as the periodic table of the elements? This has been Rebecca Kamen's vision, and her task.

My first serious experience of the full Periodic Table of the Elements (those capitals) was in high school chemistry, in a large colorful chart posted on the wall in our class. I would be taught how to read it over a full year of education, but its mysterious beauty never decreased – a steady but complex rhythm of information, coded by numbers and arcane one or two-letter element designations: Dy – Dysprosium, Au – Gold, K – Potassium, Sn – Tin, Se – Selenium. Some metals, some gasses, but all essentially autonomous expressions, that, in the eyes and hands of an artist, could be turned into an intensely rich work of art, if it were deeply investigated, or envisioned....

In my class, I learned more about how groups of elements were organized, in terms of how they might – or might not – interact, which had to do with how the three particles within the atom, the proton and the neutron in the atom's nucleus, were balanced by the third particle, the electron, which rotated around the nucleus in "shells," or consecutive orbital patterns. These patterns might be seen as efflorations – flowers, with different – numbered petals, so that every specific element has a different floral form, in terms of the extent and character of its electron family. Rebecca Kamen has seen it in that overall form: as very different flowers in a vast garden.

Kamen's structures, which represent all 83 elements that occur naturally, look a lot like stupas, Buddhist religious buildings in Asia that often contain relics of the historical Buddha, but which serve as metaphors for transcendence. They are towers, or cones attenuating to an invisible centrality. And in this exhibition, Kamen's elements are arranged according to one of the most essential orders of nature, the Fibonacci Series, resonant to the Golden Mean, or in less mathematical terms, the way the spiraling of a shell inevitably and naturally orders itself.

What you're seeing, then, is fundamentally truthful and obviously beautiful. And that's the great surprise here – that the grace in these individual pieces, and in their overall arrangement, isn't only imaginative – it's imagination working to infuse beautiful facts with beautiful forms. Contemporary art is often, justifiably, seen as self-indulgent activity, entertaining or enlightening in various degrees. The idea that artists could be useful as scouts into – or messengers from – the unrecognizably deep present, is the most optimistic of possibilities. This work steps up to that hope, very directly.

J.W. Mahoney

Artist, writer, independent curator, and Art in America's Corresponding Editor for Washington.



LIST OF WORKS

photography credit:

Angie Seckinger p.p. 10 - 31

Terry Lowenthal cover, inside cover, p.p. 1 - 9, 36

flysheets: Alick Dearie **Divining Nature: Plan Evolution** (detail) ink on paper 24" x 80" 2009 **Platonic Solids:**

p. 28

Fire Mylar, fiberglass rods 33" x 36" x 19" 2008

p. 26

Air Mylar, fiberglass rods 42" x 34" x 19" 2008

p.12

Water Mylar, fiberglass rods 37" x 66" x 7" 2008

p. 27 left

Earth Mylar, fiberglass rods 51" x 39" x 25" 2008

p.p. 10 - 11, 27 right

Cosmos/Ether Mylar, fiberglass rods 59" x 40" x 29" 2008

front/back cover, inside front/back cover **Divining Nature: An Elemental Garden** p.p. 1 - 9, 36, studio p.p. 13 - 25, 28 - 31, gallery

Mylar, fiberglass rods 2009

NUMBER	ELEMENT	MAX DIA.	MAX HEIGHT	41	niobium	15 1/2"
				42	molybdenum	15 3/4"
				43	technetium	16"
1	hydrogen	5 1/2"	6''	44	ruthenium	16 1/4"
2	helium	5 3/4"	6 1/3"	45	rhodium	16 1/2"
3	lithium	6"	6 2/3"	46	palladium	16 3/4"
4	berylium	6 1/4"	7''	47	silver	17"
5	boron	6 1/2"	7 1/3"	48	cadmium	17 1/4"
6	carbon	6 3/4"	7 2/3"	49	indium	17 1/2"
7	nitrogen	7"	8"	50	tin	17 3/4"
8	oxygen	7 1/4"	8 1/3"	51	antimony	18"
9	flourine	7 1/2"	8 2/3"	52	tellerium	18 1/4"
10	neon	7 3/4"	9"	53	iodine	18 1/2"
11	sodium	8''	9 1/3"	54	xenon	18 3/4"
12	magnesium	8 1/4"	9 2/3"	55	caesium	19"
13	aluminum	8 1/2"	10"	56	barium	19 1/4"
14	silicon	8 3/4"	10 1/3"	57	lanthanum	19 1/2"
15	phosphorus	9"	10 2/3"	58	cerium	19 3/4"
16	sulfur	9 1/4"	11"	59	praseodymium	20"
17	chlorine	9 1/2"	11 1/3"	60	neodymium	20 1/4"
18	argon	9 3/4"	11 2/3"	61	promethium	20 1/2"
19	potassium	10"	12"	62	samarium	20 3/4"
20	calcium	10 1/4"	12 1/3"	63	europium	21"
21	scandium	10 1/2"	12 2/3"	64	gadolinium	21 1/4"
22	titanium	10 3/4"	13"	65	terbium	21 1/2"
23	vanadium	11"	13 1/3"	66	dysprosium	21 3/4"
24	chromium	11 1/4"	13 2/3"	67	holmium	22"
25	manganese	11 1/2"	14"	68	erbium	22 1/4"
26	iron	11 3/4"	14 1/3"	69	thulium	22 1/2"
27	cobalt	12"	14 2/3"	70	ytterbium	22 3/4"
28	nickel	12 1/4"	15"	71	lutetium	23"
29	copper	12 1/2"	15 1/3"	72	hafnium	23 1/4"
30	zinc	12 3/4"	15 2/3"	73	tantalum	23 1/2"
31	gallium	13"	16"	74	tungsten	23 3/4"
32	germanium	13 1/4"	16 1/3"	75	rhenium	24"
33	arsenic	13 1/2"	16 2/3"	76	osmium	24 1/4"
34	selenium	13 3/4"	17"	77	iridium	24 1/2"
35	bromine	14"	17 1/3"	78	platinum	24 3/4"
36	krypton	14 1/4"	17 2/3"	79	gold	25"
37	rubidium	14 1/2"	18"	80	mercury	25 1/4"
38	strontium	14 3/4"	18 1/3"	81	thalium	25 1/2"
39	yttrium	15"	18 2/3"	82	lead	25 3/4"
40	zirconium	15 1/4"	19"	83	bismuth	26"

19 1/3" 19 2/3" 20'' 20 1/3" 20 2/3" 21" 21 1/3" 21 2/3" 22" 22 1/3" 22 2/3" 23'' 23 1/3" 23 2/3" 24" 24 1/3" 24 2/3" 25" 25 1/3" 25 2/3" 26" 26 1/3" 26 2/3" 27" 27 1/3" 27 2/3" 28'' 28 1/4" 28 1/2" 28 3/4" 29" 29 1/4" 29 1/2" 29 3/4" 30" 30 1/4" 30 1/2" 30 3/4" 31" 31 1/4" 31 1/2" 31 3/4" 32"

REBECCA KAMEN

Sculptor	Professor of Art
http://www.rebeccakamen.com	Northern Virginia Community College
	Alexandria, VA

EDUCATION

- 1978 MFA Sculpture, Rhode Island School of Design, Providence, Rhode Island
- 1973 MA Art Education, University of Illinois, Champaign-Urbana, Illinois
- 1972 BS Art Education, Pennsylvania State University, University Park, Pennsylvania

SELECTED ONE AND TWO PERSON EXHIBITIONS

- 2009: Divining Nature: An Elemental Garden, Greater Reston Arts Center, Reston VA Catalog
- 2008: Manuscript as Muse, American Philosophical Society Library, Philadelphia, PA Matter, National Institute of Heath, Bethesda, MD
- 2006: Kunstkammer: A Cabinet of Curiosities, Towson University, Towson, MD
- 2005: Meta, McLean Project for the Arts, McLean, VA Catalog

Invisible Sightings, American Center for Physics, College Park, MD

- 2003: Gallery 51, Philadelphia, PA
- 2001: Inside the Invisible, Part 1, District Fine Arts, Washington, DC Inside the Invisible, Part 2, Carla Massoni Gallery, Chestertown, MD
- 2000: Forces of Nature, Coincidence Gallery, Richmond, VA
- 1996: The Ralls Collection, Washington, DC
- 1996: Portsmouth Museum, Portsmouth, VA
- 1995: Kamen/Schneider Collaborative Exhibition, Arlington Arts Center, Arlington, VA
- 1994: Meteoritic Messages, Cortland Jessup Gallery, Provincetown, MA

A Bridge Between Cultures, McLean Project for the Arts, McLean, VA

- 1993: Garden Series, Cortland Jessup Gallery, Provincetown, MA
- 1992: Garden Series, Jones Troyer Fitzpatrick Gallery, Washington, DC
- 1990: Kami Series, Jones Troyer Fitzpatrick Gallery, Washington, DC
- 1988: Rebecca Kamen, Winston Gallery, Washington, DC Catalog
- 1988: Middle Tennessee State University, Murfreesboro, TN
- 1987: Leslie Cecil Gallery, New York, NY
- 1986: Brody Gallery, Washington, DC
- 1985: Arnold and Porter, Washington, DC
- 1984: Arlington Arts Center, Arlington, VA

SELECTED GROUP EXHIBITIONS

2011: Clifford C. Hach Gallery, The Chemical Heritage Foundation, Philadelphia, PA

- 2010: The Art of Science/The Science of Art, Frederick Community College, Frederick, MD Fluid, The Smith Healing Center Gallery, Washington, DC
- 2008: Aquifer, Edison Place Gallery, Washington, DC Catalog
- 2007: Women of Steel, Men of Cloth, Suffork Art Museum, Suffork, VA The Chandler Sculpture Walk, Vision Gallery, Chandler, AZ
- 2006: Pulse 2006, Hillyer Art Space, Washington, DC

Artists in Dialogue with the Landscape, Adkins Arboretum, Ridgely, MD Sculpture Now: 2006, Washington Square, Washington, DC Sculpture Unbound, Edison Place Gallery, Washington, DC

- 2003: Beyond the Image, Carla Massoni Gallery, Chestertown, MD Strictly Painting, McLean Project for the Arts, McLean, VA
- 2000: Washington Sculptors Group, Grounds for Sculpture, Hamilton, NJ Looking Back, Moving Forward, Ellipse Arts Center, Arlington, VA
- 2000: Small Scale Religious Sculpture 2000, National Juried Exhibition, Catholic University, Washington, DC Catalog Juros Award
- 1999: Sculpture Now '99, Gallery 505, Washington, DC
- 1997: Pyramids and Cones, View Gallery, New York, NY
- 1996: New Look: Contemporary Women Sculptors, Washington Square, Washington, DC Confronting Cancer through Art, Ross Gallery, Philadelphia, PA – Catalog Collaborative Exhibition, Peninsula Fine Arts Center, Newport News, VA
- 1995: Traces: Connecting Drawing and Sculpture, Maryland Art Place, Baltimore, MD Joel Kessler Fine Art, Miami, FL

Art Maryland '95, Howard County Center for the Arts, Ellicott City, MD

- 1994: Across Borders / Sin Fronteras, Art Museum of the Americas, Washington, DC Catalog
- 1994: Tributaries, Ellipse Art Center, Arlington, VA
- 1993: See the Elephant: The Subject of the Civil War in Contemporary Art, Traveling Exhibition, Peninsula Fine Arts Center, Newport News, VA – Catalog Bentley-Tomlinson Gallery, Scottsdale, AZ
- 1992: Acts of Grace, Frostburg State University, Frostburg, MD

Acts of Grace, Peninsula Fine Arts Center, Newport News, VA – Catalog Exchange Exhibition, Sheffield City Polytechnic, Sheffield, England Abstract Icons, Roanoke Museum of Art, Roanoke, VA – Catalog

- 1991: Invitational Sculpture Exhibition, Academy for the Arts, Easton, MD
- 1990: Iconic Visions, Tartt Gallery, Washington, DC
- 1989: DC Sculpture Now, Washington Square, Washington, DC

1989: Artifice in Sculpture: Virginia Sculpture, Peninsula Fine Arts Center, Virginia Museum of Fine Arts Professional Fellowship, 1999 Newport News, VA - Catalog Arlington Commission for the Arts Project Grant, 1994 Artery '89, Strathmore Hall Arts Center, Rockville, MD - Third Prize Sculpture Now - 10 Virginians, Danville Museum of Fine Arts and History, Danville, VA – Catalog VISITING ARTIST LECTURES Back to the Wall, Philadelphia Art Alliance, Philadelphia, PA - Catalog American Philosophical Society Library, Philadelphia, PA, 2008 Sacred Circle, Maryland Art Place, Baltimore, MD American Center for Physics, College Park, MD, 2005 Women Working in the South, Cumberland Gallery, Nashville, TN US Embassy, Cairo, Egypt, 1999 1988: Sculpture on the Wall, The Collector, Washington, DC Gezira Art Center, Cairo, Egypt, 1999 1987: Invitational Works on Paper, Little Rock Art Center, Little Rock, AK Association of University Women, Arlington, VA, 1995 Gallery Z, New York, NY Virginia Association of Museums Conference, Charlottesville, VA, 1993 Primitivism, ArtScape 1987, Baltimore, MD Shanghai Oil Painting and Sculpture Research Institute, Shanghai, China, 1987, 1985 1986: Alexandria Sculpture Festival, Alexandria, VA - Catalog Central Institute of Fine Arts, Beijing, China, 1987, 1985 Sculpture '86, Public Art Trust, Washington, DC East China Normal University, Shanghai, China, 1987, 1985 1985: Paperworks, The Athenanium, Alexandria, VA Sichuan Urban Sculpture Planning Office, Chengdu, China, 1987 1984: Cityscapes '84, Alexandria, VA China Artist Association, Shanghai, China, 1987 Sculpture '84, Public Art Trust, Washington, DC - Jurors Award Baltimore Museum of Fine Arts, Baltimore, MD School 33 Art Center, Baltimore, MD SELECTED PUBLIC COLLECTIONS 1983: Fresh Paint, Pleiades Gallery, New York, NY Arlington County, Arlington, VA Artscape '83, Baltimore, MD – Jurors Award Arts in Embassies Program, Quito, Ecuador, 2005-2008 - Catalog Alexandria Sculpture Festival, Alexandria, VA Capital One, Tysons Corner, VA 1982: Collage and Assemblage, Traveling Exhibition, Mississippi Museum of Art, KPMG Peat Martwick Corporation, Tysons Corner, VA Jackson, MS – Catalog Institute for Defense Analysis, Alexandria, VA 1981: Collage on Paper, Corcoran Gallery of Art, Washington, DC - Catalog Café Communique, Richmond, VA 1980: Pleiades Gallery, New York, NY Arts in Embassies Program, Geneva, Switzerland, 1999-2002 – Catalog 22nd Area Exhibition Works on Paper, Corcoran Gallery of Art, Washington, DC - Catalog Arts in Embassies Program, Cairo, Egypt, 1998-2001 - Catalog Beth El Synagogue, Boca Raton, FL Bet Mishpachah Synagogue, Washington, DC GRANTS AND FELLLOWSHIPS First National Bank of Jackson, TN Chemical Heritage Foundation Travel Grant Fellowship, 2010 Binion and Butler, Washington, DC Project Support Grant through Greater Reston Arts Center, Arts Council of Fairfax County, 2009 Gannett Corporation, Tysons Corner, VA Strauss Fellowship, Arts Council of Fairfax County, 2008 IBM, Baltimore, MD Pollack Krasper Foundation Grant 2006 Tower Construction Company, Bethesda, MD Pyramid Atlantic Printmaking Residency awarded by NEA, 2001 Advisors Financial, Inc., Falls Church, VA Presidents Sabbatical Award, Northern Virginia Community College, 2001 IBM, Raleigh-Durham, NC New Jersey Council for Printmaking Residency, 2000 Levy Organization, Chicago, IL

ACKNOWLEDGMENTS

This catalog is published on the occasion of the exhibition, *Divining Nature: An Elemental Garden*, curated by Greater Reston Arts Center, 2009.

The artist and Greater Reston Arts Center would like to acknowledge the following organizations for their participation:

Chemical Heritage Foundation Children's Science Center Dogwood Elementary School GRACE Explore More Docents Herndon High School Jane Franklin Dance Company Pimmit Hills High School South Lakes High School The Staff of Greater Reston Arts Center

The artist and Greater Reston Arts Center would like to acknowledge the following individuals for their participation:

Tina Devine Ann R. Erickson Peggy Feerick Marian Fry Marge Gapp Dan Grove Jan Haerer Jiyun Park Tami I. Spector This exhibition was funded in part through a project grant from the Arts Council of Fairfax County, supported by Fairfax County.

Generous support provided by Helen and Ronald Dunn.

Program support provided by Reston Community Center.

Soundscape composed and recorded by Susan Alexjander.

Installation drawing created by architect Alick Dearie.

GRACE programs are sponsored in part by the Virginia Commission for the Arts and the National Endowment for the Arts.

Catalog Design: Shinji Turner-Yamamoto

Printing: The Business Press

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GreaterReston**ArtsCenter**

12001 Market Street, Suite 103, Reston, VA 20190 www.restonarts.org

The mission of Greater Reston Arts Center is to enrich community life by promoting involvement and excellence in contemporary visual arts.



GreaterReston ArtsCenter