This Sense of Awe and Wonder

The Rachel Carson Distinguished Lectures at the Center for Environmental and Sustainability Education, 2004–2010
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Ethics of Sustainability: A Dialogue with Mary Evelyn Tucker and Alison Hawthorne Deming</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“What Then, Do We Say to Our Students?”</td>
<td>Inaugural Rachel Carson Distinguished Lecture by Mary Evelyn Tucker</td>
</tr>
<tr>
<td>2004</td>
<td>“With Animals in Mind”</td>
<td>Inaugural Rachel Carson Distinguished Lecture by Alison Hawthorne Deming</td>
</tr>
<tr>
<td>2005</td>
<td>The Open Space of Democracy</td>
<td>Rachel Carson Distinguished Lecture by Terry Tempest Williams</td>
</tr>
<tr>
<td>2006</td>
<td>A Barbara Kingsolver Weekend</td>
<td>“Setting Free the Crabs” by Barbara Kingsolver</td>
</tr>
<tr>
<td>2006</td>
<td>Lessons from Charley, Frances, Ivan, Jeanne, Rita, and Wilma: Environment, Politics, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Global Destabilization</td>
<td>“Long Tails and Ethics” by David W. Orr</td>
</tr>
<tr>
<td>2007</td>
<td>Eyes to See Otherwise: The World of Homero Aridjis</td>
<td>Rachel Carson Distinguished Lecture by Homero Aridjis</td>
</tr>
<tr>
<td>2008</td>
<td>Finding Beauty in a Broken World: An Ensemble for Earth</td>
<td>Rachel Carson Distinguished Lecture by Alison Hawthorne Deming</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rachel Carson Distinguished Lecture by Terry Tempest Williams</td>
</tr>
<tr>
<td>2009</td>
<td>“Islands in a Gathering Storm”</td>
<td>Annual Celebration remarks by Peter Blaze Corcoran</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rights and the Earth Charter” by Steven C. Rockefeller</td>
</tr>
<tr>
<td>2010</td>
<td>“Bloom Where You’re Planted: Focus on the Local”</td>
<td>“Hope for the Human Spirit in the Journey of the Universe” by Mary Evelyn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tucker</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>Annual Celebration remarks by Peter Blaze Corcoran</td>
</tr>
</tbody>
</table>

FGCU Mission
Florida Gulf Coast University continuously pursues academic excellence, practices and promotes environmental sustainability, embraces diversity, nurtures community partnerships, values public service, encourages civic responsibility, cultivates habits of lifelong learning, and keeps the advancement of knowledge and pursuit of truth as noble ideals at the heart of the university's purpose.
We dedicate this collection to the memory of Oannes Arthur Pritzker, a great friend of Mother Earth and of the Center for Environmental and Sustainability Education. On April 17, 2010, Oannes passed to the spirit world in his sleep at his Naples, Florida home under the slash pines. Oannes was a long-time friend of the Center, a member of our Board of Advisors, and a mentor to Center staff and student assistants.

Oannes was a forest ecologist, a spiritual ecologist, and a radio journalist. He advised Florida Gulf Coast University since its founding. He also advised us on the University Colloquium. He generously counseled the Center for Environmental and Sustainability Education from our earliest planning charrettes through his attendance at our Board of Advisors meeting in 2010.

He was director of Yat Kitischee Native Center, an intertribal, cultural, environmental, social justice, and news media organization. He served on the Board of Advisors of Radio for Peace International, and was host and producer of the award winning global community radio program “Honoring Mother Earth—Indigenous Voices.” For many years, he was involved in the national environmental justice movement. He was a proud member of the American Indian Movement and often expressed satisfaction at the size of his FBI file.

To the best of our knowledge, he was the last of the Penobscot tribe, from what is now called Maine, who was raised in the traditional way. He was lifted up at his birth by his six aunties. He spoke Penobscot and was knowledgeable in the life ways of the Penobscot nation. He grew up in material poverty and spiritual richness on Indian Island in the Penobscot River.

We were blessed to have him in Florida, at Florida Gulf Coast University, and at the Center. Among his many contributions to the Center was his suggestion that we establish a distinguished lecture series—this became the Rachel Carson Distinguished Lectures, our signature event at the Center. We are honored to dedicate this publication in his name.

Oannes also encouraged us to consider the contribution of a wide array of cultural knowledges to the discourse of sustainability. We will remember his decades of activism, bringing indigenous wisdom to environmental education, and keeping alive Penobscot knowledge and traditional wisdom.
“What is the value of preserving and strengthening this sense of awe and wonder, this recognition of something beyond the boundaries of human existence? Is the exploration of the natural world just a pleasant way to pass the golden hours of childhood or is there something deeper? I am sure there is something much deeper, something lasting and significant. Those who dwell, as scientists or laymen, among the beauties and mysteries of the earth are never alone or weary of life. Whatever the vexations or concerns of their personal lives, their thoughts can find paths that lead to inner contentment and to renewed excitement in living. Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts.”

Rachel Carson, *The Sense of Wonder*

So wrote Rachel Carson at the end of her last book, *The Sense of Wonder*, published posthumously in 1964. She had gracefully completed a difficult professional and personal journey. She courageously endured industry attacks on her integrity as a scientist and their sexist criticism of her work on *Silent Spring*—attacks which, amazingly, continue to this day. In spite of the widespread recognition of her classic work as one of the most important books of the twentieth century, she had bravely survived cancer and overcome many family challenges. Her love of nature and her conviction of its balm for human suffering as articulated in *The Sense of Wonder* comforted her—and countless others.

We decided, at the suggestion of the late Center Advisor Oannes Arthur Pritzker, to create a distinguished lecture series. It was a short leap to decide to honor the legacy of Rachel Carson by naming the lectures in her memory. We want to keep her name alive among rising generations of students unfamiliar with her role as the mother of environmentalism.

At an even deeper level, Rachel Carson’s work is the inspiration for the Center for Environmental and Sustainability Education itself. As you will read in several of my introductions to lectures, her contribution to human understanding of our environment is unparalleled. Rachel Carson’s areas of successful work, most relevant to the mission of the Center, are public policy based on sound science and ethics, active participation of an ecologically literate citizenry, and appreciation of the natural world through the literary arts and environmental education.

These lectures are a tribute to the spirit of Rachel Carson and its influence on American culture and science. They are also a tribute to the commitment to service of the lecturers themselves. They have generously spoken *pro bono* and deliver thoughtful, original lectures to our appreciative FGCU audiences. We are grateful to each of them—many of whom are members of our Board of Advisors. As ever, we appreciate the guiding wisdom of our distinguished Board, especially co-chairs Mary Evelyn Tucker and David W. Orr.

The Co-Chairs and Center staff have, on occasion, chosen to give a Rachel Carson Award for contributions to environmental and sustainability education—and to the Center. These awards, given in conjunction with a Rachel Carson Distinguished Lecture, were Terry Tempest Williams in 2004, Richard Clugston in 2006, and Bill Hammond in 2007. We will award Oannes Arthur Pritzker posthumously in 2011. That lecture will be entitled “The Africa You Don’t Know: A Women’s Perspective” and will be delivered on April 1, 2011.

In the words of our mission, the Center “works toward realizing the dream of a sustainable and peaceful future for Earth through scholarship, education, and action. The Center advances understanding and achievement of the goals of environmental and sustainability education through innovative educational research methods, emergent eco-pedagogies, and educational philosophy and practice based on ethics of care and sustainability.” It is to this activity that we have dedicated our resources and hard work.

A companion volume to this one draws its title from this mission: “Works Toward Realizing the Dream: Five Years of Scholarship, Education, and Action at the Center for Environmental and Sustainability Education.” It catalogs our work to our university colleagues and our stakeholders. Please let us know if you would like a copy.

Our work would not be possible without the undiminished support of the leadership of Florida Gulf Coast University. We especially acknowledge the commitment of President Wilson G. Bradshaw and of Vice President Joe Shepard and Dean Donna Price Henry, both members of our Board of Advisors. Finally, we express our deep appreciation to you for sharing in “this sense of awe and wonder.” We know this shared value brings strength and hope.
The Center for Environmental and Sustainability Education. Her contribution to human understanding of our environment is unparalleled. Silent Spring has been called the most important book of the twentieth century—it launched the environmental movement. Rachel Carson’s contributions, most relevant to the mission of the Center, are public policy based on sound science and ethics, active participation of an ecologically literate citizenry, and appreciation of the natural world through the literary arts and environmental education.

Preamble to the Mission
Ours is a unique historical moment. The scope and range of human impacts on the Earth are unprecedented. So, too, are the possibilities to build a secure basis for a sustainable and sustaining future. Never has so much depended on our wisdom, foresight, and the quality of our thinking. Higher education has a strategic contribution to make: helping to rediscover ancient truths, create new ideas and equip, empower, and inspire the rising generation. These goals, in turn, require mobilizing the research, educational, and organizational resources of the university community. The Center, then, is designed to meet the challenges and opportunities of the 21st century boldly and creatively.

Mission
The Center for Environmental and Sustainability Education works toward realizing the dream of a sustainable and peaceful future for Earth through scholarship, education, and action. The Center advances understanding and achievement of the goals of environmental and sustainability education through innovative educational research methods, emergent eco-pedagogies, and educational philosophy and practice based on ethics of care and sustainability. The Center seeks to elevate the environmental mission of Florida Gulf Coast University and serve the university community, the local community of the Western Everglades and Barrier Islands, and the wider community of scholars.

Goals
I. To advance innovative educational research methodologies and pedagogies in environmental and sustainability education. This work will include developing methods for the assessment of sustainability, philosophical research, and curriculum and program development, and will take place in a variety of educational settings and geographical locations, ranging from local to global.

II. To educate for an ecologically literate citizenry and to advance civic engagement in the critical environmental issues of the Western Everglades and Barrier Islands. Key areas of emphasis will include ethics, activism, and the literary arts.

III. To provide professional development for educators in environmental education and education for sustainability. The priority audiences will include University administrators, faculty, and in-service and pre-service teachers.

IV. To provide opportunities for faculty, administrators, staff, and students from across the campus to engage in scholarly activity, teaching, and service related to environmental and sustainability education. The Center will cooperate with other FGCU Centers and Institutes to advance common interests and to achieve the University’s environmental mission.

About the Center
“Future generations are unlikely to condone our lack of prudent concern for the integrity of the natural world that supports all life.”

Rachel Carson, *Silent Spring*

Board of Advisors

Mary Evelyn Tucker
Forum on Religion and Ecology, Yale University; Co-chair, Center Board of Advisors

David W. Orr
Professor and Chair, Environmental Studies, Oberlin College; Co-chair, Center Board of Advisors

Lawrence Jay Amon
Chief Financial Officer, Ocean Conservancy, Washington, D.C.

Armand Ball
Former Executive Director, American Camping Association, Sanibel Island, Florida

Richard M. Clugston
Project Coordinator, Earth Charter Scholarship Project, Earth Charter US, South Freeport, Maine

Jack Crocker
Vice President of Academic Affairs, State College of Florida, Manatee-Sarasota, Florida

Alison Hawthorne Deming
Poet, Professor of Creative Writing, University of Arizona

Marci Greene
Dean, College of Education, Florida Gulf Coast University

Maxine Greene
Professor Emeritus, Teachers College, Columbia University

Donna Price Henry
Dean, College of Arts and Sciences, Florida Gulf Coast University

Collette M. Hopkins
Director of Education and Public Programs, National Black Arts Festival, Atlanta

Louise M. Johnson
Former Mayor, City of Sanibel, Florida

June LaCombe
Environmental Artist, Curator, Maine

Oannes Arthur Pritzker
(in memoriam), Ecologist, Journalist, and Educator; Director, Yak Kitschee Native Center, Florida

Andrew Rowan
Executive Vice President, The Humane Society of the United States

Jacob Scott
Trainee Solicitor, Burges Salmon, FGCU Alumnus, Bristol, England

Joe Shepard
Vice President for Administrative Services and Finance, Florida Gulf Coast University

Erik Thijs Wedershoven
Student, Sciences Po Paris, France and London School of Economics, England

Terry Tempest Williams
Writer, Teacher, Activist, Utah and Wyoming
Introduction
Peter Blaze Corcoran

In perhaps the most important book of the twentieth century, Rachel Carson wrote, “The road we have long been travelling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road—the one less traveled by—offers our last, our only chance to reach a destination that assures the preservation of our earth.” The inaugural Rachel Carson Distinguished Lecture gathers in the spirit of Rachel Carson and in the hopeful possibility of a destination that assures that dawn will come after night, and spring after winter.

Mary Evelyn Tucker hears the voices of our religious and secular traditions calling us to create new life-sustaining relations with Earth. She understands the religious roots of environmental concern. Her work helps us to reimagine our destiny and to realize the transformative context created by or understanding of the Universe story. She reminds us that we dwell amidst the mystery and beauty of creation. In the inaugural Rachel Carson Distinguished Lecture, Tucker helps us to understand the possibilities of an ethics of sustainability.

Alison Hawthorne Deming hears voices, too, and feels energy we might not feel. Her art wakes us up to life. Whether she is listening to local people in the many geographies of her work or listening to the monarch butterflies to whom she famously apprenticed herself, she hears the call of mystery. Through her poetic voice, we, too, can hear of the sacred. It is no exaggeration to say Alison Hawthorne Deming is a major American poet. Her poems and essays are widely published in journals and anthologies of all kinds. They call us to the responsibility of our time of diminishing natural and culture systems. In the Inaugural Rachel Carson Distinguished Lecture, we invite Deming to help us grow in our understanding of the ethics of sustainability.
What Then, Do We Say to Our Students?
Mary Evelyn Tucker

I want to begin by telling a story of two students. They could be your students; they could be your children. These were two students at Bucknell University and I think they represent something of the predicament that we are presently in as a people and as a planet. The first was my husband’s student. He was reading some papers of Thomas Berry, who is one of the great eco-spiritual visionaries of our time. This very bright freshman student was overwhelmed by what he was reading about the pervasiveness of the global environmental crisis. He began to realize what we are all facing with the diminishment of life and of ecosystems. He was becoming aware of the intricate problems of environmental protection and development issues that many of you already know on this island. He wondered, as have you, what will happen to our grandchildren. This student was so overwhelmed that he went into his room and spent the whole day with the door closed, thinking about it. He then came out a day later to talk to my husband, John.

The other student was in my class on religion and ecology. We were discussing the fact that we are living in an extinction period. This means that the scale of species being lost on the planet right now is comparable to the last great extinction period, namely when the dinosaurs went extinct 65 million years ago. Scientists are calling our historical moment “the sixth extinction period.” This is monumental to even imagine. We have exploded in one century from two billion people to six billion people, and thus species and ecosystems are suffering. Our presence around the planet is more detrimental than beneficial for life systems.

We were discussing in class, “What does it mean to live with an awareness of the loss of species on this scale?” Many of the students were taking this in with the same alarm that John’s student had. Then one student said, “Why should I care if 10,000 species a year go extinct? It doesn’t affect me. I’m going to go to New York to get my job on Wall Street.” There was a ripple of shock across the room. It was a haunting question, indeed, and while other students tried to respond to him, he remained unpersuaded.

These are pressing questions. What does it mean to live in a diminished world, to live with such vast loss? Both these students represent responses we know from our own experience. One was overwhelmed and filled with fear of his future so that he went into the sanctuary of his room to consider the implications. The other student, indifferent to the rest of life and ecosystems, responded confidently with the notion that humans will survive, our technologies will save us, and other species won’t impinge on our future.

These two responses still haunt me, and we have versions of them around us in all kinds of ways. What does it mean for the manatees here in southern Florida? What does it mean for the bird species here on Sanibel Island? What will be left in a few generations of the magnificent species who once inhabited these places?

In considering these struggles between greed and grief, between indifference and paralysis, we need to ask ourselves, “Where do we go when confronted by these massive questions before us?” These are the central dilemmas regarding the future of life that are inviting us into conversations around the planet on ethics, values, and sustainability. From the United Nations to local bioregions, this is one of our key challenges.

We need to acknowledge that we don’t have all the answers to these questions, but nonetheless, we must listen to the questions because they hold the most pressing issues we can ponder. The questions themselves are things we live with, things we struggle with. We are in the midst of the largest challenge the human community has ever faced as a species. We are just awakening to this, and that is what these questions represent. Where are we going? What do our religious and moral traditions have to say to this crisis? How do our environmental movements respond to it?

As a first step into the questions, I want to share with you some reflections from the psychologist, Mihaly Csikszentmihalyi, in his book titled The Evolving Self. His challenge to us is how are we going to evolve into a more encompassing species with a larger mindset, a larger heart set, a larger soul set? He says, “The only value that all human beings can readily share is the continuation of life on Earth. In this one goal, all individual self-interests are united. Unless such a species identity takes precedence over the more particular identities of faith, nation, family, or person, it will be difficult to agree on the course that must be taken to guarantee our future.”

The single overarching goal here is the continuation of life. We’re not quite sure how to get there, but we can surely say we want life to continue. He reflects as well, “It is for this reason that the fate of humanity in the next millennium depends so closely on the kind of selves we will succeed in creating. Evolution is by no means guaranteed. We have a chance of being part of it, only as long as we understand our place in that gigantic field of force we call nature.”

That is our way forward—understanding our role in that gigantic field of force we call nature.

What then, do we say to our students? What can we give to our children and our grandchildren? I would suggest four areas that we’re beginning to define as finding our place within nature itself. If you think of these areas as concentric circles, the largest circle where we are now locating ourselves is the story of the universe. For the first time we realize that we have evolved from this vast expanse of 13 billion years of life emerging. We know now that our body is stardust in some form. We know that there is an invisible thread, a life force pervading the universe, and that is why we are so moved by this beautiful new moon tonight, the spring moon, hanging like a thread from Venus. It’s miraculous. It touches us. It thrills us. It contains an energy beyond expression—for the poets, musicians and other artists. The universe story holds us in a container larger than we can even imagine. We feel it; we sense it all the time. That’s why people come to Sanibel. They feel it; they know it; it’s in their heart and blood, and they return for more.

The universe story is the large-scale context for our way forward. Who are we as humans in a vast universe? How do we dwell in intimate immensities?

The next great circle that holds us is the Earth itself. With 4.6 billion years of evolution, this is a complex self-organizing system where life eventually emerged from the oceans. We sense this dynamic, wild, life force, right here, close to us. For this magnificent blue green water planet is unique, as far as we know it, in the universe. It is special beyond measure and now being diminished before our eyes. How do we rediscover that we are not only Sanibel people, Florida people, New York people but we are planet people, we are Earth people? We belong to a home that has shaped our bones, our bodies, our voices, our ears, and all our senses. We are part of this system of life. We are Earth beings. That is the second great circle to which we belong.

The third circle is the systems of culture, history, and religion that have guided us over many generations. Through human cultures and religions we find paths to walk in creative alignment with life and its rhythms. We guide ourselves by morals, values, by ethics and, most of all, by stories. All of the religions of the world contain multiple ways of wisdom for our way forward—magnificent rituals, compelling stories, persuasive values, and sustaining guidance for our evolution.

“The nested circles of cosmos, Earth, history and bioregion link us to the unfolding life force of evolution.”  
Mary Evelyn Tucker, 2004 Rachel Carson Distinguished Lecture
With Animals in Mind
Alison Hawthorne Deming

“Though human beings have created much of the beauty of the world, they are only collaborators in a much vaster project.”

“Beauty prepares us for justice.”
ELAINE SCARRY On Beauty and Being Just

T-REX
My grandson Raymond became obsessed with Tyrannosaurus Rex at about age five. The younger of two brothers, Ray lives with an emotional intensity that can send him reeling with no apparent explanation and running outdoors for the safety of solitude where he will wander the pine woods behind his yard for an hour, stewing in his feelings until he has them ordered and is ready again to join the social world. It’s folly to try to cajole him out of his intensities. They are part of his weather, and he knows this and will one day perhaps become an artist who can describe these storms to others in a way that will make them legible both to himself and to others who are less articulate and find themselves getting lost in emotional turbulence.

The powerlessness of those moments when he can do nothing but split from family and his own social self must be frightening in a child who, by definition, needs the nurture of family. I suspect this volatility had something to do with his extreme affection at a certain age for T-Rex. One could see a look of mischievous competence creep over his face as he began to lumber about the room, two fingers of each hand raised like claws. Heavy-footed, predatory, incapable of language beyond a guttural reptilian hiss, he would stalk along the edges of an adult conversation, and everyone present would know he was testing his small power against the great and confusing powers of the adult world, and it appeared he found that small power quite sufficient to keep him in the room. He was not only a good imitator, but became, as he continued to practice his shamanism, an expert on T-Rex paleontology. When I once tried to play T-Rex back at him, raising three fingers in each hand into claws, he found it necessary to break out of role and coach me, his patience with my ignorance barely contained. “No, grandma, tee-tee has only two fingers. Three toes and two fingers.” I had spoiled the game by being a lousy scientist. This was, in fact, not a game, but a trying on of animal power by a creature as yet uncertain of his own.

Ray is now a seasoned nine-year old, and so called on the telephone to tell me I was writing about important animals are to people. I asked him if he remembered how much he’d loved T-Rex when he was younger and if he remembered why. “Yeah,” he said coyly, “because he’s the biggest and strongest and fiercest of the dinosaurs.” I felt a moment of remorse that he had found fierceness a desirable quality, until I recalled a list he’d once made for school when asked what were his earliest memories: 1) I would start crying every time my mom left the house; 2) I started to walk and talk; 3) I lost my first tooth and started riding a bike; 4) I went to second grade; 5) the terrorist attack.

I remember my own dinosaur infatuation, growing up in the post-World-War-II glow and denial of a heroic nation that was building its arsenal of doomsday machines while my family rode its emotional roller coaster up happy-faced hills and down rage-roaring precipices, a madness that sent me out into the woods for solace. My dinosaur was the diplodocus, a giant that could hold a beachhead just by standing its ground, its head above the trees. My partner Malcolm, who grew up lonesome in Oklahoma because his mother was too depressed to get out of bed in the morning and who came home from school at lunchtime to make himself a bacon sandwich and see if she was still alive, claims the stegosaurus for his dinosaur. Why? I asked. “It was very well protected.”

We each have our personal dinosaur, it would appear, a monstrous version of ourselves, primitive, gargantuan, a being that completes us in our vulnerable early years. What happens to that childhood capacity to protect and instruct ourselves through imaginative identification with animals? We continue the process, if we’re lucky, though it does become unseemly for an adult to stalk the edges of the dining room with a galumphing gait and forefingers raised. We name athletic teams the Bulldogs, the Cardinals, though I’m not convinced these names hold much ceremonial meaning for us. Who could believe that the Cardinals stand a chance against the Wildcats? And we still play at animal identities, calling a lover Vixen or Stud, horsing around or acting pigheaded. I’ll admit that recently I have been referring, in private, to a certain obstreperous family member as T-Rex, thereby safely ritualizing the hostility that another’s nastiness might provoke in me. Dinosaurs are extinct, as we all know, so what could be a safer way to imagine ourselves as invulnerable or our antagonists as extinct forms of being when we need to be larger and more fearless than it’s possible for us to be?

MOUNTAIN LION
An ethical dilemma stalks my neighborhood in the northeast foothills of Tucson. In recent months, twenty-two sightings of mountain lions have been reported, many of the cats displaying “aberrant behavior in close proximity to humans,” as the state’s game and fish department states. One day a report came over the radio as I drove along with the automobile horde from my desert neighborhood into the city center for work: a lion, nonchalant, had walked through the parking lot at a middle school located in a canyon that backs up to the Santa Catalina Mountains. This was a clear and credible report, as was another I heard about a family living about a mile from me that had watched a mountain lion walk onto their deck and snatch their housecat off the patio table. Most of the sightings, however, have
An estimated 2,500 mountain lions live in Arizona. It was hard to know if the animal really was a mountain lion or if the behavior could be interpreted as stalking. Nonetheless, people are alarmed that the lions have lost their fear of human beings, and with these incidents occurring just months after news that a mountain lion in California had attacked two bicyclists, killing one and seriously wounding the other, the alarm is loud enough that people are listening. An estimated 2,500 mountain lions live in Arizona, with numbers diminishing as their territory is swallowed by development. An estimated five-and-a-half-million people live in Arizona, with more pouring in like a flash flood in monsoon season. Most sympathies, among all but the most rabid growth mongers, are with the lions. Most people, reluctant as they are to become prey, want to know that these magnificent predators roam the wilds. The animals give us the thrill of living in a landscape that offers some vestige of natural power unsullied. Nonetheless fish and game officials announced that for the safety of those of us who live and hike here, they intended to launch a lion hunt, tracking the animals with “lion dogs” until they were found and killed. After protesters stood vigil outside in the rain, the proposed lion hunt was downgraded to a capture. The offending animals would be darted, caged, and carried off to “an animal rehabilitation center at an undisclosed location.” To what condition they would be rehabilitated was not stated.

I can’t say for sure what “lion management” policy I favor. The very notion that we need such a policy offends my aspiration for a world in which the dignity of all creatures is valued as highly as that of human beings. These days even the idea of the diginity of human beings wears a thick coat of soot and dust. But such is the world we have made and there is no going back to Eden or even to Africa, and policies are among the acts of creation we need to keep the beauty of the world intact for our sakes and theirs and for those who come after us, whatever species may be. My personal policy is to accept the risk of living in lion habitat. If I want a world in which such creatures live freely, then I want a world in which it is possible, though remotely so, that I will become prey.

The beauty of dangerous animals calls me to feel vulnerable, and feeling vulnerable calls me to know that life is precious and can be destroyed, and grieving that my life can be destroyed, I become aware that the lion’s life too can be destroyed, that we are on equal footing in our vulnerability, and the awareness of that equal footing is the beginning of the idea of justice. The beauty of dangerous animals is that they call us to humility, reverence, and the idea of justice.

WOMAN

I have never seen a mountain lion, except in captivity. But I have known them in my imagination. This winter, experiencing the dual life adjustments of bringing my 93-year-old mother from Connecticut to live with me on the outskirts of Tucson and going through my own process of menopause, I found myself hungry for two things: solitude and rhythm. Solitude is the easier of the two, though to find it within the demands of balancing professional, artistic, intimate, and family life can be a challenge. Rhythm had me stumped. For forty years my body has participated in the lunar cycle. Without my will or consciousness, my body has enacted the mathematical principle of the universe—that everything has a pattern and a cycle. When the cycle played out month after month, my womb hoarding then releasing, changes my body produced on its own time, I took this as news that I was part of the wisdom of the universe, whether I knew it or not. What did it mean, then, for those cycles to end? The popular literature about menopause speaks mostly about the problems of hot flashes and hormone replacement therapy. Mechanical matters that did not say a word about what troubled me: the condition of my mind and my soul. And so I began my morning project of getting up every day for one lunar cycle before first light, taking my notebook out into the wildlife corridor behind my walled yard to be present to the coming of the light. No hormone replacement, silicon implants, or eye tucks for me. I know I am aging. I know this change is one of many in which I will have to depart from certain cycles in which I have grown comfortably at home. There is not time to deny this or cover it up. My body’s lesson to me is that the paradigm of perpetual youth, like the paradigm of obsessive growth, violates the basic principle of how things work in this universe. I intend to watch this process and find what meaning it may offer, knowing that meaning comes only when you look for it, whether in art or science or God or the backyard. So beginning in mid-December I wrapped myself in an old, white wool Navy blanket and sat in the dark, waiting and watching for I knew not what.

I came to know birdsong as more complex that I’d ever recognized, came to know how the moon moves at this hour day by day from west through south to east, how rain upon rare and welcome occasion in the desert blurs the ink on my pages, and how easy it can be to write a poem each day when all one asks for are the senses to perceive and a mind that insists upon language. I watched thrashers, jila woodpeckers, cactus wrens, and ravens. I watched cholla spines take and reflect first morning light. I heard palm fronds rustle awake with the waking of the resting doves. I heard coyotes by the gang wail, yip, and call in the beautiful chaos of their untamed song. And I found myself watched. I was watched by the great horned owl, emboldened in the crepuscular light and moving closer to watch me some more. I was watched by the timid but curious rabbits, the doltish doves, and the fearless thrashers. I was watched by the coyote who sat a long time to contemplate me, then squatted and took a leisurely piss before trotting off on her business. And I was watched by the unseen eyes of early morning. I could feel them watching me, almost as if their watching had the sound of breath. Was that a wisp of movement on the periphery of my vision? Or was it a ghost, only the movement in my mind, the animals that have lived there since my ancestors carved water birds and half-lions out of mammoth tusks and learned to outwit their predators? Was it the bobcat my companion Malcolm has seen moving confidently on its routine patrol through the yard? Was it the mountain lion my mother swears she saw passing outside her bedroom window? Was it the mountain lion watching me just to watch, because animals—even the puzzling human ones—call other animals to reflection and wonder?

THE RABBIT ON MARS

Do other animals tell jokes? Perhaps the play of young animals in which they practice what will later become life-enhancing skills—the stalk, the pounce, the thrashing—is not so unlike what human beings do in attempting to learn what they will need to survive in the future. Of course, we live and direct our lives so much in the mind, so much in the richness and folly and, yes, beauty, of what our minds can create, that our play often takes the form of jokes, a linguistic version of play. One of my recent favorites was the Rabbit on Mars. In 2004 the National Aeronautics and Space Administration landed two rovers, research gathering devices, on our neighboring planet, the one with soil so bloody with iron that it was named after the Roman god of war. How much more benign is our view: let’s do some geologic study of the soil and find out what it’s really made of and whether any forms of life might once have inhabited the place, might (miraculous to say!) have blown loose in a cosmic wind and drifted here to our spinning globe, seeding everything we know, including the great and troubling argument between religion and science.

The two research devices are named Spirit and Opportunity, as if the project were intended, at last, to create a team from these often opposing forces. It has been an awe-inspiring experience to watch these little emissaries of our curiosity make their journey through space and land like bouncing balls in a place so far away we cannot imagine the distance—though we can cross it—then release themselves from their protective shells in response to messages beamed
from Earth. Errors in the software? No problem—new instructions are beamed from home base, and the little brain is reconfigured, the rover rolling off its platform, drilling into Martian rock, sending snapshots instantly back home through space. The scientists and engineers have worked in a collaboration as musical and passionate as a symphony orchestra to accomplish this, and their joy is beautiful to behold. How the knowledge will be used by Opportunity, if you will forgive my appropriating these names and returning them to their Earth-bound meanings, remains a cautionary tale. No green-thinking poet could celebrate transporting the culture of obsessive consumerism to another planet. It is how the knowledge will be used by Spirit that draws me to the curious phenomenon of the Rabbit on Mars.

Along with the panoramic images of barren rusty soil and rock circulating on the Internet—that collective unconscious of the technological that hovers over the surface of Earth—came a fuzzy image of an object that appears to have very long, erect, and pointed ears. It was graced with the caption “A Rabbit on Mars?” It is hardly the first time that the projection of our first gods in the childhood of humanity. It’s always a pleasure to be at St. Michael and All Angels Church. The church was built just at the time that Rachel Carson published Silent Spring. In what was perhaps the most important book of the twentieth century, she wrote, “Future generations are unlikely to condone our lack of prudent concern for the integrity of the natural world that supports all life.” Tonight we gather in such a concern for education must make a strategic contribution to rediscover ancient truths, to create new ideas and to equip, empower, and inspire the rising generation. 

Terry Tempest Williams has written, “Rachel Carson’s name is synonymous with courage.” She has also written, “Rachel Carson has called us to action. Silent Spring is a social critique of our time as essential to the American ideals of freedom and democracy as anything ever written by our founding fathers.” The Preamble of the Mission of the Center for Environmental and Sustainability Education, written by our Board of Advisors co-chairs David Orr and Mary Evelyn Tucker, reads, “Ours is an historical moment. The scope and range of human impacts on Earth are unprecedented. So, too, are the possibilities to build a secure foundation for a sustainable and sustaining future. Never has so much depended on our wisdom, foresight, and the quality of our thinking. Higher education must make a strategic contribution to rediscover ancient truths, to create new ideas and to equip, empower, and inspire the rising generation.”

We’ve been so moved by the seriousness of purpose of the rising generation of students in the controversy at Florida Gulf Coast University. When President Merwin of FGCU said Terry Tempest Williams could not speak at Convocation and that he would cancel the Rachel Carson Distinguished Lectures, the students stood for freedom of speech and they stood for academic freedom. They showed the courage of Rachel Carson and the spirit of Terry Tempest Williams. Many others did as well: faculty members, Orion Grassroots Network members, and Center stakeholders.

In tribute to the commitment that has been shown...
regarding education for democracy, finding common ground, and learning to open this space for democracy. I’d like to close my brief remarks by reading Hannah Arendt. For me, this captures the work of democracy, I’d like to close my brief remarks by reading Hannah Arendt. For me, this captures the work of education for democracy, finding common ground, and learning to open this space for democracy.

Hannah Arendt writes, “Education is the point at which we decide if we love the world enough to assume responsibility for it. And by this same token, save it from that ruin which, except for renewal, except for the coming of the new and the young, would be inevitable. Education, too, is where we decide whether we love our children enough not to expel them from our world, not to strike from their hands their chance of undertaking something new, something unforeseen by us, but to prepare and advance for the task of renewing a common world.”

**The Open Space of Democracy**

**Terry Tempest Williams**

Good evening.

It is such an honor for me to be here at St. Michael and All Angels Church—we can all use angels. Thank you, Jim. Thank you, Peter. Deep bows to both of you for your gifts as teachers and your courage and integrity as teachers. I’m mindful of your place within this community on Sanibel Island and the power of the Center for Environmental and Sustainability Education.

My father, Patrick Kelly of the Orion Society, myself—we’re so grateful to be here tonight. What I want you to know is that we’re so struck by what we’ve gone through in the past three days. Today as I was walking on the beach, my heart, my mind, everything just went down to my feet. Walking for that hour along the beach with those beautiful shells, I was struck by a sense of humility about what we’ve all been able to be a part of. I hope you’ll sit with me in this space of humility as we hold it, together. Susan Cerulean, as a writer of this place, I want to honor you. I see my beautiful students—that’s how protective I’ve become of them—Graham, Brandon, Darlene, Donna. You’ve changed my life. Victoria Dimidjian and members of the Florida Gulf Coast University faculty, you’ve held us. I’m so grateful that we are here together on Sanibel Island, on this sanctuary of grace.

I cannot sleep and slip from the comfort of our tent to face the low, diffused glow of midnight. All colors bow to the gentle arc of light the sun creates as it strolls across the horizon. Green steps become emerald. The river, lapis. A patch of cotton grass ignites. My eyes catch the illuminated wings of a tern, an Arctic tern, fluttering, foraging above the river—the embodiment of grace, suspended. The tern animates the vast indifference with its own vibrant intelligence. Black cap; blood-red beak pointed down; white body with black-tipped wings. With my eyes laid bare, I witness a bright thought in big country. While everyone is sleeping, the presence of this tern hovering above the river in the Arctic National Wildlife Refuge, alive, alert, engaged, becomes a vision of what is possible.

On this night, I met the Arctic Angel and vowed the 22,000 miles of her migratory path would not be in vain. I will remember her. No creature on Earth has shunned darkness in the same way as the Arctic tern. No creature carries the strength and delicacy of determination on its back like this slight bird. If air is the medium of the Spirit, then the Arctic tern is its messenger.

What I know is this: “When one hungers for light it is only because one’s knowledge of the dark is so deep.”

Here is my question: what might a different kind of power look like, feel like? And can power be distributed equitably among ourselves, even beyond our own species?

“We can only attain harmony and stability by consulting ensemble,” writes Walt Whitman. This is my definition of community, and community interaction is the white-hot center of a democracy that burns bright.

I think of wildness as a place of Original Mind, where the ongoing natural processes of life can continue without interference. Our evolutionary past and our future are secured here. This is a place where the press of humanity can be lifted in the name of restraint and where our species’ magnificent nature can be practiced. Open space becomes breathing space. In the company of wild nature, we experience our own humble core of dependency on the land. I hear Walt Whitman’s voice once again, “The quality of Being… is the lesson of Nature.” Raw, wild beauty is a deeply held American value. It is our own declaration of independence. Equality is experienced through humility. Liberty is expressed through the simple act of wandering.

“As long as the Earth can support roseate spoonbills, we have reason to be hopeful. We have reason to be faithful to the Earth, to each other, and to this beautiful broken world of ours.”

**TERRY TEMPEST WILLIAMS, 2004 Rachel Carson Distinguished Lecture**
I’m so mindful of the Sanibel-Captiva Conservation Foundation and the kind of greatness of spirit exemplified by Anne Winterbotham and so many others of you in this room. Because of your efforts, because of your love and passion, because of your ability to see nature infused with the Spirit, the interior freshwater river system that runs through the heart of Sanibel is here, the only intact system of fresh water on any barrier island. When we first arrived, Peter told us that two-thirds of this island is protected. Vision and vigilance. Nothing to be taken for granted. Not the land, not the refuge, not the Earth Charter—may it rise again from the sands of Sanibel.

Democracy is an insecure landscape, and in many ways it feels more so now. We are vulnerable, and we are vulnerable together. We have been so moved, my father, Patrick, and myself by the stories here of the hurricanes—the evidence, the physical evidence. The uprooting of trees. Hearing of Mary Burleson Carter, who just turned 90 last week. In the name of restoration she is rebuilding her house. Sanibel Island, sanctuary island. This kind of fortitude. This kind of adaptation. The birds. The tasseled mangroves. The burning vegetation. A blood red moon, the smell of smoke. Again, primal transformation. Every morning we’ve been here, a walk on the beach yields gifts. A bounty of shells, gifts from the sea, listening to that deeper, powerful, enduring voice on the edge of the sea.

We are here to honor Rachel Carson, and we all know her name, but how many of us really know her path, what she went through, the extraordinary poetry of her life, and the extraordinary lightning rod of her life, the struggle of her life?

I want to share with you a piece that I wrote when I was struggling after September 11, 2001. I had been in Washington, D.C. My father will testify that I was with a group of photographers. We were across from the White House. We were about to conduct a press conference on a book and a photographic exhibit called “In Response to Place.” It was at that point that a security guard came in and said, “The Twin Towers have been struck. The Pentagon has been hit. We have reason to believe the White House will be next. Run.” Nothing in our experience could move our feet. I remember Richard Misrach grabbed my hand and ran out of the Corcoran Gallery. Across we saw from the White House everyone running, with a cell phone in their hand. The next thing I know, we’re in a cab—nine of us. The cab driver turned around and asked us, “And just where would you like to go?”

Transformation. I kept thinking, “What does it mean to be a patriot” when I was told that I was not one. What does it mean to speak on behalf of one’s country, one’s physical country, and to be told, “This is not about the land.” What was it in me that rose up and said, “There are many forms of terrorism. Environmental degradation is one of them.”

What is a patriot?

Rachel Carson. I first heard her name from my grandmother. I must have been seven or eight years old. We were feeding birds—song sparrows, goldfinches, and towhees—in my grandfather’s yard in Salt Lake City. We had just finished breakfast. “Imagine a world without birds,” my grandmother said as she scattered seed and filled the feeders. “Imagine waking up to no birdsong.”

“Rachel Carson,” I remember her saying. Later, around the dinner table, she and my grandfather were engaged in an intense discussion of the book they were reading, Silent Spring, as my mind tried to grasp what my grandmother had just said about a muted world.

Decades later, I found myself in a used bookstore in Salt Lake City. The green spine of Silent Spring caught my eye. I pulled the classic off the shelf and opened it. First edition, 1962. As I read various passages, I was struck by how little had changed. Each page was a startling shock and a revelation: “One of the most tragic examples of our unthinking bludgeoning of the landscape is to be seen in the sagebrush lands of the American West, where a vast campaign is on to destroy the sage and to substitute grasslands. If ever an enterprise needed to be illuminated with a sense of history and meaning of the landscape, it is this…. It is spread before us like the pages of an open book in which we can read why the land is what it is, and why we should preserve its integrity. But the pages lie unread.”

The pages of abuse on the American landscape still lie unread.

Rachel Carson is a hero, a towering example within American democracy of how one person’s voice can make an extraordinary difference in both public policy and in the minds of the populace. Her name and her vision of a word intact and interrelated entered mainstream culture in the 1960s, heralding the beginning of the modern conservation movement. Even so, in the year of Silent Spring’s fortieth anniversary, I wonder how many of us really know much about Miss Carson’s life or many of us, if we are honest, have ever read this crucial book?

We can all rattle off a glit two-sentence summation of its text: “All life is connected. Pesticides enter the food chain and not only threaten the environment but destroy it.” Yet, I fear that Silent Spring’s status as an “American classic” allows us to nod to its power, but to miss the subtleties and richness of the book as both a scientific treatise and a piece off distinguished literary nonfiction.

Rachel Carson presents her discoveries of destruction, not in the form of rhetoric, but in the form of storytelling. In example after example, grounded in the natural world, she weaves together facts and fictions into an environmental tale of life, love, and loss. Her voice is forceful and dignified, but sentence-by-sentence she delivers right hand blows and counter punches to the status quo ruled by chemical companies within the Kingdom of Agriculture: “The ‘control of nature’ is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man…. It is our alarming misfortune that so primitive a science has armed itself with the most modern and terrible weapons, and that in turn they against the insects it has also turned them against the earth.”

Her words were radical then. I think they’re more radical now.

The facts she presents create the case against “bio-cide”: We are killing the very fabric of nature in our attempt to rid the world of pests through these “elixirs of death.”

The fictions she exposes are the myths we have chosen to adopt in our obsession to control nature. She reminds us of the story of Medea, the Greek sorceress who, overwrought with jealousy over her husband’s love of another woman, presents the new bride with a gift, a robe that will immediately kill whoever wears it. It becomes a garment of death. Carson calls our use of pesticides “death by indirect.” We are killing insects and in turn, killing ourselves, as these toxins slowly and violently enter the waters and eventually our own bloodstream.

Rachel Carson did not turn her back on the ongoing chronicle of the natural history of the dead. She bore witness. “It was time,” Carson said, “that human beings admit their kinship with other forms of life. If we cannot accept this moral ethic, then we too are complicit in the killing.”

I wanted to read everything I could about her. I wanted to walk in the footsteps. I wanted to try to understand the landscape that she was a part of. I went to the Rachel Carson National Wildlife Refuge. I reread every one of her books, The Edge of the Sea at Morgan Bay. I watched an hour film, a video, of her interview with Eric Sevareid. She had breast cancer, and she had not told anyone. She was so frail. She had on this very strict black wig. She was as fierce a human being as I have ever seen. For an hour she went toe to toe with a spokesperson from Monsanto who was absolutely out to discredit her on every level, even creating a parody of Silent Spring to show how wrong she was. She was full of grace. She was articulate. She changed the face of American perceptions.

It struck me how today we would no longer give an hour program to an environmental issue like this where you would allow a full hour of discussion to unfold. What was most impressive to me was when they spoke with a Department of Agriculture spokesperson. He actually said, “We don’t know.” Can you imagine? There was no spin, but simply, “We don’t know. Ms. Carson may be right. We don’t know, but
we have an obligation to find out.” Can you imagine that today? The Monsanto Chemical Company, anticipating the publication of Silent Spring, urgently commissioned a parody entitled “The Desolate Year” to counteract Carson’s attack on the industry. Its intent was to show the pestilence and famine that Monsanto claimed would occur in a world without pesticides. Notice how fear is always the counterpoint to truth. Robert White-Stevens, a biochemist who was assistant director of the Agricultural Research Division of American Cyanamid, became the chemical industry’s spokesman. He made over twenty-eight speeches against Silent Spring, and claimed that Carson was “a fanatic defender of the cult of the balance of nature.” We must all belong to a cult, right? This is my favorite. Time magazine called Silent Spring “unfair, one-sided, and hysterically over-emphatic,” and accused Carson of frightening the public with “emotion-fanning words,” claiming her text was filled with “oversimplifications and downright errors.” How do you attack a woman? “She’s emotional. She’s hysterical.” Never mind the science, and especially never mind the poetry. Former Secretary of Agriculture Ezra Taft Benson, who later became Eisenhower regarding Rachel Carson, asked simply, “Why a spinster with no children was so concerned about genetics?” His own conjecture was that she was “probably a Communist.” Spinster. Communist. A member of a nature cult. An amateur naturalist who denies justice toward nature? Our character has been shaped by the diversity of America’s landscape and it is precisely that character that will protect it. We can carry a healthy sense of indignation and protected by the diversity of America’s landscape and it is precisely that character that will protect it. This is the President’s reply. “I think particularly, of course, since Miss Carson’s book.” And what happened? What happened was the Environmental Protection Agency. What happened was a mandate to build a body of case law to establish a citizen’s right to a clean environment. That’s what Silent Spring initiated.

In 2004, Rachel Carson’s spirit is still among us. Like her, we can all be fierce and compassionate at once. Like her, we can remember that our character has been shaped by the diversity of America’s landscape and it is precisely that character that will protect it. We can carry a healthy sense of indignation and reflects how it was disrupting the balance of nature. In Silent Spring we see her signature strength on the page, and witness how a confluence of poetry and politics with sound science can create an ethical stance toward life. But perhaps Rachel Carson’s true courage lies in her willingness to align science with the sacred, to admit that her bond toward nature is a spiritual one: “I am not afraid of being thought a sentimentalist when I say that I believe natural beauty has a necessary place in the spiritual development of any individual or any society. I believe that whenever we destroy beauty, or whenever we substitute something man-made and artificial for a natural feature of the earth, we have retarded some part of our spiritual growth.”

Rachel Carson has called us to action. Silent Spring is a social critique of our modern way of life, as essential to our evolving American ideals of freedom and democracy as anything ever written by our founding fathers. “If the Bill of Rights contains no guarantee that a citizen shall be secure against lethal poisons distributed either by private individuals or by public officials,” Miss Carson wrote, “it is surely only because our forefathers, despite their considerable wisdom and foresight, could conceive of no such problem.”

There are many forms of terrorism. Environmental degradation is one of them. We have an opportunity to shift the emphasis on American independence to American interdependence and redefine what acts of responsibility count as heroism. Protecting the lands we love and working on behalf of the safety of our communities from the poisoned reside of corporate and governmental neglect must surely be chief among them. Perhaps this is what the idea of “home-land security” is meant to be in times of terror.

I want to mention another individual who embodies the open space of democracy. Wangari Maathai was just awarded the Nobel Peace Prize, the first time an African woman was ever awarded the Nobel Peace Prize, the first time an environmentalist was ever acknowledged for the work of peace. Peace on Earth. Earth in peace. Wangari Maathai. Thirty million trees. Thirty million trees planted since 1977. Thirty million trees planted by African women. Kenyan women, gathering seeds in the folds of their skirts, even the seeds of change.

I had the privilege of meeting Wangari when I was 29 years old. I’m 49 now. Twenty years ago she was 44. She’s now 64. It was part of the United Nations Decade of Women gathering in Nairobi. I didn’t know why I was going, but the opportunity presented itself. I was from Salt Lake City, a Mormon girl. I was scared to death. It was my father, who I knew why I was going, but the opportunity presented itself. I was from Salt Lake City, a Mormon girl. I was scared to death. It was my father, who I pay tribute to tonight, who said, “All a writer has is experience. Stay open.”

My heart was opened by Wangari Maathai. I had never heard a woman—anyone—speak so passion-
ately in defense of the earth. She gave a human face to deforestation. She educated us every chance she could, saying the African woman is carrying the environmental crisis on her back as she is gathering firewood eight to ten hours a day in search of fuel to light fires to cook food for her children.

All I wanted to do was follow this woman. My heart had never been opened in that way. I asked her if I could follow her into one of the villages. I left the conference, and she took me in to one of the villages in Kenya not so far from Nairobi to meet those women. I was able to witness those women gathering seeds in the folds of their skirts, planting the seeds, watering the seeds, nurturing the seeds until they were saplings, and carrying the saplings to the schools into the hands of their children where those saplings were planted in Green Belt Movement forests. Thirty-million trees.

I was so inspired that when I came home and my family asked how the U.N. Decade on Women was, all I could do was talk about trees, planting trees. Some friends started a Green Belt Movement of Utah. We had an artist friend make up a certificate. My mother and grandmothers were the first to buy money for Wangari Maathai, but what we didn’t realize is that we were educating our communities on our own issues of deforestation. We sent over saplings were planted in Green Belt Movement forests. Every day I think, “Wangari—what would she do? What is she doing?” She was jailed twice. She was beaten severely for her protests—her acts of civil disobedience—to stand in the way of the trees, the forests that were being felled by President Moi. She ran for the Parliament and lost. She ran again in 2002 and won. She is now the Deputy Minister for the Department of Natural Resources.

Last spring I had the privilege of welcoming Wangari Maathai into my home. My husband was out of town. I got a call the night before from a friend who had said, “Wangari is coming to see her son graduate from the University of Pennsylvania and she wants to make a trip to Utah.” She and her son Muta walked into our house and we held each other after twenty years. The young vibrant woman that I had met when I was 29 was a seasoned elder. You could see what she had undergone in her face, in the stillness of her powerful, courageous face.

Can I tell you how worried I was to cook for her? I got out every good Mormon recipe I could think of! I asked Wangari what she had learned in twenty years and without hesitating she said, “Patience.” The patience of trees. The patience of stones. Then she said, “So often those of us on the edges, those of us on the margins who are creating this open space of justice and democracy are not the ones who inhabit that space.” She said, “Terry, it is so important for us to inhabit that space. That’s why I ran for president. That’s why I ran for parliament. The women who gathered those seeds in the folds of their skirts know that open space has been created for them and they can stand in the center of that.”

Heroes. These two women, passionate, brave women, changed the world one word at a time, one tree at a time, all the while creating and maintaining the open space of democracy: each in their own way, each in their own time, each with their own gifts.

Brandon Hollingshead is the student who wrote me a letter on behalf of the student body of Florida Gulf Coast University. Brandon Hollingshead, Graham Bearden, Donna Roberts and other students created a circle of understanding when I arrived. We passed around a little frog that had been given to me by the poet Simon Ortiz, and each of the students and faculty talked about what had happened to us, how this visit had transformed us: why Brandon had the strength to write the letter, why Darlene had the strength, curiosity, and hunger to call me and interview me for the other side of the story. Why Graham had written to me and said this is what we can do at the Center for Environmental and Sustainability Education. This is where the money can go to create a forum for free speech.

Brandon brought these beautiful lilies, what he told us his grandfather had called Camus lilies. I couldn’t help but think of Camus when he wrote, “To create art is a dangerous enterprise.” Camus lilies created the centerpiece around a circle of understanding with a beautiful bowl that had been created by Tricia Fay of the faculty of art. Brandon talked about how his great-grandmother had these lilies, and his grandfather transplanted those lilies in his yard, and his father transplanted those lilies in his yard, and Brandon has transplanted those lilies into his own yard, even as a student of Florida Gulf Coast University. That to me is what an ethic of place is. That to me is what gives one authority to speak, to advocate, and to fight for one’s own education: roots. Deep roots transplanted, planted again, transformed.

These individuals, Rachel Carson, Wangari Maathai, the students of Florida Gulf Coast University, hold an ethic of place. They know who they are because they know where they are from, with values rooted in relations in community. They have taken a risk not knowing what the outcome would be. Each of these individuals believed in principles larger than themselves. And each of these individuals trusted their instincts, turned their instincts into ideas, and through hard work acted on those to create essential change.

This is what the open space of democracy looks like.

---

The Open Space of Democracy
Terry Tempest Williams

Florida Gulf Coast University Student Union Ballroom
Fort Myers, Florida
Monday, October 25, 2004, 10:00AM

St. Michael and All Angels Church
Sanibel Island, Florida
Monday, October 25, 2004, 7:00–8:30PM
Introduction
Peter Blaze Corcoran

At the Center, we believe a book can change the world. At a time when we were a deeply divided nation, and a deeply divided island, we were enthusiastic to be a part of Sanibel Reads—what could be more noble than to exclaim “Let’s all get on the same page!”

Barbara Kingsolver is an inspiration to students of all ages. We deeply appreciate her vision and work to a larger purpose. Her book *Small Wonder* is an elegant answer to Rachel Carson’s questions, “What is the value of preserving and strengthening this sense of awe and wonder, this recognition of something beyond the boundaries of human existence? Is the exploration of the natural world just a pleasant way to pass the golden hours of childhood or is there something deeper?” We at the Center deeply appreciate Kingsolver’s vision and work to a larger purpose, and we thank her for her kindness in speaking to us of small wonders.

Setting Free the Crabs
Barbara Kingsolver

At the undulating line where the waves licked the sand on Sanibel Island, our three pairs of human footprints wove a long, sinuous path behind us. Littoral zone: no-man’s-land, a place of intertidal danger for some forms of life and of blissful escape for others. The deliberate, monotonous call and response of the waves—assail, retreat—could have held me here forever in a sunlight that felt languid as warm honey on my skin. So we moved in a trance, my mother, my daughter, and I, the few sandblasted clamsheils and knotty whelks we had gathered clacking together in the bag that hung carelessly from my fingertips. Our practiced beachcombers’ eyes remained on high alert, though, and eventually my daughter’s eye caught the fist true find of our day: a little horse conch, flame orange, faceted, perfect as a jewel. Treasure.

My daughter wanted to take it home, I knew. She turned it over, already awed like any lottery winner by the stroke of sudden wealth and the rapid reordering of the mind that tells itself, Yes! You did deserve this.

And then her face fell. “Uh-oh,” she said. “Already taken.”

“Oh shoot,” my mother said. “Is it alive?” There are laws, on Sanibel, about taking live creatures from the ocean.

“Well, not the conch—that’s gone. But a hermit crab’s in the shell.”

Two small white claws protruded from the opening. The sluggish gastropod that had been architect and builder of this magnificent orange edifice had already died—probably yesterday, judging from the condition of the shell—but as any house hunter can tell you, no home this gorgeous stands empty for long. A squatting crab had moved in.

“Oh, they don’t care if you take those,” my mother reassured her. “There are thousands of hermit crabs on this beach.”

She was right, of course, though I could not help thinking, “There are thousands of us on this beach, too—at what point do we become expendable?” But I said nothing, because I had nothing sure to say, and anyway I was more interested in hearing how my daughter would respond. I decided to watch my leggy, passionate ten-year-old walk into the jaws of this dilemma by herself.

She looked up, uncertain. “But it’s a living creature, Grandmama. We can’t kill it just because we want a shell for our collection.”

My mother, like every grandmother, wants her grandchildren to have the sun, the moon, and the stars, all tucked into a box with a bright red bow. If my daughter really wanted this shell, Grandmama was going to give her an out. “Well,” she said, summoning remarkable creativity, “can’t we find it another shell?”

My daughter pondered this. She knows, as I do, that a hermit crab won’t give up its shell just because you want it. It will hold on. It will relinquish a claw or a head, or whatever else you manage to pull off, rather than come out. Were we going to take this thing home and set out an array of alternatives in front of it, as if it were a hapless shopper who’d won a dazzling spree? Some hermit crabs, the bigger ones with reddish claws, are game for a certain amount of terrestrial adventure, but this one wasn’t that kind. Away from the littoral zone, this tiny life would give up its ghost within a few hours. I know this, I’m ashamed to say, from experience. So I waited, as did my husband, who had jogged up to join us, wondering what our little life-and-death huddle was all about.

My daughter looked at the creature in her hand for a long time and then said firmly. “No. We can’t kill it.” “Anyway, it has the best shell on this whole beach,” Steven said, quick to nail a few planks to support her decision lest it should wobble. “It deserves to keep it.”

So we handed it over to him, and he tossed it far out into the surf, to brood out there however a crustacean mind may brood upon a catastrophe narrowly escaped in the cradle of a human child’s hand.

I have tried to teach my children to love nature as my parents taught that reverence to me—through example, proximity, and plenty of field guides and age-appropriate biology books. As long as I’ve been conscious of my thoughts, I’ve considered myself a lover of nature. Only when I was old enough to have fallen in and out of love with other things and people did I begin to understand that there were different kinds of love. There is the sort I think of as maternal—both selfless and wholly giving—the point of which is to help some other life do as well as possible even outside your presence, and hopefully to survive beyond you. Even if the object of your affection moves, say, to New Zealand, and you know you’re
never going to see it again, you will still love it, and love it fiercely. You’ll send it food, money, anything. Then there is a less selfless, more possessive form of passion. This may be what most of us felt for our first high-school flame: a desperate need to be near, to observe, to show it off, to have and to hold.

I understand that I waver between these kinds of love when I throw my heart to nature. I cherish the wild things in my backyard, but I also love that I get to be near them. I need to live somewhere, I reason; the house was already built when I got here, so I will be a responsible steward of the place and take it under my wing. It’s easy when that stewardship coincides with my own needs, but not so much fun when these programs collide and I am forced to feel more like what I really am: a colonist on occupied territory. When the cute wild things charge down the fence of my garden, I will still love it, and really am: a colonist on occupied territory. When the cute wild things charge down the fence of my garden, I will still love it, and really am: a colonist on occupied territory.

When humans decide to work our will, we are so times faster than at any time in the past 65 million years. What we’re witnessing now is the most catastrophic extinction event since the dinosaurs died—it looks like Rome is burning. And plenty of people are fiddling as it burns: In November 2000 exactly half of the voters in this country opposed the man who wrote the words I just quoted. But the other half voted for him, I remind myself. Right now, other frightening imperatives have distracted us so far from the program of benevolence toward our planet that it seems we might just try to burn the whole world for fuel to keep ourselves guarded and cozy. But that is not the expressed will of our people. Most of us do understand, when we can calm down and think clearly, that whether we are at peace or at war, the lives that hang in the balance are not just ours but the millions more that create the support system and biological context for humanity. More and more of us are listening for the silent alarm, stopping in our tracks, wishing to salvage the parts of this earth we haven’t yet wrecked. Even in our best-intended efforts, though, it’s hard to sort out goodwill from self-interest. We want every square inch of our national parks to be accessible by paved road and private automobile, with rest rooms every handy. We work lots harder to save the panda than to rescue the snail darter, presumably because the latter is such a plain little fish that we don’t much care whether or not our children will ever get to see one cowering in a zoo. I do not begrudge the lovely pandas one penny of their save-the-panda money, heaven knows they need it, but I worry that our bias toward saving “charismatic megafauna” (as a friend of mine calls them) begets a misguided strategy. If we believe in putting women and children in the lifeboat, I reason; the most women, presumably because the latter is such a plain little fish that we don’t much care whether or not our children will ever get to see one cowering in a zoo. I do not begrudge the lovely pandas one penny of their save-the-panda money, heaven knows they need it, but I worry that our bias toward saving “charismatic megafauna” (as a friend of mine calls them) begets a misguided strategy. If we believe in putting women and children in the lifeboat, I reason; the most women, presumably because the latter is such a plain little fish that we don’t much care whether or not our children will ever get to see one cowering in a zoo. I do not begrudge the lovely pandas one penny of their save-the-panda money, heaven knows they need it, but I worry that our bias toward saving “charismatic megafauna” (as a friend of mine calls them) begets a misguided strategy. If we believe in putting women and children in the lifeboat.

Some friends unknowingly proposed a dilemma about nature-love in a story they told me of visiting Cancún years ago. It was still a relatively sleepy fishing town then, surrounded by paradise, poised on the edge of discovery and prompt destruction. These friends are of a certain age and were far ahead of their time in the manner of appreciating nature. Over the course of their lives they have dedicated a great deal of their energy to conservation.

“We saw what was coming to Cancún,” they said. “We actually saw the bulldozers starting to clear it. So we saved what we could out of that jungle. We have orchids growing in our greenhouse that we collected from there.”

I admired their enterprise and empathized with their heartbreak at seeing delicate, rare lives crushed. And yet if had been my choice to make, I think I’d have felt uneasy at the prospect of profiting in any way—even just aesthetically—from the destruction of a sacred place. Maybe I’m wrong about this, or maybe there really is no right way to look at it, but my heart tells me it’s better to grieve the whole loss than to save a handful of orchids. Better to devote oneself to anger and bereavement, to confront the real possibility that soon there will be nowhere left to go, anywhere, to see an orchid in the wild, than to derive a single iota of pleasure from these small, doomed relics of a home that’s forever gone. Anger and bereavement, throughout history, have provided the engine of relentless struggles for change. In a greenhouse these orchids will flourish awhile and then, after a few years or many, die. A jungle is a form of eternal life, as ephemeral and enduring as the concept of love or mystery. It cannot be collected. More recently, modern science has settled this question by working with governments to place strict limits on the collection and transportation of native species, especially endangered ones. Although the market for contraband exotics still persists (and this perverse appetite regularly precipitates horror stories such as the one about the parrots smuggled from Mexico inside automobile hubcaps), the net effect of government limits has been to discourage the private possession of morally unknowable things.

A zoo is many steps up from a private collection, at least in its modern form as a park where the animals are given more space to roam and more species-appropriate habitats than the humans who must walk down narrow paved trails to see them. Most modern zoos have signed on to the proposition that they are in business not just to let kids have a gawk at a giraffe or an elephant, but also to join in the worldwide effort to spare giraffes and elephants from extinction on their home ground. From fund raising and reproduction programs to the sponsorship of significant research, most zoos are more about animal advocacy (and increasingly, habitat advocacy) than about possession. And perhaps most important of all, they offer the only opportunity that most modern
Aquarium Association (aza) requires its member institutions to manage captive animals in a manner that furthers their conservation, and half the U.S. population passes each year through aza facilities—that’s more people than attend all professional football, basketball, and baseball games combined. This is a significant contribution to our nation’s education, reaching far beyond the population that actively supports environmental projects. Once individuals have experienced “lion,” not just with their eyes during a TV nature show but with their ears, nose, and the little hairs that stand up on the back of your neck when a lion stares you down, they can be expected to share the world with lions in a different way—a way, we can hope, that will be more protective of the animals’ right to occupy their own place. The first steps toward stewardship are awareness, appreciation, and the selfish desire to have the things around for our kids to see. Presumably the unselfish motives will follow as we wise up.

Meanwhile, we grapple with what it really means to love animals. My husband, an ornithologist who studies bird populations, was once amazed, in a little, out-of-the-way pet shop, to see an Indian hill mynah on display in a cage. He asked if there was a captive breeding population of these birds—a possibility that seemed unlikely. The man in the store said no, the mynah had been captured in the wild in India and brought here to be sold as a pet. My husband was shocked to hear that; these birds were already known to be declining, though this was some years before their capture and sale became strictly illegal. He asked how the pet-store owner could justly sell a bird that was in danger of being extirpated from the wild.

“We’re keeping it safe,” the man explained without a twinge of remorse. “Somebody will take very good care of it.”

“But you’ve taken it from the wild. It’s gone from the breeding population,” my husband protested. “But it’s right here, still alive,” the man replied.

“Yes, but you’ve essentially killed it. Even if there were a mate for it somewhere, they probably wouldn’t reproduce, and that’d be a dead end anyway. Genetically speaking, this bird is dead.”

The pet-shop fellow looked at his bird, which must have seemed to him very much alive, and insisted, “It’s extremely dangerous for these birds in the wild. By keeping this one as a pet, we’ve saved its life.”

Both men restated their arguments a few times until it was clear they had reached an impasse. My husband left the man and the bird that day, but he has never stopped thinking about this semantic dead-lock over what it means to “save the animals.” For all of us whose first biology lesson was Noah’s ark, it is hard to unlearn the fallacy that sparing just a few of anything can provide some sort of salvation. It takes a basic knowledge of population genetics to understand exactly why a breeding population of a certain size, in a healthy habitat, is necessary for the continuation of a species. Low genetic variation, inbreeding, and lethal genes all mean that when a population gets down to the last two of a kind, they might as well be just one; their species is doomed. Certainly a single bird in a cage, separated from its habitat and species, is done for. Orchids without the mystery of their forest are not what they were; likewise, an Indian hill mynah removed from its Indian hills is nothing but an object of beauty. No longer in its own sense a living thing, it has become a possession.

The trick here is to distinguish between caring about the good of a species and caring about an individual creature. These two things can actually run at cross purposes. One animal lover, for example, may be putting out seed to attract birds and help them through winter, even as the animal lover next door is nurturing a cat bent on carrying out a methodical campaign of genocide (or rather, avicide) at the bird feeder. This is not to suggest that it’s wrong to love a cat or dog, or to sell or buy pets, or to lobby for animal rights in the form of better treatment for cats, dogs, seals, or fish. All these concerns do not make an environmental case. They make a spiritual case, and animal-right activists are practicing a form of religion, not environmental science. I like to think that the world is pretty large enough for both science and religion, and usually the two mesh well. But sometimes they may confuse or contradict each other. Certainly my own relationships with the animals in my life are absurdly complex: Some I love, some I eat, and the scraps left over from the ones I eat, I feed to the ones I love. (Is there a song about that?) But as I try to sort this out, I find that when I must choose, my heart always comes down on the side of biodiversity.

A famous conflict between these interests arose when the Nature Conservancy undertook to preserve the very last few hundred acres of native Hawaiian rain forest. This tract is a fragile fairyland of endemic ferns and orchids that were being rooted to shreds by feral pigs. Anything native to Hawaii has no defenses against ground predators, simply because these ecosystems evolved without them; thus, none geeze don’t run or fly when humans approach, and native birds are helpless against the mongoose-come-latelies that eat their eggs. For the flora, the problem is pigs: The Polynesians brought them over in their canoes for food (they would later be replaced by larger pigs brought in European ships), and some escaped to the wild, where their descendants now destroy every path in their animal. The Nature Conservancy faced an animal lover’s painful dilemma. The extremely difficult terrain and the caginess of the wild hogs made it impossible to take them alive; to save the endangered forest some pigs would have to be killed. Enter, then, the People for the Ethical Treatment of Animals (peta) who set up a demonstration. The Conservancy staff argued that sparing a few dozen pigs would cost thousands of other animal and plant lives and extinguish their kinds forever. They also pointed out that the pigs had come to Hawaii in the first place under a human contract, as a food item. No matter, said peta; the chain of pig death ends here. The two groups have reached some compromises, but the ideological conflict remains interesting.

I applaud any religion that devotes itself to protecting life; I applaud it right up to—but stopping short of—the point where protecting one life-form brings an unintended holocaust upon others that are being overlooked. In this contest between a handful of pigs and thousands of native birds, insects, and plants, neither side could fairly say it was simply approximating life. It had become necessary to make a choice between systems—restoring a natural one versus upholding an increasingly damaged one.

For the sake of informed choices, I took a trip. I walked in that magical forest, by special invitation, so I might carry out a story that would wrench compassion from people who far away who would never get to see its wonders. They story is a heartbreaker, so I did the best I could. I could already see the ghosts of the place; it was that near death, and that willfully alive. White mists rose through the curved spines of blue-green fern trees. A single scarlet bird with a sad, down-curved bill spoke its name, ili`ili, again and again, like the eulogy a child might sing for himself if every last relative had died of the plague. I want that place to be, forever. I will never step on that soft moss again. I don’t want to leave any more footprints, but I would give anything for that scarlet iwi to find a mate and produce two small eggs and a future of songs among those ferns. I felt sorrow for being human there and ached for the ignorance of my kind, who seem always to arrive in paradise thinking only of our next meal. For this bowl of lentils—a pork chop, a can of sliced pineapple rings—we sold our birthright to paradise and infected Hawaii with a plague on its native kind.

“I have tried to teach my children to love nature as my parents taught that reverence to me—through example, proximity, and plenty of field guides and age-appropriate biology books. As long as I’ve been conscious of my thoughts, I’ve considered myself a lover of nature.”

BARBARA KINGSOLVER, “Setting Free the Crabs”
This story of pigs and forest is a tale about possession. A pig can be owned; an iwii can’t. Pigs are a human invention, as are cows, Chihuahuas, and house cats. Over thousands of years our ancestors transformed wild things into entirely new species that they named food, work, or companionship. These beasts are alive, as surely as the yeast that makes our bread is alive, but they are animals only by our definition, not by nature’s. They have no natural habitat. However much we may love them or not, they are like our things, like our houses and vehicles. When cats or dogs go wild, the effect on nature is something like what would happen if our useful yeast were transform itself into an Ebola virus: It begins a cascade of deaths one after another, extending far beyond the reach of what we ourselves have bulldozed or killed. Scientists who study this destruction have estimated, for example, that domesticated cats in North America kill as many as four million songbirds every day. (The millions of feral cats out there—those that have left human habitation and are fed by no one but themselves—add many more deaths to this toll.) These animals are a living extension of our possession. There must be limits, somewhere, to the human footprint on this earth. When the whole of the world is reduced to nothing but human product, we will have lost the map that can show us how we got here, and can offer our spirits an answer when we ask why. Surely we are capable of declaring sacred some quarters that we dare not enter or possess.

* * *

A sad loss recently befell my friends, the orchid growers who witnessed the sad destruction of Cancún many years ago: The large, forested lot next to their home was cleared for development. They had been assured, from the time they moved into their house, that the beautiful piece of wild land abutting them was not for sale. But everything has its price, it seems, and now when I visit them we sit on the porch facing away from the absurdly huge, modern house that was built next door, right up to the edge of its lot on every side, and though we don’t speak of it, we are mourning. Perhaps there really is not such thing as saving the wilderness next door for our own enjoyment. Enjoyment goes only with the enjoyers, who will be the death of this place—of every place. People love the woods but can’t abide the mosquitoes, so we spray insecticide from the airplanes, which ends up not just killing mosquitoes (and the encephalitis germ we dread) but also monarch butterflies, ladybugs, lacewings, and the birds and lizards that eat the poisoned ants.

My daughter, a few years after she surrendered the world’s best shell to that hermit crab, did a science-fair project on the aerial mosquito sprat of choice, malathion, and its effects on life beyond mosquitoes. She discovered that at unbelievably minute concentrations it still causes the tiny microorganisms in our wetlands to swim in desperate circles and then die. This zooplankton—uncharismatic as it may be—is the stuff of life, the stuff that supports the tiny fish, which support the bigger fish, which are eaten by raccoons and bears and herons and people and bald eagles. The toxin kills the bugs that pester you, and another million creatures that you’ve never thought about or even noticed. From an insect’s point of view, let’s face it, the obliteration of all to punish the perceived crimes of an infinitesimal percentage amounts to precisely the horror that we humans have named, in our own world, ethnic cleansing.

I don’t know if the average human mind can open wide enough to think of it that way. Last night I slapped a mosquito that was drinking from my arm and then stared awhile at the little splat, feeling mildly avenged at the sight of my foe’s blood until I realized, of course, that the blood was my own. Oh, what a tangled web we weave when we first practice to do the right thing! We take care of ourselves, we destroy; we don’t take care of ourselves, we destroy. Mosquitoes, I have been told, are important pollinators in the Arctic. So, good, they have their place in the grand scheme, and I’ll vote against aerial spraying on behalf of everything else that goes before the fall, but it’s taking me some time to get that emotional plane where I can love a mosquito. It may in fact require more than a few lifetimes’ remove from the varmint-killing ethic whence I arose. My generation has taken historic steps toward appreciating nature, setting aside more parklands, and enjoying them in greater numbers than any before it. But if we are going to hold on to this place in any form that includes genuine wilderness, we will have to become a people who can imagine a faraway, magical place like the Arctic National Wildlife Refuge—and all the oil beneath it—and declare that it is not ours to own because it already owns itself. It’s going to demand the most selfless kind of love to do right by what we cherish, and to give it the protection to flourish outside our possessive embrace.

Maybe that step begins with giving up ownership of the most beautiful shell on the beach, not simply to save the life of a homely, ordinary crab, but as an exercise in resisting the hunger to possess all things bright and beautiful. It can begin when a ten-year-old mind senses the sovereignty of living worlds apart from her own, so that a perfect shell may be—must be—thrown back into the sea. We humans have fallen far from the grace we once had, when we could look on every mountain with fear and reverence, but we have also crept slowly back from the depths, when we needed to have our names carved on every mountaintop and a passenger pigeon in every pot. We seem mostly to be moving in some kind of right direction, if only we aren’t too late. I hope my own mistakes will serve as a benchmark for my children, to show them how life accumulates its wisdom and moves on.
Lessons from Charley, Frances, Ivan, Jeanne, Katrina, Rita, and Wilma
Environment, Politics, and Global Destabilization
David W. Orr

EDITORS’ NOTE In his 2006 Rachel Carson Distinguished Lecture on the campus of Florida Gulf Coast University, David Orr said, “Rachel Carson asked questions that the world wasn’t prepared to recognize or understand in 1962—and perhaps even in 2006. She was well ahead of her time in every way. Rachel Carson was a beacon, and we often don’t know what social traps are. Thanks to you, the University has a richer sense of our own goal of ecological literacy and how we might realize it. Thanks to you, we are aware of the moral responsibility of higher education to tell the truth about what we’re doing to the environment. He’s made my introduction very easy because I’m going to use words that he used to describe Rachel Carson to describe him: “lucid prose,” “crystal clarity in thinking,” “foresight,” “fortitude,” and “fearlessness.” David, for these and countless other characteristics you share with Rachel Carson, we’re honored to have you at Florida Gulf Coast University.

By David W. Orr

Good morning. The Rachel Carson Distinguished Lecture Series keeps the spirit of Rachel Carson alive. Her accomplishments are many, but the ones most relevant to the Center for Environmental and Sustainability Education are public policy based on sound science and ethics, active participation of an ecologically literate community, and appreciation for the natural world through the literary arts and environmental education. We aspire to keep her name alive for rising generations who may not know who she was and we strive to keep the spirit of Rachel Carson strong by bringing to Florida Gulf Coast University lecturers who embody what Rachel Carson was all about.

David Orr is a regular visitor to Florida Gulf Coast University. We are deeply indebted to him for co-chairing the Board of the Center. David, you’re among friends here. Thanks to you, students know what social traps are. Thanks to you, the University has a richer sense of our own goal of ecological literacy and how we might realize it. Thanks to you, we are aware of the moral responsibility of higher education to tell the truth about what we’re doing to the environment. He’s made my introduction very easy because I’m going to use words that he used to describe Rachel Carson to describe him: “lucid prose,” “crystal clarity in thinking,” “foresight,” “fortitude,” and “fearlessness.” David, for these and countless other characteristics you share with Rachel Carson, we’re honored to have you at Florida Gulf Coast University.

Long Tails and Ethics: Thinking about the Unthinkable
By David W. Orr

 “[It is a] mistaken belief that one can philosophize without having been compelled to philosophize by problems outside philosophy.”
KARL POPPER

We have long lived in the faith that “nature does not set booby traps for unruly species,” as Robert Sinzheimer once noted. Whether nature does or not, we humans do and we have nearly trapped ourselves by exploiting large pools of carbon found in soils, forests, coal, oil, and gas. The result is a rapid change in the chemistry of the atmosphere leading to rising temperatures, destabilization of virtually every part of the biosphere, and the looming prospect of global catastrophe. The effect of climatic disruption now gathering momentum is a tsunami of change that will roll across every corner of the Earth, affect every sector of every society, and worsen problems of insecurity, hunger, poverty, and societal instability. We live now in the defining moment of our species that will determine whether we are smart enough, competent enough, and wise enough to escape from a global trap entirely of our own making.

The first scientific evidence that human activity could alter atmospheric chemistry came from the laborious calculations of Svante Arrhenius in 1896. Compared with the later findings of the Intergovernmental Panel on Climate Change, his numbers are surprisingly accurate. His overall conclusion, however, was less accurate. Arrhenius, a Swede, thought a warmer Earth to be a good thing on the whole, a conclusion that has not stood the test of time. But it would be another sixty-nine years before the President’s Science Advisory Committee in 1965 delivered the first official warning of the possible scale and scope of global warming (Weart, 44).

Nearly a half-century later we know that global warming, in the words of John Holdren, President Obama’s science advisor, “is already well beyond dangerous and is careening toward completely unmanageable” (Holdren, 2008, 20). Further, the destabilization of climate is now believed to be more or less permanent in human timescales. Geophysicist David Archer puts it this way:

“The climate impacts of releasing fossil fuel CO2 to the atmosphere will last longer than Stonehenge. Longer than time capsules, longer than nuclear waste, far longer than the age of human civilization so far. The CO2 coming from a quarter of that ton will still be affecting the climate one thousand years from now, at the start of the next millennium.”

(Archer, 2009, 1)

In other words, even if we were to stop emitting carbon immediately, sea levels would continue to rise for at least another thousand years and temperatures would continue to rise with all of the collateral effects one dares to imagine (Solomon et al., 2009). In short, because of our past actions the Earth likely will become a hotter, more barren, and more capricious place for time spans we typically associate with the longevity of nuclear waste. The climatic destabilization we have incurred is not a solvable problem but a steadily worsening condition with which humans will have to contend for a long time to come. Early and effective action to end our use of coal, oil,
and natural gas and switch to renewable energy can only contain the eventual scale, scope, and duration of climatic destabilization but will not remedy the situation in any way that could reasonably be called a solution. That’s the science. But the gap between science and the public discourse about climate destabilization seems as wide and seemingly as unbridgeable as the Grand Canyon itself. We are, to say the least, quite unaccustomed to thinking about matters so total and so permanent.

We rely on analogies and metaphors to understand things otherwise inexplicable. But what analogies, metaphors, or manner of thinking clarify the issues posed by climatic destabilization? We will first turn to the familiar beginning with the standard metaphor of our age rooted in the image of the machine—devices of our own making that are accordingly understandable, purposeful, and repairable. Machine thinking leads some to regard climate destabilization as a solvable problem and, of course, as an opportunity to build a better world. “We can have it all,” says the author opines, “growth in the economy, a thriving business environment, and a solution to the climate crisis.” Would that it were so. Machine thinking is rooted in the Enlightenment era’s faith in progress, so machines beget better machines that beget still better ones. And better machines and more cleverness, it is assumed, will restore climate stability without disrupting our manner of living. But the Earth and its enveloping atmosphere are not simply machines and accordingly are not repairable. Nor is their “malfunction” a solvable problem as we understand those words.

Reliance on the discipline of economics rooted in the metaphor of “invisible hands” doesn’t clarify our plight much either. Humans are not the rational calculators assumed in economic models. And the common use of discounting marginalizes the prospect of future disasters so a new shopping mall is privileged over investments that reduce the scale of catastrophe, say, fifty years hence. Neither are the pre-analytic assumptions about human mastery of nature, infinite substitutability of technology for scarce natural resources, and the beneﬁcence of economic growth useful for adapting economic activity to the limits of the Earth.

What about Biblical narratives? There is, for one, a similarity of sorts between the story of Adam and Eve’s eviction from paradise and that of which we are now writing about our own self-eviction from the ten-thousand-year paradise that geologists call the Holocene into a hotter world that some call the Anthropocene. Perhaps a better story is to be found in narratives about End Times. Theologian Jack Miles, for instance, wonders what we will resolve to do once we discover that achieving sustainability is beyond our capacities and that we are living in the End Times, although not as told by rabid End-Timers like Pastor Tim LaHaye, co-author of the “Left Behind” books. Would our demise turn out to be our finest hour or simply a nasty and brutish final scene? Perhaps climate destabilization bears a resemblance to the issue of abortion writ large. Where the public debate about abortion has been focused on an individual fetus, climate destabilization carries with it the possibility of aborting many species forever and many generations of humans that would otherwise have lived. But in Jonathan Schell’s words:

How are we to comprehend the life or death of the infinite number of possible people who do not yet exist at all? … To kill a human being is murder, but what crime is it to cancel the numberless multitude of unconcepted people? In what court is such a crime to be judged? Against whom is it committed? … What standing should they have among us? (116)

This is a case of what Hannah Arendt once called “radical evil,” which Schell interprets as evil that “goes beyond destroying individual victims and, in addition, destroys the world that can in some way respond to—and thus in some measure redeem—the deaths suffered” (145). Climate destabilization, like nuclear war, has the potential to destroy all human life on Earth and in effect “murder the future” (168). But never having lived those not born will not suffer, will know no deprivation, and can make no claims against those who aborted the opportunity they might otherwise have had to live. Willfully caused extinction is a crime as yet with no name. There would be no judge, no jury, no sentence … simply a void and a great silence that would once again descend on Earth.

There are other metaphors and analogies that we could summon to help us begin to comprehend the full gravity of our situation, but all will be found wanting in one way or another. We are now in the era that biologist E. O. Wilson has called “the bottleneck,” for which we have no precedent and no very useful example. I have faith that humankind will emerge someday chastened but improved. But deliverance will require more than astute science and a great deal more than smarter technology—both necessary but insufficient. Science can describe our situation down to parts per trillion and help to create better technologies, but it can give us no clear reason why we should want to survive, why we deserve to be sustained on Earth, or why we should worry about the lives or well-being of generations whose existence now hangs in the balance. That is, rather, the function of deeper senses that we catalog with words like morality, ethics, and spirituality. But what kind of morality or ethics is remotely adequate when measured against the time spans necessary to restabilize Earth systems? I do not know. But with each turn of the screw it will be tempting to avoid asking such questions and give in to tradeoffs that privilege the living and damn those who reside only in the abstraction we call the future. And, for sure, there is no easy or perhaps good case to be made for current destitution except a bit more of it for the wealthy.

I do not presume to know what the content of that morality might be. Whatever it is, I doubt that it will be born in “deep thinking” characteristic of the academy or from philosophers debating esoteric points of obscure doctrines. I think the birth will be harder than that; messy and painful which is to say a philosophy born of necessity and of stories of real people caught in the acts of struggle, generosity, and failure. Perhaps it won’t be philosophy at all but rather a kind of practical worldview that emerges from the recognition of realities we’ve created and with which humankind must now contend for centuries to come. Let me suggest three illustrations of such a process. The first is taken from a friend who recently spent several months as a patient in a cancer ward. During hours of treatment he witnessed the growth of community among his fellow cancer patients. Once reticent to say much about themselves, under the new reality of a life-threatening disease they gradually became more talkative and open to thinking about their lives and listening to the experiences of other patients. Living in the shadow of death they were more open to ideas and people including, some that they formerly regarded as threatening or incomprehensible. They were less prone to arrogance and more sympathetic to the suffering of others. They
were less sure of once strongly held convictions, and more open to contrary opinions. No longer masters of their lives, their schedules, or even their bodies, many achieved a higher level of mastery by letting go of illusions of invulnerability, and, in the letting go, they reached a more solid ground for hope and the kind of humble but stubborn resilience necessary for beating the odds or at least for living their final days with grace.

Another possible narrative can be drawn from the experience of people overcoming addiction. Alcoholics Anonymous, for example, offers a twelve-step process to overcome addiction that begins with self-awareness and leads to a public confession of the problem, a reshaping of intention, the stabilizing influence of a support group, and a reclaiming of self-mastery to higher ends. The power of this narrative line is in the similarity between substance addiction and its collateral damages and our societal addictions to consumption, entertainment, and energy and their destructive effects on our places, selves, and children.

A third narrative comes from the haunting story of the Native American Crow Chief Plenty Coups, told by philosopher Jonathan Lear (2007). Under the onslaught of white civilization, the world of the Plains tribes collapsed and their accomplishments, disappeared along with their culture, sense of purpose, and meaning. At the end of his life, Plenty Coups told his story to a trapper, Frank Linderman, saying: “But when the buffalo went away the hearts of my people fell to the ground, and they could not lift them up again. After this nothing happened” (Lear, 2007, 2). Of course many things happened, but without the traditional bearings by which they understood reality or themselves nothing happened that the Crow people could interpret in a familiar framework. Lear describes Chief Plenty Coups’ courageous efforts to respond to the collapse of his civilization with “radical hope” but without the illusion that they could ever recreate the world they had once known. There were others, like Sitting Bull, who pined for vengeance and a return to a past before the juggernaut of American civilization swept across the Plains. Likewise, Ghost Dancers hoped fervently to restore what had been, but Plenty Coups knew that the Crow culture organized around the hunt and warfare would have to become something inconceivably different. The courage necessary to fight had to be transformed into the courage to face and respond creatively and steadfastly to a new reality with “a traditional way of going forward” (154).

What makes his hope radical, Lear says, “is that it is directed toward a future goodness that transcends the current ability to understand what it is. Radical hope anticipates a good for which those who have the hope as yet lack the appropriate concepts with which to understand it” (104).

It is clear by now that we have quite underestimated the magnitude and speed of the human destruction of nature but the rapid destabilization of climate and the destruction of the web of life are just symptoms of larger issues the understanding of which runs hard against our national psyche and the Western worldview generally. It is easier, I think, to understand the reality of dilemmas in places that have historic ruins and are overlaid with memories of tragedies and misfortunes that testify to human fallibility, ignorance, arrogance, pride, overreach, and sometimes evil. Amidst shopping malls, bustling freeways, and all of the accoutrements, paraphernalia, enticements, and gadgetry of a booming fantasy industry, it is harder to believe that sometimes things don’t work out because they simply cannot or that limits to desire and ambition might really exist.

When we hit roadblocks we have a national tendency to blame the victim or bad luck but seldom the nature of the situation or our beliefs about it. What Spanish philosopher Miguel de Unamuno called “the tragic sense of life” has little traction just yet in the U.S. because it runs against the national character, and we don’t read much philosophy anyway (de Unamuno, 1977).

A tragic view of life is decidedly not long-faced and resigned, but neither is it giddy about our possibilities. It is merely a sober view of things, freed from the delusion that humans should be about “the effecting of all things possible” or that science should put nature on the rack and torture secrets out of her as we learned from Francis Bacon. It is a philosophy that does not assume that the world or people are merely machines or that minds and bodies are separate things, as we learned from Descartes. It is not rooted in the assumption that what can’t be counted does not count as Galileo believed. The tragic sense of life does not assume that we are separate atoms, bundles of individual desires, unrelated hence with- out obligation to others or what went before or those yet to be born. Neither does it assume that the purpose of life is to become as rich as possible for doing as little as possible, or that being happy is synonymous with having fun. The tragic view of life, on the contrary, recognizes connections, honors mystery, acknowledges our ignorance, has a clear-eyed view of the depths and heights of human nature, knows that life is riddled with irony and paradox, and takes our plight seriously enough to laugh at it.

Whether aware of it or not, all of us are imprinted with the stamp of Bacon and the others who shaped the modern worldview. The problem, however, is not that they were wrong but rather that we believed them too much for too long. Taken too far and applied beyond their legitimate domain, their ideas are beginning to crumble under the weight of history and the burden of a reality far more complex and wonder-filled than they knew and could have known. Anthropogenic climate destabilization is a symptom of something more akin to a cultural pathology. So, dig deep enough and the “problem” of climate is not reducible to the standard categories of technology and economics. It is not merely a problem awaiting solution by one technological fix or another. It is, rather, embedded in a larger matrix; a symptom of something deeper. Were we to “solve” the “problem” of climate change, our manner of thinking and being in the world would bring down other curses and nightmares now waiting in the wings. Perhaps it would be a nuclear holocaust, or terrorism, or a super plague, or, as Sun Microsystems founder, Bill Joy, warns, an invasion of self-replicating devices like nanotechnologies, genetically engineered organisms, or machines grown smarter than us that will find us exceedingly inconvenient. There is no shortage of such plausible nightmares, and each is yet another symptom of a fault line so deep that we hesitate to call it by its right name.

The tragic sense of life accepts our mortality, acknowledges that we cannot have it all, and is neither surprised nor dismayed by human evil. The Greeks who first developed the dramatic art of tragedy knew that we are ennobled not by our triumphs or successes but by rising above failure and tragedy. Sophocles, for example, portrays Oedipus Rex as a master of the world—powerful, honored and quite full of himself but also honest enough to search out
the truth relentlessly. In his searching, Oedipus falls from the heights and that is both his undoing and his making. Humbled, blind, old, and outcast, Oedipus is a far nobler man than he had been at the height of his kingly power. Tragedy, the Greeks thought, was necessary to temper our pride, to rein in the tug of hubris, and to open our eyes to hidden connections, obligations, and possibilities.

We are now engaged in a global debate about what it means to become “sustainable.” But no one knows how we might secure our increasingly tenuous presence on the Earth or what that will require of us. We have good reason to suspect, however, that the word “sustainable” must imply something deeper than merely the application of more technology and smarter economics. It is possible and perhaps even likely that more of the same “solutions” would only compound our tribulations. The effort to secure a decent human future, I think, must be built on the awareness of the connections that bind us to each other, to all life, and to all life to come. And, in time, that awareness will transform our politics, laws, economics, philosophies, manner of living, worldviews, and politics.

**SOURCES**


**2007 Rachel Carson Distinguished Lecture**

**Eyes to See Otherwise**

**The World of Homero Aridjis**

Homero Aridjis

**Introduction**

Peter Blaze Corcoran

Rachel Carson would have been 100 years old in 2007. We name the Rachel Carson Distinguished Lecture series after her so that we can keep her spirit and her name alive for younger people who may not remember her literary contributions or her great book *Silent Spring* on the impact of pesticides on human health and also on all forms of life.

I would like to read a little bit of a Preface to a book she wrote 45 years ago. She wrote, “The modern world worships the gods of speed and quantity, and of quick and easy profit. Out of this idolatry, monstrous evils have arisen, yet the evils go long unrecognized. Even those who create them manage by some devious rationalizing to blind themselves to the harm they have done for society. As for the general public, the vast majority rests secure in childlike faith that someone is looking after them—a faith unbroken until some public-spirited person with patient scholarship and steadfast courage present facts that can no longer be ignored.”

Indeed, that’s what she did in her own life and in her own work. She writes, “Gone are the pastoral scenes in which chickens wander through the green fields or flocks of chickens scratch contentedly for their food. In their place are factories in which animals live our wretched existences without ever feeling...
the earth beneath their feet, without ever knowing sunlight or experiencing the simple pleasures of natural food.”

The crowding of boiler chickens and the revolting insanity of confined laying hens in tiny cages are just examples of this.

Homero Aridjis exemplifies the characteristics of Rachel Carson’s work that guide us at the Center for Environmental and Sustainability Education—the public policy based on sound science and ethics, active participation of an ecologically literate citizenry, and appreciation of the natural world through the literary arts and environmental education.

First, in terms of the public policy component, Homero is the president emeritus of International PEN, the worldwide association of writers. This is very significant in terms of his advocacy for writers who do not necessarily have the freedom to write—supporting and defending the human rights and the rights to free speech and free writing in many parts of the world where this freedom is not existing. He has been Mexican ambassador to the Netherlands and to Sweden. This coming week he will be heading back for Senate hearings to confirm his nomination as Mexican ambassador to unesco.

Secondly, in terms of activism, Betty Ferber, Homero’s wife who is here with us, formed with Homero the Grupo de los Cien, which is a group of 100 intellectuals, writers, and others who have worked very hard to ban commercialization of sea turtles, to protect the over-wintering habitat of the monarch butterfly, as well as the grey whale nursery. Homero is a very public figure speaking on behalf of nature.

Finally, in a reflection of Rachel Carson’s literary arts, Homero has published 36 books of poetry and prose. They have been translated into more than a dozen languages. He is widely considered to be one of Mexico’s greatest living writers. We thank you so much for coming, and thank you for all you’ve done in your public life.

---

We do not have permission to post this lecture online. A copy is available upon request by ordering a print version of “This Sense of Awe and Wonder.”

Please email us at cese@fgcu.edu to request a hard copy by mail.
Finding Beauty in a Broken World
An Ensemble for Earth
Alison Hawthorne Deming and Terry Tempest Williams

Introduction
Peter Blaze Corcoran

This evening I turn, as I have so often done, to the inspiration of a favorite quotation from Rachel Carson herself. In her last and posthumously published great work, The Sense of Wonder, she wrote, “What is the value of preserving and strengthening this sense of awe and wonder, this recognition of something beyond the boundaries of human existence? Is the exploration of the natural world just a pleasant way to pass the golden hours of childhood, or is there something deeper?” And she answered, “I am sure there is something deeper, something lasting and significant. Those who dwell as scientists or laymen among the beauties and mysteries of the Earth are never weary of life. Whatever their vexations or the concerns of their personal lives, their thoughts can find paths that lead to inner contentment and to renewed excitement in living. Those who contemplate the beauty of the Earth find reserves of strength that will endure as long as life lasts.”

Tragically, we are set an even more difficult task than merely to contemplate the beauty of Earth. In so many ways, the world as Rachel Carson knew it is broken. The beauty and bounty of Earth is not a given. And so our work is to rescue the diminished ecosystems upon which we utterly depend. In this hundredth anniversary year of Rachel Carson’s birth, we present an ensemble lecture that we hope will inspire you in this critical task of creating beauty, restoring beauty, and finding beauty in a heartbreaking world. We at the Center are drawn to Maine by the spirit of Rachel Carson, by the support of the Center by so many generous Maine people, and by the opportunity to bring together an ensemble of voices influenced by their respect of Rachel Carson and by the cultural and natural vitality of the North Atlantic coast.

Alison Hawthorne Deming is a prolific and wise poet and an essayist of increasing renown. She is a tenth generation New Englander and a direct descendent of Nathaniel Hawthorne. She’s a professor of creative writing at the University of Arizona and keeps New England ties on Grand Manan Island. In light of Rachel Carson’s love of monarch butterflies, I mention The Monarchs, a book-length sequence of poems resulting from a period in Alison’s life when she, as she puts it, apprenticed herself to the monarchs. In so many ways, Deming’s work helps us explore the theme of finding beauty in a broken world.

Terry Tempest Williams has written, “When onehungers for the light, it is only because one’s knowledge of the dark is so deep.” And so it is that Terry’s work always helps us through the present darkness of diminished democracy, social injustice, destruction of ecosystems, and all our post-modern plagues. She is an inspired teacher. At the moment she is the Annie Clark Tanner scholar at the University of Utah and the Wyoming Excellence Chair at the University of Wyoming. She’s been induced into the Rachel Carson Honor Roll. She helps us to find the lightness created by human efforts to overcome fragmentation and to find wholeness again.

At the Center we have a member of our Board of Advisors who is a Penobscot from Maine and he opens our board meetings with an invocation. Oannes Arthur Pritchker helps remind us of our original instructions and ties us and connects us back here to what he says, is “the place now called Maine.” Deanna Francis has lived, except for years away for formal education, on the mighty shores of Passamaquoddy Bay. She lives on Passamaquoddy Island. In light of Rachel Carson’s love of monarch butterflies, I mention Descendent, a book-length sequence of poems resulting from a period in the work helps us explore the theme of finding beauty in a broken world.

Invocation
Deanna Francis

I thank you, grandfathers, and I thank you, grandmothers. I thank my fathers and my mothers. I thank my brothers and I thank my sisters and I thank my brothers. And I thank all of the children.

I thank the Eastern direction of the ancestors. I thank them and ask them to come and be with us here for a little while this evening and to embrace the women that are going to be speaking, and to hold them because the work they have is so big. I give thanks to the Southern direction. I ask the ancestors and the spirits of the Southern direction to bring in the little one—the little child, the little boy and the little girl—that is in each and every one of us, so that the brightness in our hearts will be open to receive the words that are going to be coming from these women. With a broken heart, we can’t let anything in. We seek their help, we seek their abundant love, because they are so strong and we are so pitiful.

I give thanks for the Western direction. I give thanks for the darkness. I give thanks for the beautiful stars. I give thanks for all of our relatives that have gone and crossed over. I give thanks for them because we can call them to help us. We can ask them to come and bring their strength so that we can have peace, so that we can have humbleness to be able to do the work that we have been given to do at this time.

We give thanks for the Northern direction, where the unknown is, where the white wolf and the white bear has medicine for all of us.

It is the unknown that these women are able to tap into when they’re in their place with the pen, with their heart, with their mind, with their spirit, with their groundedness to our Mother, the Earth. I give thanks for that and blessings for these women, and all of you, and me too. Now our hearts are one and let’s stay there.
Alison Hawthorne Deming

A cormorant the size of a human thumb has been found in the Hohle Fels cave in Germany’s Swabian Mountains. One of three figurines carved from mammoth ivory, the find provides the earliest evidence that our archaic human ancestors made figural art more than 30,000 years ago, the period during which bison, mammoth and lion images began to transform European caves into shrines. All three carvings in the recently discovered cache depict animals: one horse’s head, one half-lion/half-human creature, and one bird with body and neck extended into the graceful tension of a cormorant rising toward water’s surface after a feeding dive, rising from the invisible underwater world into the air. The beauty of animals called these ancestors to acts of creation.

The figures, which do not appear to be the work of amateurs though they may be among the earliest art works made by human beings, are polished from constant handling, as one might rub a beech stone or hardwood burl letting the oil of one’s fingers raise the object’s sheen, while the thumb’s repetitive motion against that smoothness leads the mind to that clean place one comes to when staring into space and thinking. Rather than being savages, our forebears were sculptors, painters and contemplators, their minds like ours in a daydream. As long as we’ve been human, we’ve been making art. Or perhaps it is more accurate to place this eagerness to participate in creation at the center of what it is to be the animal we are: as long we’ve been making art, we’ve been human.

Art from the primal world draws the imagination back into the unthinkably deep well of time it took for the human mind, as we know it, to evolve. “We” may have been around as toolmakers, language users, dietary omnivores, cosmological celebrants, nomadic socializers and combatants for 500,000 to 2,000,000 years, depending what markers you use to start measuring humanity. But it is not until 40,000 to 100,000 years ago that fossil forms look indistinguishable from those of modern human beings. As we dig up more and more of the last remote places on Earth looking for the bones that will teach us the nature of what we are, we keep turning up art and asking, What does it mean?

It means what it is. Mammoth tusk transformed to water bird by a creature who, seeing the beauty and mystery of the bird, was moved to hold it in mind and hand, to become intimate with the bird, and so carved a likeness that would preserve and keep it close. And so begins the long human braiding of art, nature and the idea of the transcendent: the bird transends the limits of its birdness by flying through water, and the carving transcends the circumstance of the encounter with the water bird, prolonging the interaction for as long as hand and mind desire, and providing the opportunity to share it with others. Our deepest human memory, one so deep we cannot see the shape of it on the surface of our thinking, may be our capacity to read and preserve and share our encounters with animals. Early humans may have learned this capacity in surviving the threat of predators, but we get to carry it forward as acuity to animal beauty that gives meaning to our lives.

* * *

It is not only the glorious creatures that can inspire, so let’s look to the ant.

ANT ART

At the end of World War II, Jean Dubuffet began searching for spontaneous and anonymous types of art, works produced without regard for rules or conventions of the day. He called what he was looking for “Art Brut.” He wanted work that owed nothing to works on display in museums and galleries, but instead would appeal to humanity’s first origins. He gathered art made by self-trained marginal artists: psychiatric patients, prisoners, recluses, peasants, and nomads. He believed true art could be found where you least expected it, that it required secrecy and silence. Dubuffet’s collection of works made by individuals disconnected socially and psychologically from their society included statuettes made from chewed bread; drawings dictated by the dead; the 15,000-page saga made by a hospital janitor titled In the Realms of the Unreal featuring the seven “Vivian girls” (all male in gender); huge machines made of branches, rags, and wire lubricated with human excrement; pictures drawn in tincture of iodine with brushes made from locks of human hair; balloon drawings touched up with coffee grounds, tobacco juice, and wine, then browned over with a cigarette lighter; five-hundred tiny drawings, each containing thousands of miniscule faces, made by the Polish shopkeeper who, after the Germans occupied his town, took refuge in his brother’s attic, refusing entry to anyone and never left his confinement until his death twenty years later.

I have found works made by untrained artists in the back lot behind my desert home, dozens of cones randomly arrayed in an area twenty-feet square shaded by a large mesquite tree. The cones each have a collapsed center like a volcano and range in diameter from 6 to 9 inches across. The tallest are six inches high; the widest crater is nine inches across measuring from one crisp lip to the other, sides falling outward like a skirt. The cones are constructed of coarse brown sand, fine gravel no larger than peppercorns, the particles as smooth and regular as if they had passed through a flour sifter. The sifter, in this case, is the body of an ant. The ant hills lie in various phases of construction and destruction. Some long neglected have lost their shape, melted by rain into messy heaps. Some have been dug at by coyotes, claw
tracks gouged into the dirt scattering their symmetry into chaos. In the desert’s flowering seasons, the ant-hill may be skirted with yellow petals from pale verdure trees or purple petals from Texas Ranger shrubs, diaphanous tissue cut into shreds like confetti. In winter the site is still and lifeless. One day I found the anthills had become a working construction site with a ten-foot line of ants flowing into the colony and another line flowing out as workers delivered mesquite leaves to the farmers below. The ants flowed like water over a bumpy streambed, each bearer carrying a needle-like leaf over its head, so that it looked like a parade marshals. The ants staggered as they made their way along the dirt. I left them then returned hours later to find them still at work. I tore a leafy twig off the mesquite tree and tossed it on the ground a foot away from their parade line. Within seconds a handful of ants had branched off and begun severing the green from the wood, then flowing from their tributary back into the ant river.

Ants are little chemistry sets, sensitized for making and detecting scent. They get around by following the chemical trail left by ants that have gone before them, and they do so with minimal help from vision, hearing, and feeling. They learn by imitation, not teaching. Researchers following the scent trail of Atta texana, E.O. Wilson reports, calculate that one millimeter of trail pheromone would lead a column of ants three times around the Earth. Ants use their antennae to follow this trail, appearing to stagger as they first bring the right antenna over the vapor space, proceeding in that direction until losing the scent, then turning until the left antenna crosses the trail and heading in that direction until the ant then loses the trail, and so forth, so that following a straight line for an ant requires zigzagging left and right. The most elementary ant pheromone is carbon dioxide, which fire ants use to hunt subterranean prey. Ants can also produce alarm pheromones and attractant pheromones, a death pheromone signals the need to dispose of a corpse. They will remove anything placed in their nest, if it is marked with this chemical. Some ants make slaves, raiding nearby colonies and carrying prisoners back home to labor for their colony. They do this by spraying an alarm pheromone on their enemies, which frightens and disperses them, making them easy captives. Wilson calls these “propaganda substances,” one of which can provoke the victims to fight amongst themselves.

Most people’s response to insects is not to build a professional career out of a relationship with them. Most people are crept out by bugs. They arouse fears of infestation, toxicity, destruction, contamination, pestilence, and ultimately the occupation of the corpse by the devouring swarm. People slap them, sweep them, spray them, burn them, poison them, turn them one against the other to terminate them, these tiny agents of transformation that have lived for fifty million years on Earth. Their familiar will have their day with our meat and bones, clearing us up for the final judgment that I suspect will be made by no authority greater or lesser than Earth, which can only welcome us back as fresh material. I value the scientist’s eye for particulars and the patience that researchers exhibit in exercising that eye to understand the peculiarities of each creature’s existence. When I asked my friend Elizabeth Bernays, who has made a distinguished career of her relationship with insects, about my flower cone builders, she smiled as if she were boasting about some accomplished members of her own family. She told me they were leafcutter ants, and that their colonies go three-feet under the ground. They spread the flowers out to dry and when the petals have lost enough moisture the ants carry them down into the nest, a structure that is one of the largest and most complex made by any animal, where the ants use the flowers to farm gardens of fungus, and the fungus produces enzymes that break down the plant material into a form the ants can use. The queen ant, who may live for ten or twenty years, spends her entire life in the fungus garden.

I know it is wrong to call the flower cones art, a word that implies intentionality and an inner life rich enough to produce the contradictions that make art necessary. What I had seen as an aesthetic construction was an artifact of utilitarian enterprise, only a phase in the ants’ menu planning. But why is it that the arrangement of the petals is so symmetrical, the sculptural appeal so tactile, the pattern of cone building repeated with such precise craft? How do chemicals tell the mindless ant to create form, symmetry, pattern, beauty? Do human beings misapprehend art as a goal or product, when it too is an artifact of a process that meets a biological need? An artist does not need to make or eat poems to live, but as William Carlos Williams wrote, “men die miserably every day for lack of what is found there.” And can my apprehension of the artfulness of these objects make them art?

*I * *

I’ll close with two poems, including the title poem from Rope. This book has an epigraph from the wonderful French poet Saint-John Perse, who wrote, “One has only to serve/ like an old rope,” which is certainly helpful advice considering the enormity of the challenges that we face.

Rope
The man gathers rope every summer off the stone beaches of the North. There’s no sand in this place where the Labrador Current runs like an artery through the body of the Atlantic, channeling particles that once were glacial ice and now are molecules making not one promise to anyone.

The man gathers rope with his hands, both the rope and the hands worn from use. The rope from hauling up traps and trawl lines, the hands from banging into rocks, rusted nails, fish knives, winch gears, and bark.

The rope starts to pull apart fiber by fiber like the glacial ice, and the man wishes he could find a way to bind it back together the way a cook binds syrup or sauce with corn starch.

The rope lies in the cellar for years,coiled, stinking of the sea and the fish that once lived in the sea and the sweat of the man who wishes he could save one strand of the world from unraveling.

The Lake
The rowboat bobs and bangs at the dock. I want to float the canoe into the shallows where yellow water lilies bloom.

This place makes sense to me as a child. I can read the distance from dock to raft arms pulling to join the cousins out there a mile from our charming, oblivious, and haply drunken parents. Did I know anything then about beauty or need to? Yes.

I caught a sunfish once—a golden marvel the size of my hand. They’re no good for eating, someone said, throw it back.

I stared at the fine weave of its scales the pale calico of white, yellow, orange the body so thin. I knew the place it came from was deeper than I could ever see or dive to that beauty could come up from a dark and cold place and mercy was a skill my hands would have to learn.

Thank you very much.

Fall 2008 Rachel Carson Distinguished Lecture
Terry Tempest Williams

Thank you Alison, that was so exquisite. Deanna, I want to thank you for bringing me back to center. I’m sure I can speak for all of us that your voice reminds us of who we are in our deepest and highest selves. I didn’t realize how off-centered I had become watching too much television and listening to too many political speeches. Thank you Peter Blaze Corcoran, Jim Wohlpart, Mallory Marshall Haffenreffer, June LaCombe. It is so wonderful to be here in Maine to be able to celebrate this glorious late summer, early fall evening with all of you in Portland. I see so many friends.

I love Maine and I love this season. I have to keep explaining myself to my family. We’ve been migrants here in Maine since 2000. My father took it as a personal assault as a westerner. He won’t even come visit. He said, “I bet you’ve got a barn on your place.” A migrant alongside the merlins that are migrating across Mt. Desert Island, even as we speak. Monarchs, too. The last few nights in Surrey I awoke to loons flying over at night not as migrants, but as an ancient voice of this beautiful state of mind.

It is a privilege to be able to focus and honor the work of the Center for Environmental and Sustainability Education under the visionary leadership of Peter Blaze Corcoran and Jim Wohlpart. I can tell you, these men are heroes of mine, defenders of free speech at Florida Gulf Coast University. To Dean Donna Henry, thank you for your presence. A big part of my heart resides in your school. Peter Blaze and Jim are true grassroots community organizers, from Sanibel Island, to Fiji, to the landscapes of academia that reach into their own communities and homes. They are men and citizens of both word and deed.

“Sometimes I have my doubts of words altogether,” writes Robert Frost, “and I ask myself what is the place of them? They are worse than nothing unless they do something, unless they amount to deeds as in ultimatums or battle cries. They must be flat and final like the showdown in poker from which there is no appeal. My definition of poetry, if I were forced to give one,” says Frost, “would be this: words that have become deeds.” The Earth Charter, which means so much to Peter and Jim, are brave words. Call it a coda of compassion. In my mind it is not only about finding beauty in a broken world, but creating beauty in the world we find and sustaining it. The Earth Charter, to which this organization is devoted, is both word and deed.

We know in our bones that the world is broken. We know in our hearts that we are all complicit in our addiction to oil: we drive, we fly, we heat our homes. At whose expense? Governments and corporations around the world are fostering the old patterns that promote and profit from a consumptive model of growth. Who benefits? We know in the fullness of our being that the lives we are living are not sustainable. Someone is paying the price.

“We stand at a critical moment in Earth’s history, a time when humanity must choose its future.” The first sentence of the Preamble of the Earth Charter is central to our awareness, understanding, and evolution as a species. We can no longer afford to live in the denial of our role in the fracturing and fragmentation of the planet. We can begin to build a new ethical structure globally founded on empathy, not economics, a framework based on giving, not taking, and on a model of compassion, not competition. It seems to me that what we are seeing in our nation right now are two parallel paths: one that is connecting to the past and one that is seeking transformation. I believe that if we are going to move toward the path of transformation that we are all going to have to work very, very hard to make sure our words become deeds.

As I said, I’ve been a part-time resident of Maine since 2000. I feel like it is a secret in my heart. I’ve been deeply moved by the conservation community here in Maine, from the Maine Coastal Heritage Trust to the Blue Hill Heritage Trust to the National Resource Council of Maine, organizations large and small that are indeed collaborative. Another one of my heroes is here tonight, Roger Milliken, whose words are his deeds. From his work on the St. John River, to creating sustainable forestry practices in Downeast Maine, to working hand in hand with other fellow Mainers on the Penobscot River to restore native salmon populations. Roger, right here in Maine, is now the chairman of the Nature Conservancy. Roger, we honor you. Community. Again from the Earth Charter, “To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny.” Words and deeds, putting our love into action. Each of us finds our own path. Finding beauty in a broken world is finding beauty in the world we have.

Rachel Carson. Her path has impacted all of us. This woman, for whom the evening is dedicated, writes, “I am not afraid of being thought a sentimentalist when I say that I believe natural beauty has a necessary place in the spiritual development of any individual or any society. I believe that whenever we destroy beauty, or whenever we substitute something man-made and artificial for a natural feature of the earth, we have retarded some part of man’s spiritual growth. Our origins,” she says, “are of the Earth and so there is in us a deeply seated response to the natural universe which is a part of our humanity.”

My humanity has been tied to Utah prairie dogs. This is the piece of our mosaic that I bring to you tonight.

Tesserae: the basic unit of mosaic.

There are five species of prairie dogs unique to North America: black-tailed, white-tailed, Gunnison’s, Mexican, and the Utah prairie dog.

The surface of mosaics is irregular, even angled, to increase the dance of light on the tesserae.

Prairie dog country is an undulating landscape of small hills and holes.

Tesserae are irregular, rough, individualized, unique.

Prairie dogs literally change the land with their hands. If prairie dogs were to turn their front paws over toward the sky, you would see an extra Padding of skin to help them with this task.

If you are creating a horizontal line, place tesserae vertically.

Some mounds created from the excavation of burrows can become two feet high and ten feet in diameter. They serve as lookout posts so the prairie dogs can watch for danger.

Each glass tessera is a mirror reflecting light back.

When danger is near, a series of barks occur in a prairie dog chorus, often led by sentinel dogs guarding the periphery of the colony and picked up by dogs standing on the mounds. Word spreads quickly. They scramble and scurry across the desert, disappearing in one of the nearby holes to their burrows below.

Many colors are used to create one color from ash in mosaics. Different hues from the same color were always used in ancient mosaics.

Prairie dogs have a significant effect on biological diversity in prairie ecosystems. More than 200 species of wildlife have been associated with prairie dog towns, with over 140 species benefiting directly, including bison, pronghorn antelope, burrowing owls, pocket mice, deer mice, ants, black widow spiders, horned larks, and many predators such as rattlesnakes, golden eagles, badgers, bobcats, weasels, foxes, coyotes and especially black-footed ferrets.
There is perfection in imperfection. The interstices or gaps between the tesserarche speak their own language in mosaic. Prairie dogs create diversity. Destroy them, and you destroy a varied world.

“The Utah Prairie Dog is one of the six species identified, world-wide, as most likely to become extinct in the twenty-first century.”


When I read that, I realized the prairie dog of my childhood, another secret in my heart, was calling me. Shortly after I read that I had a dream.

The dream: I was walking along a dike that held the river in place. It was close to sunset. Up ahead, I saw a small figure that appeared to be standing. It was a prairie dog. It didn’t move. Finally, we were facing each other. The prairie dog spoke: “I have a story to tell.”

In the American West, one of the predominant myths that still lives is that of the rugged individual. The prairie dog stands for community. We are fragmenting our sense of community, Utah once understood this concept, in the beginning of its statehood. We are forgetting our communal roots as we are developing our communities.

Prairie dogs are Pleistocene mammals. They have survived the epic changes through time. Standing on their hind legs in the big wide open: What do they see? What do they smell? What do they hear?

They hear the sound of a truck coming toward their town, the slamming of doors, the voices, the pressure of feet walking toward them. From inside their burrow, they see the well-worn sole of a boot, now the pointed tow of the boot, kicking out the entrance to their burrow, blue Levi’s bending down, gloved hands flicking a lighter, the flame, the heat, then the hands shoving something burning inside the entrance, something is burning, they back up further down their tunnel, smoke now curling inside the darkness as the boot is kicking dirt inside, closing their burrow, covering their burrow, tampering the entrance shut. They are scurrying down, down, down, around, they cannot see, what they smell is fear, they cough and wheeze, their eyes are burning, their lungs are tightening, they cannot breathe, they try to run, turn, nowhere to turn, every one of them, trying to escape, to flee, but all exits and entrances of their burrows have been kicked closed. The toxic smoke is chasing them like a snake, an invisible snake herding them toward an agonizing death of suffocation, strangulation, every organ in spasm, until they collapse onto each other’s bodies, noses covered in blankets of familiar fur, families young and old, slowly, cruelly, gassed to death.

The truck drives away, the American flag is flapping in the wind, the red, white, and blue banner of the American West that says the rights of private property take precedence over the lives of prairie dogs who are standing in the way of development.

Nearly four hundred Utah prairie dogs disappeared in the summer of 1999 at the Cedar Ridge Golf Course in Cedar City, Utah. It is believed they were murdered, gassed to death. Two federal agents investigated the crime. This is a federal criminal offense. Penalties for killing or attempting to kill the federally protected animals range from fines of up to a hundred-thousand dollars to one year in prison. Some say locals know who did it and are glad they did. Other locals are outraged. Nobody is talking. Both sides offered rewards for the offender’s arrest.

Cedar City is a small town. The killers were never caught.

Iron County commissioner Gene Roudy has said, “I think it’s a crime against society that a prairie dog can move into your front yard and you can’t take care of it.”

Whose society?

One day a shovel unearths a day of its own.

A terrible beauty is born.

Everything that happens to us, everything that we say or hear, everything we see with our own eyes or we articulate with our own tongue, everything that enters through our ears, everything we are witness to (and for which we are therefore responsible) must find a recipient outside itself… Everything must be told to someone.

At night, putting your ear to the ground, you can sometimes hear a door slam.

How many millions lost their homes to clear the ground?

How many homeless

Wandering, improvisatory

As new deserts move up

The sight made us all very silent

We’ve got to go underground therefore, like seed, so that something new something different, may come forth. It isn’t time that’s required it’s a new way of looking at things.

Night-season. I think that is a lovely phrase.

“We are living amid a sixth extinction,” writes Niles Eldredge, a curator at the American Museum of Natural History, “one that, according to the Harvard biologist E.O. Wilson, is costing the Earth some 30,000 species a year. Biologists estimate that there are at least 10 millions species on Earth right now. At this rate, the vast majority of the species on Earth today will be gone by the next millennium.”

Who cares?

“Only if we understand can we care. Only if we care will we help. Only if we help shall they be saved.”

JANE GOODALL.

What will we lose if prairie dogs disappear from North America?

In 1950, government agents proposed to get rid of the prairie dogs on some parts of the Navajo Reservation in order to protect the roots of sparse desert grasses and thereby maintain some marginal grazing for sheep. The Navajo elders objected, insisting, “If you kill all the prairie dogs, there will be no one to cry for the rain.”

The amused officials assured the Navajo that there was no correlation between rain and prairie dogs and carried out their plan. The outcome was surprising only to the federal officials. The desert near Chilchinhito, Arizona, became a virtual wasteland. Without the ground-turning process of the burrowing animals, the soil became solidly packed, unable to accept rain. Hard pan. The result: fierce runoff whenever it rained. What little vegetation remained was carried away by flash floods and a legacy of erosion.

If you take away all the prairie dogs, there will be no one to cry for the rain.

Clay colored monks dressed in discreet robes of fur stand as sentinels outside their burrows watching, watching as their communities disappear one by one, their hands raised up in prayer.

I like to think of the Earth Charter as a promise to our planet. We will be present with you. We will not turn our backs on the poverty of our brothers and sisters. We will not walk away from our commitment to face whatever the future may bring. We will watch. We will listen. We will speak. We will act on behalf of a “reverence for life.”

My own path has been a struggle of how to live and love with a broken heart. Deanna, you remind us: We sing. We sing together. My path has taken me these last eight years from the mosaics of Ravenna, Italy, to the prairie dog towns of Bryce Canyon National Park in Utah, to the healing fields of Rwanda, literally creating a genocide memorial out of the rubble of war.

“I want to tell you a story,” says Louis as we sit on Mama Chakula’s porch, where we met almost two years ago.
“There is a woman who was married to a pastor... It was a happy family. Some say they were a family of six; others say they were eleven. The woman was away, and when she returned, she saw how the Inter-ahamwe were butchering her children on the ground along with her husband.

“After the war, the man who murdered her family came back from the Congo, and when Gacaca called him to explain what he had been accused of, he said ’I accept everything I have been charged with, and from the depth of my heart, I apologize.’

“The woman said, ’I saw everything happen. I know you killed my family. I loved my children and my husband. I am alone. I have nothing, but I now choose to forgive you and take you into my home. You will live with me, and I will do whatever it takes to make you feel like my own son.’

“Can you be in the same shoes as this woman?” Louis asks.

Louis then says, “Rwanda is struggling with peace one person at a time. This is as hard as growing wheat on rock. We are finding our way toward unity and reconciliation on a walkway full of thorns, and we are walking barefoot.”

He stands up and walks over to the balcony that overlooks Gisenyi into the Congo where he was born.

“We are trying to forgive, but to forgive is to forget, and we cannot forget. Perhaps there is another word. I am searching for that word.”

---

**Finding Beauty in a Broken World**

*An Ensemble for Earth*

Alison Hawthorne Deming and Terry Tempest Williams

Portland Museum of Art
Portland, Maine

Friday, September 5, 2008, 5:30pm

Thank you Florida Gulf Coast University for reminding me what a fortunate person I am... for making this work of bringing our message to the world possible... and thank you President—and Mrs.—Bradshaw. Thank you Jim Wohlpart. Thank you Board of Advisors members June LaCombe, Armand Ball, Jack Crocker, Larry Amon, Oannes Pritzker, Louise Johnson, Marcel Greene, Rick Clugston, Joe Shepard, and Donna Price Henry. I would like to thank our hosts Peter and Mallory Henfenreffer, our Host Committee Members, Faithful Student Assistants, and Distinguished Guests.

I realize this is not the Rachel Carson Distinguished Lecture, but I’m pleased to share a few ideas with you! I was encouraged by Advisor June LaCombe and Advisor Terry Tempest Williams to share my insights and concerns from twenty years of research in the South Pacific. “Islands in a Gathering Storm” is an ominous title for a talk at a celebration— but I returned from my work in the gorgeous and threatened islands of Oceania convinced that the storm of climate change is gathering with a fearsome inevitability. My brief remarks are in three parts of three parts each.

First, I want to introduce you to the extraordinary characteristics of the South Pacific Islands. Second, I want to draw similarities between the South Pacific Islands and barrier islands of Southwest Florida.

Third, I want to suggest what we what we might do to try to prevent the crisis of climate change and variability. Although the South Pacific is far away and exotically different, we have many similarities in the problems we face in the South Seas and Southwest Florida.

First, we share a high degree of reliance on natural resources for our major industries of tourism and agriculture and we share vulnerability of fragile ecosystems to degradation and destruction from rising seas and increasingly severe storms.

Second, we must connect our current actions to our past and the future. Threatened islands of Oceania convinced that the storm of climate change is gathering with a fearsome inevitability. They are in a state of profound denial. It is not only difficult to imagine the Earth dying, it is disempowering and despair-inducing. We must find ways to fire our prophetic and poetic imagination toward solutions—like Sanibel Island. Yet, as John Donne wrote, “Therefore, never send to know for whom the bell tolls; it tolls for thee.” And then he concludes with what we must surely consider sound advice in drawing the similarities of the South Pacific and Southwest Florida: “By this consideration of another’s dangers, I take mine own into contemplation and so secure myself.”

So, what might we do? What do island dwellers do when a great storm is gathering? First, we must acknowledge the catastrophic nature of what we are facing and the paralysis of our response. This failure to act leads us to a difficult and psychologically-complex dimension of the gathering storm. I believe we are in a state of profound denial. It is not only difficult to imagine the Earth dying, it is disempowering and despair-inducing. We must find ways to fire our prophetic and poetic imagination toward solutions of hope. I think our Advisor Maxine Greene’s analysis of Camus’ *The Plague*, Dr. Tarrou recognizes that the plague can be understood as a metaphor for people’s indifference and distancing, and she adds, thoughtlessness. He finds the wit and creative imagination to organize people into squads to fight the disease and make it the moral concern of all because, as she says, everyone carries the potential for the plague of indifference. Yet this is overcome by imagination. Second, we must connect our current actions to their long-term effects. The American way of life with its overconsumption and enormous output of greenhouse gases is causing untold devastation in the far-off South Pacific Islands where we do not see, much less take responsibility for, the results of our actions. I think we must and can change our consciousness. We can expand our sense of awareness of
Working on Behalf of the Beauty and Bounty of Earth
An Earth Charter Scholars Panel

Steven C. Rockefeller and Mary Evelyn Tucker

In 1951, at the height of the Korean War, Rachel Carson gave a speech that contained her first reference to the anxieties of living in the “atomic age.” First Lady Truman was in the audience. The book to which she refers is her classic The Sea Around Us.

She said: “After my book was published I began to receive a great deal of mail from people of all ages, and both sexes, and of all degrees of education. They have made it clear that men and women in all walks of life are responding in a surprising way to what I have written about the ocean. They are finding it something that is helping them face the problems of these difficult times. That “something” is, I think, a new sense of perspective on human problems. When we contemplate the immense age of earth and sea, when we get in the frame of mind where we can speak easily of millions or billions of years, and when we remember the short time that human life has existed on earth, we begin to see that some of the worries and tribulations that concern us are very minor. It has come to me very clearly through these wonderful letters that people..."
everywhere are desperately eager for whatever will lift them out of themselves and allow them to believe in the future.”

For many of us, this is the Earth Charter. And while a just and sustainable future is by no means assured, we believe it is worth working for—a sustainable and peaceful future is humankind’s dream. As Thomas Berry tells us, the dream drives the action.

**Universal Rights and Responsibilities**

The Universal Declaration of Human Rights and the Earth Charter

Steven C. Rockefeller

It is an honor to be here with you to participate in the Earth Charter International. It participated in conferences celebrating this historic event, and we used this opportunity to reflect on the relation between the Universal Declaration and the Earth Charter. Both documents are very valuable educational instruments in addition to their other functions, and I would like to share with you some thoughts on their relationship. In addition, at this critical moment in the evolution of civilization when humanity faces massive ecological, economic, and social challenges and suffering is widespread in every society, it is a good time to stop and reflect on the values that are the promise of a better world.

Historians will come to recognize, I believe, that one of the most significant accomplishments of the 20th century has been the development of international agreements on shared human values and the emergence of a new global ethics. This has been achieved in and through international, cross-cultural dialogue initiated by the United Nations. This process began with the drafting of the U.S. Declaration of Independence of 1776, the U.S. Declaration of Independence of 1789, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

At the outset, it is useful to note the basic ideas and values that form the foundation of the ethical vision in the Universal Declaration of Human Rights, which was adopted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

The Universal Declaration of Human Rights

At the outset, it is useful to note the basic ideas and values that form the foundation of the ethical vision in the Universal Declaration of Human Rights, which was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.

Initially the Universal Declaration of Human Rights was drafted immediately after World War II by the newly formed UN Commission on Human Rights chaired by Eleanor Roosevelt. The Universal Declaration further develops the concept of human rights found in the British Bill of Rights of 1689, the U.S. Declaration of Independence of 1776, the U.S. Bill of Rights, and the French Declaration of the Rights of Man and Citizen of 1789. These documents declare that all men are born free and equal and the purpose of government is to protect their rights and freedoms.
uted to the end of colonialism and continues to be a force in the struggle against discrimination of every kind and all forms of oppression. Further, it establishes the principle that how governments treat their own citizens is not just an internal matter; it makes governments accountable to the larger human family with regard to their human rights record.18

The Earth Charter, Universal Responsibility, and Sustainability

Like the Universal Declaration, the Earth Charter has been designed “as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed” (Earth Charter Preamble). There are two general points to be made when comparing the Universal Declaration of Human Rights and the Earth Charter and considering how these documents complement each other. First, the drafters of the Universal Declaration and the Earth Charter recognized the importance of both universal rights and universal responsibilities. However, the emphasis in the Universal Declaration is almost entirely on human rights, and the emphasis in the Earth Charter is primarily on human responsibilities. Taken together, the two documents provide the balanced understanding of rights and responsibilities and their interrelationship that is needed in the 21st century.

The Universal Declaration recognizes in Article 26 that “everyone has duties to the community” as well as individual rights. The Earth Charter is designed as a declaration of global interdependence and universal responsibility. It considers human rights in this context. It reaffirms the vision of human rights in the Universal Declaration and related international law as a fundamental part of the new global ethics, emphasizing that the promotion and observance of human rights is a basic responsibility of everyone. Nine principles in the Earth Charter—two main principles (7 and 12) and seven supporting principles (2a, 3a, 9a, 11a, 12b, 13a and 13b)—refer explicitly to human rights.

Second, the Earth Charter sets forth a larger and more inclusive vision of shared values and common ethical standards than one finds in the Universal Declaration, reflecting the influence of the international environmental and sustainable development movements that took form during the last three decades of the 20th century. The Earth Charter integrates the human rights agenda into this more comprehensive ethical framework, making clear the interdependence of human rights, respect for nature, environmental conservation, the eradication of poverty, equitable socio-economic development, democracy and peace.

When the Universal Declaration was adopted in 1948, the United Nations was focused on the issues of collective security, human rights, and equitable development. The degradation of the environment was not yet viewed as a major problem by the international community. This did not begin to change until the United Nations Stockholm Conference on the Human Environment in 1972. The concept of sustainable development was not introduced into United Nations deliberations until the 1980s. The most important influences in this regard were publication of the mncu World Conservation Strategy in 1980 and Our Common Future, the report of the World Commission on Environment and Development, in 1987.

Environmental Justice, Intergenerational Responsibility, and Respect for Nature

The focus of the Earth Charter on universal responsibilities and on sustainable ways of living leads to an emphasis on three very important ethical ideas not found in the Universal Declaration and to a clarification of the limits to human rights. First of all, the Earth Charter expands the Universal Declaration’s vision of social justice and human rights with its vision of environmental justice and the right to a healthy environment and essential natural resources such as clean air and water. In the past, there has been tension between human rights advocates concerned about socio-economic development and environmentalists concerned about the impact of development on ecosystems and biodiversity. However, over the past twenty-five years these groups have increasingly found common ground in and through a deepening understanding of the interdependence of people and ecosystems and a recognition of the principle of environmental justice involving the idea of a basic human right to a safe and healthy environment.

A number of international environmental declarations such as the Stockholm Declaration (1972), the World Charter for Nature (1982), the Rio Declaration (1992), and the United Nations Millennium Declaration have laid the groundwork for recognition of a right to a healthy environment, but they do not contain an explicit affirmation of such a right. Some regional human rights treaties such as the African Charter on Human and Peoples Rights (1981) and the American Convention on Human Rights in the Area of Economic, Social, and Cultural Rights (1988), and other regional agreements like the Aarhus Convention (1998) ratified by the European Community do recognize this right.19 It is also recognized in sixty national constitutions. Building on these declarations, treaties, and constitutions, the Earth Charter contains a very strong formulation of this principle, which reads: “Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health and spiritual wellbeing, with special attention to the rights of indigenous peoples and minorities” (Principle 12).

Earth Charter Principle 9a sets forth certain basic rights regarding the environmental and economic conditions that must be secured in order to protect the right to a healthy environment and eradicate poverty. These rights “to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation” include and go beyond what one finds in the Universal Declaration and more recent human rights treaties. Principles 12 and 9a provide an especially good example of the interdependence of human rights and sustainable development. Secondly, recognition that environmental degradation will have a devastating impact on the quality of life of future generations has led to a new concern with intergenerational responsibility as fundamental to the ethics of a sustainable way of life. The Earth Charter, therefore, adds to the vision in the Universal Declaration an explicit call for recognition of the needs and rights of future generations with a special emphasis on preservation of the integrity of Earth’s ecosystems. Principle 4, for example, is a call to “secure Earth’s bounty and beauty for present and future generations.”

Thirdly, recognizing the interdependence of humanity and nature, as well as all peoples, the Earth Charter states in the Preamble: “in the midst of a magnificent diversity of cultures and species we are one human family and one Earth community with a common destiny.” The Earth Charter affirms in Principles 1 and 1a that all life forms have inherent value, not just members of the human species, and all are worthy of respect regardless of their utilitarian value to people. The Earth Charter, therefore, expands the vision of ethical responsibilities to include respect and care for the whole community of life, of which humanity is one interdependent part. In addition to issues of environmental justice and wellbeing for people, here lies another fundamental reason for ecological responsibility. The Earth Charter’s ethical vision is summarized in the Preamble in the statement that “it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.”

By considering human rights in the light of the

“Another distinctive aspect of the Earth Charter’s vision for a better world is its recognition of the importance of human spiritual development for the achievement of a sustainable way of life and its identification of a number of widely shared spiritual attitudes and values that support ethical responsibility.”

Steven C. Rockefeller, 2009 Rachel Carson Distinguished Lecture
goal of sustainability and the principles of environmental justice, intergenerational responsibility, and respect for nature, the Earth Charter clarifies the relation between rights and responsibilities, specifying certain limits to the exercise of human rights and fundamental freedoms. The Universal Declaration acknowledges in Article 29 that a person’s rights and freedoms may be limited by law in order to protect the rights and freedoms of others and the general welfare. In accord with this view and the concept of environmental justice, the Earth Charter in Principle 2a, for example, states “that with the right to own, manage and use natural resources comes the duty to prevent environmental harm and protect the rights of people.” Along the same lines, Earth Charter Principle 4a asserts, “that the freedom of action of each generation is qualified by the needs of future generations.”

Earth Charter Principle 7, which contains a fundamental guideline for achieving sustainability, sets limits to the right to development. It calls for “patterns of production, consumption, and reproduction that safeguard Earth’s regenerative capacities, human rights, and community well-being.” The Earth Charter establishes a general guideline directly relevant to the relation between rights and responsibilities in Principle 1b, which asserts, “that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.” This principle helps to clarify the meaning of the concept of “common but differentiated responsibilities,” which is cited as a fundamental guideline in the United Nations Framework Convention on Climate Change (1992) and the Rio Declaration (1992).

Some international lawyers distinguish environmental human rights and ecological human rights. Environmental human rights affirm the right to a safe and healthy environment along the lines of the Earth Charter Principle 12. Ecological human rights involve viewing human rights from a biocentric perspective and imposing limits on the exercise of human rights in the light of humanity’s responsibility to protect and restore the integrity of Earth’s ecosystems. In the Earth Charter both concepts are at work.

The Rights of Nature
When considering the Earth Charter and human rights, it is important to note that the Earth Charter does not use rights language. The principle of human rights is related to non-human species and the larger community of life. The Earth Charter recognizes that every life form and all living beings are worthy of respect and moral consideration, but it does not refer to animal rights or the rights of nature. During the drafting process, some individuals and groups, including the environmental philosopher Thomas Berry, strongly supported use of such language in the Earth Charter. However, the Earth Charter Commission concluded that there was not a consensus on this issue in the emerging global civil society and, therefore, the Earth Charter should not make reference to the rights of nature.

The call for respect and care for the community of life in the Earth Charter can, of course, be used to support the concept of the rights of non-human species. Rights language is useful primarily as a legal mechanism. The strongest argument for using rights language with reference to animals and ecosystems is that it could be a way to clarify and to establish legally humanity’s responsibilities in relation to the larger community of life and to facilitate legal enforcement. United States legislation like the Endangered Species Act and International treaties such as the Convention on International Trade in Endangered Species (cites) are steps in this direction. International documents like the World Charter for Nature and the Earth Charter have established the ethical foundation for the legal use of rights language to protect the greater community of life. This possibility certainly merits serious consideration.

Diversity, Poverty, and Governance
There are a number of other ways in which the Earth Charter extends and strengthens the ethical vision in the Universal Declaration. In the Preamble, Principle 1, Principle 5, and the conclusion entitled, “The Way Forward,” a special emphasis is put on the value of diversity, especially biological and cultural diversity and gender equality. The Universal Declaration affirms the equal rights of men and women in its preamble, but it does not include a principle on gender equality. Reflecting the fundamental importance of the liberation of women for the achievement of sustainable development, the Earth Charter in Principle 11 calls for “gender equality and equity” and “universal access to education, health care and economic opportunity.” Earth Charter Principles 12 and 13 give special recognition to the rights of indigenous peoples, which have long been neglected by the international community.

The Universal Declaration addresses the problem of poverty by calling for freedom from want and affirming in Article 25 “that everyone has a right to a standard of living adequate for the health and well being of himself and of his family.” The Earth Charter contains in Principle 9 an explicit call to eradicate poverty as an ethical, social and environmental imperative.” In addition, Principle 10 sets forth a basic principle that should govern economic development. It states: “Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.” This principle is designed to make clear that economic development is not an end in itself and should be regarded first and foremost as a means for promoting equitable human development. Businesses are entitled to make a profit, but the well-being of people, including observance of human rights, and sustainability should be the fundamental objectives of an healthy economic system.

The Earth Charter also contains other principles and guidelines for good governance that are of fundamental importance in the effort to secure human rights and to protect the environment. For example, Principle 13 states: “Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making and access to justice.” The Earth Charter also takes the position that in the transition to a sustainable future, responsibility for governance should be a common but differentiated responsibility. “The Way Forward” asserts:

- Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

The Spiritual Dimension of a Sustainable Way of Life
Another distinctive aspect of the Earth Charter’s vision for a better world is its recognition of the importance of human spiritual development for the achievement of a sustainable way of life and its identification of a number of widely shared spiritual attitudes and values that support ethical responsibility. The Earth Charter states “that when basic needs have been met, human development is primarily about being more, not having more” and it affirms “the intellectual, artistic, ethical and spiritual potential of humanity.” It calls for “a change of mind and heart.” Among the spiritual values cited in the document are: reverence for the mystery of being, gratitude for the gift of life, humility regarding the human place in nature, reverence for life, compassion, love, and the joyful celebration of life. The spiritual practice outlined in the Earth Charter is about right relationship, and the goal is a culture of nonviolence and peace. Principle 16 on peace is the last principle in the Earth Charter because implementation of the preceding fifteen principles is a prerequisite for the realization of peace. In Principle 16 peace is defined as “the wholeness created by right relationship with oneself, other persons, other cultures, other life, Earth and the larger whole of which all are a part.”

Much more could be said about the Universal Declaration of Human Rights and the Earth Charter, but I would like to conclude by reiterating this fundamental point. These two documents together provide a balanced vision of the universal rights and social and ecological responsibilities that are at the core of the emerging new global ethics. It is these values and principles that should guide decision making as our leaders work to reconstruct the global economy, eradicate poverty, protect planetary ecosystems, and promote collective security.
As we survey our human prospects at present, we find our global situation fraught with particular irony. Over the past century, science has begun to weave together the story of a historical cosmos that emerged some 14 billion years ago. The magnitude of this universe story is beginning to dawn on humans as we awaken to a new realization of the vastness and complexity of this unfolding process. At the same time that this story is becoming available to the human community, we are becoming conscious of the growing environmental crisis and of the rapid destruction of species and habitat that is taking place around the globe. Just as we are realizing the vast expanse of time that distinguishes the evolution of the universe over some 15 billion years, we are recognizing how late is our arrival in this stupendous process. Just as we become conscious that the Earth took more than 4 billion years to bring forth this abounding life, it is dawning on us how quickly we are foreshortening its future flourishing. Living in the midst of this extinction period is one of the greatest challenges for the human spirit. As the Preamble to the Earth Charter notes, “We stand at a critical moment in Earth’s history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise.” From where will we derive hope and nourishment?

Clearly, the nourishing of the human spirit and imagination is what is at stake in our present moment—a spirit and imagination that is shriveling before our very eyes with an anguish and confusion that is heart wrenching to see. The human spirit and imagination is deeply entwined in these living forms around us. Their destruction is diminishing our capacity to dream and to hope. Without vibrant oceans and rivers, without lush quiet forests, without majestic mountains and craggy peaks, without the movements and sounds of animals about us we will create a silence even larger than the silent spring Rachel Carson predicted. The silence will engulf us in the sound of our own lament. This lament will not end soon for we are just beginning to write the eulogies, to sing the requiems, to plant the markers for life that is disappearing before our very eyes. And this is true in areas that are urban and suburban, as well as rural and wild.

We are dwelling in a period of mass extinction. Loss is all around us. We are engulfed by it and at the same time we are nearly blind to it. Yet we feel in our bones some kind of unspeakable angst that will not leave us in the depths of night or even at daybreak when the birds greet the sunlight again. This crushing feeling of unstoppable destruction is holding us back from acknowledging the tears that slip out unnoticed at unexpected times. Such loss of life demands not only mourning, but also recognition that we are in a huge historical whirlwind. It will require no less than every part of ourselves to find our way out. Are we like Job struggling to hear the call of life in the midst of the whirlwind of inexplicable loss? Or are we like Jacob wrestling with the angel of life in the presence of death? Or are we like Noah collecting and counting the animals, birds, reptiles, and amphibians that will pass through this hourglass of extinction with us?

We are grooping; we are limping; we are struggling. But in this grooping, in this dark night, we seek to return to who we are as children of the Earth. We are beings of Earth who feel the mysterious rhythms of life unfolding in the movement from sunrise to sunset, from the migrating patterns of birds and wild animals, from the call of whales in the depths of the oceans, from the leaping and twirling of animals and children at play, from the smell of spring soil appearing through winter’s snow. All of it sings to us in the movement of seasons as the planet finds its way around the sun and back again. It is these movements that will ground us anew in the Earth that has brought forth and sustained life for billions of years.

Rediscovering our purpose as humans to enhance life, not destroy it, will be crucial to our future direction. The Earth Charter can help us embrace our still evolving role as children of the Earth and as a planetary species. No longer are we citizens of nations alone but of the entire globe. Our allegiance is moving ever outward from family, society, state, continent, to the blue green planet that is home. There is no time for wavering. Rather, we need to move carefully but confidently into the challenge of becoming a beneficial planetary species. To do otherwise is to risk the destruction of life on the planet. We have a choice facing us.

We are currently at sea but we know somehow that our meddling through will be crucial to finding our way back home once again. Patience, courage, and endless endurance are required in this process and maybe a dash of humor and of hope will steer us through the whirlwind. The lights from the shore are there if we can only come up to the deck to see them and be guided by them. In a dark moonless night this requires a new kind of learning of currents, of winds, and of stars for navigation. Our Odyssey is at hand. Our hope is that the vast mysterious processes of the Earth will guide us home once again. How will we find our way? Perhaps through a sense of our immense journey.

Since the earliest days of human civilization, we have struggled to understand and define our place in the universe. Many cultures throughout history have organized themselves around their fundamental accounts concerning the universe, the place of the human, and the question of why we are here. The earliest human groups relied upon oral stories that would have been told around the fire or in ceremonial practices. In the classical civilizations, cosmological accounts were carried by sacred scriptures such as the Ramayana in India or the Hebrew Bible in the Middle East.

Chinese Confucian cosmology places the human in a series of concentric circles in which we are embedded. This ranges outward from the person, to the family, to the educational world, to the larger society, to the government, to nature, and to the cosmos itself. All of this encourages humans to see themselves not as isolated or alienated but as profoundly interrelated. Nature in this cosmology is a dynamic, changing, life filled entity with which humans can harmonize their lives—on a daily or seasonal basis. Over the last two centuries however, and particularly in the West, the scientific paradigm has taken root and, in many cases, become the dominant philosophy. Through the scientific method, science tends to objectivize what it describes. In recent years, science and religious cosmology have therefore co-existed uneasily. Some scientists and philosophers have come to the conclusion that the universe, while appearing to follow certain natural laws, is largely a random and accidental accretion of objects, with little meaning and certainly no larger purpose.

However, during the last few centuries the evolutionary account of the universe has also entered human awareness. The opportunity of our time is to narrate this new empirically grounded story not just as a string of facts but in a way that might help humans orient themselves in the universe in a new way. That is, the challenge is to narrate the scientific
facts within an overall inquiry concerning those fundamental questions humans have faced in every era of history: Where did we come from? Why are we here? How, do we belong?

We have begun to weave together the story of a historical cosmos that emerged some 13.7 billion years ago. The magnitude of this universe story is beginning to dawn on humans as we awaken to a new realization of the vastness and complexity of this unfolding process. At the same time we are absorbing news about the destruction of our natural environment and its effect on humans around the planet.

As we see our present interconnected global challenges we know that the obstacles to the flourishing of life’s ecosystems and to genuine sustainability are considerable.

In the midst of these challenges, we are being called to the next stage of evolutionary history. This requires a change of consciousness and values—an expansion of our worldviews and ethics. For the evolutionary life impulse moves us forward from viewing ourselves as isolated individuals and competing nation states to realizing our collective presence as a species with a common origin story and shared destiny.

The human community has the capacity now to realize our intrinsic unity in the midst of enormous diversity. And, most especially, it has the opportunity to see both unity and diversity as arising from the dynamics of the evolutionary process itself. We have for the first time an integrated story of the evolution of the universe and Earth that shows us our profound connectedness to this process. The Earth Charter embodies the hope for expanded vision and inspiring values for the larger Earth community as it seeks to build common ground for a sustainable future.

We are still discovering the larger meaning of the story and our responsibility within it. This story enhances the uniqueness of each human, deepens the sense of inner subjectivity and conscious self-reflection, and affirms the attraction of eros, kinship, and friendship that enlivens every life.

We need, then, to step back to assimilate our cosmological context. If scientific cosmology gives us an understanding of the origins and unfolding of the universe, human reflection on scientific cosmology gives us a sense of our place in the universe. And if now we are so radically affecting the story by destroying our own nest, what does this imply about the possibilities of the flourishing of Earth’s ecosystems for future generations? This is our challenge as we search for hope and meaning in fragmented times.

More than ever before in human history we are facing a moment of immense historical consequence. Our planet has evolved over four and a half billion years. It has brought forth complex and beautiful life forms. We are latecomers to the Earth community. Our presence and our technological powers are causing the climate to change, species to go extinct, and ecosystems to be diminished. We have a staggering great work now before us.

In over a hundred and fifty thousand years of our presence on this blue-green planet we have never been asked to renew the face of the Earth. That is what we are being asked to do now. To renew our wetlands and restore our woodlands. To rehabilitate cities and countryside in a sustaining way. To participate in healthy cycles of carbon and nitrogen. To become a life-enhancing species on a life-giving planet. As the Preamble to the Charter notes, this is a task of considerable urgency.

The possibility that is held forth for us as humans in renewing the face of the Earth is to become worthy of our name Homo sapiens sapiens. Perhaps we had to be named twice, sapiens, so we could reflect on what our gift of self-reflection would mean over time. We have to earn the name of wisdom. And earning our wisdom means being rooted in our story. This great story of the evolution of Earth and of humans is what makes for grounding in an animating vision and enlivening values that may well enhance the flourishing of the Earth community.

Working on Behalf of the Beauty and Bounty of Earth
An Earth Charter Scholars Panel
Steven C. Rockefeller and Mary Evelyn Tucker
St. Michael and All Angels’ Church
Sanibel Island, Florida
Friday, February 20, 2009, 7:00pm

Bloom Where You’re Planted
Focus on the Local

In light of the economic recession, the Center for Environmental and Sustainability Education scaled back the Annual Celebration and did not host a Rachel Carson Distinguished Lecture in 2010. Rather, we chose the theme “Bloom Where You’re Planted: Focus on the Local” to celebrate the Center’s work in the local community, our work with young people, and the wisdom of our elders.

The event brought together young and old to reflect on the Center’s mission of “scholarship, education, and action” for a sustainable future. FGCU student volunteers staffed the fundraising event; the young volunteers and elder Island residents welcomed the opportunity to interact with one another. The Center believes that such conversations advance intergenerational equity—the process of transmitting sustainable ways of life to future generations.

The event featured organic food prepared with ingredients grown by local gardeners. Guests socialized and learned about the Center’s initiatives in the local community. A detailed description of the Center’s work was given to participants in our recently published report, “Works Toward Realizing the Dream: Five Years of Scholarship, Education, and Action at the Center for Environmental and Sustainability Education.”

Event contributors included members of the Center’s Board of Advisors, student assistants, and a local Host Committee. “Bloom Where You’re Planted: Focus on the Local” took place at the Sanibel Island home of our generous hosts Peter and Mallory Haffenreffer on March 18, 2010.
**About The Rachel Carson Distinguished Lecturers**

**Homero Aridjis** is a globally-recognized Mexican writer and environmentalist whose books have been translated into a dozen languages. Aridjis is former President of International PEN, the worldwide association of writers. He has been honored with numerous prestigious awards for his ecological conservation work, involving the habitats of monarch butterflies, sea turtles, and grey whales.

**Alison Hawthorne Deming** is Professor in Creative Writing at the University of Arizona. She is the author of several books, including *The Monarchs: A Poem Sequence* and *Writing the Sacred into the Real*, and *Rope*. Her writing has won fellowships from the National Endowment for the Arts and a Pushcart Prize.

**Barbara Kingsolver** has twelve books of fiction, poetry, and creative nonfiction including the novels *The Bean Trees* and *The Poisonwood Bible*. Translated into nineteen languages, her work has won a devoted worldwide readership and many awards, including the National Humanities Medal. Her most recent book is the New York Times bestselling *The Lacuna*.

**David W. Orr** is the Paul Sears Distinguished Professor of Environmental Studies and Politics at Oberlin College. He is best known for his pioneering work on environmental literacy in higher education and his recent work in ecological design. Orr’s books include *Ecological Literacy, Earth in Mind, The Nature of Design, The Last Refuge: Patriotism, Politics, and the Environment in an Age of Terror*, and *Hope is an Imperative: The Essential David Orr*.

**Steven C. Rockefeller** is Professor Emeritus of Religion and former Dean of Middlebury College, Vermont. He chaired the international Earth Charter drafting committee and served as Co-chair of the Earth Charter International Council. He has served as a Trustee and Chair of the Rockefeller Brothers Fund.

**Mary Evelyn Tucker** is Senior Lecturer and Research Scholar at Yale University’s School of Forestry and Environmental Studies and the Divinity School. She is Co-director of the Forum on Religion and Ecology and organized a series of conferences on world religions and ecology at the Harvard Center for the Study of World Religions.

**Terry Tempest Williams** is the Annie Clark Tanner Scholar at the University of Utah. Her books include *Refuge, The Open Space of Democracy*, and most recently, *Finding Beauty in a Broken World*. She is the recipient of Lannan and Guggenheim fellowships in creative nonfiction.
NOTES

3 Ibid., p. 277.
6 Terry Tempest Williams, “Ground Truthing” from The Open Space of Democracy (Great Barrington, MA: The Orion Society, 2004), p. 45.
11 Ibid., pp. 194–195.
15 Ibid., p. 161.
17 Ibid., p. 230.
18 Ibid., pp. xvi, 235.

Printing Information
Electricity is one of the most significant contributors to carbon emissions. To address this important issue, J.S. McCarthy is proud to partner with Clean Currents to make Green-e certified wind power available to all of our customers. The advances in windmill technology and the increases in wind power availability now enable J.S. McCarthy to guarantee that our customers’ printed pieces are produced with 100% wind-generated power. This environmentally-friendly renewable energy is being used to meet our entire plant’s electricity needs.

Paper Information
Cover: Carnival Felt, 50% recycled fiber, 50% post-consumer, Process Chlorine-Free (PCF) and Elemental Chlorine-Free (ECF).
Interior: Chorus Art Silk, FSC certified, 55% recycled fiber, 30% post-consumer, Elemental Chlorine-Free (ECF).
“Activities that devastate the environment and societies continue unabated. Today we are faced with a challenge that calls for a shift in our thinking so that humanity stops threatening its life-support system. We are called to assist the Earth to heal her wounds and in the process heal our own. The Center for Environmental and Sustainability Education at Florida Gulf Coast University is engaged in the shift to a sustainable future through its Earth Charter scholarly agenda. The Center’s work in environmental education and social education points toward a better world.”

Wangari Maathai  
Founder, Green Belt Movement  
2004 Nobel Peace Prize Laureate  
Earth Charter Ambassador

“Rachel Carson is a hero, a towering example within American democracy of how one person’s voice can make an extraordinary difference in both public policy and in the minds of the populace. Her name and her vision of a world intact and interrelated entered mainstream culture in the 1960s, heralding the beginning of the modern conservation movement.”

Terry Tempest Williams, 2004 Rachel Carson Distinguished Lecture  
Writer, Teacher, and Activist  
Utah and Wyoming

“I would like to recognize the efforts being made by President Bradshaw and Florida Gulf Coast University to build a new educational institution that reflects the values and principles of sustainable development. I want to thank the University for the support it has given the Earth Charter and for the commitment it is making today to become an affiliate of Earth Charter International.”

Steven C. Rockefeller, 2009 Rachel Carson Distinguished Lecture  
Former Co-chair, Earth Charter International Council  
Professor Emeritus of Religion, Middlebury College, Vermont

“I congratulate the Center for Environmental and Sustainability Education on its… anniversary. I am glad that Green Cross International and the Center have been successfully co-operating on a number of projects. I wish Florida Gulf Coast University and the Center all the best, and look forward to continuation of this partnership.”

Mikhail Gorbachev  
Founder and Chairman of the Board, Green Cross International  
1990 Nobel Peace Prize Laureate  
Earth Charter Commissioner