

Name: Rachel Carson

1907-1964 (Died of breast cancer)

Location: Eastern United States

Position: Biologist for US Fish and Wildlife Service and Author

Achievements: Once she became a recognized author, Carson retired from her work as a biologist for the USF&WS. In 1962 she published *Silent Spring*, a book she wrote to educate the general public on the detrimental effects of DDT (a commonly used pesticide) on insect populations and anything connected to insects through food webs – all the way to humans. (The disappearance of birds, because this chemical accumulated in fat and was found at higher doses in top carnivores like fish and birds, was something humans around the US could see and feel impacted by.) *Silent Spring* was incredibly controversial, fought by major chemical companies. After presidential science committees confirmed her work, DDT was banned in the US, but is still used abroad, especially where malaria is severe. Traces of DDT can still be found in human breast milk today.



Excerpts:

“Those who dwell, as scientists or laymen, among the beauties and mysteries of the earth are never alone or weary of life.”

“We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been traveling 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 the earth.”

“In the early 1950's when Carson finished The Sea Around Us, she was optimistic about the use science could make of nature while still respecting the final priority of natural processes over human manipulation...Ten years later, at work on Silent Spring, Carson was no longer as sanguine about the ability of the environment to protect itself from human interference. She had begun to understand the destructive impact civilization had on the environment, and was presented with a dilemma: the growth of civilization destroys the environment, but only through increased knowledge (a product of civilization) can destruction be stopped.” Vera Norwood, “Heroines of Nature: Four Women Respond to the American Landscape” *Environmental Review*, 8, (1984).

Name: Aldo Leopold

1887-1948

Location: Midwestern United States

Position: U.S. Forest Service in Wildlife Management, Writer, Restored native prairie

Achievements: Leopold had a full career with the Forest Service where he developed wildlife management programs (a newly forming concept for the time). His profession and affinity for studying nature, gave him extensive field experiences.

Towards the end of his life he was a professor in Game Management at University of Wisconsin and bought a farm which his family began restoring. Through his life he formed a **land ethic**, in which humans were responsible for protecting the balance of communities. He is most famous for his collection of writings, from his farm and travels, published in his posthumous Sand County Almanac. This book describes, often poetically, the importance of connections within nature and humans' need to be responsible within these connections. This book is often heralded as initiating the environmental movement, with Leopold considered by some the father of that movement.



Excerpts:

“The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively the land...In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it.

A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity.”

“Anything is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.”

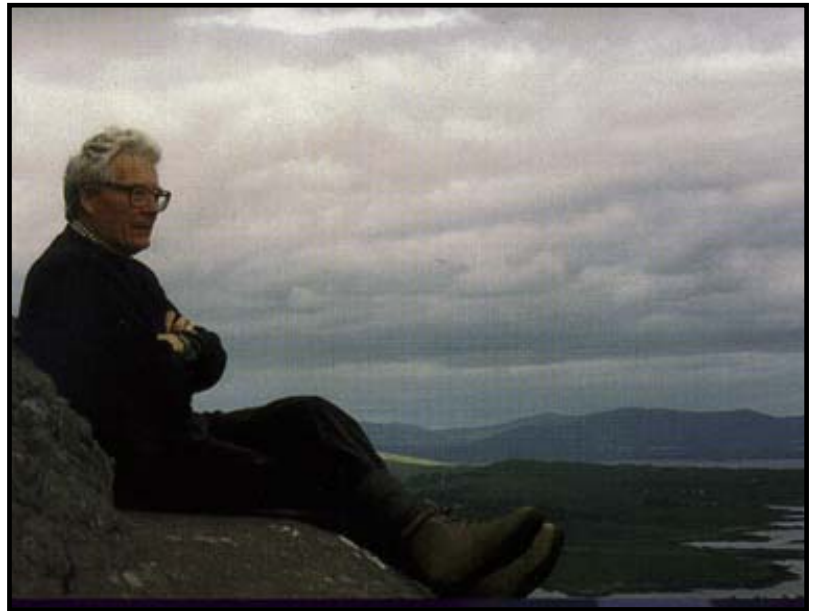
Name: James Lovelock

1919- present

Location: UK

Position: Author, Inventor

Achievements: After receiving his PhD in medicine in 1948, Lovelock held a variety research and teaching positions in the United States and the UK. He has authored approximately 200 scientific papers, distributed almost equally among topics



in Medicine, Biology, Instrument Science and Geophysiology. **He developed many chemical monitors used in increasing environmental awareness.** His electron capture detector allowed Rachel Carson to write her book, Silent Spring, after quantifying the ubiquitous pesticide residue.

He may be most famous for originating the **Gaia Hypothesis** (now Gaia Theory), which suggests that the earth operates like a living organism, actively keeping our planet a place for life. Lovelock is also a proponent and advocate of nuclear energy.

Excerpts:

“Life does more than adapt to the Earth. It changes the Earth to its own purposes.”

“This programme to stop nuclear by 2020 is just crazy. If there were a nuclear war, and humanity were wiped out, the Earth would breathe a sigh of relief.”

“ The fear of nuclear energy is understandable through its association in the mind with the horrors of nuclear warfare, but it is unjustified; nuclear power plants are not bombs.... the dangers of continuing to burn fossil fuels (oil, gas, coal) as our main energy source are far greater...Much of the first world behaves like an addicted smoker: we are so used to burning fossil fuels for our needs that we ignore their insidious long-term dangers.

Nuclear power, although potentially harmful to people, is a negligible danger to the planet. Natural ecosystems can stand levels of continuous radiation that would be intolerable in a city. The land around the failed Chernobyl power station was evacuated because its high radiation intensity made it unsafe for people, but this radioactive land is now rich in wildlife, much more so than neighboring populated areas.”

Adapted from <http://www.ecolo.org/lovelock/lovebioen.htm>

Name: Terry Tempest Williams

1955-present

Location: Castle Valley, Utah

Position: naturalist, writer

Achievements: Williams is the author of

Refuge – An Unnatural History of Family and Place; An Unspoken Hunger – Stories from the Field; Desert Quartet; Leap; Red – Passion and Patience in the Desert; The Open Space in Democracy; and Finding Beauty in a Broken World.



Ms. Williams has received numerous awards including, the Robert Marshall Award from the Wilderness Society, the Distinguished Achievement Award from the Western American Literature Association, and the Wallace Stegner Award.

She is currently the Annie Clark Tanner Scholar in the Environmental Humanities at the University of Utah.

Her website, terrytempestwilliams.com, advocates for the preservation of the American Western wilderness.

Excerpts:

"Our kinship with Earth must be maintained; otherwise, we will find ourselves trapped in the center of our own paved-over souls with no way out." (Finding Beauty in a Broken World)

"The story of the Utah prairie dog is the story of the range of our compassion. If we can extend our idea of community to include the lowliest of creatures, call them 'the untouchables', then we will indeed be closer to a path of peace and tolerance. If we cannot accommodate 'the other', the shadow we will see on our own home ground will be the forecast of our own species' extended winter of the soul."

"To be whole. To be complete. Wilderness reminds us what it means to be human, what we are connected to rather than what we are separate from." - testimony before the Senate Subcommittee on Forest & Public Lands Management regarding the Utah Public Lands Management Act of 1995. Washington, D.C. July 13, 1995

"So here is my question, what might a different kind of power look like, feel like, and can power be redistributed equitably even beyond our own species?"

Name: Theodore Roosevelt

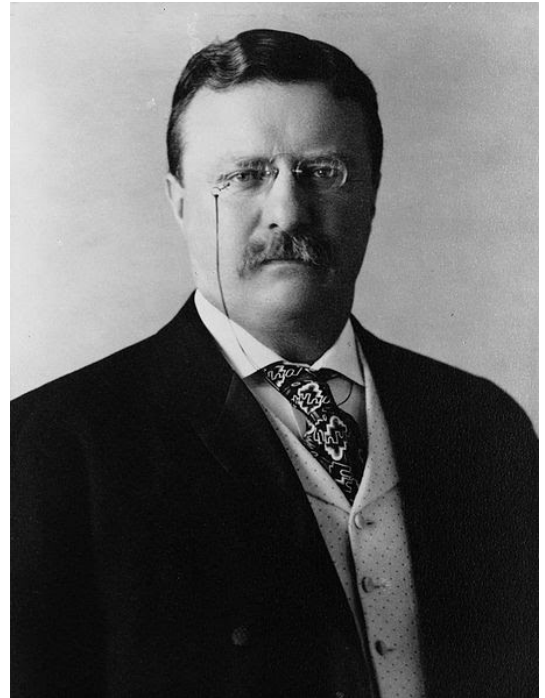
1858-1919

Location: Born in New York City

Position: 26th President of the United States

Achievements: Theodore Roosevelt was educated at Harvard in Darwinian Biology and naturalist studies. He loved wild places and was an avid big game hunter. When surveying the Dakota Territory in 1887, he found few elk, buffalo or antelope. He observed that 'winning the West' came at the expense of our natural resources.

(Douglas Brinkley, author of the Wilderness Warrior)



As president, in 1902, he established the

first national park at Crater Lake, OR. (<http://www.edf.org/article>)

Theodore Roosevelt signed the "Act for the Preservation of American Antiquities," also known as the Antiquities Act or the National Monuments Act, on June 8, 1906. The law authorized the President at his discretion to "declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic and scientific interest that are situated upon lands owned or controlled by the Government of the United States to be National Monuments." TR established the first 18 National Monuments and created the National Park Service. No President since has matched this record.

<http://www.theodoreroosevelt.org/life/conNatMonument.htm>

Excerpts:

"The conservation of our natural resources and their proper use constitute the fundamental problem which underlies almost every other problem of our national life." Congress in 1907.

"A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people."

"The movement for the conservation of wild life and the larger movement for the conservation of all our natural resources are essentially democratic in spirit, purpose, and method," Roosevelt wrote in 1916

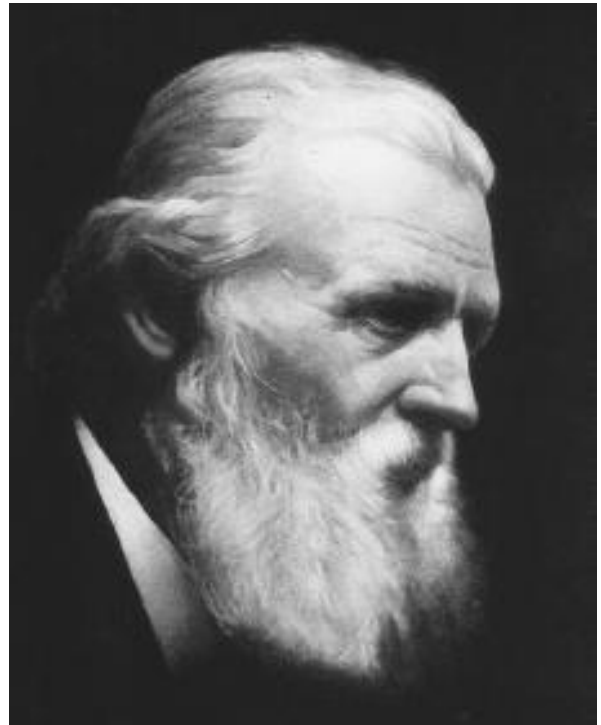
Name: John Muir

1838-1914

Location: Born in Wisconsin; Traveled to Gulf of Mexico, Cuba, Panama, California and Alaska and to all of the continents.

Position: author, naturalist, advocate for the preservation of wilderness

Achievements: John Muir was perhaps this country's most famous and influential naturalist and conservationist. He taught the people of his time and ours the importance of experiencing and protecting our natural heritage.



His words have heightened our perception of nature. His personal and determined involvement in the great conservation questions of the day was and remains an inspiration for environmental activists everywhere. (sierraclub.org)

He established the Sierra Club to protect the newly formed Yosemite National Park from stockman who wanted to graze their livestock in the meadows. He failed in his efforts to stop the building of the Hetch Hetchy Valley Dam.

Excerpts:

One may as well dam for water tanks the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man.

The gross heathenism of civilization has generally destroyed nature, and poetry, and all that is spiritual.

Trees go wandering forth in all directions with every wind, going and coming like ourselves, traveling with us around the sun two million miles a day, and through space heaven knows how fast and far!

Name: Jane Lubchenko

1947 to present

Location: Born in Denver Colorado, MS and PhD in marine ecology from the University of Washington and Harvard, marine biologist, Distinguished Professor of Zoology at OSU

Position: NOAA Administrator and Under Secretary

Achievements: Dr. Lubchenko made path-breaking studies on the ecology of seaweed and algae, deciphered the biological interactions along the rocky shoreline, was the past president of AAAS, founder of the Aldo Leadership Program, organizer of the Communication Partnership for Science and the Sea, and founding director of Climate Central. She was awarded the McArthur Fellowship, a Pew Fellowship, the Heinz Award in the Environment, and the Nierenberg Prize for Science and the Public Interest, and 8 honorary degrees.



Excerpts:

So, the name of the game has been environmental mitigation. And all of this has been strongly underpinned by good scientific analyses and guidance and strong monitoring. *PBS NewsHour interview on the Gulf Oil Spill*

A powerful new tool that is emerging and that is being talked about much more seriously is that of a network of marine reserves - not unlike national parks or wilderness areas on land. A marine reserve is an area of the sea that is completely protected from extractive activities. They are also called "no take areas" - no fishing, no mining, no drilling, no dumping. These fully protected marine reserves have been shown quite definitely to be extremely powerful in protecting habitat in protecting biodiversity and protecting the essential services provide by marine ecosystems. And in some cases, they are also helping to replenishing depleted fisheries. At present, far less than one percent of U.S. water is fully protected. So we have some real opportunities to make a real difference with this new solution. The challenges in protecting oceans and ecosystems are formidable, but they are very important and essential to the very quality of our life. We need healthy ecosystems. They provide the goods and services of our earth's life-support system. *On acceptance of the Heintz Award*

Name: Jane Goodall

1934 to the present

Location: London, England

Position: pioneering English
Primatologist

Achievements: PhD at Cambridge University, founded the Gombe Stream Research Center in 1964, helped found the Committee for the Conservation and Care of Chimpanzees, wrote the children's book *Chimpanzee Family Book* and *With Love*, founder of the Jane Goodall Institute and Roots and Shoots



a global youth program. Dr. Goodall has received numerous honors and awards for her humanitarian and environmental work. She received the Tyler Prize for Environmental Achievement, the Gandhi-King Award for Nonviolence, and the Kyoto Prize.

Excerpts:

- Chimpanzees have given me so much. The long hours spent with them in the forest have enriched my life beyond measure. What I have learned from them has shaped my understanding of human behavior, of our place in nature.
- The more we learn of the true nature of non-human animals, especially those with complex brains and corresponding complex social behavior, the more ethical concerns are raised regarding their use in the service of man -- whether this be in entertainment, as "pets," for food, in research laboratories, or any of the other uses to which we subject them.
- Change happens by listening and then starting a dialogue with the people who are doing something you don't believe is right.
- We can't leave people in abject poverty, so we need to raise the standard of living for 80% of the world's people, while bringing it down considerably for the 20% who are destroying our natural resources.

Name: Steven Running

Location: University of Montana

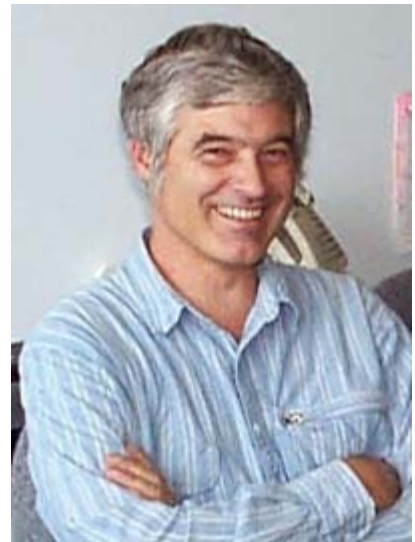
Position: Director Numerical Terradynamics

Simulation Group responsible for developing the algorithms used by the Moderate Resolution Imaging Spectroradiometer (MODIS) on board NASA satellites, Terra and Aqua

Regent Professor of Ecology at the Department of Forestry and Conservation Sciences
University of Montana

Achievements: BS in Botany Oregon State University, MS Forest Management Oregon State University, PhD Forest Ecophysiology Colorado State University

Contributor to IPCC (International Panel on Climate Change)
Nobel Peace Prize of 2007 shared between the IPCC and Albert Gore
Published over 200 works on ecology



Excerpts:

Within 10 years we will have the technological options to solve the global warming problem.

I do not see that we will have the international leadership and governance for the global response that is needed. Speech at University of Montana after receiving the prize.

I never thought my name would be linked in any way, shape or form to something like this. I can almost certainly say that I won't write anything else the rest of my career that will have this type of impact. We've got to get past all the petty bickering and get to work. This is about a big transition for society over the next 50 years. The path we are on is unsustainable. What the Nobel committee is saying is that we've got to wake up. We've got to change the course of the whole world. [\[5\]Missoulan on winning the prize.](#)

We really don't see evidence that global vegetation can be a savior for carbon emissions.

Vegetation productivity in the boreal and temperate regions appears to be increasing by maybe 45 to 46 percent over twenty years. The counterpoint is that we're now quantifying that forest clearing, wildfires, deforestation, on a global basis is now a major part of the CO2 emissions every year. They are actually about 20 percent of what fossil fuel emissions are. So on the one hand, we have vegetation growing better in temperate and boreal forests, but on the other hand we have accelerating disturbance, deforestation, and fire emissions that are actually increasing the CO2 emissions from the terrestrial landscape. earthsky.org

Name: **Norman Borlaug**

1914-2009

Location: Born in Cresco, Iowa

BS Forestry, MS, and PhD Plant Pathology,
University of Minnesota.

Position: Agronomist, Distinguished Professor in
the Soil and Crop Sciences Department at
Texas A&M. Reason.com



Achievements: Norman Borlaug was the Father of the Green Revolution. In 1944, the Rockefeller Foundation asked him to boost wheat production in Mexico. In the 1960s, he almost single handedly averted famine on the Indian subcontinent by developing and introducing a high-yield, low pesticide dwarf wheat. For this, he was awarded the Nobel Peace Prize in 1970. His later efforts on the African continent yielded similar results initially. He argued that high yield farming would preserve wild habitats which are now being depleted by slash and burn subsistence farming. Opponents argue that inorganic fertilizers and high tech irrigation will harm the environment.

Easterbrook, Atlantic Monthly, 1997

Excerpts:

The forgotten world is made up primarily of the developing nations, where most of the people, comprising more than fifty percent of the total world population, live in poverty, with hunger as a constant companion and fear of famine a continual menace.

The green revolution has an entirely different meaning to most people in the affluent nations of the privileged world than to those in the developing nations of the forgotten world.

There are no miracles in agricultural production.

Therefore I feel that the aforementioned guiding principle must be modified to read: If you desire peace, cultivate justice, but at the same time cultivate the fields to produce more bread; otherwise there will be no peace.

During the past three years spectacular progress has been made in increasing wheat, rice, and maize production in several of the most populous developing countries of southern Asia, where widespread famine appeared inevitable only five years ago.

... the number of farmers, small as well as large, who are adopting the new seeds and new technology is increasing very rapidly, and the increase in numbers during the past three years has been phenomenal.

The destiny of world civilization depends upon providing a decent standard of living for all mankind.

Norman Borlaug Brainyquote.org

Name: Edward Osborne Wilson

1929 to the present

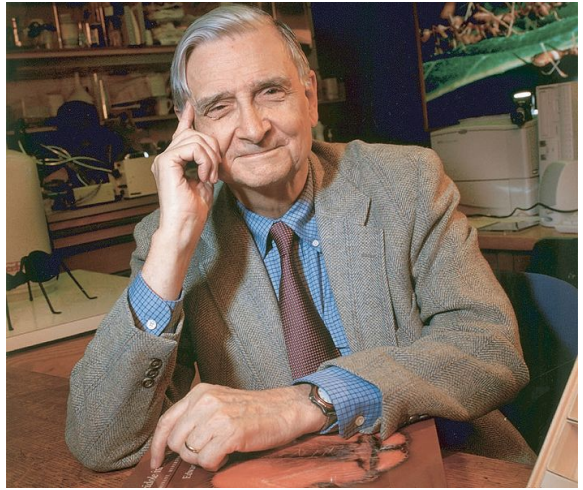
Location: Birmingham, Alabama

Position: Pellegrino University Research

Professor in Entomology for the Department of Organismic and Evolutionary Biology at Harvard

Achievements: Earlier in his career he collected data on the classification and ecology of ants in New Guinea.

His idea of species equilibrium led him to the theory of island biogeography. He researched how ants chemically communicate through pheromones. He published the very influential *Diversity of Life* which synthesized the principles and issues of biodiversity. He has contributed to our understanding of human nature and has argued for a reversal in the fragmentation of knowledge to bridging the sciences and humanities. He has won over 10 awards including two Pulitzer Prizes for *On Human Nature* and *Ants*.



Excerpts:

The natural world offers myriad forms of value in education, exploration, aesthetic experience, and irreplaceable products and services.

A very Faustian choice is upon us: whether to accept our corrosive and risky behavior as the unavoidable price of population and economic growth, or to take stock of ourselves and search for a new environmental ethic.

Perhaps the time has come to cease calling it the "environmentalist" view, as though it were a lobbying effort outside the mainstream of human activity, and to start calling it the real-world view.

It's obvious that the key problem facing humanity in the coming century is how to bring a better quality of life - for 8 billion or more people - without wrecking the environment entirely in the attempt.

We are drowning in information, while starving for wisdom. The world henceforth will be run by synthesizers, people able to put together the right information at the right time, think critically about it, and make important choices wisely.

Name: Vandana Shiva

1952-Present

Location: Dehradun, India

Currently in New Delhi

Position: physicist, environmental
activist



Achievements: Dr. Vandana Shiva has
a BS in physics; MA in

philosophy: PhD in quantum theory physics at the University of Western Ontario. With this background and a love of nature, Shiva wondered how science and technology impacted the environment and started doing inter-disciplinary research in science, technology, and environmental policy. In 1982, Shiva founded the Research Foundation for Science, Technology, and Ecology, an institution concerned with biodiversity conservation. She is the author of 13 books and 300 publications and has spoken out against the "Green Revolution of the 1970s which was to alleviate hunger by improving with irrigation, fertilizers, pesticides, and mechanization. She reports that instead of bringing aid to the farmers, the high yielding seeds brought poverty, and environmental destruction. She has also criticized genetically modified foods for genetic pollution and patent monopolies on non-renewable seeds.

<http://www.bio.davidson.edu/people/kabernd/seminar/2004/GMbios/LH.html>

Excerpts:

The primary threat to nature and people today comes from centralizing and monopolizing power and control. Not until diversity is made the logic of production will there be a chance for sustainability, justice and peace. Cultivating and conserving diversity is no luxury in our times. It is a survival imperative.

The Mayan peasants in the Chiapas are characterized as unproductive because they produce only two tons of corn per acre. However, the overall food output is twenty tons per acre when the diversity of their beans and squashes, their vegetables and fruit trees is taken into account. [\[2007\] Economic globalisation has become a war against nature and poor by Vandana Shiva](#)

"The very idea of disease-free animals and disease-free people fuels the appetite for genetic engineering. It decreases our levels of tolerance and resilience. It breeds fear, anxiety and paranoia - the kind of fear that is moving the military might of Britain to declare a war against its hoofed inhabitants. This paranoia suits the genetic engineering industry perfectly. By exterminating farm animals, the option of small organic farms is eroded. By creating a fear of disease, a new market is created for Dolly, and Polly and Tracy and all their clones. We should stop this war against farm animals. Without them we will never be able to build a sustainable farming future."---Dr Vandana Shiva

Name: Bill McKibben
1960 to present

Location: Grew up in
Lexington, MA

Position: Scholar in
residence at
Middlebury College

Achievements: Bill
McKibben was
president of the
Harvard Crimson



newspaper and “Talk of the Town” columnist for the New Yorker. He is probably the nation’s leading environmentalist for his writing and the organization of national and global rallies (stepitup07.org and 350.org) that urge reduction in carbon dioxide emissions. End of Nature (1989) was his first book on climate change, written for general audiences. The Age of Missing Information (1992) compared the information coming over 100 TV channels in a day with a spent at his mountaintop home. His latest book called eearth describes how we can do on this changing planet.

McKibben has been awarded the Guggenheim and Lyndhurst Fellowships and won the Lannan Prize for nonfiction in 2000.

Excerpts:

"What sets wilderness apart in the modern day is not that it's dangerous (it's almost certainly safer than any town or road) or that it's solitary (you can, so they say, be alone in a crowded room) or full of exotic animals (there are more at the zoo). it's that five miles out in the woods you can't buy anything." ([The Age of Missing Information](#))

"TV, and the culture it anchors, masks and drowns out the subtle and vital information contact with the real world once provided. There are lessons, enormous lessons, lessons that may be crucial to the planet's persistence as a green and diverse place and also to the happiness of it's inhabitants-that nature teaches and TV can't." ([The Age of Missing Information](#))

"Here is a statistic that does matter: Three quarters of Americans believe the Bible teaches that “God helps those who help themselves.” That is, three out of four Americans believe that this uber-American idea, a notion at the core of our current individualist politics and culture, which was in fact uttered by Ben Franklin, actually appears in Holy Scripture. The thing is, not only is Franklin's wisdom not biblical; it's counter-biblical. Few ideas could be further from the gospel message, with its radical summons to love of neighbor. On this essential matter, most Americans—most American Christians—are simply wrong, as if 75 percent of American scientists believed that Newton proved gravity causes apples to fly up."

Name: Diane Dumanoski

Location:

Position: author

Achievements: Dumanoski is an author and environmental journalist reporting for WGBH, the *Boston Phoenix* and the *Boston Globe*. During her time at the *Globe*, she was a pioneer in reporting on ozone depletion, global warming, and accelerating species loss. She wrote *Our Stolen*



Future, The End of the Long Summer: Why We must remake Our Civilization to Survive on a Volatile Earth. She has received a variety of awards for her reporting. She is a Knight Fellow in Science Journalism at MIT, a fellow at the University of Colorado's Center for Environmental Journalism and A Poynter Fellow in Environmental Journalism at Yale. She has a BA from Vassar and a Master's in English at Yale University. Her website, [ourstolenfuture.org](http://www.ourstolenfuture.org) follows new research on synthetic chemicals that interfere with the body's own hormones.

<http://www.diannedumanoski.com/about.html>

Excerpts:

"The weight of our civilization has become so great, it now ranks as a global force and a significant wild card in the human future along with the Ice Ages and other vicissitudes of a volatile and changeable planetary system"

- **Dianne Dumanoski**, *Rethinking Environmentalism*, December 13, 1998.

