

For Immediate Release
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**Scientists Set Forth Evidence that Global Warming Has Begun;
Surge in Greenhouse Gases is Human Induced and
Not Within Normal Fluctuations**

**Gore Cites Problem's Moral Dimension and
Calls for a Ban on Greenhouse Gas Emissions in the U.S.**

**The entire Symposium is archived on a free Webcast. It can be viewed via the NYBG
Web site, www.nybg.org. Or go to:
<http://www.iian.ibeam.com/events/nybg001/20218>
This Webcast is made possible by Lewis B. and Dorothy Cullman**

More than 500 concerned New Yorkers and a live Webcast audience heard compelling, authoritative updates from scientists that significant climate changes induced by human activity are now underway. They also heard riveting, urgent calls to action from commentators and former Vice President Al Gore during *Climate Change: Prospects for Nature*. The symposium, organized by Thomas E. Lovejoy, Ph.D., President, Heinz Center for Science, Economics and the Environment and The New York Botanical Garden, was presented in New York City on Friday, September 15.

In his keynote address, former Vice President Al Gore provided a moral dimension to the climate change phenomenon. "How could we be utterly transforming the relationship between our species and our planet during our lifetime? ... We've quadrupled the population of humans on the planet in less than a hundred years, we have multiplied the power of the technologies that we use thousands of times over, and we have also undergone a subtle but very significant shift in our guiding philosophy. And that last is in some ways the most challenging of the three factors that have transformed our relationship to the planet." Three days after this address, Mr. Gore called for a ban on greenhouse gas emissions in the United States.

Need for public education

Introducing this public education symposium, Botanical Garden President Gregory Long said, "The New York Botanical Garden, as one of the world's great plant research institutions conducting research in the evolutionary history of plants, plant and molecular systematics, and plant genomics, is intensely concerned about the effects of climate change on plant biodiversity and evolution."

Clarity of the scientific evidence

In opening remarks, Thomas Lovejoy stated, "Clear and multiple signals in nature from the climate change that has already occurred tell us we have to act right now. We must protect the biological underpinnings from the impending steamroller of further climate change."

Cameron P. Wake, Ph.D., from the Climate Change Research Center, University of New Hampshire stated: "...Climate changes. It always has and always will. What is new today is that humans are one of the forces causing climates to change. We are now in fact a geological force. ...Our winters in the northeast US have become markedly warmer over the past 30 years. For example, average winter temperatures have increased on average 4.4° Fahrenheit over the last 30 years, which means that Boston's wintertime climate is now equivalent to what characterized Philadelphia 30 years ago. Over the same time period snowfall in northern New England and northern New York State has decreased, snow on ground days have decreased by 16 days, and ice-out dates on lakes occur one to two weeks earlier."

David W. Wolfe, Ph.D., Professor of Plant Ecology, Department of Horticulture, Cornell University, set forth evidence that climate change is already upon us. We know this "...not only based on what the thermometers are telling us, but also from observations that plants and other living things are responding. Spring is coming earlier, as documented by a four, six, and nine day advance in spring bloom of lilacs, grapes, and apples, respectively, since the 1960s."

Wolfe warned that climate change will pose many new challenges and threats. "The very notion of the Northeast is at stake." The fabric of our forests will be forever changed, with dominant species changing gradually from maple, beech, and birch to oak, hickory, and pine. Wolfe continued, "Invasive insects, diseases, and weed pests are likely to benefit most from climate change, leading to increased pesticide use as gardeners and farmers adapt to change. Reductions in biodiversity are likely, because climate change will tend to favor aggressive invasive species, at the expense of endangered species that tend to be poor at migrating and adapting in response to climate change."

Journalist Elizabeth Kolbert, author of *The Front Line of Climate Change* and the series, "The Climate of Man" published by *The New Yorker*, presented observations based on three years of reporting on climate change from sites around the world. One telling difference between climate change and other technology stories she has covered is the intense anxiety that the most knowledgeable scientists express about Earth's future. Scientists and technicians close to potentially harmful forces, such as nuclear power, are often less concerned than the general public about the likelihood of dire consequences. In the case of climate change, scientists who know the issues best are significantly more anxious about bad outcomes than is the general public.

Commentary and Calls to Action

Following the speakers, a panel of experts provided commentary and responded to audience questions:

"Science is clear and irrefutable. Human-caused global warming is producing rapid and dangerous climate change," stated Stephen B. Heintz, President of the Rockefeller Brothers Fund. Climate change is the "single gravest environmental challenge facing the planet...biodiversity conservation, pollution, water supply, desertification, etc., all are exacerbated by global warming."

Adam Markham, Executive Director and Founder of *Clean Air-Cool Planet* stated, "The science is telling us that we must act and act soon. But far from despairing about the size of the challenge, we should take hope from the fact that all over this country people and institutions are already taking matters into their own hands. Businesses, cities, and college campuses are demonstrating that they can reduce their emissions of greenhouse gases and save money at the same time. What we need now is federal policies which will limit, for once and for all, the growth of heat trapping gases in the atmosphere."

"After sweating through the hottest summer in decades, freezing global warming pollution is the kind of bold action that we need, and we need to cap carbons now. Instituting a national plan to reduce pollution further would create the market for the advanced energy technologies we need to meet this serious climate challenge, and move America beyond oil and other fossil fuels," said Frances Beinecke, President of the Natural Resources Defense Council.

Peter C. Goldmark, Jr., Director of the Climate and Air Program at Environmental Defense noted, “This is about adaptation. What does Darwin teach us? He doesn’t teach us that the strong will survive. He doesn’t teach us that the most intelligent will survive. He teaches us that those who adapt will survive. ...It will be done by harnessing economic forces, and there are ways to do that, and we have experimented successfully with such ways.”

Bill McKibben, author of *The End of Nature*, said, “The work, in some measure, of the scientists has been done. They have done an extraordinary job of reaching consensus on an enormously complex physical problem, and much of it really was done seven, eight, nine years ago... We know more than enough to tell us what we need to be doing...”

The entire symposium is available on an archived Webcast via the Botanical Garden’s web site at nybg.org

*Symposium sponsored by House & Garden and V. Kann Rasmussen Foundation
Webcast made possible by Lewis B. and Dorothy Cullman*

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The New York Botanical Garden is an advocate for the plant kingdom. The Garden pursues its mission through its role as a museum of living plant collections arranged in gardens and landscapes across its National Historic Landmark site; through its comprehensive education programs in horticulture and plant science; and through the wide-ranging research programs of the International Plant Science Center.

The New York Botanical Garden is located on property owned in full by the City of New York, and its operation is made possible in part by public funds provided through the New York City Department of Cultural Affairs.

A portion of the Garden’s general operating funds is provided by The New York City Council and The New York State Office of Parks, Recreation and Historic Preservation. The Bronx Borough President and Bronx elected representatives in the City Council and State Legislature provide leadership funding.

The New York Botanical Garden is located at Bronx River Parkway (Exit 7W) and Fordham Road. The Botanical Garden is open Tuesday through Sunday and Monday federal holidays. For more information, including hours, directions, admissions pricing, and programming specifics, please visit www.nybg.org or call 718.817.8700.

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