



Human - Nature - Controversy  
STS.003, Fall 2010

# Review:

- Undeniable evidence that species change over time  
-- but what mechanism?
- Darwin's theory bore striking parallels to the economic and political conditions in which he wrote
- His theories were quickly applied in economic and political policy
- Debates over place of humans in nature

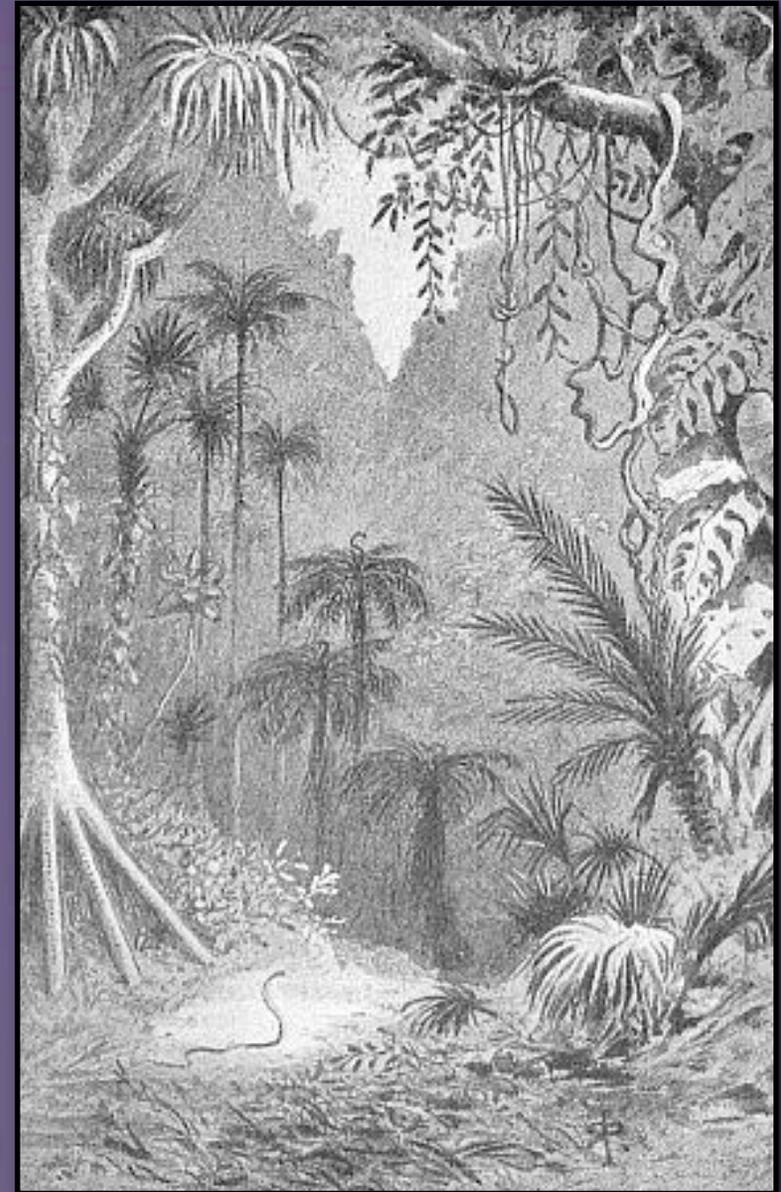
# Overview:

- From evolution to ecology and environmentalism
- Role of humans in global ecosystem
- Global warming controversies
- Continuing impact of commerce on science

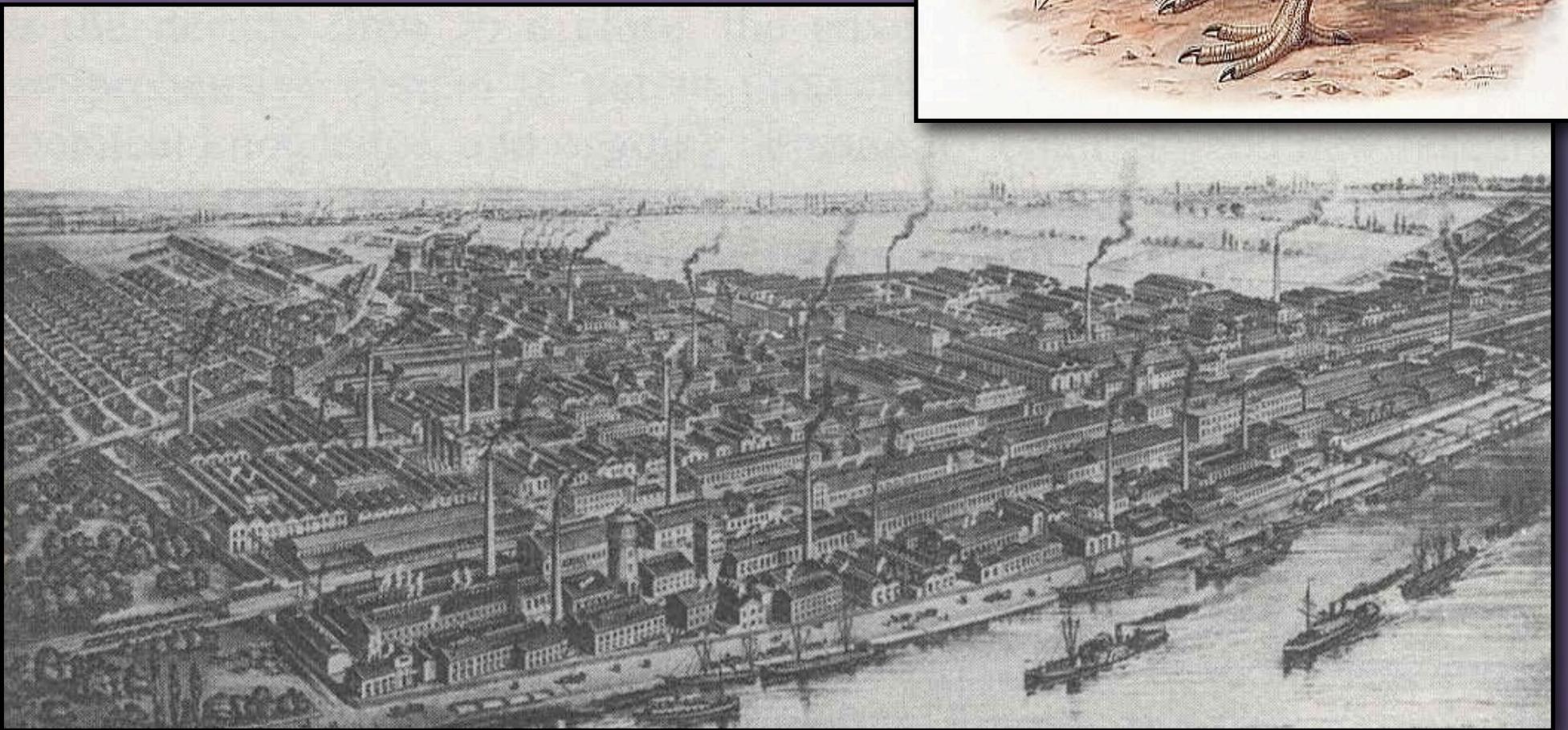
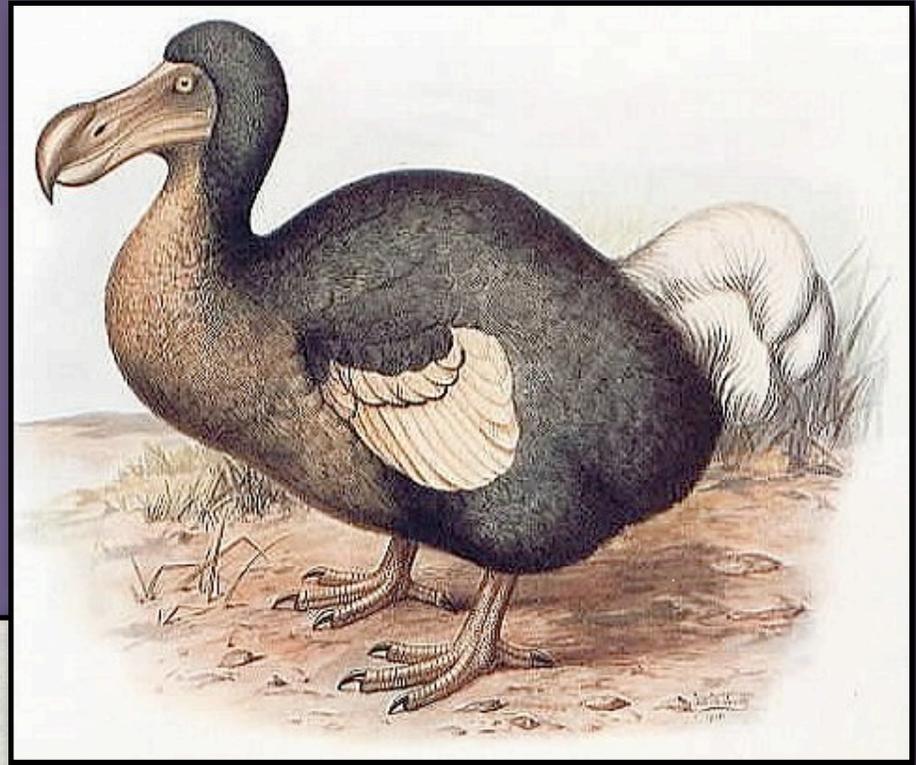
# The Tangled Bank

“It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us.”

-- Charles Darwin, *Origin of Species*, 1859



Late 19th Century:  
Industrialization, Pollution,  
Deforestation, Extinction



# John Muir, Theodore Roosevelt: Conservation, National Parks



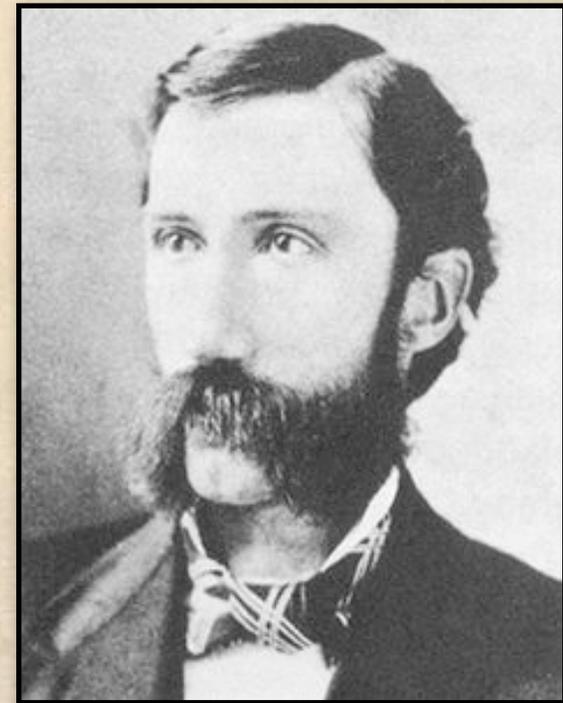
“Two ideas are thus seen to be sufficient to explain the order evolved from this seeming chaos; the first that of a general community of interests among all the classes of organic beings here assembled, and the second that of the beneficent power of natural selection which compels such adjustments of the rates of destruction and of multiplication of the various species as shall best promote this common interest.”

-- Stephen Forbes, “The Lake as Microcosm,” 1887

**ILLINOIS STATE LABORATORY**  
OF  
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See: [Ecosystems of the World](#).

Photo of Rachel Carson  
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Photo of "Silence Spring,"  
Rachel Carson, removed due to  
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DDT, Pollution  
Clean Air and Water Acts  
Environmental Protection  
Agency (1970)

# Environment and Disease: Swamps, Miasmas, Malaria

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to copyright restrictions.

# Spanish-American War and Tropical Medicine: Is the threat the environment or its microbes?

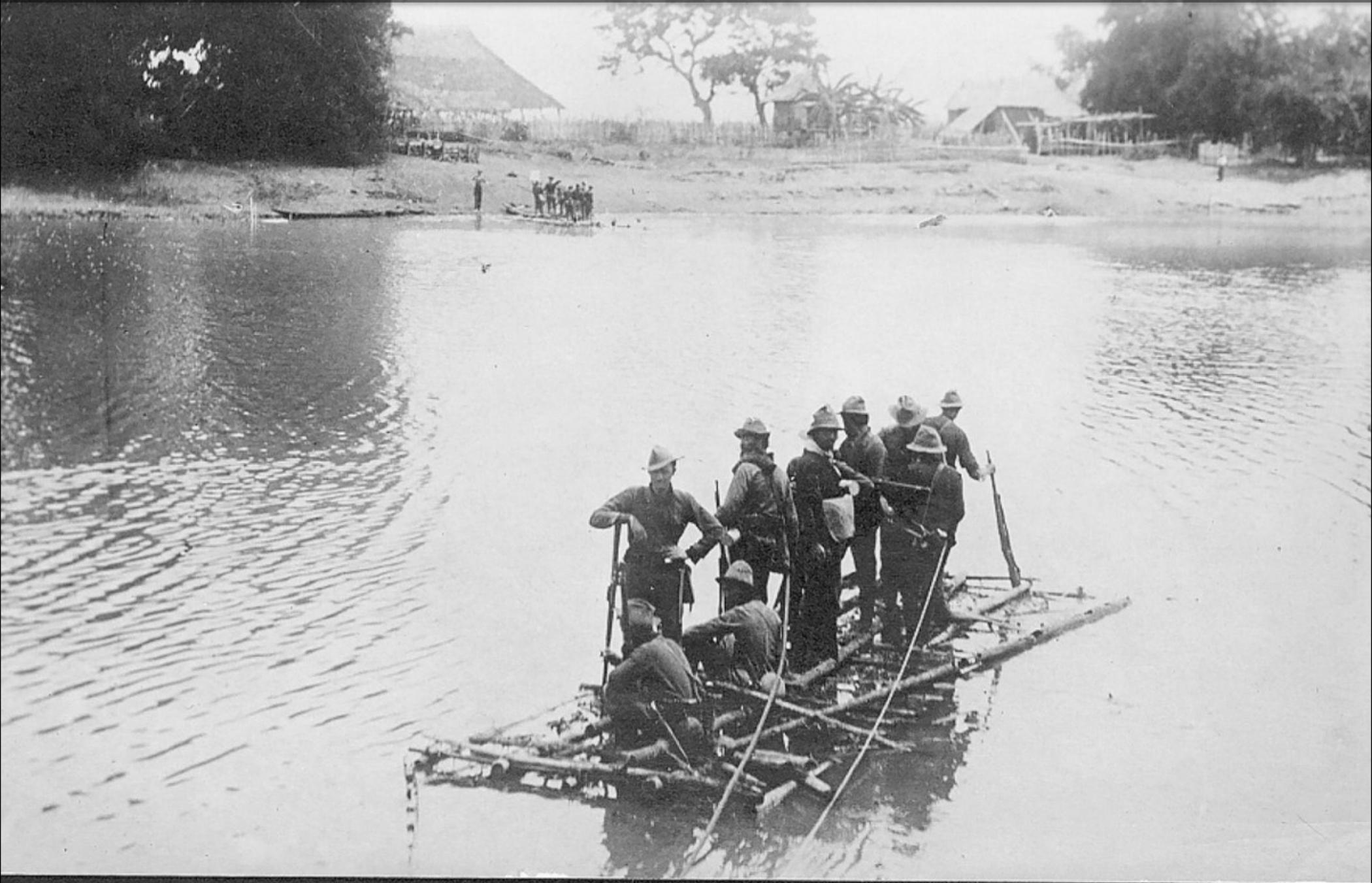




Photo of modern day Miami  
removed due to copyright  
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Mastering the Tropics: Miami in 1926 and Today



Photo courtesy of [United Nations Development Programme](#) on Flickr.

Port-au-Prince Earthquake, 2010: > 200,000 deaths

Aerial photo of New Orleans  
after Hurricane Katrina removed  
due to copyright restrictions.

Hurricane Katrina, 2005: > 200,000 deaths

Photo of the 2004 tsunami in  
the Indian Ocean removed due  
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Indian Ocean Tsunami, 2004: > 200,000 deaths

# Natural Disasters?

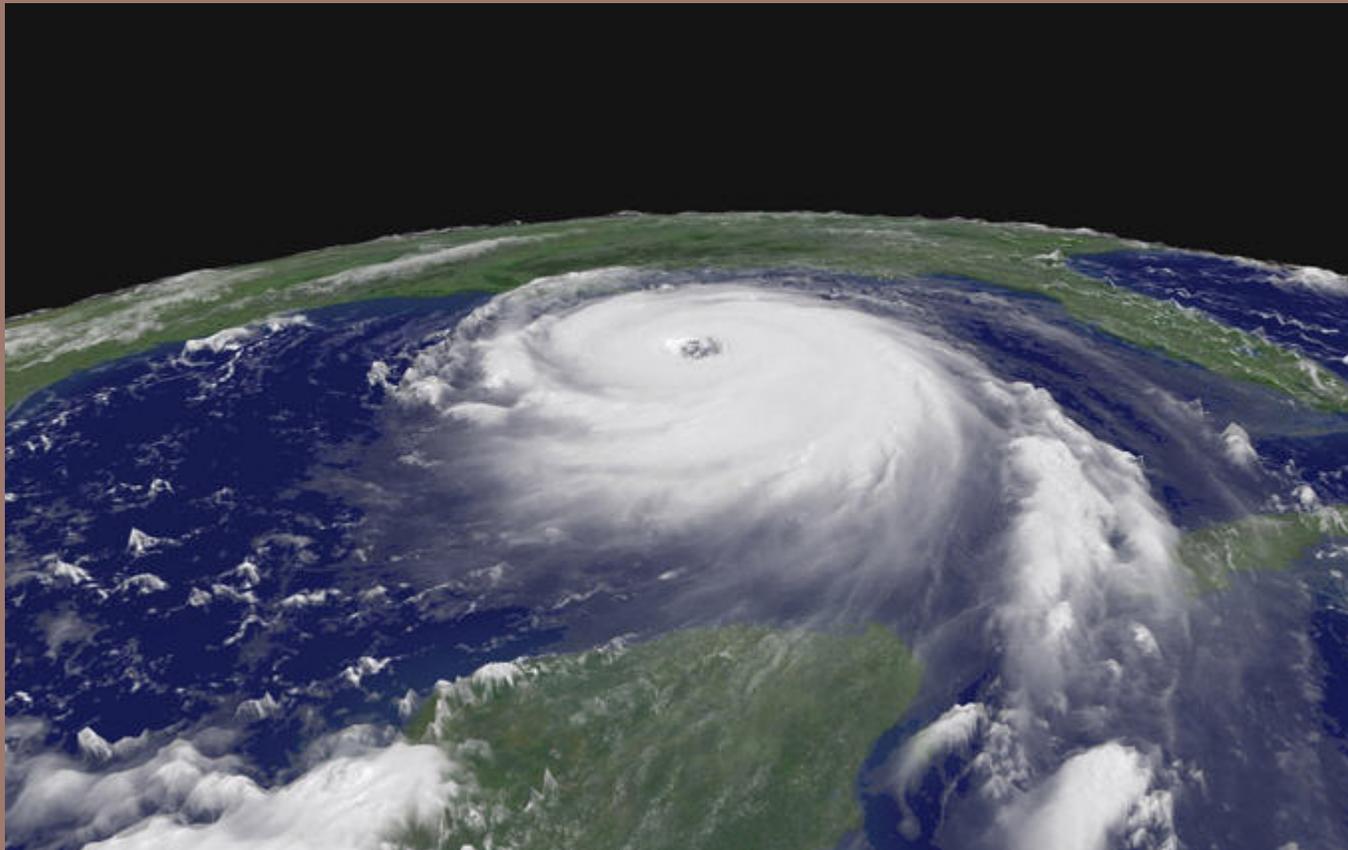


Photo courtesy of [giuser](#) on Flickr.

Ground and aerial photos of  
New Orleans post-Hurricane  
Katrina removed due to  
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# Social Distribution of Risk

# Indiana, 8 November 2005

Photos of tornado damaged  
trailer parks removed due to  
copyright restrictions.

# United States, 1979-1994: 15,000 Cold-related Deaths

Satellite photo of the Eastern U.S. during the winter removed due to copyright restrictions.

For similar photos from 2011, see: <http://www.flickr.com/photos/gsfcr/5395476209>

Maps of temperatures and heat related deaths during the 1995 Heat Wave in Chicago removed due to copyright restrictions.

# Chicago, July 1995

Cover of "Time" from October 19, 1987 removed due to copyright restrictions.

The cover story is entitled "The Heat Is On."

Cover of an undated "Time" removed due to copyright restrictions.

The cover story is entitled "Vanishing Ozone The Danger Moves Closer to Home."

# 1980s-1990s: Emerging Fear of Climate Change

# Precedents? Fears of Nuclear Winter

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Photo of a desolate winter scene  
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Photo of Kerry Emanuel  
removed due to copyright  
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Have hurricanes  
become more  
frequent and  
powerful?

Cover of "Divine Wind the  
History and Science of  
Hurricanes," Kerry Emanuel,  
removed due to copyright  
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# Key Points:

- Humans and nature? We can alter it profoundly, and yet we remain vulnerable
- Can nature change? It seems to, but what is our role in climate change?

Photo of a piece of coal wearing sunglasses captioned "Clean coal. Cool." removed due to copyright restrictions.



Photo courtesy of [Morgan Solar](#) on Flickr.

# A Future without Fossil Fuels?

Cover of "Agnology the Making and Unmaking of Ignorance," Edited by Robert N. Proctor and Londa Schibinger, removed due to copyright restrictions.

Scan of a speech removed due to copyright restrictions. Brown and Williamson.  
"Smoking and Health Proposal." (1998).

(Brown and Williamson, 1969)

Political cartoon of George W. Bush discounting global warming while having gas pumped into his ear removed due to copyright restrictions.

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STS.003 The Rise of Modern Science  
Fall 2010

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