

It was 98 degrees in Washington on Thursday, June 23, 1988, and climate change was bursting into public consciousness. The Amazon was burning, wildfires raged in the United States, crops in the Midwest were scorched and it was shaping up to be the hottest year on record worldwide. A Senate committee, including Gore, had invited NASA climatologist James Hansen to testify about the greenhouse effect, and the members were not above a little stagecraft. The night before, staffers had opened windows in the hearing room. When Hansen began his testimony, the air conditioning was struggling, and sweat dotted his brow. It was the perfect image for the revelation to come. He was 99 percent sure, Hansen told the panel, that “the greenhouse effect has been detected, and it is changing our climate now.”

thing, they argued, the data reflect urbanization (many temperature stations are in or near cities), not true global warming.

Shaping public opinion was only one goal of the industry groups, for soon after Hansen’s sweat-drenched testimony they faced a more tangible threat: international proposals to address global warming. The United Nations had scheduled an “Earth Summit” for 1992 in Rio de Janeiro, and climate change was high on an agenda that included saving endangered species and rain forests. ICE and the Global Climate Coalition lobbied hard against a global treaty to curb greenhouse gases, and were joined by a central cog in the denial machine: the George C. Marshall Institute, a conservative think tank. Barely two months before Rio, it released a study concluding that models of the greenhouse effect had “sub-



1990

SPREADING DOUBT

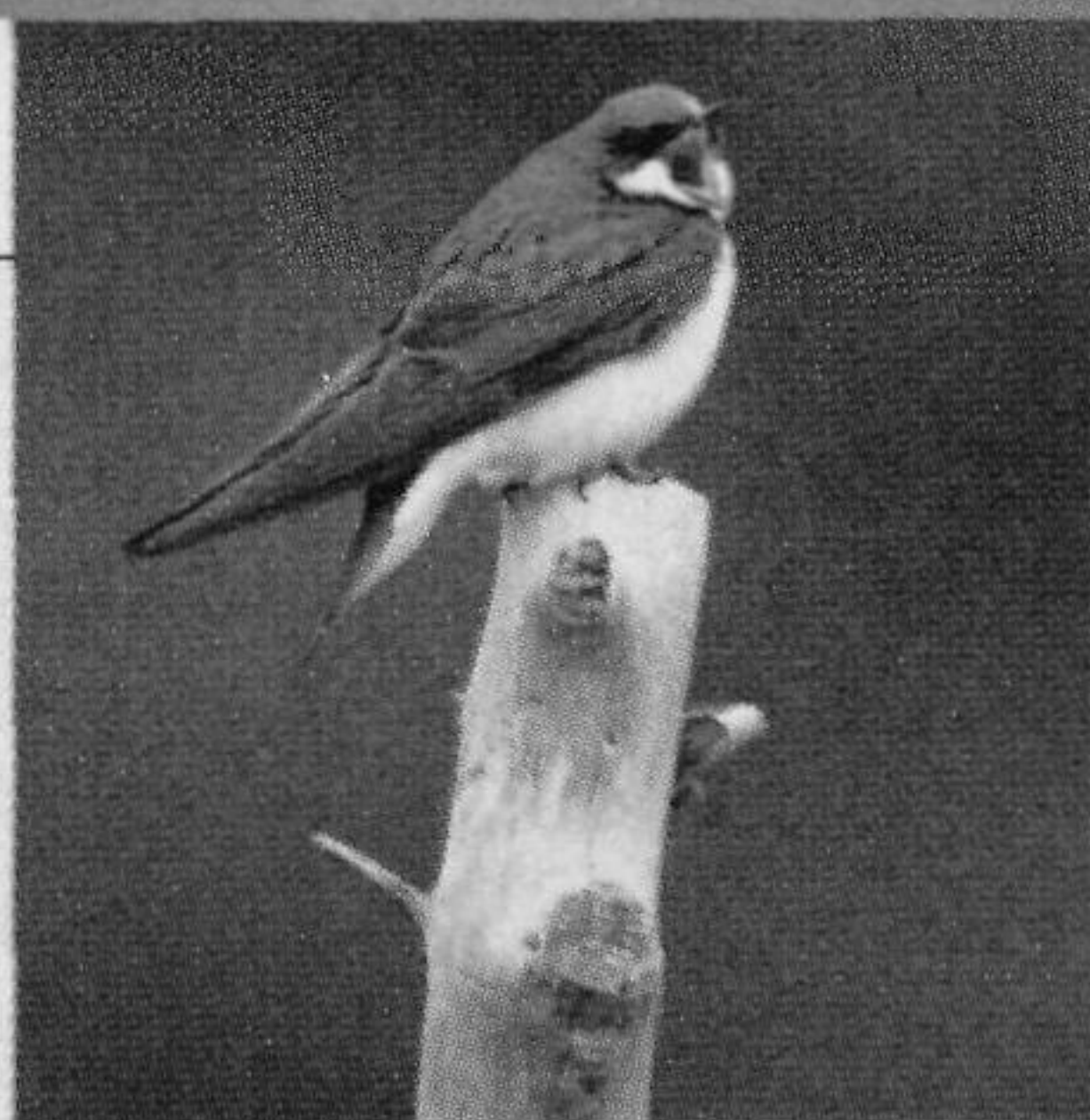
Leading climate-change skeptic Fred Singer founds the Science and Environmental Policy Project. In the years that follow, the group pursues a media campaign to discredit evidence of global warming.



1991

SIGNS OF CHANGE

Climate-related changes in the behavior of wildlife become apparent. North American tree swallows, for instance, are laying their eggs an average of nine days earlier than they did in the late '50s.



1992

HABITATS AFFECTED

A study begins tracking the Edith's checkerspot butterfly, found in western North America. The results: it is moving to higher altitudes and north, growing scarce in Mexico but thriving in Canada.

together on the science of climate change, the pushback began,” says historian Naomi Oreskes of the University of California, San Diego. Individual companies and industry associations—representing petroleum, steel, autos and utilities, for instance—formed lobbying groups with names like the Global Climate Coalition and the Information Council on the Environment. ICE’s game plan called for enlisting greenhouse doubters to “reposition global warming as theory rather than fact,” and to sow doubt about climate research just as cigarette makers had about smoking research. ICE ads asked, “If the earth is getting warmer, why is Minneapolis [or Kentucky, or some other site] getting colder?” This sounded what would become a recurring theme for naysayers: that global temperature data are flat-out wrong. For one

The reaction from industries most responsible for greenhouse emissions was immediate. “As soon as the scientific community began to come

stantially exaggerated its importance.” The small amount of global warming that might be occurring, it argued, actually reflected a simple fact: the Sun is putting out more energy. The idea of a “variable Sun” has remained a constant in the naysayers’ arsenal to this day, even though the tiny increase in solar output over recent decades falls far short of explaining the extent or details of the observed warming.

In what would become a key tactic of the denial machine—think tanks linking up with like-minded, contrarian researchers—the report was endorsed in a letter to President George H.W. Bush by MIT meteorologist Richard Lindzen. Lindzen, whose parents had fled Hitler’s Germany, is described by old friends as the kind of man who, if you’re in the minority, opts to be with you. “I thought it was important to make it clear that the science was at an early and primitive stage and that there was little basis for consensus and much reason for skepticism,” he told *Scientific American* magazine. “I did feel a moral obligation.”

Bush was torn. The head of his Environmental Protection Agency, William Reilly, supported binding cuts in greenhouse emissions. Political advisers insisted on nothing more than voluntary cuts. Bush’s chief of staff, John Sununu, had a Ph.D. in engineering from MIT and “knew computers,” recalls Reilly. Sununu frequently logged on to a computer model of climate, Reilly says,



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