

# The Way Things *Really* Are

## Debunking **Rush Limbaugh** on the Environment

By Leonie Haimson, Michael Oppenheimer and David Wilcove  
Environmental Defense Fund

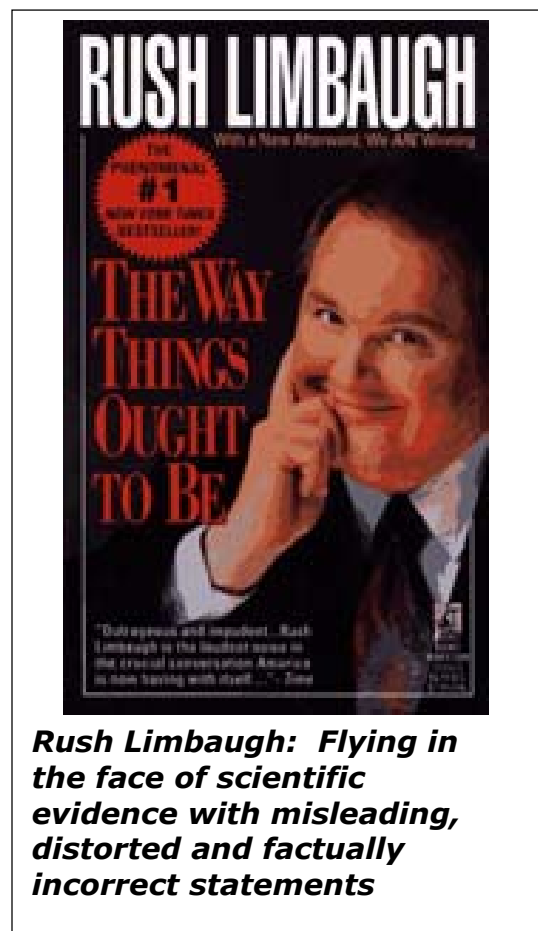
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### INTRODUCTION

Rush Limbaugh's best-selling books *The Way Things Ought To Be* and *See, I Told You So* are full of statements on the environment that are misleading, distorted, and factually incorrect. Indeed, Limbaugh's claims often fly in the face of carefully considered scientific evidence, and put him in opposition to the views of the most eminent scientific experts, as reflected in the conclusions of such esteemed bodies as the National Academy of Sciences and the World Meteorological Organization. Though Limbaugh likes to frame the debate as a contest between him and the "environmental wackos," it is really Limbaugh's word against the overwhelming tide of scientific knowledge.

Unfortunately, his fallacies have created a great deal of confusion and have perpetuated the misunderstanding of a number of critical issues. It is important that Limbaugh's disinformation campaign be confronted directly and that the resulting misconceptions be cleared up.

Here we present several examples of erroneous statements from Limbaugh's books, followed by the actual scientific facts. In each instance, we have included sources in the scientific and professional literature – unlike Limbaugh, who offers little or no evidence to back up his claims.



***Rush Limbaugh: Flying in the face of scientific evidence with misleading, distorted and factually incorrect statements***

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## CHLOROFLUOROCARBONS AND OZONE DEPLETION

**Rush FICTION:** Limbaugh proposes that environmental "alarmists and prophets of doom" have exaggerated the problem of ozone depletion, suggesting that it has been limited to "occasional reduced levels of ozone over Antarctica." <sup>1</sup>

**Scientific FACT:** Substantially reduced levels of ozone have been measured over most of the globe, including North America, Europe, and elsewhere. In fact, scientists have observed a thinning of the ozone layer at all latitudes outside the tropics. By 1991, the depletion over North America averaged nearly 5 percent. <sup>2</sup> Since 1991, ozone depletion has further intensified. <sup>3</sup>

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**Rush FICTION:** "Mount Pinatubo in the Philippines spewed forth more than a thousand times the amount of ozone-depleting chemicals in one eruption than all the fluorocarbons manufactured by wicked, diabolical, and insensitive corporations in history. . . . Conclusion: mankind can't possibly equal the output of even one eruption from Pinatubo, much less billion years' worth, so how can we destroy ozone?" <sup>4</sup>

**Scientific FACT:** Limbaugh's numbers are completely off-base. Volcanoes emit two sorts of ozone-depleting compounds. One is hydrochloric acid, but the amount of this chemical in the stratosphere, measured before and after Pinatubo's eruption in 1991, was found to be largely unchanged. <sup>5</sup>

The other ozone-depleting chemical emitted by Pinatubo, sulfur dioxide, is converted in the stratosphere into tiny particles which, acting in combination with man-made chlorofluorocarbons (CFC's), temporarily increased the rate of ozone depletion by several percentage points during 1992 and 1993. <sup>6</sup> Nevertheless, nearly all the particles resulting from the Mt. Pinatubo eruption have already washed out of the atmosphere, unlike CFC's, which remain in the stratosphere for as long as a century. <sup>7</sup>

Cumulatively speaking, Pinatubo's destructive effect on the ozone layer has been about *fifty times* less than that of CFC's, rather than a thousand times greater, as Limbaugh claims. Thus, his estimate is off by a factor of fifty thousand.

**Rush FICTION:** What "environmental wackos . . . really want to do is attack our way of life" in the effort to limit CFC's. "Their primary enemy: capitalism." <sup>8</sup>

**Scientific FACT:** Limbaugh ignores the fact that the conservative *Reagan administration* signed onto the Montreal Protocol, the international agreement to restrict CFC's, and that crucial support for the measure came from some of the largest manufacturers of these chemicals, who – like Ronald Reagan – are hardly enemies of capitalism. Although many of these corporations initially resisted action when the ozone problem was discovered, Dupont, Allied Signal and other domestic producers of CFC's have long favored strong restrictions concerning their production and use. Indeed, Dupont proposed a global ban of CFC's before European or United States governments did. <sup>9</sup>

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**Rush FICTION:** "In just one day in January [1992], NASA measured the amount of chlorine and another gas in the atmosphere of the Northern Hemisphere and found an unusually high level compared to normal. . . . There were headlines for days about an ozone hole in the atmosphere above North America. Senator Al Gore . . . predicted that President Bush would soon come around on all this because of the 'ozone hole over Kennebunkport,' despite the fact there was no such thing. . . . Within a few weeks, it was learned that most of the unusual measurements could be attributed to Mount Pinatubo's eruption, a fact the agenda-oriented scientific community attempted to ignore." <sup>10</sup>

**Scientific FACT:** Limbaugh's last statement is absolutely false. The measurements to which he refers, of extremely high levels of chlorine monoxide, were made by NASA only six months after Pinatubo's eruption and in a particular region of the Arctic stratosphere that was at the time unaffected by the volcanic emissions. Furthermore, large amounts of these chemicals were measured throughout the month of January, not just on one day, as Limbaugh asserts. <sup>11</sup>

As for the rest, the condition of the ozone layer in January of 1992 was a great deal more complex than Limbaugh's account would suggest. Indeed, many scientists were disturbed by the high chlorine monoxide levels. For a very large depletion to occur, however, the Arctic stratosphere would have had to remain cold for several more weeks, as it often does that time of year. Instead, a sudden warming occurred the following month, so the

damage to the ozone layer never became as severe as originally feared. If it had, the depletion might well have reached 20 to 30 percent in the lower stratosphere, rather than the 10 to 15 percent that was recorded. Indeed, such large depletions could occur over parts of Northern Europe and Canada during any winter, and may do so in the future. <sup>12</sup>

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In his most recent book, *See, I Told You So*, Limbaugh returns to the subject of ozone depletion. This time, he discusses the implications of a possible prehistoric supernova that may have damaged the atmosphere:

**Rush FICTION:** "Scientists say a supernova 340,000 years ago disrupted 10 percent to 20 percent of the ozone layer, causing sunburn in prehistoric man. Wait a minute – I thought only man could destroy the ozone. . . . And if prehistoric man merely got a sunburn, how is it that we are going to destroy the ozone layer with our air conditioners and underarm deodorants and cause everybody to get cancer? Obviously we're not...and we can't ...and it's a hoax." <sup>13</sup>

**Scientific FACT:** The report of a prehistoric supernova exploding close enough to the Earth to have possibly affected its ozone layer, thousands of years ago, though of doubtful relevance to Limbaugh's argument, was published in the British journal *Nature* and followed up by the *New York Times* in 1993. As quoted in the *Times*, Dr. Neil Gehrels, one of the authors of the report, clearly did not mean to minimize the possibility that the ozone loss that may have resulted would have damaged whatever forms of life were roaming the planet. Indeed, he was reported as saying that the effects of such an ozone depletion may well "have impaired the health of human beings and other creatures..." <sup>14</sup>

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**Rush FICTION:** "Even *The Washington Post* – that haven of liberal mythology – published a front-page story on April 15, 1993, that dismissed most of the fears about the so-called ozone hole...[It] had this to say: 'In fact, researchers say the problem appears to be heading toward solution before they can find any solid evidence that serious harm was or is being done.'" <sup>15</sup>

**Scientific FACT:** Limbaugh neglects to mention that the problem of ozone depletion appears to be heading towards solution only as a result of international agreements to restrict the production and use of CFC's. Thanks to these agreements, the ozone layer should return to near-normal levels around the year 2045. Before 1998, however, stratospheric ozone is expected to become thinner every year, and the amount of ultraviolet radiation reaching the Earth to increase, assuming other influences remain constant.<sup>16</sup> Although the consequences of increased ultraviolet exposure for plants and marine life are just beginning to be explored, the damage to humans from long-term exposure is well known. In many parts of the globe, ozone depletion is likely to cause a rise in rates of skin cancer, particularly non-melanoma cancers, which, due to lifestyle factors, are already at record levels.<sup>17</sup>

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**Rush FICTION:** "A few days later, the authoritative journal *Science* published a story headlined 'Ozone Takes Nose Dive After the Eruption of Mt. Pinatubo.' It pointed out that the ozone layer should show significant signs of recovery by 1994. But have you heard Algore ( *sic* ) or any other ozone alarmist step up and admit that he or she perpetuated ( *sic* ) a fraud on the American people?"<sup>18</sup>

**Scientific FACT:** Indeed, the ozone layer did not thin as much in 1994 as it did in 1993, due to the washing out of emissions from Mount Pinatubo (see above). Nevertheless, as *Science* magazine pointed out in a recent issue, this improvement is only temporary, since levels of "atmospheric chlorine will continue to increase until controls on CFC emissions take hold late in this decade. Pinatubo or no, things will get worse."<sup>19</sup>

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## GLOBAL WARMING AND THE GREENHOUSE EFFECT

Global warming is another topic about which Limbaugh attempts to mislead his readers, despite the international scientific consensus on many aspects of this issue. This consensus is reflected in the findings of the top researchers in the field, as published in the peer-reviewed scientific literature, and the conclusions of the [Intergovernmental Panel on Climate Change](#) (IPCC), the international scientific panel assessing climate change, which consists of a network of 2,500 experts worldwide. The IPCC has issued two reports clearly stating and then reaffirming that the Earth's climate *will* warm due to the buildup of man-made greenhouse gases.<sup>20</sup> In 1992, the [National Academy of Sciences](#) published its own report, concluding that "greenhouse warming poses a potential threat sufficient to merit prompt responses."<sup>21</sup>

Instead of taking on the international scientific community directly, however, Limbaugh chooses to attack Vice President Al Gore, and his book *Earth in the Balance*.

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**Rush FICTION:** "Al Gore's ( *sic* ) book is full of calculated disinformation. For instance, he claims that 98 percent of scientists believe global warming is taking place. However a Gallup poll of scientists involved in global climate research shows that 53 percent do not believe that global warming has occurred, 30 percent say they don't know, and only 17 percent are devotees of this dubious theory."<sup>22</sup>

**Scientific FACT:** These numbers, apparently lifted from a George Will syndicated column of September 3, 1992,<sup>23</sup> are supposed to reflect the findings of a Gallup poll taken in late 1991 to ascertain the opinions of research scientists concerning global warming. Even though polling is of doubtful relevance for determining the scientific truth of any proposition, it should be pointed out that nowhere in the actual poll results are there figures that resemble those cited by Will or Limbaugh.

Instead, the Gallup poll found that a substantial *majority* of the scientists polled, 66 percent, believed that human-induced global warming was already occurring. Only 10 percent disagreed, and the remainder was undecided.

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Moreover, the 98 percent figure appears in the context of Al Gore's book to refer to the percentage of scientists who believe that human-induced global warming is a legitimate threat, not, as Limbaugh frames it, to the number of those who argue that it is already in effect. In fact, the Gallup poll seems to bear out Gore's estimate as well, finding that only 2 percent of the scientists polled believed that there was no chance that substantial, human-caused warming will occur over the next 50 to 100 years.<sup>24</sup>

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**Rush FICTION:** "Al Gore told the *Washington Times* on May 19, 1993: 'That increased accumulations of greenhouse gases, particularly CO<sub>2</sub>, cause global warming, there is no longer any serious debate. There are a few naysayers far outside the consensus who try to dispute that. They are not really taken seriously by the mainstream scientific community.' Yet we saw in the last chapter that there is nothing resembling a consensus on this issue among scientists who have some expertise in this area. In fact, a majority clearly does not believe global warming has occurred."<sup>25</sup>

**Scientific FACT:** See the preceding item. Furthermore, even the most publicized and vehement of scientific naysayers, such as Pat Michaels of the University of Virginia, agree that increased accumulation of carbon dioxide will eventually cause global warming. What they disagree about is how much warming will occur over what period of time.<sup>26</sup>

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**Rush FICTION:** "...back at the time of the first Earth Day, the big concern wasn't global warming, it was global cooling. . . . [This was] the view of most environmentalists for years after."<sup>27</sup>

**Scientific FACT:** Although the Earth has warmed by about one degree Fahrenheit over the past hundred years, this warming has not occurred uniformly. In particular, during the period from 1940 to 1970, the Northern Hemisphere stopped warming and may have even cooled slightly.<sup>28</sup> This hiatus in the long-term trend contributed to concerns that the Earth was about to cool significantly, possibly due to the increased amount of soot and other particulates in the atmosphere.

However, warming resumed again in the 1970's and the nine warmest years on record have all occurred since 1980.<sup>29</sup> Recent calculations indicate that the greenhouse effect will outrun the effects of particulate cooling in the future, although the accumulation of particulates in the atmosphere may slow the overall rate of warming.<sup>30</sup>

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**Rush FICTION:** "A fact you never hear the environmentalist wacko crowd acknowledge is that 96 percent of the so-called 'greenhouse' gases are not created by man, but by nature."<sup>31</sup>

**Scientific FACT:** This is an obvious straw man set up by Limbaugh. It is true that the greenhouse effect is, by and large, a natural phenomenon, produced by gases in the atmosphere such as carbon dioxide and water vapor that have warmed the Earth for eons, making its climate moderate enough to support life as we know it. Without these gases, Earth would be forty to sixty degrees colder, essentially a frigid desert.<sup>32</sup>

However, in nature these gases usually remain in balance, leading to a stable climate, while the greenhouse gases added by humans over the last two hundred years have accumulated to the point that the amount of carbon dioxide in the atmosphere, for example, is now more than 25 percent above what it had been for the previous 10,000 years. (Scientists have direct evidence of this data, from measurements of air bubbles trapped in polar ice cores.)<sup>33</sup> The scientific consensus is that the accumulation of carbon dioxide and other gases due to human activity will alter the climate substantially, warming the globe by three to eight degrees Fahrenheit over the next century.<sup>34</sup>



## FORESTS AND THE SPOTTED OWL

One of the most contentious of current political debates concerns the old-growth forests in the Northwest. Limbaugh addresses this issue in *See, I Told You So* by citing mostly irrelevant statistics on tree growth in the United States as a whole:

**Rush FICTION:** "Would it surprise you to learn, for instance, that America's forests are much healthier today in the 1990s than they were at the turn of the century? In fact, you could say that in the last seventy years America's forests have been reborn. There are 730 million acres of forest land in our country today, and the growth on those acres is denser than at any time

. . . . New England has more forested acres than it did in the mid-1800s. Vermont is twice as forested as it was then. Almost half of the densely populated northeastern United States is covered by forest. Why? How could this be? If we are ravaging our land, as the environmentalists suggest, why are there more trees around – more forests?"<sup>35</sup>

**Scientific FACT:** Here, it seems, Limbaugh cannot see the forests for all those trees. It is true that due to the abandonment of farming, there has been a regeneration of forests in the northeastern United States over the past century, although not with all the species they originally contained.

Instead, environmentalists' primary concern during the last decade has been the rampant destruction of old-growth forests, particularly in the Northwest, where ancient trees were being cut down at an unprecedented rate, leaving only about 11 to 14 percent of the original forests still standing.<sup>36</sup>

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**Rush FICTION:** "What the environmentalists are saying, in effect, is that some trees are better than others. Trees that have been planted by man are not as worthy or valuable as those that grow in 'virgin' forests. What is a virgin forest anyway? Most trees live for only a couple of hundred years and then die. No tree lives forever."<sup>37</sup>

**Scientific FACT:** Virgin forests are forests untouched by humans. In the Northwest, they are mostly old-growth forests, featuring towering stands of trees, 200 to over 1,000 years old.<sup>38</sup> These trees are known to harbor a

number of endangered or threatened species, among them (but not limited to) the Northern spotted owl. Which brings us to Limbaugh's next point:

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**Rush FICTION:** "It reminds me of the researchers who recently ventured into the forests of California. Do you know what they found? No, not Al Gore. They found spotted owls. It seems the place is teeming with spotted owls – even though they're supposed to be an endangered species." <sup>39</sup>

**Scientific FACT:** Fewer than two thousand pairs of the Northern spotted owl are thought to survive in California forests – a number that could hardly be described as "teeming." <sup>40</sup> Even more importantly, at a meeting of experts called by the U.S. government in December 1993 at Fort Collins, Colorado, virtually every biologist who presented data concluded that the total numbers of the owl are still in decline. Moreover, the population loss rate appears to be accelerating. <sup>41</sup>

On the whole, Limbaugh dealt with this issue more honestly in his first book, *The Way Things Ought To Be*, when he asserted, "If the owl can't adapt to the superiority of humans, screw it. . . ." <sup>42</sup>

## CONCLUSION

Although he attacks his opponents in the scientific community for being driven by ideology, it is Rush Limbaugh who clearly allows his political biases to distort the truth about a whole range of important scientific issues.

All in all, the words he uses to describe Al Gore's book could more appropriately be applied to his own. Limbaugh's most recent work, just like the previous one, is "nothing more than a hysterical, pseudo-scientific tract designed to cut off calm, reasoned discussion of environmental issues and simply push the nation toward irrational, irreversible, misguided (not to mention expensive) public policies." If the words of Rush Limbaugh on scientific subjects prove anything, it should be "to discredit [him] from any serious participation in our nation's debate over the environment."<sup>43</sup>

The American public deserves better: to have its intelligence respected, not abused.

## ENDNOTES

1. Limbaugh, Rush, *The Way Things Ought To Be*. (New York, NY: Pocket Books, 1992, p. 155.
2. World Meteorological Organization, *Scientific Assessment of Ozone Depletion*. 1991, pp. 2, 16.
3. World Meteorological Organization and the United Nations Environment Programme, *Scientific Assessment of Ozone Depletion: 1994*, Executive Summary, pp. 2, 11.  
The 1994 Assessment cited anthropogenic chlorine and bromine compounds such as CFC's as the cause of polar ozone depletion and described the cause of the long-term downward trend in ozone at other locations as follows: "... recent scientific findings strengthen the conclusion of the previous assessment [Endnote 2] that the weight of scientific evidence suggests that the observed middle- and high-latitude ozone losses are largely due to anthropogenic chlorine and bromine compounds."
4. *The Way*, pp. 155-56.
5. Wallace, L. and W. Livingston, "The Effect of the Pinatubo Cloud on Hydrogen Chloride and Hydrogen Fluoride." *Geophysical Research Letters*, vol. 19, June 1992, p. 1209.
6. Kerr, R.A., "Ozone Takes a Nose Dive After The Eruption of Mt. Pinatubo," *Science*, vol. 260, April 1993, pp. 490-91; Gleason, J.F., et al., "Record Low Global Ozone in 1992," *Science*, vol. 260, April 1993, pp. 523-26; and Hoffman, D.J., et al., "Ozone loss in the lower stratosphere over the United States in 1992-93: Evidence for heterogeneous chemistry on the Pinatubo aerosol," *Geophysical Research Letters*, vol. 21, January 1994, pp. 65-68.
7. D'Altorio, A., et al., "Continuous Lidar Measurements of Stratospheric Aerosols and Ozone After Pinatubo Eruption Part II: Time Evolution of Ozone Profiles and of Aerosol Properties," *Geophysical Research Letters*, vol. 20, December 1993, pp. 2869-72; and WMO *Assessment 1994*, pp. 1-2.
8. *The Way*, p. 156.
9. Benedick, Richard, *Ozone Diplomacy*, (Cambridge, MA: Harvard University Press), 1991, pp. 31-32.

10. *The Way*, pp. 156-57.
11. Browell, E.V., *et al.*, "Ozone and Aerosol Changes During the 1991-1992 Airborne Arctic Stratospheric Expedition," *Science*, vol. 261, August 1993, pp. 1155-58; and Toohey, D.W., *et al.*, "The Seasonal Evolution of Reactive Chlorine in the Northern Hemisphere Stratosphere," *Science*, vol. 261, August 1993, pp. 1134-35.
12. Newman, P., *et al.*, "Stratospheric Meteorological Conditions in the Arctic Stratospheric Expedition," *Science*, vol. 261, August 1993, pp. 1143-45; Anderson, J.A. and O.B. Toon, "Airborne Arctic Stratospheric Expedition II: An Overview," *Geophysical Research Letters*, vol. 20, November 1993, pp. 2499-2502.
13. Limbaugh, Rush, *See, I Told You So*, (New York, NY: Pocket Books) 1993, p. 178.
14. *The New York Times*, February 25, 1993, Section D, p. 23.
15. *See, I Told You So*, pp. 178-79.
16. WMO, *Assessment 1994*, p. 11; "Quicker Ozone Recovery Forecast," in Random Samples, C. Holden, editor, *Science*, vol. 265, September 1994, p. 1806.

Changes in cloudiness or air pollution may also enhance or diminish ultraviolet radiation reaching Earth in different ways at different locations.
17. United Nations Environment Programme, *Environmental Effects of Ozone Depletion*, November 1991, pp. 15-24.
18. *See, I Told You So*, p. 179.
19. "Ozone Has Recovered From Pinatubo's Jold," Random Samples, R. Stone, editor, *Science*, vol. 264, May 1994, p. 1078; WMO, *Assessment 1994*, p. 11.
20. Intergovernmental Panel on Climate Change, *Climate Change: The IPCC Scientific Assessment*, (New York, NY: Cambridge University Press), 1990, p. xi; Intergovernmental Panel on Climate Change, *Climate Change 1992: The Supplementary Report to The IPCC Scientific Assessment*, (New York, NY: Cambridge University Press), 1992, p. 5.

It is worth reproducing the original IPCC statement on this point from the 1990 report –

"We are certain of the following:

- there is a natural greenhouse effect which already keeps the Earth warmer than it would otherwise be.
- emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases: carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface. The main greenhouse gas, water vapor, will increase in response to global warming and further enhance it."

These conclusions were reaffirmed in the IPCC's 1992 report.

21. National Academy of Sciences, *Policy Implications of Greenhouse Warming*, (Washington, DC; National Academy Press) 1992, p. 68.

22. See, *I Told You So*, pp. 162-63.

23. Will, G.F, "Al Gore's Green Guilt," *The Washington Post*, September 3, 1992. Will's erroneous summary of this poll has been quoted so many times that it has become gospel for the proponents of the environmental backlash.

24. The Gallup Organization, *A Gallup Study of Scientists' Opinions and Understanding of Global Climate Change*, November 1991, pp. 5, 8. Available from the Center for Science, Technology & Media, 6900 Wisconsin Avenue, Chevy Chase, MD.

25. See, *I Told You So*, p. 179.

26. Michaels, P.J. and D.E. Stooksbury, "Global Warming: A Reduced Threat?" *Bulletin of the American Meteorological Society*, vol. 10, October 1992, p. 1563.

27. See, *I Told You So*, pp. 180-81.

28. IPCC, 1990, p. 213.

29. Wilson, H. and J. Hansen, *Update of GISS Global Temperature Analysis Through 1993*, (New York, NY: Goddard Institute for Space Studies) 1994; Hansen, J. and S. Lebedeff, "Global Surface Air Temperatures: Update Through 1987," *Geophysical Research Letters*, vol. 15, April 1988, pp. 323-26.

30. Kerr, R.A., "Pollutant Haze Cools the Greenhouse," *Science*, vol. 255, February 1992, pp. 682-83; Wigley, T.M.L. and S.C.B. Raper, "Implications for climate and sea level of revised IPCC emissions scenarios," *Nature*, vol. 357, May 1992, pp. 293-300.
31. See, *I Told You So*, pp. 179-80.
32. IPCC, 1990, p. xxxvii.
33. Raynaud, D., *et al.*, "The Ice Record of Greenhouse Gases," *Science*, vol. 259, February 1993, pp. 926-34.
34. IPCC, 1990, pp. xxii, xxv; IPCC, 1992, p. 18.
35. See, *I Told You So*, p. 175.
36. Wilcove, D. and J.T. Olson, "The ancient forests of the Pacific Northwest," *Perspectives on Biodiversity*, eds. C.S. Potter, *et al.*, (Washington, DC; American Association for the Advancement of Science Press) 1993, pp. 177-85.
37. See, *I Told You So*, p. 176.
38. U.S. Forest Service, Old-Growth Definition Task Group, 1986.
39. See, *I Told You So*, p. 177.
40. Gutierrez, R.J., "Changes in the Distribution and Abundance of Spotted Owls during the Past Century," *Studies in Avian Biology*, vol. 15, 1994, pp. 293-300.
41. Burnham, K.P., *et al.*, "Estimation of Vital Rates of the Northern Spotted Owl," Summary of the Fort Collins Spotted Owl Demographic Workshop, January 12, 1994; available from Colorado Cooperative Fish and Wildlife Research Unit, Fort Collins, CO.
42. *The Way*, p. 161-62,
43. See, *I Told You So*, p. 162.

## AUTHORS

**Leonie Haimson** is a freelance writer based in New York.

**Dr. Michael Oppenheimer**, an atmospheric scientist, and **Dr. David Wilcove**, an ecologist, are senior scientists with the Environmental Defense Fund.

### *Acknowledgments*

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