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Review of *The Vanishing Face of Gaia: A Final Warning*. By James Lovelock. Foreword by Martin Rees.

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The Vanishing Face of Gaia: A Final Warning. By James Lovelock. Foreword by Martin Rees. New York: Basic Books, 2009. ix + 278 pp. Figures, references, index. $27.00 cloth, $15.00 paper.

I must have been deeply impressed by the fable of *The Ant and the Grasshopper* as a child because I still remember it decades later. The lessons from that tale clearly have been missed by many people these days. Had they been learned and heeded we might not find ourselves in so many environmental and economic messes. Similarly, if we in the U.S. had not seen the so-called Fairness Doctrine manipulated by a few scientists attempting to discredit proven science in the eyes of the public, as documented in Oreskes and Conway's *Merchants of Doubt* (2010), we would seriously be trying with other nations to solve these problems instead of largely ignoring them. Few of us give any thought to how what we are doing to despoil the Earth now will affect humans generations beyond the lives of our grandchildren, if humans happen to be around then. We all are products of our upbringing, and because of that, as Arthur Schopenhauer said, "Every man takes the limits of his own field of vision for the limits of the world." It's so easy to deny there's a problem and ignore all the evidence that there is.

In his latest book, *The Vanishing Face of Gaia*, James Lovelock writes a clear narrative about the major impacts humans are having on the tightly coupled biotic/abiota system we call the Earth and that Lovelock refers to as Gaia in his many scholarly works. He tells us that this coupled system acts in concert to maintain the Earth's environment at an optimal condition for the organisms that live together here, modifying, for example, the atmosphere so that its composition stays at about 21% oxygen and 78% nitrogen (in the tale of *Goldilocks and the Three Bears* this would be "just right"), with some—but not too much—carbon dioxide, methane, and other greenhouse gases present in the mixture. He points out that part of the problem of recognizing our negative impacts on the system is that, while the data of human-induced increases in greenhouse gases can not be seriously challenged, many of us feel the data are meaningless and should be dismissed without due consideration. He notes that the reports of the Intergovernmental Panel on Climate Change (IPCC) in 2001 and 2007 documented the changes being induced by human activities, but that a demand for a consensus with international political leaders led to the report's being watered down. Seeking consensus instead of accepting the facts and moving to solve problems now is part of the reason we are in this fix.

Lovelock tells us that global warming is a fact supported by data taken from all over the world. He says that even if we accepted this and tried to stop adding greenhouse gases to the atmosphere we would not be able to reverse the trend in the foreseeable future. He evaluates the ideas of green energy and writes that they are unlikely to help decrease warming and may even add to the problem. He comes out strongly for nuclear energy because it does not produce greenhouse gases and expresses his opinion that we were manipulated by opponents of this energy source to prevent its use. Our discovery of fire may have been our "original sin," he asserts, because much of the environmental damage to the Earth's atmosphere can be linked to its use.

If the scenario laid out by Lovelock proves true, what will its probable impact on the Great Plains be? Lovelock tells us that the climate of the lower 48 states will become much more arid than it is today for a prolonged period.

This will have a profound impact on our quality of life and our food production, particularly in those areas of the Plains where very long-term irrigation is not possible. That conclusion does not give those of us who live here now or who will live here in the future much joy, but Lovelock writes that there will be areas where climate change will not be quite so negative and points to Canada as a place where conditions might support a greater human population.

Gaia is in the process of making us pay for our past and continuing profligacy. The Earth and its life will change environmental conditions to achieve a new balance that gives life the best chance of survival. Lovelock believes that we should try to modify our behaviors and accept the fact that humans are likely to have real survival problems in the near future. We should try to "have a future in communion with our living planet to make her strong again and able to counter the disabling impacts that are due."

This is an important work. I encourage readers to examine its data and Lovelock's arguments and conclusions with an open mind. **R.F. Diffendal, Jr.,** *Conservation and Survey Division, School of Natural Resources, University of Nebraska–Lincoln.*