

The Greenhouse Effect Attracts Speculation

The January issue of *Agroborealis*, published by the University of Alaska Agricultural Experiment Station, Fairbanks, AK 99701, carries an article by Glenn Juday, a visiting associate professor and ecological reserves coordinator, titled "Climatic Trends in the Interior of Alaska: Moving Toward a High CO₂ World?" Juday's analysis begins with the peak of the last glacial period, about 14,000 years ago, and notes that the change from full glacial to modern climate conditions "was very rapid in northwestern North America, being essentially completed in 1,000 years." He traces the forest-tundra treeline in the central Canadian Arctic as a shifting climate marker readable in terms of the past several thousand years, and adds to that record the ground and soil temperatures "since the ground 'remembers' the temperature to which it has been exposed by storing the heat (or cold, depending upon your point of reference.)"

Juday concludes that "perhaps the most far-reaching consequences of CO₂ induced climatic warming would come about if the hypothesized collapse of the west Antarctic ice shelf occurred, rapidly raising world ocean levels by nearly 16.5 feet (Mercer, J.H. 1978. West Antarctic ice sheet and the CO₂ greenhouse effect: a threat of disaster. *Nature* 271:321)." On the other hand, he points out, although much of western and northern Alaska's coastal region would be inundated, a real warming could enhance the prospects for success of Alaska's new agricultural development projects.

An article ("Computing Climate,") in the May issue of *Science* 82 on long-range climate modeling with computers, suggested that the chances for accuracy from such forecasts were "0 to 100%." A letter to the editor of *Science* 82 in the July-August issue disagrees on the basis of a National Academy of Science panel (in 1979) that tried, with no success, to find a factor that would diminish to negligible proportions the effects of a carbon dioxide rise. The panel concluded that a global temperature rise of between two and five degrees Celsius was likely.