

### A THREAT TO THE POLAR ICE SHEETS?

[Review by G. de Q. Robin\* of Sherwood B. Idso's *Carbon dioxide: friend or foe?*, Tempe, Arizona, IBR Press, 1982, 92 p, illus. Soft cover \$9.95.]

This is a forceful small book that needs publicity. It reviews the climatic and agricultural consequences of the rapidly rising CO<sub>2</sub> content of the atmosphere. Idso's conclusions differ from those of the Carbon Dioxide Assessment Committee of the U.S. National Academy of Sciences and most atmospheric modellers. He predicts a worldwide temperature change of less than +0.3°K from a doubling of atmospheric CO<sub>2</sub> as opposed to the much greater figure of +2.0 to +4.0°K obtained by most modellers. He considers that increased agricultural productivity arising from increased CO<sub>2</sub> levels in the atmosphere is well established, and that the resultant benefit to man deserves more than the passing mention it is given in most official surveys.

Idso is not the only person whose funds for research on CO<sub>2</sub> climatic effects have been cut after reaching similar conclusions. Those responsible for the cuts clearly believe that such conclusions result from inadequate treatment of the problem. However Idso effectively levels the same charge at climatic modellers by quoting extracts from committee reports and scientific papers. Although his views appear biased against the establishment, this is no more than a natural reaction against the criticism he has received.

Modelling deficiencies appear more likely in tropical regions where negative feedback effects due to latent heat redistribution may be dominant. How then does the problem relate to polar regions where some influence of positive feedback due to early seasonal disappearance of snow and sea ice cover appears likely? Such effects make polar regions more promising for detection of global effects. However combined records from the Arctic and Antarctic do not provide clear evidence of CO<sub>2</sub> induced warming to date.

In my experience the publicity given to the postulated rapid collapse of the West Antarctic ice sheet due to CO<sub>2</sub> induced global warming fits many of Idso's criticisms. Careful consideration by the glaciological community shows that we do not have sufficient knowledge of all processes involved to give a reliable answer. Furthermore, the response could be a gradual increase in size rather than a collapse. Nevertheless, the collapse hypothesis continues to receive unwarranted emphasis from senior establishment scientists.

Idso and I, and most scientists at all levels, agree on one point. The effects of increasing CO<sub>2</sub> in the atmosphere are important and we need to know what they will be. The complications in reaching an answer seem more akin to the problems of economics than of the basic sciences, which nevertheless must provide the answer.

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### PERMAFROST

[Review by P. J. Williams\* of the *Roger J. E. Brown Memorial Volume: Proceedings of the Fourth Canadian Permafrost Conference*, edited by H. M. French, Ottawa, National Research Council of Canada, 1982, 594 p, illus.]

Canada has more permafrost than all the other English speaking countries together. Before the War the output of scientific literature on this topic from Canada was nevertheless quite insignificant. Wartime activities stimulated research; especially since about 1960, when the First Canadian Conference gave rise to a slim volume of largely tentative papers, an ever expanding and more comprehensive science has developed which is well represented by the diversity of papers in this volume. Roger Brown's career coincided with this period. He was widely known for the extensive fieldwork he carried out on the distribution of permafrost and for the stimulation he gave to others in that fundamental topic, which was his foremost research interest.

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