WOLF!

AN EDITORIAL NOTE

By David A. Brooks

ONE OF THE INSIDIOUS dangers of the "ozone hole" is that its significance is apparently discounted by the public. The topic has great social currency in airplanes and back yards. Puzzlement is expressed, for example, about why a factor-of-two fluctuation in ozone concentration over Antarctica should be of such concern, when citizens of Los Angeles have for years been subjected to ozone levels much higher than national standards. Astute readers note that pessimistic forecasts of ozone depletion bring high-latitude levels of damaging UV-B radiation (280-320nm) barely up to those presently experienced at sea level in equatorial zones; so what's the fuss?

We could do a better job explaining the problems.

We solicit public interest in science issues and welcome the chance to clarify important points. Unfortunately, the misunderstandings sometimes take on a strident note. For example, the *Houston Chronicle* recently featured an article with the banner title "The 'ozone hole crowd' [is] trying to peddle us a load of hot air." Under notable credentials, the author alleged that many scientists concerned about pollution, ozone depletion and global warming are motivated more by pecuniary interests than by altruistic desires to advance the common good. He cheerily concluded that "we are being peddled protection from non-existent hazards." Such views may be dismissed as extremist or irrational, unworthy of reaction, but the solidity of newsprint magnifies the malignancy and demands a response.

Part of the public skepticism may arise from the suddenness with which the Antarctic ozone hole has appeared. Perhaps this suggests uncertainty or lack of consensus about the reality of the ozone deficit. Possibly the science community's credibility has been weakened by the recent cold-fusion debacle and the shameless scramble for headlines it engendered. As a result, important climate issues may be viewed with suspicion by a jaded public, wary of false messengers and the echoing cry of "Wolf!" Such skepticism is especially unsettling at a time when we need to convince talented young men and women that the sciences offer intellectually and morally satisfying careers.

In this issue, we present some of the known facts concerning the ozone deficit, its causes, and its effects on organisms in the ocean. As the authors carefully note, there are great uncertainties in these matters. Nonetheless, it seems clear that reduced *stratospheric* ozone produces significant increases in the *proportion* of damaging UV-B radiation reaching the ocean surface, and that phytoplankton and zooplankton at the base of the global food web may suffer as a result (the italicized words reveal the respective flaws in the "Los Angeles" and "equatorial" arguments). The growing confusion about the ozone deficit and its portent for the ocean indicates that we could do a better job explaining the problems and their possible solutions.