Letters

Population Control: Man and Other Species

To the homeostatic mechanisms of population control mentioned by Wynne-Edwards ("Self-regulating systems in populations of animals," 26 Mar., p. 1543) might be added another, an automatic rather than conventionalized competition by which faster-growing (or older) members of a population chemically inhibit the growth of smaller members. This is without reducing the food supply below the critical level or involving disease, predation, or physical factors which are also automatic but influence the population from outside. Water taken from an aquarium in which one or more *Rana pipiens* tadpoles have been eating and growing inhibits the growth of and can even kill smaller tadpoles of the same species, even though the large ones are not present [see S. M. Rose, *Science* **129**, 1026 (1959); *Amer. Midland Naturalist* **62**, 474 (1959); *Ecology* **41**, 188 (1960)]. The effect is not observed unless the larger individuals are eating and growing; and the inhibiting substance is subject to various alterations, including breakdown on standing. Here is a kind of competition befitting species members not mature enough for social conventions, and natural for plants (see the third reference), which are presumably unable to practice them at all.

As a student for the priesthood, I find it hard not to react to Wynne-Edwards' discussion of society. Can we avoid going wrong if we are too eager to miss the differences between animals that think and do science and those that do not? Surely it is to the shame of the former not to be able to set up a society distinctly superior to that of the latter, one which could hardly have the same definition except in a very loose sense. While "conventional competition" is a genuine characteristic of our society—and a clear understanding of this will help all the more in its betterment—this competition is not, one may hope, the distinguishing quality that defines it in the same way as it does a society of birds that sing in the morning and dig for worms all day. And to say that "it becomes obvious at last that we are getting very near the global carrying capacity of our habitat," when more than 8/10 of the earth's surface remains almost untapped and when we are using only 8×10^{-8} of the sun's energy that reaches us, is to ignore the once unimagined things man's God-given mind has already done.

JOHN YOUNG
Holy Cross Fathers Seminary,
Stonehill College,
North Easton, Massachusetts

Authors et al.

Even though—or perhaps because—the letter headed "Needless pangs caused by heedless editors" (*Science* **147**, 1241—the pagination is inclusive) is highly author-centered, it deserves the close scrutiny of fair-minded readers and of editors hopeful of improving the quality of technical papers. The most sadistic of reviewers will probably admit, at least in his compassionate moments, that the writer of the letter, I. H. Page, has a legitimate complaint about the treatment of some papers by some reviewers and editors.

Page's complaint about editorial trivia and his suggestions concerning them require close examination. In the writing and editing of any paper, three groups should be considered: authors, editors, and readers. Because the number of readers exceeds, we hope, the number of authors and editors, any calculation of time saved by one practice or another should be weighted in favor of the reader.

The use of *et al.* in place of authors' names is admittedly arbitrary. It is based on the assumption that the front-runner in a pack of authors did most of the work, whereas he may only be the head of a department. Probably the *et al.* practice developed as a defense of the editor-trying-to-save-money against the proliferation of authorship that seems to be a trend of the times. A cynic might remark that *et al.* only assigns to anonymity the persons who ought to be there anyway. If we had more anonymity, we might have fewer freeloading authors. (These are reflections of an editor in one of his dark moments.) Freeloading, or almost freeloading, is so common that I am tempted to believe that any legal and ethical practice that will reduce the number of authors per article is desirable.

JAMES S. AYARS
Illinois Natural History Survey,
Urbana, Illinois 61801

Small Conferences

The editorial "Group interaction among scientists" (23 Apr., p. 447) draws attention to the importance of small, informal group meetings in fostering communication among scientists representing different fields of endeavor. Abelson gives an excellent description of the interaction that takes place when such a conference, planned for the meeting of minds, is successful, but says, quite correctly, that bringing individuals together does not invariably produce an environment which promotes motivation, understanding, creativity, and amity.

For the last 30 years I have been involved in the organization of small multiprofessional conferences in biology, medicine, and the social sciences, under the auspices, initially, of the Josiah Macy, Jr. Foundation, later of the American Institute of Biological Sciences, and currently of the Interdisciplinary Communications Program of the New York Academy of Sciences. We have gradually evolved a procedure for the organization and administration of such conferences which seems to be successful in providing the "special microenvironment" described by Abelson. In our experience precautions must be taken to avoid the danger that such a meeting will regress to the current standard for scientific meetings—the reading of a series of papers with scant time for discussion. It is essential to devote most of the conference time to threshing out issues in conversational exchanges and to encourage interruption, which is the