

Living coral reefs with their complex ecosystems are now the centre of increasing attention. The zooxanthellae have been cultured by microbiologists and revealed as the resting stages of dinoflagellates representing 'imprisoned phytoplankton'. They take the means of protein metabolism from the coral but also return essential organic matter to the animal. They were finally revealed by Tom Goreau in Jamaica as essential agents in the high rate of calcification needed to maintain reefs against the effects of physical and biological agents of destruction.

Modern reefs date no further back than the last Ice Age, only some 10,000 years ago and much of the present structure, increasingly revealed and photographed by aqua-lung divers and shown with all its accompanying life on television screens the world over, is no more than a modern crust over

earlier formations.

The scientific study of coral reefs is now a major area of enquiry involving a wide range of biological and physical disciplines conducted by workers in many countries. This is at once apparent in the diversity and origins of the 31 papers published in the first volume of *Coral Reefs*. The new journal is produced at the high standard which is expected of Springer International and under the co-ordinating editorship of David Stoddart, uniquely experienced in coral reef investigations in three oceans, with the assistance of 23 associate editors. This excellent new journal should be available to all interested in oceanographical research. □

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## Limits to growth

L.J. Audus

**Journal of Plant Growth Regulation.**  
Editor-in-chief Thomas C. Moore.  
*Springer-Verlag. 4/yr. DM181, \$71.80.*  
**Plant Growth Regulation.**  
Editor-in-chief Tudor Thomas.  
*Martinus Nijhoff/Dr W. Junk. 4/yr. Fl155, \$62.*

STUDIES of plant growth regulation have proliferated dramatically since the last war, to the extent that articles in this field now predominate in the well-established international journals of plant physiology. Yet there is little evidence that authors of good papers on the subject are finding difficulty in getting speedy publication in those journals.

Strangely, therefore, it has been thought necessary to introduce two new journals to cover this field, with almost identical titles and clearly identical aims and scope. Each is concerned, from cell to plant community, with the control of growth and development by natural hormones and synthetic regulators from both fundamental and applied aspects. Only one, the *Journal of Plant Growth Regulation* (JPGR), explicitly welcomes papers on photomorphogenetic processes involving phytochrome, although *Plant Growth Regulation* (PGR) has already published one such article.

Both journals have distinguished international editorial boards, two members being common to both. That of JPGR is half American, this journal being really a society forum in that it is published "in co-operation with" the International Plant Growth Substances Association. The board of PGR is larger (24 as compared with 14), more international and has more British members.

Articles for the JPGR are submitted to two reviewers (and a third if the first two disagree). The reviewing policy for PGR is not stated. Page allocation for the JPGR is strictly limited to 8–10 printed pages, and has been maintained in the first volume. PGR is more flexible, limiting original research papers to 10 printed pages but accepting an occasional review (up to 25 pages) and "short communications" of 2–3 pages. Both journals require the article to be written in English and so far the quality of writing has been high. Both require English abstracts although PGR allows a second in French, German or Spanish, a point in its favour.

The JPGR records dates of receipt of manuscripts and of publication of each

number. For the 31 papers in the first year the "time to publish" averaged 208 days, which differs little from that of the established journals. PGR is erratic with such records in the first three numbers available for review, so that similar calculations cannot be made. However each article indicates key words, a facility which the JPGR omits.

Already one can distinguish clear differences in the flavour of the two journals. The JPGR has published fewer papers on the applied aspects of the subject (about one in five) whereas PGR has published proportionately more (about two in five). Twelve of the 31 papers in the JPGR have dealt with fundamental processes whereas PGR has published proportionately many fewer. In the JPGR, university departments provide most (83%) of the papers whereas in PGR the majority are from research establishments concerned with applied matters. I feel that the quality of the material in the JPGR is superior to that in PGR, there being a greater proportion of papers (about half compared with a quarter) making important new advances.

It is difficult to see how these two publications are both going to survive the strong competition of the well-established international journals. In particular it is a puzzle why Springer should establish the JPGR alongside the "sister" journal *Planta*, which has been predominant in precisely the same field. It appears that PGR may find their strong and combined presence overwhelming. □

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## Icy life

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**Polar Biology.**  
Managing editor G. Hempel.  
*Springer-Verlag. 4/yr. DM168, \$66.70.*

THIS journal can legitimately claim to be international; the Managing Editor is supported by an editorial team of 29 people representing 14 nations, and contributors to its first four issues included a number of distinguished workers from eight countries. The quality of the papers is high, the format attractive and production standards good. So far, each issue of about 60 pages has contained six to eight refereed articles reporting original research, appearing six to nine months after submission. The emphasis in the journal to date has been strongly on the Antarctic marine ecosystem.

An editorial comment in the first issue noted that contributions in polar biology were "scattered over national multidisciplinary polar journals and the specialized biological periodicals". This will continue

to be true, as the new journal can accommodate but a small proportion of the articles appearing in its field. Interested research workers will therefore continue having to scan the established polar and biological journals, which would have been appropriate repositories for most of the research papers so far appearing in *Polar Biology*.

Scope exists for a journal devoted to the biology of polar regions, especially in view of the ecological implications of accelerating resource development for both marine and terrestrial ecosystems but its emphasis should surely be on discussion and synthesis rather than specialized research papers for which there is already adequate outlet. Review articles and correspondence are said to be acceptable in *Polar Biology* and topics such as comparisons of the contrasting biological systems in Arctic and Antarctic regions are foreshadowed in the initial editorial comment. Inclusion of such material would materially enhance the value of the new journal. □

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