

lead to further knowledge of cosmic radiation, particularly regarding its potency in inducing radioactivity in exposed material.

The overlapping which is so often a fault with publications of this type seems very largely to have been avoided. It should perhaps be mentioned that the word "aeropause" is defined by its originator (K. J. K. Buettner) "as that atmospheric range in which the functions of the atmosphere, in a physiologically effective degree, fade out, one after the other".

References are given at the end of each article. The book is well produced and has a good index.

K. E. SPELLS

## PROGRESS IN CYTOLOGY

### International Review of Cytology

Edited by G. H. Bourne and J. F. Danielli. Vol. 1. (Prepared under the auspices of the International Society for Cell Biology.) Pp. xii+368. (New York: Academic Press, Inc., 1952.) 7.80 dollars.

ANOTHER new biological journal, or more correctly a new biological annual, has appeared, and, when such an event occurs, perhaps the most natural question to ask in this age of overcrowded book-shelves is whether this new publication can justify its place. Does it provide information which is not available elsewhere or could not appear more appropriately in existing journals? If so, is the method of presentation as economical as it could be and as helpful?

The first volume certainly contains many interesting articles, and much new information is presented as well as some very useful syntheses. It has been the aim of the editors to make the review truly international, and while they have partially succeeded in this aim, with perhaps an inevitable Anglo-American slant, the policy is inclined to lead to difficulties in language and outlook (though the articles are all, in fact, written in English) unless the editors are prepared to edit more scrupulously than they have apparently done in presenting the subject-matter of the first volume. The purpose of the international review is presumably to allow cytologists in all branches of the subject to become familiar in a general way with events occurring in fields other than their own. Very few of us can be expert in all branches of the subject, and the jargon of each becomes more and more exclusive and unintelligible to the others. If, therefore, a review of cell biology is to be useful, it must be written in simple language which all can understand. It must be the primary object of each author of the review articles to explain his subject as simply as possible and not to be as cryptic and clever with his jargon as he can. Two examples will illustrate the dangers. The following paragraph presumably means something to the author and perhaps to workers in the same field, but one wonders how much it conveys to others: "The activators and inhibitors mentioned under the Tween techniques have no effect whatsoever on the hydrolysis of the naphthol esters, except that eserine ( $10^{-6}$  M) appears to inhibit the activity of the muscle-spindles of the mouse considerably". Another pair of adjacent sentences in another article seems a little curious to the uninitiated: "This is the basis of the acid-Giemsa technique, which is now

widely used for bacterial cytology. It is of course obviously derived from the Feulgen reaction, but produces much clearer preparations". Why is it of course so obvious? Perhaps in the second and subsequent volumes the editors will help the reader over such difficulties. They will have a hard task; but they will have to face it if the review is to succeed.

Some of the sixteen articles, which are on various topics ranging as a whole from bacterial nuclei through the localization and mode of action of enzymes to physicochemical studies of cell structure and even to a short historical note on early cytological research, are little more than original papers or summaries of original papers by the same author. While sometimes individually interesting, they are, in my opinion, out of place. On the other hand, such reviews as those on freezing and drying techniques, on the basis of staining processes and on enzyme action in the penetration of cell membranes, are on the whole well balanced and useful. Perhaps the most interesting theory which is developed—and it is the declared policy of the editors to provide space for the development of new theories—involves the folding and unfolding of protein molecules as a basis for osmotic work done by cells. This seems to be full of possibilities.

On a minor point, I would suggest that the lists of references should include the titles of the papers.

E. N. WILLMER

## USEFUL PLANTS OF THE TROPICS

### The Useful and Ornamental Plants in Trinidad and Tobago

Revised fourth edition by R. O. Williams and R. O. Williams, Jr. Original edition by W. G. Freeman and R. O. Williams. Pp. 335. (Port of Spain: Department of Agriculture, 1951.) 2 dollars.

THE fourth edition of "The Useful and Ornamental Plants in Trinidad and Tobago", by R. O. Williams, sen. and jun., will doubtless prove, like the earlier editions of this extremely useful reference work, to be of value in many other tropical countries besides the West Indies, for a large proportion of the plants dealt with are, more or less, cosmopolitan throughout the tropics. The authors are father and son, and the work affords a good example of family enterprise and co-operation. Both are now engaged in agricultural work in East Africa, and the senior author has produced a somewhat similar work there ("Useful and Ornamental Plants of Zanzibar and Pemba").

At the present time there is increasing interest in economic plants of all kinds. This is particularly noticeable where food plants are concerned, and those plants that fall in the category of protective food plants or which are rich in vitamins. This is perhaps a natural consequence of a rapidly increasing world population and the demand for more and yet more food. Medicinal and drug plants are another group of economic plants that are attracting much attention. Many feel that the thousands of native medicinal plants throughout the world in use by primitive peoples are worthy of intensive investigation on modern scientific lines, and that more extensive use might be made of some of them. There is interest at the present time in those plants known to be used