

ENZYMES IN ARTERIES

Enzyme Biochemistry of the Arterial Wall as Related to Atherosclerosis

By Tibor Zemlenyi. Pp. x + 273. (Lloyd-Luke (Medical): London, November 1968.) 90s.

DR ZEMLENYI has directed his monograph to two types of investigator—the biochemist (who “may not be too aware of the medical problems”) and the medical biologist (who “often has forgotten most of the biochemistry that he learnt as a student”). The volume gives a comprehensive account of enzymes found in arterial tissue. After dealing in the first part with enzyme activities found in normal vessels, the author moves on in part two to deal with the special problems of the vascular enzymes in relation to atherosclerosis. Naturally, particular emphasis is given to the extensive experimental work which has been published from Zemlenyi’s department in the Cardiovascular Research Institute in Prague. One has to admire the thoroughness with which experiments have been carried out to test a very wide range of possible relationships with enzyme activity. Using a variety of experimental models, the effects of age, sex, castration, experimental disease and injury have been studied for an amazingly wide range of enzyme activities. An interesting further comparison is between atheroma-prone and atheroma-resistant vessels from the same animals.

The subject is a difficult one and few of the medicals who have “forgotten their biochemistry” will be able to finish the course. It is not easy to see any pattern emerging from the vast array of observations recorded, and it is not surprising perhaps that there is no convenient final chapter summarizing the position and pointing the way ahead. There is no doubt, however, that Zemlenyi has performed a valuable task in assembling these data in a readily accessible form. Enzyme histochemistry is one of the research tools that have contributed to the mass of our detailed knowledge of the atherosclerotic lesion; the place of these enzyme changes in the pathogenesis of the lesion remains to be determined.

T. CRAWFORD

DISEASE RESISTANCE IN PLANTS

Plant Immunity

Biochemical Aspects of Plant Resistance to Parasitic Fungi. By L. V. Metlitskii and O. L. Ozeretskovskaya. Translated from the Russian. Pp. 114. (Plenum: New York, 1968.) n.p.

THIS is a general review of our present knowledge of the subject. While most attention is given to recent work, earlier studies are not forgotten and discussion is coloured by a philosophical approach to the complexities of the problem. The authors state that final conclusions on most aspects of host-pathogen relations are dependent on new experiments capable of proving or amplifying earlier work.

After a short introduction, major aspects of disease relations are conveniently separated into six chapters. Resistance factors present in the host under normal conditions or only after infection are considered. These include the interesting but confused phytoalexin theory, which is described as well as our present knowledge allows. The authors conclude that in the interest of further profitable treatment of the problem of plant immunity it is imperative that a more precise terminology be introduced and that workers in the area of phytoncides and phytoalexins join forces.

Energy exchange problems in phytoimmunity are considered. The active energy system of a host plant that promotes its defence against many fungus pathogens can raise its infectability to certain obligate parasites and

viruses. The causes of infection by wounding and the increased defence mechanisms of wound periderm are discussed in some detail. The question of necrotic reactions and hypersensitivity is fully explored, the authors rightly concluding that the factors involved are by no means fully understood. The last review chapter deals with the vascular pathogens, their toxins and host defence mechanisms, and finishes with a useful summary.

The book is well produced and covers a wide field of endeavour in its 114 pages. There is a bibliography of nearly 300 references. The authors do not claim to make a complete survey of all the information available but have certainly covered the salient points. This is a book useful to both student and research worker.

D. S. KIRKHAM

FUNGI FOR EATING

Wild Mushrooms

An Illustrated Handbook. By Linus Zeitlmayr. Translated and adapted from the German, with mushroom recipes by Otto Gregory and with illustrations by Claus Caspari. Pp. 138. (Frederick Muller: London, October 1968.) 30s.

THE author’s foreword begins: “Another mushroom-fungus book? Any fairly expert fungus hunter is bound to ask the question after an anxious look at the by no means short row of fungus books already on his shelves”. Yes, indeed, still another, and I can see its justification only in the beautiful coloured plates by Claus Caspari illustrating seventy of the larger fungi.

The book is clearly not intended for the scientist, but rather for the amateur with a special interest in collecting mushrooms and toadstools for the pot. It should also assist him in avoiding the poisonous species. There is a brief appendix on cooking recipes, but it has not been possible to test the value of this part of the book.

The first half is an introduction to the larger fungi directed to the general reader. The second is concerned with a description of the seventy illustrated species. As so few are considered, however, this work can hardly serve, even for the beginner, as a handbook for naming the fungi he might find in woods and fields.

C. T. INGOLD

BERKSHIRE PLANTS

The Flora of Berkshire

By H. J. M. Bowen. Pp. 389. (H. J. M. Bowen, 20 Winchester Road, Oxford, 1968.) 45s.

DRUCE’S *Flora of Berkshire* is now over 70 years out of date and Dr Bowen’s new *Flora* adequately fills the need for a more modern work. Besides Charophyta and vascular plants, it includes lists of lichens, fungi and bryophytes, for which the author had the help of various specialists. Brief summaries of ecology are given for most species, and the distributions and relative frequencies of 570 species of vascular plants are separately shown on maps gridded on a 5 km × 5 km basis. There are short chapters on geology and soils and on climate. In a chapter on plant communities and land use, it is refreshing to find bryophytes and fungi mentioned in the community lists as well as vascular plants. The author adopts Matthews’s classification of British seed plants according to their European distribution in a section on geographical relationships and changes, and gives some indication of decreasing and increasing species in Berkshire. The recent changes in the Berkshire flora, however, are dealt with too shallowly to be of much use and more information would have been welcome.