Phytochemistry, 1970, Vol. 9, pp. 2071 to 2072. Pergamon Press. Printed in England.

BOOK REVIEWS

The Story of Ergot: F. J. BOVÉ. S. Karger AG, Basel, Switzerland, 1970. 297 pp. 132*s*.

THE BOOK informs the reader about an old plant drug, which until recently has been of considerable economical importance. It is written in the short, clear-cut style used by the writers of modern prose and certainly will fascinate not only pharmacists, biochemists, biologists, physicians and historians but also intelligent laymen. The author, a pharmacist and member of the National Association of Science Writers, knows what is needed for writing a fascinating tale. He gives no dry monotonous history but a lively story of the scientists who worked on ergot and the problems they solved.

For those interested in a more detailed study of ergot, the book provides a path through ". . . a thick forest. A forest of literature. And a forest of confusion . . .". It contains a large amount of carefully edited data on the pharmacognosy (nomenclature, life cycle, host–parasite relationship and history), on the structure and biochemistry of the alkaloids, pigments and other constituents and on the physiology, biological standardization, pharmacology and clinical uses of ergot. The references given at the end of each chapter make further studies possible. To facilitate easy reading by those who are not interested in a more serious study, practically no formulae and no indexes are provided. However, since the book of George Barker, *Ergot and Ergotism*, which appeared in 1931, no such complete survey of all facets of ergot and ergot research has been written. A survey ". . . the reader will enjoy reading. And add to his knowledge while enjoying himself."

University of Hallé
D.D.R.

MARTIN LUCKNER

Experimente zur Pflanzenphysiologie. Eine Einführung. (Experiments in plant physiology. An introduction): PETER SCHOPFER. Verlag Rombach, Freiburg. 418 pages, no price given.

IT HAS long seemed to me that plant physiologists at universities are somewhat reluctant to divulge the sort of experiments to which they subject their students in the laboratory. Accordingly, the present book is to be welcomed. The author clearly believes in the paramount importance of laboratory work well carried out and properly written up. Furthermore, many of the experiments described require a well-equipped and up-to-date laboratory including a centrifuge giving 30,000 *g*, a Warburg manometer apparatus capable of photosynthesis experiments and a *good* spectrophotometer. Peter Schopfer begins his Foreword with

> "Modern investigation in plant physiology is characterized by an abundance of biochemical and biophysical research methods."

His book gives an excellent introduction to what this means.

It is divided into sixteen sections, section 1 being a general introduction to selected topics in laboratory practice with supporting theoretical treatment where appropriate. This section concludes with a brief treatment of bio-energetics mainly about Gibbs free energy and redox potentials.

Sections 2–15 comprise ninety-two experiments of varying sophistication each section covering some topic of physiology and/or biochemistry and being preceded by an introduction for each particular topic. These introductions are particularly helpful especially when taken in conjunction with a lecture course for which they are not meant to be a substitute. All experiments are accompanied by full details as to materials, reagents, equipment, etc. with suggestions for further work in addition to some pertinent questions.

Typical experiments in the book include: qualitative detection of fats, carbohydrates and protein, isolation and characterization of nucleic acids, isolation and quantitative determination of chlorophylls *a* and *b*, gel chromatography of enzymes, quantitative determination of ascorbic acid, nitrogen metabolism of leguminous plants in relation to *Rhizobium*, transport of radio-active calcium, spectroscopic demonstration of reduced cytochrome, demonstration of CO_2 fixation using labelled CO_2, water uptake by seeds, transpiration in shoots, and water conduction using eosin dye.

No less than forty experiments are concerned with various aspects of growth, including plant growth regulators, regeneration, tissue culture and photomorphogenesis. This seems to me a most instructive set of experiments and, no doubt, reflects the author's special interest. Finally, there is an Appendix giving instructions for making light-growth cabinets.

The book is to be strongly recommended. Students will benefit from the wide range of experiments made available and will also become acquainted with a number of important experimental techniques. This last point calls for one comment: equipment used and the setting up of many of these experiments does call for the services of well-trained laboratory staff.

University of Reading F. B. HORA