The Germination of Seeds: by A.M. MAYER and A. POLJAKOFF-MAYBER. 3rd edition, Pergamon Press, Oxford, 1982. 211 pp. £19 hardback, £9.50 flexicover.

A textbook on seed germination that has achieved the status of a third edition needs no detailed appraisal from a reviewer, since its virtues will already be familiar to all those working in this area of plant research. Undoubtedly, the popularity of this book stems from it providing, within a relatively short compass, a critical and lively account of the structural, physiological and biochemical events associated with seed germination in higher plants. It is also well referenced so that it provides a useful entry into the research literature on the subject. For this third edition, many sections have been revised or rewritten and a variety of new references added.

In spite of extensive revision, the authors still rely fairly heavily on the literature of the 1930–1960 period. While this undoubtedly has considerable pedagogic value, it means that certain parts of the book have a rather dated appearance. Nonetheless, when it really matters, e.g. when dealing with nucleic acid metabolism in germinating seeds, more recent references dominate. Furthermore, the sections on growth substances in seeds fully reflect current doubts and questionings about the precise roles of abscisic acid and the gibberellins in controlling the germination process. It is incidentally unfortunate that the structure shown on p. 70 for abscisic acid is that of the inactive 2-*trans*-isomer, rather than that of the active *cis*-isomer. It is also a pity that the stereochemistry at C-1′ is not defined, since this is an important part of its biological activity.

A particular merit of this text for both student reader and researcher alike is the fact that the authors do not eschew the difficulties associated with those topics in seed germination which are both controversial and highly complex. They point to the many unsolved problems awaiting study and this can only be an important stimulus for further extending our very incomplete knowledge of a plant process which has many practical implications in agriculture and horticulture.

Plant Science Laboratories, University of Reading JEFFREY B. HARBORNE

The Alkaloids: senior reporter M. F. GRUNDON. Vol. 11, Specialist Periodical Reports, The Royal Society of Chemistry, London, 1981. 259 pp. Hardback, £50.

The senior reporter and his 16 colleagues are to be congratulated on the production of Vol. 11 in this excellent series. The literature was reviewed between July 1979 and June 1980 with the exception of that for *Erythrina* alkaloids which covers a 2 year period. Again the format of the book remains the same, with some 16 chapters, each being prepared by a leading expert in that particular field. Chapter 1 covers biosynthesis and over 60 references are quoted, including work with isolated enzymes and chloroplast extracts on quinolizidine alkaloids. The remaining chapters deal with pyrrolidine–piperidine–pyridine, tropane, pyrrolizidine, indolizidine, quinolizidine, quinoline, β-phenethylamine–isoquinoline, aporphine, Amaryllidaceae, *Erythrina*, indole, *Lycopodium*, diterpenoid, steroidal and miscellaneous alkaloids. As might be anticipated, the chapters are uneven in content with only a handful of references on *Lycopodium* and Amaryllidaceae alkaloids, for example, in contrast to a massive collection of 413 references on β-phenethylamine and isoquinoline alkaloids. Over 750 references are included and it is to the authors' credit that the volume remains slim. Although over one-third of the references are devoted to synthesis and biosynthesis it should be noted that other aspects, such as plant sources of alkaloids, structural determination, spectral data and biological activities, are included. Thus, it is possible to obtain references on naloxone, for example, ranging from endorphin blockade to electro-acupuncture analgesia and covering some 25 different types of biological effect. This year, it seem that indole alkaloids have to take second place with only 132 cited references but the extent of the work is similar to previous years and includes diverse topics such as mould metabolites and the neat syntheses of those bisindoles with potential as anti-cancer drugs.

The cost of the volume is high and unfortunately it will not be purchased by many individuals who are alkaloid devotees. It is to be hoped that libraries will continue to take the series because it is comprehensive and is of interest to scientists who primarily consider themselves as either botanists, chemists, pharmacists or pharmacologists.

The School of Pharmacy, University of London J. DAVID PHILLIPSON