book deals with the motion and excitation of carriers by external fields and includes a particularly helpful discussion of photoelectron effects. The book is well indexed, remarkably free from typographical errors and will, I feel sure, be a useful textbook for a variety of students (and their seniors) for the next few years.

J. E. ENDERBY

Lichens

The Lichens. Edited by Vernon Ahmadjian and Mason E. Hale. Pp. xiv+697. (Academic: New York and London, January 1974.) $35; £16.80.

ABOUT one fifth to one quarter of all described species of fungi are lichenised, but very few books have been written about them. Indeed, this is the first large and comprehensive work of advanced scholarship in the English language about lichens since the classic monograph of A. L. Smith in 1921. Furthermore, since so few botanists specialise in these plants, there is unlikely to be another book of this type for some time to come. It is, therefore, something of a milestone in the development of the subject.

There are 23 authors contributing 19 chapters and 3 appendices, covering a wide range of topics including morphology, taxonomy, reproduction, physiology, ecology, secondary metabolic products and symbiont interactions. Inevitably, there are some gaps. In the preface, the editors say that chemotaxonomy is one of the main present day areas of research in lichens, yet the book has no chapter devoted to this richly controversial topic: indeed, it gets but a passing mention in one appendix, and is not cited at all in the index.

Unevenness in quality is to be expected in all multiauthor works, and this is no exception. Although the editors have been very thorough and painstaking—so that errors and unclear passages are rare—it is a pity that they did not persuade authors to be more interpretive in their approach. Too many contributors are content to give meticulous accounts of published observations without following up with an incisive section which says, in effect, ". . . now what all this means is . . . so that the problems which now require solution are . . .".

Hence, the memorable parts of this book are the handful of chapters in which the authors develop a critical, personal synthesis of their views. Poelt's critique of the systematic value of morphological characters is particularly good. The account by Tuominen and Jaakola of the accumulation of mineral elements and radionuclides is not only a valuable review of widely scattered literature, but it also sets a refreshingly high standard of rigour in discussing physiological topics. Brodo's excellent chapter on substrate ecology is profoundly thoughtful: at long last, here is a lichen ecologist who can write, quite simply, "I think the terms 'nitrophilous' and 'calciphilous' imply a knowledge of the requirements of lichens that we do not yet have".

For some students, the book will be hard going for it lacks an introductory chapter to set the scene. More acutely, it needs a concluding chapter to draw together the diverse strands of the individual contributions. Here would have been a chance for the editors to paint the broad canvas of the nature of the interactions between the symbionts; or to integrate the different themes of the chapters on substrate ecology, resistance to extreme environments, and mineral accumulation; or point out the gaps which, in the preface, they say exist.

The price puts this book beyond the reach of almost all students and academics, but I think it is essential for all botanical libraries. Although it does not achieve the same classic status as A. L. Smith's 1921 monograph, it nevertheless contains some important, substantial and valuable contributions about lichens which are not available elsewhere. Academic Press may be able to blame inflation for the price, but they cannot blame anyone but themselves for a subject index which is so skimpy, has so very many omissions and is so poorly organised as to be nearly worthless.

D. C. SMITH

Blue-eyed Negroes

Light-Eyed Negroes and the Klein-Waardenburg Syndrome. By Jenni Soussi Tsafrir. Pp. viii+153. 20 plates. (Macmillan: London and Basingstoke, March 1974.) £7.50.

THIS little book describes and discusses 18 non-Caucasian families ascertained by eye colour, where one or more members had Waardenburg's syndrome, and 10 families where one or more members had unilateral or bilateral blue or light green eyes, or heterochromia iridis.

Much of the book is devoted to discussion of Waardenburg's syndrome and, though the clinical descriptions of manifestations of the disorder are excellent, there is much repetition and nothing new is added to knowledge or understanding of an autosomal dominant trait which is relatively common and has been reported in many races. The families where there was only hypochromia of iris, which resulted in blue or greenish eye colours, or where there was heterochromia inherited as a dominat trait are of much greater interest, and this is the best account so far given of these phenomena in Africans.

I feel that all the information in the book could have been presented in a short paper, or possibly in two papers, one on Waardenburg's syndrome in Africans and one on the other group of subjects. As it stands the book reads as if it was a condensation of an excellent thesis, although such an origin is not mentioned. Presumably the very high cost of this book is in part due to the nine pages of excellent colour photographs.

ALAN C. STEVENSON

African medicine

La Pharmacopée Sénégalaise Traditionnelle: Plantes Médicinales et Toxiques. By J. Kerharo, with J. G. Adam. Pp. 1011. (Editions Vigot Frères: Paris, 1974.) 370 francs.

PROFESSOR Kerharo is well known for his previous studies on the indigenous medicine and medicinal plants of the Ivory Coast and Upper Volta. During the past 15 years he has carried out similar, very detailed investigations in Senegal and his findings are now made available in this monumental work. The first part (about 75 pages) fills in the historical, (phyto) geographical, and ethnic background. It also discusses the religious and magical concepts underlying the various indigenous systems of medicine as well as the more positive aspects like diagnosis, pharmaceutical operations, and how medicines are dispensed and administered.

The second and main part of the book (about 700 pages) comprises detailed, individual monographs on about 555 plants. These monographs are divided into sections dealing with synonyms, vernacular names, distinguishing botanical features, habitat, folk-medicinal uses, chemistry and pharmacology. The chemical and pharmacological sections are extended and up to date accounts which summarise data from more than 2,200 references (closing date, May 1973). They are a particularly important feature of the book and extend its usefulness and value far beyond the confines of Senegal, since much of the flora of that country occurs in other parts of West Africa and elsewhere.

The third part (about 200 pages) comprises the bibliography and the various indices. Professor Kerharo's book provides a welcome complement to Watt and Breyer-Brandwijk's *Medicinal and Poisonous Plants of Southern and Eastern Africa.*

N. G. BISSET