

Fungal miscellany

Fungi: Delight of Curiosity. By Harold J. Brodie. Pp. 131. (University of Toronto Press: Toronto, Buffalo and London, 1978.) \$10.

DR Brodie is a distinguished mycologist who has devoted much of his life to the biology and taxonomy of the beautiful bird's nest fungi (Nidulariales). Now in retirement he has attempted to convey his delight in fungi generally to others in a series of short and rather philosophical essays. Clearly he has enjoyed writing this book and, perhaps because of that, it is easy to read; and being so short, it can be read in an evening.

The essays deal with a number of separate subjects, mainly mycological oddities. These subjects are: the gunnery of *Pilobolus*; the nature and growth of the fungal mycelium; form and function in gill-bearing toadstools; the elegance of the coral fungus (*Hericium coralloides*); the splash-cups of his own bird's nest fungi; fungi in soil, with special reference to those that capture eel-worms; the remarkable gasteromycete *Sphaerobolus*; Laboulbeniales under the title "insect itch"; the attine ants and their fungus gardens; and finally a mushroom monstrosity, namely the toadstool *Lactarius* parasitised by the ascomycete *Hypomyces lactiflorum*. The book is a fungal miscellany.

The author refers at the outset to the well known biological fable of the three blind men and the elephant. "Each man developed his own mind picture according to the nature of his particular contact with the elephant. The blind man who touched the sinuous and writhing trunk thought of a snake; he who took hold of the firm tough tail thought of a rope; and he who felt the rough and massive leg pictured the base of a tree." This theme of the limitations of partial knowledge recurs throughout the book, and so do the blind men. In the final paragraph the author remarks: "In retrospect I would conclude that the three blind men do not know very much about fungi after all." We mycologists are the blind men.

Each of the essays is illustrated by up to three photographs. There are no line drawings. The pictures vary in

quality. A few are excellent, but some are most disappointing—a pity as the whole emphasis of the book is on the beauty of fungi. The figure of *Pilobolus*, one of the loveliest moulds, is quite good, but it is disturbing to read in the legend that the spores are shot "on to vegetation where they will grow to create new plants." Happily in the text the true story is told.

In the essay on splash-cups, *Polyporus conchifer* is described but not figured. However, there is a full-page picture of *Laeticorticium minnsiae* without any reference to it in the text. Incidentally splash-cups are called "water-guns", surely an odd term. During washing up when one's face is splashed by the jet of water from the tap being reflected from a spoon in the sink, it would hardly seem appropriate to refer to the spoon as a gun. Surely in a gun the propulsive force is generated within the weapon?

Treatment of individual subjects is sometimes so generalised that a vital point is missed. In the chapter on form

and function in toadstools the essential fact that the range of the basidial gills is less than the distance between the gills is not mentioned. Further, in a spore-print the spores are said to "pile up on the paper in lines corresponding to the position of the thin spore-plates", whereas the lines actually correspond with the spaces between the gills.

It is difficult to estimate what impression the essays would make on someone without mycological knowledge, although the author seems to have in mind "persons who have had little contact with basic concepts of biological science." Certainly the book is not for the student or for the dedicated naturalist, as the information conveyed is not clear-cut and comprehensive. Perhaps those who might most enjoy it are fellow mycologists who would know the background and would appreciate the philosophical asides.

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Contamination of the environment

Air Pollution. Vol. 2: The Effects of Air Pollution. (Third edition.) Edited by A. C. Stern. Pp.684. (Academic: New York, San Francisco and London 1977.) \$43.50; £30.90.

ARTHUR Stern is a well-known and much respected elder statesman in the field of air pollution and his collections of review articles, now grown from two volumes in the first edition of 1962 to five volumes in the present third edition, have become for the environmentalist almost what Grove is to the musicologist. The proliferation in recent years of published work and opinions concerning the contamination of the environment is truly frightening, especially as much reported work is so bad that it would never have seen the light of day had editors and referees done their jobs. There is a need, therefore, for an authoritative work on this massive topic and Stern's set comes as close as any other publication to being the standard text on the subject.

Volume 2 of the third edition is concerned with the effects of air pollution and is much larger than its predecessor (concern about air pollution would seem to be inversely proportional to its concentration), and is the product of 14 distinguished contributors. Part A deals with effects of pollution on physical and economic systems and part B is concerned with the appraisal of effects on biological systems. Part

C is a welcome bonus on air pollution literature resources which is a useful if daunting guide to reports (current and past), journals and other literature. Not surprisingly, it is already a little out of date. Another welcome feature is the inclusion, before the text, of the contents of the other volumes.

In part A there is a timely chapter on the effects of pollution on the quality of air indoors. Part B deals with effects on vegetation, biological effects (mainly an attempt to review the reported effects of specific pollutants on animal models) and the effects of pollutants on human health. There is a section on chemical analysis and bioassay for carcinogenicity which could be said to take up too much space compared with that allotted to the section on human health.

To attempt to review in detail a book of this size and density would be an impossible task. Suffice it to say that there is much sound discussion, though the opportunity to be critical enough to purge the literature of some of the notoriously slipshod work has often been lost. A volume in which fourteen authors have written must necessarily take much time to edit and compile, so that the contents are accordingly behind the times; references later than 1975 are rare.

The book and its companion volumes merit a place on the shelves of those authorities who have responsibilities to protect the environment.

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● In the review of *The Story of Cancer* (Nature 27 July; 274, 404, column 3, lines 18–20 should read "... malignant human neuroblastoma cells can be induced to differentiate terminally into mature neurones, and erythroleukaemia cells can be induced to differentiate terminally into RBCs, and how particular . . .").