

had the list of esculent fungi been confined exclusively to species known to be good eating and worth the trouble of collecting, excluding such minute species as *Agaricus clavus*, and *Agaricus esculentus*, and *Agaricus griseus*, with a cap as large as one's little finger nail, and a stem but little thicker than a horsehair, and including *Agaricus elvensis* and *Agaricus hæmorrhoidarius*, with a few others, large, fleshy, and as safe and delicious as the finest mushroom ever cultivated. But perhaps, though known to mycologists, they were disregarded by the writer of the "Text-book," or contemptible in his eyes beside such delicacies as *Agaricus sinuatus* and *Lactarius piperatus*. Perchance some mycologist, hesitating whether to purchase or not, may read this notice. Let us state for the information of such a one that the hard, woody *Polyporus fomentarius*, which grows on old trunks, and the equally well-known *Polyporus squamosus*, are with all seriousness and gravity introduced into the "Catalogue of Esculent British Fungi;" that the excellent *Agaricus sylvaticus*, which we are only too glad to get the chance of eating, is condemned to the "Catalogue of Poisonous British Fungi," together with *Agaricus lacrymabundus*, which is at least a considerable ingredient in the modern "mushroom catsup," as sold in the shops; and, if he seeks further evidence of "vast experience," he will find it in the novel information that *Agaricus mucidus* is rare, that *Cortinarius cinnamomeus* may be used as a substitute for cinnamon, that the difference between *Agaricus giganteus* and *Agaricus maximus* is only nominal, that *Lactarius subdulcis* is easily confounded with *Lactarius rufus*, that *Lactarius camphoratus* smells of camphor (when?), and that *Russula decolorans* is common under beeches and is "a good comestible."

Finally, we must protest against the wholesale manufacture of new names, many of them barbarous enough, and some of them ridiculous, under the vain supposition that they will become popular names for the species of edible and poisonous fungi. The old "fairy-ring champignon" is to be called the "oread," the common mushroom is the "white pratelle." The *Russula emetica* is "the sickener," and *Russula fragilis* is the "sickener's sister." In one place we are told "how to prepare parasols," but not whether this includes umbrellas, or whether it is based on the principle that "it's never too late to mend." Earnestly we hope it is, for there is vast scope for amendment in this book, and the sooner it is commenced the better. As it stands, it is difficult to determine whether it should be classed with comic literature, novels, or ancient history.

M. C. C.

OUR BOOK SHELF

The Structure and Life-History of the Cockroach (Periplaneta orientalis). An Introduction to the Study of Insects. By L. C. Miall, Professor of Biology in the Yorkshire College, Leeds, and Alfred Denny, Lecturer on Biology in the Firth College, Sheffield. (London: Lovell Reeve and Co., 1886.)

THIS volume forms the third of a series of studies in comparative anatomy, the object of the authors being to lead the student, by the investigation of some one animal form, to an interest in, and a comprehension of, other

kindred forms. While it will be generally conceded that this is a sound method of research, it is evident that its success will very much depend on the special forms selected, and we think that it may be open to some doubt whether, in selecting the cockroach for an introduction to the study of the Insecta, the authors have not selected a too little specialised form, since they have been obliged to omit the investigation of so characteristic a feature of insect life as that of metamorphosis. Nevertheless, they have given us a very fully detailed and interesting account of an easily obtained insect, and we hope it may be the means of encouraging many others to follow up the subject for themselves. As an introduction to this volume, we have a short account of the writings of those wonderfully patient pioneers in the field of minute anatomy—Malpighi, Swammerdam, Lyonnet, and Straus-Durckheim. This is followed by a sketch of the zoological position and the life-history of the cockroach. In this latter there is a brief record of the internal parasites of this insect—a record that might be greatly extended. The chapters on the outer skeleton, the myology, the neural system, the alimentary canal, and the organs of circulation and respiration, are well written and illustrated. The section relating to the respiratory movements of insects is written by Prof. Felix Plateau; that on the embryonic development, by Joseph Nusbaum, who very pertinently remarks that the inexperienced embryologist will find it more profitable to examine the eggs of bees, of Aphides, or of such Diptera as lay their eggs in water. Indeed, the difficulties in the way of the investigation of the eggs of the cockroach are so great that even the author has had to pass over the early stages of segmentation. A chapter on the cockroach of the past, from the able and experienced pen of Prof. S. H. Scudder, concludes a volume which, though not exhaustive of its subject, nor yet quite even in its treatment of all the branches of that subject, may be placed with the greatest safety and advantage in the student's hands. The authors tell us, in their preface, that, from the description of the cockroach in Huxley's "Anatomy of Invertebrated Animals," came the impulse which has encouraged them to write the present work. We hope that it will in its turn encourage many another to undertake equally honest researches.

The Administration Report of the Meteorological Department, India, 1885-86.

MR. BLANFORD'S Report, as usual, gives a good account of work. It commences with the actinometric observations. The records from Leh for twenty-three months were not found to be as valuable as had been expected, the climate having turned out unfavourable. The results have been sent home to the Solar Physics Committee, and meanwhile the observations are being continued at Dehra Doon and Mussooree, under the superintendence of Colonel Haig.

In the matter of forest observations, considerable activity is recorded; pairs of stations, on the system devised by Ebermayer for Bavaria, have been established at Dehra Doon and Ajmere. These observations have, however, been going on for too short a time for the results to be worth quoting, but much is to be expected from these investigations in India.

Mr. Blanford gives an account of his forecast of the character of the monsoon rains of 1885 from the character of the Himalayan snowfall, and he shows that the facts fully carried out his theory. The Report goes on with a brief notice of the theory of the South-west Monsoon, which, Mr. Blanford says, he is in a position to show, by his forthcoming Indian Ocean wind-charts, is not the South-east Trade simply drawn across the equator.

The remainder of the Report is occupied by details of the observational system, which seems to be in a good state of efficiency.