

museum and miscellaneous work, Mr. Lydekker gives a very clear account of the principles on which that work was guided and of the results achieved. The main lines along which Sir William's ideas of the purpose of museums and of their arrangement ran must be approved by all interested in the subject, although as to some matters of detail there may be room for individual differences of opinion. There can be no doubt of the soundness of the principle that the specimens exhibited in the galleries should, so far as possible, form a distinct collection adapted specially to its purpose of instructing the general public, that old and bad taxidermy should disappear from the cases, that specimens should not be crowded together, but that each should be exhibited with a purpose, instructively or "descriptively" labelled, and placed so that it can be properly seen. How far, however, the principle of making such a popular series rather a collection of "labels illustrated by specimens" than a collection of specimens explained by labels should be carried out is a question which it would be out of place to discuss in a notice like the present, as is also the question as to how far "pictorial mounting" ought to be adopted in natural history museums.

Sir William Flower was a strenuous opponent of the unnatural divorce between recent biology and palæontology. Everyone agrees with him now—theoretically—but how many zoologists will take the trouble to look up and read an original palæontological memoir? If they want information on a fossil subject, do they not usually take it and quote it from some text-book at second hand?

In compiling this memoir Mr. Lydekker has done his work sympathetically and well, and has produced a little volume which is worthy of a place on the book-shelves of all British naturalists. R. H. T.

#### OUR BOOK SHELF.

*Sfere cosmografiche e loro applicazione alla risoluzione di Problemi di Geographia Matematica.* By Prof. Angelo L. Andreini. Pp. xxix+326. (Milano: Ulrico Hoepli, 1907.) Price 1fr.

This little book, as its title implies, shows how a class of simple problems in spherical trigonometry can be solved with approximation by mechanical methods. It is a form of exercise which has fallen into disrepute in this country, but practical computers will admit that there are times when an appeal to the globe is not without its uses. Such cases can occur in the transformation of coordinates, when the conditions of the problem make the choice of a quadrant uncertain. The author, however, is not so much concerned in providing assistance for the expert as in instructing the novice.

After tracing the history of globe construction and showing some forms of orrery which explain the motion of superior and inferior planets, the phases of the moon, &c., the author indicates the principal problems for which mechanical solution is possible. Very considerable ingenuity is exhibited in the choice and variety of problems submitted, and by some simple additional apparatus for measuring angles an approach to accuracy is made. In those problems connected with the diurnal rotation of the earth, the latitude of a place is determined by measurements made on the prime vertical, while in those depending upon

the annual revolution about the sun the equation of time and the obliquity of the ecliptic find a place. This will give some idea of the range of subjects for which the author finds application. Indeed, not a little of the interest of the book centres in its completeness. We should imagine that no class of problems to which a globe has ever been applied is entirely unrepresented here. As a matter of fact, there is reference to the tides and the establishment of a port, though it is difficult to see how a globe can give any assistance in such matters. A large number of examples are given to be worked by the student, and in another section the manner of solution is indicated.

*Electric Light and Power.* By E. E. Brooks and W. H. N. James. Pp. viii+372. (London: Methuen and Co., n.d.) Price 4s. 6d.

The best that can be said of this text-book is that it is neither better nor worse than others of its class. The book is apparently intended as a first-year course for students of not very high scholastic attainments; if this is so, we think it covers too much ground. Starting from the very beginning, with experiments with knitting needles, the student is led to the consideration of dynamos, alternators, and motors. Then follow a couple of chapters on lighting circuits and lamps, a chapter on measuring instruments, and finally one on primary cells and accumulators. We doubt if any student can properly master all this material in a preliminary course. In any case, we are strongly of opinion that it is inadvisable that he should try to do so.

Much has been spoken and written on the question of the interconnection between teaching and manufacturing. We cannot forbear quoting one instance from this book, which shows how desirable closer sympathy is. After a very inadequate description of primary batteries, the authors write in reference to the dry cell:—"Economy in first cost is attained in various ways. For instance, a cell recently examined was found to have a solid block of wood nearly three inches thick between the bottom of the cardboard case and the bottom of the zinc cell." It is nothing short of a travesty of teaching to devote even four lines in a text-book, where space is only too valuable, to conveying this sort of information. The authors must have forgotten the excellent definition of an engineer as one who can do for a dollar what any fool can do for five. We pity the young engineer, nourished on this food, who, when asked by his employer to endeavour to reduce first cost, comes forward with a suggestion of this kind. M. S.

*L'Hygiène moderne.* By Dr. J. Héricourt. Pp. 311. (Paris: Ernest Flammarion, 1907.) Price 3.50 francs.

This book surveys, in an interesting, readable, and non-technical manner, modern views on hygiene. It is divided into five sections—hygiene of the individual, which includes predisposition, tuberculosis, diet, clothing, exercise, and infantile mortality; hygiene of the home, which includes the house and domestic life; hygiene of communities, schools, &c.; and public hygiene, including that of public vehicles, streets, domestic animals, &c. One of the earlier chapters on the arthritic diathesis would be better suited, perhaps, to a medical text-book, and the author seems to be one of those who hold extreme views on the evils of uric acid. On the question of alcohol, the author believes that good wine or spirit in moderation does no harm, and in many cases is beneficial. The kissing of children is rightly condemned, and the condition of the public streets, with their dust, dirt, and spitting, is characterised as a "hygienic scandal." R. T. H.