

writer's garden the sparrows are at this moment doing their best to clear the rose-trees of the "green-fly" that infest them, and there can be no doubt that at this season the sparrow is almost entirely insectivorous; at other seasons it is almost equally granivorous; possibly a judicious thinning of sparrows may be salutary, but those who advocate wholesale slaughter should bear in mind the results of the indiscriminate destruction of raptorial birds in these islands.

Miss Ormerod is not always happy in her nomenclature. Excepting in one book there is no such thing known as "*Hybernia prosapiaria*" (p. 5), the specific appellation rightly belonging to an entirely different insect; moreover had she consulted any recent work or list on *Micro-Lepidoptera* she would not have penned the footnote that appears at p. 67.

The illustrations (even if most of them be old and familiar) are good, and add to the usefulness of the Report.

In future Reports we think it deserves Miss Ormerod's consideration whether a meteorological summary in tabular form would not prove a useful addition, compiled especially with regard to the comparative abundance or scarcity of particular injurious species in former years, in connection with the temperature and rainfall in every month of each year.

R. McL.

OUR BOOK SHELF

An Elementary Treatise on the Integral Calculus, containing Applications to Plane Curves and Surfaces; with Numerous Examples. By B. Williamson, F.R.S. (London: Longmans, 1884.)

A WORK by Mr. Williamson is like good wine, and needs no commendation from us. We note that this has reached a fourth edition, but Mr. Williamson does not rest content with what he has already achieved. He has given a touch here, brought out into greater prominence a feature there, and not only so, but he has at last added a new detail in the shape of a chapter on multiple integration. In our notices of former editions we have drawn attention to the absence of such a chapter, and we are glad to see that he has at last introduced what he hopes "will be found a useful addition to the book." We need only remark further that this edition has 393 pages against 375 pages in the third edition.

An Elementary Treatise on Solid Geometry. By Charles Smith, M.A. (London: Macmillan and Co., 1884.)

MR. SMITH has already won his spurs as a mathematical writer by his admirable "Conics." This work, as far as possible, is on the same lines. It is not intended to supersede the classic treatises by Salmon and Frost any more than his former book was to take the place of the splendid work on "Conics" by the former of the above-named writers. A feature in Mr. Smith's treatment of the subject is the early discussion of the different surfaces which can be represented by the general equation of the second degree; and in the way in which these surfaces are here handled we think the student will be much interested. The discussion is full and very clear. An excellent collection of exercises adds much to the value of the book for students: those in the body of the chapters being well fitted to bring the text home to the reader. For the majority of students we should say, "Read Smith's 'Solid Geometry,' and you will not need any other work." Those who wish to penetrate into the inmost recesses will find that they have been helped by the study of this work

to attack the masterpieces referred to at the outset of our notice.

A Collection of Examples on the Analytic Geometry of Plane Conics; to which are added some Examples on Sphero-Conics. By R. A. Roberts, M.A. (Dublin University Press Series, 1884.)

WE had the pleasure of noticing with commendation (NATURE, vol. xxvi. p. 197) a previous collection of examples by Mr. Roberts on conics and some of the higher plane curves. This has all the merits of the former work, with, we fancy, increased power and skill in the methods employed. A portion of the exercises is common to both works. Much space is devoted to the discussion of properties of circles connected with a conic, especially of circles having double contact with the curve. Great use is here made, and effectively, of elliptic coordinates. "This method simplifies greatly the study of relations involving the angles of intersection of such systems," *i.e.* as have double contact with two fixed conical conics, "whose differential equations take a simple form." In all there are fifteen chapters, the last of which treats of sphero-conics; in this chapter also much use is made of elliptic coordinates. The collection is likely to be very serviceable to junior students, and will be convenient for reference generally. After perusal we have not detected, we believe, any errata that will cause such students as can use the book with profit any trouble.

Mineralogy. Vol. II. Systematic and Descriptive. By J. H. Collins, F.G.S. (Collins's Advanced Science Series.) (London and Glasgow: W. Collins, Sons, and Co., 1883.)

THIS little book is not, neither does it profess to be, more than a dictionary of minerals. The names, localities, and general characters are given as briefly as possible; and the work seems to be brought up to latest date.

The only point in which the author lays claim to originality of treatment is the classification, and it is precisely here that exception may be taken to the book, with its system of Pyritoids, Spathoids, Haloids, Plethoids, Brithoids, &c., and partial neglect of isomorphous groups. Cerussite, for example, is grouped with phosgenite instead of with aragonite, witherite, &c.

There are a number of crystal figures, but the notations, where used, are not consistent; and in one case, where the cleavages of barytes are wrongly described, the notation is meaningless.

There are several typographical and other errors which should be corrected in a second edition—*e.g.* "Senaviza" (p. 61) should be "Serravezza"; feather-ore (p. 60) should be referred to jamesonite, and not to berthierite; "eulitite" (p. 239) should be "eulytite."

It can scarcely be expected that the book will be much used by the "practical miners, quarrymen, and field-geologists" for whom it is intended. The other readers for whom the author writes, "students of the science classes," may however find it a useful and compendious book of reference, as containing a very complete list of minerals.

Handbook of Vertebrate Dissection. Part III. "How to Dissect a Rodent." By H. Newell Martin, D.Sc., M.D., M.A., and William A. Moale, M.D. (New York: Macmillan and Co., 1884.)

IN the third of their series of Handbooks of Vertebrate Dissection, Drs. Martin and Moale describe a mammal, taking as a type the common rat.

In spite of the authors' remark in the preface that "he who aspires to become a comparative anatomist, and yet finds a rat too small for the observation of all the main facts in its structure, has mistaken his vocation," we think that, for beginners, a larger mammal would have been preferable—at any rate for those who do not aspire to