

detract from the scientific aspect of the volume; such as the statement of the views of the "very intelligent student" on the subject of the eyes of the shrimp (p. 225); the suggestion that the "Sea-devil" of the Mediterranean might well be the "great fish" referred to in the Book of Jonah (p. 222); the criticism on Spence Bate's description of *Parathanas immaturus*, apparently only given to afford the opportunity of quoting an ungallant saying about women (p. 233), and several such like; or we could have been spared three pages about *Birgos latro*, or the half-page of a justification for giving Hansen's most excellent synoptic table of the Cymothoid group. Indeed, the author's desire not to make this manual a "dry and repulsive catalogue" has made him write a number of sentences which the seriously-minded reader will find it better to pass over with a very cursory eye. To conclude all we have to say on this aspect of the volume, we have strong objections to urge to the page headings, as being an attempt not to help but to confuse. Possibly the author may not be accountable for these; they have often so little to do with the subject of the matter in the pages, that it is not unlikely that they were selected by some one as ignorant of the subject as of good taste; as examples we quote the following: "The tail unique," "A box of branchiæ," "An affectionate squeeze," "Perils of baby-farming," "Looking like a buffoon," "How genera are generated," and many such like.

With all these little defects, which might so easily have been avoided, this volume will be indispensable to the student of this class of Arthropods; it brings together in an intelligible form an immense mass of literature. In some of the orders most complete lists of genera and species are given, notably among the Isopods. Those species interesting either for their morphological, geographical, or bathymetrical distribution are invariably mentioned, and so far as we can judge, all the British species are named. Most useful will this volume, compact in size and well-packed with information, be to collectors. There is at present no one work that can compete with it. Perhaps the day may come when our great National Museum may publish a revised list of all known Crustacea, as they have done of the fishes, reptiles, and birds; till then Mr. Stebbing's volume will not lose its value, a value that would be greatly increased should a companion volume be published giving the history of the remainder of this interesting group. The work is embellished by nineteen plates and thirty-two illustrations in the text.

OUR BOOK SHELF.

An Elementary Treatise on the Geometry of Conics. By A. Mukhopadhyay. (London: Macmillan, 1893.)

THIS work is well adapted for junior students. It treats of the principal properties of the curves, and may well be read after a pupil has mastered his six books of Euclid. The starting point is from the focus and directrix definition, and no modern methods (as projections) are employed, nor are the curves shown to be obtainable from plane sections of the cone. Each curve has a chapter allotted to its discussion, which is conducted, as far as possible, on uniform lines. To the parabola are

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assigned twenty-five propositions, to the ellipse thirty-five propositions, and to the hyperbola thirty-seven propositions, with an additional five for the rectangular form. The order of treatment is mechanical description, chord properties, and then tangent properties. The proofs should be readily mastered by a boy who knows his Euclid, for they are clearly and simply put, and the author does not assume the truth of a converse proposition, as we have noticed some writers do. Mr. Mukhopadhyay has read far and wide in his subject, and has brought together in his 800 exercises a large collection of the most interesting problems. Many of these he accompanies with full solutions, and to very many more he furnishes suggestive hints. The figures are white on a black ground. The book appears to be very correctly printed; at any rate, we have detected very few (easily corrected) misprints. The book appeals successfully to a larger public than the students of the Indian colleges.

The Geometrical Properties of the Sphere. (Univ. Corr. Coll. Tutorial Series.) By William Briggs and T. W. Edmondson. (London: W. B. Clive, 1893.)

IN these fifty pages the authors have brought together most of the chief geometrical properties of the sphere, intending the book to be used as a companion to their larger one, on mensuration of the simpler figures, by students preparing for the intermediate examinations in Arts and in Science of the University of London. The three chapters into which the subject is divided lead the reader from the elementary definitions relating to great and small circles, poles, lunes, &c., through the numerous geometrical properties of spherical triangles and their antipodal triangles, polar triangles, supplemental triangles, and finally to the determination of the area of lunes, spherical triangles, spherical polygons, and the spherical excess. The definitions and theorems are expressed quite clearly throughout, while the figures leave nothing to be desired. As an introduction to works on spherical trigonometry, students will find this book a most helpful guide. Two minor slips in construction will be found: one on page 6, line 6, where for CT read TC; and the other on page 18, line 9, where for *oa* and *ob* read *ao* and *bo*.

A Key to Carroll's Geometry. By J. Carroll. (London: Burns and Oates, Ltd., 1893.)

THIS key contains the solutions of the exercises in orthographic projection and solid geometry, which are given in the author's book on geometry. The solutions seem to have been thoroughly and carefully worked out. The figures are generally drawn to full scale, but sometimes half-scale has been employed. Lines of projection are clearly indicated—an important factor in some of the more complicated figures. The key should prove a help to beginners, who should study well the questions and their accompanying figures.

LETTERS TO THE EDITOR.

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"Geology in Nubibus."—A Reply to Dr. Wallace and Mr. LaTouche.

DR. WALLACE has taught us a great deal, and among those lessons is the supreme virtue in scientific controversy of courage and candour. He must forgive me therefore for answering promptly, and I hope frankly, his last letter in NATURE. In this letter he appeals from your columns to a non-scientific