sixteenth century,"—a statement which is very doubtful, even with regard to the bed-bug, and certainly not true of bugs in general, to which it would seem here to apply. The water-scorpions are said to "belong to the homopterous division." Of the structure of the mouth in the Lepidoptera all description is omitted, and the reader is left to infer that these insects are suctorial, from the statement that "the mouth of the caterpillar, unlike that of the perfect insect, is formed for mastication." At p. 287 we are told that "The *Tineinæ* are a form which may be divided into three groups—1st, the species hurtful to our stuffs and furs; 2nd, the species which destroy our corn crops; 3rd, the species which feed on plants." Can anything be imagined much more absurd in a Zoological Manual? This, however, is almost equalled by a delightful passage on the same page, in which the wings of the Orthoptera are described as follows:—"There are four wings; the anterior parts are smaller than the posterior; they are coriaceous or leathery, and form *elytra;* the posterior part of the wings is membranous and longitudinally folded, the under wings being folded over the upper." We must leave this enigmatical statement to be solved by our entomologic readers, who will also be surprised to learn that "the Dragon-flies pass through a series of changes which are of extremely short duration, and in the *Ephemeræ* reach their minimum [*sic*] of brevity." At p. 301, after a passage describing the respiratory organs of Spiders, the account of the Crustacea begins at once without any notice to the reader that he has got into a new class, and even the headline, "Arachnida," is continued to the end of the section. The Cirripedia, on the other hand, have a section as a class by themselves, although we are told that they "are Crustaceans, which are affixed in the adult period;" and the question naturally arises, Why then are they not included with the Crustacea, seeing that a great deal of the interest attaching to them depends upon the recognition of this relationship? The character given of the class is a very queer one, and seems to have been compiled from two descriptions, parts of which crop up curiously in different places. Upon the early stages of the Cirripedes, from which mainly their relationship to the lower Crustacea has been recognised, we find not a single syllable! and indeed the metamorphoses of the Crustacea themselves are passed almost *sub silentio*. The last blunder that we shall notice is really almost inconceivable. Of the Echinodermata we are told—"This class comprises animals having a coriaceous skin, without spines or quills, or a shell-test"!! How such a statement as this should escape any writer in face of the manifest meaning of the name of the group is quite beyond our comprehension.

It is with regret that we have had to pass what may seem to be a harsh judgment upon Dr. Carter Blake's book, but we felt it to be our duty to warn students and their teachers that in it they will not find a trustworthy guide to zoological knowledge, and we have devoted to the book a greater amount of space than its importance might seem to deserve, because it bears what the author himself describes as the *imprimatur* of Professor Owen, in the shape of some notes from lectures delivered by the latter, inserted by permission at the beginning of the book as a sort of preface. How the learned Professor was induced to lend the sanction of his name to such a book is hard to understand; and while we may appreciate the kindness of his motive, we cannot but accuse him of having been too easy of persuasion on this occasion. It is equally difficult to conceive how a naturalist of acknowledged repute like Dr. Carter Blake can offer to students a "Manual of Zoology" containing such a mass of instances of ignorance or carelessness, or of both combined.

In Dr. A. Nuhn's "Text-Book of Comparative Anatomy"[6] we have a purely descriptive manual, the author never going out of his way in search of homologies. He treats his subject from the physiological point of view, describing the organs of animals in the order of the functions they perform. In his first part he treats of the organs of vegetative life, digestion, respiration (and voice), circulation, and secretion (including generation); and his descriptions, which are careful and detailed, are illustrated with a great number of woodcuts, many of them more or less diagrammatic. Some of the figures illustrating the circulatory apparatus are coloured with red and blue, to distinguish the venous and arterial portions. Professor Nuhn's work will be a useful manual for students.

We may safely recommend to young entomologists, and to those who wish to furnish young entomologists with a useful guide, the "Sketches of British Insects" of the Rev. W. Houghton.[7] It furnishes a brief outline of British entomology written in a pleasant style, and from it the beginner will obtain a great deal of sound information on the natural history of our native insects. The little work is illustrated with several plates printed in colours, and with numerous wood-engravings.

Although Mr. Darwin's reputation rests chiefly in most minds upon that theory which generally bears his name, his claims to rank as a thoroughly practical naturalist and most acute and accurate observer have an equally sure foundation, and are of much longer standing. Even his opponents admit that the qualities of a naturalist of the very highest rank are displayed even in those theoretical works to the general conclusions of which they object; and some of the publications which have been produced in support of the theory manifest the same qualities very

---

[6] "Lehrbuch der vergleichenden Anatomie." Von Dr. A. Nuhn. Erster Theil. 8vo. Heidelberg. 1875.

[7] "Sketches of British Insects: a Handbook for Beginners in the Study of Entomology." By the Rev. W. Houghton. Sm. 8vo. London: Groombridge. 1875.

strongly. One of these is the memoir on "The Movements and Habits of Climbing Plants,"[8] originally published in the *Journal of the Linnean Society*, a second enlarged and improved edition of which is now before us. In this work Mr. Darwin describes the various modes in which plants climb,—by simple twining, by means of tendrils of diverse origin, by the agency of hooks, and by peculiarly-developed roots. He enters into very full and interesting details of experiments made for the purpose of determining the direct causes of the movements implicated in producing the described results, and shows that, as he himself says, many of the plants cited "display as beautiful adaptations as can be found in any part of the kingdom of nature." By a series of comparative considerations upon the state of the organs in nearly-allied plants, and even in different parts of the same plant, Mr. Darwin endeavours to show the mode in which the peculiar structures of climbing plants have been developed in accordance with his theory of evolution. The little book is, however, of the highest interest independent of any theoretical considerations, and to the botanist its study will be indispensable.

Under the title of "Plantæ Lorentzianæ"[9] we have from Professor Grisebach a most valuable contribution to the botany of the pampas of the interior of the Argentine Republic. Dr. Lorentz of Cordoba has been employed for two years in the service of the Government in investigating the plants of this region, and the collections and notes sent home by him are here worked up by the author into a memoir of great importance, published in the *Transactions of the Royal Society of Sciences at Göttingen*. The flora of the region examined by Dr. Lorentz appears to be a poor one, for although his researches extended over the provinces of Cordoba, Santiago, Tucuman, and Catamarca, stretching through about five degrees of latitude—and parts of this region are of a mountainous character—the total number of species of vascular plants obtained is only 927. From these materials, however, Professor Grisebach has been enabled to indicate the main features of the botany of this little-known region—how little known is best evidenced by the great number of species which he has been compelled to describe as new. Some of these are figured on two plates which accompany the memoir.

Professor Morris has printed a "Lecture on the Geology of Croydon,"[10] delivered by him before the members of the Croydon Microscopical Club, in which, while describing the structure of the immediate neighbourhood of the place inhabited by his hearers, he takes the opportunity of indicating the geological relations of that locality to other districts, and thus, in brief, the general principles of stratigraphical geology. Such little sketches as these, when executed by the hand of a master, are of the greatest value, by leading those who would probably read geological manuals forever without getting a single idea into their heads to a comprehension of great facts, through an intelligent consideration of the details which lie within their daily observation. Professor Morris's little pamphlet is illustrated with a coloured map and several woodcuts.

Of Professor Frey's "Grundzüge der Histologie"[11] we need scarcely say more than that it furnishes an excellent manual for medical students; whilst from the mode of treatment adopted, and the number of illustrations derived from other animals than man, it will be a useful book of reference to naturalists generally. The style adopted by the author is exceedingly clear, and the subject is arranged so as to carry on the reader very easily; his progress will also be facilitated by the great number of figures interspersed through the text.

A third edition of the English translation of Dr. Pouchet's work, "The Universe,"[12] will be welcome at this season of gift-books. The main point of the book seems to be to contrast the phenomena of the infinitely great and the infinitely little, as is indicated by its second title; and with this view the author gives a rapid sketch of such portions of the animal and vegetable kingdoms, and of the general facts of geology and astronomy, as suit his particular purpose. The science strikes us as being loose and often antiquated, and the style is, *more Gallico*, rather too magniloquent for English tastes. The book is illustrated with a great number of beautifully-executed woodcuts.

The sea, which possesses such a peculiar and mysterious fascination for all of us who are not too familiar with it, and has in all times been a favourite theme with poets, naturally furnished an admirable subject for one of those gushing, semi-scientific books that M. Michelet loves to write,—strange mixtures of science, love, sentiment, and anecdote,—such as we can easily imagine to be the delight of sentimental lads, and the still more numerous young ladies of a similar turn of mind. Accordingly "La Mer" forms a companion volume to "L'Oiseau," "L'Insecte," and "La Montagne," and Mr. Davenport Adams has just published a translation

[8] "The Movements and Habits of Climbing Plants." By Charles Darwin. Second edition, revised. Sm. 8vo. London: Murray. 1875.

[9] "Plantæ Lorentzianæ. Bearbeitung der ersten und zweiten Sammlung argentinischer Pflanzen des Professor Lorentz zu Cordoba." Von A. Grisebach. 4to. Göttingen: Dieterich. 1874.

[10] "Lecture on the Geology of Croydon, in Relation to the Geology of the London Basin and other Localities." By J. Morris. 8vo. Croydon. 1875.

[11] "Grundzüge der Histologie, zur Einleitung in das Studium derselben." Vierundzwanzig Vorlesungen von Heinrich Frey. 8vo. Leipzig: Englemann. 1875.

[12] "The Universe; or, the Infinitely Great and the Infinitely Little." By F. A. Pouchet, M.D. Third edition. 8vo. London: Blackie. 1875.