

brate zoölogy. Notwithstanding the presence of the neat little volume before us, and its promising title, a complete guide is still as much a desideratum as ever. Like all other books which have appeared in English on this subject, this volume is small and thin, and, we are compelled to add, wretchedly illustrated. Of the one hundred and one pages of subject-matter, sixteen are frittered away in an effort to inform the reader where birds of the various families from Turdidae to Alcidae are to be found. How much better to have devoted this space to adequate instructions for mounting dried skins, which important branch of the subject is summarily disposed of on a single page, instead of to such cheap information as that 'the chimney-swift inhabits chimneys,' that kingfishers are found 'in the vicinity of streams,' and the like. With the exception of the above, all the information and advice contained in the chapter on collecting is valuable, and bears the stamp which experience places upon its work.

The chapters on 'skinning birds' and 'making skins' would be very satisfactory but for one thing. While the author strongly condemns dry arsenic as a dangerous poison, and says not a word about arsenical soap, the only preservative he recommends as fit for use is one compounded only by himself. After extolling its virtues to the extent of two pages, but carefully withholding all information as to its composition, he coolly informs the reader that its price is 'twenty-five cents per single pound.' We are told that tannic acid, alum, salt, or black pepper (!) may be used to temporarily preserve skins until the other can be procured. The 'dermal preservative,' which, strange to say, is not a poison, is recommended, or rather exclusively directed, in no fewer than fourteen places throughout the work, for mammals, birds, reptiles, and fishes, as a non-poisonous astringent, absorbent, deodorizer, and insecticide; and, if the reader is at all credulous, he will be led to exclaim, There is but one preservative, and C. J. Maynard is its maker! If this little book is honestly intended to meet the wants of amateur collectors wherever it may find them, and not to increase the sale of a nostrum of doubtful value, nor to advertise the author's business, the author has taken a queer way to show it. It will not be surprising if his readers resent such unfair treatment.

While there is much that is practical, valuable, and new in the chapter on mounting birds, and in those detailing the treatment of mammals, reptiles, and fishes, they are all deplorably incomplete; and we vainly regret that the

author did not go as deeply into the subject, and with as good diagrams and illustrations, as he might have done. The information given is valuable as far as it goes; but there are only one-quarter as many facts stated, and directions given, as the unskilled operator needs to know.

As an example of the doubtful value of such highly condensed instructions, we may take those for skinning small mammals. The author says, "... peel down on either side [of the body] until the knee-bones are exposed, then cut the joint, and draw out the leg, *at least as far as the heel.*" Not a word is said about skinning the foot, and removing the flesh under the metacarpal and metatarsal bones: hence we suppose it is left to decompose, which it will generally do right speedily, and at the expense of the hair and epidermis above. We should like to see the author remove and prepare the skin of any monkey according to his own directions.

We are honestly sorry we cannot freely recommend this manual — nor any other in our language, for that matter — as being well calculated to meet the wants of those for whom it is intended. An epitome of the subject is no longer wanted, but a handbook which shall be really complete is needed very much.

ELEMENTARY TREATISE ON THE MICROSCOPE.

Traité élémentaire du microscope. Par EUGÈNE TRUTAT, Conservateur du musée d'histoire naturelle de Toulouse. Paris, Gauthier-Villars, 1883. 322 p., 165 ill.

Few are aware of the magnitude to which microscopical work has grown. The modern methods of research in the physical and biological sciences have involved more and more an appeal to the microscope. As a result of this growth, we find whole volumes devoted to a description of the microscope and its application to the various departments of study.

Microscopy has been taught in our schools only a very few years. This is partly due to the fact that formerly the instruments were both expensive and imperfect. There was also an almost total lack of literature upon the subject. At the present time, however, there are plenty of good works on microscopical technology, and the microscope as applied to the study of medicine in all its branches, including biological research.

In a work like this before us, it is necessary to present a large amount of material of such an elementary character that it is of value

only to the novice. It is decidedly a French work, written by a true Frenchman. Neither an instrument nor an accessory is mentioned, unless either invented or manufactured by a Frenchman. The stands of Verick are given great prominence, as are also those of Hartnack. When we consider how beautiful and useful are the instruments of our own country, to say nothing of the fine productions of English houses, we are forced to call the work 'an elementary treatise on the French microscope.' For convenience, elegance of design, and varied adaptability, the French microscope will not compare with those of our own country, while we far excel in the superior quality of our objectives.

The microscopist will be much interested in reading the chapter on the projection microscope. Electricity will soon furnish us with proper illumination.

More information is given under the head of mineralogical research than in any work brought to our notice. Among the accessories mentioned is the camera lucida of Oberhauser. It is a form little used in America, and yet it is one of the most convenient and perfect of its kind.

The new pattern of Malassez's *Compteglobules*, by Verick, is minutely described. The results obtained by this instrument promise to be very accurate: we have practically tested its merits, and can give testimony to its precision. The method for photographing from the microscope is not so simple as that employed here by the use of dry plates; and, if the frontispiece be taken as a sample, it is not more satisfactory. The author shows perfect familiarity with the instruments and accessories, together with their applications as made and used in his own country. C. H. STOWELL.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

PROCEEDINGS OF SECTION E.—GEOLOGY AND GEOGRAPHY.

Reports of committees on geological subjects.

To the call for a report of the *Committee to memorialize the legislature of New York for a new survey of Niagara Falls*, Prof. James Hall responded, that several surveys had been made, or were in progress, in connection with legislation by the State of New York for preserving the scenery. These would supersede the need of any work of the kind by the association. The committee was discharged.

To the call for a report of the *Committee on state geological surveys*, Prof. N. H. Winchell responded, that the committee had never been called together, and there was no probability of its action. The committee was discharged.

To the call for a report of the *Committee on the international congress of geologists*, Dr. T. Sterry Hunt (by request of the chairman, Professor Hall) responded as follows:—

The committee held a meeting in the month of November last. Two important questions came up,—of geological nomenclature, and topography. It was suggested by Professor Hall, that the only action which could be taken in support of the system of uniform mapping and colors, and signs and symbols, would be to prepare maps of the United States as a whole, and perhaps also maps of portions of the United States, and to color them by different systems; the system adopted being that of Major Powell of the U. S. geological survey, and one or two others. Major Powell has been good enough to say that he would endeavor to prepare such maps, and aid in every way the carrying-out of the scheme. I have no doubt that the matter will be so well man-

aged that the whole question of geological topography will be settled.

As to the question of geological nomenclature, we had much difficulty in getting reports of the previous meetings; and we have named several persons, some of whom have already handed in, or have in process of preparation, their abstracts of geological nomenclature; and I have every reason to hope that in the course of a few weeks we shall have the whole of that matter in shape to transmit to the Berlin congress a full and proper representation of the views of American geologists with regard to our geological nomenclature. There is one thing very much to be regretted,—the possibility that the meeting of the American association and the British association will come in collision with the meeting of the Berlin congress. Nothing definite has been arranged, so far as I can learn by letters. I have met with no response, but I was told that the time of the Berlin congress had not been fixed. In the committee which was held to consider arrangements for the meeting of the British association, it was suggested that we put ourselves in communication with the local authorities of the Berlin congress, and endeavor to get them to fix the time of their meeting so late in September as will allow members of the American and British associations to leave this continent after the meeting of our associations so as to be present at the Berlin congress.

The committee was continued.

The *Committee to confer with the United-States geologist in regard to co-operation between government and state geological surveys* was called on for a report. Prof. James Hall of Albany responded in-