

and, of the four which remain, three are zoological, the fourth, by Dr. Felix Koerber, being meteorological. Dr. Fritsch's communication, *apropos* of collections made by Dr. Paulay on the voyage of the "*Saida*," adds to the genera *Blepharis* and *Walleria* each a new species, while new varieties of *Hibiscus viti-folius* and *Cynorchis fastigiata* are described. Dr. Fischer's paper gives an account of his journeys and collections made on behalf of the Vienna Museum. It is a most interesting and carefully executed work of 30 pp., with six plates and 51 admirable woodcuts. The author's notes on ear ornaments are especially commendable, but when all is done as by him it becomes difficult to particularize. This monograph bears the same stamp of excellence as those of Dr. Otto Finsch and Prof. Hein which have preceded it (cf. NATURE, vol. xlii. p. 157), and ethnologists owe the authorities of the Vienna Museum a debt of gratitude for the manner in which they have enriched the literature of their subject. Of the zoological treatises, one (by Dr. Gottlieb Marktanner-Turneretscher) is a Report upon the Hydroids in the Museum collection. The *Gymnoblaster* and *Calyptoblaster* are chiefly dealt with; several new forms are described, localities and donors' names are sufficiently recorded, and a Report upon the *Hydrocorallines* is promised. The two remaining contributions are entomological. One, by Dr. J. Kreichbaumer (13 pp.), is a continuation of the author's previous Report on the *Ichneumonidae* in the Museum; new genera and species are described. The other is a lengthy monograph of the Linnean genus *Sphex* (266 pp., with 5 plates) by Franz Friedr. Kohl. The author acknowledges his indebtedness to the collections of other Museums and of private individuals, from many of which types have been lent him, and he makes a point of excepting "the material in the London Museum, which contains the greatest number of types." This is greatly to be regretted, in consideration of the pretentious nature of his work, which purports to be a revisionary monograph of the genus; he promises a companion treatise on the allied genera *Ammophila* and *Sceliphron*, and we sincerely hope that, in preparing this, arrangements may be made whereby he shall consult our national cabinet.

Exercises in Practical Chemistry. By A. D. Hall, M.A. (London: Rivingtons, 1890.)

THE author states in his preface that an opinion has been growing latterly that chemistry, as usually taught, is a subject lacking in educational value, and that this is especially the case in practical chemistry. These exercises are suitable for boys beginning practical work, and they are intended "to exemplify the exact nature of chemical reactions, and to illustrate some of the great principles and fundamental laws of the science." Consequently many of the exercises are quantitative. The first experiment is a verification of Boyle's law by means of a straight barometer tube and mercury. The second is a determination of the coefficient of expansion of air. After a few such preliminary exercises, the more usual chemical experiments follow. The author has not attempted to give "details of craftsmanship," as he states that they can be better obtained from the teacher.

An Elementary Geography of India, Burma, and Ceylon. By Henry F. Blanford, F.R.S. Macmillan's Geographical Series. (London: Macmillan and Co., 1890.)

DR. GEIKIE, the editor of Macmillan's Geographical Series, could not have entrusted the subject of the present volume to a more thoroughly competent writer than Mr. Blanford. In the course of a long service in India, as Mr. Blanford himself notes in the preface, he had occasion to visit most parts of the Empire, so that his knowledge of the geography of India is incomparably more exact, extensive, and vivid than if it had been

derived merely from books. Traces of this fact are to be found in every section of his excellent manual. In the preparation of a volume of this kind one of the chief difficulties of the writer is to decide how much shall be omitted; and this question Mr. Blanford seems to us to have settled with admirable tact and judgment. Nothing he introduces would, if properly understood, tend simply to burden the memory. The facts he has selected are both important and interesting; and they are presented in so simple and clear a style, while their relations to one another are so distinctly brought out, that they cannot fail to arrest the attention of young learners, and to foster the growth of individual intelligence. The illustrations—for the most part taken from photographs—are in every way worthy of the text.

LETTERS TO THE EDITOR.

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Araucaria Cones.

I AM happy to say that I can inform the Duke of Argyll of at least two instances within my own personal observation of the fruiting of *Araucaria*. The cones were seen, and one of them handled, by myself and many members of the Geologists' Association five years ago, when we were entertained at luncheon by our excellent Rural Dean, the Rev. J. T. Brown, Rector of St. Paul's, Wokingham. The fact will be found recorded in the Proc. Geol. Assoc., vol. ix. p. 223. The other instance was a few years earlier, and the tree which bore the cones is, I believe, still standing on the lawn of Sandhurst Rectory. My attention was drawn to them, as to something somewhat rare, by the present Bishop Suffragan of Reading, who was Rector of Sandhurst at that time. A year or so later, a geologist, who has written much on palæobotany, when on a visit to this neighbourhood for the purpose of making the acquaintance of the London Bagshots, had the assurance to inform me that the *Araucaria* never blossomed or fruited in this country, because it was a diœcious tree! In order to convince him of his error on so fundamental a matter, I took him to Sandhurst Rectory and pointed out the tree to him; but I cannot recollect if any fruit-cones were on it then.

I may add that the fruit is large and the bract-scales very succulent. It resembles most nearly the fruit of the Alpine cedar (*Pinus Cembra*), but the fruit is three or four times as large.

Wellington College, Berks, Nov. 7.

A. IRVING.

IT is quite a common occurrence for the *Araucaria* to bear cones in this country, when the tree is healthy and of fair size. Very possibly it may be necessary that some check to its development shall have taken place before a large number of cones are formed, as I have never seen more than three or four upon a single tree.

Not only are the cones formed, but seed is ripened, and I have now in my possession some plants about three years old, which I have reared from English-grown seeds picked up under a fruited *Araucaria*. Apparently about a year elapses between the appearance of the cone and the shedding of the seed, and no doubt towards the end of the summer of 1891 the tree belonging to the Duke of Argyll will yield many thousands of fertile seeds. These do not seem to keep well through the winter, but are best sown in the autumn without delay. Artificial heat is not necessary to their germination.

JOHN I. PLUMMER.

8 Constitution Hill, Ipswich, November 11.

IN reply to the Duke of Argyll's inquiries (NATURE, November 6, p. 8), we have an *Araucaria* in our garden, now about 20 feet high, which bore barren cones first in the summer of 1889. We have also a seedling *Araucaria*, one of several grown from seeds from large seed-bearing cones gathered from the avenue of *Araucarias* in the late Lady Rolle's grounds at Bicton Park, near Budleigh Salterton, in 1878, at which time they were abundant on the splendid trees forming the avenue.

Further Barton, Cirencester, Nov. 9.

E. BROWN.