

will thus consist of seventeen volumes." It is further stated that the price is to be £18 for the set, with varying prices for individual volumes, from ten to thirty-five shillings.

An examination of the present volume shows that the scheme of classification differs materially from that followed commonly in this country. Numbers of four figures, from 0000 to 9999, are assigned to subdivisions of the subject as follows: 0000 to 0999, general (including philosophy, history, biography, periodicals, etc., general treatises, addresses, pedagogy, institutions, nomenclature); 1000 to 1999, external morphology and organogeny (including teratology); 2000 to 2999, anatomy, development and cytology; 3000 to 3999, physiology; 4000 to 4399, pathology; 4400 to 4999, evolution; 5000 to 7999, taxonomy; 8000 to 8999, geographic distribution; 9000 to 9999, plankton. Ecology (spelled 'oecology') appears as an item under physiology, coordinate with growth, irritability, symbiosis, parasitism, etc. Paleobotanical papers are to be distributed under their appropriate heads and marked with a dagger (†). The pages devoted to the scheme of classification are printed in English, French, German and Italian. Following these is a topographical classification, for use in geography, geology, botany, zoology, etc., and which is apparently as satisfactory as any which might be adopted, although open to some criticism in details.

The authors' catalogue covers eighty-four pages, and includes 1,922 entries. This is followed by the subject catalogue, in which the arrangement outlined above is followed. This part of the book requires 240 pages, and apparently includes many titles not entered in the first list. As these are all papers published in the year 1901, and as we are promised a second part of the botany volume 'in the course of a few months,' it will be seen that the need of such a work as this is imperative.

In some quarters there appears to be a disposition to find fault with this catalogue on account of alleged sins of omission and commission, and also in regard to its plan of classification and some of its details. While there may be truth in these criticisms, it

should be borne in mind that, in part, they come from those who are not experts in bibliography, and who are, therefore, not fully conversant with the difficulties of a complete classification. It will be well for us to remember that it is much easier to find faults in any proposed system than to suggest one which will not contain as many objectionable features. No doubt this catalogue will be of great value to scientific workers. Let us be thankful for it; let us buy it; let us use it; and let us trust that year by year it may grow better. Even if not quite what many of us desire, it is a very good piece of work—better, no doubt, than we ourselves could have made it.

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*Catalogue of the Crosby Brown Collection of Musical Instruments of All Nations. I. Europe.* New York, The Metropolitan Museum of Art. 1902. 8vo. Pp. xxxv + 302; pl. 53.

Some months ago (SCIENCE, June 13, 1902) attention was directed to the first part of a catalogue of the 2,800 musical instruments in the New York Museum. The catalogue of the European instruments, apparently about a thousand in number, has just been published and proves to be a remarkably fine piece of work. In the preparation of it Mrs. Brown has had the assistance of Mr. A. J. Hipkins and Rev. F. W. Galpin, both of England, whose previously published works show that no more competent authorities in England or America could have been called in. The former was associated in several investigations with the late A. J. Ellis, the translator of Helmholtz, and has written much on the history of the piano, etc.; and both have co-operated in the historical exhibitions that have taken place in England. For this catalogue Mr. Hipkins wrote a special introduction to the keyboard instruments, while Mr. Galpin identified many of the instruments, made the classification, wrote the prefaces to its several parts and added many notes.

The classification impresses the reader as simple and practical: it begins with 'Class

One, Stringed Instruments,' I. without a keyboard; II. with a keyboard; and under each (A) plucked, (B) struck, (C) bowed strings; III. with automatic mechanism. 'Class Two, Wind Instruments,' without and with a keyboard and with automatic mechanism, each divided into whistles and reeds. The instruments of these classes fill four fifths of the book. The come 'Vibrating Membranes,' 'Sonorous Substances' and 'Musical Accessories.' A long list of portraits of musicians follows, and the volume is closed by two full indexes, one by classes, the other alphabetical.

A striking feature of the catalogue is its copious illustration. Over fifty half-tone plates furnish a wealth of illustration unparalleled in musical literature except in a very few sumptuous books covering narrow fields. Of these plates twenty-four show each one family of instruments, from the smallest to the largest, as guitars, viols, recorders, clarinets, saxophones, saxhorns, etc.; generally these plates of families include also a measuring rod divided into inches and centimeters, by which the actual sizes of the instruments may be scaled off. The reduced copy of a chart in the Germanic Museum at Nuremberg shows, in a remarkably interesting way, the forms of the string and percussive instruments in use in successive centuries from the eleventh to the seventeenth; while the plate of the striking 'Egyptian Type Case' shows that the ancestors of most of our modern instruments were known on the banks of the Nile long before the date of the Pythagorean legend.

To secure examples of all these complete families, some of which are exceedingly rare, many reproductions have been obtained from European museums, as acknowledgments accompanying more than forty items make evident. And since the special aim of the collection is educational, many details of instruments are shown by dissections or models.

The descriptions of the several instruments vary in length from a couple of lines for some items up to three pages for the Cristofori piano, averaging, for the principal kinds of instruments, about a quarter of a page. The data are arranged in a systematic way,

the parts of the instrument being taken up in a uniform order, and then follow the details of place, date and size, with occasional notes.

To keep the voluminous matter within the bounds of a 'handbook,' obviously pretty rigorous limitations must be observed; so only the most important historical and acoustical facts are added to the description, and these are put in very condensed form. For chatty historical matter one must still go to Engel, and for technical details to Mahillon. The region and period covered by this book, unlike those of the former catalogue, which dealt with Oriental instruments, make unnecessary any discussion of questions of the scale; for the diatonic or chromatic scale was here the universally accepted norm, and the few instances of enharmonic scales and similar deviations are of small importance.

These statements show more clearly than any mere words of praise could do what an admirable piece of work this book is: the fullness of the collection, the clearness of the classification, the care and system in description, the discriminating notes, the sense of expert knowledge, the freedom from trivial confusing details, the references to allied instruments from other countries, the cross-referencing and full indexing, the liberal illustration and the good typography, all conspire to make it almost as useful away from the museum as in the presence of the instruments. It should prove a valuable supplement to any dictionary of music, to any discussion of instruments from either the physical or the musical side, to such books as Lavignac's 'Music and Musicians,' and to any of the histories of music in use by clubs and students.

A book capable of such wide usefulness ought not to remain a local guide-book; the fact that it is not copyrighted may be an additional indication of liberality on the part of the donor and editor, but also suggests the doubt whether proper means are being taken, as by advertising or listing in the *Publishers' Weekly* or otherwise, to let librarians and students know of its existence.

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