

contributed by Mr. A. Bernard Badger. The great body of the work—328 pages—is taken up by the enumeration of the flowering plants and vascular Cryptogamia that grow in the county, and an account of their distribution and the special stations of the rarities. The county is divided into ten districts founded on the river drainage, and each of these has been worked separately. The last edition of the “London Catalogue” has been followed as a standard of nomenclature and species limitation. The county is specially rich in Rubi, and in studying them Mr. Bagnall had the advantage in starting of the oversight in the field of the Rev. A. Bloxam, who was one of the best practical authorities in this difficult genus that we have had in this country. The flowering plants of the county have been worked so thoroughly that it is not likely that any material additions will be made. Then follows the enumeration of the mosses, of which 236 species are known in the county. The Hepaticæ and lichens have not been worked so carefully, and in these orders there is ample scope for further research. The enumeration of the fungi is confined to the Hymenomyces and Gasteromyces. The enumeration of the lower Cryptogamia occupies 130 pages. Then follows a table showing the distribution of the plants through the ten drainage districts of the neighbouring counties of Leicester, Northampton, and Oxford. The book concludes with a sketch of the progress of botanical investigation in the county; the principal botanists who have worked within its limits being Withering, Stokes, Perry, Purton, Bree, and Bloxam.

The flowering plants and vascular Cryptogamia of the county summarize as follows:—Out of 532 plants generally diffused throughout Britain, Warwickshire has 501. Out of 409 species concentrated towards the south of Britain, Warwickshire has 285. Out of 127 plants concentrated in the eastern counties, Warwickshire has 31. Out of 70 plants concentrated in the western counties, Warwickshire has only 8. Out of 37 plants concentrated in the centre of Britain, Warwickshire gets 7. Out of 208 plants which represent the boreal element in the British flora, Warwickshire has only 19.

The book is not too large to be conveniently carried, which is a great advantage in a county flora. From every point of view it is thoroughly satisfactory, and will be a lasting memorial of the ability and diligence of its author.

J. G. BAKER.

#### OUR BOOK SHELF.

*A Hand-book and Atlas of Astronomy.* By W. Peck, F.R.S.E., F.R.A.S. (London and Edinburgh: Gall and Inglis, 1890.)

AS Astronomer and Public Lecturer to the City of Edinburgh, the author of this work might reasonably be expected to be familiar with the requirements of a popular hand-book of astronomy. His aim, however, has not been to give a mere outline of the subject, but to give “complete and accurate” information in the principal departments of modern astronomy. In this endeavour he has compiled the volume before us, consisting of 170 pages, and embellished with 20 large plates and numerous smaller diagrams. For the ordinary reader who does not possess even a small telescope, the book has not much to recommend it. The descriptions are

often very meagre, and the spectroscopic work which is now engrossing the attention of so many astronomers is scarcely touched upon. The star maps and the tables which accompany them are excellent, but it is questionable whether they would not have been more convenient if issued separately, instead of forming part of a rather bulky volume. Yet, if these were taken away, there could be little excuse for the existence of the remainder. That is to say, there would be little left that is not already available in much cheaper forms. The author has fallen into the common error of attempting to combine a popular work, suited to the general reader, with one more especially adapted for those wishing to acquire a comprehensive knowledge of the subject. From either point of view, the deficiency of spectroscopic astronomy is very conspicuous.

Some of the large diagrams are really excellent, but others are very indifferent. Amongst the latter the most striking are Plate 9, illustrating solar phenomena, and Plate 19, depicting various spectra. In the latter the colours are unsatisfactory, and the spectrum of hydrogen is represented as consisting of two bright lines and numerous dark ones. It would have been a great improvement if, instead of the drawings of some of the brightest nebulae, photographs had been reproduced. The reproductions of photographs of the moon, taken by the author, are excellent.

*Biographisch-litterarisches Handwörterbuch der wissenschaftlich bedeutenden Chemiker.* By Carl Schaedler. (Berlin: R. Friedlaender und Sohn, 1891.)

BIOGRAPHICAL notes of some hundreds of chemists and physicists are here collected together, the names being arranged in alphabetical order. In the majority of cases there are given the date and place of birth, and; in cases where it has occurred, of death, besides the offices held, the most important of the work done, and the books, &c., written by the individual. The period covered extends from before the Christian era, and among the most recent names may be found those of Thomas Carnelley and Sydney Gilchrist Thomas. The collection cannot fail to be useful and interesting, but its value to historians would have been greatly enhanced if references had been given to the authorities from which the statements are derived. To do this would have probably added but little to the trouble of compilation, and would have made the volume a standard work of reference.

*Round Games with Cards.* By Baxter-Wray. (London: George Bell and Sons, 1891.)

IN this little treatise, Mr. Baxter-Wray deals with all the most popular round games with cards. Among them may be mentioned nap, loo, poker, vingt-un, commerce, pope-joan, spin, together with eight others which are played at the present day. With regard to each game the reader receives sound advice as to the methods he should adopt, and those he should not. The variations of each game are well described, but mention might have been made—in the variation of nap called “miser, or misère”—of playing with all the hands on the table face upwards, which affords, when more than three are playing, an excellent game requiring much skill and tact.

Many suggestions and rules are given pertaining to the stakes, deals, &c.; and those who read the book will find in it all that will enable them to learn a new game.

*Elementary Science Lessons: Standard II.* By W. Hewitt. (London: Longmans, Green, and Co., 1891.)

THIS book is intended to be in the hands of teachers, who, by making a judicious use thereof, should be able to engraft much in the minds of young people in a sound and practical manner. The principle on which it is written is excellent. The work is drawn up on the same lines