

Bentham and Hooker's "Genera Plantarum," these genera are credited with one and four to five species respectively, and while we might expect some increase in the number of known species since the date of issue of that volume, it is with somewhat of a shock that we find *Platystemon* credited with fifty-five and *Eschscholtzia* with 123 species. In *Platystemon* forty-nine of the species are of Greene and six of Fedde, in *Eschscholtzia* 104 of Greene and twelve of Fedde. Prof. E. L. Greene, we believe, holds views as to the origin of species which do not accord with those generally accepted, and these views are no doubt responsible for the description of species based on characters which might otherwise be regarded as representing mere variants of a single species. Dr. Fedde has not only adopted Dr. Greene's estimate, but added to the number. He perhaps shrank from the difficult task of reducing the species to more workable proportions, and took the path of least resistance. The result is, however, an increase in the number of those genera, which, like *Cratægus* in America, and *Rubus* in the Old World, have been rendered hopelessly unworkable by any but the most devoted expert. This method of treatment of some of the genera leads to a want of uniformity in the work as a whole. Thus under the common poppy, *Papaver rhœas*, are twenty-six varieties and subvarieties, which probably have as good claim to specific distinction as the "species" of *Platystemon*.

In dealing with the genera of *Chelidoniæ*, Dr. Fedde has followed the limitation of species accepted by Dr. Prain, though he does not adopt his reduction of several of the genera, *Dicranostigma*, *Hylomecon*, and others, to subgeneric rank under *Chelidonium*. On the whole, however, Dr. Fedde shows a disinclination to differ from authority which we do not expect from the expert who has exhaustively surveyed the entire field of a large natural order. Thus under *Meconopsis*, while accepting Dr. Prain's sections, he suggests with regard to two of these, *Aculeatæ* and *Primulinæ*, that the division is not a natural one.

As regards the presentation of genera and species, the descriptions are full, the synonymy and geographical distribution are carefully worked out, and collections and numbers are largely cited. The index is a good one, but would be improved by the repetition of the genus name at the head of each column, thus avoiding the necessity for turning back to find the genus to which the species names belong.

A. B. R.

OUR BOOK SHELF.

Woodcraft for Scouts and Others. By O. Jones and M. Woodward. Pp. 156. (London: C. Arthur Pearson, Ltd., 1910.) Price 2s. net.

THAT the present generation of country people do not study woodcraft and field-lore with the zest and thoroughness of their forefathers, is a regrettable fact too well known to all capable of forming an opinion on the subject. The nature-knowledge of the old-fashioned shepherd has been replaced by a superficial education of a different class, which is of little or no use to its possessor, and the intimate knowledge of the creatures of the forest, field, and stream owned by the professional poachers of a generation ago has to a

considerable extent vanished with the diminution in the numbers of that class in many districts. Nor is this all, for ordinary country lads, in some counties at any rate, show a lamentable lack of knowledge of the names of wild plants and birds as compared with their grandfathers. That the scout movement, if properly conducted will do something to improve this state of affairs in the case of the rising generation is almost certain, for it is obvious that to orient one's position in a wood at night, to follow the trail of a suspect, or to escape the attentions of an enemy is impossible without a full knowledge of woodcraft in its widest sense.

As an aid to knowledge of this nature, the excellent little volume by Messrs. Jones and Woodward is very opportune, if only it reaches the class for which it is primarily intended. Both authors appear to have a thorough grasp of their subject, and the amount of information contained in their work is little less than marvellous. In the tenth chapter there is perhaps a little too much tendency to convert the young scout into a rabbit poacher, and the expression on p. 136, "to break the law of trespass," is an indication that the authors are not so well versed in the common law of their own country as they might be. In treating of the animals and plants of the countryside, the authors are just as much at home as when discussing old-fashioned country remedies, or the difference between wholesome and noxious funguses, and their work as a whole leaves little or nothing to desire in the matter of completeness and thoroughness.

R. L.

A School Course of Heat. By R. H. Scarlett. Pp. xvi+300. (London: Longmans, Green and Co., 1910.) Price 3s. 6d.

THIS book is intended for the use of students who have already passed through an elementary course in general physics. The author devotes the first thirty pages of the present volume to a recapitulation of the elementary portions of heat. The rest of the book deals with the more advanced parts of the subject and touches briefly upon some points which do not usually find a place in a school text-book.

The subject is developed throughout along the line of practical work in the laboratory, but we do not think the laboratory experiments are always well chosen. In dealing with the errors of mercury thermometers on p. 18, the author states that mercury is not quite uniform in its expansion, and near 50° C. on the scale, there will be a constant error amounting to almost a degree. This error, of course, will depend upon the glass, but one-tenth of a degree is nearer the average correction necessary from this cause. The method employed on p. 62 to obtain the relation between the density of a liquid at different temperatures and its coefficient of expansion will present difficulty to an elementary student, and it is certainly not sufficiently accurate for all experiments as performed in the laboratory. Thus, in the example given on pp. 64, 65, there is an error of 3 per cent. in the calculated coefficient due to the use of this approximate formula.

Similarly, in the treatment of coefficient of absolute expansion on p. 70, it is not made clear to the reader which column length is involved in the denominator of the expression obtained. The wrong one is measured in the illustrative example, making a 1½ per cent. error in the result. The hydrostatic method is a most unsuitable one to employ for the expansion coefficient of ether between 10° and 30°, as given on p. 66. On p. 191 we are told that the steam and hoarfrost lines intersect at 0° C. The chapter on thermal conductivity would have been improved by