

is without doubt an enthusiast on the subject, and something of a poet as well, but it is unfortunate that poetical descriptions and Latin names of plants are but ill-assorted companions, and the frequency of the necessary names detracts considerably from the purely æsthetic pleasure of perusing the volume.

The Alps, with their flora, are described at the different seasons of the year, and the beauties of each are duly eulogised; to our thinking, however, the concluding chapters on the abuse and protection of alpenes, and on some gardens in the Alps, are the most worthy portions of the volume. In the former chapter the good work done by the "Swiss League for the Protection of the Natural Beauties of the Alps" receives well-deserved commendation, for it is largely owing to its efforts that much wanton destruction of alpine plants by the thoughtless tourist and so-called lover of plants is gradually being stopped. In the final chapter the Thomasia gardens, near Bex, Rambertia, at the summit of the Rochers de Naye, and Linnæa, at Bourg St. Pierre, are described.

The author wonders why we in England have not attempted to create alpine pastures; he seems to forget the peculiar beauty of English pasture as it is with its buttercups, cowslips, and orchis, daisies and red sorrel. Very possibly he might find that English grasses ere long would hold the field where once his less resisting alpenes were planted. On laying down this book we cannot but feel that Mr. Flemwell is more at home with the brush than with the pen, and that in writing a book on alpine flowers and gardens he would have produced a more useful volume had his fancies been more restrained.

(2) This work is an interesting contrast to the preceding, and affords an example of the present limitations of the art of colour photography. In a few cases, as, for instance, the plates of *Trifolium alpinum* (plate xi.) and *Saxifraga aizoides* (plate xx.), the results are good, but in many of the others the green of the leaves or of the background has come out badly. Blue and violet flowers are perhaps the least successful; it may be that the original photographs have suffered considerably in reproduction, but from the examples before us we cannot entirely agree with the author that "the pictures are true portraits of the flowers 'at home.'" A page or so of descriptive text accompanies each illustration, and there is a general introduction to the volume occupying sixteen pages which in some places needs textual revision; for instance, we do not imagine that the author means to suggest that Baedeker or Bradshaw is either an efficient or an inefficient plant press.

OUR BOOK SHELF.

A Manual of Practical Farming. By John McLennan. Pp. xi+298. (New York: The Macmillan Company; London: Macmillan and Co., Ltd., 1910.) Price 6s. 6d. net.

THE number of books dealing with special branches of science applied to agriculture is great and is steadily increasing; we have books on agricultural chemistry, botany and entomology, on the soil, on

fertilisers and feeding-stuffs; there are also a number of large treatises and encyclopædias on agriculture. But only few writers have attempted to produce a small, handy book on practical agriculture dealing with the subject as a whole; the majority have been deterred by the difficulty of reducing so wide and complex a subject to the necessary small dimensions.

Mr. McLennan has essayed the task that many have avoided. His aim has been to give the farmer useful practical instruction, and also to set forth "the results of scientific research as far as known and as far as they square with practical experience." In the first object he will probably be found to have succeeded; he clearly knows the men for whom he is writing, and furnishes facts and illustrations that will be useful and will also show what has been accomplished by competent workers. The average American farmer does not yet get all he might out of his land. To some extent the untrained amateur is a factor in the case, as he is beginning to be in England, and our author has something to say about the would-be poultry farmer who came out from the city without any knowledge, but "full of literature on the subject, built elaborate houses, runs, brooders, and incubators, purchased high-priced eggs and costly fowls. He could figure out a comfortable living for himself and family, with freedom from city cares. He usually remained two years; the feed bills exceeded the receipts for eggs; the roup got his hens, and lice got his chickens; his enthusiasm waned, and he went back to his counter."

In his second object—the presentation of the scientific aspects of agriculture—our author is less successful. He shocks us on the very first page by saying that "the soil and the subsoil are primarily composed of molecules; that is, minute grains of rock of varying size and forms. These are simply a result of the action of the elements, such as frost, rain, wind, and heat, in breaking down and disintegrating the surface rock." This is a typical example of the "science" set out for the reader. If the author could persuade some scientific friend to read through the book and make the necessary alterations for the second edition its value would be much enhanced.

Leitfaden der Mineralogie. By Prof. Julius Ruska. Pp. viii+144. (Leipzig: Quelle und Meyer, 1910.) Price 2 marks.

THIS "Guide to Mineralogy" is intended for the use of younger boys in German schools who have not yet received instruction in mathematics, physics, and chemistry. Although it is customary to defer the study of mineralogy until after the latter subjects have been started, it is the author's belief that it is a subject that of itself can be made intelligible and interesting to younger boys. After a brief introduction of four pages, in which hardness and specific gravity are dealt with, he plunges into the subject, explaining such terms and principles as are necessary when occasion arises. The order in which the more common minerals are described follows the usual classification into elements, sulphides, oxides, carbonates, &c. Commencing with sulphur, an opportunity is given to explain some of the principles of crystallography in connection with the rhombic system of crystals; and under the sulphides, galena, zincblende, and iron-pyrites, the three important classes of the cubic system are described. A large amount of information is given in a very concentrated form, and possibly such an essence of mineralogy might not agree with quite young boys.

A striking feature of the book is its wealth of illustrations. Besides the sixty-nine figures on the coloured