

ance to the statesman wishing to get a sound idea of the state of an industry subject to such local variations as agriculture, seem to have dropped out of favour in this country; to parallel them we must go back fifty years to the prize reports on the farming of the various counties which used to be a feature of the earlier numbers of the *Journal* of the Royal Agricultural Society.

The Tavoliere di Capitanata is a dry flat plain with an annual rainfall of only eighteen inches, and a mean temperature of more than 60° F.; the prevailing calcareous subsoil results in there being but little surface water, while the few rivers descending from the Apennines are torrential in their nature, and in consequence have formed a considerable area of marsh. The agriculture of the district is of a primitive character, much of it is pastoral, this being one of the sheep-producing districts of Italy; the cultivated land is farmed on a kind of four-course rotation of hard wheat (macaroni wheat), wheat, oats and fallow, and on the poorer land an even simpler rotation of wheat or oats and fallow alternately is practised. A certain acreage is also occupied by vines and olives.

The author, after a preliminary discussion of the meteorological conditions, geology, &c., of the district, proceeds to describe the system of management which prevails, and sets out in detail the cost of the various operations, rates of wages, and gross returns as regards sheep, wheat and vines. As a means of improving the condition of agriculture he lays stress on the introduction of forage crops, such as temporary pastures, sainfoin and lucerne, instead of the present primitive and exhausting alternation of cereals and fallow.

*The Stellar Heavens.* By Ellard Gore. Pp. xxxii + 128. (London: Chatto and Windus, 1903.) Price 2s. net.

THE author has brought together in a small compass a list of the more prominent objects in the heavens for the use of possessors of small telescopes. The list is accompanied also by brief historical and introductory information applicable to each class of object treated. There are five chapters in all, and these are devoted to the following subjects:—Stars, double, multiple and binary stars, variable stars, star-clusters and nebulae, and the stellar universe. In the first of these a brief account, among other topics, is given of the classifications of stellar spectra, but unfortunately the reader is not told that Vogel's classification is based on the assumption that all stars are decreasing in temperature, while a natural and more recent classification, dividing the stars into groups in which they are increasing or decreasing their temperature, is altogether omitted.

The paragraph devoted to the explanation of temporary or new stars is needlessly brief considering the number of views expressed on this important subject. On the other hand, an excellent account is given of the methods of observing the brighter variable stars which are in the reach of amateurs, and it is hoped that this interesting branch of astronomy, one specially suitable for those who have only opera glasses at their service, will be taken up more generally.

The volume will, however, be a very useful help for directing the observer's attention to the various more conspicuous objects in the sky, and although it does not pretend to take the place of that well-known friend of amateurs, namely, Webb's "Celestial Objects for Common Telescopes," it will prove a serviceable guide. The only erratum found was the misspelling of the name of Klinkerfues on p. 23, although the name is indexed correctly.

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*Departmental Notes on Insects that Affect Forestry.*

By E. P. Stebbing, F.L.S., F.E.S., Forest Entomologist under the Government of India. No. 2. Pp. vii + 151-334; plates vii-xix. (Calcutta, 1903.)

THE importance of economic entomology is now fully recognised by the Indian Government, and the publication before us is devoted chiefly to Scolytidæ and other beetles injurious to the bark and leaves of trees, and to their parasites; a few moths and scale-insects are also noticed. Each species occupies several pages, and is fully dealt with under various headings, the most important being description, life-history, relations to the forest, points in the life-history requiring further observation (an extremely important matter), protection and remedies, localities, parasites, fungi, &c. Several species are referred to under their generic names only, but this will not render their identification a matter of any great difficulty. The illustrations are fairly good, and many of them are devoted to galleries of Scolytidæ and to different portions of trees attacked by insects. The illustrations of the Coccid, *Monophlebus Stebbingi*, Green, on plate 14 are very interesting. We are sorry that Mr. Stebbing has overlooked the necessity for adding the author's name to every described species mentioned; it is done in some cases, but is frequently omitted, and many of the species described have "M.S." appended to their names. We presume that these are names published for the first time by Mr. Stebbing himself, in which case he should either have added his own name or else "n. sp."

We are glad to notice the increase of well-illustrated publications on economic entomology, for their value is considerable, both from a practical and from a scientific point of view.

*Analytical Chemistry.* By F. P. Treadwell, Ph.D. Translated from the second German Edition by W. T. Hall, S.B. Pp. xi + 466. (New York: Wiley and Sons; London: Chapman and Hall, Ltd., 1903.) Price 3 dollars.

THE text-book is compiled from lectures delivered by the author at the Polytechnic Institute at Zurich. The matter is, as one might expect, very largely explanatory of the various reactions, that is to say, it is a book to be studied rather outside than in the laboratory. From this point of view it doubtless serves a useful purpose, for every reaction is clearly described and illustrated by an appropriate equation.

One may doubt sometimes the expediency of simplifying all analytical operations on paper in this way, but, provided practical experience is added as a corrective, the value of an equation as a general guide to a reaction can do no harm.

The book is written in a thoroughly scientific spirit—not a common characteristic of books on this subject—and the author is conversant with the modern theory of analytical chemistry, to which reference is frequently made.

Seeing that prominence is given to minerals in which the different elements occur, one misses the refinements of blowpipe analysis which Plattner and Richter did so much to develop. Possibly this might have made the volume too bulky. As it is, the information seems accurate and complete. There are plenty of tables of separation, and there is a section at the end devoted to the rarer elements. The book is printed on good paper in clear type, and is bound in a substantial cover. Altogether the external appearance, for a work on qualitative analysis, produces a very favourable impression. The translator has done his work well. Whether this justifies the prominence given to his name on the back can scarcely be decided by the reviewer.

J. B. C.