

presence of a very much larger percentage of dissociation"; and on p. 432, "The reader will have no difficulty in comprehending books that still use the nomenclature of the theory of electrolytic dissociation by remembering that the term *ion* as used in expressing chemical change means the same as atom or radical" (*sic*).

The periodic law is discussed in Chapter XX., but in the arrangement of the descriptive matter it is entirely ignored. This is a great drawback, as inorganic chemistry without the periodic law and the ionic hypothesis becomes a mere jumble of disconnected facts, difficult to remember, and still more difficult to assimilate. Otherwise the book contains as much pure chemistry as a student of medicine or engineering, who can devote only one year to the subject, requires. There are also short accounts of the chief processes in applied chemistry.

OUR BOOK SHELF.

Super-organic Evolution. Nature and the Social Problem. By Dr. E. Lluria. With a preface by Dr. D. Santiago Raman y Cajal. Translated by Rachel Challice and D. H. Lambert. Pp. xix+233. (London: Williams and Norgate, 1910.) Price 7s. 6d. net.

"MAN is a product of universal mechanics."

"The solution of the social problem is contained in the law of evolution."

"There exists an irrefragable law which has made man out of a conglomeration of matter, and this same law, sooner or later, will have to be followed, in order that man himself may attain the state of happiness that is his legitimate aspiration."

These aphorisms lie at the root of Dr. Lluria's philosophy. The researches of Don Santiago Raman y Cajal into the phylogeny and ontology of the nervous system have greatly impressed him, and a third of the volume is occupied with an account of them. He assumes that the nervous system of man will continue to increase in complexity. "The brain of man still continues its psychic evolution." While agreeing that this is "a conclusion of paramount value," we fail to trace the logical steps by which it is reached, and the same may be said of the further inference, "In society, super-organic organism, the rapidity of change will be greater than in any other."

With the best will in the world, it is not easy always to follow the author, as, *e.g.*, when he tells us that "Society lives in a profound error as to property. It has chosen the paltry medium of money instead of the grand inheritance of Nature, which belongs to it by right, confirmed by the theory of evolution." But it is not only society that is to blame. "The responsibility falls particularly on many men of science who have not understood the theory of evolution, giving it, for example, such a false and iniquitous interpretation as the *struggle for existence*—a dreadful distortion of the natural course of ideas."

It is unfortunate that the translator is evidently unfamiliar with the technical terminology which is inseparable from a treatise of this description. There is no index.

The Romance of Modern Astronomy, describing in Simple but Exact Language the Wonders of the Heavens. By Hector Macpherson, Jun. Pp. 333. (London: Seeley and Co., Limited, 1911.) Price 5s.

COMMENCING with a chapter on our place in the universe, the author proceeds in the established sequence with chapters on the earth's motions, the

sun, Mercury, Venus, &c., completing the discussion of the solar system with comets and shooting-stars. At more remote distances the suns of space, stellar motions and systems, and nebulae are the subjects claiming the writer's pen. Some forty pages are devoted to tides, the spectrum and other incidental subjects, while five chapters deal with popular aspects of astronomical history.

The treatment, though generally clear and accurate, seldom rises above the commonplace. A feature which cannot be commended is the persistent introduction of somewhat lengthy quotations from other writers on astronomy. This method of providing "purple patches" discounts the individuality of the writer, whether it be due to modesty or otherwise.

Though steering clear of error in his elementary exposition, the author is not guiltless of loose statements, such as that silver-on-glass reflectors "have a light-gathering power far exceeding the telescopes whose mirrors are constructed of speculum metal."

Many of the illustrations are new, and, on the whole, well done, the artist being successful in finding picturesque settings for some of the more common astronomical happenings. The frontispiece, however, is very misleading; here an enlarged drawing of the head of Halley's comet fills the picture above a portion of landscape, put in doubtless for effect, the whole giving the impression that the coma stretched from zenith to horizon.

The Practice of Soft Cheesemaking. A Guide to the Manufacture of Soft Cheese and Preparation of Cheese for Market. By C. W. Walker-Tisdale and T. R. Robinson. Second edition, revised. Pp. 04. (London: Office of the Dairy World, 1910.) Price 1s. net.

A SECOND edition of this little book having been called for, the authors have taken advantage of the opportunity for introducing a certain amount of new matter. With true commercial instinct, they have put in a section describing fully the preparation of Bulgarian sour milk and sour cheese, but their chief object is to give a number of recipes for making soft cheese—often known as cream cheese—likely to sell well and at a good profit.

Soft cheese is a much simpler matter for the producer than ordinary cheese. No great capital or strength are required; the uniformity desirable for butter-making is not needed, so that comparatively small volumes of milk suffice, and the best demand exists precisely at the time when milk is in greatest abundance, *i.e.* in spring and summer. It is therefore essentially a product that the small holder can go in for, and the recognition of this fact by the authors adds greatly to the value of the book. The process of manufacture is simple, and consists merely in adding rennet to milk or to a mixture of milk and cream, then separating the coagulum, and allowing it to drain. There are, however, numerous details that require attention, but these are fully set out.

The book will be found very useful for dairy students and small holders, as well as for the growing class of dwellers in the country who keep a cow for their own use.

Twelfth Report of the Woburn Experimental Fruit Farm. By the Duke of Bedford, K.G., F.R.S., and S. U. Pickering, F.R.S. Pp. iv+51. (London: Amalgamated Press, Ltd., 1910.) Price 1s. 7½d. (post free).

IN this, the twelfth report issued from the Woburn fruit farm, the authors deal with the silver-leaf disease of plums and other fruit-trees in the thorough manner that characterises all their work. This disease is caused by the fungus *Stereum purpureum*, but the