

OUR BOOK SHELF.

A History of the Daubeny Laboratory, Magdalen College, Oxford. By R. W. Günther, M.A., F.L.S. Pp. vi+137; 3 full page plates. (London: Henry Frowde, 1904.) Price 5s. net.

OXFORD chemistry is entering on a new phase of its existence. Up to the present time the theoretical teaching has been excellent, but partly owing to lack of accommodation and partly through other causes, the practical teaching has not reached so high a standard. Mr. Günther's book is a sort of commemoration of the opening of the reconstructed chemical laboratory at Magdalen College. The laboratory, apart from the Physic Garden, which is nearly four hundred years old, was founded in 1842, and it was the scene of Daubeny's labours both as chemist and botanist. His chemistry lectures were, however, given in a basement of the old Ashmolean building. It is to a certain extent typical of the earlier days of Oxford science that most of the work was relegated to cellars. Brodie's "last word on the formula of ozone" was said in a cellar at Balliol, and in the same cellar much of Dixon's excellent work on the rates of explosion in gases was done. Harcourt's classical experiments on velocity of chemical change were performed in a basement at Christ Church. Things are changing now. New laboratories have been built both at Christ Church and Magdalen, and in both, research laboratories, with the best appliances, give hope that chemical research in Oxford may be entering on a new lease of life.

Mr. Günther gives a very minute and interesting account of the laboratory now under his charge. Not the least interesting is his description of the collection of old apparatus which has been lying, fortunately unbroken, for many years in the laboratory. A complete meteorological record from 1869 has been kept, and the monthly averages are given in an appendix. A list of Daubeny's researches is also appended; the number of papers is very large, considering the fact that he was the holder of three several professorships—chemistry, botany, and rural economy. The researches of later workers in the laboratory are described in full. Mr. Günther has evidently been misled by the politeness of one of the learned societies. It is scarcely considered a mark of distinction for an author to have his paper "deposited in full in the Society's Archives."

The registers of attendance at the lectures of Daubeny are printed in full from 1826, with notes of the after careers of the students. It is a curious fact that fully three-quarters of the early attendants of science lectures in Oxford afterwards took Orders, and among them we find three archbishops, Tait, Whately and Thomson. In these later days science is apparently not so necessary for the education of the clergy.

Abriss der Biologie der Tiere. By Prof. H. Simroth. 2 vols. Pp. 157 each. (Leipzig: Göschen.)

THESE little books correspond to the series issued in this country by Messrs. Newnes, as the "Story of Fish-Life" and the like. But Dr. Simroth, possessing as he does a great knowledge of animal bionomics, has condensed within two small volumes all the essential facts of comparative physiology of animals in a way that is paralleled by no English work except Semper's "Animal Life." Unfortunately the Germans, with few exceptions, do not arrange and select their elementary science in a way that assists the beginner. Almost on the first page we meet with "idioplasma" and "chromosomes," a fact which is eloquent of the distance between writer and learner. Whilst this work is one of great value to teachers, it is well to understand that it is useless to those be-

ginning the subject. The reviewer, however, as one who has known the stimulating character of Prof. Simroth's teaching, gladly acknowledges the suggestive and clear way in which the influence of gravity, light, heat, and other radiations are referred to. These, and the concluding chapters on reproduction, rudimentary organs, and habitat, are well worth the attention of those who have already acquired a practical knowledge of biology.

From India to Fergana. Description of a Journey made in 1898 by Lieut.-Colonel V. T. Novitskiy, being part of vol. xxxviii. of the *Memoirs* of the Russian Geographical Society. Pp. 297; with a map and 18 photographs. (St. Petersburg, 1903.)

STARTING from Srinagar, the author went first to Leh; thence, proceeding in a northern direction, he crossed the Karakoram Plateau, reaching the Karakash River, or Khotan-daria, at the Chinese post Shahi-dula. Then, instead of taking one of the usual passes across the Raskem Range, the Russian traveller went through a more western, formerly unknown pass, Karlik-davan, which proved to be extremely difficult, especially in the gorge of the Tagra-su. Descending next to the valley of the Ulyuch-su, the party soon reached Kargalyk, in Kashgaria, and Yarkand, and went to Russian Turkestan, following one of the usual routes. The author gives very good descriptions of Kashmire and of the dreary Karakoram Plateau, about 15,000 feet high in its high valleys, which are covered with alluvial deposits from old desiccated lakes, and are surrounded with bare mountains reaching an altitude of 24,600 feet in the Ak-tash group of peaks. He describes further the Alpine zone, intersected with wild gorges, which is usually known on the maps as the Raskem Range, but represents in reality an intermediate zone between the plateau and the plains of Kashgaria. He gives detailed lists of the plants he collected and of the birds he saw, and also most striking photographs, artistically reproduced. A map of the Pamirs and the surrounding regions, 27 miles to the inch, and a very interesting cross-section, based on the author's barometric measurements, are added to this valuable work.

Dissertations on Leading Philosophical Topics. By Alexander Bain, Pp. vi+277. (London: Longmans, Green and Co., 1903.) Price 7s. 6d. net.

THIS volume consists of fifteen essays on logical, psychological and ethical topics that have been previously published in the pages of *Mind* or elsewhere. Nevertheless, a special interest attaches to it because the essays represent the maturest conclusions of the late Prof. Bain upon subjects to which he had devoted his attention with so conspicuous success throughout his long and distinguished career, and were designed by him to supplement the two great works on psychology which ill-health prevented him from again reissuing. The essays exhibit all that wide learning, that clearness and vigour of intellect, and that width of sympathy and interest which gave Bain's works on psychology a place in the foremost rank and secured for him a world-wide reputation. Very characteristic are the two essays in which he insists on the importance for psychology of physiological considerations and psycho-physical experiment, and at the same time defines their scope and their true relations to the introspective method. The volume concludes with an essay on the examination-system that assumes ever vaster proportions in this country in spite of many denunciations. Here Bain, recognising the necessity of examinations, appears as an advocate of improvement in the art of examining and of restriction rather than abolition of the system.