

A BIBLIOGRAPHY OF AGRICULTURAL SCIENCE.¹

THE yearly increasing output of scientific workers, like the fleas that have "lesser fleas to bite 'em," has called into being another class of workers who have to abstract the papers into Jahresberichte, Centralblätter, records, and the like, the next step in the *ad infinitum* process being represented by the indexes which appear every decade or so to the abstracts themselves. By no other means would the investigator be able to "read up the literature" before attacking a new problem, and though there may be two opinions as to the wisdom of so doing, there can be none as to the desirability of having the power if need be. The present volume consists of a subject index to the first twelve volumes of the *Experiment Station Record*, the well known series of abstracts of both American and European papers in agricultural science which is issued monthly by the United States Department of Agriculture, and distributed so liberally to all foreign workers. The *Experiment Station Record* is, indeed, something more than a journal of abstracts; it contains from time to time special articles resuming the current state of knowledge about particular subjects, and written by some acknowledged expert; for example, in this index we find mentioned special articles by Kühn, Stohmann, Kellner, Zuntz, and Hagemann on nutrition investigations alone.

The abstracts proper in the *Experiment Station Record* are generally very full; like all abstracts, they vary much in value, but generally they fulfil their real purpose of telling one whether it is worth while to read the original paper or not. Naturally, with a subject like agriculture, touching on so many sciences, the abstracts cover a very wide field; chemistry, botany, zoology, geology, all have their special journals which must be looked through lest any article bearing on agriculture escape; meteorology, bacteriology, veterinary science, horticulture also contribute, in addition to the great volume of journals in every country which are devoted solely to agricultural topics. The present index only adds to the debt of gratitude which all British workers in this field have long owed to the United States Department of Agriculture; in fact, if one wants to find the reference to some English experiment, by far the best if not the only way of tracing it is to hunt up its abstract in the *Experiment Station Record*. Such a pursuit will now be greatly facilitated by the present general index, which represents a putting together of the very full indexes to each of the annual volumes. A further feature of value is a complete list of *Bulletins* issued by the various divisions of the U.S. Department of Agriculture, with references to the abstracts in the *Record*. When we add that the department has also published card indexes to the more important foreign agricultural publications, as, for example, to the well known *Landw. Versuchsstationen*, we get a further idea of the completeness with which the United States Department of Agriculture is pursuing its self-imposed task of bibliography.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

At the Darmstadt Technical College Mr. Clarence Feldmann has been appointed professor of electrotechnics.

PROF. W. NERNST, director of the departments of physical chemistry and electrochemistry at Göttingen, has accepted the chair at Berlin previously occupied by Prof. Landolt.

PROF. ARRHENIUS has declined the appointment offered him at Berlin, the Swedish Academy of Sciences having founded a Nobel Institute of Physical Chemistry with Prof. Arrhenius as director.

DUBLIN University has conferred the degrees of Master in Surgery and Doctor in Medicine *honoris causa* on Sir Frederick Treves, C.B., and the degree of Doctor in Science *honoris causa* on Major Ronald Ross, C.B., F.R.S.

DR. E. W. SKEATS, demonstrator in geology at the Royal College of Science, has been appointed to the chair of geology and mineralogy in the University of Melbourne in

¹ "General Index to Experiment Station Record." Vols. i. to xii., 1889-1901. Pp. 67r. U.S. Department of Agriculture. (Washington, 1903.)

succession to Prof. J. W. Gregory, F.R.S., now professor of geology at Glasgow University.

CHAIRS for research and teaching in protozoology and in helminthology are about to be established at the London School of Tropical Medicine, the funds being provided by certain colonial Governments. The importance of these branches of research in tropical medicine is unquestionable, and it is gratifying to know that this is appreciated by the Governments which have thus assisted the study of the subjects.

DR. JOLY has been appointed ordinary professor of mathematics at Lausanne; Dr. Heinrich Liebmann, hitherto recognised teacher in mathematics, has been appointed assistant professor of philosophy at Leipzig; Dr. Roland Scholl, assistant professor of chemistry at the technical college, Karlsruhe; Dr. Arthur Wehnelt assistant professor of theoretical and applied physics at Erlangen; Dr. Georg Eder von Georgievics, hitherto professor of chemical technology at Bielitz, is to succeed Prof. Karl Zulkowski at the German Technical College at Prague.

THE annual conference of teachers, arranged by the London County Council, will be held on January 5-7 next at the Medical Examination Hall, Victoria Embankment. At the first meeting, addresses on the teaching of arithmetic will be given by Mr. C. T. Millis and Mr. S. O. Andrew, and the discussion will be opened by Mr. A. W. Siddons. Other subjects to be brought forward at subsequent meetings are:—the psychology of dictation, the teaching of reading, art teaching in Japan, the influence on handicraft of art teaching in elementary and secondary schools, the art training of the artisan, and true and false applications of Froebel's principles.

THE promoters of the movement for providing the University College of North Wales with new buildings on the site presented by the Corporation of Bangor have within the last few days been greatly encouraged in the task by an announcement that Mr. Owen Owen will contribute 1000*l.* to the building fund. This donation, taken in conjunction with the recent bequest to the college by the late Dr. Isaac Roberts of the sum which is expected to reach about 15,000*l.*, and by the late Mr. John Hughes, of Liverpool, and Mr. Richard Hughes, of Llanfawr, Anglesey, of 5000*l.* and 1500*l.* respectively for the purpose of establishing scholarships, affords a welcome indication of the interest which is now being taken in the fortunes of the college by Welshmen having the like means and wish to benefit the cause of higher education.

At a recent meeting with reference to Swanley Horticultural College, presided over by Lady Brassey, Mr. J. C. Medd urged the claims of the college to recognition by the Board of Agriculture, and showed how the institution now fulfilled the conditions which it ought to do, if it were to expect an annual grant from that Government department. He also alluded to the nature-study course for teachers which was held at Swanley during the summer holidays. Sir John Cockburn pointed out that all educational establishments that did their duty were in need of funds, and that Swanley College was no exception. Mr. Buckmaster, chief inspector to the Board of Education, spoke of the efficiency of Swanley College at the present time, and thought that all energy should be directed towards maintaining and improving the position which Swanley had attained rather than to inaugurating similar undertakings.

ADDRESSING the boys at St. Clement Danes' Holborn Estate Grammar School on Monday, Lord Alverstone remarked that it was the knowledge acquired in youth which lasted longest. The effort to retain impressions in later life was in marked contrast to that made when the brain was younger. Modern languages, therefore, should be earnestly and carefully studied at school. He was glad to see a considerable number of pupils had gained honours in English literature. In the hurry and race of modern life there was a tendency to advocate education which would be of immediate assistance to professional life; but he was strongly of opinion that up to the age of sixteen or seventeen a boy's education should be general, and the temptation to specialise too much should be resisted. A boy would be a better student and would make a better man