defined by the author as "an empirical examination of the genesis and development of some of the cultural values which underly the large-scale pursuit of science". The "Dictionary of National Biography" has been selected as the source of information of an occupational census and the data subjected to a tabulation process. On the basis of this information a further survey of discoveries based on Darmstaedter's "Handbuch zur Geschichte der Naturwissenschaften und Technik" was compiled. This indicated the particular interests which arose in different times in the period studied. The influence of religious movements such as Puritanism is considered. The influence of external factors is carefully examined. The whole study is very interesting and suggestive in many fields but suffers from the lack of a detailed table of contents, so that the intention of the work is not easy to grasp, and the author's conclusions are not easy to find in the mass of detail. Vol. 5 of *Osiris*, which now rejoices in a Latin title as *Commentationes de scientiarum et eruditionis historia rationeque volumen quintum Iulio Ruska oblatum*, is dated 1938, and is edited by Dr. Sarton assisted by Dr. Pogo. It contains some interesting and valuable papers on scientific incunabula (to which a recent volume of *Osiris* was devoted), on Arabic algebra (incidentally, the history of mathematics has occupied a prominent place in the journal so far), on Kopp, the historian of chemistry, on astronomy, on Michael Scot (a subject which has now been about worked to death), on animals in the Bible, and on other subjects. There is a biographical and bibliographical notice of Ruska and a portrait. These two volumes of *Osiris* maintain the high standard of scholarship of the publication, and are indispensable to students of the history of science.

Royal Cornwall Polytechnic Society

In its several ways the Royal Cornwall Polytechnic Society continues to stimulate interest in the traditions and archæology of the county as well as in science. Lectures are given, prizes for essays awarded, excursions are made and much is done for meteorology by the maintenance of the Falmouth Observatory and the support of the Cornwall Rainfall Association. All these matters are referred to in the one hundred and fifth annual report, recently issued, which is accompanied by some of the original contributions to the Society. The Society was founded when the Cornish metalliferous mines were in full swing, and in a paper entitled "The Ancient Mining Districts of Cornwall" Mr. F. J. Stephens gives a review of the score or more of mines which existed within two miles of the coastline, in the parishes of Illogan, St. Agnes and Perranzabuloe. Another contribution, but in lighter vein, is an account of the opening of the railway to Falmouth in 1863, from which it was hoped the district would gain much by the re-opening of the port of Falmouth as a terminus for steamship lines, while in yet another Mr. E. Chirgwin treats of the dialect of Cornwall. As in other parts of Great Britain, the dialect "is speeding from the presence of compulsory instruction, the cinema, the motor coach, the daily paper and the thousands of visitors" who flock to the district. As usual, Mr. W. T. Hooper gives a series of valuable meteorological notes, in which he shows that those discontented because perpetual sunshine is not to be enjoyed at Falmouth, have little about which to complain.

Japan Institute for Science of Labour

The annual report of the director of the Japan Institute for Science of Labour for 1937 gives a brief account of the history of the Institute as well as of its divisions and functions (Tokyo: Japan Institute for Science of Labour, 1938. 70 sen). A programme of proposed investigations, including studies on nutrition and the prevention of industrial accidents and occupational disease, is also outlined which indicates how sadly warped the whole outlook of Japan has become under the demands of her policy of war and aggression. Brief notes are included on investigations completed in 1936–37, among which may be mentioned a study of dust in mail-cars and a survey of the labour conditions of railway postal workers. The first part of an investigation on gaseous metabolism in heavy muscular work has been completed, covering gaseous exchange in static effort, and a third report on occupational diseases of printers, especially lead poisoning, deals with the density of dust in the air and the window space in the printing shop. A statistical analysis has been made of the causes of death in different occupations, and other studies have included acute nicotine poisoning among land workers and water supply in an agricultural village.

The Lily Year-book

The Royal Horticultural Society's Lily Year-book for 1938 (London: the Society's Office, Vincent Square, S.W.1. Pp. 181+35 plates. 5*s*. paper; 6*s*. cloth. 1938) contains an account by Messrs. A. B. Stout and W. M. Porterfield of "Seed Patterns and Incompatibilities in *Lilium candidum*". It is shown that incompatibilities may occur among sister plants of the same species. Such disabilities are physiological in nature, and are not to be confused with failures in hybridizing fertilizations. An ingenious method of estimating incompatibility by the examination of seeds has been used. The results are considered in relation to the practical promotion of fertility by late fertilization, when suitable stigmatic secretion is developed, and by artificial treatments of the stigma. The Year-book contains numerous papers about the horticultural treatment of lilies; Dr. Fred Stoker has a useful article upon the geographical origin and classification of the Carniolicum group of lilies; Mr. A. D. Cotton contributes a short biography of Père Armand David (1826–1900), the celebrated naturalist and explorer; and Mr. E. O. Clement describes various practices for the germination of lily seed in Ontario. The year's work upon lilies revealed by the volume indicates a lack of contributions of a fundamentally scientific nature. Reports of discussions at meetings of the Society's Lily Group, published in the present Year-book (pp. 42–79), and similar accounts in earlier

years, show that those whose interest in lilies is practical and aesthetic, need, and desire, the specialized help of the geneticist, the physiologist and the pathologist.

Scientia Genetica

WITH the object of stimulating the development of genetics in the Latin countries, a new journal, *Scientia Genetica*, is being launched under the direction of Prof. Carlo Jucci of the University of Pavia and with his colleague Prof. Adriano Buzzati-Traverso as its editor-in-chief. Though it is primarily intended to provide an appropriate medium for publication for geneticists in these particular countries, original papers from elsewhere will be welcomed so long as they are written in Italian, French, Spanish or Portuguese, and possess a strictly genetical interest. There is to be a special section for abstracts, reviews of recent books and for summaries of original papers dealing with animal and plant breeding (such papers will not be published in full). At the end of each year there will be given a complete bibliography of papers of genetical interest that have appeared in the scientific literature of the Latin countries, and from time to time there will be presented a critical review of some selected field. Geneticists will welcome this addition to the literature of their science. It undoubtedly supplies a need, and it may be expected to play a notable part in the inevitable advancement of genetics not only in the Latin countries but also in the world as a whole.

Beneficial Insects

IN 1922 the Ministry of Agriculture and Fisheries issued a small publication on "Beneficial Insects". It contained little-known information, written in a non-technical style, on those insects that are beneficial to the farmer, fruit-grower and gardener. During the sixteen years which have elapsed, this bulletin has passed through three editions and has been reprinted on five occasions. Knowledge of insects of this kind has greatly increased in the interval and the practical measures that can be taken to increase their usefulness have been extensively investigated. This new bulletin (No. 20; 1939) has been entirely re-written by Dr. W. R. Thompson and forms a useful non-technical introduction to the subject. It is obtainable from His Majesty's Stationery Office, or through any bookseller, price 9*d*. net.

Advanced Study at the University of Cambridge

THE University of Cambridge has recently published abstracts of ninety-one dissertations approved during the academic year 1937–38 for the Ph.D. (75), M.Sc. (11) and M.Litt (5) degrees. The abstracts are full enough (averaging about a page and a half) to give a fair idea of the substance of the dissertations. They may be roughly grouped as follows: the humanities 26, pure science 55, applied science 10. The actual distribution according to faculties is: divinity 2, moral science 2, classics 3, English 4, modern and medieval languages 6, history 3, economics and politics 3, archæology and anthropology 2, geography 1, mineralogy and petrology 4, mathematics 8, physics 6, chemistry 14, botany and zoology 15, biochemistry and physiology 8, agriculture 3, engineering 7.

North Pacific Earthquake

AN earthquake of moderate intensity occurred on November 17, 1938, and its epicentre has been determined by the United States Coast and Geodetic Survey in co-operation with Science Service and the Jesuit Seismological Association as lat. 55° N., long. 158° W. It is estimated to have normal focal depth. This preliminary determination was made with the help of readings from the following stations: Georgetown, Fordham, Weston, Chicago, Ann Arbor, Ukiah, Victoria, San Juan, St. Louis, Tucson, Philadelphia, Williamstown, Butte, Bozeman, Honolulu, Manila, Sitka, Pasadena, College, Burlington, Huancayo and Kew. The epicentre is situated under the ocean bed to the south of the Alaska Peninsula, and is not far distant from the scene of the violent earthquake of November 10, which was lat. 56° N., long. 150° W.

National Physical Laboratory: Publications

THE demand for the first issue of the "National Physical Laboratory Abstracts", which covered papers contributed by the Laboratory to the scientific and technical press during the year 1936, has proved its value to industry and has justified the recent issue of a similar pamphlet for the year 1937. The abstracts of papers in the present issue cover sixty-seven pages and on the average an abstract occupies a little less than half a page. They are arranged in order of subject: engineering, metallurgy, electricity and heat and general physics abstracts occupying 7–11 pages each and other subjects less. Both author and subject indexes are provided. The pamphlet may be purchased directly from H.M. Stationery Office, price 1*s*.

Finney-Howell Research Fellowships

FINNEY-HOWELL RESEARCH FELLOWSHIPS have been renewed for the following: Dr. P. C. Aebersold, University of California, Berkeley; Margaret E. Boyland, Royal Cancer Hospital, London; Dr. Alma Howard, McGill University, Montreal; Dr. Ll. M. Joshel, Harvard University; Dr. Ll. W. Law, Jackson Laboratory for Cancer Research, Bar Harbor, Maine; Dr. H. Lisco, Johns Hopkins Hospital, Baltimore; Dr. C. S. McEuen, McGill University; Dr. W. C. Merkel, Union Memorial Hospital, Baltimore. Fellowships for 1939 have been awarded to the following: G. M. Badger, of Melbourne, Australia, to work at the Royal Cancer Hospital, London; Dr. A. Kirschbaum, to work at Yale University; Dr. J. L. Melnick, to work at Yale University; Dr. J. F. Menke, to work at Stanford University Hospital; Dr. J. L. Wood, to work at Harvard University; Dr. P. C. Zamecnik, to work under Dr. K. Linderström-Lang at the Carlsberg Laboratory, Copenhagen. Grants in aid have been awarded to Dr. R. D. Fowler and Dr. R. W.