

V. Floyd, Manhattan; Psychology, Raymond H. Wheeler, Lawrence; Junior Academy, Hazel E. Branch, Wichita. Additional members of the executive council are: Hazel E. Branch; Robert Taft, Lawrence, and J. A. G. Shirk, Pittsburg.

The Kansas Academy at the date of the annual meeting had an active membership of over 300, of which 13 are honorary and 51 are life members.

The meeting in 1932 will be held at McPherson.

GEORGE E. JOHNSON,
Secretary

THE MEDAL MEETING OF THE FRANKLIN INSTITUTE

THE Medal Meeting of the Franklin Institute, Philadelphia, was held on the afternoon of May 20. The Franklin Medallists, Dr. Willis R. Whitney and Sir James Hopwood Jeans, were the speakers. Dr. Whitney's address was entitled "Research: Theory and Practice," and Sir James's "The Origin of the Solar System."

Other medals were presented as follows:

Longstreth Medal to Charles G. Garrard, M.E., Thorn, England.

Wetherill Medals to Thomas Tarvin Gray, president Gray Industrial Laboratories, Newark, New Jersey; Arthur J. Mason, Homewood, Illinois; Henry M. Sutton, Edwin G. Steele and Walter L. Steele, Sutton, Steele and Steele, Inc., Dallas, Texas; Edward C. Wentz, Ph.D., Bell Telephone Laboratories, Inc., New York City.

Levy Medal to J. Stuart Foster, Ph.D., assistant professor of physics, McGill University.

Henderson Medal to Arthur Newell Talbot, Sc.D., D. Eng., professor of engineering, emeritus, University of Illinois.

Clark Medal to Daniel J. Young, consulting engineer, Tacoma, Washington.

Potts Medal to Benno Strauss, Ph.D., Essen, Germany.

Cresson Medals to Clinton J. Davisson, Ph.D., and Lester H. Germer, Ph.D., Bell Telephone Laboratories, Inc., New York City; Kotaro Honda, director, Research Institute for Iron, Steel and Other Metals, Tohoku Imperial University, Sendai, Japan, represented by the Honorable K. Midzusawa, first secretary of the Japanese Embassy, Washington, D. C.; Theodore Lyman, Ph.D., director emeritus, Jefferson Physical Laboratory, Harvard University, Cambridge, Massachusetts.

SCIENTIFIC NOTES AND NEWS

RESOLUTIONS were adopted by the Michigan legislature on April 14 citing the accomplishments and contributions to medicine and chemistry of Dr. Frederick G. Novy, professor of bacteriology, University of Michigan Medical School; of Dr. Moses Gomberg, professor of chemistry, University of Michigan, and of Dr. Reuben L. Kahn, of the Michigan State Department of Health. The ceremony was attended by Governor Wilber M. Brucker, Mr. Henry Ford, the supreme court justices, other state officials and many physicians. Governor Brucker, in opening the program, stated that the plan had been originated by Dr. James T. Upjohn, senator from Kalamazoo and chairman of the senate public health committee.

ON the occasion of the presentation on May 22 of the Willard Gibbs Medal to Dr. Phoebus A. Levene, of the Rockefeller Institute for Medical Research, a banquet was held at the Steuben Club, Chicago. Dr. Hermann I. Schlesinger, University of Chicago, chairman of the Chicago section of the American Chemical Society, presided. Dr. Fred G. Koch, University of Chicago, presented the medal, after which Dr. Levene delivered an address on "The Revolt of the Biochemists." Responses were made by Dr. Lawrence V. Redman, president-elect of the society, and by Dr. Robert M. Hutchins, president of the University of Chicago. The Willard Gibbs jurors, forming the committee of award, are: B. S. Hopkins, W. Lee

Lewis, S. C. Lind, Julius Stieglitz, W. D. Bancroft, G. Borrowman, Otto Folin, F. C. Whitmore, W. L. Evans, A. A. Noyes, L. V. Redman, Harry Steenbock and H. I. Schlesinger, chairman.

SIR JAMES HOPWOOD JEANS received the honorary degree of doctor of laws from the Johns Hopkins University on May 15. He was presented by Dr. Robert W. Wood, professor of experimental physics, and the degree was conferred by President J. S. Ames. A dinner in honor of Sir James will be given at the Hotel Astor, New York, on Thursday, May 28, under the auspices of the New York Museum of Science and Industry, the American Institute, the American Museum of Natural History, the Amateur Astronomers Association, the New York Academy of Sciences and the *Scientific Monthly*. Professor Michael I. Pupin will preside and will introduce the speaker. Reservations may be obtained from the New York Museum of Science and Industry, 220 East 42nd Street, New York City.

DR. KARL FERDINAND HERZFELD, professor of physics at the Johns Hopkins University, has been designated as the recipient of the Mendel Medal, awarded annually to a Roman Catholic who has achieved distinction in the field of science. The previous winners of the Mendel Medal, which was founded three years ago, are Dr. John A. Kolmer, of the University of Pennsylvania, and Dr. Albert

F. Zahm, chief of the division of aeronautics in the Library of Congress.

THE Oberly Memorial Prize, founded in honor of Eunice Rockwood Oberly, librarian of the Bureau of Plant Industry, who died in 1921, has been awarded to Mr. Everett E. Edwards, economist of the U. S. Department of Agriculture, for his publication entitled "A Bibliography of the History of Agriculture in the United States."

THE British Iron and Steel Institute has awarded the Carnegie Gold Medal for engineering research to Dr. E. Valenta, of the Skoda Works, Pilsen. The work for which the medal was awarded is a book entitled "Heat and Acid-resisting Cast Iron with High Chromium and Carbon Content," and represents the results of two years' experiments. It was issued by the Carnegie Fund as part of the series, Carnegie Memoirs, in connection with the Iron and Steel Institute.

It is stated in *Nature* that the following have been proposed for election as honorary members of the German Chemical Society: A. Angeli (Florence), E. J. Cohen (Utrecht), W. Ipatiew (Leningrad), Irving Langmuir (Schenectady), H. Le Chatelier (Paris), Sir William Pope (Cambridge), Th. Svedberg (Upsala), and E. Warburg (Berlin).

THE council of the Royal Geographical Society has made the following awards for 1931: The Murchison Grant to Mr. L. M. Nesbitt, for his journey through the Danakil country of Abyssinia; the Back Grant to Col. R. H. Rowe, for his surveys in Nigeria and on the Gold Coast; the Cuthbert Peek Grant to Mr. H. J. L. Beadnell, for his explorations in the Libyan Desert; the Gill Memorial to Mr. Michael Spender, for his studies of the Great Barrier Reef.

THE following elections were made at a meeting of the executive committee of the American section of the Society of Chemical Industry on May 8: *Chairman*, Allen Rogers; *Treasurer*, F. C. R. Hemingway; *Secretary*, Foster D. Snell; *New Members of the Executive Committee*, William Gesell, Robert J. Moore, Arthur Singmaster, Irving Hochstadter and Benjamin T. Brooks.

PROFESSOR HAROLD L. ALLING, of the University of Rochester, was elected president of the New York State Geological Association at the meeting held at Port Henry on May 16. Professor Edward Hoffmeister, also of the University of Rochester, was elected secretary.

OFFICERS of the Physical Society, London, have been elected as follows: *President*: Sir Arthur Eddington; *Secretaries*: Dr. Ezer Griffiths and Dr. Allan Ferguson; *Foreign Secretary*: Professor O. W.

Richardson; *Treasurer*: Mr. R. S. Whipple; *Librarian*: Mr. J. H. Brinkworth; *Assistant Secretary*: Dr. J. J. Hedges; *Editor*: Captain C. W. Hume.

DR. FRANK R. LILLIE has been elected dean of the division of biological sciences of the University of Chicago, succeeding Dr. Richard E. Scammon, who is returning to the University of Minnesota to become dean of the medical sciences there.

DR. W. F. HAMILTON has been appointed full professor of physiology at the University of Louisville.

DR. PAUL A. MOODY has been promoted from assistant professor of zoology in the University of Vermont to an associate professorship, and Lyman S. Rowell has been advanced from instructor to the rank of assistant professor of zoology.

Nature reports that at the end of last year, Professor A. A. Ivanoff retired from the position of director of the Observatory in Pulkovo and took over the office of the president-adjoint of the Central Chamber of Weights and Measures, Leningrad.

DR. JAMES H. MEANS, Jackson professor of clinical medicine at the Harvard Medical School, was recently elected a member of the board of regents of the American College of Physicians.

DR. LEWELLYS F. BARKER, of Baltimore, served at the Peter Bent Brigham Hospital, Boston, as annual physician-in-chief, *pro-tempore*, for the week beginning on April 20.

THE J. T. Baker Chemical Company's Analytical Fellowship, Eastern Division, has been awarded to Nelson Allen for the academic year 1931-1932, to work at Princeton University. Mr. Allen received the B.S. degree from Centre College, Kentucky, in 1927, and the M.S. degree from the University of Chicago in 1927, and is now assistant professor at Centre College.

THE Committee on Scientific Research of the American Medical Association has granted \$500 to Drs. Harold G. Grayzel, Maxwell Bogin, Hyman Warshall and Mendel Jacobi for continuation of their studies in amyloidosis. The investigations are conducted at the Pediatric Research Laboratory of the Jewish Hospital of Brooklyn.

THE Scientific Club of Winnipeg has awarded its Research Prize of \$250, for the most meritorious investigations conducted by a post-graduate student in the University of Manitoba during the last three years, to P. A. Macdonald, Ph.D. The researches of Dr. Macdonald, which were carried out in the department of physics, consisted of studies of the senses of temperature, pain, vision, touch and hearing, with particular reference, in the last three, to the validity of the Weber-Fechner law.

PROFESSOR WILLEM DE SITTER, of the University of Leyden, will visit Mount Wilson Observatory next winter.

SIR FREDERICK WILLIAM ANDREWES, professor of bacteriology at the University of London, recently visited the University of Wisconsin to make observations of work on agglutination problems in progress at the College of Agriculture in the departments of veterinary science and bacteriology.

H. H. WHETZEL, professor of plant pathology at Cornell University, represented the university at the inauguration of the chancellor of the University of Porto Rico on May 20. The new chancellor is Carlos E. Chardon, formerly commissioner of agriculture and labor in the Governor's Cabinet. Professor Whetzel will also give the commencement address at the College of Agriculture at Mayaguez, Porto Rico, on May 25.

DR. NILS A. OLSEN, chief of the Bureau of Agricultural Economics, has been selected by Secretary Hyde to represent the U. S. Department of Agriculture at the conference of wheat-exporting countries, which opened on May 18 at Canada House, London. The Federal Farm Board sent Mr. Sam R. McKelvie as its representative. Dr. Alonzo E. Taylor, of the Food Research Institute of Stanford University, accompanied Mr. McKelvie as technical adviser.

DR. ALBERT W. HERRE, curator of the Zoological Museum of Stanford University, is making preparations for an extensive trip through the Sulu Archipelago, British North Borneo, and parts of the island of Mindanao of the Philippine group, during next year, which will be his regular sabbatical leave. During his trip Dr. Herre expects to gather new fish specimens for the museum at Stanford and to add to scientific knowledge concerning the territory he is to visit.

THERE will be a general assembly of the International Scientific Radio Union in Copenhagen from May 28 to June 8. The following delegates will represent the United States: Messrs. Austin, Briggs, Chaffee, Dellinger, Squier and Wilson. The meeting is being held at the same time and place as the meeting of the official body known as the Technical Consulting Committee on Radio Communication.

SIR JAMES JEANS will deliver the first annual public lecture of the Harvard chapter of Sigma Xi, in Sanders Theater at 8.15 p. m., on May 26, on "The Annihilation of Matter." The lecture is made possible through the courtesy of the Franklin Institute, of Philadelphia, of which Sir James is Franklin medalist for this year.

ON April 17, Dr. R. G. Aitken, director of Lick Observatory, addressed the University of Cincinnati chapter of Sigma Xi at the annual initiation meeting. His subject was "Our Changing Universe."

DR. E. D. MERRILL, director-in-chief of the New York Botanical Garden, delivered an illustrated address on May 21 before the Washington Academy of Sciences on "Plants and Animals of the Philippines and Neighboring Islands—How They Came to be Where They Are."

DR. ROBERT A. MILLIKAN, of the California Institute of Technology, delivered two general university lectures at the University of Oklahoma on May 3 and 4. His subjects were "Science and Religion" and "Opportunities in Science." At a breakfast given in his honor, he addressed members of the physics department and guests on "Recent Developments in the Study of Cosmic Rays."

DR. ARTHUR H. COMPTON, of the University of Chicago, was the chapel speaker at Pennsylvania College for Women, Pittsburgh, on May 8. His subject was "The Human Side of Science."

DR. CLARENCE COOK LITTLE, director of the Roscoe B. Jackson Memorial Laboratory, at Bar Harbor, Maine, formerly president of the Universities of Maine and Michigan, will be the chief speaker at the University of Maine alumni banquet to be held during commencement week on June 6, at which time President Harold S. Boardman will act as toastmaster.

MRS. MAYME I. LOGSDON, associate professor of mathematics at the University of Chicago, was the principal speaker at the annual meeting of the Kentucky Section of the American Mathematical Association held at the University of Kentucky on May 9.

DR. ARNO B. LUCKHARDT, professor of physiology at the University of Chicago, delivered on May 7 and 8 two lectures under the auspices of the Gorgas Medical Society at the School of Medicine of the University of Alabama. The subjects were "The Parathyroid Glands, their Pathology and Physiology" and "High Lights and Shadows in the History of the Discovery of General Anesthesia." After the close of the second lecture Dr. Luckhardt was made an honorary fellow in the Gorgas Medical Society.

ON April 30 and May 1 Dr. Joseph H. Bodine, professor of zoology in the University of Iowa, lectured at the University of Michigan under the auspices of the department of zoology, on the following subjects: "Some Fundamental Problems in the Physiology of Development," "Respiratory

Metabolism of a Developing Egg" and "Cycles or Rhythm in Development." Dr. Fernandus Payne, professor of zoology at the University of Indiana, lectured on May 7 and 8 on "Twentieth Century Advances in Biology," "A General Discussion of Protoplasmic Structure and in particular the Cytoplasmic Structures" and "The Cytoplasmic Structures in Developing Insect Eggs."

AN intersectional meeting of the American Chemical Society is to be held at Pasadena, California, from June 15 to 20, in conjunction with the national meeting of the American Association for the Advancement of Science. This is an unusually important scientific event, which a number of distinguished eastern and foreign speakers will attend. Members of the American Chemical Society are invited to present papers at the sessions held during the latter part of the week. Morning sessions during the earlier days of the meeting will be devoted to symposia.

FOR the first time since 1897 the American Medical Association will meet this year in Philadelphia, the city in which it was founded eighty-four years ago. The new municipal auditorium will be the focal point of the meeting, which will be held from June 8 to 12. With the exception of the meetings of the House of Delegates, all meetings and exhibits will be held there and in the adjoining commercial museum.

THE South Dakota Academy of Science held its sixteenth annual meeting at Eastern State Teachers' College, Madison, South Dakota, on May 8 and 9. Twenty-four papers were read and discussed. The guest speaker was Dr. William A. Riley, chief of the Department of Entomology and Economic Zoology at the University of Minnesota. At the academy dinner on May 8, Dr. Riley spoke on the subject "Warfare of Man with Insects," and on the afternoon of May 9 his subject was "Some Native Parasites." Officers elected for the year 1931-32 are: *President*, B. B. Brackett, professor of electrical engineering, University of South Dakota; *First Vice-president*, George Gilbertson, professor of entomology, South Dakota State College, Brookings; *Second Vice-president*, Ralph E. Dunbar, professor of chemistry, Dakota Wesleyan University, Mitchell; *Secretary-Treasurer*, A. L. Haines, professor of chemistry, University of South Dakota. The next annual meeting will be held at Yankton College, Yankton.

THE first office of the U. S. Public Health Service to be opened in Latin America has been established in Mexico City, at the U. S. consulate, under the direction of Dr. Howard Franklyn Smith, major U. S. M. C.

MR. EDWARD S. HARKNESS will give to Columbia

University a library building which it is planned to erect on South Field. It will face the Low Memorial Library, which will be used in the future for rare collections of books and manuscripts, for research workers and for the offices of the president, secretary and trustees of the university. The new library building will be designed to house four million books. Mr. Harkness's gifts to Columbia have exceeded \$3,600,000. His gifts last year to charitable and educational institutions amounted to \$31,000,000.

A PROGRAM to raise \$14,000,000 as a preliminary step to putting the New York University and Bellevue Hospital Medical College development on the East River on a par with the Columbia and Cornell medical centers was tentatively outlined on May 10 by Mr. Percy S. Straus, at the ninety-second anniversary dinner of the Alumni Association of the college. New York University has acquired the land necessary for the project, Mr. Straus said, and the first aim is to raise \$5,250,000 for the erection and maintenance of a College of Medicine Building, for which general plans already have been drawn. The medical center plan as a whole calls for ten buildings, some of which are already erected and need only to be enlarged and modernized, while others are in process of building. Mr. Strauss made no estimate of the total cost, but he said that the entire center could be built much more cheaply than were either the Columbia or Cornell centers because Bellevue Hospital has been built and is supported by the city.

THE council of the senate of the University of Cambridge issued a report on the proposed allocation of the "Rockefeller Benefaction." It will be recalled that the International Education Board offered to the university the sum of £700,000, provided the university could secure £479,000, and that the chancellor was able to announce at his installation last year that the university had received promises which would enable them to satisfy this condition. It is proposed to divide the total sum of £1,179,000 as follows: For the university library, £500,000; for agriculture, including the building and equipment of a new laboratory, £162,000; for biochemistry and biophysics, including a professorship of colloidal physics, £121,500; for botany, £108,500; for physiology, £87,700; for zoology, £168,400, and for physics, including the establishment of a professorship of mathematical physics, £30,000.

PRESIDENT HOOVER has written as follows to the Secretary of Agriculture: "In view of the manifest overproduction of wood products, it seems to me it would be of assistance both to the commercial situation and to the real conservation of our forests, if the Department of Agriculture would still further

temporarily restrict the leasing of the national forests for wood production. I believe it would be desirable now to more positively define the limitation of all leases by the Bureau of Forests except for pulp purposes in Alaska, to occasions when a sum of not more than \$500 is involved and to cases where some cutting privileges must be given to actually maintain sawmills that are in operation, and this only where the mills can not obtain raw materials elsewhere. The only reason I am moved to make these exceptions is that we should not deprive farmers and small industries of wood supply and should not create local unemployment by inconsiderate action."

THE fifty-first annual meeting of the American Forest Association will be held jointly with the North Carolina Forestry Association at Asheville, North Carolina, on June 3, 4 and 5. Forest conservation as a function of state government will be discussed by Colonel Henry S. Graves, dean of the Yale Forest School, and at one time Chief Forester of the United States. America's land situation, with special reference to the southern Appalachians, will be presented to the conference by Dr. L. C. Gray, in charge of land economics of the United States Department of Agriculture, while R. Y. Stuart, chief forester of the United States, will speak on the national forests in a coordinated program of land use. The subject of state forests and parks will be presented by William G. Howard, superintendent of lands and forests of the State of New York. Dr. Wallace W. Atwood, president of Clark University, will tell of the meaning and place of the national parks. Other speakers will be Dr. Frank R. Oastler, of New York; Dr. Nehemiah Boynton, of Medford, Massachusetts, and James G. McClure, president of the Farmers' Federation.

THE committee on the Costs of Medical Care, of which Secretary Ray Lyman Wilbur is chairman, met in Washington on May 15 and 16. The committee, which has already given four years to the study of the problem, is not a government agency but is underwritten by a group of philanthropic agencies which include the Rockefeller Foundation, the Julius Rosenwald Fund, the Carnegie Foundation, the Russell Sage Foundation, the Twentieth Century Fund, the Milbank Memorial Foundation, the New York Foundation, and the Josiah Macy, Jr., Foundation. Five main questions are being studied by subcommittees: (1) To what extent should an attempt now be made in the United States, with due consideration to economic and geographic variations, to supply all the people's needs for medical service? (2) What general and specialized personnel and what buildings and equipment should be provided for supplying this

medical service? (3) How may personnel and equipment be organized so as to insure the highest practicable quality of service and the maximum economies in the use of equipment, and of the time of both practitioner and patient, compatible with adequate return to the persons and agencies providing service? (4) Should there be agencies in local communities to plan for existing and future medical needs and to provide for the coordination of all medical services? (5) To what extent should payment of medical services be based upon individual purchase or upon group purchase?

THE Second International Congress of the History of Science and Technology, as already announced, will take place in London, England, from June 29 to July 3 of this year, with the Science Museum, South Kensington, as its headquarters. The executive committee is hoping to arrange an exhibition of books and periodicals dealing with the history of science and of technology, at the headquarters of the congress throughout the week. Publishing firms interested in this event should send to the assistant honorary secretary of the congress, Science Museum, South Kensington, London, S.W. 7, a list of books which they consider suitable for exhibition. No charge will be made for exhibition-space, but the executive committee will expect publishing firms to undertake the cost of transport of books both to and from the museum.

THE Association of American Medical Colleges announces that the statistical work on the study of the performance of medical students during their first year in medical school is completed. The freshman class of 1929 was recruited from 591 liberal arts colleges. Each one of these colleges may obtain a record of the students they sent into medicine by writing to the secretary of the association, Dr. Fred C. Zapffe, 25 East Washington Street, Chicago, Illinois. The association undertook this work to establish cooperation between the liberal arts and the medical colleges with the expectation that a better understanding of aims of both groups will result.

THE New York State College of Forestry, Syracuse, New York, has been notified by Sven Pettrini, the secretary-general of the International Union of Forest Research organizations, Experimentalfaltet, Sweden, of its election to membership in the International Union of Forest Research organizations. In addition to the New York State College of Forestry there are five other forestry institutions belonging to the union in the United States—the Harvard Forest; the Yale School of Forestry; School of Forestry and Conservation, University of Michigan; Forest Soil Laboratory, Cornell University, and the California

Forest School of the University of California. Germany has the largest membership embracing eight institutions, Great Britain has six and other foreign countries from one to three memberships.

THE Department of Geology at the University of Illinois, through the courtesy of Dr. John B. Reeside, Jr., of the United States Geological Survey, has received a gift from the United States National Museum of a collection of Mesozoic plant and invertebrate fossils.

WE learn from *Nature* that the Pontifical Academy of Sciences (Nuovi Lincei) is offering a prize of 10,000 lire for a critical dissertation on the law of Mendel and the chromosome theory. Essays must be unpublished and may be written in English, French, German, Spanish, Italian, or Latin. They may be signed or written under a pseudonym, and must reach the Pontifical Academy of Sciences, The Vatican City, before October 30. The award will be announced at the first meeting of the academy in December.

DISCUSSION

BIOLOGICAL ABSTRACTS

BIOLOGICAL ABSTRACTS is intended to serve as a comprehensive abstracting journal of the entire literature of biological research of the world. The first number appeared in December, 1926, and the fifth volume is now in course of publication. Its subscription price is \$15.00 per volume. It is the only publication in the world that pretends to cover the entire field of biology. Our German colleagues in order to obtain an equally comprehensive service would have to subscribe to ten abstract journals in theoretical biology at a cost of \$382.50 per year, and to some at least of the journals in applied biology which collectively cost \$305.00 a year additional. There would be, of course, an immense amount of duplication in such a collection of the admirable German abstracting journals. But the comparison will serve at least to indicate what an enormous undertaking it has been to organize a single journal which eliminates all duplication. If the performance of *Biological Abstracts* to date gives good promise of realization of its aim, there would be few to deny that it is a contribution to the service of biological research worthy of a high institutional rank.

It is not necessary to argue the case of the need of a reference system that will be something more than merely bibliographic before biologists of any one of the numerous persuasions. Whether those who grew up under the relatively simple conditions existing before the war are more convinced than those to whom the present intense worldwide activity and cooperation in scientific research seems of the order of nature is perhaps a matter of indifference, for neither the veterans nor the recruits are able without the aid of a comprehensive abstracting journal to view the entire biological front with its thousands of media of publication, whatever may be possible within a small field of investigation. And it is becoming increasingly important in genetics, in physiology, biochemistry and biophysics, in pathology and

bacteriology, in ecology, in cytology and other disciplines within biology, to know not only what is being done by the zoologists, but also by the botanists, and not only in academic institutions and museums, but also in the medical schools, the institutes of agriculture, in the fisheries and oceanographic institutes, to name only some of the organizations in applied biology. Each piece of work has some taxonomic implication, so that the bad tradition that has separated systematists and workers in fields of more general biology should be broken down. If *Biological Abstracts* is really comprehensive, it is not only a great convenience, but it is a great unifying force in the life-sciences, and hence an agency of scientific progress.

It has been said that it is an impossible undertaking, but at present about 5,500 periodical publications out of a total of about 6,000 are being abstracted for their biological content. It will not require much extension to make the survey practically complete. Abstracts are furnished in part by authors, and to a great extent by some 3,000 collaborators scattered in all countries where biological research is in progress. Yet the resulting volumes, owing to special format and thin paper, are not unwieldy. The progress that has been made in these five years in completeness of references is guarantee of a fully satisfactory representation of the literature. The main criticism that can be made up to the present is the slowness in appearance of the index numbers, without which use of the volumes is rather painfully slow. But the recent appearance of the index number to the first volume is evidence that the difficulties connected with this essential part of the service have been overcome. It is to be hoped that the index numbers of the succeeding volumes will now be expedited. Already *Biological Abstracts* has a subscription list of over 3,000, which is greater than that of any other biological publication in America. It has been demonstrated not only that