

platinum, experiments to convert cellulose into sugar, investigations on chlorophyll, and the isolation of a series of pigments from flowers. Since 1918 he has been conducting investigations on enzymes, using the method of selective absorption based on the work of A. Danilewski,

and in studies on efficient adsorbing substances, such as the different hydrates of aluminum. Dr. Willstätter, as has already been announced in *SCIENCE*, has been selected by the Chicago Section of the American Chemical Society to receive the Willard Gibbs Medal September 13.

SCIENTIFIC NOTES AND NEWS

THE Penrose Medal of the Society of Economic Geologists was presented to Dr. Louis De Launay, French mining engineer, at the annual dinner at the Princeton Inn on July 7. Dr. B. S. Butler, of the University of Arizona, president of the society, was in the chair, and Charles Le Ganissel received the award on behalf of Dr. De Launay, who was unable to be present.

AT a recent meeting of the Georgia Section of the American Chemical Society the Herty Medal for 1933 was presented to Dr. Fred Allison, professor of physics at the Alabama Polytechnic Institute, for his work on magneto-optics.

THE Rainer Medal of the Society for Zoology and Botany at Vienna has been conferred on Dr. Paul Buchner, professor of zoology at Breslau.

DR. F. G. DONNAN, professor of general chemistry in the University of London, has been elected an honorary member of the German Bunsen Society.

AMONG those on whom the degree of doctor of laws was conferred by the University of Glasgow at the end of June were Professor Albert Einstein, Léon William Collet, professor of geology in the University of Geneva, and Dr. William Blair Bell, professor of obstetrics and gynecology at the University of Liverpool.

INDIANA UNIVERSITY has conferred the degree of doctor of laws on Dr. Oscar Riddle, of the Carnegie Institution, and on Professor Chancey Juday, of the University of Wisconsin.

THE degree of doctor of science was conferred on Dr. Linus Carl Pauling, assistant professor of theoretical chemistry at the California Institute of Technology, at the sixty-fourth commencement exercises of the Oregon State Agricultural College.

AT the commencement exercises of Ohio Northern University the honorary degree of doctor of science was conferred on Dr. J. M. Rogoff, associate professor of experimental medicine at Western Reserve University.

DR. WILMER KRUSEN, president of the Philadelphia College of Pharmacy and Science, received the honorary degree of doctor of science at the commencement exercises of Franklin and Marshall College.

DR. EDWIN GRANT CONKLIN, who retired last month as Henry Fairfield Osborn professor of biology at Princeton University, has been requested by the board of trustees to serve as lecturer in biology next year.

A UNITED PRESS dispatch states that Professor Albert Einstein will cooperate in the administration and direction of the physics institute of the Hebrew University at Jerusalem. Dr. Einstein is reported to have sent a cable to the effect that he would accept a chair at the university if certain reforms he suggested were carried out.

THE Galton chair of eugenics in the University of London has been filled by the appointment of Dr. R. A. Fisher, who since 1919 has been engaged in scientific research in the statistical department of the Rothamsted Experimental Station. He succeeds Dr. Karl Pearson, who has been Galton professor and director of the Francis Galton Laboratory for National Eugenics since its establishment.

THE Governing Body of the Imperial College of Science and Technology has elected to Imperial College fellowships the following old students of the college: Emeritus Professor P. F. Frankland, Emeritus Professor Henry Louis, Sir Basil Mott and Dr. A. E. H. Tutton.

AT the University of Leeds, E. A. Spaul, of Birkbeck College, University of London, has been appointed professor of zoology and Dr. E. R. Flint has been made director of surgical research.

DR. E. L. MILOSLAVICH, formerly associate professor of pathological anatomy at the University of Vienna and later professor of pathology and director of the department of pathology and bacteriology at Marquette University, Milwaukee, has been appointed professor of legal medicine and director of the Medico-legal Institute at the Royal University, Zagreb, Yugoslavia.

ARNO B. CAMMERER, associate director of the National Park Service, has been appointed director to succeed Mr. Horace M. Albright, who resigned voluntarily to become vice-president and general manager of the United States Potash Company, operating mines and refineries at Carlsbad, New Mexico. Arthur E. Demaray, senior assistant director of the National Park Service, has been appointed associate director.

ELISHA A. VOSE, of Concord, New Hampshire, who has reached the age of seventy years, will retire from the U. S. Weather Bureau on August 1, under the thirty-year service economy rule of the government. Llewelyn Raplee, in charge of the Hartford station, will also be retired.

BRIGADIER ERNEST ELLIOT BUCKLAND MACKINTOSH has been appointed director and secretary of the Science Museum, South Kensington, in succession to Colonel Sir Henry Lyons, who is retiring in October next, on attaining the age of sixty-nine years. He was appointed to his present position in 1920, having previously served in the museum as secretary to the Advisory Council and as a keeper, and his term of office has twice been extended past the normal retiring period. The museum has been greatly extended during his period of office, and he has introduced such novelties as the Children's Gallery and the wireless concerts.

DR. E. W. MACBRIDE, professor of zoology in the Imperial College of Science and Technology, London, has been appointed chairman of the Advisory Committee on Fishery Research of the Development Commissioners, in succession to the late Professor G. C. Bourne.

THE Board of Scientific Directors of The Rockefeller Institute for Medical Research announces the promotion of Dr. Cornelius P. Rhoads from the rank of associate to that of associate member; the appointment of Dr. Theodore J. Abernethy as resident physician at the Hospital of the Rockefeller Institute, and the acceptance already recorded in *SCIENCE* by Dr. Lawrence R. Blinks, associate in the division of general physiology, of an appointment as associate professor of plant physiology in the department of botany at Stanford University.

DR. VAN B. HART, extension professor of farm management at the New York State College of Agriculture, Ithaca, has been appointed acting director of agricultural extension during the six months' absence of L. R. Simons.

DR. THOMAS E. PURCELL, of Kansas City, has been appointed dean of the School of Dentistry of St. Louis University.

DR. WILBUR F. POTTER, assistant professor of physiology and pharmacology in the Medical Department of the University of Georgia, has been appointed to a similar position at Georgetown University School of Medicine, Washington.

LEAVE of absence for the next academic year has been given by Princeton University to Professor Charles H. Smyth, Jr., of the department of geology. Dr. William T. Thom, Jr., associate professor of geol-

ogy, has been granted leave of absence for the first term.

PROFESSOR MERRITT F. MILLER, of the Missouri College of Agriculture, has sailed from New York to spend a year in studying soil formations and soil management in Europe.

PROFESSOR H. A. SIMMONS, of the department of mathematics of Northwestern University, who is on sabbatical leave this semester, spent two months in study at Princeton and will be abroad until fall in France, Germany and Italy.

DR. AUGUSTE PICCARD, of the University of Brussels, sailed for France on July 6. Dr. Piccard came to the United States in connection with the stratosphere flight from Chicago, which may be made on July 15 by Dr. Jean Piccard and Commander T. G. W. Settle.

THE Peking correspondent of the London *Times* reports that Dr. Sven Hedin has received news from Dr. Nils Ambolt, the Swedish astronomer who had been missing in Chinese Turkestan for more than six months. Dr. Ambolt is safe at Khotan and is returning to Peking *via* India.

THE twenty-eighth quarterly meeting of the Entomological Club of Southern California was held in June at the University of California at Los Angeles, with an attendance of ninety-one members. The following newly elected officers were installed: *President*, A. W. Swain; *Vice-president*, S. E. Flanders; *Secretary and Treasurer*, H. C. Lewis. The retiring officers were: *President*, C. E. Bliss; *Vice-president*, D. W. Tubbs; *Secretary and Treasurer*, A. M. Boyce. Following the program, consisting of five papers with discussions, the group inspected the laboratories and other facilities of the recently established division of the branch of the College of Agriculture in Southern California at the University of California at Los Angeles.

THE International Society of Orthopedic Surgery, whose president is Professor Nové-Josserand, of Lyons, will hold its second congress in London from July 19 to 22.

THE twenty-seventh South African Medical Congress will be held at Capetown, from September 25 to 30.

WE learn from *The British Medical Journal* that a congress of hydrology will be held at Toulouse in October under the presidency of Professors Sabatier and Abelous. The subjects to be discussed are: the thermo-mineral waters of the French Pyrenees and their geological grouping; the rarer gases of mineral waters; climatic cures and pulmonary tuberculosis; indications for providing treatment for children in

spas, mountain resorts and at the seaside; primary non-suppurative infection of the nervous system in relation to hydro-mineral therapy; utilization of spas by the French army, and the legal control and survey of mineral waters. Sir James Purves-Stewart will contribute a report on infections of the nervous system. After the congress four days will be devoted to motor car tours in Languedoc, Pyrenees and the Côte d'Argent. Further information may be obtained from Dr. François Françon, Aix-les-Bains.

THE Fourteenth Exposition of Chemical Industries will be held in New York in the Grand Central Palace, during the week of December 4. The number of exhibitors, and the progress of the exposition generally, at this date, is equal to the progress in any of the more prosperous years. It is somewhat better, at a corresponding date, with respect to the last exposition, which was held in 1931. Three floors of Grand Central Palace are reserved for the event and, at this date, contracts have been signed which take care of two floors and part of the third. In the most prosperous days, the number of exhibitors at this time has been no greater in proportion.

DR. LINSLEY R. WILLIAMS, director of the New York Academy of Medicine, issued the following statement on July 8: "Many physicians engaged in teaching and research in Germany have been deprived of their civil rights so that it has been impossible for them to continue their activities in either of these fields. They have also been deprived of means of support

for themselves and their families. Many non-Aryan physicians in Germany have made notable contributions to medicine in teaching and research and German medical science in general has always had many ardent followers in the United States. It is impossible to believe that the present policies, which are doing so much harm to German science and culture, will have the lasting approval of our many German colleagues, with whom we wish to maintain the most cordial and friendly relations." The statement has been signed by a large number of physicians, including Dana Harlow Brooks, Lewis A. Conner, William Darrach, A. R. Dochez, Eugene F. DuBois, John A. Hartwell, G. Canby Robinson, Peyton Rous, James J. Walsh and Shirley W. Wynne. The explanation is made that although many of the signers are affiliated with various medical organizations, their signing of the statement should not be taken as officially representative, but simply as their personal view.

It was stated in the issue of *SCIENCE* for May 12 that the works of Dr. Franz Boas, professor of anthropology at Columbia University, had been removed from the library of the University of Kiel, from which university Professor Boas received the doctorate degree in 1881 and was last year given an honorary degree. We are informed from the office of the rector of the university that the books by Professor Boas were not removed from the library but were withheld from circulation for a few days as a protest against an open letter to President von Hindenburg which was signed by Professor Boas.

DISCUSSION

INTERNAL CHROMOSOMAL VARIATION AND ITS PROBABLE CAUSE

It has been known for some time that in the mosquito there exists a very interesting chromosomal condition. In the cells of all the tissues the nuclei and the cells themselves are of different dimensions, and corresponding to this situation there are parallel differences in chromosomal equipment. The present writer has found this situation in other cases among insects, notably in the blackfly. Not only does this remarkable condition exist in insects, but it has been found quite generally in the case of plants, for example, in the genera *Nicotiana* and *Crepis*. This state of affairs also presents itself in so-called graft hybrids and in chimeras.

It has occurred to the writer in connection with a wide series of investigations covering both plants and animals that an explanation of this remarkable situation might be supplied by a study of the meiotic or reduction division. The blackfly and the mosquito

were chosen for this purpose and it has been observed that in the active larvae of both these types there are very interesting conditions present in the primary spermatocytes. At metaphase certain smaller chromosomes of the type which it is customary at the present time to designate univalent (a singularly unfortunate appellation!) lag notably on both sides of the equatorial plate. As is commonly the case in animals and lower plants, these chromosomes ultimately reach their proper place in the metaphase plate. In anaphase the abnormal distribution of the chromosomes is still more marked, particularly in the mosquito, where they cover the spindle from end to end in an extremely aberrant fashion. The only reasonable explanation of this situation in accordance with our general knowledge at the present time is the presence of interspecific hybridism. This suggestion is in line with what we know of the cytology of chimeras and internal heteroploidy. In the orange and apple, for example, which are notoriously prone to the forma-