

important fields of research, and the great investigator does not always accept the views of the masses as evidence of truth.

At the funeral of Poincaré the French Minister of Public Instruction remarked that all his work, all his life, was animated by a prepossession, which he expressed in this thought: "The search for truth must be the goal of our activity; it is the only end that would be worthy of it."

An open confession of some of the hidden ignorance of the mathematical scholars has furnished the starting point of many of the most important advances in recent years. In this way Weierstrass started some of the fundamental work relating to continuous functions, and in this way Poincaré clarified a number of questions relating to foundations, especially to the foundation of geometry. The mathematical refinements resulting from such new viewpoints have already taken root in the minds of leaders in other sciences. For instance, Boltzmann said: "The fact that the actual behavior of gases is represented by a curve which can not be differentiated and hence can not be represented graphically leads to great difficulties."¹

In closing this brief appreciation we may perhaps fittingly quote the words of Sir G. H. Darwin, President of the Fifth International Congress, which met recently at Cambridge, England. At the opening meeting of this congress, held August 22, 1912, Sir Darwin said: "Up to a few weeks ago there was one man who alone of all mathematicians might have occupied the place which I hold, without misgivings as to his fitness. I mean Henri Poincaré."

G. A. MILLER

UNIVERSITY OF ILLINOIS

SCIENTIFIC NOTES AND NEWS

THE New York State Education building will be dedicated with elaborate exercises on October 15, 16 and 17. The dedicatory address will be made by Dr. Andrew S. Draper,

¹ Klein und Hoefler, "Grenzfragen der Mathematik," 1906, p. 8.

Bureau of Education, and in the course of the exercises a number of addresses will be made, including one on museums by Dr. Henry Fairfield Osborn, president of the American Museum of Natural History, and one on Educational Extension by Dr. C. R. Van Hise, president of the University of Wisconsin.

PROFESSOR STIMPSON J. BROWN, head of the department of mathematics and mechanics at the Naval Academy at Annapolis, and Professor H. M. Paul, the second ranking officer of the department, have been relieved from duty at the academy and Professor Harry E. Smith has been named as head of the department.

PROFESSOR THEODORE FUCHS, director of the geological department of the Royal Natural History Museum at Vienna, has celebrated his seventieth birthday.

R. O. E. DAVIS, Ph.D., lately physicist in the Bureau of Soils, U. S. Department of Agriculture, has been appointed head of the Division of Soils Water Investigation, in the same bureau, to fill the vacancy in that office occasioned by the death of Dr. W J McGee.

DR. F. D. HEALD, professor of botany in the University of Texas, has resigned to become pathologist to the Pennsylvania Chestnut Tree Blight Commission, Philadelphia, Pa.

DR. S. R. KLEIN, formerly professor of histology and embryology at the Fordham University School of Medicine, New York, has been placed in charge of the new research laboratories of the Hahnemann Medical College, Chicago.

MR. OWEN M. JONES, who has been carrying on investigations during the last year for the Michigan-Lake Superior Power Co. at Sault Ste. Marie, Michigan, has resigned his position at the Tulane University of Louisiana, where he was in charge of the department of civil engineering, to accept a permanent position with the Power Co.

PROFESSOR HUGO DE VRIES, on his present trip to Alabama to visit the original locality for *Oenothera grandiflora* (see SCIENCE for

August 30), stopped first for a day at Tuscaloosa, where he was the guest of Dr. Eugene A. Smith, state geologist, one of the pioneer students of the relations between the geology and vegetation in the southeastern states. On the evening of September 21 he was given an informal reception by the faculty of the University of Alabama, in Smith Hall, and described briefly some of his recent observations on mutation in *Oenothera*. While in Alabama he was accompanied by Mr. H. H. Bartlett, of the U. S. Department of Agriculture, who is also a student of *Oenothera* mutants. After visiting Mississippi, Louisiana and Texas, he will go late in October to Florida to study the phytogeography of that unique peninsula under the guidance of Dr. John K. Small, Professor P. H. Rolfs, and perhaps other botanists.

PROFESSOR R. B. DIXON, of the department of anthropology, of Harvard University, will spend his sabbatical year in the Orient. During the autumn he will be in western Thibet, but during the winter he expects to pursue his ethnological researches in the Malay states.

PROFESSOR A. S. HITCHCOCK, systematic agrostologist of the United States Department of Agriculture, has gone to the West Indies for the purpose of studying and collecting grasses. He is accompanied by his son, Mr. Albert E. Hitchcock, as assistant. They will go first to Jamaica and later to various points in the Windward Islands, probably visiting last the island of Trinidad.

DR. A. HRDLIČKA, of the U. S. National Museum, has returned from an expedition to Liberia and Mongolia.

PROFESSOR C. W. MOULTON, of Vassar College, has been granted a leave of absence from the college for the year 1912-13. He will pursue special investigations at the University of Berlin.

LEAVE of absence for the coming year has been granted by Oberlin College to Professor F. E. Leonard, professor of physiology and director of the men's gymnasium. Dr. Leonard will divide his time between work under

Professor Kelly at the Johns Hopkins University and study and travel in Europe.

MR. J. B. SPEER, registrar in the University of Montana, has resigned and has gone to Stanford University as private secretary to President Jordan.

PROFESSOR E. C. SCHMIDT, in charge of the department of railway engineering of the University of Illinois, has been commissioned by the Japanese government to design a railway dynamometer car for the imperial government railways. The car will be constructed in this country under the supervision of Professor Schmidt, and is expected to be delivered next spring to the representative of the Japanese government.

PROFESSOR G. H. T. NUTTALL, of Cambridge University, will give a Harvey Lecture in New York City on October 12 on "The Relapsing Fevers."

"SOCIAL Hygiene" was the subject of a recent lecture at the University of California by Dr. Richard C. Cabot, of the Harvard Medical School. He urged the establishment of an efficient national public health department at Washington, physical examination and adequate medical care by school physicians and nurses for every child in the public schools, more attention to industrial hygiene and occupational diseases, and development by which the public hospitals shall more and more care for the general public health.

THE Earl Lectures, supported by an endowment of \$50,000 given to the Pacific Theological Seminary by Mr. Edwin T. Earl, of Los Angeles, are being given in Berkeley by Dr. Arthur C. McGiffert, professor of church history in Union Theological Seminary, of New York. His subject is "The Rise of Modern Religious Ideas." As a state university, the University of California has no theological department. Several denominations, however, the congregationalists, baptists, christians and unitarians, have established independent theological seminaries in Berkeley which devote their strength and resources wholly to doctrinal and strictly theological training, while their students attend

the university for instruction in Greek, Latin, Hebrew, modern languages, history, philosophy, economics, sociological subjects, etc.

PROFESSOR G. FREDERICK WRIGHT, president of the Ohio State Archeological and Historical Society, delivered the main address at the laying of the cornerstone of the museum in Columbus, for the erection of which \$100,000 was appropriated by the Ohio legislature. The building, which stands at the entrance of the state university campus, will be two hundred feet long, fifty feet wide and three stories high, and is planned to allow large additions in the future. The chosen purpose of the museum is the housing of the society's unusual collection of relics of the Mound Builders, which is recognized as the finest gathering of such material in existence. Professor Wright has also secured an appropriation of \$50,000 from the legislature for the erection in Fremont, Ohio, of a memorial to President Hayes, which will contain the Hayes Library of Americana, which is the famous Clark Library of Cincinnati with the additions made by Mr. Hayes.

A PUBLIC meeting will be held at the Mansion House, London, on October 23, in support of the memorial to Lord Lister.

DR. LEONARD W. WILLIAMS, instructor in comparative anatomy at the Harvard Medical School, was crushed to death by an elevator in one of the school buildings on September 26. Dr. Williams was born at Muskogee, Okla., in 1875, and received his bachelor's degree from Hanover College, his master's degree from Princeton University and his doctor's degree from Brown University, where he was assistant professor of biology; he was the author of important researches on embryology and comparative anatomy.

THE deaths are announced of Dr. Stanley Dunkerley, formerly professor of engineering in the University of Manchester and a member of the Royal Institution of Civil Engineers; of Dr. Ernst Becker, emeritus professor of astronomy at Strasburg, and of Dr. Aurel Török, professor of anthropology at Budapesth.

CIVIL service examinations are announced for two positions in the department of the interior, one for specialist in rural education at an annual salary of \$3,000, and one as collector and compiler of statistics at a salary of \$2,400.

THE Transcontinental Excursion of International Geographers (Professor W. M. Davis, of Harvard University, director), celebrating the sixtieth anniversary of the American Geographical Society, of New York, will be the guests of the University of Virginia on October 12. A symposium will be held at the university in the afternoon on the status of geographical teaching in European universities, in order to show the serious attention that is there given to the fundamental subject of geography as a study of mature grade, presented by expert professors. Addresses will be made by the following speakers: Dr. Joseph Partsch, professor of geography, University of Leipzig, late president of the Geographical Society of Leipzig; Dr. Eugen Oberhummer, professor of geography at the University of Vienna, president of the Geographical Society of Vienna; Lucien Galois, professor of geography, University of Paris, associate editor of the *Annales de Géographie*; George G. Chisholm, lecturer on geography, University of Edinburgh, secretary to the Royal Scottish Geographical Society; Emile Chaix, professor of geography, University of Geneva and School of Commerce. Addresses by American geographers will be made by Professors W. M. Davis, of Harvard University, A. P. Brigham, of Colgate University, and Mark Jefferson, of the State Normal College, Ypsilanti, Michigan.

THE Riberi prize of the University of Turin, amounting to \$4,000, will be awarded after the close of the year 1916 for the work which is adjudged to have most advanced the science of medicine.

It is announced that the following sums have been bequeathed by Madame Jonglart for the furtherance of science in France: 50,000 francs to the Collège de France; 95,-

000 francs to the faculty of science of the Sorbonne, of which amount 55,000 francs is to be devoted to the zoological laboratory; 95,000 francs to the museum; 50,000 francs to the faculty of medicine; 70,000 francs to the School of Advanced Studies; 150,000 francs to be divided between the Geographical and Anthropological Societies and the Association for the Advancement of Science, and 139,000 francs to various scientific and charitable institutions.

THE Natural History Museum at South Kensington has, as we learn from the *London Times*, received the most valuable gift of the kind which has ever been bestowed upon it. It is the gift of a very extensive collection of exotic and palearctic butterflies and moths which belonged to Mr. H. J. Adams, of Enfield, who died in March last. It is understood that Mr. Adams spent more than £40,000 in acquiring this collection. By his will he had left his collection of butterflies and moths upon trust, with the consent of the residuary legatees, to offer them to the South Kensington Museum for the use of the nation, and his British collection of lepidoptera to the Enfield Entomological Society. The collection of butterflies and moths, which has recently been removed to South Kensington, comprises about 150,000 specimens, contained in 68 cabinets. All the specimens are in excellent condition, and are labelled with the details of the respective localities in which they were obtained. There are at least 200 type specimens of new species described by Mr. Adams.

A PRESS cutting quoted in *Nature* states that Mr. Fisher, prime minister, Australia, referred to the forthcoming visit of the British Association in 1914 in his budget speech on August 1 as follows: "We have been advised that about half as many more members of that association are likely to visit the commonwealth than was anticipated when our invitation was accepted. This will entail an increase in the amount of money which I propose to give towards their expenses; and, speaking for this parliament and country, I

say that no greater compliment could be paid to Australia than the fact that our visitors are to be increased in number. It is usual a year or eighteen months before the visit is made to send a representative man of the same class as themselves to get into communication with them. We propose to incur that expenditure pending the expenditure of a larger amount to cover their expenses."

PREVENTIVE medicine, hygiene and public health will be the subject of a series of lectures, open to the general public, to be given at 2 o'clock every Friday at the University of California Hospital, the medical department of the university, on Parnassus Avenue, San Francisco. Federal, state and municipal control of disease, vital statistics, pure food, pure milk and pure water, sewage disposal, sanitary engineering, disinfection, social economics and social service in relation to public health will be some of the subjects dealt with.

THE council of the Institute of Chemistry, London, are making an endeavor, as we learn from the *London Times*, to raise a fund for new buildings for the institute. Owing to alterations which the London County Council propose to carry out by the widening of Southampton-row, at the rear of the present premises of the institute, 30 Bloomsbury-square—it will not be possible to effect a renewal of the present lease. The council of the institute wish, therefore, to take this opportunity to secure more suitable and permanent headquarters. It is reckoned that with economy adequate provision for the work of the institute can be obtained for about £15,000. The appeal has now been issued nearly three years, and the amount promised to date is about £10,000. As the council will proceed to select a site and prepare plans at the close of this year, they are very desirous of being assured that the full sum of £15,000 will be at their disposal, and it is hoped, therefore, to raise the £5,000 which is still required before the end of October.

THE U. S. National Museum of the Smithsonian Institution has recently issued a paper as a contribution to our knowledge of bees

and Ichneumon flies, by H. L. Vierick, of the Bureau of Entomology, U. S. Department of Agriculture. In this paper Mr. Vierick describes twenty-one new genera and fifty-seven new species of Ichneumon flies, one new genus of which is named after Dr. Marcus Benjamin, editor of the publications of the U. S. National Museum.

UNIVERSITY AND EDUCATIONAL NEWS

MR. T. JEFFERSON COOLIDGE has given \$50,000 for the construction of one of the buildings for the Chemical Laboratory of Harvard University.

It is announced that the Graduate School buildings of Princeton University, now in the course of erection, will in all probability be formally opened in June, 1913, instead of the following September, as originally planned.

THE original purpose of American colleges was mainly to train men for the ministry, but at present Harvard gives to this profession barely 2 per cent. of its graduates; Yale now contributes 3 per cent. This and other changes in the professions favored by college graduates are described in a bulletin by Bailey B. Burritt on "Professional Distribution of University and College Graduates," just issued by the United States Bureau of Education. The decline in the numbers going into the ministry has been accompanied by a rise in the professions of teaching, law and business. All three have been more or less consistent gainers at the expense of the ministry. At Harvard the ministry yielded the leadership to law after the revolutionary war, and law remained the dominant profession of Harvard graduates until 1880, when business took the lead. At Yale the ministry competed successfully with law until after the middle of the nineteenth century, when law took the ascendancy and kept it until 1895, being then displaced by business. At the University of Pennsylvania one fourth of the graduates used to go into the ministry; now about one fiftieth do so. Oberlin College, founded with strong denominational tendencies, shows the same story of the decline in numbers of men going

into the ministry. At the University of Michigan, out of over 15,000 graduates, only 188 have become ministers. Aside from their contributions to the clergy, most of the universities and colleges have had favorite professions. At Columbia, Dartmouth and Michigan, for instance, it is law; at Pennsylvania it is medicine; at Oberlin, Wisconsin, and many others, particularly the co-educational institutions, it is teaching. A final summary of 37 representative colleges shows that teaching is now the dominant profession of college graduates, with 25 per cent.; business takes 20 per cent.; law, which took one third of all the graduates at the beginning of the nineteenth century, now claims but 15 per cent.; medicine takes between 6 and 7 per cent. and seems to be slightly on the decline; engineering is slowly going up, but still takes only 3 or 4 per cent.; while the ministry takes 5 or 6 per cent.

WITH the appointment of Frank B. Moody, assistant state forester of the Wisconsin forest service, the University of Wisconsin has taken the first steps toward the formation of a course in forestry. Mr. Moody is a graduate of Bates College, Maine, and of the forestry school of the University of Michigan. Mr. Moody's main work will be to organize a school for forest rangers and to give the courses on woodlot management in the university. The forest rangers' course will consist of two sessions of six months each extending over a period of two years. One half of each session will be spent at the university during the fall and winter, the other half in the field during the spring and summer, where instruction will be given by direct practical work on the state forest lands. It is expected the new course will be ready for students by January first, 1913.

AMONG promotions in the faculty of Oberlin College is that of Dr. George David Hubbard, to be professor of geology on permanent appointment and head of the department. Among the new appointments the most important is that of Dr. Alan W. C. Menzies as permanent head of the department of chem-