It is very fitting at this meeting, the first of the Research Club since the death of one of its specially honored members, Karl Eugen Guthe, that some words of appreciation should be spoken and I know well that in what I shall say now I shall have the hearty consent and sympathy of the whole club.

Sixteen years—1893 to 1903[1] and 1909 to 1915—a teacher in the university, nine years an active member of this club, and three years the dean of the graduate school, Dr. Guthe won for himself an unusually general and unusually cordial respect. His fine character, his high ideals, his constant loyalty to careful scholarship and scientific research made him a man whom it has been a benefit to us all to have known and to whom the university in its work as an educational institution and in its larger life, where the man as well as the teacher and officer makes himself felt, is indebted greatly.

It is pleasant to remember Dr. Guthe's last paper before the Research Club, read at the Roger Bacon memorial meeting in April, 1914; a paper on Bacon as a scientist that was a model of conscientious study and critical statement.

It is pleasant, too, to remember how seriously and faithfully he applied himself to the newly organized graduate school, seeking to put it and all its opportunities to the real service of productive study. What he accomplished, moreover, has given the school a most valuable foundation.

And, again, it is pleasant to remember in these days of national and racial differences, when so many are carried away by their partisan feeling, that although often at variance with the opinions and sympathies of many of his friends he neither gave offense to any nor took offense; and this, quite without sacrifice of his independence. He did indeed show, as too few have shown, how science and its methods, its ideals and its purposes, may give men integrity and poise; winning for himself and his views the respect that with his sense of fairness he was so ready to accord to others and to their views.

A true scholar, a faithful and efficient officer, and a most genial friend, Dr. Guthe was one whom we are glad to have had among us and whose memory we may well cherish.

## SCIENTIFIC NOTES AND NEWS

A CABLEGRAM from Copenhagen to the daily papers, the correctness of which is open to question, states that the Swedish government will award the Nobel prize in physics to Thomas A. Edison and Nikola Tesla; and in chemistry to Professor Theodor Svedberg.

PROFESSOR ADOLF VON BAEYER celebrated his eightieth birthday on October 31. With the beginning of the present semester he retired from the chair of chemistry at Munich in which he succeeded von Liebig in 1875.

PROFESSOR EDUARD BRÜCKNER has been elected president and Professor Eugen Oberhummer vice-president of the Vienna Geographical Society.

DR. DAVID W. CHEEVER, of Boston; Dr. Wilfred T. Grenfell, of Labrador; Dr. Stephen Smith, of New York; and Dr. Lewis McL. Tiffany, of Baltimore, were elected honorary fellows of the American College of Surgeons at its recent Boston meeting.

ON the occasion of the dedication of the Elizabeth Steel Magee Hospital the University of Pittsburgh conferred its doctorate of laws on Dr. John W. Williams, dean of the Johns Hopkins Medical School; Dr. Barton Cooke Hirst, professor of obstetrics, University of Pennsylvania; and on Dr. Walter William Chipman, professor of obstetrics and gynecology, McGill University.

PROFESSOR HENRY S. JACOBY, of the college of civil engineering, Cornell University, has been elected president of the Society for the Promotion of Engineering Education for the year 1915–16.

PROFESSOR A. H. WHITE has considered it necessary, owing to reasons of health, to resign the chair of pathology in the school of the Royal College of Surgeons in Ireland, which he has held for the last seventeen years.

DR. JOHN CASPER BRANNER, whose resignation of the presidency of Stanford University has been accepted to take effect December 31, will retire on a Carnegie pension and will continue to live on the Stanford campus. He will maintain an office in the university, in accordance with the trustees' invitation, and immediately after his retirement will be occupied for some time in a revision of two of his books, each of which is about to be published in a third edition—his Portuguese

[1] 1903–1905 Dean Guthe was in the Bureau of Standards, Washington, D. C., and 1905–1909 he was professor of physics in the University of Iowa.

grammar and his elementary text-book of geology, written in Portuguese for students of Brazil. In accepting Dr. Branner's resignation and appointing Dr. Ray Lyman Wilbur to succeed him, the Stanford board of trustees expressed "its obligation to Dr. Branner for his long and faithful service to the university and for his self-sacrifice in extending his term of service as president until December 31, 1915, at the urgent request of the board."

As an outcome of the recent Manchester meeting, the British Association has, as we learn from *Nature,* invited the following gentlemen to serve on a committee to consider and report upon the question of fuel economy (utilization of coal and smoke prevention), from a national point of view: Professor W. A. Bone, of the Imperial College of Science and Technology, London (chairman); Mr. E. D. Simon, chairman of the Manchester Air Pollution Committee (secretary); Professors P. P. Bedson (Armstrong College, Newcastle-on-Tyne), J. W. Cobb and J. B. Cohen (Leeds University), H. B. Dixon (Manchester University), Thomas Gray (Royal Technical College, Glasgow), H. S. Hele-Shaw (London), L. T. O'Shea and W. P. Wynne (Sheffield University), and Richard Threlfall (Birmingham), together with Dr. G. T. Beilby (Glasgow), Mr. Ernest Bury and Dr. J. E. Stead (Middlesbrough and the Cleveland district). The committee, which is empowered to add if necessary to its members, has been selected so as to include representative chemists, engineers and technologists from all the principal industrial areas.

AT the third triennial conference of the National Association for the Study of Pellagra held in Columbia, S. C., October 21 and 22, the following officers were elected: president, Capt. Joseph F. Siler, M.C., U. S. Army; vice-presidents, P. A. Surg. R. M. Grimm, U. S. P. H. S., and Henry W. Rice, Columbia, S. C.; secretary, Dr. James W. Babcock, Columbia, S. C., and treasurer, Dr. James A. Hayne, Columbia, S. C.

THE Elisha Mitchell Society, University of North Carolina, elected in October the following officers for the ensuing year: James B. Bullitt, president; T. F. Hickerson, vice-president; and J. E. Smith, secretary and treasurer.

DR. DAVID CHEEVER, of Boston, has been appointed chief surgeon in charge of the third Harvard surgical unit, which leaves this month for France. The unit consists of thirty-six nurses and eight surgeons in addition to Dr. Cheever.

ANOTHER party of American physicians returned to the United States on October 20 aboard the steamer *Cretic.* The members of this party who had been serving in Serbia were Dr. Louise Taylor-Jones, who established a hospital for babies at Nish; Dr. Thomas W. Jackson, of Washington, D. C., who succeeded Dr. Richard P. Strong as head of the American Sanitary Commission in Serbia; Dr. Joseph Thompson, of Cleveland, Ohio; and Dr. George W. Mellon, of Beaver, Pa., who will return to Belgrade after a three weeks' leave of absence in this country.

DR. HENRY A. STRECKER has been appointed chief medical inspector of the Philadelphia Bureau of Health, in succession to Dr. Charles A. Groff.

PROFESSOR HENRY LOUIS RIETZ, of the department of mathematics of the University of Illinois, has been appointed by Governor Dunne a member of the commission that is to investigate the operation of all pension laws heretofore enacted in the state. The commission is also to collect information from this country and foreign lands and is to make a report to the next general assembly.

HENRY B. STEER, a graduate of Cornell University in forestry, has received an appointment for forest work in the Indian Office, U. S. Department of the Interior. He will work on the eastern Cherokee lands in western North Carolina.

PROFESSOR LEONARD HEGNAUR has been appointed soils and crop specialist for field work under the direction of the extension department of the Washington State College.

MR. F. R. WULSIN is returning from Madagascar where he has been for about six months, collecting for the Zoological Museum, Harvard

University, after a long trip in British East Africa for the same purpose.

R. I. SMITH, formerly professor of entomology in the University of Porto Rico, College of Agriculture, Mayaguez, has been placed in charge of the Boston office for the foreign cotton quarantine, against the pink boll worm of Egypt and other countries.

DR. SAMUEL W. STRATTON, director of the United States Bureau of Standards, gave an illustrated lecture before the engineering students of the Ohio State University on November 5, on "The Work of the Bureau of Standards."

DR. WILLIAM S. FRANKLIN, recently professor of physics in Lehigh University, lectured before the students of Sibley College, Cornell University, on November 3, on "Some Mechanical Analogies in Electricity and Magnetism," with experiments. On November 5, at a meeting of the local section of the American Institute of Electrical Engineers, he gave a talk "On Electric Waves," with demonstrations and experiments.

PROFESSOR MARSTON TAYLOR BOGERT, of Columbia University, on October 25, addressed the staff and students of the school of chemistry of the University of Pittsburgh and of the Mellon Institute upon "Reminiscences of Famous European Chemists and Chemical Laboratories."

THE Swiney lectures on geology in connection with the British Museum (Natural History) will be delivered by Dr. J. D. Falconer, beginning November 13. There will be twelve lectures on "Ice and the Ice Age."

THE lectures before the Royal College of Physicians of London this autumn are as follows: The Bradshaw Lecture, by Dr. Mitchell Clarke, on November 2, the subject being nervous affections of the sixth and seventh decades of life; the FitzPatrick Lectures on November 4 and 9, by Dr. W. H. R. Rivers, on medicine, magic and religion; and the Goulstonian Lectures, by Dr. Gordon Holmes, on November 16, 18 and 23, on acute spinal lesions, with special reference to those of warfare.

BRIGADIER-GENERAL GEORGE M. STERNBERG, retired, surgeon-general of the army, from 1893 to 1902, distinguished for his investigations of yellow fever and other diseases, died at his home in Washington, on November 3, at the age of seventy-seven years.

WIRT TASSIN, formerly chief chemist and assistant curator of the division of mineralogy, U. S. National Museum, since 1908 a consulting metallurgist at Chester, Pa., known for his contribution to mineralogy and metallurgy, died on November 2, at the age of forty-six years.

DR. WILLIAM NOYES, for fifteen years superintendent of the Boston Insane Hospital, known for his work on neurology and psychiatry, died on October 20, at his home in Jamaica Plain, aged fifty-eight years.

FELIX LECONTE, professor in physical and mathematical sciences at the University of Ghent, died in London on October 11, aged fifty years.

As a result of the explorations of the Siberian expedition of the Museum of the University of Pennsylvania, the university will shortly be the possessor of a valuable collection of ethnological specimens from the primitive Tungus tribes in the arctic regions of Siberia, and the scientific world enriched by writings and data on a branch of the Mongolian race of which hitherto virtually nothing has been known. More than 700 miles were traveled by the explorers through a country almost without food and sometimes with a temperature as low as 80 degrees below zero. The University Museum's Amazon Expedition has forwarded an account of its discovery of the original habitat of the Mondurucus Indians, a little-known tribe of savages who behead their enemies and then boil the heads. Dr. William C. Farabee, who is in charge of the expedition, spent a long time among the Mundurucus, studying their language, their manners and customs and making a vocabulary and writing down much of their folk-lore, as a result of which he expects to settle absolutely the long vexed question of the relation of this tribe to the Tupi. He also visited villages of

the Apiacas and Manes and got important data.

IN connection with the twentieth anniversary celebration of the New York Botanical Garden, Miss Caroline Coventry Haynes presented to the Garden the collection of Hepaticæ formerly belonging to Dr. Marshall A. Howe, from whom she purchased it in 1909. This collection is especially rich in Californian material and includes most of the specimens described or cited by Dr. Howe in his memoir on "The Hepaticæ and Anthocerotes of California," published in 1899. The collection includes, besides, a considerable amount of foreign material received in exchanges with Schiffner, Levier, Heeg, and other European students of the Hepaticæ. The pockets of specimens now turned over to the Garden number 1,174. The Ricciaceæ of this herbarium had already been deposited at the Garden. Certain specimens belonging to groups in which Miss Haynes is especially interested are being retained by her for a time, making the total number of pockets of specimens that are eventually to come to the Garden about 1,851. The New York Botanical Garden has received also one thousand dollars from the executor of the will of Jacob Langeloth, and this legacy has, by order of the board of managers, been credited to the principal of the Endowment Fund for Science and Education, increasing this fund to $76,455.

AMONG the resources of California of great potential value and as yet only slightly developed are the mineral springs which abound in many parts of the state. Streams of pure water issue in large volume from the northern lava fields, but some of the desert springs yield strong brines. Some mountain regions yield springs of ice-cold water in mid-summer, and in the same vicinity are pools of vigorously boiling water. Water so corrosive that clothing soon falls to pieces under its action is common in some localities; in others issue springs of hot, soft water excellent for laundry use. Several of the more noted springs are mere trickles of pleasant-tasting carbonated water; other and larger springs of more delicious natural "soda water" are at present remote from roads and are known only to the hunter and prospector. Many springs form deposits of salt that are welcomed by cattle and wild animals as "deer licks"; others are a menace to small life because of the purgative salts they contain or of the great amount of carbonic-acid gas they give off. The chemical constituents produce notable coloring in many waters, giving in some springs shades of yellow, green or blue, and at one place a milky and an inky-black stream issue side by side. In connection with studies of other phases of the water resources of California G. A. Waring, of the United States Geological Survey, made an examination of the springs, and the results are embodied in Water-supply Paper 338. Of the 600 springs described in this paper, more than 100 are used to greater or less extent as resorts, but only about one third of this number have been patronized primarily for the curative value of their waters, the others being noted chiefly as pleasure resorts. At a few, however, equipment comparable with that of the well-known European spas is in use and advanced practise in therapeutic treatment is employed.

RUBBER manufacture involves the use of numerous poisonous substances, of which lead salts, antimony pentasulphide, aniline oil, carbon disulphide and carbon tetrachloride are the most dangerous. The operations involving exposure to these poisons, however, employ but a small proportion of the large number of workers. No women and very few boys are engaged in such operations. A lesser danger is found in the use of coal-tar benzol and of various petroleum products, such as naphtha, benzine, etc. A considerable number of the workers, including women and boys, are exposed to the fumes of these compounds. These facts are brought out in an investigation by Dr. Alice Hamilton of the industrial poisons used in the rubber industry, the results of which have just been published as Bulletin 179 of the Bureau of Labor Statistics of the Department of Labor. While it was impossible to get complete data as to the frequency of industrial poisoning in the rubber industry, records were secured of no less than 66 cases

of lead poisoning which occurred in 1914 among the rubber workers in the United States. Cases were also found of naphtha poisoning, and of poisoning from carbon disulphide, carbon tetrachloride and aniline oil. The dangerous nature of some of the compounds used in the rubber industry is not as yet commonly known, so that cases of industrial poisoning may occur without being recognized as such and ascribed to their true cause. Also, in the case of some of the compounds, the symptoms of poisoning may be obscure or may not develop until some time after the exposure has taken place, so that again the resulting harm may not be ascribed to its true cause. The investigation on which the bureau's report is based covered 35 rubber factories, located in fifteen cities or towns in nine states. Practically every branch of the rubber industry was included among the activities of these factories. The processes of rubber manufacturing are many and various and there is a great difference in the extent to which men and women employed in the different branches are exposed to the danger of poisonous dusts and fumes.

## *UNIVERSITY AND EDUCATIONAL NEWS*

By the will of the late A. F. Eno, his residuary estate, which may be very large, is bequeathed to Columbia University.

The American Association of University Professors will hold its annual meeting in Washington, D. C., on Friday, December 31, 1915, and Saturday, January 1, 1916. Besides routine business, the principal matters to come before the association at this meeting will be the final adoption of the constitution, and the presentation and discussion of the general report and declaration of principles of the Committee on Academic Freedom and Tenure of Office.

Professor Cornelius Betten, formerly with Lake Forest College, Illinois, is now on the faculty of the New York State Agricultural College, Cornell University.

Herman J. Muller, a student in the department of zoology of Columbia University, has been appointed instructor in biology at the Rice Institute, Houston, Texas.

Dr. George von Pullinger Davis has gone to Salt Lake City as professor of physiology in the University of Utah.

Dr. Leo Loeb has been appointed professor of comparative pathology in the medical school of Washington University.

## *DISCUSSION AND CORRESPONDENCE*

### THE POSITION OF REFERENCES IN JOURNAL ARTICLES

To the Editor of Science: The subject of Mr. Heyward Scudder's letter in Science for October 1 (p. 454) is one that has long interested me as author, as editor and as secretary of the British Association Committee on Zoological Bibliography and Publication. I therefore venture a few comments on his proposals.

It happens that I have just had to see through the press an article furnished with references in the precise manner desired by Mr. Scudder. The article, however, was so long that it had to be spread over three monthly parts of the periodical to which it was sent. Thus, on the proposed plan, the reader of the first two parts would have to wait one or two months for the references—a course that was quite inadmissible. This illustrates one frequent objection to the proposals. Mr. Scudder himself admits others, even when the article is less lengthy.

There are two sets of people to be considered: on the one hand, the editor and publisher; on the other, the author and his readers. Mr. Scudder's main argument is the saving to the former, but the utmost saving that he claims does not amount to one per cent., and the average of all his actual instances shows a less saving than half a page in a hundred. That amounts to 31 sheets in an edition of 1,000 in octavo. The total pecuniary saving from the paper bill and the printer's bill would thus be about two dollars, which equals one fifth of a cent per copy. The more important journals, which begin each article on a fresh page, would rarely effect any saving in paper.