

shaw, secretary; W. K. Brooks, H. C. Bumpus, E. G. Conklin, C. B. Davenport, C. H. Eigenmann, L. O. Howard, D. S. Jordan, J. S. Kingsley, F. R. Lillie, E. L. Mark, C. S. Minot, T. H. Morgan, H. F. Osborn, G. H. Parker, R. Rathbun, J. Reighard, W. E. Ritter, W. T. Sedgwick, C. W. Stiles, A. E. Verrill, C. O. Whitman, E. B. Wilson and R. R. Wright.

The meetings will open in Boston, where the scientific sessions will be held, and from which excursions will be made to Harvard University and to other points of interest. At the close of the Boston meeting the congress will proceed to Woods Hole, Massachusetts, visiting the Station of the United States Bureau of Fisheries, the Marine Biological Laboratory and the collecting grounds of the adjacent seacoast. The journey to New York will be by sea through Long Island Sound. In New York the congress will be entertained by Columbia University, the American Museum of Natural History and the New York Zoological Society, and excursions will be made to Yale University, to Princeton University and to the Carnegie Station for Experimental Evolution. From New York the members will proceed to Philadelphia and Washington. Tours will be planned to Niagara Falls, to the Great Lakes, Chicago and to the West. It is hoped that arrangements can be made for reduced transportation for members of the congress on transatlantic lines and on the American routes.

The first formal circular announcing the preliminary program of the congress will be issued in October, 1906. All inquiries should be addressed to G. H. Parker, Seventh International Zoological Congress, Cambridge, Massachusetts, U. S. A.

*MINUTE OF THE FACULTY OF MEDICINE
OF HARVARD UNIVERSITY ON THE RE-
TIREMENT OF PROFESSOR BOWDITCH.*

IN parting with their colleague, Henry Pickering Bowditch, the members of the faculty of medicine of Harvard University wish formally to express to him their feelings of affection and respect.

They desire to record their recognition of the great value of his researches in physiology, the wide range and originality of his work, his public service as a courageous defender of the freedom of research, and the inspiration given to his pupils now teachers in other schools in this country.

They feel under especial obligation to him for his leadership in their councils, for his efficient aid in the reform of medical education, and for that good judgment and foresight which through many years have aided them in developing a school of medicine of a character deserving the position it holds in the science and civilization of their day.

It is a source of gratification that his life's work has been recognized by many great centers of learning; but by no body of men has it been more thoroughly appreciated than by his comrades of the medical faculty.

SCIENTIFIC NOTES AND NEWS.

THE American Association for the Advancement of Science opens its special summer meeting at Ithaca on June 29, under the presidency of Professor William H. Welch, of the Johns Hopkins University. Excellent programs are promised by the sections devoted to physics, chemistry, mechanical science and engineering, zoology and social and economic science. The sections devoted to geology and geography, and to botany will be concerned especially with field work. Reports of the meetings of the association and of the affiliated societies will be reported in subsequent numbers of *SCIENCE*.

THE announcement has been made of the resignation of Dr. William T. Harris, commissioner of education, and of the nomination of his successor, Professor Elmer E. Brown, of the University of California. Dr. Harris's retirement has been made possible by a retiring allowance from the Carnegie Foundation for the Advancement of Teaching. This action was taken by the trustees of the foundation under one of their rules which permits of such action in the case of extraordinary and unusual service to education. Dr. Harris has been the commissioner of education since

1889 and has, perhaps, had a larger and more intimate connection with the whole body of teachers than any other man. The offer to him of this retiring allowance was an act of the highest regard for his work and places his name at the head of the list of distinguished men who have accepted such retiring allowances from the Carnegie Foundation.

DR. W. W. BAILEY, professor of botany at Brown University, has retired from active service. His colleagues have presented to him a loving cup bearing the following inscription: "Presented to William Whitman Bailey, A.M., LL.D., professor of botany, by his associates in the faculty, in loving recognition of twenty-nine years of honorable service in Brown University, June, 1906."

DR. D. T. MACDOUGAL, director of the department of botanical research of the Carnegie Institution of Washington, has been elected a foreign member of the Hollandsche Maatschappij van Wetenschappen.

PRINCETON UNIVERSITY has conferred its doctorate of science on Mr. A. E. Shipley, F.R.S., lecturer in zoology at the University of Cambridge.

DR. ALEXIS CARREL, of the University of Chicago, has accepted a position in the Rockefeller Institute for Medical Research, New York, and Dr. C. C. Guthrie, also of the physiological department of the University of Chicago, has accepted a call to St. Louis University.

MR. HOWARD S. REED has resigned his position as instructor in botany in the University of Missouri and has taken an appointment in the Bureau of Soils of the U. S. Department of Agriculture. He will be engaged in studying problems in plant physiology in connection with the fertility investigations of the Bureau of Soils.

MR. HAROLD A. WHITTAKER, A.B. (Wisconsin), has been appointed assistant bacteriologist for the state of Ohio.

PROFESSOR J. G. MCKENDRICK has resigned the chair of physiology at Glasgow, which he has held for thirty years.

DR. KARL VON DEN STEINEN has retired from an associate professorship of ethnology in the University of Berlin and the curatorship of the museum of ethnology in order to devote himself to scientific exploration.

MR. HALDANE, M.P., British secretary of state for war, opened the electrical laboratory of the National Physical Laboratory on June 25.

MAJOR LEONARD DARWIN will lecture next winter at Harvard University on 'Municipal Ownership and Public Service Industries.'

THE course of Lane medical lectures of the Cooper Medical College of San Francisco, beginning on August 20, 1906, will be given by John C. McVail, M.D., of Glasgow, Scotland. The subjects of the lectures will be 'Practical Hygiene, Epidemics and Preventive Medicine.'

DR. W. H. MANWARING, of Indiana University, has been invited to give a paper before the British Medical Association at its meeting in Toronto in August.

PROFESSOR K. BIRKELAND, of Christiania, will read a paper before the Faraday Society, London, this month, entitled 'Oxidation of Atmospheric Nitrogen by Means of the Electric Arc.'

WE learn from *Nature* that Dr. Bernhard Mohr, of London, recently presented to the museum of the German Chemical Society 100 letters written by the famous Liebig to Dr. Mohr's father, the late Professor Friedrich Mohr, of Bonn, during the years 1834 to 1869.

DR. HARRISON EDWIN WEBSTER, formerly professor of natural history at Union College, professor of geology and natural history at the University of Rochester and president of Union College, died on June 16, at the age of sixty-five years.

GEORGE J. SNELLUS, F.R.S., a British metallurgist, known for his improvements in the manufacture of steel, died on June 20, at the age of sixty-nine years.

DR. RUDOLF KNIETSCH, the director of the Badische Anilin- und Soda-Fabrik, who rendered important service in developing the preparation of synthetic indigo, died on May 28 at the age of fifty-two years.

PROFESSOR DANIEL GEORG LINDHAGEN, the Swedish astronomer, died on May 5, at the age of eighty-seven years.

DR. THEODOR POLLECK, formerly professor of pharmacology at Breslau, died on June 1 at the age of eighty-four years.

DR. F. HEGELMAIER, honorary professor of botany at Tübingen, has died at the age of seventy-two years.

THE death is announced of M. Bischoffsheim, founder of the observatory near Nice.

THE German Botanical Society offers a prize of 1,000 Marks for a monograph on 'Polymorphism in the Algae.'

AT the meeting of the council of the Royal Astronomical Society, held on June 1, the following resolution was unanimously agreed to: "That the council learn with deep concern of the danger threatened to the Royal Observatory, Greenwich, from the erection of a large electric generating station near the observatory and desire to represent to the admiralty at the earliest opportunity their conviction of the paramount importance of maintaining the integrity and efficiency of Greenwich Observatory, which has been adopted as the reference point for the whole world."

THE spring series of *ballons-sondes* ascensions at St. Louis, conducted by Mr. Rotch, director of the Blue Hill Observatory, proved very successful, since twenty of the twenty-one instruments despatched have been recovered, most of them with good records of barometric pressure and temperature. The experiments were in charge of Mr. S. P. Fergusson, mechanic of the observatory, and were witnessed by Professor O. L. Fassig, who will undertake similar investigations for the United States Weather Bureau.

AT the instance of the late Professor I. C. Russell, of Michigan, the Geological Society of America recently invited the cooperation of the government surveys of the United States, Canada and Mexico in the preparation of a geologic map of North America. The immediate object was to make such a map available at the approaching international geological congress in the City of Mexico.

The map is being prepared in the office of the United States Geological Survey under the direction of Mr. Bailey Willis, and will be published in connection with a professional paper. The map will be about six feet by four and a half feet in size, and may be used as a wall map or as a pocket reference.

THERE has just been published, by act of congress, a report on the geology of the Owl Creek Mountains in central Wyoming, which contains a description of a but little-known portion of the Rocky Mountain region. It is the result of an exploration made during the past summer, by N. H. Darton, of the U. S. Geological Survey, partly for the purpose of ascertaining the mineral resources of the portion of the Shoshone Indian Reservation to be opened to settlement on August 15 this year. The report is Senate Document No. 219, 59th Congress, First Session, and may be obtained by application to senators and representatives; the Geological Survey will not have the report for distribution.

PROFESSOR H. H. TURNER, of Oxford University, addressed a letter on June 2 to the editor of the *London Times*, in which he says: "The board of visitors of the Royal Observatory at Greenwich found themselves confronted, at their annual meeting yesterday, by a grave anxiety. The London County Council have established in the Greenwich meridian and within half a mile of the observatory a large station for generating electricity. There are already two chimneys, 250 feet high, which rise from the river bed above the domes of the observatory, in spite of the 150 feet of hill on which the latter is placed; as well as two other chimneys somewhat smaller. The disturbance caused by the hot air and smoke from all these chimneys can not fail to be serious, though it is at present impossible to estimate it quantitatively. But there is another source of disturbance of an alarming kind of which direct evidence has already been obtained. In spite of various precautions taken, the engines of the generating station are so powerful that they shake the observatory. The delicate observations for nadir, which furnish the refer-

ence points for Greenwich time and for terrestrial longitudes, indicate a state of constant vibration while the engines are running, which will be greatly increased if the full proposals of the London County Council are carried out. By the invitation of the Astronomer Royal, I paid a special visit to Greenwich on Tuesday and was able to compare for myself the state of matters during the running of the engines and after they had been stopped (*i. e.*, after midnight). The observations left no room for doubt as to the seriousness of the disturbance."

Nature states that Messrs. R. B. Woosnam, D. Carruthers and A. F. R. Wollaston, three members of the zoological expedition sent to Africa under the auspices of the Natural History Museum, South Kensington, have made the following ascents in the Ruwenzori range. On April 1 they ascended Duwoni, the peak rising to the northeast of the Mubuku Glacier. This peak has two tops of apparently equal altitude; the southern top, which was reached, was found to be 15,893 feet. On April 3 they ascended Kiyanja, the peak at the western end of the Mubuku group of peaks. The altitude was found to be 16,379 feet. (The altitudes were taken by aneroid and by the boiling-point thermometer.) Both these peaks have been thought by different explorers to be the highest points in Ruwenzori, but from the summit of Kiyanja a still higher peak with two tops was seen in a northwesterly direction. The weather at this season of the year is very unfavorable, the mountains being almost constantly buried in clouds with frequent snowstorms, which prevented the party from making further explorations.

THE advance made during the last five years in the manufacture of various forms of apparatus for lighting purposes has developed a use for metals and metallic oxides such as tantalum, cadmium, zirconia, thoria, yttria, and cerium, lanthanum and didymium oxides. With the exception of cadmium, all these materials are now used commercially in the manufacture of different lamps and are obtained from the following minerals: monazite, zircon, gadolinite, columbite and tantalite. A

brief report on the production of these minerals during 1905 has been written by Dr. Joseph Hyde Pratt and will be published in the forthcoming volume of the U. S. Geological Survey, entitled 'Mineral Resources of the United States, 1905.' Monazite is the mineral which contains the oxides used in the manufacture of mantles for the Welsbach and other incandescent gaslights. Although monazite has been found sparingly at many localities throughout the United States, the Carolinas are still the only states that are producing this mineral commercially. During 1905, however, a probable new source of supply of this mineral has been worked out by the investigations that have been carried on at the concentrating plant of the United States Geological Survey at Portland, Ore., which has been testing systematically the black sands of the Pacific slope as to their mineralogical contents. The results of this investigation have shown the presence of some monazite and more zircon in many of these sands, especially in those from Oregon and Idaho. By using the Wetherill magnetic separator an almost perfect separation can be made of both the zircon and the monazite. The production of monazite, zircon and columbite during 1905 amounted to 1,352,418 pounds, valued at \$163,908, as compared with 745,999 pounds, valued at \$85,038 in 1904, an increase of 606,419 pounds in quantity and of \$78,870 in value. From one sixth to one fourth of the monazite mined in 1905 was exported to Germany.

UNIVERSITY AND EDUCATIONAL NEWS.

At the commencement of Brown University it was announced that \$162,000 had been subscribed for the John Hay memorial library, thus securing the additional gift of \$150,000 by Mr. Andrew Carnegie.

MR. D. W. GOODSPEED, secretary of the board of trustees of the University of Chicago, has announced a gift of \$260,000 from Mr. John D. Rockefeller for current expenses for the year beginning July 1.

At the recent commencement of Olivet College gifts aggregating \$265,000 were an-