paleontology, which have been largely carried on at the museum during the 22 years that he has been connected with it. Dr. Gregory will have associated with him in the new department Dr. J. Howard McGregor, who has been appointed associate in human anatomy.

The staff in ornithology, under the leadership of Dr. Frank M. Chapman, has been strengthened by the appointment of Dr. Robert Cushman Murphy as associate curator of marine birds. Dr. Murphy will devote himself particularly to the studies on the birds of the Brewster-Stanford Collection and to the collection which will be obtained by the Whitney South Sea Expedition

The former department of invertebrate zoology has been reorganized as two departments, namely, lower invertebrates and entomology. Dr. Henry E. Crampton has been appointed honorary curator of the new department of lower invertebrates and will confine his attention to his Polynesian researches. Mr. Roy W. Miner is appointed associate curator in charge.

Dr. Frank E. Lutz has been promoted to the curatorship of the new department of entomology.

Further staff changes or promotions are as follows:

#### PROMOTIONS

Lower Invertebrates: Willard G. Van Name, assistant to assistant curator.

Ornithology: Ludlow Griscom, assistant to assistant ant curator.

Anthropology: N. C. Nelson, assistant curator to associate curator of North American archeology; H. J. Spinden, assistant curator to associate curator of Mexican and Central American archeology.

### NEW APPOINTMENTS

Comparative Anatomy: S. H. Chubb, assistant in osteology.

Public Education: Grace E. Fisher, assistant.

Ichthyology: E. W. Gudger, associate in ichthyology.

Mammalogy: Carl E. Akeley, associate in mammalogy.

Entomology: Herbert F. Schwarz, research associate, Hymenoptera.

The title of the department of physiology has been changed to read department of comparative physiology.

#### SCIENTIFIC NOTES AND NEWS

At a meeting of the trustees of the Elizabeth Thompson Science Fund, held on February 26, the following grants were voted: Dr. T. Brailsford Robertson, Adelaide, South Australia, \$250 for the purchase of a comptometer for use in a statistical study of growth. Dr. Donald Macomber, Boston, \$300 for an investigation of the effects of diet on fertility. Dr. W. J. Fisher, Woods Hole, \$75 for a study of low sun phenomena (sunrise and sunset and horizon mirage). Dr. H. G. Barbour, New Haven, \$300 for an investigation into the heat regulatory mechanism of the body.

LAWRENCE J. HENDERSON, professor of biological chemistry, has been appointed Harvard exchange professor to France and will lecture at the Sorbonne during the second half of the present academic year.

Professor William Alanson Bryan, formerly curator in the Bishop Museum and professor of zoology and geology in the University of Hawaii, has been appointed director of the Los Angeles Science Museum of History, and Art, where he succeeds the late Frank Dagget.

Dr. F. C. Harrison, principal of Macdonald College, was elected as president of the Society of American Bacteriologists, at their annual meeting held at Chicago.

At the annual meeting of the Royal Meteorological Society the following were elected officers: President, R. H. Hooker. Vice-presidents, J. Baxendell, W. W. Bryant, Sir Napier Shaw and Dr. E. M. Wedderburn. Treasurer, W. V. Graham. Secretaries, J. S. Dines, L. F. Richardson and G. Thomson.

During the current year the University of Texas established two lectureships to be filled by distinguished scholars from other universities. Professor E. G. Conklin, of Princeton University, was invited to Texas to fill the first engagement. During the week beginning February 28 Dr. Conklin gave a series of five

lectures, two to the general public and three seminar lectures to advanced students in the biological departments. Professor Conklin will also lecture at Houston, Galveston and San Antonio.

On the evening of February 22, Professor F. R. Watson, of the University of Illinois, delivered an illustrated lecture on "Acoustics of auditoriums" before the Illinois Society of Architects at the Chicago Art Museum.

FREDERICK G. CLAPP, of New York City, an authority on petroleum geology, is giving a series of twelve lectures on that subject at Harvard University, beginning on Tuesday, March 8.

Dr. Harlow Shapley, of the Mount Wilson Observatory, gave a series of illustrated lectures in San Francisco and Berkeley, February 25 and 27, on the following subjects: "New stars and variable stars," Astronomical Society of the Pacific, Native Sons' Hall, San Francisco; "On the structure of the galactic system," astronomical department of the University of California; "The dimensions of the sidereal universe," California Academy of Sciences, Golden Gate Park, San Francisco.

The joint spring meeting of the Association of American Geographers and the American Geographical Society will be held in New York City on April 22 and 23. The complete program for the meeting will be published in the near future.

The third annual meeting of the American Society of Mammalogists will be held in Washington, D. C., from May 2 to 4. Sessions devoted to the reading of papers, discussion and business, will be held from 10 A.M. to 4.30 P.M., each day, in the New National Museum. A session may also be arranged for the evening of May 2. Opportunities will be offered to visit various places of zoological interest in the city, and the usual social functions will be arranged.

THE annual meeting of the American Association of Pathologists and Bacteriologists will be held at Cleveland, Ohio, on March 25 and 26. Dr. Howard T. Karsner is the president.

THE next annual meeting of the American Astronomical Society will be held at the Van Vleck Observatory, Wesleyan University, Middletown, Connecticut, from August 30 to September 2, 1921.

The second annual meeting of the Southwestern Geological Society will be held on March 18, at Tulsa, Oklahoma. The first bulletin of the society will be ready for distribution about that time. The society has a membership of one hundred and seventy-nine. Sections have been organized at Austin, Texas; Houston, Texas; Ardmore, Oklahoma; Okmulgee, Oklahoma; Duncan, Oklahoma; Dallas, Texas, and Shreveport, Louisiana. Visiting geologists in any of these localities are invited to attend the section meetings.

The Indian Botanical Society has recently been organized with a charter membership of eighty-five. The officers, who serve until the meeting of January, 1922, are as follows: President, Winfield Dudgeon; Vice-president, W. Burns; Secretary-treasurer, Shiv Ram Kashyap; Councilors, Birbal Sahni and Rai Bahadur K. Rangachari. The society had its inception in a resolution passed by the Botanical Section of the Indian Science Congress at the Nagpur meeting in January, 1920.

The Eye-Sight Conservation Council of America with headquarters in New York City, was recently organized, and Mr. L. W. Wallace, New York, was elected president, and Dr. Cassius D. Wescott, Chicago, vice-president. Drs. Frederick R. Green, Chicago; W. S. Rankin, Raleigh, N. C.; Arthur L. Day, Washington, D. C., and Allan J. McLaughlin, U. S. P. H. S., Washington, D. C., are members of the board of councilors. The council has for its object the conservation and improvement of vision by arousing public interest in eye hygiene, especially as it pertains to defective vision and the protection of the eyes in hazardous occupations.

The trustees of the American Medical Association have made an appropriation to further meritorious research in subjects relating to scientific medicine and of practical interest to the medical profession, which might not be

carried out for lack of funds at hand. Applications for grants should be sent to the Committee on Scientific Research, American Medical Association, 535 North Dearborn Street, Chicago, before April 1, 1921, when action will be taken on the applications at hand.

Dr. J. Paul Goode (Minnesota, '89), of the department of geography of the University of Chicago, gave an address on "Coal and civilization" at the annual banquet of the General Alumni Association at the University of Minnesota, on February 18. The occasion was the fifty-third anniversary of the founding of the University of Minnesota.

Dr. S. B. Wolbach, associate professor of pathology and bacteriology, Harvard University, will deliver the eighth Harvey Society lecture at the New York Academy of Medicine on Saturday evening, March 12. His subject will be "Typhus fever and rickettsia."

Surgeon-General Ireland has completed plans to have prominent physicians of the country deliver addresses before the General Staff College at Washington. Dr. Joel E. Goldthwait, Boston, and Dr. Thomas W. Salmon, New York, recently went to Washington to speak at the college.

THE Washington Section of the American Institute of Mining and Metallurgical Engineers held a supper and meeting at the Interior Department on January 14. Dr. H. Foster Bain, the newly appointed director of the Bureau of Mines, lectured on "Mines and mining in the far east."

On behalf of the subscribers to the Poynting Memorial Fund, the portrait of the late Professor J. H. Poynting by Mr. Bernard Munns has been presented to the University of Birmingham, and Mr. W. Waters Butler has presented the portrait of the late Professor Adrian Brown by the same artist.

Dr. WILLIAM MILLER WELCH, an authority on contagious diseases, and for more than fifty years connected with the Philadelphia Bureau of Health, and professor in the graduate school of medicine of the University of Pennsylvania, has died at the age of eighty-three years.

Dr. F. J. V. Skiff, director of the Field Museum, Chicago, died on February 24 at the age of sixty-nine years.

The North Carolina Department of Agriculture announces the death of Dr. James Marion Pickel, for many years past the feed chemist of the department.

Dr. J. C. Cain, editor of the publications of the London Chemical Society and author of works on synthetic dyestuffs, died on January 31 at the age of fifty years.

Alfred Gabriel Nathorst, the eminent Swedish geologist and paleobotanist, died at Stockholm on January 20, in his seventy-first year.

Professor T. Miyake, of the department of zoology of the Agricultural College of the Imperial University of Tokyo, died on February 2 of typhoid fever which at that time was prevalent in Tokyo. Professor Miyake will be remembered as the author of a large two-volume work on the entomology of Japan, a review of which was published in Science some months ago.

THE request is made to botanists to supply the department of botany of the Alabama Polytechnic Institute with separates and other publications to help restore the library which was lost in the fire which destroyed the agricultural building.

The sum of \$500,000 has been given by Dr. Frank Schamberg, Dr. John A. Kolmer and Professor George M. Raiziss to the dermatological research laboratories of the University of Pennsylvania for the support of medical research. The sum represents the profits received by the laboratories during the war from the sale of the drug arsphenamine, a solution for German salvarsan. Its manufacture was the result of experiments conducted in the dermatological research laboratories by Dr. Schamberg and his two assistants, Dr. Kolmer, professor of pathology and bacteriology of the graduate school of medicine of the University of Pennsylvania, and George M. Raiziss, professor of chemotherapy at the same school of the university. Dr. Schamberg was director of the Research Institute.

The magnetic-survey yacht Carnegie, under the command of J. P. Ault, arrived at San Francisco on February 19. After re-outfitting there, she will continue her present circumnavigation cruise, which was begun at Washington in October, 1919, and has an aggregate length of about 62,000 nautical miles. She will cruise in the Pacific Ocean until about September and thence return via the Panama Canal to Washington in October.

Public lectures under the auspices of the New York City College Chemical Society, in the Doremus Lecture Theatre at four-thirty P.M. are announced as follows:

March 7. "Beyond the laboratory," Ellwood Hendrick.

March 15. "The service of the synthetic dye industry to the state," Marston Taylor Bogert, professor of chemistry at Columbia University.

March 23. "The trail of the chemist in the packing industry," Charles H. MacDowell, president, Armour Chemical Company.

April 8. "Explosives in war and peace," Ernest M. Symmes, Hercules Powder Co.

April 14. "Chemical evolution," Daniel D. Jackson, professor of chemical engineering at Columbia University.

The Southwestern Division of the American Association for the Advancement of Science announces the following lectures at El Paso:

February 15. "How to live," Dr. Jenness.

March 1. "Alien insect enemies," Benjamin Druckermaur.

March 14. "The mechanism of heredity, development and evolution," Edwin Grant Conklin, of Princeton University.

March 15. "Historical progress in chemical theory," F. H. Seamon.

April 5. "Reclamation work," L. M. Lawson. April 19. "Great American scientists: Major J. W. Powell and Professor Langley," E. C. Prentiss

May 3. "Southwestern agricultural problems," Robert S. Trumbull.

May —. "Archæology," Edgar L. Hewett, of the School of American Research, Santa Fe, N. M. May 17. "Crystallography," James C. Crichett.

## UNIVERSITY AND EDUCATIONAL NEWS

By the will of Miss Helen F. Massey a legacy of \$500,000 has been left to the University of Pennsylvania. It is reported that one of the conditions of the bequest is that the income shall be used for increasing the salaries of members of the college faculty.

HAROLD HIBBERT, Ph.D., Sc.D., assistant professor in Yale University, has been promoted to an associate professorship of applied chemistry, and assigned to the graduate school and the Sheffield Scientific School.

Dr. Hugh C. Muldoon, professor of chemistry at the Albany College of Pharmacy, has become dean and professor of chemistry in the School of Pharmacy, Valparaiso University.

The biology department, Macdonald College, has been divided into two departments, the department of entomology and zoology, under Professor William Lochhead, and the department of botany, under Professor B. T. Dickson. Dr. G. P. McRostie, Ph.D. (Cornell, '17), has been appointed assistant professor in the cereal husbandry department in charge of grass and clover investigations, and Walter Biffen, B.Sc. (Wales '06), has been appointed lecturer in the department of botany.

# DISCUSSION AND CORRESPONDENCE MUSICAL NOTATION

TO THE EDITOR OF SCIENCE: While musical notation is not a matter of great scientific interest, reform presumably is.

The desirability of the changes advocated by Professors Huntington and Hall may be admitted. This leaves the space available for briefly discussing the cost.

The reform of printing implies (1) reprinting all existing music, and (2) scrapping some machinery, type, etc.

There is also an ideal cost. Whatever the exact methods of physical science may ultimately reveal as to the pitch in orchestral