

Experiments with High-school Science Clubs: Morris Meister, chairman of the department of physical science, Haaren High School, New York.

Science Clubs in Relation to State Academies of Science: S. W. Bilsing, department of entomology, Agricultural and Mechanical College of Texas. Discussion led by Pauline Beery Mack, editor, "Science Leaflets," State College of Pennsylvania.

LUNCHEON, 12:30 P. M.

Presiding Officer: Jerome Isenbarger, teacher of biology, Chicago Public High Schools.

Some Reactions of Science upon Those Who Study It: John C. Merriam, president, Carnegie Institution of Washington.

AFTERNOON SESSION, 2:00 P. M.

Presiding Officer: H. A. Carpenter, specialist in science, Rochester Public Schools, New York.

The Work of the Central Association of Science and Mathematics Teachers: W. F. Roecker, teacher of science, Boys' Technical High School, Milwaukee.

Types of Useful Organizations of Science Teachers: W. L. Eikenberry, head of science department, State Teachers College, Trenton.

Are Further Organizations of Science Teachers Needed? An open discussion.

THE CAMBRIDGE MEETING OF THE NATIONAL ACADEMY OF SCIENCES

THE autumn meeting of the National Academy of Sciences will be held at the Massachusetts Institute of Technology on Monday, Tuesday and Wednesday, November 20, 21 and 22, 1933.

The sessions will be held in the lecture room of the George Eastman Research Laboratories of the Massachusetts Institute of Technology.

Luncheon will be served to members of the academy and guests on Monday, Tuesday and Wednesday at the Walker Memorial, Massachusetts Institute of Technology. On the afternoons of Monday and Tuesday, tea will be served in the Forris Jewett Moore Room, 6-321, and on Tuesday at Harvard University, in a place to be announced later. The subscription dinner on Tuesday, November 21, will be held at the

Lowell House, Harvard University, at the invitation of Professor Harlow Shapley.

The provisional program follows:

Sunday, November 19

7:30 Dinner of the Council. Algonquin Club, Boston.

Monday, November 20

9:30 Business Meeting in Eastman Lecture Room, 6-120.

10:30 Welcome by President Compton and response by the president of the academy, followed by a scientific session. Eastman Lecture Room.

1:00 Luncheon for Members and Guests. Walker Memorial, North Hall.

2:30 Scientific Session. Eastman Lecture Room.

4:30 Tea in the Forris Jewett Moore Room, 6-321.

8:00 Public Lecture by Dr. Arthur E. Morgan, director Tennessee Valley Authority, on "Muscle Shoals and the Tennessee Valley Problem." Walker Memorial, Main Hall.

9:00 Reception by President and Mrs. Compton, at the President's House.

Tuesday, November 21

9:30 Scientific Session. Eastman Lecture Room.

12:30 Luncheon in Walker Memorial, North Hall.

2:00 Scientific Session. Eastman Lecture Room.

3:15 Visit to Technology and Harvard University Buildings. Arrangements will be made for visiting the various laboratories, libraries, museums, etc., of both institutions, by members of the academy and their guests.

5:00 Tea in the Forris Jewett Moore Room, Massachusetts Institute of Technology, and at Harvard University, in a place to be announced later.

8:00 Subscription dinner for members and guests, including ladies. Lowell House, Harvard University.

Wednesday, November 22

9:30 Scientific Session. Eastman Lecture Room.

12:30 Luncheon in Walker Memorial, North Hall.

1:30 Excursions to Round Hill and Oak Ridge, in case of sufficient demand.

SCIENTIFIC NOTES AND NEWS

THE new science building at Radcliffe College has been named William Elwood Byerly Hall, in honor of Dr. William E. Byerly, Perkins professor of mathematics, emeritus, at Harvard University, who served for more than thirty years as chairman of the academic board at Radcliffe.

DR. HERMANN WEYL, formerly professor of mathematics at Göttingen, arrived in New York on October 24 to take up his work at the Institute for Advanced Study at Princeton. He also plans to give a course

of lectures at Swarthmore College. Dr. Weyl left Göttingen at the end of the spring term after the Hitler government caused several of his Jewish colleagues to be dismissed from the institution.

DR. JOSEPH S. AMES, president of the Johns Hopkins University, made the address on October 31 at a convocation of the University of Pennsylvania held in commemoration of the semi-centennial of the Graduate School of Arts and Sciences.

PROFESSOR HUGH S. TAYLOR, chairman of the de-

partment of chemistry at Princeton University, will be the first speaker under the A. R. L. Dohme lectureship for 1933-34 at the Johns Hopkins University. The lecture will be given on November 17 at 4:00 P. M., in Remsen Hall. The subject of the address is "Theoretical and Experimental Research Problems Involving Heavy Hydrogen."

ON October 24, Dr. J. O. Perrine, of the Bell Telephone Laboratories, lectured on television at West Virginia University, under the auspices of the West Virginia University Scientific Society. A dinner in his honor was given by the local chapter of Sigma Pi Sigma, the national honorary physics fraternity.

At the graduation ceremony of the University of St. Andrews on October 6, the honorary degree of doctor of laws was conferred on Emeritus Professor J. E. A. Steggall, who has retired after fifty years' service in the chair of mathematics in University College, Dundee.

A GOETHE MEDAL has been awarded by the president of the Reichstag to Dr. Karl Sudhoff, professor of the history of medicine at Leipzig.

DR. ALEXANDER VON LICHTENBERG, of Berlin, has been awarded the Gold Medal of the International Serological Association.

WE learn from *Nature* that Dr. Edward Greenly has been awarded the Liverpool Geological Society's Medal, which is given for "outstanding geological work connected with problems bearing upon the work of the society." Dr. Greenly labored at his own expense for many years in the elucidation of the geology of Anglesey.

SIR LEONARD ERSKINE HILL, lately director of the department of applied physiology of the British National Institute of Medical Research, now director of research of the London Light and Electrical Clinic, writes to the *London Times* as follows: "On the retirement of Sir Edward Sharpey-Schafer from the chair of physiology at Edinburgh, at the age of eighty-three, his past and present assistants, twenty-nine in number, have published in his honor a special volume of the *Quarterly Journal of Experimental Physiology* composed of accounts of original researches carried out by themselves. Thirty-two papers are included in this volume and cover a wide field of interest. The final editing was placed in Sir Edward's own hands. His contributions to physiological science are stored in the libraries and utilized daily by research workers in further extending the boundaries of knowledge which he himself has done so much to advance right up to the time of his retirement. Every one knows of Schafer's method of artificial respiration, and many may be interested to know of the honor which old as-

sistants, of which I am one, have tried to show him. We can never forget the friendship and wisdom with which he helped us on the way."

DR. J. B. LEATHES, lately professor of physiology at the University of Sheffield, has been made professor emeritus.

At the meeting of the International Union of Geodesy and Geophysics, which was held at Lisbon, from September 17 to 24, the International Commission on Glaciers was continued. Of this commission Dr. Adolf Hoel, of Oslo, is *president*; Professor William H. Hobbs, of Ann Arbor, *vice-president*, and Professor P. Mercanton, of Lausanne, *secretary*.

At a meeting on October 18 of the Indiana chapter of Sigma Xi the following officers were elected: *President*, Dr. Paul Weatherwax; *Vice-president*, Dr. Paul M. Harmon; *Secretary*, Dr. C. M. Louttit; *Treasurer*, W. D. Thornbury. Dr. H. T. Briscoe delivered the address of the retiring president, speaking on "The Last Two Decades of Chemistry."

RODOLPHE M. DE SCHAUENSEE has been elected a member of the Board of Trustees of the Academy of Natural Sciences of Philadelphia. This board, as now constituted, includes the following: Effingham B. Morris, *chairman*, Cary W. Bok, Charles M. B. Cadwalader, Clarence H. Clark, 3rd, R. R. M. Carpenter, Frank B. Foster, James E. Gowen, Thomas S. Gates, Prentiss N. Gray, George L. Harrison, T. Charlton Henry, E. R. Fenimore Johnson, Arthur E. Newbold, Jr., J. Stoddell Stokes and Harry C. Trexler.

DR. CHARLES S. MANGUM, professor of anatomy at the University of North Carolina Medical School since 1905, has been appointed dean to succeed Dr. Isaac H. Manning, resigned.

DR. BENJAMIN SPECTOR has been promoted to the head of the department of anatomy at Tufts College Medical School. Dr. Attilio Canzanelli has been appointed assistant professor of physiology; Dr. Max Ritvo assistant professor in radiology, and Dr. Harold A. Chamberlin professor of urology.

DR. WILLIAM J. FORDRUNG, Scarsdale, has been appointed head of the department of physiology and hygiene at Hunter College, New York City.

DR. GEORGE J. GOODMAN has been appointed instructor in botany at the University of Oklahoma. In addition to his teaching he will have custody of the state herbarium, a collection which at present consists primarily of a representative flora of Oklahoma.

WILSON R. MALTBY has been appointed bolometric assistant in the Smithsonian Institution. He relieves Walter Watson, Jr., at the solar radiation station at

Montezuma, Chile. Mr. Watson returns to Washington.

At the invitation of the Academy of Sciences of the U.S.S.R., Dr. Hermann J. Muller, professor of zoology at the University of Texas, is spending the present academic year at the laboratory of the Academy of Sciences, Leningrad. Dr. Muller will also work at the Medico-Biological Institute of Dr. S. G. Levit in Moscow. Dr. Carlos A. Offermann will cooperate in the work at Leningrad.

PROFESSOR LOUIS C. KARPINSKI, who is lecturing in Europe at the present time, has been asked by the rector of the University of Athens to give a lecture early in November at the university. The subject of the lecture, which will be in French, is "Les Liaisons entre la Developpement de la Mathématique grecque ancienne et le Progrès de la Science et de la Civilisation." He is also to lecture in English at the American College in Athens. In Cairo, during Thanksgiving week, Dr. Karpinski will lecture in French on "The Importance of the Ancient Egyptian Mathematics." In December he will lecture in Beirut and Jerusalem on "The Importance of the Arabic Mathematics" and on "The Importance of the Babylonian Mathematics."

JOHN C. PHILLIPS, associate curator of birds at the Harvard Museum of Comparative Zoology, sailed on October 22 to attend the International Conference for the Protection of the Fauna and Flora of Africa, in London.

WHARTON HUBER, associate curator of birds and mammals in the Academy of Natural Sciences of Philadelphia, has returned from a six months expedition to California, the object of which was to make a survey of the faunal geography of that state, with a special view to type localities. Through the courtesy of the California Game Commission, he was enabled to secure a number of interesting mammals for the academy's laboratory collections, including specimens of the dwarf elk which now is found only in Kern and Colusa Counties.

DR. HENRY E. SIGERIST, of the Johns Hopkins University, gave an address on "The Medical Profession through the Ages," at the New York Academy of Medicine on October 18.

DR. WALTER B. CANNON, of the Harvard Medical School, addressed the Society for the Advancement of Gastro-Enterology, New York City, on October 4, on "The Relation of the Nervous System to the Function of the Smooth Muscles."

PROFESSOR IVAN DE BURGH DALY, who has succeeded Sir E. Sharpey-Schafer in the chair of physiology at the University of Edinburgh, delivered his

inaugural address on "Perspectives in Physiology" on October 11.

At its October meeting the council of the American Academy of Arts and Sciences voted awards from its Permanent Science Fund as follows: To Charles V. Green, Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, \$500, to aid in his studies of tumor inheritance; to Gleason W. Kenrick, Tufts College, \$500, for apparatus and assistance to aid him in studying the Kennelly-Heaviside layer; to Bret Ratner, New York University and Bellevue Medical College, \$500, to assist him in his study of the anaphylactogenic properties of certain materials, and to V. M. Slipher, director of the Lowell Observatory, Flagstaff, Arizona, \$750, to aid in the spectra of the planets. The next series of awards will be made in March, 1934. The address of the chairman of the Permanent Science Fund Committee is Professor E. M. East, Bussey Institution, Forest Hills, Boston, Massachusetts.

THE committees appointed by the Board of Overseers at Harvard to visit the Harvard Engineering School and other scientific departments "selected because of their interest in the success and usefulness of the department to be visited" include a number of scientific men. Dr. Irving Langmuir, associate director of the laboratories of the General Electric Company in Schenectady, New York, is a new member of the visiting committee for the Engineering School. The visiting committee on astronomy includes Dr. C. E. Kenneth Mees, of Rochester, N. Y., director of research for the Eastman Kodak Company, and Professor John C. Slater, of the Massachusetts Institute of Technology. George W. Merck, '15, a manufacturing chemist of New York City, has been appointed a member of the committee on chemistry. Alfred L. Loomis, banker and physicist, of New York City, is a new member of the committee on physics. F. Trubee Davison, president of the American Museum of Natural History, has been appointed to the committee for the Harvard Museum of Comparative Zoology. The two new members of the committee on zoology are Dr. E. Amory Codman, '91, and William P. Wolcott, '03, both of Boston. Clinton H. Crane, of New York City, naval architect, has been named to the committee on geological sciences.

To make it possible for its members conveniently to attend the Fourteenth Exposition of Chemical Industries, which is to be held at Grand Central Palace in New York City, December 4 to 9, 1933, the American Institute of Chemical Engineers has changed the dates of its national meeting to the following week. The meeting of the institute will now be held on December 12, 13 and 14. The place of the meeting, Roanoke, Virginia, is unchanged.

THE twenty-fourth annual Exhibition of Scientific Instruments and Apparatus under the auspices of the British Physical Society will be held at the Imperial College of Science and Technology from January 9 to 11, 1934. Evening discourses will be delivered during the exhibition by Mr. R. S. Whipple, on "The Evolution of the Galvanometer," Mr. J. Guild on "The Instrumental Side of Colorimetry" and Sir Ambrose Fleming on "The History and Development of the Thermionic Valve."

THE Committee on Scientific Research of the American Medical Association invites applications for grants in aid of research on problems bearing on the clinical aspects of medicine and surgery. Inquiries may be addressed to the committee at 535 North Dearborn Street, Chicago.

MISS M. D. RANKIN, Greenock, has given £20,000 to the University of Glasgow to provide a fund for medical research. The donor has expressed a wish that the claims of cancer research should receive special consideration, but apart from that the fund is to be available for any kind of medical research into the origin and curative treatment of disease. An executive committee of six members will be set up to administer the fund. A bequest of £8,000 has also been made to the university by the late Miss B. Aitken Gray for the endowment of a traveling bursary in engineering. With this fund a bursary will be instituted. It will be awarded by competition, and the successful student will be enabled to travel to study engineering achievements in different parts of the world.

A CORRESPONDENT to the London *Times* reports that the expedition to Abyssinia under the leadership of Mr. Wilfrid Thesiger has reached Addis Ababa. Mr. Thesiger is the son of the Honorable Wilfrid Thesiger, who was for ten years British Minister to Abyssinia. The expedition is supported by the Royal Geographical Society, the Percy Sladen Trust and Magdalen College, Oxford. The object of the expedition is to explore the still little-known Danakil country, which lies between the Abyssinian table-land and the Red Sea. The Hawash River, which rises in the mountains near Lake Zwai, flows down into the Danakil plains, and there is lost in the Aussa Sulta-

nate. Its lower course has never been followed; its banks are covered with thick bush and the valley is extremely malarious. The region is inhabited by the nomadic, camel-owning Danakils, a warlike tribe akin to the Somalis, given to raids on the Abyssinians in the hills. The party will first undertake a short journey south of Addis Ababa to the headwaters of the Hawash River, to try out the caravan, and will then endeavor to follow the river to its end. They will make a compass traverse of the route and collect all possible specimens of mammals, birds and plants. Work will also be carried on for the Locust Investigation Bureau. The caravans will then be reequipped for a long journey north of the Simien Mountains, where the party will remain for about a month making further collections and endeavoring to get specimens of the Abyssinian ibex. This animal is only to be found in these precipitous mountains, which rise in places to a height of some 15,000 feet. The expedition will be away about nine months, and hopes to bring back a comprehensive collection of the varied Abyssinian fauna and flora.

ACCORDING to the *British Medical Journal*, the annual report of the council of the Royal Society of Medicine, presented to the recent annual general meeting of fellows, states that the roll of the society now includes 4,967 names, the great majority being those of fellows. The number of meetings of the society held last session was 166, comparing with 183 the year before. The number of readers in the library during the year was 44,391, and the number of books borrowed for home use was 28,679. The income of the society for the session was £22,473, an increase of £144 on the previous year, and it is explained that this relatively small increase in income is due to the fact that the financial crisis caused many more resignations than usual, though, fortunately, the accessions to the society outnumbered the resignations and deaths. The total expenditure was £506 less. At the request of the India Office the council of the society has considered the report of the Indian Drugs Inquiry Committee, and the Section of Therapeutics and Pharmacology has prepared a memorandum on the subject, which has been forwarded, through the India Office, to the Government of India.

DISCUSSION

GEOLOGICAL MISCONCEPTIONS CONCERNING THE OCEANS

CERTAINLY no phase of geology has been so neglected as the study of the ocean floor. Because of this neglect and because of scarcity of information up to recent times various ideas with very little basis in fact have taken form and become fixed in the writings and teachings of geologists. For example, one

obtains the impression from typical text-books that the continental shelves are graded platforms which extend out from the shore to depths of approximately 100 fathoms (600 feet) where they are terminated by a steep slope, because this depth represents "wave base." The shelves are said to consist of wave-cut terraces inside and wave-built terraces beyond. The sediments on the shelves are supposed to be arranged