pedition will take from eighteen months to two years. Later an entomologist, a geologist and a recording technician will be appointed from the American Museum staff and from Columbia University.

A SIX months' expedition to make a comprehensive collection of the plants of Guatemala for the herbarium of the Field Museum of Natural History left Chicago on September 27 under the direction of Dr. Julian A. Steyermark, assistant curator of the herbarium, who sailed on the steamship *Ulm* from New Orleans. The expedition is sponsored by Stanley Field, president of the museum. It is planned to explore the little known Oriente area in the departments of Chiquimula, Jutiapa and Jalapa. Work in the desert area around Zacapa will be carried out during the rainy season, and Dr. Steyermark expects to find a number of unusual species of plants. The expedition then plans to move into the Sierra Madre region of western Guatemala, in the provinces of San Marcos and Huehuetenango. Particular attention will be devoted to the flora of the Tajumulco volcano, and collecting is contemplated in the district around Mazatenango.

FIELD WORK OF THE U. S. GEOLOGICAL SURVEY

AMONG the members of the Geological Branch who have recently returned to Washington, D. C., after completing their season's field work on the projects indicated, are the following:

S. R. Capps, who studied the structural history of west-central Idaho in its relation to the gold placer deposits.

H. G. Ferguson, who continued studies of structural and stratigraphic problems in Nevada and completed preliminary mapping of the western and central parts of the Sonoma Range quadrangle.

T. A. Hendricks and Paul Averitt, who investigated the geology and oil possibilities in the western part of the Ouachita Mountains, Okla.

A. A. Baker, who studied the phosphate and coal resources and oil and gas possibilities in the southern Wasatch Mountains, Utah.

W. P. Woodring, who examined the geology and oil resources in the Santa Maria district, Calif.

W. C. Warren, who, with the aid of aerial photographs, mapped about 1,150 square miles of coal lands in southeastern Montana.

D. A. Andrews, who completed his fourth season of study of the stratigraphy, structure, economic geology and geomorphology along the northeast flank of the Bighorn Basin, Wyoming and Montana.

C. B. Hunt, who completed his fifth and final season of investigating the geology of the Henry Mountains, Utah, and examined gold placer gravel deposits and unusual erosion features in the canyon of the Colorado River between Hite and Lee's Ferry.

Members of the Alaskan Branch have completed the season's field work in Alaska and have returned to Washington for the office and laboratory studies required to put their resulting maps and notes into shape for publication. F. H. Moffit examined the east-central part of the Alaska Range, embracing principally the country between Delta and Johnson Rivers. J. C. Reed carried on geological surveys in the northwestern part of Chichagof Island, southeastern Alaska. J. B. Mertie, Jr., investigated the potential tin fields of western Seward Peninsula. Gerald Fitzgerald made extensive topographic surveys in the vicinity of Porcupine River from Fort Yukon to the Canadian Boundary. T. V. Ranta revised much of the early exploratory mapping of the country between Nabesna and Chisana Rivers, near the head of Tanana River. Philip S. Smith inspected a number of the more accessible mining districts in central Alaska, and collected information as to new mining developments in progress.

SCIENTIFIC NOTES AND NEWS

THE Royal Society, London, according to a wireless report in *The New York Times*, awarded on November 2 the Copley Medal to Professor Thomas H. Morgan, director of the William G. Kerckhoff Laboratories of the California Institute of Technology, for his work in genetics, and the Davy Medal to Dr. James W. McBain, professor of chemistry at Stanford University, for his work in colloid chemistry.

THE Sedgwick Memorial Medal, awarded for distinguished service in public health, was presented to Dr. Thomas Parran, Jr., Surgeon General of the United States Public Health Service, on October 17 at the sixty-eighth annual meeting of the American Public Health Association in Pittsburgh. Dr. Milton J. Rosenau, director of the Division of Public Health of the School of Medicine of the University of North Carolina, made the presentation.

DR. FRANCIS CARTER WOOD, director of the Institute of Cancer Research of Columbia University, was presented with the Clement Cleveland Medal for 1939 at the annual dinner of the New York City Cancer Committee.

A CITATION for distinguished service to agriculture was presented to Dean Emeritus F. B. Mumford, of the Missouri College of Agriculture, at the annual banquet on November 2 of the Association of Alumni and Former Students. The banquet was held on the last evening and formed part of the centennial celebration of the university.

THE Charles Frederick Chandler Medal of Columbia University will be presented to Thomas Hamilton Chilton, director of the Technical Division of the Department of Engineering in the E. I. du Pont de Nemours and Company, on the evening of November 16, when Mr. Chilton will deliver the annual Chandler Lecture. His subject will be "Engineering in the Service of Chemistry."

ACCORDING to press reports the Nobel Prize for physiology and medicine "has been regretfully declined" by Professor Gerhard Domagk, director of the research institute of the I. G. Farbenindustrie Laboratory at Elberfeld. It is said that he has written to the Stockholm committee, thanking them for the honor conferred on him, but pointing out that under the present law no German is allowed to accept a Nobel Prize.

SIR CHARLES SHERRINGTON, Waynflete professor of physiology at the University of Oxford, has been elected to an honorary fellowship in Magdalen College.

ARTHUR NUTT, vice-president for engineering of the Wright Aeronautical Corporation, has been nominated for the presidency of the Society of Automotive Engineers.

DEAN OLIN J. FERGUSON, of the College of Engineering of the University of Nebraska, has been elected president of the Society for the Promotion of Engineering Education for the year 1930–40. He succeeds Dr. Karl T. Compton, president of the Massachusetts Institute of Technology. The secretary is Dr. F. L. Bishop, of the University of Pittsburgh. The annual meeting will be held at the University of California from June 25 to 28, when it is expected that a thousand delegates will be in attendance.

PROFESSOR FRANK CYRIL JAMES, director of the School of Commerce of McGill University, will succeed Dr. Lewis W. Douglas as principal and vice-chancellor of the university. Mr. James, a native of London, is thirty-six years old and is a British subject. In 1924 he was appointed instructor of finance in the Wharton School of Finance and Commerce of the University of Pennsylvania, becoming full professor in 1935.

DR. GEORGE W. CORNER, since its establishment in 1924 professor of anatomy and chairman of the department in the School of Medicine and Dentistry of the University of Rochester, has been appointed director of the department of embryology at the Carnegie Institution of Washington. He succeeds on May 1, 1940, Dr. George L. Streeter, who since 1917 has been director of the department.

KENNETH H. CONDIT will succeed Professor Arthur Maurice Greene, Jr., as dean of the School of Engineering of Princeton University, Professor Greene, since 1922 dean of the school, having presented his resignation. Mr. Condit is at present assistant to the president of the National Industrial Conference Board. He was elected at the recent annual meeting vice-president of the American Society of Mechanical Engineers.

DEAN WILLIAM H. HALL has been made head of the new college of engineering at Duke University.

DR. WILBER E. POST, for the past twenty years clinical professor of medicine at the Rush Graduate School of Medicine of the University of Chicago, has been appointed dean.

DR. HOWARD Y. MCCLUSKY, of the University of Michigan, has been promoted to a professorship of educational psychology, mental measurements and statistics. He has also been made assistant to the vice-president in charge of university relations in the field of adult education.

DR. LEROY A. SCHALL, who has been instructor in laryngology at the Harvard Medical School since 1926, has been appointed Walter Augustus Lecompte professor of otology and professor of laryngology. He succeeds Dr. Harris P. Mosher, who has taught at the Medical School for more than thirty years and now becomes professor emeritus.

DR. S. ULAM has been appointed lecturer in mathematics at Harvard University for the academic year 1939–40.

DR. PETTUS HOLMES SENN, of the department of agronomy of the University of Florida, has been promoted to a professorship of agronomy and to the head of the department in the teaching division of the College of Agriculture.

DEPARTMENT chairmen at Queens College, New York City, who are elected by the faculty, have been chosen in the science departments as follows: Professor Donald E. Kirkpatrick, physics; Professor Anne Anastasi, psychology; Dr. John Dambach, health and recreation; Professor T. Freeman Cope, mathematics; Professor Roland Whittaker, chemistry; Dr. Hortense Powdermaker, anthropology and sociology, and Professor Donald E. Lancefield, biology. The appointments will be presented to the Board of Higher Education for formal approval.

DR. ELIOT G. MEARS, professor of geography and international trade at Stanford University, will be the general chairman of the seventeenth annual Institute of World Affairs, to be held under the auspices of the University of Southern California at the Mission Inn, Riverside, Calif., from December 10 to 15.

DR. DETLEV W. BRONK, director of the Eldridge R. Johnson Foundation for Medical Physics and of the Institute of Neurology of the University of Pennsylvania, has been appointed managing editor of *The*

Journal of Cellular and Comparative Physiology of the Wistar Institute of Anatomy and Biology, Philadelphia. He succeeds Professor E. Newton Harvey, of Princeton University.

SIR JOSEPH BARCROFT, from 1926 until his retirement in 1937 professor of physiology at the University of Cambridge; Sir Harold B. Hartley, chairman of the Fuel Research Board of the Department for Scientific and Industrial Research, and Sir Frank E. Smith, secretary of the department and a secretary of the Royal Society, have been appointed members of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research. Lord Cadman and Sir James Jeans have retired from the council on completion of their terms of office.

DR. FOREST RAY MOULTON, permanent secretary of the American Association for the Advancement of Science, addressed members of the Academy of Medicine of Washington, D. C., on the evening of October 27. The title of his address was "A Jaundiced Look at the Human Machine."

DR. C. STUART GAGER, director of the Brooklyn Botanic Garden, gave an address at the three hundredth meeting of the Botanical Society of Washington, D. C., on November 7. His subject was "How Botany Advances." The address was preceded by "illustrated reminiscences," with portraits of former botanists of Washington.

DR. ELLIOTT C. CUTLER, Moseley professor of surgery at the Harvard Medical School, spoke before the Omaha Mid-west Clinical Society in Omaha on October 26 on "Incomplete Intestinal Obstruction" and on "Acute Appendicitis." On October 30 he spoke on the "Surgical Treatment of Gallstones" at the Inter-state Post-graduate Medical Assembly of North America in Chicago.

THE first of the 1939–40 series of Foster Lectures at the University of Buffalo was given on October 26 by Dr. Vincent du Vigneaud, professor of biochemistry at the Cornell University Medical College, New York City. His subjects were "The Metabolic Relationship of Choline and Methionine" and "Tracing Chemical Reactions in the Body by Means of Isotopes." During the week of November 13, Professor Kasimir Fajans, of the University of Michigan, will be in residence. He will give six lectures on the chemical aspects of crystal structure, adsorption indicators, types of chemical linkages, and refractometric investigations. The Foster lectures are provided by the proceeds of a fund given the university by the late Mrs. O. E. Foster in memory of her husband.

THE program for the New England Conference of the American Association of Museums at the Springfield Museum of Fine Arts has been arranged in outline, according to *Museum News*, as follows: Friday, November 24, registration, address of welcome and a business meeting; a special performance in the planetarium for delegates, followed by tea and a subscription dinner, with an address by Andrey Avinoff, director of the Carnegie Museum, Pittsburgh, on "The Relationship of Science and Esthetics in the Museum." Saturday, November 25, morning sessions by art and science groups meeting separately; a special program for the art group in connection with an exhibition of paintings and drawings by David and Ingres; luncheon at the museum; a joint session, at which questions raised by Mr. Avinoff's address will be discussed, and a tea and a gallery talk by Katherine Dreier in connection with the first showing of the collection of the Société Anonyme.

THE recently formed Sigma Xi Club of Hawaii held its first annual meeting in the new Union Building of the University of Hawaii on October 20. The election of thirteen new members raised the membership total to sixty-five. Officers elected for the ensuing year were: *President,* Dr. C. J. Hamre, associate professor of zoology in the University of Hawaii; *Vice-president,* Dr. Martha Potgieter, associate nutritionist in the Hawaii Agricultural Experiment Station; *Secretary-Treasurer,* Dr. S. S. Ballard, assistant professor of physics in the University of Hawaii; *Councilors,* Dr. H. E. Gregory, retired director of the Bernice P. Bishop Museum, and C. E. Pemberton, executive entomologist of the Experiment Station of the Hawaiian Sugar Planters' Association. The address of the evening was delivered by Dr. Hamre, who spoke on "Some Aspects of the Physiology of the Bone Marrow."

IN a statement made by Chancellor O. C. Carmichael, of Vanderbilt University, it is announced that more than $1,500,000 of a bequest from the estate of Frederick W. Vanderbilt has been received by the university.

BY the will of the late Henry W. Putnam, a New York manufacturer, who left an estate valued at over $21,000,000, Harvard, Yale and Princeton Universities will share the sum of $9,858,332 upon the death of four of his cousins. The sum of $3,000,000 is bequeathed to the Henry W. Putnam Memorial Hospital at Bennington, Vt.

ACCORDING to a press dispatch from Pasadena, Dr. John Martin Vincent, emeritus professor of European history in the Johns Hopkins University, who died in September at the age of eighty-one years, left his estate, said to be of the value of $1,500,000, to the department of history.

THE will of the late Richard Halliburton, the explorer, leaves an estate, believed to be worth about

$100,000, largely in trust to his parents with the provision that, following their death, it be turned over to Princeton University to establish a Richard Halliburton Geological Library.

THE five million kronen collected on the occasion of the thirtieth year of the reign of King Gustaf of Sweden will be devoted to the establishment of a foundation for the study of paralytic diseases, especially poliomyelitis, and to the campaign against tuberculosis.

FORMAL exercises dedicating the Medical Building at the University of North Carolina will be held on December 4. The morning will be devoted to addresses by prominent physicians and experts in public health. The afternoon will be given over to inspection of the new building, and a banquet in the evening will conclude the program.

AN Associated Press dispatch states that further Nobel Prize awards will be withheld this year, due to the European war. The literary, physics and chemistry prizes for 1939 may be awarded next year, but the 1938 chemistry prize, postponed last year, will be permanently omitted and the prize money, about $38,769, returned to the main fund.

THE Statistical Laboratory of the Iowa State College, of which Professor G. W. Snedecor is director, has recently made an agreement with the Bureau of Agricultural Economics of the U. S. Department of Agriculture to provide for joint research in the statistics of agriculture and associated statistical theory.

DISCUSSION

VITALIZING HISTORICAL GEOLOGY THROUGH FIELD TRIPS

FIELD trips, if they are to constitute a part of a course in general geology, should make a vital contribution to the course. It frequently happens that this contribution can be made more easily when the work deals with physical geology than when it deals with historical geology. Since one or more of the geologic agents are continually at work in any given region it is not difficult to plan a field trip on which the student can observe some of the physical processes which they study in class. In some regions it is a little more difficult to plan a field trip that will make a vital contribution to the study of historical geology. In some localities only a limited geologic column is accessible to the students without the expenditure of an unreasonable amount of time and money. In such cases the field trip may resolve itself into a fossil-collecting expedition or a superficial study of the rocks of the region with little or no connection with the work of the classroom.

For several years the author has been attempting to remedy this weakness and to make the field work of his students contribute more than that to their work in general geology. An article recently published by Gwynne[1] describing his efforts to make the field trip a real teaching device, suggested to our mind that the plan we had tried this year might be interesting and helpful to other geology teachers.

It so happens that the rocks in the region around New Concord are in the Conemaugh series of the Pennsylvanian system. Most of the ridges of the region are high enough to include the lower part of the Monongahela series. Since this is the case it seemed desirable to make an effort to correlate the field trips with our class discussion of the Pennsylvanian system.

As early in the spring as weather conditions would permit field work the students were given a mimeographed schedule of observations and records that were to be made on field trips. Small groups of students were then taken into the field and together with the instructor observed and recorded a typical exposure of a succession of rocks of Pennsylvanian age found in a road cut near New Concord, Ohio. Each student contributed his observations, and the members of the group recorded the observations in their note-books. The instructor directed the activities and attention when necessary, making sure that all important points were observed.

After the group instruction in the field each student chose from a list of places previously selected by the instructor a road cut, ravine or roadside ditch near New Concord in which to observe and study a consecutive succession of rock exposures. The student was instructed to observe and describe the successive exposures and their contacts as carefully as possible and to collect whatever fossils they could find. The fossils which they collected were identified in the laboratory. Thus the field trip contributed to the work in the laboratory. When a student's observation was complete the record was presented to the instructor, who checked it for completeness and accuracy. In most cases it was necessary to send the student back over the area to make a more careful and detailed observation. All observations were to be completed and the records checked and accepted before the day on which the class discussion of the Mississippian period was finished.

On the day scheduled for the beginning of the class

[1] C. S. Gwynne, SCIENCE, November 11, 1938.