pean medical students studying abroad to New York medical licensing examinations have been announced by Dr. Ernest E. Cole, acting commissioner of education. These requirements are in harmony with regulations recently promulgated by the Federation of State Medical Boards of the United States. The federation has announced that students proposing to study medicine in Europe will be subject to the following regulations for admission to the various state medical licensing examinations:

1. No American student matriculating in a European medical school subsequent to the academic year 1932–1933 will be admitted to any state medical licensing examination or to the examination of the National Board of Medical Examiners, who does not, before beginning such medical study, secure from a state Board of Medical Examiners or other competent state authority, a certificate endorsed by the Association of American Medical Colleges or the Council on Medical Education and Hospitals of the American Medical Association showing that he has met the premedical educational requirements prescribed by the aforementioned associations.

2. No student, either American or European, matriculating in a European medical school subsequent to the academic year 1932–1933 will be admitted to any state medical licensing examination, or to the examination of the National Board of Medical Examiners, who does not (a) present satisfactory evidence of premedical education equivalent to the requirements of the Association of American Medical Colleges, and the Council on Medical Education and Hospitals of the American Medical Association, and graduation from a European medical school after a medical course of at least four academic years, and (b) obtain a license to practise medicine in the country in which the medical school from which he is graduated is located.

NEW MEXICO MEETING OF THE SOUTHWESTERN DIVISION OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE thirteenth annual meeting of the Southwestern Division will be held from Monday to Thursday, May 1, 2, 3 and 4, at Las Cruces, New Mexico. The host institution will be the New Mexico College of Agriculture and Mechanic Arts, the post office address of which is State College, New Mexico.

Officers of the division are: Charles T. Vorhies, University of Arizona, *president;* F. E. E. Germann, University of Colorado, *vice-president;* Edwin F. Carpenter, Steward Observatory, University of Arizona, *secretary-treasurer.* Officers of the New Mexico Association for the Advancement of Science are: S. B. Talmage, *president,* New Mexico School of Mines, Socorro; H. C. Graham, *vice-president,* State Teachers College, Silver City; H. G. Fisher, *treasurer,* New Mexico Museum, Santa Fe; E. R. Harrington, *secretary,* High School, Albuquerque.

The general meetings will include the opening session on Monday morning; a symposium on problems relating to erosion, on Tuesday evening; and the annual banquet at which the retiring president of the division will deliver his address, on Wednesday evening. In addition there will be a luncheon symposium devoted to the historical interest of the region, in Old Mesilla, near Las Cruces, site of the signing of the Gadsden Purchase of 1853. The John Wesley Powell Lecture, now partially endowed by recent vote of the executive committee, will be delivered, probably on Monday evening, May 1, by Aldo Leopold, consulting forester, of Madison, Wisconsin.

Las Cruces lies at an elevation of 3,800 feet on the El Paso-Albuquerque branch of the Santa Fe Railroad, 40 miles north of El Paso.

Excursions and entertainment are being planned by the local committee under the chairmanship of Professor D. S. Robbins. Thursday, the last day of the meeting, has been set aside for the excursions. The points for which visits have been definitely planned are (1) White Sands, a large area of drifting dunes of gypsum sand, about 40 miles from Las Cruces; (2) the Jornada Experimental Range, about 23 miles from Las Cruces, and (3) El Paso, 40 miles southward, for its mining and metallurgical industries, its cement and electrolytic copper plants, several oil refineries, and, across the border, Juarez.

SCIENTIFIC NOTES AND NEWS

THE bicentenary of the birth of Joseph Priestley occurred on March 13. He was born in Yorkshire and came to the United States on June 4, 1794, living in Northumberland, Pennsylvania, until his death on February 6, 1814.

DR. HUGO DE VRIES, the distinguished Dutch botanist, celebrated his eighty-fifth birthday on February 16.

DR. FRANK BURR MALLORY, until his retirement in 1932 professor of pathology in the Harvard Medical School, having reached the age of seventy years, has also retired as chief of the department of pathology at Boston City Hospital. Dr. Mallory has been connected with the hospital since 1891.

SIR ROBERT HADFIELD, metallurgical engineer, managing director of Hadfield's Limited, Sheffield, has been elected an honorary member of the Academy of Sciences at Leningrad, in recognition of his work for metallurgy. The Soviet Ambassador in London, I. Maisky, gave a luncheon in honor of the occasion on February 28.

DR. ARTHUR E. KENNELLY, emeritus professor of electrical engineering, Harvard University, was elected to membership in the International Committee of Weights and Measures at its meeting in Sèvres, France, at the end of January.

PROFESSOR MARSTON T. BOGERT, of the department of chemistry at Columbia University, has been elected president of the Columbia Chapter of Sigma Xi to succeed Professor Donald E. Lancefield. Professor Harold W. Webb, of the department of physics, has become vice-president, succeeding Professor J. J. Morgan, and Professor Arthur W. Thomas, of the department of chemistry, has been named secretary-treasurer to succeed Dr. G. Marshall Kay. Membership in Sigma Xi was granted to 115 candidates, including 17 faculty members.

DR. H. LUDENDORFF, director of the Astrophysical Observatory at Potsdam, has been elected president of the German Astronomical Society, to succeed the late Dr. Max Wolf, of Heidelberg.

Nature states that at the annual meeting of the British Royal Astronomical Society held on February 10, the following officers were elected: *President,* Professor F. J. M. Stratton; *Vice-presidents,* Sir Arthur S. Eddington, Mr. John Evershed, Dr. H. Knox-Shaw and Dr. W. J. S. Lockyer; *Treasurer,* Mr. J. H. Reynolds; *Secretaries,* Mr. W. M. H. Greaves and Dr. W. M. Smart; *Foreign Secretary,* Professor Alfred Fowler.

DR. DAVID RIESMAN has been elected professor of the history of medicine in the University of Pennsylvania, filling a newly established chair.

DR. J. HENDERSON SMITH, plant pathologist of the department of mycology at the Rothamsted Experimental Station, has been appointed head of the recently organized department of plant pathology, to succeed Dr. W. B. Brierley, now professor of agricultural botany at Reading University, formerly at the head of the department of mycology at Rothamsted.

Museum News reports that N. D. Riley has been appointed keeper of the department of entomology of the Natural History Museum (British Museum) in succession to E. E. Austen. H. G. Blair has been appointed deputy-keeper of the department. W. P. Pycraft has retired from the post of assistant keeper in the department of zoology of the Natural History Museum (British Museum).

ACCORDING to *Industrial and Engineering Chemistry,* George P. Gray, for the past two years director of the California Soil Improvement Committee, has become associated with the Colloidal Products Corporation, San Francisco, to assist in the continuation of the company's research program on the investigation of spreaders and fixators in their relation to spray material.

JOHN R. HEWETT, editor of the *General Electric Review* for nearly twenty years, has retired because of ill health.

DR. GUSTAV ZECHEL, of the department of anatomy of the College of Medicine, University of Illinois, has received a grant from the American Medical Association for the purchase of a microcinematographic apparatus which will facilitate his studies on the growth of malignant cells. Dr. Arthur Knudson, professor of biochemistry, and Dr. Lloyd H. Ziegler, professor of neuropsychiatry of the Albany Medical College have been allotted a grant for the study of the remote effect of rickets.

H. A. BENDIXEN, of Washington State College and Experiment Station, has received a grant from the Oberlaender Trust of the Carl Schurz Memorial Foundation, under which he will study problems of dairy manufactures and travel in Scandinavian countries, Germany and Russia for one year. During the year's leave of absence Dr. N. S. Golding, associate professor of dairying in the University of British Columbia, will serve in his place as associate professor of dairy husbandry.

PROFESSOR KNUT LUNDMARK, director of the University Observatory, Lund, Sweden, has been spending several weeks studying the collection of nebular photographs at the Steward Observatory of the University of Arizona, and Dr. Sture Holm, of the Lund Observatory, has been spending two months on photometric investigations with the three-foot reflecting telescope of the observatory.

AN Associated Press dispatch states that Professor Auguste Piccard is planning a balloon ascent to study cosmic rays in the stratosphere this summer, starting from the grounds of the World's Fair at Chicago, provided that arrangements for financing his ascent can be made with American balloon and metal manufacturers.

SIR HENRY H. DALE, director of the National Institute for Medical Research, London, will deliver the Dohme Lectures at the Johns Hopkins Medical School on April 20, 21 and 22.

DR. CURT STERN, of the Kaiser Wilhelm Institute for Biology in Berlin, delivered a lecture at the University of Kansas recently on "The Structure of the Chromosomes." He is now engaged in a tour as a speaker for Sigma Xi, honorary science fraternity. Following his address at the University of Kansas, he went to the University of Missouri.

DR. J. E. ACKERT, dean of the division of graduate study and professor of zoology and parasitologist at Kansas State College, Manhattan, addressed the Snow Zoological Club at the University of Kansas on February 21, on "Host-Parasite Relationships between Chickens and their Intestinal Nematodes."

DR. EDWARD MELLANBY, professor of pharmacology at the University of Sheffield, will deliver on June 8, 13 and 15 the Croonian Lectures on "Nutrition and Disease—the Interaction of Clinical and Experimental Investigations."

THE Romanes Lecture at the University of Edinburgh will be given this year by Dr. Heinrich Wieland, professor of chemistry at Munich.

THE Stuart McGuire Lectureship series at the Medical College of Virginia, Richmond, will be held on April 25, 26 and 27. Dr. Ronald T. Grant, of the department of clinical research, University College Hospital Medical School, London, will give three lectures on "The Pathology of Endocarditis" and a fourth lecture on "The Arteriovenous Anastomoses in Human Skin"; Professor Louis Hamman, of the Johns Hopkins University, will lecture on cardiac burgh will be given this year by Dr. Heinrich Wieversity, will hold a clinic.

THE second annual Sigma Xi Day of the Rochester Chapter was held at the University of Rochester on February 22. The principal event was the evening lecture, on "Lung Injuries of Industrial Importance resulting from Dust Inhalation," delivered by Dr. Cecil K. Drinker, head of the department of physiology at the School of Public Health, Harvard University. In addition, the program included a morning lecture intended especially for children, a series of seven lecture-demonstrations of current scientific research by members of the chapter and a formal dinner. "Light—Where it Comes from, Where it Goes" was the title of the children's lecture, given by Dr. Brian O'Brien, professor of physiological optics at the University of Rochester.

MEMBERS of the science faculty of Ohio University have organized a Sigma Xi Club. Officers elected for the current year are: *President,* Professor F. H. Krecker, head of the department of biology; *Vice-president,* Dr. F. B. Gullum, associate professor of chemistry, and *Secretary-treasurer,* Dr. D. D. B. Green, assistant professor of physics. Members are: Professors Paulsen, Anderson and Patrick, of the department of psychology; Professors Stehr, Rowles, Frey and Krecker, of the department of biology; Professors Morton, Reed and Starcher, of the department of mathematics; Professors Gullum and Clippinger, of the department of chemistry; Professors Heil and Green, of the department of physics, and Professor Clark, of the department of civil engineering. Meetings will be held bi-monthly throughout the year. The subjects of papers to be presented during the current year are: "Radio Thermy," "Principles of Biologic Control," "The Goal Gradient Process of Learning," "Concepts of Infinity," "A Study of Stresses in Arches by Means of Small Models," and "Relation of Clumping to Resistance to Toxic Substances in Invertebrates."

THE department of geology and geography of Northwestern University announces the continuation of its exchange arrangement with the University of Cincinnati, initiated last year. Early in March Dr. Nevin M. Fenneman, professor and head of the department of geology and geography, University of Cincinnati, gave four lectures at Northwestern University, and Dr. J. T. Stark, associate professor of geology, Northwestern University, will give a similar series of lectures at the University of Cincinnati. Professor Stark's lectures will deal principally with the geology of the Precambrian rocks of the United States and with the methods used in interpreting their structure and genesis; they will be delivered at Cincinnati during the week of March 20. The lectures given by Professor Fenneman dealt chiefly with problems of regional physiography. The subjects of these lectures were as follows: "The Middle Rocky Mountains," "The Appalachian Peneplains," "The Southern Rocky Mountains" and "The Grand Canyon District." In addition, Professor Fenneman spoke on the night of Thursday, March 9, before the Geological Society of Chicago on "Cyclic and Non-Cyclic Erosion."

ACCORDING to *Nature,* progress has been made in the discussion of the proposal to institute an international congress of the ethnological and anthropological sciences. Arrangements are now being made for a preliminary conference for further discussion to be held in Basel on April 20, 21 and 22. Invitations to the conference are being issued by the Royal Anthropological Institute of Great Britain, while the local arrangements are in the hands of Dr. Felix Speiser, director of the Museum of Ethnology, Basel. The conference will be welcomed on behalf of the City and the Education Committee, and its sessions will be held in the Burgeratsaal. The subjects for discussion are the scope of the proposed congress and its relation to existing congresses of like character, such as the International Congress of Americanists and the International Congress of Prehistoric and Protohistoric Sciences; constitution and procedure, and the date and place of the first meeting. On this last point, it has been suggested that meetings should take place in years alternate to those of the Prehistoric and Protohistoric Sciences Congress and coinciding once in every four years with the European meetings of the Americanists' Congress.

THE thirteenth annual summer term of the American School of Prehistoric Research will open in Prague on June 28, and close in Berlin on August 21. Dr. V. J. Fewkes, who last year conducted the expedition to Yugoslavia sponsored jointly by the school, the Fogg Art Museum of Harvard University and Peabody Museum of Harvard, will again be in charge as associate director for the summer term. The program will consist of a study of museum collections, field excursions, conferences, excavations (including field technique) and examinations. Requests for further information should be addressed to Dr. George Grant MacCurdy, director, Old Lyme, Connecticut.

THE department of biology of the College of the Pacific at Stockton, California, will open a Marine Biological Station on the Pacific Coast. Courses in elementary and advanced biology will be offered during the regular summer session. Students may spend three additional weeks at the station to carry out research in invertebrate zoology. Facilities will be offered for intensive laboratory work in biology and zoology. Student living quarters will be established close to the station at a low rate, and the cost of board will probably not exceed the amount charged at the college. It is hoped eventually to establish a permanent Pacific Biological Marine Station with courses continuous throughout the year.

Museum News states that the Adler Planetarium and Astronomical Museum, on Northerly Island, Chicago, will complete the lower floor and install additional ventilating machines in the next two months in order to take care of crowds expected at the time of the World's Fair this summer. In order to make the additions the planetarium is closed for the two months. During the fair lectures will be given every hour instead of twice a day.

Nature reports that Sir Dugald Clerk, who died on November 12, bequeathed £3,000 to the Institution of Civil Engineers; £2,000 to the Royal Society; £1,000 to the Royal Institution; £1,000 to the Royal Society of Arts; £1,000 to the Institution of Mechanical Engineers; £1,000 to the University of Glasgow; £1,000 to the University of Leeds; £1,000 to the University of St. Andrews; £1,000 to the University of Manchester; £1,000 to the University of Liverpool. The residue of the property is to be divided into thirty-one parts; three of these parts are to go to the Institution of Civil Engineers; two to the Royal Society; one to the Royal Institution; one to the Royal Society of Arts; one to the Institution of Mechanical Engineers; one each to the Universities of Glasgow, Leeds, St. Andrews, Manchester and London.

DISCUSSION

NATURE SANCTUARIES—A MEANS OF SAVING NATURAL BIOTIC COMMUNITIES

ONE of the characteristic things about organisms is their fluctuations in abundance from time to time. A community is an assemblage of plants and animals—a living thing which after a period of stress will never be exactly the same again. A nature sanctuary is a community or community fragment covering a certain area within which the fluctuations in abundance and other natural changes are allowed to go on unmodified and uncontrolled. Such areas afford opportunity for the study of the dynamics of natural biotic communities.

Outside of modern ecology there has been little or no tendency towards the development of specialists in the entire life of natural communities. The trend of research and education is toward specialization on particular objects or particular organisms. Perhaps one reason why nature study has been unsuccessful is because it is not the study of nature but of single natural objects or groups of objects which constitute a small part of any natural assemblage of organisms. Often this has resulted in the emotional protection of animals singled out by popular prejudice. In general, from a philosophical and practical view-point, the unmodified assemblage of organisms is commonly more valuable than the isolated rare species. However, because the significance of the unmodified assemblage is popularly ignored, the whole is commonly sacrificed in the supposed interest of the rare species. Usually neither need be sacrificed in any large natural area.

The nature sanctuaries are surrounded by areas in a less natural state, called buffer areas of partial protection. In a buffer area the vegetation is only slightly modified by man. It is a region of partial protection of nature and is zoned to afford suitable range for roaming animals under full protection. Since nature sanctuaries are areas in which natural forces are allowed free play, they may be classified with regard to the organisms now missing from the primeval community which once occupied the same area.

(1) First-class nature sanctuaries include areas of original vegetation containing all the animals which are historically known to have occurred there. (2) Second-class nature sanctuaries include (a) second growth areas approaching maturity with animals as in the first-class type and (b) areas of original vegetation from which not more than two important species of animals are missing. (3) Third-class nature