opinion handed down by Judge J. Earl Major in U. S. District Court in Springfield, Ill.

Dismissing a bill of complaint asking that federal officers be enjoined from enforcing this year's waterfowl-hunting regulations, Judge Major declared that the plaintiffs had no property right in the migratory birds but "only such permissive privileges as the governmental authorities may decree."

Led by G. G. Brandenburg, president of the Illinois Sportsmen's Association, and including five of that state's hunting clubs, the plaintiffs had alleged that the enforcement of the regulations would cause a depreciation in the value of property which they had acquired as hunting grounds. The judge, however, pointed out that "those who spend large sums of money in the purchase of land and in improving and equipping the same for the hunting and taking of migratory birds must have done so with the knowledge, actual or implied, that they had no property right" in the birds.

The "matter in controversy," the judge concluded, was not the damage alleged to be sustained in property depreciation, but rather the restriction on the plaintiff's taking and possessing waterfowl. Damage or injury suffered because of decreased real estate values he considered "purely incidental or collateral to the object and purposes of the suit." Ruling that such damage could not be taken into consideration in determining the amount in controversy, Judge Major reached the conclusion that this did not exceed $3,000 and was therefore outside the jurisdiction of the Federal Court.

This conclusion, together with the ruling that no property right justifying an injunction was involved, according to the judge, precluded the consideration of other questions presented, including the allegation that the regulations were made without regard to zones of temperature or to the distribution, abundance, economic value, breeding habits and migrations of the birds. Biological Survey naturalists who were in court prepared to present the data used in formulating the regulations, and local sportsmen who supported the conservation policies of the bureau were thus not called upon to testify.

This year's regulations were based on the results of extensive investigations showing that the alarming condition of the birds made a short season with severe restrictions the only alternative to a complete prohibition of hunting. Though interested primarily in the protection of the birds, the Biological Survey points out that only the necessary restrictions indicated by the condition of the species are recommended, and the restrictions are for the purpose of perpetuating the sport of wildfowling rather than of interfering with it.

THE PRESIDENT OF THE AMERICAN CHEMICAL SOCIETY

DR. EDWARD R. WEIDLEIN, director of the Mellon Institute of Industrial Research, Pittsburgh, has been elected president of the American Chemical Society for 1937. Dr. Weidlein was nominated in a national poll of the 19,000 members. The final choice was made by the society's council from the four nominees receiving the largest number of votes. Dr. Weidlein will serve as president-elect during 1936.

On January 1, Professor Edward Bartow, head of the department of chemistry and chemical engineering in the State University of Iowa, now president-elect, will take office as president of the society, succeeding Professor Roger Adams, of the University of Illinois.

Dr. Weidlein was born in Augusta, Kansas, July 14, 1887. He was graduated from the University of Kansas in 1909, and received the master of arts degree in 1910. He was industrial fellow of the university from 1909 to 1912. He holds the honorary degree of doctor of science from Tufts College, 1924, and of doctor of laws from the University of Pittsburgh, 1930.

Dr. Weidlein became associate director of the Mellon Institute in 1916, after serving four years as senior industrial fellow. In 1921 he was named director. His research has been chiefly in the fields of heat insulation materials, hydrometallurgy, camphor and epinephrine. Recently he has devoted himself to the methodology of industrial research.

Dr. Weidlein was chairman of the fuel committee of the National Research Council in 1918, and is now a member of the central petroleum committee and of its division of engineering industrial research. He was a chemical expert to the War Industries Board in 1918 and 1919.

He is a past president and director of the American Institute of Chemical Engineers and a fellow of the American Association for the Advancement of Science and of the American Institute of Chemists, as well as a member of other organizations in this country and abroad. He is a trustee of the University of Pittsburgh and a director of the Forbes National Bank, Pittsburgh.

SCIENTIFIC NOTES AND NEWS

THE Penrose Medal of the Geological Society of America has been awarded to Dr. Reginald Aldworth Daly, Sturgis-Hooper professor in the department of geology of Harvard University. It will be presented at the annual dinner of the society at the Waldorf-Astoria Hotel, New York City, on December 27. The

medal was endowed by the late Dr. R. A. F. Penrose in 1927 and is awarded by the council of the society only at such times as it may decide proper "in recognition of eminent research in geology and of outstanding original contributions or achievements which mark a decided advance in the science of geology."

THE Henry Grier Bryant Gold Medal of the Geographical Society of Philadelphia was presented to Dr. Isaiah Bowman, president of the Johns Hopkins University, formerly director of the American Geographical Society, on December 1. This was the first award of the medal, which was established in honor of the late president emeritus of the society, Henry Grier Bryant, explorer and geographer. Dr. William E. Lingelbach, professor of modern European history at the University of Pennsylvania and formerly president of the society, in presenting the medal characterized Dr. Bowman as "scholarly and original in research, philosophical in his thinking, and concerned with the influence of geography on institutions and on society."

THE Catherine Wolfe Bruce Gold Medal of the Astronomical Society of the Pacific has been awarded to Dr. A. O. Leuschner, director of the Students' Observatory of the University of California, for distinguished services in astronomy. The award is for the year 1936, and formal presentation probably will be made to Dr. Leuschner in January.

THE Prix Binoux of 1935 for the history and philosophy of science has been awarded by the Paris Academy of Sciences to Dr. George Sarton, editor of *Isis* and associate of the Carnegie Institution of Washington, for the published volumes of his introduction to the "History of Science." This is the second time that the academy has awarded the Prix Binoux to Dr. Sarton; it was first awarded to him in 1915.

THE Edison Medal for 1935 has been awarded by the American Institute of Electrical Engineers to Dr. Lewis B. Stillwell, "for distinguished engineering achievements and his pioneer work in the generation, distribution and utilization of electric energy." The Edison Medal was founded by associates and friends of Thomas A. Edison, and is awarded annually for "meritorious achievement in electrical science, electrical engineering or the electrical arts" by a committee consisting of twenty-four members of the American Institute of Electrical Engineers. The following have been recipients of the medal: Elihu Thomson, Frank J. Sprague, George Westinghouse, William Stanley, Charles F. Brush, Alexander Graham Bell, Nikola Tesla, John J. Carty, Benjamin G. Lamme, W. L. R. Emmet, Michael I. Pupin, Cummings C. Chesney, Robert A. Millikan, John W. Lieb, John White Howell, Harris J. Ryan, William D. Coolidge, Frank B. Jewett, Charles F. Scott, Frank Conrad, Edwin W. Rice, Jr., Bancroft Gherardi, A. E. Kennelly and Willis R. Whitney. The medal will be presented to Dr. Stillwell during the winter convention of the American Institute of Electrical Engineers to be held in the Engineering Societies Building, New York, N. Y., from January 28 to 31.

THE title of doctor *honoris causa* was recently conferred by the University of Paris on Dr. B. A. Houssay, professor of physiology in the faculty of medicine in the University of Buenos Aires. Dr. Houssay recently gave the Dunham lectures at Harvard University and will make one of the general addresses at the St. Louis meeting of the American Association for the Advancement of Science.

ACCORDING to the *Journal* of the American Medical Association, a bust of Dr. Garcia Tapia, professor of otorhinolaryngology in the faculty of medicine at Madrid, and a bust of Dr. José Luis Lopez de Haro, were recently unveiled. Dr. Garcia Tapia's bust was unveiled at Riaza, Segovia, and Dr. Lopez de Haro's bust was unveiled in Almaden de Minas. Both physicians are living.

DR. GEO. H. SHERWOOD, curator-in-chief of education and honorary director of the American Museum of Natural History, was elected president of the New York Academy of Sciences at the annual meeting held at the museum on December 16. Vice-presidents elected were: George T. Finlay, Ross A. McFarland, Horace W. Stunkard and Elsie Clews Parsons. Dr. Marshall A. Howe, director of the New York Botanical Garden, delivered the address of the retiring president on "Plants that Form Reefs and Islands," and Dr. William Crocker, director of the Boyce Thompson Institute, showed motion pictures illustrating the effect of toxic and stimulative materials on plants.

DR. GEORGE FINLAY SIMMONS, a member of the department of biology of the University of Montana for the past two years, has been elected president of the university.

DR. EUGENE MAXIMILIAN KARL GEILING, associate professor of pharmacology at the Johns Hopkins University, has been appointed professor of pharmacology and head of the newly established department of pharmacology at the University of Chicago. Pharmacology has hitherto been included in the department of physiological chemistry and pharmacology. Under the new arrangement it becomes a separate department and the older department, of which Professor Fred C. Koch is chairman, has been renamed the department of biochemistry.

DR. HARRY E. HIMWICH, associate professor of physiology at Yale University School of Medicine, has

been made assistant professor of physiology at Albany Medical College, succeeding Dr. F. S. Randles, who recently resigned. Dr. Joseph L. Schwind, associate professor of anatomy at Georgetown University School of Medicine, Washington, D. C., has been appointed to a similar position at Albany, succeeding Dr. Donald H. Barron, who has resigned to pursue research at the University of Oxford.

PROFESSOR RUDOLPH CARNAP, an authority on the philosophy of science, a member of the faculty of the German University of Prague, will teach at the University of Chicago this winter. He and Professor Charles Morris, of the University of Chicago, this summer organized the International Congress for the Unity of Science, which met at the Sorbonne, Paris, in September.

DR. GEORGE F. LAMB, professor of geology at Mount Union College, has been given leave of absence on account of ill health. Dr. John Robert Cooper is serving as substitute professor of geology during the present academic year.

PROFESSOR KENNETH NEVILLE MOSS, professor of mining at the University of Birmingham, has been appointed to succeed Professor Walter Stiles as dean of the faculty of science.

AT the University of London, Dr. Eric Boyland, since 1931 physiological chemist at the Research Institute of the Cancer Hospital, has been appointed university reader in biochemistry and Dr. V. B. Wigglesworth, since 1926 assistant in the department of entomology at the London School of Hygiene and Tropical Medicine, has been appointed university reader in entomology.

THE retirement from active service is announced of Professor Alfred Fischel, the director of the Institute of Embryology at the University of Vienna.

DR. LEWIS H. WEED, professor of anatomy in the School of Medicine of the Johns Hopkins University, and James Ford Bell, a business man of Minneapolis, have been elected trustees of the Carnegie Institution of Washington.

DR. JOSEPH I. LINDE, clinical professor of pediatrics at the Yale University School of Medicine, has been appointed health officer of New Haven, succeeding Dr. Leonard Greenburg, who recently resigned to become associated with the New York State Department of Labor.

V. L. HARPER has been made chief of the Division of Forest Management at the Southern Forest Experiment Station, New Orleans, La. Mr. Harper is being transferred from Lake City, Florida, where he was in charge of the naval stores investigations.

OWING to the removal of Dr. T. L. Guyton, the secretary of the Pennsylvania Academy of Science, to another state, Dr. V. Earl Light has been appointed acting secretary and communications may be addressed to him, care of Lebanon Valley College, Annville, Pa. The next annual meeting of the academy will be held at the State Teachers College, at Indiana, Pa., on April 10 and 11.

THE following appointments are announced in *Nature*, recently made by the British Secretary of State for the Colonies: F. J. Pound, to be agronomist, Department of Agriculture, Trinidad; N. H. Sands, to be agricultural officer, Malaya; F. W. Toovey, to be botanist, Department of Agriculture, Nigeria; W. E. Miller Logan, to be assistant conservator of forests, Gold Coast; A. C. Russell, to be assistant conservator of forests, Gold Coast; T. N. Wardrop, to be assistant conservator of forests, Nigeria; J. B. Alexander, to be geologist, Nyasaland; A. Cawley, to be engineering geologist, Tanganyika; W. H. Reeve, to be assistant field geologist, Tanganyika; B. N. Temperley, to be assistant field geologist, Tanganyika; W. J. B. Johnson, to be canning officer, Department of Agriculture, Malaya; A. A. Abraham, assistant agricultural superintendent, to be agricultural superintendent, British Guiana; G. W. Lines, lately superintendent of agriculture, to be superintendent of agriculture, Nigeria; T. H. Marshall, senior agricultural assistant, to be district agricultural officer, Tanganyika, R. J. M. Swynnerton, agricultural assistant, to be district agricultural officer, Tanganyika.

AT the recent meeting of the Research Committee of the Virginia Academy of Science, grants in aid of research were made as follows: Dr. W. E. Bullington, of Randolph-Macon College, for the purchase of a camera attachment; Dr. M. J. Murray, of Lynchburg College, for the purchase of certain chemicals; Dr. C. C. Speidel, of the University of Virginia, for the purchase of motion picture film, and Dr. T. W. Turner, of Hampton Institute, for the purchase of certain supplies. Aid was also extended to Dr. E. P. Johnson, of the Virginia Polytechnic Institute, which obtained for him an apochromatic objective for photomicrographic work. The payments to Dr. Murray and Dr. Speidel were made by the American Association for the Advancement of Science under the new arrangement by which research funds may be distributed through the affiliated academies.

THE U. S. Biological Survey announces that cooperative agreements have been entered into with a land grant college and the Conservation Commission in eight states under which research and demonstration in wildlife management will be carried on. Each unit will undertake a major research problem, will assist

in finding solutions to technical problems arising in wildlife administration, cooperate with management demonstration of locally important species, and carry on extension and educational work as may be feasible. The men selected to carry on the work at the various colleges are the following: Harold S. Peters, Alabama Polytechnic Institute, Auburn; Dr. Paul D. Dalke, Connecticut State College, Storrs; Logan J. Bennett, Iowa State College, Ames; Clarence M. Aldous, State University, Orono, Maine; Arthur S. Einarsen, Oregon State College, Corvallis; Dr. Walter P. Taylor, Texas Agricultural and Mechanical College, College Station; Dr. D. Irvin Rasmussen, Utah Agricultural College, Logan, and Charles O. Handley, Virginia Polytechnic Institute, Blacksburg.

PROFESSOR W. PAULI, of the University of Zurich, will give a series of three lectures at the Carnegie Institute of Technology on January 13, 14 and 15 on theoretical physics. The lectures are part of a regular program of public lectures sponsored by the institution. Professor Pauli is in this country for a year at the Institute for Advanced Study at Princeton.

FOUR lectures, concerned with the nature of some major visual problems and with the biological arrangements which underlie their solution, will be given by Dr. Selig Hecht, professor of biophysics at Columbia University, at the New School for Social Research, New York City, on Wednesday evenings at 8:20 o'clock, on January 8, 15, 22 and 29.

DR. THOMAS M. RIVERS, of the Rockefeller Foundation, New York City, gave on December 10 the third lecture in the Smith-Reed-Russell series for this year at the School of Medicine of the George Washington University. The subject of the address was "Filterable Virus Diseases of the Central Nervous System."

THE United States National Committee of the International Commission on Illumination held its annual meeting at Engineering Societies' Building, New York City, on November 15. G. H. Stickney was reelected president and Professor H. B. Dates was elected secretary-treasurer. Messrs. Stickney and Dates were also chosen as U. S. Members of the I. C. I. Executive Committee. The committee approved, with only a few minor reservations, all the resolutions adopted at the meeting in Karlsruhe, Germany, last July. Professor C. D. Fawcett was reappointed director of the secretariat on lighting education and Professor H. B. Dates, of the secretariat on lighting practice. U. S. representatives were appointed for the new list of technical committees. Other plans were formulated in preparation for the convention which is scheduled to be held in Holland in 1938. The commission and the U. S. committee are both in prosperous condition and are reported to be undertaking significant work of importance in the lighting field. Among recent accomplishments are the assurance of a satisfactory primary standard of light, the elimination of discrepancies in photometry, and a guiding outline of practice and regulations for aviation lighting.

ACCORDING to the interim report of the American Film Institute, a complete catalogue of educational films in the United States has been prepared. By carefully checking the United States copyright records for a number of years, and lists of commercial, scientific, school, governmental, amateur and other groups, it was possible to locate more than 1,800 sources for films that have more or less educational value. A film catalogue card was prepared covering about 100 items and representing the consensus of opinion of many persons using or producing films. The United States Office of Education, through the courtesy of Dr. John W. Studebaker, commissioner, cooperated with the council in sending out about 10,000 of these cards. As they are returned by the film owners, the information will be carefully indexed, and for the first time in this country there will be accumulated a large body of information on all existing films suitable for education. Both the Office of Education and the American Council on Education desire that wide use be made of this information and therefore various types of film lists will be prepared. Steps will be taken to keep this film information up to date by a careful check on all new films. From such lists committees, such as the one in physical education, will be able to obtain information quickly about all films available in a given field. This information will also be of great value to teachers, administrators, CCC Camp advisers and others who use films as instruction aids.

THE Air Hygiene Foundation of America, Inc., has been formed by a group representing various industries, with headquarters at Thackeray Ave. and O'Hara St., Pittsburgh, Pa. The purposes of this organization are to conduct investigations of and to stimulate research on problems in the field of air hygiene and to gather and disseminate factual information. It will also cooperate with and assist other agencies active in this field and will collaborate in the coordination of such research efforts. A comprehensive investigation has been begun at Mellon Institute of Industrial Research, Pittsburgh, sponsored by the Air Hygiene Foundation, in which the hygienic, technologic and economic aspects of air contamination, especially by dust in the industries, will be studied. H. B. Meller, who has been appointed managing director, will carry out the investigation. He will be aided by Dr. F. F. Rupert, an industrial fellow since 1913, specializing in the field of physical chemistry. The medical adviser will be Dr. Samuel R. Haythorn, professor of

preventive medicine in the School of Medicine of the University of Pittsburgh and director of the Singer Research Laboratories.

AT the annual meeting of the Association of Consulting Chemists and Chemical Engineers, held on October 22, several members brought up the definition of the term "scientific opinion" employed in the Copeland Bill. This bill, which provides for food and drug regulations, has passed the Senate and now rests with the House Committee on Interstate and Foreign Commerce. In it the term "scientific opinion" is defined as "the opinion, within their respective fields, of competent pharmacologists, physiologists or toxicologists." Believing that this definition is inaccurate and narrow the association passed a resolution suggesting the substitution of the present definition by "Scientific opinion is the opinion, within their respective fields, of competent specialists in the basic or applied sciences."

DISCUSSION

GEOLOGICAL MAPPING OF THE OCEAN BOTTOM

IT is becoming more evident all the time that in the long neglect by geologists of the study of the ocean floor a gold mine of information has been left untouched. The common belief among geologists that the continental shelves represent great piles of sediment built out from the lands onto the deep ooze and clay-covered ocean basins has naturally deterred stratigraphers from attempting to trace the rock formations of the ocean floor. While this belief will probably continue to be taught to budding geologists for another generation, it is perfectly evident to all of us who are investigating the problem that there are extensive areas of rock bottom on the continental shelves, on the continental slopes and even on the deep ocean floors. Reports of rock bottom have been made for years by the various coastal surveys of the world and various fragments of the rock have been brought up from time to time, including some dredged by the writer. In the summer of 1934 H. C. Stetson, of Woods Hole Oceanographic Institution, succeeded in breaking off fragments of rock from a submarine canyon wall with fossils of definite age. During the past summer, working with the Scripps Institution and later with the California Fish and Game Commission boat, the writer, using similar equipment—that is, a heavy dredge attached to the boat by heavy wire —was able to obtain rock from five canyons off the California coast. Excellent fossils were dredged from the walls of the Monterey Canyon which preliminary examination have shown to be of Pliocene or Pleistocene age. Less certain fossils were obtained from the walls of La Jolla submarine canyon, but the character of the rock made it possible to establish the age as Eocene from comparison of nearby outcrops on land. Also, the age of the rock into which the canyon north of the Mexican Coronados Islands was cut appears to be Miocene or Pliocene on stratigraphic grounds. That rock is not difficult to find may be indicated by the fact that about four out of five of the attempted dredgings were successful.

It need not be supposed that these reports of what constitute real geological mapping of the ocean floor come from very unusual localities which are especially favorable for such results. To be sure, the sides of canyons are good places to obtain rock, but soundings show that these submarine canyons are to be found around the continental margins off practically all coasts of the world. Judging from the success of dragging the walls of these canyons and also from the many reports of rock bottom by coast surveys on the shelves and slopes, it seems likely that a large part of the millions of square miles of territory included in the continental shelves and slopes may be added to the geologically mappable areas.

Regarding the deep ocean the problem is more complicated. Fragments of rock have been brought up by the various oceanographic expeditions from abyssal depths, although it has generally been assumed that these blocks represented erratics dropped by icebergs or floating vegetation. The blocks were always obtained while dredging for some biological purpose and as a rule have been thrown overboard or subsequently lost or at any rate neglected. There are reports of lava obtained from the deep Pacific. There should be good possibilities of obtaining rock by dragging up the sides of some of the precipitous slopes which echo soundings are showing to be not uncommon in the deep oceans. Probably dredging around the oceanic islands where there has been recent vulcanism would also bring up volcanic products.

It is interesting to speculate on the results which extensive dredgings would have on the geological science. It has often been said that the continental shelves probably contain many fragments of the stratigraphic record which were not preserved on land partly because of epochs when the inland seas were practically completely withdrawn. Now with the steep walls of submarine canyons, often many thousands of feet high, to draw upon, it is certainly highly probable that some parts of this lost record will be discovered. Incidentally new diving apparatus makes it perfectly possible to go down and look at these walls to depths of over a thousand feet and perhaps to as much as 3,000 feet.

One of the most debated problems in geology has been concerning the cause of similarities shown now