in the Psychological Laboratory at the University of Cambridge.

Dr. Anderson proposes to work in Germany, the others at centers in the United States. Dr. Rawdon-Smith will hold his fellowship for six months only.

FIRST AWARD OF THE FRANCIS P. GARVAN MEDAL

DR. EMMA P. CARR, head of the department of chemistry at Mt. Holyoke College, was awarded on September 8 the first Francis P. Garvan Gold Medal, established "to honor outstanding women chemists." Of those starred in American Men of Science 4.6 per cent. are women. The award, announced by the American Chemical Society at its ninety-fourth meeting, was given to Dr. Carr in recognition of "her work in physical chemistry, especially on the structure of organic molecules by means of absorption studies in the far ultra-violet portion of the spectrum."

According to the Committee of Award, of which Dean Frank C. Whitmore, of Pennsylvania State College, president-elect of the society, was chairman, Dr. Carr has become an authority in this field of chemistry. She developed at Mt. Holyoke an unusual research technique in which organic chemists, physical chemists and physicists cooperate closely.

Dr. Carr, now in San Francisco, will sail soon for Australia on an educational mission. A paper describing the results of her work and that of her coworkers was read by Professor Mary L. Sherrill, of Mt. Holyoke College, before the Division of Organic Chemistry. The report confirmed the configuration of two different forms of hydrocarbon molecules, the principal constituents of gasoline. By means of absorption spectra, the theory of the structure of the cis and trans 2-butene isomers, or compounds with an identical number of hydrogen and carbon atoms but different arrangement of atoms around the double bond, was borne out. Dr. Carr has also identified for the first time the pure cis and trans isomers of 2-pentene, a third hydrocarbon molecule. This additional data of a purely scientific nature will aid the petroleum chemist. Dr. Carr's reported researches have dealt with the energy relationships of the hydrocarbon molecules, especially of the double bond, involving the olefins.

Dr. Carr was born in Holmesville, Ohio, in 1880. She began the study of chemistry under Professor William McPherson, of the Ohio State University, continuing at Mt. Holyoke College and at the University of Chicago. From the latter institution she received the degrees of bachelor of science and doctor of philosophy, studying under Dr. Julius Stieglitz.

She became head of the department of chemistry at Mt. Holyoke in 1913 after some years of teaching and research and began her spectrographic work in 1919. She has traveled widely, and has carried on research under A. W. Stewart in Belfast, Ireland, and Victor Henri, of the University of Zurich, Switzerland. Last year she was delegate from the National Research Council to the International Chemistry Union meeting in Lucerne.

The work of Dr. Carr and her associates at Mt. Holyoke has been supported by the National Research Council, which provided a vacuum spectrograph and technical assistance, and by the Rockefeller Foundation, which has granted financial aid for absorption spectra research with unsaturated hydrocarbons. The medal will be formally presented to Dr. Carr at the ninety-fifth meeting of the society at Dallas, Texas, on April 18, 1938.

SCIENTIFIC NOTES AND NEWS

DR. SIMON FLEXNER, director-emeritus of the laboratories of the Rockefeller Institute for Medical Research, will sail for England on September 25 to take up his work as Eastman visiting professor at the University of Oxford.

DR. JAMES ROWLAND ANGELL, formerly professor of psychology at the University of Chicago and later president of Yale University, recently appointed educational director of the National Broadcasting Company, will leave for Europe early in October. He will make a study of educational broadcasting in England, Belgium, Holland and the Scandinavian countries.

DR. LOUIS MARTIN, director of the Pasteur Institute, has been elected a member of the French Academy of Sciences to succeed Dr. Jean Charcot, who was drowned when the *Pourquoi Pas?* foundered off the coast of Iceland. Dr. Charcot is succeeded in the French Academy of Medicine by the author Dr. Georges Duhamel.

PRESENTATION of the first German national prizes, established in 1936 as a substitute for the Nobel prizes as part of the protest of the German Government against the award of the Nobel peace prize to Carl von Ossietzky that year, was made on September 7 at a cultural session of the Nazi Party Congress. A prize of $40,000 was awarded to Dr. Alfred Rosenberg, official philosopher of national socialism; one prize was divided between Professor August Bier, for his work with new methods in surgery, and Professor Ferdinand Sauerbruch, for his work in the sur-

gery of the lungs; the third award was given to Dr. Wilhelm Filchner, who has led exploring expeditions into Mongolia and Tibet.

Nature states that the honorary degree of doctor of science has been conferred by the University of Birmingham on Dr. C. C. Paterson, director of the Research Laboratories of the General Electric Company, "in recognition of his many contributions and services to electrical science." Dr. Paterson was for sixteen years a member of the staff of the National Physical Laboratory, where he established and administered the Electrotechnics and Photometry Divisions of the Laboratory until 1918. He then under Lord Hirst initiated the General Electric Company Laboratories at Wembley. His chief personal contributions and scientific papers have been in the fields of light and lighting.

THE decoration of chevalier of the Legion of Honor of the French Republic has been conferred on George E. Pearson, the governing director of the Wellcome Foundation, Ltd.

THE Medical Association of Kinesiology at Buenos Aires has elected Dr. Max Westenhöfer, professor of general pathology and pathological anatomy in the University of Berlin, as an honorary member.

HENRI PITTIER celebrated his eightieth birthday in Caracas, Venezuela, on August 13. The Secretary of Education of Costa Rica directed to him a letter of congratulation, and of appreciation of his long years of scientific and educational labor in that country. He ordered also that an account of his work should be given on August 13 in all the secondary schools. A session of the Rotary Club of San José in honor of the occasion was attended by numerous government officials and many representatives of scientific and educational circles.

DR. OTIS W. CALDWELL, general secretary of the American Association for the Advancement of Science, was elected at the meeting at Tokyo of the World Federation of Education Associations chairman of the newly organized International Association of Science Teachers. H. A. Carpenter, specialist in science in the schools of Rochester, N. Y., was elected secretary.

DR. OSCAR V. BRUMLEY, dean of the College of Veterinary Medicine of the Ohio State University, was elected president of the American Veterinary Medical Association at the recent convention held in Omaha, Nebr.

AT the Pennsylvania State College and Agricultural Experiment Station the retirement is announced of Frank D. Gardner, head of the department of agronomy for twenty-nine years, and of J. A. Ferguson, head of the department of forestry for twenty-seven years. Dr. A. L. Patrick, professor of soil technology and soil technologist at the college, has become associated with the Soil Conservation Service of the U. S. Department of Agriculture.

KNOWLES A. RYERSON, in charge of sub-tropical food investigations at the office at Riverside, Calif., of the Bureau of Plant Industry, has been appointed professor of agriculture and director of the branch of the College of Agriculture of the University of California at Davis. Eugene L. Jack has been appointed assistant professor of dairy industry, and Louise C. Struve, assistant professor of home economics.

DR. RAOUL L. MENVILLE, a member of the department of chemistry at the Louisiana State University since 1906, will take up his work as dean of the College of Pure and Applied Science at the opening of the college year. He takes the place of Dr. Charles E. Coates, who, according to the policy of the university, retired on reaching the age of seventy years, with the title dean emeritus.

DR. FLOYD L. RUCH, of the Pennsylvania State College, has become associate professor of psychology at the University of Southern California.

MAYNARD W. QUIMBY, graduate student and instructor in botany at Cornell University for the past four years, has been appointed instructor in botany at the University of Maine.

DR. N. F. CHILDERS has been appointed a member of the staff of the department of horticulture at the Ohio State University. He succeeds Professor W. Paddock, who has retired.

DR. WERNER KUHN, of Carlsruhe, has been appointed professor of physical chemistry at Kiel in succession to Professor Schwarz, who has become professor of chemistry at Königsberg.

D. J. BAUER, of Trinity College, University of Cambridge, has been elected to the Michael Foster studentship in physiology.

THE following scholars from abroad will join the faculty of the University of Notre Dame, Indiana: Canon Georges Lemaître, professor of mathematics and theoretical physics at the University of Louvain; Dr. Kurt Godel, of the University of Vienna, and Professor Emil Artin, of the University of Hamburg. They will join Dr. Karl Menger and Dr. Arthur Haas, both formerly of the University of Vienna. In addition, Dr. Eugen Guth, also of the University of Vienna, has accepted a teaching fellowship for the coming year and will collaborate with Dr. Haas in a series of special research problems.

HARRY T. DAVIS, associate director and curator of

geology at the North Carolina State Museum, has been appointed director of the museum by the commissioner of agriculture. Mr. Davis succeeds H. H. Brimley, who has been head of the museum for the past forty-two years. Mr. Brimley becomes curator of zoology.

FRANK M. SETZLER, acting head curator of anthropology at the U. S. National Museum since the death of Walter Hough, has been appointed head curator.

DR. P. N. ANNAND has been made special research assistant to the chief of the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture. C. M. Packard will succeed him as chief of the Division of Cereal and Forage Insect Investigations.

DR. C. M. HOUCK, formerly manager of the inspection division of the Pittsburgh Testing Laboratory, has been elected vice-president. His predecessor in the vice-presidency, A. R. Ellis, was recently elected president.

DR. R. D'E. ATKINSON, associate professor of physics in Rutgers University, has been appointed chief assistant in the Royal Observatory, Greenwich. A correspondent writes: "Dr. Atkinson has always been interested in astrophysical problems and his work on atomic synthesis and the source of stellar energy was of particular importance. In the course of this work he deduced, at a time when the neutron had not been discovered, from general considerations of atomic abundance in the sun and stars that there must be some type of particle that could penetrate a highly charged nucleus more easily than a proton." Dr. Atkinson was a member of the Harvard College Observatory Eclipse Expedition to Siberia in 1936.

LORD MOYNE, a vice-president of the Zoological Society of London, is leaving England in his yacht, *Rosaura,* taking with him another member of the council of the society, M. Jean Delacour, who is the owner of some private zoological gardens at Clères, Normandy. M. Delacour is especially interested in live humming birds and is taking with him elaborate apparatus for collecting and keeping them on board the yacht. In addition to collecting animals for the London Zoological Park, Lord Moyne will study the culture and mode of living of the aboriginal Indians who live in the hinterland of British Guiana close to the Venezuelan frontier.

AMONG those attending the tenth meeting at Lisbon of the International Union against Tuberculosis were Dr. Kendall Emerson, managing director of the National Tuberculosis Association, a member of the executive committee of the International Union; Dr. Robert E. Plunkett, general superintendent of tuberculosis hospitals, New York State Department of Health; Dr. Charles J. Hatfield, director of the Phipps Institute of Philadelphia, secretary of the National Tuberculosis Association; Frederick D. Hopkins, executive secretary of the National Tuberculosis Association; Dr. B. S. Pollak, head of the Hudson County (N. J.) Tuberculosis Hospital, and Dr. Abraham E. Jaffin, of Jersey City.

THE London *Times* states that the Soviet press reports the dismissal of Dr. Gorbunoff, secretary of the Scientific Academy of Moscow, and the liquidation of his Commission of Examiners, in consequence of the discovery that certificates had been granted by favor without examination to students possessing no algebra and imperfect Russian. Dr. Gorbunoff, who is forty-five years old, was private secretary and secretary of the Council of People's Commissars in 1917, manager of the Council of Labor and Defense in 1920, leader of the Soviet-German expedition to the Pamirs in 1928 and vice-president of the Academy of Agricultural Sciences in 1930.

A PRIZE of $1,000 and a gold medal for outstanding achievement in milk chemistry has been established by the Borden Company. The award will be made annually for three years beginning in 1939 under the direction of the American Chemical Society. Establishment of the prize was sanctioned by the society at the Rochester meeting on the recommendation of a committee consisting of Dean Frank C. Whitmore, of Pennsylvania State College, president-elect of the society; Erle M. Billings, of the Eastman Kodak Company, and Professor Arthur J. Hill, of Yale University, both of whom are directors of the society.

A SANITARY engineering research laboratory and section station on University Heights, New York City, which will be conducted jointly by New York University and New York City, will be dedicated on September 20. Mayor La Guardia, Lieutenant Colonel Brehon B. Somervell, Works Progress Administration administrator of New York City, and Dr. Thorndike Saville, dean of the College of Engineering of New York University, will be the principal speakers. In a statement issued in regard to the laboratory Dean Saville said that the new laboratory constitutes a "unique development in cooperation between a large city department and a private educational institution. The Department of Sanitation in New York City and the New York University College of Engineering have effected an agreement whereby each of the parties is enabled jointly to further specific objectives in a more comprehensive manner than either could achieve alone."

THE Rockefeller Foundation, which has conducted work on health projects at Kingston, Jamaica, for more than eighteen years, will retire this month. Its headquarters will be transferred to Havana. Dr.

Benjamin E. Washburn, head of the West Indies branch of the foundation, has received the formal thanks of the government for the work of the foundation, which has resulted in a decreased death rate and other benefits.

LORD NUFFIELD, who recently made a gift of £5,000 to the National Hospital for Nervous Diseases, Queen Square, London, for the building of a new research department, has made a further gift of £24,000 for the same purpose. The rebuilding scheme was made possible by the offer of the trustees of the Rockefeller Foundation to give £60,000 towards rebuilding the laboratories, the department of pathology and the surgical unit, and £60,000 for the endowment of research work, provided that a similar amount be raised by December 31.

AN Associated Press dispatch printed in the *Los Angeles Times* states that the Norwegian iceship Gudrun returned on September 4 from the Arctic with a receptacle, which it is believed contains the diary of the Swedish explorer, Salomon August Andree, who was lost on an attempt to reach the North Pole by balloon forty years ago. The copper and cork container was found on a small island near Spitzbergen by a fisherman. The diary is said to be in good condition.

AN aeronautical museum has been established at Ottawa with the purpose of illustrating the development of aviation and particularly the part Canada has played in this development. *Museum News* states that a large hall in the basement of the National Research Building has been set aside for the museum and exhibits are now being installed. The material already acquired includes exhibits dealing with the work of Alexander Graham Bell in aeronautical science and in practical flying. So far all exhibits have been donated and necessary cases have been paid for out of funds of the National Research Council. Organizations cooperating in the establishment of the museum are the National Research Council, the Associate Committee on Aeronautical Research of the Council, the Canadian Flying Clubs Association, the Canadian Department of National Defense and the Civil Aviation Branch of the Department of Transport.

FIFTY-TWO survey and exploratory parties were placed in the field this year by the Mines and Geology Branch, Department of Mines and Resources, Ottawa. Forty-one of these parties have been engaged in geological investigations and eleven in topographical mapping. The field force, of about 300 men, worked every mineral producing province in the Dominion, and in Yukon and the Northwest Territories. Nine geological parties were sent to British Columbia, while Ontario and Quebec each had seven. The Prairie Provinces had eleven; the Maritime Provinces four; the Northwest Territories two, and Yukon one. Three topographical parties have worked in British Columbia, three in Alberta, two in the Northwest Territories, and Ontario, Nova Scotia and Yukon each have one. The National Museum of Canada placed nine parties in the field for the purpose of making investigations dealing with the migration and nesting habits of Canadian birds; the distribution of plant and animal life, and the preservation of game, particularly in the Northwest Territories. In addition, ethnological studies were planned of certain Indian tribes. In this last connection excavations have been made in a number of old Indian village sites in Quebec and in Prince Edward Island.

DISCUSSION

OBSERVATIONS OF A BRILLIANT AURORA

ON the night of August 1 to 2, while obtaining spectrograms with the 69-inch reflector of the Perkins Observatory, I stepped out on the deck to the northeast at five minutes past midnight, E.S.T., to look for Finsler's Comet. My attention was immediately arrested by an unusually brilliant display of the Aurora Borealis. At this moment two distinct arches were visible, of which the lower was the brighter and the more irregular in outline. Several bright streams of different widths and intensities projected upward from the north point, like beams from a giant searchlight. The two arches gradually merged into one.

At 12:15 A.M. the streamers were much more brilliant and numerous. Eighteen were counted, and in addition several fainter ones were suspected. Some were several degrees wide, and some were not more than half a degree in width. The brightest extended fully forty-five degrees above the horizon. No motion was apparent at this time, the streamers simply brightening and gradually fading away. Most of the auroral light was of the customary white color with pale greenish tinge. However, the brightest group of streamers, rising in the north-northeast, was distinctly pink in hue. The intensity of the color increased toward the extremities of the streamers, where they appeared quite red.

At 1:25 a brilliant white bow was observed projected like the beam of a powerful searchlight across the zenith from west by north to east by south. It