SCIENTIFIC NOTES AND NEWS

The fifty-third meeting of the American Chemical Society and the second National Exposition of Chemical Industries are being held in New York City this week. The address of the president, Dr. Charles H. Herty, of the University of North Carolina, was on "Expanding Relations of Chemistry in America." This address we hope to have the privilege of printing in Science, and the official abstracts of papers presented before the divisions of the society will, as usual, be printed here.

In the presence of Secretary Daniels and with appropriate ceremonies twenty members of the Civilian Navy Consulting Board, headed by Thomas A. Edison, took the oath of allegiance to the United States on September 19, as officers of the federal government. They were later entertained at a luncheon at the Army and Navy Club by Secretary Daniels. At the subsequent meeting the industrial survey of the country and the naval research laboratory were among the questions discussed. Those present besides Mr. Edison were Messrs. M. R. Hutchinson, W. R. Whitney, L. H. Baekeland, Frank J. Sprague, R. S. Woodward, Arthur G. Webster, A. M. Hunt, Spencer Miller, William Leroy Emmet, Matthew B. Sellers, Hudson Maxim, P. C. Hewitt, Thomas Robins, Howard E. Coffin, Andrew L. Riker, Elmer A. Sperry, W. L. Saunders, Lawrence Addicks and Bion J. Arnold.

The American Fisheries Society will hold its forty-sixth annual meeting in New Orleans, La., on October 16 to 19, inclusive. As this is the first meeting of the society to be held in any of the Gulf states, special consideration will be given to the problems and conditions of fisheries and fish culture in these states. Professor Jacob Reighard, of the University of Michigan, is president of the society.

Dr. Charles W. Pilgrim, superintendent of the Hudson River State Hospital, Poughkeepsie, N. Y., has been appointed by Governor Whitman to serve as president of the New York State Lunacy Board. Dr. James V. May, former head of the board, resigned some time ago to accept a similar position in the state of Massachusetts.

Dr. Alexander Johnson, for thirteen years secretary of the National Conference of Charities and Correction, has been selected as the expert for the Colorado State Survey Commission to investigate and make recommendations concerning the care of mental defectives and insane in the state, and the charities and corrections departments of the state.

Professor E. M. Lehnerts, of the department of geography of the University of Minnesota, has succeeded D. Lange as president of the Minnesota Forestry Association.

Dr. William H. Welch, of the Johns Hopkins University, sailed from England on September 20. Dr. Welch left for England five weeks ago to obtain data in connection with the organization of the Institute of Hygiene, which was made possible through a gift from the Rockefeller Foundation.

Dr. F. J. H. Merrill, from 1899 until 1904 state geologist of New York, has moved to Los Angeles, where he will resume consultant practise in geology and mining engineering.

For the academic year 1916–17, an exchange has been arranged between Professor Cassius J. Keyser, of the department of mathematics of Columbia University, and Professor Mellen W. Haskell, of the department of mathematics of the University of California.

Dr. M. C. Tanquary, assistant professor of entomology, Kansas State Agricultural College, who was granted a leave of absence in 1913 to accompany the Crocker Land Expedition, has returned to the Kansas Agricultural College and will continue his work in the college and experiment station.

Dr. Donald Reddick, professor of plant pathology, Cornell University, and chairman of the editorial board of *Phytopathology*, has been granted sabbatic leave and will spend the ensuing academic year in special work in the laboratory of plant physiology, Johns Hopkins University. Matters pertaining to *Phytopathology* should be addressed to him at Baltimore until June 1, 1917.

PROFESSOR H. MAXWELL LEFROY has been on special duty with the British army in Mesopotamia connected with fly investigations.

THE John B. Murphy Memorial Association has been incorporated in Illinois by Drs. William A. Evans, James E. Keefe, Allan B. Kanavel, Frank H. Martin and Frank Crozier. It is planned to raise half a million dollars for a memorial to the distinguished surgeon. The two requisites of the memorial are said to be that it be permanent and that it be a "living power making for the advancement of surgery on both the scientific and moral sides."

LEROY CLARK COOLEY, emeritus professor of physics in Vassar College, where he was head of the department from 1874 to 1907, died on September 20, at the age of eighty-three years.

JOSEPH HOEING KASTLE, director of the experiment station of the University of Kentucky, died in Lexington, Ky., on September 23, aged fifty-three years. Dr. Kastle became chief of the division of chemistry in the hygienic laboratory of the United States Health and Marine Service in 1905 and remained in that position until 1909, when he accepted a call as professor of chemistry at the University of Virginia.

SIR T. LAUDER BRUNTON, F.R.S., distinguished for his work in pharmacology and therapeutics, died September 16, at the age of seventy-two years.

DR. ENRIQUE NUNEZY PALOMINA, secretary of sanitation in the government of Cuba, and professor of medicine in the University of Havana, died in New York on September 15, aged forty-four years.

A. F. EMINSON has been killed in action while serving with the British army. Mr. Eminson had recently carried out some valuable investigations into the bionomics of *Glossina morsitans* in northern Rhodesia.

DR. W. ZURHELLEN, assistant at the Royal Observatory, Berlin, died on July 15, aged thirty-six years. It is noted in the *Observatory* that Dr. Zurhellen was one of the members of the Eclipse Expedition from the Berlin Observatory to the Crimea to observe the total eclipse of 1914, August 21. The last news which we had obtained of this expedition was that Zurhellen, being of military age, had been interned in Russia, whilst the older members of the expedition were allowed to return to Germany. After a year in Russia, Zurhellen was allowed to return to Germany; he joined the Bonn contingent, and was killed in the fighting in north France.

THE *Electrical World* quotes from an article in the *Electrician,* by F. G. Donnan, in which he urges a separate department of state to be called the "Ministry of Science." Some of the functions of this department are to establish national laboratories and "bureaus" for the purpose of undertaking extensive investigations; to guide the domestic and foreign policy of the cabinet by having ready at a moment's notice complete and detailed information concerning every question relating to science; to foster, endow and promote the teaching and investigation of science in the universities of the country by giving much larger grants of money to the scientific laboratories. The establishment of a great national bank is also suggested, whose special concern would be the fostering of new and old industries based on scientific method and scientific research.

THE United States Senate on August 29 ratified the treaty with Canada extending to all migratory birds the same protection on both sides of the Canadian border. The American Game Protective and Propagating Association, of which Mr. Edward F. Quarles is vice-president, drew up the provisions for that treaty, recommended them to congress and urged them in Canada. According to the New York *Sun* Mr. Quarles said that the regulations approved by the Canadian government provide for exactly the same degree of protection for migratory birds that is insured to them within the borders of the United States. By the act of congress, approved March 4, 1913, all migratory birds—wild geese, wild swans, wild ducks, snipe, woodcock, rail and all other migratory game and insectivorous birds—which, as the act reads, in their northern migrations pass through or do not remain per-

manently within the borders of any state or territory, shall be deemed to be within the custody and protection of the government of the United States and shall not be destroyed or taken contrary to regulations provided for by that government. The act which was passed in 1913 has been amended and the regulations drawn up by the Department of Agriculture for the enactment of the provisions went into final effect on August 21, 1916, when President Wilson publicly proclaimed the regulation. According to Mr. Quarles, the treaty will secure protection all over the North American continent for some 1,022 species and sub-species of birds, and the law is of prime importance to farmers, for it means that insectivorous birds will get the protection they deserve. All migratory birds, game and insectivorous, will be completely protected in the spring flights, during the breeding season, and the open season on the winter migration south will be curtailed in a great many species. The rulings as to open and closed season in each state have been made with due regard to the state's relative position in the great sweep of migration, north and south, and with provisions for the special protection of certain species in those localities where they have suffered under the old law, or where the farmer needs, for example, the presence of certain insectivorous birds.

The following series of Saturday afternoon lectures are being given in the Museum building of the New York Botanical Garden, at four o'clock:

September 2—"Plants of the Danish Islands, St. Croix, St. Thomas and St. John," by Dr. N. L. Britton.

September 9—"Across Mexico from Vera Cruz to Colima," by Dr. W. A. Murrill.

September 16—"Farming in the Middle West," by Dr. G. C. Fisher.

September 23—"Through the Mountains of Utah and Colorado," by Dr. F. W. Pennell.

September 30—"Flowers for Fall Planting," by G. V. Nash.

October 7—"Botanical Cruises in the Bahamas," by Dr. M. A. Howe.

October 14—"Destructive Fungi," by Dr. F. J. Seaver.

October 21—"Autumn Coloration," by Dr. A. B. Stout.

October 28—"The Potato Family," by Dr. H. H. Rusby.

November 4—"The New York Botanical Garden," by Dr. Britton.

November 11—"Planning Next Year's Flower Garden," by Mr. Nash.

The value of tar, ammonia and benzol products recovered in the manufacture of artificial gas in municipal plants and at by-product coke ovens in 1915 was nearly $25,000,000. Statistics recently compiled by C. E. Lesher, of the United States Geological Survey, Department of the Interior, show that more than 51,340,000 gallons of tar were obtained in connection with the manufacture of oil and water gas, that nearly 48,000,000 gallons of tar was recovered at coal-gas plants, 138,400,000 gallons of tar was obtained in connection with the manufacture of by-product coke, and that the total quantity of tar produced in the United States in 1915 was more than 237,400,000 gallons, valued at $6,260,000. The oil and water gas tar had an average value of 2.2 cents a gallon, the coal-gas tar a value of 2.03 cents a gallon and the by-product tar a value of 2.6 cents a gallon. Approximately 50,700 tons of ammonium sulphate was obtained from the coal-gas plants and about 197,000 tons from by-product coke plants, a total of about 198,000 tons. The value of this ammonia was more than $11,175,000. The coal-gas plants produced and sold 336,213 gallons of benzol, drip oil and holder oil, valued at $28,281, an average value of 8.4 cents a gallon. Benzol products recovered in connection with the manufacture of by-product coke amounted to 16,600,857 gallons, valued at $7,337,371, an average of 44.2 cents a gallon. It is thus seen that coal-gas plants are negligible as a source of supply of benzol products. Nearly 223,000 pounds of naphthalene, valued at $3,565, was obtained and sold from the coal-gas plants as compared with 465,865 pounds, valued at $46,959, from the by-product plants. More than 27,000 tons of retort carbon, valued at $183,170, an average of $6.73 a ton was obtained from the oil and water-gas plants and 1,696,366 tons of gas coke, valued at $7,222,744, or

an average of $4.25 a ton, was obtained and sold from the coal-gas plants in 1915. Including by-product, the output of which in 1915 was 14,072,895 tons, valued at $48,558,325, the coke and retort carbon produced in the United States was 15,796,461 tons, valued at $55,964,239. The value of the tar, ammonia, benzol products, naphthalene and coke produced in the United States in 1915 was $80,816,975.

THE *Electrical World* notes that the great scarcity of potash has almost crippled many of the industries in this country, notable among others being the glass industry. The glass used in making incandescent electric lamp bulbs is a very special kind that must withstand sudden changes of temperature and also great pressure. Heretofore it has been thought that only glass made with a certain amount of potash was suitable for the lamp industry. The outbreak of the war two years ago cut off all supply of potash from Germany and threatened the supply of glass. The research chemists of the General Electric Company, however, succeeded in producing a glass for making incandescent electric lamp bulbs by replacing potash with soda in the glass mixture. This glass, it has been stated, has proved superior to the old potash glass; so much so, indeed, that from now on potash glass will no longer be used. The world supply of potash comes almost entirely from Stassfurt in Germany, because the natural deposits there have been cheaper to work than any other known source. The sources of supply in the United States have proved utterly inadequate to meet the great demand of the industries. Soda, on the other hand, is produced from ordinary table salt, great natural deposits of which are to be found in different parts of the country.

UNIVERSITY AND EDUCATIONAL NEWS

DR. THOMAS F. HOLGATE, professor of mathematics in Northwestern University and dean of the college of liberal arts, has been elected by the trustees *ad interim* president of the university, on the recommendation of the council of deans.

DR. JAMES R. CLEMENS has been elected dean of the John A. Creighton Medical College, Omaha.

DR. A. I. RINGER, formerly assistant professor of physiological chemistry at the University of Pennsylvania, has been appointed professor of clinical medicine (diseases of metabolism) at the Fordham University School of Medicine, New York.

DR. LEON F. SHACKELL, of Washington University, has been appointed an instructor in physiology at the University of Utah Medical School, Salt Lake City.

DONALD W. DAVIS, Ph.D., of De Pauw University, has been appointed professor of biology in the College of William and Mary, and is succeeded at De Pauw University by Hardin R. Glascock.

AT the State University of Iowa, George Bain Jenkins has been appointed professor of anatomy, and Vive Hall Young, assistant professor of botany.

DISCUSSION AND CORRESPONDENCE

THE SONG OF FOWLER'S TOAD (BUFO FOWLERI)

VARIOUS observers have described the voice of Fowler's toad. All descriptions indicate that only its characteristic, weird, droning scream has been heard.

Allen, speaking of the common toad in New Hampshire, believed that the toad's song changed from a prolonged trill to the weird note produced by Fowler's toad. He says:

> After the breeding season the toad's song changes from a prolonged pipe to a shorter, lower-toned note that, at night, has a peculiar wierdness and almost reaches a wail.[1]

Until recently the writer was convinced that Fowler's toad possessed but one song, the unmistakable, weird, wailing scream which advertises its presence throughout its range. It is now known that some individuals produce a

[1] Allen, Grover M., "Notes on the Reptiles and Amphibians of Intervale, New Hampshire," *Proc. of the Boston Soc. of Nat. Hist.*, Vol. 29, No. 3, 1899, p. 71.