study of the monkeys, apes and other primates than by any other means.

It does not seem extravagant to claim that the securing of adequate provision for the systematic and long-continued study of the primates is by far the most important task for our generation of biologists, and the one which we shall therefore be most shamed by neglecting. But it is also a task which, as history clearly indicates, will not be accomplished unless we devote ourselves confidently and determinedly to it, with faith, vision and enthusiasm. For my own part, I am so entirely convinced of the scientific importance and human value of this kind of research that I am willing to devote my life wholly to it.

If we are to progress beyond the present narrow limits of our knowledge of the lower primates and make them contribute importantly to human welfare, it must be through adequate provision for their systematic study. I have presented to my fellow biologists a plan in the hope that their interest, criticisms, and support may ultimately lead to excellent facilities for this work, if not to the realization of the particular plan in question.

Robert M. Yerkes

Harvard University

SCIENTIFIC NOTES AND NEWS

The forty-fifth anniversary of its establishment was celebrated on February 9 by the United States Bureau of Fisheries, with the unveiling of a tablet in memory of its founder, Spencer Fullerton Baird, presented by his associates and followers. Professor Edwin Linton, of Washington and Jefferson College, presented the tablet, and Mr. Edwin F. Sweet accepted it on behalf of the Department of Commerce. The bronze tablet bears a bas-relief of Professor Baird with the inscription:

> He devoted his life to the public service and through the application of science to fish culture and the fisheries gave his country world-wide distinction.

The Albert medal of the Royal Society of Arts has been presented to Sir J. J. Thomson, "for his researches in chemistry and physics and their application to the advancement of arts, manufactures and commerce."

The fifth annual dinner of the Columbia University Biochemical Association took place on February 10, at the Hotel Majestic, with about 250 members and guests present. Dr. A. B. Macallum, professor of physiology at the University of Toronto, was the guest of honor, and made the principal address.

Professor Samuel Wendell Williston, of the department of paleontology at the University of Chicago, has been elected a fellow of the American Academy of Arts and Sciences.

William H. Burr, professor of civil engineering in Columbia University, retires from active service at the close of the present academic year.

At the annual meeting of the Royal Meteorological Society on January 19 the Symons memorial gold medal was presented for transmission to Dr. C. A. Angot, of the French Meteorological Bureau.

Professor Ayres Kopke, of Lisbon, has received the prize offered by the Sociedade de geographia of Lisbon for the best work by a Portuguese writer on sleeping sickness.

The Academy of Sciences at Vienna has granted a further subsidy of $960 to Professor R. Pöch to continue his anthropologic measurements and photographing of the various ethnologic types among the prisoners of war.

The Tri-State Medical Society of Arkansas-Louisiana-Texas has awarded the gold medals for the three best papers on original research work presented to the society, as follows: first prize, Dr. Thomas E. Wright, Monroe, La.; second prize, Dr. Herbert L. McNeil, Galveston, Texas, and third prize, Dr. Truman C. Terrell, Fort Worth, Texas.

The *Journal* of the American Medical Association states that Dr. Richard P. Strong has accepted the position of vice-president to the American International Corporation. This corporation recently formed with a capital of fifty million dollars is designed to explore, purchase or lease, lands and mercantile business in any part of the world. Dr. Strong will

attend to the sanitation districts in which the company's development work is situated.

DR. J. J. TAUBENHAUS, associate plant pathologist of the Delaware Agricultural Experiment Station, has accepted a position of head plant pathologist and physiologist at the Texas Agricultural Experiment Station.

PROFESSOR V. L. KELLOGG, who has been serving as a director of the Belgium Relief Commission in Brussels during the last eight months, has returned to take up his work at Stanford University. His position with the commission is now being filled by Professor Frank Angell.

H. H. WHETZEL, of the department of plant pathology, Cornell University, has gone to Porto Rico to study fungi and plant diseases.

MICHIYA HIRAOKA, professor in the Technical High School of Osaka, and Professor Wakamatsu Yokoyama of Port Arthur, are specializing in mining and metallurgy at the Massachusetts Institute of Technology.

PROFESSOR MILTON J. ROSENAU, of Harvard University, will deliver the Harrington lectures at the University of Buffalo Medical School during the alumni reunion, May 30, 31 and June 1. The subjects will be as follows: Two lectures on "Anaphylaxis" and one on "Education for Public Health Service as a Career."

THE Infants' Hospital, adjacent to the Harvard Medical School, has been formally opened. The speakers were Dr. Charles W. Eliot, president emeritus of Harvard University; Drs. J. Collins Warren, John Lovett Morse and Clarence J. Blake.

M. MAURICE CAULLERY, exchange professor from the University of Paris at Harvard University, has begun in French courses on "The Present State of the Problem of Evolution" and "Biological Problems and Sex."

PROFESSOR L. R. ABRAMS, of Stanford University, has been giving Professor Jepson's course in dendrology at the University of California during the first semester.

A COURSE of six lectures on early American geology is being delivered by Dr. George P. Merrill, head curator of geology, United States National Museum, before the department of geology, Columbia University, on Thursday afternoon at four o'clock and Friday morning at ten o'clock. The purport of the lectures is to show the gradual growth of the science from its infancy to the present day. They are accompanied by lantern slides, portraits, maps, copies of early publications, and personal sketches. There is also in course of delivery before the same department a course of ten lectures on ore deposits by Professor John D. Irving, professor of economic geology, Sheffield Scientific School, Yale University, on Thursday and Saturday mornings at ten o'clock.

PROFESSOR LAWRENCE J. HENDERSON is giving at Harvard University a course of five public lectures on "Teleology and Natural Science."

DR. ARTHUR M. BANTA, of the Carnegie Station for Experimental Evolution, addressed the Sigma Xi of Indiana University on January 27, on "Sexual Forms and the Supposed Reproductive Cycle in *Cladocera*."

AT the 222d meeting of the Elisha Mitchell Scientific Society held at the University of North Carolina on February 7, the program consisted of an address on "The Lumière Process of Color Photography," by Professor E. A. Harrington.

ON February 3, Professor W. H. Bragg delivered before the Chemical Society, London, a lecture on "The Recent Work of X-rays and Crystals and Its Bearing on Chemistry."

A MONUMENT is planned in memory of Professor Angelo Celli. It will stand on the Roman Campagna, where he made his investigations of malaria.

DR. C. WILLARD HAYES, chief geologist of the United States Geological Survey from 1902 to 1911, died on February 9 at his home in Washington, D. C. Dr. Hayes left the survey in 1911 to become vice-president and general manager of the Mexican Aguila Oil Company. He was born in Granville, Ohio, in 1859, and was graduated from Oberlin College in 1883, and in 1887 became assistant geologist of the Geological Survey.

Dr. Richard Henry Whitehead, professor of anatomy and dean of the department of medicine of the University of Virginia, died at his home in Charlottesville, on February 6, after a week's illness with pneumonia. He was in his fifty-first year.

Dr. J. Wilhelm Richard Dedekind, the distinguished mathematician, died at Brunswick on February 2, aged eighty-three years.

Professor Paul Sorauer, of the University of Berlin, known for his work on plant pathology, has died at the age of seventy-seven years.

Dr. Alzheimer, professor of psychiatry at Breslau, died on December 19, aged fifty-two years.

Professor Gross, editor of the *Archiv für Kriminal-Anthropologie,* has died in Graz at the age of sixty-seven years.

Dr. Rodolphe Engel, former professor of chemistry at the Montpellier School of Medicine, has died at the age of sixty-six years.

We learn from *Nature* that Dr. Reginald Koettlitz and his wife have died from dysentery at Somerset, South Africa, where Dr. Koettlitz was in practise. He joined the Jackson-Harmsworth Polar Expedition in 1894 and was senior medical officer in the late Captain Scott's expedition of 1902. In these expeditions and in South America and Africa he had carried on important work of exploration.

William Inchley, lecturer in mechanical and electrical engineering at University College, Nottingham, author of valuable publications on mechanics and heat engineering, was killed on December 19 at the age of thirty-two years, while serving as second lieutenant in the British army.

The *Journal* of the American Medical Association records the following deaths: Tiburcio Padilla, one of the leaders of the profession in Argentina, ex-governor of his province, Tucuman, aged eighty; F. L. von Neugebauer, of Warsaw, noted for his numerous articles on gynecologic subjects but especially for his study and publications on hermaphroditism and allied conditions; L. R. Lorentzen, of Copenhagen, president for a number of terms of the Danish Medical Association, aged sixty-three; M. De Cristoforis, to whose efforts is due in large part the leading place taken by Milan in public hygiene, aged eighty; T. Langhans, until recently professor of pathologic anatomy at the University of Bern, aged seventy-six; A. Mendonça, chief of the bacteriologic institute connected with the medical school at S. Paulo, Brazil, and founder of the *Revista Medica de S. Paulo.*

The University of California has announced a series of Saturday morning lectures, open to the general public on the problems of tropical medicine, a field of work to which particular attention is being paid by members of the staff of the Hooper Foundation for Medical Research of the University of California. These lectures, at the University of California Hospital in San Francisco, are as follows:

January 15—Dr. E. L. Walker, "The Scope of the Literature on Tropical Medicine."

January 22—Professor Walker, "Entamoebiasis," with a clinical discussion by Dr. H. C. Moffitt.

January 29—Professor Walker, "Leishmanioses," with a demonstration of cultures and living organisms.

February 5—Dr. K. F. Meyer, "Trypanosomiases," with a demonstration of living organisms.

February 12—Professor Walker, "Malaria in California," with a demonstration of material.

February 19—Dr. H. C. Moffitt, "Clinical Aspects of Malaria in California."

February 26—Dr. K. F. Meyer, "Piroplasmiases," with demonstrations.

March 4—Dr. H. F. Nichols, "Spirochetiases."

March 11—Dr. Billings, "The More Important Helminthiases."

March 18—Dr. K. F. Meyer, "Yellow Fever, Dengue and Pappataci."

March 25—Dr. K. F. Meyer, "Typhus, Spotted Fever and Verruga Peruviana."

April 1—Dr. Howard Morrow, "Leprosy and Tropical Skin Diseases."

April 8—Dr. Billings, "Beriberi and Pellagra," with demonstrations.

April 15—Dr. E. L. Walker, "Parasitic Insects and the Rôle of Insects in the Transmission of Tropical Diseases."

April 22—Dr. K. F. Meyer, "Tropical Hygiene and Sanitation—Summary of the Present-day Achievements."

PROFESSOR GROSS, editor of the *Archiv fur Kriminal-Anthropologie und Kriminalistik*, has died in Graz at the age of sixty-seven years.

Nature quotes from the *Journal* of the Institution of Electrical Engineers for December 15, 1915, a report of a presentation of original Faraday papers made to the institution by Mr. D. J. Blaikley, whose wife is a niece of Faraday's. Her sister, Miss Jane Barnard, lived for several years with Faraday and his wife as a daughter of the house. She died in 1911, and left these books and papers to Mr. Blaikley to dispose of under certain conditions. They include Faraday's journal of the continental voyage which he undertook, at the age of twenty-two, as an assistant to Sir Humphry Davy—the voyage which, Professor Silvanus Thompson said, in proposing the vote of thanks to Mr. Blaikley, "transformed Faraday from being little more than a bookbinder's apprentice and laboratory assistant of a great chemist, into a man who could speak and think and work scientifically."

A COURSE of twelve lectures by the members of the New York State Museum staff is being given in the Education Building, Albany, as follows:

February 4. "The State Museum: How to Use It." John M. Clarke.

February 11. "Diamonds." H. P. Whitlock.

February 18. "The Forests of New York State." Homer D. House.

February 25. "Lake Albany—Our Present Abode." David H. Newland.

March 3. "Man and Insects." E. P. Felt.

March 10. "How Minerals are Formed." H. P. Whitlock.

March 17. "Mastodons and Elephants of New York." Rudolf Ruedemann.

March 24. "The Empire State of Indian Days." Arthur C. Parker.

March 31. "Harmonics and Cross Purposes in the Insect World." F. T. Hartman.

April 7. "Earthquakes of New York." David H. Newland.

April 14. "Nature Monuments." John M. Clarke.

April 21. "Life of the Ancient Seas." Rudolf Ruedemann.

AT the Chemists' Club, New York City, on February 11, a symposium on "Electrochemical War Supplies" was arranged by the New York Section of the American Electrochemical Society jointly with the New York Sections of the American Chemical Society and the Society of Chemical Industry. Chlorine, hydrogen and many other electrochemical products which were a drug on the market before the war have become valuable. New electrochemical industries like that of metallic magnesium have been started. This whole electrochemical development is of the utmost importance to every chemist and engineer, and to the American nation at large. The speakers were: Lawrence Addicks, "Electrochemical War Supplies"; W. S. Landis, "Air Saltpeter"; E. D. Ardrey (U. S. Navy), "Hydrogen for Military Purposes"; Albert H. Hooker, "New War Products"; William M. Grosvenor, "Magnesium"; G. Ornstein, "Liquid Chlorine"; Geo. W. Sargent, "Electric Steel"; W. R. Ingalls, "Electrolytic Zinc." Dr. L. H. Baekeland, Dr. J. W. Richards, Mr. W. L. Saunders, Mr. E. A. Sperry, Mr. B. B. Thayer, and other engineers consented to be present and express their views.

THE Society of American Foresters, at its annual meeting, held in Washington, on January 22, adopted a resolution endorsing the present federal migratory bird laws.

THE *Journal* of the American Medical Association states that the demonstration train of the State Board of Health started on its initial trip, January 10. The train consists of three Pullman cars, the first of which is used as an office with sleeping and dining accommodation for the demonstrators. The second contains the dynamo, sleeping quarters for the train crew, and various models such as the illustration of the Imhoff tank sewage disposal system; contamination of water in driven or open wells from polluted or service water; a modern dairy; proper feeding and clothing of babies; open-air treatment of tuberculosis and other similar questions of public health. In the third car are displayed thirty-six panel posters

giving warnings and advice on sanitary subjects and disease prevention and a large stereomotograph. On the initial trip the train was in charge of Dr. Joseph Y. Porter, state health commissioner, and Miss F. D. Herndone, his assistant. Surgeon Carroll Fox, U. S. P. H. S., also accompanied the train to inspect health conditions in the state and to observe the workings of this plan of popular sanitary education.

In commemoration of the centennial of the independence of Argentina, 1816–1916, the Academy of Medicine offers a prize of 2,500 pesos for the best unpublished work on a medical subject presented at the Congress of Social Sciences to be held at Tocyman, Argentina, July 9, 1916.

A Vienna manufacturer has given $100,000 to found an institution to study the technical side of nutrition for the people, by correlating the findings of organic chemistry, biology, physiology, etc. It is to be called the Institut für Volksernährung.

The *Journal* of the American Medical Association states that the minister of justice has appointed a commissioner to study crime in Chile and to report to the government his recommendations for measures to prevent crime, reform delinquents, and for the classification and separation of prisoners. A laboratory of experimental psychology is to be established in the penitentiary at Santiago, and physicians in penal institutions will be required to furnish information or data in connection with the work.

For some years the formation of a society and the publication of a journal devoted to applied optics has been under consideration by a number of persons. In November, 1915, such a society, called the Association for the Advancement of Applied Optics, was formed in Rochester. This was so constituted that it might become a local section of a larger society when such should be organized. The officers of the Rochester society are Dr. P. G. Nutting, president; Dr. H. Kellner and Professor Howard Minchin, vice-presidents; Mr. L. A. Jones, recording secretary; Dr. F. E. Ross, corresponding secretary and Mr. Adolph Lomb, treasurer. Since its organization this society has held well-attended, regular meetings every two weeks. The initial organization has shown such strength that it has been decided to proceed at once with the organization of the larger society so that the journal may be started with the next calendar year. A committee on organization is being selected and later, officers and editors will be chosen by ballot. The president and corresponding secretary of the local society will serve as temporary chairman and secretary of the organizing committee. Both may be addressed at the Research Laboratory, Kodak Park, Rochester. A tentative draft of the proposed constitution and by-laws will be submitted shortly for approval.

Nature states that the *Scotia,* which was the vessel that carried the Scottish National Antarctic Expedition to the south polar regions, under the command of Dr. W. S. Bruce, has been burnt in the Bristol Channel, and has been run ashore at Sully. It was hoped at the end of the expedition that the *Scotia* might be further endowed and handed over to the universities of Scotland as a well-fitted oceanographical ship, but this was not to be, and she fell to the hammer as a whaler. Later, however, she was chartered by the Board of Trade as the most suitable vessel on which to carry out ice observation, meteorology and oceanography in the North Atlantic Ocean after the wreck of the *Titanic.*

The Broad Pass region of Alaska, which has long been considered a possible source of mineral wealth, has taken on additional interest since the announcement of the route chosen for the new government railroad connecting the Pacific coast with the interior of Alaska. In anticipation of the probable demand for information about this region the United States Geological Survey began the work of mapping its topography and geology in 1913, and now presents the results of the work in Bulletin 608, by F. H. Moffit, "The Broad Pass Region, Alaska." Broad Pass is the western part of a wide glacial valley which is bordered by steep, straight mountain walls and which lies parallel with a great east-west

range on the north and connects the upper valleys of Chulitna and Susitna rivers. Nenana River, a tributary of the Tanana, occupies the eastern part of the region. The valley of Jack River, which crosses Broad Pass just above the narrow valley of the Nenana, before that stream passes through the Alaska range, provides the route by which the railroad will cross from the Susitna-Chulitna drainage basin to that of the Tanana. The upper parts of streams tributary to Chulitna and Jack rivers overlap each other within Broad Pass, there being no appreciable divide between, so that the grades from the head of the Chulitna to the head of the Susitna are gentle and there is no obstruction. North and south of Broad Pass are high mountains. Those on the north are part of the great range from which, only 70 miles to the west, rise Mount McKinley and, nearby on the east, Cathedral Mountain and Mount Hayes. There is a fair growth of timber in the larger valleys but most of the country is above timber line. This region has long been a favorite hunting ground for the Indians of the Susitna valley. The geologic conditions in the region appear to be favorable to mineralization, but no valuable ore bodies have yet been discovered. The most favorable reports come from the district just west of Broad Pass, near the head of Chulitna River, an important gold placer district, where prospecting has been carried on for several years. Valdez Creek lies about thirty miles east of the pass. Along some of the streams between Broad Pass and Valdez Creek there are prospects of placer gold, which, however, has not been found in commercial quantity. Copper prospects, too, have been discovered in several parts of the region, and at one place, Coal Creek, there is a small area of coal. The railroad, which will probably soon reach this region, will aid greatly in its development. The wealth of the Broad Pass region appears to be mineral rather than agricultural, and it can be profitably exploited only by a greater population and through better means of transportation.

AT the meeting of the Royal Society on November 11 Sir Ronald Ross read an introductory paper on "Pathometry." According to an abstract the method he proposed to follow in studying the nature of the functions according to which the number of individuals infected with some disease should vary from time to time, on the supposition that the laws governing the rate of transference of the considered disease were already known *a priori*. He stated the fundamental problem under consideration in the following terms: "If a population is divided into two groups, namely, those who are affected by some kind of happening, such as an infectious disease, and those who are not so affected; and if in unit of time a constant or variable proportion of the non-affected become affected, while simultaneously a constant proportion of the affected become non-affected (that is, revert or recover); and if at the same time both the affected and the non-affected are subject to different birth-rates, death-rates and rates of immigration and of emigration, so that the whole population may be incessantly varying during the period under consideration; then what will be the number of affected individuals and also the number of new cases at any moment during that period?" In this first paper the problem was presented in mathematical language, with its solution, and a broad analysis of the curves obtained and of some integrals. Only constant rates of happening (applicable to other happenings besides disease), and rates which varied according to the number of individuals already affected (specially applicable to infectious diseases) were considered. In the latter cases the resulting curves were frequently bell-shaped, declining a little more slowly than they rose—that is, generally similar to the curves frequently seen in epidemics—thus suggesting *prima facie* that epidemics might be largely explicable in the terms of the thesis given.

UNIVERSITY AND EDUCATIONAL NEWS

THE General Education Board announces appropriations to colleges as follows: Maryville College, Maryville, Tennessee, $75,000 toward an endowment fund of $300,000; West-