SCIENTIFIC NOTES AND NEWS

DR. ROBERT G. AITKEN, director of the Lick Observatory, was presented with honorary membership at a meeting of the Rittenhouse Astronomical Society at the Franklin Institute on April 19. On this occasion Dr. Aitken gave an address, taking as his subject "The Work of a Mountain Observatory."

AT a meeting of the New York Mineralogical Club at the American Museum of Natural History on Saturday, April 28, a reception and testimonial will be presented to Dr. Edward Salisbury Dana, professor emeritus at Yale University, in recognition of his acceptance of honorary membership in the club.

ACCORDING to a press dispatch, at a banquet tendered in honor of the delegates at the close of the Ninth International Congress of Pure and Applied Chemistry, at Madrid, Dr. Atherton Seidell, chemist, of the National Institute of Health, U. S. Public Health Service, was made by the Spanish government a commander of the Order of the Republic.

A CERTIFICATE of honorary membership in The American Ceramic Society, awarded to Professor Henry Le Chatelier, by the fellows of the society at the annual convention held in Cincinnati in February, was presented to him in Paris on April 16 by Dr. Alexander Silverman, head of the department of chemistry at the University of Pittsburgh.

AT a meeting and dinner of the American Institute, which will be held at the American Museum of Natural History, New York City, on May 3, gold medals will be presented to Dr. Oscar Riddle, research associate, Carnegie Institution at Cold Spring Harbor, L. I., in recognition of his achievements in endocrine research, and to Dr. E. V. McCollum, head of the department of biochemistry of the School of Hygiene and Public Health of the Johns Hopkins University, in recognition of his work on nutrition. The presentation to Professor McCollum will be made by Dr. H. C. Sherman, of the department of chemistry of Columbia University, and to Dr. Riddle, by Dr. Allan Winter Rowe, director of research at the Evans Memorial Hospital, Boston.

DR. GEORGE R. MINOT, professor of medicine at the Harvard Medical School, has been elected an honorary fellow of the Chicago Institute of Medicine.

PROFESSOR R. D. CARMICHAEL, of the department of physics of the University of Illinois, has been made dean of the Graduate School and Dr. M. T. McClure, professor of philosophy, dean of the College of Liberal Arts and Sciences. Dr. Carmichael and Dr. McClure have served as acting deans during the present academic year.

AT the Massachusetts Institute of Technology, Professor Charles Blaney Breed has been promoted to be head of the department of civil and sanitary engineering, and Professor Henry B. Phillips has been appointed acting head of the department of mathematics, succeeding Professor Frederick S. Woods, who will retire next fall. The following promotions to full professorships have been made: Dr. Arthur C. Hardy, of the department of physics; Dr. George Rutledge, of the department of mathematics, and Dr. Walter C. Schumb, of the department of chemistry.

DR. JOHN HASBROUCK VAN VLECK, professor of physics at the University of Wisconsin, has been elected associate professor of mathematics and physics at Harvard University. Alfred Rehder, curator of the herbarium of the Arnold Arboretum since 1918, has been elected associate professor of dendrology.

The British Medical Journal notes the following appointments: Dr. Richard Sirbeck, of Heidelberg, professor of internal medicine at Berlin; Dr. Aubertin, professor of experimental medicine at Bordeaux; Dr. Serr, professor of medical pathology at Toulouse; Dr. Ladislas Melanowski, professor of ophthalmology at Warsaw, and Dr. E. Cylarz, professor of internal medicine at Vienna in succession to Professor J. Pal.

THE Society for Experimental Biology and Medicine have elected the following officers: *President,* E. L. Opie; *Vice-president,* P. E. Smith; *Secretary-Treasurer,* A. J. Goldforb; *Councillors,* E. F. DuBois, H. W. Smith; *Nominating Committee,* P. Rous, *chairman,* E. Allen, A. J. Carlson, A. R. Dochez, E. A. Doisy, R. Gesell, A. C. Ivy, J. R. Murlin and O. Riddle.

AT the annual business meeting of the Western Reserve University Chapter of the Society of the Sigma Xi the following officers were elected for the year 1934–1935: *President,* Dr. James A. Doull, professor of public health; *Vice-president,* Dr. J. Paul Visscher, professor of biology; *Secretary,* Dr. W. M. Krogman, associate professor of anatomy and physical anthropology; *Treasurer,* Dr. E. W. Skinner, associate professor of basic and dental technology. Drs. Carl J. Wiggers and H. S. Booth were elected to the membership committee for a three-year term. Following the business meeting the president-elect made an address on "The Present Status of Our Knowledge of Leprosy," illustrated with slides and a film on "A Day at the Clinic in Cordova, Cebu." As an additional feature the chapter was privileged to exhibit, through the courtesy of the Mallinckrodt Chemical Works, films on "The First Public Demonstration of Anesthesia" and on "The Manufacture of Anesthetic Ether."

DR. ANNA W. WILLIAMS, since 1905 assistant director of laboratories in the New York City Department of Health, of which Dr. William H. Park is director, was retired on March 23, having passed the

age limit for city employees. She will continue her research in the laboratories on a pension.

FRANÇOIS E. MATTHES, of the United States Geological Survey, has been appointed "titular member," representing the United States, of the Commission Glaciologique of the International Geodetic and Geophysical Union. He was reappointed recently as chairman of the Committee on Glaciers of the American Geophysical Union for a second term of three years.

DR. ARTHUR BEVAN, state geologist of Virginia, has been elected secretary of the Association of American State Geologists and editor of the quarterly journal published by the association.

DR. E. M. NELSON, of the Bureau of Chemistry and Soils, U. S. Department of Agriculture, has been invited to represent the United States as one of two official delegates at the second International Conference on Vitamin Standardization to be held in London, from June 12 to 14, by the Health Organization of the League of Nations.

DR. O. LARSELL, professor of anatomy at the Medical School of the University of Oregon, and Dr. A. R. Moore, at present a visiting professor at the Tohoku Imperial University of Sendai, Japan, will be laboratory guests at the Morris Biological Farm of the Wistar Institute, Philadelphia, during the coming summer.

DR. HERBERT H. WHETZEL, professor of plant pathology at Cornell University, left on April 21, on a collecting trip to procure specimens of a rare cup fungus. His trip will lead him through the Canadian province of Manitoba. On his return Professor Whetzel will deliver two lectures at the University of Minnesota on "Coming—the Practising Plant Pathologist," and "Scholastic Freedom, or the Right to Learn."

DR. E. D. ADRIAN, Foulerton research professor of the Royal Society and fellow of Trinity College, Cambridge, has been appointed chairman of a new committee set up by the British Medical Research Council, in consultation with the Board of Control. The committee will advise and assist in the promotion of research into mental disorders. It will include representatives not only of psychiatry, medical psychology and the study of mental deficiency, but also of neurology, physiology, biochemistry, pathology and genetics.

DR. ARTHUR STANLEY EDDINGTON, Plumian professor of astronomy and director of the observatory at the University of Cambridge, will speak at a luncheon given in his honor by the English-Speaking Union of the United States, at the Astor Hotel on April 28. Dr. Eddington is Messenger lecturer for 1934 at Cornell University.

DR. EDWIN P. HUBBLE, of the Mt. Wilson Observatory, gave the evening lecture before the National Academy of Sciences on April 23. His subject was "The Realm of the Nebulae."

DR. JOHN F. FULTON, Sterling professor of physiology, Yale University, gave the tenth N. W. Jones lectures at the University of Oregon Medical School. His subjects were "Autonomic Representation in the Cerebral Cortex" and "The Functions of the Frontal Lobes."

DR. WILLIAM J. CROZIER, director of the laboratory of general physiology at Harvard University, discussed "Behavior and Mechanism" at a recent meeting at the American Museum of Natural History of the New York Association of Biology Teachers.

PROFESSOR H. LEVY, professor of mathematics at the Imperial College of Science and Technology, London, delivered the twenty-fifth Conway Memorial Lecture on April 25, his subject being "Science in an Irrational Society."

A GROUP of members of Sigma Xi residing in Kansas City and vicinity met on March 12 at the University of Kansas City and organized the Sigma Xi Club of Kansas City. On March 19 the first regular meeting was held with Dr. James E. Wildish, of Kansas City Junior College, delivering a paper on "Radioactive Families." Regular meetings will be held on the second Friday of each month.

APPLICATIONS for the positions in connection with the U. S. Geological Survey of chief topographic draftsman, principal topographic draftsman, senior topographic draftsman, topographic draftsman and assistant topographic draftsman must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than May 22. The entrance salaries range from $1,620 to $2,600 a year subject to a deduction of not to exceed 10 per cent. until June 30, 1934, and of not to exceed 5 per cent. during the fiscal year ending June 30, 1935, as a measure of economy, and also to a deduction of 3½ per cent. toward a retirement annuity. Applicants must have had certain education and experience.

THE *Bulletin* of the Mount Desert Island Biological Laboratory for 1934 contains announcements for the coming season, reports of officers and abstracts of research accomplished during 1933. Those wishing to work at the laboratory during 1934 should apply before May 1 since accommodations are limited. Copies of the *Bulletin* may be secured by writing to Professor William H. Cole, Rutgers University, New Brunswick, New Jersey.

A CORRESPONDENT writes: "The Louisiana State University is opening its Field Laboratory at Grand Isle with good prospects. With the cooperation of

the State Conservation Commission and the resident staff in Baton Rouge in the departments of botany, zoology, geology and forestry it is felt that a good many investigations can at least be begun this summer by the students already enrolled. A number of independent investigators have joined the laboratory from other sections of the country in order to compare the Gulf fauna with Atlantic and Pacific coast fauna. As in previous summers, Dr. E. H. Behre, of the department of zoology, will be in charge."

IT is announced by the New York Academy of Medicine that a sum of approximately eight hundred dollars is available under the Edward M. Gibbs Memorial Prize during 1934. Candidates, who must be physicians who have been graduated at least three years and who are residents of the United States, shall submit "evidence of research already performed and of facilities to prosecute research upon the causation, pathology and new methods of treatment of diseases of the kidney." The award may be continued, but not more than three years to any one individual. Applications with the required evidence should be addressed to the New York Academy of Medicine, 2 East 103d Street, New York City, prior to June 1.

IT is announced that the authorities of the Naval Academy at Annapolis are making plans for a planetarium similar to the planetarium now under construction for the American Museum of Natural History, New York.

ACCORDING to *The Museum News,* a topographical survey of the area occupied by the National Arboretum at Washington has been authorized as a preliminary to completing plans for roads, trails and buildings. The survey is to be made by the Bureau of Plant Industry, which has received an allotment of $10,000 from the Public Works Administration for the purpose.

A NOTE in a recent issue reported the acquisition by the Museum of Anthropology of the University of Michigan of a collection of Indian basketry and bead work given in memory of Mrs. W. B. Hinsdale, who died in January of this year. Through an unfortunate error reference was made to the "late Dr. Hinsdale." Dr. Hinsdale is now professor emeritus of internal medicine and associate in charge of the Division of the Great Lakes in the Museum of Anthropology.

SIR JOHN RUSSELL, director of the Rothamsted Experimental Station at Harpenden, writes to the London *Times* in reference to the recent appeal for £30,000 for the purchase of the experimental fields in part as follows: "I am thankful to say that the appeal has been so well received that complete success is now possible if only the friends of Rothamsted will do a little more. Mr. Robert McDougall, of Cheadle, has offered £15,000, and the Halley Stewart Trust Fund has offered £5,000, towards the total sum required, but both have attached the entirely reasonable condition that the remaining £10,000 shall be raised before May 12, when our option expires. Sir Bernard Greenwell gave £1,000, and another £1,000 was secured through the help of old supporters of Rothamsted. A list of these will shortly be issued. The station is thus confronted with the problem of raising £8,000. Machinery has been set in motion for collecting from farmers and others living in country places. But the countryside, though very sympathetic and appreciative, is not well off, and for much of the £8,000 we shall be dependent on the generous help of public-spirited men and women who, while recognizing the importance of agriculture to the community, are not themselves actually farming."

FREDERICK S. DELLENBAUGH has recently completed for the Museum of the American Indian, Heye Foundation, New York, a painting 42″ x 60″ upright, as a record in color, on a large scale, of the stairway leading down towards the valley from the Hopi village of Walpi at the south end of the First Mesa, Arizona. This stairway of sandstone slabs was constructed centuries ago and is still intact. It is known as an excellent example of the ingenuity of the Hopi in the line of original, constructive building. On one side it is bounded by the upright cliff, on the other by a towering, monumental column of solid rock balanced, apparently rather precariously, giving somewhat the effect of the Leaning Tower of Pisa. The steps lead down for a couple of hundred feet through this picturesque setting. As it is probable that in the course of time the stairway will not be kept in repair, will fall into disuse and eventually pass out of existence, the picture is designed to preserve it for the future in its condition in 1884 when Mr. Dellenbaugh spent a number of weeks on the First Mesa. He was aided in details by a fine photograph made about that time by John K. Hillers, of the United States Geological Survey.

RECENT recession measurements made by the Department of the Interior show that for a representative group of five of the single-peak system of 28 Mount Rainier glaciers, the Emmons Glacier receded 46 feet during the past year, the Nisqually 44 feet, the South Tahoma 13 feet, the Carbon Glacier 12 feet and the Paradise about six feet. The first four have a definite downward movement and are classified as "living" glaciers, while the last-named, having little if any such movement, is described as "dead." The Nisqually will retain its status for approximately 5,000 years. It is about five miles long, and is probably one of the best-known ice fields in the world because

of its accessibility. The Paradise Glacier, known for its ice caves, was measured from three points rather than one because it has a broad cliff-like front rather than a snout as a terminus. So heavy was the snowfall of the past winter that when the measurements were made in September one point was still covered to a depth of several feet. Recession measurements have been made of the Mount Rainier ice fields for several years, but the records for the Nisqually Glacier date further back than any of the others. The total recession recorded for this ice field during the past 75 years amounts to 3,118 feet.

DISCUSSION

THE OLDEST KNOWN PLANT VIRUS DISEASE

THE virus diseases of plants and animals are each year attracting more attention. Modern medicine, on the one hand, and plant pathology, on the other, developed about the modern concepts of parasitism and "the germ theory of disease." Much in modern mycology and bacteriology developed in turn out of the stimulated studies of the specific parasites concerned. Naturally work with the grosser fungi antedated that with the more minute and hence more baffling bacteria. Finally the ultra-microscopic or filterable viruses were recognized, their study requiring still more refined techniques. With the aid of such, the youngest branch of biological science, "virology," is now being outlined. And just as earlier with bacteriology so now with "virology" the developments are led by those interested in the applications to pathology, whether with diseases of man, lower animal or plant.

For many purposes of experimental study, the plant offers peculiarly attractive host material for the investigator seeking fundamental information as to the nature or characteristics and distribution of viruses. This has recently been illustrated on the historical side by a publication[1] of scholarly merit and of broad interest to students of diseases of this obscure type. The authors are especially competent to find and evaluate the evidence, Professor McKay having for years been a leading investigator of virus diseases in the Pacific Coastal regions and Dr. Warner being bibliographer of the United States Department of Agriculture. Professor McKay recently demonstrated that the so-called "breaking" of tulips, which is evidenced by curiously streaked, speckled or feathered coloration of flowers with fainter foliage mottlings, is really a "degeneration" or "mosaic" disease. It is caused by an infectious virus which is readily transmitted with infected juice, either mechanically or by aphids. Once infected, the condition persists with the bulb. Hence, new "bizarre" color strains originate which have heretofore been considered "variegations" by bulb growers and so propagated and commercially distributed.

[1] "Historical Sketch of Tulip Mosaic or 'Breaking,' the Oldest Known Plant Virus Disease," by M. B. McKay and M. F. Warner, *National Horticultural Magazine*, 12: 179–216, July, 1933.

Of much immediate interest is the fact that these floral markings are so distinctive as to permit their recognition in the earlier illustrated floral catalogues and even the early herbals. The authors not only list these, with full bibliography, but reproduce the early plates from several such herbals as Clusius (1576), and from the illustrated garden manuals of Vallet (1608), de Bry (1612), etc. Moreover, some of these writers record observations upon the origin of their "broken" strains from those of pure color, exactly as now is experimentally reproducible. Clusius, in addition, notes that offsets from "broken" bulbs always have flowers of the same broken colors, whereas seedlings from the same plants reproduce the original pure color strain. The authors trace the early records of the introduction of the tulip into the gardens of western Europe from Turkey and show not only that such "breaking" was common among these earliest Turkish introductions, but also that it was probably observed by 1555 or earlier in the Turkish gardens before the bulbs were carried from these to western Europe. Thus, the evidence seems clear that this tulip mosaic is the oldest known plant virus disease, traceable through the four centuries of recorded tulip culture of western Europe to the still earlier gardens of Turkey. Incidentally, these centuries of experience point the moral that any modern tulip fancier who introduces these variegated novelties into his tulip garden should expect to find, as did Clusius four centuries ago, that the "variegation" with attendant weakening of plants will gradually spread to other pure-color tulips. He should, therefore, promptly eliminate these diseased tulips from his garden, unless he is more interested in verifying history than in maintaining the vigor and color of his flowers.

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THE PARASITE INDUCING PEARL FORMATION IN AMERICAN FRESH-WATER UNIONIDAE

IT has been known for many years that the best pearls are formed around the transparent spherical cysts of larval parasitic worms. In Europe the cysts of larval trematodes serve as nuclei for pearls, while larval cestodes induce pearl formation in the pearl oysters of the Indian Ocean. Apparently no one