search. He has left his enduring mark on literally thousands of Brown men, particularly on many generations of freshmen, who, entering the class in "Biology 1, 2," oftentimes with hesitancy or indifference, soon came under the spell of his sane enthusiasm.

Of the fifty-six students who have attained the Ph.D. degree at Brown University during the past thirty-two years, twenty-six did their thesis work under his immediate direction. No other member of the Brown faculty has equalled this record. A similar percentage of those who have been granted the master's degree owe their inspiration to his scholarly and sympathetic guidance. These advanced students of biological science have gone out to occupy positions of service and responsibility and they form a living monument of ever-increasing importance to Professor Gorham's memory.

The various extra-academic services to city and state which he has rendered in his long career have been signalized by continuous effectiveness to the very end. For thirty-four years he was bacteriologist for the Providence Department of Health; since 1914 he has been deputy milk inspector for the city; for twenty years he has been an active member of the Rhode Island Shellfish Commission; he was president of the R. I. Tuberculosis Association and secretary of the board of directors of the R. I. State Sanatorium at Wallum Lake; from 1925 to 1931 he served on the Metropolitan Park Commission, and since 1913 he has organized and directed the control of the mosquito nuisance in Providence, expending in this work over a quarter of a million of dollars to the satisfaction of every one concerned.

In all these different exacting activities, which have absorbed vacation-time as well as lengthened every day of the university year, in the face of frequent discouraging lack of appreciation and in spite of the inevitable interference of petty politics, Professor Gorham has steadily and serenely gone ahead with singleness of purpose and unquestioned integrity in the execution of his unselfish philosophy of life.

To quote Dr. H. L. Barnes, superintendent of the state sanatorium, "The time and abilities which he devoted to the State Sanatorium from a busy life, and without compensation, set the highest standard of disinterested public service." And Dr. C. V. Chapin, with whom he worked for years in the health department of Providence, said of him, "He was a man of wonderful judgment and thoroughly grounded in public health work. The beginning of practical bacteriology was Professor Gorham's examination of throats in 1895 for diphtheria control. His knowledge and advice were invaluable in the development of bacteriology. I couldn't say too much for Professor Gorham's work."

He was a fellow of the American Public Health Association and of the American Association for the Advancement of Science. He was chairman of the laboratory section of the American Association of Pathologists and Bacteriologists; past president (1907) of the Society of American Bacteriologists; president of the R. I. Tuberculosis League; member of American Naturalists; Washington Academy of Sciences; Boston Bacteriological Club; Providence Engineering Society, and honorary member of the Rhode Island Medical Society and the Providence Medical Association. Since 1926 he has been the head of the biological department in Brown University.

Among his colleagues and the many students everywhere who have known him intimately it is not so much what he has accomplished during his long useful career, important as that has been, which will be retained in precious memory, as the character of the man himself, a buoyant soul, a true gentleman, a faithful friend.

H. E. WALTER

HARRY HAYWARD CHARLTON

DR. CHARLTON, since 1920 a member of the staff of the department of anatomy of the University of Missouri, died suddenly on the evening of May 31, from complications following an operation. His death came on the eve of his appointment as chairman of the department of anatomy.

Dr. Charlton was born at Allston, Massachusetts, on May 18, 1887. His childhood was spent in Nova Scotia. He then returned to the United States, and his high-school work was done in Lowell, Mass. He received his A.B. degree from Lebanon Valley College, Pennsylvania, in 1914 and the degree of master of arts at Yale in 1916.

During the war Dr. Charlton was retained at Yale as technical assistant in pathology, associated with the Gas Defense Service in the Yale Army School. He served as head of the department of anatomy of Fordham Medical School in 1918–19. He returned to Yale and completed his work for the degree of doctor of philosophy in 1920. He was appointed assistant professor of anatomy at the University of Missouri in 1920, associate professor in 1922 and professor in 1931. He served as secretary of the Missouri Anatomical Board from 1922 to the time of his death.

Dr. Charlton's principal interest in research was concerned with the comparative anatomy of the brain, to which study he made several worth-while contributions. He spent several summers in study at the Biological Laboratory, at Woods Hole, Mass., and

spent a year on sabbatical leave at Professor Ariens-Kappers' Neurological Laboratory in Amsterdam.

Dr. Charlton will be remembered by his students as a sincere, conscientious teacher, exacting but always fair in his evaluation of students' work.

He is survived by his widow, Mary Polson Charlton, and a daughter, Barbara.

EDGAR ALLEN
DEA B. CALVIN
M. D. OVERHOLSER

UNIVERSITY OF MISSOURI

SCIENTIFIC EVENTS

INTERNATIONAL MUSEUMS CONFERENCE AT MADRID

ACCORDING to *Museum News*, the international museums conference at Madrid has been moved from the fall of 1933, as previously announced, to April 4, 1934. It will continue for about ten days and will consider problems of museums and collections of art, archeology, history and popular art.

The subjects to be discussed have been announced by the International Museums Office as follows:

Museum Architecture: (1) General principles of construction, plans and materials, special requirements imposed by purposes of the particular museum, site, environment, arrangements for expansion. (2) Construction of a museum in a historic architectural ensemble. (3) Adaptation of old buildings for museum use.

Arrangement: (1) Exhibition halls. (2) Conference rooms and auditoriums, children's rooms, information and sales rooms. (3) Courts and gardens. (4) Libraries and document rooms, offices. (5) Laboratories, shops for making casts, for photography and restoration. (6) Storage and handling. (7) Caretakers' rooms.

Special Questions: (1) Natural and artificial lighting. (2) Cleaning, heating, ventilation, air conditioning. (3) Protection against fire, theft, earthquake, etc. (4) Custodian service. (5) Floor covering. (6) Coat rooms, buffets, seats, rails and other comforts for visitors.

Presentation of Collections: (1) General considerations in regard to effective exhibition, dimensions and orientation of halls, covering and color of walls, etc. (2) Permanent and temporary exhibitions, exhibits within and without the museum. (3) Presentation of collections—as a whole, selected objects, paintings, combination of paintings, sculpture, furniture, etc., chronological presentation, period rooms and reconstitution of architectural and other ensembles, new acquisitions. (4) Problems caused by enlargement of collections by purchase, gift and bequest, and periodical disposal of unnecessary material. (5) Organization of stored, reserve and study collections. (6) Plans and signs for guidance of visitors. (7) Numbering and labeling. (8) Exhibit material—moldings, cases, hanging methods, protection against vibration, frames, pedestals, movable partitions, rails, etc. (9) Classification and conservation material for drawings, prints, coins, medals, textiles, etc. (10) Publications.

Loans and Exchanges between Museums: Possibilities of collaboration between museums of the same country and between museums of different countries.

An Exhibition of Museum Documents: Plans, photographs, sketches, publications, posters, publicity material.

THE WAWONA ROAD TUNNEL IN THE YOSEMITE NATIONAL PARK

THE recently completed 4,230-foot Wawona Road Tunnel in Yosemite National Park, California, was formally dedicated on June 10. Secretary of the Interior Harold L. Ickes was unable to be present at the ceremonies, but by means of electrical transcription those gathered in Yosemite National Park heard his message of greeting as delivered in Washington.

The new Wawona Road, which extends from near the foot of Bridal Veil Falls to the Mariposa Grove of Big Trees, is approximately 28 miles in length, is on a six per cent. grade, has wide, easy curves, and can be traveled any day in the year. It was built jointly by the National Park Service of the Department of the Interior and the Bureau of Public Roads of the Department of Agriculture.

The driving of the Wawona Tunnel was begun in January, 1931, and was completed in one year. Blasted through cliffs of solid granite, it is 28 feet wide and 20 feet high. The tunnel has three ventilating shafts drilled horizontally to the cliff face. The largest shaft is at the center of the tunnel and contains three large electrically-driven fans which operate automatically, according to the percentage of carbon monoxide gas in the air. These fans are capable of handling 300,000 cubic feet of air per minute. Lights of 4,000 lumens set in deep-bowl reflectors in the roof of the tunnel to within 180 feet of each end give a warm mellow light free from glare. For 180 feet at each end, bulbs of 6,000 lumens give a brighter light to permit vision adjustment.

Parking space for a hundred cars is available near the east portal of the tunnel.

One of the main features of the dedicatory ceremonies was a historical pageant of progress, portraying the evolution of transportation in the Yosemite since its discovery in 1851. The pageant included aboriginal Indians on foot, prospectors with burros, the first tourist horseback parties, lumbering wagons and horse stages, motor stages and 1933 automobiles.

REDUCTION IN FEDERAL AID FOR THE LAND GRANT COLLEGES

ACCORDING to a report by Science Service, federal grants for science and education made to the states