only in the operation of the Zoological Park but in the fields of education and research. Naturally, many obstacles have had to be overcome and many more await us, but we are determined to do everything in our power to continue to maintain these activities for the duration. Our endorsement and encouragement comes from the public itself—a visible and powerful growing public interest, the limits of which, I believe, we do not ourselves begin to measure.

Our scientific staff has been able to assist directly in a number of ways in the war effort, especially in the fields of marine intelligence and in medical problems. Forty-three members of our organization, including eleven trustees, are absent on military duty.

I will touch briefly on two or three of the highlights of the past year. The new farm exhibit has proved even more popular than we could have anticipated. More animals were taken out from behind the bars this last summer (the elephants and rhinoceroses) and interior improvements, notably those to the Bird House, were completed in December. It will of course not be possible to make improvements of any importance during this year, although a large number of minor betterments will be carried out.

In passing—we will open in April an event of an entirely new type. Mr. Liers is on our program to-night and he and his friends, the otters, will be with us for the season, giving a number of public showings every day. We believe that through these the public will gain a better understanding of the minds and manners of animals. Mr. Liers is not an animal trainer. He reasons with animals and lets them reason with him.

One field expedition was carried out—that under Dr. Beebe to Venezuela. We feel a debt of gratitude for the financial support given to this work by the Committee for Inter-American Cultural Relations, and also the generous arrangements made for Dr. Beebe and his staff at Caripito by the officials and organization of the Standard Oil Companies here and in Venezuela.

As to finances, we have no major complaint. We ended the year within our earned income. Somewhat surprisingly, considering war demands, the Society has received cash donations during the past year slightly in excess of $50,000. We have not thought it timely to enter into a general campaign for capital funds. Allow me, nevertheless, to remind you that this institution greatly needs funds for the fulfilment of its ultimate destinies in education, in research and in public service. It is not my business to suggest to you when and how to give!

As to the future, the Zoological Society is scheduled to receive a fund in excess of $3,000,000 under the terms of the Post War Program, as publicly announced by the Mayor on April 24, 1942. This will provide for the further modernization and development of the Zoological Park—the initial steps for such a program having been taken, you will recall, in 1939 with the drawing of plans for the African Plains Exhibit—and the building of a new Aquarium. In regard to the latter, we now have the opportunity of planning for an institution that will really do justice to the miracle of the life of the rivers, the lakes and the great oceans of this world. There is now available a plan and design fund of $60,000, of which the City has provided $40,000 and the Society $20,000. This year it is expected that an equivalent fund will become available from the same sources. Plans for both institutions are therefore now being put into the blueprint stage. (You can see, after this meeting in the exhibit corridor, projections of both of these major projects.)

What other destinies are there? Certainly the realization, we hope, of that most compelling and important idea—the establishment of a research center in the Zoological Park for the study of animal diseases in their relation to human disease problems. Sometime, somehow this must be accomplished. We further aim to create a dynamic and expressive conservation exhibit—an exhibit so designed that it will vividly carry to the public at large the message of the conservation of our natural resources. Our objectives include also the further extension of our educational work and of the research work which leads so definitely to the advancement of human knowledge.

I must not overstay my time. The other day, our guest speaker to-night sent me a quotation from a chemist—none other than Dr. Eliot, that great educational leader, late president of Harvard University. It runs as follows:

> The human race has more and greater benefits to expect from the successful cultivation of the sciences which deal with living things than from all the other sciences put together.

It is with such thoughts, such potentialities, such objectives in mind that this institution calls upon us for the best of our thoughts and of our energies.

OBITUARY

STEPHEN WALTER RANSON
1880–1942

Two days after he had reached his sixty-second birthday, Stephen Walter Ranson, professor of neurology and director of the Neurological Institute at the Northwestern University Medical School, died of coronary thrombosis on August 30, 1942. His wife, Tessie, and three children, Captain Stephen W. Ran-

son, Mrs. Margaret Jane Lacy and Miss Mary Elizabeth Ranson, survive him.

Dr. Ranson was born at Dodge Center, Minnesota, on August 28, 1880, the son of Dr. Stephen William and Mary Elizabeth Foster Ranson. After finishing Dodge Center high school in three years, he entered the University of Minnesota in 1898. Here he came under the influence of Professor J. B. Johnston, who stimulated in him an interest in the nervous system. At the end of his third year, he transferred to the University of Chicago. In 1902, he started graduate work at the University of Chicago, after receiving the A.B. degree from the University of Minnesota. He worked under the supervision of the late Professor H. H. Donaldson and received an M.S. degree in 1903 and the Ph.D. degree in 1905. His dissertation was entitled "Retrograde Degeneration in the Spinal Nerves." While a graduate student, he went to the St. Louis University School of Medicine and helped the late Professor A. C. Eycleshymer with the work in the Department of Anatomy there for part of the year of 1904. He served as a fellow in neurology at Chicago in 1904–1906 and was awarded the M.D. degree at the Rush Medical College in 1907. He completed a year's internship at the Cook County Hospital and had planned to establish a practice in Chicago. However, he was induced to take an appointment in 1908 as associate in anatomy at the Northwestern University Medical School by Dr. Arthur W. Meyer, who was then head of the department there. When Dr. Meyer left for Stanford the following year, Ranson accepted an appointment as assistant professor and acting head of the department. On August 18, 1909, he married Miss Tessie Grier Rowland, of Oak Park, Illinois, and their family circle was a happy and hospitable one. In 1910 he became associate professor and then in 1912 professor and head of the department of anatomy at Northwestern, where he served for the subsequent twelve years. He spent the year of 1910–11 at Freiburg in Professor Wiedersheim's laboratory.

In 1924, he went to the Washington University School of Medicine in St. Louis to become professor of neuroanatomy and head of the department of neuroanatomy and histology. He was extremely happy with this opportunity, which offered him a reduced teaching load and excellent facilities for research. However, he decided to return to the Northwestern University Medical School on the first of February, 1928, to become professor of neurology and the first director of the newly formed Neurological Institute there. He remained at Northwestern the rest of his life, where he devoted himself to building one of the most productive schools of neurology that has ever existed. Since 1929, the work of the institute has been collected in an annual volume and these volumes contain a formidable array of important contributions.

His own research is recorded in a bibliography of some 205 titles[1] and gives expression to his interest in the form and function of the mammalian system. He was interested throughout his life in the components of the peripheral cerebrospinal and the visceral nervous systems. His demonstration of unmyelinated nerve fibers as early as 1909 was given additional proof by his introduction of the pyridine silver technique in 1914, an important modification of one of Cajal's. After he found unmyelinated fibers in large numbers in sensory nerves, he devised experiments to show that they mediate pain sensation. His later experiments and those with the cathode ray oscillographic analyses such as made by Erlanger, Gasser, Bishop and others have supported his earlier work. Because he recognized unmyelinated fibers, his histological analyses of the peripheral visceral nervous system were much more complete than previous ones. His work on peripheral and central visceral afferent pathways and vasomotor centers in the medulla oblongata is included in his review on "Afferent Paths for Visceral Reflexes" in the first volume of *Physiological Reviews*.

For a period of years, he worked on the mechanisms involved in postural contractions and a study of postural reflexes. Ranson and his colleagues first became interested in the hypothalamic region for its significance in somatic motor integrations, for the study of which he introduced the Horsley-Clarke stereotoxic apparatus into his laboratory in 1930.

Later, he directed the attention of his laboratory toward the analysis of visceral responses elicited by stimulations in this region and of symptoms arising from lesions accurately placed by electrolysis. He and his co-workers investigated such problems as the significance of the hypothalamus and hypophysis in water exchange and the syndrome of diabetes insipilus, and of the hypothalamus to temperature regulation, obesity, sexual function, emotional expression, catalepsy and other abnormal conditions. The corpus striatum occupied much of his attention at the last.

His later work was reviewed in the following lectures: Weir Mitchell Oration (1934), Harvey Lecture (1936), the Dunham Lectures (1940) and Hughlings Jackson Lecture (1941). The volume of the Association for Research in Nervous and Mental Disease, "The Hypothalamus and Central Levels of Autonomic Function" (1940), was dedicated to him.

In addition to these contributions in the experimental field, Ranson was the author of the text-book, "The Anatomy of the Nervous System," the first edi-

[1] This bibliography has been published by H. W. Magoun, *Quart. Bull. of Northwestern Medical School*, Vol. 16, pp. 304–310, 1942.

tion of which appeared in 1920 and just before his death he had completed the seventh edition. This textbook has been an important factor in the development of neuroanatomy in a superior fashion in the United States. He was extremely conscientious as a teacher and his kindly and sympathetic manner will be remembered by many a student. On his return to Northwestern in 1928, he gave up undergraduate teaching.

Into the work of his laboratory, he attracted many students, both from this country and abroad. He stimulated teamwork, an intense interest in experimental work and the utmost loyalty. He has trained men who are now in teaching posts in anatomy and physiology in various institutions, and there are many in clinical medicine who spent time with him. His enthusiasm was infectious and his training rigid and demanding.

He was a trained morphologist with strong interests in physiological significance. He had a keen appreciation for the implications of his work to clinical neurology, but he did not swerve from his objectives in fundamental problems of morphology and physiology.

He was a fellow of the American Association for the Advancement of Science, and a member of the National Academy of Sciences, the American Neurological Association, the American Physiological Society and the American Association of Anatomists, of which he was president from 1938–40. He served for a number of years on the Committee on Nomenclature of the American Association of Anatomists and he was a member of the editorial board of the Archives of Neurology and Psychiatry. His medical fraternity, Phi Beta Pi, established an annual lectureship in his honor at the Northwestern University Medical School in 1929. He was elected to Alpha Omega Alpha while an undergraduate medical student.

Dr. Ranson was a dignified, modest and retiring man who felt keenly his responsibility for leadership for the advancement of knowledge in the neurological sciences. He did not hesitate to question dogma and didactic authorities and to stand his ground against attack and criticism. His interest was in establishing factual evidence rather than in selling himself. He worked diligently all his life, even to the detriment of his own health in later years. He was a devoted husband and father who found time to enjoy and contribute to the family circles.

The students who passed through his laboratory were extremely loyal to him and appreciated the fatherly interest he took in them. After they had left his laboratory, they continued to seek his help and advice and he always welcomed them. His accomplishments will live through time and his influence will be continued by his students and associates who have been keenly appreciative of his outstanding leadership and his high ideals.

JOSEPH C. HINSEY
CORNELL UNIVERSITY MEDICAL COLLEGE

HERBERT CLIFTON HAMILTON
1868–1942

HERBERT CLIFTON HAMILTON was born at Sandy Lake, Pennsylvania, on November 21, 1868. In 1897 he received his master's degree from the University of Minnesota in chemical engineering and immediately secured a position as chemist in the laboratory of a steel plant. After two years he joined the Parke, Davis and Company research staff as a pharmaceutical chemist and later took up pharmacological standardization work. His specialty was the study of germicides. Even after retiring on December 31, 1934, he continued germicidal studies at Pennsylvania State College and at the New York Experiment Station, Geneva.

He pioneered in the adaptation of biological assay methods to commercial use and contributed more than forty publications to that field of work. His studies involved disinfectants, insecticides, digitalis, ergot, hemostatic agents and posterior pituitary extracts.

Mr. Hamilton was a member of the American Chemical Society, the American Pharmaceutical Association and the American Public Health Association and attended many of their national conventions. He was associated with the Tenth Revision of the U. S. Pharmacopoeia as an auxiliary member of the committee.

His death occurred suddenly on November 13, 1942, as the result of an automobile accident.

OLIVER KAMM

RECENT DEATHS

DR. HOWARD HAWKES MITCHELL, since 1921 professor of mathematics at the University of Pennsylvania, died on March 13 at the age of fifty-eight years.

THE death at the age of sixty-seven years is announced of Dr. Frederick T. Van Beuren, Jr., president of the Morristown, N. J., Memorial Hospital since 1933. From 1921 to 1934 he served as associate dean of the College of Physicians and Surgeons of Columbia University.

ROLLO APPLEYARD, cable engineer, physicist and inventor, died on March 1 at the age of seventy-six years.

DR. R. R. MARETT, the anthropologist, rector of Exeter College, Oxford, died on February 18 in his seventy-seventh year.

A CABLE received by Yale University announces the death on March 6 at the age of seventy-two years of Dr. Arnold C. Klebs, Switzerland, specialist in medical and scientific bibliography.