States scientific strength between the two world wars.

The NRC fellowship program is but one example of what was clearly Millikan's greatest lifetime interest—the education and encouragement of talented young men. He was himself a gifted teacher who attracted and inspired students to a degree matched by few American scientists. A host of his former students now occupy positions of leadership in science, industry, and technology both here and abroad. Two have won Nobel prizes. He took a keen personal interest in each of his students, in their jobs, and in their families. At a Caltech dinner in honor of his 80th birthday he remarked that he was always amazed by the loyalty and friendship of his colleagues and students, "because," he said with a characteristic twinkle, "I have also loved all their wives."

His kindly good humor, friendly interest in people, and spell-binding ability on the platform made Robert A. Millikan one of the most loved and respected citizens of Southern California. His great and conspicuous achievements made him one of the most famous scientists of his day. He left to the world a threefold monument: his imperishable contributions to knowledge, his creation in Caltech of a new kind of scientific institution, and the inspiration he gave to hundreds of students.

The scientific community in America "grew up" between 1915 and 1940. It would be hard to find a man who contributed more to this maturing process than Robert A. Millikan.

Henry Albright Mattill: 1883-1953

Clarence P. Berg

Department of Biochemistry, College of Medicine, State University of Iowa, Iowa City

THE passing of Henry A. Mattill at Iowa City, Iowa, on March 30, 1953, is keenly felt by the many who knew him and found in him warm friendliness, quiet humor, and cordial scientific and personal companionship.

Dr. Mattill was born in Glasgow, Missouri, November 28, 1883, the son of the Reverend Henry and Emma Fryhofer Mattill. He received his A.B. degree from Adelbert College of Western Reserve University in 1906 and his A.M. in 1907. His Ph.D. in physiological chemistry was awarded by the University of Illinois in 1910. He taught physiology and physiological chemistry at the University of Utah from 1910 to 1915 and nutrition at the University of California at Berkeley from 1915 to 1918. During World War I he served as captain and major in the sanitary corps, division of food and nutrition. In 1919 he became professor of biochemistry in the Department of Vital Economics at the University of Rochester, and in 1927 professor and head of the Department of Biochemistry at the State University of Iowa. He retired to part-time status in July, 1952.

Dr. Mattill for many years edited a section of *Biological Abstracts*. He held memberships on the editorial boards of the *Proceedings of the Society for Experimental Biology and Medicine*, the *Journal of Nutrition*, and *Physiological Reviews*. He served the American Society of Biological Chemists as its secretary, as a member of its council, and as chairman of its editorial committee. At the time of his death he was the society's president. His associates found him keen in his perception and critical in his judgment, but always alert to human factors and diplomatic in his approach. His maturity of wisdom, his astute outlook, his ever soft voice, and his knack of introducing sly humor to ease embarrassment fitted him well for academic and scientific statesmanship.

His early research with P. B. Hawk was concerned with the effects of prolonged fasting on nitrogen partition and of variations in water-intake upon the utilization of foods. His subsequent observation that rats failed to reproduce when they were maintained on a diet whose proteins and vitamins were supplied entirely by whole milk powder introduced a fresh field of interest. His pioneering efforts in this area aided materially in the establishment of vitamin E as a reproductive factor. The more ready development of rancidity noted in animal fats, which lack this factor, led to studies which showed that vitamin E was itself an antioxidant and, like the other fat soluble vitamins, was often associated in tissue with substances that acted as inhibitors or stabilizers to delay the development of the rancidity in fats or the autoxidation of other substances. There followed an intensive program of investigation of the probable mechanism of antioxygenic action which associated the primary action with ortho and para di- and polyphenolic compounds and showed that their effect is prolonged synergistically by the addition of certain inorganic or organic acids that are inactive alone, and that still other acids act both as synergists and as stabilizers. Physiologically, alpha tocopherol was found to prevent the autoxidation of vitamin A in the intestine; the paralysis in the young rat deprived of vitamin E was shown to be a muscular, not a nervous lesion; the creatine output in the rabbit rendered dystrophic by the lack of the vitamin was observed to exceed that which could be accounted for by muscle breakdown; and the dystrophic muscle was found to have an increased oxygen uptake. From these studies

and those of numerous other investigators in the field no clear-cut metabolic pattern has yet emerged. Dr. Mattill's interest in the search for clues and his broad perspective are revealed in his last publication on vitamin E, in *Nutrition Reviews* **10**, 225 (1952).

In 1950 he received the third annual Iowa Award of the American Chemical Society, in recognition of his teaching and of his research. In 1952 he was awarded the honorary degree of Doctor of Science by Western Reserve University.

Few men have been as genuinely and unselfishly interested in their associates on the staff and in their students as was Dr. Mattill. He took pride in his relationship with the 2000 or more medical students who had sat in his classes. He strove zealously to "cultivate unprejudiced objective thinking," to stimulate integration and correlation of factual material into functional concepts, and to aid in moulding well-rounded personalities.

In 1912 Dr. Mattill married Helen Isham, Ph.D., Cornell, 1906, then a member of the chemistry staff of the University of Illinois, who took a continuing and helpful interest in his work. He is survived by her and a married son, John I. Mattill of Concord, Massachusetts, director of publications of Massachusetts Institute of Technology. The Mattill home was a delightful one, as countless friends and students can testify. Dr. Mattill was an accomplished pianist and organist. Interest in stamp collecting and miniature photography brought him and John into an exceptionally happy father and son relationship.

Late in May, 1952, Dr. Mattill had submitted to surgery. Having apparently recovered well, he and Mrs. Mattill had gone to Havana, Cuba, to carry out his agreement to serve as an adviser that fall to the Foundation for Medical Investigation. He was forced to return to Iowa City in December for further medical attention. His condition proved to be malignant and steadily worsened, but to the last he kept his courage and his interest. From his sick-bed he had dictated an address on the nutritional requirements of man, to be read in Spanish at the dedication of the Cuban laboratories on January 26, 1953. His message closed with these words:

> It is our hope that the work which is being undertaken in the Laboratories of the Foundation for Medical Investigation in Nutrition may contribute to the improvement of the health and the welfare of the people of Cuba. However, obtaining data is not alone sufficient. For the realization of this goal, there must be men of good will willing to assist the less fortunate in their quest of a better and healthier life.

Such concern as this for his fellow traveler made journeying with him a refreshing experience.[1]

[1] This obituary is similar to one read before the American Society of Biological Chemists at its annual meeting in Chicago, April, 1953.

News and Notes

The First World Conference on Medical Education

THE First World Conference on Medical Education was held in London, Aug. 22–29, 1953, under the auspices of The World Medical Association, in collaboration with The World Health Organization, The Council for International Organizations of the Medical Sciences, and The International Associations of Universities. The general theme of the Conference was "Undergraduate Medical Education."

The official languages of the Conference were English, French, and Spanish. All seats were equipped with earphones and excellent direct translation from the speaker's language to the listener's language was available at all times. Over 600 registrants representing 62 countries participated.

Following the opening plenary session, the Conference divided into four working groups or sections: (A) Requirements for entry into medical schools; (B) Aims and content of the medical curriculum; (C) Technics and methods of medical education; (D) Preventive and social medicine. These sections conducted their programs under the supervision of a vice president and a "rapporteur" for three and a half days. A summary of the Conference was made by the vice presidents and "rapporteurs" of each of the sections during the final days.

The over-all Conference was well attended, papers were stimulating and thought provoking, and discussions thoroughly excellent. It was gratifying to find that regardless of the nation involved, the basic qualities being sought in people seeking to enter the medical profession are much the same the world over. The basic background and preparation of students for admission to the study of medicine had a fairly common denominator while the methods, technics, and actual needs in medical training itself varied greatly, depending upon the objectives being sought in various parts of the world to meet the specific needs of certain areas.

Outstanding addresses were given the first day by Sir Lionel Whitby, Regius Professor of Physic at Cambridge on "The Challenge to Medical Education in the Second Half of the Twentieth Century," and by Sir Richard Livingstone, formerly president, Corpus Christi College, Oxford, on "What is Education?" Both of these excellent addresses are printed in full in the Aug. 29, 1953, issue of the *British Medical Journal*. Sir Lionel levelled the first challenge of the new half-century at education itself rather than specifically at medical education. Regardless of what profession a student strives to enter today, the basic difficulty is essentially the same as in medicine, namely, that the accumulation of knowledge has reached such a state as to involve early specialization and to make it diffi-