hemorrhagic syndrome in the common laboratory mammals, Greaves and Schmidt showed that the blood of rats with bile fistulas had a decreased content of prothrombin and a prolonged coagulation time. They attributed this condition to the failure of absorption of vitamin K in the absence of bile. Quick[30] summarized the available data and suggested that vitamin K should be effective in the treatment of the hemorrhagic diathesis of obstructive jaundice.

With the stage thus set by the investigations referred to in the two preceding paragraphs, it was only logical to make the next move—namely, the study of the effect of vitamin K in obstructive jaundice. The first report on the therapeutic use of vitamin K in the treatment of bleeding in cases of obstructive jaundice was published by Warner, Brinkhous and Smith (1938),[31] but within a very short time Butt, Snell and Osterberg and Dam and Glavind published their observations on the same subject. Several additional publications, chiefly from the Mayo and Iowa groups, have now appeared. In addition to the treatment of obstructive jaundice and other conditions in which absorption from the intestine is impaired due to a lack of bile in the intestine Waddell and Guerry[32] have successfully utilized vitamin K for the treatment of spontaneous and traumatic hemorrhage of the newborn. Brinkhous, Smith and Warner had previously shown that the prothrombin of the blood of babies is subnormal in amount.

SUMMARY

During the decade following Dam's first observations on the hemorrhagic syndrome the combined efforts of several groups of investigators have solved many of the important problems connected with the new vitamin. Sources of vitamin K were discovered, methods of extraction and purification devised, the isolation effected, the structure of K_1 worked out and then verified by synthesis, and a promising start made on the therapeutic applications. In addition, simple water soluble compounds with antihemorrhagic properties have been supplied for clinical work. Preliminary results with these compounds are encouraging.

[30] Quick, *Jour. Am. Med. Assn.*, 109: 66, 1937.

[31] Warner, Brinkhous and Smith, *Proc. Soc. Exp. Biol. and Med.*, 37: 628, 1938; Butt, Snell and Osterberg, *Proc. Staff Meetings Mayo Clinic*, 13: 74, 1938; Dam and Glavind, *Acta Med. Scand.*, 96: 108, 1938.

[32] Waddell and Guerry, *Jour. Am. Med. Assn.*, 112: 2259, 1939; Brinkhous, Smith and Warner, *Am. Jour. Med. Sci.*, 193: 475, 1937.

OBITUARY

FERDINAND AUGUSTUS SILCOX
1882–1939

FERDINAND AUGUSTUS SILCOX, chief forester of the U. S. Forest Service, died at his home in Alexandria, Virginia, on December 20, 1939. The country has lost one of its most distinguished foresters and one of its ablest public servants.

Mr. Silcox was one of the first southerners to enter the profession of forestry. He was born in Columbus, Georgia, and received his undergraduate training in the College of Charleston in South Carolina. He completed graduate work at the Yale School of Forestry in 1905, and was immediately given an appointment in the Forest Service. That was the year in which the administration of the National Forests was placed in the Department of Agriculture under Gifford Pinchot. The progressive withdrawal of forest lands from the public domain as permanent reservations was still under way. Mr. Pinchot had only begun the organization of the National Forest units and development of an effective system of protection and management. Silcox was thus one of the pioneers in National Forest work. He rose rapidly from the positions of field assistant and forest ranger to that of assistant district forester in the northern Rocky Mountain region. In 1911 he was appointed district forester, succeeding William B. Greeley, who later became chief forester of the Forest Service.

The constructive activities and influence of Silcox were of great importance in the evolution of policies and management of the public forests under his charge. He rendered valuable service in administrative organization, skilful management of forest labor, systematic fire control, development of forestry practice in timber sales, regulation of grazing, fighting fraud in application of mining laws and in previously established homestead claims, and meeting many other problems that in those days were in the early stage of solution.

At the time Silcox was district forester there was trouble in the lumber camps through the activities of the I.W.W. At one time during a very dry season when hundreds of men were needed in the suppression of fires in the forests, the workers refused to fight fire. Through skilful negotiation with labor leaders Silcox secured the cooperation of the I.W.W. to aid in protecting the public forests. This incident is important because it called attention to his ability in labor matters and was doubtless a factor in his assignments during the war. He was commissioned captain in the 20th Engineers and later promoted to the rank of major. Under joint action of the Department of Labor and the Shipping Board he was delegated to handle labor relations in the Seattle shipyards and in spruce production for airplanes. After 1919 he served as director of industrial relations for the Ty-

pothetae of America, and occupied a similar position for the New York Employing Printers' Association. While working for the latter he organized a system of apprentice schools in which he took great pride.

Silcox was appointed chief forester in 1933. His early experiences in the Forest Service and subsequent activities in labor relations counted large in his success in his new position. They were a foundation for his keen appreciation of the social aspects of the forestry problem. A major objective of forestry is to ensure sustained production of forests that will provide employment through industrial activities in forest and mill and thereby a stable support of local communities. Silcox has given special emphasis to this problem in his national program of forestry. In the recent expansion of public activities in forestry, he demonstrated great ability as an organizer, executive and personal leader. He was awarded the honorary degree of LL.D. by the College of Charleston and by the University of Syracuse for his distinguished achievements.

Silcox had a brilliant mind, keen power of analysis, extraordinary grasp of detail and an unusual memory. He had high ideals of public service which were reflected throughout his organization. He was also a realist, fully appreciating the obstacles to rapid achievement of his objectives.

His interests were broad, and he was very well read. He had unlimited courage, without a trace of self-interest. He was a man of great personal charm. He was widely admired and respected for his abilities and achievements. He had the affectionate regard of a host of friends who were attached to him through his personal qualities and who deeply mourn his death.

HENRY S. GRAVES

NEW HAVEN, CONN.
DECEMBER 27, 1939

RECENT DEATHS AND MEMORIALS

DR. HENRY MCELDERRY KNOWER, formerly associate in anatomy at the Johns Hopkins University and later professor of anatomy at the University of Cincinnati, died on January 10 at the age of seventy-one years.

PROFESSOR ALBERT DEFOREST PALMER, until his retirement as emeritus in 1934 associate professor of physics at Brown University, with which he had been connected for forty-six years, died on January 13 at the age of seventy years.

DR. HARRY MILLIKEN JENNISON, since 1923 professor of botany at the University of Tennessee, died on January 5, in his fifty-fifth year.

THE death is announced of Dr. Wilfred A. Welter, professor of biology and head of the department at the Morehead State Teachers College, Kentucky.

CARL GEORGE LANGE BARTH, consulting mechanical and industrial engineer, retired, of Philadelphia, died on October 28 at the age of seventy-nine years.

DR. KAKUGORO NAKATA, of the Botanical Institute of the Faculty of Agriculture of the Imperial University of Kyushu, Fukuoka, Japan, died on November 14. A correspondent writes: "He had recently returned from an extended tour of North China. Dr. Nakata was well known and highly esteemed by plant pathologists in America, where he had spent about two years (1919–1920) studying occidental methods of research, dividing his time between the University of California, the University of Wisconsin and the Laboratory of Plant Pathology, Bureau of Plant Industry, U. S. Department of Agriculture. He returned to this country for a shorter period in 1934."

A MEMORIAL tablet in honor of Lord Rutherford has been placed by the Historic Sites Monuments Board of Canada on the outside wall of the Macdonald Physics Laboratory of McGill University, where he was for nine years professor of physics. The inscription on the tablet reads:

ERNEST RUTHERFORD
Baron Rutherford of Nelson, O. M.
1871–1937

Here Lord Rutherford, Macdonald Professor of Physics, 1898–1907, made fundamental discoveries respecting radioactivity, the transmutation of matter, and the structure of atoms; foremost experimental physicist in his time, he advanced greatly the frontiers of knowledge, and opened new paths for the progress of science and human welfare.

A.D. 1939

SCIENTIFIC EVENTS

THE CANCER INSTITUTE OF MEDICINE AT BUENOS AIRES

THE correspondent at Buenos Aires of the *Journal* of the American Medical Association reports that a new six-story pavilion has been added to the Institute of Experimental Medicine for the Study and Treatment of Cancer in Buenos Aires. The dedication took place on December 12. The pavilion contains 250 beds in separate rooms, thus increasing the total capacity to 550 beds and two well-equipped air-conditioned surgical rooms. All modern ideas of hospital technic were incorporated in its construction and equipment. The cost amounted to about 1,000,000 pesos (about $300,000). This Cancer Institute founded in 1923 is connected with the University of Buenos Aires and has been for sixteen years under the