a program to develop smut-resistant wheats adapted to Washington conditions. Hybrid 128, developed at the Washington Experiment Station through work begun by Dr. W. J. Spillman, was widely used at the time but was very susceptible to smut. Beginning with Hybrid 128, Gaines led the program of crossing it with smut-resistant varieties and from this came successively Ridit, Albit and Hymar, the latter now the leading winter wheat in eastern Washington. This was but part of the work which led to an international fame for Dr. Gaines. He was the author of numerous scientific articles.

In addition to a busy research program, Dr. Gaines was active in church and civic affairs, in the Boy Scouts and in the Grange. He was a fellow in the American Association for the Advancement of Science and in the American Society of Agronomy and a member of the American Phytopathological Society, American Botanical Society, Northwestern Scientific Association, Alpha Zeta, Phi Kappa Phi, Phi Beta Kappa, Sigma Xi and Alpha Gamma Rho.

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DEATHS AND MEMORIALS

DR. HARRY BERMAN, associate professor of mineralogy at Harvard University and curator of the Mineralogical Museum, died on August 30 in an air crash of an American Transatlantic plane in Scotland. He was on leave of absence from the university and was in charge of research laboratories and of crystal production for the Reeves Sound Laboratories, Inc., and the Hudson American Corporation, both of New York. At the time of his death he was *en route* for England to supervise work for the Royal Air Force and the United States Army Eighth and Ninth Air Forces.

DR. WALTER L. JENNINGS, until his retirement in 1937 professor of chemistry at the Worcester Polytechnic Institute, died on September 2, in his seventy-eighth year.

DR. JOHN FITCH KING, professor of chemistry and chairman of the department at Williams College, died on August 29. He was in his fiftieth year.

DR. R. BENNETT BEAN, from 1916 to 1941 professor of anatomy at the University of Virginia, died on September 3 at the age of seventy years.

DR. HENRY WILSON STILES, professor of anatomy at Syracuse University, died on September 5 at the age of sixty-nine years.

EDWARD F. BERRY, professor of civil engineering and head of the department at Syracuse University, died in his fifty-fifth year on August 28.

WALTER HARVEY WEED, of Los Angeles, consulting geologist, died on September 5. He was eighty-two years old.

SIR ARTHUR SMITH WOODWARD, from 1901 to 1924 head of the department of geology of the British Museum, died on September 2. He was eighty years old.

IT is reported in *The Times,* London, that the Manchester Literary and Philosophical Society, with which John Dalton, the chemist and physicist, was closely associated throughout his life in Manchester, is commemorating his work on the occasion of the centenary of his death. In addition to a memorial lecture, arranged for the first meeting of its next session, the society hopes to publish a memorial volume, in which it is desired to give the whereabouts of relics of Dalton. Many of those which the society possessed have been destroyed by enemy action.

SCIENTIFIC EVENTS

ASTRONOMY IN SOVIET RUSSIA[1]

Nature reports that nine of the nineteen Soviet observatories were in territory that was overrun by the Germans and have been destroyed or seriously damaged. Most important of these was the Pulkovo Observatory, near Leningrad, which was completely destroyed by air and artillery bombardment. Most of the equipment and the valuable library of the observatory were removed in time to safer places. The Pulkovo staff has continued astronomical research work at Tashkent, Abastumani and Alma-Ata. Professor Belyavsky, director of the observatory, states that it has been decided that reconstruction is to commence immediately and that the instrumental equipment will be reinstalled at Pulkovo at the earliest possible moment, to make possible the resumption of work in fundamental astronomy. More powerful equipment is to be constructed in the U.S.S.R. or obtained from abroad. The Engelhardt, Nikolaeff and Tashkent Observatories will also carry on fundamental observations.

The *Moscow News* has reported the decisions of an astronomical conference held in Moscow in September last. A great astrophysical observatory is to be established with headquarters at Simferopol in the Crimea. There will be three observing stations, one in the Crimea at an altitude of 2,000 meters, a solar station at an altitude of 3,500 meters, and a station

[1] See article by O. Struve, "Post-war Planning in Russia," SCIENCE, February 4, 1944, p. 100.

somewhere in the southern hemisphere. The equipment will include a 120-in. reflector, two 80-in. reflectors, two 16-in. double astrographs, one 50-in. and one 30-in. Schmidt telescope, solar towers and a coronagraph. The training of the astronomical staff has continued during the war; some sixty or seventy astronomers and astrophysicists will be required for staffing the new institution. Information has been received that the international latitude station maintained by the U.S.S.R. at Kitab, Uzbekistan, has continued to function regularly throughout the war.

A TECTONIC MAP OF THE UNITED STATES

DR. CHESTER R. LONGWELL, Henry Barnard Davis professor of geology at Yale University, has announced the completion, after nine years of work, of a tectonic map of the United States depicting its complete geologic structure. Dr. Longwell is chairman of a committee of sixteen members, a division of the National Research Council and an affiliate of the National Academy of Sciences. Other members of the committee are Professors C. H. Behre, W. H. Bucher and G. Marshall Kay, of the department of geology of Columbia University; Drs. Eugene Callaghan, D. F. Hewett, P. B. King (committee vice-chairman), G. R. Mansfield, Watson Monroe, J. T. Pardee and G. W. Stose, all of the U. S. Geological Survey; Dr. E. B. Knopf, New Haven; A. I. Levorsen, consulting geologist, Tulsa, Okla.; Professor T. S. Lovering, University of Michigan; Professor W. T. Thom, Princeton University; Professor A. C. Waters, Stanford University; Dr. E. D. Wilson, Arizona Bureau of Mines, Tucson; Professor A. O. Woodford, Pomona College.

The map, in dimensions of four by six and a half feet and with a scale of forty miles to the inch, is the first of its kind to be published. It will be of practical value in many fields, particularly as an aid to petroleum geologists in giving them an overall picture of the major structural features of bedrock, with a consequent direct relationship to the occurrence of petroleum; to research geologists, who are working on the causes of large scale movements of the earth's crust; to instructors in geology teaching in college classrooms throughout the country.

The committee began its work in 1935. Funds were first provided by the National Research Council. Additional funds were granted by the American Association of Petroleum Geologists and by the Geological Society of America.

Members of the committee, who were chosen from previously designated sections of the country, worked from 1935 through 1940 in cooperation with geologists in the various districts, gathering information and checking it for accuracy with local representatives before forwarding it to the United States Geological Survey in Washington, D. C., where all information was first compiled before being transferred to the map. On the completion of this work in 1940, a preliminary edition of the map was prepared for limited distribution and criticism; and upon the basis of the resulting suggestions, work was resumed on the final and revised edition.

Earlier plans called for the completion of the map in 1941, but owing to the war and the subsequent increase in war work on the part of the geologists engaged in the study, the final revision took nearly four years.

Although the map has been completed, copies of it will not be available for another month. Approximately five thousand copies will be printed and will be for sale at cost by the American Association of Petroleum Geologists, Tulsa, Okla.

THE REORGANIZATION OF THE OFFICE OF THE SURGEON GENERAL

THE post of Assistant Surgeon General, to be filled by Brigadier General Raymond W. Bliss, has been established in a partial reorganization of the Surgeon General's Office. General Bliss will hold the new post in addition to his duties as chief of the Operations Service.

The Assistant Surgeon General will act for the Surgeon General in coordinating the work of the Operations Service, the various professional divisions, the Military Personnel Division and the activities of other divisions and services that affect operations.

Other changes include the dissolving of the Administrative Service; the Fiscal, Legal and Office Service Divisions of that service will report directly to the executive officer as previously; the Professional Service is dissolved and four Professional Consultant Divisions have been established as follows: Medical, Surgical, Neuropsychiatric and Reconditioning. The Nursing Division also is dissolved and all personnel and related aspects of the Army Nurse Corps will be the responsibility of the Army Nurse Branch of the Military Personnel Divisions.

A new Professional Administrative Service has been set up with Colonel Arden Freer as chief and Colonel Esmond R. Long as deputy chief. It will include the following divisions: Physical Standards, Nursing, Medical Statistics and the Professional Inquiries and Women's Health and Welfare Units. Colonel Florence A. Blanchfield has been appointed director of the Nursing Division.

Other appointments have been announced as follows:

Major William Harold Dunn has been appointed neuropsychiatric consultant for the Fifth Service Command Headquarters, Columbus, Ohio.

Colonel James Earle Ash, of the Army Medical Museum, has been appointed director of the Army Institute