works is one of the triumphs of the First Five Year Plan.

Third in significance is the Kazakh area, north of Lake Balkhash, where coal and copper have been developed in the inter-war years.

The fourth of Siberia's minerally-productive districts lies east and west of Lake Baikal, while the fifth is along the Amur River in the Far East. Reserves are considerable but production is only partly developed. Coal and iron are secured in a number of localities, and there is the beginning of a steel industry at Komsomolsk. Petroleum is obtained on the island of Sakhalin.

While Far Eastern developments are somewhat vulnerable to Japanese attack, production in the Urals and at Kuznetz seems secure from any feasible invasion, whether from east or west.

If mineral production will win the war, the Union of Soviet Socialist Republics has what it takes.

During the past two decades, the American public has been very reluctant to recognize the industrial potentialities of the Soviet Union. From the military record of recent months, it should be clear that any nation which can afford to lose tens of thousands of planes and tanks, and millions of soldiers, and still take the initiative, has far greater productive capacities than commonly appreciated. In the post-war world, it seems inescapable that the Soviet Union's geological foundations will place it in the first rank among industrial nations.

OBITUARY

GLOVER MORRILL ALLEN

SCHOLAR as well as student, an enthusiastic zoologist interested quite as much in the history and background of his subject as in the technical details, patient and persevering, with a most extraordinary fund of information and a capacity for methodical, detailed, accurate work possessed by few, taking keen pleasure in helping others though himself shy and retiring and always so far as possible keeping in the background, Dr. Glover Morrill Allen was one of the significantly outstanding mammalogists and ornithologists of his time. His published works are models of directness, clarity and accuracy. In reading them one instinctively feels his thorough mastery of the subject under discussion, and also one realizes that any statement made by him is authoritative and does not require checking. But his influence extended far beyond his published contributions. All his associates are more or less indebted to him for suggestions, advice or help of one kind or another, and some of them at times leaned rather heavily upon him. His unusual capacity for detailed work and his accuracy went far toward maintaining the high standard of the various publications he edited.

Glover Morrill Allen was born in Walpole, New Hampshire, on February 8, 1879, the son of the Reverend Nathaniel Glover Allen and Harriet Ann (Schouler) Allen, a sister of Rear Admiral John Schouler, U. S. Navy. At a very early age he became interested in mammals and birds. He prepared for college at the Newton High School, and while living at Newton in the winter and at Intervale, New Hampshire, in the summer he busied himself with an intensive study of the local faunas. Even when in high school he had an enviable local reputation as an authority on birds and mammals, although because of his shyness and diffidence he was personally known to very few. An unusually keen observer, he had already acquired a remarkably extensive knowledge of the details of the habits of the mammals and birds of his region, and his ability to recognize birds, particularly the numerous warblers, by their notes was almost uncanny. Like all the young zoologists of that region at the time, he made frequent visits to the natural history establishment of Charles J. Maynard, who always spoke of him as a most promising boy.

While living in Newton he made a large collection of the local mammals, all the skins being beautifully prepared and accompanied by full data. This collection, which included a porcupine, perhaps the last to be captured in Newton, was later presented to the Newton High School. In 1896 when a junior in high school he was elected an associate of the American Ornithologists' Union.

Entering Harvard, he was elected to the Phi Beta Kappa in his junior year, and received his A.B. *magna cum laude* in 1901. While at Harvard, in addition to the more usual courses, he applied himself to the study of Russian, and in the evenings studied Danish. He was awarded a John Harvard scholarship. In the year of his graduation from Harvard he was appointed secretary, and also librarian and editor, of the Boston Society of Natural History. Also in 1901 he published, together with Reginald Heber Howe, Jr., "The Birds of Massachusetts," in the preparation of which he had done the major part of the work.

In 1903 he received his A.M. degree, and in the same year published his book on the "Birds of New Hampshire." His Ph.D. he received in 1904; in June of that year he published a "List of the Mammalia of New England," and in July his doctor's thesis on "The Heredity of Coat Color in Mice." His interest in genetics was maintained throughout his career, and

he was one of the few descriptive naturalists who was also versed in the experimental method and in the literature of contemporary biology, and was therefore enabled to apply the knowledge of one field in judging results in the other.

Always passionately fond of outdoor life and with an absorbing interest in the habits of birds and mammals, he had made many camping trips to various places, but especially to the White Mountains, an area he knew in minute detail. Now for the first time he had an opportunity to visit the tropics as a member of an expedition to the Bahamas.

In 1906 and 1907 he was a graduate student at Harvard, and in the latter year began working part time on the mammal collections of the Museum of Comparative Zoology. While he did most of the curatorial work of the department as well as carried on research it was not until 1924 when he retired as Secretary of the Boston Society of Natural History that he was appointed curator of mammals, a position which he held until his death. During 1906 and 1907 he was serving as editor of *The American Naturalist,* then published by Ginn and Company; this editorship came to an end when that journal was taken over by the Science Press in 1908. In the summer of 1906 he made a trip to Labrador with Dr. Charles Wendell Townsend, publishing a paper on the "Birds of Labrador," in cooperation with Dr. Townsend, in 1907. In 1909 he was a member of an expedition to British East Africa, and in 1910 he visited Grenada, British West Indies, making extensive collections in both regions. His monograph on *Solenodon paradoxus* appeared in 1910.

He was married on June 26, 1911, to Sarah Moody Cushing, who, with a daughter, Elizabeth Cushing (Mrs. Arthur Gilman), survives him.

He was a member of an expedition to the Sudan in 1912. In 1916 his monograph on the whalebone whales of New England was published. On the establishment of the American Society of Mammalogists in 1919 he became a charter member, and also a member of the board of directors, and in the same year he was elected president of the Nuttall Ornithological Club, succeeding William Brewster, a position he held until his death. He was elected a fellow of the American Ornithologists' Union in 1921.

He retired as secretary of the Boston Society of Natural History in 1924, and in the same year was appointed a lecturer in zoology at Harvard. His "Birds and their Attributes," a work remarkable for the vast amount of included information, was published in 1925. In 1926 he was a member of an expedition to the Belgian Congo and Liberia.

He was elected president of the American Society of Mammalogists in 1927, serving for two years. On his retirement as librarian of the Boston Society of Natural History in 1928 he was elected vice-president, a post he held for the remainder of his life. In 1928 he published, in cooperation with his old friend Gerrit S. Miller, "American Bats of the Genera *Myotis* and *Pizonyx.*"

He was a member of an expedition to Brazil in 1929, and in 1931 visited Australia.

The American Ornithologists' Union in 1937 selected him as editor of *The Auk,* and in 1938 he was appointed associate professor of zoology at Harvard. It was in 1938 that he published the first volume of his great monograph on the mammals of China and Mongolia, the second volume appearing in 1940. In 1939 he published a check list of the mammals of Africa, and also a most excellent popular work on bats, creatures which had always been of special interest to him and on which he was the leading authority.

This brief review of Dr. Allen's career gives but a very imperfect idea of his industry and accomplishments, and of the confidence that others felt in him. He published many papers on birds and mammals, most of them in Cambridge and Boston, and contributed many excellent and kindly reviews of the work of others, particularly to *The Auk.* In recognition of his achievements a number of birds and mammals collected by him, particularly in Africa, have been named for him by his friends.

Dr. Allen's interests were by no means confined to birds and mammals. He had an extensive acquaintance with many other groups, particularly with their representatives in New England. This was not surprising in the case of other vertebrates, which are not numerously represented in New England, but to see him recognize certain rare insects in the field was surprising. Once in a bog at Essex he suddenly exclaimed, "There is *Bombus borealis,*" and, sure enough, there was that rare little bumblebee flying about.

Personally, Dr. Allen was a man of the highest ethical type, one of that rare sort in whom you instinctively feel complete confidence. He was always courteous to every one, and always anxious to be of assistance in any way possible. He had a cheerful and equable disposition. He never became excited over anything, and if depressed he never showed it. Especially characteristic was a lively sense of humor. Frequently he would surprise one with a droll remark, or an unusual combination of words. For instance, a zoo to him was "a museum which is not yet dead." He was deeply religious, an Episcopalian, but this side of his nature he always kept strictly to himself. Always retiring and rather shy, he was particularly reticent about his personal affairs.

Dr. Allen's sudden death on February 14, 1942, came as a great shock to all who knew him, and to

all those who knew and admired his work—a much larger group than he, modest as he always was, ever suspected.

AUSTIN H. CLARK

DEATHS AND MEMORIALS

DR. JOHN ALEXANDER MCGEOCH, professor of psychology and head of the department at the State University of Iowa, died on March 3, at the age of forty-four years.

PERCY TRAIN, fossil and plant collector, died on February 3. He was sixty-six years old.

THE death is announced of Dr. Cornelis Winkler, formerly professor of neuropsychiatry at Amsterdam, at the age of eighty-six years.

"A BOOK of Tributes to Charles Bernard Jordan," dean of the School of Pharmacy of Purdue University from 1924 until his death in April, 1941, has been issued by the university. It gives a reproduction of the illuminated parchment presented to him in honor of his twenty-five years of service to the university. Dr. Jordan joined the staff of the university in 1910.

THE Institución Cultural Española in Buenos Aires has established a laboratory for histopathologic research in memory of Professor S. Ramón y Cajal to be directed by Professor Pío del Río Hortega of Buenos Aires with a staff of eight investigators. The institute will promote investigations on the histology of the nervous system, employing the technic of Cajal and his school.

SCIENTIFIC EVENTS

GRANTS-IN-AID OF THE AMERICAN COLLEGE OF DENTISTS

THE American College of Dentists, through its Research Committee, offers annually a limited number of Grants-in-Aid and Research Fellowships. Information relative to such funds can be obtained by addressing the chairman of the Research Committee of the American College of Dentists, Dr. A. L. Midgley, 1108 Union Trust Building, Providence, R. I.

Research grants are made for one year only and are available on July 1. All applications should be made on blanks supplied for the purpose and must be in the office of the chairman of the committee by December 1. Action on requests for funds is taken once annually at a special meeting held by the Research Committee in February.

At a meeting held on February 21 in Chicago, the sum of $3,200 was allocated as follows:

$1,200 to Dr. Wallace Armstrong, of the University of Minnesota, for the continuation of an investigation of the effect of a fluorine free diet on the teeth of experimental rats and the determination of the fluorine content of some human diets.

$250 to Dr. Morris Steggerda, of the Carnegie Institution of Washington, Cold Spring Harbor, New York, for an investigation of the relation between growth and the eruption of the teeth in whites, Negroes and Indians.

$500 to Dr. Michael F. Bates, Tufts College Dental School, Boston, for an investigation to test the theory that the histological structure of the teeth is an index of the health of the individual during the period of tooth development.

$750 to Drs. H. R. Hunt and C. A. Hoppert, Michigan State College, for the continuation of an investigation of inheritance factors in rat dental caries.

$500 to Dr. James Nuckolls, of the University of California Dental School, for the continuation of a study of the primary centers of lobular development, growth and calcification of the tooth.

THE PROFESSIONAL STATUS OF CHEMISTS

THE professional status of chemists has been upheld by the National Labor Relations Board in a decision which lays down the principle that professional employees should not be forced into a bargaining unit composed of a miscellaneous group of skilled and unskilled workers as well as professional employees. It was held that only a majority vote of the professional group itself can determine its desires on the issue of union representation.

Describing the decision as "momentous," Dr. Charles L. Parsons, secretary of the American Chemical Society, says in a report to members of the society:

> While the board in earlier decisions had granted professional employees the right to express their choice in the matter of bargaining units, the unanimous decision rendered in the matter of the Shell Development Company and the International Federation of Architects, Engineers, Chemists and Technicians, Case No. R-3245, goes further than any prior decision of the board in establishing the right of professionals to self-expression within their group.

The controversy was submitted to the board on petition of the Federation of Architects, Engineers, Chemists and Technicians to set up a bargaining unit composed of both professional and non-professional employees. A group of professional employees of the company employed in professional work intervened, contending that professional and non-professional employees should not be merged into one unit.

When the case came to the board for hearing,

> the issue was squarely presented as to whether a union, by reason of having signed up a certain number of employees in a particular plant, could reach out and corral an almost equally large number of employees who had no desire to have that particular union represent them and