

developed Tracts in the Shenandoah Valley, Va.," by D. F. Hewitt, G. W. Stose, F. J. Katz and H. D. Miser. The greensand deposits of the eastern United States are considered by G. H. Ashley particularly with reference to their possible utilization as a source of potash, for their green color is due to their content of glauconite, a mineral that usually carries about 7 per cent. of potash, although the sands as a whole contain somewhat less of this useful alkali. An interesting paper on "Strontianite Deposits near Barstow, Cal.," by Adolph Knopf, forms part of the volume. Strontianite has been successfully used in the recovery of sugar from beet-sugar molasses, large quantities of the molasses being unavoidably produced in the manufacture of beet sugar. Among the mining districts described in this bulletin are the Cuyuna iron district, Minn., by E. C. Harder and A. W. Johnston; the Kings Mountain tin district, N. C. and S. C., by Arthur Keith and D. B. Sterrett; the northwestern part of the Garnet Range and the Dunklebery district, Mont., by J. T. Pardee; and the Arabia district, Nev., by Adolph Knopf.

The bulletin which consists of about 300 pages and contains a number of small maps and line illustrations, may be obtained on application to the Director, U. S. Geological Survey, Washington, D. C.

SUMMER BIOLOGICAL STATIONS

THE University of Michigan will maintain its biological station for instruction and research for the eleventh session during the eight weeks from June 30 to August 22. This station is situated on the shores of Douglas Lake, near Pellston, Mich., about twenty miles northeast of Petoskey, in the famous summer playground of northern Michigan. It is, however, well isolated from the summer resorts and the resort crowds. The personnel of the teaching staff is as follows: In zoology, Professors La Rue and Welch, of the University of Michigan, Professor Frank Smith, of the University of Illinois, and Mr. Dayton Stoner, of the State University of Iowa; in botany, Professor Gates and Dr. Ehlers, of the University of

Michigan, and Professor Quick, of De Pauw University. Courses are offered in entomology, ornithology, vertebrate zoology, ecology of invertebrate animals, systematic botany, plant ecology and plant anatomy, all but the last requiring a large amount of field work. Opportunity for investigation is offered to a limited number of investigators upon payment of nominal fees. For further information address George R. La Rue, director, the Biological Station, University of Michigan, Ann Arbor.

Dr. Raymond C. Osburn, head of the department of zoology and entomology in Ohio State University, has been appointed director of the Lake Laboratory. The 1919 session of the laboratory will be held from June 23 to August 2, a period of six weeks. The laboratory is now located at Put-in-Bay, Ohio, which is on an island in Lake Erie several miles from the mainland. It is easily reached by steamer from Cleveland, Sandusky and Detroit. Cooperation with the State Fish and Game Commission of Ohio during the 1918 session proved satisfactory to both the laboratory and the commission and the arrangement will be continued. A course on the fishes of Lake Erie will be given by Professor Osburn. Members of the staff will be Dr. F. H. Kreeker, the acting director, Ohio State University, who will offer a course in animal ecology; Professor S. R. Williams, of Miami University, who is in charge of invertebrate morphology; Professor M. E. Stickney, of Denison University, who gives work in plant ecology, and Dr. Edna Mosher, who is in charge of entomology. Surveys made last summer showed that the region was exceptionally well suited to the requirements of the laboratory. The fauna and flora are abundant and offer a wide field for research along a number of important lines. Independent workers will be cordially welcomed and given laboratory accommodations without charge.

An illustrated booklet has recently been issued descriptive of the work and environment of the Iowa Lakeside Laboratory. This station was founded by alumni of the University of Iowa on Lake Okoboji in 1909.

Beginning with the summer of 1919 the work of the laboratory will be organized on a research basis, and only those prepared for independent work will be admitted. The laboratory will open June 23, continuing in session ten weeks and closing August 30. Any one interested in the work for the coming summer should address the director, Robert B. Wylie, of the University of Iowa, Iowa City, Iowa.

DISTINGUISHED SERVICE MEDALS

GENERAL PERSHING has awarded the Distinguished Service Medal to a number of medical officers including the following:

FRANCIS A. WINTER, Brigadier-General. As chief surgeon of the lines of communication, American Expeditionary Forces, from June to December, 1917, he organized medical units at the base ports and in camps in France. He established large supply depots from which medical supplies were distributed to the American Expeditionary Forces, and by keen foresight and administrative ability, made these supplies at all times available for our armies.

JOSEPH A. BLAKE, Colonel. As chief consultant for the district of Paris, and commanding officer of Red Cross Hospital, No. 2, he efficiently standardized surgical procedures especially in the recent methods of treating fractures. His remarkable talent has materially reduced the suffering and loss of life among our wounded.

GEORGE W. CRILE, Colonel. By his skill, researches and discoveries, he saved the lives of many of our wounded soldiers. His tireless efforts to devise new methods of treatment to prevent infection and surgical shock revolutionized Army surgery and met with the greatest success.

WILLIAM H. WILMER, Colonel. As surgeon in charge of medical research laboratories, air service, American Expeditionary Forces, since September, 1918, he has rendered most distinguished service. His thorough knowledge of the psychology of flying officers and the expert tests applied efficiently and intelligently under his direction have done much to decrease the number of accidents at the flying schools in France and have established standards and furnished indications which will be of inestimable value in all future work to determine the qualifications of pilots and observers. The data collected by him is an evidence of his ability, his painstaking care and of

his thorough qualifications for the important work intrusted to him. The new methods, instruments and appliances devised under his direction for testing candidates for pilots and observers have attracted the attention and been the subject of enthusiastic comment by officers of the allied services, and will be one of great importance in promoting the safety and more rapid development of aerial navigation.

JOEL E. GOLDTHWAIT, Colonel. As a member of the medical corps he has, by his unusual foresight and organizing ability, made it possible to reclaim for duty thousands of men suffering from physical defects. He has thereby materially conserved for combat service a great number of men who would have been lost to the service.

THOMAS W. SALMON, Colonel. He has, by his constant tireless and conscientious work, as well as by his unusual judgment, done much to conserve manpower for active front line work. He was the first to demonstrate that war neurosis could be treated in advanced sanitary units with greater success than in base hospitals.

SCIENTIFIC NOTES AND NEWS

JOSEPH BARRELL, professor of structural geology at Yale University, died on May 4 from pneumonia and spinal meningitis, aged forty-nine years.

THE National Research Council announces the appointment of James Rowland Angell, dean of the faculties, and professor of psychology in the University of Chicago, as chairman of the council for the year commencing July 1, 1919. Dr. Angell succeeds Dr. George E. Hale, director of the Mount Wilson Solar Observatory of the Carnegie Institution of Washington, who has directed the affairs of the council during the war, and who resigned as chairman on April 30, to return to California. Dr. John C. Merriam, professor of paleontology in the University of California, who has been acting chairman of the council at various times, will direct its affairs until Dr. Angell assumes office in July.

At a meeting of the Franklin Institute at Philadelphia on May 21, the presentation of the Franklin Medals will be made to Sir James Dewar, the distinguished English chemist, and to Major-General George Owen Squier, of the