

parently irreconcilable objects can be effectively attained through the establishment of municipal bread bureaus, which should subsidize or tax the bakers according to the fluctuations in the price of corn. This expedient was successfully resorted to during the Crimean War.

It is urged that the home production of manures should be fostered by using every measure to increase the output of sulphate of ammonia, by developing the synthetic manufacture of nitrates and ammonia from the atmosphere, and by increasing the production of superphosphate, all of which industries, it is urged, should have the same privileges as munition factories. To secure increased crops arrangements should be made for free distribution of manures to small cultivators.

Measures must be taken for restoring the head of live stock. To this end restrictions must be placed upon slaughter of home stock; the colonial resources of Madagascar and Africa must be drawn upon for meat, to be prepared there in frozen or otherwise preserved condition in order to reduce costs of transport. For the same reason abattoirs and refrigerating plants should be established in the home meat-producing districts, whereby cheaper production and reduction in the number of middlemen would be secured. The strong prejudice of the people against refrigerated or preserved meat must be broken down, and much could be done in this direction by the use of such products throughout the Army and Navy.

THE SHALER MEMORIAL EXPEDITION

AFTER the death of Professor Nathaniel Southgate Shaler a group of more than 700 Harvard alumni raised an endowment for the "Shaler Memorial Fund," the income of which was to be used for geological research. The *Harvard Alumni Journal* reports that carrying out of the purpose for which that fund was created, a Shaler Memorial Expedition was organized last year to cover much the same ground which Professor Shaler himself traversed in a journey during the summer of 1873. The expedition of 1917 set out to study

the stratigraphy of the Ordovician formations from Pennsylvania to Alabama; were Professor Shaler alive, he would be especially interested in the attempt to correlate formations over so large an area, or, as he expressed it, the study of "that wonderful record of the first stages of the life and sea."

Professor J. B. Woodworth conducted the first Shaler Memorial Expedition; it went to Brazil in 1908. The expedition of 1917 to the Appalachians was conducted by Dr. Percy E. Raymond, associate professor of paleontology and curator of invertebrate paleontology at Harvard University, who started from Cambridge on August 1. He was joined at Salem, Va., by Mr. Richard M. Field, lecturer at Brown University. Thence the party worked southward as far as Bristol, Tenn. Dr. Ellis W. Shuler, of the Southern Methodist University, Texas, acted as guide from Blacksburg to Bristol.

As in Professor Shaler's expedition of 1873, the travelers of 1917 had to be "free to move in any direction." Even with the greatly improved railroad facilities, it was next to impossible, without independent means of transportation, to cross and recross the mountains along their entire length, in the time allowed. The Appalachians still remain a great barrier to the interior of our country, a fact of considerable military significance. But the automobile solved the problem of transportation, as the wagon did in 1873; although tire and engine trouble occurred, the car was a great aid in reaching distant and out-of-the-way sections, and bringing in specimens.

During the first field-season the party was able to work the principal sections between Pennsylvania and Tennessee, and it is hoped that two additional years of intensive study, especially the northward, will supply the material for a thorough description of the Ordovician rocks and faunas of the Appalachians.

The first year's work has already brought to light facts regarding the nature and distribution of sediments and faunas which are original and contrary to some preconceived ideas. The field work in Central Pennsylvania, which was started independently in 1915 by

Mr. Richard M. Field, has been completed, and the results will soon be ready for publication. The outstanding features of that section are certain peculiarities of the fauna which have been heretofore undescribed, and the remarkable series of limestones and dolomites, replete with phenomena significant of their origin and evolution.

WAR SERVICE FOR CHEMISTS

THE secretary of the American Chemical Society, Dr. Charles L. Parsons, has prepared the following statement:

So many hundreds of letters are being received from firms and individuals that it is necessary to answer by this form letter, which covers most inquiries.

Individuals can obtain deferred classification only through the local boards or by appeal to the district boards.

Manufacturers engaged in the production of materials necessary for the war may apply by letter to the Chemical Service Section, National Army, Room 1108, Interior Building, Washington, D. C., for the return to them of necessary, trained chemists now in the army and not already transferred to chemical service. They may also apply through the Chemical Service Section for deferred classification of trained chemists necessary to the control of their operations who are not yet called. Applications from the men themselves will not be considered. Only those chemists whose services are necessary to war work will be considered. The evidence submitted by the manufacturers must be conclusive.

Students taking a regular chemical course may be enlisted in the Engineers' Reserve Corps and placed on the inactive list in order to complete their college course. The dean or president of the institution must certify, however, that their standing is such as to warrant the conclusion that they will graduate with a record equal to the first third of the graduates of the previous ten years. This does not apply to students in biological and physiological chemistry, as the Chief of Engineers has ruled that such come under the Surgeon General's Office, rather than under the Engineering Department. Students wishing to take advantage of this opportunity to receive their degrees before entering the country's service should address the Chief of Engineers, War Department, Washington, D. C., asking for the necessary blanks to be filled out for this purpose.

Transfers to chemical service are made by the War Department on request from some division of the army for the particular chemist needed. After the approval of the commanding officer and the Chemical Service Section, the man is transferred. Remember that the Secretary has no power to transfer you to chemical service. He simply brings your name and qualifications before those who have.

No one can predict how great this requirement for chemists will be. At present, although nearly 1,000 chemists are serving in a chemical capacity, some 300 men properly classified as chemists remain in the camps. Accordingly, if you enlist as a chemist before you are called, you will deprive another chemist, actually in the army, of his opportunity to render chemical service. The industries which supply the army and navy with the sinews of war need chemists and are being seriously handicapped by the depletion of their chemical personnel. Cards, giving age, training, experience, etc. (obtained from questionnaires filed with the Bureau of Mines), of all men with chemical training (known to be in the army) are kept in the office of the society. These cards are constantly consulted by those in command needing chemical assistance. Men are chosen, not to give the individual an opportunity to serve in a chemical capacity, but to find the man especially qualified for the work in hand. Accordingly, you may or may not be selected. Men with plant experience, research, physical and organic chemists, some analytical chemists, etc., have been in demand. On the other hand, there has been almost no chance to place pharmaceutical chemists, agricultural or food chemists, as the army apparently has little need for this form of chemical service, and the government itself is not manufacturing in these lines.

Chemical positions in the government service other than those by enlistment in the army and navy are obtainable only through the Civil Service Commission. They do not necessarily exempt the incumbent from military service.

Commissions seek the man. A number of chemists have been commissioned, but in almost every instance it has been by promotion from the ranks for recognized ability, or the particular man has been sought to fill a special place of responsibility or trust for which he was known to be especially fitted. The place was not made for the man, but the man was found for the place, sometimes after long search. A commission carries authority with it and is not lightly awarded, whether in the engineering, medical, or chemical branches of the service.