

in the former that the dust from the seed in the field irritated the eyes, throat, and especially the nose, so much that the native laborers were obliged to wear masks. It has been reported that the Germans had bought all the available supply of these seeds before the declaration of war. Both the sabadilla seeds and all preparations compounded from them are now, however, declared contraband by England.

Another plant of the same genus grows wild in Texas, and some botanists believe that should a need for sabadilla arise here it could easily be cultivated in Texas and in other southern states. Dr. Rose collected many other specimens during his trip, primarily in the mountains about Caracas and Puerto Cabello, where he made an especial search for cacti and orchids.

Mr. Paul C. Standley, another botanist of the National Museum, spent three weeks in the vicinity of Fort Myers, on the west coast of southern Florida, collecting plants and studying the local flora. He was later detailed for field-work in New Mexico, and remained for four weeks at Ute Park, where he gathered over 5,000 specimens, including several genera new to the state, and many additional species. During his work, he secured the largest collection of cryptogams, the flowerless plants propagated by spores or simple cell division, ever obtained in New Mexico. This collection includes about 300 species of fungi not previously found in this state.

The Smithsonian pamphlet also describes the botanical explorations of Professor A. S. Hitchcock in the Hawaiian Islands, a report of which will be published shortly.

WAR SERVICE FOR CHEMISTS¹

CHEMISTS and chemical engineers are normally needed in almost all branches of industry (including the standardization and control of food products) for the successful operation of processes, the detection and speedy correction of difficulties and the improvement of products. England, France and

Italy found it necessary to recall all chemists from the ranks; Canada does not allow chemists to enlist; chemists have saved Germany up to the present time.

There was a decided shortage in the supply of chemists in the United States even before April, 1914. The war has made the shortage acute, and it is certain that our own war needs and industries necessary to war will absorb chemists as rapidly as they can be trained.

It takes from four to seven years to train a chemist. The shorter time is for college graduates and chemical engineers who become wholly useful only after a further year of experience in a manufacturing plant or laboratory (corresponding to the hospital year required of medical students). The longer time is for the training of research men taking the doctorate degree in chemistry, on whose shoulders ultimately the vast need of the government and the industries fall for meeting and solving new difficulties and problems of organized research.

When chemists of mature years are called in for service in government laboratories, their places must be filled by younger men to keep the machinery working. It is, therefore, of the greatest importance that steps be taken:

1. To keep and impress into service in *chemical* lines chemists drawn by the draft for service in the United States Army or Navy.

2. To provide means for keeping open sources of supply of chemists from universities, colleges, and schools of technology, and to procure volunteers in chemistry.

A tentative plan for accomplishing these results is hereby appended and recommended. WILLIAM H. NICHOLS, *chairman of the Chemistry Committee, National Defense Council.* Past-president, Society of Chemical Industry. President, Eighth International Congress of Applied Chemistry.

MARSTON T. BOGERT, *chairman of the Chemistry Committee, National Research Council.* Past-president, American Chemical Society.

¹ Report to the Council of National Defense.

A. A. NOYES, *Past-president, American Chemical Society.*

JULIUS STIEGLITZ, *President, American Chemical Society.*

CHARLES L. PARSONS, *Secretary, American Chemical Society.*

PLAN FOR THE IMPRESSMENT OF CHEMISTS FOR WAR
SERVICE AS CHEMISTS AND FOR THE PRESERVA-
TION OF THE SUPPLY OF CHEMISTS

I. There shall be organized a committee of three to advise the President of the United States through the War Department on requests for exemption of chemists. This committee might well include besides a government representative two chemists, one a chemical engineer or technical chemist, the second a university man. These men should be nominated to the President by the Council of National Defense.

II. Requests for exemption of individual chemists shall be made to this committee by:

1. Government, state or municipal laboratories and bureaus.

2. Heads of manufacturing plants on the basis of the imperative need of these men for their successful operation.

3. Presidents of universities, colleges and schools of engineering or mining on the basis of proficiency, promise and ability of candidates for college or university degrees, specializing in chemistry. Men recommended under this head who are candidates for the doctorate degree shall not be over 26 years of age when they receive the degree, and men who are candidates for a four-year college degree shall not be over 23 years of age when they are to receive the degree.

III. (1) Chemists under 21 and over 30 years of age and chemists between 21 and 30 who have not been drafted may enroll with the above committee as volunteers in chemistry subject to the same conditions as the enlisted and exempted men.

(2) Students in chemistry under 21 years of age may enroll with the above committee for a "chemists reserve" under the conditions specified in II. (3).

IV. Men thus enrolled and accepted under the provisions of the above paragraphs for war service as chemists shall be subject to the orders of the government as to location and nature of service and shall be entitled to wear a badge or other insignia indicating their official status (practise of France and possibly of other European countries). Students enrolled in a "chemists reserve" shall be subject to the same conditions as obtain for other

reserves of the government and shall also be entitled to wear some insignia or badge indicating their enrollment.

SCIENTIFIC NOTES AND NEWS

A COMMISSION under the chairmanship of Dr. Frank Billings, of Chicago, is about to leave for Russia, under the auspices of the war council of the American National Red Cross. Its members include specialists in sanitary science, general medicine, tuberculosis, bacteriology and other branches of medicine, engineering, foods, transportation, business, etc. Mr. William B. Thompson, of New York, is assuming the expense of the commission.

FORTY-FIVE engineers of the topographic branch of the Geological Survey who are members of the Engineer Officers' Reserve Corps, have been assigned to active duty in connection with the military mapping now being done for the War Department. Among the men affected are Majors Frank Sutton, William H. Herron, Robert B. Marshall, Glenn S. Smith, George T. Hawkins, Robert Muldrow, James H. Jennings, William H. Griffin, Robert H. Chapman, Joseph H. Wheat and Albert M. Walker; Captains Claude H. Birdseye, Emory I. Ireland, Clyde B. Kendall, Albert Pike, Herbert H. Hodgeson, Carl L. Sadler, J. G. Staack, William L. Miller, Eugene L. McNair, Asahel B. Searle, William O. Tufts, Bertram A. Jenkins, James W. Bagley and Calvin E. Giffin. The list also includes twenty first and second lieutenants.

MR. HENRY S. GRAVES, chief of the U. S. Forest Service, has arrived in Paris to make arrangements for the forest work which the American army engineers will undertake in France in connection with the military operations of the allied forces.

DR. ALLERTON S. CUSHMAN, president of the Institute of Industrial Research, with headquarters at Washington, D. C., has been commissioned a major in the Officers' Reserve Corps, and will carry on special research work under the ordnance section on the chemistry of high explosives.

DR. ALEXIS CARREL, of the Rockefeller Institute for Medical Research, who has been at the