insects and whiteflies. Most of the collections of *Tiphia* in Puerto Rico were made under similar conditions, but in Haiti *Tiphia* is much more often seen frequenting the flowers of wild parsley, *Pastinaca sativa*. At the lower elevations in Puerto Rico, wild parsley does not attain maturity, and even in the mountains must be planted and cared for if one is to have a continuous supply of flowers. At Kenscoff and elsewhere in Haiti, it is a weed that no amount of cultivation seems to discourage. With wild parsley flowers present in abundance at all seasons of the year, *Tiphia* wasps thrive in Haiti, yet barely manage to survive in Puerto Rico, feeding on the excretions of scale insects. The presence or absence of this one factor, important but admittedly not absolutely vital to the non-parasitic stage of their major parasite, apparently determined the relative abundance of white grubs in these two countries.

The coffee leaf-miner, *Leucoptera coffeella*, appears to be present everywhere that Arabian coffee grows, and has numerous minute wasp parasites, generally of very minor importance in its control. On the island of Guadeloupe, French West Indies, Mr. F. Sein found a Braconid parasite, later named *Mirax insularis* by Mr. C. F. W. Muesebeck, which attacks from 65 to 80 per cent. of all the leaf-miner caterpillars. Introduced into Puerto Rico, it has become established, but rarely can one find more than a fraction of 1 per cent. of parasitization. What factor, present in the coffee groves of Guadeloupe, is so scarce in Puerto Rican groves that this parasite, so effective there, can not attain a similar fortunate destiny in Puerto Rico?

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THE COMPLETE UTILIZATION OF SCIENTIFICALLY TRAINED PERSONNEL

IN his recent communication[1] on "Wartime Scientific Manpower Production" Professor Nicholas deals with one phase of a problem which has caused, as he says, "the growing demand for complete utilization of scientifically trained personnel." Scientific teaching which is designed to train new personnel in fields where shortages exist or are imminent furthers the war effort and should therefore be considered as an important duty, as well as an essential war job. There are several other ways through which existing personnel shortages in the various fields of physics could be alleviated. There are many workers in the biological, chemical and geological fields who have the qualifications either for teaching or for war research in physics and who are not as yet doing war work. New teaching personnel could also be found in the ranks of the refugee scientists who are barred from war research because they are non-citizens. Many high-school science teachers are well qualified to teach college courses. In addition, a system for exchange of teaching personnel, such as is already being used by some institutions, could make more teachers available by increasing the efficiency of their utilization.

The above suggestions supplement Professor Nicholas's suggestion of a "personal inventory" with the proposal that the National Roster, or another qualified body, make an inventory of various groups of people who are available to fill the deficit in teaching and research personnel in those fields where shortages exist or are imminent. But it is in relatively few fields that the needs of war research have thus far made a serious drain on scientific manpower. In the field of biology, including the medical and agricultural sciences, and in chemistry mobilization is far from complete. It is chiefly this fact which has caused "the growing demand for complete utilization of scientifically trained personnel," and it was with this phase of the problem that an earlier communication from the American Association of Scientific Workers was concerned. Since the publication of this communication,[2] the AAScW has sent a memorandum (July 30) to the National Academy of Sciences and a letter (Aug. 27) to Dr. Vannevar Bush, the director of OSRD, containing recommendations for specific actions by these two bodies which would aid the mobilization of scientific personnel.

The bottleneck in the full utilization of scientists in the fields mentioned appears to be the difficulty of converting their peacetime research into activity fruitful to the war effort.[3] Many of the war problems in these fields are not obvious to the civilian scientist. Many scientists are therefore awaiting the time when the national scientific authorities will call upon them for specific work. They do not often realize the magnitude of the task which is being done so well by our scientific authorities and many have become discouraged because of the delay in calling upon them for war work. There is hesitation about formulating research projects independently and a paucity of means by which individual or group initiative can be encouraged and made effective. It is feared that independently formulated projects may duplicate work actively in progress and that such independently initiated projects are not wanted by our scientific authorities. Many scientists do not realize that they can themselves make important pioneering contributions to war problems because of their specialized

[1] SCIENCE, 96: 2484, 135–6, August 7, 1942.

[2] *Ibid.*, 96: 2479, 16, July 3, 1942.

[3] This difficulty is not unique for our country but also exists in Great Britain, as can be seen from various editorials in *Nature* and from reports on this question by our colleague, the British Association of Scientific Workers, *e.g.*, *Nature*, No. 3797, August 8, 1942, pp. 186–8.

knowledge of new techniques and of the latest developments in their own fields.

The general solution to the problem of the utilization of scientists has been well stated by Professor Wilder Penfield,[4] who speaks from his experience as a participant in the Canadian and British war effort. In Professor Penfield's words: "It should be recognized as a principle in a democratic country that the government can not be considered omniscient, or always wise. Leadership must therefore develop spontaneously in every department of our national life. New ideas and new efforts should break out among men in all walks of life, from laborer to industrialist and professor, like an epidemic of influenza."

The American Association of Scientific Workers, through several of its branches, is developing activity to aid scientists in formulating and presenting projects for war research. This small-scale experiment is sufficiently promising that it is being paralleled by other groups. The extension of such activity throughout the country appears desirable and the AAScW has recommended to our national authorities various steps which will encourage and promote the exercise of their creative initiative by our civilian scientists so that new problems and new types of research useful to the war effort may arise on the basis of peacetime skills.

HARRY GRUNDFEST,
National Secretary, American Association of Scientific Workers

SCIENTIFIC BOOKS

ORGANIC CHEMISTRY

Organic Reactions. Vol. I. ROGER ADAMS, editor-in-chief; WERNER E. BACHMANN, LOUIS F. FIESER, JOHN R. JOHNSON and H. R. SNYDER. Pp. vi + 391. New York: John Wiley and Sons, Inc.; London: Chapman & Hall, Ltd. 1942. Price, $4.00.

THIS is the first volume of a publication which it is hoped to issue periodically in books of about 12 chapters each, under the general editorship of Dr. Roger Adams, an editorial board and a group of associate editors. The editorial group and the contributors of the individual chapters are all recognized leaders in their chosen fields, on both the experimental and the literary sides. The result, as was to be expected, is an admirable piece of work, constituting an exceptionally valuable contribution to the literature of organic chemistry.

Every investigator, in the prosecution of his experimental laboratory work on synthetic organic chemical problems, draws upon our accumulated knowledge of chemical reactions as stored up for him in texts and reference books. Space limitations prevent the inclusion in such books of adequate discussion of the scope and limitations of these reactions, of the conditions determining maximum yields or of giving specific illustrative examples of variations in technic. The investigator, therefore, may have to spend a large amount of valuable time in searching the literature for this information. The purpose of the present undertaking is to meet this need, and all organic chemists will be grateful to those who are carrying through this project.

This first volume consists of 12 chapters, each devoted to a single reaction, or a definite phase thereof, as follows: (1) Reformatsky Reaction; (2) Arndt-Eistert Synthesis; (3) Chloromethylation of Aromatic Compounds; (4) Amination of Heterocyclic Bases by Alkali Amides; (5) Bucherer Reaction; (6) Elbs Reaction; (7) Clemmensen Reduction; (8) Perkin Reaction; (9) Acetoacetic Ester Condensation; (10) Mannich Reaction; (11) Fries Reaction; (12) Jacobsen Reaction. These subjects are presented from the preparative view-point, and the authors have had practical personal experience with the processes described. Each chapter begins with a Table of Contents, lists in tables the different compounds to which the reaction has been applied and includes full references to the literature. The book is indispensable to every investigator of synthetic organic chemical problems.

As it is practically impossible, in gathering data of this kind, not to miss some facts of interest buried in unexpected places, one way in which organic chemists can express their appreciation to the authors of this and subsequent volumes is to call their attention to any omissions they may note. Cooperation in this direction, the reviewer is confident, will be both welcome and helpful.

As is always the case with Wiley publications, paper, presswork and binding are admirable.

Organic Syntheses. Vol. 22. An Annual Publication of Satisfactory Methods for the Preparation of Organic Chemicals. LEE IRVIN SMITH, editor-in-chief, with an editorial board and an advisory board. Pp. 114. New York: John Wiley and Sons, Inc.; London: Chapman & Hall, Ltd. 1942. Price, $1.75.

THE new volume of this very useful series describes the preparation of the following: Acetobromoglucose;

[4] "Some Problems in Wartime Neurology," *Arch. Neurol. and Psychiat.*, May, 1942.