carried on by the department itself. This is the department's sole agency with the administrative functions mentioned.

On December 13, 1941, a major reorganization of the Department of Agriculture was announced to streamline it for the war effort. An Executive Order dated February 23, 1942, validated this reorganization. At that time seven of the old-line scientific bureaus and agencies, concerned largely with research work, were combined to form the Agricultural Research Administration. Included also were the four large Regional Research Laboratories, authorized in 1938, and established at Peoria, Ill., Albany, Calif., Philadelphia, Pa., and New Orleans, La.; the nine Bankhead-Jones laboratories for research on special agricultural projects; and the Beltsville (Md.) Research Center.

In February, 1943, due to an internal reorganization within the Agricultural Research Administration, some of the bureaus were re-named. Their names will provide a sufficient indication of the fields of research they cover for present purposes and are now as follows: Bureau of Animal Industry, Office of Experiment Stations, Bureau of Entomology and Plant Quarantine, Bureau of Human Nutrition and Home Economics, Bureau of Dairy Industry, Bureau of Plant Industry, Soils, and Agricultural Engineering, and the Bureau of Agricultural and Industrial Chemistry. The work of the Regional Research Laboratories is now closely integrated with the last.

As a result of Presidential reorganization plans announced in 1939 and 1940, the Weather Bureau was transferred to the Department of Commerce, the Food and Drug Administration to the Federal Security Agency, the Bureau of Public Roads to the Federal Works Agency, and the Bureau of Biological Survey to the Department of the Interior, where it became part of the Fish and Wildlife Service.

In addition to the above-mentioned agencies in the Agricultural Research Administration, the department carries on considerable scientific research in the Forest Service and in the Soil Conservation Service. The former does research in twelve forest and range experiment stations, and in the well-known Forest Products Laboratory at Madison, Wis. The latter conducts investigations into the character, cause and effect of soil erosion and water depletion, and develops methods of soil and water conservation in cooperation with state agricultural experiment stations. Finally, the Bureau of Agricultural Economics is the central statistical and economic research agency of the department, and has done outstanding work in the fields of social and economic science.

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A TEA PREPARED FROM NEEDLES OF PINE TREES AGAINST SCURVY

IN the issue of SCIENCE for August 6, 1943, Maurice Donnelly calls attention to the work of B. Shishkin concerning the use of needles of ordinary pine trees against scurvy. Francis Parkman is quoted as having published the beneficial effect of a decoction of evergreen on scurvy.

The beneficial effect of this substance was discussed in an article of Dr. Walter Tobler, now in Bern, Switzerland, who studied scurvy in the children's clinic of the University of Vienna after the first World War. His paper is published in the *Zeitschrift fuer Kinderheilkunde* (Vol. 18, pp. 63–158, 1918). He found the publication of Lind, "Treatise about Scurvy," (Riga and Leipzig, 1775, translated from the second edition (English) by Petzold).

In the war between Sweden and Russia (most likely the march of Charles XII into the Ukraina in the winter of 1708/09) almost all soldiers of the Swedish army became incapacitated through scurvy. But the further progress of the disease was stopped, as according to the advice of Erhenius, the royal physician, a tea prepared from pine needles was used. Even the most severe cases were cured and soldiers up to that moment free from scurvy were protected. This remedy became therefore very famous and the pine tree was called afterwards *Pinus Antiscorbuticus*.

Lind quotes further proofs for the beneficial effect of pine needles and needles of other conifers. Later the cones and even the green bark of these trees were used against scurvy and not only in form of tea but also in form of pine-beer. Lind states with enthusiasm: "If one takes a few bags filled with Pine branches on an ocean trip, one may prepare this 'marvellous drink' at any time. The drink may be prepared by letting the pine needles ferment in wine or beer."

One of the first antiscorbutic remedies in Europe was wine in which Vermouth was put in and boiled. But Lind states that experience teaches that "real" pine-needle beer better than anything else not only prevents scurvy but it is also a very effective curative remedy.

Tobler points out that the richness of woods in pine trees in Europe gives the people the consolation that they possess an excellent remedy against scurvy. Wine and beer are not necessary.

Tobler prepared the drink by pouring boiling water over the crushed needles, letting the extracting proceed until the tea obtained an exquisite aroma of pine needles. The taste of the tea is very pleasant so that even a sensitive palate will not refuse it. Tobler used the tea and was enthusiastic about it. I took it myself and found the drink very nice.

Children went with knapsacks into the pine woods

in order to collect the pine needles, and each child received one cup of pine-needle tea daily.

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VITAMIN C IN EVERGREEN-TREE NEEDLES[1]

THE identity of the tree that cured Jacques Cartier's men of scurvy when they wintered near Quebec in 1535–6 will always remain in doubt, as the Iroquois name "annedda" (ameda) denotes simply an evergreen tree. Many of Champlain's men died of scurvy when he wintered near the same place 73 years later, in 1608–9. Champlain had heard something of Cartier's miraculous "annedda," but he sought it in vain, probably because he did not know it was a tree—he speaks of it as "l'herbe appelée Aneda"—and because since Cartier's time the Iroquois population had moved away and the Algonquins who had replaced them could not tell him the meaning of the word.

Almost every editor of the Voyages of the early French explorers, beginning with Hakluyt in 1600, has proposed a different tree for annedda. The suggestions have been sassafras, *Sassafras varifolium;* white pine, *Pinus strobus;* balsam fir, *Abies balsamea;* spruce, *Picea sp.;* and hemlock, *Tsuga canadensis.* Sassafras is Hakluyt's wild guess; the northern limit of the tree is far south of Quebec. Of the others, spruce and hemlock are the more likely candidates. There is evidence that the inner bark of white spruce, *Picea canadensis,* which is known to be very rich in ascorbutic acid, was used in Indian medicine. It was an ingredient in a "spring tonic" compounded by white settlers in Ontario who had been told of its virtues by the Indians.[2] Hemlock, however, seems to have been in far greater use among the natives than any of the other conifers. It served them as food, drink and medicine. To give a few references: F. W. Waugh ("Iroquois Foods and Food Preparation," Ottawa, 1916), "Take the leaves, steep, sweeten with maple sugar, and eat with corn bread or at meals." John Stewart ("An Account of Prince Edward Island in the Gulph of St. Lawrence," London, 1806), ". . . and the tips yield a medicine which has been found very powerful in scorbutic complaints." L. H. Morgan ("Houses and Home Life of the American Aboriginies," Washington, 1881), "A favorite beverage was made from the tips of hemlock boughs boiled in water, and seasoned with maple sugar." And Thoreau relates that his Indian guide in the Maine woods gave him hemlock tea for breakfast. He adds the characteristic remark, "and we were not obliged to go as far as China for it."

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[1] SCIENCE, August 6, 1943.

[2] Personal letter from Professor R. B. Thompson, Department of Botany, University of Toronto.

SCIENTIFIC BOOKS

PSYCHOLOGY FOR THE FIGHTING MAN

Psychology for the Fighting Man. Prepared for the fighting man himself by a committee of the National Research Council with the collaboration of Science Service as a contribution to the war effort. Washington: *The Infantry Journal.* 1943.

IT is a truism that the popularization of science is not easy. Real scientific publications are never needlessly complex except when written by pedants or by scientists whose minds are not quite first-class. Of course the non-scientifically trained reader can not always follow good technical writing becase he is in respect to the science in question a layman and has not mastered its concepts. The duty of the true popularizer in science is to make the specific problems dealt with as clear as possible to the non-professional reader. It is an advantage also in popular writing to relate these problems in some way when possible to the ordinary experience of everyday life in which the non-technical reader is interested. The popularizer may then describe in simple and clear expository prose the solutions of the problems that have been raised. The intermediate description of special methods, particularly those that are mathematical, and the technical evaluation of the evidence of the science must in many cases be omitted or only most briefly presented.

The book before us is just such a true popularization. It is a most successful one. The common experience to which it is everywhere related is military life. How did this book come into being? The need for a presentation of real, modern, scientific psychology so that it could be understood by the average American enlisted man was early recognized. The way of achieving this end was discussed at a number of meetings of the Emergency Committee or "war cabinet" in psychology of the Division of Anthropology and Psychology of the National Research Council. Finally a committee was appointed to prepare the present book. The chairman of the committee and editor-in-chief of the volume was Professor E. G. Boring, of Harvard University.

Many psychologists contributed chapters or sections for the book. Much of this material as originally presented was not "popular" in the sense described in the