

names for plants, he adopted those given by Torrey, Gray and others "for very obvious reasons." He always maintained this courteous and respectful attitude toward Gray in spite of their rivalry. He was content to be a good teacher and to make good money from his various books, of which about 800,000 copies were sold.

If there was any one reason for the wide sale and popularity of Wood's "Class-Book of Botany," it was the provisions he made for its use in identifying native plants by quick, easy methods. These were not found in earlier books. For this reason the new book was a great stimulus to field botany and observations of living plants. Wood's great practical contribution to the technique of rapid identification was the scheme he called analytical tables, now known as keys. In his preface, Wood gave Dr. Phelps much credit for the idea, but they were first published and later improved in the "Class-Book." They were both new and useful, just the tools needed by the amateur. The professionals had similar schemes based on natural affinities between families and genera but very difficult for use by others or in the field. They still are and they are still printed in most sections of Gray's "Manual," though many of us would like to see the Woods-Phelps type of artificial keys in the next edition. It's about time after a long one hundred years.

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### SCIENCE AND THE NEW DRAFT REGULATIONS

IN recent articles in *SCIENCE* (101: 172-173, 1945), and in *The Scientific Monthly* (LX, 37-47, 1945), Dr. M. H. Trytten, director of the Office of Scientific Personnel of the National Research Council, has forcefully pointed out that our present manpower policies have endangered the postwar supply of scientists. The drastic decline in graduate students and in the number of doctoral degrees that have been granted during the war years doubtless will seriously affect the future of American science.

At this moment, an even more serious threat is taking place which will still further curtail the supply of scientific personnel. I refer to the new Selective Service policies promulgated in *Local Board Memorandum No. 115*, as amended on February 21, 1945. Under these new regulations, a considerable number of war research workers and probably the major portion of university staff members who are in the 18 to 30 age group will be reclassified and inducted into military service—most likely for combat duty. According to the above memorandum, it is also expected that the 30 to 38 age group will follow soon thereafter.

Certain agencies, such as the National Roster and OSRD, are authorized to certify research workers for deferment by the local boards. However, the above memorandum states that these agencies "... have agreed to specific limitations upon the total number of certifications that will be made ... and definite limitations upon the type of persons to be certified. ... ." According to reports received by the American Association of Scientific Workers, the universities and colleges, at the insistence of the manpower authorities, have made up lists designating which members of their staffs are first to be released for induction.

Unless these steps are halted, scientific personnel on college staffs and on research projects of less immediate importance to the prosecution of the war will shortly be swept into the armed forces. In terms of manpower, the total number of people involved is small. Induction or deferment of these groups of scientists can do little, therefore, to affect the requirements of the armed forces. In terms of the loss to society and to science, however, the induction of these younger scientists will bring about a grave situation. It will deprive society and science of a group which is probably at the height of its originality and promise. It will furthermore seriously curtail the teaching facilities of the colleges, and thus bring about a still greater deficit in the postwar supply of scientists than even the alarming situation forecast by Dr. Trytten.

There is considerable irony in this new threat to scientific personnel. The contributions science has made to the war effort have impressed the public and our national authorities with the need for fostering and expanding postwar scientific development. This is exemplified in President Roosevelt's letter recently to Dr. Vannevar Bush. Furthermore, the current plans for expanded national and international economies, such as those embodied in the President's program for 60 million jobs, and in the plans of the Dumbarton Oaks, Bretton Woods and Yalta agreements, carry with them a demand for an increased number of scientists, technologists and teachers. At the same time that these important new plans are being developed, young scientists are being drained away and our capacity to provide new ones is being destroyed.

The new Selective Service regulations (*l.c.*, p. 1) that deferments may be made by local draft boards, if it is shown that individuals are "irreplaceable ... in support of the national health, safety or interest." Scientists will agree that the group of their younger colleagues clearly falls into this category and that all steps should be taken by colleges, universities and other employers of scientists to obtain deferments for this small but important group.

Because we believe that it is clearly in the national

interest to defer the young scientists who are working in the universities and on research projects not immediately vital to the war effort, the American Association of Scientific Workers has made representations to War Manpower Commissioner McNutt, Selective Service Director Hershey and to various authoritative scientific bodies. It is important, however, that a wider protest be made through the other scientific societies, through colleges and universities and by individual scientists.

The AAScW is also preparing a detailed memoran-

dum to the Selective Service System pointing out the importance of deferring research and teaching scientists, as it pertains to the future of the national well-being. We invite other scientific societies, colleges and universities to join us in memorializing the Selective Service to preserve the activities of scientific personnel in the national interest.

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## SCIENTIFIC BOOKS

### THE CLIMATE OF INDIANA

*Climate of Indiana.* By STEPHEN S. VISHER. 511 pp. 492 figures. 81 tables. Indiana University. 1944.

THIS is by far the most comprehensive and complete climatological history compiled for any State. It embodies unique features not ordinarily found in works of this kind, among which may be mentioned a well-deserved recognition of the services of the climatological observers of the Weather Bureau whose unselfish devotion to their observational work, often for long periods of time, makes possible such valuable publications as here presented.

These thousands of public-spirited men and women, instead of asking the all-too-frequent question "What is there in it for me?", are content with the conscious satisfaction of a public service faithfully rendered to their community, State and nation, not only for its current usefulness, but also to be left as a priceless heritage to generations yet to come.

Recently Dr. Isaiah Bowman declared, "Facts more valuable than all the gold in the Klondike lie hidden in the climatological records of the Weather Bureau." Dr. Visher has not only brought to light many of these facts that had lain dormant in the basic data for Indiana, but has given due credit to their source. The records show that for this State 39 observers have served, past and present, for periods ranging from 20 to 60 years, and Indiana until very recently had the dean of the some 5,000 for the United States, Mr. Elwood Kirkwood, Mauzy, with a record of more than 60 years. Mr. Kirkwood passed away a few months ago.

The first chapter of Dr. Visher's book contains a general summary of Indiana's climate, followed by discussions of the several climatic elements, profusely illustrated by maps and graphs with a minimum of tabular matter. Many of the illustrations have to do with variations from the standard normals which bring out graphically pertinent facts in anomalies

and the "to be expected" frequencies of significant and important weather occurrences. This is the outstanding recommendation for the book.

Supplementing the basic data are many auxiliary maps and graphs which afford convenient "Weather Guides," valuable in long-time planning for agriculture and other enterprises. Among such numerous maps the following may be mentioned as illustrations of their general character:

The lowest temperature of record in 80 per cent. of the years, that is, only one year in 5 has experienced lower temperatures than those given.

The average annual number of cold days, with sub-freezing daily normal temperature; moderately warm days 50-68°, and hot days, daily normals 75° or higher.

Dates of beginning and ending of summer, based on daily normal temperature of 68°.

Average depth of frost penetration.

Number of days per decade with temperature continuously below 10°, 20°, and the lowest for the coldest month of the year in 20 per cent. of the years. That is, in 80 per cent. of the years the temperature did not go lower than those shown on the map.

Several maps show various rainfall intensities, such as the percentage of years with 3 or more inches in 3 successive days.

In many cases data, both temperature and precipitation, are given for pairs of successive months, supplementing the usual seasonal (3-month) maps. This device is used also in drought summaries, such as rainfall totals for the driest pair of months during the crop-growing season.

Several maps show maximum and minimum values of data that are exceeded in a relatively small percentage of the years, such as dry months for which the values given are exceeded for dryness in only 20 per cent. of the years. That is, a drier month may be expected, on the average, only one year in 5.

An interesting map shows drought frequency in