

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

terms of the sum of the percentage of normal rainfall for each of the 3 summer months (June to August) when each receives less than 1.5 inches.

In addition maps are included showing the average dates of planting and harvesting important crops in Indiana and the temperature relation to these dates in its annual march.

In brief, the book is outstandingly complete in subject-matter and profusely illustrated, containing nearly 450 climatic maps for Indiana, in addition to many other forms of graphic presentations, the greatest number ever published for any State. Among the

some 80 tables of climatic data, detailed weather records for long periods of time are given for key Weather Bureau stations representing different areas of the State. Most of the maps could well have been in larger scale, but this, in view of their great number, would have increased greatly the size of the volume. However, if this had been possible, it would have been well worth while. Dr. Visser truly has presented a challenge to climatologists of other States as a guide for future studies and model for publications of like character.

J. B. KINCER

## REPORTS

### TECHNOLOGICAL MANPOWER

DR. CHARLES L. PARSONS, secretary of the American Chemical Society, has addressed the following letter to the President of the United States:

We appeal to you for aid to forestall disaster. England, Russia, Belgium, Canada, and even France, have already acted. Only the United States fails to realize that the elimination of technological brains—the “know how” of production, the source of progress, and the foundation of our success in the world’s future economy—can only lead to catastrophe.

The training of chemists, chemical engineers, physicists and other indispensable scientists has virtually ceased. At least 50 per cent. of our technological manpower is under thirty years of age. The younger scientists are already in the Army. Those ready for our colleges are not permitted to train to enable America to compete in the peace to come. England, Canada and Russia, per contra, are crowding their technological schools for this competition; some are even doubling their attendance.

They are allowing virtually none to leave production for their combat forces. Our own production is already decreasing and will become stagnant for lack of this type of man, one of whom can make jobs for many. They have been trained to use brains, not arms. The combat army would be strengthened by their discharge and efficient utilization. Modern progress and industrial competition are impossible without them. Research is their tool. Their output has made this nation strong and will assure its future if permitted to function.

American technology has given birth to the greatest power of all time. To-day we are drying up prosperity at its source. Public opinion of the future will view with amazement the waste of scientists in World War II, will applaud the unequaled accomplishments of the few who were utilized, and will condemn the lack of trained personnel in the economic competition that is to come. Our children and grandchildren will not forgive the loss of an entire generation of scientists—a disaster that can easily be avoided.

No more than 100,000 of the 10,000,000 in the combat services are involved in the problem. Comparatively, their

number is insignificant. Before induction they already have saved this war by enabling America to keep abreast, and often ahead, of the miraculous devices of our enemies. They have admirably demonstrated that “Science is Power.”

Mr. President, only you can avert a national tragedy. We ask that technological brains may still grace our colleges and save our production; that early discharge come to those in the services. We are prepared to prove our thesis before any unbiased jury you may appoint. We especially urge the early discharge of technological men.

Dr. Parsons also made public an appeal which he has sent to the 40,000 members of the American Chemical Society, urging them to use their influence individually to save America and American industry from disaster. From the inception of the Selective Service law every effort has been made by the society, working through administrative channels, to see that chemists and chemical engineers were utilized where they might serve America best—in the appropriate armed services, in the “production army” and in research essential thereto. The appeal reads:

With the exception of those individuals who through misguided patriotism felt that it was essential to be in uniform irrespective of the efficient utilization of their specific training and experience, the society’s efforts in cooperation with Selective Service until March, 1944, were highly successful.

The virtual blanket draft of men 18 to 26 years of age, later extended to 18 to 29 years of age, has entirely altered the picture so that America faces a future, which, when carefully surveyed, is little less than appalling. All efforts to obtain real relief through administrative procedure have failed. We regret, deeply regret, that there appears to be no way to save the situation except through public opinion and legislative relief.

The McDonough bill now has been introduced into Congress by Congressman McDonough, of Los Angeles, calling for legislative relief in the hope that America’s future during the present conflict and in the postwar world may be conserved. We are asking every member of the Amer-