oratories. An evening session dealing with the application of micro- and semimicro-methods to research in organic chemistry will be held on the evening of December 28. An apparatus exhibit devoted to micro- and semimicro-apparatus is also being arranged. An informal dinner is planned for Wednesday evening.

THE annual two-day Ohio-Michigan regional meeting of the American Chemical Society took place at Columbus, Ohio, on November 19 and 20. Twenty-two papers reporting scientific advances in industrial and university laboratories were presented. An address on "Broad Trends in Chemical Research" was made by Dr. E. R. Weidlein, director of the Mellon Institute of Industrial Research and president of the American Chemical Society. The Ohio State University, the Battelle Memorial Institute and the Columbus Section of the society sponsored the assembly, to which the Ohio, Michigan, Kentucky and the Kanawha Valley Sections of the society, comprising a membership of 2,000, sent delegates. The technical sessions on Friday were held at the Ohio State University, and on Saturday morning a session was held at the Battelle Memorial Institute. At the annual dinner Dr. Weidlein was the principal speaker. Professor Harold S. Booth, of Western Reserve University, showed motion pictures of leaders of American chemistry at work. There were inspection trips through the laboratories of the Ohio State University, the Battelle Memorial Institute and the Owens-Illinois Glass Company in Newark, Ohio, on Saturday afternoon. The offices of *Chemical Abstracts,* under the direction of Professor Evan J. Crane, were also visited.

To provide opportunity for discussion of road and transportation problems, the seventeenth annual meeting of the Highway Research Board of the National Research Council will be held in Washington, D. C., for four days, from November 30 to December 3, instead of for the two days that formerly were found sufficient. A large part of the time will be devoted to open departmental meetings on economics, design, materials and construction, soils investigations and roadside developments. On Tuesday, November 30, the meeting of the Department of Soils Investigations will be held and on Wednesday morning papers and reports relating to soils and maintenance will be presented. Wednesday afternoon will be devoted to materials and construction and roadside development. Thursday's meetings will include a general session in the morning on finance, materials and construction and roadside development and one in the afternoon on highway safety. Friday will be devoted to design and economics.

APPROXIMATELY two hundred physicists of Upper New York State met on November 6 at Cornell University for a program of scientific papers and a business organization meeting. It was estimated that about forty per cent. of those present were teachers in colleges and universities, twenty per cent. high school teachers and forty per cent. from industry. It was unanimously voted to form an organization to be known for the present as the Physics Association of Upper New York State. No officers were elected but the affairs of the organization were placed in the hands of a Committee on Organization and Arrangements made up as follows: G. H. Cameron, Hamilton College; H. P. Gage, Corning Glass Works; R. C. Gibbs, Cornell University; L. G. Hector, University of Buffalo, and P. I. Wold, Union College, *chairman.* There was discussion as to whether it would be more advantageous to operate this association as an entirely independent organization or to seek affiliation with one of the existing national societies in the field of physics. The opinion was definitely in favor of the latter course.

THE Committee on Scientific Research of the American Medical Association has made a grant to Washington University School of Medicine to aid Dr. Martin Silberberg in his work on the influence of hormones on bone growth. This research is being carried out under the direction of Dr. Leo Loeb in the department of experimental pathology.

THE California Institute of Technology has been made the chief eventual beneficiary in the estate of Henry M. Robinson, a trustee of the institute, who died in Pasadena on November 3. The will provides that the residue of the estate, which is valued at $800,000, after individual bequests have been provided for, shall be placed in trust for his widow, and that at her death the entire estate shall go to the institute.

DISCUSSION

FREEDOM OF THE PRESS AND THE SCIENTIST

FREEDOM of speech and of the press are privileges dear to the American, but do we not too frequently abuse these privileges as we do various other liberties upon which it has become necessary to impose restrictions? The chief restriction on the scientist's publication is the publisher's profit or the bank balance of the technical society. An editor, to be sure, may reject an article for other reasons, but the author may publish at his own expense without regard to the contents.

I am quite aware of the need of increased facilities for publication, but I am convinced that we have a still greater need for a wiser use of those now available. The worker of to-day is confronted by an array of past publications vastly greater than that of a single generation before. It has been an almost hopeless struggle for abstracting and indexing to keep pace with the output. Should we not give more attention to these difficulties at their beginnings rather than merely satisfy our present wishes and let the future care for itself? The concentration of related subject-matter is a problem frequently considered, but the multiplication of small overlapping journals seems much more popular.

Some journals carry a large number of brief notes representing a quantity of detailed information "placed on record." These require an entirely undue amount of indexing and are practically useless without it. Surely they would be more satisfactory if compiled in some orderly fashion. Surely some of them are scarcely worth publishing and others might well be delayed for more effective presentation. Some authors seem to have a penchant for publishing in as many different journals as possible and thus scatter brief notes on a single topic. I have a special grievance against the short articles which state that a more complete account is being published (or will be) elsewhere. A well-known editor tells me that a large part of these never appear. Sometimes they are designed to merely call attention to work in progress and solicit cooperation and may be commendable. Often they give preliminary results, describe a new species or merely mention it without description. There seems little excuse for cluttering up the journals with these fragments.

A few years ago I sent a circular letter with similar suggestions to about one hundred biologists, including officers of several national societies and editors of their journals. The majority of the comments were favorable. As one put it, "When it comes to publication, we scientists certainly are unscientific." One taxonomist suggests that it would be desirable to have all descriptions of new forms published in revisionary treatments, but that the new forms are continually coming to light and that no revisionary work on the group is under way. As a matter of fact there seems a distinct tendency to describe the new forms in advance of other publication. Sometimes this is to avoid the introduction of such material into a general catalogue or manual in which brief and uniform treatment is essential. In other cases the original descriptions are closely followed by a general treatment (usually in a different journal) and it seems a question whether any gain is achieved.

In some quarters it seems much easier to secure funds for mimeographing than for ordinary printing, thus resulting in a quantity of preliminary reports and a lack of substantial publication. It seems unfortunate that it is so easy to secure publication of brief notes or short articles and so difficult to care for the longer articles. Some progress has been made in recent years through the establishment of several publications designed especially for the latter group. We make little, if any, advance in handling those of the first sort. I would be disposed to accept the present conditions as necessary if it were not for the frequent encounters with articles which seem quite an unnecessary burden upon our limited publication space. We could profit by closer contact and cooperation in preparing the results of our investigations. Is delay in publication always so serious as it seems? Is it not possible to have more editorial supervision, especially along the line of contacting other workers?

One objection to delaying and to incorporating results with those of other workers is the possible loss of credit. Publications are one of the worker's chief assets. To have prepared something for presentation is indeed an accomplishment, but it is well known that too often an employer is concerned with a list of papers rather than with the worth of their content. If we can secure judgment based upon quality rather than quantity, we shall have gone a long way toward the improvement of publications. If the field of publication is limited, surely we should endeavor to utilize it to the best advantage. The investigator has a real duty to humanity by presenting his material so that it will be of greatest service.

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ARCHEOLOGY AS A TOOL FOR USE IN PREDICTING THE PERMANENCY OF AGRICULTURE

IN a recent issue of SCIENCE[1] the results of the excavations in Kansas and Nebraska by Dr. Wedel were reported. He explained the alternation of agricultural and hunting phases in the prehistory of the central Great Plains as being caused by a corresponding alternation of humid and drought periods. During the more humid years agriculture was successful, but it could not maintain the people throughout an extended series of dry seasons.

Similar conditions to those found by Dr. Wedel in Kansas are to be found in the extreme southwestern portion of the Great Plains. East of the White Mountains in southeastern New Mexico are many sites of a lost group of the agricultural Pueblo peoples. Their fields were waste lands and their houses rubble-heaps when the Spanish entered the land; only wandering bands of hunters lived there then. Why did the little

[1] SCIENCE, 86: 2232: Supplement, 8–9, 1937.