its annual meeting at the State University of Iowa on November 8, 9 and 10.

THE Rev. Dr. Anson Phelps Stokes, secretary of Yale University, has been chosen principal of Hampton Normal Institute, to succeed the late Dr. V. B. Frissell.

DR. WILLIAM B. MELDRUM, of Vassar College, has been appointed assistant professor of chemistry at Haverford College, taking the place of Lyman B. Hall, professor of chemistry, who resigned at the retiring age after thirty-seven years of service.

THE following changes have been made during the summer in the staff of the department of geology at the University of Illinois: Professor C. W. Rolfe has retired as professor emeritus. Mr. Fred H. Kay, lecturer on petroleum geology, has gone into the service of the Sun Oil Company; Dr. F. M. Van Tuyl, instructor, has resigned to accept the assistant professorship of geology in the Colorado School of Mines; Dr. C. W. Tomlinson, A.M. (Wisconsin), Ph.D. (Chicago), has been appointed associate in structural and general geology.

MR. F. A. C. PERRINE has resigned as assistant professor of psychology at the University of Pittsburgh to accept the position of adjunct professor of psychology at the University of Texas. Mr. Jos. U. Yarbrough was made an instructor in psychology at the University of Texas.

DR. J. W. BEEDE, associate professor of geology at the Indiana University, has accepted a position in the bureau of economic geology and technology, in the University of Texas.

AT Cornell University, Bernard A. Chandler has been appointed assistant professor of forest utilization for 1917–18, in place of Professor A. B. Recknagel, who is absent on leave.

DISCUSSION AND CORRESPONDENCE

INTERNATIONAL UNITS AND SYMBOLS IN AEROGRAPHY

TO THE EDITOR OF SCIENCE: In the somewhat appreciative review of the text-book on "Aerography" in SCIENCE, September 14, 1917, on p. 265 is the statement "the student may be confused in having absolute pressure units presented as 'kilobars' when they are commonly known as 'millibars.'" The reviewer underestimates the intelligence of university men; because the reasons why kilobar is preferable are given at length on page 30. Kilobar is as natural as kilogram. It may also be added that those who persist in advocating the retention of millibar are evidently not aware that V. Bjerknes expressly states that in his system the C.G.S. unit will be the *microbar*.

Again, the statement of the reviewer that "kilobar has historic preference over millibar but millibar is the internationally accepted term" is both inaccurate and misleading. Millibar is the earlier term and it has international acceptance only because there has been no opportunity to have the mistake corrected by international agreement. Moreover it is extremely problematical if the International Congress will ever meet again. But is it good form in scientific work to continue the use of an erroneous term because an official disclaimer is lacking? There are some other matters which are of perhaps greater moment. It is a strange commentary upon the work of the International Meteorological Congress that while giving us symbols for no less than 23 conditions varying from haze to aurora, there are no symbols for bright and diffused sunshine, mountain and valley winds, temperature inversion and sea-breeze. For the last named, the sea-breeze, we have been using at Blue Hill, three arrows on a vertical staff, to represent the characteristic changes in circulation. As the sea-breeze is a frequent and very important aerographic condition, any suggestion for a more fitting symbol will be appreciated.

ALEXANDER MCADIE

BLUE HILL OBSERVATORY,
READVILLE, MASS.

SYMBOLS

I AM confident that there is not a worker in the wide domain of physical science who

has not wished for a standard series of symbols. The question is not a new one; it was considered by a committee of the American Association for the Advancement of Science many years ago, but its efforts were shattered in the attempt at international cooperation. Such cooperation is very desirable, but if it is not available that is no reason why America should deny herself the benefits of coordination which she, with her scientific resources, may devise. Every monograph, every textbook that is written adds to the confusion of symbols, for there are no standard tables to guide one. It seems to me not only possible, but practicable that a list of symbols could be compiled under various headings—mathematical, astronomical (with subdivisions), physical (with subdivisions), geophysical, electrical, etc. The various headings would be necessary because the same symbol is frequently used under different headings, and, of course, with different meaning. Whether we write g for terrestrial acceleration or a is fundamentally quite immaterial, so it is whether we write L, or ϕ, or λ for latitude, but it is not immaterial for the person who reads it. He will probably wonder why the writer doesn't use such and such symbol. We want uniformity, uniformity to as great an extent as possible. Personal preferences should be waived and sunk in the greater scheme of uniformity. There are already many constants, many expressions, many concepts that await being labeled for common recognition. Who is to undertake this work, who is to do the labeling? I can see, or rather I can hear rumbling—"I'm not going to be bound by any such tables." Quite so, they would have no authority whatever. However the dictates of common sense would be their propelling force and I think the vast majority of American scientific writers would avail themselves of their usefulness. Anything that promotes readiness of understanding and ease of reading mathematical expressions and equations should be encouraged.

In order to give definiteness to my ideas, which I hope will arouse discussion, I would suggest that the tables of symbols spoken of be prepared by the Carnegie Institution of Washington. It is work that so eminently falls within its scope, and it is so well equipped with material and other resources, that one can look forward with confidence to a well-matured publication. Should the work be undertaken by the Carnegie Institution nothing would further the general adoption of the symbols promulgated more than the wide distribution of the publication and that could be profitably effected by sending to every scientist—to every man in "American Men of Science"—gratis a copy of the Carnegie publication.

My closing word: Don't let details smother uniformity. Make a start.

OTTO KLOTZ
DOMINION OBSERVATORY,
OTTAWA,
August 4, 1917

BACTERIAL LEAF SPOT OF TOBACCO

A BACTERIAL leaf spot of tobacco has been found to occur within certain sections of North Carolina. This disease, because of the rapidity with which it spreads, has appropriately been given the name "wild fire." It first manifests itself in seriously destructive form at the time of transplanting, so that in some fields it has been necessary to replace the seedlings by a second and a third transplanting. Plants in the seed beds from which these seedlings were taken have been found to be diseased, indicating that the malady was introduced from the seed beds.

The disease first appears as circular yellow spots about 1 cm. in diameter. A minute brown area indicates the center of the spot. Within a few days the brown area will have enlarged to 2 or 3 cm. in diameter with a translucent border and surrounded by a wide chlorotic halo. When the spots are numerous they fuse, forming large brown irregular areas which in severe cases involve most of the leaf tissues.

Isolation and inoculation work has shown that the disease is due to a grayish white bacterial organism which is heretofore undescribed. This organism is rod shaped, about three times as long as wide, and actively motile