just as in the ordinary method for the preparation of ether. The essential condition for success consists in maintaining the mixture under experiment at a temperature of 100°, thus quickly removing the water which is continuously formed in the reaction. The directions for the preparation of ethyl acetate will serve to illustrate Wade's process: Three volumes of alcohol are mixed with two volumes of acetic acid, and two volumes of this mixture are added to one volume sulphuric acid, in an Erlenmeyer flask which is *immersed in* a water-bath. As soon as distillation commences, more of the mixture of alcohol and acetic acid is added by means of a funnel with a fine stem. Most of the excess of alcohol is recovered from the distillate. The process may be interrupted at any time without detriment, and there is no delay in restarting once the materials have regained the necessary temperature.

In the case of esters having boiling points above 100° the operation is conducted under reduced pressure. The presence of a strong mineral acid is essential to the success of the process, but more than a small proportion is detrimental. Charring seldom takes place.

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CURRENT NOTES ON METEOROLOGY.

MONTHLY WEATHER REVIEW.

The number of journals devoted to the different branches of science has become so large that most men of science can with difficulty, if at all, keep up with the periodical literature of their specialties. Yet there are none of us who do not frequently, or at any rate occasionally, wish to refer to some note or article, published in some journal devoted to another science than our own. It is convenient, for that reason, to have brought to our attention from time to time the more important articles, or at least the articles of most general interest, which are appearing in the various scientific periodicals of the world. It is with this feeling in mind that the compiler of these 'Current Notes on Meteorology' attempts to point out, from time to time, what there is of interest to scientific men in the meteorological publications of the various countries. It is impossible to devote much space in Science to these notes, for they obviously concern primarily only a single subject. But they may, perhaps, serve to help a fellow scientist, now and then, to learn of some meteorological publication which he has not seen or heard of, and which he may, at some time, find useful in his own work.

The *Monthly Weather Review* of our own Weather Bureau becomes more valuable with each succeeding year, as a meteorological journal covering a wide field, and essentially of a 'popular' nature. So prominent has the portion of the *Review* devoted to articles and notes become that with the first number for 1906, these articles occupy the first pages, instead of following, as they have done, summaries of climate and crop conditions, and accounts of the forecasts and storm warnings of the month. The last three numbers of the *Review* (November, December, 1905, January, 1906) contain the following articles of general interest:

'The Rainfall of China and Korea,' by T. Okada; reprinted from the Journal of the Meteorological Society of Japan; an important study of the climatic conditions of a region which is analogous in many respects to the eastern coast of North America.

'The Development of Meteorology in Australia,' by Andrew Noble; prepared at the request of Professor Cleveland Abbe, under the direction of the acting meteorologist of New South Wales.

'Indian Summer,' a note in which the sound and sane statement is made: "Indian summer is an extremely indefinite season as to its date and its character. There has never been any determination of its average date and duration so far as we know. It is often described as a warm, dry, hazy period after the first severe frost in autumn, but it often fails to come at all."

'A Mistake about Atmospheric Dust'; commenting on a statement which is going the rounds of the newspapers to the effect that 'rays of light go straight through all kinds

of gases,' and calling attention to refraction, the importance of dust and of aqueous vapor in coloring the sky, etc.

'Air and Water Temperatures,' by W. F. Cooper; a study of the effect of the water temperatures of Lake Michigan.

'The Climate of Madison, Wis.,' by James L. Bartlett, observer, Weather Bureau; a good general account of the climate of an important city, with some reference to the weather controls and weather indications.

'Tornado Insurance,' by H. E. Simpson, instructor in geology, Colby College; a paper written as a thesis in the course in General Climatology in Harvard University, and containing a number of facts not previously compiled from the present point of view.

'Meteorology in India,' containing notes from Mr. Gilbert T. Walker, now in charge of the Indian Meteorological Service. Of Mr. Walker's seven monsoon forecasts, six have been right, and one negative.

'Meteorological Maps for School Use'; it is a satisfaction to note that the Weather Bureau now supplies blank outline maps of the United States, suitable for laboratory work, at $2.50 or $5 per thousand, the price depending on the quality of paper used.

'Asymmetric Cyclones and Anticyclones in Europe and America,' by Professor F. H. Bigelow; the conclusions are somewhat startling, to wit:

> There is no evidence of the superposition of cold-center cyclones upon warm-center cyclones, as expounded by Clayton or by Bjerknes and Arrhenius, nor are there purely dynamic vortices in a rapid stream as supposed by Hann, nor are there cyclonic vortices caused by atmospheric islands of high pressure obstructing a rapidly flowing eastward drift as explained by Shaw, or by Hildebrandsson in his report to the international committee, 1905.

'Atmospheric Electricity,' by G. C. Simpson, the newly appointed lecturer in meteorology at the University of Manchester; deals with the latest aspects of the subject, chiefly in relation to meteorological problems.

'A Possible Extension of the Period of Weather Forecasts,' by Professor E. B. Garriott; calls attention to the value of a study of the great permanent areas of low and high pressure in making forecasts.

'The Relation of Forests to Rainfall,' by the late W. F. Hubbard; deals with the distribution of rainfall and forests in California, showing the close relation between the mean annual rainfall and the forest cover.

R. DEC. WARD.

REPORT OF THE ADVISORY BOARD OF THE WISTAR INSTITUTE.

THE advisory board of the Wistar Institute held its annual meeting in Philadelphia on Tuesday, April 17. The director's report of the year's work showed a decided step forward in the research work of the institute. The organization of the neurological work with Dr. Henry H. Donaldson as chief and Dr. George L. Streeter and Dr. S. Hatai as associates was reported. A statement was made of the financial condition of the institute so that the board might better consider the problems which might be undertaken. Following this report Professor Donaldson outlined the neurological work which he had under way and stated that some twenty pieces of research work were being actively pursued. Some of this work is already in press, some in manuscript, while a portion is being pursued in the laboratory of the University of Chicago and a portion in the laboratory of the Wistar Institute. Dr. Donaldson reported the action of the Imperial Academy of Science in Vienna in accepting the Wistar Institute as the central institute for brain investigation in the United States and appointing Drs. Donaldson, Mall and Minot as delegates to the meeting of the Central Committee for Inter-academic Brain Research to be held in Vienna this coming May. The advisory board considered the following question of policy: "With the understanding that all plans may be modified more or less from time to time to meet conditions as they arise, the question is presented for consideration: Shall we conduct the work of the institute after the manner of the usual research laboratories in the universities or shall we endeavor to make the work of the institute unique and try to do some of those things