

Pussy willows were out on March 8, but there was a dense layer of 8 inches of snow and sleet on the ground April 2. The grass was green when it emerged from the snow blanket, April 5.

Weather at Honolulu

Though the Hawaiian Islands are famous for their abundant sunshine, I have seen the sun able to break through the clouds only once in the last five days, and then hardly strong enough to cast a shadow. What wind there has been has been southerly, but the trade seems to be starting up again.—*H. S. Palmer*, at Honolulu, T. H., Dec. 24, 1921.

Dear Fellow Co-op's:

For many years we have been contributing our little mites toward the advancement of meteorological knowledge by accumulating daily records of the weather, "you in your small corner, and I in mine." Like soldiers in the German army, we have known little of the results of our work, but have unquestioningly read our thermometers and measured the precipitation, occasionally recording a "thunder storm," or "Lunar Halo." We have received the monthly and annual summaries of climatological data for our respective sections, where our figures were printed beside those of other observers, and our names appeared in type.

We are not expected to know very much about meteorology and most of the more important observations are left to the regular stations of the Weather Bureau.

But we are real meteorological enthusiasts. We do our daily stunt year after year purely for the love of it, and not for any other consideration, and now the American Meteorological Society has given us an opportunity to learn, to keep posted on the latest advancements in meteorology, and to assist in conducting investigations in many lines of work. Through this department in the BULLETIN we may exchange ideas and air our views generally, also ask all the questions we care to, and it is possible also that the Weather Bureau may through this magazine become more confidential with us and less distant, for the Society includes in its membership most of the personnel of the Weather Bureau, and, outside of being government employees, they are scholars and gentlemen and "regular fellows."

This department in the BULLETIN is ours to use for our mutual benefit and if we will use it freely much benefit may come to us by the means. Let us hear from Co-op's all over the United States and Canada. Tell us your problems, your troubles, your remarkable observations, your suggestions, or anything else that may be interesting or instructive to the rest of us.

If correspondents to this department will give their latitude, longitude, and elevation above sea level, as well as postoffice address, it will help the rest of us to understand their peculiar climatic conditions better.—*Cola W. Shepard*. Colony, Wyoming. Lat. 45°, Long. 104° 10', Elev. 3500'.

PROGRESS OF METEOROLOGY

Results of recent important investigations disclosed at April Meeting In Washington

The seventh meeting of the Society, April 26, 1922, at the Central Office of the U. S. Weather Bureau was perhaps even more successful than the two preceding April meetings.

At the opening session the large forecast room was crowded with some

60 fellows, members and guests. In the unavoidable absence of the President, Sir Frederic Stupart, the Vice-President, Dr. W. J. Humphreys, presided and cleverly filled the gaps between papers. The Chief of the U. S. Weather Bureau, Professor C. F. Marvin, in extending a cordial welcome to the Society said it was a particular pleasure to welcome so many foreign meteorologists—from France, from Argentina, and from Canada—and to see so many U. S. members present, representing many parts of the country. During the afternoon 6 papers were presented and discussed, and one was read by title: The proposed international "Fixed Calendar," M. B. Cotsworth; The formation and movement of West Indian Hurricanes, E. H. Bowie; A contributing factor in the mechanism of tropical cyclones, W. J. Humphreys; Recent contributions to mathematical meteorology, Edgar W. Woolard; The sequence of changes in wind direction, pressure and temperature in the free air (by title), H. W. Clough; Relation between diurnal and non-periodic changes in the temperatures at the surface and in the free air, H. W. Clough; and The local thunderstorm, C. F. Brooks. At the evening session, with about 40 in attendance, five more papers were presented and fully discussed: Solar and terrestrial relations and periodicities in meteorology, C. F. Marvin; Moisture content of peach buds in relation to temperature evaluation, Earl S. Johnston; More concerning free-air pressure maps, C. LeRoy Meisinger; As the thaw begins the frost descends, W. J. Humphreys; and Recent tests of anemometers, S. P. Fergusson and R. N. Covert.

Particular interest arose over the new developments presented by Messrs. Meisinger, Woolard, Fergusson and Covert, and Patterson. Mr. Meisinger showed how it was possible to compute with remarkable accuracy and to obtain quickly the pressures and winds at 1 and 2 kilometers above sea-level by using only surface temperatures and wind directions. The value for aviation forecasts was evident at once when Mr. E. H. Bowie, Supervising Forecaster, asked that the necessary tables be distributed to stations as soon as possible so that the pressures at 1 and 2 km. could be telegraphed to the Central Office daily for immediate use. Mr. Woolard told of the development of meteorology from an inexact to an exact science, and cited the recent triumph of the mathematical meteorologist, L. F. Richardson in showing how to *compute* from the weather of one day that for the next.

Messrs. Fergusson and Covert described the preliminary results obtained from testing anemometers in wind tunnels with air speeds up to more than 130 miles per hour actual velocity. For the first time meteorologists have experimental values available for cup anemometers throughout the range of recorded wind velocities occurring in Nature. In an actual wind of about 135 miles an hour, the cup-anemometer indicated 181 miles an hour, which is closely in accord with computations made by Professor Marvin nearly 30 years ago. It will be possible now to reduce the anemometric factor from 3 to 2.5 or lower with confidence that no further adjustment is likely to be necessary. It has been preferable to allow the Weather Bureau anemometers to register velocities some 20 percent too high than to attempt an incomplete correction which would make accurate comparisons of old and new records practically impossible. Mr. Patterson, physicist of the Meteorological Office, Toronto, who came to Washington particularly to compare some of his recent experiments (cf. Mar., 1922, BULL. pp. 37-38)

with those being conducted by the U. S. Weather Bureau, presented results from his further experiments as to the best type of cup anemometer. He had come to the conclusion that the 3-cup rather than the 4-cup type gives the best and the least variable pull, a feature of particular value in light winds.

The value of meteorologists assembling for presenting papers was obvious to those who listened to, or took part in, the discussions. Nearly as much time was spent in discussing the papers as was required for presenting the papers themselves. At the close of the meeting the following resolution was passed without dissenting vote:

Whereas, the Weather Bureau has received the visiting members and guests of the American Meteorological Society most cordially and provided so comfortably for this, the best attended meeting of the Society.

Resolved: that this meeting express its appreciation to the officials of the U. S. Weather Bureau, particularly to Professor Marvin, the Chief, for this hospitality, attractive surroundings, and the facilities provided.

Abstracts of some of the papers and summaries of the discussions will be published in the June BULLETIN.

Meteorological Meeting on the Sonnblick

An interesting announcement from Austria reached the U. S. Weather Bureau just before the meeting of the Society, but, unfortunately, was inadvertently not mentioned. A translation of it reads in part as follows:

The Austrian Society for Meteorology and the Sonnblick-Association contemplate holding, in the autumn of 1922 [about Oct. 10-14], a meeting of meteorologists of different lands in the Sonnblick Observatory [at 3,100 meters], in which scientific matters will be discussed at various sessions.

Since such a meeting at 3,100 meters above sea level is an unusual undertaking, we find it necessary to sound our colleagues, before we definitely decide to hold the assembly.

The note goes on to ask those who could attend such a meeting, which would involve a rocky climb of 8 hours to get to the summit, to communicate at once with "Oest. Gesellschaft für Meteorologie, Wien XIX, Hohe Warte 38." The meeting place would be Bad Gastein (on the direct line from Munich to Triest), where the sessions would be held in case of bad weather, until it is possible to go up the Sonnblick.

MEETING OF THE COMMITTEE ON AERONAUTICAL METEOROLOGY

The first meeting in 1922 of the Committee on Aeronautical Meteorology was held at the Weather Bureau, Wednesday, April 26th, at 1 p. m. The membership of the committee as constituted at present is as follows:

Lt. Col. C. C. Culver, A.S., *Chairman*; C. LeRoy Meisinger, Weather Bureau, *Vice-chairman*; Major W. R. Blair, S.C., Washington, D. C.; J. C. Edgerton, Air Mail Service, Washington, D. C.; Col. John P. Finley, New York City; W. R. Gregg, Weather Bureau, Washington, D. C.; Lieut. W. F. Reed, U. S. N., Washington, D. C.; R. H. Upson, New York City; Capt. Burdette S. Wright, A.S., Washington, D. C.

Of these, all were present except Mr. Upson and Col. Finley, who found it impossible to come to Washington at that time. In addition to the Committee members, Dr. J. Patterson of the Meteorological Office, Toronto, and Dr. C. F. Brooks, Secretary of the Society, were present.

Consisting, as it does, of members of the civil and military aeronautical fields, the Committee organization affords an excellent medium for the unofficial interchange of opinions and the expression of such opinions through the Society as will make for advancement of meteorology in aeronautics.