

CHATS WITH THE WEATHER MAN.

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ANNOUNCEMENT: Here is our friend Ob. Server again. He is ready to tell us about his most recent chat with the weather man. Every two weeks, you know, he visits with the scientists of the United States Weather Bureau. Let's hear what he has to say this time about that greatest of all conversational topics --- the weather.

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About this time of the year, we usually get a very practical interest in the weather. The weather makes itself felt. It impresses us with its importance now, even if its antics this summer didn't convince us.

Even if there is no "cold wave" just beyond the horizon, we know it won't be long now.

We are glad to get warning in time to protect our water pipes in the house and in the automobile radiator. We don't like cold waves to slip up on us too suddenly; to steal up on us in the night. We take the warnings as a matter of course. We use them. But did you ever think of the many practical ways in which we are helped by the science of meteorology?

Dr. W. J. Humphreys, meteorological physicist of the United States Weather Bureau, called my attention to a few of them. He says that applied meteorology plays an important part in practically every occupation, from a to z.

"A" is for aviation. Dr. Humphreys says an aviator may not, as a rule, need to have very much weather information. He may not need the information very far ahead. But what he needs, he needs, and he wants no may-be about it. For most purposes, in northern Ohio, for instance, it is quite enough for most folks to know there will be local showers this afternoon. But the aviator wants to know whether there will be a thunderstorm over the Cleveland airport at 3 o'clock sharp, the exact time he is due to arrive at that particular place. And aviation is just one field in which the weather scientists are constantly being called on for more specific, detailed weather information than we were accustomed to a few years back.

On the other hand, there is the demand for long range forecasts; that is, general forecasts far in advance. When we are starting into another season, we would like to know what sort of season it will be. At this time of the year, many folks dust off the old almanac and try to

read the answer from the wild guesses in its pages. Others pretend to predict by the length of fur on animals and the thickness of bark on trees as to what the coming winter will be like. Still others, cast the horoscope of the weather on the idea that weather repeats itself in regular cycles over a series of years. Such goose-bone prophecies are mostly "hooney".

However, Dr. Humphreys says there is one form of seasonal forecasting recognized by meteorologists as tolerably reliable and immensely useful. That is foretelling the amount of water that will be available during the summer and fall for power and irrigation in the western third of our country. That long-range forecast is based on snow surveys over various watersheds, or estimates from the record of the number and size of the winter snowstorms. Long range forecasts are practical in such cases, due to the simple fact that the snow lies on the ground a long time before it melts. It is largely a matter of figuring the amount of water in these snow reservoirs.

Another branch of meteorological work that involves a greater or less long range feature is the warning of floods. It is possible to foretell with a high degree of accuracy what the down-stream stages of a river will be by knowing what the conditions are up stream. The amount of water in the soil, the extent, and depth, and location of the snow covering, the temperature, and amount of rainfall help tell what's coming. On short, swift streams the forecaster may be able to tell from the up-stream records what conditions down stream will be a few hours to a day later. On most rivers, forecasts can be made a few days to a week ahead. For such places as the lower Mississippi, forecasts based on up-stream conditions can be made two or three weeks ahead. Much property and many lives are saved each year as a result of such forecasts. As Dr. Humphreys says, that branch of meteorological science doesn't have to wait the coming of a spectacular, first page flood. For each of that kind there are hundreds of lesser ones that together call for continuous attention year in and year out --- yes, even this year of the Big Drought.

Then there is fire---forest fire. Meteorology is a big help there by predicting the coming of "fire weather" a day or two in advance, so the forest rangers can get their crews out, and sawmills shut down lest sparks from them may set fire to the tinder like duff which carpets the woods.

In the forest, along the rivers, and at sea, the help of weather information is highly prized, especially the warnings of high winds. If a storm promises to be a heavy one, many ships, especially the smaller ones, keep behind the break-water or in some other sheltered spot, until the storm has spent its force. In this way, vast property interests are protected and innumerable lives saved, as well as greater comfort assured and reasonable insurance rates obtained.

A specialized but highly practical use of meteorology is the warning of heavy frosts in orchards at blossom time and harvest time. When the temperature of the air is considerably lower near the ground than it is 50 to 100 feet up, Dr. Humphreys says, protection from frost is not only possible, but in many cases economically practical.

When the skies are clear and the air is still, artificial heating may work all right. Other times, the orchardist would better save his fuel. Orchard heating is expensive and loss of crop disastrous, so the grower must have reliable information about when to heat. To heat when unnecessary is nearly as bad as not heating when it is necessary. In some of our orchards, notably on the West Coast, the frost warnings are highly reliable and of very great economic value.

Nor is that the only help the weather scientists give the fruit growers. Times to spray to prevent damages by scab is often a question of weather.

In fact, from seed time to harvest farmers need and make use of the services of applied meteorology, especially at harvest of any crop where sun-curing is needed and rain is damaging.

In fact, Dr. Humphreys points out that even the history of past weather is of immense importance to both farmers and more specialized plant experts. What has been the average monthly, seasonal, and yearly precipitation; what is the direction and the average strength of the winds, what is the average date of the last killing frost in the spring and the first one in the fall.

From such records of past weather, he says, we know the most promising places for testing foreign fruits, and trees, and plants, and what can and what can not be successfully grown at any given place. In that way, we know where to plant the tung tree, where to grow the Madagascar rubber bush, and where the finest dates would thrive.

So you see, the scientific study of the air has what Dr. Humphreys calls a "bread-and-butter" side to it. It is useful to us in every phase of life.

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ANNOUNCEMENT: I guess that disproves that old wise-crack about everybody talking about the weather, and nobody doing anything about it. Two weeks from today old Ob.Server will be back to tell us about another of his chats with the weather man of the United States Weather Bureau.

National Oceanic and Atmospheric Administration

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