

CHATS WITH THE WEATHER MAN

Friday, January 24, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

All Regions

OPENING ANNOUNCEMENT: At this time Station ___ is going to present our old weather friend, Ob. Server. He is a weather-wise person and tells us many interesting things about the weather, and what Uncle Sam's Weather Bureau is doing to interpret it. Ob. Server is going to talk about snow today so you had better pull on an extra coat. All right, Mr. Weatherman.

Well folks, put on a heavy coat, build a big fire, and pile up plenty of firewood---I'm going to talk about SNOW, and you may get just a little chilly before we get through.

One time a cook was ordered to prepare the best piece of meat obtainable for his master's dinner. He prepared tongue. The next day he was ordered to prepare the meanest piece of meat obtainable for his master's dinner. Again he prepared tongue. The cook believed tongue could be the best or worst piece of meat in the world, depending on whether it was used for good or for evil purposes

Now snow is very much like tongue. It can be one of man's best friends, or it can cause him about as much trouble and misery as anything Old Man Weather has to offer his millions of inquisitive people waiting to see what he is going to do. Some sections of the United States experience very heavy and frequent snowfalls during the year, other sections have occasional snows, but every State in the Union is subject to snow, at least in portions; therefore, this talk will be of interest to all of you whether you live in the sunny South where snowflakes come once in a leap-year, or out in the Sierra Nevada Mountains of California where snow is a regular feature of the winter. I thought you radio listeners would be interested in knowing something about our beautiful snow that the poets write about, so I got in touch with Dr. P. C. Day, in charge of snow and ice investigations for the United States Weather Bureau. Dr. Day has been tinkering with the weather for more than 45 years, but he has never been able to do a thing with it. He's as helpless as the Georgia cotton farmer or the California sheep raiser;---all see the weather,---and all they can do is talk about it, as Mark Twain once pointed out.

For convenience let's make three divisions of this talk. First, let's find out what snow is, and what causes it. Second, let's find out what sections have the most snow, and third, let's find out whether snow is good or bad for this country and its people. Here goes the first subject, "What is snow?"

According to Dr. Day snow is ice crystals formed from water vapor. Way up in the air a thousand feet or more above the surface of Old Mother Earth, moisture starts condensing. Sometimes this condensed moisture falls in the form of rain, sometimes as hail and sometimes as snow. What this moisture will be when it hits the ground depends on the temperature of the air it passes through in transit. Very often we have rain falling which freezes just after it strikes

the ground or trees. This is called glaze and has caused thousands of people, including myself and many of you listeners, to take a hard and unexpected seat. Sleet is frozen raindrops or pellets of ice formed some little distance up in the air. Snow is formed from about a thousand feet above the earth up to miles high. All forms of precipitation decrease after about 6,000 feet up. The decrease is more noticeable in some sections of the country than others. Topography probably determines that.

Snow forms at the temperature of freezing or below. If the temperature rises, the snow turns to rain. It may be raining in an upper current or stratum of air and sleeting on the ground, or snowing in the upper and raining below. Most of you listeners have seen snow turn to rain as it approaches the ground due to a warmer air. Snow may be dry, hard and glassy, and then again it may be soft, moist and velvety. Often one sees snowflakes so large as to resemble a combination of many flakes into one. This may or may not be the case. That's another one of the weather mysteries.

Now let's take an airplane trip over the United States and see for ourselves just where snowfall is the heaviest. I had better add that 10 inches of snow when melted usually equals about one inch of rainfall. We'll start from an air field in central Maine. The time is January 24, and the year is 1928, and these records are the ones actually set down that year. The country looks like an unbroken snowfield; the snow is more than 15 inches deep over most of the New England States. The average fall for the year up there is 70 inches.

Here we are in Washington and there's the White House, the Capitol, and those red brick buildings at 24th and M Streets which constitute the U. S. Weather Bureau. Washington averages about 22 inches of snowfall per year.

This is a fast airplane and we're now sailing high over Atlanta, Montgomery, New Orleans and the beautiful Gulf Coast. These southeastern states average from one to three inches of snow per year. Most of this is in the northern part, and in some years no snow falls, but occasionally the white mantle sifts to the earth as far South as northern Florida, as it did in December, 1929.

We're following the Mississippi River to St. Louis. There's a city with an average per year of 19 inches of snow. Now up the Mississippi a piece then we'll fly straight across to the Pacific Ocean, if we can rise over the Rocky Mountains. Below is Iowa with an average of 29 inches of snow. Soon we pass Wyoming with 51 inches and next is Idaho with 59, and by speeding up the motors we're able to glide over the mountains, and into California, which has from no snowfall in the South to the heaviest in the United States in some of its mountain sections. Florida has the least snowfall, and California, in some parts, has the heaviest amounting in places to more than 800 inches in some years.

Some sections of the northwest have such heavy snowfalls that at times they are almost snowed in. In some instances you see the tops of trees and tops of houses instead of the whole. The remainder is covered in snow. In crossing the mountains we sailed high above the transcontinental railway but you didn't see many trains. They were there all right, going right along at a rapid clip, but running under snowsheds covered 15 to 30 feet deep in snow.

Snow is light or heavy depending on whether it is wet or dry snow. Dry snow is light; wet snow is heavy. The weight of snow becomes quite a problem in some sections. Railroad snowsheds are often braced with 12-by-14 inch solid

timbers, sometimes even these give way as a result of the tremendous weight of the snow. Flat-roofed buildings are conspicuously absent in the regions of heavy snowfall; gabled buildings with very steep roofs are used so the snow will slip or slide off from its own weight.

Many of you listeners can recall the winter of 1922 when the heavy snow apparently caused the roof of the Knickerbocker theatre in Washington to cave in, and snuff out the lives of many, many people.

A railroad decided to landscape the ground about one of its stations in the region of heavy snowfall. A pipe fence was made from discarded two inch boiler flues. The snows that winter got so deep and heavy that these two inch steel pipes were bent until many of them dropped from their holes in the posts. Snow is not only beautiful, white, and cold, but it's heavy.

Does it get too cold to snow? No. However, when the air gets rapidly colder the snow generally stops, but that is because the air in the clearing-up side of a storm usually is colder than it is in the snowy or rainy section, and not because it is too cold for snow to form.

Do we have as much snow as we used to have? Thomas Jefferson once remarked that we did not, and that the snows melted quicker than they used to. According to Dr. Day and the Weather Bureau records, we have as many snows as we ever had, they are as heavy, and remain on the ground as long when we take averages of, say, 10-year periods.

Now what good does snow do? Well, it does harm by interrupting traffic, transportation, and freezing livestock and even people. Losses from these sources are decreasing because people are preparing for the snows and protecting themselves and their property and livestock against them. A sudden snow in some southern sections often does more harm because of unpreparedness, than the heaviest snows in sections accustomed to them.

Snow is coming to be a great economic factor since irrigation has been established. The melted snows are caught in huge reservoirs and held for the growing crops. Snows help the grain crops by bringing down fertilizers, like ammonia, from the air, by spreading a blanket over them, that prevents alternate thawing and freezing, or winter killing, and by supplying moisture which soaks into the ground instead of running off. Snow supplies moisture in some sections where rain seldom falls. California probably profits more from her heavy snowfalls than any other one state. That's probably because she is so big and it needs the water.

CLOSING ANNOUNCEMENT: You have just listened to our friend the old weather Ob. Server, talk about snows. The snow storm is over, and you listeners can now take off your coats. Ob Server will be with us again with some more information about the weather exactly two weeks from today.

National Oceanic and Atmospheric Administration

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