

CHATS WITH THE WEATHER MAN

Friday, December 11, 1931.

ANNOUNCEMENT: No matter what the day, nor where the place, the weather is important. Our old friend, Ob Server, has been talking with scientists of the United States Weather Bureau again. This time it is about another of the many services of the Bureau -----But I'm going to let him tell you about that----- Well, Mr. Ob. Server.

As Mr. W. W. Reed, of the climatological division of the United States Weather Bureau, reminds me, our Weather Bureau didn't spring into being overnight.

Its far-flung network of stations, tied together by wire and radio, and systematically reporting to central headquarters, is a gradual development.

In its present form, it is just about forty years old. Before that it was part of the U. S. Army. It came into being as a branch of the Signal Corps. Our first regular weather stations were at military posts about sixty years ago. Before that scientists of the Smithsonian Institution were doing some investigating of the weather. And before any government or semi-governmental organization took hold, individuals were watching and recording weather conditions. Ben Franklin and Tom Jefferson were among our early independent weather observers.

And, Mr. Reed says, that is the way it has been in other countries. First interested individuals, scattered here, there and yonder, begin keeping weather records. Then comes closer organization, and finally systematized observation under the direction of a central office and a network of stations.

Mr. Reed has compiled climatic records for South America, and from what he tells me, it seems that in that vast continent to the South of us are to be found weather services in nearly all stages of development.

In southern South America, Argentina, Chili, and Uruguay each have had central institutions with a network of stations collecting weather reports for many years. There are not many big regions which do not have weather stations.

In northern South America, in Dutch and British Guiana, Venezuela and Brazil, there are also networks of stations under central offices, which have been developed to such an extent they can give a fairly comprehensive view of the prevailing weather conditions over their various parts.

In other countries, Mr. Reed says, there has been little coordination of efforts to determine climatic conditions. Vast areas are still almost entirely unexplored. However, there are many stations in and west of the Andes

Mountains at which weather records have been kept for rather long series of years. Those stations are irregularly distributed over the territory. They are located at various places from sea level to 15,000 feet above sea level. From the records of those stations it is possible to make a fairly accurate estimate of the temperature for any place in that territory, when you know its elevation.

But suppose one of our "good-will" aviators wants to get the needed weather information for a flight through South America. How is he going to know what kind of weather he is likely to find in the different countries along his route? Of course, you say, he can apply to the weather services of these countries. Yes, but you must remember that there are a number of different countries involved. And you must also remember that some of them have not yet developed as complete services as others. Some of the information might have to come from independent, scattered station records published here, there, and everywhere. Obviously, the air pilot would be able to gain only a patchwork of information; even if he had the months, or even years, of time he would need to hunt down the scattered records.

That is not an altogether fanciful case, either. Mr. Reed mentioned that the U. S. Weather Bureau has been actually called upon for weather records for use on just such a flight.

Then there are those pioneer souls who see the opportunities of a new country beckoning to them from certain parts of South America. They often want to know whether the climate where they propose to settle will fit in with their plans. They call upon the Weather Bureau for the answer.

More often, however, it is the practical business man and shipper in this country who needs to know about the climate. The rainfall at certain times of the year may determine how he will pack his goods, or when he will ship, or whether it will pay him to ship at all. Where is the answer?

Well, that is one of the things Mr. Reed is working on. He is gathering together the temperature and rainfall records from all parts of South America. He is working out the averages for each month of the year.

That's evidently quite a job. Sometimes just one little line of figures giving the mean monthly and annual temperature for one station, means adding up the records of twenty years and hours of calculation.

Fortunately, he doesn't have to include Brazil in his compilation, because there are already comprehensive records of the climate of that country written in Portuguese. As it is mostly a matter of figures, our weather men don't even have to know how to read Portuguese to get the accurate picture of the climate from those records.

On first thought, you might think it would be easy to just figure South American climate from what we know of North American climate. You would naturally expect that the weather in December at a place a certain distance below the equator would be about the same it is in June at a place an equal distance above the equator.

But then there is the question of elevation. Weather comes in three dimensions, you might say. For instance, on the northern border of Argentina, due to the influence of the Andes mountains, there is a change in the average

Year-round temperature from East to west of 22 degrees in the short distance of 100 miles.

In the interior of temperate South America you might expect to find much the same climate we have in the interior of our country, until you realize that the southern part of South America slopes more to a point. It is narrower, and there is not the room to develop the continental type of climate we have in the middle of our country.

On the northern coast of Chili, with winds from the Ocean, moisture in the air, and clouds overhead, you would naturally look for rain. Yet that is one of the most outstanding regions for lack of rainfall on the face of the earth. That, Mr. Reed explains, is largely traceable to effect of cool ocean currents which wash those shores, and to the fact that winds from the other side of the continent drop their rain in trying to climb the steeps of the Andes mountains.

You see this matter of climate is complicated. To really know your weather for any place you have to possess regular records taken near the spot. And to have those records, on hand for our business and other interests to use means collecting the figures from many sources and days and months of work arranging them in convenient tables, so "he who runs may read." That is what the U. S. Weather Bureau is doing with the records from governments, and institutions, and independent observers throughout all South America.

ANNOUNCEMENT: Just another of these services of the United States Weather Bureau. This time the work was outlined to your old friend, Ob. Server by Mr. W. W. Reed, of the Bureau's climatological division. We will have another chat with the weather man two weeks from today.

National Oceanic and Atmospheric Administration

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