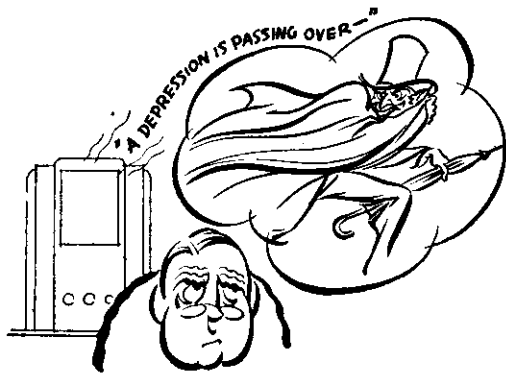
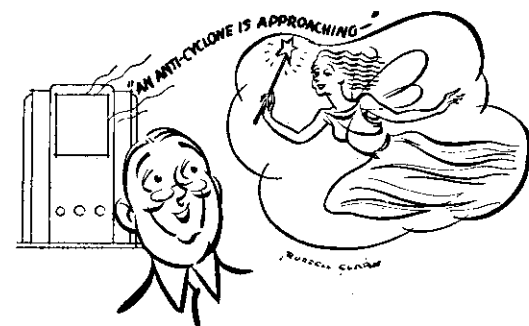


SPEAKING OF THE WEATHER



We're All Interested In Those Forecasts, But Most Of Us Have Only A Vague Idea Of What They Really Mean



MOST of us are more interested in the weather than G. K. Chesterman's Noah—

He often said to his wife, when he sat down to dine, "I don't care where the water goes if it doesn't get into the wine";

but few of us achieve a very accurate conception of what weather and the forecasting of it means. We have vague mental pictures of kindly sprites or fearsome devils advancing upon us as the omniscient weather man, perched lonely upon a hill, sees either Anti-cyclones or Depressions coming across the always evil Tasman Sea. Even in an age which has caught Father Christmas coming in the bedroom door instead of down the chimney, there might still be some who think that Mr. Savage combs New Zealand to find a really sensitive corn for the Department of Scientific and Industrial Research to use in its work of forecasting the weather.

But up in the Weather Office at Kelburn, Wellington, the forecasters have more to worry about than water in the wine. Every day they receive and digest up to 5,000 separate statements about weather in the South Pacific, the Tasman Sea, and Australia.

A hundred times a day they make decisions affecting every detail of our existence, from the courses of the air liners to the choice of a woman's wardrobe.

How are these decisions made?

Modern forecasting methods have some limitations, but not many. Forecasters themselves recognise possibilities of error and are at all times seeking new and better information. Results generally are accurate to a very fine degree. It might be happier phrasing to "be very sure that rain betides, when the leaves show their undersides," but none of the two or three hundred weather proverbs means as much as "fine and warm," or "a depression has passed over," or "an anti-cyclone is advancing."

This accuracy makes it possible for a contractor to know to an hour when he will have a period of calm for erecting a tall wireless mast (as they did at Tinakori Hill just recently), or for a pilot to take off with his passengers into a storm and find high ceilings with gentle winds when he lands 200 miles away.

Above all, it enables assistance to be given to farmers, to high country men if a storm is coming, to fruit-growers when frost threatens, to wheat-farmers when gales approach.

Four times a day the Kelburn Office receives up to 75 reports from New Zealand observers, up to 60 reports from Australia, 30 from Pacific Islands, and an average of six from ships at sea. In the early morning they are received entirely by telephone. During the day telegraphs and cables join in, but radio helps. Each telegram averages five groups of five-figure numbers. Each number represents a specific weather condition in a code. This code of numbers is transferred by means of another code, of symbols, on to the charts which line the forecasting room. Hundreds of people have co-operated to complete the work. Every three hours the charts are corrected, the forecasting officer scans them, prepares his statement, sits at a microphone connected to 2YA, and in less than a second you know the situation as he sees it and you are probably making plans on the basis of his forecast.

Five minutes later they are all hard at work again preparing the next forecast.

Much of the work of the Weather Office is at present dominated by the need for a speedy and efficient service to the air lines. Dr. M. A. F. Barnett, M.Sc., Ph.D., F.Inst.P., the new Director, formerly chief assistant to Dr. E. Kidson, has been especially interested in this work. The aviation reports which listeners hear two or three times a day are a small part of it. Before any commercial aeroplane leaves the ground the pilot has a full forecast and a detailed report of the weather along his route. Before he lands he receives an accurate report of pressure readings to enable him to check his altimeter. This may mean dozens of contacts every day between the Office, aerodromes, and aeroplanes.

In preparation for the trans-tasman air service, Australia has already reorganised its reporting system and gives New Zealand statements every six hours. Routine in New Zealand at present brings in reports every three hours from 6 a.m. to 3 p.m. Arrangements are in hand for additional reports at

6 p.m. and 12 midnight. Listeners' forecasts will benefit from the extra information available.

The old method of forecasting from the information received was a comparatively simple matter of allowing for the flow of air at high pressure into areas of low pressure. The forecaster could tell where wind would blow and rain would fall; but his system lacked the scientific accuracy which is now the rule.

With much more information at his disposal, the modern forecaster is able to follow, almost mile by mile, the progress of air currents. Generally speaking, condensation, with its attendant rain, hail, or snow, does not occur within one mass of air. But when two masses, differently constituted, meet to form what is called a "front," their contact creates an area of bad weather. The extent of this area, and its rate of movement, can be determined fairly accurately. It is called a depression, and everyone who has been warned of its arrival by the weather office easily recognises it when it comes.

Listeners are as familiar with such a term as "anti-cyclone" as they are with radio stars, and the weather men have familiarised them with depressions, fronts, millibars, and isobars. They may even know why an anti-cyclone makes for fine weather—that it has higher pressure in the centre of its air mass than at the edges. While that is the case no air from a foreign mass will penetrate it, no fronts are formed, and no condensation takes place. Listeners have also heard of millibars, and isobars. Millibars are units of pressure, something like pounds per square inch; and isobars are the weather man's contour lines. On his chart they join points at which pressure is the same, just as the map-maker draws contours between points of equal height.

None of this science and accuracy will ever prevent rain from falling on wash-day, or when the windows are newly cleaned; but listeners may at least be sure that there is very much more than a sensitive corn or rheumy joints behind the reports which come over the air every day of every week, every year, with such unfailing regularity and such admirable accuracy.