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SPEAKING OF THE WEATHER

How to Understand The Forecasts

TAST week The Listener described how the weather reports and forecasts, which are now back on the air, are prepared. Listeners are by now learning once more to take for granted the three daily broadcasts, but there are probably a good many who would like to know the explanation of some of the terms that are regularly used. Obviously, technical terms must be used to some extent, or the Weather Office would have to repeat clumsy descriptions of certain weather conditions that can be more clearly understood if we once get used

to a few new words and phrases.

First of all, it is a help to know how a weather chart works. It is an outline map of our part of the world, on which observations taken at the same time at many different points are en-tered. Then lines are drawn, joining areas of equal pressure. These are called ISOBARS. On the completed map these lines always conform to one or another of several fundamental types of weather SYSTEM, which usually includes either a depression (alias "cyclone") or an anticyclone, which will appear on the chart as a complete set of rings-like the contour lines on a map of Mount Egmont, for instance. Here are explanations of some of the terms used in describing the general situation.

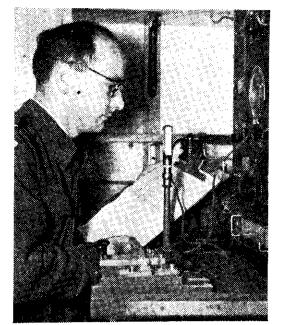
Weather System Terms

ANTICYCLONE: This is a weather system with a patch of high pressure in the middle, and lower pressure round the sides. The winds run round it in circles (along the isobars) and in the Southern Hemisphere they go anti-clockwise. So if an anticyclone is coming at us from the west, we will get southerly winds first; then as the centre passes over, the winds will be light and variable; then we get the other side of the anticyclone. and the winds are northerly. Correspondingly: If an anticyclone lies to the north. winds will be from the west; if it lies to the south, they will be from the east.



If an anticyclone is described as INTENSE, the central pressure is unusually high. If it is EXTENSIVE, it covers a large area, and the rings on the chart will be big. Most of our Best weather comes with an anticyclone, but it isn't necessarily always perfect. eneral, the nearer you are to the middle, the better the weather. All the same, some anticyclones are cloudy, and bring drizzle or fog, especially in the mornings.

DEPRESSION: This is really the opposite of an anticyclone, but it would be misleading to call it a cyclone because people would think of the tropical kind, the destructive whirlwind, tornado, or "twister." It is called a depression, or sometimes a "low" because the pressure



Here is one of the forecasters whose voices are heard direct from the Weather Office. The voices of several members of the staff were tested by the NBS for their suitability for broadcasting before weather torecasts were resumed, and the job of reading the forecast into the microphone might fall to one of these during a duty spell. Some of the equipment used for keeping in touch with other weather offices is seen in the photograph.

at the middle is low, and the pressure at the sides is high. The winds round a depression go clockwise in the Southern Hemisphere, so that if the centre lies to the north of where you live, you will probably get easterly winds. You can work out the other directions by imagining the depression as a clockface, with the sweep of the hands representing the general trend of the winds.

Depressions usually mean bad weather -strong winds, and possibly gales, but conditions will differ very much from place to place. When the pressure at the middle is falling, the depression is "deepening." When it is rising, it is "filling up." Near New Zealand, depressions have the habit of travelling towards the south-east, and they often alter suddenly and considerably on the way.

TROUGH: This is like a valley between mountain ranges, a strip of low pressure between areas of higher pressure. It may be a trough between two anticyclones. When a deep depression is passing south of New Zealand, from west to east, its low-pressure part often stretches northward over this country, and instead of being roughly circular, it may be like an arch, or the lines that show it on the chart may even come to quite a sharp point at the top, like an upside-down V. This is called a trough. Naturally pressure falls as the trough approaches, and rises again as it passes, like a dinghy between big waves.

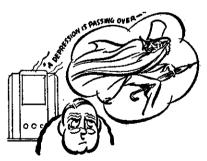
RIDGE and WEDGE: Both means the same. A ridge is the opposite of the trough just described. In other words, it may be a ridge of high pressure between two depressions, or it may be the central part of an anticyclone that has become elongated and is no longer circular in the middle.

WESTERLY CONDITIONS: This phrase describes one type of weather system that we get now and again. A belt of high pressure may lie across the north Tasman, stretching to the northeast of the Dominion, while a series of deep depressions move from west to east, far to the south of New Zealand. The effect here is a series of associated troughs, and as each one passes, the wind changes from North-west to Southwest. When the depressions follow one another quickly, the wind fluctuates between these two directions, and its

strength changes a great deal. This situation is called "westerly type" or "a series of westerly depressions.

COLD FRONT: There is usually a clearly defined line dividing large areas of cold and warm air. If cold air moves along the ground and pushes up the warm air, this is called a cold front. Normally it is associated with a trough -that is, pressure falls ahead of it and rises behind. If a vigorous cold front passes there will be a sudden drop in temperature, heavy rain, and an abrupt change in the wind, say from North-west to South. On the West Coast, rain may set in before the front actually arrives. Showery weather usually prevails be-hind the front, but conditions gradually get better. However, some fronts may become so weak that there is no rain at all. A cold front may move slowly or quickly, but 30 miles an hour is not uncommon.

WARM FRONT: When it is the warm air that moves forward, and rises over the cold air, the front is called warm.



This usually produces an extensive cloud sheet, and rain which increases, but stops when the front has passed.

Forecast Terms

Finally, definitions of some of the terms used in the actual forecasts. Wind strength is usually described by one of these: light, moderate, fresh, strong, gale, strong gale, whole gale, storm. The words used for temperatures are these: cold, cool, moderate, mild, warm, hot. MOD-ERATE varies from season to season, and is in fact about the average for the time of year.

There are six words used in everyday discussion of the weather which do (continued on next page)