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A Science Service Feature

? WHY THE WEATHER ?

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NEW STYLE WEATHER MAPS

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A novelty in methods of picturing current weather is now to be seen on some of the daily weather maps published in Europe. On the maps issued in Norway, Russia and some other regions the long-familiar plan of delimiting areas of relatively high and low barometric pressure by means of isobars is supplemented by lines showing the location of "warm fronts" and "cold fronts" and by letters indicating the "air masses" occurring over different regions.

The new ideas back of these features originated in Norway during the World War and have been the subject of endless discussion among meteorologists in recent years. According to the "Bergen School" of forecasters, the weather of the temperate zone is controlled by the interplay of two main streams of air - one coming from the polar regions and the other from the tropics - which flow side by side without much intermingling along a so-called "polar front." From time to time a tongue of warm air bulges poleward from this dividing line and eventually glides upward over the adjacent colder air along a line known as a "warm front." At the same time cold air sweeps around this tongue, or "warm sector," pressing it from the rear and gradually underrunning it, along a line called the "cold front." These events mark the evolution of a cyclone, or "low." The rise of warm, moist air leads to cloudiness and rainfall along both of these fronts.

The two main air streams above mentioned consist of "polar" air from high latitudes and "tropical" air from low latitudes, and these two kinds of air are subdivided into "maritime" and "continental" varieties, which owe their properties to their origin over water and land, respectively. The different types of air, distinguished chiefly by temperature and moisture, are described as "air masses," and ingenious methods of "air-mass analysis" have been devised for identifying them.
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