

A Science Service Feature

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? WHY THE WEATHER ?

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THE CAUSES OF DROUGHTS

The widespread drought of recent weeks in the United States and Canada and the even more severe recent droughts in the Old World raise the question that inevitably occurs in connection with any abnormality of weather--What is the cause?

Droughts in the temperate zone are mainly due to disturbances--relatively slight from the meteorological point of view--in the wind system of the region affected. Sometimes the storm tracks are shifted away from their usual locations, or again the number of storms--i.e., cyclonic disturbances--passing along these tracks may be fewer than usual. Most of the rainfall in our latitudes is brought by cyclones; either in the shape of general rains over the cyclonic area or scattered thundershowers, which are most common in the region to the south and southeast of the cyclone center.

It is usually easy to trace the proximate causes of droughts by examining a file of daily weather maps for the droughty period, but the more remote causes, underlying the abnormal cyclonic phenomena, are always more or less obscure. They belong to "world meteorology". The best that the meteorologist can yet do toward putting his finger on the cause of a severe drought or any other striking local abnormality of weather is to show that certain quasi-permanent centers of high or low barometric pressure (known as "atmospheric centers of action") have been abnormal, either in intensity or in location. Some of these centers most closely connected with American weather are the Iceland and Aleutian "lows", and the subtropical North Atlantic "high", sometimes called the "Azores high".

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