

METEOROLOGY

Medicine Hat Is Not Cold Wave Factory For U. S.

Winter's Big Freezes Actually Come From Polar Basin; Canadian Station's Fame Dates From Pioneer Days

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WE AT THE U. S. Weather Bureau are frequently asked where cold waves come from, and whether Medicine Hat is "the cold wave factory for this country."

Medicine Hat does not deserve that title. The cold wave factory for the United States is farther north than that, in the Polar basin. In former years, before we had reports from the Mackenzie Valley, Medicine Hat was one of the first outposts to feel the cold sweeping down from the north. The weather station there sent warnings, and so it was that Medicine Hat, in western Canada, gained cold wave fame.

Our cold waves do not always take the same path from the north. But the main highway for the cold air masses is from the Polar reservoir southward through the Mackenzie Valley, sometimes only as far south as Minnesota, sometimes nearly to the Gulf of Mexico. Then the cold wave route swings eastward over our southern states.

Express Train Speed

So rapidly does the cold air move, on this transcontinental journey, that it has little chance to warm up—that is why it remains a cold wave. In the cold wave of January, 1936, Chicago was frozen to below zero point at 8 o'clock one Wednesday morning, and by 3 o'clock next morning the zero wave, traveling almost as fast as a railroad train, had struck Washington, D. C.

With the system of reporting maintained by the U. S. Weather Bureau, we can usually give 24 to 36 hours warning of a cold wave's approach. Railroads depend entirely on these warnings, to advise them when to take emergency measures.

They hasten to add extra heat to protect perishable goods, or even delay shipments entirely. Fruit growers would be helpless against disastrously low temperatures without the warnings of weather men. Given a little time to pre-

pare for a freeze, they can hastily warm up their heaters and save acres of fruit.

We have no way of knowing how many lives and how much inconvenience the cold wave warnings save. If we could look into homes where the weather warning is read in the daily newspaper we would find one family bringing in extra wood; another family seeing that cows and horses are warm enough; another rushing around to weather-strip windows or do some other long-delayed job to make the house more comfortable. We would find fishermen deciding not to take their boats out, and sick people being hurried to hospitals, lest they have to make an emergency trip in zero weather—all sorts of experiences, plans changed quickly, because of a single line in the newspaper, "Cold wave coming!"

Weather forecasting, started about 1870, has taken a great deal of terror

and misery out of winter crises. There could be no practical forecasting of weather until our modern means of communication, particularly the telegraph, were invented. The ancient Greeks, in Aristotle's day, established about a thousand stations where observers were to study natural phenomena, including the weather. Aristotle himself wrote an excellent book on meteorology. But lacking the aid of telephone, telegraph, or radio, the Greeks, and all other early weather observers, could not gather weather data fast enough, or speed it to a waiting world fast enough, to establish the valuable science of weather forecasting.

Science News Letter, February 19, 1938

GENERAL SCIENCE

National Research Council Elects New Chairman

DR. ROSS G. HARRISON, Sterling Professor of Biology and director of the Osborn Zoological Laboratory at Yale University, has been elected to the chairmanship of the National Research Council. He succeeds Dr. Ludvig Hektoen, who has been named Executive Director of the National Advisory Cancer Council. Dr. Hektoen has been chairman of the National Research Council since July, 1936.

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A BEACH OF DEAD FISH

Hundreds of thousands of menhaden, or "fatback", were piled on the beach at Topsail Inlet, just above Wilmington, N. C., when massed schools of the fish attempted to pass through the shallow strait, in water insufficient to accommodate their huge numbers. Suffocated when the oxygen in the water was exhausted, they died and were piled up by the waves until they covered the beach.