

## GREAT PLAINS BLIZZARDS

by

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On the Great Plains of North America today, the term blizzard has an ominous connotation. It creates images of frigid howling winds that propel blinding flurries of snow into impassable drifts. It recalls stories of snowbound railways, freezing range cattle and great human suffering. The word blizzard has become a readily recognized part of American vocabulary and, somehow, "sounds" like an appropriate label for one of nature's most fierce winter storms. It is interesting to note, however, that the term's common use and official definition are both uniquely American and of relatively recent historic origin.

English language usage of blizzard appears to have been derived from the German word blitz, a reference to lightning. Blizzard was initially used to describe events or actions of sudden, violent or overwhelming nature, such as showers of hurled stones, volleys of gunfire or even torrents of words from a talkative person. One of the earliest documented instances of blizzard being used to describe severe winter weather may be found in an 1870 edition of the Estherville, Iowa newspaper, The Northern Vindicator. Within ten years the term blizzard, in this context, was commonly used and recognized across America.

The current official definition of blizzard by the National Oceanic and Atmospheric Administration is: A storm with winds of at least 35 miles per hour, temperatures below 20 degrees Fahrenheit, with enough blowing or falling snow to reduce visibility to less than one-fourth mile. A "severe blizzard" is one that has wind velocities equal to or greater than 45 miles per hour, temperatures below 10 degrees Fahrenheit, and visibility near zero. It should be noted that the Wind-Chill Factor, an index of the cooling power of wind (the temperature perceived by the human body), may be minus 40 degrees Fahrenheit or colder during a severe blizzard. During the severe blizzards of the 1880s in the Great Plains, when temperature dipped to 20 degrees below zero and wind speeds reached 45 miles per hour or greater, the wind-chill factor dropped to minus 85 degrees Fahrenheit.

The genuine blizzard, or buran as it is known on the Steppes of Siberia, may occur occasionally in several areas of the globe but is most dramatically represented by the Great Plains of North America. These storms are usually associated with the mixing of cold dry Continental Polar (cP) air with warmer and more moist Maritime Tropical (mT) air producing snow. Unusually steep pressure gradients behind the well developed cold front of the Continental Polar air mass generate high velocity winds. The Rocky Mountains act as a barrier that helps channel the cold wind southward across the plains.

During the second half of the 19th century, and the early years of the 20th, blizzards were a formidable threat to people on the Great Plains. Physical hardship or death was often the fate of persons unable to quickly reach shelter following the sudden onslaught of a storm. Other casualties resulted among travelers stranded by snowbound trains. Prolonged periods of extreme cold caused additional misery for those residents with inadequate housing or limited reserves of fuel or food.

The aftermath of severe blizzards frequently compounded the problems faced by plains inhabitants. Water from melting snow, unable to penetrate the frozen earth, sometimes caused flooding along ice-clogged streams. Bridges, roads, and rail lines often required extensive repair of damage incurred during the storm and ensuing floods.

Agriculture also became the occasional victim of severe winters marked by blizzards. Livestock herds were sometimes decimated by sub-zero temperatures, strong winds, and lack of feed. In some instances, winter wheat suffered major losses due to the severity of weather conditions. Some pioneer farmers on the Great Plains, already struggling to cope with drought and other environmental hazards, undoubtedly considered the blizzard to be the proverbial "last straw" and abandoned the region.

It should not be surprising that the term blizzard continues to command attention on the Great Plains. This winter storm still represents a natural hazard for farmers, urban dwellers, and travelers. For the native of the Great Plains perhaps just the sound of the word BLIZZARD, like a chilling echo from the past, is enough to stir a slight shiver.

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#### GREAT PLAINS CLIMATE

*Coming from the more humid eastern areas of the United States, early settlers on the Great Plains were unprepared to deal with the climate here. They discovered that in most years there is enough moisture for growing crops but not always. The threat of drought always hangs overhead. Winds are also a constant factor in the Great Plains climate. During dry periods of spring, wind can blow away tons of valuable topsoil. In the summer, hot, dry winds from the southwest can destroy crops. In the fall and winter there are blizzards that threaten the lives of man and beast. Yet, Great Plains weather tries those who live here, but in large measure, the climate is what makes the Great Plains unique.*

*From PLAINS TALK*