

GROUNDHOG DAY

Origins & Folklore in North America

Groundhog Day is celebrated in Canada and the United States annually on 2 February. The first official Groundhog Day celebration took place in 1887 in Punxsutawney, Pennsylvania.

According to legend, watching a groundhog emerge from its burrow can determine the weather forecast for the coming weeks. Thus, if it is a sunny day and the groundhog sees its shadow, it goes back to sleep for six more weeks of winter. If the weather is cloudy and the groundhog does not see its shadow, it stays outside, meaning that the worst of winter is over and spring will soon arrive.

The origins of Groundhog Day date back to medieval Europe. The day of 2 February corresponds with Candlemass, a Christian festival during which candles are lit. The celebration also falls half-way between winter solstice and spring equinox. It dates back to pagan times, when farmers would purify their land by carrying torches in procession before sowing time. Excess flour was used to make crepes, a symbol of prosperity for the coming year.

Many old proverbs draw links between the length of winter and the weather conditions that occur on 2 February. In Scotland, there was an old saying that "If Candlemas Day is bright and clear, There'll be twa [two] winters in the year". In England, an old song elaborates on this idea: "If Candlemas be fair and bright, Come, Winter, have another fight. If Candlemas brings clouds and rain, Go Winter, and come not again."

A relationship was established early on between the waking of hibernating animals (e.g., bears, otters and hedgehogs) and the end of winter. According to European beliefs, spring's arrival could be predicted based on the awakening of such animals. It appears European settlers (notably Germans) brought this belief with them to North America and relied on the marmot, one of the most widespread hibernating

animals, to predict whether winter conditions or spring warming lay in store.

Groundhogs spend the winter hibernating in their burrows; during this time, their body temperatures drop significantly, their heartbeats slow from 80 to five beats per minute and they can lose 30% of their body fat. In February, male groundhogs emerge from their burrows to claim their territory before going underground again. They come out of hibernation for good in March.

Groundhog's Forecast & Canadian Winters

Canadian winters are much longer and more intense than those in Europe. As winter food stores got low, the first European settlers hoped that spring would arrive early so they could sow earlier and therefore harvest earlier. But, the groundhog emerges from hibernation later than the European hedgehog, and it is much less likely to stir, even on warm winter days. While winter in Western Europe is normally finished on 2 February, in Canada it is usually still cold and snowy well past that date. The entrances to groundhog's burrows are usually covered in thick layers of snow and ice in early February.

There is a kernel of truth to the shadow aspect of the legend. In winter, sunny days are usually associated with Arctic air, which is colder and drier, while cloudy days are associated with coastal air, which is milder and more humid. Since weather conditions often last several days, those on 2 February could continue to last for a few days.

Canadian meteorological data prove that the groundhogs' success rate is quite low. Data from 13 Canadian cities over the past 30 to 40 years indicate that there have been an equal number of sunny and cloudy days on 2 February. During this period, the groundhogs' predictions were correct only 37% of the time in that the folklore outcome prevailed.

