HOW DO YOU GET A WHALE IN VERMONT?

The Unlikely Story of Vermont's Official State Fossil

by

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Chapter 11 - The Gelatinous Muck of Mt. Holly

The exhausted Ice Age mammoth at Mt. Holly managed to survive through most of the night but by the time the sun came up all life had passed from the great beast. The few scavengers that wintered in the mountains attempted to exploit the meat but were only able to reach those bits that weren't frozen solid and remained exposed above the ice. Quickly the carcass became frozen and was buried in the ice and snow.

But with the coming of spring and the brief summer, the carcass thawed and was eagerly scavenged by a wealth of animals thankful for the rich meat. The bones were broken and scattered – some disappearing on land, others sinking into the murky water. Quickly the meat was consumed. The enormous skull and tusks sank slowly and slid with time toward the deepest part of the bog, and there the remains settled and came to rest.

The bog was not really a bog in the beginning. It started out as a depression filled with meltwater – possibly a kettle hole resulting from a melting block of buried ice, or simply a hollow in the bedrock caused by erosion. Water flowed through it on its way down the mountains, but as the years, decades and centuries went by, the summers got longer and the land became greener. Gradually the pond began to fill with debris from a succession of plant communities: tundra lichens to low plants to study bushes to pioneer trees to mature forest.

Throughout most of its early history the pond maintained a flow of water, keeping it open and fresh. The pond remained that way for a thousand years or two, until beavers came along and cut down the trees, driving the sharpened trunks deep into the mud, damming the flow and creating a large, quiet pond. With water flow restricted, the pond began to fill with organic debris - slowly at first - but then more and more rapidly until the beavers could no longer maintain their homestead and moved on to find other small depressions to dam.

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Meanwhile at the bottom of the bog, the skull, the tooth and the few scattered bones sat motionless in the oxygen-starved muck. Over succeeding millennia, water permeated every cavity, tissue and cell until it completely filled every space, virtually suspending the bones in fluid. With unlimited mobility, acids resulting from decay saturated the remains and slowly leached out calcium phosphates and other structural minerals, leaving behind little but a leathery, water-soaked sponge of slimy collagen. Only the enamel of the tooth was able to resist.

In the cold anoxic waters, dead plant material accumulated faster than it could rot. Through the same basic process it was reduced to rubbery cellulose that shook like jelly and rapidly and thoroughly dried out upon removal from the bog. (In his notes, Zadock Thompson reported that the saturated gelatinous muck lost fully 7/8 of its mass upon drying and was light as cork.) The bones of the mammoth were no different. Upon removal they too lost half their volume and rapidly cracked beyond repair.

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Migrating animals continued to pass by the small bog, most stopping to drink and browse, some undoubtedly becoming entrapped in the frozen muck of winter. Early human explorers passed along its edge as they followed the animals through the mountains. Eventually a military road widened the trail, followed by a toll road and a stage coach route.

Then one day a small group of surveyors arrived at the bog on horseback. They took some measurements and drew some maps. They viewed the pass from every angle and discussed it from every vantage point. But regardless of how they plotted it, they kept coming back to the same conclusion: the new railroad had no choice but to cut directly through the middle of this muck.