

A Colonial Chill

by Susan Wilkinson, HSMC Director of Marketing & Communication

“. . .that from the midst of October, to the midst of May there is a sadd face of wynter upon all this land, both sea and land so frozen for the greatest part of the tyme as they are not penetrable, no plant or vegetable thing appearing out of the earth untill it be about the beginning of May nor fish in the sea besides the ayre so intolerable cold as it is hardly to be endured . . .”

These words penned by George Calvert described the winter of 1628-1629 that he suffered in his Newfoundland colony. A consequence of the big chill that Calvert caught in Canada was the founding of Maryland in 1634.

Calvert was well-informed and a planner. Why didn't he expect winter to be cold in the Avalon colony?

Perhaps the reports he received about climate were mixed. Sure, the Virginia Company's 1607 settlement in Sagadahoc, Maine failed to thrive following a “frostie” winter, but Capt. Edward Wynne wrote that winters in Newfoundland were milder than those in England. Then again, many



others expressed belief that New World winters were indeed more severe than those in the mother country. Perhaps part of the problem was there was no way of quantifying just how “intolerable cold” or “frostie” it really was. A reliable thermometer didn't come along until the beginning of the 18th century.

Early explorers were perplexed by the cool weather they found in the New World. They recognized that Newfoundland and London are roughly the same distance from the equator and should have similar weather. Today we can measure the influence of jet streams, ocean currents, and surrounding land or water. In the Calverts' time, the New World cold was attributed to a variety of phenomena -- floating ice, the sun losing energy as it traveled over the oceans.

Sixteenth century diaries, ships' logs, and other primary documents provide a rich history of climate and weather. These documents suggest that it was colder then than it is now.

In *A Relation of Maryland*, a promotional tract from 1635, we learn that in Maryland we can expect “. . .in winter, Frost and Snow.” John Winthrop's *Journal* reports that much of Chesapeake Bay was frozen in the winter of 1641-42 and the winter of 45-46 even more severe. A Maryland court case in 1659-60 revolved around the drowning deaths of three servants “as they went ashore upon the ice” and that “the severe winter of 1695-96 and lack of fodder caused the loss of large numbers of animals..” Proceedings from the Assembly tell us that ships had problems getting in and out of ports during winter. You'd think colonization took place smack in the middle of the Ice Age.

In fact, today's scientists are extracting information from glaciers, sediments, pollen, tree rings, and insect deposits that indicate there was a Little Ice Age with vague beginnings in the 13th century and profound effects from the mid-16th through the 18th century. Northern Hemisphere cooling during this period was probably on average about 1°C but cold conditions were exaggerated in some areas, particularly the North Atlantic region. Theories on the reason for these climatic changes include variation in the sun's energy output, volcanic eruptions, and internal oscillations in Earth's climate system, but none satisfy all of the data.

Whatever the cause, the Atlantic ice pack grew and glaciers expanded, sometimes destroying towns in their paths. Snowfall was heavier, and the snow lay on the ground longer. Crops and cultivation practices changed, and northern England and Scandinavia endured years of famine. Whole villages exhibited the crazed symptoms caused by ingesting grain infected with the ergot fungus, which thrives during cool, damp summers. The cold may have had a brighter impact on the art world. Some attribute the acoustic wonders of the violins produced by Stradivari to the dense wood produced during this period of slow growth. Paintings of icy scenes with waltzing skaters emerged on the Dutch scene and moody landscapes with dark skies were much more frequent. Maryland is about 1,800 miles south of Newfoundland. Today, winter temperatures in St. Mary's average a good ten degrees warmer, and a typical growing-season length is 74 days longer. How did the St. Mary's Leonard Calvert found differ from what we know today?

Dr. Bill Williams, a St. Mary's College of Maryland biologist with an interest in climate change, imagines "Growing seasons would have been significantly shorter than they are now. Winter would start perhaps as much as a week or two earlier and end as much later. Snow would have been much more likely and significant freezing of the St. Mary's River was probably a frequent occurrence." This seems to be borne out in the records (although good weather is unlikely to provoke discussion in court cases or by the assembly). Williams continued "I wouldn't be surprised to find that droughts happened less frequently and were less severe. Lower average Bay and river temperatures suggest a better habitat for sea grasses and a worse one for sea nettles." That theory is corroborated by local estuarine ecologist Dr. Kent Mountford's research. He wrote "broad Colonial literature is silent (about sea nettles) until the 1750s, when the Maryland Gazette reports that. . .an Annapolis man, "met with a singular and fatal accident" when he "became entangled in a great number of sea-nettles and was drowned."

The big chill surely presented unwelcomed challenges to Maryland's colonists. At least they were spared the burning sting of a jellyfish kiss!

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