The Little Ice Age and the Contact Period, 1300-1850

Did the Little Ice Age affect the early relationships between the Chesapeake Bay area Native Americans and the Europeans colonists?

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Introduction

Climate change associated with the Little Ice Age had internal and external influences on both the social and agricultural dynamic of Chesapeake region Native American and colonial populations. To explore this theory published materials detailing dendrochronological research in North Carolina, climate data from Jamestown, published archaeological data from Maryland sites, and first hand observations of Contact Period climate were consulted. The data suggest that Europe attempts at colonization were initially difficult because there was no precedent for the climate they encountered upon arrival in the Chesapeake region. Anticipating climate that was similar in latitude to Europe, colonization at Roanoke failed while settlers at Jamestown initially experienced severe food shortages. Competition for resources began between Native American populations and colonists in order to sustain respective populations thus straining relationships of all who lived in the region.

The Environmental Effects of the Little Ice Age:
- North American tree populations changed as the cooler temperatures were less tolerated by certain species like beech. Oak, which are more cold tolerant, increased in population.[16]
- Glaciers in the Alps continued through the Little Ice Age and affected nearby populations, causing the failure of crops and abandonment of mines, which became buried under ice.[22][23]
- In England wheat, oats, and barley were difficult to grow because of colder temperatures, colder ground temperatures, and longer winters. Growing seasons were shortened by five to eight weeks. (Figure 4)[23]
- In France wine harvests were shortened or were non-existent when grape vines did not survive the cold. In Scotland, famine also became widespread through the 16th century, forcing part of the population to emigrate to other countries.[23][24]
- Dendrochronology data from bald cypress trees located along the Black River in North Carolina and along the Blackwater and Nottoway rivers in Virginia (Figure 1) demonstrate that initial colonization of Roanoke and Jamestown colonies occurred during two severe droughts. (Figure 2)

Native Americans at the Time of Contact:
- European estimations place the Native American population between 30,000-45,000 in permanent settlements.[33]
- Corn not prevalent in the Chesapeake Region until 1100 CE.[33]
- Squash and beans, which appear after 1300 CE were present at the Hughes and Winslow Sites but not Claggett's Retreat, which was abandoned before that date.[12][14]
- Seasonal subsistence patterns took advantage of the estuarine resources and the fertile soil. Subsistence included domestic plants (maize, gourds, melons, sunflowers) and wild food sources (acorns, nuts, wild berries, seeds, grapes, and plums) with a focus on plants which offered greater returns. [50][6][15]
- Reliance on hickories (deadfall) for fuel, which grew scarce by the late 1600's at Hughes/Winslow site.[7]
- Exhaustion of soil nutrients, disruption of forest cover due to slash and burn agriculture, and increase in edge environments prompt relocation further south along the Potomac towards the Chesapeake.[14]
- Possible warfare indicated at the Winslow site because of changes from circular palisades to rectangular which are better for defense.[25]
- Winslow site was only occupied for 10 years before movement of its population towards the Chesapeake coastal region.[25]
- Water quality in the region would have deteriorated due to drought and turning available water brackish.[11]

Europeans Arrival in the Chesapeake Region:
- Roanoke colony was founded in 1585. Jamestown established in 1607 in Powhatan Cheifdom's territory.
- Colonists encounter severe drought that lasts from 1607-1612. (Figure 3)
- Given lands by the Native groups that were already cleared by Native slash and burn practices. Native groups also exchanged food, such as maize, beans, and squash for precious commodities such as copper.[18][14]
- Native American reports of food shortages were not attempts to circumvent the colonists' requests because the shortages did exist.[16]
- Adoption of tobacco as a primary crop as a way to recoup losses to British investors who assumed products like olives and grapes could be successfully grown.[46]
- Clashes between Native populations and colonists begin as colonial populations rise and require more land.[16]
- Labor intensive agriculture begins.[16]

Lasting Impact of Contact
- Although their social structure was disintegrating, smaller separate tribes began to unify and blend their traditions in an effort to resist European colonization and acquisition of lands.
- Colonist push for agricultural lands and attempts to restrict Native populations to reservations with resources that could not sustain them.[19]
- Native American populations decreased due to the introduction of new diseases such as smallpox. The smallpox fatality rate is 20-40%.
- Changing climatic conditions affected Native American populations before Europeans arrived. However, the combined effects of climate, European diseases, and European land acquisition practices resulted in substantial population loss, which had a profound effect on Native cultures. In some cases, the loss of group members and ritual spaces resulted in a loss of cultural traditions and knowledge.

Bibliography: