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**ASSURANCE AND FRUSTRATION: FROM IRELAND AND  
THE NETHERLANDS TO JAMESTOWN**

By

Keith A. Donahoe  
B.A., Wright State University, 1986

A Thesis  
Submitted to the Faculty of the  
Graduate School of the University of Louisville  
in Partial Fulfillment of the Requirements  
for the Degree of

Master of Arts

Department of History  
University of Louisville  
Louisville, Kentucky

December 2010

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A Thesis Approved on

Dec. 2, 2010

Date

By the following Thesis Committee

Dr. John McLeod, Director

Dr. Daniel Krebs

Dr. John Hale

**DEDICATION**

This thesis is dedicated to

Max and Maria

for whom I try to make history fun.

## **ACKNOWLEDGMENTS**

I would like to thank my thesis advisor, Dr. John McLeod, for his advice and patience. I would also like to thank the other committee members, Dr. Daniel Krebs and Dr. John Hale, for their help in achieving this goal. I would like to thank LTC Pasquale Maldera, Italian Army, Director of the Biblioteca del Centro Simulazione e Validazione dell'Esercito in Civitavecchia, Italy, Dr. Jan van Hoof, Netherlands Institute for Military History, Dr. Wayne Lee, University of North Carolina, LTC Harold Knudsen, United States Army, COL (retired) Charles Allen, U.S. Army War College, and COL Peter Wenning, German Army, for their input. Ms. Virginia Callan and Ms. Sutton Adams helped me format and edit the final draft. I appreciate the support I have received from the University of Louisville Ekstrom Library, Louisville, Kentucky and the Army Heritage Education Center, Carlisle, Pennsylvania. I would like to thank my fellow U.S. and NATO comrades who have endured my discussions about sixteenth-century Dutch, Irish, and American history. Most of all I would like to thank my family, especially my wife and daughter who would not let me give up. Any omissions or mistakes are my own.

## **ABSTRACT**

### **ASSURANCE AND FRUSTRATION: FROM IRELAND AND THE NETHERLANDS TO JAMESTOWN**

Keith A. Donahoe

November 29, 2010

English experience gained from colonization attempts in the New World and in Ireland, as well as military expeditions to the European continent and the New World, helped make Jamestown more successful than any previous English colonial venture in the New World up to that time. Jamestown's early leadership successfully applied the collective English experiences from the Netherlands and Ireland to help the Jamestown colony survive. English experiences in Ireland were instrumental in developing the concepts that led to successful English colonization of North America, but English experiences in the Netherlands also played an important role. In the critical first two-and-a-half years of the colony, a council led by a president ran the colony. From late 1609 until King James I made Jamestown a crown colony in 1624; a series of military governors ran the colony. This leadership and the English experience was the catalyst for Jamestown's survival.



## TABLE OF CONTENTS

	PAGE
ACKNOWLEDGMENTS .....	iv
ABSTRACT .....	v
LIST OF FIGURES .....	vii
CHAPTER	
I. INTRODUCTION .....	1
II. EVERYTHING ADVANTAGEOUS TO LIVE . . . SAVE A MEANS TO LIVE .....	12
III. IRELAND: ESTABLISHING A MODEL FOR COLONIZATION .....	42
Applying English Colonial Design to the New World .....	52
IV. THE ENGLISH LEARN TO FIGHT DURING THE DUTCH REVOLT ....	58
Applying Dutch Techniques to the New World .....	69
V. MAKING JAMESTOWN LAST: APPLYING LESSONS LEARNED FROM IRELAND AND THE NETHERLANDS .....	78
VI. CONCLUSION .....	94
REFERENCES .....	100
CURRICULUM VITAE .....	114

## LIST OF FIGURES

FIGURE	PAGE
1. Diagram of Fort St. George on the Kennebec River in Maine found in the archives of the Indies in Spain .....	18
2. “Zuniga” map of Jamestown ca. 1609 from the Spanish archives of the Indies .....	22
3. Plan for the settlement of Macosquin in Ulster’s County Londonderry about 1610 showing the central fort with small plots nearby .....	46
4. Map of Londonderry 1600 from the Royal Irish Academy. Londonderry can be considered a central bastide town .....	47
5. King John’s Castle, Limerick Castle in 1633 showing a blend of medieval and more modern elements with the angled bastion providing flanking cover for two adjoining towers .....	48
6. Examples of seventeenth-century Irish bawnes .....	50
7. Map of Site H at Martin’s Hundred archaeological site in Virginia showing a fortified farmhouse or bawne with flankers .....	52
8. Polish-German Adam Freitag’s visualization of sixteenth century Italian fortifications showing the recessed or retired flanks of the bastions. Photo by the author in CivittaVechia, Italy, May 2009 .....	62

LIST OF FIGURES (continued)

FIGURE	PAGE
9. Freitag’s visualization of seventeenth-century Dutch Fortifications used by both Duffy and Lenihan. Characteristics include continuous other enceinte or enclosure and detached works including ravelins (A, B, C), demi-lunes (sometimes called half moons) (D, E, F) and horn works (G, H, I). Photo by the author in CivittaVechia, Italy, May 2009 .....	64
10. English bronze saker and falcon cannons of the late 1500s-early 1600s photographed at the Royal Armories Museum, Fort Nelson, UK, by the author .....	67
11. Bronze demiculverin cannon of the late 1500s- early 1600s photographed at the Royal Armories Museum, Fort Nelson, UK by the author .....	67
12. Murderer cannon of the late 1500s-early 1600s photographed at the Royal Armories Museum, Fort Nelson, UK by the author .....	67
13. Reconstruction of an American Revolutionary War redoubt similar to what Jamestown bulwarks would have looked like except the palisade may have been on top of the earthworks. Photo by the author at the Army Heritage and Education Center, Carlisle, PA, July 11, 2009 .....	72
14. Reconstructions of the inside of an American Revolutionary War redoubt similar to what the inside of the Jamestown bulwarks with the wall shored up with bundles of saplings called a <i>fascine</i> . Photo by the author at the Army Heritage and Education Center, Carlisle, PA, July 11, 2009 .....	72

LIST OF FIGURES (continued)

FIGURE	PAGE
15. Prince Maurice of Nassau Medallion by Rottermont similar to ones found at Jamestown and Flowerdew Hundred reinforces early colonial links to the one of architects of the Early Modern Military Revolution .....	78

## CHAPTER I

### INTRODUCTION

There has been renewed emphasis on the study of the Jamestown Colony with the 400<sup>th</sup> anniversary of its founding. While much of the historiography concerning Jamestown is the product of great scholarship, it does not answer the specific questions of how Jamestown's leadership helped the colony survive and where these leaders learned their skills. New evidence from archaeology and further examination of documentary sources support the thesis that the colony survived the critical early years from 1607 to 1622 because Jamestown's early leadership synthesized new defensive military techniques absorbed during England's support of the Dutch Revolt and organizational knowledge acquired during English attempts to colonize Ireland.

The origins of new defensive military techniques in late-sixteenth and early seventeenth-century Europe can be found in the fifteenth century. A new style of warfare developed when gunpowder weapons were introduced *en masse* to early modern battlefields. In particular, fortifications and tactics changed significantly in reaction to the greater destructive capability of gunpowder projectiles. These changes began in Italy and quickly spread throughout Europe. By the late sixteenth century, the antagonists in the Dutch Revolt had adapted this new method of warfare and English expeditionary forces learned how to fight using these methods as they supported the Dutch in this period.<sup>1</sup>

At the same time, English experience gained from colonization attempts in Ireland during the sixteenth century also added to Jamestown's success and ultimately made it more successful than any previous English colonial venture in the New World. John Smith is still a towering figure in early American history, but he did not save the colony alone. In the critical first two-and-a-half years of the colony, a council led by a president ran the colony. From late 1609 until 1624, when King James I made Jamestown a crown colony, a series of military governors led the colony. The Jamestown Colony survived because all of these early leaders successfully applied the collective English experiences from Ireland and the Netherlands.

The remainder of this chapter discusses Jamestown's historiography as well as what has been written about the English military of the late sixteenth and early seventeenth centuries. The second chapter provides the history of Jamestown Colony as it is relevant to this study. The third chapter explores the development of Irish colonial organization and its application to the Jamestown Colony. The fourth chapter discusses the adaptations of tactics and fortifications during the Dutch Revolt. The experiences of key leaders and how they helped the Virginia Colony survive is the topic of the fifth chapter. The final chapter summarizes how the English applied what they knew to secure success for Jamestown in the New World. The inspiration for the title of this study comes from an early declaration issued by the Virginia Company.<sup>2</sup>

Much of the general twentieth-century impression of Jamestown was influenced by the work of Wesley Frank Craven. He “argued that the Jamestown venture had foundered as a result of poor planning and incompetence, which resulted in King James I dissolving the venture in 1622 and taking direct control.”<sup>3</sup> Craven, a prominent southern

historian, is widely recognized for helping define the issues that developed the southern identity.<sup>4</sup> In *The Conquest of Virginia: The Second Attempt*, Conway Whittle Sams provides a very detailed account of the first three years of the colony that is very prejudicial to Captain John Smith. Sams includes a discussion of contemporary world events to put Jamestown in perspective.<sup>5</sup> The negative impressions of Jamestown's early leaders, influenced by books such as these, continued until late in the twentieth century. In *American Slavery, American Freedom*, Edmund S. Morgan calls the Virginia Colony the "Jamestown Fiasco."<sup>6</sup> Morgan believes that the only real success of the colony was John Rolfe's discovery that West Indian tobacco would grow in Virginia, thus allowing the colonists to plant tobacco.<sup>7</sup> Kathleen M. Brown's *Good Wives, Nasty Wenches, & Anxious Patriarchs: Gender, Race, and Power in Colonial Virginia* also follows the earlier impressions with a focus on the developmental concept of racial superiority in colonial Virginia.<sup>8</sup>

Benjamin Woolley tries to correct some of the prejudices formed by these works and put forth a more balanced version of events in *Savage Kingdom: The True Story of Jamestown, 1607, and the Settlement of America*.<sup>9</sup> Woolley argues that King James' revocation of the Virginia Company's Charter was perhaps more of a struggle between the King and prominent parliamentarians rather than an indicator of the company's effectiveness.<sup>10</sup> Author James Horn also provides a balanced look into the founding of Jamestown in *A Land as God Made It: Jamestown and the Birth of America* and *Adapting to a New World: English Society in the Seventeenth-Century Chesapeake* and in his role as editor of the Library of America's edition of John Smith's works, published in 2007.<sup>11</sup> *A Land as God Made It* is the strongest recent work and provides an excellent discussion

of the struggles facing the colonists while also providing evidence of their military competence and that of their leaders.<sup>12</sup>

Several authors also discuss Jamestown's influence on the developing British Empire in the collection of essays *Envisioning an English Empire: Jamestown and the Making of the North Atlantic World*.<sup>13</sup> A few of the authors provide links to Irish colonization, but they do not go into adequate detail about the day-to-day defense of the colony. David Price's *Love and Hate in Jamestown: John Smith, Pocahontas, and the Heart of A New Nation* focuses on the relationships of Jamestown and also tries to provide a more sympathetic view of what happened in the colony.<sup>14</sup> James Deetz also provides insight into the early colonies in *Flowerdew Hundred: The Archaeology of a Virginia Plantation, 1619-1863* but focuses more on the insights archaeology provides concerning the social aspects of one part of the colony.<sup>15</sup> Frederic Gleach's *Powhatan's World and Colonial Virginia: A Conflict of Cultures* provides an excellent discussion of the struggle for dominance between the early European colonists and the Native Americans led by Wahunsonacock, paramount chieftain of the Powhatan Confederation.<sup>16</sup> Much of this work focuses on the misconceptions the colonists and Native Americans had about each other. In *Virginia Immigrants and Adventurers 1607-1635: A Biographical Dictionary* Martha McCartney provides an excellent, albeit incomplete, discussion of the background regarding the majority of the key players in the Jamestown saga.<sup>17</sup>

Dr. Karen Ordahl Kupperman makes several excellent contributions to the overall understanding of Jamestown in *The Jamestown Project*, which effectively puts Jamestown in its appropriate place in the world.<sup>18</sup> Several other authors, including



Kupperman, have contributed to the understanding of Jamestown and the lost colony of Roanoke.<sup>19</sup> During the last half of the twentieth century, Phillip L. Barbour was one of the prominent figures in study of early American colonization. He provided in-depth studies of the Native Americans' language confronting the Jamestown colonists, of Pocahontas through an interpretation of John Smith's writings, and of other aspects of early English colonization of the Americas.<sup>20</sup> Anthony Garvan does not write about Jamestown, but he effectively links the methods used to colonize seventeenth-century America with those in Ireland in *Town Planning in Colonial Connecticut*.<sup>21</sup> He links the Irish efforts to English King Edward I's earlier success in Wales. Garvan realizes that the colonists built what they knew from their experiences rather than experiment with new and untested ideas.<sup>22</sup>

Although there is a lot of information about colonial conflict available, the research about the military aspects of the colonies does not adequately address how Dutch and Irish experiences influenced colonial organization and military structure. John Ferling, for example, argues in *A Wilderness of Miseries* that Americans' ideas about warfare were shaped by early colonial understanding of Roman and Greek authors and the European Wars of Religion.<sup>23</sup> This, combined with the experience of warfare in the colonies, especially with the Native Americans, produced a barbaric style of fighting that closely resembled the barbaric warfare of the classical period. Guy Chet argues in *Conquering the American Wilderness* that the earliest American colonists' experience with the European warfare, especially the effective and consistent use of European tactics such as defense in depth and the massed fires from cannon and muskets, enabled the colonists to defeat the Native Americans.<sup>24</sup> William Shea's *The Virginia Militia in the*

*Seventeenth Century* focuses on the usefulness of the militia in early Virginia, but also provides insight into the nature of fighting in and around Jamestown as well as the level of competence of the early colonial leaders.<sup>25</sup> The most focused discussion regarding Jamestown's military aspects is D. A. Tisdale's *Soldiers of the Virginia Colony 1607-1699*.<sup>26</sup> Tisdale covers the tactics, arms, armor, militia training, and fortifications of the seventeenth-century colonies but does not adequately address the recent archaeological discoveries at Jamestown, the effectiveness of the early defenses, and the reasoning behind them. However, Tisdale does emphasize that the Virginia Colony specifically looked for those who had experience in the Netherlands and Ireland. The Native Americans could not stand up to the massed firepower of the colonists, and it was the gentlemen of the colony—not the unskilled laborers—who actually helped the colony survive.<sup>27</sup>

Recent discoveries by historians and archaeologists have also helped put Jamestown into its appropriate place in American history. They have reevaluated many long-held beliefs about early English North American colonization attempts, and their work has resulted in surprising revelations.<sup>28</sup> The proximate cause, however, of the reinterpretation of the importance and relative success at Jamestown is due to one man, Dr. William Kelso, Director of Archaeology for the Association for the Preservation of Virginia Antiquities (APVA) Jamestown Rediscovery project. Believing that the remains of the original Jamestown fort had not washed away, Kelso was able to convince the APVA to allow him to start digging in 1994 near the presumed location. Kelso soon found early seventeenth-century artifacts, which enabled him to obtain more support for his work, and he eventually rediscovered the outline of the earliest English fortifications

at Jamestown. His discoveries add credence to the assertion that the English chose their site wisely using some of the best early modern European ideas concerning fortification and colonization. Kelso's work was influenced by the knowledge gained while working with Ivor Noël Hume in the 1970s at Martin's Hundred, one of the first seventeenth-century sites that was scientifically excavated. This gave Kelso experience in the delicacy of colonial archaeology and revitalized the study of colonial Virginia.<sup>29</sup> Kelso's books on Jamestown and his earlier work at the Kings Mill plantation site are essential reading for anyone studying colonial archaeology.<sup>30</sup>

Even though authors like Kelso and Kupperman tried to put the Jamestown experience in context with the wider seventeenth-century world, one must look to other areas for a more complete understanding of Jamestown. The works of Nicholas Canny, Steven G. Ellis, and Pádraig Lenihan provide a strong background of the Irish model for colonization, its links to the American colonies, and the specifics of its organization and defensive structures.<sup>31</sup> Lenihan adeptly links Irish fortifications to those developed in the Netherlands during the Eighty Years' War (1568-1648). George Hill provides an excellent study of colonization efforts in his nineteenth-century work *An Historical Account of the Plantation in Ulster at the Commencement of the Seventeenth Century*.<sup>32</sup> Paul Kerrigan's *Castles and Fortifications in Ireland 1485-1945* chronicles the development of Irish fortifications extremely well.<sup>33</sup>

The exact form of the defensive structures owed a lot to the English experiences in the first part of the Eighty Years' War in the Netherlands. To understand how this contributed to improving English military expertise, one can refer to several works that highlight their knowledge during the period. Among the many works that add perspective

to this experience are A. L. Rowse's *The Expansion of Elizabethan England*, Charles Carlton's *Going to the Wars: The Experience of the British Civil Wars, 1638-1651*, Martin Van Creveld's *Supplying War: Logistics from Wallenstein to Patton*, and Christopher Duffy's *Siege Warfare: The Fortress in the Early Modern World 1494-1660*.<sup>34</sup> Lindsey Boynton's *The Elizabethan Militia 1558-1638*, Adrian Caruana's *Tudor Artillery 1485-1603*, Charles Cruickshank's *Elizabeth's Army*, Mark Fissel's *English Warfare, 1511-1642*, Norman Longate's *Defending the Island: From Caesar to the Armada*, and Henry J. Webb's *Elizabethan Military Science: The Books and the Practice*, all focus on the specifics of Elizabethan strategy.<sup>35</sup> *Makers of Modern Strategy from Machiavelli to the Nuclear Age* provides excellent background on tactics and strategy in the early modern period.<sup>36</sup>

Primary sources are readily available for Jamestown research. There is a plethora of information concerning all aspects of Jamestown and early English colonization published and on the Internet. Early English Books Online is available through academic subscription. In addition, the Virtual Jamestown, the Jamestown Rediscovery, the *Colonial Williamsburg Journal*, and *National Geographic* websites are excellent starting points for Jamestown research.<sup>37</sup> Additionally, Susan Myra Kingsbury's transcription of the surviving Virginia Company records published in 1935 is an essential resource for correspondence between the colonists and their backers in London. Much of this information is also available online through the Library of Congress, especially since many of the earliest records of the Virginia Company have been lost.<sup>38</sup> Edward Haile's *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, the First Decade: 1607-1617* is another essential resource for Jamestown primary source research.<sup>39</sup>

## Endnotes

<sup>1</sup> For more information on the military revolution see Michael Roberts, "The Military Revolution, 1560-1660," *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe* (Boulder: Westview, 1995), 13-35; Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West 1500-1800* (Cambridge, UK: Cambridge University Press, 1996).

<sup>2</sup> The title was taken from this passage: "Our forces are now such as are able to tame the fury and treachery of the Savages: our Forts assure the Inhabitants, and frustrate all assailants." A True Declaration of the estate of the Colonie in Virginia," *The Virginia Company of London, 1610, Virtual Jamestown First Hand accounts*, available at <http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1059> (accessed November 11, 2010).

<sup>3</sup> Benjamin Woolley, "Rediscovering Jamestown," History News Network (HNN) posted January 2, 2007, <http://hnn.us/articles/36913.html> and <http://s50780.sites40.storefront-hosting.com/detail.aspx?ID=1225> (accessed August 9, 2009); Wesley Frank Craven, *The Dissolution of the Virginia Company: The Failure of a Colonial Experiment* (N.p.: Oxford University Press, 1932).

<sup>4</sup> Benjamin Woolley, "Rediscovering Jamestown," History News Network (HNN) posted January 2, 2007, <http://hnn.us/articles/36913.html> and <http://s50780.sites40.storefront-hosting.com/detail.aspx?ID=1225> (accessed August 9, 2009); Craven, *The Dissolution of the Virginia Company*; Wesley Frank Craven, *The Southern Colonies in the Seventeenth Century, 1607-1689* (Oxford: Oxford University Press, 1932, Baton Rouge, LA: Louisiana State University Press, 1949).

<sup>5</sup> Conway Whittle Sams, *The Conquest of Virginia: the Second Attempt* (Norfolk, VA: Keyser-Doherty Printing Corporation, 1929; repr. Spartanburg, SC: The Reprint Company, 1973).

<sup>6</sup> Edmund S. Morgan, *American Slavery, American Freedom: The Ordeal of Colonial Virginia* (New York: W. W. Norton & Company, 1975), 71-91.

<sup>5</sup> Ibid.

<sup>8</sup> Kathleen M. Brown, *Good Wives, Nasty Wenches, & Anxious Patriarchs, Gender, Race, and Power in Colonial Virginia* (Chapel Hill: The University of North Carolina Press, 1996).

<sup>9</sup> Benjamin Woolley, *Savage Kingdom: The True Story of Jamestown, 1607, and the Settlement of America*, (New York: HarperCollins, 2007).

<sup>10</sup> Ibid.

<sup>11</sup> James Horn, *A Land as God Made It: Jamestown and the Birth of America* (New York: Basic Books, A Division of Perseus Books Group, 2005); Randall J. Stephens, "Jamestown Redivivus: An Interview with James Horn," *Historically Speaking: The Journal of the Historical Society* 8, no. 4 (March/April 2007), [http://www.bu.edu/historic/hs/james\\_horn/](http://www.bu.edu/historic/hs/james_horn/) (accessed August 9, 2009).

<sup>12</sup> Horn, *A Land as God Made It*.

<sup>13</sup> Robert Applebaum and John Wood Sweet, eds., *Envisioning an English Empire: Jamestown and the Making of the North Atlantic World* (Philadelphia: University of Pennsylvania Press, 2005).

<sup>14</sup> David A. Price, *Love and Hate in Jamestown: John Smith, Pocahontas, and the Heart of a New Nation* (New York: Alfred A. Knopf, 2003); Love and Hate in Jamestown, About the Author, <http://www.jamestownbook.com/author.htm> (accessed August 9, 2009).

- <sup>15</sup> James Deetz, *Flowerdew Hundred: The Archaeology of a Virginia Plantation, 1619-1863* (Charlottesville: University Press of Virginia, 1993); James Deetz and Patricia Scott Deetz, *The Times of Their Lives: Life, Love and Death in Plymouth Colony* (New York: W. H. Freeman and Company, 2000).
- <sup>16</sup> Frederic W. Gleach, *Powhatan's World and Colonial Virginia: A Conflict of Cultures* (Lincoln: University of Nebraska Press, 1997).
- <sup>17</sup> Martha W. McCartney, *Virginia Immigrants and Adventurers 1607-1635: A Biographical Dictionary* (Baltimore: Genealogical Publishing Co., Inc., 2007).
- <sup>18</sup> Karen Ordahl Kupperman, *The Jamestown Project* (Cambridge, MA: Belknap Press of Harvard University Press, 2007); John Smith, *Captain John Smith: A Selection of His Writings*, ed. Karen Ordahl Kupperman (Chapel Hill: University of North Carolina Press, 1988); "Presentment of Civility: English Response to American Self-Presentation, 1580-1640." *William and Mary Quarterly* 3d ser., 54 (1997), 193-228.
- <sup>19</sup> Karen Ordahl Kupperman, *Roanoke: The Abandoned Colony* (Totowa, NJ: Rowman and Allanheld, 1984).
- <sup>20</sup> Philip L. Barbour, ed., *The Complete Works of Captain John Smith (1580-1631)* (Chapel Hill: University of North Carolina Press 1986); *The Jamestown Voyages under the First Charter 1606-1609* (London: The Hakluyt Society and the Cambridge University Press, 1969); *Pocahontas and Her World: A Chronicle of America's First Settlement in Which Is Related the Story of the Indians and the Englishmen, Particularly Captain John Smith, Captain Samuel Argall, and Master John Rolfe* (Boston: Houghton Mifflin, 1970); *The Three Worlds of Captain John Smith* (Boston: Houghton Mifflin, 1964).
- <sup>21</sup> Anthony Garvan, *Town Planning in Colonial Connecticut* (New Haven: Yale University Press, 1951).
- <sup>22</sup> Ibid.
- <sup>23</sup> John E. Ferling, *A Wilderness of Miseries: War and Warriors in Early America, Contributions in Military History, Number 22* (Westport CT: Greenwood Press, 1980).
- <sup>24</sup> Guy Chet, *Conquering the American Wilderness: The Triumph of European Warfare in the Colonial Northeast* (Amherst: University of Massachusetts Press, 2003).
- <sup>25</sup> William L. Shea, *The Virginia Militia in the Seventeenth Century* (Baton Rouge: Louisiana State University Press, 1983). See also Robert B. Asprey, *War in the Shadows: The Guerilla in History: Two Thousand Years of the Guerilla at War from Ancient Persia to the Present* (New York: William Morrow and Company, 1994).
- <sup>26</sup> D. A. Tisdale, *Soldiers of the Virginia Colony 1607-1699* (Richmond, VA: Deitz, 2000).
- <sup>27</sup> Ibid.
- <sup>28</sup> James Axtell, "Historical Rivalry: Virginia's Jamestown Was the Continent's First Permanent English Settlement. So How Is That Massachusetts's Plymouth Has Precedence in the Minds of So Many Americans?" *Colonial Williamsburg Journal* (Winter 2007), online at [www.history.org](http://www.history.org).
- <sup>29</sup> Ivor Noël Hume, *Martin's Hundred: A Firsthand Account of One of the Most Important Excavations in American Historical Archeology: The Discovery of a Lost Plantation—and the Most Extensive Evidence We Have of English Colonial Life in Early Seventeenth-century Virginia* (New York: Alfred A. Knopf, 1982).

- <sup>30</sup> William Kelso, *Jamestown Rediscovery: 1994-2004*, (N.p.: Association for the Preservation of Virginia Antiquities, 2004); Kelso, *Kingsmill Plantations 1619-1800: Archaeology of Country Life in Colonial Virginia Studies in Historical Archaeology*. Orlando: Academic Press, Inc., 1984; Kelso, with Beverly Straube. *Jamestown Rediscovery: 1994-2004*. N.p.: Association for the Preservation of Virginia Antiquities, 2004.
- <sup>31</sup> Nicholas P. Canny, *The Elizabethan Conquest of Ireland: A Pattern Established 1565-76* (Hassocks, Sussex, England: The Harvester Press Limited, 1976); *Making Ireland British 1580-1650* (New York: Oxford University Press, 2001); Pádraig Lenihan, ed., *Confederate Catholics at War 1641-49*, in *Studies in Irish History*, Nicholas Canny, gen. ed. (Cornwall, UK: Cork University Press for the Irish Committee for Historical Sciences, 2001); Pádraig Lenihan ed., *Conquest and Resistance: War in Seventeenth Century Ireland* (Leiden, the Netherlands: Koninklijke Brill NV, 2001); Steven G. Ellis, *Ireland in the Age of the Tudors: English Expansion and the End of Gaelic Rule* (London: Longman, 1998).
- <sup>32</sup> George Hill, *An Historical Account of the Plantation in Ulster at the Commencement of the Seventeenth Century*, (Belfast: M'Caw, Stevenson and Orr, 1877 repr. Shannon, Ireland: the Irish University Press, 1970); Internet Archive: "An Historical Account of the Plantation in Ulster at the Commencement of the Seventeenth Century," <http://www.archive.org/details/anhistoricalacc00hillgoog> (accessed August 9, 2009).
- <sup>33</sup> Paul Kerrigan, *Castles and Fortifications in Ireland 1485-1945* (Cork, Ireland: The Collins Press, 1995).
- <sup>34</sup> A. L. Rowse, *The Expansion of Elizabethan England* (New York: Harper and Row, 1955); Charles Carlton, *Going to the Wars: The Experience of the British Civil Wars, 1638-1651* (New York: Routledge, 1992); Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (New York: Cambridge University Press, 1992); Christopher Duffy, *Siege Warfare: The Fortress in the Early Modern World 1494-1660* (New York: Barnes and Noble Press, 1979).
- <sup>35</sup> Lindsey Boynton, *The Elizabethan Militia 1558-1638* (London: Routledge & Kegan Paul Limited, 1967); Adrian B. Caruana, *Tudor Artillery 1485-1603, Historical Arms Series No.30* (Bloomfield, Ontario: Museum Restoration Service, 1992); Charles Greig Cruickshank, *Elizabeth's Army*. 2nd ed. (London: Oxford University Press, 1966); Mark Charles Fissel, *English Warfare, 1511-1642, Warfare in History* (London: Routledge, 2001); Norman Longate, *Defending the Island: From Caesar to the Armada* (Glasgow: Grafton Books, 1990); Lacey Baldwin Smith, *This Realm of England 1399-1688*, 8th ed., (Boston: Houghton Mifflin Company, 2001) Henry J. Webb, *Elizabethan Military Science: The Books and the Practice*. (Madison: The University of Wisconsin Press, 1965).
- <sup>36</sup> Peter Paret, ed., *Makers of Modern Strategy from Machiavelli to the Nuclear Age* (Princeton: Princeton University Press, 1986).
- <sup>37</sup> "Early English Books Online," <http://eebo.chadwyck.com/home> (accessed August 8, 2009); "Virtual Jamestown, Jamestown interactive," <http://www.virtualjamestown.org/interactive.html> (accessed August 8, 2009); "Association for the Preservation of Virginia Antiquities, Jamestown Rediscovery," [http://www.preservationvirginia.org/rediscovery/page.php?page\\_id=1](http://www.preservationvirginia.org/rediscovery/page.php?page_id=1) (accessed August 8, 2009); "Colonial Williamsburg Foundation," <http://history.org> (accessed August 8, 2009); and "National Geographic Society." [http://google.nationalgeographic.com/search?site=default\\_collection&client=default\\_frontend&proxystylesheet=default\\_frontend&output=xml\\_no\\_dtd&oe=UTF-8&q=jamestown&btnG.x=21&btnG.y=6](http://google.nationalgeographic.com/search?site=default_collection&client=default_frontend&proxystylesheet=default_frontend&output=xml_no_dtd&oe=UTF-8&q=jamestown&btnG.x=21&btnG.y=6) (accessed August 8, 2009).
- <sup>38</sup> Susan Myra Kingsbury, ed., *The Records of the Virginia Company of London* (Washington, DC: The United States Government Printing Office, 1935), [http://memory.loc.gov/ammem/collections/jefferson\\_papers/mtjessay2.html#text2](http://memory.loc.gov/ammem/collections/jefferson_papers/mtjessay2.html#text2) (accessed September 4, 2009).
- <sup>39</sup> Edward Wright Haile, ed., *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, the First Decade: 1607-1617* (Champlain, VA: Roundhouse, 1998).

**CHAPTER II**  
**EVERYTHING ADVANTAGEOUS TO  
LIFE . . . SAVE A MEANS TO LIVE<sup>1</sup>**

The English made the Jamestown Colony their first successful settlement in North America. English interest in colonization and the conquest of North America began almost as soon as Columbus discovered it. In 1496, English King Henry VII granted John Cabot the right to claim for England any lands he found in his voyages. Despite England's stated desire to colonize North America, many of the early attempts were really nothing more than organized plundering expeditions of the North American coastline. The earliest recorded English attempts, led by Martin Frobisher, Sir Humphrey Gilbert, and several individuals backed by Sir Walter Raleigh to Baffin Island, Newfoundland, and Roanoke Island, respectively in the 1570s and 1580s, ended in failure. In 1583, Sir Humphrey Gilbert attempted to colonize Newfoundland but was lost at sea with his crew without establishing a colony.<sup>2</sup>

The accounts of these early voyages collected by Richard Hakluyt the elder, his cousin Richard Hakluyt the younger, and Thomas Hariot, often with the backing of Sir Walter Raleigh, encouraged support for future expeditions and provided a knowledge base for colonization.<sup>3</sup> These accounts kept interest in North American colonization alive while England was engaged in a struggle with Spain in the 1580s and 1590s. They emphasized the tremendous potential in America while deemphasizing the failures of



previous colonization attempts. The English believed in the American potential because they knew how rich Spain had become from America. The English had also been trying to establish colonies in Ireland to expand their control. None of these attempts fared any better until the last years of the Elizabethan era.<sup>4</sup>

Backers of colonial ventures expected a quick turnaround with fabulous profits. In the Virginia Colony, profits only came much later with the cultivation and export of tobacco, rather than the gold that many hoped to find. By the early 1620s, after many colonization attempts, English thinkers such as Sir Francis Bacon recognized that colonial ventures were long-term projects that could require twenty years of losses before getting a positive return.<sup>5</sup>

An understanding of how Jamestown fit into the big picture of late sixteenth and early seventeenth centuries English ventures may help put the developments of the Virginia Colony in perspective. Spanish gold and the persistent legend of a sea route to the Orient through either Russia or the Americas enthralled the early modern English. They also wanted to challenge the Portuguese trade in Africa and Asia. Many Englishmen wanted their share of the wealth they thought they could gain through trade, conquest, or plunder. The stories of the great English “Sea Dogs” such as Sir Francis Drake and Sir Richard Grenville inspired fellow Englishmen to look for other ways to become rich and be recognized as champions for their country and religion. The English were able to fund their colonial expansion and other ventures due to growth in industry and capitalism, partially stemming from a burgeoning arms industry in support of continental wars that generated funds for English merchants.<sup>6</sup>

England was not only focused on trade. England was involved in the European Wars of Religion, primarily in the Netherlands from 1572 until the ascension of James I to the throne of England. Elizabethan foreign entanglements strained the early modern English economy despite Elizabeth I's (Queen of England 1559-1603) efforts to be frugal. She supported some attempts at colonization-mainly in Ireland-but could not commit enough resources to sustain any long-term efforts. Most of the backing for any colonization efforts came from private sources until the English government was forced to commit more resources to end O' Neill's rebellion as Queen Elizabeth I neared the end of her life.<sup>7</sup>

Ironically, after Queen Elizabeth's death, aid for English colonial development also came from an unlikely source: Spain, one of England's chief rivals. King James I, King of England from 1603-1625, began working on a peace treaty with Spain soon after he assumed the throne. His efforts also resulted in a "demobilization" of English forces soon after peace was declared between Spain and England on June 25, 1605, with the Somerset House Treaty. In 1609, a formal twelve-year truce in the Netherlands began just in time to release more manpower to sustain English colonization attempts in Virginia. Spain's King Philip III hoped this truce would give him a chance to rebuild his depleted resources. The Dutch and English would also have more resources for establishing new colonies or strengthening those already established. Englishman Henry Hudson was able to explore the coast of North America for the Dutch and lay the foundation for the establishment of the Dutch colonies of New Amsterdam, Fort Orange, and later Wiltwyck. English veterans of the Dutch War could also be released from service in the Netherlands to found and support colonies in Ireland and America.<sup>8</sup>

James I did not openly support challenging Spain's New World Empire, but he did not suppress early efforts at colonization in North America or in Ireland either. These actions could have resulted from King James' realization that England was war weary and in financial trouble after thirty years of warfare. The king's "demobilization" and peacemaking overtures left many military men, and others who had made a living supporting Elizabeth I's war effort, unemployed, thus providing a pool of men willing to support colonization efforts. The Virginia Colony was not the only focus of English capitalistic ventures, but one of several secondary efforts that included involvement in Russia, the Netherlands, West Africa, and South America. Ireland remained, because of its proximity to England, the English main effort. King James I was involved in many of these ventures, if only in the background.<sup>9</sup>

Once the English began attempting to colonize the New World, the general location of the English colonies was not accidental. They had been exploring the New World almost since its discovery and by 1600 had become very familiar with the eastern coastline of North America. Mindful of the fate of an earlier French Huguenot colony wiped out by Spain in the 1560s, they knew they had to choose the site of their colonies carefully. The proximity of Spanish bases in the Caribbean and French efforts in the north meant that only colonies set up between Cape Fear and Nova Scotia would have any chance of succeeding against any competitors. The English negotiated a peace with the Spanish government in 1605, but there were still tensions between England and Spain in the New World. To illustrate this, an exploratory group for a colony to the north of the future site of Jamestown was captured off Florida by the Spanish in August 2006.

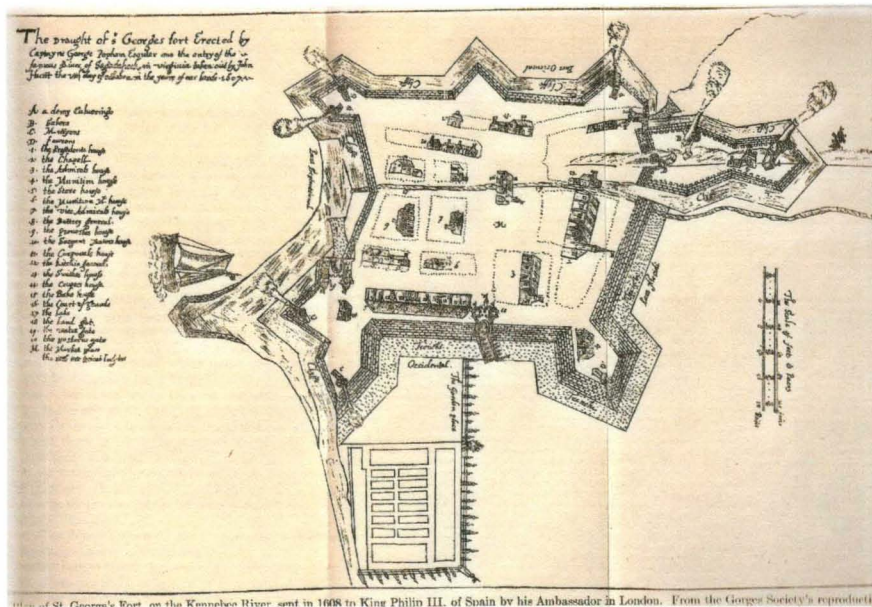
The Dutch were exploring to the north, and with French efforts focused around the Gulf of St. Lawrence and the Spanish clearly in control from Florida to present-day South Carolina, the Chesapeake Bay seemed like the best place to attempt to establish a foothold in North America.<sup>10</sup> The English probably did not know that the Spanish had tried to establish a mission very close to the site of Jamestown in the 1570s.<sup>11</sup>

The English attempted several colonies besides Jamestown in the first two decades of the seventeenth century, such as the Popham Colony on Maine's Kennebec River and Walter Raleigh's colony in Guiana, but none of the settlements would prove to be as successful as Jamestown.<sup>12</sup> Before King James I granted the charter that gave the English the justification to establish colonies in North America, a few individuals, apparently led by Captain Bartholomew Gosnold, worked for several years to get support for establishing a joint stock company to finance an English colony on the North American continent. The list of individuals that became involved in getting the colony started include Edward Maria Wingfield, the first president of the colony; Robert Hunt, the colony's first chaplain; Captain John Smith, and diverse others. It also included other prominent Englishmen not simply known for any association with Jamestown, including King James I, the Earl of Southhampton, Henry Wriothesley, the Earl of Salisbury, Robert Cecil, Elizabethan scholar Richard Hakluyt, London financier Sir Thomas Smith, and Sir Edwin Sandys. Sir Thomas Smith emerged as the leader of the Virginia Company portion of the Corporation in London.<sup>13</sup>

King James I signed the first charter giving the Virginia Company the right to colonize the land between 34° and 45° N latitude on April 10, 1606.<sup>14</sup> This charter divided the colonization rights between two subordinate companies: the London

Company, given the colonization rights for the area between 34° and 41° N, and the Plymouth Company, with rights to the area between 38° and 45° N latitude. The overlapping parts of the grant were not to be colonized until one part of the colony was sufficiently established to expand into that area.<sup>15</sup>

The Plymouth Company's first northern venture, the Popham Colony, failed after a year. Its principle installation, Fort St. George, has been recently discovered and is currently under excavation. John Hunt, one of the colonists, drew a detailed map of the fort that was smuggled to the Spanish Ambassador, Pedro de Zuniga, in London, who then sent it to the Spanish king. This is the most thorough known depiction of an early English settlement in the Americas. It includes a depiction of the fortifications, including cannons called demi-culverins and falcons as well as a storehouse, chapel, guardhouse, other public buildings, and residences for the colonists. Of note are the elongated bastions on three corners of the drawing and the extension of the garden beyond the fort. This bears similarities to the Jamestown fort depicted in the map and shows links to the Dutch style of fortification that will be discussed in Chapter Four. The fact that this map and the only known drawing of James Fort were both found in the Spanish archives of the Indies serves to underscore the degree to which the Spanish crown perceived these colonies as a threat. Both maps show a flag- like extension of the fort that probably represented individual plots outside the fort, protected by a palisade.<sup>16</sup>



Plan of St. George's Fort on the Kennebec River sent in 1608 to King Philip III. of Spain by his Ambassador in London. From the Gorges Society's reproduction

**Figure 1.** Diagram of Fort St. George on the Kennebec River in Maine found in the Archives of the Indies in Spain.<sup>17</sup>

In the south, the Virginia Company selected three ships for the voyage: the Susan Constant, the Godspeed, and the Discovery, captained by Christopher Newport, Bartholomew Gosnold, and John Ratcliffe, respectively. These ships left London on December 20, 1606, sailing to Virginia via the Canaries, Martinique, Puerto Rico, and other islands. They explored the Chesapeake Bay region for several days after reaching the Virginia coastline on April 26, 1607.

When the colonists arrived in Virginia, Sir Christopher Newport, captain of the ship that brought them to the New World, opened the sealed instructions from the Virginia Company. Among the instructions were specific guidance on the division of labor and the governance of the colony. John Smith, Sir Christopher Newport, John Ratcliffe, George Kendall, Edward Maria Wingfield, Bartholomew Gosnold,

Richard Hunt, Sir Richard Marten, and John Marten were appointed members of the thirteen-man council. Edward Maria Wingfield was elected the council's first president. The council helped check the power of the president of the council. The remainder of the colonists consisted of carpenters, two surgeons, a barber (also a form of surgeon), a blacksmith, a mason, and a tailor.<sup>18</sup>

By May 14, 1607, the *first planting* of Jamestown colonists had chosen the location for their base, generally following the guidance from the Virginia Company. They immediately set up temporary fortifications, perhaps modeled after temporary fortifications in the shape of a half moon that they had learned to make in the Dutch Wars.<sup>19</sup> Native American inhabitants a generation or two before had cleared the fort site. The forest had not yet reclaimed it. The James River water level may have been lower than today because of a drought that plagued the area during the period. The worst seven-year drought since the twelfth century plagued the area around Jamestown from 1606 to 1613, which accounts for, in part, the suffering of the colonists, the apparent lack of corn available from the Native Americans, and the brackish water in the fort's wells and in the river water nearby. The drought, indicated by the narrowness of growth bands in trees from the period, suggests that even the best planned and supported colonization attempts would have been severely challenged during this period.<sup>20</sup> A recent study of oyster shells retrieved from a well in the fort, which showed much greater salinity of the waters of the James River in the early 1600s, also supports evidence of a severe drought.<sup>21</sup>

The land the colonists chose was probably considered marginal by the Native Americans because it had not yet recovered from its former agricultural use. Any crops planted on the land would require more intensive fertilization, even with normal rainfall.

The English inability to grow enough of their own crops probably was exacerbated by the drought. This led to increased tensions between the colonists and the native inhabitants of the area, who were also severely affected by the drought. Neither side clearly understood completely why corn and rain was so scarce.

Most of the Native American inhabitants of the area were loosely united in a confederation, known collectively as the Powhatan, under the paramount chieftainship of Wahunsonacock, known to history as simply Powhatan,. Very simplistically, the Native Americans believed that they only used the land and did not own it. The English concept of permanent land ownership and control of resources conflicted with that understanding, causing a lot of tension. The English challenged Powhatan's control and competed for limited resources that the native inhabitants did not exploit as efficiently as the English felt they could.<sup>22</sup>

After Native American attacks killed one colonist and wounded eleven on May 26, the colonists began a vigorous effort to build a much stronger fortification. George Percy and John Smith provide two different versions of this effort. George Percy said,

The fourteenth day (of May) we landed all our men, which were set to worke about the fortification, and others some to watch and ward as it was convenient. . . . The fifteenth of June we had built and finished our Fort, which was triangle wise, having three Bulwarkes, at every corner, like a halfe Moone, and foure or five pieces of Artillerie mounted in them. We had made our selves sufficiently strong for these Savages.<sup>23</sup>

John Smith's version hints at internal conflict within the colony:

Now falleth every man to work: the council contrive the Fort. . . . The Presidents overweening jealousy would admit no exercise at arms, or fortification but the boughs of trees cast together in the form of a half-moon by the extraordinary pains and diligence of Captain Kendall. . . . Hereupon the President was contented the Fort should be pallisadoed, the ordinance mounted, his men armed and



exercised, for many were the assaults and Ambuscadoes of the Salvages. . . . What toil we had with so small a powere to guard our workmen adays, watch all night, resist our enemies, and effect our business to relade the ships, cut down trees, and prepare the ground to plant our corn, etc.<sup>24</sup>

Percy implies that the colonists immediately began working on Jamestown's triangular fortifications. Smith implies that the colonists did not set up anything but rough fortifications made from tree branches until they were attacked by the Native Americans on May 22, 1607. In both descriptions we see references to a *half moon* fortification; though the shape of these fortifications was probably not what modern readers would think of as a half moon, "half moon" was nevertheless the term used by the English in Netherlands and Ireland to refer to certain types of fortifications.

The colonists completed the first iteration of the Jamestown fortifications by June 15, 1607. This is a remarkable achievement, especially when one considers that fort construction was only a part of what the 108 original colonists were doing. Some were exploring, others cutting down trees for clapboard to send to England, and, of course, some had to guard the settlement day and night.<sup>25</sup> The colonists quickly built a defensive enclosure when they landed and then doubled their efforts to build better fortifications at Jamestown.<sup>26</sup>

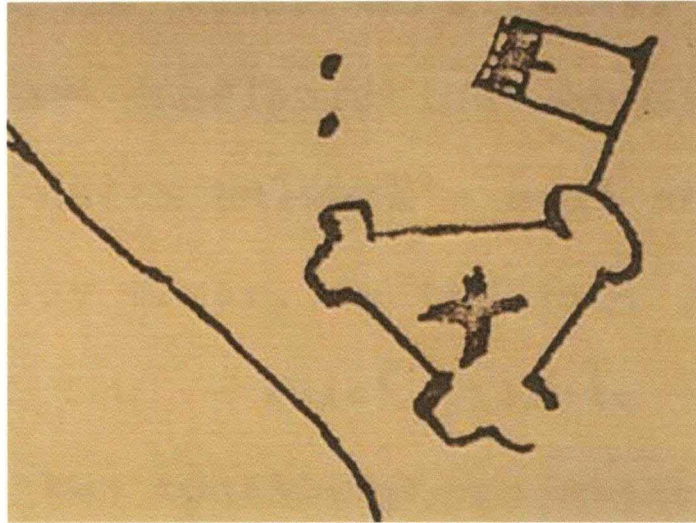


Figure 2. “Zuniga” Map of Jamestown ca. 1609 from the Spanish Archives of the Indies.<sup>27</sup>

Shortly after the fort was completed on June 22, 1607, Captain Newport returned to England with the commodities the English had gathered, leaving enough provisions for 13-14 weeks. Bartholomew Gosnold, perhaps the primary visionary and proponent behind the establishment of the Jamestown Colony itself, died after a three-week-long illness on August 22, 1607. Bartholomew Gosnold was the perhaps the most influential of the early leaders of Jamestown, but his contributions are largely unknown because he actually participated in the colony for barely three months after the first settlers arrived in Jamestown.

Bartholomew Gosnold’s death was one of the greatest blows to the early colonists. Both John Smith and Edward Maria Wingfield, two of the greatest adversaries at Jamestown, lamented his passing and credited him with being the person that organized and solicited support for the colony in England. His perseverance was the proximate cause of the establishment of the Jamestown Colony; using his family

connections, he garnered support ranging from the great writer Sir Francis Bacon to Sir Thomas Smythe, a powerful merchant who brought the backing of the merchants of London to the Jamestown venture, to Sir Fernando Gorges, another of the great Elizabethan thinkers.<sup>28</sup>

Even without the discouraging effects of the loss of Gosnold, sustaining the colony was a serious challenge from its start. The logistic systems of the early seventeenth century were not capable of adequately sustaining forces for a long time, especially in a colony so distant from England. The shortcomings of this structure soon made it apparent that the food supplies brought by the earliest colonists could not sustain them. The accepted solution for this problem was for troops to simply take what they needed from the local population, which was standard practice in Europe, Ireland, and other places in the New World. In European warfare, as in Jamestown, organized plundering was the rule. Some armies had begun to supply some basic needs to their soldiers, deducting the cost from a soldier's pay, but that was impractical in Jamestown. The difficulty of resupply had dire consequences for the Jamestown settlement in its early years even though they applied the accepted European model of taking from the local population.<sup>29</sup>

As spring turned into summer, perhaps within weeks of Newport's departure, the colonists began to suffer from the combined effects of poor hygiene, lack of fruits and vegetables, the drought, the proximity of Jamestown to a tidal swamp, and the salty brackishness of the river water they were using as their primary water source. They lived on sturgeon and sea crabs available during the summer because they believed that they could get what they needed from the Native Americans. Arriving late in the spring during

a drought also prevented them from benefiting from a crop they would have planted their first year. The colonists did not gather much food to store for the winter.

While Wingfield was president, it does not appear there was much effort to build sturdy, more permanent houses within the palisaded fort. During Wingfield's time, the colonists lived in lean-tos attached on one side to the fort wall and partially dug into the ground.<sup>30</sup> On September 10, 1607, after fifty colonists had died, Wingfield was relieved as the colony's president to be replaced by John Ratcliffe. Only then did the colonists attempt to build houses.<sup>31</sup>

On January 7, 1608, a fire of unknown origin destroyed all the houses in the fort that had been built since Ratcliffe became president. Because the colonists had to balance the defense of the colony with the rebuilding of their houses, it took until the summer to recover from the damage. There was a lot of interaction and trading between the Native Americans and the English colonists. Although relations were not always peaceful, there was not daily combat between them.

Building acceptable living quarters continued to be a concern when John Smith was elected president of Jamestown on September 10, 1608. His actions are given a large amount of the credit for saving the Jamestown Colony in its first years. As president, he reorganized the colony, rebuilding the public buildings destroyed by fire, extending the fort into the shape of a pentagon, revitalizing the guard force called the Watch, and requiring everyone to participate in weekly military training on Saturdays. He also orchestrated the planting of 30-40 acres of crops, the digging of a well, and the building of several more fortifications. The latter included a block house on the land bridge from Jamestown Island to the mainland that served as both a trading post and a means to

interdict Native American incursions onto the Island; a blockhouse on Hog's Island, so named because Smith also moved the colonies' hogs there; and an earthen redoubt across the James River that came to be known as Smith's Fort.<sup>32</sup> His confusing relationship with Pocahontas and Powhatan Chief Wahunsonacock may have kept the Powhatan from annihilating the colony from the start. Wahunsonacock apparently saw John Smith as one of his vassals, as an adopted member of his tribe, and then considered the Jamestown colony as one of his possessions. The famous story of Pocahontas saving John Smith's life cannot be taken at face value and may have been part of an adoption ritual staged by the Powhatan to symbolize Wahunsonacock's overlordship.<sup>33</sup>

In England, the Virginia Company would soon have more help in maintaining their colony. The company was able to recruit more veterans from Dutch wars when the Anglo-Spanish truce went into effect in 1609. The company also focused colonial leadership into one or two men.<sup>34</sup> In 1609, the Virginia Company sent a force of 500 men under Sir Thomas Gates and Sir George Somers to reinforce the colony. These new colonists would also be capable of forcing the Native Americans in the area to accept fealty from the English. The president and council were then replaced by a governor who had complete control. The Virginia Company planned to make hostages of Native American youths and train them to become proper English subjects, which had some precedence in Ireland. The English colonists had already sent youths to live among the Native Americans to learn their ways, most of who survived. Unfortunately, only three of the nine ships containing 250 people sent with this force arrived in the late summer of 1609. The others, including those of Sir Thomas Gates and Sir George Somers, were shipwrecked off the coast of Bermuda.<sup>35</sup>

Gabriel Archer, who arrived with this group of colonists, and others argued with John Smith over who was in charge. Smith believed he should serve as president until the new governor arrived with the charter. When one of Smith's gunpowder pouches exploded and injured him, he had to return to England due to this grievous wound. He conceded his leadership of the colony to Sir George Percy.<sup>36</sup>

Fighting erupted again between the colonists and the Native Americans shortly after John Smith left the colony and the third resupply transport arrived. Wahunsonacock came to see the English as a threat that needed to be extirpated from his land. Only recently consolidating his own control of the confederation, Powhatan could not tolerate a rival independent "tribe" in his domain. He may have had reservations about them from their arrival, but the departure of John Smith could have encouraged a change of heart by eliminating any attachment he had to the colony. By 1609, the English colonists and the Virginia Company in London came to a similar conclusion about the Powhatan confederation. The Powhatans subjected the settlers at Jamestown to a devastating siege from November 1609 to May 1610, during which all but about 60 of the Jamestown colonists perished. According to Percy, the Native Americans confined the English to the area of the fort. Wahunsonacock's warriors sealed off the island in an attempt to starve out the English, rather than attacking the fort itself. They had learned that a frontal attack against massed English firepower was not worth the cost.<sup>37</sup>

Two points need to be made about the colony during this period of Percy's leadership, commonly called the "Starving Time," to put it in the proper perspective. First and most importantly, the key stakeholders from the Virginia Company continued to support the colony, and colonists continued to come to Jamestown, enabling the colony's

survival. The second point is that the attrition rate at Jamestown, as hard as it is to imagine now, was not uncommon in many parts of the world during this period. England's continental adventures and especially her efforts in Ireland suffered from extremely high death rates. For all of these endeavors, English gentlemen worked side by side with men who were forced to go to with them as well as those who wanted to go to seek their fortunes. They all lacked general knowledge concerning hygiene and sanitation that seems obvious now, but was not obvious to anyone then. The general lack of good sanitary procedures caused a variety of diseases, which expeditionary forces have only been able to control in this century.<sup>38</sup>

Despite allowances made for the lack of knowledge concerning hygiene and any effects from the drought, George Percy was not an adept leader. Percy's ruthlessness towards the Native Americans and general ineptitude caused the colony to shrink from 490 colonists to 60. He withdrew most of the colonists back to Jamestown, reversing the policy of dispersing the colonists to nearby fortified settlements, making it easier for disease to spread and harder to get enough food for everyone. With all the colonists concentrated at Jamestown, the Native Americans could direct their efforts there while the concentration of people there caused additional strain. In a desperate attempt, Percy sent the colony's second president, John Ratcliffe, with 34 men to get food from the Powhatan. They were ambushed; most of them were slain, and Ratcliffe was tortured to death. Percy also neglected to keep up the fortifications while he was in charge as can be surmised from the written reports of the period.<sup>39</sup>

Gates and Somers arrived with John Rolfe, Ralph Hamor, and other survivors from Bermuda on May 23, 1610. They were appalled by what they found. The fort was in

a sad state. The palisade and empty houses were being torn down. The colonists had apparently been taking firewood from whatever buildings they could; they feared going outside the fort to get it, as the Native Americans attacked anyone who ventured beyond the blockhouse.<sup>40</sup> With the exception of the Ratcliffe expedition, it seems that only those who ventured out individually or in pairs were slain. The blockhouse probably refers to additional fortifications near the small neck of land that connected Jamestown to the mainland. Nevertheless, the arrival of the Governor Gates, the remainder of the survivors of the Bermuda shipwreck, and some supplies helped.

In accordance with the Virginia Company's reorganization of the colony's government, Sir Thomas Gates now acted as Virginia's first governor until the arrival of the permanent governor Thomas West—*Lord Delaware*. On May 24, Gates issued *The Laws, Divine, Moral, and Martial*, which put the colony under strict martial law.<sup>41</sup> This was the first of several manifestations of draconian martial law, which, like Smith's rules, helped the colony survive.

The written accounts from the period consistently describe the initial fortifications as a triangular wooden palisade with three well-armed bulwarks.<sup>42</sup> William Strachey provided the most detailed eyewitness account of the early Jamestown fortifications. From this description, one can see that the fort either followed the basic guidance of the Virginia Company already or did so after Lord Delaware fixed it. William Strachey describes the fort at Jamestown in June 1610 as follows:

. . . cast almost into the forme of a Triangle, and Pallizadoed. The south side next to the river (howbeit extended in a line, or Curtaine sixscore foote more in length, then the other two, by reason the advantage of the ground doth so require) contains 140 yards: the West and East sides 100 only. At every Angle or corner, where the lines meete, a Bulwarke or Watchtower is raised, and in each Bulwarke a peece of Ordance or two well mounted. To every side, a proportionate distance



from the Pallisade, is a settled streete of houses that runs along, so each line of the angle hath his streete. In the midst is a market place, a storehouse, and a corps de garde, as likewise a pretty chapel . . . . It is in length threescore foot, in breadth twenty-four . . . . And thus enclosed, as I said, round with a Palizade of Planckes and strong Posts, foure foot deep in the ground, of yong Oakes, Walnuts, etc., the fort is called, in honor of his Majesty's name, Jamestown. The principal gate from the town, through the palisade, opens to the river, as at each bulwark there is a gate likewise to go forth and at every gate a demiculverin, and so in the market place.<sup>43</sup>

The surviving colonists were stretched thin. Sir Thomas Gates apparently abandoned Jamestown and sailed to the mouth of the James River, where he met the new governor—Sir Thomas West, Lord Delaware. This seemed like an act of divine providence. Lord Delaware strengthened and reissued Gates' *Laws, Divine, Moral, and Martial*, providing strong leadership for the colony until ill health forced him to return to England. In his absence, George Percy served as the interim governor until Sir Thomas Dale could replace him. The English began retaliatory raids, now called “feedfights,” aimed at destroying Native American crops and food stores during this period using tactics similar to those used in Europe at the time.<sup>44</sup>

Percy again failed to keep up the fortifications. It did not take long to see the difference between Percy and Dale. When Sir Thomas Dale arrived in Virginia, he planted corn and rebuilt two coastal forts, Charles and Henry, before arriving back at Jamestown and thoroughly repairing the fortifications there.<sup>45</sup>

Ralph Hamor provides insight into what the fort looked like in 1611:

The Towne it selfe by the care and providence of Sir Thomas Gates, who for the most part had his chieftest residence there, is reduced into a handsome forme, and hath in it two faire rowes of houses, all of framed Timber, two stories, and an upper Garret, or Corne loft high, besides the three large, and substantial Storehouses, joyned together in a length some hundred and twenty foot, and in breadth forty, and this town hath been lately newly, and strongly impaled, and a faire platforme for Ordence in the west Bulwark raised.<sup>46</sup>

Hamor's description and archaeological evidence found by Dr. William Kelso supports his belief that the fort was expanded about this time. This larger fort area could explain why the later Jamestown churches, normally built in the center of the town, were built on the original east wall. That is, as the fort expanded, the church moved to the new center of the fort.<sup>47</sup> If the church was moved, it is likely the rest of the marketplace was moved the storehouse and guardhouse, making that location a new center for the town's inner defenses. In the same year, Sir Thomas Dale built another fort, *Henrico* or *Henricus*, named after Henry, Prince of Wales, at the fall line of the James River near present-day Richmond, Virginia.<sup>48</sup> Dale began a program that followed patterns similar to those in use in Ireland to expand control of colonies, which was exactly what the Virginia Company wanted. At Henrico, Dale also established a strong in-depth fortification. The outermost portion of the defenses was a two-mile long stockade guarded with several "commanders" or blockhouses between the two rivers on which the fort was situated. The second line of defense was five more "commanders" in which a continuous guard was kept to provide for the town's security. The town was set on very high ground and defended by a strong palisade and several blockhouses. Dale also encouraged the establishments of fortified settlements, normally consisting of a main house surrounded by a stockade that resembled the Irish bawnes, which will be discussed in the next chapter. Other colonists settled around the main stockade.<sup>49</sup>

The Virginia Colony continued to struggle, but they also ensured that no one else effectively threatened them. The English captured three men from a Spanish exploratory mission to Virginia in 1611.<sup>50</sup> English forces from Jamestown destroyed French settlements at Mount Desert Island, on the coast of Maine, and at St. Croix and Port

Royal in the Bay of Fundy, Nova Scotia, to protect English claims to northern Virginia—what is now New England, south of 45° N latitude, in 1613.<sup>51</sup>

The 1614 marriage of John Rolfe and Pocahontas, Powhatan's daughter and legendary savior of John Smith, was partly responsible for a generally peaceful period that lasted until 1622. John Rolfe also introduced West Indian tobacco to the colony, which would ultimately help the colony become profitable. Raising tobacco became an obsession for the colonists because of the tremendous profits it brought them. This fixation on getting rich quickly from tobacco or possibly sassafras distracted the colonists from just about everything else, including raising corn and the upkeep of their defenses.<sup>52</sup> The truce gave the colony the opportunity to thrive, but it continued to be run under martial law.

When Captain Samuel Argall, governor of the Virginia Colony from 1616-1617, arrived at Jamestown, he reported that the colony's defenses were again in need of repair. The palisade and church had fallen down, Jamestown's wharf was in ruins, and many of the colony's houses were uninhabitable. All throughout the colony, houses, palisades, and blockhouses had not been maintained and needed repairs before they could be effective. Captain Argall focused on fixing Jamestown's fortifications as his main base, despite some colonists' wishes to move it to Henricus, again reaffirming the choice of the original colonists.<sup>53</sup>

In 1618, the paramount chieftain of the Powhatan Confederation, Wahunsonacock, died. Powhatan's brother Opechancanough, who had at one time been humiliated by John Smith, became de facto ruler of the Confederation. It is unclear whether Opechancanough was the sole leader of the tribe or led jointly with his brother

Opitchapam. Opitchapam may have actually been the “official” paramount chieftain, but Opechancanough was the war chief and real power of the confederation.

Opechancanough did not hold any illusions about English fealty or have any reason to honor the truce.

In England, the Virginia Company’s long-time leader, Sir Thomas Smythe, was replaced by Sir Edwin Sandys. He believed Jamestown would only turn a real profit if the Virginia Colony produced something other than tobacco and could establish other English institutions. The colony still had a high death rate and was not very profitable. In 1619, Sir Edwin Sandys sent Sir George Yeardley to Virginia as governor.<sup>54</sup>

Although an experienced soldier who had first come to Jamestown with Lord Delaware, Sir George Yeardley had instructions from the company leadership to replace the martial law that had been in effect since 1610 with English common law. These instructions also included a new land policy that allowed more settlers, improved local administrative procedures, and provided for the election of a “General Assembly” to help govern the colony. By the first meeting of this assembly, eleven areas around Jamestown had been settled by colonists. Security was not a concern because of the relative peace since 1614, but Yeardley did work to maintain the colonies defenses, especially at Jamestown and his own plantation.<sup>55</sup> Militia training had gradually become less important to the colonists and effectively ended with the end of martial law.<sup>56</sup>

The Powhatans at this time did not openly oppose the colonists. The Native Americans allowed missionaries to proselytize in their villages. The relationship between the colonists and the Powhatans became so friendly that the colonists allowed them to come and go into their farmsteads and small settlements as they pleased. In November

1621, Sir Francis Wyatt replaced Sir George Yeardley as governor, but the friendly relations with the Native Americans made maintenance of outlying fortifications seem less important.<sup>57</sup>

On March 22, 1622, as several of the Jamestown settlers were sitting down to breakfast, many with the Native Americans they had come to trust, they were surprised by a devastating attack orchestrated by Opechancanough. The Native Americans killed many settlers with their own tools. Opechancanough had lulled the settlers into a false sense of security over the years, convincing many of them that the Powhatans were well on the road to becoming Anglicized. Of more than 1200 colonists, 347-400 were slain. Many of the survivors fled to Jamestown.

Jamestown and a few other settlements fought off the attacks even though their defenses were supposedly not strong. The Powhatans did not persist in attacking any place that was well defended such as Jamestown and the Flowerdew Hundred Plantation. Opechancanough still remembered what the massed fires of the English under Gates, Delaware, Smith, and Dale had done.<sup>58</sup>

The reforms initiated by Governor Yeardley and the friendlier relations with the Native Americans may have actually aided in allowing the attack to occur. Opechancanough had apparently been preparing for this attack since Wahunsonacock's death in 1618. Not only did the almost-complete surprise of the attack result in the death of over three hundred colonists that morning, but the number of the Virginia Company's outlying plantations was reduced from eighty to six. The surviving colonists arranged a meeting with the Powhatans under the pretense that they were only concerned with their safety, to which the Powhatans agreed, believing they had completely intimidated the

colonists. The colonists attacked the Native Americans at the meeting, killing many on the spot, but Opechancanough escaped.<sup>59</sup>

The period after the 1622 uprising presented the greatest challenge since the starving time. The continued commitment of the Virginia Company, with the support of the English people, ensured the colonies' survival. King James I made it a crown colony in 1624. This may have been as much about King James asserting his royal authority and religious intolerance as it was about reacting to the Virginia Company's incompetence that led to the 1622 massacre.<sup>60</sup> Sporadic fighting continued between the Native Americans and the colonists into the 1620s. Opechancanough's brother, Opitchapam, and up to 800 Native American warriors fought a two-day battle in July 1624 against 60 colonists who tried to destroy some of Opitchapam's corn fields. The colonists succeeded and drove Opitchapam and his warriors from the field.<sup>61</sup> The English continued the pattern of feedfights instigated under Lord Delaware and ruthlessly destroyed Native American crops and food stores.<sup>62</sup> A 1625 colonial census showed 1,232 settlers in the colony, almost up to the number they had been before the massacre.

On March 4, 1623, Francis Wyatt proclaimed March 22 as a holy day to be spent in "prayer thanksgiving to God" to commemorate the colony's deliverance from the March 22, 1622, Native American attack on the colony.<sup>63</sup>

Opitchapam died about 1630, allowing Opechancanough to become the undisputed paramount chieftain of the Powhatan Confederation. In the 1630s, a large number of predominantly male laborers flooded the colony, helping it to grow stronger and become firmly established. From 1632 until 1644, there was another period of sporadic fighting between the remaining Powhatans and the burgeoning colony,

culminating in Opechancanough's April 1644 uprising, in which 500 colonists were killed. The Powhatans were initially successful, especially on the York and Pamunkey Rivers, but a well-armed militia sent by Governor Berkeley subdued them. After two years of warfare, the nearly one-hundred-year old Opechancanough was captured, paraded through Jamestown in triumph, and then assassinated by a guard. This marked the final defeat of the Powhatan Confederation.<sup>64</sup> The Native American attacks in 1622 and 1644 were in vain. The English foothold in America was firmly established before both attacks.

## Endnotes

<sup>1</sup> William Shakespeare the *Tempest*, Act II, Scene I “Here is everything advantageous to life . . . Save a means to live.” The tempest was loosely based on the wreck of the Sea Venture at Bermuda in 1609.

<sup>2</sup> James Horn, *A Land as God Made It: Jamestown and the Birth of America* (New York: Basic Books, A Division of Perseus Books Group, 2005), 25-27; Nicholas Canny, *Making Ireland British 1580-1650* (Oxford: Oxford University Press, 2001), 59-164.

<sup>3</sup> Henry S. Burrage, ed., *Early English and French Voyages: Chiefly from Hakluyt 1534-1608, Original Narratives of Early American History* (New York: Charles Scribner’s Sons, 1930); Richard Hakluyt, *A Particular Discourse Concerning Western Discoveries, Written in the Year 1584*, <http://odur.let.rug.nl/~usa/D/1501-1600/hakluyt/plant.htm> (accessed August 31, 2009); Richard Hakluyt, *Divers Voyages Touching the Discoverie of America* (Ann Arbor: Ann Arbor University Microfilms, Inc., A Division of Xerox, 1966); Richard Hakluyt, *The Principal Navigations Voi[y]ages and Discoveries of the English Nation*, vols. 1 and 2, (Cambridge: The Cambridge University Press, 1965); Richard Hakluyt, *Virginia richly valued . . .* (London: Felix Kyngston for Matthew Lownes, 1609), Reel position: STC / 939:18, Copy from: Henry E. Huntington Library and Art Gallery, Early English Books Online <http://eebo.chadwyck.com.echo.louisville.edu> (accessed December 20, 2008); Thomas Hariot, *A briefe and true report of the new found land of Virginia* (London, 1588), Reel position: STC / 546:14, Copy from: Henry E. Huntington Library and Art Gallery, Early English Books Online <http://eebo.chadwyck.com.echo.louisville.edu> (accessed December 20, 2008); Thomas Hariot, *A briefe and true report of the new found land of Virginia . . . 1590*, Reel position: STC / 246:03, Copy from: Henry E. Huntington Library and Art Gallery, <http://eebo.chadwyck.com.echo.louisville.edu> (accessed December 20, 2008).

<sup>4</sup> Horn, *A Land as God Made It*, 25-27.

<sup>5</sup> Sir Francis Bacon, “of Plantations” in *The Essayes or Counsels, Civill and Morall* (Norwalk, CT: Easton Press, 1980), 110-13.

<sup>6</sup> Rowse, *The Expansion of Elizabethan England*, 206-237; Milton, *Big Chief Elizabeth*, 290-95; Kupperman, *Jamestown Project*, 12-72; J. R. Hale, *War and Society in Renaissance Europe: 1450-1629* (Baltimore: The Johns Hopkins University Press, 1985), 210-32.

<sup>7</sup> Hale, *War and Society in Renaissance Europe*, 210-32; Canny, *Making Ireland British*, 160-67.

<sup>8</sup> Conway Whittle Sams, *The Conquest of Virginia: The Second Attempt*, (Norfolk, VA: Keyser-Doherty Printing Corporation, 1929, repr., Spartanburg, SC: The Reprint Company, 1973), 1-52; Horn *A Land as God Made It*, 203, 309-10; Wooley, *Savage Kingdom*, 16-23, 45, 186, 203, 280.

<sup>9</sup> Sams, *The Conquest of Virginia*, 1-52; Horn *A Land as God Made It*, 203, 309-10, Kupperman, *Jamestown Project*, 12-72; Melanie Perreault, *Early English Encounters in Russia, West Africa, and the Americas, 1530-1614* (Lewiston, NY: The Edwin Mellen Press, 2004).

<sup>10</sup> Horn, *A Land as God Made It*, 203, 309-10; Craven, *The Dissolution of the Virginia Company*, 60-64; Barbour, *The Jamestown Voyages*, vol. I: 13-21, 24-34; Charles M. Andrews, *The Colonial Period of American History*, 4 vols. (New Haven: Yale University Press 1934; repr., 1964), I: 90-95.

<sup>11</sup> Horn, *A Land as God Made It*, 1-10; Clifford M. Lewis, S. F. and Albert F. Loomie, S. J., *The Spanish Jesuit Mission in Virginia: 1570-1572* (Chapel Hill: The University of North Carolina Press for The Virginia Historical Society, 1953), Internet Archives [http://www.archive.org/stream/spanishjesuitmis012198mbp/spanishjesuitmis012198mbp\\_djvu.txt](http://www.archive.org/stream/spanishjesuitmis012198mbp/spanishjesuitmis012198mbp_djvu.txt)



(accessed August 9, 2009); under Virtual Jamestown, First Hand Accounts the Spanish Settlement [http://www.virtualjamestown.org/fhaccounts\\_desc.html](http://www.virtualjamestown.org/fhaccounts_desc.html) (accessed August 9, 2009).

<sup>12</sup> Horn, *A Land as God Made It*, 22-34.

<sup>13</sup> Sams, *The Conquest of Virginia*, 1-28.

<sup>14</sup> In this paper, the Virginia Company refers to the London Company except in the explanation in this paragraph.

<sup>15</sup> Sams, *The Conquest of Virginia*, vii-xxii; Tom Gidwitz, "The Little Colony That Couldn't: A Short Lived Settlement Founded in Main in 1607 Could Have Changed the Course of American history—If Only It Had Survived." *Archaeology* (March/April 2006): 30-35; Popham Colony Fort St. George [http://www.pophamcolony.org/new\\_page\\_3.htm](http://www.pophamcolony.org/new_page_3.htm) (accessed June 6, 2008).

<sup>16</sup> Gidwitz, "The Little Colony That Couldn't and Popham Colony Fort St George," John Hunt Map, [http://en.wikipedia.org/wiki/Fort\\_St.\\_George\\_\(Popham\\_Colony\)](http://en.wikipedia.org/wiki/Fort_St._George_(Popham_Colony)) (accessed August 9, 2009); under Popham Colony Fort St. George [http://www.pophamcolony.org/new\\_page\\_3.htm](http://www.pophamcolony.org/new_page_3.htm) (accessed June 6, 2008).

<sup>17</sup> Gidwitz, "The Little Colony That Couldn't; Popham Colony Fort St George," John Hunt Map, [http://en.wikipedia.org/wiki/Fort\\_St.\\_George\\_\(Popham\\_Colony\)](http://en.wikipedia.org/wiki/Fort_St._George_(Popham_Colony)) (accessed August 9, 2009); under Popham Colony Fort St. George [http://www.pophamcolony.org/new\\_page\\_3.htm](http://www.pophamcolony.org/new_page_3.htm) (accessed June 6, 2008).

<sup>18</sup> The Library of Congress, American Memory, The Thomas Jefferson Papers: "Virginia Records Timeline: 1553-1743," [http://memory.loc.gov/ammem/collections/jefferson\\_papers/mtjvatm2.html](http://memory.loc.gov/ammem/collections/jefferson_papers/mtjvatm2.html) (accessed August 10, 2009).

<sup>19</sup> Sir George Percy "Observations gathered out of a Discourse of the Plantation of the Southerne Colonie in Virginia by the English, 1606" quoted in Edward Wright Haile, ed., *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, The First Decade: 1607-1617* (Champlain, VA: Roundhouse, 1998), 94-98; John Smith, "The generall historie of Virginia . . ." quoted in Haile, *Jamestown Narratives*, 224-25; and The London Virginia Company "Instructions by way of advice, for the intended Voyage to Virginia," 1606, available on line <http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1039> accessed May 3, 2009.

<sup>20</sup> Shanti Menon, "Grimness of Mythic Proportions—Jamestown Colony Experienced Drought—Brief," *Discover* (Jan. 1999), [http://findarticles.com/p/articles/mi\\_m1511/is\\_1\\_20/ai\\_53501786](http://findarticles.com/p/articles/mi_m1511/is_1_20/ai_53501786) (accessed June 19, 2008); College of William and Mary, "Extreme Droughts Played Major Role in Tragedies at Jamestown, 'Lost Colony,'" *Science Daily*, April 28, 1998, <http://www.sciencedaily.com/releases/1998/04/980428075409.htm> (accessed August 10, 2009); and David W. Stahle, Malcolm K. Cleaveland, Dennis B. Blanton, Matthew D. Therrell, and David A. Gay, "North American Drought: A Paleo Perspective, The Last 500 Years, The Lost Colony and Jamestown Droughts," [http://www.ncdc.noaa.gov/paleo/drought/drght\\_james.html](http://www.ncdc.noaa.gov/paleo/drought/drght_james.html) (accessed August 10, 2009).

<sup>21</sup> "Early American Colonists Were Hit By Severe Drought," BBC News online, June 1, 2010, <http://www.bbc.co.uk/news/10200347> (accessed July 22, 2010).

<sup>22</sup> Virtual Jamestown, Landscapes and Legacies, [http://www.virtualjamestown.org/land\\_leg.html](http://www.virtualjamestown.org/land_leg.html) (accessed August 10, 2009). For more information on the complexities of this relationship, see Gleach, *Powhatan's World*; William W. Fitzhugh, ed., *Cultures in Contact: The Impact of European Contacts on Native American Cultural Institutions A.D. 1000-1800*, (Washington: Smithsonian Institution Press, 1985); Daniel K. Richter, *Facing East from Indian Country: A Native History of Early North America*, (Cambridge,

Mass: Harvard University Press, 2001) and J. Frederick Fausz, "Fighting Fire with Firearms; The Anglo-Powhatan Arms Race in Virginia," *American Indian Culture and Research Journal* 3 (1979): 33-50.

<sup>23</sup> Sir George Percy, "*Observations gathered out of a Discourse of the Plantation of the Southerne Colonie in Virginia by the English, 1606*" quoted in Edward Wright Haile, ed., *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, The First Decade: 1607-1617* (Champlain, VA: Roundhouse, 1998), 94-98.

<sup>24</sup> John Smith, "*The generall historie of Virginia . . .*" quoted in Haile, *Jamestown Narratives*, 224-25.

<sup>25</sup> Percy, *Observations*, quoted in Haile, *Jamestown Narratives*; John Smith, *generall historie*, quoted in Haile, *Jamestown Narratives*; The Thomas Jefferson Papers Series 8. Virginia Records Manuscripts. 1606-1737, The oath of supremacy, <http://memory.loc.gov/cgi-bin/ampage?collId=mtj8&fileName=mtj8pagevc03.db&recNum=23> (accessed August 10, 2009).

<sup>26</sup> John W. Reys, *Tidewater Towns: City Planning in Colonial Virginia and Maryland* (Williamsburg: The Colonial Williamsburg Foundation, 1972) 11-12, 33-37 quoted in Horn, 53-54.

<sup>27</sup> Available at [http://www.preservationvirginia.org/rediscovery/page.php?page\\_id=24](http://www.preservationvirginia.org/rediscovery/page.php?page_id=24).

<sup>28</sup> Kelso, *Jamestown Rediscovery: 1994-2004*, (N.p.: Association for the Preservation of Virginia Antiquities, 2004), 20-24.

<sup>29</sup> Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (New York: Cambridge University Press, 1992), 7-8.

<sup>30</sup> John Smith, "*The generall historie of Virginia . . .*" quoted in Haile, *Jamestown Narratives*, 149. Evidence of these houses that has been found in recent excavations at the fort site. See "The Dig: June 2010—Historic Jamestown" available online at [http://www.historicjamestowne.org/the\\_dig/](http://www.historicjamestowne.org/the_dig/).

<sup>31</sup> Percy, *Observations*, quoted in Haile, *Jamestown Narratives*, 98-100; Smith, *generall historie*, quoted in Haile, *Jamestown Narratives*, 230-31.

<sup>32</sup> John Smith, quoted by Phillip Barbour, Historic Jamestown Timeline of Events and References <http://www.apva.org/history/timeline.html> (accessed August 10, 2009).

<sup>33</sup> John Trebbel and Keith Jennison, *The American Indian Wars* (New York: Harper & Brothers, 1960), 13-17; Gleach, *Powhatan's World*, 11, 106-121.

<sup>34</sup> Horn, "The Conquest of Eden," *Envisioning an English Empire*, 43-44.

<sup>35</sup> *Ibid.*

<sup>36</sup> Smith, *Captain John Smith*, 10-11, 126-31, 255.

<sup>37</sup> Horn, "The Conquest of Eden," *Envisioning an English Empire*, 43-44; Kelso, *Jamestown Rediscovery*, 28-29.

<sup>38</sup> Melanie Perreault, *Early English Encounters*; and Pádraig Lenihan, *Confederate Catholics at War 1641-49*, Studies in Irish History, Nicholas Canny, General Editor, (Cornwall, UK, MPG Books Ltd, for Cork University Press for the Irish Committee for Historical Sciences, 2001), 60.

<sup>39</sup> Percy, *Observations*, quoted in Haile, *Jamestown Narratives*, 98-100; and True Relation, quoted in Haile, *Jamestown Narratives*, 497-519; Richard L. Morton, *Colonial Virginia, Vol. 1: The Tidewater Period 1600-1710* (Chapel Hill: The University of North Carolina Press, 1960), 25-33.

<sup>40</sup> William Strachey, quoted by Wright, 1964; Historic Jamestown Timeline of events and references <http://www.apva.org/history/timeline.html> (accessed August 10, 2009).

<sup>41</sup> These laws can be found on line under “Lawes, divine Morale and Marital” at <http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1056> (accessed August 10, 2009); Haile, 27.

<sup>42</sup> <http://www.apva.org/history/index.html>.

<sup>43</sup> William Strachey, quoted in Haile, *Jamestown Narratives*, 429-30.

<sup>44</sup> William L. Shea, *The Virginia Militia in the Seventeenth Century* (Baton Rouge: Louisiana State University Press, 1983), 19-21; John Grenier, *The First Way of War: American War Making on the Frontier* (New York: Cambridge University Press, 2005), 21-25; Morgan, *American Slavery; American Freedom*, 74-76. For further discussion of feed fights see the discussion between Dr. Wayne Lee and Dr. J. Frederick Fausz in Letters to the Editor, *The Journal of American History*, online at <http://74.6.239.185/search/srpsache?ei=UTF-8&p=%22feed+fights%22+shea+virginia&fr=att-portal&u=http://cc.bingj.com/cache.aspx?q=%22feed+fights%22+shea+virginia&d=4516231241138500&mkt=en-US&setlang=en-US&w=3ea09f56,1ddb3987&icp=1&.intl=us&sig=TueyzIm6QbHjRfRRXB0QZw-->.

<sup>45</sup> Ralph Hamor, “A True Discourse of the present estate of Virginia, and the success of the affairs there till the 18<sup>th</sup> of June, 1614,” in Haile, 821.

<sup>46</sup> Ralph Hamor, “A True Discourse of the present estate of Virginia” quoted in Edward Wright Haile, ed., *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, The First Decade: 1607-1617* (Champlain, VA: Roundhouse, 1998), 827-28; Ralph Hamor, *Historic Jamestown, Jamestown Rediscovery*, [http://www.preservationvirginia.org/rediscovery/page.php?page\\_id=64](http://www.preservationvirginia.org/rediscovery/page.php?page_id=64) (accessed September 6, 2009).

<sup>47</sup> William M. Kelso, with Beverly Straube, *Jamestown Rediscovery: 1994-2004* (N.p.: Association for the Preservation of Virginia Antiquities, 2004), 46-49; Kelso, *Jamestown: The Buried Truth*, 22-23.

<sup>48</sup> “In geomorphology, a fall line marks the area where an upland region . . . and a coastal plain . . . meet. Technically, a fall line is an unconformity. A fall line is typically prominent when crossed by a river, for there will often be rapids or waterfalls. Because of these features river boats typically cannot travel any farther inland without portaging unless locks are built. Because of the need for a port and a ready supply of water power, settlements often develop where rivers cross a fall line. The fall line in the United States along the eastern coast of the United States, the east-facing escarpment where the Piedmont of the Appalachians descends steeply to the coastal plain forms a fall line over 1500 kilometers long. This long fall line played a major role in settlement patterns along rivers, back into prehistoric times. It is often referred to simply as ‘the fall line.’ In some places the fall line may be abrupt, while in others it is a zone that may be many miles wide. Geologically the fall line marks the boundary of hard metamorphosed terrain—the product of the Taconic orogeny—and the sandy, relatively flat outwash plain of the upper continental shelf, formed of unconsolidated Cretaceous and Tertiary sediments.”  
Fall Line, [http://en.wikipedia.org/wiki/Fall\\_line](http://en.wikipedia.org/wiki/Fall_line) (accessed August 10, 2009).

<sup>49</sup> Hamor, “True Discourse,” in Haile, *Jamestown*, 825.

<sup>50</sup> Shipmates of Diego Molina, “Voyage as far as Virginia”; John Clark, “Declaration of the Englishman in Virginia”; and Don Diego de Molina, “Letter to Don Alonso de Velasco, 28 May 1613” in Haile, *Jamestown Narrative*, 533-47, 746-51.

- <sup>51</sup> Alexander Brown, *The Genesis of the United States*, 2 vols. (New York: Russell and Russell, 1980), 2:639-40, quoted in Horn, *A Land as God Made It*, 310: "To protect English claims to northern Virginia (New England) south of 45 degrees north Latitude, Argall destroyed small French settlements at Mount Desert Island, on the coast of Maine, and St. Croix and Port Royal in the Bay of Fundy, Nova Scotia, in two expeditions during the summer and fall of 1613."
- <sup>52</sup> Susan Myra Kingsbury, ed., *Records of the Virginia Company, 1622-24*, Volume I: Court Book Part A, 359, Thomas Jefferson Papers Series 8. Virginia Records Manuscripts. 1606-1737. <http://lcweb2.loc.gov/cgi-bin/ampage?collId=mtj8&fileName=mtj8pagevc01.db&recNum=358> (accessed August 10, 2009).
- <sup>53</sup> Horn, *A Land as God Made It*, 237. A Map of the James River of c.1617 shows the locations of Argall's Town. Horn references Michael Jarvis and Jeroen van Driel, "The Vingboons Chart of the James River, Virginia, circa 1617," *William and Mary Quarterly* 3d ser., 54 (1997), 386. <http://www.jstor.org/pss/2953278> (accessed August 10, 2009); Irene Hecht, "The Virginia Colony, 1607-1640: A Study in Frontier Growth" (PhD diss., University of Washington 1969), 79.
- <sup>54</sup> Wesley Frank Craven, *The Virginia Company of London, 1600-1624, Jamestown 350th Anniversary Historical Booklet Number 5* (Williamsburg, VA: Virginia 350th Anniversary Celebration Corporation, 1957), 35-40. <http://www.gutenberg.org/files/28555/28555-h/28555-h.htm> (accessed September 6, 2009).
- <sup>55</sup> Craven, *The Virginia Company*, 35-40.
- <sup>56</sup> Shea, *The Virginia Militia*, 22-24.
- <sup>57</sup> Craven, *The Virginia Company*, 35-40.
- <sup>58</sup> Tisdale, 26-28; Deetz, *Flowerdew Hundred*, 40-50, [http://books.google.com/books?id=KuQjuWY8SzQC&pg=PA46&lpg=PA46&dq=flowerdew+1622+hundred&source=bl&ots=OT2z3YKbfe&sig=8NfKi7Ns3e8fURx8jedkLpdBHA0&hl=en&ei=ABBFsSCQBJHR-Qaqo40T&sa=X&oi=book\\_result&ct=result&resnum=1](http://books.google.com/books?id=KuQjuWY8SzQC&pg=PA46&lpg=PA46&dq=flowerdew+1622+hundred&source=bl&ots=OT2z3YKbfe&sig=8NfKi7Ns3e8fURx8jedkLpdBHA0&hl=en&ei=ABBFsSCQBJHR-Qaqo40T&sa=X&oi=book_result&ct=result&resnum=1) (accessed August 10, 2009).
- <sup>59</sup> Trebbel and Jennison, 17-18; Shea, *The Virginia Militia*, 33-38.
- <sup>60</sup> Wooley, *Savage Kingdom*, 16-23, 45, 186, 203, 280.
- <sup>61</sup> Frank E. Grizzard and D. Boyd Smith, *The Jamestown Colony Complete Reference Library* (ABL-CIO, 2007), 158. Opitchapam battle July 1624, <http://www.jamestown.abc-clio.com/ReferenceDisplay.aspx?entryid=859631> (accessed June 24, 2008); [http://books.google.com/books?id=555CzPsGLDMC&pg=PA158&lpg=PA158&dq=Opitchapam+1624+battle+july&source=bl&ots=WLPWHQvKQ1&sig=RsLeDohxqgvDVr5fECTKHwK1c4A&hl=en&ei=pXmASvTHMcrZ-QainqFE&sa=X&oi=book\\_result&ct=result&resnum=1#v=onepage&q=Opitchapam%201624%20battle%20july&f=false](http://books.google.com/books?id=555CzPsGLDMC&pg=PA158&lpg=PA158&dq=Opitchapam+1624+battle+july&source=bl&ots=WLPWHQvKQ1&sig=RsLeDohxqgvDVr5fECTKHwK1c4A&hl=en&ei=pXmASvTHMcrZ-QainqFE&sa=X&oi=book_result&ct=result&resnum=1#v=onepage&q=Opitchapam%201624%20battle%20july&f=false) (accessed Aug 10, 2009).
- <sup>62</sup> Shea, *The Virginia Militia*, 33-38.
- <sup>63</sup> Kingsbury, *The Records of the Virginia Company of London*, 40. There was also an earlier day of Thanksgiving at Berkeley Plantation, near Jamestown, in 1619, in celebration of their arrival in the colony, but it was limited to that plantation only. President Bush acknowledged Berkeley Plantation's place in history in November 2007. *Washington Times*, <http://www.washingtontimes.com/apps/pbcs.dll/article?AID=/20071120/NATION/111200037/1001> (accessed 18 December 2007).

<sup>64</sup> Trebbel and Jennison, 18-60; and D. Boyd Smith and Frank E Grizzard, Jr. "A Jamestown Timeline," <http://www.historyisfun.org/pdf/Curriculum-Materials/A%20Jamestown%20Timeline.pdf>.

### **CHAPTER III**

#### **IRELAND: ESTABLISHING A MODEL FOR COLONIZATION**

The methodology for organizing the Jamestown Colony and many other early English colonization attempts evolved largely from England's successes and failures in Ireland. English patterns of colonization included two separate but complimentary defensive systems. By the end of the sixteenth century, colonization efforts usually started with developing the main town of the colony and then allowing it to spread out to its outlying areas with fortified farms. The English had been gaining firmer control of the entire British Isles since the Norman Conquest. The English subjugated Wales first, then applied the principles they learned there to Ireland and, later, to the Americas. Ireland was also one of the first places the English applied new developments in fortifications triggered by the nature of the fighting in the Netherlands. In the first decade of the seventeenth century, Irish, not American, colonization was England's main effort overseas. The beginning of a long truce in the Netherlands released English forces from fighting on the continent to help colonize Ireland and the New World.<sup>1</sup>

Ireland was more important to the English than Jamestown. It was closer and provided a more immediate threat and opportunity than the more distant Virginia Colony. Invaders from the continent could use Ireland as a base from which to stage attacks on England, and it was easier to resupply English colonies there. From 1560 to 1641, Ireland attracted more English settlers than America and the Caribbean combined.<sup>2</sup> Ireland

provided military experience, including an introduction to military fortifications and colonial town planning, to many Englishmen. It also gave many veterans of the Long War in the Netherlands a chance to apply, and perhaps reinterpret, what they had learned.

English subjugation of Ireland began 400 years before Queen Elizabeth with the Norman invasion of Ireland in 1169. For many years, the extent of English control centered on Dublin, in an area called the Pale, and in seacoast towns. The earliest English attempts to colonize Ireland were relatively successful, but many of these earliest colonists assimilated into Gaelic culture.<sup>3</sup>

In the century after the Norman Conquest of Ireland, Edward I, King of England 1272-1307, and the Count de Poitiers, Eustache de Beaumarchais, adopted a type of fortification called a *bastide* for use during Edward I's subjugation of Wales. It was modeled after ecclesiastic sanctuaries called *Salvetates* in Aquitaine, then in English possession.<sup>4</sup>

A bastide was a frontier fortress town designed to protect an English minority from a larger native population. It has the secondary purpose of displaying the benefits of urban life for the local population.<sup>5</sup> Initially, a bastide town was built around a fortified castle and then expanded. This town was often also an autonomous seignury, with its own laws, courts, and special privileges.<sup>6</sup> This method of establishing relatively autonomous fortified colonies was not successfully applied in Ireland until Elizabethan times and led to the establishment of colonies sponsored by joint stock companies.

During the Tudor period, Scotland, France, and Spain became increasingly involved in Irish affairs. As the European center of gravity shifted from the Mediterranean to the Atlantic, the English realized the increased strategic importance of

Ireland, which led the government to try to gain firmer control of the entire island, not just the Pale.<sup>7</sup> As they would eventually in the Americas with Native Americans, the English initially viewed the native Irish as relative equals that needed civilizing, but as their struggles with the Irish continued, they began to deal more harshly with them, considering and treating them as barbarians to be subjugated.<sup>8</sup>

Many of the original leaders of Jamestown, such as Governors Edward Maria Wingfield and George Percy, had personal experience in Ireland or had family members who did. There was also a wide variety of literature about Ireland that may have been read by key figures in the early American colonies. For example, Thomas Hariot's *Briefe and True Report* was apparently widely read by those that developed colonies in both America and Ireland.<sup>9</sup>

Sir Henry Sidney was one of the key figures who were well-read in the contemporary literature of Ireland and the Americas. He saw how English plantations could aid in the subjugation of Ireland and supported early attempts by the Earl of Essex and Sir Thomas Smith on the Ards Peninsula in Northern Ireland during the 1570s. He developed provincial presidencies and a plantation system, which set the stage for future programs. Sidney's use of joint stock corporations, extensive advertising, subscriptions systems, and general organization also established the paradigm for later colonization attempts in Ireland and the New World.<sup>10</sup> Sidney also believed that armed force would be needed to subjugate Ireland before establishing mutually supporting plantations.<sup>11</sup> Many of the families and individuals that aided in the Elizabethan conquest of Ireland later showed up in the New World and applied a very similar organization in the Jamestown plantation.<sup>12</sup>



Sir Henry Sidney's successful experience in Wales led him to believe that applying the bastide concept to Ireland would set the stage for renewed English colonization there. The design of the bastide fortress town guarded against external attacks with an external curtain wall and internal rebellion with a fortified place, usually the market place that commanded the streets. In sixteenth- and seventeenth-century Ireland, this central square had a barracks, a town hall, and other administrative buildings that could be used to suppress any riots or other domestic disturbances that arose. The squares were often equipped with small artillery pieces to aid in riot control and to deter colonists from rioting in the first place. The outer walls of the towns built in Ireland were more like early modern fortifications than their medieval town predecessors. Fortifications designed by Elizabethan English military engineers tended to be simpler and more orderly than their more over-elaborate European counterparts, resulting in more practical and defensible fortifications while incorporating key elements of the Dutch system.<sup>13</sup> Nevertheless, English experience in the Netherlands led many English adventurers to incorporate Dutch features that they felt were appropriate in fortifications they built in Ireland.

There may also have been some visible remnants of a palisade, earthen rampart, or ditch surrounding part of the core English area in Ireland, called the Pale, around this time. The English Pale comprised the eastern portion of the Irish Coast originally occupied by the English. It could have also been enclosed with pales or paling, perhaps giving it the name Pale, a designation first mentioned in beginning of the thirteenth century.<sup>14</sup> This frontier fortification also could have been inspired by classical frontier fortifications such as Hadrian's Wall in England or the *Limes* in Germany.<sup>15</sup> Either one of

these fortifications could have provided inspiration for later stockades that were built along the Jamestown Peninsula.

Early Elizabethan English attempts to colonize Ireland, including those of Sir Henry Sidney, failed, but lessons learned in Ireland proved useful to the English. Ireland was where Elizabethan, and later Stuart, soldiers tested and refined their tactics. English colonization plans as early as 1565 called for plantations in eastern Ulster. The objective was to have fortifications at strategic points supported with outlying settlements. Spain's increased involvement in Irish affairs leading up to the Spanish Armada, as well as fear of piracy, necessitated increased focus on Irish coastal fortifications to defend English interests. By the 1590s, Limerick Castle had bastioned defenses and "exemplified the British assimilation of the military revolution," including an Italian style bastioned trace across the town with demi-bastioned flanks and a central bastion with a semi circular half

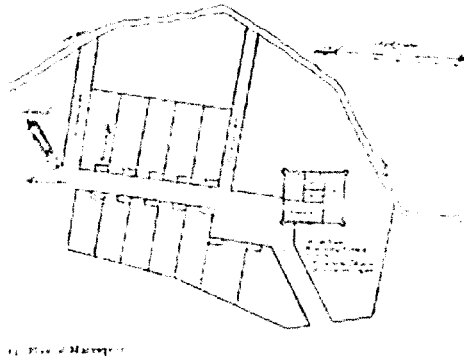


Figure 3. Plan for the settlement of Macosquin in Ulster's County Londonderry about 1610 showing the central fort with small plots nearby.<sup>16</sup>

moon work across the Shannon. On the east, there were a series of arrow-like projections called *redans*. Connected together, they formed a *tenaille trace*. All of these were elements of the new developments in fortifications. In the late sixteenth/early seventeenth century, smaller firearms such as muskets and hand-carried cannons were used in Ireland even though large artillery was available.<sup>17</sup>

Between 1595 and 1603, the construction of forts became a key part of Anglo-Irish warfare. Wooden palisaded forts shored up with earthworks were situated to control key terrain. These works showed continental influences, and some of them were actually designed by Dutch engineers. The problem with earthworks and palisades is that even though they could be constructed relatively quickly, the earthworks eroded after heavy rains, and the wooden palisades decayed within a few years.<sup>18</sup> After the Irish defeat at Kinsale in 1603, English attempts at colonization began in earnest. More permanent brick and stone structures requiring less maintenance but higher initial costs replaced temporary wooden fortifications and earthworks.

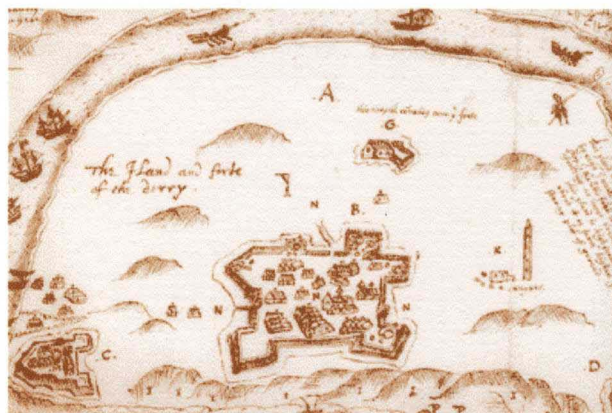


Figure 4. Map of Londonderry 1600 from the Royal Irish Academy. Londonderry can be considered a central bastide town.<sup>19</sup>

The medieval fortifications at Limerick, like other English fortifications in Ireland, were modernized. By 1611, the Irish town of Limerick had a new bulwark capable of mounting five or six big guns, and an angled bastion, which provided flanking cover for the adjoining towers of the medieval curtain wall.<sup>20</sup>

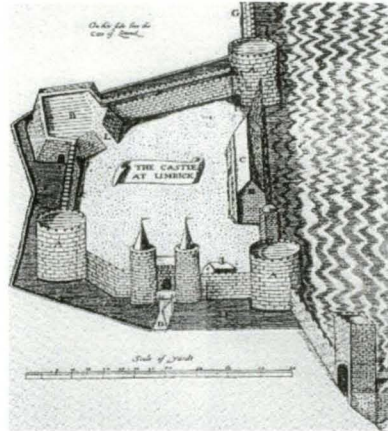


Figure 5. King John's Castle, Limerick Castle in 1633 showing a blend of medieval and more modern elements with the angled bastion providing flanking cover for two adjoining towers.<sup>21</sup>

The fortifications in Ireland encompassed both medieval and modern elements, so any modernization would likely have had medieval structures side by side with new ones. Before 1630, only trading companies and colonists in newly conquered territories were concerned about town planning.<sup>22</sup> Elizabethan experiences with planning colonies in Ireland began to develop into distinctive characteristics of English colonies in the seventeenth century.

In the late sixteenth and early seventeenth century, the concept of using soldier settlers to occupy, farm, and defend English holdings was further developed in Ireland. Each English Captain would be given a grant of land and command of a small English

garrison. The soldiers of the garrison would then become tenants on their captains' lands. Each captain's holdings would be one link in a chain of strategically placed fortified positions throughout newly conquered Gaelic lands.<sup>23</sup>

By 1608, English concepts of how to establish plantations had been codified by such documents as "*A collection of such orders and conditions, as are to be obserued by the vndertakers, vpon the distribution and plantation of the eschaeted lands in Vlster.*"<sup>24</sup>

This document prescribed among other things that landholders or "Undertakers" of holdings of 2,000 acres should build a "castle" surrounded by "strong court or *bawne*."<sup>25</sup>

The undertakers of outlying holdings were also to build a stone or brick house, also surrounded by a "strong court or *bawne*." Individual tenants were to build their houses near their "principal castle, house or *bawne* for mutual defence and strength."<sup>26</sup> The *bawne* had to be built within two years, and the undertaker or master of the holdings of 2,000 acres, for example, had to have 12 muskets, 12 calivers, and 24 men to guard his holdings. In seventeenth-century Ireland, Londonderry was an example of the central bastide fortification, with the suburb of Benburb, where Lord Wingfield, a kinsman of Edward Maria Wingfield, was in charge of a 2,000 acre sub-holding. He built a fortified *bawne* of lime and stone that was 120 square feet with two flankers, each of which contained a good house. The *bawne* was the place of safety for twenty-eight English families.<sup>27</sup>

A fortified strong house or *bawne* of early sixteenth-century Ireland may have included corner towers, called flankers, with pistol or rifle loopholes around the house and *bawne* walls. Rectangular forts with corner bastions were also built near towns to aid in the defense of urban areas. These fortifications were frequently reported to be in poor

condition with only the threat of imminent conflict providing the impetus to repair them.<sup>28</sup>

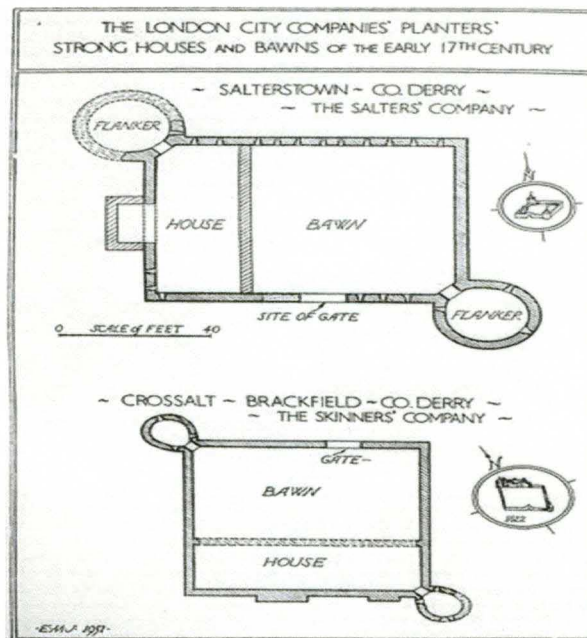


Figure 6. Examples of seventeenth-century Irish bawnes.<sup>29</sup>

Before the English Civil War, military architecture in England was little affected by innovations in Ireland or Europe, because the country was not as plagued by internal strife as Europe and Ireland were during the period. The English only tried to keep the coastal and border fortifications, such as Berwick-upon-Tweed, up to current European standards because of the threat of Spanish or Scottish attack. Many of these fortifications were transitional in nature with elements borrowed from the Italian style. Medieval fortifications with long curtain walls were the norm in England. Away from the coasts and Scottish border, English fortifications were generally lacking bastions because there did not seem to be an imminent threat.<sup>30</sup> In Ireland, innovations in military engineering came into use before than they did in England, because of the very real threat of insurgency or invasion.

After the English became disengaged from European conflict in the early part of King James I's reign, they did not keep up with continental military innovations. The diary of the defense of Limerick Castle from May to June 1642 is very similar to accounts of the 1601-1604 siege at Ostende, providing an indication of English military stagnation as they became less involved in European wars.<sup>31</sup> The English disengagement from the Long War in the Netherlands meant that English military fortifications or practices from the early 1600s until the English Civil War would center on lessons learned in Ireland.

The fighting and colonization attempts in Ireland made the English ruthless, but it also helped them gain experience at colonization. By the early 1600s, the foundation of the English colonial model was formed, with many future American colonists gaining experience in Ireland first, which exposed them to both the *bastide* and the *bawne* concepts being tested there. By the 1640s, the English and Irish learned how to destroy an enemy, including its basis for subsistence, by destroying crops and houses.<sup>32</sup> Ireland became an increasingly critical theater for the British and “the arts of war, English and Gaelic, improved each decade until their destructive power utterly ravaged that island during 1641-50.”<sup>33</sup>

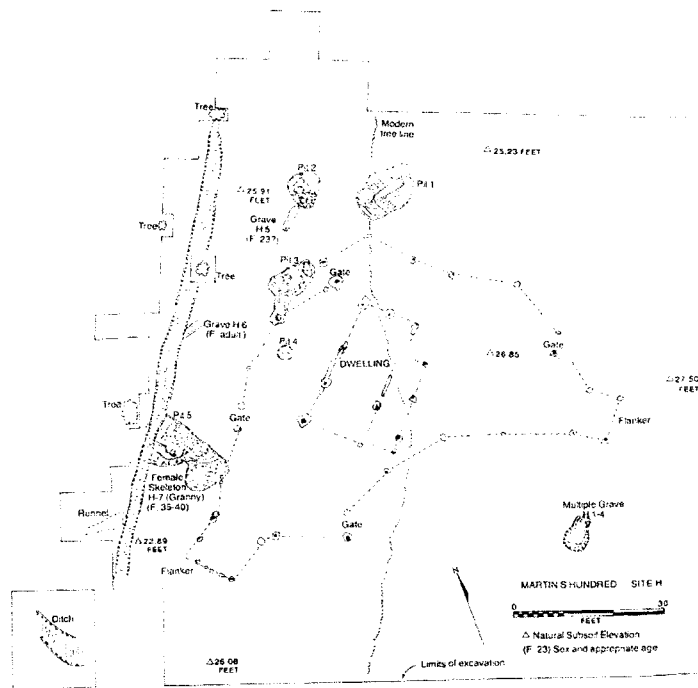


Figure 7. Map of Site H at Martin's Hundred archaeological site in Virginia showing a fortified farmhouse or bawne with flankers.<sup>34</sup>

### **Applying English Colonial Design to the New World**

The English used a central bastide fortification surrounded by smaller fortified bawnes in the New World. They also used long palisades to separate themselves from the native inhabitants. The first fortification at Jamestown can be likened to the central bastide fortification. The fortified farms or bawnes would be represented by Jamestown's outlying settlements, such as Martin's and Flowerdew Hundred, with a palisade serving as another obstacle between the main settlement areas and the rest of the continent. These defensive measures show a strong similarity to English concepts developed by Edward I, brought to Ireland by Sir Henry Sidney, and subsequently used in the New World.<sup>35</sup>

At least by 1610, if not from the beginning, the colonists built a central building in the middle of the fort, the *corps de garde*, or guardhouse. This interior market place



contained a storehouse and a chapel. It is unclear whether this was three separate buildings or one stronger building used for several purposes. This central point served many functions: a last ditch defense in case any attackers breached the outer perimeter, a rallying point, and protection against internal insurrection. It also included at least the demi-culverin cannon positioned in the center of the town mentioned in early accounts.<sup>36</sup> This large gun in the center was too important to be placed there just as a symbol of power. Cannons and small arms fire from the bastions and curtain walls provided a formidable threat to anyone who attacked the fort. The fortified center, whether it was a building or a single cannon, would be an appropriate final defense once the walls were breached or to keep order.

James Fort, as it was called initially, was built to defend against land and sea attacks.<sup>37</sup> The first permanent dwellings inside the fort were probably wattle and daub structures much like the colonist had constructed in England, not the log cabins of popular mythology. The only exception to this construction may have been the building built in the center of the fort for the company stores and guard force. The corps de garde building may have been built much more solidly than the other buildings, but it would not look very formidable by modern standards. The remains of a building fitting this description have been recently discovered in the fort. The fort also looked different than what it is often believed to look like. The curtain wall and perhaps the bastions were surrounded with rough planks along the perimeter.<sup>38</sup> The best trees in the area were probably collected for shipment to England. Jamestown got that which was less desirable.

Small fortified settlements, not much more than fortified farms, began appearing outside Jamestown between 1611 and 1622. Archaeological evidence of some of these fortifications, such as Martin's Hundred, Berkeley Hundred and Flowerdew Hundred, have been rediscovered in the last forty years. Archaeological excavations indicate that these fortifications strongly resemble the fortified bawne that was common in Ireland as in the picture from Martin's Hundred above. This pattern was part of the English colonial model prescribing outlying holdings to be built around a stone or brick house surrounded by a "strong court or bawne." Individual tenants were to build their houses near their "principal castle, house or bawne for mutual defence and strength."<sup>39</sup> Some of the archaeological evidence from Martin's and Flowerdew Hundred indicates substantial buildings may have used brick or stone at least partially in their construction. The archaeological record of these sites indicates that the buildings constructed there generally followed the guidelines of the fortified bawne from Ireland. Some of the evidence also indicates that the fortified farmstead survived in this area well into the latter part of the seventeenth century.<sup>40</sup>

## Endnotes

- <sup>1</sup> Andrew Hadfield, Chapter 8: "Irish Colonies and the Americas," in *Envisioning an English Empire: Jamestown and the Making of the North Atlantic World*, eds. Robert Applebaum and John Wood Sweet (Philadelphia: University of Pennsylvania Press, 2005); Rowse, *The Expansion of Elizabethan England*, 126-57.
- <sup>2</sup> Hadfield, "Irish Colonies and the Americas," in *Envisioning an English Empire*, 8:174-75, 311; Canny, *Conquest of Ireland*; Rowse, *The Expansion of Elizabethan England*, 126-57.
- <sup>3</sup> Rowse, *The Expansion of Elizabethan England*, 90-95; Canny, *Making Ireland British*, 45, 55, 59-66; Hill, *Plantation in Ulster*, 55, 70.
- <sup>4</sup> Garvan, *Town Planning in Colonial Connecticut*, 27-28; Longate, *Defending the Island*, 299-300.
- <sup>5</sup> Garvan, *Town Planning in Colonial Connecticut*, 27-30; Longate, *Defending the Island*, 299-300.
- <sup>6</sup> Garvan, *Town Planning in Colonial Connecticut*, 27-30; Patricia Alkhoven, "The Changing Image of the City: A Study of the Transformation of the Townscape Using Computer-Aided Architectural Design and Visualization Techniques. A Case Study: Heusden," <http://igitur-archive.library.uu.nl/dissertations/01754573/heusden3.htm#16> (accessed January 2, 2009) or <http://igitur-archive.library.uu.nl/dissertations/01754573/heusden3.htm> (accessed August 15, 2009).
- <sup>7</sup> Kerrigan, *Castles and Fortifications*, 17.
- <sup>8</sup> Canny, *Elizabethan Conquest*, 76, 98.
- <sup>9</sup> Hadfield, "Irish Colonies and the Americas," in *Envisioning an English Empire*, 8:190.
- <sup>10</sup> Hadfield, "Irish Colonies and the Americas," in *Envisioning an English Empire*, 8:174-75; Canny, *Elizabethan Conquest of Ireland*, 76, 198.
- <sup>11</sup> Canny, *Making Ireland British*, 118-20.
- <sup>12</sup> Hadfield, 174-75; Canny, *Elizabethan Conquest of Ireland*, 76, 198.
- <sup>13</sup> Garvan, *Town Planning in Colonial Connecticut*, 27-49.
- <sup>14</sup> Hill, *Plantation in Ulster*, 21-22, 70.
- <sup>15</sup> For more information on Roman border fortifications, see Edward N. Luttwak, *The Grand Strategy of the Roman Empire: From the First Century A.D. to the Third* (Berkeley: University of California Press, 1989); Gisela Graichen, *Limes: Roms Grenzwall Gegen die Barbaren* (Frankfurt am Main: S Fisher Verlag GmbH, 2009); Dietwulf Bätz, *Der Römische Limes: Archäologische Ausflüge zwischen Rhein und Donau*, (Berlin: Mann Verlag, 1975).
- <sup>16</sup> <http://www.histarch.uiuc.edu/plymouth/images/Boroughs1.jpg> (accessed November 11, 2010).
- <sup>17</sup> Roelf Loeber and Geoffrey Parker, "The Military Revolution in Seventeenth Century Ireland," Jane H. Ohlmeyer, ed., *Ireland from Independence to Occupation 1641-1660* (Cambridge: Cambridge University, 1995), 67-69, referenced in Fissel, *English Warfare*, 132.
- <sup>18</sup> Fissel, *English Warfare*, 132; Kerrigan, *Castles and Fortifications*, 4-6, 37-38, 43-44.

- <sup>19</sup> Map of Londonderry, Royal Irish Academy, [http://www.ria.ie/projects/ihta/derry\\_1600.html](http://www.ria.ie/projects/ihta/derry_1600.html) (accessed June 22, 2008).
- <sup>20</sup> Fissel, *English Warfare*, 205-6.
- <sup>21</sup> Image available at <http://www.teachnet.ie/mmorrrin/castle/history.htm>.
- <sup>22</sup> Garvan, *Town Planning in Colonial Connecticut*, 21.
- <sup>23</sup> Canny, *Making Ireland British*, 60-61.
- <sup>24</sup> *A collection of such orders and conditions, as are to be obserued by the vndertakers, vpon the distribution and plantation of the eschaeted lands in Vlster* (London: Robert Barker, 1608), Early English Books Online, Reel position: STC / 1012:09. Copy from: Henry E. Huntington Library and Art Gallery <http://eebo.chadwyck.com.echo.louisville.edu/home> accessed June 21, 2008); Kerrigan, *Castles and Fortifications*, 6.
- <sup>25</sup> Hill, *Plantation in Ulster*, 82.
- <sup>26</sup> Garvan, *Town Planning in Colonial Connecticut*, 21, *A collection of such orders*, 31.
- <sup>27</sup> Garvan, *Town Planning in Colonial Connecticut*, 31; Hill, *Plantation in Ulster*, 70, 554; *A collection of such orders*.
- <sup>28</sup> Kerrigan, *Castles and Fortifications*, 6.
- <sup>29</sup> <http://freepages.genealogy.rootsweb.ancestry.com/~econnolly/books/acientmonumentsni.html>.
- <sup>30</sup> John R. Hale, *The Art of War and Renaissance England* (Washington: The Folger Shakespeare Library, 3-5; Garvan, *Town Planning in Colonial Connecticut*, 23; Kerrigan, *Castles and Fortifications*, 2.
- <sup>31</sup> "A relation or Dyary of the siege of the castle o Limerick by the Irish from May 18 until June 23, 1642," *Journal of the Royal Society of Antiquaries* 34 (1904), 164, 171, 173, 177, 186, referenced in Fissel, *English Warfare*, 133.
- <sup>32</sup> Lenihan, *Confederate Catholics at War*, 62.
- <sup>33</sup> Fissel, *English Warfare*, 205-6.
- <sup>34</sup> <http://www.preservationvirginia.org/rediscovery/image/siteh.gif>.
- <sup>35</sup> Garvan, *Town Planning in Colonial Connecticut*, 27-49; Hill, *Plantation in Ulster*, 70, 554; Garvan, *A collection of such orders*.
- <sup>36</sup> Percy, "Observations"; Smith, "Proceedings"; Haile, *Jamestown Narratives*, 94-98, 224-25.
- <sup>37</sup> Horn, *A Land as God Made It*, 53-54.
- <sup>38</sup> For a discussion of the possible site of the storehouse go to the following link: [http://www.preservationvirginia.org/rediscovery/page.php?page\\_id=347](http://www.preservationvirginia.org/rediscovery/page.php?page_id=347). Harold Shurtleff demonstrates in *The Log Cabin Myth* (Cambridge: Harvard University Press, 1939), that log cabins did not appear in the American Colonies until the Swedish set up a colony in Delaware in 1639. The first English colonists set up wattle and daub houses. Later in the seventeenth and eighteenth centuries squared timbers, joined by

corner notches were used in defensive structures. James Deetz and Patricia Scott Deetz, *The Times of Their Lives: Life, Love and Death in Plymouth Colony* (New York, W.H. Freeman and Company, 2000), 175.

<sup>39</sup> Garvan, *Town Planning in Colonial Connecticut*, 31; *A collection of such orders*.

<sup>40</sup> Deetz, *Flowerdew Hundred*; Tisdale, *Soldiers of the Virginia Colon*; William M. Kelso, *Kingsmill Plantations 1619-1800: Archaeology of Country Life in Colonial Virginia Studies in Historical Archaeology*, (Orlando: Academic Press, Inc., 1984); Theodore Reinhart and Dennis J. Pogue, eds., *The Archaeology of 17th Century Virginia*, (Richmond, VA: Archaeological Society of Virginia, 1993).

## CHAPTER IV

### THE ENGLISH LEARN TO FIGHT DURING THE DUTCH REVOLT

English knowledge of continental European military practices, including the developing Dutch system of fortification and how to effectively mass the fires of their cannons and muskets, came as a result of their involvement in the Dutch Revolt. The Dutch style, or *old Netherlands system of fortification*, was the standard fortification type of the late sixteenth and early seventeenth century. Other new military practices also developed, which changed the concept of how soldiers fought and prepared for battle. The English also developed an arms industry to support their needs and those of other armies as they became involved in fighting on the European continent that helped finance future ventures and exploration.<sup>1</sup>

Dutch fighting techniques had adapted in response to the professionalism of the Spanish Army of Flanders, which was one of the best armies of the period. In the 1570s and 1580s, the English involvement in the Dutch Revolt, or Eighty Years War, started and gave many Englishmen personal experience with the preeminent practices of maneuver, discipline, drill, and fortifications. The earliest English settlers applied lessons they learned to the Jamestown Colony not because they were innovative but because they were following standard continental practices they had learned in the Netherlands. This chapter will discuss the English experiences in the Dutch Revolt, the origins and

tenets of Dutch fortifications, some of the military practices to which the English were exposed, and the application of this knowledge in the early days of the Jamestown Colony.

Queen Elizabeth I of England sent her first contingent of “voluntaries” to help the Protestant Dutch in their struggle with their Catholic Spanish masters in 1572 over religious freedom and retention of their medieval rights and privileges.<sup>2</sup> Subsequently, tensions increased between England and Spain for the next thirteen years. Several plots were discovered involving the invasion of England by Catholic armies or the assassination of the Queen herself.<sup>3</sup>

In August 1585, the English and Dutch signed the Treaty of Greenwich, in which Queen Elizabeth committed troops and half the royal income to aid the Netherlands in their struggle with Spain. Some of these troops would occupy Flushing and Brill in the Netherlands for the crown until England was reimbursed by the Dutch.<sup>4</sup> The commitment to fighting the Catholics in the Netherlands was one of the first instances of what was to become the classic British defense policy that “if one had to fight it was better to do it on someone else’s soil, and to forestall an attack before it developed.”<sup>5</sup>

The English would soon be organized under the multinational Dutch States’ Army, which included Dutch, German, French, Scottish, Swiss, as well as English units. Until 1588, this army was not as good as the Spanish forces under the Duke of Parma.<sup>6</sup> During this struggle, the English improved their skills with gunpowder weapons such as muskets, caliver, and cannon, as the last vestiges of the standard medieval English weapon, the longbow, faded away. They learned about the latest techniques for troop deployments and formations from contemporary masters such as Maurice of Nassau,

Ambrogio Spinola, and Henry of Navarre. Prince Maurice's innovations especially would have tremendous influence on the colony. The English also learned military engineering based on the Dutch, or Netherlandish, version of new artillery fortifications evolving from the Italian style commonly called the *trace italienne*.<sup>7</sup> The leaders in this developing system had to understand drill, how to train their soldiers in it, and how to enforce its practice when they were not fighting.<sup>8</sup>

Before effective artillery came about in the fifteenth century, medieval curtain walls had to be built high to prevent besiegers from using scaling ladders, the most practicable form of assault open to a besieger. With the development of better constructed guns, gun carriages, lead bullets, and more consistent gun powder, these walls became easier to knock down. These more effective guns could punch holes in the base of the curtain, causing the whole length of walls to come crashing down. By the early 1500s, military engineers in Italy and other places began to lower fortress walls and heap earth up behind them so that they would stand up to artillery fire better while also providing a stable artillery platform. Other temporary measures included extending the fortifications from the outer moat into the field surrounding the fortress and building ramparts in the moat between the wall and the outer bank.<sup>9</sup>

The new Italian system of fortification that developed in the early 1500s focused on preventing a besieger from pushing his guns forward and protecting the curtain walls. The initial temporary measures of reducing the wall height and heaping dirt behind them were replaced by the more permanent bastion, which projected forward from the fortification. Bastions were angled quadrilateral fortifications with two forward faces and two flanks connecting to the curtain wall. The bastions projected from the curtain wall of



the fortification at regular intervals. The forward faces enabled a fortification's defenders to emplace heavy artillery to engage any attackers as they moved their trenches closer. When the besiegers were close enough, they would be caught in a cross fire along the curtain wall from the defender's artillery and small arms firing from the flank of the bastions. This enfilading fire from adjoining flanks was most important since attacking formations were more likely to be wide rather than deep, increasing the likelihood that it would hit a target. This system also typically had a stepped profile, allowing the defender to fire on the attacker from three, or even four, levels simultaneously.<sup>10</sup> Some of the earlier bastions of the Italian style were built at intervals of 400-600 meters, which was the maximum effective range of the artillery of the time. They focused on firing at the flanks of attackers close into the fortifications. They were not effective in preventing besiegers from bringing guns closer to the fortifications. By the late sixteenth century, bastions grew in size to provide a more stable gun platform and to engage besieging forces further out. The salient angle became a key part of this evolution; the faces of a blunt salient could be easily breached by a single battery, while an extremely pointed face could be easily destroyed by heavy siege guns. The solution ended up being one with an angle of 60-90 degrees.<sup>11</sup>

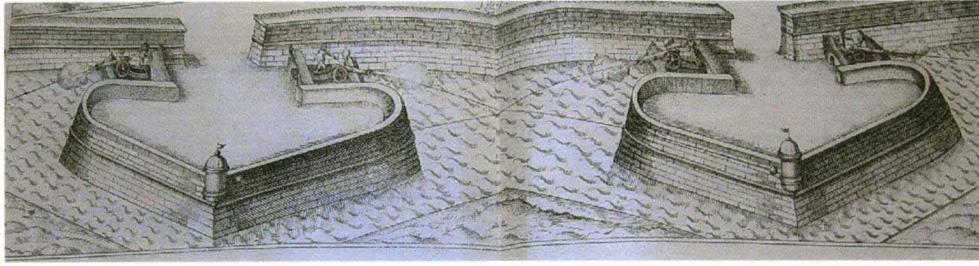


Figure 8. Polish-German Adam Freitag's visualization of sixteenth century Italian fortifications showing the recessed or retired flanks of the bastions. Photo by the author in CivittaVechia, Italy, May 2009.<sup>12</sup>

The Italian style of fortification had spread slowly north from Italy until the focus of western European Continental wars became the Netherlands, as the Italian wars ceased to be the Spanish main effort. Charles V sent Italian engineers to fortify towns in the southern Netherlands, currently Belgium, when France started a war with him. The Eighty Years War (1568-1648) resulted soon after from the protestant Dutch revolt for their rights.<sup>13</sup> A byproduct of this conflict was the adaptation of the Italian style of fighting in the Netherlands. The fortifications built by the Dutch and Spanish became the standard of military engineering until the 1640s. During this latter period, the preeminence of French fortifications emerged perhaps because they, like Sweden, developed a professional engineer corps.<sup>14</sup>

The most distinctive features of Dutch fortifications were the use of an earthen rampart and wet ditch, which were best suited to flat terrain with a high water table. The Dutch modified existing fortifications with earthen ravelins and detached bastions beginning around the 1570s. Soon afterwards, they also began building earthen enceintes that completely enveloped a city. This fortification also included regular bastions and

elaborate outworks, such as “horn works,” “demi-lunes,” and more ravelins. Away from the main fortifications, the Dutch built small earthen redoubts called *schanzen* to protect dikes, canals, and river lines controlling access to the defender’s inner regions. By starting a bonfire or firing a shot from the *schanzen*, soldiers could signal to the main fortifications that the Spanish were coming.<sup>15</sup>

The great Dutch strategist Prince Maurice of Nassau positioned his bases and planned operations using the rivers of the Netherlands. He was able to resupply his forces, move his troops and heavy artillery easier and more efficiently because he planned for most of his operations around rivers. Prince Maurice and his half-brother Frederick Henry perfected the Dutch fortification system and other military reforms during this period.<sup>16</sup> Schematic representations of typical elements of Dutch fortifications sometimes show a bristling, seemingly impenetrable mass of defensive works. The drawings could be misleadingly complex, but they do show the key types of works and technical terms.<sup>17</sup> The Dutch system could be differentiated from the earlier Italian style by looking at how the bastion flanks and faces related to the curtain wall of the fortress. In the Italian style, the emphasis was on heavier artillery, so the bastion flank formed an acute re-entrant angle, which optimized protection for the flanking guns.<sup>18</sup> The re-entrant angle is an angle in the perimeter of fortifications in which the apex of the angle is closest to the interior of the fortification such as where the bastion projects from a curtain wall. Conversely, a salient angle was based on works projecting outward from fortifications.<sup>19</sup>

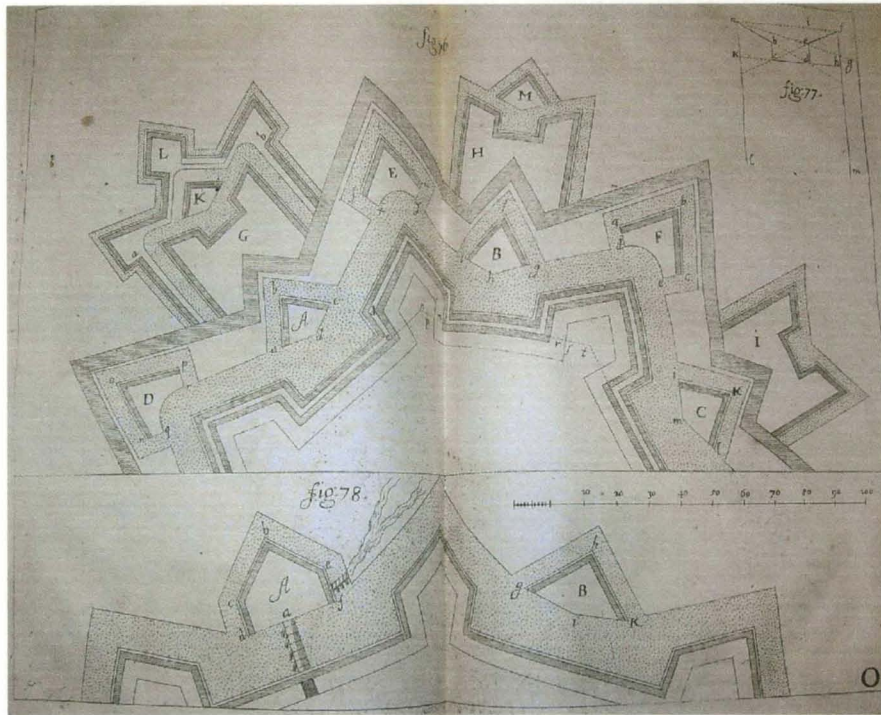


Figure 9. Freitag's visualization of seventeenth-century Dutch Fortifications used by both Duffy and Lenihan. Characteristics include continuous outer enceinte or enclosure and detached works including ravelins (A, B, C), demi-lunes (sometimes called half moons) (D, E, F) and horn works (G, H, I). Photo by the author in CivitaVechia, Italy, May 2009.<sup>20</sup>

Dutch fortifications were always built with the range of musketry in mind. The emphasis was more on small arms than artillery for flank defense, so the bastion flank was at a right angle to the curtain, and the bastions were closer together, rarely more than 250 yards apart. This also created a gap that would allow for building another type of work, providing an inner line of defense called a retrenchment. Dutch bastions were also elongated, with the faces of Dutch bastions meeting in narrow salient angles between 60° and 75°. The salient angle is the measurement of a projecting section of the line of

defense, an imaginary prolongation of the bastion face, intersecting the adjacent curtain rather than the re-entrant of the nearest bastion. The long bastion faces were designed so that defenders could supplement the cross fire of the flanks, leaving the main task of the frontal defense to the curtain and outworks. Since the main task of frontal defense fell to defenders on the curtain, those in the narrow salient could be vulnerable to enfilading fires. The salient angle of the bastions created an area of dead space to the front, which could not be covered by fires from the bastion.<sup>21</sup>

The Dutch attempted to overcome the lack of coverage in front of the bastions with musket fire from the curtains. The design made it impracticable for heavier guns to provide flanking fire for adjacent bastions. The Dutch would not solve this dilemma until the 1670s, when they began to make the flanks of their bastions more obtuse in relation to the curtain walls.<sup>22</sup>

Outworks such as ravelins, demi-lunes, and horn works supported the defense in depth on the most likely enemy approach. A ravelin was an outwork detached from the curtain with two faces forming a salient angle, normally in between bastions. The Dutch copied the Italian style ravelin without modification, while they modified and greatly improved the demi-lune and the horn work. The demi-lune, sometimes called half moon, was specifically designed to cover a bastion salient and was planted in front of the bastion. Demi-lunes were placed at angles and bastions. The horn work, sometimes called crown work, provided additional flanking fires at a critical point in of a defensive line by projecting sharply beyond the main defensive ditch from a position that commanded that point of the line. The sides of the horn work formed parallel or slightly divergent branches with two half bastions connected by a small curtain wall, resembling a two-

pronged fork. In front of the horn works, another small ravelin could cover dead space directly in front of the horn works.<sup>23</sup> Sometimes the horn works did not look much different than a demi-lune because of their complexity.

Dutch military engineering, although complex, was characterized by relatively easily and inexpensively built earthen fortifications. In the Netherlands, the moats were made wider than they would have been in earlier medieval defenses to add another obstacle for any attacker. The massed, interlocking fires provided defense in depth to the Dutch system in cities such as Breda, which made a frontal assault very costly. Ambriglio Spinola, military commander of the Spanish Netherlands, thought the cost would be too high and laid siege to the city for ten months instead.<sup>24</sup> Massing fires, defined as the ability to “concentrate the effects of combat power at the decisive place and time” in modern U.S. Army doctrine, continues to be an important principal of war. Defending in depth means that operations were extended in “time, space and resources” so that a defender could “create opportunities to maneuver against an enemy from multiple directions as attacking forces were exposed or discovered.”<sup>25</sup>

Another innovation of Maurice of Nassau was the rediscovery of classical, especially Roman, drill and discipline and the application of it to late sixteenth-century technology. His development of battle drills required a lot of repetitive training and a requirement for carefully choreographed sequential actions, but it enabled his forces to fight their enemies with less commands and enabled them to mass their efforts and fires. Along with his cousin Willem Lodewijk van Nassau, he developed a strict code of conduct and daily drills, using Roman models, to instill discipline and obedience in his troops. He applied a manual of arms that made the complex loading of his soldiers’

cumbersome muskets instinctive. His soldiers also drilled to perfect their defensive battlefield maneuvers. Maurice had these commands translated into Dutch, English, and German so that proper execution of the manual of arms would become a physical manifestation of efficiency and instant obedience for the various units of the States' Army. His drill also made an effective synchronization of muskets and the pike possible. As part of the general trend of the time, he reduced the basic fighting unit of his army, the company, to a 130-man phalanx with guns and pikes. Maurice and Willem also made it imperative that all soldiers actually took part in building their fortifications or laying siege to an enemy fortress, just like the Romans did. At the time, many soldiers thought manual labor such as this was beneath their dignity.<sup>26</sup>

By the early seventeenth century English military forces had earned the respect of European Armies. They were recognized for both their bravery and their mastery of siege craft during the siege of Ostende from 1601-1604 with other forces of the States' Army against a massive Catholic assault force. Dutch control of sea lines of communication enabled them to resupply Ostende so that it could withstand the siege longer.<sup>27</sup> The



Figures 10-12 (left to right). English bronze saker, falcon, demiculverin, and murderer of the late 1500s-early 1600s photographed at the Royal Armories Museum, Fort Nelson, UK, by the author.

English had become expert miners and sappers and had more than kept abreast of contemporary developments in artillery, to the extent that their small cannon (sakers, minions, and falcons) were in great demand on the continent.”<sup>28</sup>

The Dutch forces played an equally important role in Ostende’s defense and shared many of their innovations with their English counterparts. This expertise may have come at too high a price and led to a strain on the economy and general war weariness in England towards the end of Elizabeth’s reign.<sup>29</sup> Regardless of their war weariness, by the time James I had made peace with the Spanish in 1605 and a twelve-year truce was established in the Netherlands in 1609, the English had learned the basics of fortifications and tactics from the Dutch. They also learned the importance of battle drills and discipline.

English involvement in continental wars decreased dramatically after the truce. The English stayed out of the Thirty Years War that developed after the truce ended. The lack of involvement kept the English away from the latest European developments after 1609 until much later in the century. Military innovation in the Netherlands decreased after the 12 year truce ended in the 1620s as major fighting shifted east during the Thirty Years War. The Dutch Eighty Years War with the Spanish continued until 1648, when both that war and the Thirty Years War were ended by the Treaty of Westphalia. By the 1640s, dominance of the Netherlandish system was beginning to be challenged by the French. The French school of fortifications was less cluttered with outworks and used obtuse angles between the flank and curtain so that artillery could sweep the faces of adjoining bastions.<sup>30</sup> The Dutch influence on English Military Science decreased as



England and the Netherlands became less confederates against Catholicism and more colonial rivals in America.

### **Applying Dutch Techniques to the New World**

Through their involvement in the Dutch Revolt, the English were exposed to a new style of fortifications that modified the Italian style and the tactical innovations of Prince Maurice and his contemporaries. The colonists' experience with new standards for drilling soldiers and building fortifications with bastions close enough to be covered by small arms fire that could be easily rebuilt or modified served them well. When comparing a plan of Jamestown from even the most recent scholarship to those of European fortifications, it is easy to arrive at the misconception that the site of Jamestown was poorly chosen, but an understanding of the early seventeenth-century standard for fortifications puts the choice into perspective. Jamestown does not fit the model of a great colonial fortification such as the Castillo de San Marcus in Saint Augustine, Florida, which was built in the 1670s. Until the mid sixteenth-century, the forts at both Saint Augustine and Jamestown were relatively simple earthworks. The simple wood and earth forts fulfilled the purpose of either protecting the first colonists from the ever-present Native American attacks or from possible aggression from French, Dutch, Muslim, or Spanish marauders. The designers of the fort showed an adequate comprehension of early seventeenth-century fortification techniques. They were continuously improving the fortifications in line with improving their defenses and expanding the colony. The fortifications at Jamestown were constructed in depth with interlocking fields of fire that enabled the colonists to mass fires at several locations.

Attacking the Jamestown fortification would have been too costly for the Native Americans.

Jamestown would not have occupied much more than a modern city block. Comparatively, it would have occupied a similar amount of space to major European fortifications in existence at time and would not have been a complete, stand-alone fortification itself. The earth and wood construction was extremely perishable in the event of erosion or fire and needed constant maintenance to keep it at peak effectiveness. The fort was the right size, however, for the colonists available to effectively defend it. In a crisis, the fort could also be repaired relatively quickly.

Jamestown had specific elements of the Dutch style of fortification style from the beginning, starting with its location on high ground near the James River. A curtain wall consisting of a palisade of planks about eight feet high surrounded the fort. This provided adequate protection from Native Americans arrows or the small arms of any would-be European attacker. Loopholes in the planks allowed the colonists to safely return fire from an elevated firing platform. The fort was built on a low ridge, giving it a clear view of the river. The drought may have also given the earliest Jamestown fortifications a more commanding position relative to the river. The navigable channel ran close to the shore at the western end of the ridge, where the fort was located, and was farther off from land east of the fort towards the Atlantic Ocean. Any enemy warships coming up the James River would only get close to land as they got close to Jamestown Fort itself. By that time, they would have already been under fire of Jamestown's guns for some time before ever even being able to effectively fire at the fort.<sup>31</sup>

The fort's positioning in such a location fits with the Dutch style of fortification. The compact size and simplicity of James Fort does not detract from its effectiveness. Some of the most distinctive features of Dutch fortifications were the use of an earthen rampart and wet ditch, which were best suited to flat terrain with a high water table such as at Jamestown. Even though Dutch fortifications also included regular bastions and elaborate outworks, such as "horn works," "demi-lunes," and ravelins, the fortifications did not have to have these attributes if they were not needed or could not be manned.<sup>32</sup> The size of James Fort made elaborate outworks inappropriate. Evidence of outworks may also be harder to find through archaeological evidence because outworks were much smaller than the regular bastions. The stepped nature of Dutch fortifications meant that the already low lying bastions had even lower lying outworks, evidence of which could be completely erased by subsequent modifications of the fortification. Elaborate outworks also required a lot of manpower to man, which Jamestown did not have.

The evidence for the actual design of the fortifications at Jamestown, including the 1608 Zuniga map<sup>33</sup> and recent archaeological evidence, suggests that the two bulwarks that flanked the curtain wall parallel to the river were more elaborate than the one bulwark inland. Both of the river bulwarks had elongated outworks reminiscent of the Dutch style, resembling a crown work or demi-lune. In keeping with contemporary practice, cannons would have been mounted low to the ground with low, thick ramparts, less than 25 feet high and at least as wide, which would allow the position to stand up to artillery fire better. Both land-mounted and ship-mounted cannons of this period were primarily direct fire weapons with a flat trajectory. Ship-mounted guns could not be as low to the water line because they would cause the ship to sink.



Figures 13-14. Although these pictures are reconstructions of an American Revolutionary War redoubt, the bulwarks at Jamestown probably more resemble them than most depictions. The palisade may have been on top of the earthworks, with the inside wall shored up with bundles of saplings called a *fascine*. Photo by the author at the Army Heritage and Education Center, Carlisle, PA, July 11, 2009.

The location of the Jamestown Fort near the James River aided in making the fort easier to defend and resupply (including the ease of unloading artillery), and made it possible for colonists to leave quickly if they had to.<sup>34</sup> Jamestown's low profile would protect against larger Spanish ships and Native American canoes. The bulwarks may have also had a watchtower to provide early warning of attack. William Strachey described it thus: "At every Angle or corner, where the lines meete, a Bulwarke or Watchtower is raised, and in each Bulwarke a peece of Ordance or two well mounted."<sup>35</sup> These guns were demiculverins, murderers, sakers, or falcons. The largest guns, called demiculverins, were placed at the main gate for the town, which opened to the river through the palisade, at each bulwark, and in the central market place. It also appears that

these cannons were facing outward, which would prevent them from inadvertently firing at an adjacent bastion. The low profile of the fort as well as its situation on a ridge hid its location from any attacker until the last minute. The fort's positioning also helped prevent any attacker from getting good enfilading fire on the fort until it had been already under fire from the fort's guns. A demiculverin had a point blank range of 400 yards, while the saker had a range of 300 yards. If either of these gun were elevated 10 degrees, their range increased to around 2,000 yards.<sup>36</sup> The design of the fort also did not preclude the placing of outworks, although evidence of them has not been found in the archaeological record.

The length of the curtain wall and the length between bastions provide another link to Dutch fortifications, which were predominantly built with small arms like muskets in mind. The length of the curtain walls, listed as 140 yards parallel to the river with the West and East walls only about 100 yards, was short enough that each bastion could cover the curtain to the next bastion with small arms fire alone. Even the positioning of the 1608 extension, which made the fort more pentagonal, facilitated effective overlap of small arms fire around the perimeter of the fort. Salients in the fortifications enabled defenders to fire at the flanks of attackers. Any attackers would normally attack in some sort of line. Given the way that Jamestown was built, any attacking force would suffer the effects of massed interlocking fires from the bastions as well as the curtain wall.

The corner bastions would have also had a secondary defensive mission of covering the streets along the side of the palisade if the curtain wall was breached. Again, Strachey describes that there was a street with houses parallel to the wall "a proportionate

distance from the Pallisade” running along each curtain. The houses would themselves have provided another line of defense.<sup>37</sup>

Away from the main fortifications, the Dutch, as mentioned earlier, often built small earthen redoubts called *schanzen* to protect dikes and river lines. From these small redoubts, soldiers could signal the main fortifications that an enemy was approaching with either a bonfire or cannon fire.<sup>38</sup> The fortification at Hog Island along with at least two blockhouses on Jamestown Island and Smith’s Fort, across the James River from Jamestown, served the same purpose. They provided early warning for the Jamestown settlement; additionally, if it fired on any attacker, it would force the attacker to get into an attack formation much earlier and thus require them to advance up the river more slowly, giving the colonists at Jamestown time to prepare for an attack. The first instructions to the colony also directed the construction of a small fort for just such a purpose.<sup>39</sup>

Another aspect of the defense of Jamestown was the *pale*. The first version of this may have been as part of the flag-like extension of the fort indicated in the 1608 Zuniga map, evidence of which has been found in the archaeological record.<sup>40</sup> As early as 1611, but definitely by 1616, a palisade, or pale, had been built across necks of land in order to separate the colonists from the Native Americans. This pale separating the English from the natives hints at experience gained by the Irish and perhaps the ancient Romans. By 1631, the entire peninsula was separated by a bastioned timber pale from the rest of the country. The fortification was an obstacle that, like its modern counterparts, was not meant to completely stop Native American forays into the colony but simply to slow them down and give the colonists time to react.

Finally, the drilling enforced by some of Jamestown's early leaders multiplied the fire power and effectiveness of the small number of defenders. The Native Americans did not attack Jamestown's forces when they could be arrayed in their battle formation. Forces of colonists numbering more than ten were effectively engaged by the Native Americans in only a few instances, such as in the massacre of Ratcliffe's raiding party in 1609. Ratcliffe's raid took place when drilling was not enforced, during the time of George Percy's leadership.<sup>41</sup>

English experience in the Dutch Revolt exposed them to fighting techniques that had challenged the Spanish Army of Flanders and provided them with the best early modern practices of maneuver, discipline, drill, and fortifications. This experience established Dutch techniques as the standard in England. The earliest English colonists applied Dutch tactics and training to the Jamestown Colony because it was what they knew.

## Endnotes

- <sup>1</sup> J. R. Hale, *War and Society in Renaissance Europe: War and Warriors in Early America, Contributions in Military History, Number 22* (Westport, CT: Greenwood Press, 1980), 210-32.
- <sup>2</sup> Dr. J. P. C. M. van Hoof, email message to author, August 18, 2009 clarifying that the Dutch perspective was that the Dutch revolt did not start as a war for independence as Mark Charles Fissel implies in *English Warfare*, 137-53, <http://www.aug.edu/mfissel/fisselbooks.html>.
- <sup>3</sup> Norman Longate, *Defending the Island: From Caesar to the Armada* (Glasgow: Grafton Books, 1990), 505-52.
- <sup>4</sup> Van Hoof, in Dutch Flushing is Vlissingen, Brill is Brielle.
- <sup>5</sup> Longate, *Defending the Island*; Fissel, *English Warfare*, 141; Ian Gentles, Review of *English Warfare: 1511-1642, Seventeenth-Century News* (Toronto: Glendon College, York University), <http://www.aug.edu/mfissel/fisselbooks.htm>, (accessed June 15, 2008).
- <sup>6</sup> Van Hoof, Email.
- <sup>7</sup> Duffy, *Siege Warfare*, 85- 89.
- <sup>8</sup> Michael Roberts, "The Military Revolution, 1560-1660," *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe* (Boulder, CO: Westview, 1995), 13-35.
- <sup>9</sup> Lenihan, *Confederate Catholics*, 147; Van Hoof email message to author, August 21, 2009.
- <sup>10</sup> Lenihan, *Confederate Catholics*, 147; Van Hoof email message to author, August 21, 2009.
- <sup>11</sup> O. van Nimwegen, "Maurits van Nassau and Siege Warfare (1590-1597 in *Exercise in Arms: Warfare in the Netherlands, 1568-1648*)," ed. M. van der Hoeven (Leiden: Brill Academic Publishers, 1997), 113-31.
- <sup>12</sup> Adam Freitag, *Architectura Militaris Nova et Aucta oder Neue Vermehrte Fortification* (Leyden, 1630), repr. as *L'Architecture Militaire ou la Fortification Nouvelle* (Paris: Guillaume de Luyne, 1668), B, Figure 4.
- <sup>13</sup> Van Hoof, August 18, 2009.
- <sup>14</sup> Lenihan, *Confederate Catholics*, 146-47; Duffy, *Siege Warfare*, 103-4.
- <sup>15</sup> Duffy, *Siege Warfare*, 90; Van Hoof.
- <sup>16</sup> Van Creveld, *Supplying War*, 10; J. P. C. M Van Hoof, "Fortifications in the Netherlands (1500-1940)," *International Review of Military History*, no. 58 (1984): 97-104.
- <sup>17</sup> Lenihan, *Confederate Catholics*, 146-48; Duffy, *Siege Warfare*, 31, 90-91; Freitag, *Architectura Militaris*, figures 76-78, 80-81.
- <sup>18</sup> Lenihan, *Confederate Catholics*, 147-48; Duffy, *Siege Warfare*, 90-91.
- <sup>19</sup> Kerrigan, *Castles and Fortifications*, 283.
- <sup>20</sup> Lenihan, *Confederate Catholics*; Duffy, *Siege Warfare*; *Architectura Militaris*.
- <sup>21</sup> Lenihan, *Confederate Catholics*; Duffy, *Siege Warfare*.



- <sup>22</sup> Van Hoof, August 18, 2009.
- <sup>23</sup> Lenihan, *Confederate Catholics*; Duffy, *Siege Warfare*; Van Hoof.
- <sup>24</sup> Lenihan, *Confederate Catholics*.
- <sup>25</sup> *Field Manual 3-0: Operations* (Washington, DC: Department of the Army, June 2001), 4-11 to 4-18.
- <sup>26</sup> Paret, *Makers of Modern Strategy*, 32-45, Van Hoof; Roberts, "The Military Revolution, 1560-1660."
- <sup>27</sup> Duffy, *Siege Warfare*, 85-89; Van Hoof.
- <sup>28</sup> Fissel, *English Warfare*.
- <sup>29</sup> Rowse, *Elizabethan Expansion*, 354; Van Hoof.
- <sup>30</sup> Lenihan, *Confederate Catholics*, 148; Van Hoof.
- <sup>31</sup> Horn, *A Land as God Made it*, 53-54).
- <sup>32</sup> Duffy, *Siege Warfare*, 90.
- <sup>33</sup> This map can be found online at <http://www.virtualjamestown.org/maps1.html>.
- <sup>34</sup> Van Creveld, *Supplying War*, 10.
- <sup>35</sup> Strachey, quoted in Haile, *Jamestown Narratives*, 429-30.
- <sup>36</sup> Caruana, *Tudor Artillery*, 23-24; Tisdale, *Soldiers of the Virginia Colony*, 109.
- <sup>37</sup> Strachey, quoted in Haile, *Jamestown Narratives*, 429-30.
- <sup>38</sup> Duffy, *Siege Warfare*, 90.
- <sup>39</sup> Smith, "Instructions by way of advice" London Virginia Company, Virtual Jamestown, <http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1039> (accessed August 30, 2009).
- <sup>40</sup> William M. Kelso, *Jamestown: The Buried Truth* (Charlottesville: University of Virginia Press, 2006), 69.
- <sup>41</sup> Percy, *True Relations*, in Haile, 502-9.

## CHAPTER V

### MAKING JAMESTOWN LAST: APPLYING LESSONS LEARNED FROM IRELAND AND THE NETHERLANDS



Figure 15. Prince Maurice of Nassau Medallion by Rottermont similar to ones found at Jamestown and Flowerdew Hundred reinforces early colonial links to the one of architects of the Early Modern Military Revolution.<sup>1</sup>

The previous chapters provided insight into the experience and guidance the colonists had as well as what was considered standard knowledge at the time. This chapter focuses on how nine early leaders applied, or failed to apply, lessons learned from Ireland and the Netherlands to Jamestown.<sup>2</sup> The earliest colonists used their experiences in early Irish colonization and military engineering in the Netherlands to plant the first successful English colony in North America at Jamestown. The early North American colonists were adept at selecting the sites for their bases and then building fortifications that would adequately protect them from the ever present threat of sea or land attacks from Native American, French, Dutch, or Spanish aggressors. They showed an up to date

comprehension of appropriate early sixteenth-century fortification techniques. The fortifications, like those in Ireland, lacked the geometric precision and detail of Old World fortifications, such as those in Breda and Ostende in the Netherlands, but incorporated key components of the Dutch school of fortification such as half-moon, or demi-lune, bastions. English colonial leadership was able to synthesize the fortification techniques of the Netherlands with the English colonization techniques being refined in Ireland and the materials they had on hand in order to develop an effective means of defending and establishing their colony. They could effectively concentrate or mass the gunfire of their fortifications, using interlocking, supporting fires between bastions. Although Jamestown would most likely not have been able to stand up to an aggressive, well planned attack from European power, it was enough to deter the Native Americans. Jamestown struggled the most when Dutch defensive techniques and Irish colonial organization methods were not adequately applied.

A modern measure of an individual's leadership is how well that leader accomplished the goals or missions of his or her organization.<sup>3</sup> The leadership of Jamestown synthesized the experiences of Ireland and the Netherlands to help the Virginia Colony survive while ultimately accomplishing the goals of the Virginia Company. The most successful leaders communicated priorities, gave guidance by establishing the rules that the colony needed to follow, and continued to provide direction for the colony. These rules were largely the result of English experience during the Dutch Revolt.

Edward Maria Wingfield, John Ratcliffe, John Smith, Sir George Percy, Sir Thomas Gates, Lord Delaware, Sir Thomas Dale, Samuel Argall, and Sir George

Yeardley each led Jamestown based on their individual understandings of what was needed. Ultimately, the colony began to be successful when they synthesized organizational techniques based on their experiences in Ireland with defensive techniques based on their experiences in the Netherlands during the governorship of Sir Thomas Dale. John Smith, Sir Thomas Gates, Lord Delaware, and Sir Thomas Dale used draconian methods to instill the discipline the colony needed to survive, based on what they knew worked well in the Netherlands. They also began to apply a model of colonization very similar to that which had been developed and was being refined in Ireland. In austere environments such as Jamestown, successful leaders enforced discipline through strict rules, which helped keep the organization together. In the absence of strong individual leadership, the Virginia Colony's council lead by a president governed the colony. There is no evidence that Edward Wingfield or John Ratcliffe similarly expanded their ability to defend themselves. Sir George Percy simply implemented the orders of his colonial superiors or did not control his subordinates. After Sir George Yeardley removed martial law, the colony was hit by a devastating attack from the Powhatan.

Although the focus is on the nine colonial leaders mentioned in the last paragraph, many other early Jamestown settlers were experienced soldiers who knew what needed to be done. In the States Army of the Netherlands, they learned how to maneuver and train their troops. Their efforts in the Netherlands helped them become leaders and trainers in the New World. Their experiences enabled them to work quickly to set up adequate defenses. Prince Maurice of Nassau emphasized the importance, even for gentlemen, of helping to build the fortifications and manning the guard force. At least initially, it may

have just those with Continental and Irish experience that manned the guard at Jamestown.<sup>4</sup>

Like several members of his family, Edward Maria Wingfield, the first president of the Virginia Colony, was involved in early Irish colonization attempts and also served there. He served with distinction during the Battle of Zutphen in the Netherlands. He was captured and imprisoned with Sir Ferdinando Gorges, another prominent English promoter of colonization and member of the Council of Virginia, at Lisle in Flanders in 1588.<sup>5</sup> At fifty-six, Wingfield was the oldest member of the colony. He was a natural choice to be president, as he was the only patentee of the Virginia Company and the only person whose name appeared on the charter to sail to Jamestown in 1607. In September 1607, after only a few months in office, Wingfield's fellow colonists impeached and replaced him with John Ratcliffe. In Virginia, it appears that he was more interested in a quick return on his investment than in making the colony successful. Among the problems John Smith had with Wingfield were his unwillingness to effectively secure the colony and the colonists, his lack of efforts to sustain the colony, and his apparent hoarding of company supplies for his personal use at the expense of the colonists. His actions were more characteristic of the English captains of the period and therefore not unique for English soldiers, but such behavior was unacceptable at Jamestown. His inadequacy as president led the council to remove him from office and bar him from the council.<sup>6</sup> However, as president of the colony, Wingfield gave the final approval of the fort site and design. Both the fort's location and design followed patterns of the Dutch Revolt. Wingfield did not, however, provide the regimented leadership or instill the discipline that was characteristic of the forces fighting in the States Army.

After Wingfield's impeachment, John Ratcliffe served as president of the colony until September 1608. He was apparently not much better in leading the colony than Wingfield, having spent a great deal of the colony's resources building a "palace" for himself at Jamestown, but the colonists did not depose him. Ratcliffe had served in some capacity in the Netherlands, the exact nature of which is unclear. He was captured at Mosheim in 1605 before returning to England to join the Jamestown venture in 1606. After serving his term as president of the colony, he sailed to England in January 1609 and returned in June of the same year. He was tortured and killed while on a trading expedition to the Powhatans, whilst George Percy was in charge later that year.<sup>7</sup> Like Wingfield, Ratcliffe did not apply the lessons learned from Europe to the fledgling colony.

John Smith did not hide his contempt for either Edward Maria Wingfield or John Ratcliffe. The colony survived in spite of these two men because of the checks and balances of the council. Edward Maria Wingfield and John Ratcliffe apparently had attempted to run the Jamestown Colony like corrupt Elizabethan captains had run their companies. Queen Elizabeth tried to improve the effectiveness of her forces and reduce the corruption of her captains during her reign, but she was not very successful. Captains were usually lesser nobility like Edward Maria Wingfield, but on very rare occasions, commoners like John Smith could rise to a captaincy through bravery, skill and luck.<sup>8</sup> It may have been the poor leadership of Wingfield and Ratcliffe that made the council even consider allowing a common-born man like John Smith to run the colony, but it must be also remembered that John Smith was by this time a captain and a gentleman.<sup>9</sup>

John Smith was a complicated, smart, self-made survivalist who became the third, and most well known, president of the Jamestown Colony. Although young compared to his fellow colonists, he was very experienced and used discipline and the upkeep of the colony's defenses to ensure the colony's survival.<sup>10</sup> He served in northern France, the Netherlands, and in central and eastern Europe against the Ottoman Turks during the "Long War" of 1593-1606.<sup>11</sup> In Hungary he earned his captaincy, a coat of arms and nobility. He was later wounded in battle, captured, and sold into slavery by the Turks. He escaped bondage, making his way back through Russia and Poland, traveling through Europe and North Africa before arriving back in England. He heard about the American colonial venture Gosnold was trying to get started and chose to invest in it.<sup>12</sup>

Like Gates, Delaware and Dale later, Captain Smith insisted that the fortifications were built, maintained and well guarded. John Smith also imposed stiff discipline on his fellow colonists, including the memorable "he who will not work will not eat" rule, very similar to rules imposed on armies in Europe. He was replaced when Christopher Newport brought a new company charter from headquarters in London. After fighting to maintain his position, he was finally forced to return to England after being wounded in a gunpowder explosion in October 1609.<sup>13</sup> He is the first of the colony's leaders to clearly have applied lessons learned from the Netherlands, if not Ireland, to the colony in an attempt to implement the Virginia Company's guidance. His ability to get food from the Native Americans also helped counteract the inadequacies of Ratcliffe's tenure as president.

Sir George Percy was the president of Jamestown from the time John Smith left until Sir Thomas Gates arrived, and again from the time Lord Delaware left until

Sir Thomas Dale arrived. This earliest period has been called the “starving time.” The closest the colony came to failure was when he was in charge during this period.

Although perhaps the most well born of the early colonists, he was not named to the colony’s council because of the suspicion that his brother Henry Percy, the 9<sup>th</sup> Earl of Northumberland, was involved in the Gunpowder Plot to blow up the houses of parliament on 5 November 1605.<sup>14</sup> As the younger son of a noble family, George still had to find his fortune some other way; he started out as a soldier in the Netherlands before going to Virginia. He served as governor again when Lord Delaware left Virginia due to ill health in March 1611 until Sir Thomas Dale arrived in May 1611. Percy’s own narrative of his leadership shows his ineptitude and poor leadership.<sup>15</sup>

The fortifications seem to have been in the worst state when Sir Percy was in charge and the colonists neglected the constant maintenance required of earthen fortifications and palisades. The period of his leadership coincides with the starving time, raising the possibility that the poor state of the fortifications and the colonists’ struggle for basic survival is as much a testament to Percy’s poor leadership skills as other factors. Other leaders such as John Smith, Lord Delaware, and Sir Thomas Dale also devoted time to drill, which supplemented the effectiveness of the fortifications they were maintaining. There is little evidence to show that Percy continued the strict discipline of Smith, who like Lord Delaware and Sir Thomas Dale later made a proactive effort to keep the colonists from starving. Percy’s own writings show a reactive leader who reacted to each crisis independently and who failed to impose strict discipline by forcing his fellow colonists to drill or ordering them to maintain their fortifications after the crisis had passed.



Because of the new charter, he did not have the checks of a council to keep him from making too many mistakes as Wingfield, Ratcliffe, and Smith had. Some of the worst treatment of Native Americans recorded also occurred during his tenure. His own accounts show he was either extremely merciless in dealing with Native Americans or simply could not control his men. The performance of the colony while he was in charge lends credence to the latter possibility. Percy left Virginia in April 1612.<sup>16</sup> His performance shows that combat experience does not equal combat competence.

Sir Thomas Gates and George Somers were appalled with the state of the colony's defenses when they arrived from Bermuda on May 23, 1610. Gates' *Laws, Divine, Moral, and Martial*, which put the colony under strict martial law, were an answer to enforcing the discipline the colony needed to survive.<sup>17</sup> From the very beginning of his time at Jamestown, Gates applied lessons learned from the Netherlands.

Sir Thomas Gates was an experienced soldier. He fought in the Dutch Revolt and sailed with Sir Francis Drake to bring some settlers from Roanoke Island in the mid 1580s. He published an account of his voyage in 1589. He would later be one of the first to petition King James I for a charter granting him the right to colonize America. He was knighted by the Earl of Essex in 1596 and continued to serve in the Netherlands until he was granted leave from Dutch service to serve as the Virginia Colony's first governor in 1609.

In July 1609 while on his way to the colony, he was shipwrecked off Bermuda with his fleet commander, Sir George Somers, and 150 other colonists. He assumed leadership of the survivors and managed to keep them alive until they were able to build a ship that would take them to Jamestown. He arrived in Virginia in May of 1610 and

returned to England in July of that same year. He came back to Virginia as governor again in May 1611, remaining until April 1614. He brought his company from the Netherlands under the command of Captain George Yeardley, who would later govern the colony himself. His actions are given credit for laying the groundwork that made the Virginia colony ultimately successful. He was criticized for his harsh rule in “A Brief Declaration of the Virginia Planeters,” written to the Virginia Company in London, but overall his time in charge was reported favorably. In November 1620, James I appointed him to the council for the “planting, ruling, ordering, and governing of New England in America.”<sup>18</sup>

Thomas West, Lord Delaware, 1577-1618, also came from a distinguished family and had military service in the Netherlands. Lord Delaware served in the Netherlands under the Earl of Essex. He served the Earl well and was implicated in Essex’s rebellion in 1601. He was imprisoned until the Earl denied his involvement in the plot.

After his father’s death, West became the third Lord Delaware and a member of the Privy Council under Elizabeth I and James I. From 1608, he became a strong promoter of the protestant colonization of America, perhaps to remove any suspicion that he was a Catholic recusant. He was named governor and captain general of Virginia for life in February 1610, sailed for Virginia, and remained there until forced to return to England due to ill health in June 1611. He strengthened and reissued Gates’ *Laws, Divine, Moral, and Martial*, providing continued strong leadership for the colony, and continued to apply lessons learned from the Netherlands. He ruled the colony as a military camp, eliminating any resemblance to civilian government. While in Virginia, he established three additional forts: one near the falls of the James River, and two near

Point Comfort on Chesapeake Bay. He died on his return voyage to the colony in June 1618. He may be buried at Jamestown near the present church.<sup>19</sup> His strict rule while he was in charge helped the colony survive.

Sir Thomas Dale, the next Jamestown leader in this discussion, married Elizabeth Throckmorton, whose family may have been linked to Sir Walter Raleigh, William Shakespeare, and both sides of the gunpowder plot. He is the first leader to clearly apply lessons learned from both Ireland and the Netherlands to help the colony begin to thrive and ensure its ultimate survival. At least as early as 1588, Dale was a mercenary in Dutch service. In the 1590s, he served in Ireland before serving in Scotland on the retinue of King James' eldest son Henry. He returned to the Netherlands in 1603 and was commissioned a captain of an infantry company in the Netherlands, serving with Sir Thomas Gates. He was knighted by King James I in 1606 and continued to serve in the Netherlands until granted a leave of absence in 1611 to serve in Virginia.<sup>20</sup> There, he strengthened the rules started by Sir Thomas Gates, began establishing settlements further upriver, strengthened and repaired Jamestown's fortifications, and, when he felt it was necessary, imposed martial law.<sup>21</sup>

Dale served with the Virginia Company in Virginia until May 1616, where he developed a reputation for strong military and civic virtue, which in turn caused his administration to be noted for both its harshness and progressiveness. He served as marshal, deputy governor and governor under the second Virginia Company Charter, during which time he implemented a program of decentralizing the settlements. He also implemented a land distribution program to those who had come over under the first charter. These programs are the first to clearly establish programs resembling those in use

in Ireland. His implementation of Virginia Company policy in establishing further settlements followed the patterns established in Ireland. These were characterized by strong fortified central settlements surrounded by fortified farms—in other words, strong bastide settlements surrounded by fortified bawnes. As stated previously, Sir Thomas Dale built another fort named Henricus at the fall line of the James River in 1611. This fort, like Jamestown, can be likened to a central bastide fortification. Additionally, Dale began establishing fortified plantations along the James River very similar to Irish bawnes. He is also reported to have built the first palisade across the peninsula on which Jamestown was located, near the fort at Henricus. His program of expansion follows patterns similar to those used in Ireland to expand control of colonies.

Dale returned to England in 1616 with Pocahontas and John Rolfe to promote the colony and its products, such as tobacco. In November 1617, he was appointed fleet commander for the East India Company and died in service to that organization in Java in 1619 or 1620.<sup>22</sup>

Samuel Argall was put in charge after Dale left. There is no record of him serving in Ireland or the Netherlands, but he maintained the policies of the Virginia Company, which promoted colonization of the New World similar to what the English were doing in Ireland. This could have been the result of his service as a captain of a 50-man militia company during Lord Delaware's tenure with experienced soldiers such as Sir George Yeardley. After first traveling to Jamestown with Lord Delaware in 1610, he left and returned to the colony several times before returning to Jamestown in May 1617 as Deputy Governor; he retained that position until April 1619, when he was relieved by Sir George Yeardley. During his tenure as governor, Argall maintained the strict rules of

Gates, Delaware, and Dale while strengthening Jamestown and expanding the area under English control, continuing to apply European lessons learned.<sup>23</sup>

When Argall arrived, he reported that the colony's defenses were again in disrepair. The palisade and church had fallen down, Jamestown's wharf was in ruins, and many of the colony's houses were uninhabitable. All throughout the colony houses, palisades and blockhouses had not been maintained and needed repair to be effective. Raising tobacco and sassafras distracted the colonists from just about everything else, including the upkeep of their defenses. Captain Argall insisted on fixing Jamestown's fortifications as his main base, despite some colonists' wishes to move it to Henricus, again validating the choice of the original colonists but also continuing with the application of Dutch lessons learned.<sup>24</sup>

In 1619, Sir George Yeardley, a veteran of the Dutch Wars, came to Virginia as Governor. He continued to apply lessons learned in Ireland and the Netherlands with one notable exception. His efforts on a new openness with the Native Americans ended the strict discipline and martial law that had been in effect for most of the colony's existence. He served as the colonial governor from April 1619 until shortly before the Indian uprising of 1622, and previously as acting governor from May 1616 until May 1617. He met Sir Thomas Gates while serving with an infantry company in the Netherlands and accompanied him to Jamestown in 1609. Gates made him captain of his guard in 1610 and then his lieutenant in 1611. When Yeardley arrived, he found that there were not adequate fortifications against attack, so he worked to restore the fortifications while also engaging the Chickahominy, forcing them to abide by a peace treaty they had made earlier with Sir Thomas Dale. He also implemented English Common Law. By 1620,

Yeardley was satisfied with his progress but asked for men with experience in the Netherlands to come to the colony to build more fortifications. In that year, he rebuilt a fort at Point Comfort and the gun platforms at the Jamestown fortifications.<sup>25</sup> He also turned his own property, Flowerdew Hundred, into a well fortified farm; like Jamestown, Flowerdew Hundred was one of the few English settlements that withstood the uprising in 1622 with relatively few deaths, while other places such as Martin's Hundred incurred many more.<sup>26</sup> It is apparent that, at both places, Yeardley had not let them forget that they always needed to be on their guard.

It seemed as if the Virginia Colony was secure. The survival rate was less than ideal, but Jamestown was still a land of opportunity. The March 22, 1622, surprise attack on the colony shocked the settlers out of the sense of security they had developed. Jamestown and a few other settlements fought off the attacks even though their defenses were not supposed to have been strong. Remembering the effects of the massed fires the Powhatans did not persist in attacking any well defended place they could not take by surprise.<sup>27</sup> The system of establishing fortified bastide towns such as Jamestown and Henricus surrounded by fortified farms such as Flowerdew Hundred gave many colonists a place of refuge and ultimately saved the colony. It is a credit to those early leaders who insisted fortifications and armament be placed appropriately that the colony was able to survive this devastating attack.

The collective experiences of these early colonists in the Netherlands and their implementation of the Virginia Company guidance, which incorporated the best practices from Ireland, contributed to the survival of the Jamestown Colony. Some like Wingfield, Ratcliffe, and Percy did not really help the colony grow and thrive. Though the negative

influence of the first two was balanced by the colonial council, the colony came closest to failure when there was no one to counteract Percy's inadequacy. These three leaders did not apply the lessons learned from the Netherlands or Ireland as the Virginia Company had instructed. Others like Smith, Gates, West, Dale, Argall, and Yeardley were strong, effective, albeit imperfect, leaders whose leadership helped the colony grow partly because they provided strong leadership and adequate defenses based on best practices learned in the Netherlands. Most of these men had important leadership positions in the Netherlands. Samuel Argall may not have been a leader in the Netherlands but he had been the captain of a ship and had served in a leadership capacity under Lord Delaware. The application of colonial organization based on the Irish model helped to set up a viable defense, thereby enabling the colony to establish itself and eventually thrive. The leaders that applied the lessons learned only helped the colony survive because they applied the lessons learned from Ireland and the Netherlands. They were not innovative but were simply applying what they knew.

## Endnotes

<sup>1</sup> This image available at [http://commons.wikimedia.org/wiki/File:1615\\_Maurits\\_Rott.jpg](http://commons.wikimedia.org/wiki/File:1615_Maurits_Rott.jpg). For a discussion of the medal found at Flowerdew Hundred, see James Deetz, *Flowerdew Hundred: The Archaeology of a Virginia Plantation, 1619-1863* (Charlottesville: University Press of Virginia, 1993) and Robert Leath, Dutch Trade and Its Influence on Seventeenth-Century Chesapeake Furniture at <http://www.chipstone.org/publications/1997AF/Leath/LeathArticle.html>. For references to the medal found at Jamestown, see “The Dig: July 2008—Historic Jamestowne” [http://historicjamestowne.org/the\\_dig/dig\\_2008\\_07\\_30.php](http://historicjamestowne.org/the_dig/dig_2008_07_30.php).

<sup>2</sup> Lessons Learned is a systematic process used by modern armies to collect, assess, share and integrate current and relevant lessons of the military profession into training and education. It was not a recognized process in the sixteenth century but it is a useful tool to describe how the English changed how they fought during this period. *Field Manual 7-1: Battle Focused Training* (Washington, DC: Headquarters, Department of the Army, September 2003), 6-12.

<sup>3</sup> *Field Manual 6-22: Leadership* (Washington, DC: Headquarters, Department of the Army, 2006), 1-1 and 9-1.

<sup>4</sup> Horn, *A Land as God Made It*, 53-54; Roberts.

<sup>5</sup> Hill, *Plantations*, 315, 316, 541, 551; Rowse, *Elizabethan Expansion*, 306-8.

<sup>6</sup> Horn, *A Land as God Made It*, 34; Haile, *Jamestown Narratives*, 66; Woolley, *Savage Kingdom*, 21-23, <http://www.virtualjamestown.org/Wingfield.html> (accessed June 20, 2008). Edward Maria Wingfield, ca. 1560 to sometime after 1613, like his kinsman Bartholomew Gosnold was from a distinguished family, famous for their knighthood and ancient nobility that predated before the Norman Conquest. Another was killed in battle during the English raid on Cadiz, Spain in 1596. Wingfield seems to have gotten into debt before following the family tradition of becoming a professional soldier.

<sup>7</sup> Woolley, *Savage Kingdom*, 104-6, 110-11, 135, 142; Haile, *Jamestown Narratives*, 54, 247-49. He also apparently did not completely lose the confidence of his fellow colonists as completely as Wingfield. His real name apparently was John Sicklemore, but John Smith believed it was the reverse—that his real name was John Ratcliffe and Sicklemore was an alias. John Smith’s version may be based on the belief that he was the Ratcliffe imprisoned in the tower for the gunpowder plot or a spy for Sir Robert Cecil in the Netherlands.

<sup>8</sup> For further discussion of the problems with captains, see Geoffrey Parker, *The Army of Flanders and the Spanish Road: The Logistics of Spanish Victory and Defeat in the Low Countries’ Wars*, 2nd ed. (Cambridge: Cambridge University Press, 2004); Charles Greig Cruickshank, *Elizabeth’s Army*, 2nd ed. (London, Oxford: Oxford University Press, 1966); Roberts, “Military Revolution”; Webb, *Elizabethan Military Science*.

<sup>9</sup> Webb, *Elizabethan Military*; Hale, *The Art of War and Renaissance England*; Cruickshank, *Elizabeth’s Army*; Boynton, *Elizabethan Militia*.

<sup>10</sup> John Smith, *Captain John Smith: A Selection of His Writings*, ed. Karen Ordahl Kupperman (Chapel Hill: University of North Carolina Press, 1988).

<sup>11</sup> Barbour, *The Three Worlds of Captain John Smith*, I:lvi-lvii, 3:377-84, referenced in Horn, 35; Haile, 59-60; Barbour, *The Complete Works of John Smith*, <http://etext.virginia.edu/etcbin/ot2www-smith?specfile=/web/data/collections/projects/jamestown/public/texts/www/smith> (accessed June 18, 2008).



<sup>12</sup> Barbour, *The Three Worlds of Captain John Smith* I: lvi-lvii, 3:377-84, referenced in Horn, 35; Haile, 59-60; Barbour, *The Complete Works of John Smith*. John Smith's Turkish enslaver sent Smith to Istanbul, where he was acquired by Lady Charatza Trabigzanda. In a tale that hints of unrequited love of her and a lack of cultural awareness, seemingly more akin to a modern romance novel than history, John Smith escaped his enslavement by killing her brother whom he thought was oppressing him.

<sup>13</sup> His travels were apparently more extensive than his peers and may have included the Hungarian triangular fortress at Komárom or Komorn, located on key terrain in the Hapsburg-Turkish frontier on the banks of the Danube, and Russian fortresses built using earth buttressed with wooden palisades. For a good view of the fort at Komorn, see Duffy, 68-69. For evidence that John Smith saw Komora and Russian wooden fortifications, see Barbour, *The Complete Works of John Smith*.

<sup>14</sup> Perhaps the "worst thing that never happened" this conspiracy is still remembered and celebrated in England today, discussion with Mick Jakeman, English amateur Historian, personal communication, Nuneaton, UK, June 3, 2003. It dramatically affected English attitudes and fears of the period.

<sup>15</sup> Haile, *Jamestown Narratives*, 497-519.

<sup>16</sup> Haile, *Jamestown Narratives*, 52-53.

<sup>17</sup> These laws can be found on line at <http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1056> (accessed June 18, 2008) or in Haile, *Jamestown Narratives*, 27.

<sup>18</sup> Haile, *Jamestown Narratives*, 46-47, 891-915. Sir Thomas Gates, ca. 1559 to 1621, also was a soldier that fought in the Dutch wars. See also Kingsbury, *Virginia Company Records* for a transcription of the complete letter.

<sup>19</sup> Woolley, *Savage Kingdom*, 365; Haile, *Jamestown Narratives*, 64-65; 458-59. Purchas, Hakluytus Posthumus 19:60-61; Haile, *Jamestown Narratives*, 458-459; Samuel M. Bemiss, *The Three Charters of the Virginia Company of London: 1606-1621* (Williamsburg, VA, 1957), 72; David H. Flaherty, ed., *Lawes Divine, Morall and Martiall, etc.* (Charlottesville, VA., 1969), x-xxxv, referenced in Horn, 308; <http://etext.lib.virginia.edu/etcbin/jamestown-browse?id=J1034> (accessed July 5, 2008).

<sup>20</sup> Haile, *Jamestown Narratives*, 45-46; McCartney, *Virginia Immigrants and Adventurers*, 239-40.

<sup>21</sup> Haile, *Jamestown Narratives*, 45-46; McCartney, *Virginia Immigrants and Adventurers*, 239-40.

<sup>22</sup> Haile, *Jamestown Narratives*, 45-46; McCartney, *Virginia Immigrants and Adventurers*, 239-40; Woolley, *Savage Kingdom*, 329.

<sup>23</sup> McCartney, *Virginia Immigrants and Adventurers*, 88-89; Haile, *Jamestown Narratives*, 42-42.

<sup>24</sup> Horn, *A Land as God Made It*, 237. A Map of the James River of c.1617 shows the locations of Argall's Town, see Michael Jarvis and Jeroen van Driel, "The Vingaboons Chart of the James River, Virginia, circa 1617," *William and Mary Quarterly* 3d ser., 54 (1997), 386. Also references Irene Hecht, "The Virginia Colony, 1607-1640: A Study in Frontier Growth" (PhD diss., University of Washington, 1969), 79.

<sup>25</sup> McCartney, *Virginia Immigrants and Adventurers*, 771-74.

<sup>26</sup> Deetz, *Flowerdew Hundred*, 45-48.

<sup>27</sup> D. A. Tisdale, *Soldiers of the Virginia Colony 1607-1699* (Richmond, VA: Deitz, 2000), 26-28

## **CHAPTER VI**

### **CONCLUSION**

By simply doing what they knew, the Virginia colonists were able to make their colony survive and eventually thrive. Jamestown's early leadership synthesized defensive techniques learned during England's support of the Dutch War for Independence and organizational techniques learned in their attempts to colonize Ireland to help the colony survive in the critical early years of the colony from 1607 to 1622. English adventurers had tried since the 1500s to set up colonies in the New World and Ireland. Success only came after England made peace with Spain and after a truce during the Dutch Revolt. These events made it less likely that the Spanish empire would attack England or its colonial ventures. They also freed up manpower from Netherlands and the defense of England for the Jamestown venture and many others. The men that were freed up came with vast experience from trying to organize colonies in Ireland and fighting a defensive war in the Netherlands. The application of these experiences by able leaders was responsible for Jamestown's survival. Recent scholarship, looking again at primary source material and interpreting archaeological discoveries and historical scholarship, has begun to show more positively Jamestown's contribution to the development of America and how the experiences in the Netherlands and Ireland facilitated the successful English colonization of the New World.

The earliest colonists used their experiences in early Irish colonization and fighting in the Netherlands to plant the first successful English colony in North America at Jamestown. They were adept at selecting the sites for their bases and then building fortifications that would adequately protect them. Their simple wood and earth forts fulfilled the purpose of protecting the first colonists from the ever-present threat of sea or land attacks from Native Americans, French, Dutch, or Spanish, and showed an up-to-date comprehension of current fortification techniques currently being employed elsewhere at that time. They lacked the geometric precision and detail of Old World fortifications but incorporated key components of the Dutch school of fortification and were more than effective against their adversaries. The earth and wood construction of the fortifications contributed to their decay if they were not maintained constantly. The early colonists also concentrated or massed the gunfire of their fortifications, using interlocking, supporting fires between bastions, or in the form of massed formations when they ventured from the fort under the right leadership. The English colonial leadership also applied the colonization techniques being refined in Ireland and the materials they had on hand to develop an effective means of defending and establishing their colony. From the central fortification of Jamestown, they built fortified farms that eventually enabled the colony to expand. In short, Jamestown's early leadership's application of the collective English experiences from the Netherlands and Ireland helped the colony survive. John Smith, Sir Thomas Gates, Lord Delaware, and Sir Thomas Dale all insisted that everyone be trained to defend the colony, implementing weekly drill to ensure this goal was accomplished. The leaders would not have been successful without the collective experiences from both Ireland and the Netherlands.

By the early 1600s, by simply doing what they knew, the English had the capabilities to make a colony like Jamestown survive. They effectively organized the colony to set up a viable defense and eventually were able to expand the colony using the techniques that were beginning to have success in Ireland. The fortifications they used and their methods of colonization came from their collective experience, especially that of their key leaders. They learned practical techniques of colonization and fortification in Ireland and the Netherlands, which enabled them to successfully colonize Virginia. The basic concepts they used for colonization and defense were based on the late sixteenth- and early seventeenth-century practices of English adventurers in Ireland and contemporary Dutch fortification techniques. The original leadership chose the location for their new colony based on guidance contained in their charter, one hundred miles from the mouth of the river, on strong ground.

The Jamestown colonists immediately set up temporary fortifications upon their arrival, perhaps modeled after temporary fortifications they had learned to make in the Dutch Wars. After Native American attacks killed one colonist and wounded eleven on May 26, they quickly built a much stronger fortification, completing the first iteration of the first Jamestown fortifications by June 15, 1607, while part of their group were exploring, cutting down trees for clapboard, or guarding those building the fort.

The triangular fort had three bastions mounted with several cannons at each angle, with the most elaborate bastions nearest the James River roughly corresponding with the Zuniga map from the Spanish Archives. The defensive capabilities of James Fort were extensive. Within time the fort had streets of “a good breadth” that could be covered by fire from guards or small field pieces placed in the square. The written accounts from the

period consistently describe the initial fortifications as a triangular wooden palisade with three well-armed bulwarks. As the American adaptation of the “bastide” fortifications used in Ireland, it laid the groundwork for successful establishment and expansion of the colony. William Strachey’s 1610 description of the fort at Jamestown, the most detailed eyewitness account of the early Jamestown fortification, describes a fort that follows the basic guidance of the Virginia Company and shows a strong similarity to Irish colonial bastide towns. It is difficult to ascertain exactly what Jamestown’s fortifications looked like during this period. There is evidence that after 1610 the triangular fort was either allowed to decay or was restructured to cover a much larger area. William Kelso believes that the fort maintained this shape until William Strachey could measure it but then was modified to cover a much larger area, as described by Ralph Hamor in his description of a town with a “handsome form” with “two fair rows of houses . . . newly and strongly impaled.” This expansion of the fort resulted in the church and most likely the rest of the marketplace, including the storehouse and guardhouse, being moved, making that location a new center for the town’s inner defenses.

Sir Thomas Dale began the expansion of the colony with the construction of Henricus at the fall line of the James River in 1611. By this time, Sir Thomas Gates had built himself a substantial residence at Jamestown, the palisade had been kept up, watchtowers built, the west bulwark raised up, and two blockhouses built outside the fort for early warning of attack. Sir Thomas Dale began establishing fortified settlements resembling Irish bawnes, spreading the colony out along the James River. He is reported to have also built the first palisade across the peninsula that on which Jamestown was settled, near the fort at Henricus. His program of expansion follows patterns similar to

those used in Ireland to expand control of colonies. This expansion was what the Virginia Company wanted.

When Captain Samuel Argall, governor of the Virginia Colony from 1616-1617, arrived at Jamestown, he found the colony's defenses again in disrepair. The palisade and church had fallen down, Jamestown's wharf was in ruins, and many of the colony's houses were uninhabitable. All throughout the colony, houses, palisades, and blockhouses had not been maintained and needed repair to be effective. Raising tobacco and initially sassafras apparently distracted the colonists from just about everything else including the upkeep of their defenses. Although Argall had apparently not served in the Netherlands or Ireland, his work with earlier veterans such as Sir George Yeardley under Lord Delaware gave him the basic knowledge he needed to keep the colony going. Captain Argall focused on fixing Jamestown's fortifications as his main base, despite some colonists' wishes to move it to Henricus, providing further support for the choice of the original colonists. In 1619 Sir George Yeardley, a veteran of the Dutch Wars, came to Virginia as Governor. His efforts on a new openness with the Native Americans did not include aggressively keeping up the fortifications in outlying areas. He did ensure, however, that the fortifications at Jamestown and his own plantation at Flowerdew Hundred were kept up. With the end of martial law, the constant drilling that had kept the colonists prepared for an attack was also allowed to lapse.

The relative lack of problems with the Native Americans since John Rolfe had married Pocahontas made it seem as if the Virginia Colony was secure. The survival rate was not great, but Jamestown was still a land of opportunity. The March 22, 1622, surprise attack on the colony shocked the settlers out of the sense of security they had

developed. Jamestown and a few other settlements fought off the attacks even though their defenses were not supposed to have been strong. The Powhatans did not persist in attacking any place they thought might be well protected. They still remembered what the massed fires of the English under Gates, Smith, and Dale had done. The system of establishing fortified bastide towns such as Jamestown and Henricus surrounded by fortified farms such as Flowerdew Hundred gave many colonists a place of refuge and saved the colony. It is a credit to the early leaders that they insisted fortifications and armament were placed appropriately, enabling the colony to survive this devastating attack.

There was internecine warfare between the colonists and the Native Americans until 1644. In the 1630s, a large number of predominantly male laborers flooded the colony helping it to grow stronger and become firmly established. Opitchapam died about 1630, allowing Opechancanough to become the undisputed paramount chieftain of the Powhatan Confederation. He was finally defeated and killed by vengeful colonists after the 1644 uprising. The irony was that both the 1622 and 1644 attacks were a forlorn hope. By 1622, Jamestown was firmly established, and the floodgates of English colonization of the New World were open. English experiences in the Netherlands and Ireland applied by capable veterans and their protégés had ensured that.

## REFERENCES

### Primary Sources

- A collection of such orders and conditions, as are to be obserued by the vndertakers, vpon the distribution and plantation of the eschaeted lands in Vlster.* London: Robert Barker, 1608. Early English Books Online. Reel position: STC/1012:09. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu/home>.
- Anghiera, Pietro Martire d'. *The famous historie of the Indies declaring the aduentures of the Spaniards, which haue conquered these countries, with varietie of relations of the religions, lawes, gouernments, manners, ceremonies, customes, rites, warres, and funerals of that people. Comprised into sundry decads. Set forth first by Mr Hackluyt, and now published by L.M. Gent., London : Printed [by Thomas Dawson] for Michael Sparke dwelling at the signe of the blue Bible in Green-Arbor.* 1628. Reel position: STC/819:05. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu>.
- Bacon, Sir Francis. "of Plantations" in *The Essayes or Counsels, Civill and Morall*. Norwalk, CT: Easton Press, 1980.
- Barbour, Philip L. *The Three Worlds of Captain John Smith*. Boston: Houghton Mifflin, 1964.
- , ed. *The Complete Works of Captain John Smith (1580-1631)*. Chapel Hill: University of North Carolina Press, 1986.
- , ed. *The Jamestown Voyages under the First Charter 1606-1609*. London: published for the Hakluyt Society [by] Cambridge UP, 1969.
- Bradford, William. *Of Plymouth Plantation: 1620-1647*, New York: Modern Library College Editions, Random House, 1981.
- Brady, Ciaran, ed. *A Viceroy's Vindication: Sir Henry Sidney's Memoir of Service in Ireland, 1556-1578*. Baldoyle, CO: Cork University Press, ColourBooks, Dublin, 2002.



- Burrage, Henry S., ed. *Early English and French Voyages: Chiefly from Hakluyt 1534-1608*. Original Narratives of Early American History. New York: Charles Scribner's Sons, 1930.
- Byrchensha, Raph. *A discourse occasioned vpon the late defeat, giuen to the arch-rebels, Tyrone and Odonnell, by the right Honourable the Lord Mountioy, Lord Deputie of Ireland, the 24. of December, 1601. being Christmas Eaue and the yeelding vp of Kinsale shortly after by Don Iohn to his Lordshippe: by Raph Byrchensha Esquire, Controller Generall of the musters in Ireland. Seene and allowed*. London: Printed [by R. Bradock] for M[atthew] L[ownes] and are to be sold in Saint Dunstans Church-yarde, 1602. Bib Name/Number: STC (2nd ed.)/3081 No. pages: [34] p. Copy from Henry E. Huntington Library and Art Gallery.
- Caesar, Julius. *The Battle for Gaul*. Translated by Anne and Peter Wiseman. Boston: David R. Godine, 1980.
- de la Vega, Garcilaso. *The Florida of the Inca*. Translated and edited by John Grier Garner and Jenette Johnson Varner. Austin: The University of Texas Press, 1996.
- Digges, Leonard. *An arithmetically militare treatise, named Stratoticos compendiously teaching the science of nu[m]bers, as vvell in fractions as integers, and so much of the rules and aequations algebraicall and arte of numbers cossicall, as are requisite for the profession of a soldiour. Together with the moderne militare discipline, offices, lawes and dueties in euey wel gouerned campe and armie to be obserued: long since atte[m]pted by Leonard Digges Gentleman, augmented, digested, and lately finished, by Thomas Digges, his sonne*. London: Printed by Henrie Bynneman, 1579. Reel position: STC/419:04. Copy from Henry E. Huntington Library and Art Gallery.  
<http://eebo.chadwyck.com.echo.louisville.edu>.
- Edmondson, Sir Clement. *Observations vpon the five first bookes of Caesars commentaries*. 1600. Reel position: STC/219:03. Copy from University of Illinois (Urbana-Champaign Campus).  
<http://eebo.chadwyck.com.echo.louisville.edu/home>.
- Encyclopaedia Britannica, 1990, s.v. "Bacon, Sir Francis, *Advancement of Learning, Novum Organum, and the New Atlantis*."
- Encyclopaedia Britannica, 1990, s.v. "Shakespeare, William, 'The Tempest,'" *Complete Works*.
- Encyclopaedia Britannica, 1990, s.v. "Tacitus, P. Cornelius, *The Annals and Histories*."

- Freitag, Adam. *Architectura Militaris Nova et Aucta oder Neue Vermehrte Fortification*. Leyden, 1630. Republished as *L'Architecture Militaire ou la Fortification Nouvelle*. Paris: Guillaume de Luyne, 1668.
- Gheyn, Jacob de. *The exercise of armes for caliuers, muskettes, and pikes After the ordre of his Excellence. Maurits Prince of Orange Counte of Nassau etc. gouvernour and capitaine generall. ouer Geldreland. Holland, Zeeland, Vtrecht. Overyssel. etc. Sett forthe in figures. by Iacob de Gheyn. With written instructions. for the service of all captaines and comaundours. For to shewe hereout the better vnto their jong or vntrayned souldiers the playne and perfett maner to handle these armes., [Amsterdam and/or the Hage]: They are toe bye at Amsterdam by Robert de Baudous. 1608 Printed at the Hage. With priviledge of the Emperours Matie. the King of Fraunce, and the noble and mightye Estates General of the vnited Provinces. 1608. Reel position: STC/596:02. Copy from Cambridge University Library. <http://eebo.chadwyck.com.echo.louisville.edu>.*
- Gottfried, Johann Ludwig. *Die Neue Welt und Americanische Historien*. Germany, 1631. Facsimile reproduction. Stuttgart: Fackelverlag, 1980.
- Haile, Edward Wright, ed. *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, The First Decade: 1607-1617*. Champlain, VA: Roundhouse, 1998.
- Hakluyt, Richard. *A particular Discourse concerning Western Discoveries, written in the year 1584, by Richard Hakluyt, of Oxford, at the request and direction of the right worshipful Mr. Walter Raleigh, before the coming home of his two barks.* <http://odur.let.rug.nl/~usa/D/1501-1600/hakluyt/plant.htm>.
- . *Divers Voyages Touching the Discoverie of America*. Ann Arbor: University Microfilms, Inc., A Division of Xerox, 1966.
- . *The Principal Navigations Voi[y]ages and Discoveries of the English Nation, Vols. 1 and 2*. Cambridge: The Cambridge University Press, 1965.
- . *Virginia richly valued, by the description of the maine land of Florida, her next neighbour out of the foure yeeres continuall trauell and discoverie, for aboue one thousand miles east and west, of Don Ferdinando de Soto, and sixe hundred able men in his companie. Wherin are truly obserued the riches and fertilitie of those parts, abounding with things necessarie, pleasant, and profitable for the life of man: with the natures and dispositions of the inhabitants. Written by a Portugall gentleman of Eluas, employed in all the action, and translated out of Portugese by Richard Hakluyt., At London: Printed by Felix Kyngston for Matthew Lownes, and are to be sold at the signe of the Bishops head in Pauls Churchyard, 1609.* Reel position: STC/939:18. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu>.

Hariot, Thomas. *A briefe and true report of the new found land of Virginia of the commodities and of the nature and manners of the naturall inhabitants. Discovered by the English colon there seated by Sir Richard Greinuile Knight in the eere 1585.* 1590. Reel position: STC/246:03. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu>.

———. *A briefe and true report of the new found land of Virginia of the commodities there found and to be rayseed, as well marchantable, as others for victuall, building and other necessarie vses for those that are and shalbe the planters there; and of the nature and manners of the naturall inhabitants: discovered by the English colony there seated by Sir Richard Greinuile Knight in the yeere 1585. which remained vnder the gouernment of Rafe Lane Esquier, one of her Maiesties Equieres, during the space of twelue monethes: at the speciall charge and direction of the Honourable Sir Walter Raleigh Knight, Lord Warden of the stanneries; who therein hath beene fauored and authorised by her Maiestie and her letters patents: directed to the aduenturers, fauourers, and welwillers of the action, for the inhabiting and planting there: by Thomas Hariot; seruant to the abouenamed Sir Walter, a member of the Colony, and there employed in discovering.* London, 1588. Reel position: STC/546:14. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu>.

Quinn, David B., and Alison M. Quinn. *The First Colonists: Documents on the Planting of the First English Settlements in North America 1584-1590.* Raleigh: North Carolina Department of Cultural Resources Division of Archives and History, 1995.

Smith, John. *The Generall Historie of Virginia, New-England and the Summer Isles,* Facsimile reproduction. Milan: The World Publishing Company, 1966.

———. *Captain John Smith: A Selection of His Writings.* Edited by Karen Ordahl Kupperman. Chapel Hill: University of North Carolina Press, 1988.

Smythe, Sir John. *Certen] instruct[ions, obseruati]ons and orders militarie, requisit for all chieftaines, captaines [and?] higher and lower men of charge, [and officers] to vnderstand, [knowe and obserue]/Composed by Sir Iohn Smythe, knight, 1591. And now first imprinted. 1594.* London, 1594. Reel position: STC/421:17. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu/home>.

Speed, John. *A prospect of the most famous parts of the vworld.* London, 1631. Reel position: STC/1642:11a. Copy from British Library. <http://eebo.chadwyck.com.echo.louisville.edu/home>.

Stafford, Sir Thomas, fl. 1633. *Pacata Hibernia Ireland appeased and reduced: or, an historie of the late vvarres of Ireland, especially within the province of Mounster,*

*under the government of Sir George Carew, Knight, then Lord President of that province, and afterwards Lord Carew of Clopton, and Earle of Totnes, &c. VVherein the siede of Kinsale, the defeat of the Earle of Tyrone, and his armie; the expulsion and sending home of Don Iuan de Aguila, the Spanish generall, with his forces; and many other remarkeable passages of that time are related. Illustrated with seventeene severall mappes, for the better understanding of the storie.* London: Printed by A[ugustine] M[athewes], 1633. And part of the impression made over, to be vented for the benefit of the children of Iohn Mynshew, deceased, [1633] Date: 1633 Bib Name/Number: STC (2nd ed.)/23132a No. pages: [14], 391, [1] p., [19] plates (16 folded). Copy from Henry E. Huntington Library and Art Gallery.

Styward, Thomas. 1582. *Ianuarij decimus. The pathwaie to martiall discipline Now newly imprinted, and deuided into three bookes. Wherevnto is added the order and vse of the Spaniards in their martiall affaires: which copie was lately found in the fort in Ireland, where the Spaniards and Italians had fortified themselues. The first booke: entreateth of the offices from the highest to the lowest, with the lawes of the field, arming, mustering, and training of souldiers. The second boore [sic]: entreateth of sundrie proportions and training of caleeuers, and how to bring bowes to a great perfection of seruice: also how to march with a campe royall: with diuers tables annexed for the present making of your battells, as otherwise to know how many paces they require in their march & battels from 500. to 10000. The third booke: comprehendeth the very right order of the Spaniards, how to traine, march, and encampe, with diuers tables therein contained.* London, 1582. Reel position: STC/333:08. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu>.

Whithorne, Peter, fl. 1550-1563. *Certaine vvayes for the ordering of souldiours in battelray, and setting of battayles, after diuers fashions with their manner of marching: and also fugures [sic] of certayne neue plattes for fortification of townes: and moreover, howe to make saltpeter, gunpowder and diuers sortes of fireworkes or wilde fyre, with other thinges appertayning to the warres./Gathered & set forth by Peter Whitehorne.* Imprinted at London: by VV. VVilliamson for Ihon VVight, 1573. No. pages: [107] p. Copy from Henry E. Huntington Library and Art Gallery. <http://eebo.chadwyck.com.echo.louisville.edu>.

Whithorne, Peter, fl. 1550-1563. *Certaine vvayes for the ordering of souldiours in battelray, and setting of battailles, after diuers fashions with their manner of marching: and also fugures [sic] of certaine neue plattes for fortification of townes: and moreouer, how to make saltpeter, gounpowder and diuers sortes of fireworkes or wilde fire, with other thinges appertayning to the warres./Gathered & set forth by Peter Whitehorne.* Imprinted at London: by Thomas East for Ihon VVight, 1588. No. pages: 48, [7] p. Copy from Henry E. Huntington Library and Art Gallery.

Winthrop, John, Richard S. Dunn, and Laetitia Yeandle, eds. *The Journal of John Winthrop 1630-1649*. Cambridge, MA: The Belknap Press of Harvard University Press, 1996.

### Secondary Sources

"A Jamestown Timeline." <http://www.historyisfun.org/pdf/Curriculum-Materials/A%20Jamestown%20Timeline.pdf>.

Applebaum, Robert, and John Wood Sweet, eds. *Envisioning an English Empire: Jamestown and the Making of the North Atlantic World*. Philadelphia: University of Pennsylvania Press, 2005.

Arana, Luis Rafael. *Defenses and Defenders at St Augustine: A Collection of Writings, El Escribano, Vol 36*. Edited by Jean Parker Waterbury. N.p.: The St. Augustine Historical Society, 1999.

Arnold, Thomas F. *The Renaissance at War*. London, England: Cassell, 2002.

Asprey, Robert B. *War in the Shadows: The Guerilla in History: Two Thousand Years of the Guerilla at War from Ancient Persia to the Present*. New York: William Morow and Company, 1994.

Axtell, James. "Historical Rivalry: Virginia's Jamestown was the continent's first permanent English settlement. So how is that Massachusetts's Plymouth has precedence in the minds of so many Americans?" *Colonial Williamsburg Journal* (Winter 2007). Online at [www.history.org](http://www.history.org).

Barnard, T. C. "Crises of Identity among Irish Protestants, 1641-1685." *Past & Present* 127 (1990): 39-83.

Blumberg, Arnold. "A Fundamental Element of Classical Roman Warfare, the Marching-camp Was Both an Offensive and Defensive Tool." *Military Heritage* (June 2004): 10-15.

Boynton, Lindsey. *The Elizabethan Militia 1558-1638*. London: Routledge & Kegan Paul Limited, 1967.

Breen, T. H. "The Covenanted Militia of Massachusetts Bay: English Background and New World Development." In *Puritans and Adventurers: Change and Persistence in Early America*, 24-45. Oxford: Oxford University Press, 1980.

Brown, Kathleen M. *Good Wives, Nasty Wenches, & Anxious Patriarchs, Gender, Race, and Power in Colonial Virginia*. Chapel Hill: The University of North Carolina Press, 1996.

- Canny, Nicholas. *Making Ireland British 1580-1650*. New York: Oxford University Press, 2001.
- Canny, Nicholas P. *The Elizabethan Conquest of Ireland: A Pattern Established 1565-76*. Hassocks, Sussex, England: The Harvester Press Limited, 1976.
- Carlton, Charles. *Going to the Wars: The Experience of the British Civil Wars, 1638-1651*. New York: Routledge, 1992.
- Caruana, Adrian B. *Tudor Artillery 1485-1603, Historical Arms Series No.30*. Bloomfield, Ontario: Museum Restoration Service, 1992.
- Centuries of Service: The U.S. Army 1775-2005*. Washington, DC: U.S. Government Printing Office, 2005.
- Chambers II, John Whiteclay, and G. Kurt Piehler, eds. *Major Problems in American Military History*. Boston: Houghton Mifflin Company, 1999.
- Chartrand, René. *The French Soldier in Colonial America, Historical Arms Series No.18*. Bloomfield, Ontario: Museum Restoration Service, 1984.
- Chet, Guy. *Conquering the American Wilderness: The Triumph of European Warfare in the Colonial Northeast*. Amherst: University of Massachusetts Press, 2003.
- Clausewitz, Carl Von. *On War*. Edited by Anatol Rapoport. New York: Penguin, 1982.
- College of William and Mary. "Extreme Droughts Played Major Role in Tragedies at Jamestown, 'Lost Colony.'" *ScienceDaily*, April 28, 1998.  
<http://www.wm.edu/wmnews/042398/drought.html>.
- Craven, Wesley Frank. *The Dissolution of the Virginia Company: The Failure of a Colonial Experiment*. N.p.: Oxford University Press, 1932.
- . *The Virginia Company of London, 1600-1624, Jamestown 350th Anniversary Historical Booklet Number 5*. Williamsburg, VA: Virginia 350th Anniversary Celebration Corporation, 1957.
- Creveld, Martin Van. *Supplying War: Logistics from Wallenstein to Patton*. New York: Cambridge University Press, 1992.
- Cruikshank, Charles Greig. *Elizabeth's Army*. 2nd ed. London: Oxford University Press, 1966.
- Dederer, John Morgan. *War in America to 1775: Before Yankee Doodle*. New York: New York University Press, 1990.

- Deetz, James. *Flowerdew Hundred: The Archaeology of a Virginia Plantation, 1619-1863*. Charlottesville: University Press of Virginia, 1993.
- , and Patricia Scott Deetz. *The Times of Their Lives: Life, Love and Death in Plymouth Colony*. New York: W. H. Freeman and Company, 2000.
- Doughty, Robert A., et al. *American Military History and the Evolution of Warfare in the Western World*. Lexington: D.C. Heath, 1996.
- Duffy, Christopher. *Siege Warfare: The Fortress in the Early Modern World 1494-1660*. New York: Barnes and Noble Press, 1979.
- Dunnigan, Brian Leigh. *Forts within a Fort. Niagara's Redoubts*. Youngstown, New York: Old Fort Niagara Association, 1989.
- Dyck, Ludwig Heinrich. "Germanic Tribe Run Amok: Caesar's Conquest of Gaul began with his battle against Ariovistus, King of the Suebi." *Military Heritage* (August 2004): 68-73, 90.
- Ellis, Steven G. *Ireland in the Age of the Tudors: English Expansion and the End of Gaelic Rule*. London: Longman, 1998.
- Fausz, J. Frederick. "Fighting Fire with Firearms; The Anglo-Powhatan Arms Race in Virginia." *American Indian Culture and Research Journal* 3 (1979): 33-50.
- Ferling, John E. *A Wilderness of Miseries: War and Warriors in Early America, Contributions in Military History, Number 22*. Westport, CT: Greenwood Press, 1980.
- Ferrill, Arther. *The Origins of War, From the Stone Age to Alexander the Great*. Rev. ed. Boulder: Westview Press, 1997.
- Field Manual 3-0 Operations*. Washington, DC: Department of the Army, June 2001.
- Fissel, Mark Charles. *English Warfare, 1511-1642, Warfare in History*. London: Routledge, 2001.
- . *The Bishop's Wars: Charles I's Campaigns against Scotland 1638-1640*. Cambridge: University Press, 1994.
- Foster, Roy. *The Oxford Illustrated History of Ireland*. Oxford: Oxford University Press, 2000.
- Fundaburk, Emma Lila, ed. *Southeastern Indians Life Portraits, A Catalogue of Pictures: 1564-1860*. Tallahassee, FL: Rose Printing Company, Inc., 1996.

- Garvan, Anthony. *Town Planning in Colonial Connecticut*. New Haven: Yale University Press, 1951.
- Gidwitz, Tom. "The Little Colony That Couldn't: A Short Lived Settlement Founded in Maine in 1607 Could Have Changed the Course of American History—If Only It Had Survived." *Archaeology* (March/April 2006): 30-35.
- Gleach, Frederic W. *Powhatan's World and Colonial Virginia: A Conflict of Cultures*. Lincoln: University of Nebraska Press, 1997.
- Goetz, Dorothea. *Die Anfänge der Artillerie*. Berlin: Military Verlag der Deutschen Demokratische Republik (DDR Military Publishing), 1985.
- Gooding, James S. *An Introduction to British Artillery in North America, Historical Arms Series No.4*. Bloomfield, Ontario: Museum Restoration Service, 1988.
- John Grenier. *The First Way of War: American War Making on the Frontier*. New York: Cambridge University Press, 2005.
- Gulvin, Keith R. *Fort Amherst: A Brief History and Guide*. Maidstone, Kent: Albion Printers, n.d.
- Haile, Edward Wright, ed. *Jamestown Narratives: Eyewitness Accounts of the Virginia Colony, the First Decade: 1607-1617*. Champlain, VA: Roundhouse, 1998.
- Hale, J. R. *War and Society in Renaissance Europe: 1450-1629*. Baltimore: The Johns Hopkins University, 1985.
- Hale, John R. *The Art of War and Renaissance England*. Washington: The Folger Shakespeare Library, 1961.
- Hanson, Victor Davis. *The Western Way of War: Infantry Battle in Classical Greece*, Berkeley: University of California Press, 1989.
- Haynes, Allan. *The Gunpowder Plot*. London: Grange Books, 1994.
- Hibbert, Christopher. *Cavaliers and Roundheads: The English at War 1642-1649*. London: Harper Collins Publishers, 1993.
- Hill, George. *An Historical Account of the Plantation in Ulster at the Commencement of the Seventeenth Century*. Shannon, Ireland: Irish University Press, 1970.
- Hill, James Michael. *Celtic Warfare, 1595-1763*. New York: New York University Press, 1990.



- Hoof, J. P. C. M. Van. "Fortifications in the Netherlands (1500-1940)." *International Review of Military History* no. 58 (1984): 97-104.
- Horn, James. *A Land as God Made It: Jamestown and the Birth of America*. New York: Basic Books, A Division of Perseus Books Group, 2005.
- Hume, Ivor Noël. *Martin's Hundred: A Firsthand Account of One of the Most Important Excavations in American Historical Archeology: The Discovery of a Lost Plantation—and the Most Extensive Evidence We Have of English Colonial Life in Early Seventeenth-century Virginia*. New York: Alfred A. Knopf, 1982.
- Imhof, Dr. Arthur Erwin. *Der Friede von Vervins 1598*. Verlag Aarau: Keller, 1966.
- Jones, Archer. *The Art of War in the Western World*. New York: Oxford University Press, 1987.
- Jones, David E. *Native North American Armor, Shields and Fortifications*. Austin: University of Texas Press, 2004.
- Karr, Ronald Dale. "'Why Should You Be So Furious?': The Violence of the Pequot War." *Journal of American History* 85 (1998): 876-909.
- Keegan, John. *The Book of War: 25 Centuries of Great War Writing*. New York: Penguin, 2000.
- Keegan, John. *The Face of Battle*. New York: Penguin, 1983.
- Kelso, William M. *Jamestown: The Buried Truth*. Charlottesville: University of Virginia Press, 2006.
- Kelso, William M. *Kingsmill Plantations 1619-1800: Archaeology of Country Life in Colonial Virginia Studies in Historical Archaeology*. Orlando: Academic Press, Inc., 1984.
- , with Beverly Straube. *Jamestown Rediscovery: 1994-2004*. N.p.: Association for the Preservation of Virginia Antiquities, 2004.
- Kerrigan, Paul. *Castles and Fortifications in Ireland 1485-1945*. Cork, Ireland: The Collins Press, 1995.
- Kingdon, Robert M. *Myths about the St. Bartholomew's Day Massacres 1572-1576*. Cambridge, MA: Harvard University Press, 1988.
- Kupperman, Karen Ordahl. *Roanoke: The Abandoned Colony*. Totowa, NJ: Rowman and Allanheld, 1984.

- . “Presentment of Civility: English Response to American Self-Presentation, 1580-1640.” *William and Mary Quarterly* 3d ser., 54 (1997): 193-228.
- . *The Jamestown Project*, Cambridge, MA: Belknap Press of Harvard University Press, 2007.
- Landmarks of Liberty*. Maplewood, NJ: Hammond Incorporated, 1970.
- Lee, Wayne E. “Fortify, Fight or Flee: Tuscarora and Cherokee Defensive Warfare and Military Culture Adaptation.” *The Journal of Military History* 68 (July 2004): 713-70.
- Lenihan, Pádraig, ed. *Confederate Catholics at War 1641-49*. In *Studies in Irish History*. Edited by Nicholas Canny. Cornwall, UK: Cork University Press for the Irish Committee for Historical Sciences, 2001.
- , ed. *Conquest and Resistance: War in Seventeenth Century Ireland*. Leiden, the Netherlands: Koninklijke Brill NV.
- Lepore, Jill. *The Name of War: King Philip's War and the Origins of American Identity*. New York: Vintage Books, A Division of Random House, 1999.
- Lewis, Emanuel Raymond. *Seacoast Fortifications of the United States: An Introductory History*. Missoula, MT: Pictorial Histories Publishing Company, 1990.
- Longate, Norman. *Defending the Island: From Caesar to the Armada*. Glasgow: Grafton Books, 1990.
- Luttwak, Edward N. *The Grand Strategy of the Roman Empire: From the First Century A.D. to the Third*. Berkeley: University of California Press, 1989.
- Lynn, John A. *Battle: History of Combat and Culture*. Boulder, CO: Westview Press, 2003.
- McCartney, Martha W. *Virginia Immigrants and Adventurers 1607-1635: A Biographical Dictionary*. Baltimore: Genealogical Publishing Co., Inc., 2007.
- McNeill, William H. *The Pursuit of Power; Technology, Armed Force and Society since A.D. 1000*. Chicago: The University of Chicago Press, 1984.
- Menon, Shanti. “Grimness of Mythic Proportions—Jamestown Colony Experienced Drought—Brief,” *Discover* (Jan. 1999).  
[http://findarticles.com/p/articles/mi\\_m1511/is\\_1\\_20/ai\\_53501786](http://findarticles.com/p/articles/mi_m1511/is_1_20/ai_53501786) (accessed June 19, 2008).

- Milanich, Jerald T., and Susan Milbraith, eds. *First Encounters: Spanish Exploration in the Caribbean and the United States, 1492-1570*. Gainesville, FL: University of Florida, 1991.
- Miller, Lee. *Roanoke: Solving the Mystery of the Lost Colony*. New York: Arcade Publishing, 2000.
- Milton, Giles. *Big Chief Elizabeth: How England's Adventurers Gambled and Won the New World*. London: Hodder and Stoughton, 2001.
- Morgan, Edmund S. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. New York: W. W. Norton & Company, 1975.
- Nickle, Barry Harold. "The Military Reforms of Prince Maurice of Orange." PhD diss., University of Delaware, 1975. In Xerox University Films.
- National Geographic*, s.v. "Jamestown" and "Martin's Hundred."
- Nolan, John S. "The Militarization of the Elizabethan State." *Journal of Military History* 58 (1994): 391-420.
- Online at <http://www.gutenberg.org/dirs/etext03/vgrtl10.txt>.
- Osborne, Ken, ed. *Dover Castle*. London: English Heritage, 1988.
- Paret, Peter, ed. *Makers of Modern Strategy from Machiavelli to the Nuclear Age*. Princeton: Princeton University Press, 1986.
- Parker, Geoffrey. *The Military Revolution: Military Innovation and the Rise of the West 1500-1800*. Cambridge, UK: Cambridge University Press, 1996.
- . *Cambridge Illustrated History of Warfare*. Cambridge: Cambridge University Press, 2000.
- . *The Army of Flanders and the Spanish Road: The Logistics of Spanish Victory and Defeat in the Low Countries' Wars*. 2nd ed. Cambridge: Cambridge University Press, 2004.
- . "The "Military Revolution," 1560-1660--a Myth?" *The Journal of Modern History* 48, no. 2 (June 1976): 196-214. <http://www.jstor.org/stable/1879826> (accessed June 4, 2009).
- , ed. *The Thirty Years War*. Rev. ed. New York: Barnes and Noble, 1993.
- Parker, John. *Van Meteren's Virginia 1607-1612*. Minneapolis: University of Minnesota Press, 1961.

- Plowden, Alison. *Elizabethan England: Life in the Age of Adventure*. London: Reader's Digest, 1993.
- Potter, T. W., and Catherine Johns. *Roman Britain: Exploring the Roman World*. London: British Museum Press, 1992.
- Preston, Richard A., Alex Roland, and Sydney Wise. *Men in Arms, A History of Warfare & Its Interrelationships with Western Society*. 5th ed. Fort Worth: Harcourt College Publishers, 1991.
- Price, David A. *Love and Hate in Jamestown: John Smith, Pocahontas, and the Heart of a New Nation*. New York: Alfred A. Knopf, 2003.
- Reeves, Marjorie. *The Elizabethan Explorers*. 2nd ed. Hong Kong: Longman Group UK, 1990.
- Reinhart, Theodore, and Dennis J. Pogue, eds. *The Archaeology of 17th Century Virginia*. Richmond, VA: Archaeological Society of Virginia, 1993.
- Roberts, Michael. "The Military Revolution, 1560-1660," *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*. Boulder, CO: Westview, 1995.
- Rowse, A. L. *The Expansion of Elizabethan England*. New York: Harper and Row, 1955.
- Roy, Ian. "England Turned Germany? The Aftermath of the Civil War in Its European Context." *Transactions of the Royal Historical Society* 5th ser., 28 (1978): 127-44.
- Sams, Conway Whittle. *The Conquest of Virginia: The Second Attempt*. Norfolk, VA: Keyser-Doherty Printing Corporation, 1929. Reprint, Spartanburg, SC: The Reprint Company, 1973.
- Satterfield, George. *Princes, Posts and Partisans: The Army of Louis XIV and Partisan Warfare in the Netherlands (1673-1678)*. Leiden, the Netherlands: Koninklijke Brill NV, 2003.
- Selesky, Harold E. *War & Society in Colonial Connecticut*. New Haven: Yale University Press, 1990.
- Shea, William L. *The Virginia Militia in the Seventeenth Century*. Baton Rouge: Louisiana State University Press, 1983.
- Smith, K. C. "Colonizing Western Florida." *American Archaeology* (Spring 2005): 26-32.
- Smith, Lacey Baldwin. *This Realm of England 1399-1688*. 8th ed. Boston: Houghton Mifflin Company, 2001.

- Smurthwaite, David. *The Ordnance Survey Complete Guide to the Battlefields of Britain*. Exeter, Devon: Webb and Bower Limited, 1984.
- Stahle, David W., Malcolm K. Cleaveland, Dennis B. Blanton, Matthew D. Therrell, and David A. Gay. "North American Drought: A Paleo Perspective, The Last 500 Years, The Lost Colony and Jamestown Droughts." Jamestown/Roanoke Drought Index Reconstruction and Description from the WDC Paleoclimatology archive, [http://www.ncdc.noaa.gov/paleo/drought/drght\\_james.html](http://www.ncdc.noaa.gov/paleo/drought/drght_james.html).
- Starkey, Armstrong. *European and Native American Warfare 1675-1815*. Norman, OK: University of Oklahoma Press, 1998.
- Stoft, BG William A., et al. *American Military History*. Washington, DC: Center for Military History United States Army, 1989.
- "'The Great Charter' and the first general assembly."  
<http://www.historyisfun.org/pdf/Curriculum-Materials/Greatcharter.pdf>.
- Tisdale, D. A. *Soldiers of the Virginia Colony 1607-1699*. Richmond, VA: Deitz, 2000.
- Toner, Mike. "New Revelations at Moundville." *American Archaeology* (Spring 2005): 19-25.
- Trebbel, John, and Keith Jennison. *The American Indian Wars*. New York: Harper & Brothers, 1960.
- Vaughan, Alden T. "'Expulsion of the Salvages': English Policy and the Virginia Massacre of 1622." *William and Mary Quarterly* 35 (1978): 57-84.
- Webb, Henry J. *Elizabethan Military Science: The Books and the Practice*. Madison: The University of Wisconsin Press, 1965.
- Webb, Stephen Saunders. "Army and Empire: English Garrison Government in Britain and America, 1569 to 1763." *The William and Mary Quarterly* 3d ser., vol. 34, no. 1 (January 1977): 1-31.
- Wheeler, James Scott. *The Irish and British Wars 1637-1654: Triumph Tragedy and Failure*. London: Routledge, 2002.
- Woolley, Benjamin. *Savage Kingdom: The True Story of Jamestown, 1607, and the Settlement of America*. New York: HarperCollins, 2007.

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US Army Field Artillery School  
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B.A. Anthropology  
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Field Artillery Officer Basic Course  
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Field Artillery Officer Advanced Course  
US Army Field Artillery School  
1990-1991

German Basic Course  
Defense Language Institute, Monterey, California  
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Combined Arms Services Staff School (CAS3)  
Fort Leavenworth, Kansas  
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United States Army Command and General Staff College  
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Military History Instructor's Course  
Fort Leavenworth, Kansas  
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Master of Strategic Studies  
US Army War College, Carlisle, PA  
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NATO Information Operations Course  
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AWARDS:

Silver German Ehrenkreuz (Cross of Honor)  
2010

Defense Meritorious Service Medal  
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Meritorious Service Medal w/2 Oak Leaf Clusters  
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Bronze Star Medal  
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Joint Meritorious Unit Award  
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Army Commendation Medal w/1 Oak Leaf Cluster  
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