

NOTES

PREFACE

¹ Marley R. Brown III, ed., “Saugus Iron Works National Historic Site: An Evaluation of Roland Wells Robbins Archaeology,” report on file at Saugus Iron Works National Historic Site, 1975; Mary C. Beaudry, “Appendix: Saugus Iron Works National Historic Site, Archaeology and the Documentary Record” in “Saugus Iron Works National Historic Site”; Eric S. Johnson, “Archeological Overview and Assessment of the Saugus Iron Works National Historic Site, Saugus, Massachusetts,” report on file at the Saugus Iron Works National Historic Site, 1997).

² Donald W. Linebaugh, “‘The Road to Ruins and Restoration’: Roland W. Robbins and the Professionalization of Historical Archaeology” (PhD diss., The College of William and Mary, 1996); Linebaugh, “Forging a Career: Roland W. Robbins and Iron Industry Sites in the Northeastern U.S.,” *Industrial Archeology* 26 (2000): 5-36.

³ Roland W. Robbins, *Discovery at Walden* (Stoneham, MA: George R. Barnstead & Son, 1947).

⁴ Linebaugh, “Forging a Career.”

⁵ E. Neal Hartley, *Ironworks on the Saugus* (Norman: Univ. of Oklahoma Press, [1957]; Fort Washington, PA: Eastern National, 2001).

CHAPTER 1 Notes

¹ Jane Waldbaum, *From Bronze to Iron, The Transition from the Bronze Age to the Iron Age in the Eastern Mediterranean* (Göteborg: Paul Aströms Förlag, 1978).

² Robert Gordon, *American Iron, 1607-1900* (Baltimore and London: The Johns Hopkins University Press, 1996), 308.

³ Gordon, *American Iron*, 14.

⁴ Gordon, *American Iron*, 14.

⁵ Susannah W. Brody, *The History of Dowlon Forge* (Chester County, PA: Uwchlan Township Historical Commission County, 1995), 5; Gordon, *American Iron*, 222-223.

⁶ Terry S. Reynolds, *Stronger Than a Hundred Men* (Baltimore and London: The Johns Hopkins University Press, 1983), 11.

⁷ Reynolds, *Stronger Than a Hundred Men*, 10-11.

⁸ Hartley, *Ironworks on the Saugus*, 109.

⁹ Charles C. Gillispie, *A Diderot Pictorial Encyclopedia of Trades and Industry: 485 Plates*

Selected from 'L'Encyclopédie' of Denis Diderot (Mineola, New York: Dover Publications, Inc., 1987), vol. I, plates 82-85.

¹⁰ Gillispie, *A Diderot Pictorial Encyclopedia*, plates 84-85.

¹¹ Hartley, *Ironworks on the Saugus*, 167.

¹² Brody, *History of Dowlin Forge*, 66.

¹³ David W. Crossley, "A Sixteenth-Century Wealden Blast Furnace: A Report on Excavations at Panningridge, Sussex, 1964-1970," *Post-Medieval Archaeology* 6 (1972): 61.

¹⁴ H. R. Schubert, *History of the British Iron and Steel Industry from c. 450 B.C. to A.D. 1775* (London: Routledge & Kegan Paul, 1957), 222.

¹⁵ Brody, *History of Dowlin Forge*, 69.

¹⁶ Brody, *History of Dowlin Forge*, 70-1.

¹⁷ Brody, *History of Dowlin Forge*, 69; Stevenson W. Fletcher, *Pennsylvania Agricultural and Country Life: 1640-1840* (Harrisburg: Pennsylvania Historical and Museum Commission, 1950), 329.

¹⁸ Radomír Pleiner, *Iron in Archaeology: The European Bloomery Smelters* (Archeologický ústav AV ÈR Praha, 2000), 115.

¹⁹E. Straker, *Wealden Iron* (London, G. Bell and Sons, Ltd., 1931), 111.

²⁰ Henry Cleere and David Crossley, *The Iron Industry of the Weald* (Whitchurch: Merton Priory Press, 1995), 133.

²¹ Cleere and Crossley, *The Iron Industry of the Weald*, 133.

²² Crossley, "A Sixteenth-Century Wealden Blast Furnace," 60-61; Cleere and Crossley, *The Iron Industry of the Weald*, 133.

²³ G. F. Hammersley, "The Charcoal Iron Industry and the Fuel, 1540-1750," *Economic History Review*, 2nd ser., 26 (1973): 606.

²⁴ Hammersley, "The Charcoal Iron Industry," 606.

²⁵ Gillispie, *A Diderot Pictorial Encyclopedia*, plate 87.

²⁶ The bars produced from the liquid iron were called sows and/or pigs based on the resemblance in the sand molds to a sow suckling piglets.

²⁷ Gillispie, *A Diderot Pictorial Encyclopedia*, plate 87.

²⁸ Cleere and Crossley, *The Iron Industry of the Weald*, 221-22.

²⁹ Gillispie, *A Diderot Pictorial Encyclopedia*, plate 89.

³⁰ Gillispie, *A Diderot Pictorial Encyclopedia*, plate 89.

³¹ Schubert, *History of the British Iron and Steel Industry*, 241.

³² Schubert, *History of the British Iron and Steel Industry*, 244. This was true for areas in Britain other than the Weald.

³³ Cleere and Crossley, *The Iron Industry of the Weald*, 111-114.

³⁴ Hartley, *Ironworks on the Saugus*, 11.

- ³⁵ David W. Crossley and Denis Ashurst, "Excavations at Rockley Smithies, a Water-Powered Bloomery of the Sixteenth and Seventeenth Centuries," *Post-Medieval Archaeology* 2 (1968): 34.
- ³⁶ Crossley and Ashurst, "Excavations at Rockley Smithies," 34.
- ³⁷ Crossley and Ashurst, "Excavations at Rockley Smithies," 35.
- ³⁸ Crossley and Ashurst, "Excavations at Rockley Smithies," 34.
- ³⁹ Crossley and Ashurst, "Excavations at Rockley Smithies," 34.
- ⁴⁰ Cleere and Crossley, *The Iron Industry of the Weald*, 173.
- ⁴¹ Schubert, *History of the British Iron and Steel Industry*, 219.
- ⁴² Straker, *Wealden Iron*, 118.
- ⁴³ Straker, *Wealden Iron*, 118.
- ⁴⁴ Schubert, *History of the British Iron and Steel Industry*, 219.
- ⁴⁵ Hammersley, "The Charcoal Iron Industry," 593-613; James Dinn, "Dyfi Furnace Excavations 1982-87," *Post-Medieval Archaeology* 22 (1988): 117-18.
- ⁴⁶ Owen Bedwin, "The Excavation of Ardingly Fulling Mill and Forge, 1975-76," *Post-Medieval Archaeology* 10 (1976): 34-64; Owen Bedwin, "The Excavation of a Late 16th-Century Blast Furnace at Batsford, Herstmonceux, East Sussex, 1978," *Post-Medieval Archaeology* 14 (1980): 89-112; Crossley, "A Sixteenth-Century Wealden Blast Furnace," 42-68; David W. Crossley, "Cannon-Manufacture at Pippingford, Sussex: The Excavation of Two Iron Furnaces of c. 1717," *Post-Medieval Archaeology* 9 (1975): 1-37; Crossley and Ashurst, "Excavations at Rockley Smithies," 10-54; Dinn, "Dyfi Furnace Excavations 1982-87," 111-142; David W. Crossley, "A Gun-Casting Furnace at Scarlets, Cowden, Kent," *Post-Medieval Archaeology* 13 (1979): 239-49; David W. Crossley, *The Bewl Valley Ironworks* (Royal Archaeological Institute Monograph, 1975). Dates are approximate.
- ⁴⁷ Dinn, "Dyfi Furnace Excavations, 1982-87," 141.

CHAPTER 2 Notes

- ¹ [Edward] Johnson, *Wonder-Working Providence of Sion's Saviour in New-England, 1628-1651* (London, Nathanael Brooke at the Angel in Corn-hill, 1654 [facsimile], A2.
- ² E. Neal Hartley, *Ironworks on the Saugus*, 3.
- ³ *Records and Files of the Quarterly Courts of Essex County, Massachusetts*; Volumes I-IX, 1636-1686, (Salem, Massachusetts, The Essex Institute, 1975), I:143 cited hereafter as Records of Essex Courts.
- ⁴ A Collection of Papers Relating to The Iron Works at Lynn and More Particularly to The Suit Between Mr. John Giffard The Agent for The Undertakers of The Iron Works and The Inhabitants of The Massachusetts Bay Colony, Dated 1650 et seq., transcribed by Richard

Wormser, (Boston, Baker Library Historical Collections, Harvard University Business School, 1948), 198 (hereafter cited as Lynn Iron Works Collection.)

⁵ Hartley, *Ironworks on the Saugus*, 1957, iv.

⁶ “A Modell of Christian Charity, Written On Boarde the Arrabella, On the Atlantick Ocean, By the Honorable John Winthrop Esquire, 1630,” *Winthrop Papers*, vols. 1-6 (Norwood: The Plimpton Press, 1931), II:295.

⁷ John Winthrop to Sir Nathaniel Rich, *Winthrop Papers*, vols. 1-6 (Boston: The Merrymount Press, 1943), III:167.

⁸ Stephen Innes, *Creating the Commonwealth, The Economic Culture of Puritan New England* (New York, London: W.W. Norton & Company, 1995), 16; The Rev. Francis Higginson to his friends at Leicester, July 1629 in Everett Emerson, ed., *Letters from New England* (Amherst, Massachusetts, University of Massachusetts Press, 1976) 27.

⁹ Bernard Baylin, *The New England Merchants in the Seventeenth Century* (Cambridge: Harvard University Press, 1979), 61.

¹⁰ Records of the Governor and Company of the Massachusetts Bay Colony in New England (1628-86), vols. 1-5. Nathaniel B. Shurtleff, ed. (Boston: The Press of William White, Printer to the Commonwealth, 1853-54), 3:92 (hereafter cited as *Mass. Records*.)

¹¹ Hartley, *Ironworks on the Saugus*, 53; *Mass. Records*, 1:327.

¹² “Petition of John Winthrop, Jr. to the Massachusetts General Court,” *Winthrop Papers*, IV:423; Johnson, *Wonder-Working Providence*, p. 207.

¹⁴ *Mass. Records*, 2:127.

¹⁵ *Winthrop Papers*, V:21.

¹⁶ *Winthrop Papers*, V:6-7.

¹⁷ *Records of Essex Courts*, II:87-88.

¹⁸ *Records of Essex Courts*, II:87, 96.

¹⁹ Lynn Iron Works Collection, 197.

²⁰ Hartley, *Ironworks on the Saugus*, 187.;

²¹ Ironworks Monopoly Agreement: “Whereas they desire ye Corte would not restraine ym from selling iron, or iron worke, eithr to Indians or enemies, any furthr then we restraine orselves by law, wch the Corte granteth,” *Mass. Records*, 2:186. The Burr’s Hill site yielded many objects strikingly similar to Saugus Iron Works’ iron and brass collections. Susan G. Gibson, ed., *Burr’s Hill, A 17th-Century Wampanoag Burial Ground in Warren, Rhode Island* (Providence: Eastern Press, Inc., 1980), 79-117.

²² *Records of Essex Courts*, I:130, 173, 138, 136.

²³ *Winthrop Papers*, V:209.

²⁴ *Mass. Records*, 3:243.

²⁵ *Winthrop Papers*, V:248.

- ²⁶ Hartley, *Ironworks on the Saugus*, 135; *Mass. Records*, 3:227, 257.
- ²⁷ Hartley, *Ironworks on the Saugus*, 141.
- ²⁸ Stephen Carlson, "The Scots at Hammersmith" (Fort Washington, PA: Eastern National Park & Monument Association, 1976), 3-6.
- ²⁹ *Records of Essex Courts*, II:96-97.
- ³⁰ *Records of Essex Courts*, II:96.
- ³¹ *Records of Essex Courts*, II:97.
- ³² *Records of Essex Courts*, I:136.
- ³³ Lynn Iron Works Collection, 34.
- ³⁴ Hartley, *Ironworks on the Saugus*, 174.
- ³⁵ Sermon of Minister Samuel Treat, 1648-1717, in Henry David Thoreau, *Thoreau Reader, Cape Cod*, www.eserver.org/capecdaa.html (accessed February 8, 2005).
- ³⁶ *First Iron Works Gazette*, Vol. 3, No. 3 (July 1953), 8, First Iron Works Association Papers.
- ³⁷ General iron types include white iron, which is hard and brittle; grey iron, which is softer and less brittle than white iron; and mottled iron, which is an intermediate state showing both white and grey characteristics. See Schubert, *History of the British Iron and Steel Industry*, 238.
- ³⁸ Hartley, *Ironworks on the Saugus*, 175; *Winthrop Papers*, V:246.
- ³⁹ Lynn Iron Works Collection, 117.
- ⁴⁰ Hartley, *Ironworks on the Saugus*, 188
- ⁴¹ Lynn Iron Works Collection, 8, 35, 65, 74, 159, 184, 186, 194, 195, 211, 213, 250; *Records of Essex Courts*, II:94; *Mass. Records*, 3:59
- ⁴² Lynn Iron Works Collection, 35, 184.
- ⁴³ Lynn Iron Works Collection, 35, 40, 41, 52, 60, 69, 70, 72, 74, 75, 92, 130, 184.
- ⁴⁴ Lynn Iron Works Collection, 210.
- ⁴⁵ Lynn Iron Works Collection, 210.
- ⁴⁶ Hartley, *Ironworks on the Saugus*, 163.
- ⁴⁷ Hartley, *Ironworks on the Saugus*, 75-76, 197.
- ⁴⁸ Adam Hawkes, a neighbor, repeatedly sued the ironworks for flooding his land. *Records of Essex Courts*, II:210, 211.
- ⁴⁹ *Records of Essex Courts*, II:211.
- ⁵⁰ Lynn Iron Works Collection, 151.
- ⁵¹ Lynn Iron Works Collection, 116.
- ⁵² The Humble Petition of Joseph Jenkes, May 10, 1646, Massachusetts Archives, microfilm, manuscript, vol. 59, *Manufactures 1639-1773*, vol. 59, 26. This petition was meant to protect Jenks' "knowledge in Making and erecting of Engines of Mills to goe by water for speedy dispatch of much work with few mens labour in little time."

- ⁵³ “Statement of Henry Hoppie and Peter English, undated but ascribed to 1671,” in F.H. Blackburne Daniel, ed., *Calendar of State Papers, Domestic Series, December 1671 to May 17th 1672* (London: Public Records Office, 1897), 54-55.
- ⁵⁴ “Petition of Joseph Jinks Sword blade maker for a plot of Ground./ Granted.” Ms. R.I.1(e), Archives of the Duke of Northumberland, Alnick Castle, Alnwick, Northumberland, England.
- ⁵⁵ Lynn Iron Works Collection, 90, 91, 140.
- ⁵⁶ *Records of Essex Courts*, III:336.
- ⁵⁷ *Essex County Registry of Deeds* (Salem, MA, Salem Court House), Book 1: 32, 33; *Records of Essex Courts*, I:293.
- ⁵⁸ Hartley, *Ironworks on the Saugus*, 209, 303.
- ⁵⁹ Lynn Iron Works Collection, 158.
- ⁶⁰ *Records of Essex Courts*, V:224.
- ⁶¹ Lynn Iron Works Collection, 119.
- ⁶² Lynn Iron Works Collection, 122.
- ⁶³ Hartley, *Ironworks on the Saugus*, 163.
- ⁶⁴ Lynn Iron Works Collection, 5, 6, 22-24, 38, 48-50, 61, 159, 270, 271.
- ⁶⁵ Lynn Iron Works Collection, 94, 191, 197, 204, 213.
- ⁶⁶ Hartley, *Ironworks on the Saugus*, 216.
- ⁶⁷ Lynn Iron Works Collection, 176.
- ⁶⁸ Lynn Iron Works Collection, 177.
- ⁶⁹ Lynn Iron Works Collection, 253.
- ⁷⁰ Lynn Iron Works Collection, 179.
- ⁷¹ Stephen P. Carlson, ed., *Records of the Company of Undertakers of the Iron Works in New England* (Saugus: Saugus Iron Works NHS Archive, 1973), 304; “Petition of John Gifford to General Court,” Massachusetts Archives, 59:M-Ar.
- ⁷² *Records of Essex Courts*, II:79.
- ⁷³ Hartley, *Ironworks on the Saugus*, 242, 243.
- ⁷⁴ Hartley, *Ironworks on the Saugus*, 257.
- ⁷⁵ *Winthrop Papers*, IV:423.
- ⁷⁶ Innes, *Creating the Commonwealth*, 269, 270.
- ⁷⁷ Innes, *Creating the Commonwealth*, 269.
- ⁷⁸ Hartley, *Ironworks on the Saugus*, 61.

CHAPTER 3 Notes

¹ During later excavations along Central Street, Robbins located a “First Iron Works” historical marker placed by the Lynn Historical Society in 1898. Roland W. Robbins, Saugus Ironworks Daily Log - 1951, June 6, 1951, Roland Wells Robbins Collection, The Thoreau Society, The Thoreau Institute at Walden Woods, Lincoln, MA.

² Edwin Whitfield, *Homes of Our Forefathers: Being a Collection of the Oldest and Most Interesting Buildings in Massachusetts* (Boston: A. Williams, 1879).

³ Stephen P. Carlson, “The Saugus Iron Works Restoration: A Tentative History” (Saugus: Saugus Iron Works NHS, 1978), 1.

⁴ Carlson, “The Saugus Iron Works Restoration,” 1-2. Thomas A. Denenberg’s *Wallace Nutting and the Invention of Old America* (New Haven, Yale University Press, 2003) provides a compelling and nuanced treatment of Nutting and his larger project.

⁵ Denenberg, *Wallace Nutting and the Invention of Old America*, 95.

⁶ Edie Clark, “The Man Who Looked Back and Saw the Future,” *Yankee* 50, no. 9 (1986): 174-75.

⁷ Denenberg, *Wallace Nutting and the Invention of Old America*, 97-98.

⁸ Carlson, “The Saugus Iron Works Restoration,” 3.

⁹ Carlson, “The Saugus Iron Works Restoration,” 3.

¹⁰ Carlson, “The Saugus Iron Works Restoration,” 3.

¹¹ Carlson, “The Saugus Iron Works Restoration,” 3-4.

¹² Fundraising letter, ca. 1942-1943, First Iron Works Association, Roland Wells Robbins Collection.

¹³ Carlson, “The Saugus Iron Works Restoration,” 5-6. Fundraising letter, ca. 1942-1943, First Iron Works Association.

¹⁴ Louise du Pont Crowninshield, the daughter of Henry F. du Pont, was raised at Winterthur. As an adult she lived at Eleutherian Mills, the original du Pont family home, a site that Robbins investigated briefly in the 1950s. Mrs. Crowninshield is considered one of the nation’s leading historic preservation activists in the first half of the twentieth century. See Kim Burdick, “Louise’s Legacy: How a du Pont Invented Historic Preservation,” *Delaware Today* June 2000, 28, and “Louise’s Legacy: The Story of Louise du Pont Crowninshield,” lecture presented at the “Pioneers in Public History” conference, Saugus Iron Works National Historic Site, Saugus, MA, October 2004.

¹⁵ Carlson, “The Saugus Iron Works Restoration,” 6.

¹⁶ Quincy Bent was a vice president with Bethlehem Steel; Charles R. Harte was a professional engineer who documented many industrial and iron-making sites, primarily in Connecticut, during the first half of the twentieth century; Edward L. Bartholomew, Jr., was an assistant

professor of metallurgy at MIT; Walter Renton Ingalls was an engineer; and John Woodman Higgins was the founder of the Higgins Armory Museum in Worcester, MA. Curtis McKay White, personal communication, 2000.

¹⁷ Carlson, "The Saugus Iron Works Restoration," 9. The complete story of Robbins' work at Thoreau's cabin site is told in Donald W. Linebaugh's *The Man Who Found Thoreau: Roland W. Robbins and the Rise of Historical Archaeology in America* (Hanover: University Press of New England, 2005).

¹⁸ Vincent P. Foley, "On the Meaning of Industrial Archaeology," *Historical Archaeology* 2(1968): 66-68.

¹⁹ David G. Orr, "Philadelphia as Industrial Archaeological Artifact: A Case Study," *Historical Archaeology* 11(1977): 3-14.

²⁰ David G. Orr, "Philadelphia as Industrial Archaeological Artifact," 3-14.

²¹ Vincent Foley, "Reply to Vogel," *Historical Archaeology* 3 (1969): 94.

²² Thomas Blanding, personal communication, 1993.

²³ Paul Heberling, personal communication, 1992.

²⁴ Evan Jones, personal communication, 1992.

²⁵ Roland W. Robbins, Report on Research and Excavations: Executed from September 10, 1948 to October 16, 1948, Roland Wells Robbins Collection.

²⁶ Roland W. Robbins, Report of Archaeological Progress at the Old Iron Works Site, Saugus, Massachusetts, from September 10, 1948 to June 25, 1949, Roland Wells Robbins Collection.

²⁷ Robbins, Report on Research, 2.

²⁸ Carlson, "The Saugus Iron Works Restoration," 9.

²⁹ Robbins, Report of Archaeological Progress, 1.

³⁰ Robbins, Report on Research, 4.

³¹ Robbins, Saugus Ironworks Daily Log - 1948, December 5, 1948.

³² Robbins, Saugus Ironworks Daily Log - 1948, December 5, 1948.

³³ Robbins, Report on Research, 5.

³⁴ Charles Rufus Harte, Condition of the Excavation at the Saugus Iron Works Furnace, Saugus, Massachusetts, as of October 18, 1948, Roland Wells Robbins Collection.

³⁵ Carlson, "The Saugus Iron Works Restoration," 9.

³⁶ Roland W. Robbins, Saugus Ironworks Daily Log - 1949, May 15, 1949.

³⁷ Robbins, Saugus Ironworks Daily Log - 1949, May 26, 1949.

³⁸ Robbins, Saugus Ironworks Daily Log - 1949, May 17, 1949.

³⁹ Robbins, Saugus Ironworks Daily Log - 1949, May 24, 1949.

⁴⁰ Robbins, Saugus Ironworks Daily Log - 1949, June 15, 1949.

⁴¹ Robbins, Saugus Ironworks Daily Log - 1949, June 15, 1949.

⁴² Robbins, Saugus Ironworks Daily Log - 1949, July 6, 1949.

- ⁴³ Robbins, Saugus Ironworks Daily Log - 1949, July 8, 1949.
- ⁴⁴ Brown, "An Evaluation of Roland Wells Robbins Archaeology," 17.
- ⁴⁵ Robbins, Saugus Ironworks Daily Log - 1950, January 9, 1950.
- ⁴⁶ Robbins, Saugus Ironworks Daily Log - 1950, October 26, 1950.
- ⁴⁷ Robbins, Saugus Ironworks Daily Log - 1950, September 20, 1950.
- ⁴⁸ Robbins, Saugus Ironworks Daily Log - 1950, August 15, 1950.
- ⁴⁹ Robbins, Saugus Ironworks Daily Log - 1950, December 13, 1950.
- ⁵⁰ Mary C. Beaudry, "Archaeology and the Documentary Record," n.p.
- ⁵¹ Robbins, Report of 1949 Archaeological Progress, 1.
- ⁵² Robbins, Report of 1949 Archaeological Progress, 1.
- ⁵³ Robbins, Report of 1949 Archaeological Progress, 2-3.
- ⁵⁴ Robbins, Report of 1949 Archaeological Progress, 3.
- ⁵⁵ Robbins, Report of 1949 Archaeological Progress, 3.
- ⁵⁶ Robbins, Saugus Ironworks Daily Log - 1950, January 11, 1950.
- ⁵⁷ Robbins, Saugus Ironworks Daily Log - 1950, January 6, 1950.
- ⁵⁸ Robbins, Saugus Ironworks Daily Log - 1950, January 23-24, 1950.
- ⁵⁹ Robbins, Saugus Ironworks Daily Log - 1950, January 27, 1950. A sow is an ingot or mass of iron solidified in a sand mold.
- ⁶⁰ Robbins, Saugus Ironworks Daily Log - 1950, February 8, 1950.
- ⁶¹ Robbins, Saugus Ironworks Daily Log - 1950, January 3, 1950.
- ⁶² Robbins, Saugus Ironworks Daily Log - 1950, January 18, 1950.
- ⁶³ Robbins, Saugus Ironworks Daily Log - 1950, January 20 and February 23-24, 1950.
- ⁶⁴ Robbins, Saugus Ironworks Daily Log - 1950, February 3 and 6, 1950.
- ⁶⁵ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950. For additional information on Robbins' later excavations at West Quincy, see Donald W. Linebaugh, "Forging a Career."
- ⁶⁶ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.
- ⁶⁷ Robbins, Saugus Ironworks Daily Log - 1950, April 27-28, 1950. Robbins had previously determined that the furnace waterwheel was buried beneath the street.
- ⁶⁸ Robbins, Saugus Ironworks Daily Log - 1950, June 27, 1950.
- ⁶⁹ Robbins, Saugus Ironworks Daily Log - 1950, July 28, 1950.
- ⁷⁰ Robbins, Saugus Ironworks Daily Log - 1950, July 28, 1950.
- ⁷¹ Robbins, Saugus Ironworks Daily Log - 1950, August 2, 1950.
- ⁷² Robbins, Saugus Ironworks Daily Log - 1950, August 2, 1950.
- ⁷³ Robbins, Saugus Ironworks Daily Log - 1950, August 2, 1950.
- ⁷⁴ Robbins, Saugus Ironworks Daily Log - 1950, August 9, 1950.
- ⁷⁵ Robbins, Saugus Ironworks Daily Log - 1950, August 11, 1950.
- ⁷⁶ Robbins, Saugus Ironworks Daily Log - 1950, August 11, 1950.

- ⁷⁷ Robbins, Saugus Ironworks Daily Log - 1950, August 21, 1950.
- ⁷⁸ Robbins, Saugus Ironworks Daily Log - 1950, August 21, 1950. Robbins would often move the heavy equipment into a new area to remove the fill, while his laborers worked on completing the hand excavation in another area. With several pieces of equipment and a good-sized crew, Robbins maintained excavations in several different areas at any moment.
- ⁷⁹ Robbins, Saugus Ironworks Daily Log - 1950, August 25, 1950.
- ⁸⁰ Robbins, Saugus Ironworks Daily Log - 1950, August 25, 1950.
- ⁸¹ Robbins, Saugus Ironworks Daily Log - 1950, September 2, 1950.
- ⁸² Robbins, Saugus Ironworks Daily Log - 1950, September 5, 1950.
- ⁸³ Robbins, Saugus Ironworks Daily Log - 1950, September 9 and 11, 1950.
- ⁸⁴ Robbins, Saugus Ironworks Daily Log - 1950, September 20, 1950.
- ⁸⁵ Robbins, Saugus Ironworks Daily Log - 1950, September 25, 1950.
- ⁸⁶ Robbins, Saugus Ironworks Daily Log - 1950, October 4, 1950.
- ⁸⁷ Robbins, Saugus Ironworks Daily Log - 1950, October 6, 1950.
- ⁸⁸ Robbins, Saugus Ironworks Daily Log - 1950, October 12, 1950.
- ⁸⁹ Robbins, Saugus Ironworks Daily Log - 1950, October 12, 1950.
- ⁹⁰ Robbins, Saugus Ironworks Daily Log - 1950, October 12, 1950.
- ⁹¹ Robbins, Saugus Ironworks Daily Log - 1950, October 19 and 24, 1950.
- ⁹² Robbins, Saugus Ironworks Daily Log - 1950, October 31, 1950.
- ⁹³ Robbins, Saugus Ironworks Daily Log - 1950, November 3 and 6, 1950.
- ⁹⁴ Robbins, Saugus Ironworks Daily Log - 1950, December 1, 1950.
- ⁹⁵ Robbins, Saugus Ironworks Daily Log - 1950, December 1-11, 1950.
- ⁹⁶ Robbins, Saugus Ironworks Daily Log - 1950, December 14-15, 1950.
- ⁹⁷ Robbins, Saugus Ironworks Daily Log - 1951, January 10 and 13, 1951.
- ⁹⁸ Robbins, Saugus Ironworks Daily Log - 1951, February 19, 1951.
- ⁹⁹ Robbins, Saugus Ironworks Daily Log - 1951, February 23, 1951.
- ¹⁰⁰ Roland W. Robbins, Annual Archaeological Report - 1951, Roland Wells Robbins Collection.
- ¹⁰¹ Robbins, Saugus Ironworks Daily Log - 1951, March 14, 1951.
- ¹⁰² Robbins, Saugus Ironworks Daily Log - 1951, March 22, 1951.
- ¹⁰³ Robbins, Saugus Ironworks Daily Log - 1951, April 20, 1951.
- ¹⁰⁴ Robbins, Saugus Ironworks Daily Log - 1951, April 24 and May 7, 1951.
- ¹⁰⁵ Robbins, Saugus Ironworks Daily Log - 1951, May 1, 1951.
- ¹⁰⁶ Robbins, Saugus Ironworks Daily Log - 1951, May 4, 18, and 24, 1951.
- ¹⁰⁷ Robbins, Saugus Ironworks Daily Log - 1951, May 24, 1951.
- ¹⁰⁸ Robbins, Saugus Ironworks Daily Log - 1951, May 29, 1951.
- ¹⁰⁹ Robbins, Saugus Ironworks Daily Log - 1951, June 19-20, 1951.

- ¹¹⁰ Robbins, Saugus Ironworks Daily Log - 1951, July 13-17, 1951.
- ¹¹¹ Robbins, Saugus Ironworks Daily Log - 1951, July 13 – August 17, 1951.
- ¹¹² Robbins, Saugus Ironworks Daily Log - 1951, August 15, 1951.
- ¹¹³ Robbins, Saugus Ironworks Daily Log - 1951, August 25, 1951.
- ¹¹⁴ Robbins, Saugus Ironworks Daily Log - 1951, October 6, 1951.
- ¹¹⁵ Robbins, Saugus Ironworks Daily Log - 1951, December 6, 1951.
- ¹¹⁶ Robbins, Saugus Ironworks Daily Log - 1951, December 10-12, 1951.
- ¹¹⁷ Robbins, Saugus Ironworks Daily Log - 1951, December 20, 1951.
- ¹¹⁸ Robbins, Saugus Ironworks Daily Log - 1952, January 24, 1951.
- ¹¹⁹ Robbins, Saugus Ironworks Daily Log - 1952, January 24, 1952.
- ¹²⁰ Robbins, Saugus Ironworks Daily Log - 1952, February 12, 1951.
- ¹²¹ Robbins, Saugus Ironworks Daily Log - 1952, February 14, 1951.
- ¹²² Robbins, Saugus Ironworks Daily Log - 1952, February 20, 29, and March 1, 1952.
- ¹²³ Robbins, Saugus Ironworks Daily Log - 1952, March 14, 1952.
- ¹²⁴ Robbins, Saugus Ironworks Daily Log - 1952, March 20, 1952.
- ¹²⁵ Robbins, Saugus Ironworks Daily Log - 1952, March 28, 1952.
- ¹²⁶ Robbins, Saugus Ironworks Daily Log - 1952, May 1, 1952.
- ¹²⁷ Robbins, Saugus Ironworks Daily Log - 1952, May 1, 1952.
- ¹²⁸ Robbins, Saugus Ironworks Daily Log - 1952, June 2-3, 1952.
- ¹²⁹ Robbins, Saugus Ironworks Daily Log - 1952, June 24-30, 1952.
- ¹³⁰ Robbins, Saugus Ironworks Daily Log - 1952, June 30, 1952.
- ¹³¹ Robbins, Saugus Ironworks Daily Log - 1952, August 14, 1952.
- ¹³² Robbins, Saugus Ironworks Daily Log - 1952, August 28, 1952.
- ¹³³ Robbins, Saugus Ironworks Daily Log - 1952, August 28, 1952.
- ¹³⁴ Robbins, Saugus Ironworks Daily Log - 1952, September 4 and 10, 1952.
- ¹³⁵ Robbins, Saugus Ironworks Daily Log - 1952, October 24, 1952.
- ¹³⁶ Robbins, Saugus Ironworks Daily Log - 1952, November 5, 1952.
- ¹³⁷ Roland W. Robbins, Archaeological Discoveries for 1952, Roland Wells Robbins Collection.
- ¹³⁸ Robbins, Saugus Ironworks Daily Log - 1952, November 20, 1952.
- ¹³⁹ Robbins, Saugus Ironworks Daily Log - 1952, November 20 - December 29, 1952.
- ¹⁴⁰ Robbins, Saugus Ironworks Daily Log - 1953, March 16, 1953.
- ¹⁴¹ Robbins, Saugus Ironworks Daily Log - 1953, March 24, 1953.
- ¹⁴² Robbins, Saugus Ironworks Daily Log - 1953, April 9, 1953.
- ¹⁴³ Robbins, Saugus Ironworks Daily Log - 1953, May 4, 1953.
- ¹⁴⁴ Robbins, Saugus Ironworks Daily Log - 1953, April 9 – June 2, 1953.
- ¹⁴⁵ Robbins, Saugus Ironworks Daily Log - 1953, May 21 – June 10, 1953.
- ¹⁴⁶ Robbins, Saugus Ironworks Daily Log - 1953, May 29, 1953.

- ¹⁴⁷ Robbins, Saugus Ironworks Daily Log - 1953, July 2, 1953.
- ¹⁴⁸ Robbins, Saugus Ironworks Daily Log - 1953, July 24 – 31, 1953.
- ¹⁴⁹ Robbins, Saugus Ironworks Daily Log - 1953, July 31, 1953.
- ¹⁵⁰ Robbins, Saugus Ironworks Daily Log - 1953, September 17, 1954.
- ¹⁵¹ Brown, “An Evaluation of Roland Wells Robbins Archaeology,” 13; Carlson, “The Saugus Iron Works Restoration,” 10.
- ¹⁵² Robbins, Saugus Ironworks Daily Log - 1953, July 31, 1953.
- ¹⁵³ Robbins, Saugus Ironworks Daily Log - 1950, August 18, 1950. On many occasions, Robbins made short-term loans to crew members to cover what he perceived to be Attwill’s negligence.
- ¹⁵⁴ Robbins, Saugus Ironworks Daily Log - 1953, April 24, 1953.
- ¹⁵⁵ Robbins, Saugus Ironworks Daily Log - 1951, August 9, 1951.
- ¹⁵⁶ Robbins, Saugus Ironworks Daily Log - 1951, November 5, 1951.
- ¹⁵⁷ Robbins, Saugus Ironworks Daily Log - 1951, November 5, 1951.
- ¹⁵⁸ Roland Wells Robbins to Charles R. Harte, ca. 1952, Roland Wells Robbins Collection.
- ¹⁵⁹ Quincy Bent quoted in Charles R. Harte to Roland W. Robbins, August 7, 1951, Roland Wells Robbins Collection.
- ¹⁶⁰ Robbins, Saugus Ironworks Daily Log - 1952, February 18, 1952. Conover Fitch was the project architect for Perry, Shaw, and Hepburn, Kehoe and Dean, and architect Harrison Schock worked for Fitch.
- ¹⁶¹ Robbins, Saugus Ironworks Daily Log - 1952, February 26, 1952.
- ¹⁶² Robbins, Saugus Ironworks Daily Log - 1953, July 22, 1953.
- ¹⁶³ Carlson, “The Saugus Iron Works Restoration,” 11.
- ¹⁶⁴ J. C. Harrington, 1952, quoted in Linebaugh, *The Man Who Found Thoreau*, 86.
- ¹⁶⁵ Roland W. Robbins to Quincy Bent, August 19, 1951, Roland Wells Robbins Collection. It is unlikely that the academic Hartley would have allowed any such restriction on his academic freedom.
- ¹⁶⁶ Quincy Bent to Roland W. Robbins, August 20, 1951, Roland Wells Robbins Collection.
- ¹⁶⁷ Robbins, Saugus Ironworks Daily Log - 1950, August 2, 1950.
- ¹⁶⁸ Robbins, Saugus Ironworks Daily Log - 1950, August 2, 1950.
- ¹⁶⁹ Robbins, Saugus Ironworks Daily Log - 1950, August 3, 1950.
- ¹⁷⁰ Robbins, Saugus Ironworks Daily Log - 1950, August 4, 1950.
- ¹⁷¹ Robbins, Saugus Ironworks Daily Log - 1950, September 13-14, 1950; Roland W. Robbins to Walter S. Tower, August 9, 1950; Walter S. Tower to Roland W. Robbins, September 1, 1950, Roland Wells Robbins Collection.
- ¹⁷² Robbins, Saugus Ironworks Daily Log - 1950, September 14, 1950.
- ¹⁷³ Roland W. Robbins to Quincy Bent, October 22, 1953, Roland Wells Robbins Collection.

- ¹⁷⁴ Walter S. Tower to Roland W. Robbins, July 3, 1951, Roland Wells Robbins Collection.
- ¹⁷⁵ Robbins, Saugus Ironworks Daily Log - 1951, July 5, 1951; Tower to Robbins, July 3, 1951.
- ¹⁷⁶ Geraldine Robbins to Quincy Bent, October 29, 1953, Roland Wells Robbins Collection.
- ¹⁷⁷ Geraldine Robbins to Quincy Bent, October 29, 1953, 1.
- ¹⁷⁸ Roland W. Robbins to Quincy Bent, November 16, 1953, Roland Wells Robbins Collection.
- ¹⁷⁹ Robbins to Bent, November 16, 1953, 1.
- ¹⁸⁰ Roland W. Robbins to Reverend Charles Jarvis Harriman, November 20, 1952, Roland Wells Robbins Collection.
- ¹⁸¹ Robbins, Saugus Ironworks Daily Log - 1952, November 21, 1952.
- ¹⁸² Robbins, Saugus Ironworks Daily Log - 1952, December 29, 1952.
- ¹⁸³ Robbins, Saugus Ironworks Daily Log - 1953, January 2 and March 2, 1953.
- ¹⁸⁴ Robbins, Saugus Ironworks Daily Log - 1953, July 24-31, 1953.
- ¹⁸⁵ Roland W. Robbins to Teresa and Elso Barghoorn, October 27, 1953, Roland Wells Robbins Collection.
- ¹⁸⁶ Linebaugh, *The Man Who Found Thoreau*, 85-97.
- ¹⁸⁷ Brown, "An Evaluation of Roland Wells Robbins Archaeology."
- ¹⁸⁸ Beaudry, "Archaeology and the Documentary Record," n.p.
- ¹⁸⁹ Robbins, Saugus Ironworks Daily Log - 1950, August 11, 1950. Although not within Robbins' area of interest, he identified prehistoric features on several occasions and contacted members of the Massachusetts Archaeological Society about excavating several features that would be destroyed by the ironworks excavation (Robbins, Saugus Ironworks Daily Log - 1953, June 10, 1953).
- ¹⁹⁰ See Linebaugh, *The Man Who Found Thoreau*, 40, for an extended discussion of the probe rod testing.
- ¹⁹¹ Brown, "An Evaluation of Roland Wells Robbins Archaeology," 3.
- ¹⁹² Although this approach has now been embedded in a scientific or systematic framework, Robbins' methodology to identify features differs little from present practice.
- ¹⁹³ Robbins, Saugus Ironworks Daily Log - 1949, July 14, 1949; Saugus Ironworks Daily Log - 1950, March 6, 1950; Saugus Ironworks Daily Log - 1953, May 4, 1953.
- ¹⁹⁴ Beaudry, "Archaeology and the Documentary Record," n.p.
- ¹⁹⁵ Robbins, Saugus Ironworks Daily Log - 1950, May 16, 1950.
- ¹⁹⁶ Robbins, Saugus Ironworks Daily Log - 1951, February 17, 1951; Saugus Ironworks Daily Log - 1952, May 24, 1952; Saugus Ironworks Daily Log - 1953, May 6, 1953.
- ¹⁹⁷ Arthur C. Laura, "Research Notes on Metal Artifacts and Their Restoration," Roland Wells Robbins Collection.
- ¹⁹⁸ Robbins, Saugus Ironworks Daily Log - 1949, May 23, 1949.
- ¹⁹⁹ Robbins, Saugus Ironworks Daily Log - 1950, June 23, 1950.

²⁰⁰ Brown, “An Evaluation of Roland Wells Robbins Archaeology,” 15.

²⁰¹ Donald W. Linebaugh, “Exploring Interpretive Agendas: The Saugus Iron Works and the Cold War”; “Interpretive Agendas: From the Cold War to the Counterculture.” Paper presented at an invited session of the American Association of Museums Annual Meeting, Indianapolis, Indiana, May 2005.

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¹ Linebaugh, “Forging a Career,” 8-9.

² Linebaugh, “Forging a Career,” 10.

³ Linebaugh, “Forging a Career,” 7.

⁴ Roland W. Robbins and Evan Jones, *Hidden America* (New York, Alfred A Knopf, 1959), 42.

⁵ Robbins, Saugus Ironworks Daily Log - 1948, September 14, 1948.

⁶ Robbins, Saugus Ironworks Daily Log - 1949, August 26, 1949.

⁷ Named for Sir Mortimer Wheeler and Dame Kathleen Kenyon, two prominent methodological archeologists of the twentieth century.

⁸ Ivor Noel Hume, *Historical Archaeology* (New York, Norton, 1969, repr. 1976), 37-39.

⁹ Robbins, Saugus Ironworks Daily Log - 1951, October 12, 1951.

¹⁰ Robbins, Saugus Ironworks Daily Log - 1948, September 15, 1948.

¹¹ Linebaugh, “Forging a Career,” 6.

¹² Robbins, “Report of the 1956 Archaeological Exploration at the Site of the 1644 John Winthrop, Jr., Blast Furnace Situated in Hall Cemetery, Crescent Street, West Quincy, Massachusetts.” Reprinted in William Churchill Edwards, ed., *Historic Quincy* (Quincy, MA: City of Quincy, 1957), 256-274.

¹³ Robbins, Saugus Ironworks Daily Log - 1949, May 31, 1949.

¹⁴ Robbins actually kept a separate set of records that recorded where he lectured and how many people attended the lectures. See Chapter 11 for more information about Robbins’ public outreach.

¹⁵ Robbins, Saugus Ironworks Daily Log - 1952, April 29, 1952.

¹⁶ Robbins actually did this at the later Quincy furnace excavations.

¹⁷ Robbins, Saugus Ironworks Daily Log - 1951, August 3, 1951.

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¹ Robbins, Saugus Ironworks Daily Log - 1948, September 14, 1948.

² Cleere and Crossley, *The Iron Industry of the Weald*, 244.

³ Robbins, Saugus Ironworks Daily Log - 1950, April 30, 1950.

⁴ Hartley, *Ironworks on the Saugus* (2001 repr.), 51.

⁵ Hartley, *Ironworks on the Saugus* (2001 repr.), 172, quoting Robert Plot, *The Natural History of Stafford shire* (Oxford, 1686), 162-63.

⁶ Robbins, Saugus Ironworks Daily Log - 1949, April 10, 1949. Robbins also notes finding a subterranean drainage system below the Quincy furnace site, the earlier sister furnace to Saugus. See Robbins, Report of the 1956 Archaeological Exploration, 8-10.

⁷ Robbins, Saugus Ironworks Daily Log - 1948, December 5, 1948.

⁸ Cleere and Crossley, *The Iron Industry of the Weald*, 249.

⁹ Robbins, Saugus Ironworks Daily Log - 1949, June 3, 1949.

¹⁰ Hobart M. Kraner, "Ceramics in the Saugus Blast Furnace - 1650." Paper delivered at the American Ceramic Society Meeting, Chicago, Illinois, May 18, 1959. This paper was later published in the *American Ceramic Society Bulletin* 39, No. 7 (1960): 354-58.

¹¹ Sand, as well as clay, was another common filling medium found in other furnace sites. Peter Brown, "The Early Industrial Complex at Astley, Worcestershire," *Post-Medieval Archaeology* 16 (1982): 9-10.

¹² Robbins, Saugus Ironworks Daily Log - 1951, July 20, 1951.

¹³ Cleere and Crossley, *The Iron Industry of the Weald*, 244.

¹⁴ Cleere and Crossley, *The Iron Industry of the Weald*, 244.

¹⁵ Cleere and Crossley, *The Iron Industry of the Weald*, 244.

¹⁶ Cleere and Crossley, *The Iron Industry of the Weald*, 255.

¹⁷ Schubert, *History of the British Iron and Steel Industry*, 198.

¹⁸ Robbins, Saugus Ironworks Daily Log - 1948, October 13, 1948.

¹⁹ Robbins, Saugus Ironworks Daily Log - 1948, December 5, 1948.

²⁰ Roland Robbins, Excavations & Artifacts - Record of 1948, Roland Wells Robbins Collection.

²¹ Robbins, Excavations & Artifacts - Record of 1948.

²² Charles Rufus Harte to Walter Renton Ingalls, November 24, 1948, Papers of Charles Rufus Harte, Saugus Iron Works NHS Collection.

²³ Robbins, Saugus Ironworks Daily Log - 1948, December 5, 1948.

²⁴ The funnel shaped tuyere helped to concentrate the air blast to quickly raise the heat inside the furnace. Two tuyeres were, in fact, recovered by Robbins during excavation, although the second one was discovered out of context in the Jenks area. (See Robbins, Saugus Ironworks Daily Log - 1952, April 10, 1952.) While tuyeres were found at Saugus, they were not necessarily universally used furnace components. (See Cleere and Crossley, *Iron Industry of the Weald*, 251.)

²⁵ Robbins, Saugus Ironworks Daily Log - 1948, October 16, 1948.

²⁶ Quincy Bent to Charles Rufus Harte, December 8, 1948, Papers of Charles Rufus Harte;

Walter Renton Ingalls to Charles Rufus Harte, November 29, 1948, Papers of Charles Rufus Harte.

²⁷ Robbins, Saugus Ironworks Daily Log - 1951, February 23, 1951.

²⁸ Robbins and Jones, *Hidden America*, 55.

²⁹ Robbins, Saugus Ironworks Daily Log - 1951, February 23, 1951.

³⁰ Robbins, Saugus Ironworks Daily Log - 1951, March 12, 1951.

³¹ Robbins, Saugus Ironworks Daily Log - 1951, June 6, 1951.

³² Robbins, Saugus Ironworks Daily Log - 1951, February 28, 1951.

³³ Robbins, Saugus Ironworks Daily Log - 1951, February 28, 1951.

³⁴ Robbins, Saugus Ironworks Daily Log - 1951, March 17, 1951.

³⁵ Brown, "The Early Industrial Complex at Astley, Worcestershire," p. 14.

³⁶ Robbins, Saugus Ironworks Daily Log - 1949, April 24, 1949.

³⁷ Robbins, Saugus Ironworks Daily Log - 1949, May 20, 1949.

³⁸ Robbins, Saugus Ironworks Daily Log - 1949, May 20, 1949.

³⁹ Robbins, Saugus Ironworks Daily Log - 1951, January 10, 1951.

⁴⁰ Robbins, Saugus Ironworks Daily Log - 1951, July 11, 1951.

⁴¹ Stephen P. Carlson, *First Iron Works: A History of the First Iron Works Association* (Saugus, MA: Saugus Historical Society, Booklet No. 5, 1991), 20.

⁴² Carlson, *First Iron Works*, 20.

⁴³ Robbins, Saugus Ironworks Daily Log - 1948, October 16, 1948.

⁴⁴ Robbins, Saugus Ironworks Daily Log - 1949, October 14, 1949. The stone collection off of the southeastern corner was circular in shape, composed of the same stone used in the blast furnace construction (granite), several feet in height, and contained many artifacts and artifact fragments when dismantled. When Robbins excavated it in October of 1949, he noted that stratigraphically it sat on top of a layer of sand that Robbins attributed to be a casting bed, indicating that it must have appeared after the furnace was operating. Robbins also established that the stone feature had been built after the southern wall of the furnace was built, since it peeled away neatly and was not integral to the foundation.

⁴⁵ Robbins, Saugus Ironworks Daily Log - 1949, October 25, 1949.

⁴⁶ Robbins, Saugus Ironworks Daily Log - 1949, October 14, 1949.

⁴⁷ Robbins, Saugus Ironworks Daily Log - 1949, November 9, 1949.

⁴⁸ Robbins, Saugus Ironworks Daily Log - 19, May 24, 1950.

⁴⁹ Robbins, Saugus Ironworks Daily Log - 1949, November 21, 1949.

⁵⁰ Cleere and Crossley, *The Iron Industry of the Weald*, 253.

⁵¹ Robbins describes removing some of the slag pile for a transportation route. (See Robbins, Saugus Ironworks Daily Log - 1952, February 14, 1952).

⁵² Robbins, Saugus Ironworks Daily Log - 1951, August 10, 1951.

⁵³ E. Neal Hartley to Harrison Schock, 10 August 1951, First Iron Works Association Papers, Saugus Iron Works NHS.

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- ¹ Robbins, Saugus Ironworks Daily Log - 1949, July 19, 1949.
- ² Robbins, Saugus Ironworks Daily Log - 1949, October 26, 1949.
- ³ Robbins, Saugus Ironworks Daily Log - 1950, April 30, 1950.
- ⁴ Robbins, Saugus Ironworks Daily Log - 1950, August 3, 1950.
- ⁵ Robbins, Saugus Ironworks Daily Log - 1950, August 11, 1950
- ⁶ Robbins, Saugus Ironworks Daily Log - 1950, August 25, 1950
- ⁷ Robbins, Saugus Ironworks Daily Log - 1950, August 25, 1950
- ⁸ Robbins, Saugus Ironworks Daily Log - 1950, August 31, 1950
- ⁹ Robbins, Saugus Ironworks Daily Log - 1950, September 2, 1950
- ¹⁰ S. Epstein, K.F. Haupt, and H. D. Kraner, Examination of Small Metal Specimens Chipped From a 500# Hammer Unearthed Near the Saugus Blast Furnace Site, letter report dated December 6, 1950, First Iron Works Association Papers, Saugus Iron Works NHS.
- ¹¹ Robbins, Saugus Ironworks Daily Log - 1950, September 2, 1950
- ¹² Robbins, Saugus Ironworks Daily Log - 1950, December 2-15, 1950
- ¹³ Robbins, Saugus Ironworks Daily Log - 1950, December 11, 1950
- ¹⁴ Robbins, Saugus Ironworks Daily Log - 1950, December 12, 1950
- ¹⁵ Robbins, Saugus Ironworks Daily Log - 1950, December 14, 1950
- ¹⁶ Robbins, Saugus Ironworks Daily Log - 1950, December 18, 1950; Perry, Shaw, and Hepburn, Kehoe and Dean, Plan of Refinery Hammer & Anvil Sites, December 28, 1950. Drawing Number SK 300, First Iron Works Association Papers.
- ¹⁷ Robbins, Saugus Ironworks Daily Log - 1950, December 18, 1950.
- ¹⁸ Robbins, Saugus Ironworks Daily Log - 1951, April 30-May 3, 1951.
- ¹⁹ Robbins, Saugus Ironworks Daily Log - 1951, May 4, 1951.
- ²⁰ Robbins, Saugus Ironworks Daily Log - 1951, May 5, 1951.
- ²¹ Robbins, Saugus Ironworks Daily Log - 1951, July 13-19, 1951.
- ²² Robbins, Saugus Ironworks Daily Log - 1951, December 8, 1951.
- ²³ Robbins, Saugus Ironworks Daily Log - 1951, December 14-15, 1951.
- ²⁴ Robbins, Saugus Ironworks Daily Log - 1951, December 27-28, 1951.
- ²⁵ Robbins, Saugus Ironworks Daily Log - 1952, January 2-4, 1952.
- ²⁶ Robbins, Saugus Ironworks Daily Log - 1952, January 10, 1952.
- ²⁷ Robbins, Saugus Ironworks Daily Log - 1952, February 12, 1952.
- ²⁸ Robbins, Saugus Ironworks Daily Log - 1952, March 1, 1952.

- ²⁹ Robbins, Saugus Ironworks Daily Log - 1952, March 28, 1952.
- ³⁰ Robbins, Saugus Ironworks Daily Log - 1952, April 21, 1952.
- ³¹ Robbins, Saugus Ironworks Daily Log - 1952, June 4, 1952.
- ³² Robbins, Saugus Ironworks Daily Log - 1952, June 6, 1952.
- ³³ Robbins, Saugus Ironworks Daily Log - 1952, June 11, 1952.
- ³⁴ Robbins, Saugus Ironworks Daily Log - 1952, June 20, 1952.
- ³⁵ Robbins, Saugus Ironworks Daily Log - 1952, June 21, 1952.
- ³⁶ Robbins, Saugus Ironworks Daily Log - 1952, July 3, 1952.
- ³⁷ Robbins, Saugus Ironworks Daily Log - 1952, July 7, 1952.
- ³⁸ Robbins, Saugus Ironworks Daily Log - 1952, July 29, 1952.
- ³⁹ Robbins, Saugus Ironworks Daily Log - 1952, July 29, 1952.
- ⁴⁰ Robbins, Saugus Ironworks Daily Log - 1952, July 30, 1952.
- ⁴¹ Robbins, Saugus Ironworks Daily Log - 1952, July 30, 1952.
- ⁴² Robbins, Saugus Ironworks Daily Log - 1952, August 6, 1952.
- ⁴³ Robbins, Saugus Ironworks Daily Log - 1952, August 4, 1952.
- ⁴⁴ Robbins, Saugus Ironworks Daily Log - 1952, August 4, 1952.
- ⁴⁵ Robbins, Saugus Ironworks Daily Log - 1952, August 9, 1952.
- ⁴⁶ Robbins, Saugus Ironworks Daily Log - 1952, August 14, 1952.
- ⁴⁷ Robbins, Saugus Ironworks Daily Log - 1952, August 28, 1952.
- ⁴⁸ Quincy Bent to Andrew H. Hepburn, August 15, 1952, First Iron Works Association Papers.
- ⁴⁹ [Minutes], Meeting at Saugus, August 28, 1952, 10:30 a.m., First Iron Works Association Papers.
- ⁵⁰ H. R. Schubert to E. Neal Hartley, September 15, 1952, First Iron Works Association Papers.
- ⁵¹ A. H. Hepburn to H. R. Schubert, September 23, 1952, First Iron Works Association Papers.
- ⁵² A. H. Hepburn to H. R. Schubert, September 23, 1952, First Iron Works Association Papers.
- ⁵³ A. H. Hepburn to H. R. Schubert, September 23, 1952, First Iron Works Association Papers.
- ⁵⁴ A. H. Hepburn to H. R. Schubert, September 23, 1952, First Iron Works Association Papers.
- ⁵⁵ H. R. Schubert to E. Neal Hartley, October 1952, First Iron Works Association Papers.
- ⁵⁶ Robbins, Saugus Ironworks Daily Log - 1952, September 5, 1952.
- ⁵⁷ Robbins, Saugus Ironworks Daily Log - 1952, September 11, 1952.
- ⁵⁸ Robbins, Saugus Ironworks Daily Log - 1952, September 16, 1952.
- ⁵⁹ Robbins, Saugus Ironworks Daily Log - 1952, October 24, 1952, November 17, 1952.
- ⁶⁰ Robbins, Saugus Ironworks Daily Log - 1952, December 10, 1952.
- ⁶¹ Robbins, Saugus Ironworks Daily Log - 1952, December 10, 1952.
- ⁶² Robbins, Saugus Ironworks Daily Log - 1952, December 12, 1952.
- ⁶³ Robbins, Saugus Ironworks Daily Log - 1952, December 12, 1952.
- ⁶⁴ Robbins, Saugus Ironworks Daily Log - 1952, December 12, 1952.

- ⁶⁵ Robbins, Saugus Ironworks Daily Log - 1952, December 15, 1952.
- ⁶⁶ Robbins, Saugus Ironworks Daily Log - 1952, December 27, 1952.
- ⁶⁷ Perry, Shaw, and Hepburn, Kehoe and Dean. Existing Forge Evidence, August 13, 1952, Drawing Number SK 322, First Iron Works Association Papers; Steve Whittlesey, Field Notes - Forge, September 23, 1952, First Iron Works Association Papers.
- ⁶⁸ Perry et al., Existing Forge Evidence.
- ⁶⁹ Robbins, Saugus Ironworks Daily Log - 1953, April 8, 1953. Robbins noted that this meant the tree started growing about 1311, and suggested that they have it studied by “some reputable school of forestry,” as it “probably would reveal pertinent data relative to local weather conditions during the past six or more centuries.”
- ⁷⁰ Robbins, Saugus Ironworks Daily Log - 1953, April 27, 1953; John H. Lambert to Roland W. Robbins, May 11, 1953, Roland Wells Robbins Collection.
- ⁷¹ Perry, Shaw, and Hepburn, Kehoe and Dean, “Plan of Refinery Hammer & Anvil Sites,” December 28, 1950, Drawing Number SK 300, Saugus Iron Works NHS.
- ⁷² Trip hammer post features, traced from S.W. Work Sheet, September 16, 1952, First Iron Works Association Papers.
- ⁷³ Perry et al., Existing Forge Evidence.
- ⁷⁴ Perry et al., Existing Forge Evidence.
- ⁷⁵ Robbins, Saugus Ironworks Daily Log - 1952, July 30, 1952.
- ⁷⁶ Robbins, Saugus Ironworks Daily Log - 1952, August 28, 1952.
- ⁷⁷ Perry et al., Existing Forge Evidence.
- ⁷⁸ Perry et al., Existing Forge Evidence.
- ⁷⁹ Robbins, Saugus Ironworks Daily Log - 1952, October 28, 1952.
- ⁸⁰ Robbins, Saugus Ironworks Daily Log - 1952, November 5, 1952.
- ⁸¹ Robbins, Saugus Ironworks Daily Log - 1952, December 1, 1952.
- ⁸² Robbins, Saugus Ironworks Daily Log - 1952, December 10, 1952. These wells were located south of the area subsequently identified as the slitting mill.
- ⁸³ Robbins, Saugus Ironworks Daily Log - 1952, December 15, 1952.
- ⁸⁴ Robbins, Saugus Ironworks Daily Log - 1952, December 22, 1952.
- ⁸⁵ Robbins, Saugus Ironworks Daily Log - 1952, December 27, 1952.
- ⁸⁶ Robbins, Saugus Ironworks Daily Log - 1953, January 10, 1953.
- ⁸⁷ Robbins, Saugus Ironworks Daily Log - 1953, January 10, 1953.
- ⁸⁸ Robbins, Saugus Ironworks Daily Log - 1953, January 10, 1953.
- ⁸⁹ H. R. Schubert to E. Neal Hartley, February 11, 1953, First Iron Works Association Papers.
- ⁹⁰ Robbins, Saugus Ironworks Daily Log - 1953, March 16, 1953.
- ⁹¹ Robbins, Saugus Ironworks Daily Log - 1953, March 18, 1953.
- ⁹² Robbins, Saugus Ironworks Daily Log - 1953, April 9, 1953.

- ⁹³ Robbins, Saugus Ironworks Daily Log - 1953, May 4, 1953.
- ⁹⁴ Robbins, Saugus Ironworks Daily Log - 1953, May 4, 1953.
- ⁹⁵ Robbins, Saugus Ironworks Daily Log - 1953, May 4, 1953.
- ⁹⁶ Robbins, Saugus Ironworks Daily Log - 1953, July 4, 1953.
- ⁹⁷ Robbins, Saugus Ironworks Daily Log - 1953, July 4, 1953.
- ⁹⁸ Robbins, Saugus Ironworks Daily Log - 1953, May 4, 1953.
- ⁹⁹ Robbins, Saugus Ironworks Daily Log - 1953, May 4, 1953; May 11, 1953.
- ¹⁰⁰ Robbins, Saugus Ironworks Daily Log - 1953, May 26, 1953.
- ¹⁰¹ Robbins, Saugus Ironworks Daily Log - 1953, May 26, 1953.
- ¹⁰² Robbins, Saugus Ironworks Daily Log - 1953, May 26, 1953.
- ¹⁰³ Robbins, Saugus Ironworks Daily Log - 1953, June 10, 1953. These features were to be examined by Douglas Byers and several associates with the Massachusetts Archaeological Society.
- ¹⁰⁴ Curtis White, personal communication, January 20, 2009.
- ¹⁰⁵ Perry, Shaw, and Hepburn, Kehoe and Dean, Rough Sketch Showing Relation of the Slitting Mill Evidence to Forge Building, March 10, 1953, Drawing Number SK 414, First Iron Works Association Papers.
- ¹⁰⁶ Robbins, Saugus Ironworks Daily Log - 1953, July 4, 1953.
- ¹⁰⁷ Robbins, Saugus Ironworks Daily Log - 1953, July 4, 1953.
- ¹⁰⁸ Robbins, Saugus Ironworks Daily Log - 1953, May 26, 1953.
- ¹⁰⁹ Robbins, Saugus Ironworks Daily Log - 1953, May 26, 1953.
- ¹¹⁰ Cyril Stanley Smith, "Iron from the Slitting Mill at Saugus," *Publications in the Humanities*, Number 75 (1966): 5.
- ¹¹¹ Smith, "Iron from the Slitting Mill at Saugus," 5 and Fig. 4. However, Smith contradicts this in the text on page 5 where he notes that "it is impossible to say from what location it came"
- ¹¹² Smith, "Iron from the Slitting Mill at Saugus," 10-11.
- ¹¹³ Smith, "Iron from the Slitting Mill at Saugus," 10-11.
- ¹¹⁴ Smith, "Iron from the Slitting Mill at Saugus," 4.
- ¹¹⁵ Curtis White, personal communication, January 20, 2009. Curtis identified the spacer, which had previously been identified as an escutcheon plate.

CHAPTER 7 Notes

¹ Robbins' draft to National Park Service, May 11, 1977, Roland Wells Robbins Collection.

² Albert E. Jenks to Mr. Ernst, Dec 30, 1952, Joseph Jenks file, York Historical File, York, Maine.

- ³ Colket, Merideth B.; *The Jenks Family of England*, (Salem, Massachusetts: Higginson Book Company, reprint 1956), 5.
- ⁴ “Statement of Henry Hoppie and Peter English” in *Calendar of State Papers, Domestic Series, December 1671 to May 17th 1672*. Thanks to Hounslow Librarian Mr. John Tofts White for providing this information, 1990.
- ⁵ Colket, *The Jenks Family of England*, 7, 11.
- ⁶ Colket, *The Jenks Family of England*, 8.
- ⁷ Colket, *The Jenks Family of England*, 4.
- ⁸ Glover, Moses, Istelworth Hundred map, 1635, original painting at Syon House, Brentford, Middlesex, England, repr. by Pitkin Unichrome Ltd., Andover, Hampshire, England.
- ⁹ Isleworth, description and history from 1868 gazetteer, www.dspace.dial.pipex.com/town/walk/goa57/old/hist/ (accessed December 29, 2006).
- ¹⁰ Petition of Joseph Jinks Sword blade maker for a plot of Ground, Archives of the Duke of Northumberland.
- ¹¹ Richard Candee, “Merchant and Millwright, the Water Powered Mills of the Piscataqua,” *Old Time New England*, vol. 60, Number 220 (Spring 1970): 138.
- ¹² Candee, “Merchant and Millwright,” 139.
- ¹³ Petition submitted by Joseph Jenks to the General Court of Massachusetts, May 10, 1646.
- ¹⁴ John Becx to John Gifford, April 26, 1652, Lynn Iron Works Collection.
- ¹⁵ Essex County Registry of Deeds, <http://www.salemdeeds.com/historic/00001/0064.tif> (accessed 4:52 P.M., July 1, 2010.)
- ¹⁶ Essex County Registry of Deeds, Book 1: 80.
- ¹⁷ Records & Files of the Quarterly Courts of Essex County, Massachusetts (Salem, MA: Essex Institute, 1911), vol. 1:293.
- ¹⁸ “Petition submitted by Joseph Jenks to the General Court of Massachusetts.”
- ¹⁹ Emmanuel Downing to John Winthrop, Jr., December 27, 1650/51, *Winthrop Papers*, VI:97.
- ²⁰ Lynn Iron Works Collection, 90, 140.
- ²¹ Joseph Moxon, *Mechanick Exercises*, 1703, repr. 97 (New York: Praeger Publishers, 1970), 97.
- ²² Emmanuel Downing to John Winthrop, Jr., December 14, 1652/53, *Winthrop Papers*, VI:247.
- ²³ Essex County Registry of Deeds, Book 1: 33.
- ²⁴ Essex County Registry of Deeds, Book 1: 36.
- ²⁵ *Essex Probate Court Records* (Salem, MA, Essex Institute, 1960), vol. II:45, 46, 216, 217.
- ²⁶ “Petition of Joseph Jenks Senior to the Massachusetts General Court seeking financial assistance to build a room and procure a stock of coals and iron for the purposes of drawing wire, October 15, 1667,” Massachusetts Archives, vol. 59:88.
- ²⁷ Smith, Gnudi, *The Pirotechnia of Vannoccio Biringuccio* (Venice, 1540, 1943, repr. by Dover Publications, 1990), 378.

²⁸“Petition of Joseph Jenks Senior to the Massachusetts General Court seeking financial assistance to build a room and procure a stock of coals and iron for the purposes of drawing wire.”

²⁹ Hartley, *Ironworks on the Saugus*, 262-263.

³⁰ Testimony of Joseph Jenks, Sr., and John Jenks; dated the 27th of the 4th month, 1678, seventeenth-century copy at Saugus Iron Works NHS.

³¹ Hartley, *Ironworks on the Saugus*, 264-265.

³² *Lynn Vital Records*, vols. 1-2 (Salem, MA: Essex Institute, 1905), 2:513.

³³ Hartley, *Ironworks on the Saugus*, 278, 303.

³⁴ *Lynn Vital Records*, 2:512

³⁵ Pollack Gray interview with Edward L. Guy, June 1974, audio tape at Saugus Iron Works NHS.

³⁶ Robbins, Saugus Ironworks Daily Log - 1948, September 10, 1948.

³⁷ Albert Ernest Jenks to M. Louise Hawkes, March 11, 1949, Albert Ernest Jenks Correspondence, 1941-1953, First Iron Works Association Papers.

³⁸ Robbins, Saugus Ironworks Daily Log - 1952, February 10-14, 1952.

³⁹ Robbins, Saugus Ironworks Daily Log - 1952, February 20, 21, 1952.

⁴⁰ Robbins, Saugus Ironworks Daily Log - 1952, February 29, 1952.

⁴¹ Robbins, Saugus Ironworks Daily Log - 1952, March 1, 1952.

⁴² Robbins, Saugus Ironworks Daily Log - 1952, March 1, 1952.

⁴³ Robbins, Saugus Ironworks Daily Log - 1952, March 3-6, 1952.

⁴⁴ Robbins, Saugus Ironworks Daily Log - 1952, March 18, 1952.

⁴⁵ Goussier; *Recueil de Plances, sur les Sciences, les Arts Libéraux, et les Arts Mécaniques, avec Leur Explication* (Paris: Au Cercle du Livre Precieux, 1964-1966), vol. II, plate III.

⁴⁶ Robbins, Saugus Ironworks Daily Log - 1952, March 14, 1952.

⁴⁷ Robbins, Saugus Ironworks Daily Log - 1952, April 11, 1952.

⁴⁸ Robbins, Saugus Ironworks Daily Log - 1952, April 10, 1952.

⁴⁹ Robbins, Saugus Ironworks Daily Log - 1952, April 11, 1952.

⁵⁰ Robbins Note Card number 1004/1005, April 12, 1952, First Iron Works Association Papers.

⁵¹ de Caus, Isaak, *New and Rare Inventions of Water-Works* (London, 1659), 111.

⁵² Qunicy Bent to J. Sanger Atwill, April 18, 1952, First Iron Works Association Papers.

⁵³ Robbins, Saugus Ironworks Daily Log - 1952, April 30, 1952.

⁵⁴ E. Neal Hartley to Roland W. Robbins, May 14, 1952, The Roland Wells Robbins Collection.

⁵⁵ Hartley to Robbins, May 14, 1952.

⁵⁶ Hartley to Robbins, May 14, 1952.

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¹ Norman Smith, *A History of Dams* (Secaucus, NJ: The Citadel Press, 1972), 2.

² Smith, *A History of Dams*, 164-65.

³ Smith, *A History of Dams*, 166.

⁴ Lebelier defines “hammerpond” to mean a pond of artificial origin, which has served a forge, a furnace, or both” Fred Lebelier to Roland W. Robbins, April 5, 1949, Papers of Charles Rufus Harte.

⁵ Lebelier to Robbins, April 5, 1949.

⁶ Otto Franzius, *Waterway Engineering, A Text and Handbook Treating of the Design, Construction, and Maintenance of Navigable Waterways*, trans. by Lorenz G. Straub (Cambridge: Massachusetts Institute of Technology, The Technology Press, 1936), 23.

⁷ *Records of Essex Courts*, II:21-211.

⁸ Cleere and Crossley, *The Iron Industry of the Weald*, 225.

⁹ Cleere and Crossley, *The Iron Industry of the Weald*, 225.

¹⁰ Cleere and Crossley, *The Iron Industry of the Weald*, 229.

¹¹ Walter Renton Ingalls to Charles Rufus Harte, June 26, 1949, Papers of Charles Rufus Harte.

¹² Lebelier to Robbins, April 5, 1949.

¹³ Ingalls to Harte, June 27, 1950, Papers of Charles Rufus Harte.

¹⁴ “A statement of indebtednesses,” copied from the Salem Records & Files, 1653:290 and 291, in Papers of Charles Rufus Harte.

¹⁵ Catherine Teresa Tobin, *The Lowly Muscular Digger: Irish Canal Workers in Nineteenth Century America*, Ph.D. diss., Dept. of History, University of Notre Dame, 1987, 108.

¹⁶ Cleere and Crossley, *The Iron Industry of the Weald*, 237.

¹⁷ Robbins, Saugus Ironworks Daily Log – 1949, July 7, 1949.

¹⁸ Robbins, Saugus Ironworks Daily Log – 1949, July 8, 1949.

¹⁹ Robbins, Saugus Ironworks Daily Log – 1949, July 8, 1949.

²⁰ Robbins, Saugus Ironworks Daily Log – 1949, August 13, 1949.

²¹ Robbins, Saugus Ironworks Daily Log – 1949, August 15, 1949.

²² Robbins, Saugus Ironworks Daily Log – 1949, August 15, 1949.

²³ Robbins, Saugus Ironworks Daily Log – 1949, August 18 and 19, 1949.

²⁴ Robbins, Saugus Ironworks Daily Log – 1949, August 19, 1949.

²⁵ Robbins, Saugus Ironworks Daily Log – 1950, July 21, 1950.

²⁶ Robbins, Saugus Ironworks Daily Log – 1950, October 12, 1950.

²⁷ Robbins, Saugus Ironworks Daily Log – 1949, December 5, 1949.

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²⁹ Darcie MacMahon, *Archeological Collections Management at the Saugus Iron Works*

National Historic Site, Massachusetts (Boston: Division of Cultural Resources, North Atlantic Regional Office, National Park Service, U.S. Department of the Interior, 1988), 81.

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³¹ Robbins, Saugus Ironworks Daily Log – 1950, February 7, 1950.

³² Robbins, Saugus Ironworks Daily Log – 1950, April 5, 1950.

³³ Robbins, Saugus Ironworks Daily Log – 1950, April 5, 1950.

³⁴ Robbins, Saugus Ironworks Daily Log – 1950, October 20, 1950.

³⁵ Robbins, Saugus Ironworks Daily Log – 1950, October 20, 1950.

³⁶ Frederika A. Burrows, *Cannonballs & Cranberries* (Taunton, MA: W. S. Sullwold, c1976).

³⁷ Robbins, Saugus Ironworks Daily Log – 1951, May 24, 1951.

³⁸ Robbins, Saugus Ironworks Daily Log – 1951, May 24, 1951.

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⁴⁰ Robbins, Saugus Ironworks Daily Log – 1951, May 18, 1951.

⁴¹ Robbins, Saugus Ironworks Daily Log – 1951, January 17, 1951.

⁴² Robbins, Saugus Ironworks Daily Log – 1952, July 14, 1952.

⁴³ Robbins, Saugus Ironworks Daily Log – 1952, December 10, 1952.

⁴⁴ Cleere and Crossley, *The Iron Industry of the Weald*, 229.

⁴⁵ Robbins, Saugus Ironworks Daily Log – 1952, December 10, 1952.

⁴⁶ Robbins, Saugus Ironworks Daily Log – 1952, December 10, 1952.

⁴⁷ Robbins, Saugus Ironworks Daily Log – 1952, July 14, 1952.

⁴⁸ Robbins, Saugus Ironworks Daily Log – 1952, July 14, 1952.

⁴⁹ Robbins, Saugus Ironworks Daily Log – 1952, November 7, 1952; Barghoorn, “Recent Changes in Sea Level Along the New England Coast,” 597-598.

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² Robbins, Saugus Ironworks Daily Log – 1949, June 27, 1949.

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⁶ Robbins, Supplementary Yard and Dock Sill file – 1953, April 3, 1953.

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⁹ Stephen Whittlesey, Supplementary Yard and Dock Sill file -1953, September 10, 1953, First Iron Works Association Papers.

- ¹⁰ Robbins, Supplementary Yard and Dock Sill file – 1953, March 26, 1953.
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- ¹⁴ Robbins, Saugus Ironworks Daily Log – 1953, November 25, 1953.
- ¹⁵ Robbins, Saugus Ironworks Daily Log – 1952, November 7, 1952.
- ¹⁶ Barghoorn, “Recent Changes in Sea Level Along the New England Coast,” 597-598.
- ¹⁷ Robbins, Saugus Ironworks Daily Log – 1953, June 25, 1953.
- ¹⁸ Conover Fitch to Elso S. Barghoorn, January 31, 1952, The Conover Fitch Papers, First Iron Works Association Papers.
- ¹⁹ Robbins, Saugus Ironworks Daily Log – 1950, October 19, 1950.
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- ²⁴ Robbins, Saugus Ironworks Daily Log – 1950, September 26, 1950.
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- ³⁰ Robbins, Saugus Ironworks Daily Log – 1950, January 27, 1950.
- ³¹ Robbins, Saugus Ironworks Daily Log – 1950, January 27, 1950.
- ³² Robbins, Saugus Ironworks Daily Log – 1950, January 30, 1950.
- ³³ Robbins, Saugus Ironworks Daily Log – 1953, June 9, 1953.
- ³⁴ Robbins, Saugus Ironworks Daily Log – 1953, June 9, 1953.
- ³⁵ Robbins, Saugus Ironworks Daily Log – 1953, June 9, 1953.
- ³⁶ Robbins, Saugus Ironworks Daily Log – 1951, July 17, 1951.
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- ³⁸ Robbins, Saugus Ironworks Daily Log – 1950, April 30, 1950.
- ³⁹ Robbins, Saugus Ironworks Daily Log – 1950, April 30, 1950.
- ⁴⁰ Robbins, Saugus Ironworks Daily Log – 1949, July 29, 1949.
- ⁴¹ Robbins, Saugus Ironworks Daily Log – 1949, November 9, 1949.
- ⁴² Robbins, Saugus Ironworks Daily Log – 1952, August 18, 1952.
- ⁴³ Card Archives, SAIR 771 (G20026), SAIR 772 (G20026b), and SAIR 773 (G20026b2), First Iron Works Association Papers.
- ⁴⁴ Robbins, Saugus Ironworks Daily Log – 1952, September 17, 1952.

- ⁴⁵ Robbins, Saugus Ironworks Daily Log – 1952, May 19, 1952.
⁴⁶ Brown, “An Evaluation of Roland Wells Robbins’ Archaeology,” 33-34.
⁴⁷ Robbins, Saugus Ironworks Daily Log – 1953, June 10, 1953.
⁴⁸ Linebaugh, “The Road to Ruins and Restoration,” 167.

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- ¹ These artifactual and archival collections have provided the principal sources for the present volume.
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- ³ Johnson, “Archeological Overview and Assessment,” 14.
- ⁴ Johnson, “Archeological Overview and Assessment,” 16-17.
- ⁵ Lynn Iron Works Collection, 84.
- ⁶ Johnson, “Archeological Overview and Assessment of the Saugus Iron Works National Historic Site,” 16-17.
- ⁷ Carlson, “The Saugus Iron Works Restoration,” 9-11.
- ⁸ Jonathan L. Fairbanks and Robert F. Trent, *New England Begins: The Seventeenth Century*, (Boston: Museum of Fine Arts, 1982), 2:359.
- ⁹ Lynn Iron Works Collection, 185.
- ¹⁰ *Records of Essex Courts*, VIII:201.
- ¹¹ Saugus Iron Works NHS Museum Collections Catalog Data, ANCS+, Form 10-254, cataloged by Russell J. Barber, 1973.
- ¹² Hartley, *Ironworks on the Saugus*, 137.
- ¹³ Fairbanks and Trent, *New England Begins: The Seventeenth Century*, 1:xx.
- ¹⁴ *Records of Essex Courts*, I:294.
- ¹⁵ Steven R. Pendery, “Portuguese Tin-glazed Earthenware in Seventeenth-Century New England: A Preliminary Study” *Historical Archeology* (1999) 33, no. 4: 69.
- ¹⁶ Museum Collections Catalog Data, ANCS+, Form 10-254; Neal Trubowitz, Survey of Tobacco Pipe Collections, 2009, report on file at Saugus Iron Works NHS, Saugus, MA.
- ¹⁷ Russell J. Barber, Report on the Saugus Ironworks Collections and their Cataloguing, n.d., report on file at Saugus Iron Works NHS, 9-10.
- ¹⁸ David Bogdan, personal communication, 2009. Bogdan is a woodcrafter at Saugus Iron Works NHS.
- ¹⁹ Barber, Report on the Saugus Ironworks Collections and their Cataloguing, 9-10.
- ²⁰ Barber, Report on the Saugus Ironworks Collections and their Cataloging, 2-3.
- ²¹ Barber, Report on the Saugus Ironworks Collections and their Cataloging, 2-3.

- ²² Robbins, Saugus Ironworks Daily Log - 1949, April 30 and May 1, 1949.
- ²³ August 14, 1648, *Winthrop Papers*, II:246.
- ²⁴ *Winthrop Papers*, IV:363.
- ²⁵ G. Reginald Bashforth, *The Manufacture of Iron and Steel* (London, Chapman & Hallplace, 3rd edition, 1964).
- ²⁶ A 1775 treatise by Pierre Grignon outlines the cause and effect of mold thickness on cast iron. Reprinted in Cyril Stanley Smith, *Sources for the History of the Science of Steel 1532-1786* (Cambridge, Massachusetts: The Society for the History of Technology and M.I.T Press, 1968), 132-133.
- ²⁷ Taylor Lyman, ed., *Metals Handbook*, 1948 ed. (Cleveland, Ohio: The American Society for Metals), 505.
- ²⁸ When the gates and risers are full, they provide a place for iron to shrink that is outside the finished casting.
- ²⁹ *Records of Essex Courts*, 1:294.
- ³⁰ *Records of Essex Courts*, 1:294.
- ³¹ Dorothy Hartley, *Lost Country Life* (New York: Knopf Doubleday Publishing Group, 1979), 328.
- ³² René Antoine Ferchault de Réamur, *Memoirs of Steel and Iron*, a translation from the original printed in 1722 (Chicago: University of Chicago Press, 1956), 260.
- ³³ Lyman, *Metals Handbook*, 506.
- ³⁴ Schubert, *History of the British Iron and Steel Industry*, 286.
- ³⁵ Letter from John Becx to John Gifford, April 26, 1652, Lynn Iron Works Collection, 36.
- ³⁶ Recueil de Planches sur les Sciences, les Arts Liberaux, et les Arts Mechaniques, avec Leur Explication, Paris, 1965, Forges, 3e Section, Fourneau en Merchandise, Moulage en Sable, plates VII and VIII; and Moulage en Terre, plates III and IV.
- ³⁷ Clay and sand were obtained from sources in or near seventeenth-century Lynn. On the tailrace of the blast furnace was a corn mill. The purpose of such a mill at the ironworks site may have been to grind grass fibers or grain for the purpose of binding the clay/sand mixture and providing stability of the loam material through drying. In some cases, after the mold was made and molten iron was poured, the organic fibers of dung or grasses would burn out and provide pores for unwanted gasses to escape from the mold.
- ³⁸ The pot molds were made from three shells of loam that were strategically layered over one another.
- ³⁹ The reason the third layer is cut and the hemispheres separated is that the pot is of a bulbous shape and the layers cannot otherwise be separated.
- ⁴⁰ The two wooden patterns that are used to make the lug mold are slid into each other, loam is pressed tightly around the pattern assembly, and the patterns are then removed to form an

angular tube. The same is done again to make the other lug mold.

⁴¹ Two patterns are used together. One pattern forms the leg and the other forms a foot. Loam is wrapped around this pattern assembly and the patterns are pulled apart to reveal a faceted tube.

⁴² When the core was first turned, it included a kind of knee that circumnavigated the rim area of the mold. This knee came in direct contact with the outer shell of the pot mold, kept the hemispheres properly aligned, and formed a seal.

⁴³ While cooling, the iron would shrink. If the molder had done his job properly, the core would be crushed as the iron shrank; otherwise, the iron pot would crack and the molding and drying would all have been for nothing.

⁴⁴ Robbins, Saugus Ironworks Daily Log – 1951, September 17 and October 12, 1951.

⁴⁵ Frederick Overman, *Molder's and Founder's Pocket Guide* (Philadelphia: Moss, Brother and Company, 1860), 104-115.

⁴⁶ *First Iron Works Gazette*, vol. 1, no. 4 (October 1951): 2.

⁴⁷ Perry, Shaw, and Hepburn, Kehoe and Dean, Correspondence, First Iron Works Association Papers; Tools and Implements, “resume” dated July 26, 1954, First Iron Works Association Papers, Saugus Iron Works NHS.

⁴⁸ Scheme III, SAIR archives.

⁴⁹ Perry, Shaw, and Hepburn, Kehoe and Dean Correspondence, June 10, 1954, First Iron Works Association Papers, Saugus Iron Works NHS; A Partial List of Tools and Equipment Required to Furnish Blast Furnace, Forge, and Slitting Mill, Saugus Iron Works NHS.

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¹ Carlson, *First Iron Works*, 13.

² *The New York Times*, January 12, 1949, 24.

³ Lewis, Ralph, *Museum Curatorship in the National Park Service 1904-1982* (Washington, DC: Department of the Interior, 1993), 338.

⁴ Robbins, Saugus Ironworks Daily Log - 1949, May 23, 1949.

⁵ Kaplan, Lawrence, Mary B. Smith, and Lesley Sneddon, “Boylston Street Fishweir: Revisited,” *Economic Botany Journal* 44, no. 4 (October 1990): 516-538.

⁶ Robbins, Saugus Ironworks Daily Log - 1949, June 15, 1949.

⁷ This process involves protecting metal from corrosion by making the electrochemically active surface of metal “passive” with a chemical treatment which ties up active electrons necessary for the corrosion process.

⁸ Robbins, Saugus Ironworks Daily Log - 1950, January 18, 1950.

⁹ Roland W. Robbins to Quincy Bent, March 16, 1950, First Iron Works Association Papers.

- ¹⁰ Emily Williams, "Sixty-Five Years of History: Archaeological Conservation at Colonial Williamsburg," *North American Archaeologist* 21, no. 2 (2000): 107-113.
- ¹¹ Sean Charette, personal communication, May 18, 1999. Charette is a Getty Conservation Institute Project Director.
- ¹² Robbins, Saugus Ironworks Daily Log – 1950, February 23, 1950.
- ¹³ Robbins, Saugus Ironworks Daily Log – 1950, January 18, 1950.
- ¹⁴ Roland W. Robbins to Quincy Bent, March 16, 1950, First Iron Works Association Papers.
- ¹⁵ Carl Salmons-Perez, Carl, personal communication, November 16, 2009. Salmons-Perez is Saugus National Historic Site Curator.
- ¹⁶ Maurice Robbins was a founding member and president of the Massachusetts Archaeological Society as well as the author of *The Amateur Archeology Handbook*, which helped train generations of archeologists from across the country. He was a good friend of Roland Robbins, but not related.
- ¹⁷ Roland W. Robbins to Maurice Robbins, May 4, 1950, First Iron Works Association Papers.
- ¹⁸ Roland W. Robbins to Maurice Robbins, May 26, 1950, First Iron Works Association Papers.
- ¹⁹ Roland W. Robbins, First treatments and preservation of metal relics, Notebook No. 3, June 9, 1950, First Iron Works Association Papers.
- ²⁰ Herbert Uhlig, *Corrosion Handbook* (New York: J. Wiley & Sons, 1948, repr. by Wiley, 2000).
- ²¹ S. Epstein, K. Haupt, A.G. Ferdinand and R.S.A. Dougherty, Metallographic Examination of Cast Iron and Wrought Iron specimens from the Site of the Saugus Furnace: August 25, 1949.
- ²² Robbins, Saugus Ironworks Daily Log – 1951, February 17, 1951.
- ²³ Robbins, Saugus Ironworks Daily Log – 1951, February 23, 1951.
- ²⁴ Robbins, Saugus Ironworks Daily Log – 1951, March 14, 1951.
- ²⁵ Robbins, Saugus Ironworks Daily Log – 1951, April 17, 1951.
- ²⁶ Elso Barghoorn to Roland Robbins, May 22, 1951, First Iron Works Association Papers.
- ²⁷ Annual Archaeological Report – June 30, 1951
- ²⁸ Robbins, Saugus Ironworks Daily Log – 1952, September 12, 1952.
- ²⁹ Robbins, Saugus Ironworks Daily Log – 1952, June 8, 1952.
- ³⁰ Robbins, Saugus Ironworks Daily Log – 1952, March 30, 1952.
- ³¹ Robbins, Saugus Ironworks Daily Log – 1952, January 1952.
- ³² Robbins, Saugus Ironworks Daily Log – 1952, December 3, 1952.
- ³³ Robbins, Saugus Ironworks Daily Log – 1952, November 19, 1952.
- ³⁴ Handwritten addition, Saturday, June 21, 1958 to Robbins, Saugus Ironworks Daily Log - 1954, September 23, 1954.

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- ¹ Susan McKanna (nee Colby), personal communication, 1991.
- ² Robbins, *Discovery at Walden*, 19.
- ³ Robbins, *Discovery at Walden*, 19.
- ⁴ Robbins' notebooks reveal a level of personal insecurity understandable in someone embarking on a new career.
- ⁵ Walter Harding, personal communication, 1992.
- ⁶ Roland W. Robbins to Walter Harding, January 23, 1946, Roland Wells Robbins Collection, The Thoreau Society and Thoreau Institute, Lincoln, MA.
- ⁷ Walter Harding quoted in Robbins, *Discovery at Walden*, xv-xvi.
- ⁸ James Dodson, "The Man Who Found Thoreau," *Yankee* 49 (1985): 116.
- ⁹ Linebaugh, *The Man Who Found Thoreau*, 123-128.
- ¹⁰ Linebaugh, *The Man Who Found Thoreau*, 197-198.
- ¹¹ Robbins, Saugus Ironworks Daily Log – 1950, April 27, 1950.
- ¹² Robbins, Saugus Ironworks Daily Log – 1950, June 28, 1950.
- ¹³ Robbins, Saugus Ironworks Daily Log - 1949, June 20, 1949.
- ¹⁴ Robbins, Saugus Ironworks Daily Log - 1949, June 22, 1949.
- ¹⁵ Robbins, Saugus Ironworks Daily Log - 1950, June 22, 1950.
- ¹⁶ Robbins, Saugus Ironworks Daily Log - 1953, April 24, 1953.
- ¹⁷ Robbins, Saugus Ironworks Daily Log - 1949, November 14, 1949.
- ¹⁸ Robbins, Saugus Ironworks Daily Log - 1953, April 24, 1953.
- ¹⁹ Robbins, Saugus Ironworks Daily Log - 1950, October 3, 1950.
- ²⁰ Robbins, Saugus Ironworks Daily Log - 1950, September 2, 1950.
- ²¹ Robbins, Saugus Ironworks Daily Log - 1950, January 4, 1950.
- ²² Robbins, Saugus Ironworks Daily Log - 1951, August 15, 1951.
- ²³ Robbins, Saugus Ironworks Daily Log - 1952, June 2, 1952.
- ²⁴ Robbins, Saugus Ironworks Daily Log - 1950, June 18, 1950.
- ²⁵ Robbins, Saugus Ironworks Daily Log - 1951, June 11, 1951.
- ²⁶ Robbins, Saugus Ironworks Daily Log - 1952, June 16, 1952.
- ²⁷ Robbins, Saugus Ironworks Daily Log - 1951, June 22, 1951.
- ²⁸ Robbins, Saugus Ironworks Daily Log - 1952, August 27, 1952.
- ²⁹ Robbins, Saugus Ironworks Daily Log - 1952, September 16, 1952.
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- ³² Robbins, Saugus Ironworks Daily Log - 1953, January 22, 1953.
- ³³ Robbins, Saugus Ironworks Daily Log - 1953, March 17, 1953.

- ³⁴ Robbins, Saugus Ironworks Daily Log - 1953, April 1, 1953.
- ³⁵ Robbins, Saugus Ironworks Daily Log - 1953, April 6, 1953.
- ³⁶ Robbins, Saugus Ironworks Daily Log - 1953, June 15 and 17, 1953.
- ³⁷ Robbins, Saugus Ironworks Daily Log - 1953, June 15, 1953.
- ³⁸ Robbins recorded that he assembled the furnace waterwheel exhibit in June 1951. (See Robbins, Saugus Ironworks Daily Log - 1951, June 29, 1951.)
- ³⁹ Robbins, Saugus Ironworks Daily Log - 1953, June 17, 1953.
- ⁴⁰ Robbins, Saugus Ironworks Daily Log - 1951, January 26, 1951. Robbins notes building a “platform for visitors.”
- ⁴¹ Robbins, Saugus Ironworks Daily Log - 1949, September 19, 1949.
- ⁴² Robbins, Saugus Ironworks Daily Log - 1950, June 27, 1950.
- ⁴³ Robbins, Saugus Ironworks Daily Log - 1950, August 8, 1950.
- ⁴⁴ Preservationist Louise du Pont Crowninshield was a board member of the First Iron Works Association and a founder of the National Trust for Historic Preservation. She was also a financial contributor and fundraiser for the Saugus project.
- ⁴⁵ Robbins, Saugus Ironworks Daily Log - 1950, August 16, 1950.
- ⁴⁶ Robbins, Saugus Ironworks Daily Log - 1950, September 4, 1950; Saugus Ironworks Daily Log - 1951, January 5, 1951, February 26, 1951.
- ⁴⁷ Robbins, Saugus Daily Log, May 25, 1951.
- ⁴⁸ Robbins, Saugus Ironworks Daily Log - 1951, November 5, 1951; Saugus Ironworks Daily Log - 1952, April 15, May 5, June 9 and 21, July 1, and October 28, 1952.
- ⁴⁹ Robbins, Saugus Ironworks Daily Log - 1952, November 15, 1952.
- ⁵⁰ Robbins, Saugus Ironworks Daily Log - 1953, November 23, 1953.
- ⁵¹ Robbins, Saugus Ironworks Daily Log - 1949, April 4, 1949.
- ⁵² Robbins, Saugus Ironworks Daily Log - 1949, October 2, 1949; Saugus Ironworks Daily Log - 1951, July 31, 1951.
- ⁵³ Robbins, Saugus Ironworks Daily Log - 1953, March 24, 1953.
- ⁵⁴ Robbins, Saugus Ironworks Daily Log - 1950, September 22, November 3, 8, and 19, 1950.
- ⁵⁵ Robbins, Saugus Ironworks Daily Log - 1950, September 22, 1950.
- ⁵⁶ Robbins, Saugus Ironworks Daily Log - 1950, September 28, 1950.
- ⁵⁷ Robbins, Saugus Ironworks Daily Log - 1951, January 9, 1951.
- ⁵⁸ First Iron Works Association, Inc., and American Iron and Steel Institute, *The Saugus Iron Works Restoration*, 16-mm film, New York: Filmfax Productions, 1955.
- ⁵⁹ Robbins, Saugus Ironworks Daily Log - 1953, May 7, 1953.
- ⁶⁰ Robbins, Lecture Folders, 1948-1958, Roland Wells Robbins Collection.
- ⁶¹ Kathryn B. Greywacz, New York State Museum to Roland W. Robbins, May 25, 1954. Roland Wells Robbins Collection.

- ⁶² Robbins, Saugus Ironworks Daily Log - 1951, January 17, 1951.
- ⁶³ Robbins, Saugus Ironworks Daily Log - 1950, September 13, 1950.
- ⁶⁴ Robbins, Saugus Ironworks Daily Log - 1950, September 13, 1950.
- ⁶⁵ Robbins, Lecture Folders, 1949-1953, Roland Wells Robbins Collection.
- ⁶⁶ Dodson, *The Man Who Found Thoreau*, 116.
- ⁶⁷ Linebaugh, *The Man Who Found Thoreau*, 163-166.
- ⁶⁸ J. C. Harrington, *Archaeology and the Historical Society* (Nashville, TN: American Association for State and Local History, 1965), 35.
- ⁶⁹ James Deetz, *Flowerdew Hundred: The Archaeology of a Virginia Plantation, 1619-1864*, Charlottesville, University Press of Virginia, 1993, 169-174.
- ⁷⁰ Donald M. Scott, "The Profession That Vanished: Public Lecturing in Mid-Nineteenth-Century America," in *Professions and Professional Ideologies in America*, ed. Gerald L. Geison (Chapel Hill: University of North Carolina Press, 1983), 27-28.
- ⁷¹ Carl Becker, "Everyman His Own Historian," *American Historical Review* 37, no. 2(1932):221-236.
- ⁷² Linebaugh, *The Man who Found Thoreau*, 7.
- ⁷³ Robbins, Saugus Ironworks Daily Log - 1948, September 4, 1948; Saugus Ironworks Daily Log - 1948, June 7, 1948; Saugus Ironworks Daily Log - 1953, April 27, 1953.
- ⁷⁴ Mary C. Beaudry, "Archaeology and the Documentary Record," n.p. Beaudry was the project historian and reviewed the documentary records related to the project.
- ⁷⁵ Roland W. Robbins, *The Reader's Almanac*, Audio tape of November 24, 1959, New York: WNYC, 1959.
- ⁷⁶ Robbins, Saugus Ironworks Daily Log - 1949, September 23, 1949.
- ⁷⁷ Beaudry, "Archaeology and the Documentary Record," n.p.
- ⁷⁸ Beaudry, "Archaeology and the Documentary Record," n.p.
- ⁷⁹ Robbins, Saugus Ironworks Daily Log - 1950, November 25, 1950.
- ⁸⁰ Robbins, Saugus Ironworks Daily Log - 1949, October 5, 1949.
- ⁸¹ Robbins, Saugus Ironworks Daily Log - 1949, December 29, 1949. Robbins took several pages of notes on the Pittsford Furnace.
- ⁸² Robbins, Saugus Ironworks Daily Log - 1950, July 24, 1950.
- ⁸³ Robbins, Saugus Ironworks Daily Log - 1952, April 3, 1952. Robbins went on to work at several of these Ringwood State Park sites in the mid-1960s; he established a successful school-based program at the Hewitt site. Linebaugh, *The Man Who Found Thoreau*, pp. 187-198.
- ⁸⁴ Robbins, Saugus Ironworks Daily Log - 1950, April 30, 1950.
- ⁸⁵ Robbins, Saugus Ironworks Daily Log - 1950, April 30, 1950.
- ⁸⁶ Robbins, Saugus Ironworks Daily Log - 1952, June 19, 1952.

⁸⁷ Robbins, Saugus Ironworks Daily Log - 1952, June 19, 1952.

⁸⁸ Robbins, Saugus Ironworks Daily Log - 1952, June 19, 1952.

⁸⁹ Robbins, Saugus Ironworks Daily Log - 1950, April 7 to April 12, 1950.

⁹⁰ Robbins, Saugus Ironworks Daily Log - 1950, May 9, 1950. A visit by Ronald F. Lee, Chief Historian for the National Park Service, put Robbins in touch with colleagues at the Hopewell Furnace site in Pennsylvania. Several weeks later, Robbins gave a tour to Dennis Kurjack of the Hopewell furnace project, who invited Robbins to the PA site. Beginning in the late 1940s, Robbins also developed a regular correspondence with Harry Hornblower of Plimoth Plantation (Saugus Ironworks Daily Log - 1952, July 22, 1952), J.O. Brew at Harvard, J.C. Harrington and J. Paul Hudson at Jamestown, Dr. Maurice Robbins, and C. Malcolm Watkins at the Smithsonian. Robbins also reported a visit by Mr. and Mrs. Kenneth Kidd of the Royal Ontario Museum.

⁹¹ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹² Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹³ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹⁴ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹⁵ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹⁶ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹⁷ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950.

⁹⁸ Robbins, Saugus Ironworks Daily Log - 1950, April 7, 1950. Robbins excavated this site in 1956, a few years after leaving his position at Saugus. This work is discussed in Donald W. Linebaugh, "Forging a Career," and Robbins' Report of the 1956 Archaeological Exploration, 256-274.

⁹⁹ Robbins, Saugus Ironworks Daily Log - 1951, April 17, 1951. Robbins began research on the Falling Creek site with an inquiry to the local library in Chesterfield County, VA, in August 1950 (Robbins, Saugus Ironworks Daily Log - 1950, August 7, 1950).

¹⁰⁰ A reevaluation of the site was conducted by the William and Mary Center for Archaeological Research in 1995. Thomas F. Higgins III, Charles M. Downing, Donald W. Linebaugh, Antony F. Opperman, and E. Randolph Turner III, "Archaeological Investigations of Site 44CF7, Falling Creek Ironworks, and Vicinity, Chesterfield County, Virginia," Virginia Department of Historic Resources Survey and Planning Report Series No. 4. Richmond, VA, 1995.

¹⁰¹ Robbins, Saugus Ironworks Daily Log - 1951, March 29, 1951 (38A).

¹⁰² Robbins, Saugus Ironworks Daily Log - 1951, March 29, 1951 (38B).

¹⁰³ Robbins, Saugus Ironworks Daily Log - 1951, March 29, 1951 (38C).

¹⁰⁴ Robbins, Saugus Ironworks Daily Log - 1951, March 29, 1951 (38C).

¹⁰⁵ Robbins, Saugus Ironworks Daily Log - 1951, March 29, 1951 (38C).

- ¹⁰⁶ See Higgins et al., “Archaeological Investigations of Site 44CF7” and the Falling Creek Ironworks Foundation at www.fallingcreekironworks.org.
- ¹⁰⁷ Robbins, Saugus Ironworks Daily Log - 1950, January 3, 1950.
- ¹⁰⁸ Robbins, Saugus Ironworks Daily Log - 1950, January 3, 1950.
- ¹⁰⁹ Robbins, Saugus Ironworks Daily Log - 1949, January 4, 1949; *Scientific American Supplement*, No. 1693, June 13, 1908, 380.
- ¹¹⁰ Robbins, Saugus Ironworks Daily Log - 1949, April 9, 1949.
- ¹¹¹ J. C. Harrington, “From Architraves to Artifacts: A Metamorphosis,” in *Pioneers in Historical Archaeology: Breaking New Ground*, ed. Stanley South (New York: Plenum Press, 1994), 7.
- ¹¹² Robbins, Saugus Ironworks Daily Log - 1950, July 17, 1950.
- ¹¹³ Robbins, Saugus Ironworks Daily Log - 1950, November 21, 1950.
- ¹¹⁴ Robbins, Saugus Ironworks Daily Log - 1950, December 19-20, 1950.
- ¹¹⁵ Roland W. Robbins to Maurice Robbins, January, 26, 1953, Roland Wells Robbins Collection.
- ¹¹⁶ Robbins, Saugus Ironworks Daily Log - 1951, November 18 and 26, 1951.
- ¹¹⁷ Robbins, Saugus Ironworks Daily Log - 1950, November 30, 1950.
- ¹¹⁸ Robbins, Saugus Ironworks Daily Log - 1949, November 28, 1949.
- ¹¹⁹ Robbins, Saugus Ironworks Daily Log - 1951, March 30, 1951.
- ¹²⁰ Robbins, Saugus Ironworks Daily Log - 1952, March 14 and December 26, 1952. C. Malcolm Watkins and Lura Woodside Watkins were highly respected ceramics experts, and Robbins continued to consult with them on ceramic identification throughout his career.
- ¹²¹ Robbins, Saugus Ironworks Daily Log - 1952, December 26, 1952.
- ¹²² Robbins, Saugus Ironworks Daily Log - 1949, April 25, 1949.
- ¹²³ Robbins, Saugus Ironworks Daily Log - 1953, April 27, 1953; John H. Lambert to Roland W. Robbins, May 11, 1953, letter report on file, Saugus Iron Works National Historic Site, Saugus, MA.
- ¹²⁴ Robbins, Saugus Ironworks Daily Log - 1953, April 27, 1953.
- ¹²⁵ Robbins, Saugus Ironworks Daily Log - 1949, November 8, 18, 21, and 23, 1949.
- ¹²⁶ Cze-Ching Cheng to Roland W. Robbins, April 12, 1950, letter on file, Saugus Iron Works National Historic Site, Saugus, MA.
- ¹²⁷ Robbins, Saugus Ironworks Daily Log - 1949, May 20, 27, September 15, October 7, November 28, Dec 8, 1949; Saugus Ironworks Daily Log - 1950, January 23, 1950.
- ¹²⁸ Artifact conservation is discussed more fully in Chapter 11.
- ¹²⁹ Robbins, Saugus Ironworks Daily Log - 1951, February 17, 1951; Saugus Ironworks Daily Log - 1952, May 24, 1952; Saugus Ironworks Daily Log - 1953, May 6, 1953.
- ¹³⁰ Arthur C. Laura, Research Notes on Metal Artifacts and Their Restoration, ca. 1952, The

Roland Wells Robbins Collection. This work is meticulously documented and includes a sketch of the artifact with pretreatment measurements, detailed condition of object, and the treatment program carried out.

¹³¹ Robbins, Saugus Ironworks Daily Log - 1949, May 23, 1949.

¹³² Robbins, Saugus Ironworks Daily Log - 1951, March 14, 22, April 24, and May 7, 1951; Elso S. Barghoorn to Roland W. Robbins, May 22, 1951, Roland Wells Robbins Collection.

¹³³ Robbins, Saugus Ironworks Daily Log - 1949, April 27, 1949.

¹³⁴ Robbins, Saugus Ironworks Daily Log - 1949, September 28, 1949.

¹³⁵ Roland W. Robbins, Observations on Iron Works Impurities Removed from Area Immediately to the South of the Slitting Mill Site and Sent to H. M. Kraner, Bethlehem Steel, for Analysis, letter report dated July 14, 1953, on file, Saugus Iron Works NHS.

¹³⁶ Roland W. Robbins, Observations on Iron Works Impurities.

¹³⁷ S. Epstein, K. Haupt, A. G. Ferdinand, and R. S. A. Dougherty, "Metallographic Examination of Cast Iron and Wrought Iron Specimens from the site of the Saugus Furnace," August 25, 1949, Roland Wells Robbins Collection.

¹³⁸ S. Epstein et al., "Metallographic Examination of Cast Iron and Wrought Iron Specimens."

¹³⁹ S. Epstein et al., "Metallographic Examination of Cast Iron and Wrought Iron Specimens."

¹⁴⁰ E. Neal Hartley to Harrison Shock, July 17, 1951. First Iron Works Association Papers; R.A. Limons, H.M. Kraner, "Comparison of English Sandstones and a Saugus Spike, via Petrographic Examination, Chemical Analysis, and Deformation Tests," letter report dated February 13, 1952 on file, Saugus Iron Works NHS; James B. Thompson, Jr., "Report on Rock Spikes from Saugus Furnace," n.d., letter report on file, Saugus Iron Works NHS; Laurence LaForge, "Granite and the "Spikes,"" letter report dated February 3, 1951, on file, Saugus Iron Works NHS; Laurence LaForge, "The Spikes are not Granite," letter report dated January 9, 1951, on file, Saugus Iron Works NHS; R.A. Limons, H.M. Kraner, "Petrographic Examination of Saugus Samples marked QB-1 through and including QB-8," letter report dated August 21, 1953, on file, Saugus Iron Works NHS.

¹⁴¹ Matson, Frederick R., "Saugus Sands and Mold Fragments from the Sow and Hollowware Casting Beds," Report No. 4, July 17, 1951, report on file, Saugus Iron Works NHS.

¹⁴² Matson, "Saugus Sands and Mold Fragments from the Sow and Hollowware Casting Beds."

¹⁴³ Matson, "Saugus Sands and Mold Fragments from the Sow and Hollowware Casting Beds."

¹⁴⁴ Robbins, Saugus Ironworks Daily Log - 1951, October 9, 17, and 25, 1951; Saugus Ironworks Daily Log - 1952, November 7, 1952; Saugus Ironworks Daily Log - 1953, May 29, 1953; Elso Barghoorn, "Recent Changes in Sea Level Along the New England Coast: New Archaeological Evidence," 597-598.

CHAPTER 13 Notes

¹ Charles Rufus Harte to Quincy Bent, July 24, 1951, Papers of Charles Rufus Harte, First Iron Works Association Papers.

² E. Neal Hartley to Charles Rufus Harte, August 10, 1951, Papers of Charles Rufus Harte.

³ Hartley to Harte, August 20, 1952, Papers of Charles Rufus Harte.

⁴ Robbins, Saugus Ironworks Daily Log - 1953, May 11, 1953.

⁵ Robbins, Saugus Ironworks Daily Log - 1953, May 11, 1953.

⁶ Walter Renton Ingalls to M. Louise Hawkes, December 11, 1948, Papers of Charles Rufus Harte.

⁷ H. M Kraner to Charles M. Parker, September 29, 1950.

⁸ Charles Rufus Harte to Quincy Bent, July 24, 1951, Papers of Charles Rufus Harte.

⁹ Conover Fitch to Quincy Bent, October 26, 1951, Papers of Charles Rufus Harte.

¹⁰ Memorandum, September 5, 1952, Reconstruction Committee meeting, First Iron Works Association Papers.

¹¹ Memorandum, July 17, 1952, Reconstruction Committee meeting, First Iron Works Association Papers.

¹² Memorandum, July 17, 1952, Reconstruction Committee meeting, First Iron Works Association Papers.

¹³ Memorandum, August 24, 1951, Reconstruction Committee meeting, First Iron Works Association Papers.

¹⁴ Memorandum, October 2, 1951, Reconstruction Committee meeting, First Iron Works Association Papers.

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¹⁷ H. R. Schubert to E. Neal Hartley, September 10, 1952, First Iron Works Association Papers.

¹⁸ A. H. Hepburn to H. R. Schubert, September 23, 1952, First Iron Works Association Papers.

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²⁰ Roland W. Robbins to Charles Rufus Harte, August 29, 1952, Papers of Charles Rufus Harte.

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²³ Robbins, Saugus Ironworks Daily Log - 1952, November 25, 1952.

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²⁵ Robbins, Saugus Ironworks Daily Log – 1953, June 25, 1953.

²⁶ Robbins, Saugus Ironworks Daily Log – 1953, July 2, 1953.

²⁷ Quincy Bent to Conover Fitch, January 9, 1951, First Iron Works Association Papers.

CHAPTER 14 Notes

¹ Robbins, Saugus Ironworks Daily Log - 1953, July 24-31, 1953.

² Brown, “An Evaluation of Roland Wells Robbins Archaeology,” 13; Carlson, “The Saugus Iron Works Restoration,” 10.

³ Robbins, Saugus Ironworks Daily Log - 1953, July 31, 1953.

⁴ Robbins, Saugus Ironworks Daily Log - 1952, April 21, 1952.

⁵ Robbins, Saugus Ironworks Daily Log - 1952, pp. 93, 95, 105, 108, 114-129; Saugus Ironworks Daily Log - 1953, March 16, 1953.

⁶ Robbins, Saugus Ironworks Daily Log - 1952, April 30, 1952.

⁷ Robbins, Saugus Ironworks Daily Log - 1953, July 31, 1953.

⁸ Stephen Whittlesey, Observations on Wall Over Wharf Sill, September 10, 1953, First Iron Works Association Papers.

⁹ Hill and Knowlton, Inc., news release, Friday, September 17, 1954, The Roland Wells Robbins Collection in the Thoreau Society Collections at the Thoreau Institute at Walden Woods.

¹⁰ “Restoration Dedicated at Impressive Ceremony,” *First Iron Works Gazette* 4, no. 4 (Fall 1954): 1.

¹¹ “Restoration Dedicated at Impressive Ceremony,” 2.

¹² “Restoration Dedicated at Impressive Ceremony,” 5.

¹³ For more on Saugus and Cold War history, see Linebaugh, “Exploring Interpretive Agendas: The Saugus Iron Works and the Cold War.”

¹⁴ “Restoration Dedicated at Impressive Ceremony,” 5.

¹⁵ “Restoration Dedicated at Impressive Ceremony,” 5.

¹⁶ “Restoration Dedicated at Impressive Ceremony,” 5.

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²³ First Iron Works Association, Minutes of Annual Meeting, June 22, 1957, First Iron Works Association Papers.

²⁴ First Iron Works Association, Minutes of Annual Meeting, June 22, 1957.

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³² First Iron Works Association, Minutes of Annual Meeting, June 20, 1959, First Iron Works Association Papers.

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³⁷ H. R. Kraner to Conover Fitch, Jr., May 7, 1956, First Iron Works Association Papers, Saugus Iron Works NHS.

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⁴¹ Frederick A. Bonsal to Roland W. Robbins, December 17, 1961. Saugus Iron Works NHS, Saugus, MA

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Works Association Papers.

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⁵² First Iron Works Association, Board of Directors Meeting, Special Meeting, May 6, 1963, First Iron Works Association Papers.

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- ⁶⁰ Saugus iron Works Project, Roland Wells Robbins Collection.
- ⁶¹ Saugus iron Works Project, Roland Wells Robbins Collection.
- ⁶² Saugus iron Works Project, Roland Wells Robbins Collection.
- ⁶³ Donald W. Linebaugh, “The Road to Ruins and Restoration,” 446.
- ⁶⁴ Linebaugh, “The Road to Ruins and Restoration,” 496-97.
- ⁶⁵ Linebaugh, “The Road to Ruins and Restoration,” 469-70.
- ⁶⁶ Saugus Iron Works Project, Roland Wells Robbins Collection.
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- ⁶⁸ Saugus Iron Works Project, Roland Wells Robbins Collection.
- ⁶⁹ Saugus Iron Works Project, Roland Wells Robbins Collection.
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- ⁷⁸ Saugus Iron Works Project, Roland Wells Robbins Collection.
- ⁷⁹ Linebaugh, “The Road to Ruins and Restoration,” 470.
- ⁸⁰ Linebaugh, “The Road to Ruins and Restoration,” 513.

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