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## How Witnesses Described the Gold Plates

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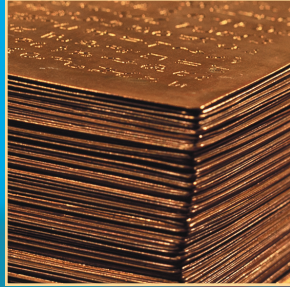
**Title** How Witnesses Described the “Gold Plates”

**Author(s)** Kirk B. Henrichsen, compiler

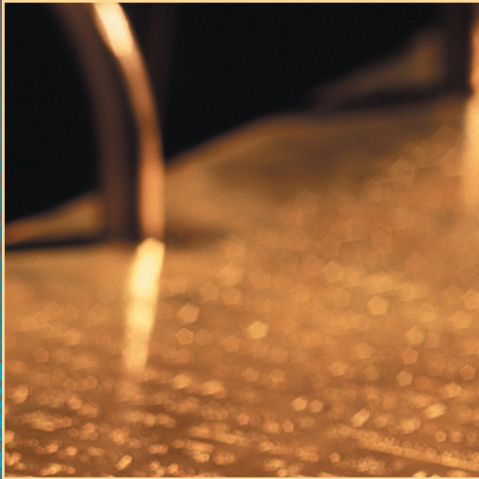
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**Abstract** This article contains descriptions of the gold plates quoted directly from individuals who were closely associated with Joseph Smith Jr. Among those quoted are Martin Harris, Orson Pratt, and Emma Smith. The compiler also comments on the material of the plates.



HOW WITNESSES DESCRIBED THE



# "Gold Plates"



Compiled by  
Kirk B. Henrichsen





Eight Witnesses Examining the Plates, pen drawing by Olinda Reynolds

Although no single comprehensive description of the Book of Mormon plates has been preserved, the Prophet Joseph Smith and several people closely associated with him made various statements that include partial descriptions of the plates. When we consider all the sources together, quite a detailed picture emerges of the physical characteristics of the ancient Nephite record.

#### Material

“the appearance of gold”<sup>1</sup>

—Joseph Smith Jr., *Eight Witnesses*,  
Orson Pratt

“golden plates”<sup>2</sup>

—David Whitmer

“a mixture of gold and copper”<sup>3</sup>

—William Smith

## Weight

“weighing altogether from forty to sixty lbs.”<sup>4</sup>  
—*Martin Harris*

“I was permitted to lift them. . . . They weighed about sixty pounds according to the best of my judgement.”<sup>5</sup>  
—*William Smith*

“I . . . judged them to have weighed about sixty pounds.”<sup>6</sup>  
—*William Smith*

“They were much heavier than a stone, and very much heavier than wood. . . . As near as I could tell, about sixty pounds.”<sup>7</sup>  
—*William Smith*

“I hefted the plates, and I knew from the heft that they were lead or gold.”<sup>8</sup>  
—*Martin Harris*

“My daughter said, they were about as much as she could lift. They were now in the glass-box, and my wife said they were very heavy. They both lifted them.”<sup>9</sup>  
—*Martin Harris*

“I moved them from place to place on the table, as it was necessary in doing my work.”<sup>10</sup>  
—*Emma Smith*

Joseph’s sister Catherine, while she was dusting in the room where he had been translating, “hefted those plates [which were covered with a cloth] and found them very heavy.”<sup>11</sup>  
—*H. S. Salisbury,*  
*paraphrasing Catherine Smith Salisbury*

## Individual Plate Dimensions

“six inches wide by eight inches long”<sup>12</sup>  
—*Joseph Smith Jr.*

“seven inches wide by eight inches in length”<sup>13</sup>  
—*Martin Harris*

“seven by eight inches”<sup>14</sup>  
—*Martin Harris*

“about eight inches long, seven inches wide”<sup>15</sup>  
—*David Whitmer*

“Each plate was not far from seven by eight inches in width and length.”<sup>16</sup>  
—*Orson Pratt*

## Thickness of Each Plate

“of the thickness of plates of tin”<sup>17</sup>  
—*Martin Harris*

“thin leaves of gold”<sup>18</sup>  
—*Martin Harris*

“about as thick as parchment”<sup>19</sup>  
—*David Whitmer*

“not quite as thick as common tin”<sup>20</sup>  
—*Orson Pratt*

“[We] could raise the leaves this way (raising a few leaves of the Bible before him).”<sup>21</sup>  
—*William Smith*

“They seemed to be pliable like thick paper, and would rustle with a metallic [*sic*] sound when the edges were moved by the thumb, as one does sometimes thumb the edges of a book.”<sup>22</sup>  
—*Emma Smith*

## Volume Thickness

“something near six inches in thickness, a part of which was sealed”<sup>23</sup>  
—*Orson Pratt*

“[W]hen piled one above the other, they were altogether about four inches thick.”<sup>24</sup>  
—*Martin Harris*

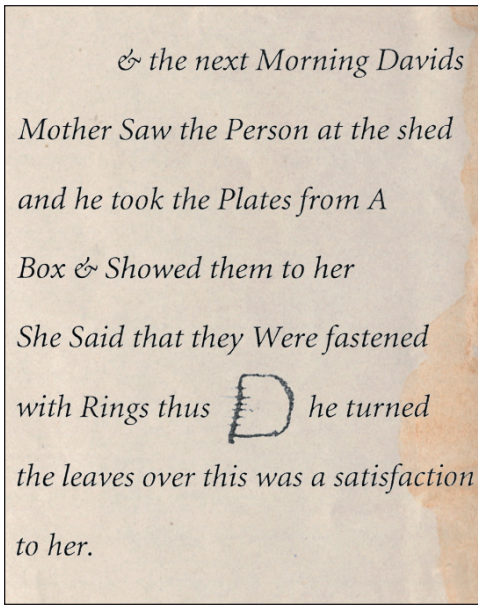
## Sealed and Unsealed Portions

“A large portion of the leaves were so securely bound together that it was impossible to separate them.”<sup>25</sup>  
—*David Whitmer*

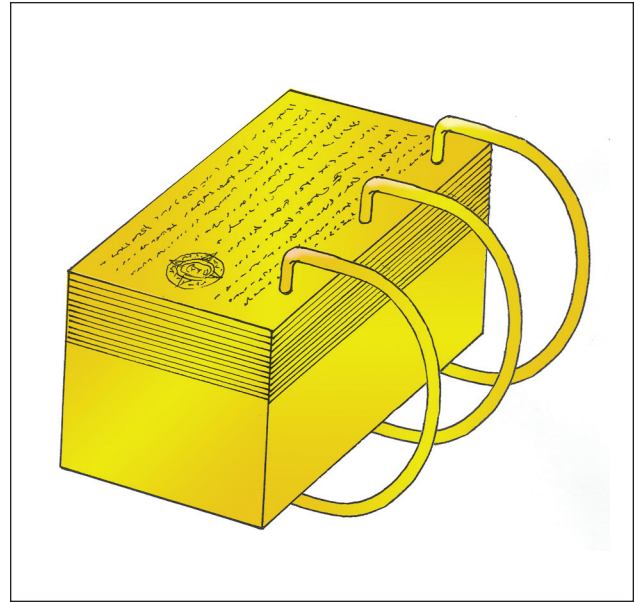
“What there was sealed appeared as solid to my view as wood. About the half of the book was sealed.”<sup>26</sup>  
—*David Whitmer*

“[A]bout two-thirds were sealed up, and Joseph was commanded not to break the seal; that part of the record was hid up. The plates which were





In 1877 Edward Stevenson interviewed David Whitmer, age 72, who recounted the story that his mother, Mary Musselman Whitmer, told him of being shown the plates by a heavenly messenger. Whitmer presumably drew the simple diagram, which Stevenson copied into his diary.



This conjectural reconstruction shows how the title page, the last plate written on in the Book of Mormon, could also appear as the first plate in the record.

sealed contained an account of those things shewn unto the brother of Jared.”<sup>27</sup>

—Orson Pratt

“A great many, in reading this record carelessly, would wonder why it was that a part of these plates should be sealed, and why Joseph Smith should not be permitted to break the seal. It was because, in this great revelation, the sealed portion of the plates from which the Book of Mormon was taken, contained this great vision, given to the brother of Jared. Joseph was not permitted to translate it, neither to break the seal of the book; it is to be reserved to come forth in due time.”<sup>28</sup>

—Orson Pratt

### Rings and Binding Format

“[T]hey were fastened with rings thus [a sketch shows a ring in the shape of a capital D with six lines drawn through the straight side of the letter to represent the leaves of the record].”<sup>29</sup>

—David Whitmer

“bound together like the leaves of a book by massive rings passing through the back edges”<sup>30</sup>

—David Whitmer

“They were bound together in the shape of a book by three gold rings.”<sup>31</sup>

—David Whitmer

“put together on the back by three silver rings, so that they would open like a book”<sup>32</sup>

—Martin Harris

“bound together in a volume, as the leaves of a book, and fastened at one edge with three rings running through the whole”<sup>33</sup>

—Orson Pratt

“Through the back of the plates were three rings, which held them together, and through which a rod might easily be passed, serving as a greater convenience for carrying them; the construction and form of the plates being similar to the gold, brass, and lead plates of the ancient Jews in Palestine.”<sup>34</sup>

—Orson Pratt





with a black, hard stain, so as to make the letters more legible and easier to be read.”<sup>40</sup>

—Orson Pratt

*The following statements, though based on transcriptions of the characters engraved on the plates and not on examination or intimate knowledge of the plates themselves, are also of interest.*

“It [Joseph’s transcription of characters from the plates] consisted of all kinds of singular characters disposed in columns, . . . Greek and Hebrew letters, crosses and flourishes; Roman letters inverted or placed sideways were arranged and placed in perpendicular columns, and the whole ended in a rude delineation of a circle, divided into various compartments, arched with various strange marks, and evidently copied after the Mexican calendar.”<sup>41</sup>

—Charles Anthon

“The characters were arranged in columns, like the Chinese mode of writing, . . . Greek, Hebrew and all sorts of letters, more or less distorted, . . . were intermingled with sundry delineations of half moons, stars, and other natural objects, and the whole ended in a rude representation of the Mexican zodiac.”<sup>42</sup>

—Charles Anthon

“[Martin Harris] was in the habit of exhibiting to his hearers what he claimed to be a fac simile [*sic*] copy of the title page of the forthcoming book [Book of Mormon].” One who saw this copy said, “On it were drawn rudely and bunglingly, concentric circles, between, above and below, which were characters, with little resemblance to letters.”<sup>43</sup>

—Charles W. Brown

## OF WHAT MATERIAL WERE THE PLATES?

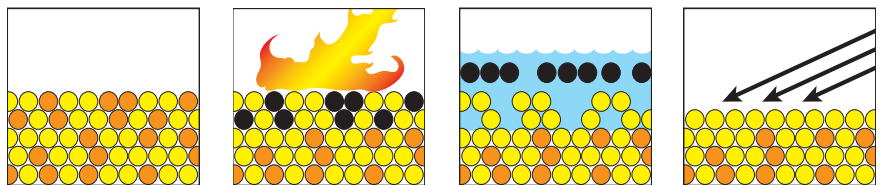
Were the Book of Mormon plates pure gold, or were they made from an alloy that looked like gold? The most serious investigation of this question was done 45 years ago by Read H. Putnam of Evanston, Wyoming, a blacksmith and metallurgist.<sup>1</sup> Working first from the general dimensions of the set of plates as reported by eyewitnesses, he calculated that a block of pure gold of that size would have weighed a little over 200 pounds. A number of witnesses, however, put the weight of the set at about 60 pounds. The discrepancy can be partly accounted for by the fact that the leaves must have been handcrafted, presumably by hammering, and irregularities in flatness would have left air space between the plates. This led Putnam to surmise that the entire set of plates would have weighed probably less than 50 percent of the weight of a solid block of the metal.

Because the weight of a metal depends on its purity, we must also consider whether the plates were of pure gold. The Nephites were aware of purity distinctions and alloys. We know, for example, that the “brass” plates were of an alloy (quite surely bronze, a copper-tin mixture)<sup>2</sup> and that the plates of Ether were specifically distinguished as being of “pure” gold (Mosiah 8:9). Furthermore, Nephi taught his associates “to work in all manner of” metals and “precious ores” (2 Nephi 5:15). Yet nowhere does the text say that the Nephites’ plates were of pure gold.

Joseph Smith’s brother William specifically said that the material of the plates was “a mixture of gold and copper.”<sup>3</sup> (Someone must have provided an objective basis for that statement, for the natural assumption would have been that the plates were pure gold.) The cautious statements by other witnesses, including Joseph Smith himself, who spoke of the plates as having “the appearance of gold,” suggest that the metal may have been an alloy.<sup>4</sup>

Putnam observed that the only two colored metals from antiquity were gold and copper. An alloy of those two elements was called “tumbaga” by the Spaniards and was in common use in ancient tropical America for manufacturing precious objects. Putnam put forward the reasonable hypothesis that metal plates made in Mormon’s day were of that material (the earliest Mesoamerican archaeological specimen of tumbaga—made from a hammered metal sheet—dates to the same century, the fifth century A.D., when Moroni hid up the plates he had in his possession).<sup>5</sup> If Mormon’s Book of Mormon plates were made of tumbaga, their weight would have been much less than had they been made of pure gold. Putnam made that point in mathematical detail and concluded that the total weight of the plates in Joseph Smith’s charge would have been near the 60-pound figure reported by several witnesses.

It is of interest that tumbaga was commonly gilded by applying citric acid to the surface. The resulting chemical reaction eliminated copper atoms from the outer .0006 inch of the surface, leaving a microscopic layer of 23-carat gold that made the object look like it was wholly gold.<sup>6</sup> Plates having “the appearance of gold,” then, are exactly what we would expect if they were made of tumbaga.<sup>7</sup> ■



In the process of depletion gilding, the particles of gold and copper that are uniformly distributed throughout the alloy are exposed to an open flame, which causes the copper to turn black. The copper is then removed by a mildly acidic “pickle,” such as a citrus extract. When heated and polished, the remaining surface particles compress and form a thin layer of pure gold.



# ENDNOTES

## The Editor's Notebook

1. *Journal of Discourses*, 7:1 (3 July 1859).
2. *Ibid.*, 2:94 (6 Feb. 1853).

"What Meaneth the Words That Are Written?" Abinadi Interprets Isaiah  
Ann Madsen

1. For an in-depth study of Hebrew law in Abinadi's trial, see John W. Welch, "Judicial Process in the Trial of Abinadi" (FARMS, 1983).
2. The brass plates version of Isaiah pre-dates the earliest extant version of Isaiah, the Dead Sea Scrolls document called the *Great Isaiah Scroll*, by about 450 years and the Masoretic Text by about 1,500 years. This latter text is what we call the Hebrew Bible, from whence came the KJV Old Testament. So the writings of Isaiah in the Book of Mormon become the earliest text of Isaiah available to us.
3. 1 Nephi 3:17–20 implies that the record on the brass plates would have perished if Nephi had not recovered it. On the importance of this record, see 1 Nephi 5:17–19. 3 Nephi 10:17 offers an example of other precious material found in the brass plates concerning the "seed of Joseph."
4. Hugh W. Nibley, in *Teachings of the Book of Mormon, Semester 2* (Provo, Utah: FARMS, 1993), 67–68, 75 passim, cleverly describes the relationship he sees between Abinadi and Noah, comparing it to other prophet-king confrontations.
5. In my edition of the scriptures, Abinadi's response runs for nearly five pages, including the last half of Mosiah 12 and the entirety of Mosiah 13–16.
6. See Matthew 10:19–20.
7. For more on this see David R. Seely, "The Ten Commandments in the Book of Mormon," in *Doctrines of the Book of Mormon: The 1991 Sperry Symposium on the Book of Mormon*, ed. Bruce A. Van Orden and Brent L. Top (Salt Lake City: Deseret Book, 1992).
8. Until now was he reciting? He may have turned to read at that moment from a scroll, plates, or book of some kind containing Exodus. The brass plates contained this material.
9. See Moses 1:6, 32; 5:9; 6:57–59.
10. From this point on in the dialogue, I quote rather than paraphrase Abinadi's powerful words.
11. In *Journal of Discourses*, 2:248.
12. Joseph Fielding Smith also refers to the "seed of Christ"; see *Doctrines of Salvation: Sermons and Writings of Joseph Fielding Smith*, ed. Bruce R. McConkie (Salt Lake City: Bookcraft, 1954), 1:25–26. Also see Bruce R. McConkie, *The Promised Messiah: The First Coming of Christ* (Salt Lake City: Deseret Book, 1981), 360–61, wherein McConkie states that an awareness of who Christ's seed are "is essential to a full understanding of what Isaiah and Abinadi really mean."
13. Hugh W. Nibley offers an additional view: "Why would help come from the mountains? That is explained very well in those wonderful verses of Isaiah which the prophet Abinadi uses so effectively, Isaiah 52:7. . . . 'How beautiful upon the mountainside are the feet of

him who brings good tidings'—literally, are the legs of the runner who brings good news and who causes us to hear that there is peace. . . . Abinadi is announcing that from the other side of the mountain, from the other world, comes the good news. This is revelation. It's the welcome messenger from the other world, the angel who brings us the gospel—who brings us the message of salvation, who brings us the message of peace, which you don't find on this side of the mountain" ("The Mountain of the Lord's House," lecture 16 of *Ancient Documents and the Pearl of Great Price* [series of videotaped lectures from a 1986 honors class at Brigham Young University on the Pearl of Great Price], transcript pp. 8–9).

14. See Doctrine and Covenants 19:15–20.
15. In Alma 32, Alma expounds the method whereby this change can occur.

## How Witnesses Described the "Gold Plates" Kirk B. Henriksen

The descriptive material for this article was compiled by Kirk Henriksen, of the staff of the Museum of Church History and Art in Salt Lake City, who kindly offered it for use in the *Journal*.

1. Joseph Smith Jr., "Church History," *Times and Seasons*, 1 March 1842 (also known as the Wentworth Letter); "The Testimony of Eight Witnesses," Book of Mormon; and Orson Pratt, in a pamphlet titled *An Interesting Account of Several Remarkable Visions, and of the Late Discovery of Ancient American Records* (Edinburgh, Scotland: Ballantyne and Hughes, May 1840), 12–13. The Wentworth Letter, the Prophet Joseph Smith's sketch of the history and faith of the Latter-day Saints written for the editor of the *Chicago Democrat*, utilizes much of the same language found in Pratt's pamphlet. Although Pratt did not see or handle the plates, he learned much about them through his close association with Joseph Smith.
- Nowhere in the documentary evidence did the witnesses or other key participants in the coming forth of the Book of Mormon describe the plates as being made of solid or pure gold.
2. David Whitmer interview, *Kansas City Journal*, 5 June 1881, in *David Whitmer Interviews: A Restoration Witness*, ed. Lyndon W. Cook (Orem, Utah: Grandin, 1993), 60.
3. William Smith (Joseph's younger brother) interview, *The Saints' Herald*, 4 October 1884, 644.
4. Martin Harris interview, *Iowa State Register*, August 1870, as quoted in Milton V. Backman Jr., *Eyewitness Accounts of the Restoration* (Salt Lake City: Deseret Book, 1986), 226.
5. William Smith, *William Smith on Mormonism* (Lamoni, Iowa: Herald Steam, 1883), 12.
6. William Smith interview with E. C. Briggs. Originally written by J. W. Peterson for *Zions Ensign* (Independence, Mo.); reprinted in *Deseret Evening News*, 20 January 1894, 11.
7. William Smith interview, *The Saints' Herald*, 4 October 1884, 644.
8. "Interview with Martin Harris,"

*Tiffany's Monthly*, May 1859, 169.

9. *Ibid.*, 168.
10. Emma Smith interview, published as "Last Testimony of Sister Emma," *The Saints' Herald*, 1 October 1879.
11. I. B. Bell interview with H. S. Salisbury (grandson of Catherine Smith Salisbury), Historical Department Archives, the Church of Jesus Christ of Latter-day Saints.
12. Joseph Smith Jr., "Church History" (Wentworth Letter), *Times and Seasons*, 1 March 1842, 707.
13. Martin Harris interview, *Tiffany's Monthly*, May 1859, 165.
14. Martin Harris interview, *Iowa State Register*, August 1870, as quoted in Backman, *Eyewitness Accounts*, 226.
15. David Whitmer interview, *Chicago Tribune*, 24 January 1888, in *David Whitmer Interviews*, ed. Cook, 221.
16. Pratt, *An Interesting Account*, 13.
17. Martin Harris interview, *Tiffany's Monthly*, May 1859, 165.
18. Martin Harris interview, *Iowa State Register*, August 1870, as quoted in Backman, *Eyewitness Accounts*, 226.
19. David Whitmer interview, *Kansas City Journal*, 5 June 1881, in *David Whitmer Interviews*, ed. Cook, 64.
20. Pratt, *An Interesting Account*, 13.
21. William Smith, *The Saints' Herald*, 4 October 1884, 644.
22. Emma Smith interview, *The Saints' Herald*, 1 October 1879.
23. Pratt, *An Interesting Account*, 13.
24. Martin Harris interview, *Tiffany's Monthly*, May 1859, 165.
25. The method by which a portion of the record was sealed is not specified in the documentary evidence.
26. David Whitmer interview, *Chicago Tribune*, 24 January 1888, in *David Whitmer Interviews*, ed. Cook, 221.
27. David Whitmer interview, *Deseret Evening News*, 16 August 1878, in *David Whitmer Interviews*, ed. Cook, 20–21.
28. Orson Pratt, in *Journal of Discourses*, 3:347, 13 April 1856. Orson Pratt was not an eyewitness of the plates.
29. *Ibid.*, 19:211–12, 9 December 1877.
30. David Whitmer interview, Edward Stevenson diary, 22–23 December 1877, Historical Department Archives, the Church of Jesus Christ of Latter-day Saints. Original capitalization and punctuation have been modernized. In Stevenson's interview, Whitmer recounted his mother's description of the rings.
31. David Whitmer interview, *Kansas City Journal*, 5 June 1881, 1.
32. David Whitmer interview, *Chicago Tribune*, 24 January 1888, in *David Whitmer Interviews*, ed. Cook, 221.
33. Martin Harris interview, *Tiffany's Monthly*, May 1859, 165.
34. Pratt, *An Interesting Account*, 13.
35. Orson Pratt, in *Journal of Discourses*, 7:31, 2 January 1859.
36. Joseph Smith, *History of the Church*, 1:71. One can surmise from Joseph's statement that when the full stack of plates was positioned on a table, the open rings would be located on the reader's right side. The sealed portion would probably be located at the bottom on the left-hand side with the unsealed plates on top so that they would open to the right.

37. Joseph Smith Jr., "Church History" (Wentworth Letter); Pratt, *An Interesting Account*, 13. Pratt's description is slightly different, adding, for example, the following italicized words: "[The plates] were filled on both sides with . . . Egyptian characters. . . . The characters or letters upon the unsealed part were small, and beautifully engraved."
38. John Whitmer to Theodore Turley, "in the presence of his anti-Mormon friends." As reported in Richard L. Anderson, *Investigating the Book of Mormon Witnesses* (Salt Lake City: Deseret Book, 1981), 131.
39. "Testimony of the Eight Witnesses."
40. William Smith interview, *The Saints' Herald*, 4 October 1884, 644.
41. Orson Pratt, in *Journal of Discourses*, 7:31, 2 January 1859.
42. Letter from Charles Anthon to E. D. Howe, 17 February 1834, as printed in B. H. Roberts, ed., *A Comprehensive History of the Church of Jesus Christ of Latter-day Saints* (Provo, Utah: BYU Press, 1965), 1:100–101. The version of the letter published in Pomeroy Tucker, *Origin, Rise, and Progress of Mormonism* (New York: D. Appleton, 1867), 44, contains slight variations.
43. Charles Anthon to Rev. T. W. Coit, 3 April 1841, as printed in B. H. Roberts, *A Comprehensive History of the Church*, 1:101.
44. From Charles W. Brown, "Manchester in the Early Days," *Shortsville Enterprise* [sic] 35 (ca. 1883), based on Orsamus Turner, *History of the Pioneer Settlement of Phelps and Gorham's Purchase, and Morris' Reserve* (Rochester, N.Y.: Alling, 1851), 215.

## Of What Material Were the Plates?

1. "Were the Plates of Mormon of Tumbaga?" *Improvement Era*, September 1966, 788–89, 828–31; also in Ross T. Christensen, ed., *Papers of the Fifteenth Annual Symposium on the Archaeology of the Scriptures* (Provo, Utah: Extension Publications, BYU Division of Continuing Education, 1964), 101–9. Putnam's findings are summarized in "The 'Golden' Plates," in *Reexploring the Book of Mormon*, ed. John W. Welch (Salt Lake City: Deseret Book and FARMS, 1992), 275–77.
2. See John L. Sorenson, *An Ancient American Setting for the Book of Mormon* (Salt Lake City: Deseret Book and FARMS, 1985), 283–84; and his "Metals and Metallurgy Relating to the Book of Mormon Text" (FARMS, 1992).
3. William Smith interview, *The Saints' Herald*, 4 October 1884, 644.
4. "The Testimony of Eight Witnesses," Book of Mormon; and Joseph Smith Jr., "Church History," *Times and Seasons*, 1 March 1842.
5. David M. Pendergast, "Tumbaga Object from the Early Classic Period, Found at Altun Ha, British Honduras (Belize)," *Science* 168, 3 April 1970, 117.
6. Putnam, "Were the Plates of Mormon of Tumbaga?"; and Heather Lechtman, "Pre-Columbian Surface Metallurgy," *Scientific American* 250 (June 1984): 56–63.
7. It is also possible that other metallurgical treatments such as a hammered copper-silver-gold alloy could have fur-