Though the first edition was an excellent addition to the college classroom or interested reader's library, the timely updates and revisions to Van Helden's second edition clearly make this a work worth purchasing for a second time.

**Obsidian Reflections: Symbolic Dimensions of Obsidian in Mesoamerica.**
Ed. Marc N. Levine and David M. Carballo.

**REVIEWED BY:** Emily A. Engel
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Krista Thompson's (2015) provocative new work on the material culture of "bling" among contemporary African diasporic groups considers how light effects and visual technologies can be used to fashion collective identities (Shine: The Visual Economy of Light in African Diasporic Aesthetic Practice [Durham: Duke University Press, 2015]). "Bling" officially entered into the English lexicon when the word was included in the *Oxford English Dictionary* (2003) with the definition: "representing the visual effect of light being reflected on precious stones or metals." The authors of the studies in *Obsidian Reflections: Symbolic Dimensions of Obsidian in Mesoamerica* demonstrate that an American fascination with luminous effect extends deep into the archaeological record. For centuries, observers have been captivated by the visual qualities of ancient Mesoamerican polished obsidian. Shaped from volcanic glass, the highly reflective devices captured the early modern historical imagination because they were thought to have opened access into a spiritual realm. The research studies presented in *Obsidian Reflections* provides a richly layered history for a highly visible class of archaeological artifacts produced from obsidian over thousands of years.

Major sources for Mesoamerican obsidian artifacts have been found in Mexico, Guatemala, Honduras, and Belize. As vestiges of elite material culture, carved obsidian artifacts were ornamental and functional. Ancient obsidian mirrors, figurines, weapons, and other carved practical objects have been dated as far back as 1400 BCE and recur over time through the Aztec period (ca. 1200–1520 CE). Archaeological excavations and conservation studies reveal that many obsidian objects were used in bloodletting, human sacrifice, and body modification as well as in ritual contexts (such as warfare and musical performance) and consumed as prestige objects in public spaces and burial deposits.

Marc Levine's introductory chapter to *Obsidian Reflections* synchronically and diachronically summarizes the state of the field with an impressive bibliography that is a very useful resource unto itself. Levine connects research on obsidian objects and technologies to the theoretical development of the field of archaeology while at the same time introducing some of the methodological approaches employed in several of the case studies presented in the volume.

*Obsidian Reflections* is divided into three subsections based on the methodological approach advanced by the author: ethnohistorical studies, ritual analyses, and religious history. Véronique Darras's investigation of postclassic Tarascan ritual use of obsidian artifacts in chapter 2 mines the *Relación de Michoacán* for ethnographic data. Beginning from the understanding that most Mesoamerican cultures used obsidian in the creation of tools and weapons, her research focuses on how Tarascan religious practices imbued obsidian with cosmological significance. Because obsidian was a sacred stone, obsidian
he named the four Medicean Stars, the four largest moons of Jupiter, now termed the Galilean moons in his honor. Galileo’s announcement of his early discoveries with the telescope, especially of the satellites of Jupiter and, importantly, their revolution around Jupiter, demonstrating that our Earth was not the center of motion of all objects in the universe, came later that same year, in a slender volume known as *Sidereus Nuncius*, the Sidereal (or Starry) Messenger. Although the later observations of 1610/11 discovering the phases of the planet Venus also proved essential in overthrowing the Ptolemaic worldview, the importance of the detection of Jupiter’s satellites to the science of astronomy cannot be overstated, as it emphasized the centrality of observations in general, and the use of the telescope in particular, in our understanding of the universe.

In 1989, Rice University Professor of History Albert Van Heiden published a translation of *Sidereus Nuncius*, accompanied by an explanatory introduction situating the instrument, the observations, and Galilei’s publication within their scientific and historical contexts. The volume concludes with an essay summarizing Galileo’s subsequent discoveries (such as the phases of Venus) and situating the sum of Galileo’s astronomical work within the history of the Copernican Revolution, especially the connections between the work of Galileo and Johannes Kepler. These ancillary materials, as well as the reproduction of Galileo’s sketches of the relative motions of the Jovian moons and copious informational footnotes, made the first edition a valuable and eminently readable pedagogical tool for courses in the history of astronomy.

In his new preface, Van Helden motivates the second edition (and explains in the introduction a number of changes necessitated) by summarizing important recent developments in our historical, political, and scientific understanding of Galileo’s first telescopic observations. These include the publication of Mario Biagioli’s *Galileo, Courtier*, which situates Galileo’s methodologies and publications within their social context; Rolf Willach’s work on the origin of the telescope; Sven Dupré’s research on the basic knowledge of optics held by Galileo’s intellectual circle; and Giorgio Strano’s scholarship on Galileo as a telescope maker. In addition, the translator sums up his collaboration with astronomer Owen Gingerich, tracing the development of Galileo’s thought process leading up to his breakthrough moment concerning the motion of Jupiter’s four largest satellites. New illustrations (one from a draft letter, and a comparison between Galileo’s sketch from 13 January 1610, and the actual relative positions of the four moons on that same date) provide a valuable window into the precision of Galileo’s observations. Van Helden also briefly discusses the debunking of a forged copy of the work that came to light in 2005.

The body of the translation of *Sidereus Nuncius* contains relevant corrections and clarification of credit due to other authors and sources. There is also, aided by Roger Ceragioli, what Van Helden describes as an “improved translation of the dedication to Grand Duke Cosimo”; however, the actual changes in the dedication appear, to this reader, as relatively few and minor. Revising the fine concluding essay on the reception of the work necessitated only minimal changes and updates. Although the original edition was notable for its lengthy bibliography (including over 100 sources), the second edition increases this number by nearly 30 percent, including many more-recent references. Changes to the index are mixed, with a number of new astronomical terms added (e.g., apogees), but some have inexplicably been removed, despite the fact that they still appear within the volume (e.g., the parallax of fixed stars).
blades and ornamental objects were instrumental in legitimizing the reigning Tarascan dynasty in the fifteenth and sixteenth centuries.

Alejandro Pastrana and Ivonne Athie argue in chapter 3 that obsidian in postclassic Central Mexico was a complex material object that was valued for its medicinal properties, practical functionality, and cosmological significance. An account from the 1570s by the Spanish naturalist Francisco Hernández describes obsidian, or iztli in Nahuatl, saying, “The stones are ... so smooth and shiny ... when they have been carved and polished.” Pastrana and Athie trace the sequence of events that led to the production and consumption of obsidian bling in the Aztec Triple Alliance, expanding on earlier studies that focused on the obsidian’s economic significance. The stone was what they term “a strategic resource” with a diverse cultural role that vacillated between economic resource, raw material, military weapon, and ideological tool. The findings presented by Pastrana and Athie parallel Darras’s findings in the Tarascan context, in that both studies conclude that obsidian, although a valuable material resource, functioned cosmologically for the Mesoamerican cultures that mined it. In chapter 4, John Monaghan also uses ethno­graphic techniques to study the use of obsidian cutting tools in the contemporary Mixtec community of Santiago Nuyoo (Oaxaca, Mexico). Monaghan contrasts contemporary obsidian shaping practices with ethnohistorical evidence drawn from the sixteenth-century Mixtec codices to distinguish further the symbolic significance of obsidian in the ancient Mesoamerican world.

Chapters 5 and 6 in the second section of the book hone in on the ritual use of obsidian objects in ancient Mesoamerica through archaeological field studies. The abundant archaeological research presented in chapter 5 by Kazuo Aoyama demonstrates an elite monopoly on the production, use, and exchange of obsidian in Copán, Pasion, and Petexbatun between 1400 BCE and 1100 CE. In chapter 6, coeditor Marc Levine’s research on late postclassic Tututepec obsidian trade networks in Oaxaca demonstrates that the possession of obsidian objects may have symbolically represented connections to powerful settlements in the Basin of Mexico or invoked ties to the sacred landscape.

The third and final section of Obsidian Reflections explores how obsidian figured in ancient Mesoamerican ritual practice. Coeditor David Carballo constructs a semiotic analysis of obsidian objects excavated from Feature 173 and Structure 12L-1 at La Laguna (Tlaxcala, Mexico). Carballo concludes that the type of offering and placement within the archaeological context reveals an increased preoccupation with death, warfare, and the underworld, themes that have been associated with an increase in militarism commonly observed during Teotihuacan’s rise to power. In chapter 8, W. James Stemp and Jaime Awe study obsidian excavated from Maya caves in Belize. They uncover how obsidian objects were shaped and distributed during their use in subterranean ritual practice between 700 and 950 CE. Human and animal sacrifice was more common deep within Maya caves; however, public rituals that employed obsidian objects were staged in more public zones where community involvement in fertility rites supported agricultural practices. Mari Carmen Serra Puche, Jesús Carlos Lazcano Arce, and Mónica Blanco García Méndez explore the domestic possibilities of obsidian at Xochitecatl-Cacaxtla where artifacts made with the precious material were used in bloodletting practices. Obsidian lancets and punches found in proximity to fine pottery in residential sites point to a diverse ceremonial practice that delimited a ritual calendar that was essential for maintaining social relations among elites. Following chapter 9, William Parry’s conclusion provides a fitting capstone for the volume.
The essays in *Obsidian Reflections* demonstrate the type of methodological innovation required to expand our understanding of the cultural production of the early modern world. The studies in this volume work to square the archaeological record with ethno-historical evidence and in the process reveal how obsidian as a material object became imbued with complex sociopolitical meanings across space and time. The shiny, reflective surfaces of obsidian artifacts may have first captured the historical imagination of early modern observers; however, this ancient bling continues to open a window into another world, in this case, the history of Mesoamerican material culture.

**Voices from Vilcabamba: Accounts Chronicling the Fall of the Inca Empire.**  
Brian S. Bauer, Madeleine Halac-Higashimori, and Gabriel E. Cantarutti.  

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The clerics, officials, and soldiers of the sixteenth- and early seventeenth-century Spanish empire in the Americas left many accounts of their experiences and the Native Americans that they encountered. Although these documents were written in Spanish or Latin, some of the most substantial have been translated into English, though many remain untranslated. Various scholars have been busily translating new texts, and in *Voices from Vilcabamba* Brian S. Bauer and his students have produced a very useful collection of texts.

The Spanish conquest of the Inca Empire of Peru is an epic filled with extraordinary violence and savagery on both sides. The central authority of the highly hierarchical Inca government collapsed abruptly due to Spanish treachery in 1532 aggravated by disunity among the native elite. Still, native resistance to the Spanish was widespread and members of the Incan royal family sought to harness its power. A native uprising besieged the Spanish in Cuzco but was repulsed in 1536. As a result, the rebellion’s leader, Manco Inca, withdrew to the inaccessible Vilcabamba region where a remnant of the once great Inca state survived until 1572. Vilcabamba was a region of steep mountains, turbulent rivers, and dense jungles that had not been a part of the Inca Empire for very long. The lost city of Machu Picchu was one of the Inca strongholds in the Vilcabamba region. The events of and the people involved in the fall of Vilcabamba reveal much about the nature of the Spanish conquest of Peru.

*Voices from Vilcabamba* begins with two chapters by the authors/editors. The first chapter relates the events from 1536 to 1572 that ended with the expedition of Hurtado de Arbieto that resulted in the fall of Vilcabamba and the execution of Tupac Amaru. The second chapter deals with Hurtado de Arbieto’s work as governor of the Vilcabamba region and his efforts to establish a Spanish colony at San Francisco de la Victoria de Vilcabamba. During his administration, he organized two expeditions (in 1582 and 1583) against the Amazonian tribe of the Pilcosuni along the Urubamba River. Both ended in miserable failure due to the unfavorable conditions of weather and landscape. The second chapter is especially useful since it deals with events that historians have generally ignored.

The book includes translations of five documents dealing with the fall of Vilcabamba and the Spanish colony. Each document has an introduction and is edited and annotated.