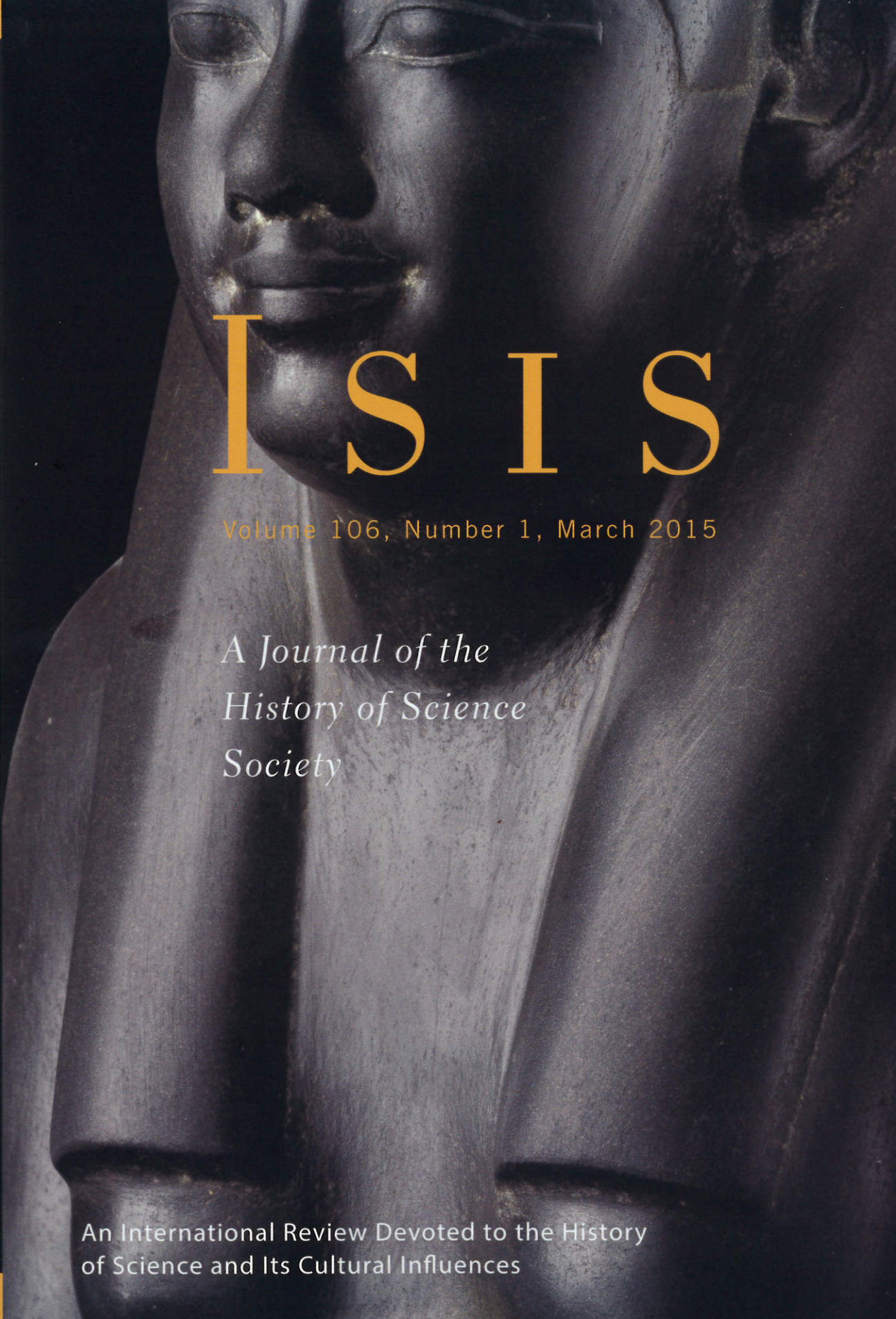

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archaeology (i.e., archaeology performed in or about the Americas) from the mid-nineteenth century to 1940. The author's main goal is to convey a sense of the sheer number of women who were substantially involved (he ultimately touches on the roles of over two hundred women), many of whom occupied pioneering positions and yet have remained invisible to the historical record. Browman does an exemplary job of tracking surname changes in rescuing many interesting careers from obscurity—careers that included field and museum work but, importantly, also organizational activities associated with world fairs, fundraising, and lobbying. Browman's portraits illuminate the nearly impossible odds women faced in entering and maintaining archaeological careers, especially if they also wanted to have a family. Women encountered rampant sexism that extended from a general patriarchal attitude toward museum work as a kind of feminine housekeeping to specific outrages such as Columbia University's very expensive publication requirement for the granting of the Ph.D. Only men received financial assistance for this; women were generally unable to pay the thousands of dollars needed to print as many as 120 bound copies of their dissertations and so, despite successful defenses, were not granted degrees until critical career moments had long passed. This book is also full of tantalizing windows onto topics other than specific biographies that demand further examination, such as the role of the Women's Anthropological Society of America in Washington (founded in 1885) and the development of new areas of research (textile and ceramic analysis, paleoethnobotany) by women as a means of professional self-preservation. *Cultural Negotiations* is an invaluable reference work, and I would highly recommend it as a starting point for graduate students and others looking for future projects.

CONOR BURNS

Curzio Cipriani; Luciana Fantoni; Luisa Poggi; Alba Scarpellini. *Le collezioni mineralogiche del Museo di Storia Naturale dell'Universita di Firenze dalle origini a oggi.* (Studi: Accademia Toscana di Scienze e Lettere "La Colombaria," 247.) xv + 236 pp., illus., apps., bibl., index. Florence: Leo S. Olschki, 2011. €28 (paper).

How does a mineral collection start and how does its growth lead to the founding of a museum? The authors address these questions by describing the activities that led to the progressive buildup of the collection in the Mineralogy Rooms of the Natural History Museum at the University of Florence.

The Florentine collections have great historical and scientific value; they comprise almost 50,000 specimens collected from around the world since the fifteenth century and represent more than 2,800 of the 4,000 species of known minerals. The endeavor of collecting the Florentine minerals over the course of five centuries bears little resemblance to the common notion of museum collecting as static and sleepy, the result of an easy conservation process. The existence of the mineral collection originally owned by the Grand Dukes of Tuscany owes much to the dedication of a small number of professionals who proposed the collections to an international scientific and commercial network and established a thoughtful exchange policy with several academies and private collectors. However, *Le collezioni mineralogiche del Museo di Storia Naturale dell'Universita di Firenze dalle origini a oggi* also describes numerous periods of uncertainty and regression, during which lack of institutional interest and inevitable personal antagonisms weakened the scientific significance of the museum.

The book is divided in four parts, each of which describes a "season" (the authors use this expression often) in the growth of the mineralogical museum. The first chapter describes how, between 1771 and 1790, some small collections of minerals scattered in the Uffizi were brought together in the Royal Cabinet of Physics and Natural History of Florence. Giovanni Targioni Tozzetti was the proponent of the idea of a general collection and editor of the first draft of the catalogue in 1791. In the second chapter, through a long process of analysis and comparison of two catalogues, edited in 1791 and 1820, the authors describe how the collections were gradually put together and structured into an autonomous Corpus Mineralibus. The synoptic tables in Appendixes II, III, and IV are based on a set of data taken from the two catalogues. They are very useful for an understanding of the development of the collections. The narrative technique of this chapter is effective in conveying the sense and the rationality of the exhibition space. The reader is guided through the sixteen rooms of the museum as they appeared two hundred years ago and is offered a detailed description of the quality, quantity, and arrangement of the exhibit.

The story of the third season, the longest and most significant, is told through the process of drafting of the 1844 and 1943 catalogues. The mineralogical collection grew enormously in size and quality from the fall of the Grand

Duchy of Tuscany to the birth of the Kingdom of Italy and then the rise of Fascism. This chapter serves as an original source for the history of the geosciences. Those who work on the history of geology and paleontology in Europe will find interesting information on many Italian scholars, including Filippo Nesti, Igino Cocchi, Cesare D'Ancona, and Carlo De Stefani.

The fourth chapter begins with a consideration of the decline experienced by the museum in the early twentieth century, a time when classical mineralogy had to make room for emerging disciplines such as geochemistry and crystallography. But in 1943 the start of work on a new systematic catalogue—interrupted during the war and completed in the 1950s—marks a step toward modernization in the approach of the curators to the artifacts. This choice contributed to the revival of the scientific competitiveness of the museum, the benefits of which became apparent in the following years.

The authors explain how Florence was, and remains, the point of reference for mineralogy in Italy. The lack of adequate funding and the limited exhibition space (currently only a small portion of the collection is displayed) are sensitive issues. The book shows that the problems experienced by the museum have not been very different from those of many other institutions and that the solutions proposed have made Florence the model for other Italian museums.

FRANCESCO GERALI

Patrizio Barbieri. *Physics of Wind Instruments and Organ Pipes, 1100–2010: New and Extended Writings.* (Tastata: Studi e Documenti, 3.) xii + 568 pp., illus., tables, bibl., indexes. Latina: Il Levante Libreria Editrice, 2013. €50 (cloth).

Patrizio Barbieri has published widely and extensively on the topic of music and musical instruments over the past thirty years. As the title suggests, this new contribution revisits Barbieri's scholarship by enhancing and reworking numerous publications written between 2001 and 2012. It is a welcome—and important—addition to a still very much understudied field. The book should be received as nothing less than Barbieri's *opus magnum*.

It is not, however, an easy book to read. Though the author kept to a minimum the number of mathematical formulas found in the text, the physics mentioned in the title might discourage more than a few readers. The book draws together, for lack of a better term, a series of in-depth accounts—one might say reference or encyclopedic entries—that form a coherent unity. In a two-page preface, we learn that Barbieri's chief goal in publishing this book was to understand and put to the forefront the major historical developments of acoustics, up to the present. Though some interesting studies have been published recently around the Scientific Revolution, the author's objective, even if limited to wind instruments and organ pipes, is to pursue investigations that "directly concern the core problems of classical acoustics, from the propagation of waves in pipes to the effects of dissipation phenomena, including the emblematic question of the theoretical and experimental determination of the speed of sound inside them" (p. xi). To sort out nine hundred years of research and scholarship on the topic, the book is roughly divided into two parts: the first four chapters (labeled by letters rather than numbers) look at the period between the Middle Ages and the end of the Scientific Revolution, while the following seven chapters primarily investigate the period from the eighteenth to the twentieth century.

The author had to master a wide range of scientific and historical sources, written in several European languages, to identify and articulate key developments touching on the theoretical, mathematical, and material-based concepts of sound production for such instruments as the clarinet (Ch. I) and the trumpet, trombone, and horn (Ch. K). Supported by a rich corpus of illustrations and graphs (some of which are in color), Barbieri examines in turn topics like the propagation of sound waves inside organ flue pipes of various shapes and the actual technology of musical instruments—Chapter B, on the fabrication of organ pipes over the *longue durée*, is fascinating and a valuable contribution in itself. Throughout the book the author never loses sight of the intrinsic connection between the instrument, its manufacture, and the theoretical understanding of sound production. Section H.4, for example, looks at tone hole spacing and size in wind instruments. In a few short pages, Barbieri explains the standard fingering on and manufacture of a typical Baroque woodwind instrument, before the later introduction of mechanical keys and their larger tone holes. This instrument maker–driven technological evolution not only had a significant impact on the sound volume, the timbre, and the player's execution, but it eventually led to the establishment in the 1930s of a firm theoretical basis for tone hole spacing based on acoustical impedances. The speaking trumpet (ancestor to the megaphone), discussed in Chapter C, receives a similar though much longer investigation—giv-