

# The Pisa Griffin and the Mari-Cha Lion

## Metalwork, Art, and Technology in the Medieval Islamicate Mediterranean

Edited by Anna Contadini



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## Preface

As mythical creatures, the Griffin and the Lion populated ancient fables and legends across the Mediterranean world. This gripping book seeks to drag them back into reality by focusing on two of the strangest and most fascinating representations of the two beasts: the Pisa Griffin and the Mari-Cha Lion. Decades of interdisciplinary research, led by Anna Contadini, have aimed to place these two sculptures firmly within the domain of science and historical certainty. Yet they seem to evade categorisation and certainties at every point, continually arousing the reader's curiosity.

The result is a compelling forensic examination, undertaken by an international cast of experts, in an attempt to unravel the web of mysteries. All the right questions are asked: Where and when were the two sculptures made? To what extent are they related to each other? What were they each made of? How and by whom were they decorated? What do their inscriptions mean? Who commissioned them? What was their function? Were they ever seen together in the past? Did they emit sounds or smells? What other similar artefacts can throw light on their creation and meaning?

Fortunately, their authority as symbols of power and rulership has ensured that neither was ever melted down to make weapons. The Pisa Griffin, probably made in Islamic Spain but later seized as booty (perhaps in Mallorca), was placed on the roofline of Pisa Cathedral in the early twelfth century. The Mari-Cha Lion, by contrast, emerged on the art market as late as 1993, and very little is known of its provenance. There is, therefore, no obvious historical reason to link them, and moreover, they are made of different alloys and were decorated by different hands. Yet a strange magnetic force seems to draw them together. They are of similar scale and bearing; the wording of their inscriptions, though formulaic, is very similar; both were incised using an unusual five-point punch; and both have inner vessels that could have been used to produce sound. When exhibited as a pair in the Museum of Islamic Art in Doha (Fig. 55 in Chapter 3.3), they set up a powerful visual dialogue.

This beautifully illustrated book publishes the complete results of the technical and historical investigation over years of dedicated research in several countries. It is a model of transcultural enquiry, showing how the close focus on individual artefacts can help to answer broader historical, cultural and technological questions that span ideological divides. The book breaks down long-established boundaries: between science and the humanities; between museums and universities; and between ideas and objects. Yet the narrative has no forced conclusions - the Pisa Griffin and the Mari-Cha Lion remain enigmatic mythical beasts.

*Deborah Howard*

Professor Emerita, University of Cambridge

June 2018

## Biographical Notes of the Authors

**Damiano Anedda** graduated in Medieval Art and completed his PhD in Art History with a thesis on Islamic bronzes and ivories in Italy. Among his publications is “Acquamani nella Liturgia Cristiana (IV-XVI secolo): il bronzo della Pinacoteca Nazionale di Cagliari,” *Anuario de Estudios Medievales* 44, no. 2 (2014): 689-731.

**Rafael Azuar** has a PhD in Medieval and Islamic Archaeology and is a Curator at the Archaeological Museum of Alicante (Spain). He is the author of numerous articles and books on the archaeology of al-Andalus, including *Los bronces islámicos de Denia (s. V HG / XI d. C.)*, Alicante: Museo Arqueológico de Alicante, 2012. His current research concerns the archaeology of Andalusian material culture within the framework of Mediterranean trade.

**Anna Ballian** is Curator Emerita of Islamic Art at the Benaki Museum in Athens, where she had a leading role in the opening of the Islamic Museum. She studied Islamic Art at SOAS, and received her PhD from the University of Birmingham with a thesis on Christian patronage in Ottoman Anatolia. She has published on Byzantine, Islamic and Ottoman and Armenian art. She is currently working on a publication of ecclesiastical silver of the Benaki collection and on an exhibition on Greeks in the Ottoman empire.

**Mirco Bassi** is an expert on metallurgy and metal technology. Between 1989 and 2008 he worked in the Morigi laboratory of metal conservation in Bologna. Among his numerous bronze restoration works are: Giambologna's fountain of Neptune in Bologna; Bonanno's door of 1180 and the three doors of 1605 of the façade of the Cathedral in Pisa; Benvenuto Cellini's statue of Perseus in Florence; and Andrea del Verrocchio's equestrian monument of Bartolomeo Colleoni in Venice. Since 2008 he has been conservator of metals at the Opera Primaziale Pisana.

**Lucio Calcagnile** is, since 2005, Professor of Applied Physics and leader of the Applied Physics Group at the Department of Mathematics and Physics of the University of Salento and, since 1999, director of CEDAD, the Centre for applied physics, Dating and Diagnostics he created. His research interests include ion beam physics, physics of isotopes, fundamentals and applications of accelerator mass spectrometry, and physics applied to materials science and cultural heritage. He is author of more than 150 articles in international journals and 1 patent.

**Richard Camber** is an expert in medieval art, with particular reference to Southern Italy. He was educated at the Universities of Edinburgh, Paris and London. He worked for the British Museum and Sotheby's before becoming a private consultant in the area of medieval works of art. He is a Fellow of the Society of Antiquaries of London.

**Anna Contadini** is Professor of the History of Islamic Art and Head of the School of Arts at SOAS. Her publications span studies of illustrated manuscripts, text and image in Islamic art, questions of materiality and transculturation, and the agency of objects within a broader artistic and social-historical context. She is currently working on a project on illustrated medieval manuscripts of the Maghreb and Spain. For a list of publications see <https://www.soas.ac.uk/staff/staff30791.php>

**Lucia Conti** has a PhD in Earth Science from *La Sapienza* University in Rome, with reference to archaeological ceramics. Since 2000, she has worked at the *Istituto Superiore per la Conservazione e il Restauro* where she is Director of the ‘Laboratory of Material Testing’. She is also Professor of Mineralogy at the *Scuola di alta formazione* of the ISCR, and she is the author of numerous publications on cultural heritage.

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**Massimo Vidale** is Professor of Near Eastern Archaeology and Archaeology of Craft Production at the Department of Cultural Heritage, University of Padua. He has conducted archaeological projects in Italy, the Middle East and South Asia, focusing on ancient craft technologies. His research is published in specialized journals and monographs, including *Restauro come Conoscenza*, Rome: Artemide, 2003, a full report on the casting technology of the Riace Bronzes.

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## Overview and Significance of the Study

*Anna Contadini*

The Pisa Griffin started to fascinate me as a teenager, and I subsequently started to study it while still a student of Islamic art at Ca' Foscari University in Venice. Over the years there followed trips to Pisa to examine it in detail and begin to research the related documentation. Thoughts about origin and function were given further impetus when the Mari-Cha Lion appeared on the scene, an equally imposing bronze that raised further questions, both connected with the Griffin and independent of it. Comparative study inevitably followed, and in order to give this further impetus Richard Camber and I were brought together by a late and sorely missed friend, Ralph Pinder-Wilson, with a view to instigating a joint project. In this we were soon joined by Peter Northover, and during the last fifteen years the pace of our research dealing with both of them has increased significantly, to the point where it seemed appropriate to try and draw the threads together and, more importantly, to widen the research field by involving other scholars and their related specialisms. I am delighted that so many distinguished colleagues have seen this as a worthwhile aim, and have agreed to contribute to this volume.

As research developed, it became clearer to me how our studies were potentially ground-breaking in relation to the wider context of metalwork production in the western Islamic world and its circulation in the Mediterranean generally during the late eleventh and twelfth centuries, a period hitherto poorly understood. This project has in fact led to a shift in our perceptions of metalwork production in Spain.

Most of the previous literature had sought to ascribe metalwork found in Spain (whether from archaeological contexts or not) to an origin elsewhere, either Iran/Khurasan, Fatimid Egypt or greater Syria. The present research changes our understanding of art production in general in the Western Mediterranean, innovatively by highlighting the significance of metalworking in Spain. It reinforces the picture of the relationship between Spain and the rest of the Mediterranean as one marked by active exchanges of goods and artistic ideas and brings this part of the Western Mediterranean into focus as an important producer in the period just prior to the development of the better-known Shirazi, Ayyubid and Mamluk inlaid metalwork.

The book's focus is primarily on the Pisa Griffin and the Mari-Cha Lion, studied both singly and, frequently, together. It attempts to resolve some of the many issues that surround them, while recognizing that on a few others there is a lack of scholarly consensus. Involved are fundamental questions of provenance, purpose and patronage. Relevant to the first is examination of casting and decoration, in each case asking where, when and how. The question of function is addressed in a similar manner: assuming they were not inert, how did they work, for whom were they made, and what purpose were they intended to serve? Indeed, given the phenomenon of transculturation the question of purpose is addressed twice (especially in the case of the Griffin): once relocated, what different purpose and meaning did they have? To this may be added the question of whence and how they were transported to their current locations. Also to be considered is the hitherto unresolved problem of the relationship, if any, between them: were they part of a common project or conceived and executed independently?, and if the latter, as seems

more likely, did they at some point come together to function as a pair before being separated and embarking on different historical trajectories?

Accordingly, consideration is given to their materials and methods of manufacture as diagnostic indicators, to the similarities and differences of their inscriptions and designs, and to their relationships to cognate metalwork and other artifacts, especially those that may shed light on their date and provenance. The exploration of context and function also embraces questions of reception, with particular reference to the better-documented history of the Griffin since its installation at the new site assigned to it in Pisa. It is clear that griffins and lions populate the visual culture of the medieval Mediterranean, whether Muslim or Christian, as both guardian figures and regal symbols. However, investigation of this aspect does not extend to the earlier history of the symbolism of lions and griffins, or the origin of the griffin as a composite beast: these are subjects that would require a separate volume.

With regard specifically to the Griffin, for which a Spanish context is increasingly certain, questions to be considered concern the evidence of metallurgical analysis for its relationship to other metalwork of Andalusian provenance and the history of bronze-casting in Spain, clouded though by uncertainty as to the location of workshops after the collapse of the Caliphate, with the consequent dispersal of artisans and, as a significant related question, the paucity of archaeological data and information about patronage during the Taifa period, to which parallels with cognate bronzes suggests that the Griffin should be assigned. This conclusion is strengthened by comparative study of its inscriptions, with regard to both vocabulary and calligraphic repertoire, and its decorative vocabulary and the techniques and tools used to realize it. These suggest the late eleventh century or the very early twelfth century as the likely date for the Griffin.

Discussion of function involves interpreting the presence of an internal vessel and, on the assumption that this can best be explained as a container for part of a sound-producing mechanism, hypothesizing an appropriate context. Although it undoubtedly has princely associations, there is, for Andalusia, no evidence for threatening sound-producing automata flanking a throne, so that a more likely location would appear to be, if not a palace interior, then a palace garden. With regard to its later history in Pisa, where it was placed on the cathedral roof, its meanings changed to include that of an apotropaic guardian of the cathedral and of the city, but still a sound-producing one, as it emitted eerie sounds when the wind blew through its belly. How it arrived there has been fertile ground for conjecture. There is, though, now a growing consensus that it was booty from a Pisan raid, with Mallorca proposed as the most likely target.

Some of the questions that surround the Lion are, inevitably, of the same order, but there is a lack of unanimity concerning the answers. The casting of its body is superior to that of the Griffin, whereas its decoration and calligraphic style, although similar, are rather less accomplished, suggesting that it is somewhat later, perhaps decorated on the model of the Griffin by the next and less expert generation of craftsmen. On the other hand, the findings of two different lines of enquiry run counter to the supposition that it, too, might have been cast in Spain: metallurgical analysis shows that it is of a different (unleaded) alloy, one not typical of medieval Spanish metalwork, while stylistic analysis emphasizing connections with sculpture in Apulia leads to the conclusion that it was cast, using copper imported from Cyprus, in Southern Italy. However, in this area there is no scholarly consensus, and different chapters propose markedly different interpretations with regard to provenance. What is not in dispute, though, is that its decoration and inscription mark it as an Islamic artifact, and that its dec-

oration is related to that of the Griffin both by features of design and by the use of the same distinctive tool (a five-dot punch). In addition, they both contain an internal vessel that, in turn, points to a common function for both, and conceivably a common location.

The Lion's later history remains obscure. Whether or not it remained alongside the Griffin in a palace context, then to be seized together with the Griffin by Pisan raiders, all that is known is that it later formed part of the collection of a noble European family with Spanish connections, and the only clue as to how it was perceived by its owners is provided by the smoothness of the metal on its back, the result, it is suggested, of generations of children riding it. Since its sale at Christie's in 1993 and emergence to the public and scholarly gaze it has remained enigmatic, the subject of contrary hypotheses, its relationship to the Griffin tantalizingly close yet distant.

### **Organization of the book**

The many experts invited to contribute come from different disciplinary backgrounds and have, inevitably, brought a variety of approaches to bear, but their contributions can be grouped into four coherent and thematically related sections.

#### **SECTION 1 - STRUCTURE AND FUNCTION**

Beginning with a richly illustrated presentation and description of the Pisa Griffin and the Mari-Cha Lion (1.1 Camber and Contadini), this introductory section continues with a more detailed survey of the Griffin and its present condition that also raises various interpretative issues (1.2 Vidale, Ferrari and Bassi). The main concern here is to give an account of the complex lost-wax technique involved in their manufacture (1.3 Bassi), and to technically interpret the internal vessel they both contain. This is widely accepted as most likely part of a sound-producing mechanism, now confirmed also by an organ builder (1.4 Merrell), that made them acoustic automata and thus part of a rich technological and symbolic tradition (1.5 Camber and Contadini), and a related contribution assesses the body of the Lion as a resonating chamber (1.6 Sharp).

#### **SECTION 2 - TECHNOLOGY**

The technological angle is then developed further, and after an explanatory introduction (2.1 Contadini) a first chapter in this section, one devoted to the Lion and the Griffin, reviews the types of investigation carried out and evaluate their findings, with the metallurgical analyses clearly revealing differences between the two (2.2 Northover). This is complemented by the results of XRF and LIBS analysis of the alloy of the Griffin, which illuminate that the alloys of its body and the internal vessel are essentially very close, with comparative results also given for the Lucca Falcon (2.3 Lorenzetti, Grifoni, Legnaioli, Pagnotta and Palleschi). The metallurgical composition of both the Lion and the Griffin is then considered in a wider context of Mediterranean metalwork (2.4 Ponting), again confirming the differences between the two beasts, and with reference to Cypriot copper production (2.5 Fasnacht). There follows a more focused comparative analysis of pieces of Spanish manufacture, illuminating their relationship with the Griffin and also identifying a Spanish source of copper (2.6 Gener and Montero-Ruiz). Finally, a report on digitization on the Griffin, and one of the Lucca Falcon, used to produce high-resolution 2D and 3D representations, shows this to be an important tool for detailed examination and enhanced understanding of specific technical and decorative features (2.7 Callieri, Scopigno and Dellepiane).

### SECTION 3 - HISTORY AND ART

Beginning with a chapter on Pisan history and sources on Pisan raids, vital for an understanding of how the Griffin might have been acquired (3.1 Garzella), this extensive section continues with articles that tease out the complex connections between various cultural-artistic spheres around the Mediterranean. In one, these are discussed allowing the Lion to be related, through a careful assessment of its structural features, to Romanesque sculpture from South Italy (3.2 Camber). The impact on our understanding of metalwork production of the period and its complexity is brought about in a wide-ranging study of the characteristics of both Griffin and Lion, their biography and agency, both past and present (3.3 Contadini).

It then moves to a coverage of various art-historical themes, ranging from illuminating surveys of Andalusian metalwork from the Caliphal (3.4 Vallejo Triano), to the Taifa (3.5 Azuar) periods. Taken together, these two studies highlight a continuity of metalwork production in Spain over at least two centuries, as against the traditional idea of a rupture between the Caliphal and Taifa periods, and at the same time explore the complexities of trans Mediterranean connections.

We then have detailed studies of design aspects of the Griffin and Lion. One, dealing with the animal medallions (3.6 Ward), puts forward the interesting hypothesis that the griffin represented on the shield-shaped panel of the Mari-Cha Lion may actually be the Pisa Griffin. The other, a detailed and comprehensive study of the characteristics of the inscriptions as well as of elements of design, reveal new features that point to Spain, and the case for the capture of the Griffin by the Pisans from Mallorca is made more substantially than in previous literature (3.7 Raby).

### SECTION 4 - COMPARATIVE

The remaining contributions provide a wider context for the study of the Griffin and Lion. The starting point and focus of each is another metal animal figure or group of figures, and the resulting network of stylistic affiliations suggests productive hypotheses concerning date, provenance, and dispersal.

They are: the Cagliari peacock, with the interesting suggestion that it (and the Pisa Griffin) were not booty but were acquired through trade (4.1 Anedda); the Doha hind and its relationship to a metal menagerie that links pieces to Spain and reinforces the evidence for a long-standing Spanish tradition of metalwork (4.2 Greenwood); the Monzón lion, studied together with the mortar found with it and revealing interesting common features with the Griffin as well as between the two (4.3 Déléry); the Mount Sinai aquamanile, an extraordinary piece here studied in all its elements, and with an interpretation of the characteristics of the inscription that would assign it to an earlier period (4.4 Ballian); and the Lucca Falcon, studied with regard to both style, period and inscription alongside the Sinai and other aquamanilia, and also with regard to its amazing transformation once in Lucca into a cockerel weathervane (4.5 Contadini). There are, in addition, technical studies on the manufacture of the Falcon (4.6 Palleschi and 4.7 Vidale and Ferrari), and a further one on the “coat” that it was given to wear once in Lucca (4.8 Bassi and Garzella).

### SECTION 5 - APPENDICES

In certain areas research findings are supported by, or presented as, technical reports. Some are integrated within chapters as tables or diagrams, as with those by Northover and Ponting, but others appear as separate entities and are grouped together as appendices. These are extremely helpful to either support or shape our understanding of the objects studied.

## BIBLIOGRAPHY OF THE WORKS CITED

The width of scholarly coverage and the variety of disciplinary approaches have generated an extensive bibliography that can itself be seen as a valuable adjunct to any future study of art and metal technology around the Mediterranean.

Taken together, the various sections of the book present us with a detailed account of the current state of scholarship not only on the Griffin and Lion but also surrounding them. They show the advances that have been made in both technological enquiry and art-historical interpretation and, importantly, have demonstrated the vital contribution that the former makes to the latter.

The results are, in certain respects, an increase in clarity and certainty: dating is now more secure, and various hypotheses about the origin of the Griffin can be firmly discarded as it is now placed more securely in a medieval Spanish environment with regard to metalworking practices, decoration and inscription. Less clear is the provenance of the Lion, and differences of opinion remain, with the art-historical case for Spain being countered by analogous arguments for South Italy. Metallurgical analyses unanimously confirm differences in the alloys used, so that the question of the relationship between the two beasts remains a matter of speculation, amply discussed in the articles that follow. Areas of controversy remain, but much progress has undoubtedly been made in order to understand not only the two magnificent bronzes at the centre of this study, but also the production and significance of metalwork around the Mediterranean between the tenth and twelfth centuries.

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