

I Cannoni di Venezia: artiglierie della Serenissima da fortezze e relitti

CARLO BELTRAME and MARCO MORIN with 4 Contributors, Illustrator Serena Zanetto

440 pp., 398 b&w illustrations including maps, 178 line drawings of guns, 6 of carriages, 9 tables

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This is a magnificently produced book providing a wealth of information on Venetian artillery between the 15th and 18th centuries. It consists of 14 chapters, one of which is an extensive catalogue of 184 extant artillery pieces, three appendices and a bibliography. Amply illustrated with nearly 400 black-and-white photographs and scale drawings, it is well referenced with footnotes.

The main authors are Carlo Beltrame, a specialist in historic ordnance, post medieval ship structure and underwater archaeology, and Marco Morin, a scholar of ancient and medieval artillery and arms and armour. All contributors are recognized experts, with the major portion, the catalogue, by Beltrame. Scale drawings are by Serena Zanetto.

The catalogue of artillery is an invaluable reference work, as it brings together guns produced by the Republic of Venice from a number of locations, remnants of the production of the Arsenal primarily extant in the Eastern

Mediterranean. The style of data presentation is simple and effective. Illustrations are a major contribution and the method of inseting photographs of diagnostic features within one photograph works well alongside the scale drawings, presenting a standard for simple (adequate yet not over-worked) photographic recording and archaeological illustration.

Although the title suggests that this may be an inclusive catalogue of artillery produced within the Venetian Arsenal between the 15th and 18th centuries, it is not. At the time of the fall of the Venetian Republic in 1797 it is estimated that over 10,000 pieces of Venetian ordnance existed, half within fortifications around the city, others in the Italian territories, Albania, Dalmatia and Istria, or within the ships. Some were within Levantine fortifications. The French took many, with numerous pieces destroyed or recycled. Only a small number of Venetian guns remain, scattered within European museums, with shipwrecks providing an additional source. Currently only 16 examples of Venetian bronze artillery exist within the Naval Historical Museum of Venice. Realizing the technological, historic and artistic importance of these pieces, the Regional Government of Venice sponsored a project devised by the Department of Humanities of Ca'Foscari University to catalogue extant Venetian artillery (bronze, and iron), supervised by Professor Beltrame. This book is the product of this fieldwork, together with archival research, primarily undertaken within a three-year period.

Renato Ridella, a specialist in artillery, military technology and gunpowder, authors the first chapter recounting the development of bronze ordnance in Italy between the 15th and 17th centuries. He includes good historical illustrations and some excellent composite photographs of guns, setting the standard sustained throughout the volume.

The following three chapters are by Morin. Well illustrated, these present an overview of the foundries, techniques of gunfounding, principal gunfounding families, Venetian classification of guns and the oared vessels and their armaments. Ch. 5, by Erika Mattio, comprises a short essay on 'The artillery of the enemy Turk'.

Beltrame authors Chs 6–8. These include location, provenance, history and condition of the artillery currently within museums and fortifications, an overview of wrought-iron ordnance (principally powder chambers and bombards), and the bronze ordnance. He selects individual guns of particular interest and provides contemporary drawings of similar pieces. A very useful table lists the type/material/founder/date and location of all guns (both iron and bronze) presented in the catalogue.

Guido Candiani presents an essay on Tiburzio Bailo and the transition to the production of cast-iron guns in Ch. 9, and Ruth Brown provides a history of Thomas Western, who cast iron mortars and other guns for the Venetian Republic, in Ch. 10. The next chapter, authored by Beltrame and Morin, presents the history of the iron guns cast by the gunfounder Carlo Camozzi, and Ch. 12, by Beltrame, describes the cast-iron Venetian guns, including a discussion on chemical analysis.

The catalogue forms the major portion of the book. The guns are arranged in order of where they can be found now, and most are given a double-page spread. The left side consists of two or more photographs with two columns of text above. One text block provides basic information including catalogue number, gun type and material, current location and inventory number, founder and date (where known), ownership (state or private), calibre, weight as marked on the piece and a basic description. This includes the device or emblem, decorative features, initials and numbers—interpreted where possible. The second block is reserved for comments and footnotes, but not rigidly. This enables a longer description if needed. The layout works well and it is easy to find basic information and compare pieces.

Photographs include at least one overview of the gun and close-ups of interesting features, varying from gun to gun depending on access as well as the feature. As a result, some of the long shots have architecture, modern mounts or scenery in the background and sometimes do not offer the best view. They are adequate, and the photographers cope well with problems of light, shadows and background clutter. There is some discrepancy in orientation of the side-views, and which way the gun is shown (muzzle left or right), some of this may be due to access. Individual photographs of specific features (decoration, marks, touch-hole, mountings, and monogram) are generally clear, although due to space some are not positioned directly beside or above where they appear on the gun. For clarity it might be have been worth including more photographs with the features spread out rather than condensed into one.

The opposite page is devoted to an archaeological illustration of the gun, providing an overhead and side view of each gun, muzzle up, together with muzzle and cascabel views. The muzzle and cascabel views are rotated so that the trunnions are aligned to the length of the gun. These would benefit from being in their correct orientation. Details such as markings and emblems are sometimes enlarged and shown between the vertical illustrations. This works well, although sometimes they are not much larger than the overhead view. These would benefit from a clearly marked linear scale, as the scale is different from that of the gun. The choice of whether to enlarge the details (either by photographs or drawings) seems a bit ad hoc; in some cases almost unrecognizable features (guns 14, 21 and 48 for example) might be better interpreted with a larger scale drawing than a detailed photograph.

The scale used for the drawings alters between guns. As a scale is not actually drawn, it is easy to make mistakes. The noted scale is very small and easily missed on the bottom right of the page and varies between 1/10, 1/15 and 1/20. As there is no linear scale on any page, and as 1/15 (the maximum scale the longest gun can fit on a page) is

unusual and not often found on scale rulers. This makes comparisons difficult. The line drawings lack a consistency in line weight, which is very obvious between the larger and smaller guns. The guns drawn do not show any indication of bore shape, so it is assumed that with the exception of the perriers, the bores are parallel. The inclusion of several maps would be of additional value.

The final chapter by Ridella provides details on the anatomy of the guns, nomenclature and the methods of recording. This is excellent, but would benefit from being positioned before the catalogue rather than after. This is especially important for those not conversant in Italian, as the annotated drawings list the named elements used within the dimensions and descriptive sections of the catalogue.

Appendix 1, by Morin, is a short essay on the history and 'types' of black powder and its production within Italy. In Appendix 2 he presents the metallurgical analysis of some of the bronze (8) and iron (10) pieces, including three English guns from Corfu that do not appear in the catalogue. The final appendix is by Beltrame and includes a series of reconstruction drawings of different types of guns on carriages dated between the 15th and 17th century, also drawn by Zanetto.

The overall result is a fine corpus of work, well executed and presented. The mix between interpretative essays and catalogue is excellent and the data presented is well balanced. The layout works well in book format, and could be the blue-print for a web-based 'virtual' collection. These could be outputs from one founder, city-state, or any dispersed collection. An immediate thought is that this would be a useful way of presenting information on guns recovered from shipwrecks that have been absorbed into disparate collections or sold. Already this publication achieves this by including some artillery within private collections and non-Eastern Mediterranean museums.

The delight of this is that it provides us with something that as individuals we would (probably) not have sought out. These guns do not exist as a group, but presented in this manner some hint of the magnificence of the output of the *Serenissima* is achieved.

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