

DANIELA PITTALUGA

FABIO FRATINI

(édité par/by)

**CONSERVATION ET MISE EN VALEUR
DU PATRIMOINE ARCHITECTURAL ET PAYSAGÉ
DES SITES CÔTIERS MÉDITERRANÉENS**

CONSERVATION AND PROMOTION OF ARCHITECTURAL AND
LANDSCAPE HERITAGE OF THE MEDITERRANEAN COASTAL SITES

ripam

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Ce livre est un ouvrage collectif, dont les contributions ont été élaborées à partir de la conférence RIPAM 7, organisée à Gênes du 20 au 22 septembre 2017 par le DAD - Département d'architecture et de design (Université de Gênes) en partenariat avec le CNR-ICVBC Institut national de recherche, Institut pour la conservation et la mise en valeur du patrimoine culturel de Florence).

This book is a collective work, with contributions developed starting from RIPAM 7 conference, organized in Genoa, 20 to 22 September 2017 by the DAD - Department of Architecture and Design (University of Genoa) in collaboration with the CNR-ICVBC (National Research Council, Institute for Cultural Heritage Conservation and Valorization, Florence).

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Daniela Pittaluga et Fabio Fratini ont travaillé ensemble sur les textes initiaux (comprenant les sections “Qu’est-ce que le RIPAM?” et “Conférence RIPAM 7”, les remerciements et les index) et sur les descriptions des thèmes et sous-thèmes (sections A et B et sous-parties). Cependant, Daniela Pittaluga a écrit les parties en français et Fabio Fratini a écrit les parties en anglais, ils sont auteurs de certains articles et les éditeurs de la partie restante.

Daniela Pittaluga and Fabio Fratini worked together on the initial texts (including sections “What is RIPAM?” and “RIPAM 7 Conference”, acknowledgements and indexes) and on the descriptions of the themes et subthemes (section A and B and subparties). However, Daniela Pittaluga wrote the parts in French, and Fabio Fratini wrote the parts in English. They are authors of some articles and editors of the remaining part.

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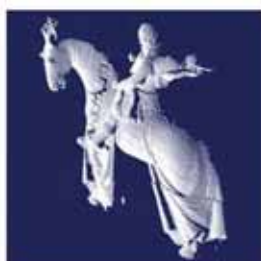
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The nineteenth-century batteries of Genoa: a forgotten heritage

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Summary. The coastal batteries represent a little-known element in the Genoese system of fortifications, consolidated during the course of the nineteenth century. One of the reasons is connected to the fact that they are generally poorly developed structures from an architectural viewpoint. Many of them have also disappeared or have been incorporated in more recent constructions which hide them from sight. This paper contextualises the system of batteries from the historical viewpoint, briefly illustrating the different solutions adopted and then concentrating on two of the still existing structures: the *Batteria della Stella*, now surmounted by a building owned by the Italian army and actually inaccessible, but still integral in its external perimeter, and the *Batteria della Malapaga*, built in the 19th century adjacent to the 16th century *Porta Siberia* gatehouse, which houses the Luzzati Museum. The purpose of this work is to bring this kind of defensive structure to the attention, to prevent those still existing from being unwillingly lost, and hopefully to contribute to increasing their awareness and enhancing their value.

Keywords: fortifications, Genoa, 19th century, construction techniques, building archaeology.

The Genoese system of fortifications is a complex and stratified system to which several studies have already been dedicated¹. It is made up of various kinds of constructions and of their relations in space and, to a certain extent, in time: the walls that were extended and bolstered several times between the Middle Ages and the 17th century; the fortified gates that were built in the various walls to permit access from the roadways and from the port; several fortresses and towers erected along the circuit of the 17th century *Nuove Mura* (new walls) and on the hills surrounding the city between the 18th and 19th century; the trenches dug

¹ FORTI 1972; FINOCCHIO 1983; DELLEPIANE 1984; AA.VV. 1991; FORTI 1992; FINAURI 2003; DECREI 2006; FINAURI 2007.

in 1747 on the occasion of the war of Austrian Succession; the concrete bunkers dating back to the Second World War.

One of the less well-known components of this system is the batteries, simple firing positions, in which one or more artillery pieces are positioned².



Fig. 01: The main nineteenth century batteries: the ones no longer existing are marked in red and the existing ones are in blue (base googlemaps)

The first batteries were positioned above the bulwarks of the sea walls in around the middle of the 17th century³, others were made in the subsequent century (for example the *Batteria Sopranis* and *Batteria Vagno*, constructed outside the walls in the area where the Fortress of *San Giuliano* is currently located, in 1745)⁴, but it was during the nineteenth century that the system of batteries was bolstered and consolidated, adopting structures suited to the new demands of warfare.

² A detailed explanation of the coastal batteries can be found in [VERROGGIO 1891].

³ They had a very simple structure: an artillery piece resting on a gun mount or on the ground, with cannon-balls next to it (FINAURI 2007, p.167).

⁴ Finauri 2007, pp. 160 and 176. For this period see FORTI 1972, pp. 182-184 and FORTI 1992.

As early as the beginning of that century, upgrades were performed, like those made on the *Batteria del Vagno* in 1804⁵. Further specific work was carried out in 1878 (restructuring the *Batteria Strega* by breaking it down into lower and upper battery, moving the *Batteria Cava*, adaptation of the square adjacent the new barracks of *San Benigno* into a battery)⁶. Following the so-called “customs war” with France, during the 1880s, the works were intensified. Therefore, new fortresses were constructed along with some new batteries: two next to or inside the already existing Fortresses of *San Martino* (1889) and of *San Giuliano*⁷ and others in positions not yet occupied or considered strategic (*Batteria di San Simone*, *Batteria Granarolo* and *Batteria degli Angeli*, the latter on the bastion of the same name, all dating back to 1889)⁸. In other cases modernisation work was carried out (*Batteria del Vagno*, 1888; *Batteria della Concezione*)⁹ or previously existing structures were radically changed, like in the case of the *Belvedere* Fortress, transformed in 1889 into the double Battery *Belvedere Inferiore* (in place of the Fortress) and *Belvedere Superiore* (built from scratch)¹⁰. At the beginning of the 20th century, many of the 19th century batteries were still operating: armed with cannons considered modern for the time, and along with the Fortresses contributed to the much lauded military power of the Genoa of this period. Some batteries, with suitable transformations, were still used during the Second World War¹¹. However, over the years, the changing conditions and urban transformations of a continually expanding city led to their progressive closure and often disappearance (fig.01).

Most of the batteries were located along the coastline, but many were also set back on the hills: all the positions, even the most internal ones,

⁵ FINAURI 2007, p. 177. A reference to the work on the *Batteria Sopranis* in 1817, as yet unverified, is in FORTI 1972, p.184.

⁶ FINAURI 2007, pp.168,180,184,195.

⁷ FINAURI 2007, pp.173-175. The drawings of the former are kept at the local office of the Ministry of Culture (*Soprintendenza Archeologia, Belle Arti e Paesaggio - SABAP*).

⁸ FINAURI 2007, pp.184-191.

⁹ For the *Batteria del Vagno* see FINAURI S., 2007, p.180, p.178; for the *Batteria della Concezione* see the project drawing dating back to the end of the 19th century, at the SABAP (Genoa).

¹⁰ FINAURI 2007, p.108.

¹¹ ROSSI 2017.

however, were there to protect the port and defend the sea just off it, thanks to the shooting range of the guns they were armed with.



Fig. 02 : Batterie di San Simone. Icnografia (1889 - SAPAB, Genoa). Fig. 03 : The Batterie di San Benigno in 1901 during an exercise. The cannons are interspersed by the munitions stores (Finauri collection)

Many of these structures are only known to us from the design and survey drawings, now found in various Archives or deposited with different kinds of Authorities and Institutions, like the *Genio Militare* (Military Engineering Corps) or the *Soprintendenza Archeologia, Belle Arti e Paesaggio* (Superintendence for Archaeology, Fine Arts and Landscape) (fig.02). The fact that the latter have no specific duties for archiving, managing and above all publicising the historical documentation in their possession, often makes it difficult, if not impossible, for this material to be consulted. No complete picture of the existing documentation is currently available. In any case, it is certainly much more extensive than the very little already published or currently in our hands.

Many batteries are also documented by historical photographs, often taken during shooting practice, copies of which can be found on the web¹², as well as in some publications¹³ (figg.03, 04a).

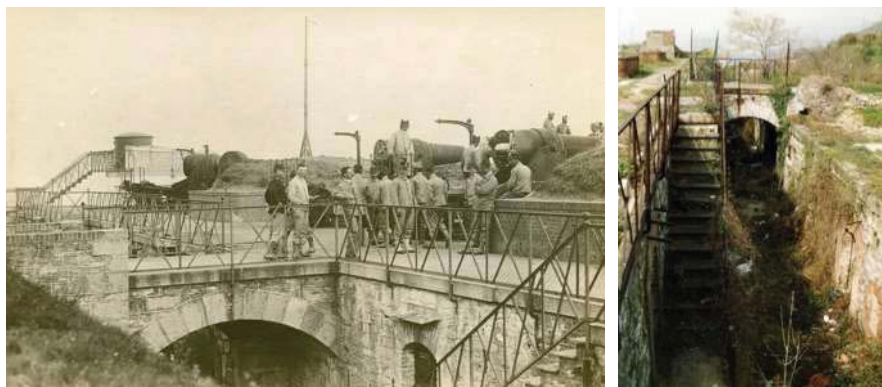


Fig. 04 a, b : The Bateria degli Angeli in 1912 (Finauri collection) and, today, abandoned

What remains of the existing ones is often very inconspicuous and not very comprehensible to non experts (fig.04b). Indeed the batteries were largely unimportant architecturally and for this reason all too often escape the attention. Their basic structure consisted of the gun emplacements where the artillery was positioned and of protected premises where the shot and gunpowder was kept¹⁴. Rangefinders, instruments used to determine the distance of the objective to strike, were also essential. The differences that we can outline between the various

¹² A wide choice of historical postcards collected by Stefano Finauri is available at <http://www.genovacards.com>. In the section dedicated to fortifications there are images from the early decades of the twentieth century regarding the following nineteenth century Batteries: *degli Angeli, Belvedere inferiore, della Cava, a fior d'acqua della Lanterna, San Benigno, San Giuliano, San Simone, Strega, del Vagno*. Stefano Finauri also curated the website <http://www.fortidigenova.com>. On the page dedicated to minor fortifications, he provides a brief overview of nineteenth century Batteries, with historical and current photos.

¹³ FINAURI 2003, FINAURI 2007.

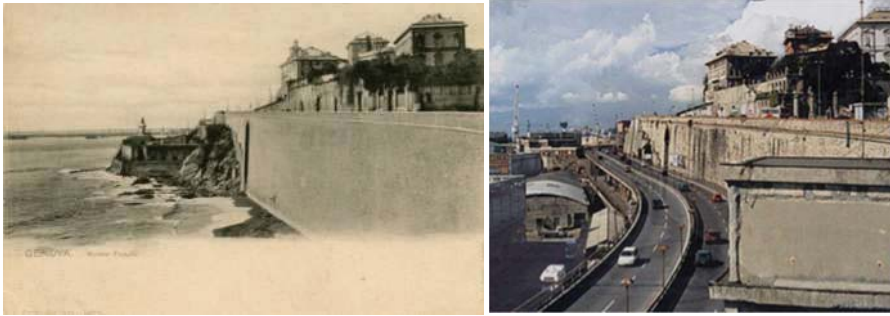
¹⁴ Premises were always a long way from the gun tubes and from other service areas where the munitions were loaded.

batteries thus concern their dimension and the layout of their few functional components, from which some divergences in their constructive appearance can also be seen. The artilleries, generally in the open air, but partially hidden by low grassy embankments, could be arranged one next to the other or distanced by low munitions deposits covered by turf. The shot was transported by carts running on rails that connected the gun tubes with the store rooms. These could also be located in underground rooms located below the gun tubes: in this case the pieces were moved through trap doors in carts on hoists. In some cases the artilleries were positioned within casemates, premises in this period with a covered vault and whose wall, facing possible targets, contained embrasures, that is outward tapered openings to direct shots. The battery could, therefore, be laid out like an actual building, arranged on one or more levels, containing all of the functions already indicated. The greater architectural importance of this kind of battery gave it more chance to survive, both because it was easier to convert into other uses and because of their greater apparent importance. However, as we shall see through the two examples presented below, survival of the structures does not necessarily mean knowledge and enhancing their historical value.

Batteria della Stella

The *Batteria della Stella*, today surmounted by a temporary construction and surrounded by roadways and port buildings, once overlooked the sea.

The short chronological digression below highlights the rapid succession of urban changes that, in just over a century, made the historical landscape unrecognisable and helps to interpret the fragmented traces of our past. The comparison of current situation with the period postcards shows how hidden these traces are, even when they do exist (fig. 05).



Figg. 05 a, b : The Bateria della Stella in 1905 (Finauri collection)(a) and today (b)

Under the Church of *San Giacomo*, where the nineteenth century battery would later appear, there were two bulwarks in the 17th century, one pentagonal and the other rectangular, as we have learned from the first official survey of the city dating back to 1656¹⁵. In 1637 Alessandro Baratta in his view of Genoa showed this emplacement armed with 4 cannons and in 1696, it was included amongst the other period batteries in a schematic plan of Vincenzo Coronelli dedicated to the defensive structure of the city¹⁶. In 1752, apart from two batteries corresponding to the two bulwarks, there was a “platform” positioned on the cliffs below (fig.06)¹⁷.

It was on the latter, defined by Codeviola, by Anonymous and then by Banchemo as “battery at the water’s surface” (*a fior d’acqua*), that, in 1846, the new *Bateria della Scuola*, fitted with a bomb-proof roof (*coperta e a tutta prova*) was built¹⁸. Called so already in 1818 and again

¹⁵ Painting on canvas, today on exhibit at the Museum of Sant’ Agostino.

¹⁶ POLEGGI 1982, respectively fig.67, pp.86-87 and fig.69, p.89.

¹⁷ In the census of M. Codeviola of 1779 they are called *Bateria di San Giacomo*, *B. a fior d’acqua di San Giacomo* and *B. di Senarega* [FORTI 1992, fig.18, pp.188-189].

¹⁸ *Ibidem*, POLEGGI 1969, p.259, BANCHERO 1846, p.666, DECRI 2006, pp. 41-42.

in 1884,¹⁹ it would later be called *Batteria della Stella*.²⁰ In a layout plan of circa 1875, which portrays all the batteries present in this coastal section, the *Batteria della Scuola* is equipped with 14 artillery pieces positioned in the same number of casemates (fig.08). Between 1883 and 1931 it contained a lighthouse (defined as a white light headlamp with a range of 12.5 miles: «*Fanale a luce bianca con portata luminosa di 12,5 miglia*»²¹).

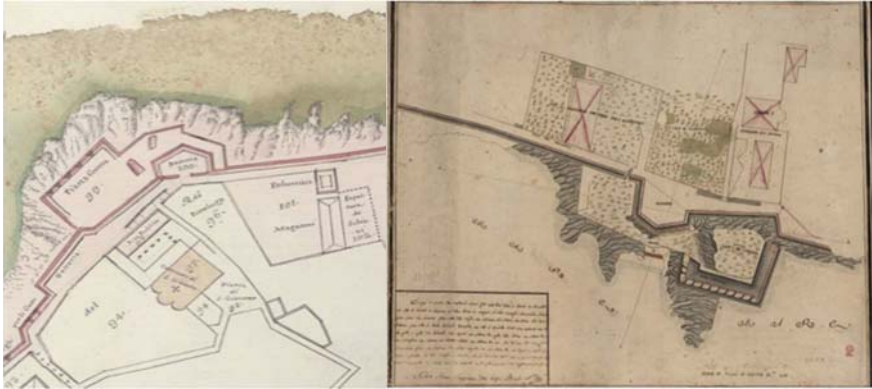


Fig. 06 : Pianta delle vecchie muraglie e loro confinanti nello stato in cui si trovano (old walls in their state at the time), 1752 (Civica Biblioteca Berio). Detail of sector 5 (99: Platform under san Giacomo; 100: Battery; Fig. 07 : Alberto Medoni, 18th century (ASGe-Archivio di Stato di Genova, *Tipi, disegni e mappe, Mappe e tipi della Repubblica di Genova, Miscellanea, 115*): one of the performed works concerned the road that leads to the "battery under the Bulwark of S. Giacomo"

¹⁹ A *Batteria di S. Giacomo* and a *Batteria della Scuola*, respectively equipped with 3 and 7 bronze 24-pound cannons, were quoted in the *Stato delle bocche a fuoco* of 1/3/1818 (Archivio di Stato di Torino, *Regia segreteria di Guerra e Marina, Divisione Artiglieria e Fortificazioni, Pratiche serie II Fortificazioni, Mazzo 7-8*). For the 1884 see the project plan of *Bagni della Strega* of 15th March (ASCG-Archivio Storico del Comune di Genova, *Amministrazione Municipalità 1860-1910, sc. 1646-49*).

²⁰ This name is used from at least 1887 (Plan annexed to a tramway project, 1887, and Map of Genoa -*Carta topografica di Genova e del suo porto secondo il progetto approvato dal Governo nell'anno 1887-*, published in LUCCARDINI 2014, p.114 and pp.16-17).

²¹ *Consorzio Autonomo del Porto di Genova, Archivio Storico, Fald. C2, fasc.421 e Idem, Genio Civile/CAP, fald.16, fasc.1, p. 147* (Report supporting the final account, 1/10/1883).

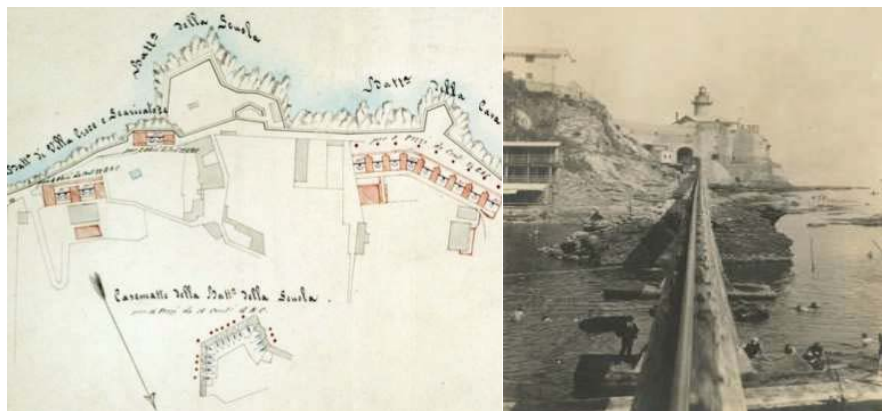


Fig. 08 : Map of c.a 1875, with detail of the casemates of the Batterie della Scuola (ISCAG-Istituto Storico e di Cultura dell'Arma del Genio, Rome, FT97/A7246). Fig. 09 : The transit of the 1914 monorail inside the Batterie (Finauri collection)

In the last decade of the nineteenth century the new seafront ring road was built behind it (fig.05a).²² On the occasion of the International Exhibition of 1914 a suspended monorail electric railway was passed inside it through a tunnel (fig. 09). The Telfer, a futuristic system that was highly admired, was used until the early years of the war, no longer with a touristic purpose, but for transporting coal and other goods, and, was dismantled before 1925.²³ The *Soprelevata*, an overpass road inaugurated in 1965, was finally inserted between the Batterie and the ring road along the sea called *Circonvallazione a mare* (fig. 05b).²⁴ This led to cutting part of the structure and of the rock on which it rested. Above the Batterie a reinforced concrete building was also built, with a variable height from one to three storeys, used by the Italian Navy (fig. 10a). Today, what remains of the batterie is not only hard to see, but also basically inaccessible, due to its function and its position inside the port area. In 2006/07 the Batterie was subject to a didactic exercise by students of the Bachelors degree in architectural restoration: the stratified walls of the building were, indeed, suited to an analysis according to the perspective of archaeology of the architecture²⁵. Thanks to the stratigraphic analysis,

²² LUCCARDINI 2014, p.64.

²³ MINELLA 2014 (particularly pp. 99-111), FINAURI 2007, photo of 1925, p.182.

²⁴ DE MIRANDA 1966.

²⁵ BOATO 2008.

large and small transformations were noted, including the breakage of two embrasures to add a great arch-shaped opening, which we could not immediately explain (fig.10b). After historical research, we then understood that it was the tunnel for passing the Telfer. Initially a window was created in the closing wall of this tunnel, evidenced by the use of brickwork around it. It was then broken in the lower section and filled in the upper part to make way for a horizontal embrasure, clearly part of a bunker from the last world war. At the same moment the adjacent cannon embrasure was also transformed for the new military requirements.

The mensiochronology of the bricks has also made it possible to date the cladding bricks of the basement (under the stone ring) to the second half of the 18th century. We have not yet obtained any documents that confirm the period of this maintenance operation, due to the significant degradation of the primitive stone blocks.



Figg.10a, b : The Battery today: western elevation (a) and detail of the eastern elevation (b), subject to the stratigraphic analysis. Above the cannon embrasure a circular opening can be seen for dissipating the gun smoke

As we have tried to demonstrate, cross-checking several sources (documents, photographs and, above all, the object itself) is the best way to interpret fragmented information and to give historical sense to otherwise unknown buildings.

Battery at Porta Siberia (gate of Molo Vecchio)

Another example concerns the Battery next to Porta Siberia gate, also analysed with the students of the Architectural Restoration Degree Course in 2005/06.

The mensiochronology of the bricks immediately clarified the fact that the construction dated back to a moment between 1830 and 1940, as was then confirmed by the documents illustrated below.

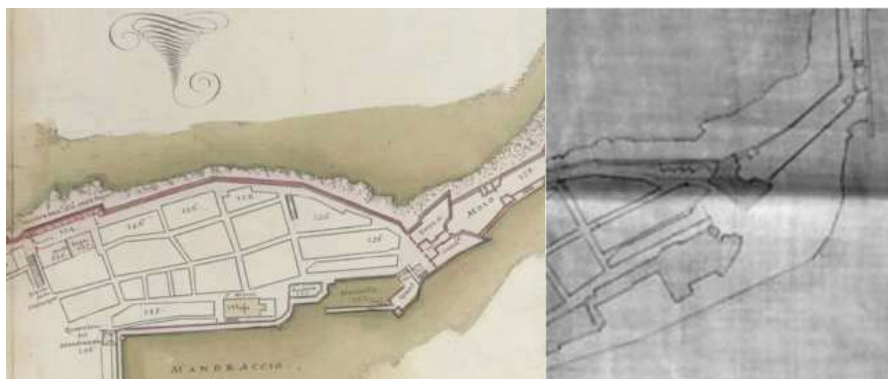


Fig. 11: *Pianta delle vecchie muraglie... cit.*, detail of sector 6. Fig. 12: *Mappa del centro di Genova, 1870 (ASCG, A.M. 1860-1910, sc. 1646)*

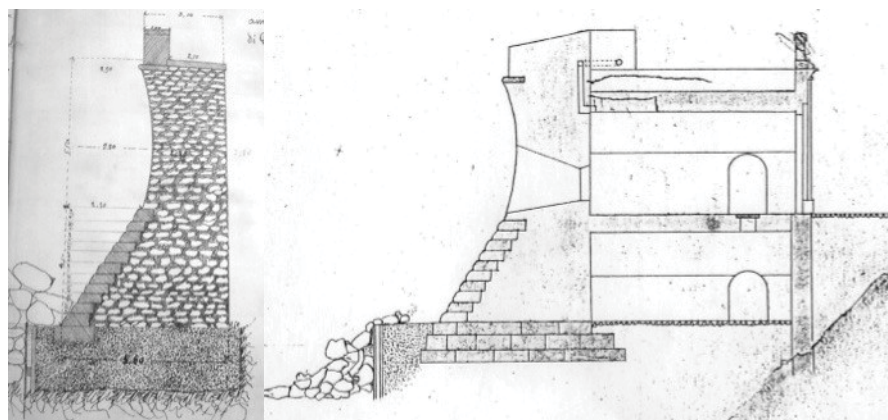


Fig. 13: *Survey of the «muro della Malapaga wall, that was built by and at the expense of the military administration»*, 1871 (ASCG, A.M. 1860-1910, sc. 1646-49).

Fig. 14: *Section of the Battery (Archive of the Genio Militare, no position, no date)*

In the 18th century the walls directly backed onto the *Porta del Molo* gate (fig.11), on the summit of which an artillery station was located.²⁶ A first project for building two new batteries adjacent to the Port dates back to 1843²⁷, but in 1846 the situation seems to still be unchanged²⁸. A map of the centre of Genoa, dating back to around 1870²⁹, on the other hand, shows a building with a saw tooth profile, where the still existing Battery is located (fig.12). In 1875 Federico Alizeri talks of the walls between the *Porta del Molo* and *le Grazie*, which are seamlessly constructed with this battery, as a recent work³⁰. Indeed, the curved profile of the wall, corresponding to the section that also characterises the Battery, is represented in a survey of 30 May 1871, provided as a reference for the construction of the new sea road that continued Eastwards from *le Grazie* (fig. 13). It can, therefore, be considered that the construction of the Battery dated back to the years immediately before. In an untitled section sourced from the *Genio Militare*, we can see the same hydrodynamic profile, which means that we can identify it with the battery (fig. 14). On the upper storey, we can see the large outward tapered opening from which the cannons were fired. They were positioned, like in the *Batteria Stella*, in what could be considered a building.

The casemates are connected to the underground storey below, through trap doors, that were presumably used for the passage of the shots. Access to the lower storey is through an internal staircase, while the upper storey communicates directly to the road with large arch-shaped openings.

²⁶ Indeed in 1779 Michele Codeviola surveyed the *Batteria del Portone del Molo Vecchio* (cfr. note 16). For the walls-port relationship, please also see a drawing of it of 1772, kept in ASGe, Foglietta, 1242 and published in AA.VV. 1975, p. 406.

²⁷ ISGAG, FT40/B2602.

²⁸ See the map of Genoa *Carta topografica della città di Genova comprese le innovazioni fatte a tutto il mese di Agosto 1846*, Edizioni libreria Grondona (CTCG, C. 68).

²⁹ DECREI 2006, fig. 44, p.43. The dating theory is that of LUCCARDINI 2014, p.15.

³⁰ ALIZERI 1875, p.63.



Figg. 15a, b : The Battery in 2006, during the educational exercise: part facing the sea (a) and detail of a cannon embrasure (b)

The *Batteria della Porta del Molo Vecchio*, unlike that *della Stella*, can be visited: indeed, along with *Porta Siberia*, it houses a museum dedicated to Emanuele Luzzati, set designer and illustrator. However, everybody knows the sixteenth century gate of the great architect Galeazzo Alessi, but few know that the part behind it is a nineteenth century battery. Even some researchers and restorers (starting with FORTI L.C., 1972, p.41) have attributed the particular hydrodynamic shape of the walls adjacent to the Battery (and obviously dating back to the same period) to Alessi's brilliance. As we have seen, however, this solution is owed to the military engineers and, more coherently with the times, dates back to the 19th century. However, the good thing about ascribing it to Alessi was that it gave the construction an importance that it otherwise probably would not have had. Concluding, it may be said that this difficult heritage, even though, in one way or another, it has survived the changes of the city and building transformations, is truly a forgotten heritage. Let us, therefore hope this this brief paper may contribute to providing greater awareness and to increasing its cultural value.

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