



# The Fortified Heritage of Boka Kotorska Bay (Montenegro)

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**Faculty of Architecture  
University of Montenegro**

**FORTRESS TOURISM AND GUIDE CONGRESS**

**Šibenik, Croatia, 29-31 March 2023**

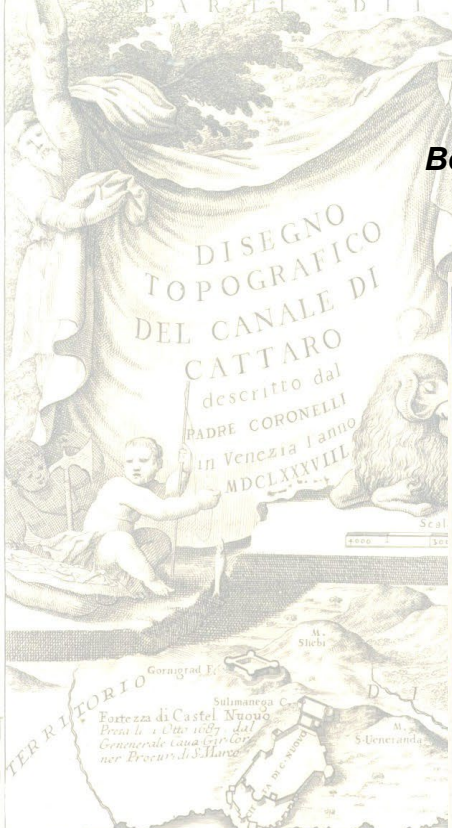
# The Fortified Heritage of Boka Kotorska Bay

*Boka Kotorska, Topographic Map, a. P. Vincenzo Coronelli, 1688*



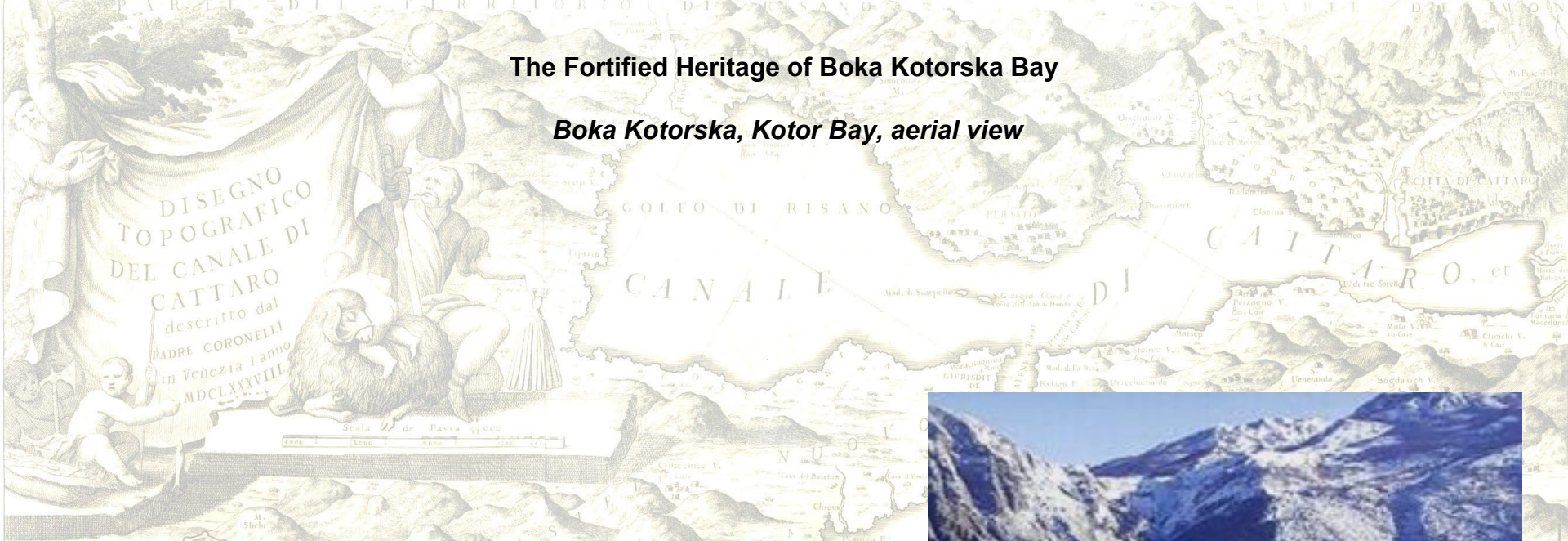
## The Fortified Heritage of Boka Kotorska Bay

### Boka Kotorska, Medieval and Venetian Period Fortifications Disposition



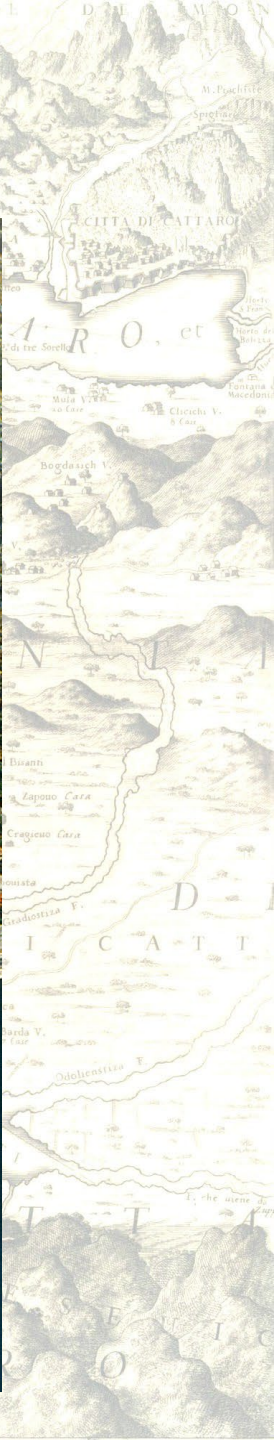
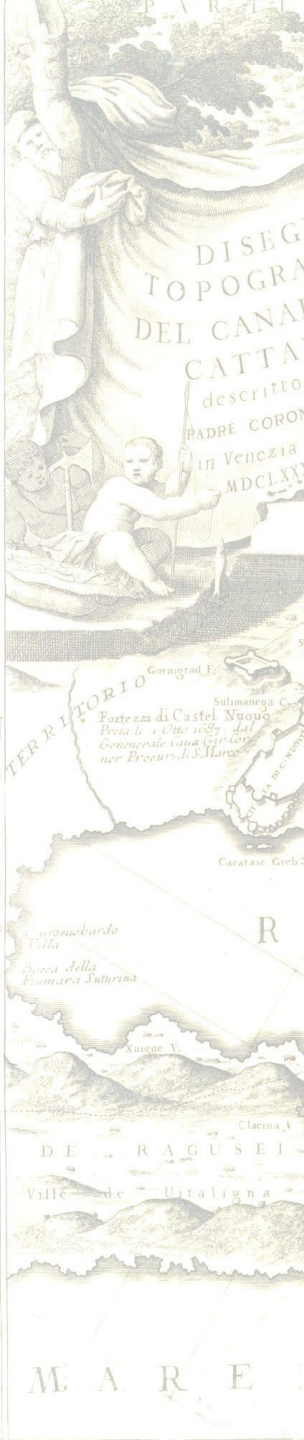
# The Fortified Heritage of Boka Kotorska Bay

## *Boka Kotorska, Kotor Bay, aerial view*



# The Fortified Heritage of Boka Kotorska Bay

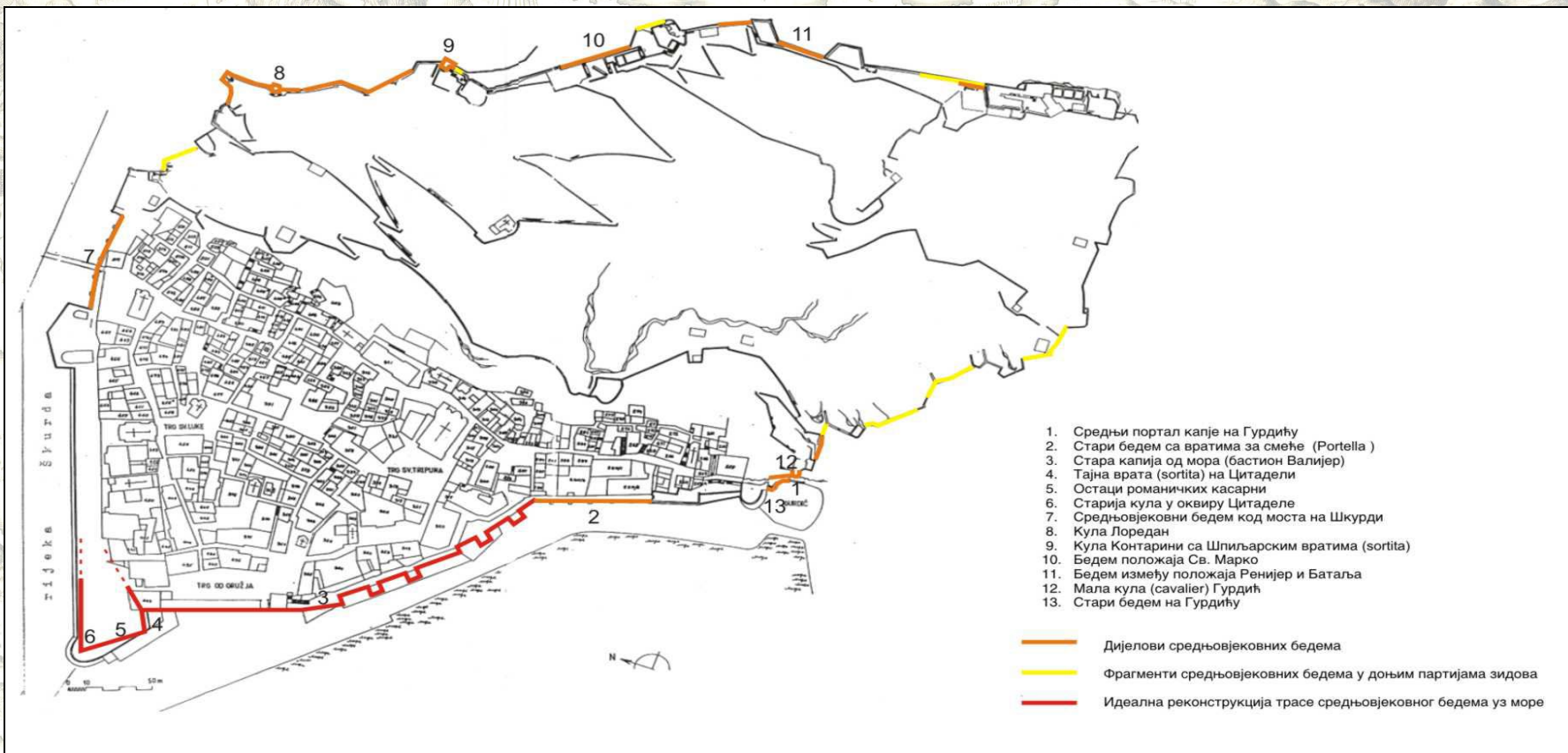
## Old Town Kotor, aerial view



# The Fortified Heritage of Boka Kotorska Bay

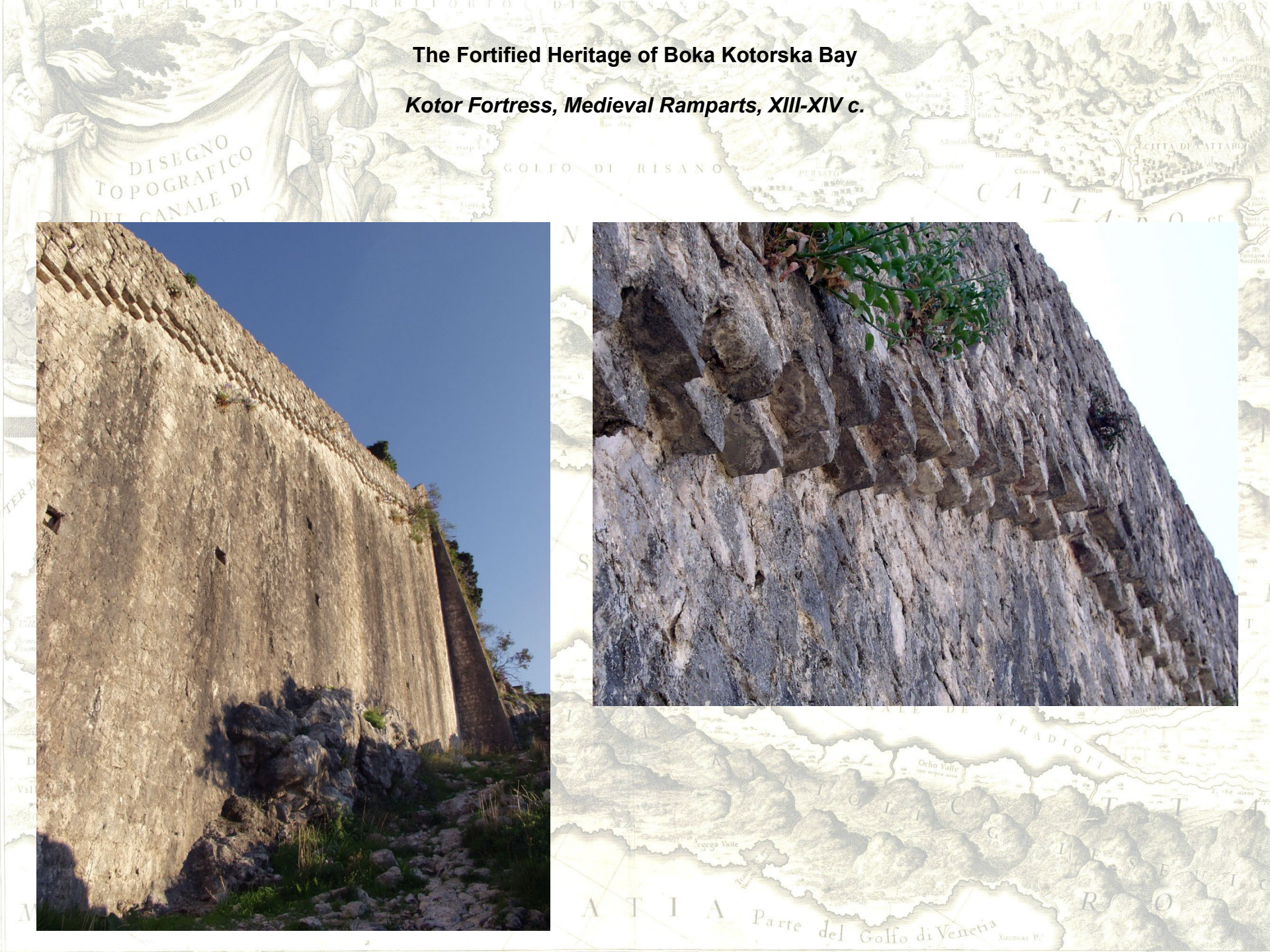
## Kotor Fortress, Medieval Period Fortifications

DISEGNO  
TOPOGRAFICO  
DEL CANALE DI  
CATTARO  
descritto dal  
PADRE CORONELLI  
1717



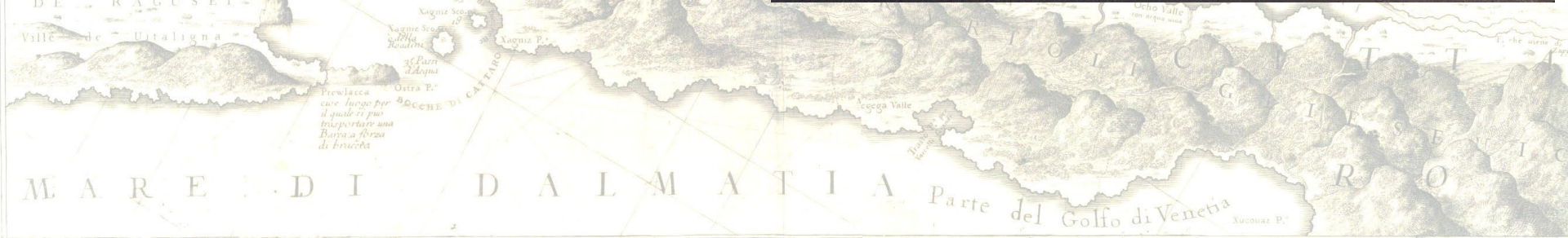
**The Fortified Heritage of Boka Kotorska Bay**

***Kotor Fortress, Medieval Ramparts, XIII-XIV c.***



# The Fortified Heritage of Boka Kotorska Bay

## Kotor Fortress, Medieval Ramparts XIII-XIV c.





# The Fortified Heritage of Boka Kotorska Bay

Kotor, Documentation of the Fortress, a. Angelo degli Oddi Padovano 1584 & Agostino Alberti 1624



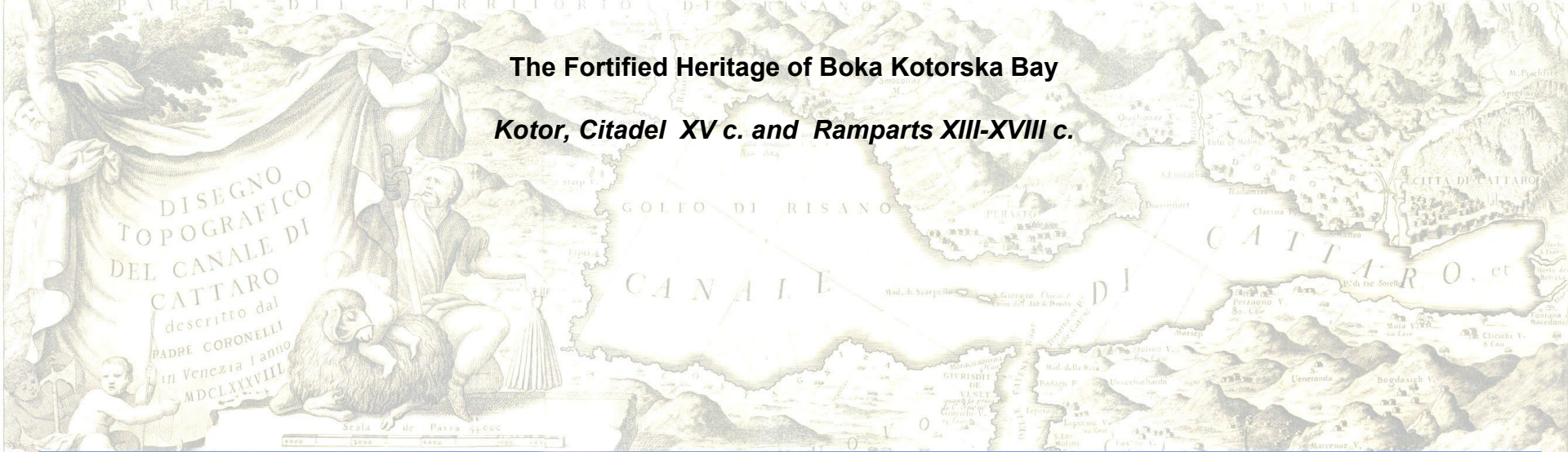
# The Fortified Heritage of Boka Kotorska Bay

**Kotor, Plan of the Fortress, a. Napoleon Eraut 1682 & Tower Contarini XIV-XV c and S.Girolamo Bestion XVIII c**



# The Fortified Heritage of Boka Kotorska Bay

*Kotor, Citadel XV c. and Ramparts XIII-XVIII c.*



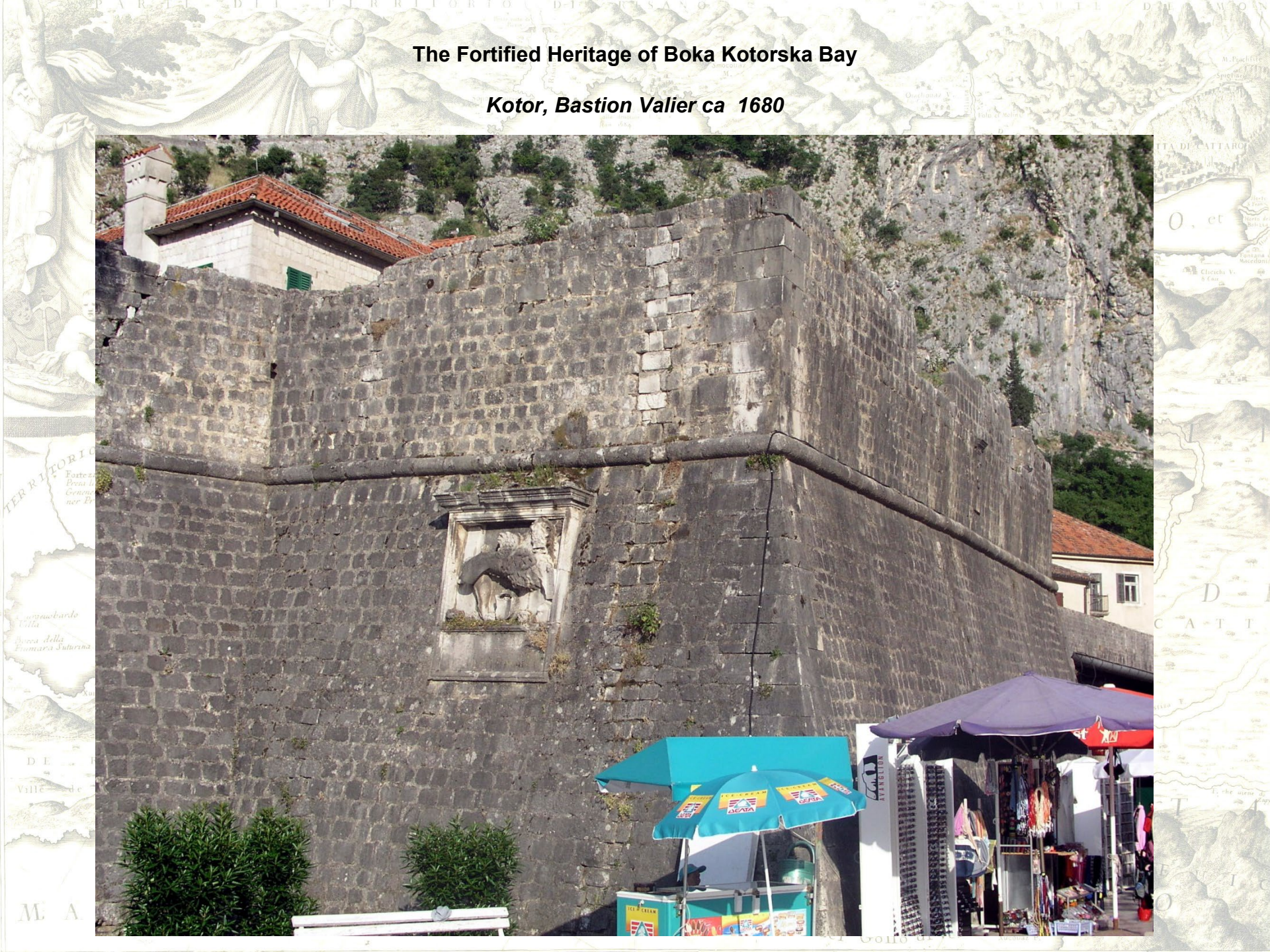
# The Fortified Heritage of Boka Kotorska Bay

**Kotor, Tower Gurdic 1470, with Southern Town Gates and Draw Bridge**



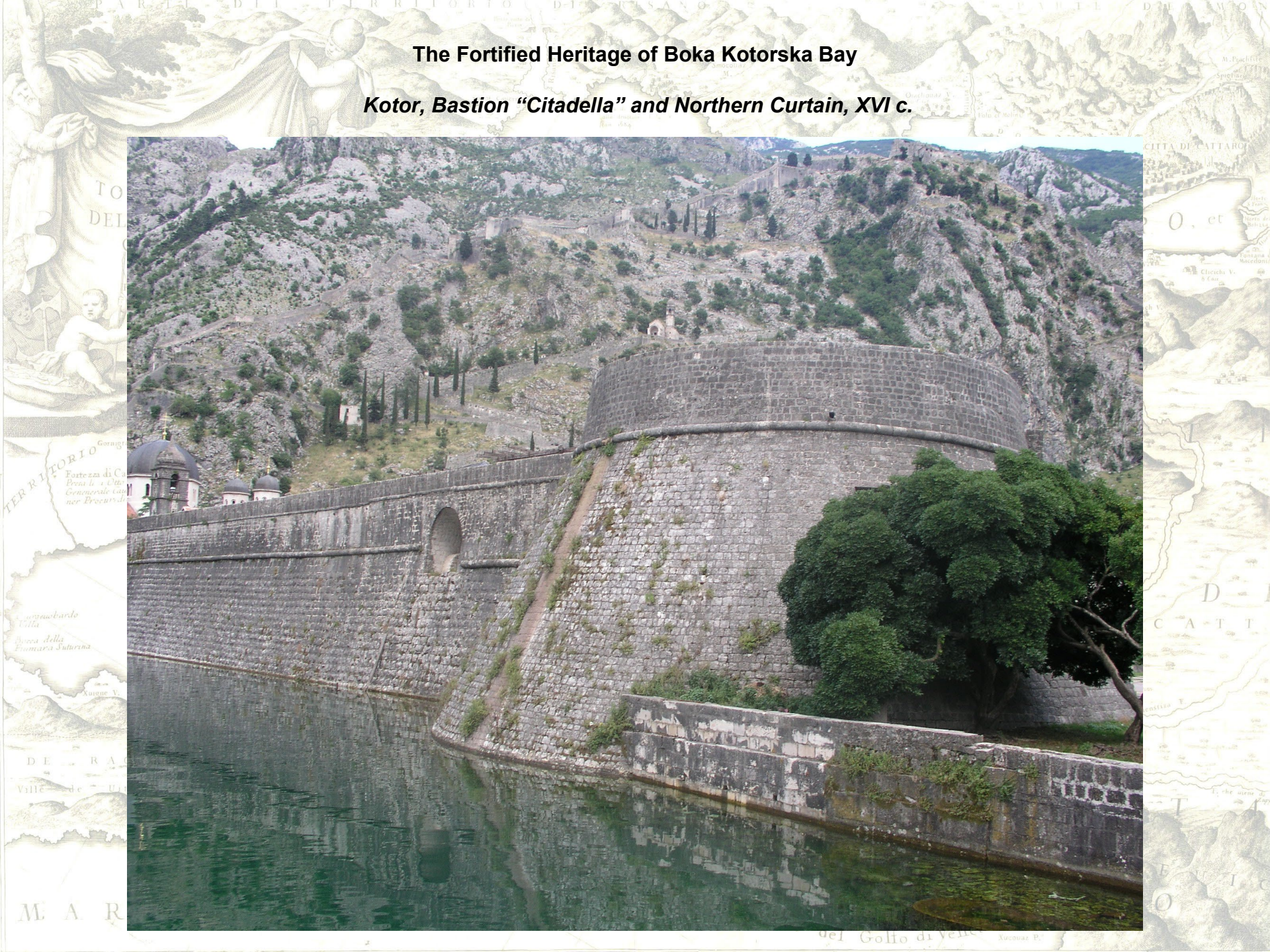
# The Fortified Heritage of Boka Kotorska Bay

*Kotor, Bastion Valier ca 1680*



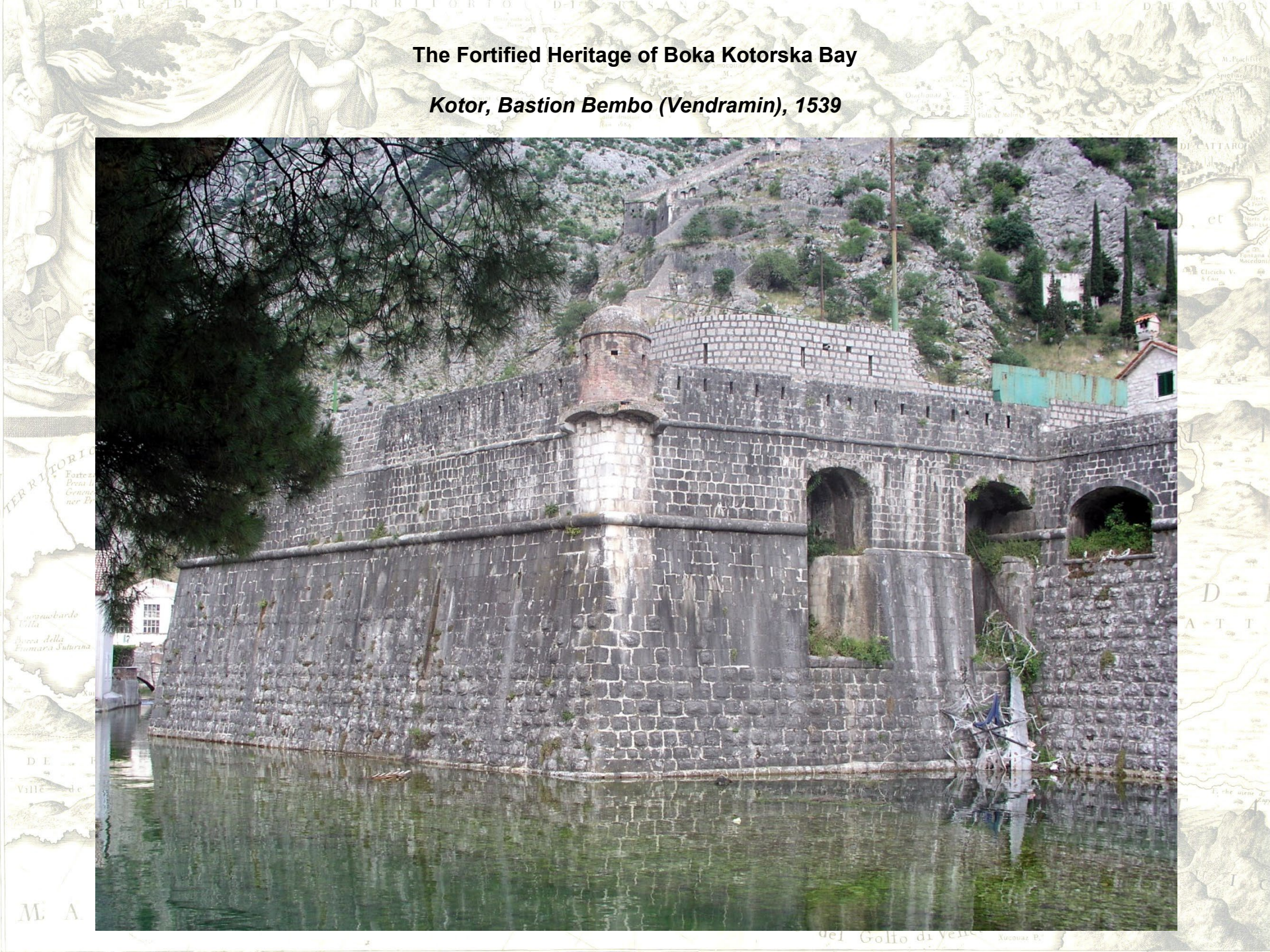
# The Fortified Heritage of Boka Kotorska Bay

**Kotor, Bastion "Citadella" and Northern Curtain, XVI c.**



# The Fortified Heritage of Boka Kotorska Bay

## Kotor, Bastion Bembo (Vendramin), 1539



# The Fortified Heritage of Boka Kotorska Bay

B.Lorini, *Delle Fortificazioni*, Venezia 1597 (Fine Arts Library, Philadelphia)

DELLE  
**FORTIFICAZIONI**  
DI BVONAVVTO LORINI,  
NOBILE FIORENTINO.  
Libri Cinque.

NE' QUALI SI MOSTRA CON LE PIV  
facili regole la scienza con la pratica, di Fortificare le  
Città, & altri luoghi sopra diuersi siti,

CON TVTTI GLI AVVERTIMENTI, CHE PER  
intelligenza di tal materia possono occorrere.

Et il particolar soggetto di ciascun Libro si dimostra nel rouerficio di quella Carta.

NVOVAMENTE DATI IN LVCE.

Con Priuilegij.



IN VENETIA.

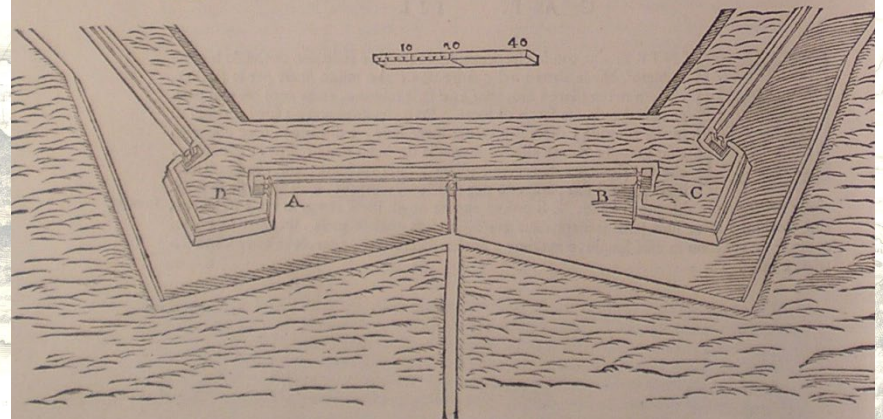
Appresso Gio. Antonio Rampazetto. M D XCVII.



FORTIFICAZIONE FATTA CO' BALVARDI.

C A P. IIIII.

**L**DOPPO l'haure sperimentato i detti torrioni tondi, ritrouarono ancora in parte  
l'imperfectione de' primi, cioè, che la parte della sua circonferenza di fuori non era sco-  
perta, nè difesa da' difensori, formando i tiri non solo delle balestre, ma delle artiglierie  
vn'angolo di fuori, nel quale poteuano stare i nemici coperti, e ficuri. Però conforme  
alla grandezza del detto angolo, fecero la muraglia, e formarono la fronte del baluardo,  
fame llo per quanto vien detto in vfo da' Francesi, il quale chiamarono Belingardo, fa-  
cendolo però di forma piccola, e con lunghe cortine, come si vede per AB cortina, e DC ba-  
luardi.

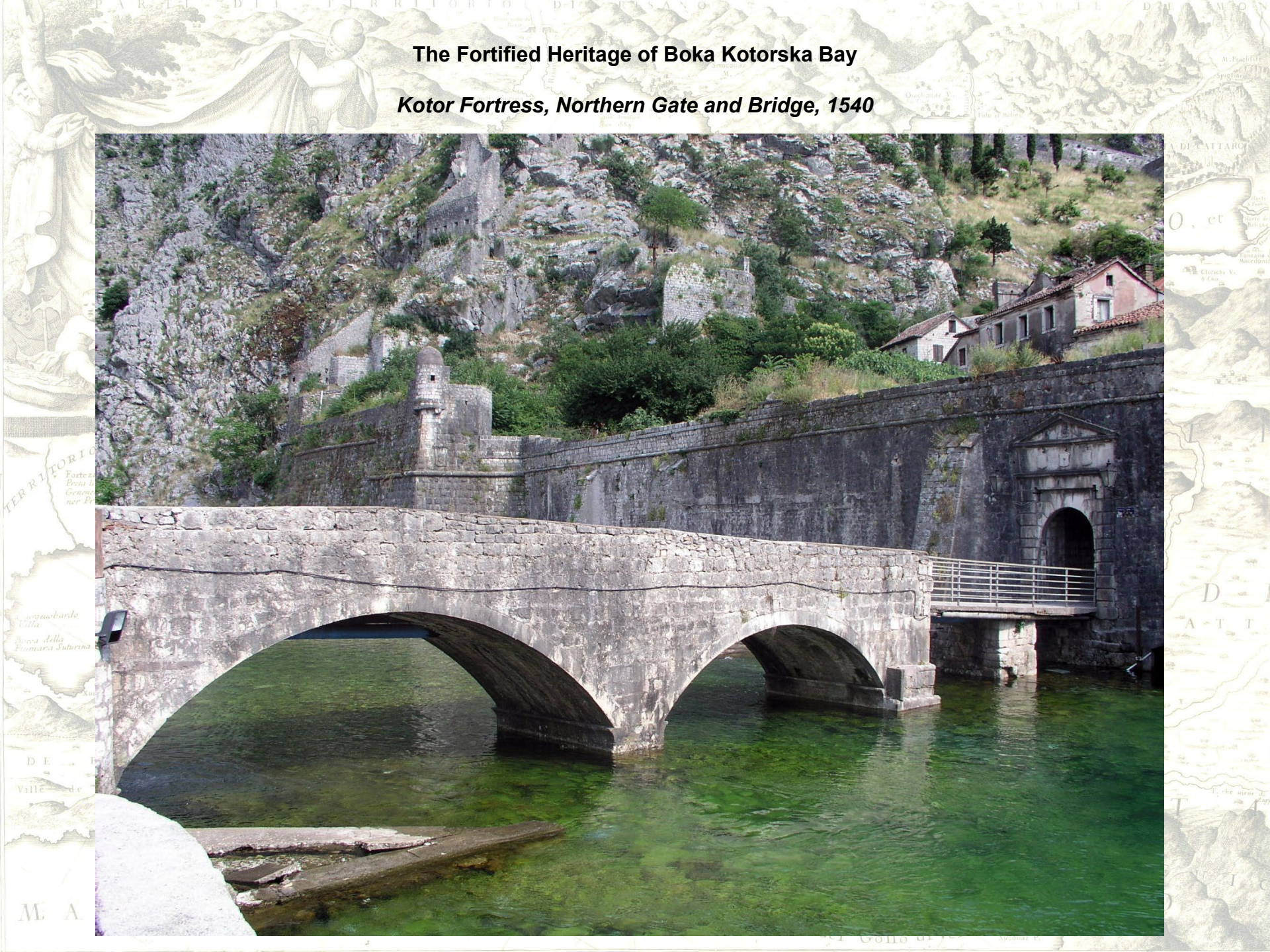


FORTI.



# The Fortified Heritage of Boka Kotorska Bay

## Kotor Fortress, Northern Gate and Bridge, 1540



The Fortified Heritage of Boka Kotorska Bay

Kotor Fortress, Northern Gate and Bridge Area, a. F. Karascay, ca 1837.

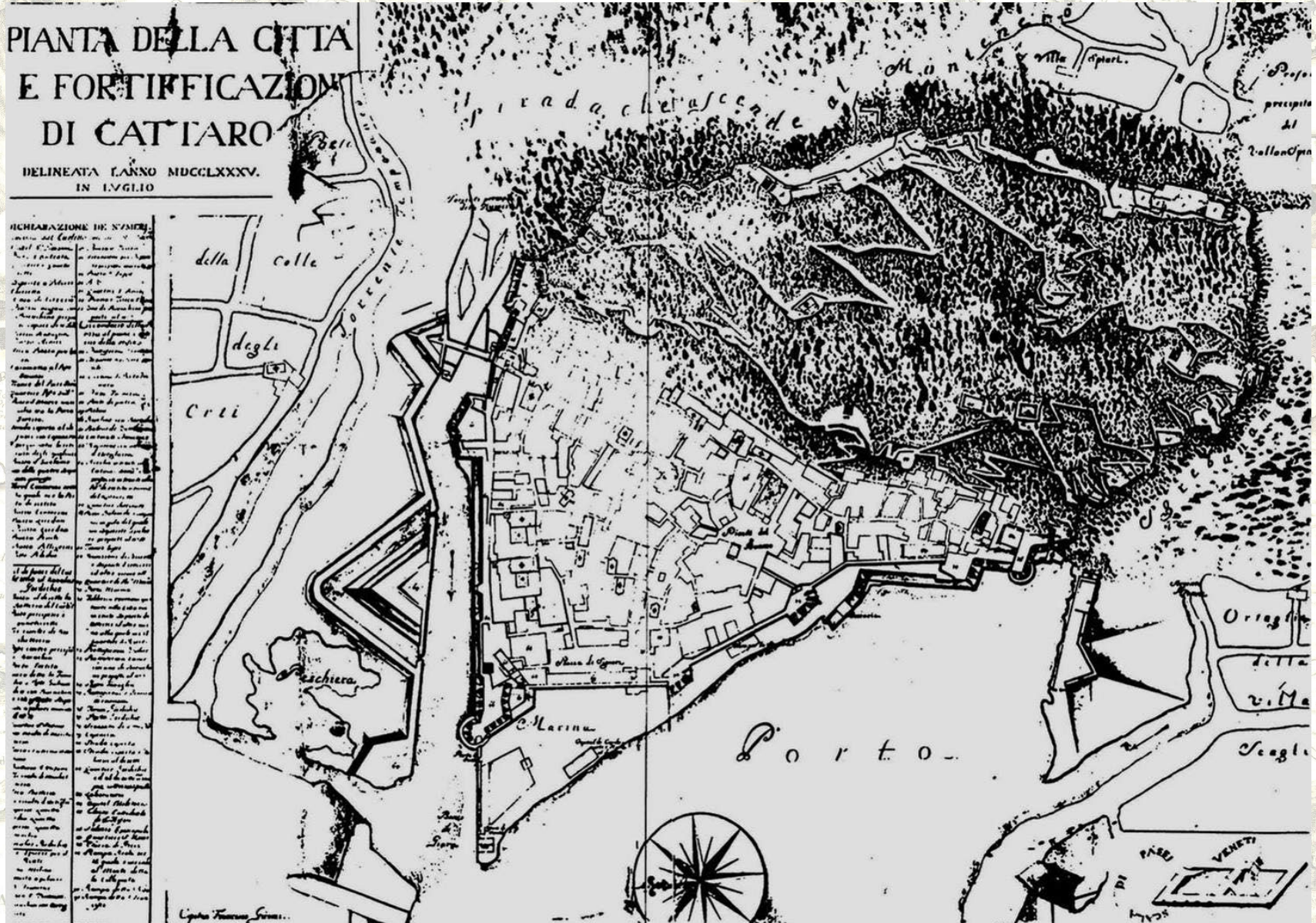


68. Veduta di Cattaro dalla parte di Porta Fiumera.

del Golfo di Yesso Xicouar P.

# The Fortified Heritage of Boka Kotorska Bay

Kotor, Plan of the Town and Fortress, a. Francesco Gironci, 1785

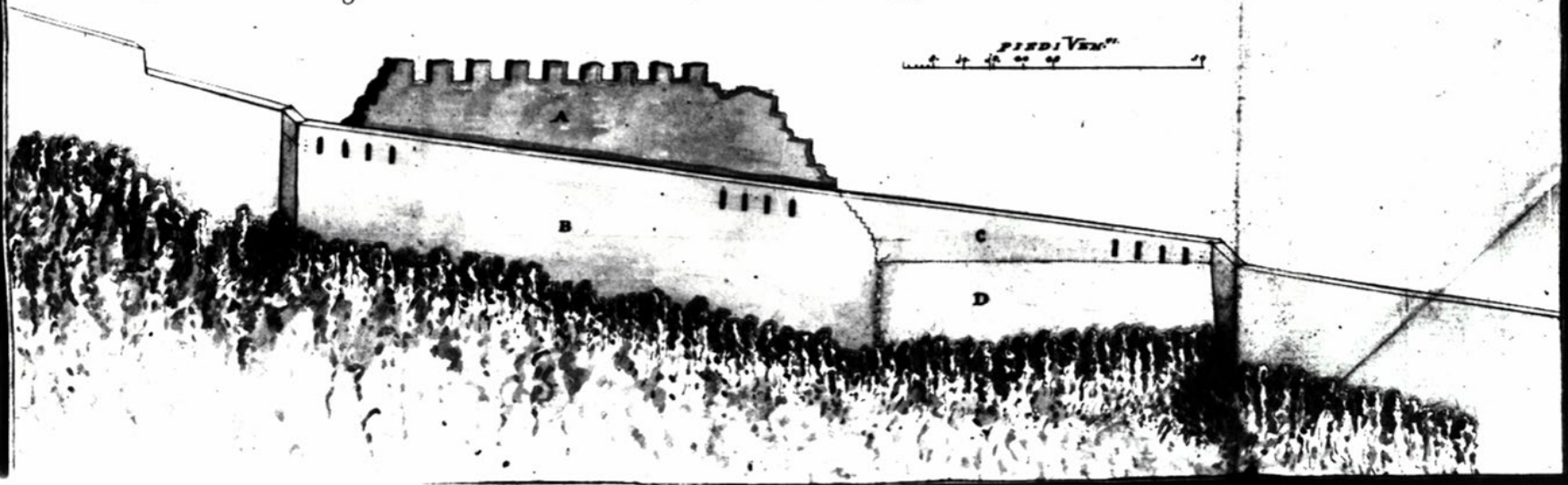


# The Fortified Heritage of Boka Kotorska Bay

## Kotor, Transformation of the Medieval Walls in Artillery Scarp Revetment, a. Francesco Melchiori 1731

PROVV. DA TERRA E DA MAR P. 680/1

Si devono destinare per soprainsondare al nuovo del Nuovo del Reinto in Piazza di questo (ma, situata tra il Porto vecchio, e l'antico  
 coveo contenuta in esso, de' domandi dell' Sommo Pontefice, a norma del presente disegno in questo dell' istesso  
 Torno sommaria demolizione della scarpina di Nuovo vecchio A, verso di novo, e in tre piedi, e mezzo sono, e in più basso  
 della linea, che lo divide dal detto mare B  
 Il Manovale, che si stabiliva dalla vicina demolizione, e con l'altro già preparato, che si va assicurando giornalmente il  
 edonamento B al Sud. Nuovo vecchio A, sino a tre piedi, e mezzo verso della linea Sud, guardando, che in questo praticato di  
 parte da Mastri plebe così legati il Bedonaco verso al detto vecchio Nuovo, con la pietra più sempre, di quattro in quattro (così  
 e che scarpina continuata, con la scarpa incominciata  
 Il resto il Bedonaco sud, sino all' abozzo Sud, si costruisce tutta la scarpina della Mura col declive, che si mostra, e si vol  
 ciarà tutta la linea del mare, con buona facciata, dalla qual sommità poi si mettono un Nuovo a Diombo alto tre piedi,  
 e mezzo, grossi once 16 Sedici, con Ligna bianca nel mezzo, di in sommità, nel quale in si apriranno, distribuite, come  
 al Proposito Sud: la Ferradura, lunga, et alta al Bedonaco un piede, et al di fuori anche verso due oncie, et alte due piedi,  
 così che habbino un piede di declive verso l'istesso a più parte rispetto del Fronte differente  
 Nella stesso tempo, che fanno parimente il Bedonaco B, andrò verso il nuovo D, dove volgarmente la Breccia, e in  
 conferma di questa la linea C, sul pavimento, e verso di Nuovo, col suo Nuovo, e Ferradura, come sopra, e come resta marcata nel  
 già sopra delineato disegno, e si è mostrato sul luogo.  
 Francesco Melchiori off.  
 Carrara 1731 6 Giugno.



# The Fortified Heritage of Boka Kotorska Bay

*Kotor, Bastion Renier 1768*



**The Fortified Heritage of Boka Kotorska Bay**  
**Kotor, Tower Loredan XIV c. and Bastion Priuli 1767**



# The Fortified Heritage of Boka Kotorska Bay

## Kotor, Citadel Gate XV c & Northern Gate 1540



**The Fortified Heritage of Boka Kotorska Bay**

***Kotor, Southern Gates, XIII & XVI c.***





# The Fortified Heritage of Boka Kotorska Bay

***Kotor, Main Gate ("Porta Marina") 1555, actual state & 1940s state***



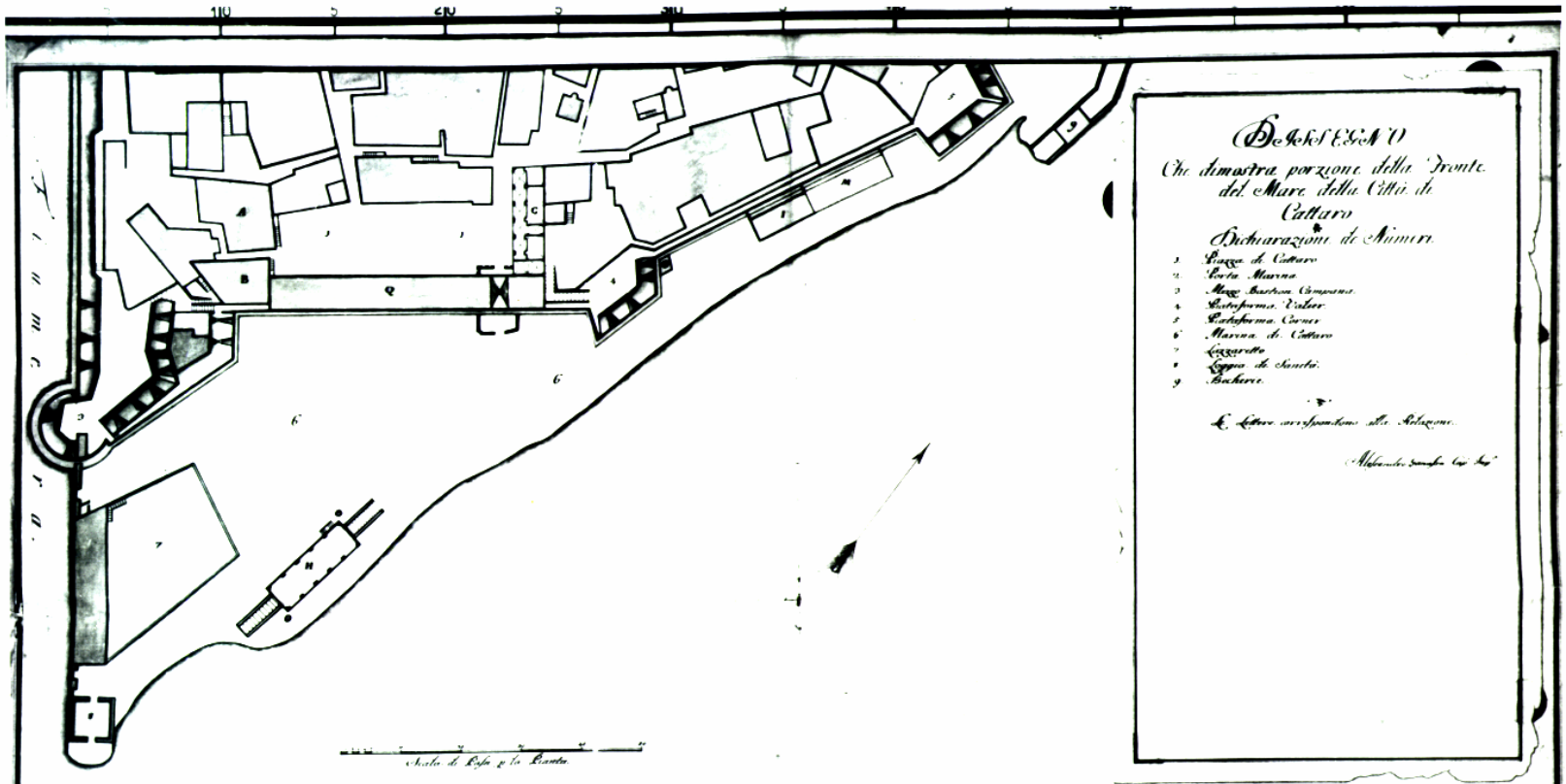
# The Fortified Heritage of Boka Kotorska Bay

Kotor, Main Gate ("Porta Marina") 1555, inner view

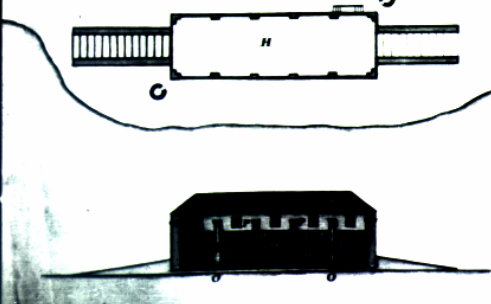


# The Fortified Heritage of Boka Kotorska Bay

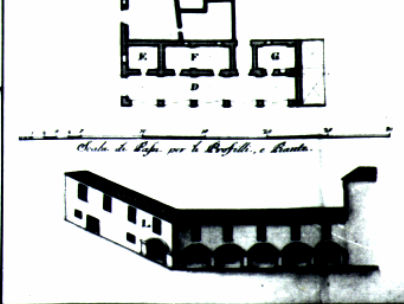
## Kotor Fortress, Main Gate Area Plan, a. Alessandro Ganassa, XVIII c.



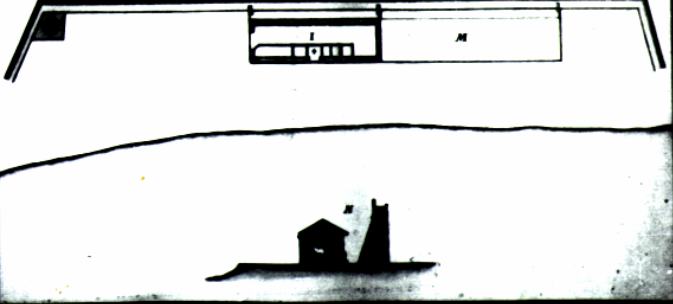
*Pianta e Prospetto del Palazzo eretto alla Marina di Cattaro l'anno 1760, serve per uso della Squadra del Golfo*



*Pianta e Prospetto della Loggia situata nella Piazza di Cattaro*

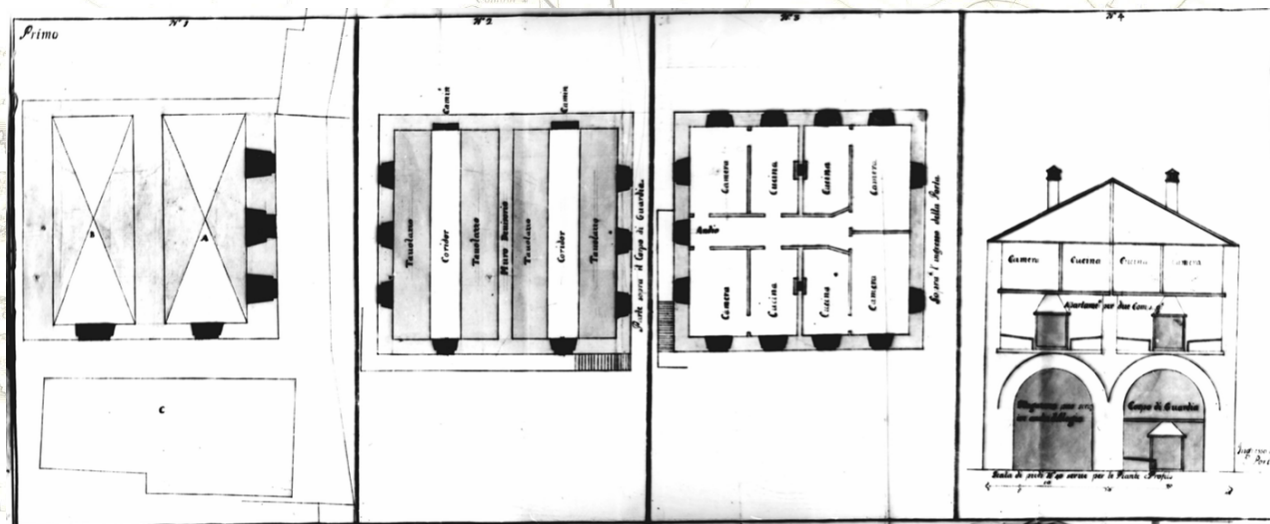
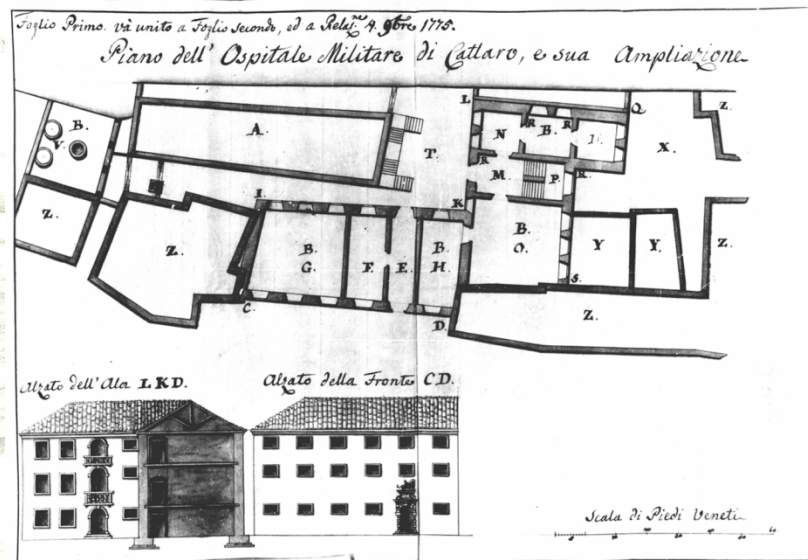


*Pianta e Prospetto del Palazzo eretto alla Marina di Cattaro l'anno 1760, serve ad uso della Squadra del Golfo*



# The Fortified Heritage of Boka Kotorska Bay

Kotor, Barracks 1765, Plan 1764, a. B. Riviera & Military Hospital 1769, Plan 1775, a. M. de Filseck



# The Fortified Heritage of Boka Kotorska Bay

**Kotor Fortress, Powder Magazine Plan, a. Agostino Alberti 1624 & Powder Magazine 1747**

**DISSEGNO IN PROFILO DEL DIPOSITO, A**

**PIANTA DEL DIPOSITO**

*la lettera F. mostra l'ante Muraglia che sarà in faccia oposta  
la lettera G. nota l'ante Muraglia & le due parti del sacro*

**PIANTA DEL DIPOSITO**

*qui sarà Pio*

*D. Calle aorno al lironi*



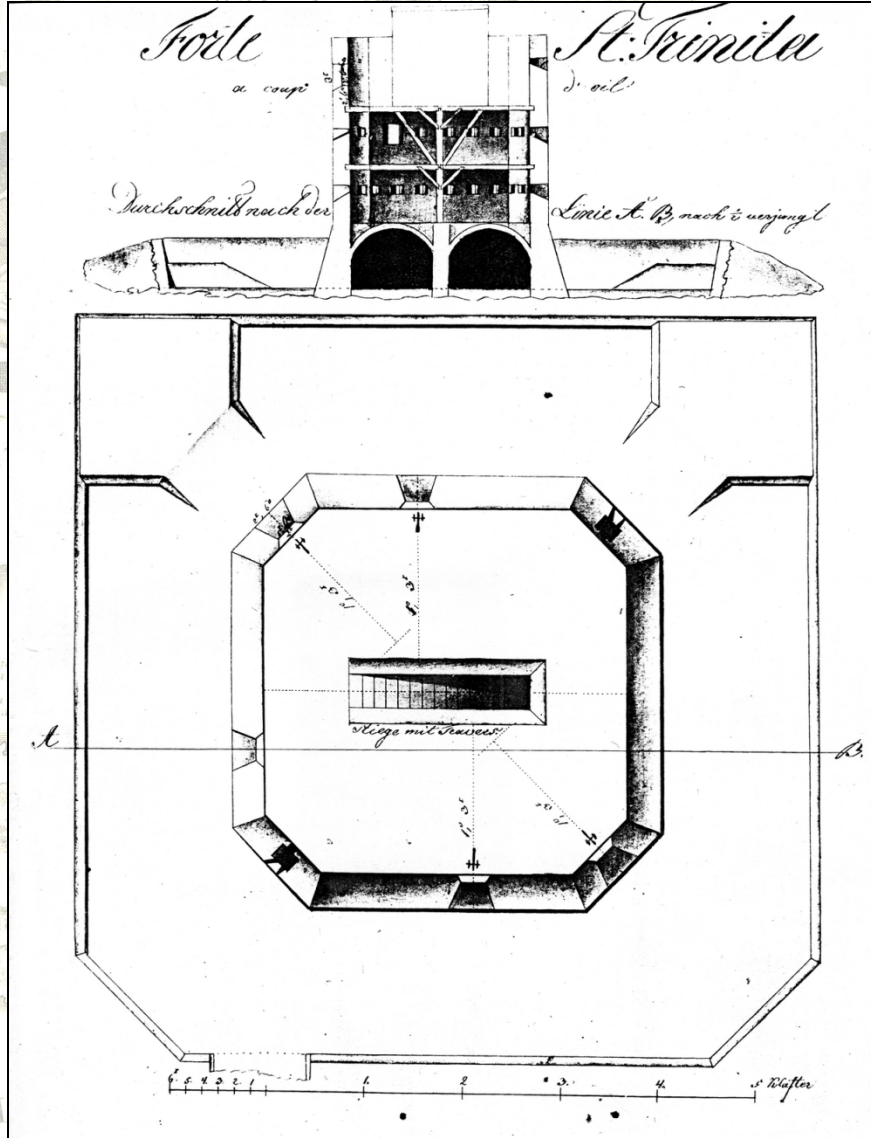
## The Fortified Heritage of Boka Kotorska Bay

*Kotor Fortress, Bastions, ramparts, barracks and communications, St. John Hill, XIII-XX c.*



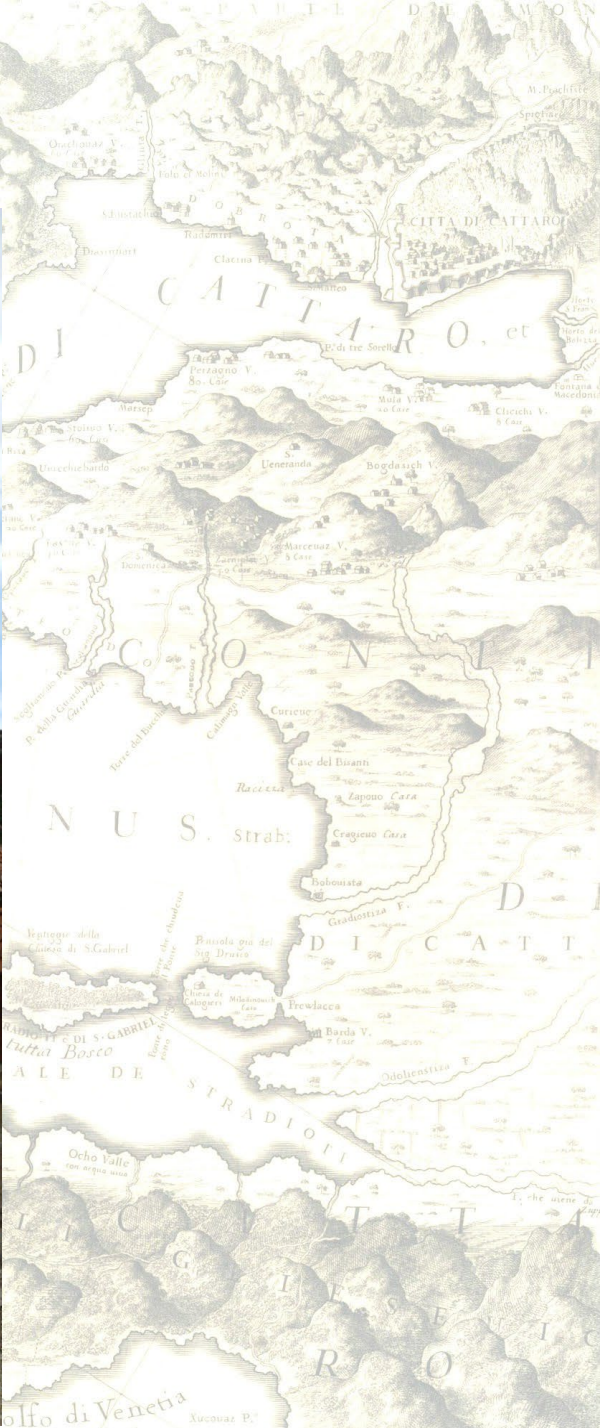
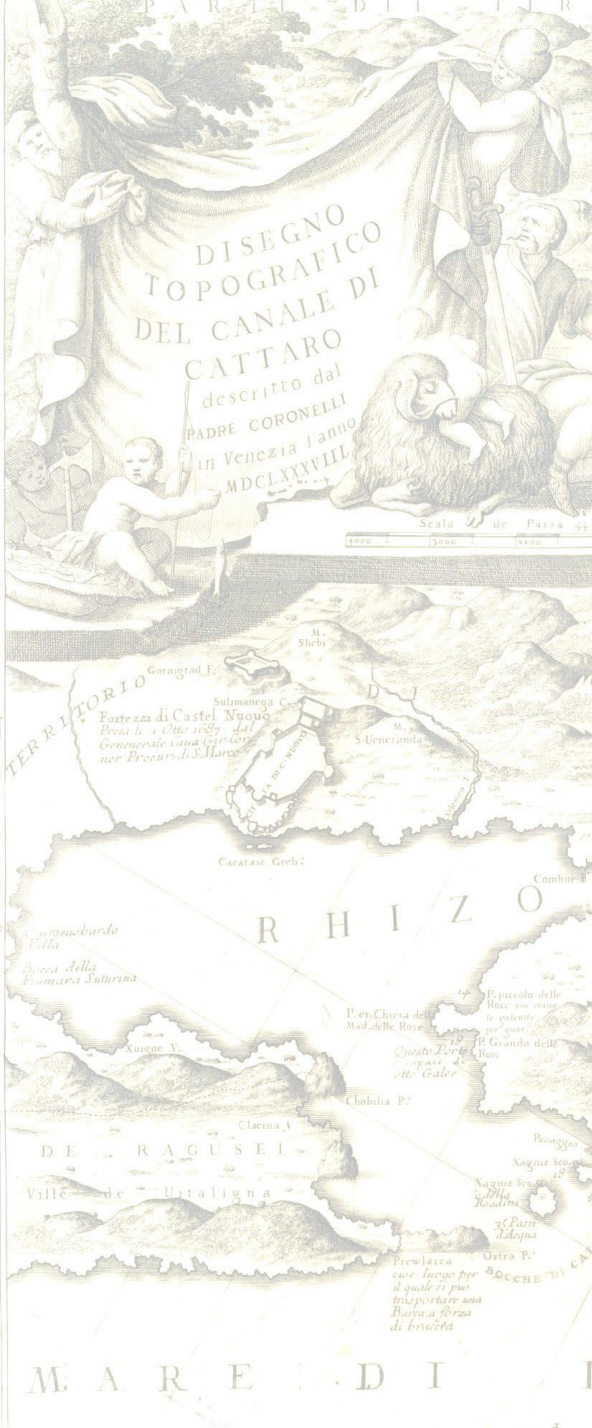
# The Fortified Heritage of Boka Kotorska Bay

## Kotor, Trinity Fort, XVIII c, Plan XIX c & North West View



# The Fortified Heritage of Boka Kotorska Bay

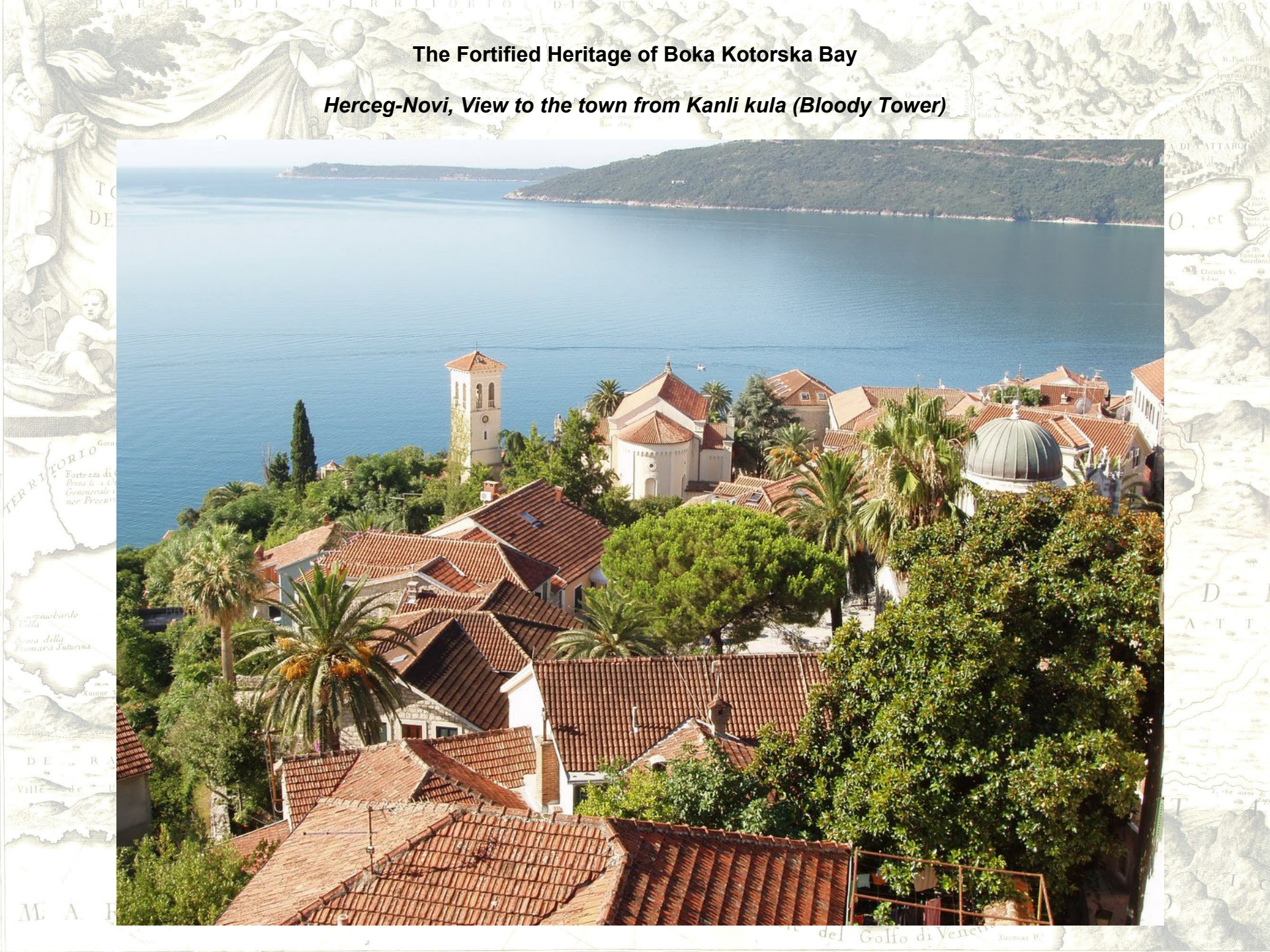
## Kotor, Trinity Fort, XVIII c, actual state





# The Fortified Heritage of Boka Kotorska Bay

*Herceg-Novi, View to the town from Kanli kula (Bloody Tower)*



**The Fortified Heritage of Boka Kotorska Bay**

***Herceg Novi, Forte Mare (Sea Fortress), Medieval Section, XIV-XV c.***



# The Fortified Heritage of Boka Kotorska Bay

Herceg Novi, Prospective View XVIII c, Museo Correr, Venezia



# The Fortified Heritage of Boka Kotorska Bay

*Herceg Novi, Forte Mare (Sea Fortress), South West view*



**The Fortified Heritage of Boka Kotorska Bay**

*Herceg Novi, Kanli Kula (Bloody Tower), XVI c*



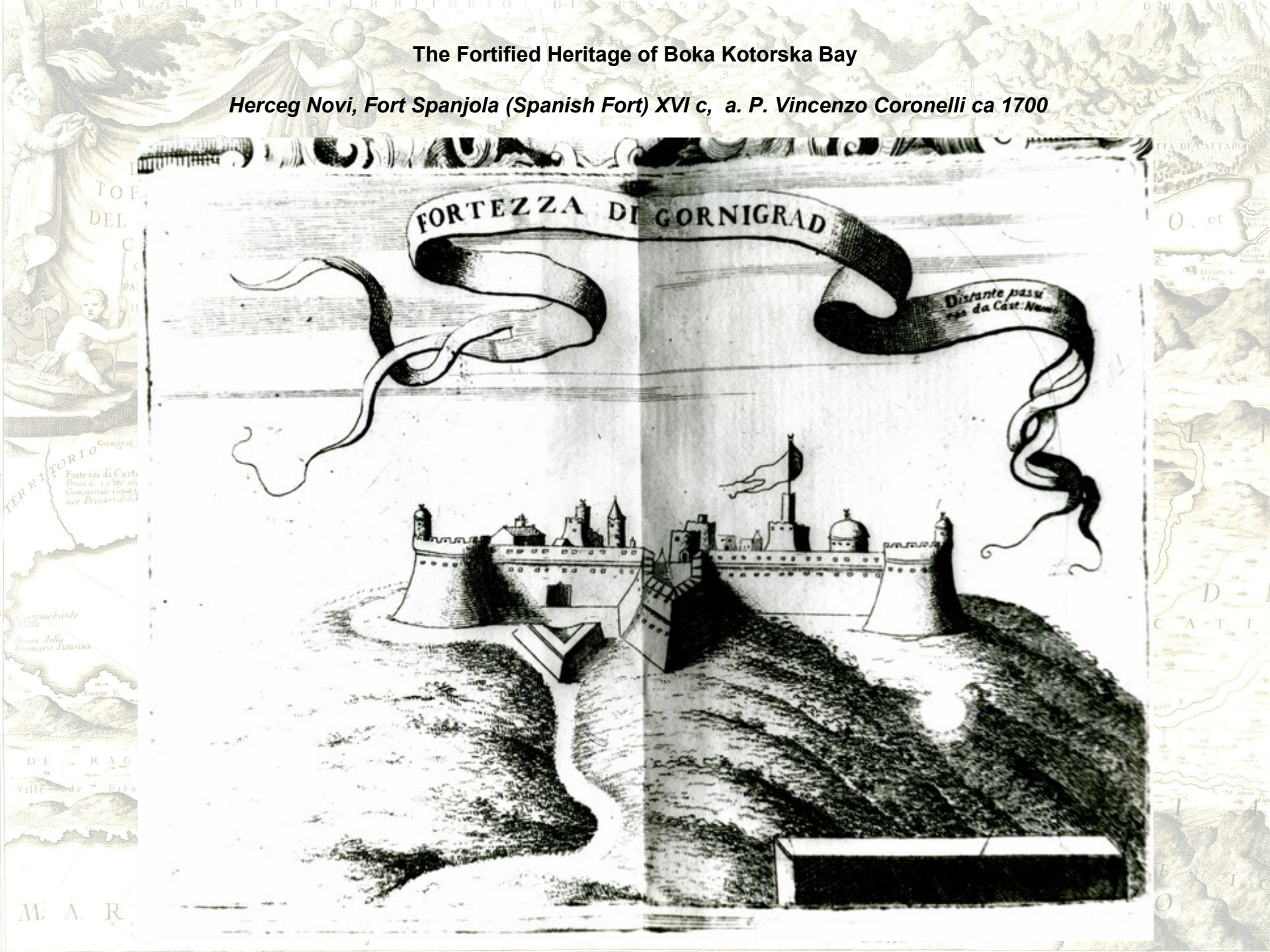
**The Fortified Heritage of Boka Kotorska Bay**

*Herceg Novi, Kanli Kula (Bloody Tower), XVI c Northern view*



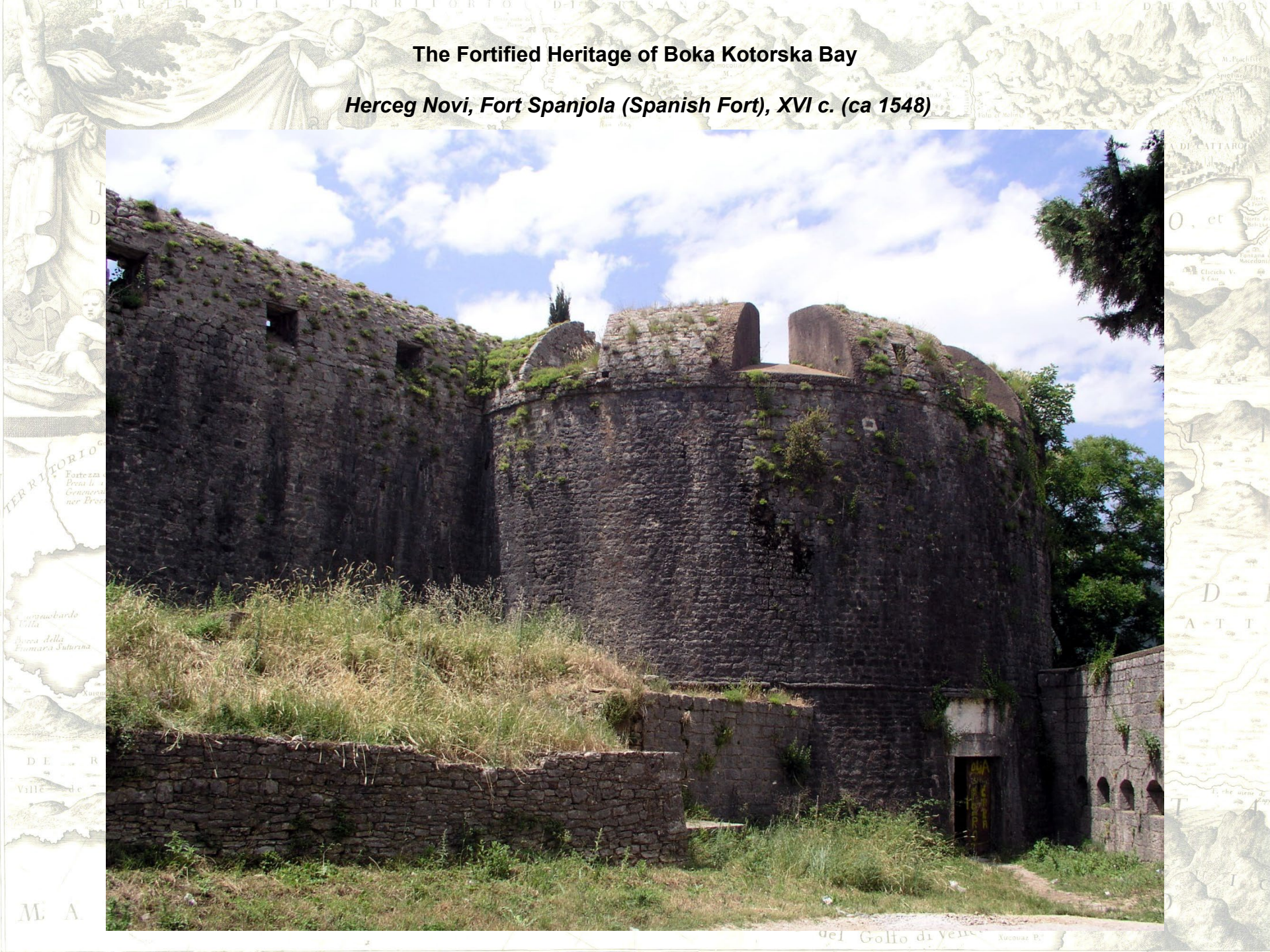
The Fortified Heritage of Boka Kotorska Bay

Herceg Novi, Fort Spanjola (Spanish Fort) XVI c, a. P. Vincenzo Coronelli ca 1700



**The Fortified Heritage of Boka Kotorska Bay**

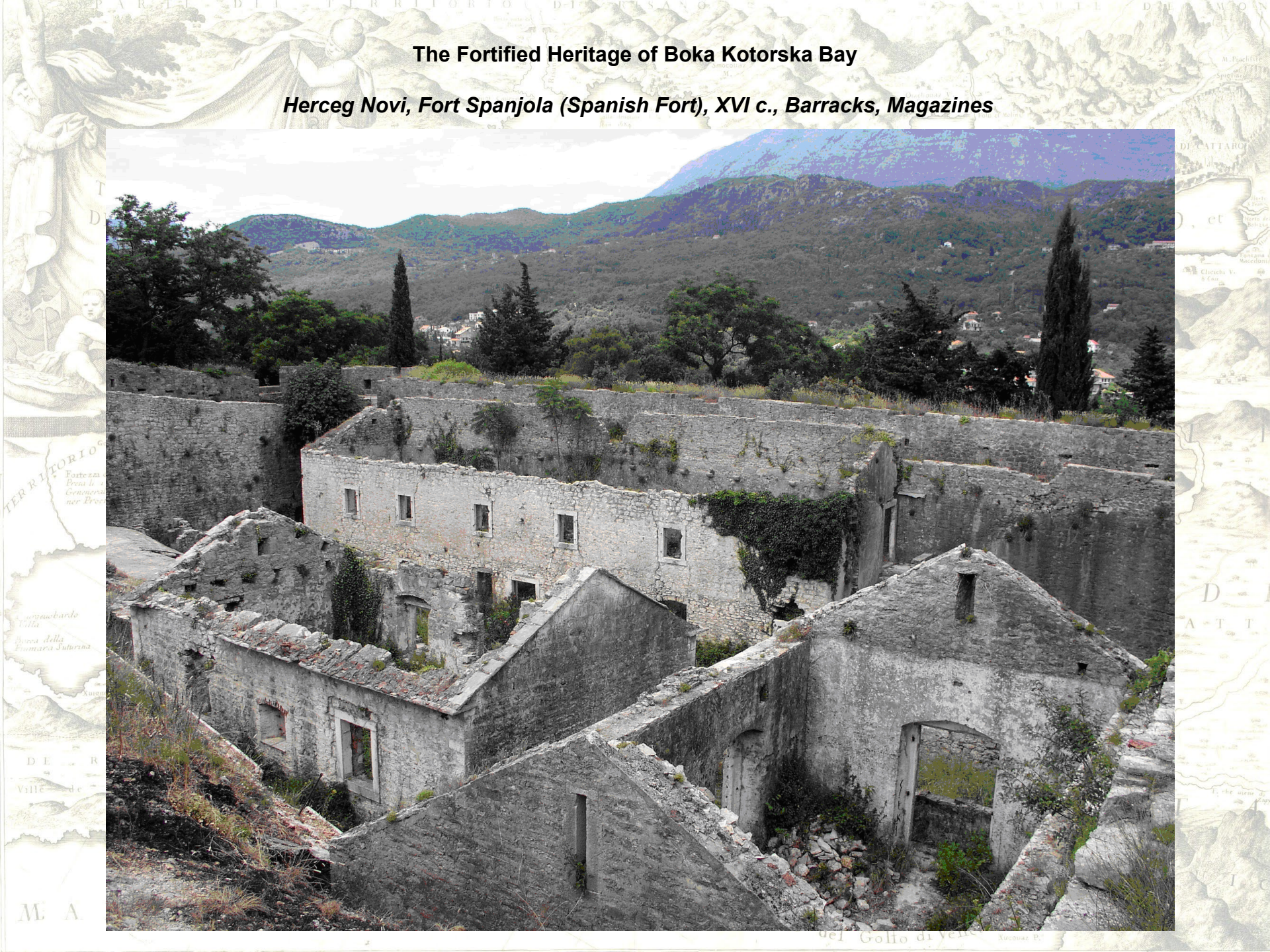
**Herceg Novi, Fort Spanjola (Spanish Fort), XVI c. (ca 1548)**





# The Fortified Heritage of Boka Kotorska Bay

*Herceg Novi, Fort Spanjola (Spanish Fort), XVI c., Barracks, Magazines*



**The Fortified Heritage of Boka Kotorska Bay**

*Kumbor, Vrbanj (Barbagnò) Fort, XVI c., a. Giuseppe Rosaccio, XVI c.*



# The Fortified Heritage of Boka Kotorska Bay

*Perast*



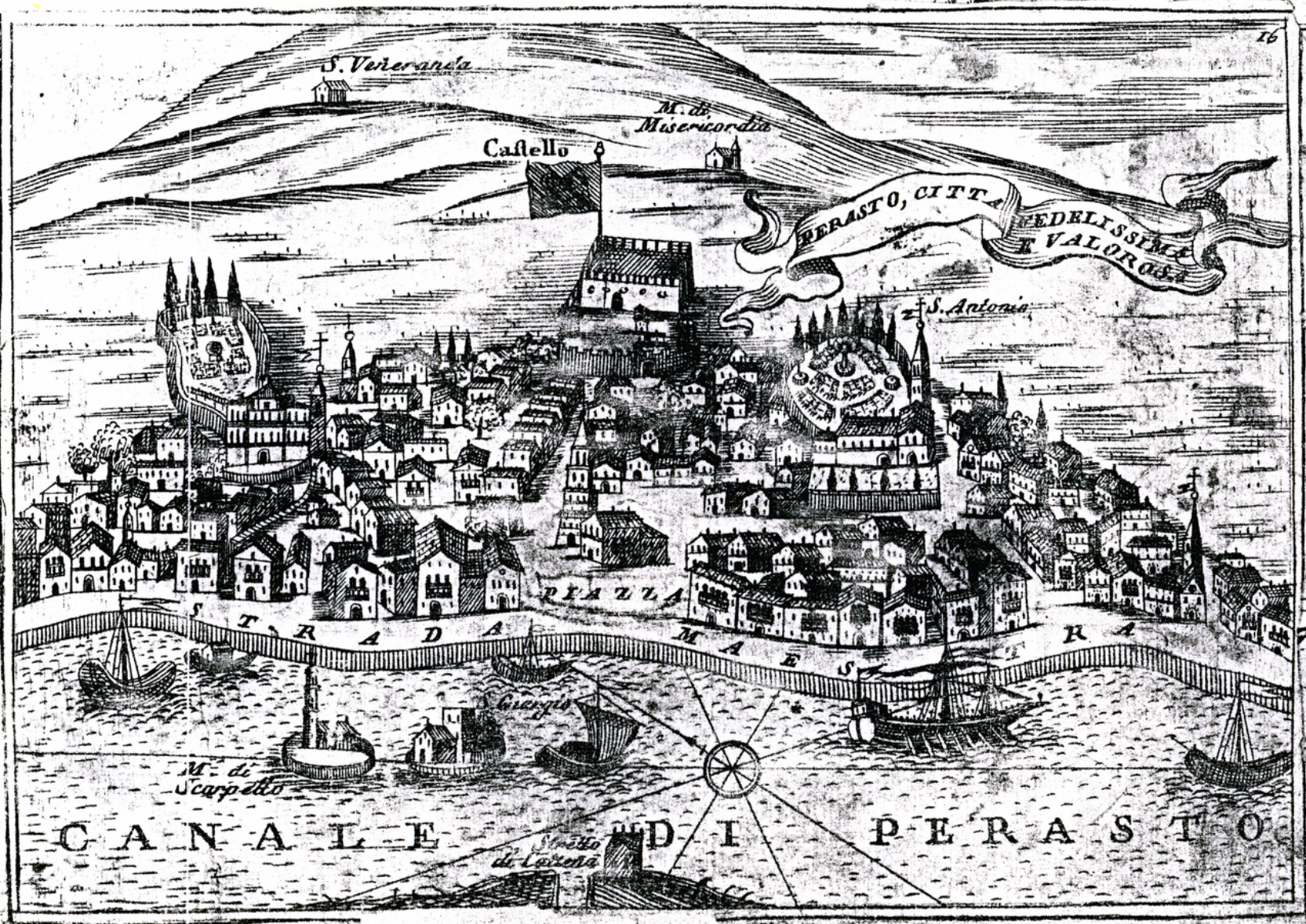
The Fortified Heritage of Boka Kotorska Bay

"Gonfalonier" (Venetian Flag Custodian) from Perast, a. P. Vincenzo Coronelli, ca 1700



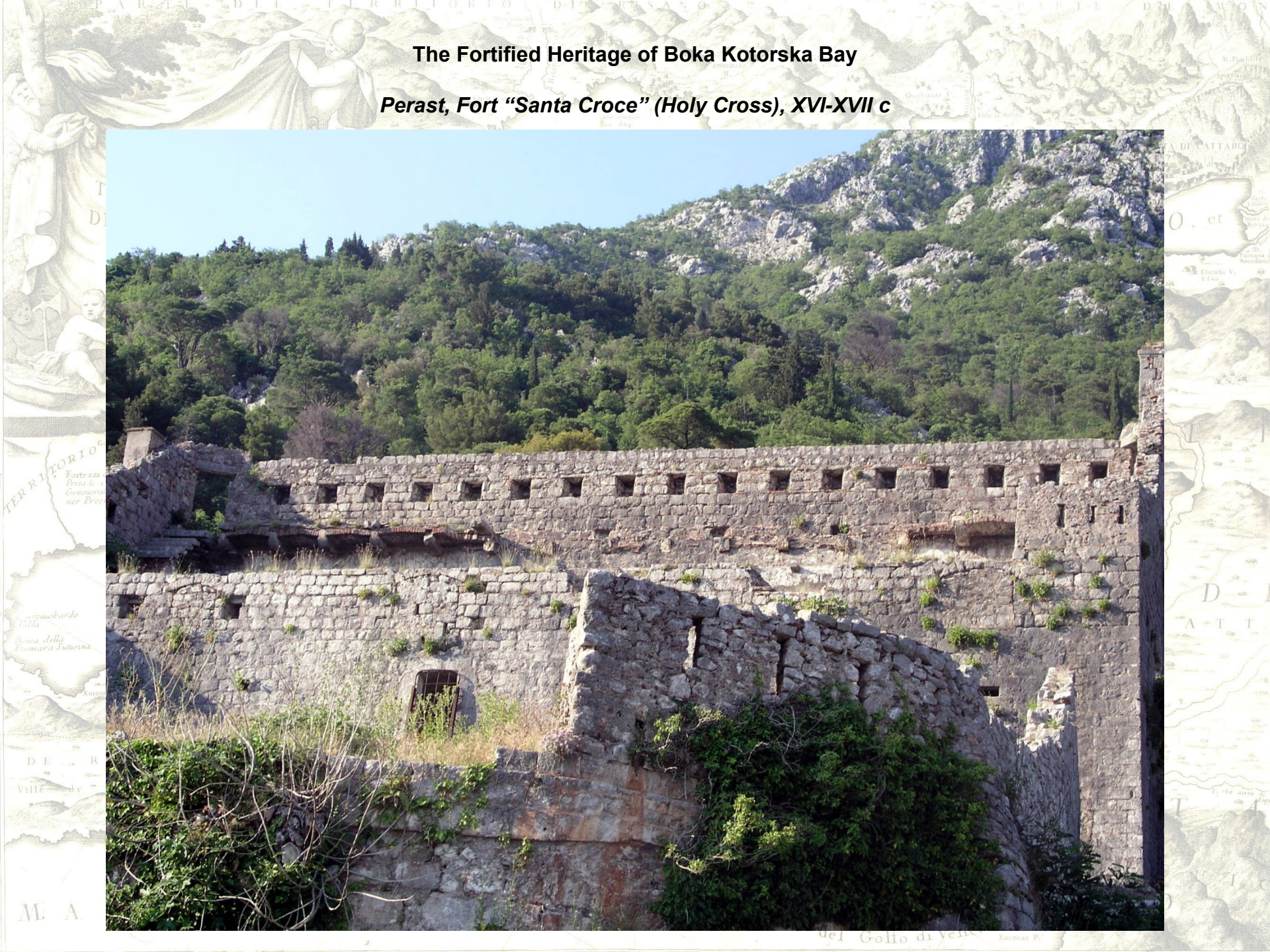
The Fortified Heritage of Boka Kotorska Bay

Perast, a. P. Vincenzo Coronelli, ca 1700



# The Fortified Heritage of Boka Kotorska Bay

Perast, Fort "Santa Croce" (Holy Cross), XVI-XVII c

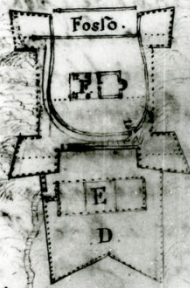


# The Fortified Heritage of Boka Kotorska Bay

Perast Fort, a. Agostino Alberti 1624 & Fort ("Santa Croce") and S. George Island, XIX c.

A Perasto il sito del reduto d. Santa Croce, come si vede & la veduta. A. e buoni  
 si p. esser nel molo della terra, come se gli è superiore, appreso  
 digno di fortificazione capace & la reticcia di quelli Popoli  
 che sono disseposti, no solo per la parte del canale, ma uno lato  
 loro del monte, inoltre alla vicinanza, che fanno col Turco, & come  
 di a parte di quella parte di sommità del monte come si  
 vedere. c. a direzione instabile, e maxime quella di Ragusa, per  
 suo subito venire alla offesa è strategia de Costantini, come per  
 fare anno alta simil genti, se venissero per la via di mare, per  
 che Perastio no uogliano più cadaveri di fortificarlo, nel monte  
 & il disegno si vede, conento conforme all' offesa, a natura  
 del sito, a quiete & conservazione si li quel luogo come la  
 sicurtà de essi Popoli, & si intelligenza la linea portata nota  
 la fortificazione del reduto con la giunta d'una terra che  
 separando più sana dieci piedi & maggior difesa del canale  
 in oltre de sacra & sublimato de indotti Popoli.

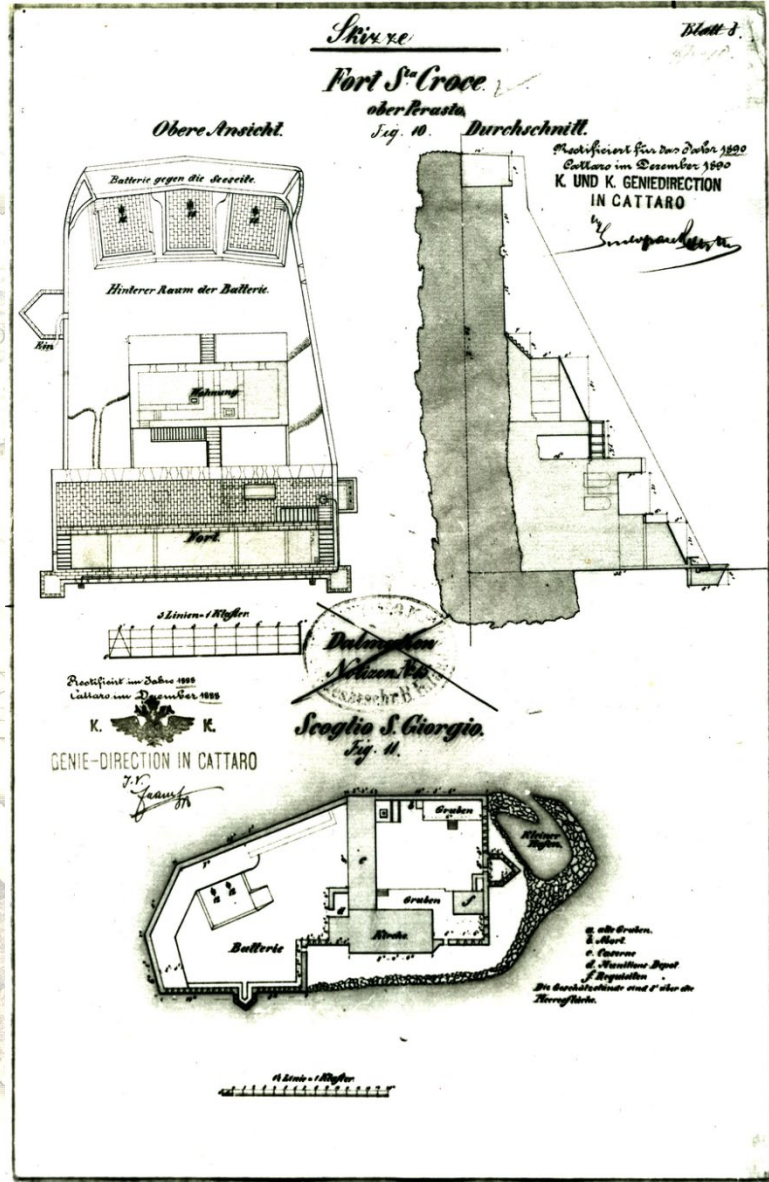
DISSEGNO DEL REDUTO, SVD. FORTIFICATO



F. Chiesa detta S. Croce.

scala de passi cento metri.

PROV. LA TERZA E DA PAR PIZZA N. 436 LS. 8



Skizze

Fort S. Croce

ober Brust  
Fig. 10. Durchschnitt.

Blatt 3.

Pfortifiziert für das Jahr 1880  
Lettjahr von Dezember 1880  
K. UND K. GENIEDIRECTION  
IN CATTARO

Pfortifiziert im Jahre 1880  
Lettjahr von Dezember 1880

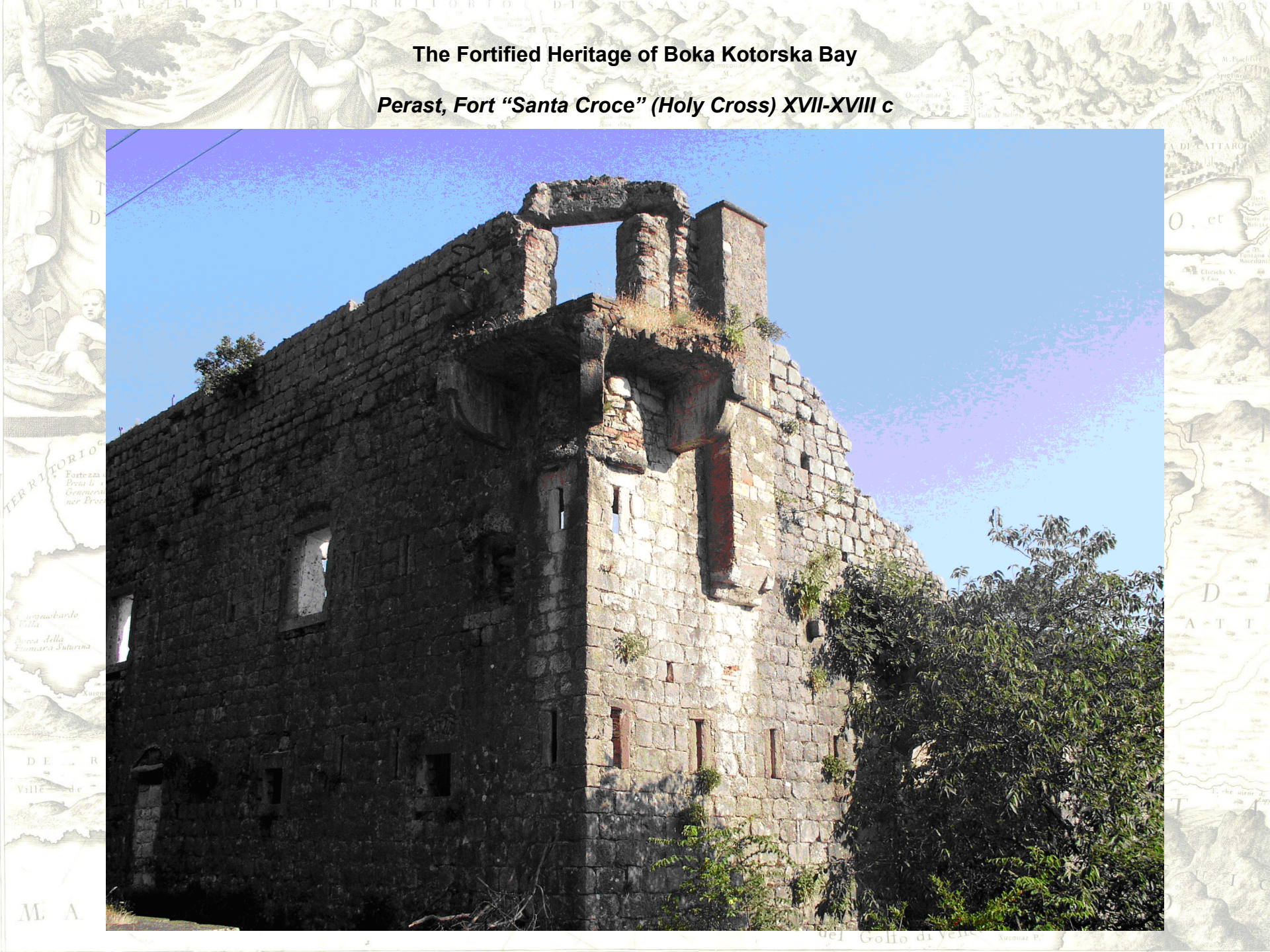
GENIE-DIRECTION IN CATTARO

Scoglio S. Giorgio  
Fig. 11.

1. alle Graden.  
2. alle  
3. alle  
4. alle  
5. alle  
6. alle  
7. alle  
8. alle  
9. alle  
10. alle

1 Linie = 1 Schritt

**The Fortified Heritage of Boka Kotorska Bay**  
**Perast, Fort "Santa Croce" (Holy Cross) XVII-XVIII c**





**The Fortified Heritage of Boka Kotorska Bay**

***Perast, St. George Monastery, XII-XIX c. and Our Lady of the Rock Church, XV-XVIII c.***



**The Fortified Heritage of Boka Kotorska Bay**

***Perast, St. George Monastery, XII-XIX c***



# The Fortified Heritage of Boka Kotorska Bay

Perast, St. George Monastery, XII-XIX c, Plan XIX c.

K. K. Fortifikations Local Direction zu Cattaro

## Rapports Plan

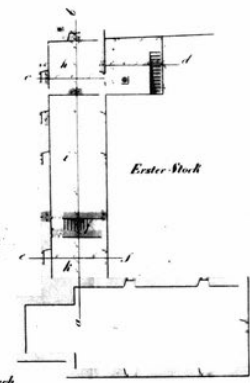
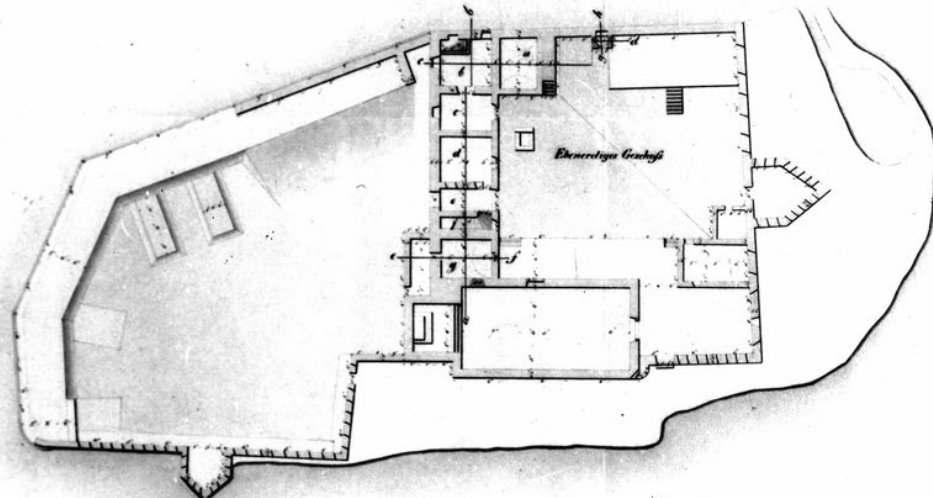
Über die Wiederherstellung der Caserne auf der Insel S. Giorgio bei Perasto

Anno 1848

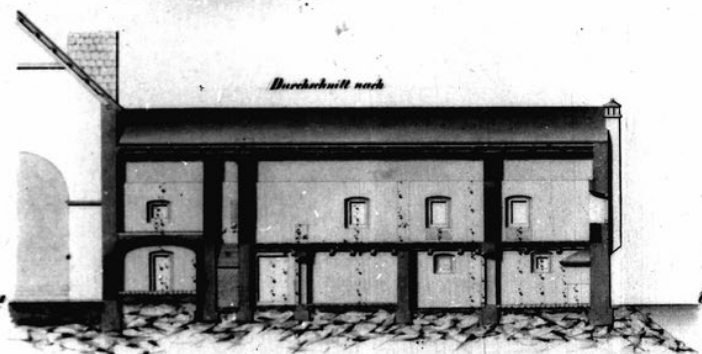
Uebersetzung des Originals von Major Franz Thaler  
 Ende April 1848  
 Wien den 17. December 1848

K. K. OEF.  
 GENIE-KAPIT.  
 ARCHIV

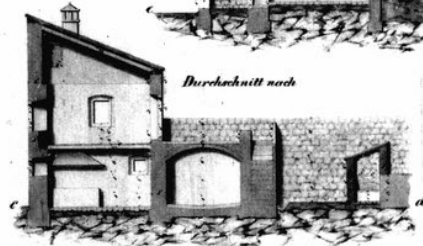
Stappeler  
 Wien



Durchschnitt nach



Durchschnitt nach



Durchschnitt nach

- Erklärung**
- a Caserne
  - b Küche
  - c Vorhaus
  - d Wankzimmer
  - e Durchgang
  - f Stiege in 1. Stock
  - g Pulvermagazin
  - h P. Pl. Zimmer
  - i Mannschafts Zimmer
  - k Artillerie
- Anmerkung**  
 Die hier gezeichneten Ansichten sind freigezeichnet  
 nach dem von dem Ingenieur...

Siehe die Durchschnitte des Doppelts



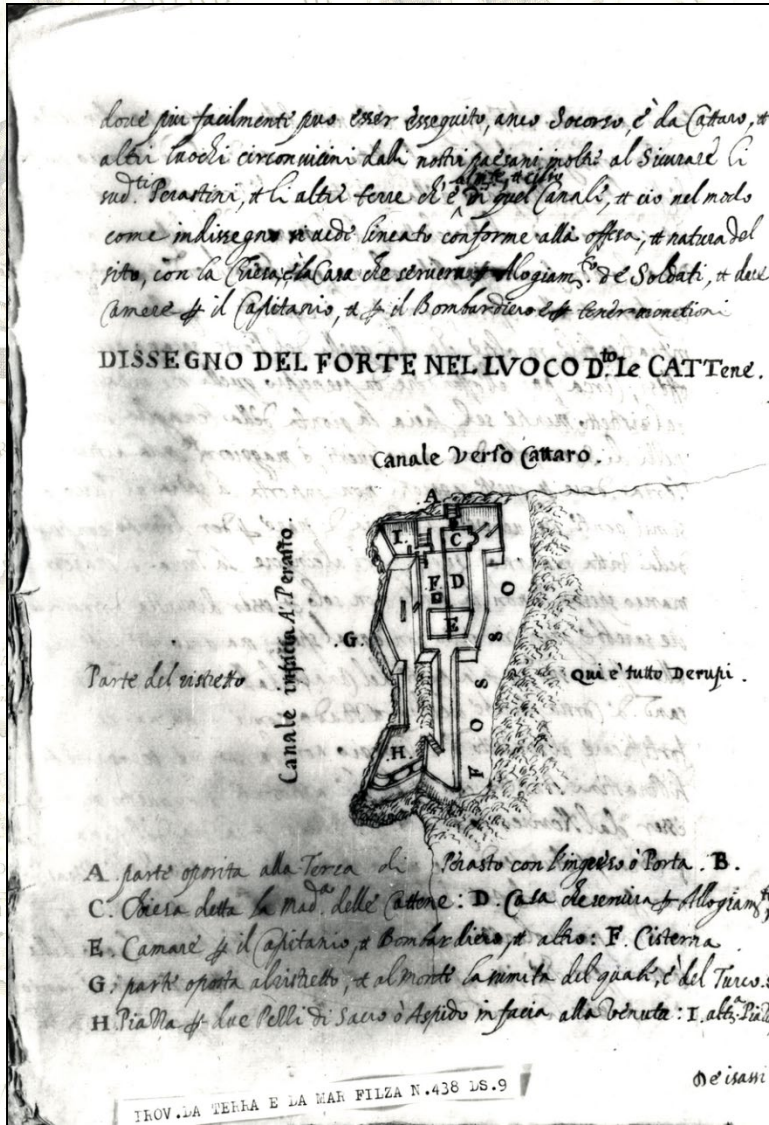
Handwritten signature and date: Wien 1848

Handwritten signature and date: Wien 1848

gezeichnet durch E. Metelk...

# The Fortified Heritage of Boka Kotorska Bay

Perast, Verige (“Cattene”) Fort, plan, a. Agostino Alberti 1624 & Verige Fort XVI c.



**The Fortified Heritage of Boka Kotorska Bay**

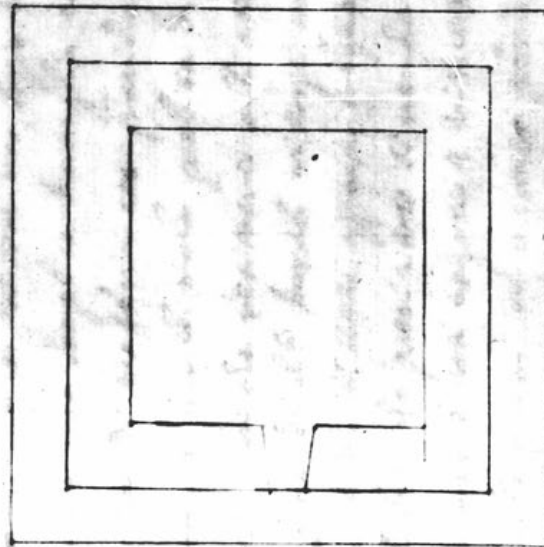
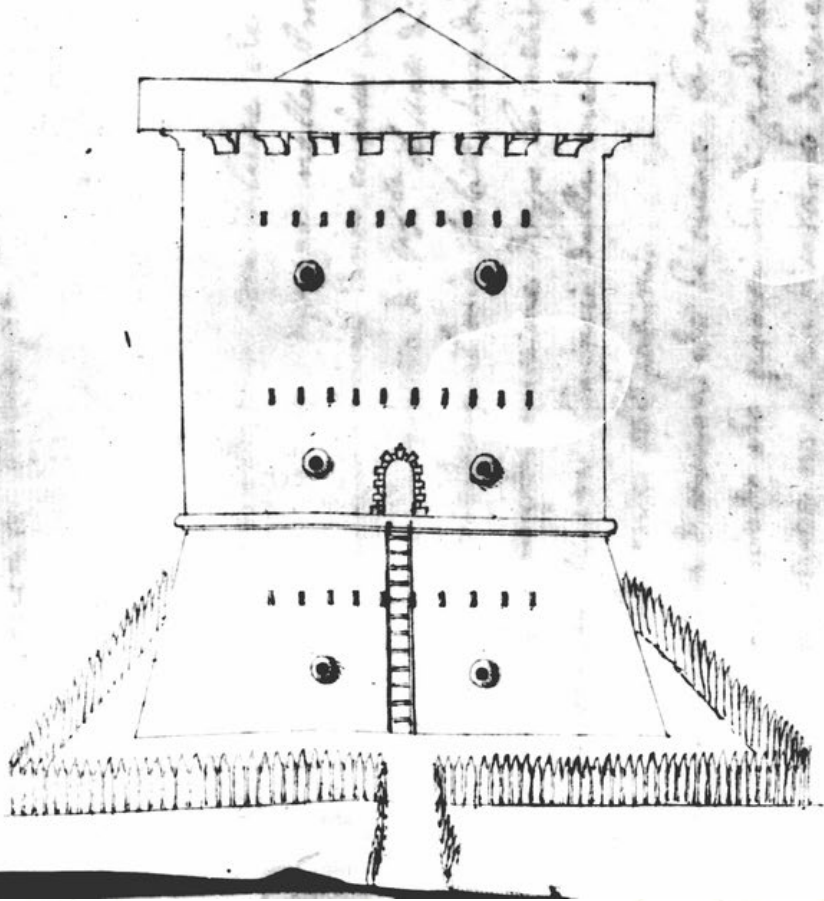
*Perast, Mazarovic & Viskovic Towers, XV c*



The Fortified Heritage of Boka Kotorska Bay

Project for the Perast Towers, a. Camillo Gonzaga 1657.

~. Scala di Piedi a. Venetiani. ~



The Fortified Heritage of Boka Kotorska Bay

*Orahovac, Bajo's Tower, 1670s & Tivat, Buca-Lukovic Tower, 1548*

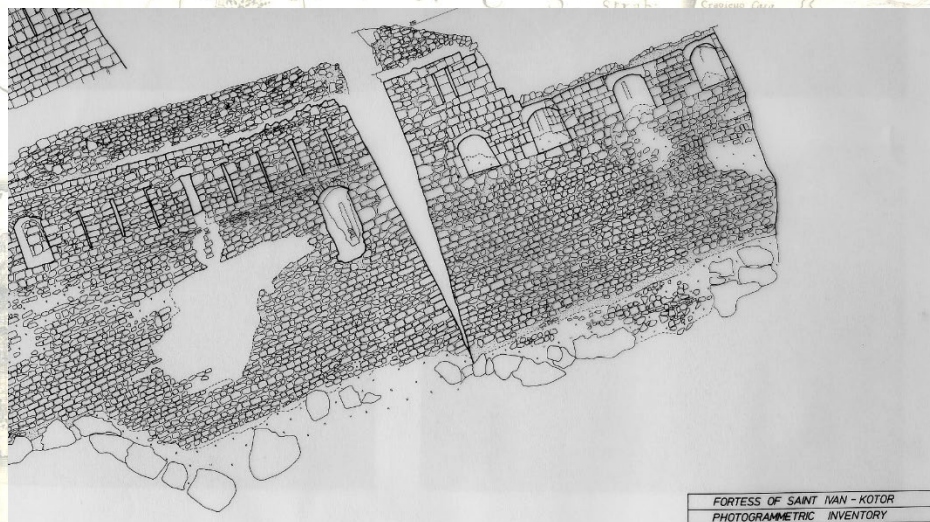


## The Fortified Heritage of Boka Kotorska Bay

### DONE SO FAR

#### STUDIES, RESEARCH & DOCUMENTATION

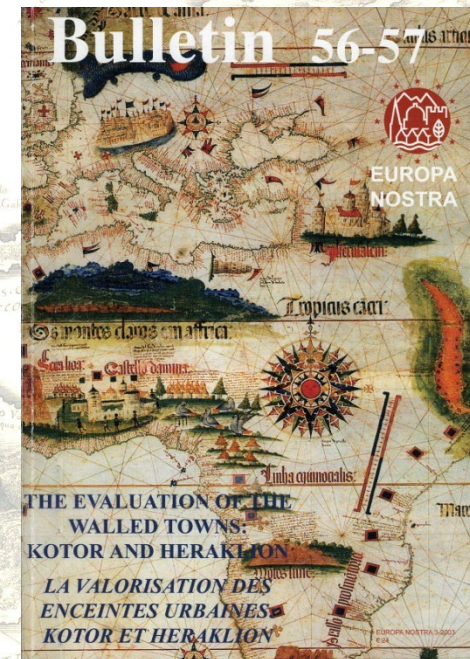
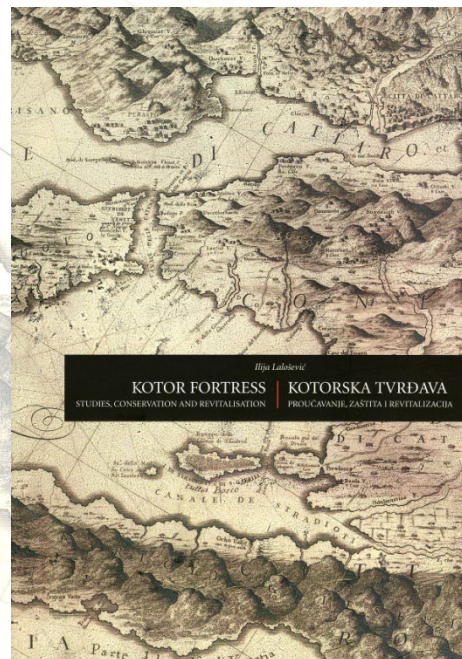
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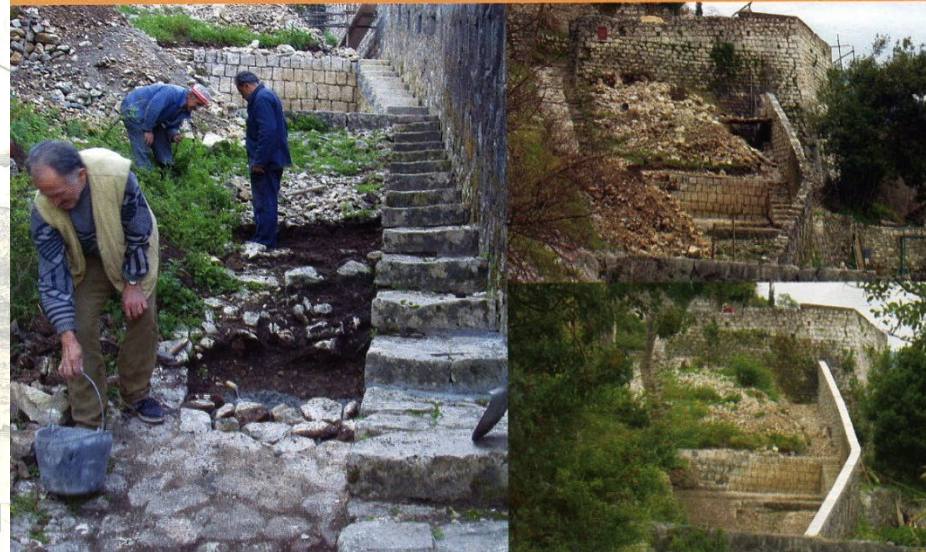
- Joint Study Project with Bologna University, 2003-2004
- Collecting historic documentation, Kriegs Archives, (Ilija Lalosevic), Vienna 2005
- Ilija Lalosevic, Fortifications of Boka Kotorska from XV to the end of XVIII century, Belgrade 2005, unpublished Ph.D. thesis

### PRESERVATION & RESTORATION

- Kotor Fortress Consolidation, Montenegro 1979 Earthquake Solidarity Fund, 1984 -1985
- Herceg Novi Fortress Consolidation and adaptive use, Montenegro 1979 Earthquake Solidarity Fund, 1985-1989
- Bastion "Citadella" Kotor adaptive use, 1990s
- Reconstruction of the part of Kotor Fortress, US Ambassador Fund, 2003-2004
- Setting up Stone Elaboration Workshop, Grassroots project of Japan, 2003-2004
- Consolidation of the Southern gate, Heritage without Borders (Swedish NGO), 2005



Reconstruction of cobblestones, steps, and ramparts of Kotor Fortress, Montenegro. U.S. Consulate in Podgorica, Serbia and Montenegro



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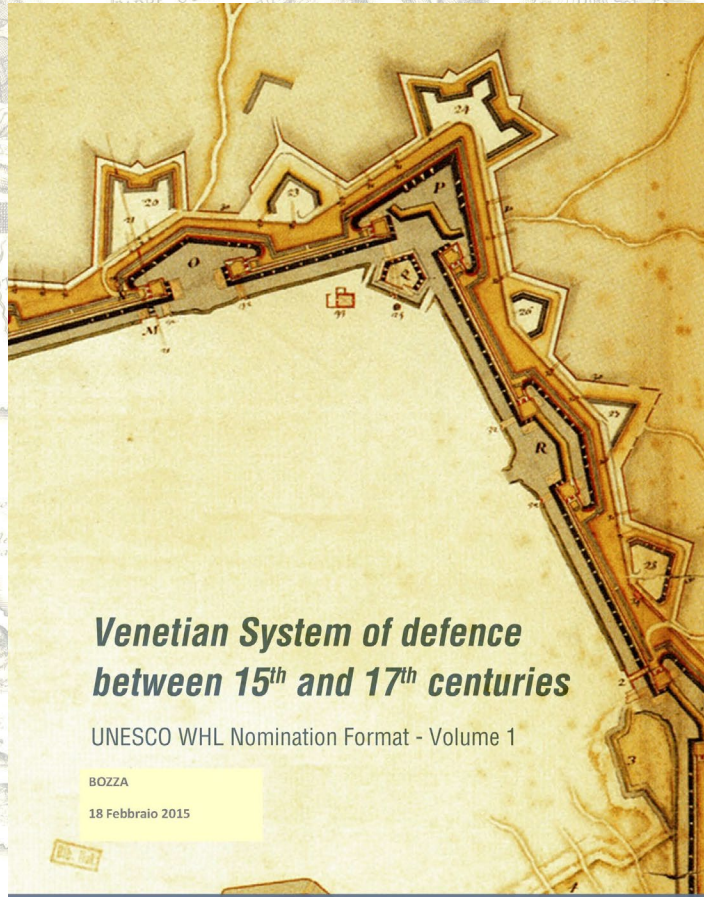
- Demolition of the industrial heritage buildings of the Tivat Arsenal, 2007.
- Conservation, maintenance and reconstruction works of staircases and gobbles of Kotor Fortress, (from 2008.) Consolidation of the Northern wall „contraforte“, 2018.



# The Fortified Heritage of Boka Kotorska Bay

## WORLD HERITAGE LIST

- Inscription of the site „*The Venetian Works of Defence between 16th and 17th centuries*“ World Heritage List, 2017.



### TVRĐAVA SV. NIKOLE 1540. KAO SVJETSKA BAŠTINA

Povodom upisa tvrđave sv. Nikole na Popis svjetske baštine UNESCO-a kao kulturnog dobra u sklopu transnacionalnog projekta „Obrambeni sustavi Republike Venecije 16. i 17. stoljeća“,

čast nam je pozvati Vas na svečanost dodjele UNESCO-ove povelje  
**četvrtak, 21. prosinca 2017. u 12 sati**  
Hrvatsko narodno kazalište u Šibeniku

Radujemo se Vašem dolasku

ŠIBENIK 2017.

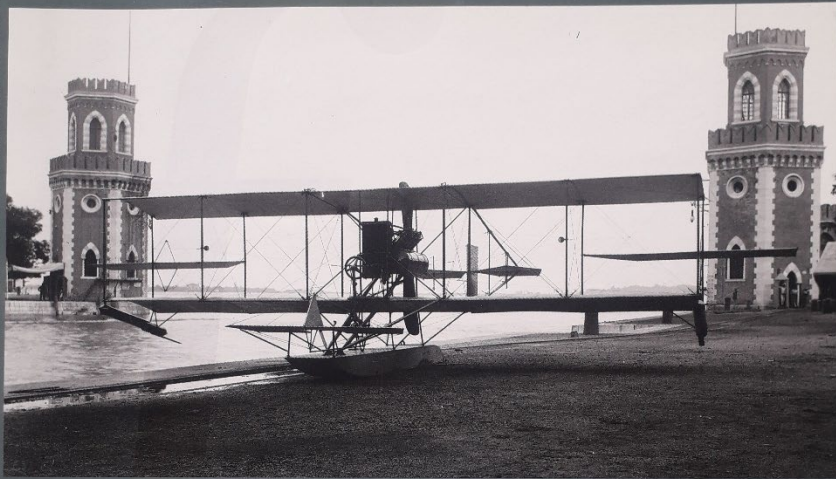
Ravnateljica Javne ustanove Priroda Šibensko-krinske županije mr. sc. Anita Babičić Ajduk

Župan Šibensko-krinske županije Goran Pauk, dipl. oec.

# The Fortified Heritage of Boka Kotorska Bay

## PROMOTION, PUBLICATIONS, PROJECTS

Quaderni  fondazione  
marghera




### dalla serenissima all'aquila bicipite

Le basi navali e gli arsenali di Venezia,  
Pola e Cattaro durante la Grande Guerra

Saggi di  
Martino Ferrari Bravo, Ilija Lalosevic,  
Raul Marsetič, Radojica Pavičević

 REGIONE DEL VENETO

BIBLION  
edizioni  marcopolo system

  
UCG  
Univerzitet Crne Gore

## FORTIFIKACIJSKA ARHITEKTURA BOKE KOTORSKE VENECIJANSKOG PERIODA (XV-XVIII VIJEK)



ILIJA D. LALOŠEVIĆ

The Fortified Heritage of Boka Kotorska Bay

PROMOTION, PUBLICATIONS, PROJECTS



## The Fortified Heritage of Boka Kotorska Bay

### PROMOTION, PUBLICATIONS, PROJECTS

- The project “**Monarchical Fortifications in Montenegro – the Former Naval Base of Cattaro**“  
**2021-2022**

scientific and technological cooperation project between Montenegro and the Republic of Austria

Project leader on behalf of the Austrian Archaeological Institute, Wien:

Dr. Ing. Mag. Lilli Zabrana MSc,

Project leader on behalf of the Faculty of Architecture, University of Montenegro, Podgorica professor Dr Ilija Lalosevic,

- **Fortress Study Tour to Kotor/Montenegro, 2022.**

**Forte Cultura,**  
Organisation **Dr. Hans-Rudolf Neumann**



parte del Golfo di Venetia  
Xucovar P.



DISEGNO  
TOPOGRAFICO  
DEL CANALE DI  
CATTARO  
descritto dal  
PADRE CORONELLI  
in Venezia l'anno  
MDCLXXXVIII

THANK YOU

Prof. Arch. Ilija Lalošević, PhD

FACULTY OF ARCHITECTURE  
UNIVERSITY OF MONTENEGRO

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