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The Cartography of Crete in the First Half
of the 17th Century:
a Collective Work of a Generation of Engineers

Abstract

In 1982 Elisabeth Clutton¹ wrote a very interesting article pointing out the major phases of the historical cartography of Crete (Fig. 1) and the fact that the 17th century cartography of the island was indebted to Francesco Basilicata's manuscript map of 1612 (Fig. 2). In particular Clutton examined and compared thoroughly the map of Basilicata with that of Marco Boschini (Fig. 3), whose publication in 1651 strongly influenced the mainstream cartography of the area -both in Italy and abroad- suggesting that the latter was no more than a copy of Basilicata's work.

The aim of this paper is to throw new light on this process of transition of information from authors with first hand experience of the area to others. The ultimate goal is to suggest that the cartography of Crete in the first half of the 17th century was not the work of a single author (however remarkable this may have been, as was the case with Basilicata's map of Crete), but the outcome of the work of a whole generation of engineers, keen to satisfy the Venetian Republic's thirst for information.

HISTORICAL OUTLINE

Crete and the Greek archipelago were the focal point of the geographical representation of the West up to the modern era. Crete or Candia, as a territory of the Venetian Republic since 1204, had largely benefited from the introduction of print and the cartographical work of the famous Venetian editors in the 16th century. But in the 17th century, the rich iconographic and cartographic documentation, which will be discussed in this paper, was mainly due to the fact that Crete represented, for the Venetian Republic and the Christian world in general, the ultimate bulwark against Turkish threat.

The military importance that Crete assumed during this

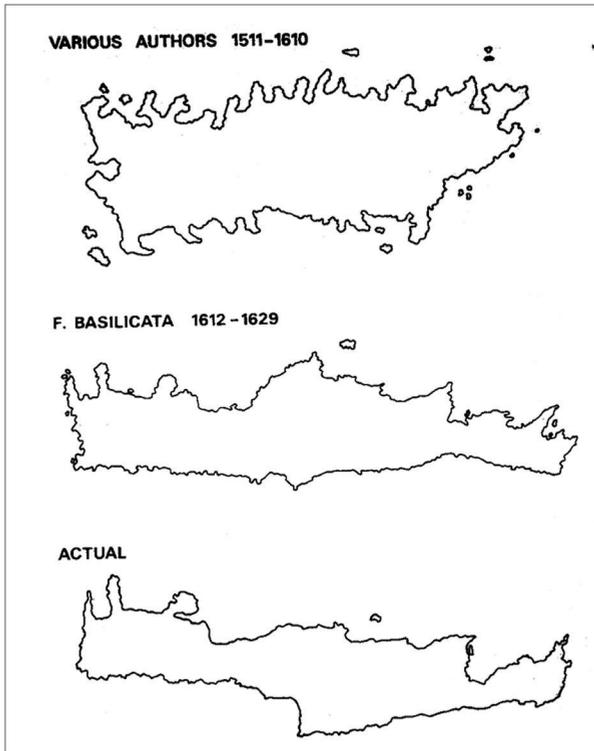
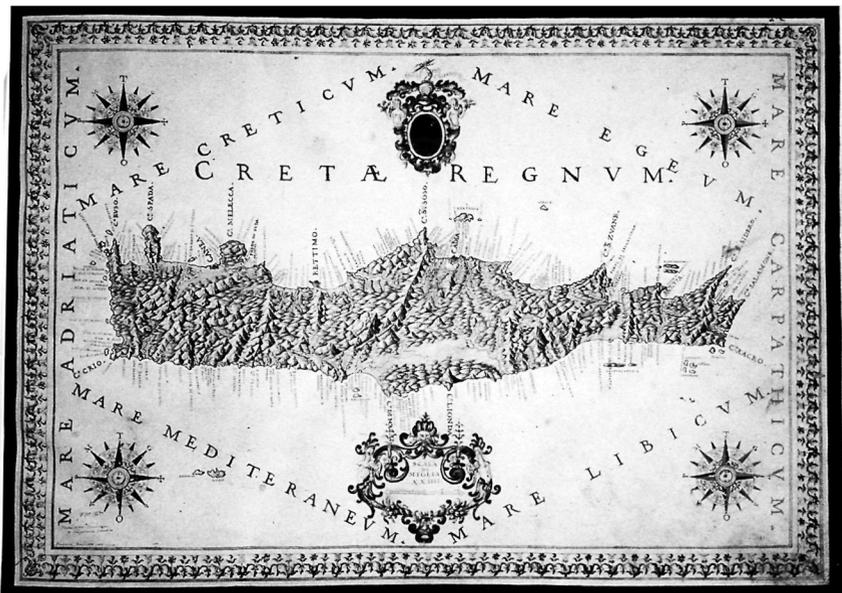


fig.1: Elizabeth Clutton, "The shape of Crete: a selection of outlines." From E. Clutton, "Some Seventeenth Century Images of Crete: a comparative analysis of the manuscript maps of Francesco Basilicata and the printed maps by Marco Boschini," *Imago Mundi* 34 (1982): 52.

fig. 2: Francesco Basilicata, "Cretae Regnum," in *Pervetusti atque nobilissimi cretensis regni urbes, arces, oppida...*, 1618-9. Venezia, Biblioteca Museo Correr (from now onwards BMC), MS. Portolano n. 4, I.



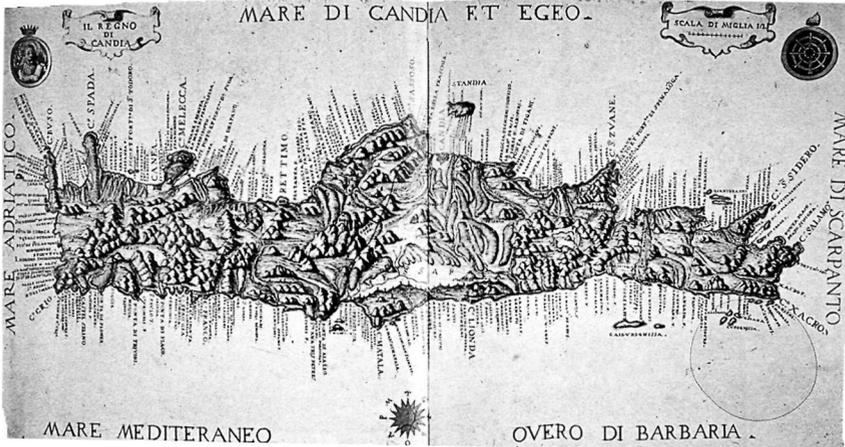


fig. 3: Marco Boschini, "Il Regno di Candia," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 2.

period was evident from the massive fortifications all over the island, such as the new fortresses of the cities of Candia and Canea initiated in the 1540's, but not completed until the late 1570's, the works for the fortresses of the small island of Suda in 1572, of the city of Rettimo and of Paleocastro in 1573, the two simple fortresses on the rock of S. Todhero in 1574, as well as the fortifications of the small rocky islands of Spinalonga in 1578 and Grabusa in 1579.²

Crete represented the "major nerve [...] of the force and reputation"³ of all the Christian world, as Luca Michiel recorded in his report of 1580 as General Purveyor of the island. And this was evident not only in the extensive fortification undertaken by Venice, but also in a series of descriptive works of the defensive state of the island accompanied by maps, plans and perspective, or bird's-eye, views of the major cities and fortresses. These collections, forming small atlases, designed and elaborated by engineers sent in loco by the Republic in order to follow the fortification of the island, or by noblemen, belonging to the Venetian governor's suite, were the outcome of a detailed and profound knowledge of the Cretan territory.

The first document we have of this kind comprises only a written text eloquently entitled: "Description of the whole

island of Candia, of all its principal cities, castles, villas, mountains, rivers and of other important things, as well as the number and quality of its fortresses, how it can be attacked by the Turks, and how it can be defended, the dangerous points, the forces and utilities that Venice receives from and other specific aspects of the moment, written by a Venetian nobleman;” that is Leonardo Querini in 1583.⁴

By the end of the 16th century, however, Crete was greatly transformed. A new townscape was created –fortified and equipped with shipyards, aqueducts, new ports, warehouses, munition deposits, military quarters and hospitals– while the landscape was enriched by the presence of new fortresses and restored castles. It was precisely this transformation of the built and natural environment that the 17th century topographical atlases registered.

The first to appear in 1601 was a collection of 24 very fine ink drawings by Angelo degli Oddi, entitled “Cities, fortresses, harbors, natural ports and beaches of the Kingdom of Candia.”⁵ Then came the three different manuscript atlases of Francesco Basilicata comprising the first (of 1612): 52 tables of designs accompanied by a brief descriptive text and a map; the second (of 1618-19): 43 tables and a map; and the third (of 1629-30): a text entitled “Report of all the Kingdom of Candia” accompanied only by a map of the island.⁶ During the same period a number of collections saw the light: Ercole Nani’s collection of 23 drawings and a map in 1613, entitled “Fortresses, beaches and harbors of the Kingdom of Candia;”⁷ Giorgio Corner’s collection of 31 plates and a map in 1625, entitled “The Kingdom of Candia;”⁸ and finally in 1631 the collection of Raffaello Monanni, in a diary form, with 71 small water-colours illustrating a descriptive text entitled “Topographical description of Candia.”⁹ All of these small atlases were dedicated to Venetian noblemen, who were often governors of the island and who probably had explicitly asked the authors to undertake this kind of work for them, as at least was the case with Monanni, who affirms in his dedication that “he was commissioned to observe all the places.”

Different from these manuscript works was, instead, the



fig. 4: Marco Boschini, "L'isola di Candia con il leone marciano," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 1.

publication of 1651 entitled "All the Kingdom of Candia outlined and engraved by Marco Boschini."¹⁰ This book dedicated to "the Serene Highness the Prince and Regal College of Venice," and comprising 59 plates of landscape views, city plans and two maps of the island (in one of which St. Marc's winged lion holding a sword was overhanging the island), was published when the city of Candia was already under siege for four years and was to remain so for 18 years more (Fig. 4).

Boschini wrote in the dedication: "I, Marco Boschini, in 1645 have presented the engraving of your noble kingdom of Candia that

you defend against the Turks [...] Now having continued my fatigues to engrave it from one extreme to the other, while your Serenity continues to defend it, alone, admired by the whole world, against the vast Ottoman power. I return, more than ever before, reverent at your Serene Highness' feet and I present it finished.”¹¹

“It was the perfect moment,” comments ironically Elisabeth Clutton, “for a patriotic Venetian to affirm the greatness of Venice in her struggle against ‘la potenza vastissima Ottomana’ and, at the same time, to launch a money-making venture by publishing a volume containing maps, plans and drawings of Crete.”¹² And Boschini’s map “very important for its precise morphology, accurate horography and abundant place-names”¹³ was indeed to have a great influence on the mainstream Italian and foreign cartography of Crete.

Yet the maps of the island that Boschini engraved in different occasions in 1645, in 1651 and for his *Isolario*¹⁴ in 1658 (very similar) were not based on a survey made by the author since he hadn’t ever visited Crete. They were, therefore, derived from the work of other authors. Clutton suggests that they were “plagiarized from the work of Francesco Basilicata.”¹⁵ She bases her affirmation on a careful comparative study of three main aspects of Basilicata and Boschini’s maps: “the shape of the outline, the coastal place-names and the representation of topography.”¹⁶ We know, however, that in addition to Basilicata, Ercole Nani and Giorgio Corner had also drawn maps of the island based on their own knowledge of the place. In particular Corner’s map (1625) (Fig. 5) with the South facing up seems even more similar to Boschini’s (1651), specifically regarding the coastline from Suda to Candia, than to Basilicata’s (1619). What’s more, we know that the first collection with perspective drawings very similar to those of Boschini was by the engineer Angelo degli Oddi, whose example was probably followed by Basilicata himself.

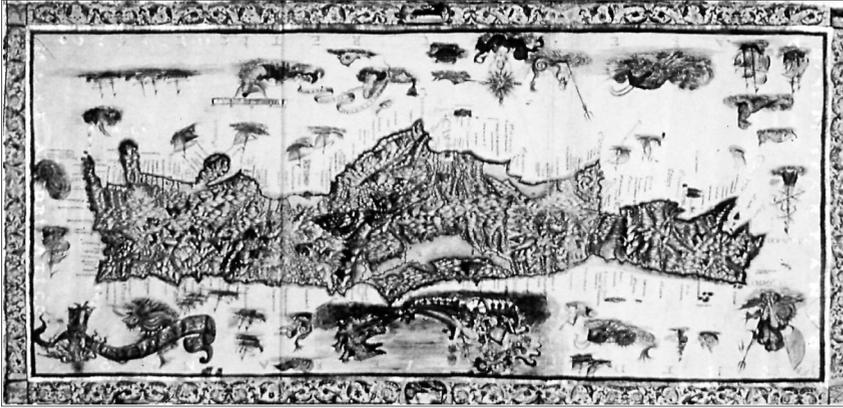


fig. 5: Giorgio Corner, "Regno di Candia," in *Il Regno di Candia*, 1625. Biblioteca Nazionale Marciana, Venezia (from now onwards BMV) MS. it. VI, 75 (=8303).



fig. 6: Angelo degli Oddi, "Paleocastro di Candia," in *Città, fortezze, porti, redotti...*, 1601. BMV, MS. it. IV 1 (=5061), tav. 23.



fig. 7: Francesco Basilicata, "Fortezza di Paleocastro," in *Pervetusti atque nobilissimi cretensis regni urbes, arces, oppida...*, 1618-9. BMC, MS. Portolano n. 4, V.



fig. 8: Marco Boschini, "Paleocastro," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 22.



fig. 9: Giorgio Corner, "Paleocastro," in *Il Regno di Candia*, 1625.
BMV, MS. it. VI, 75 (= 8303).

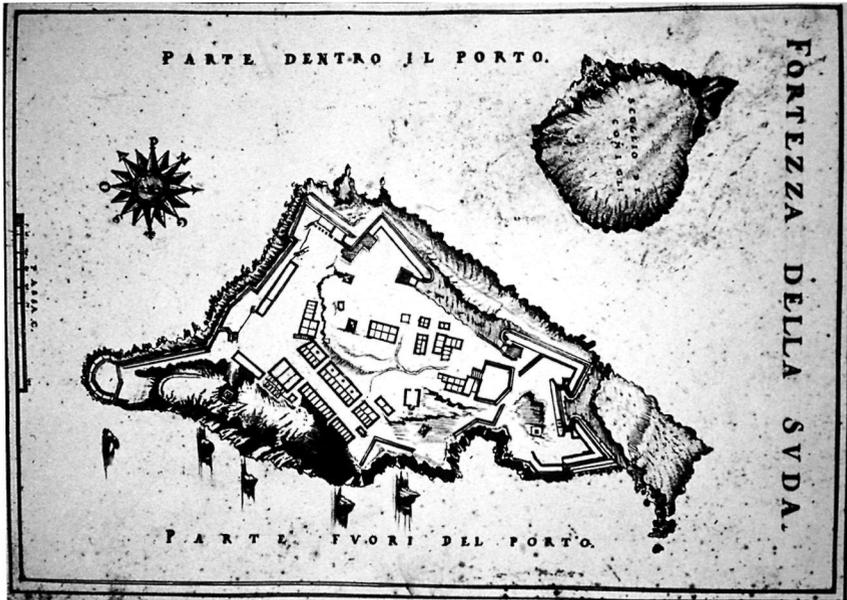


fig. 10: Angelo degli Oddi, "Fortezza della Suda," in *Città, fortezze, porti, redotti...*, 1601. BMV, MS. it. IV, 1 (=5061), tav. 11.

fig. 11: Francesco Basilicata, "Scoglio et fortezza della Suda," in *Pervetusti atque nobilissimi cretensis regni urbes, arces, oppida...*, 1618-9. BMC, MS. Portolano n. 4, XIII.



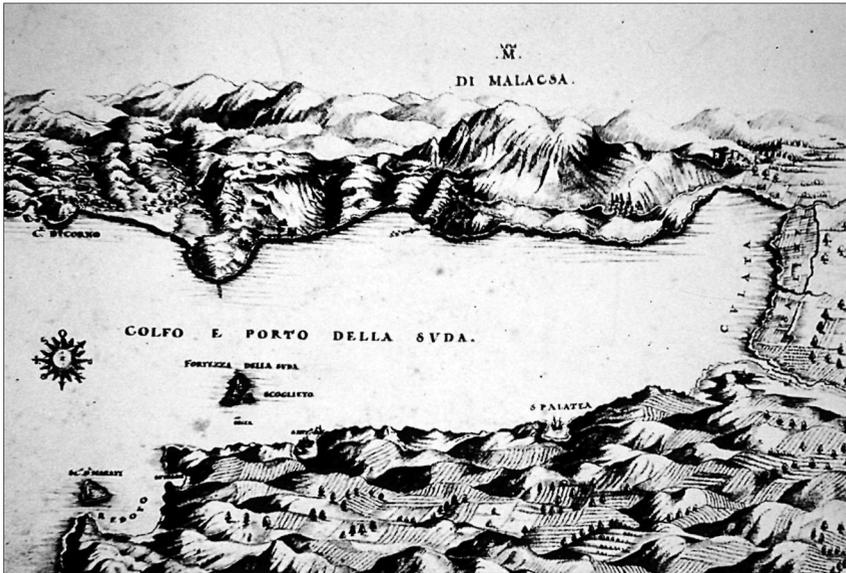


fig. 12: Angelo degli Oddi, "Golfo e porto della Suda," in *Città, fortezze, porti, redotti...*, 1601. BMV, MS. it. IV, 1 (=5061), tav. 13.

REVIEW OF CITY AND FORTRESS DRAWINGS AND PLANS

A brief comparative overview of some of the most important landscape drawings and city plans of these Venetian engineers and noblemen will better illustrate this point and will allow us to appreciate better the role played by Basilicata in the history of Cretan cartography.

Starting from the designs for the fortresses of Grabusa and of S. Todhero by Oddi, Basilicata and Boschini the similarities are so evident that any comment on their paternity is redundant. The views of Paleocastro by Oddi (Fig. 6) and Basilicata (Fig. 7) also look very much alike, while Boschini (Fig. 8) takes from Basilicata or from Corner (Fig. 9) certain details, such as the wells and the furnace.

In the views of Suda by Oddi (Fig. 10) and Basilicata (Fig. 11), once again very similar, even the indication "part inside the harbor" or "outside the harbor" is repeated in both plates. This is very important for the orientation, as the general views of Suda by Oddi (Fig. 12) and Basilicata show us, because the



fig. 13: Marco Boschini, "Fortezza della Suda," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 9.



fig. 14: Giorgio Corner, "Fortezza della Suda," in *Il Regno di Candia*, 1625. BMV, MS. it. VI, 75 (=8303).

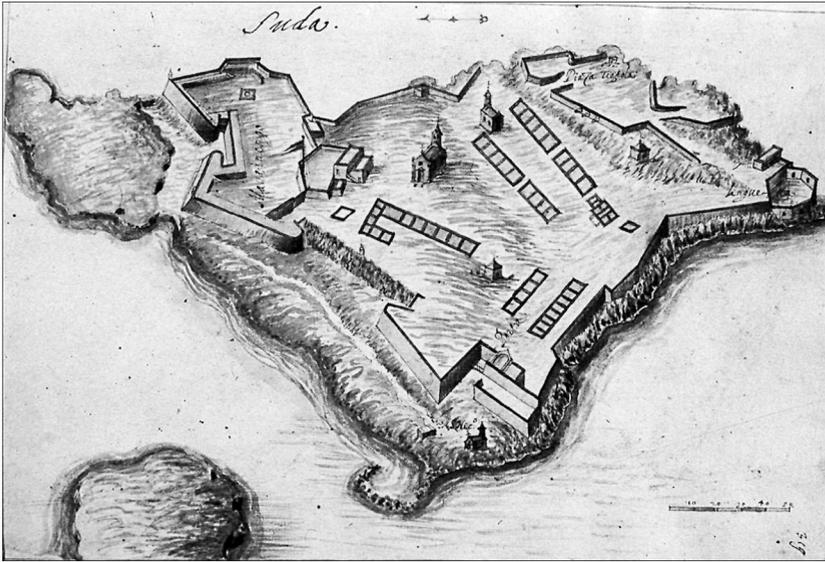


fig. 15: Raffaele Monanni, "Suda," in *Descrizione topografica di Candia*, 1631.
 BMV, MS. it. VII, 889 (=7798), p. 319.

fortified rock is situated at the opening of Suda bay, in order to defend the bay together with its salinas, from the enemy. Boschini's plate of Suda (Fig. 13) is, instead, copied from Corner's design (Fig. 14) or even Monanni's drawing (Fig. 15). It looks more like a bird's-eye view than a plan of the fortress like Oddi's and Basilicata's. It is interesting to note that Boschini copied everything from Corner, even certain details such as the South door perspective.

Plans, designs and written reports were intended to offer detailed and accurate knowledge of the whole Cretan territory, where fortresses, salinas and wells are among the most important and recurrent themes; no less, of course, than the new townscape fortified and equipped precisely in those last fifty years of the 16th century. Let's have a closer look then. First of all, the capital city Candia. The essential quality of Oddi's view was so impressive that it became a model for all successive representations of the city. The fortifications are the real protagonists of this plate (Fig. 16). Those of the 16th century divide the "urbs" (which is represented as a void) from the



fig. 18: E. Nani, "Città di Candia," in *Fortezze, spiagge e porti del Regno di Candia*, 1613. BMV, MS. it. IV, 17 (=5064) c. 25.

fig. 19: Marco Boschini, "Città di Candia assediata," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209.





fig. 20: Marco Boschini, “Città di Candia,” in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 23.

countryside that is cultivated but also inhabited by small villages (like Marulà). Those of the medieval period (re-utilized as warehouses, munition deposits and shops) characterized by the “*voltone*,”¹⁷ subdivide the built-up area distinctly into two parts, the “old city” and the “city of Candia.” In this clearly depicted spatial hierarchy, due to the primary military interests of the plate, the only other urban elements represented are the shipyards (19 the number as Nani informs us) of evident military importance.

Oddi is not the first to depict Candia in this way. Almost thirty years earlier (in 1567 and in 1573) another engineer, Domenico de Rossi,¹⁸ on request of the Venetian governors, as always, had produced a similar view of the city. Yet, Oddi’s plate definitely codifies these previous attempts, that have remained as loose sheets. Basilicata (Fig. 17) didn’t modify anything from Oddi’s view. Palms, windmills, wells, all the details are repeated unchanged from Nani (Fig. 18) up to Boschini. In his view of the city under siege, Boschini (Fig. 19) respects the military priorities of Oddi’s representation; but in his plate “The City of Candia” (Fig. 20) his interest turns to the urban configuration of the built-up area, which of course

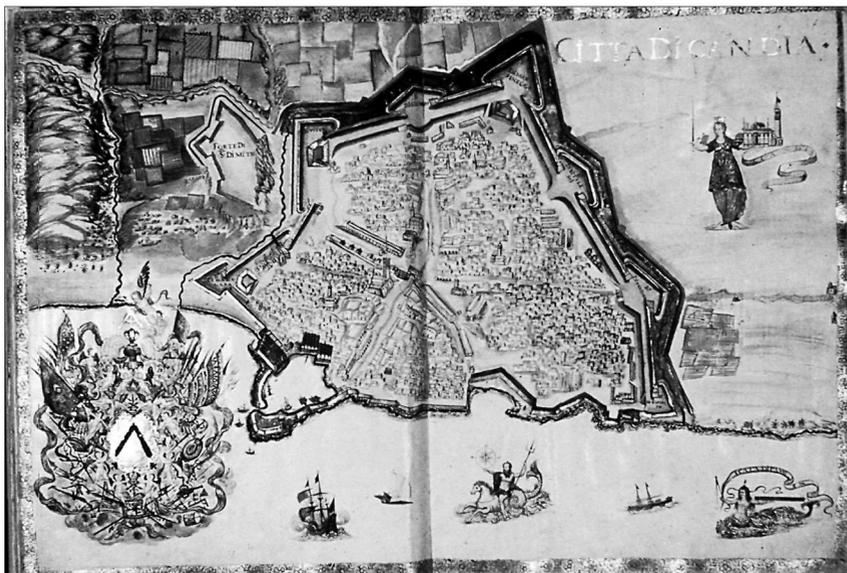


fig. 21: Giorgio Corner, “Città di Candia,” in *Il Regno di Candia*, 1625. BMV, MS. it. VI, 75 (=8303).

continues to be characterized by the “*voltone*” and the warehouses. His view, is in fact extremely similar to that of Corner (Fig. 21).

Oddi reserves the same iconographic treatment applied to Candia also to Canea (Fig. 22), the second largest city of Crete. The 16th century city walls and moat, together with the medieval fortified hill, reassume the character of the city¹⁹. The only other urban elements represented are the shipyards (15 old and 4 new ones initiated by Benedetto Moro at whose suite Oddi is operating) an aqueduct (constructed once again by the general Purveyor Moro) and a column with the winged lion of St. Marc’s, next to the quay.

Only one year later, another engineer, Emanuelle Mormori²⁰ designs a very similar view of Canea to Oddi’s with the addition of three churches. Basilicata’s plate (Fig. 23) seems to copy exactly Mormori’s. Furthermore, in his view of 1613, Nani adds all the buildings inside the medieval walls, representing them in great detail, and indicates also the fountains of the city.

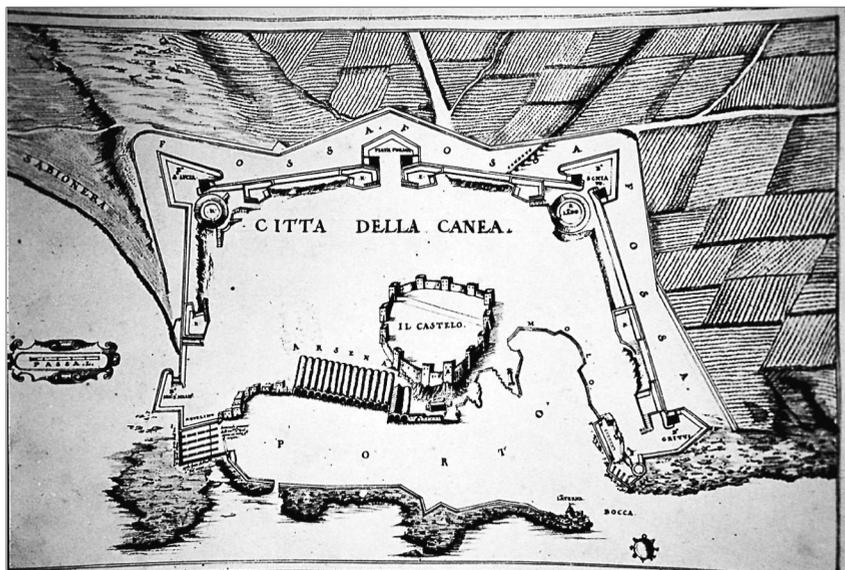


fig. 22: Angelo degli Oddi, "Città della Canea," in *Città, fortezze, porti, redotti...*, 1601. BMV, MS. it. IV, 1 (=5061), tav. 8.

fig. 23: Francesco Basilicata, "Città de la Canea," in *Pervetusti atque nobilissimi cretensis regni urbes, arces, oppida...*, 1618-9. BMC, Portolano n. 4, XIV.



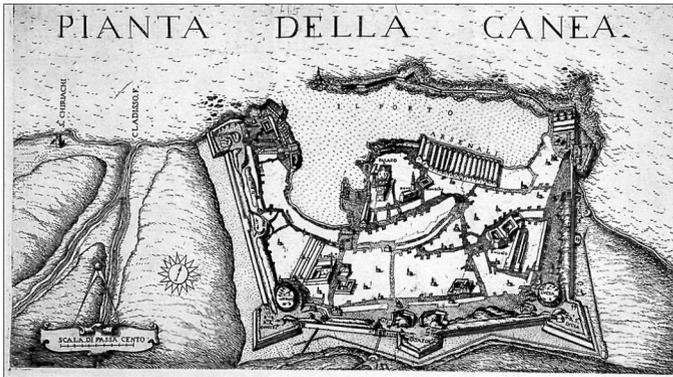
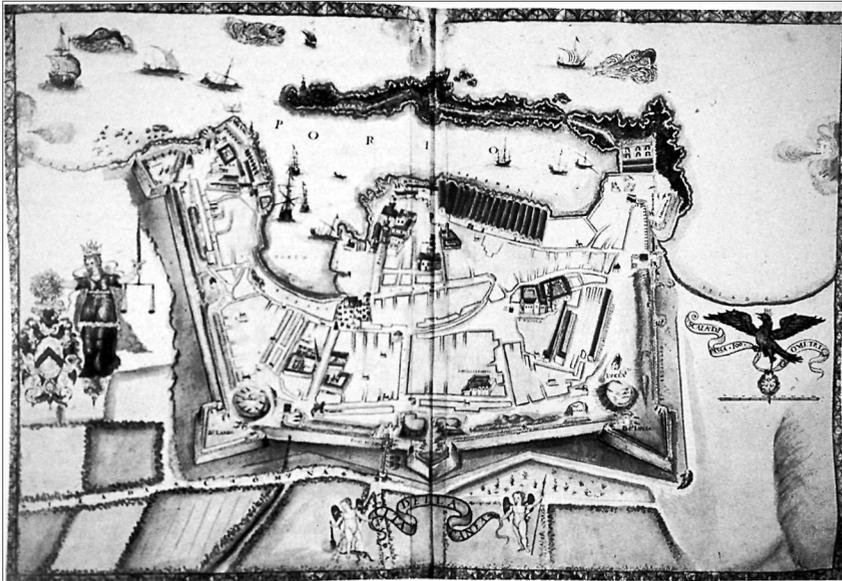


fig. 24: Marco Boschini, "Pianta della Canea," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 6.

Monanni follows up the example of Oddi, while Boschini (Fig. 24) moves away from this stylized image introduced by Oddi, producing a view of the city, from the hinterland towards the sea, that points out the street network and the big civic and religious buildings rather than the old and new fortifications works. But even in this case his plate is extremely similar to Corner's design (Fig. 25).

fig. 25: Giorgio Corner, "Città della Canea," in *Il Regno di Candia*, 1625. BMV, MS. it. VI, 75 (=8303).



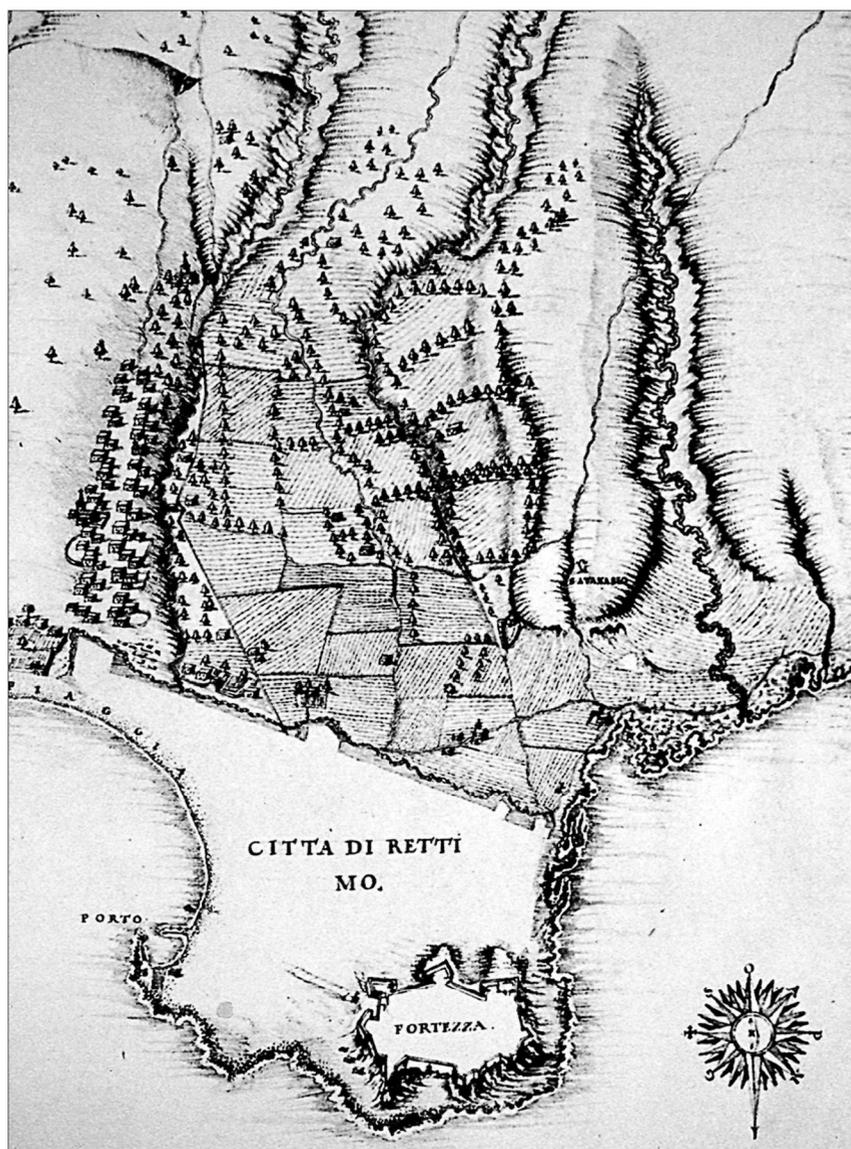


fig. 26: Angelo degli Oddi, "Città di Rettimo," in *Città, fortezze, porti, redotti...*, 1601. BMV, MS. it. IV, 1 (=5061), tav. 17.

The representation of Rettimo by Oddi (Fig. 26) shows once more the same design attitude: the city empty of any urban



fig. 27: Francesco Basilicata, "Città e fortezza di Rettimo," in *Pervetusti atque nobilissimi cretensis regni urbes, arces, oppida...*, 1618-9. BMC, MS. Portolano n. 4, IX.

element apart from the fortress, is distinguished from the countryside and the village by its 16th century fortifications. The view of Basilicata (Fig. 27), on the other hand, although based on the same planimetric system, designs the built-up area in all its detail: streets, squares, houses, while the civic and religious buildings are pointed out by their roofs painted red.²¹ Monanni's drawing is also very innovative (Fig. 28). He introduces a new more vivid with more evident three-dimensional effect perspective view of the city, highlighted by a small human figure seen from the back. Finally, Boschini (Fig. 29) copies Corner, who had designed the city from the hinterland towards the sea (Fig. 30).

The views of the last of the four bigger Cretan cities, Sittia (Fig. 31), are very similar and are the most picturesque. All the authors (Oddi, Basilicata, Corner, Monanni and Boschini) represent, in a somewhat detailed manner, the castle with the village next to it;²² this last omitted only by Boschini.

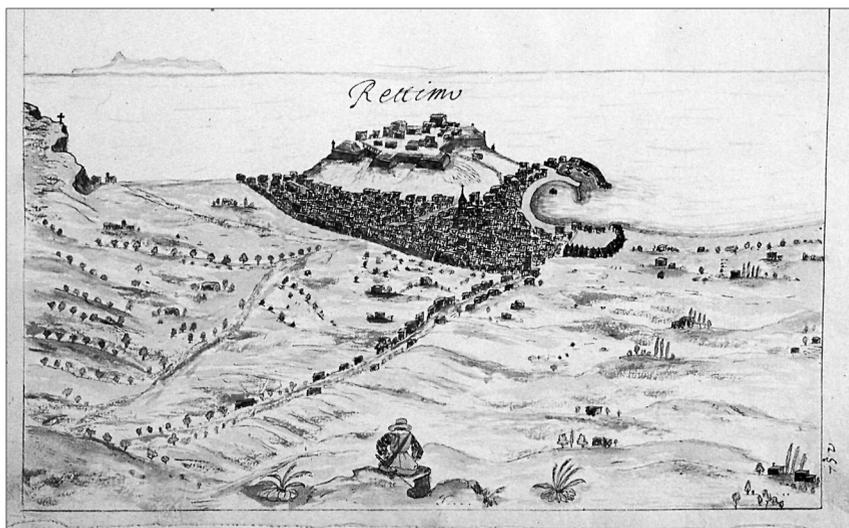


fig. 28: Raffaele Monanni, "Rettimo," in *Descrizione topografica di Candia*, 1631. BMV, MS. it. VII, 889 (=7798), p. 251.



fig. 29: Marco Boschini, "Fortezza di Rettimo," in *Il Regno tutto di Candia...*, Venezia 1651. BMC, E 1209, tav. 14.



fig. 30: Giordano Montano, "Città di Rettimo," in *Il Regno di Candia*, 1625. BMV, MS. it. VI, 75 (=8303).

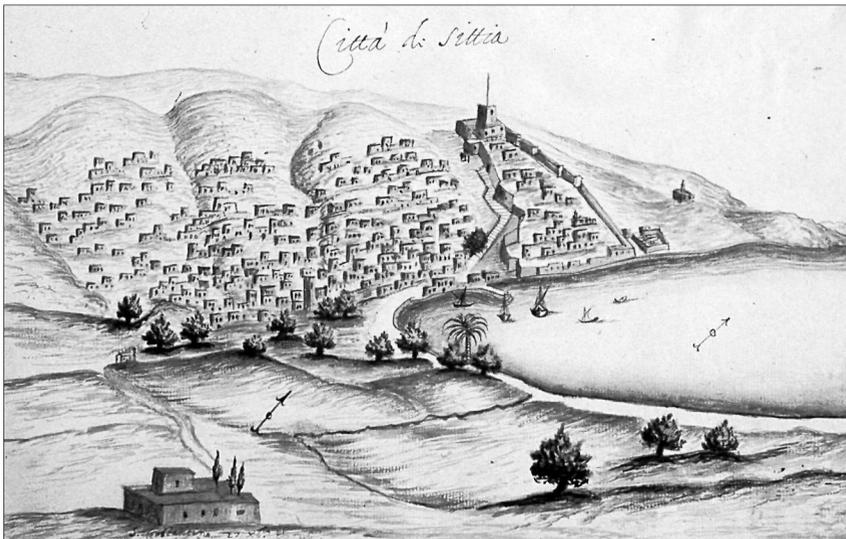
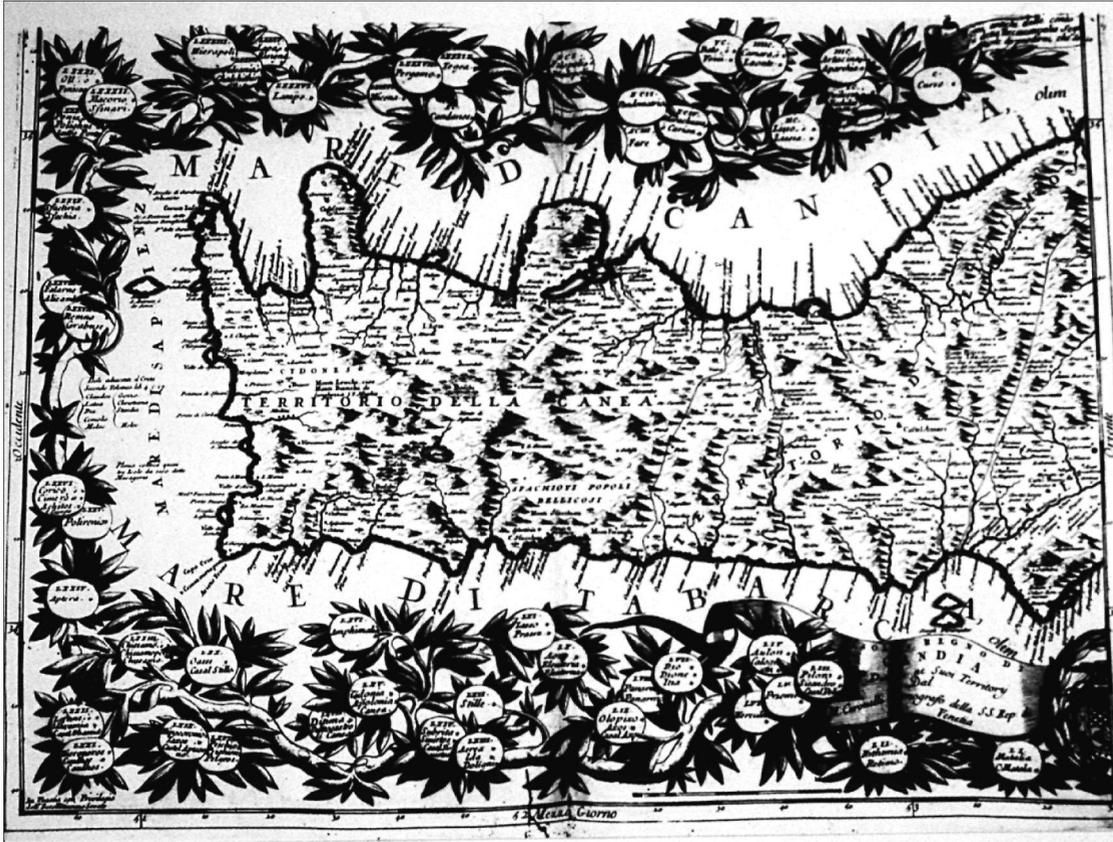


fig. 31: Raffaele Monanni, "Città di Sittia," in *Descrizione topografica di Candia*, 1631. BMV, MS. it. VII, 889 (=7798), 11.



CONCLUDING REMARKS

After this brief comparative review, it seems reasonable to draw the following conclusions. First, Oddi was the founder of this new type of small atlases for Crete and his views typified the iconographical representation of the island for more than fifty years, particularly when military concerns became more important than other kind of requirements (as in the case of Candia or Canea rather than of Rettimo and Sittia). Second, Boschini's publication on the whole seems to be more indebted to Corner's plans and designs than to Basilicata's work. And third, there was a widespread need in 17th century Crete (probably due to the Turkish threat) for better information, as

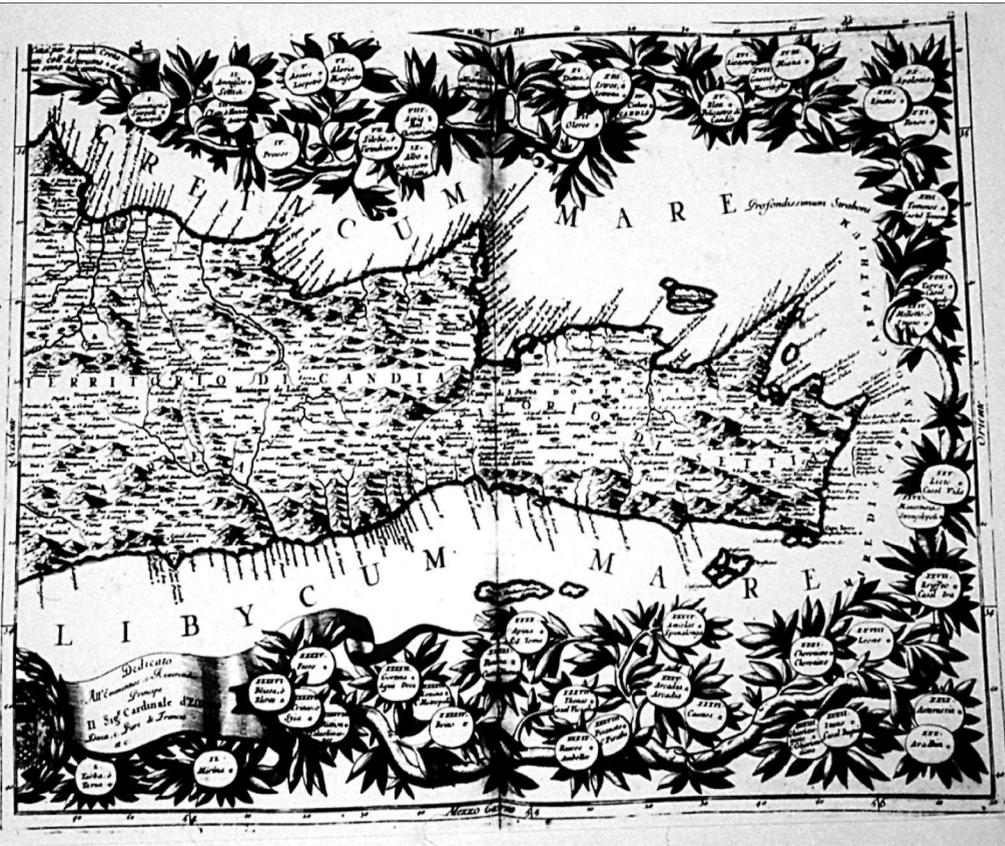


fig. 32-33: Vincenzo Coronelli, “Candia occidentale e Candia orientale,” *Isola e Regno di Candia diviso ne suoi territorij*, in *Corso Geografico Universale*, Venezia 1692, cc. 77-78. Roma, Biblioteca Casanatense, BB. I. 34. By permission of the Ministry of Cultural Heritage.

expressed by the Venetian Purveyors. Such a thirst for knowledge was satisfied through the information offered in this case by the engineers and noblemen working in their suite. After all, as Donatella Calabi put it “the information is above all a tool for governing,”²³ which becomes even more precious, it can be added, when one is confronted with a military threat.

The Venetian cartography of Crete, in the first half of the 17th century, is not the work, therefore, of a single author, but the outcome of various overlapping contributions, a kind of collective work of a whole generation of engineers on the

precious material meticulously collected and carefully represented by each one of them.

Boschini made the results of this collective manuscript work public through his book “The whole Kingdom of Candia.” The great cosmographer of the Republic, father Vincenzo Coronelli, who concluded with his magnificent work the cartographic history of Venetian Candia (Figs. 32-33), was also to be indebted to Boschini.²⁴

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NOTES

This article draws heavily on the work presented at the International Conference “Venezia e Creta.” See HELENI PORFYRIOU, “La cartografia veneziana dell’isola di Creta,” in *Venezia e Creta: atti del Convegno internazionale di studi, Iraklion-Chania, 30 settembre – 5 ottobre 1997*, a cura di Gherardo Ortalli (Venezia: Istituto Veneto di Scienze, Lettere ed Arti, 1998), 375-413.

1. ELIZABETH CLUTTON, “Some Seventeenth Century Images of Crete: a Comparative Analysis of the Manuscript Maps of Francesco Basilicata and the Printed Maps by Marco Boschini,” *Imago Mundi* 34 (1982): 48-65.

2. GIUSEPPE GEROLA, *Monumenti Veneti nell’isola di Creta* (Venezia: R. Istituto Veneto di Scienze, Lettere ed Arti, 1905-1931), 1.2: 472-639; IOANNA STERIOU, *Le fortezze veneziane di Retimo: 1540-1646* (Venezia: unpublished PhD, IUAV, 1982); PAOLO MORACHIELLO, “Candia. I baluardi del Regno,” in *Venezia e la difesa del Levante: da Lepanto a Candia 1570-1670*, cura redazionale Maddalena Redolfi (Venezia: Arsenale, [1986]), 133-43.

3. Venezia, Archivio di Stato, Collegio, Relazioni, b. 78, Relazione di Luca Michiel, 13 agosto 1580, ff. 54v-55r.

4. Città del Vaticano, Biblioteca Apostolica Vaticana, MS. Vat. lat. 9445.

5. ANGELO DEGLI ODDI, *Città, fortezze, porti, redotti et spiagge del Regno di Candia*, 1601, Biblioteca Nazionale Marciana, Venezia (from now onwards BMV), MS. it. IV, 1 (=5061); GEROLA, *Monumenti Veneti*, 1.1: 18, 45-6; DONATELLA CALABI, “Schede,” in *Venezia e la difesa del Levante: da Lepanto a Candia 1570-1670*, cura redazionale MADDALENA REDOLFI (Venezia: Arsenale, [1986]), 124-5.

6. FRANCESCO BASILICATA, [*MS Atlas of Candia*], 1612, London, British Library, MS. K. Top. CXIII. 104, 6 tab. 6; ID., *Pervetusti atque nobilissimi cretensis regni urbes, arces, oppida...*, 1618-9, Venezia, Biblioteca Museo Correr (from now onwards BMC), MS. Portolano n. 4; ID., *Relatione di tutto il Regno di Candia...*, 1629-30, BMV, MS. It. VII, 1683 (= 8976); DONATELLA CALABI, “Le cento città dell’antico e nobilissimo regno cretese,” in FRANCESCO BASILICATA, *Il Regno di Candia*, atlante corografico di Francesco Basilicata 1618, riproduzione in facsimile del codice conservato al Museo Correr di Venezia, commento di Donatella Calabi (Venezia: Marsilio, 1993), which is a new edition of *Pervetusti*.

7. E. NANI, *Fortezze spiagge e porti del Regno di Candia*, 1613, BMV, MS. it. IV, 17 (=5064).

8. GIORGIO CORNER, *Il Regno di Candia*, 1625, BMV, MS. it. VI, 75 (=8303); GEROLA, *Monumenti Veneti*, 1.1 : 19, 47-8; CALABI, *Schede*, 120-1;

DONATELLA CALABI, "Il regno di Candia e le fatiche del governo civile: le cento città, le popolazioni, le fabbriche pubbliche," in *Venezia e la difesa del Levante: da Lepanto a Candia 1570-1670*.

9. RAFFAELE MONANNI, *Descrizione topografica di Candia*, 1631, BMV, MS. it. VII, 889 (= 7798); GEROLA, *Monumenti Veneti*, 1.1: 48; CALABI, *Schede*, 116.

10. MARCO BOSCHINI, *Il Regno tutto di Candia delineato a parte, a parte, et intagliato da Marco Boschini venetiano al Serenissimo Principe et regal Collegio di Venetia* ([Venetia], 1651) (BMC, E 1209); CALABI, *Schede*, 116.

11. *Ibidem*.

12. CLUTTON, *Some Seventeenth...*, 62.

13. ANTONIO RATTI, "Le carte geografiche di Candia del Museo civico Correr," *Bollettino dei Musei Civici Veneziani* 1.4 (1979): 97.

14. MARCO BOSCHINI, *L'Arcipelago con tutte le isole, scogli, secche e bassi fondi, con i mari, golfi, seni, porti, città e castelli...* (In Venetia: per Francesco Nicolini, 1658).

15. CLUTTON, *Some Seventeenth...*, 62.

16. *Ibidem*.

17. CALABI, *Schede*, 118-9; ID., "Città e territorio nel Dominio da mar," in *Storia Di Venezia, 6: Dal Rinascimento al Barocco*, a cura di Gaetano Cozzi e Paolo Prodi (Roma: Istituto della Enciclopedia Italiana, ca. 1994), 959.

18. GEROLA, *Monumenti Veneti*, 1.1: 102-3; CALABI, *Schede*, 117.

19. CALABI, *Schede*, 124-5.

20. GEROLA, *Monumenti Veneti*, 1.1: 157.

21. CALABI, *Schede*, 147.

22. GEROLA, *Monumenti Veneti*, 1.1: 32, 171; CALABI, *Il regno di Candia*, 103.

23. CALABI, *Città e territorio*, 949.

24. RATTI, *Le carte geografiche*, 99-100.