

THE *HORTUS MESSANENSIS* OF PIETRO CASTELLI. SCIENCE, NATURE, AND LANDSCAPE ARCHITECTURE IN 17TH CENTURY MESSINA

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In 1638 the Roman physician and naturalist Pietro Castelli founded an important botanical garden adjacent to the city walls of Messina. The creation of this garden marked a critical moment in the history of gardens and landscape architecture in Sicily and reflected the spread of new attitudes and ideologies about nature in Italy. Castelli published a description of the garden, *Hortus Messanensis*, in Messina in 1640, detailing his reasoning on the purpose and value of a botanical garden for the city¹.

The garden of simples was specifically intended to serve the needs of the medical faculty of the University of Messina in accordance with contemporary scientific practice, but its significance went well beyond curricular revision. The *Hortus* and its accompanying museum and chemistry laboratory also placed Messina and Castelli within the republic of letters in the natural sciences, still centered in Rome, that extended to all quarters of Europe and even the New World. It was a tangible sign of a vibrant scientific culture in Messina in the 17th century. The construction of such a highly visible garden also complemented the major urban development in Messina in the first half of the 17th century, the ambitious redesign of the waterfront. The life of the garden was short, less than forty years; in 1674 Spanish soldiers under Viceroy Francisco Bazan de Benavides, Conte di Sanisteban, let their horses graze there while quelling the Revolt of Messina. Despite that brief lifespan, the *Hortus Messanensis* solidified a tradition of public and private botanical gardens in Sicily culminating with the *Orto Botanico* of Palermo in 1789. Castelli also inspired a generation of scholars and physicians who continued various aspects of his research, including Paolo Sylvio Boccone, Domenico Bottone, Francesco Cupani, Niccolò Gervasi, and Agostino Scilla².

Castelli has received some scholarly attention by historians of science, most notably in the work of Corrado Dollo³. However, the garden, the museum,

the chemistry lab, and the publication have been largely overlooked in the burgeoning literature on botanical gardens, museums, and collecting in Italy and Sicily⁴. This article offers an array of new material on Castelli's career and the *Hortus Messanensis*, including period accounts, letters, and contemporary images. Together these sources allow for a deeper understanding of the *Hortus* than has been possible up to now. The creation of the garden and its attendant spaces was the result of the development of new concepts of nature, landscape, and landscape architecture.

Many of the characteristics of the creation and functioning of the *Hortus* resemble those of contemporary botanical gardens in Italy and Europe, however a few aspects may be considered unique. The identification of both the singular and the common features gives a clearer definition of the meaning of this designed landscape. Paradoxically the *Hortus Messanensis* reaffirms Messina's participation in pan-European culture and simultaneously marks its difference.

Pietro Castelli from Rome to Messina

Roman by birth, Pietro Castelli [fig. 1] studied medicine at the Sapienza under Andrea Cesalpino, Giovanni Marsilio Cagnati, and Andrea Bacci⁵. Cesalpino, who spent decades in Pisa as the prefect of the Orto Botanico and a professor of simples at the university before coming to Rome around 1590, was perhaps the most influential of these mentors.

He is remembered for his publications on botany and mineralogy as well as important early work on the circulatory system⁶. Another critical figure for Castelli was his brother-in-law the Dutch pharmacist Enrico Corvino. Corvino's bottega was a favorite meeting place for naturalists in Rome⁷.

Through him Castelli may have gained access to men like Federico Cesi, the founder of the Academy of the Lincei, and Cassiano dal Pozzo, the most



Fig. 1. Pietro Castelli (Courtesy National Library of Medicine, Bethesda, Maryland).

prominent figure in the intellectual-aristocratic culture of mid-17th century Rome⁸.

Although there is some disagreement about the precise sequence of events, after Castelli received his diploma in 1594, he lectured outside the university and practiced medicine. At an undetermined moment Castelli became the personal physician of Lelio Biscia (1573-1638). Biscia was a minor patron of the arts and played an important role in the urban planning of Rome during the pontificate of Paul V. He was appointed cardinal by Urban VIII⁹.

He commissioned Castelli to write a description of the eruption of Vesuvius, *Incendio Del Monte Vesuvio* (Rome 1632), based upon others' first-hand accounts and earlier published works¹⁰. Biscia also arranged a place for the physician at the University of Padua, a privilege Castelli was pleased to recall: «poi per accrescermi gloria & honore havermi procurato con l'Ecc. Alvigi Contarini Oratore della Serenissima Republica di Venetia appresso la santità di N. S. Papa Urbano VIII un luogo nel fioritissimo studio di Padova con amplo stipendio...»¹¹.

The date, duration, and precise nature of Castelli's activities in Padua are all unclear. But considering his interests and experiences he likely had extensive contact with the famous botanical gardens. As will be discussed below, the *Orto* of Padua was one of the models that Castelli followed when creating the *Hortus Messanensis*.

By 1625-26 Castelli was also under the nominal protection of Cardinal Francesco Barberini. Through Cardinal Barberini, Castelli was named a university professor¹². He became a *lettore* of Simples. This field combined aspects of botany and chemistry. One contemporary author described it: «Simpling is an art which teacheth the knowledge of all Druggs and Physicall Ingredients, but especially of Plants, their Divisions, Definitions, Differences, Descriptions, Places, Names, Times, Vertues, Uses, Temperatures, & Signatures»¹³.

It was a basic part of medical training and Castelli, as a student of Cesalpino, would have been considered well prepared in the field. Only in 1629, after the death of Giovanni Faber, he did assume the post of *publico Semplicista* of the *Orti Vaticani*¹⁴.

However a bitter letter written several years later by Castelli to Dal Pozzo suggests that he was dissatisfied with his position. «[E]ssendo io in Roma lettore de Semplici, ero senza Horto, hora ho l'horto e non la lettura de semplici, leggendo io nello studio la Prattica e l'Anatomia...»¹⁵. It can be inferred from the letter that Castelli was passed over for a preferred post that instead went to Tobia Aldini. This may help explain why he left Rome and also may shed some light on an odd aspect of Castelli's publishing career. A well-known description of the Farnese gardens on the Palatine Hill, the *Exactissima descriptio rariorum quarundam plantarum, que continentur Rome in Horto Farnesiano* gives Aldini as an author [fig. 2]. However it has long been suggested that Pietro Castelli had a significant role in the publication and was perhaps the actual author¹⁶. The reasons or motivations for such an arrangement remain unclear. Aldini had contributed a letter to Castelli's *Discorso della duratione delli medicamenti* (Rome 1621) suggesting a previous professional relationship if not friendship. Additionally one contemporary account suggests that Cardinal Biscia was increasingly out of favor with the Barberini by the 1630s¹⁷. If Castelli felt the environment in Rome was not conducive to his professional advancement he



Fig. 2. *Exactissima descriptio...*, Rome 1625 (Courtesy National Library of Medicine, Bethesda, Maryland).

might have been more willing to accept a lucrative post in Messina, a place he later described as «questo estremo d'italia, e d'Europa»¹⁸. Furthermore he may have received some encouragement from Cassiano who was apparently very curious about Mt. Etna. Messina did offer new challenges, an excellent salary, and the freedom to pursue his interests. When approached he accepted an offer from the Senate of Messina to take a post on the faculty of medicine.

Hortus Messanensis

Considering Castelli's experience in Rome and Padua and his expertise with simples it follows logically that he immediately pushed for the creation of a botanical garden in Messina. In the Spring of 1638, after several appeals to the Senate, his desire found support. The delay in the creation was the result of several factors but ultimately it was a matter of convincing the Senators that such an appropriation was



Fig. 3. *Hortus Messanensis* titlepage (Courtesy National Library of Medicine, Bethesda, Maryland).

worthwhile. The University itself was in some turmoil over its governance in these years as the municipal authorities and Jesuits fought for control¹⁹. Ultimately the Senate would assert its authority, but not until 1641, after the creation of the garden. This situation may have both delayed the completion of the garden and influenced its particular design.

A wealth of information on the garden comes from Castelli's description and index published as *Hortus Messanensis* in 1640. The book opens with two etched illustrations [figs. 3-4]. In the first, a figure of Flora holding a scroll with the author's name and the title is showered with petals by a quartet of putti, two of them are holding cornucopias half-full with flowers. The second illustration is the stemma of Cardinal Francesco Barberini, followed by the title page. The text is then divided into four distinct sections: the dedication, a note to gentle readers, a note to his fellow scientists (in Latin), and finally the index of plants (also in Latin) followed by fifteen separate



Fig. 4. Hortus Messanenensis frontispiece (Courtesy National Library of Medicine, Bethesda, Maryland).

plates. The plates are each devoted to one of the fourteen *hortuli*, or beds, plus one presenting the total disposition of the garden [fig. 5]²⁰. Each section of the publication is revealing in its own way. The dedication to Cardinal Barberini is laden with the hope, unstated in the brief passage, but clear from his letters, that Castelli might be called back to Rome. In a 1639 letter to his friend Marco Severino in Naples he described the difficulties with the Jesuits and the departure of a professor of law for Padua. Then in the tone that seems to run through all his correspondence he wrote of his plan to create the "Horto" and lamented: «[L]o farò stampare in breve, acciò per il Mondo si sappia che ho fatto l'Horto in Messina: poi spero, che Dio, per sua Misericordia mi libererà da questo purgatorio per il paradiso di studio più studioso»²¹.

Four years later when he thought there might be an open position he pleaded his case in a letter to Cassiano dal Pozzo. He asked for Cassiano's inter-

vention with Cardinal Barberini and Monsignor (Tiberio?) Cenci. «Hora prego V.S. Ill[ustrissi]ma proporre à S[ua] E[ccellen]za et à Mons. Cenci me per il detto Horto, ne possono dire, che io non me ne intenda; perche vedranno, se sò de semplici, e far Horti, dal Horto Mesinese che hò qui fatto, et in stampa dedicata à S[ua] Eminenza, il quale quando mio Nepote glilo presentò, gli disse che sarebbe venuto occasione di favorirmi. Hora è il tempo, che V. S. Ill.mo mi può favorire, e farmi tornare à Roma...»²².

In this case however the dedication did not achieve its intended result; the call to Rome never came.

In his note to the readers, *Alli Benigni Lettori*, Castelli gives another, more reasoned, account of his motives and intentions. Exactly whom he perceives to be his readers is a crucial point. Castelli directs the greater part of the essay toward the elites of Messina who have given him the opportunity and the funds to create the garden. The text is rich with information about the history of botany, gardens, and the history of the study of the natural sciences in Italy. Castelli places himself in the company of the most distinguished physicians and natural scientists of the 16th and early 17th centuries. The note to the readers is really an essay on the value and ideology of the botanical garden. Castelli considers an array of issues including civic pride, professional practice, public welfare, and social status. His consciousness of his patrons' concerns is evident in the way that he taps into sentiments regarding the prestige of the city. His specific patrons would have been the six Senators who consented to his request and, more generally, the ruling class of merchants, aristocrats, and ecclesiastics. Castelli praises the Messinese for the creation of the University or *Studio*. This he deems an appropriate imitation of ancient Athens. Similar institutions, he points out, were also features of great cities in Italy such as: Rome, Padua, Bologna, Pisa, Mantua, Parma, Turin, Naples, and Catania. He then lists university towns across Europe including Basel, Heidelberg, Wittenberg, Leiden, Paris, Montpellier, Salamanca and many others. He continues on the theme of civic magnificence but moves toward other related justifications.

The structure of his argument for a botanical garden is logical, taxonomic even. He proceeds from ancient to modern and from general to specific. A great city needs a university, which in turn must have a facul-

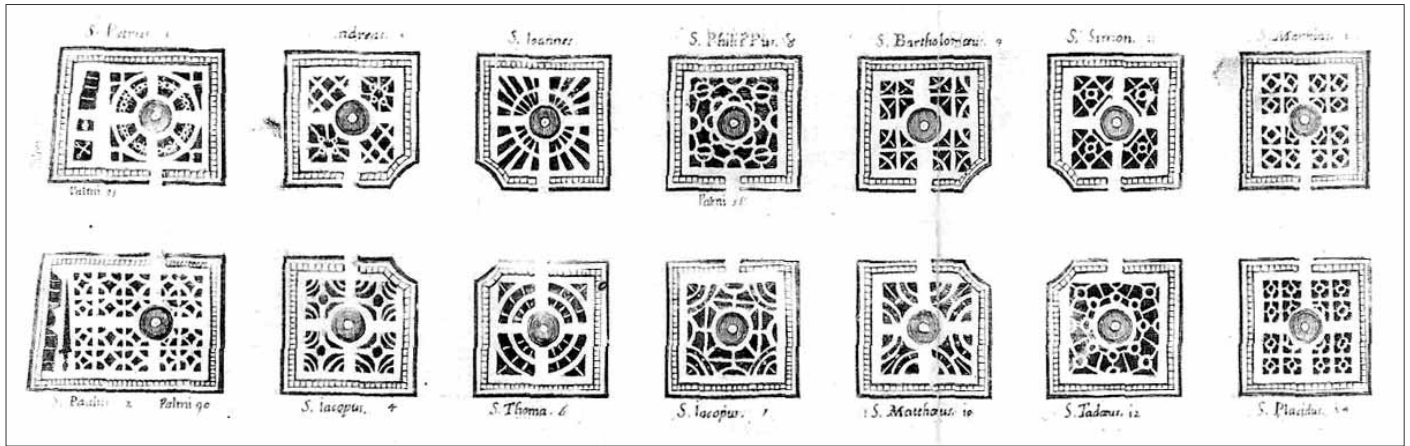


Fig. 5. Fourteen hortuli (Courtesy National Library of Medicine, Bethesda, Maryland).

ty of Medicine. The proper education in Medicine requires the study of simples. To study simples you must have a botanical garden. His intention is to demonstrate *alli Idioti* how necessary and useful a garden of simples is for the University and how the city can benefit and to laud the Senate of Messina for giving the space and the funds. The encomiums may seem superfluous or extreme but when he praises Messina for: «... il sito, per le ricchezze, e mercantie, per la nobilita, a valore de gl'antenati, per la fedelta a suoi Regi, per la forma del governo, per lo primato, e titolo di capo di questo Regno, e per singolari privilegi Reali, Papali, e Divini...»²³ he is touching on issues critical for his patrons. A botanical garden, like the University, is a feature that gives Messina greater stature, especially in comparison with its rival Palermo (and to a lesser extent Catania). In fact a botanical garden of this sort was still relatively rare in Italy and Europe. Again Castelli provides a list of distinguished cities: Rome, Padua, Pisa, Bologna, Perugia, Montpellier, and Leiden that boast such spaces. Furthermore he points out to the *Idioti* that the Pope, the *Serenissima Repubblica*, the Grand Duke (of Tuscany), and other princes have seen fit to *aggiongere anco l'Horto* to their universities.

A second argument subsequently unfolds. He returns to the idea that a garden of simples is necessary for the proper education of doctors. To the assertion that students might learn the material from illustrated books he responds: «...non si fa il bon Semplicista del vedere l'herbe dipinte; ma dalle parole del mastro semplicista, dalla presenza della pianta, e dal vederla più volte in varie stagioni, nascente adulta, con fiori, con frutti, e con semi.

Nemo Nauta ex libris»²⁴.

He emphasizes the need for the physician to see, smell, taste, and feel the plant. To this modern “scientific” conception of direct observation he offers the support of Galen and Pliny. The alternative, as Castelli sees it, is that without the proper training of doctors and pharmacists, we would have to rely on the unprepared “Erbarolo” or “Droghiero” or “Mercante” to identify and gather the plants for medications. Thus the life of a man or a prince might lie *nelle mani d'un Villano, che non sa leggere*.

After that disturbing scenario, Castelli tries to strike a more positive note but slides back into the negative. The *Hortus* will provide the infirm with: «alcune herbe fresche, e verdeggianti. [P]osciache molto piu si deve stimare l'herba di poco colta, di quella, che è seccata, corrotta, stata esposta alle ingiurie delle mosche, alli ragni, al vento, al polvere»²⁵. Also, in Castelli's view, plants that sprout in the environment of Messina will be better suited to the Messinese.

In the final pages of the essay, Castelli considers a third point, the pleasure and nobility of the garden. In effect he argues for a public garden; a remarkable consideration at this date. «Alla necessita, & utilita della costruzione del detto Horto aggiongeremo la delectatione, che ne prende il popolo tutto per esser d'ogni intorno visibile, ed varij colori de fiori quasi dipinto tutto l'anno. [D]i molte sorgenti Fonti, e diversi lavori ornato con ample, e nitide strade, che a riguardanti porgono diletto, e ammiratione. [D]i fuori mirandolo dei ponti, e de le mura. Ma se di dentro vi piacerà mirarlo, circuirlo, e considerarlo, con gl'occhi, con li passi, con la mente, si godera gli

suavi Arabi odori, le varie forme delle piante, i vaghi colori de fiori»²⁶. From a discussion of the public pleasures of the garden Castelli makes a transition, with the help of Pliny and Tacitus, to a discourse on the cultivation of gardens as a royal pastime. This variation, with a more acute appeal to social status and elitism, returns to his earlier arguments for the Hortus as a mark of civic distinction. «Ecco (amici Lettori) la professione di semplici non è di Villani, non è di quei Spetiali, e Medici, che riputandosene indegni la lasciano; ma da Principi, da Re, da gran Filosofi, & huomini Illustri»²⁷.

This point relates to a certain ideal of agriculture as an aristocratic pastime propounded in the Villa books of the mid-16th century²⁸. It is indicative of the change in attitudes from 1550 to 1640 that the ideology is nimbly altered or expanded to include the study of nature and other scientific pursuits.

The third text section, *Herbarum Scientiæ Studiosis*, is clearly directed to fellow botanists across Europe. He again identifies the traditions of natural history and the study of plants going back to the ancients Galen and Pliny but also Avicenna and then moderns like Leonhart Fuchs and Castore Durante. He compares and contrasts his own theoretical approach to those of botanists such as Adam Zaluzansky, Antonio Brasavola, and Caspar Bauhin. This is obviously a discussion for specialists. He reiterates his debt to his mentor Andrea Cesalpino as well as his brother-in-law, Enrico Corvino. Castelli explains that he has divided his garden into fourteen parterres named for the apostles, plus Saints Paul and Placido (one parterre together), and the Virgin Mary, the protectress of the garden and the city of Messina. The divisions of the plants do not, however, depend on any religious symbolism. Rather the ordering is based on seminal and vascular systems. Mosses and aquatic plants are arranged around the fountains and interspersed throughout the garden.

Form & Content

Documents published a century ago by Giuseppe Arenaprima reveal the dates of payment and construction activity as well as the presence of the architect or *Ingignery* of Messina, Giovanni Angelo Ponzello in 1638-39²⁹. As architect and engineer for the city Ponzello would have been involved in any constructions affecting the public structures. His most significant project, the redesign of the water-

front or *Palazzata*, unified the façades of all the buildings facing the port. This gave Messina an ordered yet dramatic face. The creation of the *Hortus Messanensis* can be interpreted as an extension of this project for the city. It too provided an image of order and beauty to the city.

The Senate offered Castelli a space in the moat outside the walls. In a novel arrangement, two preexisting bridges, the *Ponte di Porta Imperiale* and the *Ponte della Porta della Maddalena* were incorporated in the design. The spaces below the bridges were adapted to accommodate a laboratory, a museum, and a chapel. The bridges were also ideal for viewing the Hortus. Even though it was enclosed, the public could still enjoy the garden. The space was 270 *canne* long by 24 *canne* wide (roughly 580 x 50 meters). This was a considerable area. A small perspective view from Castelli's *Opobalsamum Triumphans* gives some idea of the layout and the relationship between the bridges, the garden, and the wall [fig. 6]³⁰. It seems to indicate that a significant portion of the garden

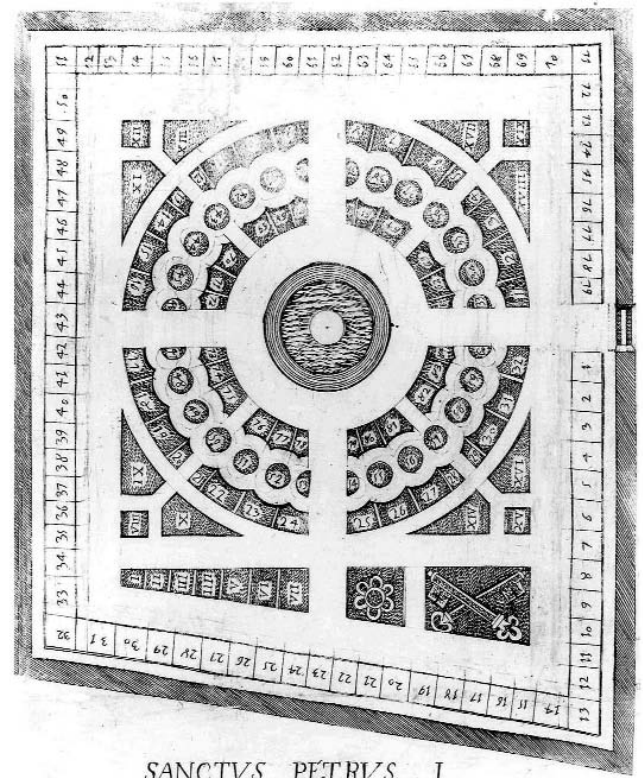


Fig. 6. *Opobalsamum Triumphans*, view of the Hortus (Courtesy National Library of Medicine, Bethesda, Maryland).

toward the rear was not formally arranged. The print is as symbolic as it is topographical: a tree (for balsam?) rises from the garden with seven escutcheons bearing lions, crosses, and castles, symbols respectively of Messina, the church, and Castelli himself. The oblong space designated by the Senate determined the overall form. It may be assumed that Ponzello directed the work to secure the perimeter of the garden, install the fountains, and perhaps construct or fashion spaces for the chemistry lab, museum, and chapel that are only briefly mentioned by the naturalist and recorded in visitors' accounts. However the internal design and layout of the fourteen *hortuli* or parterres most likely came from Castelli.

The unusual, not to say unique, naming of the flower beds for the apostles, a saint, and the Virgin Mary may be a nod toward ecclesiastical authorities, either the Jesuits, who still officially administered the University, or perhaps the desired patron Cardinal Barberini, to whom the *Hortus Messanensis* is dedicated. From his letters to Cassiano dal Pozzo, it is clear that Castelli understood his position and obligations within the dynamic of patronage³¹.

The parterres, although varied, all develop out of the idea of inscribing a circle within a square. Aside from any cosmological interpretations the plans suggest that Castelli sought to emulate the format of existing botanical gardens. In one of his letters to Cassiano from 1638 he mentioned that, «questi signori si sono risolti di fare un horto di semplici `a gara di quello di Padova»³². In the *Hortus Messanensis* he affirmed that he had seen the published plans *Disegno* of some of the important botanical gardens in Europe. Considering the very close formal similarities it appears certain that he looked at Gerolamo Porro's *L'Horto dei semplici di Padova* published in Venice in 1591. Castelli's plan for garden *Sanctus Bartholomæus VIII* is almost exactly the same as the plan for the *spaldo secondo* in Porro's work [figs. 7- 8-9]. Of course he knew the layout of the Paduan from first-hand experience. In turn, as Margherita Azzi Visentini has shown, the Paduan plans depended upon designs published by Sebastiano Serlio in Book IV of his *Regole Generale di Architettura* first published in Venice in 1537 [fig. 10]³³. A variation appear in a late 16th century manuscript regarding the Orto Botanico Pisano³⁴. The arrangement with the fountain at the center of the



SANCTVS PETRVS, I

Fig. 7. Hortulo Sanctus Petrus (Courtesy National Library of Medicine, Bethesda, Maryland).

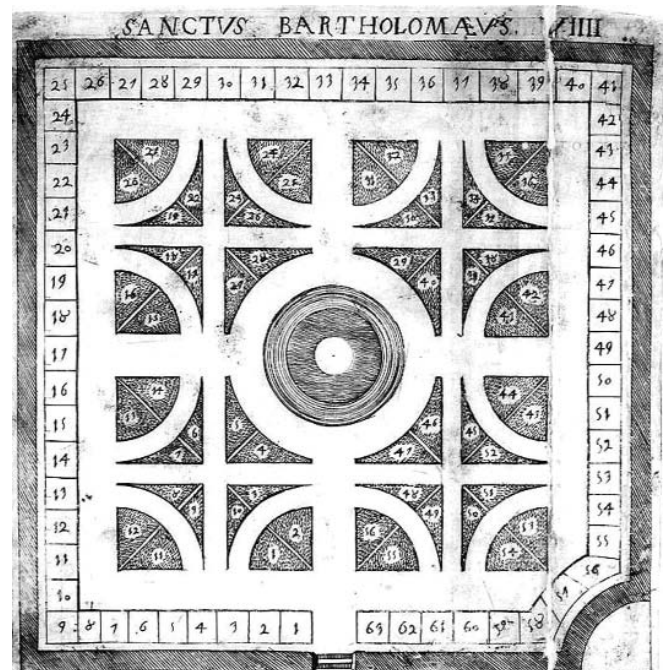


Fig. 8. Hortulo Sanctus Bartholomæus VIII (Courtesy National Library of Medicine, Bethesda, Maryland).

circle/square also appears in Falda's mid-17th century image of the garden of simples at the Vatican [fig. 11]³⁵. The form became a topos of botanical garden design, a sign, perhaps, of the desire for ordering and classification that was behind the creation of all these spaces. Understanding that this was the case it can still be asserted that Castelli wanted to equate himself and his endeavor with the Paduan model.

Microcosm & Wunderkammer

Within these 14 beds he tried to recreate the world that was in his grasp. This included not only his immediate surroundings, but also by extension the environment of his brother-in-law and *simplicista* Enrico Corvino in Rome and potentially any of his correspondents across Europe and the New World. Already in the 16th century Aldrovandi recognized that botanic gardens were an important means of giving order to the World, especially the New World³⁶.

Speaking of the botanic garden of Pisa, Lucia Tongiorgi Tomasi has noted: «Separated from the urban landscape by high walls and characterised by a precise ground plan, it came to assume the physiognomy of a genuine microcosm, a well-ordered model of the universe in which heaven and earth were founded in closely knit implications of perennial rebirth»³⁷.

This description is applicable to most botanical gardens in Europe in the early modern period, and it generally fits the *Hortus Messanensis*. Certainly this was the theme followed by the historian Placido Reina in his 1658 description of Messina. Reina, a friend and colleague of Castelli, noted that «il terreno Zancleo disposto a produrre qualunque altra pianta, che sia così di quelle, che servono all'uso della Medicina, come di quelle, che co'vagli, ed odoriferi fiori vagliono a ricreare I sensi. Ne parlo delle piante nostrali solamente, ma delle straniere ancora, perche I semi d'esse da qualsivoglia lontan paese portati mettono qui, e maravigliosamente germogliano»³⁸.

He then inserted a letter written by Castelli to the Roman physician Domenico Panaroli detailing the range of plants in the *Hortus*. Castelli begins with the citrus fruits, limes, lemons, and oranges followed by three dozen or so other examples including a variety of tulips, roses, jasmine, and hyacinths. Castelli

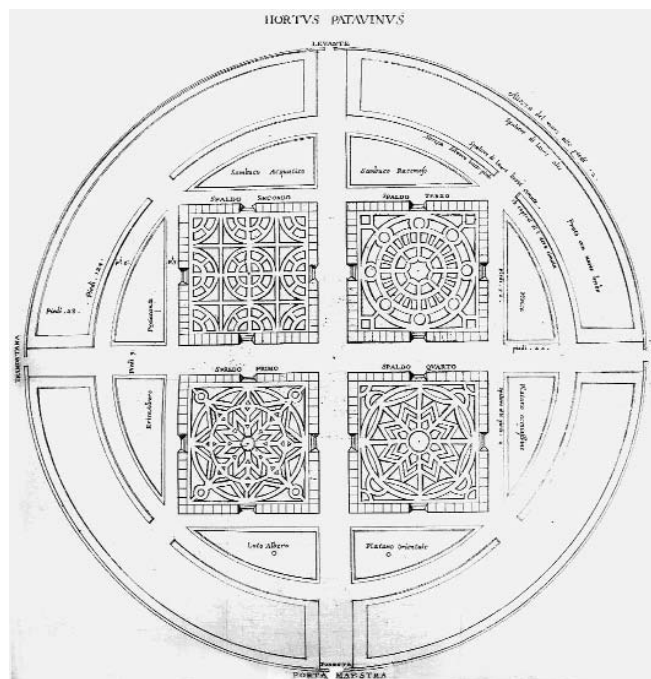


Fig. 9. Plan from Porro's *Hortus Patavinus* (Courtesy National Library of Medicine, Bethesda, Maryland).

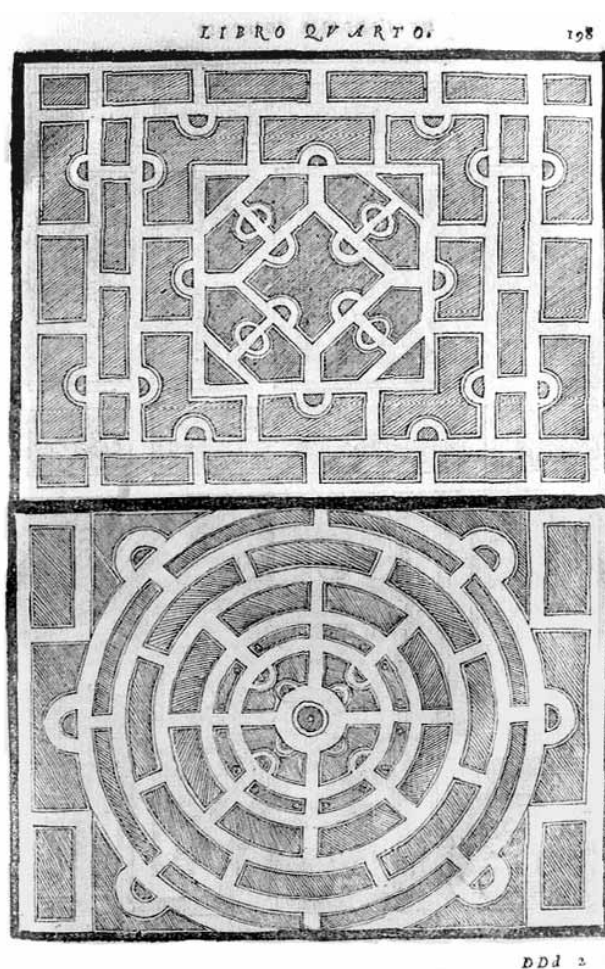


Fig. 10. Serlio garden plan (Courtesy of Special Collections of Howard-Tilton Memorial Library, Tulane University).

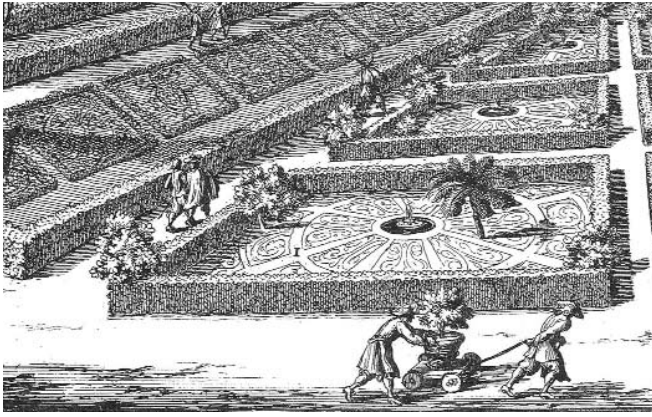


Fig. 11. Detail from *Falda Giardini di Roma* (Courtesy of the author).

emphasizes his ability to grow plants from India, Arabia, America, Egypt, China, Persia Spain, Belgium, Holland, Peru, and Turkey.

Landscape

Yet what made the collections of Messina important in the eyes of 17th century scientists and connoisseurs was not their similarity to peninsular exemplars but rather their divergence. Messina had things to offer that could not be found elsewhere³⁹. What may be specific to the *Hortus Messanensis* is its location in Sicily with its distinctive landscape (above all Mt. Etna), flora, and fauna. According to various accounts, the ground itself regularly offered up objects such as ancient coins, fossils, and volcanic rocks to the hands of eager collectors. Even the waters around Messina and the west coast of Sicily held special interest for the swordfish, sharks, and flying fish.

Already in 1496 Pietro Bembo made the link between Mt. Etna and the collection of rarities. In his *De Aetna* he mentioned the ruins of Taormina and then noted: «In fact, Greek coins are unearthed by accident everywhere». Later in the same essay he describes his ascent of Mt. Etna and the various geological phenomena. His interest was so great that he «brought two rocks back to Messina when they had cooled off and could be picked up by hand, with some of their sulphur left»⁴⁰. The fascination with Etna would only build in the next 130 years.

Castelli had an intimate knowledge of the volcano and at one point considered writing about it as he had already written on Vesuvius. He may even have had a role in the creation of one of the most impres-

sive publications on volcanology ever produced, Athanasius Kircher's *Mundus Subterraneus* (Amsterdam 1664-65)⁴¹.

In his letter of March 3, 1638 to Cassiano dal Pozzo, Castelli first mentions the *ritorno del P. Atanasio à Roma*⁴². This is certainly Athanasius Kircher who was just concluding his visit to Malta and Sicily in that month⁴³. The familiar tone suggests that Castelli knew Kircher, which, although undocumented, seems more than plausible considering their time in Rome, their shared interests, and their ties to the Barberini circle. Castelli's *Incendio del Monte Vesuvio* would have made him a recognized authority on the topic of volcanoes.

The letter goes on to describe Castelli's first encounter with Etna and her environment. He seems to be responding to Cassiano's interests: «...il passato Agosto ascisi al Monte Aetna per darlo compagno al mio Vesuvio; mà trovai presente più difficoltà in questo, che trovassi assente in quello, et havendo descritto, disegnato, e bon considerato quanto mi è occorso vedere, non hò hauto compita sodisfattione: perciò mi sono risoluto di tornarvi questa estate, e considerare il monte dall'altra parte»⁴⁴.

A subsequent letter from June, 1638 again mentions his previous ascent and reiterates his attention to record all the particulars of the volcano. In the first visit he had already collected some stones and now he will also collect plants for the botanical garden that had been approved by the Senate. «Il Mongibello sarà da me investigato con ogni diligenza. L'anno passato dove arrivavo andavo descrivendo le piante, che vedevo andavo disegnando spesso li siti, e le figure del Monte, misuravo ogni cosa, e di punto in punto andavo descrivendo le piante, che vedevo, raccoglievo i sassi, come anco hò fatto dell'altri monti, che li ritrovo tutti di diversa maniera. [D]elli diaspri investigarò qualche cosa, che à punto hò in casa da 3 dozzine di manichi di Cortelli di diaspro belli, che un mercante me li hà dati in consegna, non tralasciarò di parlare del bitume, del succino, delli Coralli, del Anacardo, e di molte altre cose di quest'Isola. [S]arò piu curioso per l'avvenire; perche andarò più attorno; poiche questi signori si sono risoluti di fare un horto di semplici à gara di quello di Padova, e mi bisognerà circuire queste montagne per questa occasione»⁴⁵.

Castelli's trips to collect Etnean simples are recorded in a book by apothecary Giovanni Domenico

Cardullo, *Teriaco d'Andromaco*. Cardullo describes the various ingredients for the theriac, in few cases he recalls Castelli's activities gathering plants such as *camedrio* and *sesali* (sesame): «Camedrio... quale alle radici di Mongibello verso Castiglione il Dottor Castelli andando al monte questo Agosto haveva trovato copiosamente, e giudicata perfetta... il Prior Castelli ha trovato assai del nostro Sesali, nelle colline sotto il Monte Etna verso Castiglione, e Linguagrossa 20 miglia discosta dal mare, questo mese d'Agosto, quando ando à veder la Montagna con il diligente, e peritissimo Spetiale di Francaviglia Girolamo Cardo, nella cognitione de semplici anco molto esercitato, e curioso... fruttice tanto copioso per la Sicilia, che da Taurmina insino alla Motta (Terra del signor Marchese Don Antonio Martiano gentilissimo Cavallier Messinese, dal quale nel viaggio a Mongibello il nostro Pietro Castelli ricevè molti favori)»⁴⁶.

Although Castelli would actively seek plants from all over the world, the Etnean flora made the *Hortus Messanensis* unique. The garden was an attraction for a number of European visitors in the 17th century including some prominent naturalists such as the Dane, Thomas Bartholin, and the Englishmen Frances Willoughby, John Ray, and Phillip Skippon. Each of them included descriptions of their experiences in Messina in later published work. Skippon, offers this account of a May 1664 visit to the *Hortus*: «We visited Dr. Jo. Petrus Corvinus, Nephew to Dr. Petrus Castellus Romanus the famous physician, who led us thro' a subterraneous passage from his house to the city ditch; which being dry, is allowed by the Messinese for a Physick garden; it is of good length and breadth. Castellus was the first botanick professor here; he divided the garden into 12 quarters, called by the apostles' names. Under one of the city bridges is a school where botanick lectures are read, and under another bridge is a room where skeletons of animals are preserved. Corvinus shew'd us his study left him by his uncle, who in two quarto volumes, described in painting and writing several insects, which Corvinus confessed himself not able to be at the charge of printing»⁴⁷.

This testimony reveals that the garden survived intact through the end of Castelli's life. For those curious about Sicily and the natural world, the *Hortus Messanensis*, was an essential stop.

In Rome Pietro Castelli had been part of a network of

scientists and aristocrats who were changing the approach to the study of the natural world. When he arrived in Messina in 1635, that scientific attitude had not yet taken hold on the island. Like Del Duca and Montorsoli and even Ponzello, he brought the newest Italian ideas to Messina. Initially, as his letters attest, he felt intellectually and physically isolated. However, in the course of twenty-five years a transformation took place and by the time of his death in 1661 Castelli might have justifiably claimed success. He enjoyed the title of Conte Palatino and an ample salary. Perhaps more importantly, he had been the harbinger of a new ideology of nature that emphasized rigorous investigation of all aspects of the world. More than any discovery, Castelli's legacy would be realized in the next generation of Sicilian naturalists (and artists). Most of them had been his students: Boccone, Bottone, Cupani, Gervasi, Scilla. They carried his approach to other parts of Sicily and in the cases of Boccone, Bottone, and Scilla to Italy and Europe as well. Messina was no longer just an importer of expertise but also an exporter. Castelli may not deserve all the credit for this transformation but he does deserve some.

In the decade and a half after Castelli's death and before the revolution in Messina, the *Hortus Messanensis* continued to serve its intended purpose as a place for research and teaching. Significantly it may be linked to some of the discoveries in plant structure published by Marcello Malpighi who assumed Castelli's post at the university⁴⁸. Despite its destruction, a memory of the place lived on, especially in and around Palermo where Cupani and Gervasi created important botanical gardens.

While it has not generally been recognized or emphasized, the *Hortus Messanensis* was a key model for the much better known *Orto Botanico* and the *Villa Giulia* of Palermo created in 1789⁴⁹. The two gardens bracket an intellectual era. Both were placed on reclaimed territory at the edge of the city near a thoroughfare. Thus they were tangible symbols of civic beneficence. They both reflect an attitude that approached the landscape as a place of wonder awaiting examination and classification. As public spaces they were also products of a culture of display and theatricality. They were showpieces for their respective cities, combinations of the ideologies of investigative science, public display, and civic identity.

Appendix I

Letters from Pietro Castelli to Cassiano dal Pozzo, Biblioteca dell'Accademia Nazionale dei Lincei, Roma, Archivio Dal Pozzo, ms XII (10).

Lettere 5-12, cc. 8r-19r

*As cited in Anna Nicolò, *Il Carteggio di Cassiano dal Pozzo, Catalogo* (Città di Castello 1991) 42.

(1)

12 Aprile 1635

Ill.mo sig, re

Son giunto Dio gratia à salvamento in Messina se bene con travagliato viaggio, e tempeste di Mare, e comincio à trovare in questi ss.ri una viva ratificat.ne delle cortezze promessemi in Roma. So, che son tanto ser. di V.S. Ill.ri ho stimato mio debito fargline(?) conto, e fargli insieme sapere, che hà in Messina chi può comandare assolutamente. Di che la supp.co(?) non men che di offerir, se non lo stimerà ardine (ordine?) all'Eminent.mo Patrone quanto potrà mai valere(?) da queste parti l'humiliss.ma servitù mia, affinché honorata da commandi dell'E. S.a io possa totalmente colmare la mia sodisfatt.e Et(?) a V.S. bagio per fare di tutto cuore le mani. di Messina li 12 d'Aprile 1635

Devot, Ser.e

Pietro Castelli

(2)

3 Marzo 1638

Ill.mo Sig, re mio et Pat.ne Ill.mo

Il ritorno del P. Atanasio* à Roma incita me ancora à ritornare alla patria, non già con il corpo, che stà qui legato dalla bona gratia di questi S.S. alli quali è gradito la mia servitù; mà con l'animo, e con le lettere significatrici dell'affetto interno, e del mio gran desiderio d'esser degno di qualche commandamento di V. S. Ill.mo alla quale, si per i meriti proprij, come anco per le gratie altre volte ricevute, sono io devotissimo, et in perpetuo obligato. Et se per esser io in questo estremo d'Italia, sono quasi fuori del commercio humano, non dimeno vorrei in qualche parte mostrarmi huomo, et anchor vivo: onde il passato Agosto ascisi al Monte Aetna per darlo compagno al mio Vesuvio**; mà trovai presente più difficoltà in questo, che trovassi assente in quello, et havendo descritto, disegnato, e bon considerato quanto mi è occorso vedere, non hò hauto compita sodisfattione: perciò mi sono risoluto di tornarvi questa estate, e considerare il monte dall'altra parte. spero da Dio hora sanità per poter affaticare, e gratia di potere doppo qualche anni venire à riposarmi à Roma, e poter servire i miei padroni: fra tanto prego V.S. à non cancellare dal numero delli suoi servitori; nel quale una volta per sua gratia mi haveva posto, et ricordandomi humilissimo, et devot.mo ser.e dell'Eminent.mo Padrone, al quale fa profund.ma riverenza, et à V.S. Ill.mo affettuosamente bagio le mani da Messina li 3 di Marzo 1638

Obligat.mo Serv.e

Pietro Castelli

*Athanasius Kircher

**P. Castelli, *Incendio del Monte Vesuvio* (Roma 1632)

(3)

Ho hautò ardire d'inviare questo mio rozzo libretto (hiena odorata) a V. S. Ill.ma non che lo riputi degno di pervenire alle sue mani ma perche era debito mio di restituire alli Padroni il suo, havendo io ricevuto dalla benignità di V.S. Ill.ma l'animale morto, et immaginandomi, che non li sia per esser discaro la memoria che io tengo delli benefitij da lei ricevuti, me li hò voluto ricordare obligatissimo servitore, pregandola à conservarmi nel numero delli suoi clienti. Il Mongibello sarà da me investigato con ogni diligenza. L'anno passato dove arrivavo andavo descrivendo le piante, che vedevo andavo disegnando spesso li siti, e le figure del Monte, misuravo ogni cosa, e di punto in punto andavo descrivendo le piante, che vedevo, raccogliavo i sassi, come anco hò fatto dell'altri monti, che li ritrovo tutti di diversa minera. [D]elli diaspri investigarò qualche cosa, che à punto hò in casa da 3 dozzine di manichi di Cortelli(?) di diaspro belli, che un mercante me li hà dati in consegna, non tralasciarò di parlare del bitume, del succino, delli Coralli, del Anacardo, e di molte altre cose di quest'Isola. [S]arò piu curioso per l'avvenire; perche andarò più attorno; poiche questi signori si sono risoluti di fare un horto di semplici `a gara di quello di Padova, e mi bisognerà circuire queste montagne per questa occasione; e se Dio mi farà vita farò quanto potranno le mie deboli forze. [T]ratanto affettuosamente bagliandoli le mani gl'augurarò ogni de -- felicità di Messina li 28 di Giugno 1638

Obligatissimo Servitore

Pietro Castelli

(4)

Mando a V.S. Ill.mo un mio Opobalsamo Trionfante il quale fù cominciato à stamparli a Messina; mà per infortunio dello stampatore, bisognò finirli in Calabria; dove è stato tanto mal trattato di Carattere, carta, e stampatura, che non lo devo divulgare. [P]ure per mostrare à VSill.mo il mio devoto animo, gli lo mando tal qual è riceva l'affetto, non l'effetto: perche desideravo di mandarli cosa compitissima e li b. le mani di Messina li 26 d'Agosto 1640

Aff.Ser.e

Pietro Castelli

(5)
 Ho inteso quante difficoltà habbia patito il mio libro del Balsamo per havere il publicetur, e quanto sia stato da V.S. Ill.ma favorito. [S]ono obligato ringraziarli: ma non basta una sola privata lettera, anchorche tutta Retorica per ricompensare tante gratie ricevute; hò voluto confessare il mio obligo con 500 publiche lettere. So che non ho sodisfatto a quanto devo, mà V.S. Ill.ma accetti il bon animo, e l'animo diuno, che cerca difendere la verità, sentendo veramente, e che il detto Opobalsamo sia legittimo, e reale onde non mi hanno potuto muovere le grandi offerte (?) della parte contraria, che hò volu – più tosto difendere la verità, che propor il falso (che pur havere con l'arte sofistica saputo palliare) e guadagnare. Prego V.S. Ill.ma accetti il bon animo, e si ricordi che essendoli antico servitore li desidero il colmo delle felicità, e quelli honori, che si devono alli meriti di V.S. Ill.ma qual pregi si degni(per gratia) in mio nome far humilissima riverenza al Emminentissimo Padrone e li b. le m.i di Messina li 25 di Agosto 1640
 Aff. servitore
 Pietro Castelli

(6)
 Mandai a V.S. Ill.ma il mio Opobalsamo trionfante con alcuni fogli mal stampati, che mi vergonavo, che comparissero, l'hò fatto ristampare e gli lo mando hora, in quanto alla stampa in miglior forma, ne mando una quarantina per lettere alli amici, e cosi nè verrò mandando dell'altri. [H]ò tardato assai per haverli fatti stampare in Venetia, non potendo qui V.S. Ill.ma accetti il bon animo. Ho ricevuto il libro di Stefano Gasparo*, quale ho trovato molto debole di dottrina, gl'ho risposto subito acerbamente; ma pare che non merita risposta giudicando qui molti dotti, che tocchi tanto leggiero il mio Opobalsamo, che non accada difenderlo, starò aspettando che mi li comanda da Roma tra tanto prego V.S. Ill.ma ricordare la mia humilissima servitù al Eminent.mo Padrone, bagian-doli di core le mani di Messina li X di Xbre 1640
 Aff. Se.re
 Pietro Castello

*Stefano de Gasparis, *Liquoris artificialis pro opobalsamo orientali in conficienda theriaca Romae adhibiti physica oppugnatio...* (Roma 1640)

(7)
 Mando à V.S. Ill.ma la forma e l'indice delle Piante del Horto Messinese, essendo io in Roma lettor de Semplici, ero senza Horto, hora ho l'horto e non la lettura de semplici, leggendo io nello studio la Prattica e l'Anatomia, se bene nel Horto insegno i semplici, e la Chimica havendomi fatto un bellissimo destillatorio, che ristampando l'Horto farò l'aggiunta non solo de semplici che stò di giorno in giorno acquistando; mà anco della mia Officina chimica e de forni che mi hò fatto fare, e poiche Roma non mi vole, e stima un Tobia* per maggior semplicista, per maggior Chimico, per maggior Cosmografo, e per maggior filosofo e Medico che Dioscorde, Paracelso, Tolomeo, Aristotele e Galeno quali tutti al suo dire sono ignoranti; dunque Tobia l'Horto, et io il nome di semplicista con solo >(onze ?) 80? Sia ringratiato Dio, qui ne hò mille, e quello di più, che si guadagna nel medicare e ben vero, che piu volentieri starei in Roma per 300. [B]astami che Roma mi conosca, e fra tanti anch'io ho scritto del Balsamo. e se Roma non mi volse ne per Teorico ne per Prattico: mà solo per semplice straordinario de leggere le feste e le vacanze. Eccoche qui sono omnia. Medica prima Teorico, poi Prattico, Notomista, Chimico, e semplicista teorico a prattico. Eccoche è verissimo Nemo Profeta in Patria, un Romano non è stato degno di leggere in Roma ne Teorica, ne Prattica; ma à Monte rotondo, Fiorenza, Aquila, Spoleto si mi doglio spesso della mia cattiva sorte ma bisogna per forza haver pazienza. Non dimeno stia pur io in questo estremo d'italia, e d'Europa pur voglio, che per il Mondo si sappia che son vivo, non cessando dar gran voci, e risonanti bombi con le mie stampe; et hor si preme il n.o libro *de Vomitu* accetti V.S. Ill.ma questo picciol dono d'un Horto per regno del grande che vorrei offerirli, e li b. le m.i di Messina il p.o di Marzo 1641.
 Affe.mo Se.re
 Pietro Castello
 *Tobia Aldini

(8)
 Intendo, che l'Eminent.mo Sig.r Card.al Padrone vole fare un Horto publico de semplici per lo studio di Roma, non sò chi prenderà per lettore de semplici. Et perche il sig. Gio. Benedetto Sinibaldi è stato eletto per lettore in Messina, e lascerà la lettura di Roma, che ora de semplici, de quali egli niente sà ne mai hà fatto professione. Hora prego V.S. Ill.ma proponere à S. E.za et à Mons. Cenci me per il detto Horto, ne possono dire, che io non me ne intenda; perche vedranno, se sò de semplici, e far Horti, dal Horto Mesinese che hò qui fatto, et in stampa dedicata à S.a Eminenza, il quale quando mio Nepote* glilo presentò, gli disse che sarebbe venuto occasione di favorirmi. Hora è il tempo, che V. S. Ill.mo mi può favorire, e farmi tornare à Roma, che se bene qui sto bene, pure desidero stare in Roma, con la metà dello stipendio che qui hò però prego V.S. Ill.mo quanto sòl, e posso, che si degna dire qualche parola per me, che à tanti oblighi, che li devo aggiongerà questo, che è il maggiore, che li possa dimandare, e con tutto il core li b. le m. di Messina li 18 di Aprile 1643.
 Obligat.o Ser.e
 Pietro Castello (*Francesco Corvino?)

- 1 The title page reads: *Petri Castelli Romani, Nobilis Messanensis Philosophi, et Medici. In Celeberrimo Mamertinorum Gymnasio Medicina Practica Professoris Primarij. Anatomici Publici Chimiae extraordinarij interpretis. Atque Academici Horti Simplicium Proto Praefecti, & Fondatoris. Olim In Romano Archigymnasio Philosophiae primum, tum Medicinae, & Simplicium Lectoris. HORTUS MESSANENSIS, Messanae, Typis Viduae Ioannis Francisci Bianco. M.DC.XXXX. Superiorum Permissu.*
- 2 Some of the botanical gardens following the *Hortus Messanensis* included the Hortus Catholicus created by Francesco Cupani in the town of Misilmeri, the garden of Niccolò Gervasi and the *Firriato* of the Prince of Villafranca, both in Palermo.
- 3 C. DOLLO, *Modelli scientifici e filosofici nella Sicilia spagnola*, Napoli 1984, especially Cap. 5 *Tradizionalisti e neoterici a Messina*, pp. 138-179; IDEM, *Fra tradizione e innovazione, L'insegnamento messinese della medicina e delle scienze nei secoli XVI e XVII*, in «Annali di Storia delle Università Italiane», v. 2, 1998; A. OTTAVIANI, *Da Fabio Colonna a Paolo Boccone: momenti della storia della botanica fra Napoli e Sicilia* & O. TRABUCCO, *La corrispondenza tra Pietro Castelli e Marco Aurelio Severino*, in *Filosofia e Scienze nella Sicilia dei Secoli XVI e XVII*, Catania 1996, vol. I, pp. 109-131 & pp. 137-166; A. OTTAVIANI, *Nemo Nauta Ex Libris: Pietro Castelli e la scienza botanica fra Roma e Messina*, in «Medicina nei Secoli, Arte e Scienza, Journal of History of Medicine», n.s. v. 12, n.1, 2000, pp. 551-563.
- 4 Passing references may be found in L. TONGIORGI TOMASI, *Botanical Gardens of the Sixteenth and Seventeenth Centuries*, in *The Architecture of Western Gardens*, Cambridge MA 1991, pp. 81-82; J. DIXON HUNT, *Curiosities to Adorn Cabinets and Gardens*, in *The Origins of Museums*, Oxford 1985, p. 26; P. FINDLEN, *Possessing Nature, Museums, Collecting, and Scientific Culture in Early Modern Italy*, Berkeley 1994, p. 256. However no mention is made of the *Hortus* in G. PIRRONI, *L'Isola del Sole, Architettura dei giardini di Sicilia*, Milano 1994, or T. PUGLIATTI, *Le raccolte di meraviglie a Messina nel Seicento*, in *Wunderkammer siciliana*, Napoli 2001, pp. 47-53.
- 5 Along with the works already cited, see A. DE FERRARI, *Pietro Castelli*, in *Dizionario Biografico degli Italiani (DBI)*, v. 21, Roma 1978, pp. 747-751 with references to the important earlier literature. De Ferrari suggests that Castelli's birth was between 1570 and 1575 but that seems a little early given the dates of his first publications. Castelli dedicates one early work, *Discorso della duratione delli medicamenti tanto semplici quanto composti*, Roma 1621, *Alli molti illustri signori, Li S.S. Francesco Castelli et Diana de Georgi Padre, & Madre miei Carissimi*.
- 6 *Ivi*, v. 16 pp. 301-303.
- 7 Castelli included an *Opinione D'Arigo Corvino di Delfo in Olandia, Spetiale in Roma all'insegna dell'Aquila Imperiale* in his *Discorso della duratione delli medicamenti*. Corvino praises his brother-in-law as an assiduous observer. See also J. CONNORS, *Virtuoso Architecture in Cassiano's Rome*, London 1992, vol. II, p. 23.
- 8 Castelli dedicated his *Epistola secunda de Helleboro*, Roma 1622, to Cassiano. For Castelli's activity in Rome see A. OTTAVIANI, *Da Fabio Colonna a Paolo Boccone... cit.*, pp. 139-141; R. PIROTTA and E. CHIOVENDA, *Flora Romana*, Roma 1900, pp.93-95.
- 9 G. MORONI, *Dizionario di erudizione storico-ecclesiastica*, Roma 1840-79, vol. 5, p. 251; A. SUTHERLAND HARRIS, *Andrea Sacchi's 'Portrait of a Cardinal'*, «National Gallery of Canada Bulletin», 1969, vol. 14, pp. 9-15, esp. n. 19; J. CONNORS, *Biscia, Lelio*, in *Grove Dictionary of Art*, New York & London 1996, vol. 4, p. 90; L. RICE, *The Altars and Altarpieces of New St. Peter's*, Cambridge 1997; E. LINGO, *The Greek Manner and a Christian Canon: François Duquesnoy's Saint Susanna*, in «Art Bulletin», March 2002, 73, 90 n. 94.
- 10 *Incendio del Monte Vesuvio, Di Pietro Castelli Romano, Lettore nello Studio di Roma già di Filosofia, & hora di Medicina, Nel quale si tratta di tutti gli Luoghi ardenti, delle Differenze delli Fuoghi, Prognostici, e Rimedii, con Metodo distinto, Historico e Filosofico*, Roma 1632.
- 11 P. CASTELLI, *Antidotario Romano*, Messina 1638, Dedication to Cardinale Biscia.
- 12 *Epistolae medicinales Petri Castelli philosophi, ac medici Romani, et in almae urbis Gymnasio professoris*, Roma 1626. In his dedication to Francesco Barberini he writes : «Tu enim ille es, qui me ad publice legendi munus in Romano Lyceo praeceteris elegisti...».
- 13 W. COLES *The Art of Simpling an Introduction to the knowledge and gathering of plants*, London 1656, p. 1.
- 14 *Hortus Messanensis "Alli Begnini Lettori" 4*.
- 15 Appendix I #7. In Messina Castelli still lectured on simples but in the garden rather than the University.
- 16 *Exactissima descriptio rariorum quarundam plantarum, que continentur Rome in Horto Farnesiano Tobia Aldino Cesenate Auctore*, Roma 1625. See D. COFFIN, *Gardens and Gardening in Papal Rome*, Princeton 1991, pp. 208-209; P.B. NOCCHI & E. PELLEGRINI, *La collezione botanica del Cardinale Odoardo*, in *Gli Orti Farnesiani sul Palatino*, Roma 1990, 419 with further references.
- 17 N. BAROZZI & G. BERCHET, *Relazioni degli stati europei lette al senato dagli abasciatori veneti nel secolo decimosettimo*, Venezia 1877, Serie III, vol. 1, p. 278.
- 18 Appendix I #7.
- 19 O. TRABUCCO, *La corrispondenza... cit.*, pp. 112-113 and Appendix I #.
- 20 Until now only the print displaying all fourteen *hortuli* has been published.
- 21 Reprinted in O. TRABUCCO, *La corrispondenza... cit.*, p. 126.
- 22 Appendix I #8.
- 23 P. CASTELLI, *Hortus...,"Alli Benigni Lettori" unnumbered pp. 2-3*.
- 24 *Ivi*, p. 5.

- 25 *Ivi*, p. 5.
- 26 *Ivi*, pp. 6-7.
- 27 *Ivi*, p. 9.
- 28 J. ACKERMAN, *The Villa, Form and Ideology of Country Houses*, Princeton 1990, esp. chap. 5 *The Image of Country Life in Sixteenth-Century Villa Books*.
- 29 G. ARENAPRIMA DI MONTECHIARO, *I lettori dello Studio messinese dal 1636 al 1674, Notizie e documenti*, in *CCCL anniversario della Università di Messina (contributo storico)*, Messina 1900, pp. 271-273. Ponzello's position in the history of architecture in Messina has been reappraised and elevated in recent scholarship. See N. ARICÒ, *Un'opera postuma di Jacopo Del Duca: il Teatro Marittimo di Messina*, in *L'Urbanistica del Cinquecento in Sicilia*, a cura di A. Casamento and E. Guidoni, Roma 1999, pp. 172-193.
- 30 *Oprobalsamo triumphans*, Messina 1640.
- 31 On patronage of the natural sciences in this period see: Bruce T. Moran ed., *Patronage and Institutions, Science, Technology, and Medicine at the European Court 1500-1750*, Suffolk 1991, esp. P. FINDLEN, *The Economy of Scientific Exchange in Early Modern Italy*, pp. 5-24.
- 32 Appendix I #3.
- 33 M. AZZI VISENTINI, *L'Orto Botanico di Padova e il giardino del Rinascimento*, Milano 1984, pp. 118-119.
- 34 L. TONGIORGI TOMASI and F. GARBARI, *Il Giardiniere del Granduca, Storia e immagini del Codice Casabona*, Pisa 1995, Fig. 9.
- 35 G.B. FALDA, *Li Giardini di Roma...*, Roma 1683, *Veduta del Giardino di Belvedere del Palazzo Pontificio in Vaticano*. In the legend I. indicates *Giardino de semplici, con varie Piante peregrine*.
- 36 P. FINDLEN, *Possessing Nature...* cit., pp. 257-258.
- 37 L. TONGIORGI TOMASI, *Art and Nature in the Giardino dei Semplici: From its origins to the end of the Medici dynasty*, in *Giardino dei Semplici*, Pisa 2002, pp. 149-188.
- 38 P. REINA, *Delle Notizie Istoriche della Citta di Messina, Prima Parte...*, Messina 1658, p. 11. The letter probably dates from before 1643 because Panaroli mentions the Hortus on p. 75 of his *Plantarum Amphitheatralium Catalogus* published in Rome that year. "*Hortum Messanensem magister meus Petrus Castellus Romanus feliciter fabricauit, sicut Catalogum.*"
- 39 G. OLMI, *L'inventario del mondo, Catalogazione della natura e luoghi del sapere nella prima età moderna*, Bologna 1992, p. 276, among many others, emphasizes the importance of the unique including the monstrous and bizarre in early museums.
- 40 P. BEMBO, *Lyric Poetry; Etna*, Cambridge MA 2005, pp. 207, 225.
- 41 On the *Mundus* see: S. JAY GOULD, *Father Athanasius on the Isthmus of a Middle State, Understanding Kircher's Paleontology, in Athanasius Kircher, The Last Man Who Knew Everything*, Routledge New York 2004, pp. 207-237; N. MORELLO, *Nel Corpo della Terra. Il Geocosmo di Athanasius Kircher*, in *Athanasius Kircher: il museo del mondo*, Roma 2001, pp. 178-196; A. HAAKMAN, *Il mondo sotterraneo di Athanasius Kircher*, Milano 1995.
- 42 Appendix I #2.
- 43 On Kircher in Sicily, P. CONOR REILLY, *Athanasius Kircher S.J., Master of a Hundred Arts 1602-1680, Studia Kircheriana Band I*, Wiesbaden 1974, chap. V *Southward Journey*, pp. 65-71; also N. MORELLO, *Nel Corpo della Terra...* cit., pp. 186-188.
- 44 Appendix I #2.
- 45 Appendix I #3.
- 46 *Teriaca d'Andromaco composta pubblicamente in Messina da Gio. Domenico Cardullo, Messinese Spetiale all'insegna di S. Giorgio*, Messina 1637, pp. 34, 44, 48.
- 47 P. SKIPPON, *A Journey through Part of the Low-Countries, Germany, Italy and France...* in *A Collection of Voyages and Travels, Now first printed from Original Manuscripts others Now First Published in English*, London 1732, v. VI, pp. 613-614. This reference to a study of insects, confirms another, later mentioning of the compendium by the historian Caio Domenico Gallo. He wrote that the work, now lost, was illustrated by Agostino Scilla. C.D. Gallo, *Annali della Città di Messina*, Messina 1804, libro IV, p. 418, cited in C. DOLLO, *Modelli Scientifici...* cit., p. 149 n. 37.
- 48 A. MEROLA, *L'Orto Botanico di Messina*, in «Agricoltura», anno XII, aprile 1963, p. 94; G. TRIPODI, *L'Orto Botanico 'Pietro Castelli'*, in «Annali di Storia delle università italiane», vol. 2, 1998, pp. 150-151.
- 49 L. DUFOUR and G. PAGNANO, *La Sicilia del '700 nell'opera di Léon Dufourny, L'Orto Botanico di Palermo*, Palermo 1996. An important exception is Rosario Di Gregorio, *Dell'Orto Botanico di Palermo*, in *Discorsi Intorno alla Sicilia*, Palermo 1821, tom. II, pp. 126-129. He recognized that the palermitan garden was part of a long tradition of botanical gardens and research in Sicily, including Castelli and the *Hortus Messanensis*.