

# FROM THE NEW WORLD TO BARCELONA: AMERICAN FLORA IN THE SALVADOR'S CABINET

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**Resumo:** A expansão geográfica vivenciada pela Europa a partir do século XVI não se limitou ao avanço das fronteiras territoriais. O surgimento do Novo Mundo trouxe à tona toda uma infinidade de novidades naturais, que contribuíram para o desenvolvimento de diversas áreas do saber. Coletar, intercambiar correspondências e materiais de estudo, entre outras práticas serviram para produzir e colocar em circulação novos conhecimentos, novos produtos e usos das espécies naturais americanas. Estes intercâmbios foram viabilizados pela densa rede de comunicação científica intensificada no século XVII, por naturalistas de toda a Europa. Barcelona conheceu estas novidades, em especial, pela atividade da família de boticários e colecionadores Salvador.

**Palavras-chave:** República das Letras; Barcelona; família Salvador; plantas americanas.

**Abstract:** Europe's 16<sup>th</sup> century geographical expansion was not limited to territorial borders. The emergence of the New World brought to the forefront a myriad of natural novelties that contributed to the development of several areas of knowledge. Practices including collecting, correspondence, and the study of materials produced and put into circulation new products, knowledge, and uses of American natural species. The dense network of scientific communi-

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cation that made this exchange possible intensified, incorporating naturalists from all over Europe by the 17<sup>th</sup> century. Barcelona came to know these innovations in part through the Salvador family of apothecaries and collectors.

**Keywords:** Republic of Letters; Barcelona; Salvador family; American plants.

The period between the 17<sup>th</sup> and 18<sup>th</sup> centuries of the modern era in Europe was marked by novelties, news of which buzzed throughout the old continent. As long-distance navigation expanded the limits defined by cartography, intense cultural, economic, and social exchanges created new paradigms. These contribute to the development of several areas of knowledge about Natural Philosophy. By connecting Europeans seafarers, nobles, and clergymen with the peoples of distant places, the *Carreira das Índias* provided a crucial basis for the vibrant culture Europe unleashed from the 16<sup>th</sup> century onwards.

The natural world narrowed the trade relations of the period. The new territorial possession's fauna and flora were exploited to the limit by the apothecaries and physicians who were sent to the colonies of the tropics to study both the new species and their use in local medicine<sup>1</sup>. Ships that crossed the ocean facilitated the circulation of this new knowledge, influencing the movement of medical and botanical information, as well as of exotic species and products themselves. Therefore, we can say that these commercial networks shaped the way practitioners did science.

From the Renaissance to the Enlightenment, a new «fashion» prevailed in cultured circles throughout Europe. Collecting became both a hobby and a way of life for those intent on achieving a certain social standing. Everything considered curious or wonderful was worthy of being collected. What was a passion for some, became a potential tool for scholars and humanists, who saw in these spaces a possibility of accumulating knowledge about the natural world and, thus, unveiling the mechanisms that allowed humans dominate the nature.

Geographical expansion led to further deviation in collecting's purpose. Initiated by the Iberian Peninsula, this expansion was promptly followed by almost all the European maritime powers who endeavoured to discover and explore their new possessions and, consequently, to control both trans-oceanic and internal commercial routes.

At the same time that the so-called «first globalized age» approached distant places – creating new commodities and enriching the old continent's naturalistic collections with new botanical specimens – the more distant the dream of control over nature became.

Knowing and understanding the natural world posed perhaps the greatest challenge for scholars of the period. This task required varied studies and practices in order to accumulate as much information as possible about each species. Naturalists acquired this much-needed information by comparing observations made by all those dedicated to describing and classifying such species.

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<sup>1</sup> MARGÓCSY, 2014.

For political and geographic reasons, the first experts to gain access to these products were those that had some ties to the new colonies and, crucial for transportation logistics, territories located near the sea. In order for the news of these objects to spread throughout the European territory, including more peripheral places, experts relied on a network for dissemination, information, and exchange of flora and fauna. The European scientific culture – which became known as the Republic of Letters – was then identified by a series of unique cultural practices. Social conventions allowed members to establish and maintain communication in a network in which both ideas and materials, including gifts, specimens, books and instruments circulated.

In this chapter, I situate the city of Barcelona and some of its most important actors in the scientific communication network, with the aim of overcoming the old dichotomy between center and periphery, demonstrating how knowledge is produced and circulated not only in cities with political courts, universities, botanic gardens and scientific societies, as well as – in an essential way for the maintenance of the network – in cities in different relative positions, spaces of action also of naturalists, collectors and natural philosophers with a remarkable scientific activity. The capital of Catalonia had a family of naturalists who for almost two hundred years had been committed to maintaining this important network of dissemination and scientific exchange. Through the Salvador's scientific activity, it is possible to highlight the substantial practices that should be performed so that they also had access to the novelties in natural history. Through the species of American plants from the Catalan apothecaries' collection – whether in the books from the private library, as seeds grown in the family garden, dried plants in their herbarium, or mentioned in the epistolary correspondence that they maintained with the most prestigious experts of the day – it is possible to verify that, even while «distant» from the intellectual centers, the apothecaries of the Salvador family were not only informed by innovations in natural history, but also active contributors to the advancement of scientific knowledge.

## **FROM THE PERIPHERY TO THE GREAT CENTERS OR FROM THE GREAT CENTERS TO THE PERIPHERY: INTEGRATING BARCELONA AND THE SALVADOR FAMILY INTO THE INTERNATIONAL SCIENTIFIC ROUTE**

A family of apothecaries, collectors, and natural philosophers in Barcelona active from the beginning of the 17<sup>th</sup> century to the mid-19<sup>th</sup> century, the Salvador family provides an important example of how residents in a peripheral city could develop innovations that arrived in the urban centers in this period.

The first member of this line of professionals was Joan Salvador i Boscá (1598-1681), who coming from Calella arrived in Barcelona in 1616 to work with the promising but demanding craft of the apothecary. The story of the Salvador family began when Joan used a classic strategy to improve his social standing: he married the daughter of a master and, thus, acquired a reputable position within the Boticarios Guild<sup>2</sup>. Six years after his arrival in the city, in 1622, Joan married Victoria Pedrol, daugh-

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<sup>2</sup> About the Apothecaries's Guild and the professional activity of this metier in Barcelona, see CAMARASA, 2008.

ter of Gabriel Pedrol, giving him both the title of master apothecary and also the inheritance of his father-in-law's business, that is, a pharmacy located on Ample Street. This was a remarkable location, privileged by a proximity to the sea which granted the pharmacy strategic access to news that arrived with the boats on the edge of Barcelona<sup>3</sup>.

But what interests us here in particular is that, in addition to the economic strategies involved in this business, Joan was responsible for starting a cultural practice, very characteristic of his time: the configuration of a library and establishment of a scientific network that allowed him to lay the foundations of the collections of books, natural and artificial objects, and exotic products that would have become the Salvador family's hallmark for nearly two centuries.

Guided by his interest in plants, Joan established intense exchanges of correspondence and information with the period's leading authorities, such as Jacques Barrelier (1606-1673). Although Joan set the precedent, acquiring important texts for the library and establishing key relationships inside and outside Barcelona, his son Jaume Salvador i Pedrol (1649-1740) intensified these practices and became one of his family's most illustrious members.

When we speak of Jaume's expansive career, we can not ignore his professional training. Unlike his father, Jaume studied in Montpellier, Toulouse, and Marseille. Besides providing him better training than he could find in Barcelona, access to these important centers offered him an excellent opportunity to develop contact with the most important naturalists in natural history of the moment. Thus, Jaume established relationships especially with specialists in botany, such as John Ray (1627-1705), Pierre Magnol (1638-1717) and Joseph Pitton de Tournefort (1656-1708)<sup>4</sup>.

Decades later, Jaume's eldest son, Joan Salvador i Riera (1683-1726), took up the family business. In addition to studying in Montpellier, as his father had, Joan also studied in Paris and travelled to Italy, where he learned about important scientific practices such as herborization, collecting objects, epistolary exchanges, among others. He established a network of relationships that linked Barcelona with London, Leiden, Paris, Montpelier, Madrid, Lisbon, Florence and Rome.

Throughout his career, the young apothecary also acquired numerous and relevant works of botany, chemistry, and medicine. His relationship with Herrmann Boerhaave (1668-1738), Professor of Medicine and head of the University of Leyden Botanical Garden and one of the time's leading natural philosophers, had a decisive influence on Joan's professional life. In addition to Boerhaave, Charles Plumier (1646-1704), one of the first to publish relevant floristics data about tropical America<sup>5</sup>, also had a profound impact Joan's scientific interests. Joan's early death led his brother Josep Salvador i Riera (1690-1761) to continue the family business. In addition to maintaining important epistolary relationships, Josep was also responsible for systematizing and organizing the family's museum and library.

From the exchanges and achievements made by these four members of three generations of the same family we might say that the Botanical Garden created by Jaume in Sant Joan Despí, was the

<sup>3</sup> PARDO-TOMÁS, 2008: 51.

<sup>4</sup> For more biographical data of the Salvador's apothecaries family, see POURRET, 1796; BOLÒS, 1959.

<sup>5</sup> PLUMIER, 1703.

first private place in Spain where common plants from gardens all over Europe were grown. Among these European plants were exotic species from the New World, which were acquired by the Salvador family's international and local commercial agents and correspondents, including contacts from Cadiz, Seville, Valencia and Lisbon. In addition to the garden, over almost two centuries the family developed a library that reflects the birth and development of modern western science. The many books, seeds, roots, oils, flowers, fruits, and curious objects acquired by the family transformed the Salvador's collection into a Cabinet of Curiosities<sup>6</sup>.

Preserving these Cabinets of Curiosities, very common between the 16<sup>th</sup> and 18<sup>th</sup> centuries, has not been an easy task. Most of them either have been lost to time or were broken up into smaller parts, severed from their former whole, and spread among different collections throughout the world<sup>7</sup>. Unlike the destiny of most of their fellows, much of the Salvador's collection still remains to this day, conserved by the Institut Botànic de Barcelona.

In order to understand the role played by these Barcelonan apothecaries and their position in the dense network of early modern scientific communication, this chapter analyses different types of writing produced at the Cabinet, a space for the production and circulation of knowledge about nature. As we have seen, European scientific culture was identified by a series of original and cultural practices. In addition to the characteristics indicated above, two fundamental practices that ensured communication of scientific networks deserve mention: books and letters<sup>8</sup>.

## **READ IN BOOKS, PLANTED IN THE GARDEN: THE LIBRARY AND HERBARIUM AS SPACES FOR THE PRODUCTION OF NATURAL KNOWLEDGE**

One of the essential issues when working with a library constituted for more than two centuries is that the acquisition of books was not limited to the latest bibliographical novelties. The collection is formed by both newly-written treatises as well as by older works. In the library like the curiosity cabinet, collecting had epistemological implications. We cannot forget that, during this period, students of natural history first turned to antiquity.

Besides being a continuous source of information on what was published about the topic of interest, the library was an essential tool for the identification, ordering, and classification of objects obtained both in travel and exchange with remote contacts. It provided the Salvador with an essential mechanism for contrasting their own observations of nature with what the classics had noted before them.

The apothecaries of the Salvador family assembled one of the largest libraries of the city in laic hands, complete with more than a thousand titles. Most of these texts focused on topics directly linked to the family occupation: natural history, pharmacopoeias, and medical matters<sup>9</sup>.

<sup>6</sup> About the Cabinets of Curiosities, see IMPEY & MACGREGOR, 1985; POMIAN, 1987; SCHNAPPER, 1988; OLMÍ, 1982; OLMÍ, 1983; OLMÍ, 1992; OLMÍ, 1993; FINDLEN, 1994; DASTON & PARK, 1998; SMITH, 2008; BLEICHMAR & MANCALL, 2011.

<sup>7</sup> PARDO-TOMÁS, 2014: 34.

<sup>8</sup> PARDO-TOMÁS, 2010.

<sup>9</sup> For more information about the Salvador's library, see PARDO-TOMÁS, 2010.

Among the classics, we find the works of Theophrastus, author of one of the treatises essential to understanding how Europeans recovered techniques for studying, describing, and ordering flora. *The Treatise of Dioscorides*<sup>10</sup> – a Greek surgeon who worked in service of Roman armies – described drugs of animal, mineral and, mainly, vegetable origin. And last but not least, we find Pliny's *Compendium of Natural History*<sup>11</sup>, a work referenced by European scholars of nature throughout the centuries.

Although the classics were important references for 17<sup>th</sup> and early 18<sup>th</sup> century naturalists, they lived in a period marked by profound transformations in all areas of knowledge. The Salvador family's private library, reflects these changes, and developed alongside the practice of botany itself. In the collection, works that heralded the discipline's rebirth are well-represented. These texts include several Renaissance works.

When studying the Salvador family, we have to place their interest in botanical works within the context of Spanish – and, more generally, European – scientific activity from the late Renaissance to the Enlightenment. Like many other European collectors of that period, the Salvadors were interested in the exotic plants native to the Americas, as we can see through several works that approach the theme at the Cabinet's library<sup>12</sup>.

The library had important titles concerning American flora. For example, we find the work of Nicolás Monardes (1508-1588) *Primera y segunda y tercera partes de la historia medicinal de las cosas que se traen de nuestras Indias Occidentales...*<sup>13</sup>, published in Seville in 1574. From the same period, we also find the notorious work of Charles L'Écluse (1526-1609), *Rariorum aliquot stirpium per Hispanias observatorum historia*<sup>14</sup>, published in Antwerp in 1576.

In addition, we find the treatise of André Thevet (1516-1590) *Les Singularitez de la France Ant-arctique*<sup>15</sup>, published in 1558, in which the Franciscan friar reports on Portuguese America (that is, Brazil) describes the new territory, its fauna, and its flora. Like many chroniclers, travellers, and missionaries contemporary to Thevet, his work presents the natural colonial world to European readers at a time when Europe was still assimilating the newly discovered curiosities. Another example is *Historia generalis plantarum*<sup>16</sup>, published in 1586 by Jacques Dalechamps (1513-1588), a compilation of all the botanical knowledge of his time. The work is decorated with almost 3,000 engravings, some of which are of American species such as avocado and graviola, with drawings from Clusius and Oviedo, respectively<sup>17</sup>.

Throughout the 17<sup>th</sup> century, exploratory voyages to the colonies intensified, increasing the botanical discoveries. Scholars updated their studies and scientific works to incorporate these new specimens. Works of the British John Ray (with his catalogues of plants) and Hans Sloane<sup>18</sup> (with his travel

<sup>10</sup> DIOSCORIDES, 1547: 14/III/24.

<sup>11</sup> PLÍNIO SEGUNDO, 1524: B/III/12.

<sup>12</sup> For more information about scientific activity and Spanish collectors see REY BUENO & LÓPEZ PÉREZ, 2011.

<sup>13</sup> MONARDES, 1574: 13/IV/13.

<sup>14</sup> L'ÉCLUSE, 1576: 13/III/15.

<sup>15</sup> THEVET, 1558: 14/IV/17.

<sup>16</sup> DALECHAMPS, 1586-1587: 14/VI/11.

<sup>17</sup> The drawings cited appear on pages 1828 and 1835 respectively.

<sup>18</sup> RAY, 1693: 12/VI/4.

relationships) particularly stand out in this period<sup>19</sup>. Towards the end of the 17<sup>th</sup> century, almost two centuries after European's first contact with the American continent, it is not uncommon to find detailed publications about a single species. For example, in the library we find the work of Abraham Munting (1626-1683), *Aloidarium sive alôes mucronato folio americanae majoris, aliarumque ejusdem speciei historia: in qua floridi illius temporis, loci, naturae, culturae, necnon qualitatum ratio paucis enarratur*<sup>20</sup>, from 1680, which deals almost exclusively with the American aloe, a species native to the arid areas of tropical America.

In the Salvador library, a group of works dedicated to certain species, such as cocoa and chocolate, deserves special attention. These are almost always associated with other so-called colonial beverages like coffee and tea – and an important additive: sugar<sup>21</sup>. At the library, we find the interesting work of Philippe Sylvestre Dufour (1622-1687), *Novi tractatus de potu caphé, chinensium thé et de chocolata*<sup>22</sup>, from 1699. In it, Dufour dedicates four chapters to the American fruit, where he makes an analysis of the ingredient, ways to consume it, and its effects. Following the same style, we also find *Histoire naturelle du cacao et du sucre*<sup>23</sup>, published in 1720, by Quélus, which features recipes using cacao. These not only advise the reader how to use the fruit, but also its by-products besides chocolate, such as butter and cocoa oil. This specific book about an American fruit, cacao, shows that its use was already adapted to a newly created «European standard». Here the Salvador library bears witness to how the American fruit was transformed from something new into a staple of European daily life.

Through these examples, we can see how this family of apothecaries from Barcelona kept up-to-date with the news. The same cabinet that housed the collection of books was a space devoted to the circulation of knowledge about New World species.

The Salvador's interest in American nature is confirmed by the herbarium that the family created. Making a herbarium was itself a scientific practice closely related to both the culture of gardens and voyages of exploration, but also to European overseas activity and the colonial trade<sup>24</sup>. Maritime expeditions returned with true botanical treasures, from agricultural crops and new drugs, to spices brought from Asia, East Indies, and the New World. Europeans based in the old world then incorporated these specimens into their botanical gardens.

Known at the time as *hortus medicus* and *hortus academicus*, while these gardens' initial purpose was to assist in the teaching of medical matters, they eventually became sites for the botanical study of new, exotic plant species encountered through European geographic expansion<sup>25</sup>. While Cabinets of Curiosities enjoyed their heyday, the number of scientific publications increased significantly, new

<sup>19</sup> For more information about the scientific activity of Hans Sloane, see WALKER *et al.*, 2012. Reference work: SLOANE, 1696: 14/III/8.

<sup>20</sup> MUNTING, 1680: 12/IV/13.

<sup>21</sup> LEMPS, 1998.

<sup>22</sup> DUFOUR, 1699: A/I/4.

<sup>23</sup> QUÉLUS, 1720: 14/III/13.

<sup>24</sup> About the culture of gardens in Spain, especially in Barcelona, see GARCIA ESPUCHE, 2008. On exploration voyages, European expansion and colonial trade, see COOK, 2007; SCHIEBINGER & SWAN, 2005.

<sup>25</sup> CHABRÁN, 2011.

institutions that aimed at the promoting scientific knowledge emerged and consolidated. The Royal Society, founded in 1660 in London, as well as the Académie des Sciences, founded six years later in Paris became the most important of such institutions. In this period, the private gardens of apothecaries and rich collectors all over Europe also played an important role in pushing the boundaries of botanical knowledge<sup>26</sup>. The garden was another essential complement of the Salvador Cabinet. On the one hand, seed was sown from the exchange with other naturalists and, on the other hand, native species were grown to select the seeds with which to properly correspond to the said exchange. Exotic flora were acclimatized found in gardens of naturalists who possessed enough time and fortune to devote themselves to their botanical pursuits. These gardens, in turn, became a particularly rich space for the production of knowledge about these exotic species. There, naturalists could experiment with crosses of species and varieties, observe growth and reproduction in conditions far more controlled than in an open field. Therefore, the little that we know about the garden that the Salvador created and maintained in their property in Sant Joan Despí is very significant.

The Botanical Garden of Sant Joan Despí was the first space where species now common to the region of Catalonia were grown. We know this mainly thanks to the herbarium, because in several folds we find this origin explicitly described<sup>27</sup>. However, for seasonal or geographic reasons, it was impossible to acquire live plants to be studied. To circumvent this problem, and also to facilitate their circulation, the use of herbarization has become commonplace.

The Salvador's Herbarium is one of the oldest and best documented in Spain. It is formed, mainly, by plants collected in trips, acquired through the Salvador's correspondence, and planted in the Garden of Sant Joan Despí by Jaume and his two sons, Joan and Josep. The vast majority of plants were derived from Catalonia, and in Europe in general. But, to a lesser extent, we can also find exotic species from Africa, Asia and, of course, from America.

Some of the species cited in the works present in the library were cultivated by the family, but the result was not always satisfactory, due to numerous variants. We know of these attempts because IBB counts preserved the herbarium, along with valuable notes made by the members of the Salvador family themselves. For example, Joan Salvador cultivated the *Mimosa americana*, but he could not make it bear fruit; it could not thrive in the low temperatures and died during the winter<sup>28</sup>.

In addition to mimosa, several other American species were grown in the garden of Sant Joan Despí and documented in the herbarium's family. Among them, we can highlight the passion flower, as well as tomatoes, vanilla, and some species of acacia trees and pumpkins<sup>29</sup>. Many of these species came to Barcelona through exchanges with naturalist who were members of the major scientific societies and involved with the most prestigious botanical gardens of time. For example, James Petiver of

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<sup>26</sup> MATAS, 2008: 65-69.

For more information about botanical gardens and its relation with a new science devoted to discovering and describing plants, see OGILVIE, 2006.

<sup>27</sup> IBÁÑEZ CORTINA & MONTSERRAT, 2008: 122-123.

<sup>28</sup> PARDO-TOMÁS, 2014: 89.

<sup>29</sup> IBÁÑEZ CORTINA & MONTSERRAT, 2008: 131-134.



the Chelsea Physic Garden facilitated the acquisition of plants from India, South Africa, and North America, while Tournefort from the Jardin des Plantes, in Paris, sent seeds and herbal plants from tropical America<sup>30</sup>.

Relationships were essential for this network of scientific dissemination network to thrive. Through exchanges of seeds, dried plants, roots, and fruits, as well as books, naturalists from secondary routes, such as Barcelona, were granted access to news that came to the capitals that dominated the colonial trade. In a double-lane way, this system also favoured naturalists from places integrated into the main interoceanic routes who were knowledgeable about the flora of more distant regions, though from their own continent<sup>31</sup>.

The gardens and herbaria, together with the technical information from books specialized in natural history, are indicators that the Salvador's interest went beyond the theoretical exercise of observation, and took shape in the curiosity with which they follow each stage in an unknown plant's cycle. «Mastering» the plant was important for practical as well as epistemological reasons; they needed to understand the plant's cycle to create a stock for future exchanges and thus maintain their position in the scientific network.

Thus, through Salvador's contacts we can reconstruct the network of information and relationships established by the this family of apothecaries.

## LETTERS FOR MATERIALS: THE INTERNATIONALIZATION OF NATURE AND NATURALISTS

Analyzing the handwritten documentation produced in a Natural History cabinet is essential to understand the protocols adopted by its owners to insert and keep themselves in this network. Like the library's contents provided a window into the Salvador's interest in American flora, the correspondence exchanged between our apothecary family and other European naturalists serves as a guide to understanding the relationship between Catalan naturalists and the Republic of Letters. Through these correspondence, we can see their interests, what paths they travelled, and what goals they set out to achieve in reference to American botanical specimens.

The collection of correspondence preserved by the Botanical Institute of Barcelona, is historically invaluable. The epistolary relations of the family, initiated by grandfather Joan with Jacques Barrelier in the 1620s, gradually intensified over the following generations, and reached its apex under the older grandson, Joan, during the period 1706-1726.

From Ample Street, letters came from all corners of the old continent. Correspondence flooded in from England, Austria, France, Portugal, Italy, the Netherlands, as well as from various places in Spain itself. Perhaps the Republic of Letters' main characteristic is that it made knowledge accessible to all parts of Europe, regardless of the participants' geographic location. Thus, in these manuscripts we find the materials with which to reconstruct the scientific activity of the Salvadors, showing how

<sup>30</sup> IBÁÑEZ CORTINA & MONTSERRAT, 2008: 126.

<sup>31</sup> IBÁÑEZ CORTINA *et al.*, 2006.

their connection to the networks of epistolary communication, and scientific production and dissemination developed during the 18<sup>th</sup> century<sup>32</sup>.

As mentioned above, the correspondences of Joan Salvador i Riera are by far the most extensive and interesting in the collection. His letters allow us not only to reconstruct his scientific trajectory, but also to envisage the friendly, personal and professional relationships he established with numerous naturalists of his time, from which he acquired many objects, specimens, and books that enriched the family collection.

In his day, the Catalan apothecary and naturalist was in contact with several notable naturalists. Among them, the friendship and bond he developed with James Petiver (1663-1718) was perhaps the most fruitful for young Joan. James Petiver was a noted English apothecary and member of the Royal Society who enjoyed considerable prestige among naturalists of the time. Disciple and friend of John Ray, he was for many years responsible for Chelsea Physic Garden and, throughout his life, developed his own important naturalistic collection.

Joan Salvador initiated his correspondence with the English naturalist in December 1706. The young apothecary reached out a few months after his return to Barcelona after he concluded his studies in Montpellier with Pierre Magnol and in Paris with Tournefort, and after having travelled through France and Italy for more than two years.

A portion of Salvador and Petiver's correspondence, which lasted from from 1706 to 1714, coincided with the years of the Spanish War of Succession<sup>33</sup>. During this period, another important figure approached Joan, and that figure became a fundamental part of his relationship with Petiver. As a Doctor of the British army, the Dutchman John Lecaan had arrived in Barcelona to stay in the city under the service of court of the archduke Carlos. Guided by his interests in natural history, Lecaan likely visited the apothecary Salvador to participate in some of the reunions and gatherings of local and foreign apothecaries, doctors and surgeons promoted by the family<sup>34</sup>. In addition to having initiated the relations of Joan Salvador with Boerhaave, Lecaan acted as mediator between Joan's correspondence with James Petiver. He was responsible for the interchanges of plant species among them, as Petiver mentioned in one of his letters to Joan «The Doctor. Lecaan will indicate how to send me his letters without obstacles or will take care of them himself»<sup>35</sup>.

Interest in American plants was recurrent among naturalists of the 18<sup>th</sup> century and it provided a common interest among these three naturalists of different nationalities. In his book<sup>36</sup>, Lecaan discusses *ipecacuanha*, a plant native to America and widely used, especially in France, as part of a cure for dysentery discovered by Helvetius<sup>37</sup> and discussed by Willem Piso<sup>38</sup>.

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<sup>32</sup> PARDO-TOMÁS, 2010.

<sup>33</sup> About correspondence exchanged between Joan Salvador i Riera and James Petiver during the Spanish War of Succession, see CAMARASA & IBÁÑEZ CORTINA, 2007; IBÁÑEZ CORTINA, 2012.

<sup>34</sup> MARTÍ ESCAYOL, 2001.

<sup>35</sup> PETIVER, James – *Letter addressed to Joan Salvador i Riera sent from London* on April 21, 1708. Botanical Institute of Barcelona.

<sup>36</sup> LECAAN, 1708: 13/IV/3.

<sup>37</sup> The work in which Adrian Helvetius indicates *ipecacuanha* is also in the Salvador Library, under register 2/II/23.

<sup>38</sup> MARTÍ ESCAYOL, 2001: 181-182.

Lecaa's compatriot and fellow practitioner, Piso, was one of the leading physicians and herbarium creators of the modern era. As doctor of the Dutch colony in the Brazilian northeast, Piso also wrote the first natural history book about from Brazil – *Naturalis brasiliae* – a compendium of tropical medicine written in the period when a part of Brazil was under the dominion of Maurício de Nassau.

Obviously, Lecaa's interest in the American botanical species was distinct from those of Petiver and Joan Salvador. While Lecaa was interested in medical botany framed in the military sphere<sup>39</sup>, James Petiver had an interest in both collecting and commerce, and successfully established himself as one of the most influential commodity intermediaries of the 18<sup>th</sup> century. Petiver relied on two main types of supply: exchange with participants in the Republic of Letters throughout Europe and with travellers in commercial enterprises<sup>40</sup>. Thus, with the suppliers' cooperation, Petiver gained access to many plants, seeds, roots, and other materials that his contacts sent from the American colonies; the London apothecary then disseminated and sent them along to contacts connected through the intensive and extensive communication network.

Merchandise exchange lay at the heart of relations between Petiver and Joan Salvador, as it also did in almost all their other correspondence. Petiver sent exotic species acquired by his contacts in the colonies of the New World, and received in return several specimens from Catalonia, especially from the Balearics, from Joan Salvador. For example, in 1712 a letter sent to Joan Salvador, James Petiver wrote:

*I wanted to take the opportunity to send you a consignment, as I promised in exchange for yours. It would have been more abundant had it not been for the sudden departure of Mr Naper, the illustrious surgeon. Nevertheless, you will find about forty American plants, most of them from Virginia, the rest from Jamaica. I would rather have sent better specimens but coarse and ignorant hands collected them because there are very few in those places that know anything about botany and even fewer who like to collect plants or that even have any idea why this is done. I have added to these around fifty English sedges and rushes and similar herbs regardless of the fact of their similarity in appearance or their being the same sent by you from Port Mahon, from where not long ago I received two volumes from someone else and daily expect other volumes). Although I do not have too many, I will naturally send you duplicates of those roots I sent you that are at least rare and no-one else has. As for the content of this consignment, you can just imagine the wonderful specimens from Asia, Africa and America that nobody else but myself can send you that you will receive in the next consignments. In exchange, I hope that, in the future, you do not fail to take advantage of any opportunity to obtain for me collections of animals, vegetables and fossils from these parts of the two Indies with which the Spaniards commerce, especially Peru and Mexico, this latter*

<sup>39</sup> According to Maria Antònia Martí Escayol (MARTÍ ESCAYOL, 2001), in the 17<sup>th</sup> century the great shipping companies employed medical personnel, both in their ships and in their possessions of the East and West Indies. These doctors were important points for the development of the medicine, since they informed about great amount of illnesses and remedies unknown until then. These plants have aroused the interest of physicians and naturalists and were an essential point for the development of medical matter and for natural history. On the other hand, according to political interpretation, natural history will become a political element of maximum strategic importance. Through the knowledge of the plants one could know other cultures, something that made them more dominated.

<sup>40</sup> DELBOURGO, 2012.

*place which Hernández and others have illustrated. In the meantime, I would be very grateful for anything that you may find wherever you go in your country, as I was not so long ago with the Squilla lata rondeletti and the crab that you sent me [...]*<sup>41</sup>.

Exotic materials – especially from America – exchanged between London and Barcelona were not limited to animal and botanical specimens. Petiver was also a major publisher and seller of books and studies recently published on the natural history; many of his publications now remain in the private library of Salvador. In a letter dated April 1715, Petiver said to send Joan his *American Pterigraphia*:

*These will be sent with my next shipment, as well as my American Pterigraphia, which contains the complete figures of about 200 rare American ferns, most extracted from the Histoire des Fouguières, by Plumier, to which I have added several marine productions and some animals [...] I am now recording 50 plants from Peru and Chile copied from Feuille's drawings. I need a lot to know what transport facilities for Madrid are within your reach so that with the shipments that I will send you I will have the chance to get together sent by Mr. Riqueur, the king's apothecary, Dr. Burlett, his first doctor and others, of whom I have Received some seeds by way of my lord Lexington [...] I am very happy with the prospects of the group of plants, animals and curious fossils that you will find in your travels in the Pyrenees and Montserrat and I will give you a great satisfaction for the ones that I will receive from you and, with your permission, you stamp all things [which] are new or proper to those mountains*<sup>42</sup>.

The exchange of correspondence and materials between the English naturalist and Joan Salvador lasted until 1718, when James Petiver died<sup>43</sup>. Although this relationship proved to be very advantageous for Joan's international reputation as a respected scientist, some of the network's contacts were most relevant to the pursuit of American plants. For this reason, I highlight the correspondence between acquaintances in Lisbon during the trip that Joan made with the brothers Jussieu<sup>44</sup> between 1716 and 1717. The series of letters that Joan received from Pau Martí, a Catalan merchant based in Lisbon, are particularly interesting. Pau Martí provided Joan Salvador with exotic products, mainly from America, that arrived at the port of Lisbon. The twelve conserved letters date from the period between October 1719 and August 1722<sup>45</sup>. Many of these letters revolve around Joan's requests for American products, which confirms his interest in these species.

The library of the Botanical Institute of Barcelona holds only correspondences sent addressed to Joan Salvador from Pau Martí. Essentially, these are answers to the requests made by Joan in letters

<sup>41</sup> PETIVER, James – *Letter addressed to Joan Salvador i Riera sent from London on October 14, 1712*. British Library. All letters sent by Petiver are in English. The transcript of the handwritten documentation can be found at CAMARASA & IBÁÑEZ CORTINA, 2007.

<sup>42</sup> PETIVER, James – *Letter addressed to Joan Salvador i Riera sent from London on April 25, 1715*.

<sup>43</sup> CAMARASA & IBÁÑEZ CORTINA, 2012.

<sup>44</sup> On the trip made by Joan Salvador i Riera in the company of the brothers Antoine and Bernard de Jussieu see FOLCH I GUILLÉN, 1972.

<sup>45</sup> This series is not published. The originals are in the Salvador Library, at the Botanic Institute of Barcelona. Josep Maria Camarasa, an expert on the manuscript collection of the collection, kindly gave his personal transcriptions of the correspondences mentioned here. All the originals are written in Catalan. The translation into English is mine.

sent to his correspondent in Portugal. From the content of the first letter that came to Barcelona, it is possible to understand that Joan had requested some American species from his compatriot, established in Lisbon:

*I asked Bartholomeu Bis, who is in the Mines of Senhor Conde, to look for all the varieties of stones, woods, herbs, roots and animals found in that medicinal land. And let him send me what he finds, but with the letters I now receive from him, he does not speak of anything<sup>46</sup>.*

Here we see that Pau Martí tells Joan Salvador that he commissioned Bartholomeu Bis, who was in Minas, to send him all the «stones, woods, herbs, roots and animals» he could find in those territories. However, Bartholomeu had not commented on the subject in any previous letter; Martí concluded that either Bartholomeu was looking carefully, he is not the one in charge of looking for such items. In the following letter, Martí wrote that he was grateful for Joan's return and mentioned that the letter that he had sent to him to forward to the Count of Minas Gerais had gone last week. If he wanted to send any more, Martí continued, he would have time, because there would be no other ships to Brazil before March 15. Martí also informed Joan that he was waiting for a fleet to arrive from Bahia and hoped that the letter with answer from Bartholomeu Bis on the ordering of medicines would be coming with it:

*It was a while since I received your letter of November 25 last year and the occupations prevented me from responding, which I do now, saying that the letter to D. Pedro that your Majesty sent, went with another one in one Ship that left last week. And you also have time to send me more, because I do not think the Rio fleet will leave before March 15 [...] I'm waiting for the Bahia fleet and with it the letters of Bartholomeu Bis das Minas, to see the Who will respond to the medicines I have ordered<sup>47</sup>.*

In a letter dated September 17, 1720, Pau Martí recounted the development of a disease that afflicted him and, curiously enough, stated that even though he could hardly eat, «I drank chocolate with some toasted bread»<sup>48</sup>. Although this is the only mention of chocolate in the correspondences between him and Joan, it confirms the hypothesis that we explored when considering the library's books on the subject. At this time in the first decades of the 18<sup>th</sup> century, the main product derived from the

<sup>46</sup> Translation by the author. Original quote: «Jo tinch encomanat à Barthomeu Bis que està en las Minas del S<sup>r</sup> Compte, quem procuri totas las castas de pedras, Maderas, Erbas, arrels, y animals que se trobin en aquella terra medecinals, Y que me envihi lo ques trobia; pero com ab las cartas que ara rebo de éll nom parla de res» (MARTÍ, Pau – *Letter addressed to Joan Salvador i Riera sent from Lisbon on October 31, 1719*).

<sup>47</sup> Translation by the author. Original quote: «Amich y S<sup>r</sup> meu. A son temps rebi la carta VM<sup>e</sup> de 25 de 9<sup>bre</sup> del any passat, y las ocupacions me han detingut fins ara la resposta, que la dono dient, que la carta p<sup>a</sup> lo Compte D. Pedro que VM<sup>e</sup> ha enviat, ja va ab altra mia ab un vaixell solt q<sup>e</sup> isqué la Semana passada: y te temps pera enviarme mes, perque crech no sen anirà la flota del Rio ans de 15 de mars vinent [...] Estic esperant la flota de Bahia, Y ab ella cartas de Bar<sup>me</sup> Bis de las Minas pera veure lo quem responderá sobre los medecinals que li encomani» (MARTÍ, Pau – *Letter addressed to Joan Salvador i Riera sent from Lisbon on January 9, 1720*).

<sup>48</sup> MARTÍ, Pau – *Letter addressed to Joan Salvador i Riera sent from Lisbon on September 17, 1720*.

American cocoa was becoming popular throughout the European continent, especially in the kingdoms that had some kind of relation with the tropical colonies.

The Salvador family's relationship with chocolate went above and beyond simply reading the works on the cocoa and chocolate in their library; they participated in the trade of chocolate. Currently, we do not yet have enough evidence to conclude whether the Salvadors were directly involved with the exchange, whether they were authorized merchants, or whether they were dealers, or even smugglers of the new drug. Furthermore, it is not yet possible to say what piqued the Barcelonan apothecaries' interest in the product or who initiated this business opportunity. The only documents that deal with the subject – besides the library's contents – are three letters sent by Pierre Barrère to Josep Salvador i Riera in 1747, many years after Joan received Pau Martí's letter.

In the Salvador Library, besides the three letters already mentioned, there are 21 letters from Pierre Barrère to Josep Salvador, which deal with different subjects. According to the documentation, Pierre Barrère's connection with the Salvador family initially began through the Jussieu brothers<sup>49</sup> who sent a book to Joan by way of Barrère.

Following the protocol of exchange – as happened with Petiver and other correspondents –, when one ordered a product, one followed the order with some «reward» to prove seriousness, fidelity, and service, as we can see in this first letter in which Barrère requests chocolate. He wrote to Josep:

*I refer you, sir and dear friend, two copies of my Ornithology that I beg you to accept. The gentlemen who went to Toulouse a few months ago left here without me seeing them. I would have taken this opportunity to make you the shipment you want and I have sent you for the esteem I have you. It's all I can do right now, I'll keep in mind to send you my little work on the stones that are printed and I recorded this moment in Paris. I would be grateful if you could provide six pounds of soft, vanilla-free chocolate. It's for my use. Please, you should give it to somebody as it is [...], if necessary I would give him essences, as long as he gave me this faithfully<sup>50</sup>.*

Through this letter, we can conclude that the French naturalist greatly appreciated chocolate, given the quantity ordered of the product. The six pounds mentioned here would be the equivalent of two and a half pounds today. As chocolate was still an expensive product at this point, the request was by no means modest. In exchange, Barrère offered some essences, which were also very valuable products at the time. According to Josep Maria Camarasa and Jean Jacques Amigó<sup>51</sup>, although it is difficult to confirm since there is no data, no direct evidence, it is quite possible that Barrère had acquired his taste for chocolate during his three-year sojourn in Guyana<sup>52</sup>.

<sup>49</sup> For more information about the Salvador family relationship with the Jussieu brothers, see CAMARASA, 1995.

<sup>50</sup> BARRÈRE, Pierre – *Letter addressed to Josep Salvador i Riera sent from Perpignan on June 14, 1746*. All original letters are written in French and are in the Salvador library of the Botanic Institute of Barcelona (CAMARASA & AMIGÓ, 1993: 69-102). The authors fully transcribe all the originals of Pere Barrère in Catalan. The English translation of all the quotations is mine. Original text in CAMARASA & AMIGÓ, 1993.

<sup>51</sup> CAMARASA & AMIGÓ, 1993.

<sup>52</sup> The french doctor reports his experience in: *Essai sur l'histoire naturelle de la France equinoxiale ou D'Enombrement des plantes, des animaux & des minéraux, qui se trouvent dans l'isle de Cayenne, les isles de Remire, sur les côtes de la mer & dans le continent de la Guyane...* published in 1741. The volume is in the library Salvador under registration, 14/IV/12.

During this same time, the new drug became highly fashionable in Europe. In precisely the same years as the epistolary correspondence between Barrère and Josep Salvador, Barcelonan drugmakers began to produce quality chocolate from the cacao of Caracas and the Venezuelan East<sup>53</sup>.

In this letter, we also find a handwritten note by Josep Salvador, reading: «On July 24 I sent him 2 pounds of chocolate». This confirms that Josep both filled his correspondent's request and that the chocolate of Barcelona passed through the Salvador family pharmacy. In the same note, Josep wrote that, in addition to the two pounds requested, he had sent four pounds in a subsequent shipment later in the same month.

The chocolate trade between the two was not interrupted, as we see in the following letter:

*Finally, dear friend of mine, I receive from Paris, or my work of figurative stones, which ten have honors to present, I would like you to satisfy him. I make an honorable mention of you whom I love and will love my whole life like all of us. This year that we have just started, I hope you all very happy. If I could get some of the best chocolate without vanilla it would fill me of satisfaction. The coachman who will give you my book, which is a man of all confidence, will take care of good taste*<sup>54</sup>.

On the back of this letter, we can also find the order note sent by Josep: «I sent him 2 pounds of chocolate»<sup>55</sup>. In the same month, Josep received another letter from Barrère, thanking for the chocolate sent. It reads,

*I have received, sir and dear friend, two pounds of chocolate from the same coachman who had given him my little work on the stones, which I hope will not displease you. I also received, when the Marques de la Mina passed, four pounds of chocolate that I have distributed first and for which I thank you. But you will give me the pleasure of seeking me a few more pounds. I can not refuse them to some people whom I have amateur with this [...]*<sup>56</sup>.

This letter confirms what we have already said before. However, consumers within the Spanish kingdoms were starting to appreciate it as a rare novelty. Likewise, we see a connection between Barcelona and chocolate; those who made it came from Barcelona and was much appreciated as a rare oddity and that, concretely, those who made it or came from Barcelona resulted in a delicacy appreciated by the connoisseurs of the high society from Perpignan<sup>57</sup>.

Further requests and sending of chocolate between Pierre Barrère and Josep Salvador appear in two more letters. One from May of 1747, that says «I would be very grateful if I would procure some pounds of chocolate without vanilla»<sup>58</sup>. In the last letter, from August 1747, Barrère says he sold two copies of his last published work for 8 pounds and asks Josep to buy in chocolate the whole amount:

<sup>53</sup> MIRÓ ALAIX, 2010. For more information on the history of chocolate in Catalonia, see MARTÍ ESCAYOL, 2004.

<sup>54</sup> BARRÈRE, Pierre – *Letter addressed to Josep Salvador i Riera sent from Perpignan on January 2, 1747.*

<sup>55</sup> CAMARASA & AMIGÓ, 1993: 85.

<sup>56</sup> BARRÈRE, Pierre – *Letter addressed to Josep Salvador i Riera sent from Perpignan on January 31, 1747.*

<sup>57</sup> CAMARASA & AMIGÓ, 1993: 86.

<sup>58</sup> BARRÈRE, Pierre – *Letter addressed to Josep Salvador i Riera sent from Perpignan on May 14, 1747.*

*I have delivered, sir and dear friend, R. P. Agustín, two bound copies of my Observations sur le pierres figurées, etc. They have not been found in Lyon or in Montpellier and I have made them come from France and I have reconnected them to Perpigny. The purchase, the port and the binding of all two I raise all eight pounds. I beg you to buy me good chocolate for that sum and I want to send it through some comfort<sup>59</sup>.*

At this time, Pierre Barrère was already sick. Unfortunately, we do not know if he had stopped consuming chocolate by medical prescription or if it was already possible to buy chocolate in that French region at this point, since in the many other preserved letters the subject was no longer approached. In addition to chocolate, we can note that Barrère consistently requests that the order not carry vanilla, another indication that the Salvador also had access to this American product.

Being a spice, it would follow among the hundreds of vials of medical material in the family pharmacy, there was some vanilla. The same understanding applies to chocolate, a drug with numerous medicinal qualities, which initially fell to apothecaries' responsibility. What matters here, and what I aim to show throughout these pages, is the moment when these products were being handled, marketed, exchanged, and studied by the apothecaries of Barcelona.

Not surprisingly, the Salvador possessed exotic objects and products in their pharmacy and cabinet, as these were common in the collections of the 16<sup>th</sup>, 17<sup>th</sup>, and 18<sup>th</sup> centuries. What merits our attention is how the apothecaries updated their understanding of these products, specifically in the context of how their practices developed outside the cultural and scientific axis of the period.

Access to these novelties can only be understood if we take into account what the Republic of Letters was, and what practices its members employed to establish and maintain communication among them. Through the exchange of correspondence, books, and botanical species, naturalists from peripheral regions, such as the Salvador family, inserted themselves into and remained a part of in this dense network, bringing together local knowledge and promoting the globalization of nature.

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