

Natural History Illustration between Bologna and Valencia: The Aldrovandi–Pomar Case

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Abstract

The manuscript *Atlas de Historia Natural*, known as the *Pomar Codex*, in the University Library of Valencia contains more than a hundred images that are practically identical to those found in the *Tavole acquerellate* in the collection of Ulisse Aldrovandi in the University Library of Bologna. I will argue that the overwhelming presence of images belonging to Ulisse Aldrovandi's collection in the *Pomar Codex* indicates that future research on this text should be based on trying to understand possible methods of exchange between Italy and the Iberian Peninsula. This case study will enable us to better understand the mechanisms of communication and exchange among early modern members of the Republic of Letters.

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Keywords

natural history illustration – Pomar Codex – Ulisse Aldrovandi – Bologna - Valencia

Introduction

Giuseppe Olmi wrote back in 1976:

[...] from any possible viewpoint, research on the “most encyclopedic of encyclopedists”, Ulisse Aldrovandi, means confronting oneself with an overwhelming quantity of material: it means, in fact, on the one hand to study attentively all the enormous volumes of his works, published between 1559 and 1668 and from the other to accomplish a systematic exploration of thousands of manuscript pages left by the naturalist – which are mostly as yet unpublished – kept at the University Library of Bologna and in some other archives and libraries in Italy.¹

This comment was not intended to discourage historians from studying Ulisse Aldrovandi (1522–1605), but rather to advise of the need to consider and study all these dimensions of the work of the Bolognese naturalist. These dimensions included building and maintaining a “microcosm of nature”, knowing everything about it, controlling and constantly updating every aspect of its components; this project involved an enormous amount of work, including cultivating a series of personal relationships representing the hubs of a living network that needed to be fed in order to attract other potential carriers and enrichers of collections and knowledge. When the project was challenged by developments such as the discovery of the New World, whose marvels needed to be studied, evaluated and integrated in light of old and new knowledge, the effort became titanic.² None of this, however, seems to have deterred Ulisse

1 “[...] impostare da qualsivoglia angolazione, una ricerca sul ‘più enciclopedico degli enciclopedici’ Ulisse Aldrovandi significa doversi misurare con una quantità di materiale veramente imponente: significa, infatti, da un lato studiare attentamente tutti gli enormi volumi delle sue opere, dati alle stampe tra il 1559 e il 1668 dall’altro compiere una esplorazione sistematica delle migliaia di pagine manoscritte – a tutt’oggi in gran parte inedite – lasciate dal naturalista, che si trovano nella Biblioteca Universitaria di Bologna e di alcune altre presenti in diversi archivi e biblioteche d’Italia.”: Giuseppe Olmi, *Ulisse Aldrovandi. Scienza e natura nel secondo Cinquecento* (Trento, 1976), 9.

2 See Giuseppe Olmi, *L’inventario del mondo. Catalogazione della natura e luoghi del sapere nella prima età moderna* (Bologna, 1992), 211–254.

Aldrovandi and his “moltj amici in varij luoghi.” In fact, it rather drove them on.³

This article does not aim to produce a global study of the work of Ulisse Aldrovandi. The study of this wildly interesting protagonist of natural history and his connections to the Republic of Letters of the sixteenth century would require the collaborative work of many people.⁴ It would also require a complete edition of the manuscripts of Aldrovandi, or at least of his correspondence, already predicted a century ago in the fundamental works of the brothers G.B. and E. De Toni, O. Mattirollo and M. Cermenati.⁵ Additionally, calculating the interactions between Aldrovandi and the correspondents whose letters have been preserved would alone be an extensive task for researchers.⁶

What I am trying to do here is to present a case study that I believe serves to complicate, or rather problematise, the interactions between the different participants and the mechanisms of circulation of objects and knowledge among sixteenth-century naturalists. I will do this with a special focus on the relations between Italy and Spain, based on the various vestiges of the stronghold constructed by the Bolognese naturalist and his circles of curious students of natural history and medical materials. This stronghold was like a building composed of living parts (objects of medical practice, and the practices of gathering, exchange, and teaching), which connected everything (paintings, annotations, living and dried plants, specimens, books, letters) to its function, which was much more than mere decoration or even collection: everything

3 Giuseppe Olmi, “Molti amici in varij luoghi”: Studio della natura e rapporti epistolari nel secolo XVI,” *Nuncius*, 6 (1991), 3–31.

4 See Angela Fischel, *Natur im Bild. Zeichnung und Naturerkenntnis bei Conrad Gessner und Ulisse Aldrovandi* (Berlin, 2009); Fabian Krämer and Helmut Zedelmaier, “Instruments of Invention in Renaissance Europe: The Cases of Conrad Gesner and Ulisse Aldrovandi,” *Intellectual History Review*, 24 (2014), 321–41; Fabian Krämer, “Ulisse Aldrovandi’s *Pandechion Epistemonicon* and the Use of Paper Technology in Renaissance Natural History,” *Early Science and Medicine*, 19 (2014), 398–423; idem, “Ein papiernes Archiv für alles jemals Geschriebene: Ulisse Aldrovandis *Pandechion epistemonicon* und die Naturgeschichte der Renaissance,” *NTM Zeitschrift für Geschichte der Wissenschaften, Technik und Medizin*, 21 (2013), 11–36; Ibid., “The Persistent Image of an Unusual Centaur: A Biography of Aldrovandi’s Two-Legged Centaur Woodcut,” *Nuncius*, 24 (2009), 313–340; Valentina Pugliano, “Specimen Lists: Artisanal Writing or Natural Historical Paperwork?,” *Isis*, 103 (2012), 716–726; Alessandro Alessandrini and Alessandro Ceregato, eds., *Natura Picta: Ulisse Aldrovandi* (Bologna, 2007).

5 See for example Mario Cermenati, “Ulisse Aldrovandi e l’America,” *Annali di botanica*, 4 (1906), 313–366; Oreste Mattirollo, *L’opera botanica di Ulisse Aldrovandi (1549–1605)* (Bologna, 1897).

6 See Ludivico Frati, *Catalogo dei manoscritti di Ulisse Aldrovandi con la collaborazione di A. Ghigi e A. Sorbelli* (Bologna, 1907).

was connected in that elaboration of knowledge which is called the “theatro del mondo.”⁷ Even though here I am exclusively concerned with his role as a naturalist, Ulisse Aldrovandi also actively participated in the literary, intellectual and cultural life of his city in a broad sense. He was one of the members of the Bochiana Academy⁸ and also participated in the meetings at the house of the painter Prospero Fontana, which brought together the intellectuals of Bologna.⁹

The manuscript 9, *Atlas de Historia Natural*, known as the *Pomar Codex* in the University Library of Valencia,¹⁰ contains more than a hundred images that are practically identical to those found in the *Tavole acquerellate* in the collection of Ulisse Aldrovandi in the University Library of Bologna. Some of these coincidences had been noticed in the past by G. Olmi and J. Pardo-Tomás; more recent observations of the same kind were also made by J.R. Marcaida.¹¹ The presence of animals and plants from the New World in the *Pomar Codex*, as well as a handwritten note in the volume, drove J.M. López Piñero to propose the hypothesis of the presence of materials coming from the expedition to New Spain of Francisco Hernández (1515–1587), which was carried out between 1571 and 1577.¹² However, the high number of similarities with

7 See Olmi, *L'inventario del mondo*, 165–210.

8 See Elizabeth See Watson, *Achille Bocchi and the Emblem Book as Symbolic Form* (Cambridge, 2004), 153. I am grateful to James S. Amelang for indicating this interesting reference about the intellectual life in Bologna at the time, revolving around one of Ulisse Aldrovandi's magistri, Achille Bocchi (1488–1562).

9 Watson, *Achille Bocchi*, 33; See also G. Olmi and Paolo Prodi, “Gabriele Paleotti, Ulisse Aldrovandi e la cultura a Bologna nel secondo Cinquecento”, in *Nell'età di Coreggio e dei Caracci. Pittura in Emilia dei secoli XVI e XVII* (Bologna, 1986), 213–235.

10 For a description see for example López Piñero's introduction to the Facsimile Edition of the *Pomar* in José María López Piñero, *El códice de Jaume Honorat Pomar (ca. 1590). El interés de Felipe II por la Historia Natural y la expedición Hernández a América* (Valencia, 1991), 13. That manuscript contains visual representations of plants and animals and his date of production is unknown, but belongs to the sixteenth century.

11 See José Ramón Marcaida López, *Arte y ciencia en el Barroco español* (Madrid, 2014), 155 (Note 56).

12 See for example López Piñero, “El Pomar Codex (ca. 1590): Plants and Animals of the Old World and from the Hernandez Expedition to America,” *Nuncius*, 7 (1992), 35–52; and López Piñero, *La escuela botánica valenciana del Renacimiento: Pedro Jaime Esteve, Juan Plaza y Juan Honorato Pomar* (Valencia, 2010), 81–132. In fact, the handwritten note in the back cover of the codex does not clear up if the present comes from Phillip II: the “II” is not clearly legible, and Gaspar Escolano speaks explicitly of Phillip III. See Gaspar Escolano, *Décadas de la historia de la insigne y coronada ciudad y reyno de Valencia* (...) (Valencia, 1601): “Otros han andado derramados por palacios de Reyes como el Doctor Ribera en

Aldrovandi's images indicates a circulation of materials from Italy towards Spain, as we will see in what follows. As I will try to show, inquiring as to the impact of Hernández's work is not, in this case, the most pertinent or interesting manner in which to proceed. In fact, everything seems to indicate that to research the circulation of images and materials of American flora and fauna between Bologna and Madrid, it is necessary to look at a chronology that starts some decades before Hernández's expedition, and therefore long before the preparation of the *Pomar Codex*.

Pomar in Madrid

The available information about the presence of Jaime Honorato Pomar in Madrid indicates that he was hired as physician starting on April 24, 1598 – a few months before the death of Phillip II:

[...] and for the good report which I received about the abilities, letters, suitability and experience of doctor Honorato Pomar chair of Medicine and examiner of the same Faculty at the University of Valencia we receive him as in the present [letter] and we receive him as physician and *simplicista*, with the obligation of living in this village of Madrid and to make [possible the actions of] planting and benefiting and cultivating in the convenient part of the land which is called *la Priora*, adjacent to this *Alcázar*, all the herbs and medicinal and unusual plants [both] extraordinary and necessary which may be found by taking the steps which convene to that end and paying visits in person to the aforementioned herbs and plants with great continuity and care [...] ¹³

el del Emperador Rodolpho de Alemania: y Pomar en el del *Rey Philippe tercero*, que hoy reynan: para quien mandó su Magestad instituyr en su palacio Real una nueva plaça de su medico herbolario, por no haber en toda España cátedra de yerbas, y florecer tanto en sola Valencia, por los grandes herbolarios y catedráticos suyos Pedro Jayme [Esteve], Collado, Plaça, y el dicho Pomar." [Emphasis is mine].

- 13 "[...] que por la buena relación que se me a hecho de las havilidades letras suficiencia y speriezia del doctor Honorato pomar cathedratico de medicina y examinador de la misma facultad en la Universidad de Valencia le havemos rescibido como por la presente y le rescibimos por mio medico y simplicista, con obligaci3n que haya de residir en esta villa de Madrid y hazer plantar y beneficiar y cultivar la parte que conviene y se señalare la huerta que llaman de la priora junto a este alcazar todas las yerbas y plantas medicinales peregrinas extraordinarias y necesarias que se pudieren allar haciendo las diligencias

In fact, the *asiento* of the royal document that contains this information was signed by the prince, the future Phillip III, in the name of his father the King. Thus, it seems plausible that whoever offered the codex to Pomar for his work in Madrid as *simplicista* was not Phillip II, but rather his son. In any case, as we have stated, Pomar's presence in Madrid points to a chronology after 1598.¹⁴ In that moment, the circulation of materials related to natural history (not only those of Hernández) was so wide that it seems more interesting to concentrate on what happened in the years 1560–1590, and to pay more attention to Aldrovandi and the Italian side of the problem.

Aldrovandi and Spain

Aldrovandi expressed his desire to travel to the New World even before Hernández's expedition. He revealed his desire in a letter to His Catholic Majesty, declaring his wish to carry out this expensive and demanding adventure. In 1567, he wrote to the "Cardinale protettore del Collegio di Spagna"¹⁵ in Bologna pointing out the opportunity to send a scientific expedition accompanied by painters and writers to the New World with the goal of composing a history of all the natural objects, plants and animals to be found in the Indies.¹⁶ One may

que conviniere para ello y visitando por su persona las dichas yerbas y plantas con mucha continuación y cuidado [...]". Archivo General de Palacio, Madrid (AGP), RE, 9, f. 318v.

- 14 For more information about Jaime Honorato Pomar in Madrid see, for example, Mar Rey Bueno and María Esther Alegre Pérez, "Renovación de la terapéutica real: los destiladores de su majestad, maestros simplicistas y médicos herbolarios de Felipe II," *Asclepio*, 53 (2001), 27–55; Marquesa de Casa Valdés, *Jardines de España* (Madrid, 1973), 194; José Miguel Morán Turina and Fernando Checa Cremades, *Las casas del Rey: casas de campo, cazaderos y jardines, siglos XVI y XVII* (Madrid, 1986).
- 15 Based on the documents cited in the introduction of Antonio Pérez Martín, *Proles Aegidiana*, vol. 1 (Zaragoza, 1979), 75–76, it seems plausible to indicate that the cardinal protector in those years could have been Francisco Pacheco, nephew of Pedro Pacheco, who had also been cardinal protector a few years before.
- 16 For a reconstruction of Aldrovandi's American interests, see for example Olmi, *L'inventario del mondo*; G. Olmi and O. Trabucco, "I nuovi mondi da Aldrovandi ai Lincei: viaggi reali e viaggi nello studio", in *Il viaggio. Mito e scienza*, catalogue (Bologna, 2007), 149–167; López Piñero and Pardo-Tomás, *La influencia de Francisco Hernández (1515–1587) en la constitución de la botánica y la materia médica modernas* (Valencia, 1996), 127–133. "Overo io mi risolverebbe quando piacesse a sua Maestà per pubblica utilità andare in queste indie occidentali havendo l'aiuto d'un tanto Re come el serenissimo Re Catholico e per poter conseguir quanto si desidera bisognerebe haver io meco varij pittori e scrittori per poter presto e con commodo far dipinger e scrivere tutta l'istoria di tutte le cose naturali che

find another instance of the same project a few years later in a text known as “Discorso naturale” from 1572–73, written for Giacomo Buoncompagni, son of Pope Gregory XIII.¹⁷ Even later, when the materials from the Hernández expedition were already in Naples, Aldrovandi virtually claimed that the idea of a scientific expedition to the New World was his:

Several years ago I wrote a long letter to His Majesty the Catholic King pushed by the desire of being beneficial to the world. Through it, with the most effective reasons I attempted to persuade this Holy Majesty that would be a very laudable act to send people ... and perhaps thanks to that letter written by me, or provoked by some other reason, shortly after he sent a physician and several designers and painters, and in this journey he spent around eight thousand *scudi*, and I understand brought back 4 or 5 thousand rare things, both plants and animals, [...].¹⁸

It is not possible to know if these claims are more than empty rhetoric, since Aldrovandi, like many of the great naturalists of his time, such as Conrad Gessner (1516–1565), did not venture far from his home territory, which in this case was Italy, at least for his time as a collector and accumulator of objects of all

in india si ritrovano oltre le recolte da me che sono tante e tante apresso ancora essicando piante et Animali realmente per portar in Spagna a sua Maestà per Mostra donde fusse extracta (...): Bibliotheca Universitaria di Bologna (hereafter BUB), Ms. 66 c. 360v. Published in Olmi, *Inventario. Lettera di Ulisse Aldrovandi al Cardinale Protettore del Collegio di Spagna* (Bologna, 12 novembre 1567). In the index of the manuscript the reader can see “Epistola ad M.m patronum Collegii Hispanorum.”

17 For more details on the relationship between Ugo Buoncompagni and Aldrovandi see Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley, 1996), 20–28 and 282–284. “Io ancorché di età di 47 anni, forse, quando piacesse al re di Spagna, per favore o mezo del Nostro Signore, di servire dell’opera mia, forse mi risolverei di pigliare questa faticosa impresa.” BUB, MS. Aldrovandi. 91, f. 539r. Published in Sandra Tugnoli Pattaro, *Metodo e sistema delle scienze nel pensiero di Ulisse Aldrovandi* (Bologna, 1981).

18 “Sono molti anni che io scrissi una lettera assai longa alla Maestà del Re Cattolico spinto dal desiderio che haveva di giovare al mondo, per la quale ad assai efficace ragioni cercai persuadere à quella Sacra Maestà che saria stata cosa molto lodevole mandar nell’Indie persone le quali fossero ... e forse da quella lettera da me scritta, o da altro eccitato, di lì a poco tempo mandò un medico o più disegnatori e pittori, nel quale viaggio spese circa ottantamila scudi, et intendo che riportò da 4 o 5 mile cose rare così di piante come di animali [...]”: BUB, MS. Aldrovandi 21, t. IV, c. 47v. Partially published in S. Tugnoli Pattaro, “La filosofia naturale di Ulisse Aldrovandi: l’America,” in *Bologna e il Mondo Nuovo*, catalogo della mostra (Casalecchio di Reno, 1992), 31–36.

types. We have no news of travels, besides a few collecting trips, for example to Monte Baldo, and his trip to visit the collections of apothecaries, doctors and naturalists which took him to Venice. Fortunately, we have Aldrovandi's notes from this trip: it seems also that in his youth he travelled through Spain, arriving in Santiago de Compostela.¹⁹

Evidence of other connections between Aldrovandi and Spain come from the hand of three correspondents who sent information, plants, seeds and even images of Spanish *naturalia*. These correspondents were the Valencian Francesc Saragossa, the Bolognese Roberto Saliceti (d. 1572) and the Belgian Jean de Brancion de Malines (c. 1520–1575). We know in some detail about the plants sent by Francesc Saragossa, Aldrovandi's former student in Bologna.²⁰ Some of these are still preserved in Aldrovandi's herbarium. This is the case, for example, with the "mamey de Indias" leaf, sent by Saragossa from the Franciscan monastery of *Nuestra Señora de Jesús* in Valencia, the only known place in Europe that had an example of this American plant. This example allows us to point out the importance of studying the role played by the religious orders in the circulation and exchange of medical-naturalistic materials between Europe and the New World.²¹

Little is known about Roberto Saliceti. He was most likely a confidant of Cardinal Gabriele Paleotti (1522–1597) and of his brother Camillo Paleotti. Saliceti appears to be the recipient of a letter regarding some relevant documents for Cardinal Paleotti and also as a commentator on some aspects of Papal politics during the Council of Trent.²² One can hypothesise that he travelled to Spain with the entourage of Giovanni Battista Castagna (1521–1590), Papal nuncio in Spain between 1563 and 1573, Archbishop of Rossano, and future Pope Urban VII.²³ In Saliceti's will, written in 1572, which is found in the

19 See Gaetano Fantuzzi, *Memorie della vita di Ulisse Aldrovandi* (Bologna, 1774).

20 See Adriano Soldano, "L'erbario di Ulisse Aldrovandi, Volumi XII–XIII–XIV," in *Atti dell'Istituto Veneto di Scienze, Lettere ed Arti*, 172 (2004), 203–205, for the "provenienze spagnole" of the herbarium.

21 For further details on this particular aspect see Emma Sallent Del Colombo, "Connexions naturalistiques entre València i Bolonya. El cas de Francesc Saragossa (1568–1659)," *Afers*, 30 (2015), 447–466. For the case of Jesuits in Spanish America see Sabine Anagnostou, "The International Transfer of Medicinal Drugs by the Society of Jesus (Sixteenth to Eighteenth Centuries) and Connections with the Work of Carolus Clusius," in Florike Egmond, Paul Hoftijzer and Robert Visser, eds., *Carolus Clusius: Towards a Cultural History of a Renaissance Naturalist* (Amsterdam, 2007), 293–313.

22 See Paolo Prodi, *Il cardinale Gabriele Paleotti (1522–1597)*, 2 vols. (Rome, 1959), 69n6.

23 Olmi indicates in a reference to Mattirollo, *L'opera botanica di Ulisse Aldrovandi (1549–1605)*, 26, that he sees Rossano as responsible for sending plants to Aldrovandi. The

Archivio di Stato of Bologna, there is an indirect reference to the “Archiepiscopi Rosanensis.”²⁴ In Aldrovandi’s manuscripts there can be found indications of the proximity between Saliceti and Castagna that offer additional testimony of the arrival of information from the courts in Madrid to Aldrovandi:

A blackbird with red beak which says things (...) like a parrot (...) close to King Philip in Madrid

Remember to write to Madrid in Spain to Mx. Roberto Saliceti about whether [...] this very rare little animal owned by M. Sig. Nuncio Archbishop of Rossano could be painted from life [...].²⁵

There are also other references to Saliceti, published by De Toni, where he appears as an emissary from “azulac de Nueva Hespaña.”²⁶ More importantly, it seems that Saliceti was in Spain a few years later in the embassy of Castagna. Indeed, he sent information to Aldrovandi about the machines that the engineer and mathematician Juanelo Turriano had in Toledo, in 1587.²⁷

annotation is the following: “Dietro ad una silografia che rappresenta una specie del genere *Plantago*, trovai segnato il nome di Urbano VII. Questa pianta era stata all’Aldrovandi portata di Spagna da questo Papa di famiglia Castagna di Roma, quando ancora era Cardinale”. It has not been possible to verify the presence of said annotation in the preserved xylographs we have been able to review.

- 24 The will indicates that Roberto Saliceto was son of a “Francesco Saliceto detto de Cantaglino, [or Contaglino] cittadino bolognese residente in Santa Maddalena in strada San Donato [Via Zamboni].” The information about the date of his death in 1572 was confirmed by Archiginnasio. Ms. B. 700 B. Carrati. Genealogie vol II. Thanks to Carla Penuti for the information about the notary and the preserved manuscripts in the Archiginnasio library. “Item eodem iure legati reliquit idem d. testator, asserens se esse debitorem Aloisii de Mediolano servitoris R.mi Archiepiscopi Rosanensis in summa et quantitate scutorum viginti quinque auri in auro, scuta viginti quinque auri similia pro satisfatione [dicti eius] crediti sive de eo appareat sive non quia voluit omnino eum dicta scuta habere et consequi.” Archivio di Stato di Bologna, Roberto Saliceto. Testament 1572.
- 25 “Un merlo col becco rosso che parla cose [...] come un pappagallo [...] Appresso al Re Filippo a Madrigo” and “Ricordo di scrivere a Madrid ex Spagna et Mx. Robi Saliceti o si [...] a ognimodo che quello animalito cosi raro che ha M. Sig. Nunzio Archivescovo Rosani li dipinge a vero [...].” BUB, MS Aldrovandi 136, t. III, c. 7 v.
- 26 See G.B. De Toni, “Spigolature aldrovandiane XI. Intorno alle relazioni del botanico Melchiorre Guilandino con Ulisse Aldrovandi.” *Atti dell’ I.R. Accademia di Scienze, Lettere ed Arti degli Agiati in Rovereto*, s. III, vol. XVII, fasc. II (1911), 149–171: 162, 170.
- 27 “Horologia pulchra ubi motus planetarium & Machina aquae aductae altum montem ad

Jean de Brancion de Malines is another very relevant character. As Florike Egmond states, Brancion was cited by Matthias de Lobel in 1581 as a great expert in plants from the past, along with Gérard (Gilbert) d'Oignies, the Bishop of Tournai, and the aristocrat Reynoutre.²⁸ Brancion became Clusius' patron: his garden in Malines contained exotic plants such as sunflowers.²⁹ According to Valentina Pugliano, Brancion was vital to the collaboration between Clusius and Jacopo Antonio Cortusio, who would go on to run the botanic garden at Padova.³⁰ Benito Arias Montano, a Spanish diplomat and naturalist who also visited the Ulisse Aldrovandi Museum in Bologna,³¹ was also among Brancion's Spanish correspondents. Interesting information about Brancion can also be gathered from the correspondence preserved between Aldrovandi and Clusius, as well as in Aldrovandi's manuscripts. In his letter in 6 February 1570 to Clusius, Aldrovandi explains that Brancion 'grew an infinite number of plants in his most fertile green court'. Besides Aldrovandi, Brancion also spent time with other Italian naturalists, including Giacomo Antonio Cortusio (Padova), Ippolito Salviani (Roma), and Alfonso Pancio (Ferrara). In 1567, Aldrovandi referred to him as a "gentiluomo" of Phillip II.³²

Other manuscripts from the Bolognese naturalist contain indexes of Spanish materials, although their origin is not completely clear. These materials, which I consider of great interest, include lists of plants accompanied by information about their origin and about how they can be acquired. Next to the names of unknown people on these lists, can be found well-known personalities such as the Catalanian doctor Micó de Vich, the Valencian doctor Collado, and the Sevillian apothecary Bernadino de Burgos. But what is perhaps most relevant is that in 1572, five years before the arrival of Hernández's material to Madrid, some very relevant plants from the New World appear cited, and Aldrovandi knew of them.

palatium habes ab Ecc.mo Mathematico Giannella dicto ut mihi retulit Robertus Salicetus": BUB, MS Aldrovandi 143 t. IX, f. 167v.

28 See Florike Egmond, *The World of Carolus Clusius: Natural History in the Making, 1550–1610* (London, 2010), 14.

29 *Ibid.*, 32.

30 Valentina Pugliano, "Botanici e artigiani a Venezia: i (pochi) amici di Carolus Clusius," *Jahrbuch für Europäische Wissenschafts-Kultur*, 6 (2011), 1–25, 3.

31 Egmond, *The World of Carolus Clusius*, 37. "Hispanus Benedictus Arias Montanus theologus," BUB, MS Aldrovandi 110, f. 242v.

32 "Al molto Mag.co Sig. Il sig. Brancione Gentiluomo della Maestà del Re Catholico": BUB, MS Aldrovandi 136, t. II, f. 112r.

Other Ways to Acquire Material from the New World

When trying to shed light on the possible channels of contact between Spain and Italy, and in particular Bologna, we must look further than just direct connections. Other paths of contact, such as the Venetian connection, the Florentine connection and the Roman connection, cannot be excluded. The relation between Aldrovandi and the Medici has been exhaustively analysed by A. Tosi³³ and G. Olmi,³⁴ among others. The “archiatra pontificio” Michele Mercati has been studied by Elisa Andretta.³⁵ As for the Venetian connection, I would like to present some channels through which Aldrovandi could obtain materials and illustration of American or exotic flora and fauna.

In the first place, I want to mention Leone Tartaglini da Foiano, herbalist, charlatan, surgeon, specialist in the production of fake basilisks and also writer of books of secrets, who also possessed a rich museum, which, in particular, contained preserved fish, and was visited by Aldrovandi himself in Venice.³⁶ It seems that the relationship between Aldrovandi and Tartaglini fell apart when the latter paid some of Aldrovandi’s painters to make copies of some of his images.³⁷ Secondly, one must talk about American images of Spanish or Portuguese origin from the codex-herbarium of P.A. Michiel, compiled between 1553 and 1565,³⁸ and copied by Aldrovandi. It would also be of great interest to ex-

33 Alessandro Tosi ed., *Ulisse Aldrovandi e la Toscana. Carteggio e testimonianze documentarie* (Florence, 1989).

34 Olmi, *L’inventario del mondo*.

35 Elisa Andretta, “Les multiples visages d’un archiatre pontifical du xvii^e siècle. Activités et fonctions de Michele Mercati au Palais Apostolique,” *Micrologus’ Library*, 51 (2012), 161–182.

36 Achille Forti, “Intorno ad un ‘Draco ex Raia effectus Aldrov.’, che esiste nel Museo civico di Verona e circa le varie notizie che si hanno di simili mostri specialmente dai manoscritti aldrovandiani,” *Madonna Verona*, 1:2 (1907) 57–73; idem, “Del Drago che si trovava nella Raccolta Moscardo e di un probabile artefice di tali mistificazioni: Leone Tartaglini da Foiano,” *Madonna Verona*, 8 (1914), 26–51.

37 “Studiosus vir Leo Folianus qui librum dipingendum curavit in quo erant multae icones rariae a Iovanne de nigris pictore meo ex meis Archetipis translatae [...]”: BUB, MS. Aldrovandi 110, c. n. n. Published in Olmi, *Inventario*, 69, note 154.

38 José Pardo-Tomás, “Tra ‘oppinioni’ e ‘dispareri’: la flora americana nell’erbario di Pier’Antonio Michiel (1510–1576),” in G. Olmi and G. Papagno eds., *La natura e il corpo: Studi in memoria di Attilio Zanca* (Florence, 2006), 73–100; Ettore De Toni, “Notizie su P.A. Michiel e sul suo Codice-Erbario,” *Ateneo Veneto*, 31 (1908); Ettore De Toni, “Il Codice-Erbario di P.A. Michiel, Introduzione al Libro Azzurro,” *Memorie della Pontificia Accademia Romana dei Nuovi Lincei*, xxvi, 1908; Ettore De Toni, “Il Libro Giallo di P.A. Michiel,” *Ateneo Veneto*, 33 (1910).

plore the contact among ambassadors such as Sigismondo Cavalli, ambassador from Venice to the court of Phillip II, who appears cited various times in letters from Michiel to Aldrovandi, and who seems to have had a close relationship with him.³⁹ Sigismondo Cavalli is not the only member of the Cavalli family with whom Aldrovandi seems to have had a relationship: Sigismondo's brother Antonio, also ambassador from Venice and *podestà* from Padua, seems to have had the role of linking Aldrovandi and Melchiorre Guilandino.⁴⁰ A third, interesting case, is the possible relationship of Aldrovandi with the so-called "Libro dei Pesci del Patriarca" of Daniele Barbaro,⁴¹ which demonstrates the complexity of the circulation of visual representations.⁴²

Beyond these interesting examples, it would be of great interest to explore in depth the connections between Aldrovandi, contemporary naturalists and the "circoli veneti" of intellectuals and humanists studied by J. Pardo-Tomás⁴³ and Andrea Carlino,⁴⁴ as well as Daniele Barbaro himself, among other interesting personalities such as Bembo, Fracastoro and Andrea Navagero, some of whom possessed gardens of exotic plants.⁴⁵

39 See G.B. De Toni, "Contributo alla conoscenza delle relazioni del patrizio veneziano Pietro Antonio Michiel con Ulisse Aldrovandi," *Memorie dell'Accademia di Scienze, Lettere ed Arti Modena* (series 3), 9 (1908), 21–70, 46–47. On 21 November 1566 Sigismondo Cavalli was named ambassador to Phillip II, succeeding Antonio Tiepolo Tiepolo. On S. Cavalli's Spanish mission, see also *Le relazioni*, 161–194.

40 G.B. De Toni, "Spigolature aldrovandiane XI," 149–171.

41 G.B. De Toni, "Spigolature Aldrovandiane III," 106: "Sono or sette od otto anni, avanti la Guerra di Cipro, che il clarissimo S. Marco Antonio, fratello di Mons.r Daniello Barbaro, homo dottissimo et che molto si diletta di questa cognitione naturale, et essendo allora Balio di Costantinopoli mi mandò certi frutti sotto il nome di Antulla simili al Pevero aetiopico dipinto dal Mattioli."

42 The manuscript BUB MS Aldrovandi 136, t. V contains a list titled: "Ex Patriarcha De Piscibus [...] secundum numerum [...]" which seems to put in context more than a hundred names of fish from the *libro del Patriarca*, thanks to hand written notes by Aldrovandi, with his paintings from Volume 4 of the "tavole" of animals.

43 See for example Pardo-Tomás, "Obras españolas sobre historia natural y materia médica americanas en la Italia del siglo XVI," *Asclepio*, 43 (1991), 51–94, which show the prolonged first relation with the *naturalia* of American origin.

44 See for example Andrea Carlino, "Medical Humanism, Rhetoric and Anatomy at Padua," in S. Pender and N. Struiever eds., *Rhetoric and Medicine in Early Modern Europe* (Farnham, 2012), 111–128.

45 See for example Manfredo Tafuri, *Venezia e il Rinascimento: religione, scienza, architettura* (Turin, 1985), 185–212; Giovanni Marsili, *Notizie inedite* (Padua, 1840).

Comparative Analysis of the Manuscripts

I have carried out an exhaustive comparative analysis of the *Pomar Codex* and Aldrovandi manuscripts from a visual, textual and material point of view through the creation of a database which has allowed us to point out the similarities and cross-reference information about the two collections of images. Of the 219 registers that correspond to the images belonging to the *Pomar Codex*, I have identified 150 which coincide with paintings of the “tavole” from Aldrovandi. These 150 include 10 doubtful cases in which the plants represented are very similar but not exactly the same. The images represent animals as well as plants, as well as figures of insects and coral. In 15 cases the differences are remarkable, in 47 cases the differences are less significant.

Some general trends are evident. I will deal with animals and plants separately. In the case of the animals, the most substantial differences appear in the representation of the ground or land on which the figures are placed. This also happens in the case of plants but it is more evident in the first case. The substantial differences among the plants include the lack of elements such as complete branches, or in the case of the tulips, the representation of the flower from an overhead perspective. In the vast majority of the images of plants, Aldrovandi's images present a greater richness of detail, which is not the case with the animals. Although as I have said, the figures are essentially identical, the bases on which the figures rest are quite different.

As for the animals, in 15 of the 44 cases, the image was studied in detail in Aldrovandi's printed works: in this case, in the three volumes of *Ornithologia*.⁴⁶ Some of the objects represented can be found in the museum of Palazzo Poggi which houses Ulisse Aldrovandi's collection of *naturalia*, where the xylographic matrices are kept, while the other parts can be found in the University Library of Bologna. With respect to the plants, in 18 cases concurrences exist with examples in Aldrovandi's herbarium. In relation to the watermarks, although there is no exact match, some are rather similar. In the case of the *Pomar Codex*, this seems to indicate an Italian origin for the paper used.

46 See Olmi, *Ulisse Aldrovandi*, gn2: “L'Aldrovandi, nel corso della sua vita, potè dare alle stampe solo i tre tomi dell' 'Ornitologiae hoc est de avibus historiae libri XII', Bononiae, Apud Franciscum de Francisci Senensem, 1599–1603, e il 'De animalibus insectis libri septem', Bononiae, Apud Joan. Bapt. Bellegambam, 1602. Le opere uscite postume furono curate da C. Uterverio, B. Ambrosino O. Montalbano, da parte di quali sono da ritenersi sicuramente probabili rimaneggiamenti; sulle varie edizioni delle opere aldrovandiane vede A. Sorbelli, 'Contributo alla Bibliografia delle opere di Ulisse Aldrovandi in 'Studi intorno alla vita e alle opere di Ulisse Aldrovandi,' Bologna, 1907, 69–139.”

Some examples will now be selected for detailed discussion, with the objective of demonstrating the plausibility of the hypothesis that the images have in general an Italian origin and, more specifically, that they are copies of others that originate from Ulisse Aldrovandi's collections in Bologna. This supports the hypothesis of a circulation of images from Italy towards the Iberian Peninsula.

Among the birds I have selected are the *Manucodiata*, the *African Hen*, the *Passer solitaries* and the *Turtur indicus*. The case of the birds is paradigmatic, given that, as we have noted, the three volumes of *Ornithologia* were published during Ulisse Androvandi's life, as well as a significant number of images. In 15 of the cases a match exists between the watercolour plates and the representations present in the pages of the publications which also provide their explicative texts. Here all of them are included.

Manucodiata

The manucodiata is the first image in the Pomar Codex, with the text: "Avis coeosis, vel Manucodiata sive Avicula Dei". The corresponding image in Aldrovandi's tables has the text: Manucodiata seu // Avis Paradisea // Apes. The images are very similar in this case, and the printed image from Aldrovandi's *Ornithologia* is also available, as well as the corresponding xylographic matrices.⁴⁷ It is not the only manucodiata from Aldrovandi.⁴⁸ This bird is also discussed in several different manuscripts from Aldrovandi.⁴⁹

African Hen

This example of "Gallina affricana foemina", according to Aldrovandi, who also had a male specimen among his watercolors, is especially interesting because it is defined in the Pomar Codex as: "Maleagris. Hisp. Gallina de Indias". Curiously, in the printed publication it appears represented next to a corn plant,

47 Thanks to Alessandro Ceregato for facilitating the acquisition of the images corresponding to the xylographic matrices. In personal communication he explained that the matrix has a mark that shows that it was indeed printed in the *Ornithologia*.

48 Five specimens appear in Aldrovandi, *Ornithologiae* (Bologna, 1599), 810, 812, 813, 814 and 815.

49 Some examples are BUB, MS. Aldrovandi 38² vol. IV, f. 44v, (Letter from Antonio Anguisola to Ulisse Aldrovandi); BUB, MS Aldrovandi 136, v, c. 180v; BUB, MS. Aldrovandi 136, v, c. 202.



FIGURE 1 *Meleagris. Hisp. Gallina de Indias, f. 31. BH Ms. 9 (Biblioteca Històrica de la Universitat de València).*

“Gallina Guinea cum panico caeruleo Indico.” The images present slight differences at their base. We find a description of the male specimen of this image in Aldrovandi’s manuscripts which indicates its possible origin.⁵⁰ Here, it is described as a Guinea-hen [Gallo di faraone] with a *ruccolo* on its head of chestnut color, reddish beak, blue and green together below the eye, all the rest black with white spots.⁵¹

Passer solitarius

What the *Pomar Codex* calls “Merula, Hisp. Mirla. Val.º Merla” appears in Aldrovandi’s *Tavole* as “Passer solitarius mas // cyanus Aristotel. Bellon. // coeruleus Gaze // merle bleu Gallis // merula saxatilis Placentie // merlo bianco

50 The image of the male specimen has the following text: “Gallina affricana mas, seu numidica / meleagris fortice / gallina arabica Scaligeri / pharaonis avis / gallina deserti Michaelis Savonar. / gallina guttata.”

51 “Breve nota de quelli uccelli ritratti al naturale nel libro di Monsignor Valiero [qual fu di maestro Lione in Venetia] i quali soli lasciando li altri più vulgari ho posto qui in Cat[alogo] [...]. Gallo di faraone con un ruccolo in testa di color castagno, il becco rosseggiante, azzurro e verde insieme sotto l’occhio, tutto il resto nero macchiato di bianco”: BUB, MS Aldrovandi 136, tomo VII, c. 80r.



FIGURE 2 *ULISSE ALDROVANDI, Tavole di animali, t. II, c. 107, Gallina africana foemina, Biblioteca Universitaria, Bologna.*

Italis // blau fogel idest cerulea avis German” and in the publication as “Passer solitarius mas cum populo alba.” In Aldrovandi’s correspondence with the “marchigiano doctor Costanzo Felici de Piobbico,” it is possible to find a step referring to this bird: “di colore negro si trova ancora il passero solitario, simile al merlo.”⁵² This bird is found among the “Avis picta à D. M.ro Pelegrino.”⁵³

Turtur indicus

The *turtur indicus* [turtledove] in the *Pomar Codex* is the “Turtur subruber indicus // thor Hebraeis // saphirina atque Chaldaice // tera Persae // alsafanin Avicennae” and in “Turtur Indicus cum latyro altero in Aldrovandi’s *Ornitologiae*. The base is completely different although the images of the birds are very similar.

All of the quadrupeds of the *Pomar* have referents in Aldrovandi’s images. We have selected three: the *Armadillo*, the *Cordylos* and the *Simia caudata*.

52 Felici, Lettere, 70. Rimini, 21 luglio 1563.

53 See BUB, MS Aldrovandi 136, v. c. 101r.



FIGURE 3 *Crocodyllus terrestris*. Cast. *Specie de crocodillo*, f. 62. BH Ms. 9 (Biblioteca Històrica de la Universitat de València).

Armadillo

The “Armadillo de Indias” in the *Pomar Codex* is titled “Tatum ex Guineia secund. Bellon // Erinaceus Insula Bresilia // Porcellus seutulatus // Pigritia lusitanis” by Aldrovandi. The image also appears in the *Historia Animalium* of Conrad Gessner,⁵⁴ although in the coloured edition it is not painted in the same way as in the images from the *Pomar* and Aldrovandi.

Cordylos

The image that in the *Pomar codex* is titled “Crocodyllus terrestris. Cast. Specie de crocodillo” is labelled “Cordylos // Vromastix // Caudiuerbera” by Aldrovandi. In the Palazzo Poggi Museum there is a preserved specimen, as well as

54 See Conrad Gessner, *Icones animalium quadrupedum viviparorum et oviparorum, quae in historiae animalium Conradi Gesneri libro I. et II* (Zurich, 1560), 103; Conrad Gessner, *Conradi Gesneri medici Tigurini historiae animalium liber II. de quadrupedibus oviparis* (Zurich, 1554), Appendix, 20.



FIGURE 4 *ULISSE ALDROVANDI, Tavole di animali, t. v, c. 37, Cordylos // Vromastix // Caudiuerbera. Biblioteca Universitaria, Bologna.*



FIGURE 5 *Museo di Palazzo Poggi.*



FIGURE 6
Orbis. Lat., f. 68. *BH Ms. 9*
 (Biblioteca Històrica de la
 Universitat de València).

the xylographic matrix which relates to the image that was later published by Aldrovandi.

Simia caudata

The “*Simia caudata. Otra especie de Mico*” from the *Pomar Codex* is “*Callitriches forte a barbatio dictum quod Graeci trica vocant // simia caudata barbata // cercophitecus parvus // ghinone vulgo*” from Aldrovandi. The images are very similar, but in the *Pomar* manuscript the chain that ties the monkey is not painted, a detail which does appear in Aldrovandi.

Orbis niloticus

This is also the case of the “*Orbis. Lat. Orbis Niloticus uirgis subnigris*” from Aldrovandi, of which there is a specimen in the Museum. The image from the *Pomar Codex* appears rotated 180°, compared to the original. The similarity between the *Orbis niloticus* and the preserved specimen in the Palazzo Poggi Museum seems to leave no doubt that the specimen has its origin in the Italian



FIGURE 7
 ULISSE ALDROVANDI,
Tavole di animali, t. IV,
c. n6, Orbis Niloticus
uirgis subnigris.
Biblioteca Universitaria,
Bologna.



FIGURE 8 *Museo di Palazzo Poggi.*



FIGURE 9 *Arundo indica siliquacea*. Hisp. Caña paternostrea o de cuentas, f. 191. BH Ms. 9 (Biblioteca Històrica de la Universitat de València).

naturalist's collection. In the Pomar representation, however, there is one whole element missing.

Rinocerontis cornu

The case of the “Cuerno de la bada o Rinoseronte” from the Pomar is one where there are substantial differences due to the lack of a corresponding object in Aldrovandi, with the description of the two parts: “Rinocerontis cornu //



FIGURE 10 *ULISSE ALDROVANDI, Tavole di piante, t. IX, c. 430 Gladiolus indicus / Chenta Hispanis / Canna saccari quib. perperam / Mestocalamus Sebest. Bassi / Camnorhodion / Cynorhodon / Lilium rubens arundinacium Turca/ canna d'India Ital. Biblioteca Universitaria, Bologna.*

Monocerontis cornu quibusdam, n1. // Cyanchus ex cornu Rhinocerontis quod peo Monocerontis cornu habe, n. 2.”

With respect to plants, we have selected the following for comparison: the *Machumae indicae siliqua*, the *Casia fistula*, the *Sabina*, the *Gladiolus indicus*, *Solanum quinquefolium*, the *Helleborus niger*, the *Apocynum*, the *Sferracavallo* and the *Tabaco*. All of these plants selected appear in BUB MS Aldrovandi man-



FIGURE 11
*Arundo Indica seu Canna
 Indica Clusij. ecc. vol. 4, c.
 323. Erbario dell'Università
 di Bologna, Italy*

uscript 55/1, titled “Ulyssis Aldrovandi. Phi. ac Medici Bononiensi. Index Plantarum suma diligentia ad vivum depictas.”

Machumae indicae siliqua

The “Phasiolus indicus. Pesoles del Brasil. Hisp.” has a much more detailed description in its Italian equivalent: “*Machumae indicae siliqua* // machuma indica fructus alter // machuma indica fructus rubescente colore // machuma indica fructus nigricans // machumae theca aperta quae tres fructus continebat // *Gurrus* vel gorro fructus e Guinea // *Phaseoli fructus* magnus purpureus arboreus // fasolo purpureo d’India // *Lupinus* indicus compressus orbiculatus latitudine trium fere digitorum nigri coloris // phaseolus brasiliensis seu americanus // *Helxines cyssampelos* argenteis foliis fructus prone et supine.”

The images are practically identical except for the small fruits which are present in Aldrovandi’s image. The Pomar illustration is also rotated 180° compared to Aldrovandi’s original. The objects are also described in Aldrovandi manuscript 55/1, and some are preserved in the Palazzo Poggi Museum.

Phaseolus indicus

The “*Siliqua indica*. Hisp. *Algarrobo indiano*” from the *Pomar* manuscript is in Aldrovandi: “*Phaseolus indicus*.” The two images are practically identical: only the distribution and the relative dimensions of the fruit and leaves vary. In Aldrovandi’s herbarium, Volume 14, f. 189, a specimen of the plant is present with the name: “*Smilax sive Phaseolus Indicus*.”⁵⁵

Sabina

The American *Arbor vitae* listed in the *Pomar Codex* as the third species of *Thuja: es mui oloroso* is in Aldrovandi as “*Brutes Plinij // Sabina alia Bellonij // Arbore vitae // Tuia forte Theopr.*” The images are similar but display a different distribution of branches. Aldrovandi’s has some fruits that do not appear in the *Pomar Codex*. The origin of this plant could be Pieter Coudenberg or Brancion.⁵⁶ In BUB MS Aldrovandi 55/1 it appears as “*Sabina alia, Brutes plinij. Arbor vitae Bellonia, tom. p^o I. 33.*”⁵⁷

Gladiolus indicus

The “*Arundo indica siliquacea*. Hisp. *Caña paternostrera o de cuentas*” is in Aldrovandi as “*Gladiolus indicus // chenta Hispanis // canna saccari quib. perperam // mestocalamus Sebest. Bassi // camnorhodion // cynorhodon // lilium rubens arundinatum // canna d’India Ital.*” In the *Pomar Codex* image a branch with flowers and fruit is missing. This specimen is also represented in Al-

55 In ms. 89 the name is “*Smilax indicus*.” Soldano, “*L’erbario di Ulisse Aldrovandi*,” 169.

56 Soldano, “*L’erbario di Ulisse Aldrovandi*,” 92, comments that: “*Loc.: Anversa. L’ampia disamina del ms. 125 conduce al suddetto Coudenberg e a Jan van Brancion (“Brancione”) di Malines e dal commento al catalogo delle piante che Aldrovandi aveva ricevuto da quest’ultimo (cfr. il successivo f. 154) si evince, riguardo a questa raccolta, (cc. 273–273v) che le scritte del ms. 125, che rimandano alla pianta descritta per primo dal Belon (Bel.) e coltivata nel giardino reale francese di Fontainebleau, furono già anticipate da quegli e che la pianta in effetti era già stata ottenuta da Coudenberg, al quale molto probabilmente va perciò attribuito questo reperto, anche perché Aldrovandi chiese al van Brancion un campione col frutto, che evidentemente neanche da lui aveva ottenuto.*”

57 It also appears in Aldrovandi’s herbarium in Volume 13, carta inserita nella numerazione, c. 151, with the label: *Thuium aut Thuia quibusdam ex horto regis Gallorum ex America seu Bresilia allata arbor vitae recentioribus.* In MS 89: “*Thuium quibusdam ex Horto regis Gallorum ex America seu Bresilo allata arbor ramis sparsis sempervirentibus conos fert admodum parvos molles penna scriptoria non crassiores ex Coldebergio et Brancione, Arbor Paradisi, Arbor Vitae, Bruthes Plinii et Sabina alia Bel.!*” See Soldano, “*L’erbario di Ulisse Aldrovandi*,” 92.



FIGURE 12
Herba Paris,
 f. 203. BH Ms. 9
 (Biblioteca Històrica
 de la Universitat de
 València).

drovandi's herbarium in Volume 4, c. 323 with the label: "Arundo Indica seu Canna Indica Clusij. Cannacorus quorundam Lobelio. Canna sacchari quibusdam. Mestocalamus Cassiani Bassi. Cuentas Lusitanis."

It also appears in Volume 9, c. 25 with a similar caption: "Arundo Indica Florida Clusij. Cannacorus quibusdam. Canna sacchari quibusdam."⁵⁸ It seems

58 In ms. 89: "Chenta Hispanis. Gladiolus Indicus. Canna sacchari quibusdam. Mestocalamus Cassiani Bassi." And in MS 125: "Chenta Hispanis. Gladiolus Indicus. Canna sacchari quibusdam. Mestocalamus Cassiani Bassi."



FIGURE 13
 ULISSE ALDROVANDI,
Tavole di piante, t.V, c.
 265 *Solanum quinque-*
folium monococcon /
Herba paris, vel potius
imparis quinque folia.
Biblioteca Universitaria,
Bologna.

that a species of this plant could have been sent by Aldrovandi to Conrad Gessner.⁵⁹

59 Soldano, “*Lerbario di Ulisse Aldrovandi*”, indicates that Aldrovandi’s manuscripts contain confirmation of the annotation of De Toni that the plant came to Gessner from Aldrovandi. The letter indicates that the plant arrived in Bologna. See Conrad Gesner, *Epistolarum medicinalium libri III* (Zurich, 1577), 78v-79: “Plantam, quam Cannae Indicae nomina ad me depictam misisti ab Hispanis, Chentam vocari, his diebus inveni: dum herbas meas siccas perlustro, & in folium eius aridum Bononia missum hoc nomine incido. Sagapeni Heraclei nomine ex eadem urbe Ulysses Aldrovandus iam olim misit.”



FIGURE 14
Herba Paris pentaphylla, vol. 6,
 c. 90. Erbario
 dell'Università di
 Bologna, Italy.

Solanum quinquefolium

The “Herba Paris” of the Pomar is the “*Solanum quinquefolium monococcon / herba paris, vel potius imparis 5 folia.*” The two images are very similar: in this case, as in others, in the Pomar Codex superposition of fruits and leaves is avoided; the stem is shorter in proportion to the leaves in Aldrovandi’s case. In this case it also corresponds to the herbarium specimen. The similarities with the painted image are impressive.⁶⁰ The place of origin of the specimen is indicated as: “Monti di Masera.”

Helleborus

The “*Peoniae tertia species*” of the *Pomar Codex* is the “*Ἐλλέβορος μέλας // Veratrum nigrum // cherbachem, seu charbechabaid // eleboro negro Italis*” in the

60 Volume 6, f. 90. In ms. 89 and 125: “Herba Paris pentaphylla.”

“tavole” of Aldrovandi. In Aldrovandi Ms. 55/1 c. 102v it appears as: “Helleborus niger verus. Tom. 2. 172 n. p^o.” Part of the images correspond, but in the *Pomar Codex* leaves and flowers of the upper part are missing; it seems as if the painting was not finished, although it could also be another representation of the same plant, or the same plant in another moment of development. The roots are also more copious in Aldrovandi’s image. The plant is present in the herbarium in Volume 1 c. 234 and Volume 6, c. 87, with the label, ms. 89 y ms. 125: “Helleborus niger verus.”⁶¹

Apocynum

In the case of the “Periploca” from the Pomar manuscript, “*Apocynum periploca repens / caprifolium memphiticum*,” it is a similar situation to the previous one: two complete branches are missing from the lower part of the stem in the Pomar case. In Ms. 55/1, c. 19r it is labelled: “Apocynon, tom. 2, 197.”

In this case the plant is also present in the herbarium. The most similar image to the one from the “tavole” is the one that appears in Volume 9, c. 182: *Apocynum aliud. Apocynum repens* Matth.⁶²

Sferracavallo

The plant “*Ferrum equinum, securidaca* species” in the *Pomar Codex* is the “*Sferracavallo siliqua longa // malvae indicae congener quae in folio habet figuram ferri equini cum foraminibus instar sferracavalli // sferracavallo siliqua longa foraminibus clausis // sferracavallo siliqua ferri equini foramine aperto*” from Aldrovandi. The root is slightly different, as it is more developed in the *Pomar* image and, in contrast to the majority of cases, there are more branches represented in the Valencian manuscript. They may be representations of the plant at different moments of growth. In the image from Aldrovandi there is an image of a large leaf with the symbol of a shield superimposed. We also find information about this plant in Aldrovandi’s herbarium, with the indication of the place it was gathered. The most similar specimen is found in Volume 11, c. 166, with the name in the herbarium of: “*Ferrum equinum ex agro romano*”.⁶³

61 Soldano, “L’erbario di Ulisse Aldrovandi,” 158, 74 indicates that in the first letter sent to Mattioli (f. 320), Aldrovandi says that this plant was cultivated in botanical gardens and that came from the mountains of Padova.

62 BUB Aldrovandi MSS 89 and 125: “Apocinon aliud.”

63 In BUB Aldrovandi MS 89: “*Sferracavallo ex agro Romano*.” In BUB Aldrovandi MS 125: “*Sfera cavalo*.” In BUB Aldrovandi MS 136-III: “*Sfera cavalo*,” f. 174 v.



FIGURE 15 *Periploca*, f. 297. BH Ms. 9 (Biblioteca Històrica de la Universitat de València).

Tabaco

The representations of tobacco from the Indies are different. This could be the result of a lost drawing from Aldrovandi's collection, although in MS 55/1 there is only one tobacco plant. However, the plant also exists in Aldrovandi's herbarium.⁶⁴ It is known that only one specimen of this plant got to Aldrovandi

64 On this and other American plants in the herbarium of Aldrovandi, see Andrea Ubrizsy Savoia, "Le piante americane nell'Erbario di Ulisse Aldrovandi," *Webbia*, 48 (1993), 579–598.



FIGURE 16 *ULISSE ALDROVANDI, Tavole di piante, t. v, c. 197 Apocynum periploca repens / Caprifolium memphiticum. Biblioteca Universitaria, Bologna.*

from Rome, thanks to Ippolito Salviani.⁶⁵ In fact, a tobacco leaf is found dried and known as “Erbario estense,” which may date from before 1560.⁶⁶

65 Laurent Pinon, “Clématite bleue contre poissons séchés: sept lettres inédites d’Ippolito Salviani à Ulisse Aldrovandi,” *Mélanges de l’École française de Rome*, 114 (2002), 477–492, 492.

66 Euride Fregni and Paola Ferrari eds., *Tesori: riscoprire l’Archivio di Stato di Modena* (Modena, 2013).



FIGURE 17
Apocynum aliud.
Apocynum repens
Matth. vol. 9, c. 182.
Erbario dell'Università
di Bologna, Italy.

Conclusion

The high number of similarities between Pomar's and Aldrovandi's images indicates, as we have seen, a likely method of circulation of materials from Italy towards Spain. To prove this point we have tried to reconstruct some of the possible connections between Aldrovandi and Spain, which enable us to better understand the ways knowledge circulated among sixteenth-century naturalists.

Could it be conjectured that Aldrovandi sent his visual representations to Phillip II with the goal of attracting his interest, in order to obtain financial support for the publication of his works? He certainly made similar requests during his life to princes, patrons and benefactors such as Ugo Buoncompagni and Pope Gregory XIII. Equally, the images may have arrived in Spain after the

dispersion and sale of the estate of Jean de Brancion de Malines after the death of his nephew in 1579.⁶⁷ Another possibility is that they were a present from the Medici to the Spanish court. Aldrovandi himself explained that he had sent many images to the Florentine family before the arrival of Jacopo Ligozzi at the Court of the Medici:

And all over the place where the Studio of medals was, there were attached to the walls more than a hundred wooden blocks of birds designed by my painter Gian Triulxi [Giovanni de' Neri], pulled out by us and extracted from my models [...]⁶⁸

It is equally possible that the images discussed in this article were copied in secret from Aldrovandi's images and then arrived in Madrid through some clandestine business arrangement: the truth is that we do not know how the images came to Spain. This article has argued for an understanding of the multiple complex routes that medical and naturalistic materials follow, placing the *Pomar Codex* in a wider and richer panorama. It has also established a basis for a closer interpretation of the extraordinary capacity of Ulisse Aldrovandi and the other "Italian naturalists" (in the broad sense) for accumulating and circulating knowledge that also came from the New World, copying and circulating knowledge in a visual form and outside the domain of print culture. American and exotic materials in the collections of the Italian naturalist did not necessarily have to pass through Madrid and El Escorial. The overwhelming presence of images belonging to Ulisse Aldrovandi's collection in the *Pomar Codex* indicates that it seems much more fruitful to base future research on trying to understand possible pathways of exchange from Italy to the Iberian Peninsula.

67 Egmond, *The World of Carolus Clusius*, 39.

68 "Et attorno ove era lo Studio di medaglie erano attaccati al muro più di cento legni di uccelli dipinti dal mio pittore Gian Triulxi [Giovanni de' Neri], da noi cavate et estratte da miei esemplari avanti ch'el Gran Ducha avesse condotto il Signor Jacomo Ligozzi, che è un altro Apelle": Alessandro Tosi, *Ulisse Aldrovandi e la Toscana. Carteggio e testimonianze documentarie* (Florence, 1989), 205–206.