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The Collection of Tommaso de' Cavalieri as Recorded by Ulisse Aldrovandi in 1577 (BUB, Ms. Aldr. 136/6)

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Herein it is presented the transcription of a Latin list of mostly non-European objects held in the Roman Collection of Tommaso de' Cavalieri. The manuscript list (Biblioteca Universitaria di Bologna, Ms. Aldr. 136/6) was penned by Ulisse Aldrovandi in 1577 and represents a valuable snapshot of part of a poorly known section of an important collection in Late Renaissance Rome.

> KEYWORDS: TOMMASO DE' CAVALIERI; ULISSE ALDROVANDI; HISTORY OF COLLECTIONS; MESOAMERICA; ROME; RENAISSANCE.

Introduction¹

The Latin source whose transcription is offered herein describes part of the collection of the famous Roman nobleman Tommaso de' Cavalieri as it was recorded by Ulisse Aldrovandi in 1577. The relevance of the text, never fully transcribed before, rests on multiple aspects. Tommaso de' Cavalieri is best known for his friendship with Michelangelo Buonarroti and for his famous collection of ancient and modern art, including several famous drawings by Michelangelo. Much less known, on the other hand, is the fact that the collection also included several non-European objects. It is for this reason that Ulisse Aldrovandi's detailed record of these "stranger things" (*res peregrinae*) is a precious source, able to reveal a poorly known facet of Tommaso de' Cavalieri's collecting activities. The text also illuminates Aldrovandi's scholarly

¹ I would like to express my sincere gratitude to Francesca Roversi Monaco for her insightful help in the revision of the transcribed text. I also thank the personnel of the Biblioteca Universitaria di Bologna for their generous support.

method, including the detailed listing of specimens owned by other collectors and the subsequent process of reworking and indexing of the manuscript record. Moreover, a detailed analysis of the Aldrovandi's lists provides precious information for scholars interested in early modern collecting of materials from extra-European countries, especially the Americas. Despite its brevity and conciseness, the text greatly contributes our understanding of the global dimension of Italian collecting practices during the Late Renaissance.

Tommaso de' Cavalieri

The Roman nobleman Tommaso de' Cavalieri (ca. 1509/10 – 1587) is especially famous due to his intimate friendship with Michelangelo Buonarroti, who dedicated several poems to his young friend, a man of "incomparable beauty" according to Benedetto Varchi. The relationship with Michelangelo strongly contributed to Tommaso's fame, somehow overshadowing the relevant role he played in Late Renaissance artistic circles². An artist himself, Tommaso was well connected with other famous artists such as Sebastiano del Piombo, Daniele da Volterra, and Marcello Venusti. Since 1548 he held various public offices related with the coordination of architectural works at the Capitol and at Palazzo Senatorio.

Tommaso de' Cavalieri was also a collector, both of ancient and modern art. In his house in Piazza de' Cavalieri, he owned a collection of classical antiquities. Between 1532 and 1535, Michelangelo bestowed him several drawings – including *The Fall of Phaeton, The Punishment of Tityus, The Rape of Ganymede, The Dream*, a *Bacchanalia of Putti*, and some "divine heads" – which became so famous that Giorgio Vasari explicitly mentioned and praised them in the 1568 edition of the *Vite*. Tommaso himself wrote to Michelangelo that one of the versions of the *Fall of Phaeton* had been admired by prestigious visitors such as

² On Tommaso de' Cavalieri and his art collection see at least Frommel 1979; Perrig 1979; Panofsky-Soergel 1984; Sickel 2006; Marongiu 2013, 2017, 2020a, 2020b; Bedon 2019; Agosti and Marongiu 2020.

Pope Clement VII (Giulio de' Medici) and the *cardinal nepote* Ippolito de' Medici. The drawings, later passed to Alessandro Farnese, are today preserved in the United Kingdom, at the Windsor Castle and The British Museum.

A less known aspect of Tommaso's collecting activity is that he also owned several "stranger things", that is, *artificialia* and *naturalia* mostly proceeding from extra-European lands. It is precisely this part of his collection that, in 1577, called the attention of Ulisse Aldrovandi, who meticulously penned a list of its contents. It is to this record that now we turn our attention.

Ulisse Aldrovandi and the Cavalieri collection

The famous Bolognese polymath Ulisse Aldrovandi (1522-1605) was linked to Tommaso de' Cavalieri by a kinship tie, since Giuliano Griffoni - son of Ulisse's sister Lucrezia - married Costanza Cavalieri, Tommaso's niece (Aldrovandi 1599, 656). During his trip to Rome in 1549-50, Ulisse made a catalogue of Tommaso's collection of Classical sculptures, then included in Delle statue antiche (Aldrovandi 1556, 225-227), published in Lucio Mauro's Le antichità de la città di Roma (1565). In 1577, Aldrovandi travelled again to Rome to meet Pope Gregory XIII and ask for his help to settle a controversy on the theriac's recipe he had with the apothecaries of Bologna. Aldrovandi remained in Rome from March to June 1577, and it was in this period of time that he visited again Tommaso's house (Fantuzzi 1774, 39-47; Frati 1907, 18-22, 25-26; Tugnoli Pattaro 1981, 153-154)3. As he used to do, during this second visit Aldrovandi meticulously recorded a different section of the Cavalieri collection, mainly constituted by natural specimens and artifacts that Aldrovandi called res peregrinae. The original list that Aldrovandi penned in Rome is lost, but several copies are preserved in the manuscript corpus at the Biblioteca Universitaria di Bologna (BUB).

³ Fantuzzi erroneously recorded the arrival of Aldrovandi in Rome on March 2, 1576, but the correct date (March 2, 1577), is provided by Aldrovandi's autobiography (BUB, Ms. Aldr. 97, 647-670; Frati 1907: 22).

As noticed by Detlef Heikamp (1976, 461-462, n. 19), Aldrovandi also briefly mentioned two Mesoamerican shields "elegantly elaborated and decorated with featherwork" from the Cavalieri collection in the first volume of the *Ornithologiae* (1599), one of the few books that he was able to publish in his lifetime.

The existence of one version of Aldrovandi's manuscript description of the Cavalieri collection (in BUB, Ms. Aldr. 143/3) was first noticed by Giuseppe Olmi, who provided interesting observations on its contents (Olmi 1992, 239, n. 64). Anna Bedon briefly mentioned the same list in a more recent publication, erroneously attributing it to 1549 (Bedon 2019, 147 n. 9). However, a search in the Aldrovandian manuscript corpus revealed that it contains three different versions of the list, as well as several references to it in alphabetic indexes. The earliest copy of the lost list is found in the sixth volume of the Observationes (BUB, Ms. Aldr. 136/6), which contains materials dated between 1571 and 1578, suggesting that this "clean copy" was done soon after the Roman trip. The list is split in two parts, both contained in the section titled Itinerarium, seu rerum in itinere fiorentino, romano et tyburtino collectarum catalogus (cc. 83r-123v), where the contents of various collections visited during the trip to Rome and Florence were recorded⁴. A first list of the Cavalieri collection (cc. 97r-100v) includes sixty-four synthetic entries, while a second list (cc. 120r-123v) describes in more detail twenty-seven objects which (with one exception; see entry n. [19]) were already recorded on the previous one. The text - written by one the scribes working in Aldrovandi's workshop - was then corrected by at least two different persons, one of them Ulisse Aldrovandi himself. Several objects listed in Ms. Aldr. 136/6 were also recorded on paper slips glued in BUB, Ms. Aldr. 145.1, which is an alphabetic index of the Observationes.

The lists from Ms. Aldr. 136/6 were then copied again in the *Peregrinarum rerum catalogi* (BUB, Ms. Aldr. 143). In its third volume, within a section titled *Romae catalogus*, the Cavalieri items were now recorded incorporating the corrections done on Ms. 136/6 and with slight

⁴ The section recording the Florentine collections (cc. 83r-93v) has been transcribed in Tosi 1989, 210-222.

changes in the entries' order and subdivisions (Ms. Aldr. 143/3, cc. 143v-145v, 154r-154v, 156v-159v).

Between 1581 and 1584, some of the entries from Ms. 136/6 were again copied, but with substantial differences in wording, in the *Admirandorum naturae et artis historia* (BUB, Ms. Aldr. 34/2, cc. 405v-408r, 413v-417r). On Ms. Aldr. 136/6, the entries that were selected to be copied in *Admirandorum* were marked, by Aldrovandi himself, with a tick on the left side of the page. Nevertheless, the *Admirandorum* also contains some items not ticked on Ms. Aldr. 136/6, maybe due to simple errors by the copyist.

Finally, some of the objects from the Cavalieri collection were also recorded on paper slips glued in alphabetical order to the pages of the *Pandechion epistemonicon* (Ms. Aldr. 105), accompanied by cross-references to their location in Ms. Aldr. 136/6 and, at times, by bibliographic notes (e.g., entry [13]).

The collection

The lists penned in 1577 by Ulisse Aldrovandi provide precious information on the heterogeneity of the Cavalieri collection. Unfortunately – and differently from the earlier description of classical statues – they contain no hints on its spatial organization and modes of display. We know that the sculptures were exhibited in two gardens and three rooms at the ground floor (Bedon 2019, 142), and it is reasonable to assume that more fragile items like modern artworks and *res peregri*nae were displayed in other areas of the palace. That said, it is unclear whether they were physically and typologically separate from the rest of the collection or whether, more likely, their description as a separate unit by Aldrovandi was an effect of the natural historian's scholarly interests.

The lists contain a total of sixty-four entries. Since some of them record objects in the plural, their total should amount to about seventy. A precise cultural and/or geographic attribution of each object is often hampered by the conciseness of most entries, as well as by the usage of labels such as "Indian", a notoriously ambiguous term in early modern inventories (Keating and Markey 2001). However, some tentative attributions can provide a general idea of the content of the collection. The quantitative balance between naturalia and artificialia is almost perfectly even. Approximately 2/3 of the naturalia are not attributable to a specific region (even if four of them are labelled as "Indian"); among those which can be reasonably attributed to specific regions (with different degrees of certainty), the great majority are from the Americas. Among the artificialia, less than 1/5 are non-attributable (three of them described as "Indian), while half of the attributable ones are from the Americas, with the rest almost equally split between Asia and Europe (both ancient and modern). These rough figures clearly show that most of the collection (or, better said, of the part selected by Aldrovandi) was composed of "stranger things", with European or Western objects representing less than 1/6 of the total. Among the res peregrinae, the American ones were clearly predominant, amounting to 1/3 of the total. Among the non-American ones, only two are explicitly described as Chinese [43]⁵ and "Turkish" [44].

It is difficult to state whether this predominance of American items was really a feature of the Cavalieri collection or whether it was instead a product of Aldrovandi's keen interest in American things. Among the naturalia, for example, American specimens like toucans (a beak and a whole specimen [1, 49]), a *Reversus piscis* [11], an iguana [14], a squash [25], a sunflower [65], and several greenstones whose names (Lapis ad dolorem iliacum, Lapis renalis) refer to their purported medicinal properties [3, 40, 41], all match similar specimens extensively treated in the Aldrovandian corpus of texts and images. However, the lists attest that some of these specimens were later sent by Tommaso to Ulisse (a greenstone and the beak of a toucan, see entries [40] and [49]), suggesting that the 1577 visit to Cavalieri's house could have further fueled Aldrovandi's interest in American things. Especially meaningful is the case of the Reversus piscis recorded in entry [11]. As first noticed by Giuseppe Olmi, this is clearly a specimen of the famous Reversus piscis aculeatus which is also illustrated in a painting in the Aldrovandi collection (BUB, Tavole di animali, IV, 121). As witnessed by an inscription on it, the painting was giv-

⁵ A "papyrus booklet", described both as "Indian" and Chinese.

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en by Tommaso de' Cavalieri to Aldrovandi, probably together with a "twin" one depicting a Reversus Indicus aliis anguilli formis (BUB, Tavole di animali, IV, 122). Copies of the two paintings, done in Bologna, were given by Aldrovandi to Francesco I de' Medici and probably also to the Bolognese jurist Antonio Giganti, in whose 1586 inventory we read about "2 pesci dipinti in carta del Mondo nuovo, uno detto pesce roversico, si potriano chiamar pesci pescatori, poiché l'uno con le spine ond'è armato infilza i pesci, et l'altro li piglia con una sacca c'ha in capo, la qual stende, spinge et ritira et gli huomini si servono di detti pesci in mare, come de bracchi et sparvieri in terra" (see Laurencich Minelli 1984, 240; Tosi 1989, 224; Olmi 1992, 238-239; Mason 2023, 110-115; Azzolini 2024). Among the non-American naturalia (or those not securely attributable to that region), it is worth mentioning a unicorn horn (i.e., a narwhale tusk) [6], a couple of sawfish rostra [8, 9], the tail of a hippo [21], and a sea turtle shell [29], together with a host of minerals.

Even considering Aldrovandi's potential role in the selection of objects to be recorded, the number of American specimens is surprising, especially when we consider Mesoamerican artifacts. A wooden drum [10], an obsidian blade [13], a mosaic-covered skull [15], an alabaster vessel [16], feather mosaics with Christian imagery [18], an obsidian mirror [23], a cup made with a dried gourd [25], two feathered shields [26], a wooden sword [27], greenstone "idols" [30], agricultural tools [31], and a pyrite mirror [42] constituted one of the richest and more varied Italian collection of Indigenous Mesoamerican artifacts in the 16th century, only comparable to the Bolognese collection of Antonio Giganti (Laurencich Minelli 1984), which was almost completely inherited by Aldrovandi himself (Domenici 2022a; Domenici in preparation a)⁶. Entry [25] attests that Tommaso de' Cavalieri sent to Ulisse the dried gourd, further informing on the flow of specimens between their collections.

⁶ Other Italian early modern collections with comparable numbers of Mesoamerican artifacts are first attested in the 17th century, even if they clearly inherited objects collected during the previous century. This is the case, for example, of the Giustiniani and Chigi collections (Domenici and Laurencich 2014; Domenici 2023).

Several of the Mesoamerican artifacts in the Cavalieri collection ([13, 15, 16, 18, 27, 31]) match those mentioned in the Descrittone dell'India occidentale, an anonymous and undated Italian printed text which could have been printed in Venice around 1564-1579 (Domenici 2017a). The text describes the arrival in Italy of a priest – most probably a Dominican friar which I tentatively identified with Juan de Córdova – who brought a rich gift of Mesoamerican artifacts. Only one of these objects is today extant, namely a Mixtec notched human femur employed as a musical instrument now held at the Museo delle Civiltà in Rome. In the 17th century it was in the possession of Cardinal Flavio Chigi, who also owned other objects listed in the Descrittione (Domenici 2016, 2023). The whereabouts of all the other objects listed in the Descrittione are unknown, but the lists commented herein clearly show that large part of them entered the Cavalieri collection a few years before Aldrovandi's visit. This suggests that the richness of Mesoamerican artifacts in Cavalieri's house was, at least in part, the consequence of the fact that Tommaso had somehow access to the Dominican circulation sphere of Mesoamerican objects, whose impact on early modern Italian collecting I have been exploring in recent years (Domenici 2017b, 2021, in press, in preparation a). Among the objects deriving from that sphere, an especially interesting one is a Mixtec mosaic-covered human skull [15]. Both the Descrittione dell'India occidentale and Aldrovandi's list record that it originally belonged to the same individual of the abovementioned femur, an "Indian king" which was defeated and sacrificed by the king of Tututepec, a Mixtec kingdom on the coast of Oaxaca. What is unique of Aldrovandi's record is that it adds further information on a previously unknown military conflict occurred in AD 1350 and that it even provides the specific identity of the defeated warrior as the king of Tlaxiaco, another famous Mixtec kingdom. Also surprising is the fact that Aldrovandi was able to record Indigenous toponyms (that he misunderstood as anthroponyms) not attested elsewhere in early modern European sources, like the Mixtec Uucu Zzaa (i.e., Yucu Dzaa, whose Nahuatl name is Tututepec) and the Nahuatl Taxiaco (i.e., Tlaxiaco). This body of information, explicitly attributed to "Indian paintings" and that Aldrovandi must have somehow learnt in Cavalieri's house, is of outmost relevance for Mesoamerican studies.

as discussed at length elsewhere (Domenici in preparation b). It is unclear whether all the pre-Hispanic and colonial Mesoamerican objects in the Cavalieri collection had a same provenance, but this is quite unlikely, suggesting that Tommaso could have drawn from different sources.

The only other extra-European region that seems to be represented by more than one artifact is the Far East: besides the abovementioned "papyrus booklet" [43] explicitly attributed to China, also Chinese or East Asian could be the tortoise-shell bowl [39], the silk textile with painted or embroidered images of birds and plants [46], and a gong [38]. Probably Asian, but difficult to identify with more precision, is the "palm hand fan" [2]. Rather perplexing is the "Turkish papyrus inscribed with spells" [44] where the term "Turkish" seems to be a general reference to the Ottoman world, since papyrus was not commonly used in the properly Turkish area of the empire. Finally, among the European (or Western) artifacts, both ancient and modern objects can be recognized. Classical objects could be the mosaics [28, 32], a *tintinnabulum* [37], and a Sardian stone with the portrait of Augustus [56], while among the modern ones one could count at least the tripartite ring which is described in detail in a fascinating entry where it is associated with the Christian Trinity [59].

In this introduction we refrained from using the term exotica to define the objects catalogued by Aldrovandi. Even if it could seem an acceptable synonym of the label res peregrinae employed by the Bolognese scholar, the term is too loaded with a clearcut, dichotomic, and ultimately fallacious opposition between "the West" and "the Rest" to properly account for the deeply entangled nature of the "four parts" of the early modern world (Gruzinski 2004; Russo 2023). Much to the contrary, Aldrovandi's lists provide us with a precious record of a collection kept in a Roman noble mansion where classical sculptures and Michelangelo's drawings coexisted with objects like the mosaic-covered skull of a sacrificed Mixtec king, a Chinese booklet, a Christian feather mosaic from Mexico, the colorful beak of an American toucan, and the white tail of an African hippo. They are powerful witnesses of the global scale attained by material culture circulation spheres in early modern times, as well as of the complexity and heterogeneity of Italian collecting practices during the Late Renaissance.

The transcription

In the following I offer a transcription of the two lists in Ms. 136/6, which - in addition to being the earliest - functioned as "master lists" for all the other occurrences in the Aldrovandian manuscript corpus. To facilitate comparisons, the two lists are presented in a table where the entries recording a same object are paired on a same line. In each column, where the text of a specific section of the manuscript is transcribed, page numbers are written in bold. A sequential numbering of the objects, in square brackets, has been added in the leftmost column. The transcription accepts the corrections penned on Ms. 136/6, explicitly recording in a footnote only those that can have some specific interest, either for lexical reasons or because they provide hints on the working methods employed in the Aldrovandi workshop. Otherwise, minor copying errors and small differences in spelling or wording with other manuscripts are not noted. When the lists copied in other manuscripts of the Aldrovandian corpus contain additional interesting information, this is offered in the footnotes. The ticks marking the items to be copied in Ms. Aldr. 34/2 are rendered with an asterisk.

	Ms. Aldr. 136, VI, cc. 97r-100v	Ms. Aldr. 136, VI, cc. 120r-123v
[1]	97v In museo celeberrimi Domini Thomasi de Ca- vallieris *Rhomphastis rostrum	
[2]	*Ventilabrum ex palmae folio confectum quod est instar chameriphy ⁷ nisi quod folia sunt co- niuncta, quod in palmide non accidit.	
[3]	*Lapis ad dolorem iliacum.	
[4]	Lapis Iaspidi et smaragdi similis.	
[5]	Lapis viridis subalbicans.	
[6]	*Monoceros similis meo non obliquum, sed cre- diderim potius igne erectum.	120v Apud Thomam de Cavallieris Romae *Monoceros similis meo non obliquum sed crediderim potius igne quam a natura ita erectum.

⁷ The word "chameriphy" was added by Aldrovandi himself. It probably refers to a genus of palms (*Chamaerops*).

[7]	*Cornu, quod Antes dicitur apud Indos niger- rimum.	*Cornu Antes apud Indos nigerrimum tor- tuosum nullam habet spiram longitudine trium dodrantum cum dimidio et plenum absque medulla si percusserit equum dolore eliaco laborantem, statim convalebit.
[8]	98r *Pristis rostrum longitudine quinqe dodrantum latitudine autem circa basim duorum palmo- rum.	*Pristis rostrum longitudine quinqe do- drantum; et latitudine duorum palmorum circa basim; versus extremum autem unius palmi colore cinereo; in parte inferna can- deat, dentes habet 46 ab utraque parte 23.
[9]	*Pristis rostrum aliud 42 habens dentes.	*Pristis rostrum aliud, quod dentes habet 42 in basi est latitudine septem digitorum.
[10]	*Tympanum Indicum ex ligno castanei coloris ⁸ .	*Tympanum Indicum ex ligno castanei coloris, quod videtur referre lignum ver- gineum referre sed longe obscurius
[11]	Reversus piscis ex India figura orbis.	*Reversus animal Indicus figuram refert orbis, licet oppressam et oblungam figu- ram , spinis undecumque osseis insignitus, quam omnes cauda versus tendunt. 121r Ceduas habet pinnas versus caput; et una in dorso et alteram in alvo ex opposito dorsi. Inferne habet os more delphini an- tiquorum et intus per transversum spinis est insignitus.
[12]	*Cortex serpentis Indici.	*Cortex serpentis Indici, quem pariter vidi apud magnum Hetruriae ducem longi- tudine duodecim dodrantum; latitudine presentem in medio unius dodrantis spinis nigris et flavis.
[13]	*Novacula lapidea ad sacrificandum cadavera idolis ⁹ .	*Novacula lapidea quam ministri templo- rum olim idolis sacrificabant.
[14]	*Uromastyx quem Ignanum ¹⁰ vocant Indi.	*Uromastyx quem Ignanum vocant Indi.

⁸ Since most of the Indigenous American objects in the Cavalieri collection are Mesoamerican, it is tempting to identify this wooden drum as either a vertical drum (*huehuetl* in Nahuatl) or a horizontal slit drum (*teponaztli* in Nahuatl).

⁹ BUB, Ms. Aldr. 105 LA/LECT, 379: "Lapis ex qua novacula. Rasoi di pietra per cavare il cuore del petto a' quelli che sacrificano gli indiani della nuova Spagna. Tom. 3° Navig. 188". The reference to Giovanni Battista Ramusio, *Navigationi et Viaggi*, vol. 3 (1556) remits to Gonzalo Fernández de Oviedo, *Generale et Naturale Historia dell'Indie*. The object is a Mesoamerican obsidian prismatic blade (see Domenici 2022b). Similar blades, "a simiglianza di rasoio", are listed in the *Descrittione dell'India occidentale* (Domenici 2017a, 510).

¹⁰ Ms. Aldr. 143/3, 144r: "Ignarium"; Ms. Aldr. 143/3, 157v: "Ignarum"; Ms. Aldr. 34.2, 136r: "Ignanum". Arguably, they are all imperfect transcriptions of "Iguanum", that is, "iguana", an Arawak term that Aldrovandi probably draw from Fernández de Oviedo's work.

[15]	Cranei Indiani regis descriptio vide suo loco al- phabetico ¹¹ .	*Cranei Indiani regis descriptio. Ut pateat crudelitas, qua Indiani Indiae mundi novi utebantur sicut historiarum scriptores tes- tantur, quod humanam carnem Indi man- ducare solebant quod verissime verissimum est, ut presens spectaculum demonstrat. Quoniam antiqua consuetudo apud Indos erat et usque 121v in hodiernam diem servatur in partibus illis, ubi nondum verbum Dei seminatum est quod si Rex vel Dux aut miles victus in proelio et captus vivus fuisset, in carcere servaretur dato sibi victus opulentissimo, ut appropinquante die festo solemnissimo vivus sacrificaretur, et eius caput scindere- tur, ut vaso de illo facto singulis annis India victoria habita Rex victor triumpharet, et biberet cum illo. Et sic evenit in temporibus illis Anno Domini 1350 ut picturae Indo- rum testantur, quod Rex TAXIACO egit bellum contra regem potentissimum Uucu Zzaa, Regem Mistecorum et Rex Taxiacus superatus ab illo et captus vivus fuit sacrifi- catus ut supra; et caput eius hoc est ¹² et est lapillis viridibus rubris et flavis tanquam li- thostraton exornatum; et est concavus nam eo utuntur ad potandum ¹³ .
[16]	*Vas Indicum ex Alabastro in figura Idoli confectum ¹⁴ .	*Vas Indicum ex Alabastro in forma dolij ¹⁵ redactum
[17]	*Fungus petreus Indicus.	*Fungus petreus indicus qui in sumitate habet quasdam fasciolas instar serpentium. [Note added:] Fecit pictura.

¹¹ The mention of the "loco alphabetico" is a reference to BUB, Ms. Aldr. 145.1, under "Cranei indici regi".

¹² Rather than "hoc est", Ms. Aldr. 34.2, 415r has a longer phrase which stresses Aldrovandi's physical engagement with the skull: "viditur Romae apud nobilem atque probatissimum virum D. Thomasum de Cavalleris; quod manibus meis contrectavi".

¹³ Ms. Aldr. 34.2, 415r, has a different final phrase, suggesting that in the interior of the skull there was an inserted element, probably a gourd: "intus cranei est quod crateris loco utantur, ut diximus".

¹⁴ This is an alabaster (*tecali* in Nahuatl) figurative vessel of a kind widely produced in Postclassic Mesoamerica. Three different "chalcedony" idols are mentioned in the *Descrittione dell'India occidentale* (Domenici 2017a, 509).

¹⁵ This is probably a copying error for "idoli". However, the same form was copied in Ms. Aldr. 143/3, 158r.

[18]	*Figura Indica variorum sanctorum nempe Christi, eius matris, et Sanctorum Apostolorum Petri et Pauli ex avicularum plumis confecta ¹⁶ .	122r *Figura Indica variorum sanctorum nempe Christi, eius Matris Mariae Verginis, Petri et Pauli et aliorum sanctorum confecta ex plumis variarum avicularum maxime viri- dium ita ut hornestraton dici possit: nam ex illis plumis varias figuras Indi effingunt et si luci exponatur more colli pavonis ¹⁷ lucidissimos et splendidissimos demons- trabant colores.
[19]		*Serpentis magnis spatula os in India inter- fecti quemadmodum foramina grandium bombardarum ostendunt.
[20]	*Arundinis indicae hastula longitudine 15 do- drantum.	
[21]	*Cauda Hippopotami candida instar lini ¹⁸ .	
[22]	98v Tabula ex alabastro varijs lineis et maculis visui gratissima ex quatuor triangulis confecta.	
[23]	Marmor nigerrimum instar speculi ¹⁹ .	*Marmor nigerrimum instar speculi, cui adherent figurae passionis Redemptoris nostri ex ebore confectae.

¹⁶ The phrase "ex evicularum plumis confecta" is added, by a different hand. Indigenous feather mosaics with Christian iconography enjoyed wide popularity both in New Spain and Europe during the 16th and 17th century. Similar feather mosaics with Christian iconography are mentioned as "imagini de Iddio & de gli Apostoli" in the *Descrittione dell'India occidentale* (Domenici 2017a, 508). Aldrovandi also possessed a similar mosaic representing Saint Hieronymus Aldrovandi, *Ornithologiae*, 656; BUB, Ms. Aldr. 116, 129. On Mexican feather mosaics see at least Russo 2014; Russo, Wolf, and Fane 2015. On Aldrovandi and feather mosaics, see Domenici in preparation c.

¹⁷ Ms. 34.2, 415v: "more pavonis seu columbi colli".

¹⁸ This hippo tail was mentioned by Aldrovandi in a letter to Girolamo Mercuriale, dated January 26, 1599: "[...] a Roma l'anno del 1577 vidi appresso il signor Tomaso de Cavaglieri una consimile quale chiamavano coda d'unicorno, volgarmente di cavallo marino, cioè hippopotamo, che al mio giudicio son con Vostra Eccellenza che non sia altrimente coda d'hippopotamo degli antichi, come si potria mostrare per la pittura delle medaglie antiche" (Tosi 1989, 424).

¹⁹ It could be a Mesoamerican obsidian mirror, but the description is too scanty to state it for sure. Several Mesoamerican mirrors or polished obsidian slabs painted with Christian imagery are known, but none with an attached ivory carving as in this case.

[25]	*Paropsis ex cucurbita indica.	*Paropsis ex cucurbita indica in qua conspiciuntur variae figurae diversis colo- ribus depictae [] ²⁰ .
[26]	*Clypei contexti ex varijs avium plumis indicis confecti, intus iuncis ²¹ obiuncti ²² .	*Clypei contexti ex plumis variariarum avicularum indicarum intus autem iunci obiuncti.
[27]	*Ensis indica ex lignea quadam materia ²³ .	*Ensis indica ex lignea quadam materia cannae indicae parum dissimilis
[28]	Persona antiqua ex varijs lapillis contexta.	
[29]	*Testudinis ossa maxime lucida, instar conche marinae margaritiferae ²⁴ .	
[30]	*Idola indica ex lapide pretioso ad renalem do- lorem utilissimo ²⁵ .	
[31]	Instrumenta aenea apud indos ad agricultura apta ²⁶ .	

²⁰ Unreadable note by Aldrovandi himself. Ms. 143/3, 144v: "mi missa", also by Aldrovandi himself; Ms. 34. 2, 416r: "ut in meo Museo", again by Aldrovandi. These later additions by Aldrovandi indicate that he received the object after the writing of the list's various copies. The object is a *jicara* (from Nahuatl *xicalli*), that is, a dried and painted (or lacquered) fruit of *Crescentia cujete* used as a drinking cup, mostly for cacao-based beverages. Such gourds, often decorated with floral motifs, were commonly produced in New Spain. A decorated gourd is depicted in an unpublished wooden xylographic matrix in the Aldrovandi collection, but it is difficult to say if it was the one proceeding from the Cavalieri collection or another similar object that Aldrovandi received from elsewhere (Domenici in preparation a).

²¹ Ms. Aldr. 143/3, 144v: "vineis" instead of "iuncis".

²² These are the two feathered shields famously mentioned in the *Ornithologiae* (Aldrovandi 1599, I, 656).

²³ In Postclassic Mesoamerica they used wooden "swords" endowed with obsidian blades (*macuahuitl* in Nahuatl). However, since it is unlikely that Aldrovandi did not describe the blades, the entry probably refers to some kind of wooden mace. The *Descrittione dell'India occidentale* mentions both kinds of weapons: "certe mazze di legno che essi chiamano Macana, & ancora certe spade di legno nelle quali sono incassate col betume fortemente certi denti di porfido negro nel taglio, et tagliano con quelle d'un colpo il collo d'un Toro, come se fossero di acciaio" (Domenici 2017a, 510).

²⁴ The word "margaritiferae" is added by a different hand.

²⁵ Likely, Mesoamerican greenstone figurines.

²⁶ The entry, recording bronze agricultural tools, is of outmost interest, since – to the best of my knowledge – the only other mention of such instruments in an early modern European collection is found in the *Descrittione dell'India occidentale*: "Hanno acchiette, & asciole, burilli & altri ingegni di rame, co' quali lavorano il legname, &

[32]	Musaicus in quo variae sunt piscium figurae, es- tque in eo figura torpedinis ²⁷ .	
[33]	Alabastrum quod primum operi fuit applicatum.	
[34]	99r Manubrium lapidis.	
[35]	*Cistula ex byrillis ²⁸ indicis minimis confecta.	
[36]	*Vas quoddam cavum ex crystallo cum duobus ansis ferro bifurcatum.	
[37]	*Tintinnabulum aeneum miro intus artificio confectum; quod est figura spherica instar cu- preo. quinquecorticibus constans quorum. ex- terior coniungitur cum secundo etc et nullus alterum tangit ²⁹ .	122v *Tintinnabum enaeum figura spherica ins- tar cuprae ³⁰ ex quinquecorticibus constans quorum exterior coniungitur cum secun- do quodam interstitio duobus in locis se- cundus cum tertio et sic deinceps; nullus alterum tangit; est multis foraminibus lon- gis per quas ingreditur aër: in medio est pilula quae hinc inde mota sonu sonum edit per amphractus estque res miro artifi- cio confecta; et a paucis fere cognita. [followed by four entries from the palace of the Grand Duke of Tuscany]
[38]	*Lamina aenea rotunda qua utuntur Indi ad tripudiandum et secundum varium digitorum motum varios etiam edit sonos.	
[39]	*Paropsis ex testudine confecta.	123r [deleted fifth entry from the palace of the Grand Duke of Tuscany] Apud Thomasum de Cavallieris Romae. *Paropsis confecta ex cortice testudinis marinae valde diaphano maculis nigris, ferrugineis et albicantibus.
[40]	*Lapis similis meo renali postremo mihi misso ex quo Indi conficiunt cultros ³¹ .	*Lapis similis meo renali postremo mihi misso, ex quo indi conficiunt cultros; erat crassitudine trium palmorum.

il terreno" (Domenici 2017a, 512). The bronze/copper discrepancy may be due to the difficulty of properly identifying specific metal alloys by simple visual inspection.

- ²⁷ The phrase "estque in eo figura torpedinis" is added by a different hand.
- ²⁸ Ms. Aldr. 34.2, 406v: "Beryllis".
- ²⁹ The phrase "et nullus alterum tangit" is added by a different hand.

³⁰ Over "instar" and "cuprae" there are two unreadable brief corrections by Aldrovandi himself.

³¹ Ms. 34.2, 406v adds: "sicut unus aut alterus habet Thomas de Cavalleris". The entry is a clear reference to a now lost obsidian knife which arrived in Bologna as part of a gift brought by the Dominican friar Domingo de Betanzos in 1533 and then sequentially owned by Leandro Alberti, Giovanni Filoteo Achillini, Antonio Giganti,

[41]	*Lapis ad dolorem iliacum colore subviridi, qui Indis Cralhuil dicitur .i. pietra di Dio ³² .	*Lapis ad dolorem iliacu' colore subviridi quam lingua indica Cialzuil .i. pietra di Dio appellant.
[42]	*Speculum naturale ex lapide Pyritide; quod vere hominis effigiem representat ³³ .	*Speculu' naturale ex lapide pyritide, quod vere hominis effigiem exprimit.
[43]	*Libellus ex papyro Indica	*Libellus ex papyro chinense foliaque sunt duplicia; et tantu ab una parte scrip- ta leguntur, qua ab(cancellato) in utraque papyri parte scribi non possit propter aius subtilitatem et diaphinitatem.
[44]	*Papyrus Turcica cui inscripta sunt multa sor- tilegia	*Papyrus Turcica in quo sunt sortilegia quadam.
[45]	*Grana frumenti qua Triticites dici possunt.	*Grana frumenti qua triticites dici possunt, qua sunt in civitate 123v Veteri inventa; quibus iniecta erant multa numismata antiquissima.
[46]	99v *Tela indica ex serico contexta varijs avium et plantarum figuris insignis.	
[47]	*Cucurbita indica.	
[48]	*Panis ex Iuca Indorum qui in multos conserva- tur annos instar biscotti ³⁴ .	

and Ulisse Aldrovandi. A woodcut of the knife was published in the *Musaeum me-tallicum* (1648) together with a text stating that it was endowed with a "manubrio ex lapide renali fabricato" (Aldrovandi 1648, 157; Domenici in preparation a).

³² Of outmost interest is the record of an Indigenous term variously transcribed as Cralhuil (Ms. Aldr. 136/6, 99r; Ms. Aldr. 143/3, 145r), Cialzuil (Ms. Aldr. 136/6, 123r; Ms. Aldr. 143/3, 154r; Ms. Aldr. 34.2, 417v; Ms. Aldr. 105, 353) or Cralzuil (Ms. Aldr. 34.2, 407r) and (erroneously) translated as "God's stone". All of them are imperfect transcriptions of the Nahuatl term *chalchihuitl*, "greenstone". At the end of the entry, Ms. 34.2, 416v adds: "Credo esse lapidem nephriticum qui eiusdem est coloris; et aliquando ex lacteo nonnunquam ex prassino colore virescit".

³³ Pyrite mirrors were common in pre-Hispanic Mesoamerica (see Melgar, Gallaga, and Solís Ciriaco 2014; Gallaga and Baliney 2016).

³⁴ This fascinating entry records a *pan cazabi*, or cassava bread, produced with manioc (*Manihot esculenta*) in the Circum-Caribbean region. As also shown by the version "biscotti seu panis nautici" in Ms. Aldr. 34.2, 407r, the reference to its preservation over time is a clear allusion to the common usage of *pan cazabi* as hardtack on European ships in the Americas.

[49]	*Pica ex Bressilia; cuius rostrum totum corpus magnitudine superat ³⁵ .	Pica illa ex Bressilia in parte inferiori plu- mas habet luteas, croceas deinde flavas ad subviride tendentes; in extremitate vero emulator colorem croci.
[50]	[after two entries from different collections] Ex Museo Dni Thomasii de Cavallieris Legno de los renones.	
[51]	*Opalo congener in quo sunt varium varii as- pectum aspectus variae apparent macule virides et pupureae et cetera.	
[52]	*Pederota qua est coloris leucphei [sic] ubique in ea radius purpureus conspicitur.	
[53]	*Carbunculus amethystizontes.	
[54]	*Annulus confectus ex quadam aetatis spetie flu- vij imagine reddens.	
[55]	100r *Aqua marina gemma est, cui insculpta est fi- gura cupidinis.	
[56]	*Sardius lapillus in qui est insculptum caput Au- gusti.	
[57]	*Polyophtalmos lapis pulcherrimus et oculis gratissimus est spes Aetatis.	
[58]	*Anulus ex tribus filis aureis contextus tanto ar- tificio et ingenij acumine ut homines in admi- rationem rapiat. refertque Santissimam Trinita- tem nam licet tria sint fila quibus adheret alter anulus mira exiguitatis qui fila illa aurea undique ambit et quamvis ad diversum filum transire vi- deatur semper in primum et unum conspicitur, etsi circumvolventi in alium semper videatur descendere anuli filum. Et sicut hac tria fila semper in unum desinunt et anulum preffertum reddunt, sic et Christiana religio credit Patrem fulum et spiritum sanctum in Trinitate unum eundem semper esse Deum immortalem et hu- mano intellectui incomprensibilem ³⁶ .	
[59]	Anulus alter qui in parte oculis obiecta semper latior apparet; licet undique eiusdem sit latitu- dinis.	
[60]	100v *Topatius habens figuram oculi	

³⁵ Ms. Aldr. 34.2, 417r adds: "Huius vidueris pulcherrimam alam visu profecto iucundam mihi sua liberabit atque donavit Humanissimus Thomas de Cavalleris nobilis Romanus". See note to entry n. [1].

³⁶ Ms. 34.2, 408r-408v adds "et huius modi annula ex auri tantum confici posse (ceteris metallis ad hunc effectum ineptis) mihi esto affirmabat ipsemet Cavallerius quod profecto admiratione non caret".

[61]	Lyncurium verum primo aspectu Chrisolitum refert; estque spes succini	
[62]	*Achates fluvij imaginem reddens in quo etiam herbae concretae imago conspicitur.	
[63]	*Dendroachates perfectissimus in quo arbuscula apparent estque totus diaphanus.	
[64]	*Crystallus montanus in quo apparent multa- rum rerum figurae	
[65]	*Hystricus seu cardaniis Girasole vulgo redactus in caput antiquum.	

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