

THE SCENT OF A TUSKED DEER: EUROPEAN DESCRIPTIONS OF MUSK DEER IN THE AGE OF DISCOVERY

Michele Castelnovi - Martino Martini Centre for Sino-European
Cultural Relations

Abstract: *Nell'immaginario medievale, l'Asia è sempre stata popolata da mostri compositi: cherubini, centauri, sirene, grifoni. La descrizione di uno strano cervo, privo di corna ma dotato di zanne, caratterizzato da un profumo molto intenso, sembrava riferita a una creatura di fantasia. Invece, il mosco esiste davvero, vive nell'Asia Centrale e in molte regioni della Cina. Le prime descrizioni giunte in Occidente appartengono alla cultura islamica; dopo alcuni accenti medievali, gli europei ricevettero notizie contraddittorie nel '500, poi rettificata nel '600.*

Beyond imagination: the existing musk deer

Over the centuries, Asia has always been described by European historians, geographers, and cartographers as full of marvelous animals to which all sorts of magical powers or wealth were attributed. One of the strangest creatures, gifted with a very valuable economic resource tradable from China towards Europe, was a real widespread animal: the *Moschus*, a small deer with its odoriferous gland, and tusks in the absence of antlers.

Modern zoological science, ever since Linnaeus' first systematic classification,¹ describes it as an artiodactyl closely related to cervids. In Europe, the deer had always played an important mythological and symbolic role, and the large antlers of the males were a desirable prey for aristocratic hunts in ancient, medieval, and modern times. The majestic male stag marks the territory by releasing fluid from a well-known eye gland, while the little musk deer is the only one with this uncommon ventral gland.

In 1821 the English zoologist J. Edward Gray (1800-1875) identified a family of its own, to which he gave the name *Moschidae*. in the order list No. 13, *ruminantes*, Gray designated this as the first and oldest family, preceding *cervidae*, *giraffidae*, *antilopidae*, *capridae*, and *bovidae*. Gray emphasized two peculiarities "frontal bones not produced; canine teeth, two long from the upper jaw".²


Between the 19th and 20th centuries, at


various chronological stages, pioneers in exotic zoology identified different species within the family *moschidae*, each divided into subspecies with different characteristics and a range that varied from the Siberian forests to the Indonesian coasts, involving several northern and southern Chinese provinces. In particular, the British naturalist Brian Hodgson (1800-1894) observed in 1839 and published in 1842 about the differences between the white and golden coloration of the abdomen, of two species named, in Greek words, *leucogaster* and *chrysogaster*.³ In 1929, the Russian Georgij Nikolaevič Flerov (1913-1990) renamed the so-called 'dwarf musk deer' as *Moschus berezovskii*,⁴ dedicating it to the famous traveler and ornithologist Mikhail Mikhailovich Berezovsky (1848-1912), who had traveled from the European seaport of St. Petersburg to the eastern Siberia. Recent studies⁵ hypothesize the family *moschidae* as descended from a distinct ancestor, *micromeryx* which lived in the Miocene eighteen million years ago. It was a small tusked artiodactyl, of which fossils have been found both in China and other parts of Asia and Europe.

The Musk in the Western imagination

Before this recent scientific awareness, the musk deer was for centuries the protagonist of the western dream imaginary. Not only in the Christian sphere but also, and above all, in Islamic culture. The musk deer was a unique animal characterized by certain peculiarities that make it more similar to an imaginary creature than a real animal.

The most alienating detail of its physical appearance is the presence of two real tusks, similar to those of a wild boar but originating at the top of the jaw and pointing downwards: an element that makes the musk deer resemble those monstrous wonders manufactured by European taxidermists of the Age of Discovery to arouse astonishment in the Baroque taste for wonder in the *Wunderkam-*





mer of wealthy patrons, collectors of curiosities. The already low credibility of these real animals was diminished by the peculiar shape of the ears of the species *Moschus himalayanus*, which were wide, long and covered with thick hair, like those of hares (a tusk deer with hare ears).

Even today we can still see this ‘chimeric taxidermy’ widespread in the Catholic noble castles of Austria and Bavaria, formed buying and collecting counterfeit stuffed specimens (so-called ‘jenny hanivers’),⁶ obtained for example by combining bat wings on the body of a four-legged lizard and labeled as ‘young dragon’ or ‘basilisk’, or the *wolpertinger* also drawn by Albrecht Dürer (1471-1528) in 1509: tusks, small antlers, pheasant wings, squirrel tail, and hare muse (in American folklore: *jackalope*).

The literary precedents of monsters from ancient mythology aroused the interest of scholars and cartographers, who filled the empty spaces of maps with composite figures, Assyrian cherubim half-winged bull and half-man, griffons half-lion and half-eagle, centaurs, and mermaids (not only in the 14th century but still at the end of the 17th century).⁷

Apart from its peculiar external appearance, musk deer was always been famous over the centuries as the source of an intense and prestigious perfume, sought after since ancient times (at least by Asian consumers). Although it was well known from antiquity in China and India, the Greeks and Romans do not seem to have attached any particular importance to this perfume, perhaps because because it was very rare in Mediterranean markets, and came from enormous distances for the time. The oldest Chinese dictionary, *Erya*, in the third century B.C. mentions the musk deer under the name of *shefu* 麝父.⁸ It was often listed along with many other fragrant ingredients that could be used in incense burners in China.⁹

The names used in European languages seem to derive from the ancient Greek trans-

lation *móschos* from the Persian *mushk*, itself derived from a Sanskrit word *muska* (testicles)¹⁰ for the similarity of these abdominal pods. The latin name, *Moschus moschiferus*, should be translated literally as “musk [animal] bearing musk scent”; in French *cerf porte-musc*. In Spanish and Portuguese, as with many words of Oriental origin, it retains the Arabic article in front of the noun: *ciervo almiezclero e veado-almiscareiro*, and the scent *almiezclar/almiscar* (from *al-misk*). Even the English name is misleading, as it seems to explicitly link this creature to the deer family.

The musk's fame in Western Islamic culture

The prestige of this perfume increased considerably in the Middle Age, due to the preference given to it by the founder of Islam. “Musk was the scent of the Prophet Muḥammad”¹¹ according to a well-known and widespread *hadith* traditionally attributed.

“As an aromatic and drug alone, musk would have been of great importance. But musk was the chosen aromatic of Muhammad, a perfume-lover who preferred musk above all other scents. And Muhammad’s life, of course, became the sunnah or model for pious Muslims to emulate, assuring musk a permanent place in the Islamic world. Even today, when the natural musk is highly endangered and rare, synthetic musks continue to hold a high place.”¹² (King, 2017, p. 3).

So in islamic culture, musk was to be placed before other scents, well known in fragrant *Arabia Felix* (*felix* meaning ‘fertile’, in all the treatises of the ancient Roman geographers). Those of plant origin: Yemenite pure incense (‘frankincense’ from medieval ‘franc/encense’), the myrrh after the Old Testament (mentioned in *Exodus* and *Song of Songs*),¹³ and the New (the Three Magi) from the resin of a Red Sea plant, Indian sandalwood and Malaysian aloewood, camphor from Borneo. But even those of animal origin, such as the

Abyssinian civet, or the enigmatic ambergris, a pheromonal secretion of spermwhales that can be expelled from the intestines and may float to any beach in the Indian Ocean, but especially in Yemen and the South China Sea.

According to the effective formulation of a mid-14th century polygraph Ibn Qayyim al-Jawziyyah (1292-1350) in his treatise *Al-Tibb al-Nabawi (The Prophetic Medicine)*, Islamic culture was influenced by the belief that Muhammad himself had said that musk was the most prestigious perfume.

“[Musk] It is the king of the varieties of aromatics, their noblest and sweetest (atyab). It is that about which proverbs are coined, and other things are compared to, while it is not compared to anything else. It is the sanddunes (kuthban) of the Garden [of Paradise].”¹⁴

It is clear from these words that musk was considered the noblest and most sacred of all existing perfumes, and was even used in the Garden of Paradise. The preference given by Muhammad is said to have prompted influential writers and encyclopaedists to take up musk: from Avicenna (980-1037) to Al-Qazwini (1202-1283). In turn, these books contributed to the demand for the perfume’s importation (and of counterfeit substitutes by unscrupulous forgers) not only by the Islamic aristocracy but also by many Christian nobles who had come into contact with this extraordinary fragrance.

Today it is forbidden to sell musk deer extract (also because these animals are at risk of extinction), but to understand the historical interest of this creature for human societies, it should be pointed out that male specimens of this species secrete an intense perfume from a particular ‘pod’ located under the abdomen that could resemble testicles. The scent could be obtained either by the removal of these skin pods or by infusion in particular in Sandalwood oil (the two scents have the particularity of being mutually reinforcing). Since it is produced by pheromones and serves the animal to mark its

territory, the scent is very persistent especially if rubbed against surfaces similar to those of trees and soil, such as wooden furniture or stone floors (as would be in the wilderness), or clothes made of fabric similar to the epidermis of leaves.

From the name of the animal musk, comes the name of the scent *muschiato*, in English ‘musky’ (in medieval Italian vernacular: *moscado*), which in ancient, medieval, and modern times did not refer to the botanical moss of the forests, but the scent extracted from the animal, mainly from the Chinese territory. Although the range included Kashmir, the Hindukush, and parts of Mongolia and northern Vietnam, these animals were also present in the forests of many provinces of China.

The Musk deer in medieval Christianity

Before the spread of Renaissance zoological science, the treatise genre of the bestiaries was well known in Europe: texts that briefly described the physical, ethological, but above all magical and symbolic characteristics attributed to real or imaginary beasts. In the 13th century, the Picardian scholar Pierre de Beauvais wrote in his bestiary about a small animal that climbed trees using its tail, similar to a squirrel but with boar tusks: without any mention of the precious scent, Beauvais offered an allegorical interpretation of this so-called *muscaliet*, specifying that it represented the sharp tusks of the Sin of Pride, which can injure and even poison a strong and good tree. In the mid-13th century, Flemish writer Jacob van Maerlant (1235-1300) wrote in his rhyming encyclopedia about the *musquellibet*, and the miniaturist’s picture had neither tusks nor antlers.¹⁵

In 1298, Marco Polo (1254-1324) claimed to have seen large numbers of musk deer in the Kashmir region, so numerous that hundreds of their intact ventral pouches could be found on the ground:¹⁶ but, considering the price Islamic perfumers attributed

to each of those pods, it could be one of the Venetian's usual hyperboles. In *The Travels Book* description, at least one element is completely wrong and would have made feeding the small herbivore very difficult: there could never be a ruminant with four exposed incisors. In the chapter devoted generically to the Tibetan area (but which, given the Venetian's proverbial lack of geographical precision, could extend to all the regions south-east of Siberia) Polo wrote:

“There is the best Muske in the World, the Beast that they have it off, is bodyed like a catte [italian: “come una gatta”, a female cat], with foue teeth, two above, and two beneath, of three fingers long. They be slender of body, and have heare [sic: hair] like red deer, and feet lyke a catte, and they have a thing like a poshe, or bagge of blood, gathered together neare to their navell, betweene the skinne and the fleshe, whiche they cutte and take away, and that is the muscke [scent]: ande there be many of those beastes there.”¹⁷

A reader from our century may be surprised by the repeated comparison with a female cat, both in terms of size and legs, as the musk deer is undoubtedly an artiodactyl with bi-cloven hooves. It was probably a simple transcription error from the manuscripts: for example, in the polian book's edition printed by the trevisan Giovanni Battista Ramusio (1485-1557)¹⁸ in 1555, he replaced the word ‘gatta’ with ‘gazzella’ (a small antelope) which appeared very similar in cursive writing: thus, size and legs were plausibly compared to an animal related to cervids.

Beyond this brief and erroneous description, Polo mentions the presence of the mosco at least four times, either in the Khan's capital (but as exotic animals, like elephants), or in an unspecified town called ‘Anbalet Mangi’ (maybe: Aqbalig), described as a commercial center in the plains on the Silk Road,¹⁹ and in Tibet or Xizang,²⁰ and also in the western province called ‘Gaidu’²¹ (Jiandu), iden-

tifiable with the Xichang valley, today in the province of Sichuan.

Perhaps this kind of description also worked to corroborate the perception of musk deer as something strong and authoritative (according to Islamic tradition), while the real animal looks rather like a shy fawn very far from the vigor and prestige attributed to perfume. After Polo and other oral accounts, some scholars proposed to the European public imaginative representations of the musk deer, adding to the tusks also long ibex horns, a virile goat beard, and a mane worthy of a prestigious steed: in an authoritative and combative pose. See for example the representation printed by the botanist Johann Wonnecke von Kaub (1430-1503), *Gart der Gesundheit* (*The Garden of Healing*), Mainz, 1485, which in chapter 272 calls it “Muscus Bysum”.

Because of the strangeness of tusks in the skull of a cervid, it was to be expected that a certain amount of skepticism was present in more cautious scholars in the same years. For example, in his *Hortus Sanitatis*, a treatise on the use of plants in medicine printed in Mainz by woodcut in 1490, the German botanist Jacob Meydenbach (XV century) depicts it without the tusks, probably because he considered that detail to be a figment of the narrators' imagination. But it is interesting to note the precision with which Meydenbach indicates the body part from which the animal secreted the pheromone on the ground: not the testicles, but the abdomen.

Misunderstandings in the 16th century

During the 16th century, many rumors circulated in Europe, according to which scent would have been obtained from the petrified excrement of a beast as small as a fox;²² or from the testicles of common deer in Asia.²³ It was hard to discern what might have been translators' misunderstandings from the conscious lies of some swindler who deceived inexperienced western traders

in the harbours, far from the inner mountains inhabited by the animal.

Even at the turn of the century, even though Portuguese navigators had updated their coastal news, cartographers were forced to rely on polian accounts for the geography of the continental parts of China. For example, in a legend on his own general map, the Dutch Cornelis De Jode (1568-1600), *China Regnum*, Antwerp, 1593, wrote “Hic reperitur moscus prestantissimus”, meaning here they find the very precious musk, indicated with the same economic importance attributed to gold, silver and rubies. But De Jode does not explain what this *moscus* was (an excrement, a plant or some kind of mineral) and, above all, he placed it to the north beyond the Great Wall, here colored in red ink in the midst of impenetrable mountains, as if the musk deer were a fabulous creature that lived only beyond the borders of Chinese civilization.

An important source of information were the manuscripts compiled by missionary Michele Ruggieri (1543-1607), between 1590 and 1609. He is usually very precise in indicating the location of iron and copper mines, but about the scent, he mentioned generically that China “profert et Moschum”²⁴ (meaning: also produces musk), along with rhubarb and other medicinal herbs. This Latin verb, in this peculiar sense, is usually used in botany, as if the musk scent ‘sprouted’ from some plant (as was long believed for silk from mulberry trees, and for cotton from some strange ‘vegetable lamb’, in German *Baumwolle*).

In 1602 the Jesuit missionary Diego de Pantoja (1571-1618) is supposed to have been the first to have had the intuition to compare musk scent to the one obtained from the African animal civet, known for centuries in Europe. In a long letter written in 1602 while Pantoja was in Peking, addressed to father Luys de Guzman, Provincial of Toledo, and published in Seville in 1605, he wrote:

“We understood also of their civet or muske, whereof they brought some, which is, as it were the maw (or stomacke) of a

beast somewhat bigger than a cat, which they kill to cut away this maw. They breed wilde in the field, and in a country very near to China, though not of this kingdome [sic]. I had read when I departed out of Spaine, a booke which is printed of the things of China, which writed of this civet, and of other things, which I have seen with my eyes: it reported many errorrs by half informations, which he which wrote it chould have been better informed in, although in many things he tell the truth.”²⁵

The mechanisms of information diffusion within the intercontinental network of Jesuit missionaries are well known, so it is not surprising that the same comparison recurs in the books of both Martino Martini (1614-1661) and Giovanni Filippo De Marini (1608-1682), even though they lived at very different latitudes. The civet is a viverride widespread throughout sub-Saharan Africa and traded since ancient times along the coasts of the Red Sea: from the living specimen can be extracted an oily liquid contained in the perianal glands, with a very intense odor and much sought after over the centuries, both ‘pure’ and ‘diluted’ in oil. It was very well known in Europe: Lorenzo De Medici (1449-1492) dedicated to the scent one of his *Canti Carnascialeschi*, composed in Florence around 1490, entitled “Canzona dello zibetto” (Civet’s Song): a text rich in double meanings and allusions to lust and luxury, which were associated to precious perfume.

Pantoja is also known to have collaborated for a long time with the missionary Matteo Ricci (1552-1610), who however, in his writings published only posthumously, mentioned musk deer only in passing, as if it was a vegetable, together with plants such as rhubarb, guaiacum and salsaparilla (*Smilax officinalis*), without attributing particular importance to the zoological origin of the perfume. Ricci seems to concentrate above all on denouncing on a moral level the greed that he attributed to Islamic traders, who he disparagingly calls Saracens as if they were all pirates:

“China produces some medicinal substances that do not exist in other places, especially rhubarb and musk scent, which the Saracens of Persia brought with overland caravans to other parts of the world: and they sold it at a very high price, while here it is worth so little: indeed, rhubarb costs two coins ‘baiocchi’ [i.e.: small coins] per pound, and musk scent six, or at most seven ‘ducati’ [i.e.: large coins] per pound. Guaiacum and salsaparilla also grow here, in the deserts, and the only cost is to go and extract them from the ground.”²⁶

The accuracy of some 17th century descriptions

European merchants did not care about the origin of this precious scented substance. It was enough for them to see that with little encumbrance they could ensure excellent earnings overseas: so it often happens to find musk pods in the inventory of the cargo of Portuguese and Dutch vessels, such as the ship led by Jacob Van Heemskerck (1567-1607) from Bantam: “yielded a cargo of Chinese manufactures and processed materials: silk, velour, fragrant wood, granulated sugar, copper, medicinal plants, camphor, musk balls, furniture, gold bars and sixty tons of porcelain.”²⁷


As usual, we owe to Martino Martini the first rational and detailed description: in the third chapter dedicated to the province of Shaanxi, the missionary mentioned the musk as a normal local economic resource (even if of great value, like the jade he described a few lines before), without any concession to legends or chimeras. In this way, Martini confirmed his general approach: to rely rationally on the previous Chinese sources, refusing the exaggerations of travelers who exaggerated rejecting the exaggerations of travelers with too much imagination, such as Marco Polo whose authority is often explicitly contradicted by Martini, along with the lack of updating.

From the very first line, Martini emphasizes the importance of his own autopsy

experience, as an eyewitness (as opposed to many treatise writers who had never left Europe). This statement resembles one already made by Pantoja half a century earlier, but Martini adds many more details:

“For no one may have any doubt as to what musk is, I will say it myself, having seen it with my own eyes more than once. Near the navel of an animal there is an excrescence, or protuberance, resembling a small bag, wrapped in a thin membrane and covered with very fine hair. This animal by Chinese is called Xe [She] and from here comes Xehiang [Shexiang], that is the smell or better fragrance of the animal Xe, which means musk. It is a quadruped similar to a fawn, with darker hair and completely without horns, of which Chinese eat the meat. A large quantity of musk is found, besides in this province, also in those of Sichuen and Yunnan, and in other localities towards the West, as I shall hereafter mention. These excrescences or pods, if they are genuine and not at all adulterated, are most valuable and, like pure civet, give off such a strong perfume as to offend the sense of smell, as any light or sound too strong offends the sight or hearing, but the merchants, dishonest by nature, after filling the bags with blood, pieces of skin and other remains of the animal added to the musk, try to sell them as true and genuine.”²⁸

The description of the small bag near the navel is very precise. The allusion to ‘pure civet’ echoes Pantoja’s words. Martini, like many other European travelers, points out the frequency of commercial counterfeiting. A picture of the musk deer was etched by an engraver from the Blaeu publishing house, on the map dedicated to the Shaanxi province. Probably, this particular portrait of the musk deer (with its three-quarter face as it grazes the grass) predates Martini. In the same years that Martini was preparing his *Atlas*, another Jesuit missionary in China, the Polish Michael Boym (1612-1659), was also preparing his treatises and maps. And in particular, in



a map preserved in the Vatican Archive,²⁹ we can recognize a very similar representation, albeit drawn in a more schematic and rudimentary way.³⁰

The books printed by Martini³¹ demonstrated the presence of a strong curiosity in the European public. For this reason, a printer in London decided to translate in English a description of China written by the Portuguese missionary Álvaro de Semedo (1585 ca-1658).³² He had begun writing in 1640, but his book had only had limited circulation in Italy in a restricted edition printed in Rome in 1643. About the musk deer, Semedo focused primarily on the problem of counterfeits. Semedo undoubtedly visited the Nestorian Stele near Xi'an, a city in the province of Shaanxi, but (unlike Martini) could not claim to have been an eyewitness to the presence of musk deer in forests.

In 1663, Jesuit missionary Giovanni Filippo De Marini reported the presence of the musk deer far to the south, in the mountains of the area called Tonkin by Westerners, between China and Vietnam. De Marini, too, referred the comparison with the civet. He also added two details: he wrote that the musk deer had a wolf-like head, and tusks similar to those of an old boar, specifying that they originate under the superior lip, initially they go down straight and then they curve towards the chin. De Marini's narration continued with a sort of recipe of the preparation of the scented mixture. Observing that the hunters were able to use every part of the body of the prey, De Marini reports a proverb, the musk deer "it's worth more dead, than alive" (Italian: "più val morto, che vivo").³³

"In the forests, lives a certain animal, called *ye hiam* by the Chinese, which in our language this means 'scented deer'. They are the size of a Fawn, and they look like a fawn, except that their head resembles that of a Wolf. And they also have two long tusks, like an old Boar, which come out from under the

upper lip and curve downward the ground. Musk has a darker hair than the Deer. They run very slowly, and the animal is so unintelligent that the hunters have simply to find it, and it lets itself be freely killed without making any resistance and without moving. They make musk scent of varying purity from the prey in the following three ways. After lifting the animal, they drain all the blood, and store it aside. Then, from below the navel, they cut out a bladder which is full of blood or some other odiferous liquid [Italian: *humore*] condensed here. Then they flay its skin, and divide the body into several pieces. If they wish the purest and the best musk scent from their prey, they take only half of the body, that is, from the kidneys downwards, and grind it, and pound it finely in a large stone mortar, and meanwhile continue to pour over it a suitable quantity of its own blood, that the whole may contribute to form a paste. Of this mixture, as soon as it is dried, they fill the pods, which they make from its own skin. If they want to obtain a musk scent which is not so pure, but still good and genuine, they pound together all the parts of the animal and mix them with its blood, and after they are dried well, they use this mixture to fill the pods. In addition to these two techniques, there is another one that is not so refined, from which however genuine scent musk is obtained. In this other technique, they use only the parts that were discarded to make the first, more refined one [Italian: *la schiettissima*]. Of that animal there is no part, which is thrown away: therefore, they are used to say, that the musk it's worth more dead, than alive".³⁴

The musk deer as a baroque metaphor

In 1667, the German Jesuit Athanasius Kircher (1602-1680), who had never traveled and had a particular taste for wonderful and extravagant things, chose the musk deer as an emblematic image to be placed at the center of the frontispiece of the treatise *China Illustrata*: moreover, he described it first among

the exotic and extraordinary animals, in the “Caput VII: De Exoticis CHINAE Animalibus”,³⁵ quoting the words of Martini (1655) and De Marini (1663), and dedicating a large full-page depiction.

Kircher’s message was straightforward and convincing in its own way: if even an absurd and improbable animal such as a deer with tusks turns out to exist in the real Far East, then it can be deduced at the level of abstract syllogism that any other chimerical fantasy could turn out to be true, including the theory of the Hollow Earth,³⁶ the existence of winged quadruped dragons (already denied by the Calvinist Conrad Gessner (1516-1565)³⁷ a hundred years earlier) or the direct correlation between Chinese ideograms and Egyptian hieroglyphs.

The large portrait of the musk deer presented by Kircher within his book closely resembled the one already printed by Martini (1655) and by Boym (1656).³⁸ But the two travelers represented the musk deer as a wild animal with no contact with civilization. Kircher, on the other hand, compares the animal to the walls of a large Chinese city with tall pagodas near exotic palm trees. An unreal scene, completely metaphorical, because the musk deer lives mainly in high mountain forests and far from urban centers. Kircher neglected all the elements of aggressiveness suggested by the previous descriptions: the allusions to the wolf, the boar, and the tiger.

Kircher in the following decades influenced many authors: among his followers, we remember the Italian Gioseffo Petrucci (1610-1680)³⁹ who in one of his books of 1677 reposed the same image of the musk deer (with the city, pagoda, and palms), but specularly inverted from left to right.

English scholar William Ashworth (1883-1960) suggests not to underestimate the importance of the representation of the world through zoological emblems, not only in its 16th-century golden age but also in the 17th century.⁴⁰ According to the analysis provided by Timothy J. Billings (1963-),⁴¹ Kircher


would have chosen the musk deer for symbolic reasons, for a baroque and eurocentric allegory that made China look like easy prey for an eventual catholic invasion. As is well known, for thousands of years in Chinese culture, the main emblem of the empire was the mighty dragon.

Very valuable or not at all valuable animals

In 1672, the French cartographer Pierre Du Val (1618-1683) listed the main economic resources of a Chinese Empire that was already famous for its wealth. In the cartouche, he matched each product to the most conspicuous Province, even if he committed some inaccuracies: he wrote that pure gold is obtained from Fujian (while it is in Yunnan), then fire-resistant porcelain from ‘Kiamsi’ (Jianxi), fine silk products from ‘Chequiam’ (Zhejiang), the best fruit in the whole world from Honan, rice in ‘Huquam’ (Huguang), and finally in ‘Xemsi: du Musc’ i.e. in Shaanxi mosco was produced, probably drawing this information after Martini’s *Atlas* of 1655, from which he copied the spelling of the name ‘Xemsi’.

So in this way, Du Val judged the perfume obtained from musk deer as one of the six most profitable and important productions of the entire empire, comparable to the most valuable goods or to the most inestimable foodstuffs that made China seem like a *Land of Cockaigne* to a European public that, between natural famines and the plundering of wars, was perennially at risk of suffering from starvation.

In 1676, the Dominican missionary Domingo de Navarrete (1610 ca.-1689)⁴² reported in his book that there were several very similar species of cervids in East Asia, with even tusks, but that some did not possess the renowned odoriferous pod. Navarrete was probably alluding to the different varieties of the *muntjac* (*muntiacus*, or barking deer) which live in southern China and Indonesian islands, or the water deer (*Hydropotes inermis*, today



better known in English-speaking countries as ‘vampire deer’) which lives at much lower latitudes, in the territories between China and Korea.

The most striking difference between these two species of deer is that the males of Muntjac have both tusks and a pair of very short antlers. This singularity may have contributed to the spread of misinformation in Europe, through the description or purchase of Muntjac specimens, falsely passed off as valuable animals (counterfeit or even simply stuffed) only because they were easily available in southern ports, very distant from the mountain area where the true musk deer lived.

European perfume merchants also sought out other creatures, attracted by the production of some particular glands. In addition to the civet and sperm whale already mentioned, we may mention at least two other important animals: the so-called *rat-musqué* (the name sounds more elegant in French than ‘muskrat’), and the beaver.

The rat-musqué was sought especially in the Canadian area for glands secreting an odor similar to that of the musk (once again, the botanical musk/moss had nothing to do with it).

The beaver was hunted because of the production of a pheromonal substance, called ‘castoreum’, whose importance was so great that three cartographers dedicated a detailed image to it in a cartouche inside one of their maps (the so-called ‘Beaver Map’). It appeared for the first time in a map by French Nicolas de Fer (1646-1720), *L’Amerique Divisee Selon Letendue de ses Principales Parties*, Parigi, 1698 (1713 and 1739), then it was copied by German Herman Moll (1654-1732), *A new and exact map of the Dominions of the King of Great Britain*, Londra, 1715 (1732) and again by the French Huguenot (but exiled in Netherlands) Henri Abraham Châtelain (1684-1743), *Carte Tres Curieuse de la Mer du Sud, Contenant des Remarques Nouvelles et Tres Utiles non Seulement sur les Ports et Iles de Cette Mer*, Amsterdam, Amsterdam, 1719. The text reports the ethology of

rodents, according to the observations of European travelers as eyewitnesses, without any hint of moral symbolism. But the beaver, like the musk deer, was also the protagonist of a medieval allegorical interpretation. In the 12th century, Beauvais wrote that to escape hunters interested in its testicles, the beaver would chew them to save its own life, and from that (imaginary) tale the writer deduced moral advice on how to avoid the devil’s temptations.

From both the Far East and America, Europeans were gathering more and more concrete information about the most exotic resources. The dissemination of eyewitnesses was important to ensure the reliability of the data: and the international network of Jesuit missionaries was particularly active.

The missionaries of Martini and De Marini generation offered European readers the most detailed and concrete descriptions. Not only for the diffusion of the musk scent but above all for the news related to farm animals and cultivated plants: especially in Martini’s *Atlas*, which lists products and quantities for each city and province of the empire.⁴³ Europe had known hunger, famine, and the plundering of the Thirty Years’ War: the treatises on botany and zoology were not extravagant curiosities of eccentric intellectuals, but real manuals on what exotic resources could have advanced Europeans in the fight against hunger.

Certainly, the role of musk deer seems less important than commodities with a much more significant impact, such as porcelain or silk. It is like the tile of a large mosaic. The analysis of the historical evolution of Western descriptions of musk deer shows in what ways Western knowledge about China has changed: before it was a chaotic tangle of legends, dreams, and nightmares (an oneiric level), which will be replaced by an orderly and rational factual description of existing reality.

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