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Abstract: *Tra il sedicesimo e il diciassettesimo secolo, i missionari gesuiti hanno prodotto un certo numero di opere geografiche in lingua cinese riguardante i territori occidentali. All'interno di questi lavori, sulle mappe e sui commenti ad esse, si trovano varie descrizioni di animali fantastici e reali, a volte correlate da immagini. In esse si rintracciano delle caratteristiche in comune con le mappe e con gli atlanti occidentali e, allo stesso tempo, si rivelano anche dei tratti non completamente nuovi per il contesto cinese. Le domande che l'autore si è posto sono: che tipo di descrizioni possono essere estrapolate da questi lavori? Quale idea e immagine di animali riflettono? Quali erano le motivazioni e gli obiettivi che hanno portato i missionari ad aggiungere tali descrizioni nelle proprie opere scritte o tradotte in cinese? La relazione tra uomo e animale, in quanto parte integrante dello sviluppo della civiltà umana, è stata ed è tuttora oggetto di ricerca da parte di molti studiosi. Il presente saggio, dopo alcune considerazioni generali riguardo alle descrizioni di animali nella cultura occidentale e cinese, si propone di analizzare alcuni esempi delle descrizioni testuali degli animali contenute nell'opera geografica di Giulio Aleni (1582-1649), Zhifang waiji 職方外紀 (1623), al fine di evidenziare alcune peculiarità del complesso processo di accomodamento culturale avvenuto attraverso quelle opere geografiche scritte in cinese.*

From the two hemispheres of *Kunyu tushuo* 坤輿圖說 (1674), an illustrated description of the world by the Belgian Jesuit Ferdinand Verbiest (1623-1688), the pictures of some of the animals seem to have the aim of scaring any traveller who is setting out on the open seas to explore unknown territories.¹ An impressive but terrifying lion stands tall before a rhinoceros who appears to be wearing a knight's armour; slightly below is a crocodile with its jaws open and ready to attack a hyena devouring its prey nearby. This type of depiction, whether in the form of illustrations or actual descriptive texts, fills the geographical works produced by the Jesuits of the Chinese mission from the end of the sixteenth century onwards.

These pictures and stories of real or imaginary animals, placed in maps and atlases to populate those remote and yet unexplored parts of the world are certainly not a new element of art and literature.² The abundance and variety of these representations highlight the importance of animals for man and the age-old relationship between the human world and the animal world throughout history.³ At a certain point in the history of humankind, man began to recognize and name the different animal species, distinguishing the dangerous animals from the harmless ones, animals that could be hunted for food and those to be wary of, animals that could be tamed and used for heat, nourishment and sustenance. Animals that could be drawn, that were depicted on masks to frighten one's enemies or to identify with ritually; animals that could be sacrificed to the gods or venerated as divinities.⁴ Man has always described animals, as far back as the cave paintings of the wonderful horses and bulls of the Lascaux complex and so many other depictions dating back to primitive times. Descriptions of animals were then found in the classical age; in Homer, Hesiodus, Herodotus and Pliny the Elder, to name but a few. Animals are obviously abundant in the Bible, we find them in medieval bestiaries full of stories and decorations and yet again in the first zoological/scientific literature from the late Middle Ages, throughout the Renaissance period and finally in the Modern Era.

This relationship, born in the mists of time as a “need for knowledge”,⁵ has accompanied human civilization over the centuries, adapting to places, cultures and populations and it has been the object of anthropological, scientific, philosophical, historical, religious, artistic, and economic studies.⁶ The two pillars of culture in the West, Classical and Christian, have moulded the representation of animals over the centuries. Animals become symbols of Good and Evil, moral and theological symbols, stories and imag-



es fill fairy tales, texts, cathedral façades and the wooden stalls of medieval choirs.

In the 13th century, nature and animals began to gradually leave the sacred dimension thus far occupied (desacralization of nature)⁷ to be analysed and described in a more scientific perspective, also through the restoration of the Aristotelian vision –which would gradually gain importance in the 16th and 17th centuries- the time of the production of Jesuits texts- with the arrival on the scene of important people who marked this change. Two significant examples are Alberto Magno di Bollstädt (1206-1280), the patron saint of scientists, and Federico Ruggero of Hohenstaufen (1194-1250), Frederick II of Swabia, also known as *Stupor mundi*. With the description of falcons in *De arte venandi cum avibus* and with the re-elaboration of the Aristotelian taxonomy of *De Animalibus*, the study of animals became gradually less symbolic and concentrated more on the scientific reality and detailed study which would become characteristic of later descriptions of the Modern Age.⁸ In the second half of the 16th century and the first half of the 17th century there was a significant diffusion of zoological knowledge as a consequence of travel literature, intended as any material deriving from travels and explorations of the era: in addition to maps, descriptions of new territories and countries were full of accounts of real and imaginary animals, some of which even made it as far as Europe, live or preserved, thus stimulating zoological research and scientific analysis.⁹ This brought about the advent of collections and encyclopaedias typical of the 16th century. Here we can mention the erudite zoologist and collector Ulisse Aldrovandi (1522 – 1605), who was fascinated by animals and naturalism.¹⁰ It is important to note, for the sake of the following analysis, that even if the evolution of accounts about animals in the West became ever more scientific over the centuries, it was still influenced by classical and medieval visions during the

Renaissance period.¹¹

Curiously, this history followed a similar development in China although for different reasons and with different characteristics. This is not the place nor is it within my capacity to tackle the relationship between man and animal in Chinese history, or the endless production in the Chinese language of texts about various types of animals over the course of history, the traces of animals in poetry and in literature, taxonomy in ancient dictionaries, travel literature, or archeological discoveries. On the differences and similarities between the Western and Chinese approaches I agree with Roel Sterckx who states that “analyses of changing approaches to knowledge about animals – or knowledge gained through them – mainly focus on European imperialism and the creation of grand collections: curiosity cabinets and then natural history museums. [...] Historians of China have thus far followed two approaches – either to study an animal across varied sources and times, or to focus on specific dynasties (mostly the Song and Qing) alongside historians of the West who choose a nation-state or another concrete political entity as a framework (usually England or Great Britain).”¹²

Chinese civilization boasts a tradition of literature in many fields of knowledge, mainly characterized by impressive continuity over time but literature that can be defined as scientific or proto-scientific about animals from that period is scarce. However, as in the West, there are plentiful descriptions and classifications regarding animals and other natural phenomena, notes Sterckx.¹³ As far back as the ancient Chinese texts from the Shang 商 (1765-1122 BC) and Zhou 周 periods (1121-256 BC), animals were presented as prey for the hunt, for nourishment and as victims of ritual sacrifices. In the literature from the Shang period up until the Warring States 戰國 period (475-221 BC) there are numerous graphemes describing the colour of sacrificial animals, or comments related

to the length of horns or other ritual details.¹⁴ However, there is no specific interest towards a real “scientific” description. In the following periods, from the Han 漢 (206 BC – 220) onwards, but above all in the Tang 唐 period (618 – 907) specific texts about animals began to appear in the catalogues and book lists. In 1963, Edward Schafer (1913–1991) highlighted that in the Tang period the relationship between man and animal was very deep and evolved and there was a high level of knowledge of looking after animals and learning from them. Schafer, to quote but one of his works, provides the English translation of the oldest Chinese text about falconry, the *Roujue Bu* 肉攫部 (*On Birds of Prey*), written by Duan Chengshi 段成式 (died 863), a scholar of the ninth century.¹⁵ However, as Sterckx notes, Schafer himself stated that “scientific aims (which he used to address approaches for understanding the habitats of living creatures) or efforts “to gain other sorts of knowledge as a motivation for conservation measures did not, it seems, exist for the men of the T’ang.”¹⁶

This shifting approach, which saw on one side a push towards a scientific evolution¹⁷ of the attitude towards the animal world, but with continuous links to the past and the presence of the exotic element, continued for centuries, almost up until the Modern Age: the emperor Qianlong 乾隆 (1711 – 1799), although inspired by a certain scientific intent, was influenced by the ancient texts and by the classical vision contained within them when writing commentaries regarding the animal world as underlined by Sterckx: “Just as in Europe the medieval bestiary tradition continued to influence early Renaissance models of animal taxonomy, in China classical texts, lexicographic and etymological works preserved repositories of knowledge that would be recycled and commented upon through the centuries”.¹⁸

In my opinion, the missionaries’ geographical texts, are no exception to this

phenomenon and contain numerous and varied descriptions of real and unreal animals characterized by this “contradictory” approach, i.e., a push toward a more scientific approach but still influenced by more antiquated views. Descriptions of animals are a common feature of Jesuit texts,¹⁹ and are not new to the Chinese panorama either, as cited above. But what type of descriptions can be traced in this type of material? Which of the above-mentioned visions do they apply to? What were the motivations and purposes of using these descriptions in the texts composed or translated by the missionaries? And how did Jesuits respond to/draw upon Chinese tradition of animal description in conveying Western knowledge to China? In the following pages some examples will be given in order to undertake a preliminary analysis and (partially) answer these questions taking the *Zhifang waiji* 職方外紀 (*Notes on foreign countries*) by Giulio Aleni (1582 – 1649)²⁰ as the starting point.

Why is this text suitable for such an analysis? Firstly, because this work - which came to light in 1623 after several years in the making, and with the participation of Aleni’s (missionary) brothers and Chinese literati - is the first book after Ricci’s map which systematically describes, in Chinese, the geography of the world. Secondly, it is considered to be a sort of “textual expansion” of Matteo Ricci’s (1552–1610) map and as such, had an important role in spreading Western culture and geographical ideas through China in the centuries following its publication.²¹ Thirdly, *Zhifang waiji* has never been analyzed from this point of view, and is a good example of this combination of new and old.

Zhifang waiji has been studied from many points of view: Bernard Hung-kay Luk (1946–2016) was maybe the first to direct his attention to this geographical work, indicating the importance of Aleni’s atlas in terms of historical geography, offering many perspectives of research which have

been later followed and explored by other scholars. Eugenio Menegon produced the most comprehensive work about Aleni's life, describing his training in Italy, his apostolic activities, and described in detail *Zhifang waiji*, contextualizing it in the written production of the missionary. Federico Masini investigated the value of *Zhifang waiji* from a lexicographical point of view and the role of Aleni in the process of creation of neologisms. Paolo De Troia identified the *Moderne Tavole di Geografia* of Giovanni Antonio Magini (1555-1617) as Aleni's possible source and in 2009 published an annotated translation in the Italian language. Zou Zhenhuan 鄒振環 explored the element of exoticism in *Zhifang waiji*, paving the way to the present analysis but without focusing on animal descriptions. Cheng Fangyi 程方毅 made a detailed historical reconstruction about the key role of *Zhifang waiji* among Jesuit geographical works and the complex question of its authorship, clarifying the role of other

missionaries such as Sabatino de Ursis (1575-1620) and Diego de Pantoja (1571-1618) in the composition of this work.²² But a specific focus about the representation of animals in this important book is still lacking. Obviously, this research needs to be expanded and it would be necessary to take other texts into consideration. In the present article the author presents a few samples of the animal descriptions and related analysis, as a starting point for further works, giving some preliminary considerations.

In Aleni there are several descriptions of animals; some samples follow below,²³ selected by their relevance, grouped into four preliminary categories.²⁴

1. Real animals mentioned in the geographical descriptions as a source of nutrition or means of transport, available through hunting or breeding; uses related to animals.

Place or people	Chinese text	English translation
Tartary	產牛羊駱駝	[The inhabitants] breed cows, sheep and camels.
Hui Hui	牛羊馬畜極多因不啖豕	Great quantities of cows, sheep and horses are bred but not pigs, because [the Muslims] they do not eat their meat.
India	此地恆有毒蛇	In this place poisonous snakes are very common.
Java	多象無馬騾	In Java there are many elephants and there are no mules.
Hungary	物產極豐牛羊可供歐邏巴一州之用	It is so rich in livestock that sheep and cows bred here are enough to satisfy the needs of the whole of Europe.

Dania	牛羊最多牛輸往他國者歲常五萬	Cows and sheep are bred, usually fifty thousand cows are exported each year.
Dania	海中魚蔽水面舟為魚涌輒不能行捕魚不籍網罟隨手取之不盡也	There are so many fish in the sea that they fill the surface of the water, the boats hardly move, raised by the fish. The fishermen do not use nets but catch fish with their hands in great quantities.
Muscovy	故八月以至四月皆衣皮裘多獸皮如狐貉貂鼠之屬一裘或至千金者熊皮以為臥褥永絕蟣虱產皮處即用以充賦稅以遺鄰國	From August to April, everyone wears the skins and furs of animals. Furs are widespread, generally fox, marten, otter and sable. A fur from one of these animals can be worth up to one thousand gold pieces. Bear furs are used as bedding and have the advantage of being immune to fleas and other parasites. In the places where these skins are produced, they are also used to pay taxes. The furs are also donated to neighbouring countries.
Mediterranean Islands	有鳥作巢於水次一歲一乳但自卵至翼不過半月此半月內海必平靜無風波商舶待之以渡海鳥名亞爾爵虐此半月遂名為亞爾爵虐日云	There is a bird which builds its nest on the seashore, and lays eggs every year. Half a month passes from when the eggs are laid to when the birds are able to fly, and in this half a month the sea is always calm and there are no storms. The merchants' ships wait for this bird to lay its eggs to make their crossing. This sea bird is called the halcyon (<i>Ya'erjue</i> 亞爾爵虐) and so these days are called the Halcyon days. ²⁵

In the last sample, Aleni is referring to the myth in which Alcyone, the daughter of Aeolus, the god of the winds, married Ceyx of Trachis. The legend goes that at the height of their happiness, the married couple sacrilegiously called each other Hera and Zeus. The two gods were offended and shipwrecked Ceyx by striking his ship with lightning. Alcyone committed suicide when she found out. The gods turned the couple into two halcyons. According to legend, every winter the female built a nest with the spines of sea urchins, threw it into the sea, laid her eggs and sat on them. To allow his daughter to do so, Aeolus restrained the winds in the days just before and just after the winter

solstice. Since then, these days are called the “Halcyon days”, the days without storms. In Chinese, *cuiniaio* 翠鳥 is the word for halcyon. When Aleni composed the book, this bird name was already present in the Chinese lexicon, but he (and his Chinese helper) instead used the phonemic loan *ya'erjueniiie* 亞爾爵虐. The reasons behind this choice may be two: 1. They did not know that the “halcyon” of the Western legend was in fact the “*cuiniaio* 翠鳥”. 2. They knew, but they consciously wanted to keep the exotic feeling of the foreign word by using a phonemic loan. Continuing with the first category, here are other examples contained in Aleni’s work:

Northern lands	產貂類極多人以為衣	The marten is very common, and its furs are used for clothing.
Northern lands	產牛羊鹿甚多犬最猛烈一犬可殺一虎遇獅亦不避也	There are cows, sheep and deer in great quantities. There are also ferocious dogs which can kill a tiger and do not flee even when face to face with a lion.
Northern lands	人善漁獵山多鳥獸水多魚鱉	The people are very able in fishing and hunting, the mountains are rich with birds and game, the sea is full of fish and turtles.

2. Humanized animals, given moral characteristics or special intellect.

India	地產象異於他種能識人言土人或命負物至某地往輒不爽他國象遇之則蹲伏	In this land there is a particular species of elephant which can understand what it said to it. If a local orders one of these animals to take something somewhere, the elephant follows the order with accuracy and precision. Usually when elephants of another country come across these elephants, they bow with respect. ²⁶
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Turks	一種異犬性好竊衣履巾之屬稍不慎輒為竅匿矣	There is a particular breed of dog which loves to steal shoes, clothes, and pieces of fabric. They are very careful in doing so and can even hide.
Seas	一名仁魚西書記此魚嘗負一小兒登岸偶以髻觸傷兒兒死魚不勝悲痛亦觸石死西國取海豚嘗藉仁魚為招每呼仁魚入網即入海豚亦與之俱；俟海豚入盡復呼仁魚出網而海豚悉羅矣	Another fish is called Ren (<i>renyu</i> 仁魚) (literally: “altruistic/compassionate? fish”). In literature it is said that once this fish carried a child on its shoulders to the shore but unwittingly harmed it with its fin. The child died and the fish, unable to endure this grief, killed itself by throwing itself against a rock. ²⁷ In Western countries dolphins are caught and once the <i>renyu</i> fish was used as bait. At the shout of the fishermen, the <i>renyu</i> swam into the net and the dolphins along with it: once the dolphins were captured, the fishermen called the <i>renyu</i> out of the net and only the dolphins remained inside. ²⁸

This text about dolphins, belonging to the second category of this book of humanized animals, contains an account found in Pliny's *Naturalis Historiae*, where we read a famous legend about a child who made friends with a dolphin which lived in Lake Lucrino.

The story goes that one day the child did not come to the lake anymore and the dolphin died of grief. Pliny also wrote about how dolphins help fishermen with the catch. Aleni here, in fact, describes two fishes, creating the *renyu*, a fish with human characteristics. It is not clear whether, while translating,

they were unaware that the *renyu* was actually the dolphin (*baitun* 海豚) in Pliny (dolphin in the Chinese text is clearly nominated as a different fish) or if they consciously created a different kind of animal, embodying human emotions. Also of some significance is the lexical choice of Aleni and his Chinese helper for this fish: they decided to use the term *ren* 仁, which is one of the most important among Confucian virtues, which characterizes the *junzi* (gentleman) and virtuous person who treats others with humaneness.

3. Reals animals mentioned for strange local customs and/or for special or exotic features.

Tartary	嗜馬肉以馬頭為絕品貴者方得啖之	Horse meat is eaten, and the horse's head is considered to be a delicacy so precious that only the rich and noble can eat it.
Tartary	道行飢渴即刺所乘馬瀝血而飲	If they are hungry or thirsty during a journey, they pierce the horse they are riding and drink its blood.

India	鳥類最多有巨鳥吻能解 百毒國中甚貴之一吻直 金錢五十	Among the many species of bird is the hornbill. From its beak they extract a substance which is an antidote to every sort of poison, for this reason in this place the beak is considered very precious and can be worth up to fifty gold pieces. [In the text <i>juniao</i> 巨鳥, literally “large bird”. It is most likely the hornbill of the Bucerotidae family, with a large beak. It still lives in India and there is a subspecies called the Indian hornbill (<i>Anthracoceros malabaricus</i>)].
India	有獸形如牛身大如象而 少低有兩角一在鼻上一 在頂背間全身皮甲甚堅 銃箭不能入其甲交接處 比次如鎧甲甲面華確如 鯊皮頭大尾短居水中可 數十日叢小之亦可馭百 獸俱習伏尤憎象與馬偶 值必逐殺之其骨肉皮角 牙蹄糞皆藥也西洋俱貴 重之名為罷達或中國所 謂麒麟天祿辟邪之	[Rhinoceros] There is an animal with the shape of a cow but as big as an elephant yet shorter in stature. It has two horns, one on its nose and one at the top of its shoulders. Its whole body is covered in an armour of skin so hard it cannot even be pierced by a metal arrow. This skin is made up of various plates attached to each other like a knight’s armour and is as wrinkled as the skin of a shark. It has a large head and a short tail and can stay in water for more than ten days. It can be tamed if raised from birth. All the other animals fear it and are impotent before it. This animal is particularly averse to horses and elephants to a point that if it comes across them by chance, it will chase them and try to kill them. Its bones, meat, skin, horns, teeth, feet, faeces are all medicinal.

The above description of the Indian rhinoceros contained in the chapter "India" of *Zhifang waiji* deserves further discussion.

This type of rhinoceros was the first to be recognized outside of its original area. One such rhinoceros was even brought to Europe (Lisbon, 1515). King Manuel I (1469-1521) of Portugal wished to send it as a gift to Pope Leone X but the animal did not survive. Some sketches by an unknown artist portraying the animal before its death were sent to Albrecht Dürer (1471-1528) who produced a wood carving of the rhinoceros, later becoming famous as “Dürer’s rhinoceros”. Despite some inaccuracies (for

example, the horn on the back), it became the official image of this animal in the West. This could be the explanation for Aleni’s statement regarding the horn on its back (有兩角一在鼻上一在頂背間).²⁵ Half a century after this textual description of the Indian rhinoceros by Aleni, we find a shorter description and an image of the same animal in the *Kunyū tushuo* (1674), the geographical illustrated text by the Belgian Jesuit Ferdinand Verbiest. According to Menegon, this rhinoceros was copied by Verbiest from a 1551 drawing by the Swiss naturalist Conrad Gessner (1516-1565), who in turn copied it from Dürer’s prototype.²⁶ In the 1760s,

Dürer's rhinoceros picture reappeared in a world map by the Jesuit father Michel Benoist (1715-1774), ordered by Qianlong em-

peror, and then entered Chinese encyclopaedias and collections.²⁷

Turkey	乘以駱駝駝行甚疾可日馳四五百里又耐渴一飲可度五六日其腹容水甚多客或乏水則剖駝飲其腹中水	Camels are used for riding. One can travel very fast with this quadruped, it can cover four or five hundred li in a day. What is more, it can resist thirst very well and once it has drunk it can go five or six days without drinking again. ³² Its stomach can hold a great quantity of water and if the traveller finds himself without water, he can pierce the camel's belly and drink the water inside.
Turkey	又有地名際刺產異羊羊之絨輕細無比雨中衣之略不沾濡即漬以油毫不污染也	There is a place called Jila 際刺 where they raise special goats: their wool is light and thin, and if you wear it in the rain it has the power to keep the rain off and if it is treated with oil, it does not soak up the water but stays dry. [It is probably Ankara, modern capital of Turkey, known as Ancyra in the Byzantine period. The wool mentioned by Aleni is the wool of the Angora goat, known also as mohair].
Java	諸國每爭白象即治兵相攻擊爭白象者白象所在即為盟主也	All [the tribes] fight over the possession of a white elephant. Whoever wins becomes chief of the alliance. ³³
Northern lands	人以魚肉為糧或磨魚為麵油為燈骨造舟車屋室亦為薪其魚皮以為舟遇風不沉不破如陸走則歲皮舟而行	Fish makes up the bulk of the diet, and fish is used for making flour and lamp oil. Boats, carts, and houses are built with fish bones, and they are also used to feed the fire. With fish skins they make boats which do not sink and do not let in water in a storm. When travelling on dry land, these boats can be closed and carried on the shoulders.
Marine fauna	一如鱷魚名曰刺瓦而多長尾堅鱗甲刀箭不能入足有利爪鋸牙滿口性甚獐惡入水食魚登陸人畜無所擇百魚遠近皆避第其行甚遲小魚百種常隨之以避他魚之吞咬也其生子初如鵝卵後漸長以至二丈每吐涎於于地人畜踐之即仆因就食之凡物開口皆動下頰此魚獨動上鄂口中亦無舌冬月則不食物人見之卻走必逐而銀之人	There is an animal similar to the crocodile called <i>lawa'er-duo</i> 刺瓦而多 (loricato/lacerto), with a long tail and such hard skin that neither swords nor arrows can penetrate it. Its feet have sharp nails, the mouth is full of sharp teeth. This animal is of a fierce nature, it dives into the water looking for fish to eat and if it emerges onto dry land, neither man nor beast is safe. All the fish stay away from it, but since it moves slowly, many small fish swim near it in order to stay safe from other predators. It lays an egg similar to a duck egg from which hatch young which quickly become as long as 2 <i>zhang</i> . It often vomits saliva on dry land where men or animals can become trapped; if this happens, they will surely be devoured by this animal. All animals move the bottom jaw when opening their mouths, but this animal moves

	返逐之彼亦卻走其 目入水則鈍出水極 明見人遠則哭之近 則噬之故西國稱假 慈悲者為刺瓦而多 哭獨有三物能制之 一為仁魚蓋此魚通 身鱗甲惟腹下有軟 處仁魚鬣甚利能刺 殺之一為乙苟滿鼠 屬也其大如貓善以 泥塗身令滑俟此魚 開口輒入腹嚙其五 臟而出又能破壞其 卵一為雜腹蘭香草 也此魚最喜食蜜養 蜂家四周種雜腹蘭 即弗敢入	the top jaw. It has no tongue, and it does not eat during the winter months. Man fears it greatly and runs from it, but if you run, it will capture and devour you. On the other hand, if you chase it, it will flee. In the water its eyes are cloudy but out of the water they are shiny. When it sees you from afar it cries, but if you approach, it will attack. For this reason, in the West they say that the tears of the <i>lama'erduo</i> are tears of false pity. There are only three things stronger than it. One is the ren fish: it can strike the <i>lama'erduo</i> on its belly with its fin, the only part of the <i>lama'erduo</i> 's body which is unprotected by its impenetrable armour. Another is the <i>yigouman</i> 乙苟滿 [mongoose], ³⁴ similar to a mouse but as big as a cat, which loves to live in the mud and has a slippery body. It waits for the reptile to open its mouth then it dives into its stomach and eats its intestines. It is also fond of its eggs. The third thing is saffron (<i>zafulan</i> 雜腹蘭), a fragrant grass. This animal loves eating honey but if you surround the hives with saffron then it will not come near.
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Here, again, in a similar way that we have observed in the *renyu*/dolphin case, Aleni “created” a different animal, the *lama'erduo*, gifted with special characteristics, and depicted it together with a real animal, the *eyu* 鱷魚, here mentioned with its current Chinese name. The description refers without doubt to the crocodile. Was it a cultural misunderstanding between Aleni and his Chinese collaborator? Did the former describe an animal and the latter compare

it to a crocodile using a Chinese term which Aleni probably did not know? Or did they consciously enrich the text with this phonemic loan and some exotic details?

The term used is perhaps a phonological loan from “loricato”, an order of large reptiles including crocodiles, alligators, caimans, and gharials. The sound of Aleni’s phonemic loan suggests other Italian words that have similar origin and meaning, such as “lucertola”, “lacertiforme”, etc.


4. Fantastic or hybrid animals, *monstra* and *mirabilia*.

Tartary	更有殊異不倫如夜行晝 伏身蒙鹿皮懸屍於樹 喜食蛇蟻蜘蛛者有人 身羊足	There are strange things beyond our imagination, such as creatures who go out at night and hide in the day, whose bodies are covered in deer skins. They hang corpses from the trees, eat snakes, ants, and spiders. There are even creatures with human bodies and goat’s hooves.
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	<p>有獸名觸角天下最亦 最奇利亞亞亦有之額 一極能解毒此地恆有 毒蛇飲之必死百獸在 人獸飲之必死百獸在 次雖渴不敢飲此獸 來以角攪其水毒遂解 獸始就飲焉勿搗祭亞 庫云有雨角稱為國寶</p>	<p>There is an animal called the unicorn (<i>chujiao</i> 觸角). This is the rarest animal of all creation, but it is found in Libya. The horn on its forehead is the best antidote to any poison. In this land poisonous snakes are very common. If a snake drinks the water from a spring, this water becomes infected with its venom; so, if men or animals drink from it, they die. When this happens, all the animals wait near the spring and even if they are thirsty, they do not dare to drink until the unicorn mixes up the water with its horn. In this way the venom is neutralized, and the animals can drink. People say that two unicorn horns are preserved in the warehouses of Venice and are considered a national treasure.</p>
India	其貓有肉翅能飛	Cats in India have wings of flesh and bone and can fly.
India	蝙蝠大如貓	The bats [Flying foxes] are as big as cats. ³⁵
Turkey	<p>傳聞有鳥名弗尼思其壽 四五百歲自覺將終則聚 乾香木一堆立其上待天 甚熱搖尾燃火自焚矣骨 肉遺灰變成一蟲又變而 為鳥故天下止有奇異無 者皆謂之弗尼思云</p>	<p>According to legend, a bird called <i>funisi</i> 弗尼思 lives here, that can live for four or five hundred years, and when it knows it is about to die, it builds a pile of fragrant wood and sits on top of it, waiting for it to get hot; then it shakes its tail, lighting a fire which envelops it. The bones and the flesh become ash, they generate a worm which then turns into the bird again. There is only one in all the world. In the West, people say that the phoenix is one of the strangest and most unique animals in the world.³⁶</p>
Borneo	<p>有獸似羊似鹿名把雜爾 其腹中生一石能療百病 西客極貴重之可至百 換，國王藉以為利</p>	<p>There is an animal which looks like a sheep and a deer, called <i>baṣa'er</i> 把雜爾. In the belly of this animal is a stone which can cure every ailment. In the West this substance is very precious and can be worth a hundred times more than ordinary goods to barter. The sovereign of this island derives great profit from this.</p>

Based on the above mixed fragments of text that I have tried to group into categories, we can try to give a preliminary answer to the initial questions: what type of descriptions and images can be traced in

this material? The defined categories are the following: 1. Real animals quoted as sources of nutrition or means of transport, available through hunting or breeding. 2. Humanized animals, with moral characteristics or



special intelligence. 3. Real animals quoted for unusual local customs, for special characteristics, or exotic animals. 4. Fantastic, hybrid animals, *monstra e mirabilia*. The cited examples, divided into such typological characteristics, can be further grouped together according to the two main approaches that have been underlined in the above discussion, i.e., a scientific evolution of the attitude towards the animal world versus the classical vision (the latter characterized by the massive presence of the exotic element, which in Jesuit texts took the form of classical stories often with humanized animals, myths, and legends). This view may also answer the second question, i.e., which vision did the representations of animals in the Jesuits' geographical texts correspond to? The presence of "informative" descriptions like those in category 1 may be linked to the geographical nature of these texts and to the necessity to inform the reader about the resources of a particular territory concerning the presence of animals, therefore "in line" with the "scientific" aim of a geographical text and with the vision of the era in which the book was written. Categories 2, 3 and 4 including humanized animals, *mirabilia* and stories about them are typical of a vision which reflects both the classical view of animals, characterized by legends and myth, and with the biblical view, where animals were humanized and endowed with emotions and moral characteristics.

Zhang Qiong 张琼, arguing about the process of science-making of Jesuits toward the Chinese literati, defines the presence of these kinds of elements in the geographical works of Jesuits a "sign of apparent regression", although, according to her, the insertion of those exotic elements, while not "scientific", was aimed at the accommodation of Western culture and the building of a sense of trust between missionaries and their counterparts.²⁸ This could answer the third question, i.e., what were the motivations and purposes of using these descrip-

tions in the texts composed or translated by the missionaries? Elements of the strange and the exotic had a powerful attraction in the process of translation and accommodation of Western culture. And this view could also partially answer the last question: how did Jesuits draw upon the Chinese tradition of animal description in conveying Western knowledge to China? I believe the examples of *renyu*/dolphin and *lava'erduo*/crocodile are quite significant and show how missionaries dealt with animals known by the Chinese, astutely using the elements of exoticism, myth, and legend.

In the two cultural worlds at the basis of Western civilization, i.e., classical tradition and the Bible, animals have a significance which transcends utility or beauty, thus in a certain way integrating with humans. The missionary authors of the text under examination are therefore in a way, typical of their time, interpreters, and disseminators of European culture of the sixteenth century when Europeans undertook great voyages of exploration, drew maps, wrote accounts of journeys to faraway lands, developing the capacity to observe and write in a scientific way about natural phenomena and the natural world. On the other hand, the Jesuits were also a strong expression of their background which was influenced by the most advanced scientific and cultural movements of their time but whose roots were firmly entrenched in classical culture and obviously, the Biblical tradition. This dichotomy can also be recognized in other sectors of science which were the object of translations of original works composed by the Jesuit missionaries in China. A particular example is astronomy, where Jesuits were acquainted with Galileo (1564-1642)'s theories but remained firm with the Ptolemaic geocentric model until opening to Tycho Brahe (1546-1601)'s compromise after 1630.²⁹ The Jesuit missionaries' reasons and aims for using pictures and descriptions of animals can be linked to several factors: the

consolidated tradition of this tool/topos in geographical descriptions, but also the need to draw in the reader with bizarre and exotic descriptions, typical of geographical texts and a basic feature of accommodation used by the Jesuit missionaries in China.

In the present research there are some interesting aspects that have not been scrutinized. It would be important to investigate whether these descriptions and the thought that they represented have had an impact on Chinese cultural history. It could be interesting to research the further diffusion of these descriptions, if there is any text which reproduced or quoted animal descriptions from *Zhifang waiji*.³⁰ Besides, Aleni very often included exotic animals in the introductions of new and unknown countries to the Chinese literati. While this may not have been his intention, the exotic animals may have had a symbolic value in his mind and worked as representative roles for the people and countries in which they were added. However, the road for this type of comparative study is still long and deserves a separate study and further research which here, due to limited space and scope, has not been included.

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Notes

¹ On Verbiest and his geographical work, see: Hartmut Walravens, “Father Verbiest’s Chinese World Map (1674),” *Imago Mundi* 43, 1, 1991, 31–47; Chen Minsun, “Ferdinand Verbiest and the Geographical Works by Jesuits in Chinese, 1584–1674,” in John W. Witek, S.J., ed., *Ferdinand Verbiest, S.J. (1623–1688): Jesuit Missionary, Scientist, Engineer and Diplomat*, Monumenta Serica Monograph Series 30 (Sankt Augustin, Steyler Verlag, 1994), 123–133.

² On animals and sea monsters on

geographical artefacts see: Chet Van Duzer, *Sea Monsters on Medieval and Renaissance Maps*, (London, The British Library, 2013-2014). About imaginary animals and monsters in the Western culture with a special focus on medieval times see: Sara Sebenico, *I mostri dell'occidente medievale: fonti e diffusione di razze umane mostruose, ibridi ed animali fantastici*, (Trieste, Università degli Studi di Trieste, 2005). For a survey about animals in literature from ancient times to Renaissance see: Cristiano Spila, *Animalia tantum. Animali nella letteratura dall'antichità al Rinascimento*, (Naples, Liguori Editore, 2012).

³ Francesco Maspero, *Bestiario antico. Gli animali-simbolo e il loro significato nell'immaginario dei popoli antichi*, (Casale Monferrato, Edizioni Piemme, 1997), pp. 7-8.

⁴ Francesco Mezzalana, *Bestie e bestiari: la rappresentazione degli animali dalla preistoria al Rinascimento*, con saggi di Guglielmo Cavallo, Danilo Mainardi, (Turin, U. Allemandi, 2001), pp.13, 14-15.

⁵ “Necessità cognitiva” in the cited source in Italian language. *Ibid.*, p. 11

⁶ *Ibid.*, p. 13.

⁷ *Ibid.*, p. 15.

⁸ See: Anne Paulus, Baudouin van den Abeele, *L'art de chasser avec les oiseaux: le traité de fauconnerie, De arte venandi cum avibus*, (Nogent-le-Roi, J. Laget, 2001); Anna Laura Trombetti Budriesi, *De arte venandi cum avibus. L'arte di cacciare con gli uccelli*, (Rome, Laterza, 2005).

⁹ Francesco Mezzalana, *Bestie e bestiari*, pp. 51-52.

¹⁰ Ulisse Aldrovandi was an important Italian naturalist and the promoter of Bologna's botanical garden. He was described by Carl Linnaeus as the “father of the study of natural history”. Aldrovandi's work is a typical example of the encyclopedic-naturalistic movement that was born in Europe during the 16th and 17th centuries. During the last years of his life, Aldrovandi started his naturalistic *Encyclopaedia*. See: Giuseppe Montalenti “Aldrovandi, Ulisse”, in *Diziona-*

rio Biografico degli Italiani, 2, 118-124 (Rome, Istituto dell'enciclopedia italiana, 1960), p. 218. The bibliography on Aldrovandi is immense. For a useful synopsis of works focusing on zoological images see: Giuseppe Olmi, Fulvio Simoni, *Ulisse Aldrovandi. Libri e immagini di Storia naturale nella prima Età moderna*, (Bologna, Bononia University Press, 2018); Raffaella Simili, *Il teatro della natura di Ulisse Aldrovandi*, (Bologna, Compositori, 2001); on his work as a collector: Giuseppe Olmi “Il collezionismo scientifico”, in R. Simili, *Il teatro della natura di Ulisse Aldrovandi*, (Bologna, Compositori, 2001), pp. 20-50; Antonino Biancastella, *Animali e creature mostruose di Ulisse Aldrovandi*, (Milan, Federico Motta, 2004).

¹¹ Bruce Boeher, “Brutal Reasoning: Animals, Rationality, and Humanity in Early Modern England”, *Renaissance Quarterly* 60.2 (2007), pp. 656–658, cit. in Roel Sterckx, Martina Siebert and Dagmar Schäfer, (eds.), *Animals Through Chinese History: Earliest Times to 1911*, (Cambridge – New York, Cambridge University Press, 2018), p. 13.

¹² Roel Sterckx, *Animals Through Chinese History*, pp. 3-4. For a deep contextualization of animals in Early China see also Roel Sterckx, *The Animal and the Daemon in Early China*, (Albany NY, State University of New York Press, 2002).

¹³ Roel Sterckx, “Animal Classification in Ancient China”, *East Asian Science, Technology, and Medicine* 23 (2005), p. 27: “While observations regarding animals and other natural phenomena are wide-spread in the sources, the contexts in which those data appear do not reveal an intense proto-scientific interest in animals by the observers who recorded and transmitted these data.”

¹⁴ Id.

¹⁵ Edward H. Schafer, “Falconry in T'ang Times”, *T'oung Pao*, 46.3/5 (1958), pp. 293–338.

¹⁶ Edward H. Schafer, *The Golden Peaches of Samarkand: A Study of T'ang Exotics* (Berkeley, University of California Press

1963), cit. in Roel Sterckx, *Animals Through Chinese History*, pp. 4-5.

¹⁷ Intended here as a new and more general attitude towards nature, requiring a detailed study in order to glean information and secrets from this immense heritage. As regards animals, this attitude entails studying them, classifying them, understanding their anatomical structure, exploring their physiological functions, studying and guiding their behaviors.

¹⁸ Roel Sterckx, *Animals through Chinese History*, p. 13. On the influence of the medieval animal literature in the Renaissance, see: Bruce Boehrer, “Brutal Reasoning”, cit. in note 11.

¹⁹ “Over the course of the sixteenth and early seventeenth centuries (1500-1645), maps and their accompanying texts drew attention to alterity and, along the way, to hitherto unknown customs and ways of living. Decorated with images of monsters, cannibals and scenes of primitive life, maps, atlases, and travel books became commodities of commerce and religious ideology”. See Tom Conley, *Renaissance Ethnography and the Invention of the Human: New Worlds, Maps and Monsters*, rev. by Sureka Davies, *Imago Mundi*, 70, 1, p. 137.

²⁰ Literally, *Zhifang waiji* 職方外紀 means “Notes about the countries outside the jurisdiction of Zhifang”. The *Zhifang* was an office in charge of the tributary countries.

²¹ There is a very strict relationship between this map and Aleni’s atlas in terms of contents and lexicon. What is also worth to underline is the great diffusion of *Zhifang waiji*, which was reprinted many times in many copies and included in important collections from 17th century to 19th century, in this way contributing to the diffusion of geographical knowledge much more than Ricci’s map.

²² Bernard Hung-kay Luk, “A Study of Giulio Aleni’s Chih-fang wai-chi”, *Bulletin of the School of Oriental and Asian Studies*,

40 (1977), pp. 58-84; Eugenio Menegon, *Un Solo Cielo, Giulio Aleni S.J. (1582-1649). Geografia, arte, scienza, religione dall’Europa alla Cina*, (Brescia, Grafo, 1994); Federico Masini: “Aleni’s contribution to the Chinese language”, in Tiziana Lippiello and Roman Malek (eds.), *Scholar from the West” Giulio Aleni S.J (1582-1649) and the Dialogue between Christianity and China*, Monumenta Serica Monograph Series XLII (Brescia, Fondazione Civiltà Bresciana – Sankt Augustin, Steyler Verlag, 1997), pp. 539-554; Paolo De Troia, “Zhongxi dilixue zhishi ji dilixue ci-hui de jiaoliu: Ai Rulüe Zhifang waiji de xifang yuanben 中西地理學知識及地理學詞匯的交流：艾儒略職方外紀的西方原本” (Geographical knowledge and lexicon between West and China: Western sources of Aleni’s *Zhifang waiji*”, in *Wakumon* 或問, 2006, 11, pp. 67-76; Giulio Aleni, *Geografia dei paesi stranieri alla Cina - Zhifang waiji* 職方外紀; traduzione, introduzione e note di Paolo De Troia, (Brescia, Fondazione Civiltà Bresciana, 2009); Zou Zhenhuan 鄒振環, “Zhifang waiji: shijie tuxiang yu haiwai lieqi 職方外紀：世界圖像與海外獵奇” (*Zhifang waiji*: world image and the search of novelty overseas), *Fudan xuebao (shehui kexue ban)* 復旦學報(社會科學版), 2009, 4, 53-62. Cheng Fangyi, “Pleasing the Emperor: Revisiting the Figured Chinese Manuscript of Matteo Ricci’s Maps”, *Journal of Jesuit Studies*, 2019, 6 (1), pp. 31-43.

²³ The work is rich in descriptions of animals, and it is hard, for the sake of the scope of this article, to include all the passages of the text here. Therefore, the writer selected some interesting samples from chapters of *Zhifang waiji* describing Asia and Europe considered to be relevant to the topic of this analysis. Lists of animals from the African and American continents have not been included.

²⁴ Quotations in the table are taken from the translated edition of *Zhifang waiji*. Giulio Aleni, *Geografia dei paesi stranieri alla Cina - Zhifang waiji* 職方外紀) cited in

note 22.

²⁵ See Robert Graves, *I miti greci*, (Milan, Longanesi, 1963, repr. 2004; Italian edition), pp. 146-148.

²⁶ The Indian elephant is notoriously more docile than its African counterpart and has been tamed since ancient times.

²⁷ *Naturalis Historiae*, IXm VII, 25. For the citations from *Naturalis Historiae* the edition used is: Gaio Plinio Secondo, *Storia Naturale*, Italian edition by Gian Biagio Conte with the collaboration of Alessandro Barchiesi and Giuliano Ranucci, preface by Italo Calvino, (Turin, Giulio Einaudi Editore, 1982), from here on abbreviated to Plinio, *Naturalis Historiae*.

²⁸ See: Plinio *Naturalis Historiae*, IX, p. 29.

²⁹ The famous French naturalist, Buffon (1707 – 1788) highlighted the inaccuracies of Dürer's representation: "les erreurs ou les caprices de ceux qui avoient publié des figures de cet animal. Celle d'Albert Dürer qui est la première, est une des moins conformes à la Nature, cette figure a cependant été copiée par la plupart des Naturalistes, et quelques-uns même l'ont encore surchargée de draperies postiches et d'ornemens étrangers." See: Georges Louis Leclerc Buffon, comte de, *Histoire naturelle, générale et particulière, avec la description du cabinet du Roi*, (Paris, Imprimerie Royale, 1770,) tome XI, p. 179. Regarding Indian beliefs relating to the medicinal properties of the horn and other parts of the rhinoceros: "Sunt in regno Bengalen rhinocerotes Lusitanis Abadas dicti, cujus animalis corium, dentes, caro, sanguis, unguis et cæteræ ejus partes toto genere resistunt venenis; quâ de causâ in maximo pretio est apud Indos." See: Johan Hugon, *L'inscotani navigatio in Orientem*, Belgicè scripta, Latinè enunciata a Lonicero, (Francfordii, 1599), pars II, p. 44; "Leurs cornes, leurs dents, leurs ongles, leur chair, leur peau, leur sang, leurs excréments même et leur eau, tout en est estimé et recherché par les Indiens, qui y trouvent des remèdes pour diverses

maladies". *Voyages de la Compagnie des Indes de Hollande*, tome I, p. 417; the last two cited in Buffon p.188, nota 1.

³⁰ Menegon also found the same image of Dürer rhinoceros in Ricci's map manuscript reproduction kept in Nanjing Museum, plate 1. According to Menegon, this kind of zoological depictions were added by Chinese artists in order to please courtiers and scholars. See: Eugenio Menegon, "New Knowledge of Strange Things: Exotic Animals from the West. 存廣異聞：西方異獸", *Gujin lunheng* 古今論衡 (Disquisitions on the past & present), 15 (2006), pp. 39-48.

³¹ Eugenio Menegon, "New Knowledge of Strange Things: Exotic Animals from the West", p. 41.

³² In actual fact camels can drink around 150 litres of water and can go without eating or drinking for 20 days.

³³ No reference has been found relating to the custom of fighting over a white elephant in Java. Niccolò Conti, in his description of the Thai kingdom hints at a white elephant and the fact that it was a symbol of power because it was ridden by the sovereign in battle: "the King of this province [Kingdom of Siam, capital Ayuthia N.d.A] rides a white elephant, wearing a golden chain decorated with precious stones around its neck, which comes down to its feet" See: "Viaggio di Nicolò di Conti veneziano, scritto per messer Poggio fiorentino", in Giovanni Battista Ramusio, *Navigazioni e viaggi*, a cura di Marica Milanese, (vol. II, Turin, Einaudi, 1979), p.797.

³⁴ This is the mongoose (*Herpestes ichneumon*), venerated in Ancient Egypt because it ate crocodile eggs. The Chinese term is a phonemic loan of the Latin name. In Pliny, *Naturalis Historiae*, VIII, XXXVII, 90, in the chapter describing the crocodile, we read "ichneumon per easdem fauces ut telum aliquod inmissus erodit alvum". Aleni's description of the crocodile and the mongoose have much in common with the respective accounts in *Naturalis Historiae*, book VIII.

³⁵ “Flying foxes”, scientific name *pteropus*. These are the biggest bats in the world, widespread in Asia, Australia, Indonesia, and the Indian subcontinent. They feed on fruit, pollen, shoots and are also known as “fruit bats”.

³⁶ The legend of the phoenix is common to many Western countries and is found in numerous accounts of journeys of the past. Aleni’s description of the phoenix corresponds more or less to Pliny’s in *Naturalis Historiae*, X, II, 4. This fantastic bird has very few similarities with the Chinese *fenghuang* 鳳凰, which is usually miscalled “phoenix” in the West. According to Schafer, the phoenix of the Western tradition could be linked to the “fire-rejecting sparrow,” a black passerine bird. “The bird was immune to fire. It was, in short, a true phoenix, unlike the *fenghuang* of Chinese tradition [...] That is, it was the *samandal* of India (said by the Arabs to be found also in Waq-waq) whose skin no flame could consume. A crystal cage in the monarch’s bedroom housed this prodigy. There the maidservants amused themselves in vain attempts to burn it with candles”. Schafer, *The Golden Peaches of Samarkand: A Study of Tang Exotics*, p. 38.

³⁷ Qiong Zhang, *Making the new world they own. Chinese Encounters with the Jesuit science in the Age of Discovery*, (Leiden – Boston, Brill, 2015), p. 85, note 123.

³⁸ Benjamin Elman, *A cultural history*

of modern science in China, (Cambridge - London, Harvard University Press, 2006), pp. 18-19. See also: Irving A. Kelter, “The Refusal to Accommodate: Jesuit Exegetes and the Copernican System”, *The Sixteenth Century Journal*, 1995, 26, 2, pp. 273–83.

³⁹ This kind of research has been partially conducted, but without specific focus on Aleni’s work. See, for instance, Eugenio Menegon, “New Knowledge of Strange Things: Exotic Animals from the West”, above cited; Keichi Uchida, *A study of cultural interaction and linguistic contact. Approaching Chinese linguistic from the periphery*, (Gottingen, V&R Unipress GmbH, 2017); Lai Yu-chih (Lai Yuzhi) 賴毓芝, “Zhishi, xiangxiang yu jiaoliu: Nan Huairen Kunyu quantu zhi dongwu tuxiang yanjiu” (知識、想像與交流：南懷仁《坤輿全圖》之動物圖像研究 (Knowledge, Imagination and Exchange: Studies of the Animal Images in Nan Huairen’s [Verbiest’s] “Kunyu quantu”), paper presented at the conference “Liang’an Gugong disanjie xueshu yantaohui: shiqi-shiba shiji (1662–1722) zhongxi wenhua jiaoliu” (兩岸故宮第三屆學術研討會：十七、十八世紀(1662–1722)中西文化交流 (The Third Academic Symposium Organized by the Palace Museums across the Strait: Sino-Western Cultural Exchange in the Seventeenth and Eighteenth Centuries, 1662–1722), held in Taipei, November 15–17, 2011.