

The beautifully illustrated copy of *Kitāb manāfi* al-ḥayawān in the Biblioteca Real of San Lorenzo del Escorial (inv. no. Ar. 898), compiled by Ibn al-Durayhim al-Mawṣilī in 755/1354, is one of five extant illustrated bestiaries based on the original text of 'Ubayd Allāh ibn Jibrīl Ibn Bakhtīshū'.¹ Ibn al-Durayhim lived most of his life in Aleppo and Damascus and was working in the school of the Umayyad Great Mosque in Damascus in 755/1354.² That Syria was still an active center of painting and illumination in the fourteenth century is confirmed by lavishly illuminated Qur'āns produced there.³ The Escorial manuscript is also close in date and style to three other illustrated Mamlūk manuscripts, for which it is thus now possible to suggest Damascus as the provenience.⁴

The text on each animal is divided into two sections, a general introduction to its principal characteristics, habits, and reactions in different situations and a section dealing with different parts of the animal and their medicinal uses. These sections represent two distinct textual traditions, the part on characteristics from Aristotle and that on medicinal uses from 'Ubayd Allāh ibn Jibrīl ibn Bakhtīshū'. Aristotle wrote five zoological books; three of them were combined in Arabic translation in the *Kitāh al-hayawān* by Yaḥyā ibn al-Biṭrīq in the eighth or ninth century, probably from a Syriac translation.<sup>5</sup>

Ibn Bakhtīshū<sup>c</sup> lived in the eleventh century, the last of a renowned family of Nestorian physicians who had directed the school of medicine at Jundīshāpūr.6 This was founded in the first half of the sixth century and quickly became a major center, attracting Greek physicians, as well as scholars from Persia and India, who maintained a tradition of cosmopolitan learning in medicine. Philosophical and scientific works in Greek and Sanskrit were translated into Syriac and Pahlavī. In 215/830 the 'Abbāsid caliph al-Ma'mūn (198-219/813-33) established the "house of wisdom" (bayt al-hikma)7 in Baghdad as the central institute for Arabic translation of scientific texts from Greek, Pahlavī, Sanskrit, and Syriac. Although other Nestorian medical centers existed, most were influenced by that at Jundīshāpūr, particularly in the organization and administration of hospitals: The first important Islamic hospital, founded in Baghdad by Hārūn al-Rashīd (170-93/786-809), was designed and staffed by physicians from Jundīshāpūr.8 From the eighth century onward members of the Bakhtīshū' family served as personal physicians to the 'Abbāsid caliphs.9

'Ubayd Allāh ibn Bakhtīshū' lived in Mayyāfāriqīn and died there in 450/1058. He was a contemporary and friend of Ibn Butlan, another celebrated Christian physician, known especially for his Taqwim al-sihha (Almanac of health; Latin Tacuinum Sanitatis). 10 Ibn Bakhtīshūc wrote several books on medicine, but his best-known work is Kitāb ṭabā'ī' al-ḥayawān wa khawāṣṣihā wa manāfi a dā ihā (Book of the characteristics of animals and their properties and the usefulness of their organs), based on several sources, including Aristotle, Hippocrates, Galen, Dioscorides, and 'Isa ibn 'Alī. The original text is not extant, but it was incorporated into bestiaries of the socalled "Ibn Bakhtīshū' tradition." It can be described as a work on homeopathic medicine, consisting of a series of recipes for use of the different parts of men, women, and other animals to cure illness. Among the mentioned benefits the majority are strictly medical, but a few are industrial or commercial, even magical. The account of the horse is particularly long and comprehensive, reflecting the importance of this animal.

Ill. II: Characteristics of the horse, fol. 17a.

The accompanying miniature, in which a horse is shown galloping, is one of the best in the manuscript (see Cat. no. 196). The animal's body is reddish-brown, and it has a dark mane and knotted tail. A golden stripe around the neck terminates in a tuft. On its back is a dark-green saddlecloth with a blue border, held in place by a yellow girth decorated in red. Such trappings are typical of horses illustrated in the thirteenth and fourteenth centuries. The illustration conveys a sense of power and strength and is distinguished by precision in detail and the technical skill with which the colors were applied on a prepared white base. *Translation* 

(fol. 17a) Discourse on the horse and the useful properties with which God has endowed it.

(fol. 17b) *The horse*. The characteristic of the horse is to amble in its walk and to be diligent in the gallop under its rider. It likes to be ridden. It knows its female and likes to mate, but it dislikes its offspring and is jealous. Among its characteristics is that, when it tramples upon the print left by a wolf, it trembles, and vapor

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Ill. III: The Desires of the female horse, fol. 18a.

comes out of its body. The packhorse loves its groom. The mare has a strong sex drive and eats a lot. (fol. 18a) Because of her lust she is compliant also to a male of a different species. It is said that, when her desire grows, she refrains from food and drink. If her mane is cut her desire is stilled. If the mare is pregnant and tramples on the print of a wolf, she becomes frightened.

The meat of the horse is hot and dry, and that of the nag is hotter and drier in temperament than that of the packhorse, but both of them warm the body of the person to whom they are fed.

Among the useful properties of the horse is that *the brain of the mare*, when aloe, myrrh, borax, and honey are put on it and it is then boiled on the fire until everything is mixed, is the most excellent ointment that has been made for wounds.

The liver of the horse, when the ligament attached to it is taken and grilled and the fumes inhaled by a person with jaundice, is of great benefit.

The gall bladder of the horse, when myrrh, spikes, resin, and cyperus are mixed with it and three carats of the mixture are

Ill. IV: Curative powers of the spleen, fol. 18b.

drunk with cumin water, is beneficial for those who pass blood. The bladder of the hippopotamus is inhaled against hemiplegia, palsy, and catarrh.

The spleen of the Arabian horse, when it has been taken and marinated in vinegar of aged white wine for a day and a night, (fol. 18b) is then taken out and dried in the sun; then a mithqāl of it is taken and pounded like kohl. The one suffering from spleen problems is ordered to run until his spleen swells up and grows in his belly. Then the dried and pounded spleen of horse is administered, after which he should drink a baghdādī raṭl of aged wine. He should do the same each day for three alternate days.

The curd of the horse is useful against pain in the stomach and intestines.

The testicle of an aged horse, when split, sprinkled with salt and aloe, dried and pounded, mixed with hot water, and spread on the foot of a person with chilblains, is beneficial. If bees are fumigated with it, wasps do not approach them. The testicle of

Ill. V: Properties of mare's milk, fol. 19a.

the hippopotamus, when dried, pounded, and drunk with milk, is beneficial against the bites of venomous animals.

Mare's milk. When the milk of a black mare is taken, henbane kneaded into it, and [the resulting paste] made into a bead, which is then put into a camel skin and hung on a pregnant woman, she aborts. If mare's milk is given to one who has asthma and a chronic cough (fol. 19a), it is of benefit. The milk of the stud mare is delicate. It makes menstruations flow; if given to a woman who then has intercourse with her husband, she conceives immediately. Mare's milk fattens the body, and, if it is left until it becomes sour and is drunk, it inebriates in the same way that wine does. If given as a vaginal irrigation when hot, it is useful for ulcers that occur there. If drunk, it is useful against the poison of sea hares.

The sweat of the horse. If it is taken and mixed with mare's milk and given to a pregnant woman to drink, she aborts immediately. If arrowheads are poisoned with it, it has a devastating effect. It is a poison for all venomous reptiles.

20.

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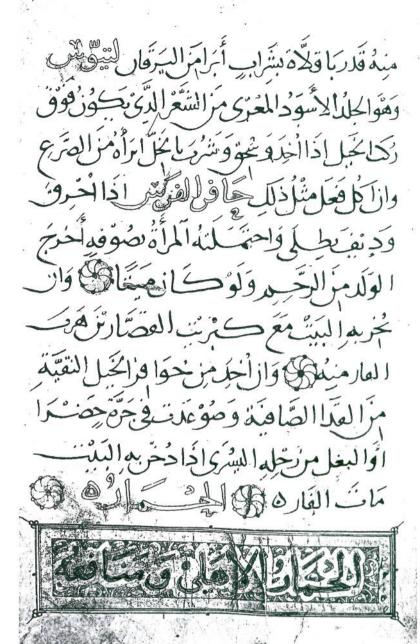
Ill. VI: The teeth of a stallion, fol. 19b.

The butter from mare's milk. If spread with salt on the pubic region of a boy or a girl for forty days before puberty, hair will never grow in that area.

The teeth of the stallion. When placed beneath the head of one who snores during his sleep, he does not snore any more. And, if a tooth of a yearling colt is taken and hung on a teething child (fol. 19b), the [teeth] come through without pain and harm. The tooth of the hippopotamus, when hung on someone who is at the point of death from stomach pain, swelling, and indigestion, cures and gives relief.

The intestines of the hippopotamus, which is one of the wild animals, cure the madness that takes people at the beginning of the new moon if inhaled and taken by them.

The urine of the horse, when boiled with natron, egg yolk, galbanum, and pepper, is useful for sores on the backs of riding animals, and when mixed with honey it cures the wounds that appear on people, because it extracts dead flesh and makes new flesh grow quickly.



Ill. VII: The dung of a horse, fol. 20a.

The dung of the horse, when dried and pounded and sprinkled on wounds, stops the bleeding. If it is applied like kohl to the leucoma that comes on the eye, it eliminates it. If it is used for fumigation, it brings the baby forth from the belly. If it is squeezed out, when damp, into a linen cloth and mixed with rose oil and used as eardrops, the pain abates. The dung of the pony, when the amount of a broad bean is taken in a drink (fol. 20a), cures jaundice.

The tayyus, which is the hairless black skin over the knees of the horse, when taken, pounded, and drunk with vinegar, cures epilepsy; if eaten, it does the same.

The horse's hoof, when burned and mixed with ointment and a woman carries a woollen cloth impregnated with it, brings forth the child from the womb even if dead. If the house is fumigated with it together with fullers' sulphur, the rats run away. If horse's hooves are put, dust-free and clean, in a green jar or alternatively a mule's left hoof, when the house is fumigated with it, the rats die.



III. VIII: Mare in estrus, from Kitāb manāfic al-hayawān, 35.2 x 27.2 cm. New York, The Pierpont Morgan Library, ms. no. M 500, fol. 28.

## Morgan M 500

The copy of *Kitāb manāfi* al-ḥayawān in The Pierpont Morgan Library in New York comprises eighty-six folios (see Cat. no. 184), with 102 miniatures, ninety original and the remaining twelve later additions dealing mainly with scenes from Niẓāmī's *Khamsa*. According to the introduction (fols. 2b-3b), the Persian translation was commissioned through an imperial *firmān* (decree) of the Īl-khānid Ghāzān Khān; the translation was prepared by the scribe 'Abd al-Hādī ibn Muḥammad ibn Maḥmūd ibn Ibrāhīm al-Marāgha'ī, who also enhanced the text by having illustrations added in appropriate places.

According to the colophon, the manuscript was completed at Marāgha in 69?/129?; the final digit of the year has been obliterated. The date can therefore be no later than 699/1299 nor earlier than 695/1295, when Ghāzān Khān ascended the throne. 12 It is most likely that this manuscript is the first Persian copy of Ibn Bakhtīshū's bestiary. Below the colophon is a much later inscription, which gives the date 690/1291; it is written on a new sheet of paper onto which the original colophon had been pasted, and it is apparent that the final unit of the date in the colophon had already been obliterated when this inscription was added.

The manuscript was acquired by Morgan from the Paris dealer Charles Vignier in 1912.<sup>13</sup> According to F.R. Martin, it had been brought to Paris from Tehran in about 1910,<sup>14</sup> suggesting that the

source may have been Vignier's brother Émile, who was carrying out commercial excavation in Iran from 1328/1910 to 1332/1914. 15 The twelve additional miniatures were probably added in the nineteenth century.16 Further comparative investigations are necessary, however, to determine their dating and stylistic affinities more precisely. They could have been executed either in the West (Paris ?) or in Iran before the manuscript left the country. They have been painted on thick, opaque grounds over portions of the original text, 17 which can be detected with the aid of a powerful lighted magnifying glass. The original manuscript appears to be almost complete, except for three folios (84a, 84b, 86a) added toward the end which obviously replace missing original folios. A major problem disregarded by many scholars is that many of the original ninety miniatures have been retouched18 or include later additions that can be difficult to detect. Examination by electronmicroscope reveals incongruities in the pigments and different layers of pigment in parts of the same miniature. 19 For example, the miniature of the hunter with hounds and fox (fol. 47a)20 is retouched on the face of the hunter, a portion of sky at the top, and the upper part of the tree, and some clouds have been added. Other alterations may be considered pentimenti, as in the illustrations of the unicorn (fol. 14b),<sup>21</sup> where the horn had been painted with the point in the other direction, and the onager (fol. 30a), originally a camel, where the head and hump were transformed into mountains.

Scholars have divided the miniatures into several stylistic groups,22 but if later overpainting is disregarded the manuscript presents a much more unified impression. No doubt further investigation would be useful, but, whether the miniatures can or should be attributed to one, two, or more painters, they seem to have been executed at the same time in the same atelier, so that the mixture of "classical" Arab and Mongol-Persian features represents the different stylistic options then available. The traditional view of this stylistic juxtaposition is that it attests the birth of a new style, marking both the incipient decadence of Arab painting and the beginning of a new school of painting. This evaluation is unjust, as far as Arab painting is concerned, arising from a misunderstanding and neglect of this type of painting, but it is certainly true that this manuscript is one of the first in which the new style begins to emerge. It should be emphasised that the two "schools" must be considered together and that at the turn of the fourteenth century painters could work in both styles and combine them without difficulty.<sup>23</sup> Support for this conclusion comes from the recent discovery of a copy of Zakariyyā' ibn Muḥammad Qazwīnī's 'Ajā'ib al-makhlūgāt probably produced in northern Iraq at the beginning of the fourteenth century,<sup>24</sup> in which the same two styles of painting are again juxtaposed; although they are recognizably different, at this date it does not seem justifiable to assign them to separate

The miniature of the mare and the stallion (fol. 28a; ht. 16.2 cm, w. 19.5 cm)<sup>25</sup> is part of the original cycle and does not show any retouches or later additions. There are more than one ground plane, and the stallion's head projects beyond the frame. The brushstrokes are very fine in both outlines and details, a characteristic of all the miniatures in this manuscript. The tree trunk and other landscape details are rendered with washes and inkblots, reminiscent of Chinese painting. The dappled mare, on the other hand, recalls thirteenth-century Arab renderings of animals, with rumps and bellies painted in gold, as in the miniature of the horse in *Kitāb na't al-ḥayawān* in the British Library.<sup>26</sup> The second part of the text on the horse, on the usefulness of the animal, is almost identical to that in the Escorial manuscript and has therefore not been translated here. The first part of the text

The second part of the text on the horse, on the usefulness of the animal, is almost identical to that in the Escorial manuscript and has therefore not been translated here. The first part of the text, on the characteristics of the horse, differs from that in the Escorial manuscript and the other Arabic manuscripts in general. Its direct source is the Persian, *Nuzhat Nāma-yi ʿAlāʾī*, by Shamardān ibn Abil-Khayr,<sup>27</sup> active during the second half of the eleventh century. It treats various phenomena of the world, and includes a section on the animal kingdom. There are two illustrated copies of this text in the Chester Beatty Library in Dublin.<sup>28</sup> In one of them (no. 115) the author mentions an original Arabic text, *Kitāb al-Badāʾiʿ* (Book of Wonders), as the source for this Persian version.

## Translation<sup>29</sup>

(fol. 27a) The nature of the mare and the stallion. When the mare is in heat, she holds her tail up, her womb is enlarged, and she urinates much. The stallion becomes mature when he is two and a half years old or maybe three. If he does so later, the result will be unsuccessful, and the colt will be weak. The mare foals after eleven months or during the twelfth month. The generative vigor of the stallion lasts for thirty years, while the mare comes in heat forty times and is good (for breeding purposes) up to the age of twenty years. The horse, they say, lives forty-five years. If a donkey covers a pregnant mare, the colt will be useless, because the

seed of the donkey is of cold temperament, but, if a stallion covers her, it does no harm. The teeth of all animals turn black in old age, except the teeth of the horse, which remain white and shining.

- <sup>1</sup> The other four are Kitāb na't al-ḥayawān (in Arabic), probably copied in northern Iraq ca. 617/1220, London, British Library, inv. no. Or. 2784; Kitāb manāfī' al-ḥayawān (in Arabic), perhaps copied in Egypt, 700/1300, Paris, Bibliothèque Nationale, inv. no. Arabe 2782; and Kitāb manāfī' al-ḥayawān (in Persian), copied in Marāgha, 695-99/1295-99, New York, The Pierpont Morgan Library, inv. no. M 500; Kitāb al-ḥayawān (in Persian), perhaps copied in Persia, ca. 700/1300, dispersed in various public and private collections. See Contadini 1992; Contadini 1988-89; Ibn Bakhtīshu' 1980; Grube 1978. The Escorial manuscript has been reproduced in a facsimile edition; El Libro de las Utilidades de los Animales de Ali Fath B al-Durayhim, Madrid, 1991. For the history of the text and an account of the various members of the lbn Bakhtīshu' family, see Contadini 1994.
- <sup>2</sup> Ibn Ḥajar 1929-32, pp. 106-108.
- <sup>3</sup> James 1992, pp. 172-75.
- <sup>4</sup> For the attribution to Damascus, see Contadini, 1988–89, p. 44. The three Mamlük manuscripts are *Maqāmāt*, Vienna, Nationalbibliothek, inv. no. A. F. 9, dated 734/1334; *Maqāmāt*, Oxford, Bodleian Library, inv. no. Marsh 458, dated 738/1337; and *Sulwān al-muṭā*, Kuwait, Homaizi collection, with two detached leaves in Washington D. C., The Freer Gallery of Art, inv. nos. 54.1v and 54.2 v, one in the Sadruddin Aga Khan collection, Geneva, and one in the al-Sabah collection, Kuwait, datable to the mid-fourteenth century. For these manuscripts, see Holter 1937; Ettinghausen 1962; Ibn Zafar 1985.
- <sup>5</sup> Dunlop 1959; O'Leary 1949, p. 159. This version may well be preserved in a manuscript in The British Library, inv. no. Add. 7511 (Rieu 1838–71, II, 215 no. 437) and a fragment in the Leiden University library, inv. no. Or. 166 (Peters 1968, pp. 47 ff.).
- <sup>6</sup> Now Shāhābād, in the province of Khūzistān in southwestern Iran; Browne 1921, p. 19, n. 1; Huart and Sayılı 1965, pp. 119–20;
- <sup>7</sup> Klein-Franke 1982, p. 70; Sourdel 1960.
- <sup>8</sup> Dunlop 1960.
- <sup>9</sup> The first recorded in the literature is Jīrjīs ibn Jibrīl ibn Bakhtīshū<sup>c</sup> (d. ca. 154/771), physician to al-Manṣūr (136-58/754-75); Ibn Abī Uṣaybi<sup>c</sup>a 1882, I, 123-48.
- Schacht 1986. Of Ibn Butlān's writings only an illustrated manuscript of Da'wat al-atibbā' (Convocation of physicians) is extant, in a copy dated 672/1272-73 in Milan, Biblioteca Ambrosiana, inv. no. a. 125 inf. S. P. 67 bis.
- Although this manuscript has never been the subject of a monographic study, the literature on it is vast; for bibliography, see Contadini 1992. The binding was thoroughly studied by Ettinghausen 1954a.
- 12 The complete text of the colophon is as follows: tamam shud kitāb-i manāfi'-i ḥayawān bi-sa'ādat / wa pirūzī khud[a]wandash bi-shahr-i Marāgha bi-tarīkh-i panzdahum . . / . . . [ti]s'īn wa sittami'a hij . . . / a'udh billāh wa ḥuṣn tawf[īqih]. I am very grateful to Alexander Morton for his help in interpreting this colophon.
- <sup>13</sup> I am very grateful to Stephen Vernoit, who supplied information on Vignier.
- 14 Martin 1912, p. 20.
- 15 Melikian-Chirvani 1985, p. 20 n. 4.
- <sup>16</sup> Grube 1978, p. 10.
- Yohannan 1917, p. 388; Gray 1961, p. 22 thought that eleven paintings are later additions in empty spaces left by the illustrator of the Mongol period. Grube 1978, p. 9, noted that they were executed over passages of text.
- Barash based her discussion of the manuscript on Richard Ettinghausen's notes; she was the first to acknowledge that several miniatures of the original cycle had been retouched at a later date.
- <sup>19</sup> This research was conducted by Drs Barbara Schmitz and Priscilla P. Soucek.
- <sup>20</sup> For a color illustration, see Natural History 1958, 68, 562.
- <sup>21</sup> Ettinghausen 1950, pl. 10; Kühnel 1959, pl. 2.
- <sup>22</sup> In his notes in the records of the Pierpont Morgan Library Ettinghausen identified six "hands;" Grube 1978, pp. 6-11, divided the miniatures into ten stylistic groups.
- The problem of the continuity of painting in Baghdad after the Mongol conquest has been discussed especially in Ettinghausen 1959; and Simpson 1982. Because the Kitāb manāfi' al-ḥayawān was produced in Marāgha, it is testimony of the dual trends in an atelier far from central Baghdad.
- <sup>24</sup> British Library, inv. no. 0r. 14140; Carboni 1988–89.
- 25 Gray 1961, p. 21.
- <sup>26</sup> Fol. 140a; see discussion of the Escorial miniature.
- <sup>27</sup> Ed. Farhang Jahanpur, Tehran 1362/1943.
- <sup>28</sup> Ms. no. 115, datable to around the mid-14th century, and ms. no. 255, dated 1007-1599. See Arberry 1959-62.
- <sup>29</sup> I am very grateful to Alexander Morton for his assistance in translating this passage.

VOLUME I

HE HORSE IN THE ART OF THE NEAR EAST
DAVIS ANDER, GENERAL EDITOR

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