The beautifully illustrated copy of Kitāb manāfi‘ al-hayawan in the Biblioteca Real of San Lorenzo del Escorial (inv. no. Ar. 898), compiled by Ibn al-Durayhim al-Mawṣili in 755/1354, is one of five extant illustrated bestiaries based on the original text of ‘Ubayd Allāh ibn Jibrīl ibn Bakhīshī. 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. That Syria was still an active center of painting and illumination in the fourteenth century is confirmed by lavishly illuminated Qur’āns produced there. The Escorial manuscript is also close in date and style to three other illustrated Manāfīq manuscripts, for which it is thus now possible to suggest Damascus as the provenience.

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 Bakhīshī. Aristotle wrote five zoological books; three of them were combined in Arabic translation in the Kitāb al-hayawan by Yahyā ibn al-Bīrūnī in the eighth or ninth century, probably from a Syriac translation.

Ibn Bakhīshī lived in the eleventh century, the last of a renowned family of Nestorian physicians who had directed the school of medicine at Jundishāpūr. 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 Pahlavi. In 2159/30 the ‘Abbāsid caliph al-Ma‘mūn (198–219/813–33) established the "house of wisdom" (bayt al-hikma) in Bagdad as the central institute for Arabic translation of scientific texts from Greek, Pahlavi, Sanskrit, and Syriac. Although other Nestorian medical centers existed, most were influenced by that at Jundishāpūr, particularly in the organization and administration of hospitals: The first important Islamic hospital, founded in Bagdad by Hārūn al-Rashīd (170–93/786–809), was designed and staffed by physicians from Jundishāpūr. From the eighth century onward members of the Bakhīshī family served as personal physicians to the ‘Abbāsid caliphs.

‘Ubayd Allāh ibn Bakhīshī lived in Mayyāfārān and died there in 450/1058. He was a contemporary and friend of Ibn Butlān, another celebrated Christian physician, known especially for his Taqwīm al-sīha (Almanac of health; Latin Tacuinum Sanitatis). Ibn Bakhīshī wrote several books on medicine, but his best-known work is Kitāb manāfi‘ al-hayawan wa khwasī‘hu wa manāfi‘ a’lā bi‘ha (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 ‘Ibān ibn ‘Ali. The original text is not extant, but it was incorporated into bestiaries of the so-called "Ibn Bakhīshī 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 medicinal, 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.
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 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 alve, myrrh, horex, 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 cypers are mixed with it and three carats of the mixture are
drunk with cumin water, is beneficial for those who pass blood. The bladder of the hippopotamus is inhaled against hemiplegia, palsy, and catararrh.

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. 13b) is then taken out and dried in the sun; then a midhat 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 baghādādī rāf of aged wine. He should do the same each day for three alternate days.

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

The testicle of an aged horse, when split, sprinkled with salt and aloes, 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 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 drank, 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.
The batter 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 calf 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.

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 tayyur, 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.
Morgan M 500

The copy of Kitāb manāfī al-hayawān 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 Nizāmī’s Khamsa. According to the introduction (fols. 2b–3b), the Persian translation was commissioned through an imperial firmān (decree) of the Il-khānīd Ghāzān Khān; the translation was prepared by the scribe ‘Abd al-Hādī ibn Muhammad ibn Mahmūd ibn Ibrahim al-Marāghī, who also enhanced the text by having illustrations added in appropriate places.

According to the colophon, the manuscript was completed at Marāgha in 699/1299; 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. It is most likely that this manuscript is the first Persian copy of Ibn Baktshīša’s bestiary. Below the colophon is a much later inscription, which gives the date 699/1299; 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. According to F.R. Martin, it had been brought to Paris from Tehran in about 1910, 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. The twelve additional miniatures were probably added in the nineteenth century. 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, 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, 85b, 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 retouched 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. For example, the miniature of the hunter with hounds and fox (fol. 47a) 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), 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, 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. Support for this conclusion comes from the recent discovery of a copy of Zakariya ibn Muhammad Qazwini's 'Ajā'ib al-makhlūqāt probably produced in northern Iraq at the beginning of the fourteenth century, 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 schools.

The miniature of the mare and the stallion (fol. 28a; lat. 16.2 cm, w. 19.5 cm) 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'īl al-haywan in the British Library. 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, Nychat Nāma-yi 'Ala'i, by Shumaradān ibn Abil-Khayar, 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. In one of them (no. 115) the author mentions an original Arabic text, Kitāb al-Badā'ī (Book of Wonders), as the source for this Persian version.

Translation

(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 gestation period 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.
SIYYA

VOLUME I

THE HORSE IN THE ART OF THE NEAR EAST

DAVID CHARANDER, GENERAL EDITOR

KING ABDULAZIZ PUBLIC LIBRARY
RIYADH, KINGDOM OF SAUDI ARABIA
# Table of Contents

Chariots and early horse equipment
Mary Aiken Littauer and Prof. Dr. Joost Crouwel, Professor of Aegean Archaeology, University of Amsterdam

Training instructions for horses from cuneiform texts: The Kikkuli tablets and related material from the Vorderasiatisches Museum in Berlin
Dr. Joachim Marzahn, Keeper, Vorderasiatisches Museum, Berlin

Assyrian horse trappings, and harness
Dr. John Curtis, Keeper, Department of Western Asiatic Antiquities, The British Museum

Hellenistic, Parthian, and Sasanian cavalry
Thom Richardson, Curator, Oriental Collections, Royal Armouries, Tower of London

Chariot races in the Roman and Byzantine periods
Professor Cyril Mango, F.B.A., Oxford University

Steppe nomad warriors their horses and weapons in the Pre-Islamic period
Dr. Helmut Nickel, Curator Emeritus, Department of Arms and Armor, The Metropolitan Museum of Art

Mongol horse trappings in the thirteenth and fourteenth centuries
Dr. Mark Kramarovsky, Department of Islamic Art, The Hermitage Museum, St. Petersburg

The horse at Qaryat al-Fau
Professor A.R. al-Ansary, Member of Majlis Ash-Shura, Kingdom of Saudi Arabia; Professor of Pre-Islamic History and Archaeology of Arabia, King Saud University, Kingdom of Saudi Arabia

Sabeans and Himyarites discover the horse
Christian Julien Robin, Directeur de recherche au Centre national de la Recherche scientifique (France); Directeur-adjoint de l’Institut de Recherches et d’Etudes sur le Monde arabe et musulman (Aix-en-Provence); Directeur de la Mission archéologique française “Qatabân” au Yémen.

Hunting, fighting, and raiding, the horse in pre-Islamic Arabia
Michael Macdonald, Oriental Institute, Oxford University

Stirrups from the Islamic world
Rachael Ward, Curator, Department of Oriental Antiquities, The British Museum

The origins and development of cavalry warfare in the early Muslim Middle East
Dr. David Nicolle, Visiting Research Fellow, Institute of Medieval Studies, Nottingham University

Hippodromes and horse-racing at Sāmarrā’
Dr. Alastair Northedge, Maître de Conférences Art et Archéologie islamique, Université de Paris-Sorbonne (Paris tv)

Riding in the early ‘Abbāsīd period
Beate Siewert-Mayer, M. A., Linden Museum, Stuttgart

14
Furūsiyya literature of the Mamlūk period
Dr. Shihab al-Sarraf, Director of the Furūsiyya Center, London

Al-Mughira again
Marthe Bernas-Taylor, Conservateur Général du Patrimoine, chargé de la section islamique, Département des Antiquités Orientales, Musée du Louvre

The horse in two manuscripts of Ibn Bakhtrishī's Kitāb Manāfi' al-Hayawān
Dr. Anna Contadini, Trinity College, Dublin

Eating horses and drinking mare’s milk
Robert Irwin, MA, FSA

Heraldry and furūsiyya
Dr. Michael Meinecke, Director, Museum of Islamic Art, Berlin

A manuscript of the Kitāb al-baytara in the Bibliothèque Nationale, Paris
Thérèse Bittar, Chargé de mission au Musée du Louvre, Département des Antiquités Orientales, Section islamiques

The Arabian and Gulf horse in medieval India
Simon Digby, formerly of Oxford University

Horses on Islamic coins
Dr. Saud Soliman Theyab, Assistant Professor of Islamic Archaeology, Department of Archaeology and Museology, King Saud University, Riyadh

The horse as a decorative element in Islamic metalwork - a note
Dr. Abdullah Ibrahim al-Ornair, Assistant Professor of Islamic Archaeology, Department of Archaeology and Museology, King Saud University, Riyadh

Ottoman furūsiyya
Professor Michael Rogers, F. S. A., F. B. A., Khalili Professor of Islamic Art, School of Oriental and African Studies, University of London

The Schwendi Booty of Archduke Ferdinand of Tyrol
Dr. Christian Beaufort-Spontin, Direktor der Hofjagd- und Rüstkammer des Kunsthistorischen Museums, Vienna

Persian horse portraits and their cousins
Dr. Sheila Canby, Assistant Keeper, Department of Oriental Antiquities, The British Museum

Safavid hunting carpets and textiles
Daniel Walker, Curator in Charge, The Department of Islamic Art, The Metropolitan Museum of Art

Notes on an illustrated persian manuscript on horses, Faras-Nāma, in the Royal Library, Windsor Castle
Dr. Muhammad Isa Waley, Curator for Persian and Turkish, British Library

Equestrian statuary in West Africa
Herbert M. Cole, Department of Fine Arts, University of California, Santa Barbara

The horse, the status mount of Africa
Josette Rivailain, Docteur des Lettres, Maître de Conferences, Muséum National d'Histoire Naturelle

The 'Abbāsī Pattā manuscript and the origins of the Arabian horse
Hamad al-Jisir, Riyadh, Kingdom of Saudi Arabia

Bibliography