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Back to the Roots and Chasing a Ghost: The "Kitāb al-Bayṭara" [Book on Equine Medicine] by Ibn al-Aḥnaf

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I. Introduction

Almost 100 years ago, Gudmund Björck was the first who tried to analyse in detail how much Arabic veterinary authors rely on Ancient Greek authors.[1] It was in the nineteen-thirties as well, that the veterinarian Reinhard Froehner attempted to interpret some selected text passages from the works of Ibn al-

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[1] Gudmund Björck, "Griechische Pferdeheilkunde in arabischer Übersetzung," *Le Monde Oriental* 30 (1936): 2. See also Veronika Weidenhöfer et al., "Hippiatrica arabica: Kontinuität und Innovation," *Pferdeheilkunde* 22 (2006): 42.

Mundhir,[2] Ibn al-ʿAwwām[3] and Ibn al-Aḥnaf.[4] But he could not answer the question of the dependence on ancient Greek authors, due to the fact that at that time the oldest Arabic hippiatric texts had been neither edited nor translated. He came to the conclusion: „Wenn erst einmal mehr Handschriften in Übersetzung vorliegen, wird der Grad der Abhängigkeit der Araber von den Hippiatrikern und Mulomedizinern genauer geprüft werden können. Erst dann auch lässt sich der ganze Einfluss feststellen, den die mittelalterlichen Araber auf das abendländische mittelalterliche Veterinärschrifttum ausgeübt haben" (As soon as more translated manuscripts are available the degree of dependence of the Arabs on the hippiatrics and mulo-medics can be analysed more precisely. This will make it possible to determine the full influence that the medieval Arabs had on western medieval veterinary literature.)[5]

In the mid-2000s a team of researchers consisting of philologists from the Department of Semitic Studies at the Philipps University of Marburg and veterinary historians from the Institute of Palaeoanatomy and History of Veterinary Medicine at the LMU Munich took up this issue again. Within the scope of the interdisciplinary project "Zur Kontinuität des hippiatrischen Erbes der Antike im arabischen Sprachraum des Frühmittelalters" [The continuity of hippiatric heritage of antiquity in the Arabic-speaking world of the early Middle Ages] funded by the DFG (German Research Foundation) the two earliest surviving Arabic veterinary texts, namely the Arabic translation of Theomnest's treatise on Equine Medicine[6] and the *Kitāb al-furūsiyya wa-l-bayṭara* [Book of Horsemanship and Equine Medicine] by Muḥammad ibn Yaʿqūb ibn akhī l-Ḥizām al-Khuttalī[7] have been edited, translated and analysed. What makes both so important is the fact that it is now possible to determine how much ancient hippiatric knowledge was

[2] Reinhard Froehner, "Das Nacerische Buch des Abu Bekr ibn Bedr. Beitrag zur Kenntnis der mittealterlichen orientalischen Veterinärmedizin," *Archiv für wissenschaftliche und praktische Tierheilkunde* 60 (1929): 362-375.

[3] Reinhard Froehner, "Die Tierheilkunde des Ibn al-Awam," *Veterinärhistorische Mitteilungen* 4-6 (1930): 25-59.

[4] Reinhard Froehner, "Die Pferdeheilkunde des Ahmad ibn Hasan ibn al-Ahnaf. Beitrag zur Geschichte der mittelalterlichen arabischen Tierheilkunde. Nach einer Handschrift aus dem Jahre 1209," in *Hauptner-Instrumente für Veterinärmedizin* (Berlin, 1936), 39-56.

[5] Froehner, "Die Pferdeheilkunde des Ahmad ibn Hasan ibn al-Ahnaf," 41.

[6] Susanne Saker, *Die Pferdeheilkunde des Theomnest von Nikopolis* (Wiesbaden: Harrassowitz, 2008).

[7] Martin Heide, *Das Buch der Hippiatrie - Kitāb al-Bayṭara von Muḥammad ibn Ya'qub ibn aḫī Ḥizām al-Ḫuttalī* (Wiesbaden: Harrassowitz, 2008).

passed on and how much of it is reflected in the works of later authors such as the *Kitāb al-falāḥa* [Book of Agriculture] by Ibn al-ʿAwwām and *An-Nāṣirī* by Abū Bakr ibn Badr al-Bayṭār or numerous *Furūsiyya* texts from the Mamluk period.[8]

Khuttalī's *Kitāb al-furūsiyya wa-l-bayṭara* is generally regarded by Arabs as a blueprint for later furūsiyya texts and they therefore consider Khuttalī as the founder of this literary genre.[9] For a long time his book was also thought to be the oldest surviving hippiatric text in Arabic. Gudmund Björck's theory that Khuttalī used Theomnest as a primary source and that he must have had the Arabic translation of his book at his disposal[10] has proven to be correct. Khuttalī has indeed taken many passages from Theomnest. He has incorporated 87 of the 96 chapters of Theomnest's treatise into his work. However, his *Kitāb al-furūsiyya wa-l-bayṭara* is much more comprehensive and goes beyond the Arabic translation of Theomnest's text. As the stable master of the ʿAbbāsid caliphs al-Muʿtaṣim (218-27/833-42) and al-Muʿtaḍid (279 - 89/892 - 902) one can assume that he is likely to have included his own experiences in his work in addition to other sources.[11] While Theomest in the opening chapter only briefly discusses the characteristics that make a beautiful horse, the situation is different with Khuttalī. He devotes a good deal to hippological matters such as horse colours, animal training, breeding, feeding and hoof care.[12]

When it comes to Arabic veterinary texts, we often come across Ibn al-Ahnaf. Although no edition and translation of Ibn al-Aḥnaf's *Kitāb al-bayṭara* [Book on Equine Medicine] was ultimately achieved as a result of the project, the researchers had already identified 50 parallels to Khuttalī.[13] The question

[8] Shihab al-Sarraf, "Furusiyya Literature of the Mamlūk Period," in *Furusiyya I*, ed. David Alexander (Riyadh: King Abdulaziz Public Library, 1996), 118-135.

[9] Housni Alkhateeb Shehada, *Mamluks and Animals. Veterinary Medicine in Medieval Islam* (Leiden: Brill, 2013), 162-169. See also: Shihab al-Sarraf, "Évolution du concept de furûsiyya et de sa littérature chez les Abbassides et les Mamlouks," in *Chevaux et cavaliers arabes dans les arts d'Orient et d'Occident: exposition présentée à l'Institut du Monde Arabe, Paris du 26 novembre 2002 au 30 mars*, ed. Jean-Pierre Digard (Paris: Gallimard, 2002), 67-71.

[10] Gudmund Björck, "Griechische Pferdeheilkunde in arabischer Übersetzung," *Le Monde Oriental* 30 (1936): 1-12.

[11] For a detailed and found study concerning Khuttalī's sources see: Heide, "*Das Buch der Hippiatrie,"* 4-44.

[12] The hippological parts have been translated into English on the basis of 6 manuscripts by Beate Siewert-Mayer. See Beate Siewert-Mayer, "Riding in the Early ʿAbbāsid Period," in *Furusiyya 1*, ed. David Alexander (Riyadh: King Abdulaziz Public Library, 1996), 110–117.

[13] Heide, "*Das Buch der Hippiatrie,"* 46.

of the true extent of his possible dependence on Khuttalī, however, had to remain unanswered at this point.

II. The Kitāb al-bayṭara by Ibn al-Aḥnaf

In 1936 Froehner had already published some selected illustrations of the famous manuscript Ms Tibb Khalīl Āghā 8 (Dār al-Kutub, Cairo). The attempt to analyse the content failed due to the language barrier. And even later research has mainly focussed on the magnificent illustrations of this work. This is not without good reason. The Khalīl Āghā 8 codex is of particular importance because the colophon mentions Madīnat al-Salām, i.e. Baghdad, as the place of origin. It is dated to the year 605/1209 and ʿAlī ibn Ḥasan ibn Hibaytallāh is named as the copyist. Another manuscript Ahmet III 2115 (Topkapı Sarayı Müzesi, Istanbul) is dated to the year 606/1210 and was also produced by ʿAlī ibn Ḥasan ibn Hibaytallāh.[14] The illustrations of these two manuscripts correspond to the iconography of the famous Arabic Dioscorides manuscript that was produced in 621/1224.[15] One mostly sees a broad strip of grass, sometimes some plants and people with a halo in half profile. Due to the similarities in the imagery and the time of origin, it was assumed that these three manuscripts were produced in a so-called Baghdād school of painting and based on the information given in the colophon and its imagery the manuscript Khalīl Āghā 8 was considered the key document for the history of the Baghdad School of Painting.[16]

Seven manuscripts of Ibn al-Aḥnaf's treatise are known so far as given in table 1 below. Three of them are illuminated manuscripts and even the Gotha manuscript, which is written in very sloppy *Naskhī*, and the manuscript owned by King ʿAbdul ʿAzīz Foundation for Human Sciences and Islamic Studies Casablanca have left space in the text flow for the later insertion of images.

[14] *Furusiyya. 2 Vol*, ed. David Alexander (Riyadh: King Abdulaziz Public Library, 1996), 198.

[15] The bulk of this manuscript is now housed in Topkapı Sarayı Müzesi (Ahmet III, 2147, no. 49316, formerly Ayasofya 3703. See The Met, "'Preparing Medicine from Honey', from a Dispersed Manuscript of an Arabic Translation of De Materia Medica of Dioscorides," accessed April 19, 2025. https://www.metmuseum.org/art/collection/search/451400.

[16] For the and pros and cons in terms of this theory see: Anna Contadini, *A world of beasts: a thirteenth-century illustrated Arabic book on animals:(the Kitāb Naʿt al-Ḥayawān)) in the Ibn Bakhtīshūʿ tradition* (Leiden: Brill, 2012), 153-156.

Table 1. Manuscripts of *Kitāb al-bayṭara* by Ibn al-Aḥnaf

Manuscripts of *Kitāb al-bayṭara* by Ibn al-Aḥnaf		
Owner	***Title***	***Shelf mark***
Dār al-Kutub Cairo	*Kitāb al-bayṭara*	Ms.Ṭibb Khalīl Āghā 8, microfilm 46631 (dated 605/1209)
Dār al-Kutub Cairo	*Kitāb mukhtaṣar al-bayṭara*	Ms.Ṭibb Khalīl Āghā 2934
Dār al-Kutub Cairo	*Mukhtaṣar kitāb al-bayṭara li-Ibn al-Aḥnaf*	Ms.Ṭibb Khalīl Āghā 9, microfilm 5650 (dated 1103/1691)
Topkapı Museum Istanbul	*Kitāb al-bayṭara*	Ahmet III 2115 (dated 606/1210)
Forschungsbibliothek Gotha	*Risāla fi-l-bayṭara*	Ms. Orient A 2075 (dated 1141/1729)
King ʿAbdul ʿAzīz Foundation for Human Sciences and Islamic Studies Casablanca	*Kitāb fi-ʿināya bi-l-khayl/Ikhtiṣār Kitāb Aḥmad b. al-Ḥusayn b. al-Aḥnaf fi-l-bayṭara*	Manus 182
Bibliothèque royale Rabat	*Kitāb fi-ʿināya bi-l-khayl wa-sāʾir dawāb ar-rukūb*	Ms. 6126 (dated 1126/1714)

A. The Rabat manuscript Ms 6126

The manuscript itself is not unknown. It has already been shown twice as part of an exhibition at the Institut du Monde Arabe (2003 and 2017). Even in 2017 it was still considered anonymous and had not yet been identified.[17]

This has changed recently.[18] Ibn al-Aḥnaf is clearly named as the author on the title page in line no. 5. Elegantly written, the manuscript shows the typical

[17] Antoine Oury, "Les manuscrits rares du Maroc s'exposent à l'Institut du Monde arabe," Actualitté, March 22, 2017, accessed October 15, 2024, https://actualitte.com/article/28323/livres-anciens/les-manuscrits-rares-du-maroc-s-exposent-a-l-institut-du-monde-arabe.

[18] In 2022 an antiquarian bookshop in Vienna offered a manuscript in its catalogue "Manuscripta Orientalia II: A selection offered by Antiquariat Inlibris" that could be identified as the missing part of the Rabat manuscript previously considered anonymous. Antiquariat Inlibris, "The missing first volume completing the copy in the Royal Library of Morocco," accessed November 14, 2024, https://inlibris.com/de/item/bn60251_de/.

characteristics of *Maghribī* style.[19] Furthermore this particular manuscript is also of special interest for another reason, namely its illustrations. Eight colourful miniatures adorn the manuscript. They vividly illustrate treatment methods, e.g. applying medicine with a horn (fig. 6) or fastening the head in a raised position (fig. 7). All the miniatures have a similar arrangement. The foreground takes up a third of the picture and the animal and veterinarians are prominently depicted. The western influence can be seen in the use of perspectives and backgrounds that do not exist in traditional Arabic painting.[20]

Table 2. Description of the manuscript

Description of the Rabat manuscript	
Shelf mark	Ms. 6126
Title	*Mukhtaṣar Kitāb al-Bayṭara li-Ibn al-Aḥnaf*
Owner	Bibliothèque royale Rabat
Author	Aḥmad b. al-Ḥusayn b. al-Aḥnaf
Language	Arabic
Alphabet	Arabic
Region	*Maghribī*
Form	Codex of 3 volumes
Binding	Red leather with fore-edge flap, centre-piece mandorla
Writing surface	Paper
Writing material	Black, red and green ink
Illustrations	8 full-page colour illustrations
Extent	42 p., 52 p., 40 p.
Size	16,5 x 22,7 cm
Lines	17
Script	*Mujawhar*
Hands	2
Date	*Dhū al-ḥijja* 1126/December 1714
Place	Morocco
Specificities	Custodes, first volume containing chapter 1-5 is missing

[19] Adam Gacek, *Arabic Manuscripts: A Vademecum for Readers* (Brill: Leiden, 2009), 147-149.
[20] Annie Vernay-Nouri, "Kitâb fī-l-ʿînâya bi-l-khayl wa sâʾir dawāb al-rukûb," in *Chevaux et cavaliers arabes dans les arts d'Orient et d'Occident: exposition présentée à l'Institut du Monde Arabe, Paris du 26 novembre 2002 au 30 mars,* ed. Jean-Pierre Digard (Paris: Gallimard, 2002), 126.

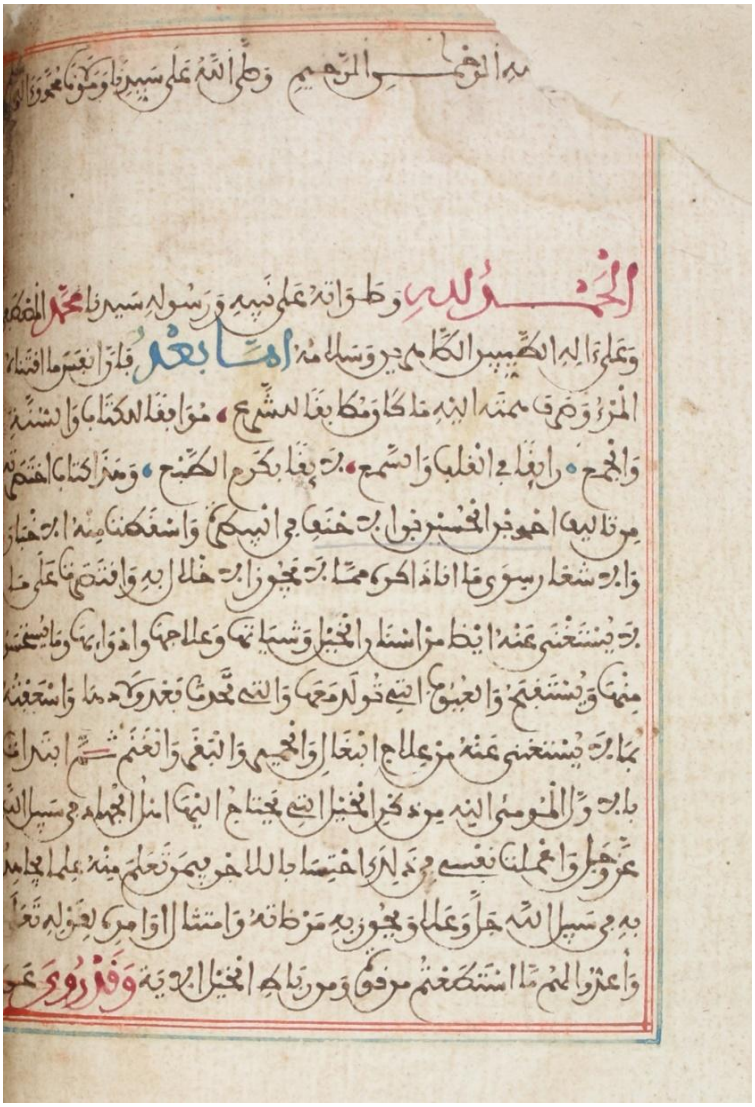

Fig. 1. The author's name Aḥmad b. Al-Ḥasan b. Al-Aḥnaf is given in line no. 5.

Fig. 2. A veterinarian examines the teeth of a horse. Ms. 6126-1, p. 6.

Fig. 3. Colophon of Ms. 6126. The year 1126 given in Arabic numerals is very difficult to read

B. The 9th chapter of the Kitab-al-bayṭara by Ibn al-Aḥnaf

Unfortunately, we lack information about the life of the author. The assumption that he lived in the twelfth century is probably based on the fact that the oldest surviving manuscripts are dated to 605/1209 and 606/1210.[21] But it is also conceivable that he was a contemporary of Khuttalī. Further research is needed to determine whether this is the case. First, an edition of the text would be very useful in order to identify the sources. A first glance in 2004 had shown that there are several parallels to Khuttalī's *Kitāb al-bayṭara*. Martin Heide assumes that Ibn al-Aḥnaf has taken about 50 recipes from Khuttalī , which represents a share of 15%.[22] It should not go unmentioned that his treatise is also considered to show reliance on sources from Late Antiquity, in particular a lost treatise by Oppian.[23] A detailed comparison with the Hippiatrica is essential and needs to be done, but would have gone beyond the scope of this article and must be left for future research.

The chapter headings do not refer to a single ailment but rather deal with a series of diseases that occur in a particular part of the body. The text consists of 30 chapters. The first eight chapters are dedicated to hippological matters, e.g. dental inspection. Starting with diseases of the head, Ibn al-Aḥnaf presents treatment methods and recipes for internal ailments, disorders of the extremities and recipes against fever, skin diseases and snake bites. The last chapter deals with the treatment of camels and cattle.[24] A closer look at chapter 9 reveals some interesting details. Chapter 9 is about the diseases that can affect a horse's head. It begins with *quʿās* (clear nostril discharge) and contains a number of already known terms for certain ailments such as *ikhtilāj* (convulsive seizure), *khunān* (glanders), *ṣudām* (concussion of the brain), *ṣudāʿ* (headache), *qaṣar* (tetanus), *ẓufra* (pterygium), *bayāḍ* [(leucoma) and tumours with animal or plant names, e.g. *fāra* (mouse), *ḍifdaʿ* (frog) or *halīlaj* (myrobalane).

[21] Heide, "*Das Buch der Hippiatrie,*" 46.

[22] Heide, "*Das Buch der Hippiatrie,*" 46.

[23] Annie Vernay-Nouri, "Chevaux et pratiques équestres dans les manuscrits arabes," in *Chevaux et cavaliers arabes dans les arts d'Orient et d'Occident: exposition présentée à l'Institut du Monde Arabe, Paris du 26 novembre 2002 au 30 mars,* ed. Jean-Pierre Digard (Paris: Gallimard, 2002), 73-79.

[24] A typewritten introduction and table of content and the digital version of another manuscript of Ibn al Aḥnaf's treatise can be found on the website of the King ʿAbdul ʿAzīz Foundation for Human Sciences and Islamic Studies Casablanca. See: King ʿAbdul ʿAzīz Foundation for Human Sciences and Islamic Studies, "Manus 182," accessed August 13, 2024, http://www.fondation.org.ma/web/ affichage_numerics/3444/17/en

The different types of glanders have been discussed in detail by Theomnest, and often repeated verbatim by Khuttalī. Ibn al-Aḥnaf gives seven recipes for the treatment of glanders and for the first three recipes no parallels can be found in Theomnest or Khuttalī.

The recipe that follows them is well known: (Take three eggs … and put their contents in a pot. Then fill two of them with honey and fill the other with good fish brine and pour it on the egg. Then mix five ounces of old oil or henna oil or violet oil or iris oil in the same quantity. Then add five miṭqāl of ground pepper, the same amount of the medicine called coccorhizone in ground form, and the same quantity of the best blue sword lily, also known as iris. Then mix everything together and pour it into the mount's mouth or nostrils and tie its head slightly upwards for about half an hour.[25]

In terms of the recipe given in Ibn al Aḥnaf's treatise one has to notice that the ingredients are the same, but the language is stylistically distinct. A translation of the Arabic passage (Figures 4 and 5) could be read like this: (The pouring method is to make a hole in the top of the three eggs and empty them into a pot. Then fill two of them with good honey and one of them with fresh good myrrh[26] and if it is the black mountain myrrh, then it is more soluble and then mix it with what you have taken out of the egg. Then add five ounces of [ordinary] oil or henna oil or violet oil or the oil of the best blue iris and of the medicine called *Qūqūrīr* in the same amount, mix it and pour it into him....]

Fig. 4.

[25] Unless otherwise noted, all translations from Arabic are my own. For the German translation see: Saker, "*Die Pferdeheilkunde des Theomnest*," 33-34.

[26] The author must have mistaken *Murrī* (Fish brine), which is given in the original text of Theomnest, for *Murr* (Myrrh).

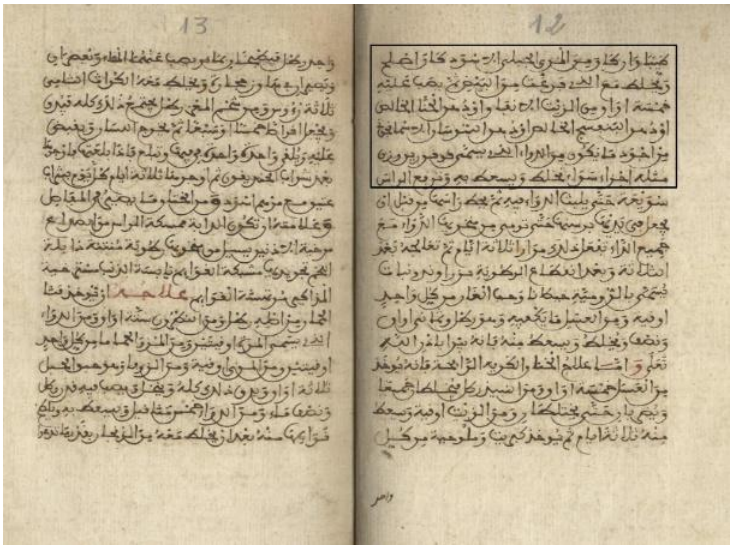

Fig. 5.

Fig. 6. Applying medicine with a horn.

Fig. 7. The horse's head is fixed in a raised position.

The next three recipes also clearly originate from Theomnest. It turns out that only the four recipes given in the third chapter of Theomnest have found their way into Ibn al-Aḥnaf's work, although Theomnest as well as Khuttalī dedicates more chapters to the treatment of glanders.[27]

Ibn al-Aḥnaf finishes the section of the treatments of glanders with a recipe that he introduces as follows: "Min qawl ar-Rūm…" (From the oral tradition of the Greek...) What follows is a simple recipe without fancy ingredients.

Also striking is the large number of prescriptions for the treatment of *bayāḍ* (leucoma). Ibn al-Aḥnaf lists 20 prescriptions while Theomnest gives only two.[28] In between the recipes for the treatment of leucoma one can find a recipe for the treatment of an eye injury caused by thorns and he names Aristotle as his source. But it parallels a passage written down by Theomnest. The beginning of the passage corresponds almost exactly to the wording of the Theomnest recipe, but the rest is heavily abridged.[29] It relates to sentences 1-4 and 13-15 of chapter 51. The part in between is missing.

[27] Saker, "*Die Pferdeheilkunde des Theomnest*," 41-47. See also: Heide, "*Das Buch der Hippiatrie,"* 166-171.

[28] Saker, "*Die Pferdeheilkunde des Theomnest*," 112-113.

[29] Saker, "*Die Pferdeheilkunde des Theomnest*," 110-111.

III. Conclusion

It is too far too early to make a clear statement and this article is intended to provide an initial insight into Ibn al-Aḥnaf's treatise.

The question about the exact number of treatment methods that are already known from Theomnest and/or Khuttalī must for the moment remain part of further research. The brief look at chapter 9 has shown that this text is also based on late antique sources. The assumption already mentioned that this book could have preserved at least in parts something of the lost treatise of Oppian could prove to be correct.

The fact that Ibn al-Aḥnaf quotes his sources frequently but does not mention Theomnest or Khuttalī may, as far as the brief overview has shown, indicate that he was not aware of the origin of these treatments and maybe the recipes had already become part of established veterinary common knowledge. However, one must assume that Ibn al-Aḥnaf's book represents a different tradition of Arabic hippiatric knowledge which is also based on sources from Late Antiquity. But these sources are as yet unknown and need to be identified in future research.

Acknowledgements

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