9ab (CONNAISSANCES) à 7 (*Tu m'as mis* ici et là) et de 15 (FACE) à 19ab (DE MOI ici et là). Nous avions aussi montré en leur temps les rapports entre 2-3 (FACE) et 14 (présentations de la prière du psalmiste) et entre 9c10a et 19c (CONNAISSANCES) (les deux seules unités où toute référence à YHWH est totalement exclue).

Si maintenant nous considérons 10b-13 comme situés entre 2-10a et 14-19 nous pouvons repérer, situés dans les première et troisième colonnes de notre tableau, **LE JOUR** en 2-3 et 17-18 aux extrêmes comme au centre en 10bc, et de même **TENEBRE(S)** en 7 et 19c comme au centre en 11-13. Pour ce qui est des trois présentations de la prière du psalmiste dans les unités initiales de chacun des trois volets, nous avons déjà comparé ci-dessus 2-3 et 14 ainsi que 2-3 et 10bc. Ajoutons ici qu'en 10bc et 14 nous lisons une interpellation à YHWH ainsi que VERS TOI. Nous avons ci-dessus signalé rapidement le caractère original de 11-13. Montrons ici comment s'y opère l'assemblage de nombreux termes répartis dans plusieurs des unités du même type. Ainsi y lit-on *LES MORTS* et *TOMBEAU* comme en 4-6, CONNAÎTRE comme CONNAISSANCES en 9ab et 19c, **TENEBRE(S)** comme en 7 et 19c. On lit aussi répartis en 4-6 et 11-13 les termes des paires stéréotypée *zkr/škḥ* [24] en 6d et 13b, *yd$^{c}$/ḥšb* [25], en 5a et 13a, *'rṣ/š'wl* [26] en 4b et 13b (selon l'ordre inverse), et aussi en (11-)13 et 19ab les termes de la paire *connaissance/compagnon* (signalée ci-dessus). Notons en particulier que CONNAÎTRE/CONNAISSANCE et **TENEBRE(S)** se lisent tant en 11-13 qu'en 19c, soit dans les unités finales du volet central et du troisième volet.

Une telle ordonnance ne laisse pas d'impressionner et ne peut guère être attribuée au hasard. Au vrai nous avons là un psaume très soigneusement charpenté, structuré, les deux sous-ensembles structurés de 2-13 et 10b-19 (se chevauchant donc l'un l'autre) le cédant pour l'ensemble à un triptyque dont les volets extrêmes se rapportent entre eux et avec le volet central selon une ordonnance très complexe et en même temps limpide. L'unité du poème n'est que mieux apparente lorsqu'on découvre ce qui en fait la structure, aucune répétition n'étant l'effet du hasard ou d'un quelconque désordre.

[24] Avishur pp. 31.74.230.242.
[25] Avishur p. 337.
[26] Avishur p. 278.

*FOLIA ORIENTALIA*
VOL. 37 2001
PL ISSN 0015-5675

ADAM BIENIEK

# PLINY THE ELDER AS SEEN BY AL-QAZWĪNĪ (13TH CENTURY)[1]

## 1. Life and works of Pliny the Elder

*'Out of Greece came Bilīnās (Pliny) – expert on talismans which he gained from caelestial and terrestial bodies at an definite time; in this book there is a plenty of information about his amulets.'*[2]

The above quotation has been taken from *Kitāb āṯār al-bilād*, in which *al-Qazwīnī* also cited the author of *Natural History* several times. As shown in the character of the information, the Muslim scholar must have used – as in other quotations in his *Geography* – purely apocryphal sources or, what seems more likely, he meant *Apollonios of Tyana*[3]. That was only in *Cosmography* where authentic excerpts from Pliny's works appeared, what may indicate the order the treatises were written in. So it is not out of the question that *Kitāb āṯār al-bilād* was first composed, thus anticipating the idea of creating *Kitāb 'aǧā'ib al-maḫlūqāt*.

Two ancient scholars were known under the name of *Bālīnūs* or *Bālīnās*: a famous mathematician *Apollonios of Perge*[4] and *Apollonios of Tyana*[5]. Such an explanation was given by M. Plessner in *Encyclopaedia of Islam*[6]. However the material ascribed by al-Qazwīnī to one of Greek scien-

[1] For further information about al-Qazwīnī see: A. Bienick, *Claudius Ptolemaeus in the Eyes of the Arabs in the Example of Al-Qazwīnī*, "Folia Orientalia" 35 (1999), pp. 5-21.
[2] Zakariyā' ibn Muḥammad ibn Maḥmūd al-Qazwīnī, *Kitāb āṯār al-bilād wa aḫbār al-'ibād*, edit. by F. Wüstenfeld, Göttingen 1849, p. 384, v. 27-28.
[3] More on the topic see: M. Plessner [in:] *E.I.*, vol. I., p. 1024-1026.
[4] D. around 200 B.C.
[5] Lived in 1st cent. A.D.
[6] M. Plessner, *op. cit.*

tists is partly confirmed in *Historia Naturalis* by *Pliny the Elder*[7], as it will be shown below. Al-Qazwīnī wrote that *Bālīnās* had come from Greece and not Rome, but because of various disparities of use of the terms *Yūnān* (*Greece*) and *Rūm* (*Rome*) in Arabic literature, and taking into account numerous distortions in the information about Pliny, it seems that the exact identification of *Bālīnās* is still complex.

Perhaps the confusion of several ancient Men of Science was due to the resemblance of their names in the Arabic version. As it was possible to relate citations to Pliny's book, the present work assumed that the Roman writer was the main objective of the writer of *'Aǧā'ib al-maḫlūqāt* – especially as *Kitāb al-ḫawāṣṣ* by Apollonios of Tyana, mentioned by al-Qazwīnī has not been preserved up to our times.

*Gaius Plinius Secundus (Maior)* was a Roman erudite writer. Born in *Comum Novum*[8] he was considered one of the opponents of the emperor Nero. Under the rule of *Vespasian*[9], and next *Titus*[10] he held numerous public ministries. He died in 79 during the eruption of *Vesuvius* when, leading the river squadron based in *Misenum*[11] he hurried to rescue the endangered citizens, at the same time trying to make some close observations of the phenomenon.[12]

Pliny proudly wrote that he had looked through over two thousands volumes and, quoting 327 Greek and 146 Latin writers, he gave a veritable mine of information on geography, ethnography, physiology, zoology, botany, pharmacology, mineralogy[13] and history of ancient art.[14] A lot of his writings perished and only *Historia naturalis* in 37 volumes has been preserved.[15] As for *Historia Naturalis* itself, the work has never been lost - even partly[16]; the fact of special importance since Pliny's treatise is the only ancient encyclopaedia entirely preserved[17] and for long centuries it remained the main source of information about natural

---

[7] Lived about 23-79 A.D.

[8] *Como* in *Lombardia*.

[9] The founder of *Flavius* dynasty - ruled 69-79 A.D.

[10] Son and succesor of *Vespasian* – ruled 79-81 A.D.

[11] South, Italy.

[12] Z. Stein in: *Słownik pisarzy antycznych*, edit. by A. Świderkówna, Warszawa 1990, p. 373.

[13] See: August Nies, *Zur Mineralogie des Plinius*, Mainz 1884.

[14] K. Kumaniecki, *Historia kultury starożytnej Grecji i Rzymu*, Warszawa 1964, p. 513.

[15] Z. Stein [in:] *Słownik pisarzy antycznych*, p. 373.

[16] G. Sarton, *Science...*, p. 79.

[17] Z. Stein [in:] *Słownik pisarzy antycznych*, p. 374.



history.[18] The outstanding historian of science George Sarton stated his opinion that: *'Historia Naturalis', dedicated by Pliny to the emperor Titus in the year 77 A.D. was one of the most influential works ever published and it was the favourite scientific encyclopaedia of the Middle Ages.* [19]

Pliny's style is quite chaotic and uneven, probably depending on his sources[20] - what by far limits the credibility of the information included in *Historia Naturalis*. That is however interesting that al-Qazwīnī's work bears the same features, hence the nickname of *Arabic Pliny* fits perfectly. As it seems, only the authors themselves could have answered the question if they realised the obvious disadvantages of their method, and if so, whether it was due to deliberate attempts to give the most factual material possible – even at the expenses of lesser scientific value.

## 2. Pliny's connections with the Arabic East

Before the Arabs took interest in the Roman encyclopaedist and statesman's heritage, Pliny had dedicated large parts of his work to the sandy peninsula and its inhabitants, providing invaluable data about that part of the world at the time. Arabia is described in chapter XXXII of volume VI of *Historia Naturalis*.

In the light of the profile of Pliny's works and his popularity in the circles of mediaeval readers it seems strange that Muslim sources give so little – or even no data about his studies in the Arabic world. It is especially more intriguing that the name of the author of *Historia Naturalis* appeared in the works of several Muslim writers – such as al'Qazwīnī himself – bringing evidence to the existence of the Arabic version of the treatise.

A relatively large number of Pliny's quotations in *Kitāb 'aǧā'ib al-maḫlūqāt* (having in mind that he was the second most often excerpted ancient author after Aristotle) shows a remarkable authority of the scientist in the Middle East.

The hypothesis that al-Qazwīnī was able to make use of *Historia Naturalis* in the Latin version seems to be out of the question, since the Muslim writer supplied authentic data, ascribing to Pliny a lot of informa-

---

[18] K. Kumaniecki, *op. cit.*, p. 513.

[19] G. Sarton, *Science...*, p. 78.

[20] Z. Stein [in:] *Słownik pisarzy antycznych*, p. 374.

tion without any reference to the original book - what can be easily proved while analysing the text.

Furthermore for a mediaeval Muslim scholar – especially the one working in once Hellenistic Syria – the scientific value of Latin must have been by far inferior to Greek, and as such it would not have compensated for the effort necessary to learn it. In addition nothing in *Kitāb 'aǧā'ib al-maḫlūqāt* testifies the writer's acquaintance even with the language of Homer, since he would not have had such difficulty with telling Pliny from Apollonios.

Tracking down the presence of Pliny's heritage in the Arabic world, we have to mention one of al-Qazwīnī's contemporaries, *Šihāb ad-Dīn at-Tīfāšī*[21], who composed perhaps the best known Arabic lapidary entitled *Azhār al-afkār fī ǧawāhir al-aḥǧār* (*Blossom of Speculations on Precious Stones*). The work in which at-Tīfāšī discusses the origins, geographical distribution, purity, value, medical and magical use of 24 precious stones, cites – apart from Arabic sources and the alleged lapidary ascribed to Aristo – exclusively Pliny's work[22]. In return it does not even mention *Theophrast*[23], whose prestige, as Aristotle's disciple, should have been major to the Roman scientist.

### 3. Pliny in al-Qazwīnī's works

As in the case of most Greek authors quoted by the Muslim writer, Pliny's – or at least ascribed to him – works can be divided into three main groups:

1. *Genuine* citations – excerpted from the Latin naturalist's treatises.
2. Quotations without reference to the preserved works by Pliny; most probably *apocrypha*.
3. *Apologetic* paragraphs.

The distribution of the citations is rather clear; the first two groups come from *Kitāb 'aǧā'ib al-maḫlūqāt*, whereas the third one is included in *Kitāb āṯār al-bilād*. To render the division even clearer the first two categories seem to point to Pliny the Elder while the last one is probably referred to Apollonios of Tyana.

The quotations ascribed to Pliny the Elder can also be divided thematically. However such classification in most cases does not agree with the

[21] D. in *Cairo* in 1253.
[22] P. K. Hitti, *Dzieje Arabów*, Warszawa 1969, p. 318.
[23] Lived 372-287 B.C.



division based on the criterion of authenticity. In this way the citations could be arranged in four groups describing as follows:

A. Animals
B. Plants
C. Minerals
D. Talismans

A. ***Zoological*** information contains 21 items:

1. Af'an (Viper)
2. Arnab (Hare)
3. Ba'īr (Camel)
4. Baqar (Cow)
5. Ḍabu' (Hyena)
6. Ḍifda' (Frog)
7. Fawā'id 'aǧzā' al-'insān (Profits of the Parts of Human Body)
8. Ḥimār (Donkey)
9. Mā'iz (Goat)
10. Na'ǧa (Sheep)
11. Sulaḥfāh (Turtle)
12. Daǧāǧa (Hen)
13. Qird (Monkey)
14. Waṭwāṭ (Bat)
15. Dīk (Rooster)
16. Sinnawr (Cat)
17. Ġurāb (Crow, Raven)
18. Hudhud (Hoopoe)
19. 'Ankabūt (Spider)
20. *Dīk* al-Ǧinn (Demon's Rooster)
21. Di'b (Wolf)

B. ***Botanical*** material consists of 7 plants:

1. Hirwa' (Castor)
2. Zaytūn (Olive)
3. Šibbiṯ (Dill)
4. Diflā (Oleander):
5. Za'farān (Saffron):
6. Kuzbura (Coriander):
7. Nānḫa(w)āh (Anise):

C. ***Minerals*** form the least numerous group including 2 items:

2. Stone Ruḫām (Marble)
1. al-Usrub (Lead)

D. The information about the amulets allegedly made by Apollonios of Tyana, set in their geographical frames and named after them, contain 6 items:

1. Farāhān
2. Kurkān
3. Ǧabal al-Ḥārīṯ wa al-Ḥuwayrīṯ (Mount Ḥāriṯ and Ḥuwayriṯ)
4. Buḥayrat al-Ḫalaṭ (Ḫalaṭ Lake)
5. Ṭilasm az-Zaytūn (Talisman of Olive)
6. Al-Qusṭanṭīnīya (Constantinople)

*a)* Genuine citations

We will start with this group, as it is the easiest one to verify by means of the entirely preserved text of Historia Naturalis.
However, we have to keep in mind that in the case of natural descriptions and properties of some substances the Arabic version may stylistically and syntactically derive from the Latin original to a large extent. We do not know the way the work by the Roman naturalist reached Muslim readers; another mystery is also the exact sort of the study on the ancient encyclopaedia al-Qazwīnī used.
In addition we have to take into account the long chain of copyists, not always fully conscious of the meaning of rewritten paragraphs. Some of the dangers for the consistency of the text it may bring about can be shown in the striking mismatches between the both manuscripts of *Kitāb 'aǧā'ib al-maḫlūqāt* used in this work:
the Egyptian edition[24] and the one worked out by the German orientalist Ferdinand Wüstenfeld[25] - even though the copyists' mistakes and translation problems did not overlap. In the case of the paragraphs of *Historia Naturalis* quoted by al-Qazwīnī only their contents suggest their authenticity.

1. ***Sulaḥfāh*** (Turtle)

*'Pliny the Sage said that if we turn a turtle upside down in a freezing cold place, nobody will suffer from frost. As for the properties of turtle body, its eye hung on a person suffering from conjunctivitis will heal him.'*[26] In *Historia Naturalis* we can read that: *'Sanguis earum claritatem visus facit, suffusionesque ocolorum tollit.*[27] Thus the first part of the paragraph is not confirmed by the Latin text, while the therapeutic properties of the eye only vaguely refer to the original work.

2. ***Ḍifda'*** (Frog)

*'Pliny wrote that a frog placed over a pot containing hot water will hasten its boiling, and hung on a man suffering from quartan fever*

[24] The Egyptian edition called *būlākī*.

[25] Zakariyā' ibn Muḥammad ibn Maḥmūd al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt wa ġarā'ib al-mawǧūdāt*, edit. by F. Wüstenfeld, Göttingen 1849.

[26] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt wa ġarā'ib al-mawǧūdāt*, al-Qāhira 1298 A.H., vol. I, p. 203, v. 41; p. 204, v. 1.

[27] *Histoire naturelle de Pline*, edit. by M. Nisard, Paris 1883, vol. II, p. 376 (Lat. XXXII,XIV,1).



*will heal him. If a woman looks at a frog, she will experience uncontrollable desire, then the excitement will subside.'* [28] While Pliny himself assured that: *'Ossiculo, quod sit in dextro latere, in aquam ferventem dejecto, refrigerari vas, nec postea fervere, nisi exemto... Et aliud esse in sinistro latere, quo dejecto fervere videatur: apocynon vocari... Rursus a dextro latere refrigerari ferventia. Hoc et quartanas sanari adalligato in pellicula agnina recenti, aliasque febres. Amorem inhiberi.'*[29] As we can see, in this case the original text was preserved as far as 13th century without any serious alterations. By the way the vitality of some superstitions is amazing. In Poland if water cannot boil for a long time, we still say that 'there must be a frog in the pot.'[30]
In another passage of *Kitāb 'aǧā'ib al-maḫlūqāt* we read that: *Among many properties of the frog it is worth mentioning that its tongue put into bread and given to eat a man accused of stealing will force him to admit his guilt. The same tongue, placed at a sleeping woman's side will make her reveal everything she did in reality – without breaking her sleep.'*[31] In his turn Pliny wrote, citing a Greek scientist prior to him, that: *'Democritus quidem tradit, si quis extrahat ranae viventi linguam, nulla alia corporis parte adhaerante, ipsaque dimissa in aquam, imponat supra cordis palpitationem mulieri dormienti, quaecumque interrogaverit, vera responsuram.'*[32]
In this way the function of frog tongue as a touchstone of truthfulness was enriched by the Muslim – or some earlier – tradition with the motive of getting testimony from thieves. Yet the principal significance is intact.
Further al-Qazwīnī wrote:
*'Other astonishing frog's properties include the ability to split into two – from the head downwards – when caught. Frog limbs burnt with reed and then rubbed into a hirsute spot will remove the hair forever. Similarly frog blood smeared on a spot after pulling out the hair will prevent further growth. Pliny was of the opinion that the man who anoints his face with frog blood, will be loved by everybody who sees him. Frog fat put on a gum will remove the tooth without unnecessary pain.'*[33]

[28] Al-Qazwīnī, Kitāb *'aǧā'ib al-maḫlūqāt*, vol. I, p. 206, v. 29-41; p. 207, v. 1-7.

[29] *Histoire naturelle de Pline*, vol. II, p. 379 (Lat. XXXII,XVIII,3).

[30] I have also heard the version: *in the kettle*. As it is clearly visible some superstitions last longer than the things they accompany.

[31] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. I, p. 206, v. 29-41; p. 207, v. 1-7.

[32] *Histoire naturelle de Pline*, vol. II, p. 378-379 (Lat.XXXII,XVIII,1).

[33] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. I, p. 206, v. 29-41; p. 207, v. 1-7.

The above paragraph does not refer to any definite passage in *Historia Naturalis*, although applying ash to removing hair was nothing extraordinary in the Roman period. Julius Caesar[34] himself gladly used scorched shell of coconut for depilation. The other information does not appear in any materials referring to the time of Pliny.

3. ***al-Usrub*** (Lead)

*'Pliny wrote in his 'Book of Properties' that if we take a sheet of lead which weighs 28 drachms and wrap it around one's waist, his desire will subside.'*[35] And the original text: *'In medicina per se plumbi usus est cicatrices reprimere: adalligatisque lumborum et renium parti laminis frigidiore natura inhibere impetus Veneris...* '[36] – They both say the same except some minor supplements being rather attempts to embroider the text than to falsify it.

4. ***Hirwa'*** (Castor)

Citing his Roman predecessor under the heading *Hirwa'* al-Qazwīnī wrote: *'Pliny mentioned in his 'Book of Properties' that after smearing its head with castor oil a rooster will not crow any more.'*[37] Pliny himself was of the opposite opinion: *'Prodest (oleum cicinum) et articulorum morbis, duritiis omnibus, vulvis, auribus, ambustis.'*[38] The mere referring castor oil to vocal cords supports the hypothesis about the authentic, though distorted by the copyists, provenance of the citation. The word *distortion* is not marked by any trace of evaluation, of course, since a certain Muslim scientist, perhaps al-Qazwīnī himself, might have assumed that the information clashed with his personal conviction of alleviating effects of oils and *'corrected'* the paragraph - spoilt in his opinion. That last conclusion is of vital importance having in mind the dispute whether encyclopaedists such as the author of *Kitāb 'aǧā'ib al-maḫlūqāt* were only copyists of some kind or rather creative scholars.

5. ***Zaytūn*** (Olive)

The author of the best Arabic cosmography spent a lot of efforts on *olive* what is rather not strange taking into consideration this plant's economical importance in all over the Mediterranean:

*'Olive leaves cooked in vinegar are good for aching teeth; cooked with sugar and water, when they become as sweet as honey themselves, the leaves are put on rotten teeth and they will remove them or coat with a protective layer.'*[39]

And in Pliny's work we read as follows:

*'Olivae albae stomacho utiliores, ventri minus. Praeclarum habent, antequam condiantur, usum recentes, per se cibi modo devoratae...'*[40]

*'Si (amurca) vero cum omphacio recoquatur ad mellis crassitudinem, casuros dentes extrahit...'*[41]

The recipes differ a bit – as always when created by local practice, but the texts seem to originate from the same source. The rest of the paragraph on olive tree ascribed to Pliny does not agree with *Historia Naturalis*:

*'Pliny said that if we hang a piece of olive stem on a person bitten by a scorpion, he would recover immediately. If we cook green olive leaves and sprinkle the concoction on the house, all the flies will leave. Cinders made of olive leaves are a substitute of zinc. Olive leaves put as dressing on haemorrhoids bring relief. Dipped in the water which we then put bread into and left to be eaten by mice, they will kill them all. A layer of mineral oil is good for scabies, lichens and rotten teeth – if only filled with this substance. Mineral oil is considered a deadly poison. All this I write after Ibn Sīnā.'*[42]

Strange enough, al-Qazwīnī placed the information about mineral oil (i.e. petroleum) in the chapter devoted to plants. Born and brought up in Persia, and then living and working in Syria, Egypt and Iraq, the writer must have known how oil was extracted.

6. ***Šibbiṯ*** (Dill)

Under the heading *šibbiṯ* al-Qazwīnī maintains that: *'Pliny said that dill seeds provide milk in abundance, they help with hiccup and colic, and also prevent the outflow of semen and remove haemorrhoids.'*[43]

And the Roman naturalist actually wrote that: *'...lactisque defectu potum mammas replet... Illinuntur folia (feniculi) tumoribus ardentibus ex aceto: calculos vesicae pellunt; venerem stimulant; genitурae abundantiam*

[34] Lived 101-44 B.C.
[35] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. I, p. 277, v. 9-14.
[36] *Histoire naturelle de Pline*, vol. II, p. 456 (Lat.XXXIV,L,1).
[37] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 23, v. 1-3.
[38] *Histoire naturelle de Pline*, vol. II, p. 117 (Lat.XXIII,XLI,1).
[39] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 27, v. 29-42; p. 28, v. 1-4.
[40] *Histoire naturelle de Pline*, vol. II, p. 115 (Lat.XXIII,XXXVI,1).
[41] *Histoire naturelle de Pline*, vol. II, p. 116 (Lat.XXIII,XXXVII,2).
[42] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 27, v. 29-42; p. 28, v. 1-4.
[43] Ibidem, vol. II, p. 72, v. 26-34.

*quoquo modo haustum facit.*'[44]
This time the evident link between dill and semen seems to support the authenticity of the passage – although badly distorted. The other part of the sentence, along with the rest of the paragraph do not cover the original text at all:
'*If somebody takes fire into his mouth while chewing white dill, the flames will not do him any harm. If we put a little dill under one's pillow, nightmares and snoring will be gone.*'[45]

7. ***Ba'īr*** (Camel)

Camel, the animal respected all over the Middle East, also saw a larger description. However only one of the citations ascribed to Pliny seems to have any real links with the work by the Latin encyclopaedist:
'*Pliny mentioned that powdered camel bones mixed with oil and anointed on an epileptic's head will cure him of the ailment.*'[46]
In *Historia Naturalis* it reads as follows:
'*It is said that camel brain dried and eaten wit vinegar is a cure for epilepsy. One pinch of its cinder in a drink cures epilepsy* - 'Cameli cerebrum arefactum, potumque ex aceto, comitialibus morbis aiunt mederi... Et dysentericis prodest illitus cinis potusque quantum tribus digitis capiatur, et comitialibus morbis.'[47]
As we can see the only common point in the two passages is the therapeutic effect on epilepsy, while neither the parts of camel body, nor the recipe fit. Thus the connection between the quotations may be a sheer coincidence. Farther al-Qazwīnī ascribes Pliny the following statement:
'*Camel hair tied to the left thigh stops involuntary passing water and so does it in the case of a boy passing water in bed. Sprinkling with camel coat ash stops nose-bleeding. We can also stop bleeding if we sprinkle the wounds with camel milk. That same milk is good against all sorts of poisonings, and used for rinsing the mouth it brings relief in case of rotten teeth. Boiling camel urine left to coagulate and then put on haemorrhoids removes them. Drinking camel urine increases potency. Camel dung effaces the yellow colour of the face.*'[48]

---

[44] *Histoire naturelle de Pline*, vol. II, p. 39 (Lat. XX,XCVI,2).
[45] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 72, v. 26-34.
[46] Ibidem, vol. II, p. 188, v. 1-15.
[47] *Histoire naturelle de Pline*, vol. II, p. 265(Lat.XXVIII,XXVI,1).
[48] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 188, v. 1-15.



Only the information about the use of camel milk as an antidote seems to have some reasonable basis, although there is no farther hint whether the lavage of the stomach known to modern medicine is concerned. The rest of the citation sounds rather like a description of nomad therapeutic practices, but it is risky to exclude their practical value – it might be a task for ethnomedicine.

8. ***Ḍabu'*** (Hyena)

Al-Qazwīnī wrote under this heading that:
'*Pliny said that hyena bile mixed with bird blood and anointed on a man stops his eyes' watering.*'[49]
Pliny wrote in his turn that: '*Lippitudini fel illitum frontibus: aut ne omnio lippiatur...*'[50] Undoubtedly this convergence is not a matter of random. Official nomenclature does not seem to have much to do with reference to the epoch when no standard medical terminology was in force. Bird blood is an innovation or rather embellishment of the recipe, which in its simplicity might have appeared hardly credible at the time of complex alchemic mixtures. Next al-Qazwīnī announced after Pliny that: '*After flaying a hyena we take its coat and carry all around the important spots of the village, and then we hang it on the gate and no plague will afflict that place.*'[51] The alleged ability of protection against '*the evil look*' ascribed to hyena coat has already seen the ethnographic work by Xavier Wolters[52], but it must be said that of all the citations coming back to Pliny this very one seems the least reliable. As for the other passages allegedly derived from *Historia Naturalis* one cannot help noticing that mediaeval Muslim medicine used hyena entirely – without wasting a single organ. The next paragraph can serve as a good object of research on therapeutic folk magic:
'*Hyena heart hung on a boy will make him quick-witted and fast learning. Anointing one's eyebrows with hyena brain will gain him popularity. Smearing a dog with that same brain will make him go mad. Its right paw will assure its owner everything he wishes, and tied to a woman's shoulder or leg it will facilitate her delivery/ Hyena*

---

[49] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 220, v. 39-41; p. 221, v. 1-5, 14-24, 30-41; p. 222, v.1.
[50] *Histoire naturelle de Pline*, vol. II, p. 265 (Lat.XXVIII,XXVII,3).
[51] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 220, v. 39-41; p. 221, v. 1-5, 14-24, 30-41; p. 222, v.1.
[52] X. Wolters, *Notes on Ancient Folklore*, Amsterdam 1934, p. 30.

*claw tied to a tree will scare birds off. Pliny wrote that hyena vulva or a piece of its navel skin tied to a man will make every woman who looks at him fall in love. Hung on a woman it will make every man fall in love with her at the very sight; tied to somebody running fever it will lower the temperature. Hyena skin serves for making a sieve and grain sifted through it after sowing will be immune to locust and all the birds. Pliny said that a piece of hyena skin with a few wormwood leaves inside, tied in a silk cloth and hung on a man will make women chase him – and that is a bizarre thing. Hyena skin buried at the sill will prevent all dogs from entering the house. Hung on a rabbit's neck it will make dogs run away. The hair growing around its nose is pulled out, burnt, mixed with oil and then anointed, what can completely cure of love. Hyena excrements mixed with myrtle oil and put on one's head will make the hair grow.'*[53]

9. ***Af'an*** (Viper)

In the last of the presented group under the heading *af'an* al-Qazwīnī ascribed Pliny the opinion that: '*Viper is good for leprosy, turbid eyes and excessive arousal.*'[54] Pliny himself wrote: '*Jumentorum oculis membrana aspidis, quam exuerit, cum adipe eiusdem claritatem inunctis facit.*'[55]

Both statements are linked with the animal's therapeutic influence on the eyesight. We cannot help noticing that Pliny often and uncritically yielded to the appeal of folk medicine, which the very look of fresh and glistening viper eyes immediately after getting rid of the turbid scales referred to the assumed miraculous side effects of shedding. As far as the impact of the animal, or more likely its venom, on excessive lust is concerned, it often happens that bio-active substances – including poisons – which in small quantities are stimulants, in larger doses become tranquillizers, or even have paralysing effects.

The next part of the paragraph does not cover anything in Pliny's work: '*If we cook a viper and rub its stock into any part of the body, hair will not grow there any more; it is also the most effective antidote against the bites of adders and poisonous snakes bites. Viper skin and*

[53] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 220, v. 39-41; p. 221, v. 1-5, 14-24, 30-41; p. 222, v.1.

[54] Ibidem, vol. II, p. 277, v. 1-8.

[55] *Histoire naturelle de Pline*, vol. II, p. 316 (Lat.XXIX,XXXVIII,3).



*head hung on a pregnant woman will prevent miscarriage.*'[56]

*b) Assumed apocrypha*

Unlike in the case of Galen or Hippocrate (also included in *Kitāb 'aǧā'ib al-maḫlūqāt*), the quotations ascribed to Pliny and not confirmed in *Historia Naturalis* cannot be divided into the unquestionable apocrypha and the information containing some dose of truth, hence it might have originated from one of the Roman naturalist's treatises. The situation is due to the very character of his work. Pliny did not classify the material according to the criterion of its credibility, or at least we know nothing on the issue. Thus a paragraph characterised by a high degree of scientific probability might have come from one of Pliny's unknown writings on the same line as from vague folk tales of unknown origin.

Certainly, as in the case of al-Qazwīnī's work, it increases the factual material, but in the same time it practically makes the verification of the authorship impossible.

Regardless of that, while revising the citations included in that category, the scientific value of some of the data seems worth paying more attention; and here is the list of the quotations:

***1. Ruḫām*** (Marble)***:***

*'Pliny said that inside marble there are worms. If you take three of them, wrap them in a rag and hang on a woman, she won't become pregnant.'*[57]

***2. Diflā*** (Oleander – *Nerium oleander*)***:***

*'Pliny said that a certain king knowing that he was unable of overcoming his enemy, took some rye, cooked it with oleander and left to dry up. Then he picked up the grain and went to face the adversary. Seeing him approach, the king withdrew leaving his load, supplies and cereal. The enemy soldiers came and fed their mounts on the grain, so all the animals perished and then the king attacked and captured them.'*[58]

We do not know exactly how much truth there is in the history of the above-mentioned king, nevertheless oleander (*Lat. Nerium oleander L.*)

[56] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 277, v. 1-8.

[57] *Ibidem*, vol. I, p. 293, v. 37-40.

[58] *Ibidem*, vol. II, p. 67, v. 40; p. 68, v. 1-2.

widespread in the Mediterranean is both poison and medicine – as it contains cardiac glycosides[59] (*oleandrine, neriantine and adynergine*).[60] Its milky juice is especially poisonous.[61]

***4. Za'farān*** (Saffron):
'*Pliny wrote that if a woman had a difficult delivery or she could not get rid of the placenta she should take ten drachms of saffron in hand – not more and not less – and then she would bear.*'[62]
Saffron i.e. *crocus* (*Crocus sativus L.*) was once used in medicine as an analgesic.[63] The plant probably came from Greece and the Middle East.[64]

***5. Kuzbura*** (Coriander):
'*Pliny announced that coriander picked up at the roots and hung on a woman in childbed would help her give birth to the child. Pliny also wrote that fumigation with coriander makes vipers and scorpions get out of the house.*'[65]
Fumigation as such has been widely used for getting rid of bugs, reptiles and parasites; it seems that the material used for that purpose is a matter of lesser importance.

***6. Nānḫa(w)āh*** (Anise):
'*Pliny wrote that staring at anise for a long time turns the face yellow.*' [66]

***7. Fawā'id 'aǧzā' al-'insān*** (profits of the parts of human body):
'*Pliny said that drinking a little urine with wine vinegar would cure severe colic. Drinking a little urine and sweating in the oven would save the life of a man bitten by a tarantula. We should pick up some excrement and roast it with a bit of the material from hornet hive walls and apply as compresses in a bath for three days in a case of*

[59] *Glycoside* – the product that is obtained when a sugar reacts with an alcohol or phenol (def. from: *Oxford Dictionary of Botany* edit. by M. Allaby, Oxford-New York 1992, p. 180.) – glycosides are widespread in various plants.
[60] Alicja and Jerzy Szweykowscy, *Słownik botaniczny*, Warszawa 1993, p. 425.
[61] Tadeusz Gorczyński, *Rośliny użytkowe*, Warszawa 1961, p. 175-176.
[62] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 70, v. 3-9.
[63] Tadeusz Gorczyński, *op. cit.*, p. 245.
[64] Alicja and Jerzy Szweykowscy, *op. cit.*, p.614.
[65] Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt*, vol. II, p. 82, v. 41; p. 83, v. 1.
[66] *Ibidem*, vol. II, p. 87, v. 37-39.



*scabies and the ailment will vanish. The same stuff rubbed into sore eyes for a few days cures them. Dried, powdered and kneaded with honey, and then used as ointment it cures difteria. Drinking urine is also good for a man hit with a poison arrow. Human intestines dried, powdered and rubbed in the form of 'kuhl' remove leucoma; and the God favour the right cause.*' [67]

***8. Ḥimār*** (Donkey):
'*Pliny wrote in his 'Book of Properties' that while carrying a thirsty piglet on back a donkey we do not water the donkey, otherwise the piglet will die.*'[68]

***9. Baqar*** (Cow):
'*Pliny said that bovine and human urine mixed together and anointed on fingers and toes would put an end to quartan fever – and triple application would be enough. It is amazing how excellent for hard abscess bovine intestines are - mixed with date vinegar and used as dressing. The same intestines – this time dried before mixing with vinegar and water – are put on hornet bites and they soothe the pain. If we spread bovine intestines on bee cells, the insects will reproduce and get stronger; warts anointed with them will vanish.*'[69]
Among some of the above-mentioned ingredients there appears an additional component – vinegar, which should probably be ascribed aseptic properties along with the ability to eliminate swellings.

***10. Na'ǧa*** (sheep):
'*Pliny announced that wearing sheep wool clothes would lead to miscarriage. A vessel filled with honey and wrapped in white wool will be safe from ants.*'[70]

***11. Mā'iz*** (Goat):
'*Pliny wrote in his 'Book of Properties' that powdered horn of a white goat, wrapped in a cloth and placed under the head of a sleeping man would make him unconscious as long as the horn is there. When we smear a cork with goat bile mixed with cow bile and then put it into*

[67] *Ibidem*, vol. II, p. 162, v. 1-20.
[68] *Ibidem*, vol. II, p. 183, v. 16-20.
[69] *Ibidem*, vol. II, p. 190, v. 12-27.
[70] *Ibidem*, vol. II, p. 194, v. 1-19.

*an ear, it will cure deafness and prevent water from penetrating inside the ear. If you pull all the hair out of your beard and then smear it with goat bile, it will never grow again. As dyestuff for the eyes goat bile is good for leucoma and fainting. It also removes a kind of growth called 'mulberry' and in compresses it brings relief in case of a swelling known as 'elephantiasis'. Goat beard hung on a man suffering from quartan fever will cure the illness, and so will it do when tied to the head of somebody afflicted with migraine. If roasted goat liver secretes some liquid, it will help with leucoma. Goat liver deprives women of attraction towards men for a long time. If a man suffering from inflammation of the spleen cuts goat spleen himself and hangs it in his home, his ailment will cease as the spleen dries up. When a goat is watered for 40 days out of a wooden vessel and then a man afflicted with inflammation of the spleen eats it, the illness goes away; if the vessel is made of tamarisk, the meat's effect will be stronger. This spleen also brings about anxiety, absent-mindedness and temptations. Pliny announced that goat blood destroys magnetic stone – and every other stone the animal was killed on. If we dip a needle in goat blood and then pierce an ear with it, the wound would cicatrise. If we put goatskin – still warm after flaying – on viper and any other snake bites or a flogged man, the skin will soothe the pain. Billy-goat saliva stirs up desire. Goat milk is good against bad luck and prevents it. This milk is also good for carnation, especially when drunk with sugar – and peculiarly with regard to women. As well as it is a remedy for absent-mindedness, concerns and melancholy. Goat milk is the cause of flabby gums and glassy eyes; it also increases potency. The rennet of young kids and lambs drains excreta out of the body. Goat urine – cooked, condensed and mixed with the appropriate amount of sugar – is anointed on the body during a bath, and after three applications the scabies vanish. A certain quantity of goat dung placed under the head of a weepy boy removes that vice.'*[71]

The information about the influence of dairies on the complexion seems reliable. Adding some sugar may play a certain role, the more so because that was not the sugar used nowadays – i.e. made of sugar beet and strongly refined, but a rough and brown sort made of sugar cane. There is also an interesting point that some Hindu fakirs, living mainly on raisins and honey, enjoy immaculate complexion.

---

[71] *Ibidem*, vol. II, p. 195, v. 10-41; p. 196, v. 1-28.



***12. 'Arnab*** (Rabbit):

*'Pliny wrote that eating rennet is good for colic but rabbit rennet is exceptionally strong. Mixed with vinegar it cures epilepsy and all poisons in general. Rabbit leg tied, respectively, to the right or left leg remedies ailments in the joints. If a woman eats rabbit vulva and then sleeps with her husband, she will become pregnant. Rabbit chest, according to the Arabs, prevents from bad look and magic. That same chest with a little dung and hung on a woman is a contraceptive. Fumigating with rabbit hair protects against lung diseases and if the hair is put on a bleeding spot, it will staunch the blood.'*

***13. Di'b*** (Wolf):

*'Pliny said that if a man first looked at a wolf, the animal would grow weaker; if the wolf's glance first reached the man, he would weaken first.'*[72]

***14. Sinnawr*** (Cat):

*'Pliny mentioned in his 'Book of Properties' that if somebody drinks a sip of blood of a black cat, women will love him. Mice escape from the smell of cat excrement. In case of an epidemic of fever if it is melted with myrtle oil and anointed on someone's body, the fever will not afflict him. The same excrement melted in water is used for anointing a man suffering from gout and it frees him from the ailment.'*[73]

Undoubtedly the smell of cat excrement is a deterrent to mice – the mere smell of a cat serves the same purpose.

***15. Qird*** (Monkey):

*'Pliny said that if we throw a monkey into the water that will subsequently serve to water a man, he will imitate its behaviour. He also mentioned that a man once became ape-like for ten days. It made him so cheerful that he hardly worried about anything, he became very generous and women loved and admired him.'*[74]

***16. Dīk*** (Rooster):

*'Pliny wrote that if we mix white rooster's bile with pure broth and*

---

[72] *Ibidem*, vol. II, p. 215, v. 18-23.
[73] *Ibidem*, vol. II, p. 218, v. 22-31.
[74] *Ibidem*, vol. II, p. 226, v. 12-20.

*eat it on an empty stomach, absent-mindedness will pass away and we will remember everything that was forgotten.'*[75]

***17. Dağāğa*** (Hen):
*'Pliny said that if a man suffering from night watering eats hen crop, the ailment will vanish. Three eggs should be soaked in vinegar, dried in the sun and put on tetters to remove them. However it is amazing how 'nīmrašt' increases the amount of potency and semen. If we want to prevent eggs from decaying for a long time we have to depose them in straw in winter and in chaff in summer. Egg white anointed on gout will relieve the ailment. Its dung is good for colic and drunk with vinegar or wine it will soothe the sufferings of a man afflicted with nephrolithiasis. Pliny was of the opinion that the excrement of a black hen stuck to one's door will raise anger and enmity.'*[76]
Similarly as in the paragraph about cows[77] it seems that vinegar – a relatively strong organic acid – is the decisive factor in removing tetters. The information about the way of storing eggs also sounds sensible; each layer acts as a thermal insulator and depending on the time of the year it protects eggs from decaying or freezing.

***18. Ġurāb*** (Crow, Craven)
*'Pliny wrote that if we anoint the face with crow fat mixed with rose oil, and then go to a ruler, he will fulfil every wish. Crow blood is dried and after, spilt on haemorrhoids to cure them. After eating arsenic or alkali one should drink a crow egg and it will stop the effect of the poison. Similarly if somebody has a crow egg and then uses arsenic or a depilatory, the hair will stay intact. However after drinking arsenic in wine one cannot have an egg anymore. Crow dung is mixed with oil and smeared on a spot afflicted with inflammation of the spleen.'*[78]
*'Pliny said that crow is dried, powdered and given to drink to a man who will not feel thirst afterwards. A man who has crow bile with wine in July will get drunk with one goblet. Crow spleen hung on a man will raise desire in him. A head of a speckled crow, well-cooked and given to a man suffering from chronic headaches, will remove the*

[75] *Ibidem*, vol. II, p. 247, v. 41; p. 248, v. 1.
[76] *Ibidem*, vol. II, p. 249, v. 22-40; p. 250, v. 1.
[77] See. paragraph 10 - *baqar*.
[78] Al-Qazwīnī, *Kitāb 'ağā'ib al-maḫlūqāt*, vol. II, p. 251, v. 15-34.



*ailment. If we mix crow blood with a little alkali, add it to wine and then give somebody to drink, he will hate the above-mentioned substances and will not return to them again. Crow excrement wrapped in a piece of wool and then given a man suffering from cough, will stop the ailment.'*[79]

***20. Hudhud*** (Hoopoe):
*'Pliny wrote that if we pick a hoopoe eye, dry it, put into some fat an then anoint the face of a man, everybody who sees him will fall in love with him. The same eye placed under one's head will make him sleepless as long as the eye remains there. Tied to somebody it will remind him everything he forgets and hung on a leper it will visibly help him. A man carrying a hoopoe tongue on him cannot be overwhelmed by the enemy as long as he has the tongue. The same tongue hung on somebody along with hoopoe eyes will remove his absent-mindedness, and consumed in a drink it will increase the intelligence and cunning. A hoopoe heart hung on a man will strengthen his potency, while fried, mixed with sugar, put on bread and given to two lovers it will make any parting unbearable for them. A man afflicted with facial paralysis should inhale this bird's bile for three days sitting in the shade, and it will bring a visible improvement. Its right wing placed under the head of a sleeping man will cause nightmares, and with the addition of a pulled aching tooth, the sleep will last longer. A hoopoe wing burnt in a tower will scare pigeons away. Sticking a hoopoe feather to the ear one can procure a victory in a dispute. Its meat cut into stripes, dried in the shade, powdered and mixed with flour should be given to eat the beloved person and it will make her love ardently. If we use hoopoe bones for fumigating a house, all the termites, ants, scorpions and the like will perish from its smoke and the place will be free of bugs for a very long time. When we give a woman burnt and powdered claws in a drink, she will become pregnant after spending a night with her husband – with the consent of God Almighty.'*[80]
Saying that burnt remains of a hoopoe are able to scare pigeons, insects or scorpions away is a sort of truism since no matter which animal is burnt, the smell is repelling enough for the purpose.

[79] *Ibidem*, vol. II, p. 261, v. 8-21.
[80] *Ibidem*, vol. II, p. 271, v. 15-41; p. 272, v. 1-13.

***21. Waṭwāṭ*** (Bat):
*'Pliny wrote that a bat drowned in water would completely deprive the man drinking that water of sleep. If we catch a bat and tie somebody's hair to the animal's neck before letting it free, the owner of the hair will not sleep again until the bat dies or the hair is untied.'*[81]

***22. Dīk al-Ǧinn*** (Demon's Rooster):
*'Pliny announced that people throw an old rooster into old wine and keep there until drowning. Next the bird is left in a clay vessel, and after some time its head is buried in the middle of a house to keep termites away – and God supports the right cause.'*[82]

***23. 'Ankabūt*** (Spider):
*'Pliny was of the opinion that powdered spider given in a tiny dose to a man suffering from suppurative fever will bring relief at once. The mere spider leg tied to a person having night fever will soothe the pain. Cobweb put on a bleeding spot will stop it. Fumigating a house with spider will scare bedbugs away.'*[83]
As for the use of spiders for throwing bedbugs away, they could be on the same level of efficiency, replaced by every protein material – because it is the hydrogen sulphate produced on that opportunity that really matters. The mention about cobweb used to stop bleeding reminds a common practice applied until lately in Poland, to put on a bleeding wound a piece of bread kneaded with cobweb.

*c) Apologetic* paragraphs.

The last group of quotations - all of them inauthentic - show an unusual Pliny, the manufacturer of powerful magic talismans. Thus it seems probable that in this case *al-Qazwīnī* made use of some materials ascribed rather to *Apollonios of Tyana*:

***1. Farāhān***[84]**:**
*'Ibn al-Kalbī*[85] *mentioned a salt lake present there – the effect of one*

[81] *Ibidem*, vol. II, p. 272, v. 15-23.
[82] *Ibidem*, vol. II, p. 287, v. 4-9.
[83] *Ibidem*, vol. II, p. 296, v. 38-41; p. 297, v. 1.
[84] Village near *Hamaḍān*.
[85] *Hišām al-Kalbī* - from *al-Kūfa* (d. about 819); Arabic historian, wrote about the Arabs before Islam; he also wrote *Kitāb al-aṣnām* (*Book of Idols*).



*the talismans prepared by Apollonios.'*[86]

***2. Kurkān*** (Pers. Gorgān - Country, Countryside)
*'One of the kings of Persia ordered Apollonios the Sage to drive scorpions off there by means of a talisman. Apollonios did as he was told and from that time on scorpions have not be seen there. If a man scoops up some soil from that place and smears the walls of his house, he cannot find a single scorpion there – no matter which country he lives in. If a scorpion bites somebody, he should take a little soil from that village and put into water – after drinking it he will be instantly cured. If you take a little of that soil in hand along with a scorpion, it will do no harm to him.'*[87]

***3. Ǧabal al-Ḥāriṯ wa al-Ḥuwayrīṯ*** (Mount Ḥāriṯ and Ḥuwayrīṯ[88]):
*'It is said that the tombs of Armenian kings are there – along with their goods and treasures, and that was Apollonios who made the talismans to protect them from capture.'*[89]

***4. Buḥayrat al-Ḥalaṭ*** (Ḥalaṭ Lake[90]):
*'One of its wonders is a lake which a fish called 'tarih' is exported from to all lands. Ibn al-Kalbī said that Ḥalaṭ Lake is numbered among the wonders of the world. For the first nine months there are no fish or frogs, and for another two months they are so numerous that they can be caught with bare hands and taken away even as far as India. They say that it is due to the talisman made by Apollonios for one of the kings of Persia.'*[91]

***5. Ṭilasm az-Zaytūn*** (Talisman of Olive):
*'It is said that the talisman is one of the works of Apollonios – master of talismans.'*[92]

[86] Al-Qazwīnī, *Kitāb āṯār al-bilād*, p. 388, v. 3.
[87] *Ibidem*, p. 299, v. 3-8.
[88] In *Armenia*.
[89] Al-Qazwīnī, *Kitāb āṯār al-bilād*, p. 333, v. 2-4.
[90] In *Armenia*.
[91] Al-Qazwīnī, *Kitāb āṯār al-bilād*, p. 352, v. 27-30.
[92] *Ibidem*, p. 399, v. 7.

*6. Al-Qusṭanṭīnīya* (Constantinople):
*'The Byzantines mention that it is a work by Apollonios the Sage. There is a talisman consisting of three copper images of horses on the gate of the royal palace. It was made by Apollonios to prevent horses from breaking the peace and neighing at the gate of the palace.'*[93]

## Bibliography


1. Bieniek A. *Claudius Ptolemaeus in the Eyes of the Arabs in the Example of Al-Qazwīnī*, in "Folia Orientalia" 35 (1999), pp. 5-21.
2. Gorczyński T., *Rośliny użytkowe*, Warszawa 1961.
3. Hitti P. K., *Dzieje Arabów*, Warszawa 1969.
4. Kumaniecki K., *Historia kultury starożytnej Grecji i Rzymu*, Warszawa 1964.
5. Nies A., *Zur Mineralogie des Plinius*, Mainz 1884.
6. *Oxford Dictionary of Botany* edit. by M. Allaby, Oxford-New York 1992.
7. Plessner M. [in:] *É.I.*, vol. I.
8. Plinius Secundus, *Histoire naturelle de Pline*, edit. by M. Nisard, Paris 1883.
9. Al-Qazwīnī Zakariyā' ibn Muḥammad ibn Maḥmūd, *Kitāb āṯār al-bilād wa aḫbār al-'ibād*, edit. by F. Wüstenfeld, Göttingen 1849.
10. Al-Qazwīnī Zakariyā' ibn Muḥammad ibn Maḥmūd, *Kitāb 'aǧā'ib al-maḫlūqāt wa ġarā'ib al-mawǧūdāt*, edit. by F. Wüstenfeld, Göttingen 1849.
11. Al-Qazwīnī, *Kitāb 'aǧā'ib al-maḫlūqāt wa garā'ib al-mawǧūdāt*, al-Qāhira 1298 A.H.
12. Sarton G., *Appreciation of Ancient and Medieval Science during the Renaissance*, Philadelphia 1953.
13. Stein Z. [in:] *Słownik pisarzy antycznych*, edit. by A. Świderkówna, Warszawa 1990.
14. Szweykowscy Alicja and Jerzy, *Słownik botaniczny*, Warszawa 1993.
15. Wolters X., *Notes on Ancient Folklore*, Amsterdam 1934.


[93] *Ibidem*, p. 407, v. 22-25.



*FOLIA ORIENTALIA*
VOL 37 2001
PL ISSN 0015-5675

TOMASZ GACEK

# A MORE PRECISE SYSTEM OF TRANSLITERATION OF THE MIDDLE PERSIAN BOOK SCRIPT NEEDED

## The traditional transliteration system

The Ambiguity of the Middle Persian book script[1] is proverbial. But while we cannot exert any influence on the habits of Sasanian and post-Sasanian Zoroastrian scribes, we are, nevertheless, obliged to avoid ambiguity and strive for precision in our modern analysis of the MPB script.

Unfortunately, the traditional method of transliterating the MPB texts is not free from significant drawbacks. To see them, we have to compare that method with the definition of transliteration. It is understood as reflecting the text written in one script with another one. It is carried through on the basis of some predefined correspondence rules between the characters of the scripts in question, which makes the whole process mechanical and possible without any knowledge of the language of the transliterated text. The correspondence rules mentioned are of the one-to-one type, and this guarantees the unequivocal nature of translit-

[1] Afterwards: MPB script; Other names for this writing system are frequently used, e.g. Book Pahlavi.