



Zootherapy in the treatment of arrow wounds in the Nuzhatu-L-Qulub
of Hamdullah Al-Mustaufi Al-Qazwinl (c.1344)

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The *Nuzhatu-L-Qulub* ("Hearts' Bliss") (c.1344) is a book detailing the geography and affairs of the Mongolian Ilkhanate Empire¹(covering Iraq, Iran, Khurasan, the Caucasus, and parts of Asia Minor); although Stephenson (1928)² describes it as a scientific encyclopaedia divided into three parts covering flora and fauna, the composition of man, and geography. It is believed to give a unique insight into this area while under Mongolian rule³.

Written by Hamdullah Al-Mustawfi Al-Qazwinl (or Hamdallah Mustawfi Qazvini) (c.1281 – after 1340). A Persian - today Iranian - official, historian, geographer, and poet, who lived during the Ilkhanate era (1256-1353)⁴ when the Mongolians ruled over most of West Asia. The ruler, Genghis Khan's grandson, Hülegü (c. 1217–65), assumed the title of "Il-Khan" or "Lesser Khan" – subordinate to the Great Khan, who ruled in China⁵. Al-Qazwinl also wrote The *Tarikh-i guzida* ("Excerpt history") (1330) a compendium of Islamic history from the creation of the world until 1329⁶ and *Zafarnamah* ('Book of Victory')⁷, an epic poem exploring Iranian history from the Arab conquest to the Mongolians⁸.

The section of the *Nuzhatu-L-Qulub* covering fauna includes several recipes using animals in the treatment of arrow wounds.

Animals and their products have been major features of medical and cosmetic treatments through history⁹, a practice termed Zootherapy¹⁰,

For the treatment of arrow wounds, in his *Natural History* the naturalist and philosopher Gaius Plinius Secundus, better known as Pliny the Elder (23-79A.D.) recommended:

Arrows ... that require to be extracted from the body, are removed by the application of a mouse split asunder, or of a lizard more particularly, similarly divided, or else the head only of the animal, pounded with salt. The snails, too, that are found in clusters upon leaves,

¹ Melville, Charles (2012). *Persian Historiography: A History of Persian Literature*. Bloomsbury Publishing.

² Stephenson, J.(1928) *The Zoological Section Of The Nuzhatu-L-Qulub Of Hamdullah Al-Mustawfi Al-Qazwinl*. London: The Royal Asiatic Society.

³ Melville (2012) op cit

⁴ Spuler, B. (1971). "Ḥamd Allāh b. Abī Bakr b. Aḥmād b. Naṣr al-Mustawfī al-Ḳazwīnī". In Lewis, B.; Ménage, V. L.; Pellat, Ch. & Schacht, J. (eds.). *Encyclopaedia of Islam*. Volume III: H–Iram (2nd ed.). Leiden: E. J. Brill.

⁵ Komaroff, L. "The Art of the Ilkhanid Period (1256–1353)." In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000

⁶ *First Encyclopedia of Islam, 1913-1936*, ed. M. Th. Houtsma, E.J. Brill' (1993),

⁷ Melville, Charles (2012) op cit

⁸ Melville, Charles (2012) op cit.

⁹ Betlloch-Masa, I; , Chinerb, E.; Chiner-Betlloch, J.; Llorca-Ibic, J.; Martín-Pascualc, L. (2014) The use of animals in medicine of Latin tradition: Study of the *Tresor de Beutat*, a medieval treatise devoted to female cosmetics. *The Journal of Ethnobiology and Traditional Medicine*. 121, 752-760

De Vries, R. (2019) A short tract on medicinal uses for animal dung. *North American journal of Celtic studies*, 3(2), 111-136.

Lev, E. (2003) Traditional healing with animals (zootherapy): medieval to present-day Levantine practice. *Journal of Ethnopharmacology* 85(1), 107-118

Medeiros, M.F.T. and Alves, R.R.N. (2020) Nineteenth century zootherapy in Benedictine monasteries of Brazil. *Annals of the Brazilian Academy of Sciences*, 92 (2) <https://doi.org/10.1590/0001-3765202020181113>.

Quave, C.L. and Pieroni, A. (2013) Mediterranean Zootherapy: A Historical to Modern Perspective. In R. R. N. Alves and I. L. Rosa (eds.), *Animals in Traditional Folk Medicine: Implications for Conservation* Berlin: Springer 303-16.

¹⁰ Alves R.R.N.and Rosa, I.L., (2005). Why study the use of animal products in traditional medicines? *Journal of Ethnobiology and Ethnomedicine* 1, 1-5.

are pounded and applied with their shells on; as also those that are used as food, the shells being first removed, applied with hare's rennet in particular. The bones of a snake, applied with the rennet of any four-footed animal, will produce a similar effect before the end of two days: cantharides¹¹, also, bruised applied with barley-meal, are highly extolled. (30.42).¹²

According to the Italian surgeons Theodoric Borgognoni (1205-1298) and Bruno Longoburgo (c.1200-1286), the Islamic philosopher and physician Ibn-Sina (Avicenna in the West) (980-1037) recommended using poultices of shredded frog or minced crab for arrow wounds; for arrows which were not deeply embedded (trapped inside the body), he recommended poultices of freshly chopped lizard heads¹³.

Mongolian healers treated arrow and crossbow quarrel wounds by placing the casualty inside a freshly killed ox. This may have been an attempt to heal the injured by the transference of the beast's energy or life force:

- In the biography of Kuo Pao-yü (1214): *"Pao-yü was hit in the chest by a stray arrow. The Emperor commanded that one cut open the belly of an ox and put [him] in the inside of it. After a short while, then, he revived (p.436, Cleaves 1954¹⁴).*

- Of Li T'ing (1274): *A ballista wounded his left shoulder ... again he was struck by a ballista ... An arrow went through his breast and he was about to expire. Po-yen commanded that one cut open the belly of a water buffalo and put him in the inside of it. After a good while, then, he revived. (p.438, Cleaves 1954¹⁵).*

- *Mu-huan was struck by three arrows in succession ... T'ai-tsung saw and pitied him. He commanded an army officer to draw out the arrows and binding an ox [tightly], to cut out its intestines and, stripping [Mu-huan] naked, to put him in the belly of the ox ... [After] a good while, then, he revived (p.441, Cleaves 1954).¹⁶*

- *The New History of Yuan Dynasty (also known as also known as the "Yuanshi") (1370) records: "Bu Zhier followed the Emperor to take part in the wars fighting foreign countries. He was always wild when fighting the enemy. He had thus been stricken by several arrows at once. The Emperor Taizu [Genghis Khan] visited him in person and ordered others to draw the arrows out, but the bleeding was so profuse it made him fall over and almost die.*

¹¹ A blister beetle known also known as the "Spanish Fly",

¹² Pliny the Elder, (1857) *The Natural History of Pliny* (Vols. 1-6) Bostock, J. And Riley, H. T. (Eds.) London: Henry G. Bohn.

¹³ Campell, E. and Colton. J. (1955) *The Surgery of Theodoric* (Vols 1 and 2). New York: Appleton Century Croft; Tabinelli, M, (2003) *The Surgery of Bruno Da Longoburgo*. Pittsburgh: Dorrance Publishing

¹⁴ Cleaves, F.W. (1954) A Medical Practice of The Mongols in the thirteenth century. *Harvard Journal of Asiatic Studies*, 17 (3/4) 428-444.

¹⁵ Cleaves (1954 op cit)

¹⁶ Cleaves. (1954) op cit

The Emperor ordered them to kill a cow and put Bu Zhier into the cow's belly with hot blood around him, he resuscitated sometime later” (p.621, Ma 2020)¹⁷.

- The seventeenth century *Historical Scripts of the Qing Dynasty (Qing shigao)* record that the Mongolian healer Chao Erji treated E Shuo - who was at the point of death after being wounded by an arrow - by withdrawing the arrow and applying medicine to the wound. For the General Wu Bai who had been wounded by over thirty arrows and had fallen unconscious, Chao Erji ordered his subordinates to kill and cut open a white camel's belly; Wu Bai was placed inside and regained consciousness soon after (Ma 2020¹⁸).

May (2015) suggests that when the injured person was placed inside the animals abdominal cavity, the ox blood may have assisted in coagulating the wound; also, as the casualty had to be placed inside the carcass in a foetal position with the legs folded, this may have kept the blood circulating and helped to reduce shock and the constriction of the carcass put pressure on the wound.¹⁹

The Renaissance surgeon Ambroise Pare recommended treating the wounds of poisoned arrows with “*Small animals such as dogs, cats or fowl, split open alive, or the lungs of an ox, calf, sheep or pig could be applied to the wound and surrounding area to ease pain, destroy poison and comfort the area.*”²⁰.

The *Nuzhatu-L-Qulub*²¹ mentions several animals in relation to the treatment of arrow wounds. For embedded arrowheads it recommends:

Cat: Presumably the domestic variety, as it is described of being “*of various colours*” and the “*enemy of the rat*”. Its flesh, dried and placed over the wound where an arrow-head was embedded would extract it²².

Lizard: Possibly a gecko: “*If its flesh be placed ... on the wound of an arrow, it brings out the arrow-head.*”²³

Oyster: Used as a poultice, the flesh “*...extracts an arrow-head from within the body*”²⁴

For healing arrow wounds:

¹⁷ Ma, B. (2020) *A History of Medicine in Chinese Culture*. World Scientific Publishing Company.

¹⁸ Ma 2020 op cit

¹⁹ May, T. (2015) Spitting Blood: Medieval Mongol Medical Practices. in Tracy, L, and de Vries, K.(eds) *Wounds and Wound Repair in Medieval Culture*. Brill.

²⁰ Pare, A. (1617) *The Method of Curing Wounds Made by Gun-shot Also by Arrows and Darts*. Faithfully done into English by Walter Hammond, Chirurgeon. Early English Books Online Books.

-- (1634) *An Explanation of the fashion and use of three and fifty instruments of Chirurgery*.

-- (1969) *Ten Books of Surgery with the magazine of the instruments necessary for it*, (R.W.Linker and N.Womack eds.) Athens: University of Georgia Press

²¹ Stephenson (1928) op cit

²² Stephenson (1928) op cit p6-7

²³ Stephenson (1928) op cit p.43

²⁴ Stephenson (1928) op cit p59

*Rat: "If a rat be split in two, and laid on the wound of an arrow, or other wound, and then burnt and its ashes mixed with oil and used as an ointment on the part, it will cause the wound to heal"*²⁵

*Goose: "The ashes of its bones will bring an arrow-wound to healing."*²⁶

Today, these cures may be judged as brutal, superstitious, or just strange. However, the tradition continues today - numerous medicaments contain ingredients derived from animals²⁷.

Illustration from: Nuzhat al-Qulub of Hamdullah Mustaufi Qazvini

(The Pleasure of the Hearts) (c.1630).

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²⁵ Stephenson (1928) op cit p22.

²⁶ Stephenson (1928) op cit p62

²⁷ "Medicines/Pharmaceuticals of Animal Origin" (PDF). Queensland Health. January 4, 2019. Retrieved 11th October 2023. https://www.health.qld.gov.au/__data/assets/pdf_file/0024/147507/qh-gdl-954.pdf