

The History of Veterinary Medicine in the late Islamic Period

D. Tabbaa, faculty of veterinary medicine, Al Baath university, Hama, Syria

Animal husbandry in the Islamic World was of great importance and had been since ancient times. Most of the preserved literature, however, concerns either hippology (horses) or falconry.

The Arabic term baytarah was generally used for treatises on hippiatry, that is, those concerned with maintaining the good health of the animals, and furusiyah and 'ilm al-farasah for hippology and equestrianism concerned with the breeding, training, use, and care of horses. The oldest Arabic work dealing solely with general veterinary medicine seems to have been the translation (probably by Ishaq ibn Hunayn) of a treatise on hippiatrics by the 4th century Greek writer Theomnestus of Magnesia, preserved in the Köprülü library in Istanbul and in a copy in Paris (Bibliothèque Nationale de France). Also in Istanbul is an Arabic manuscript on veterinary medicine (Kitab al-baytara fi sifat al-dawab min al-khayl wa-al-ibil wa ghayreha) translated from Persian in the 9th century.

VETERINARY TERMINOLOGY,

(AL-Byzara) THE TRAINER OF PREY BIRD

Veterinary:

Veterinary means the language of wound, it is injured the thing, that meaningful it occurs the wound, and the injure is: the wound, it is derived from the farrier, and the last mentioned name referred to the Person who is dealing with the livestock, in other word, he is treating animals. The treatment is meaningful as veterinary (1). The word of farrier in the poems of Al-Nabgha Al-Zubiani as he said as roughly translation:

He inserts the tool towards animal, he saved its life, This was by the treating of farrier, which is healing from the pain. (2)

Veterinary as a term, is meaning the science of the conditions of livestock bodies, in addition to all things are related with, and all can keep animals in a good health status. It is one of sciences which required to the medicine absolutely (3). The origin is Greek word as it was mentioned (4), it was classified in many books which are explained the veterinary as a single word, or as group accumulated with other subjects such as:

- The book in horse and veterinary, written by Yuaqoub bin Ishaq Al-Kandi. (T:256 H).
- The book in race-horse and veterinary, and the knowledge of horse and their sport, manner and their treatment, by Mohammed bin Yaqoub Al-Khthley, Raed Al-Khalifaa Al-Matad Al-Abassi or Al-Motawakel, he has a book which had been edited for the Khalifa of Al-Motawakel.

- The book in veterinary, written by Al-Yohsubi, which had been mentioned in the Appendix owner (5).
- The book of Al-Moghni in veterinary, written by the majesty king Omar bin Yousef Al-Rasouly (T 696 H).
- The book in the two industries, written by Al-Bitar Al-Nasserey (T 709 H), The mentioned book was reviewed three time by different names.
- The book in veterinary , written by Taj Al-Aldien Mohammed bin Al-Saheb (T 707 H).

The book in the science of veterinary and the training on prey animals, written by Mohammed bin Ibrahim Al-Ansarey Al-Senjary (T 749 H).

The veterinary science and horses:

The sources stated that the Arab population, men and women had a knowledge that can be distinguish the racing horses than others, this can be given a story, that there was a young man who bought a mare and he had been put a condition term that his mother should be seen the mare. When his mother saw the mare, he objected to buy the mention mare, then the owner of horse said, why you hate my mare, then the owner Sward by the Lord god, she is in good health status, has a good standing. The mother replayed to the owner, the mare has not move when it comes and she has irregular steps during her return back. The owner said, By the Lord, you have said the truth, My mare had suffered from the tetanus.

It is long term to deal with horses and the experiment guided Arab people to more than that, In other words, the points of weakness, not in a horse but in another breeding.

Al-Asmaey said:

The Arabian horseman recommended his son as he said: "If the owner of yellow horse needed you, then it must be trained the horse on stone land, the yellow horses have a thin hooves, and when if the owner of Al-Adham horse needed you, then it must trained the horse on the mud, the Adham horses have a bad legs, and If the owner of Kameet horse, it must be have trained the horse on a solid land, Hope you to escape. (9).

There are some Arabian people who have a wide knowledge in horses, It has been stated that Bin Doried reported that Matar Bin Al-Daraj was having a full experiences in horses, as well as he was a friend of Al-Mahdey. (10). The scientists of Arabic language had reported the names of horses without taken care on the classification, their medicine and utilization of horses. Then the Arabic language scientists had started to looking after on the scientific and practical uses of horses as Al-Jahez had dealt with same purposes. No matter to monitor all what is linking to horses which related to veterinary vocabulary but we can say in confidence that Arabic language is

meaningful in vocabulary words in this field, for that reasons, Arabic language is considered as the first international languages in term of precision and expression. As indicator as above mentioned shall present some terminology which are related to veterinary.

Disadvantages of Horses and Health Problems

As state before, as mentioned by Arabian man who stated that his mare which was in a good health status, good standing, this was an expression to too much disadvantages and health problems which can be affected horses. As somebody mentioned in the past, that horses are combined of meat, blood, bones and nerves...Horses are most likely to have risk of affecting with health problems and their healing would be indeed great (11). Man (who is son of Adam) is still working with horses, where he is loading horses problems and use it for heavy loading.

If the veterinary books were accounted more than 80 books on disorders and diseases (12). Furthermore, it was accounted disorders occurred which were more than 50 events such as Blindness in both or one eyes, tongue-tomy, mechanical events, trauma and affecting by the nervous system (13). I would like to state that disadvantages and health problems which can be affected only nerves, hands and legs that as follows:

- Prevalence: Swelling in nerves as result of stress.
- Prefixes: sweater of legs as result of affecting the legs nerves.
- Al-Jard: All are related to articularis which cause increase and swelling in the nerve.
- Al-Hallal: This is meaning as relaxing in the nerves of animals.
- Al-Shwzat: This is a sticky bone with the brachium, if horse moves it was said the mare is broken down.
- Al-Dahes: The tumor in hoof.
- Al-Aran: The cracks affecting horses in their legs and hands
- Al-Shwqaq: This affecting on the carpuses.
- Al-Saratan: This disease is started in the carpus, this may be leaded to make the venous hard into the carpus which resulted to turn back of the hoof.
- Al-Hanaf in horses and other equine animals which have hooves in hand and legs means that each hand or leg meet each other face to face.

- Al-Irtehash: The horse scratch the back side of the hoof from the right hand to the left hand, and may be produced as hemorrhages this because the hand of horse is characterize by the week structure.
- Al-Namlaah: An injure in the dorsal side of the interdigital.
- Al-Meleh: A disorder affects the legs of horses.
- Al-Fara: The smell in the dactyls of mare, which can be smelled if the surface of the area is cleaned by using wipe method, this can be accumulated more and more if it leaves over.
- Al-Zllaa: A disease affects legs and caused a lameness.
- Al-Okaal: This can be expressed as Al-Zllaa disease for just one hour then it can be recovered.
- As reported some statements which can understood as the farrier liked with a disease in somehow, such as:
 - The Farrier tied the animal: contraction of legs nerves as result of a disease.
 - AL-Asmaey said, that the Monaqabah is the tool which farrier look for a health problem (15).

Prevention

Some reports indicated that prevention is a target should be achieved using too many methods:

- The proper selection of harness, intensive harness caused a cold condition in the body in the summer season, as well as, the intensive wool caused a cool condition in the body's animal during winter season.
- Don't play much more with horse and making animal lies down on the ground and turn in different sides on the ground, this can be caused to extended to the horse skin and turning the animal intestines into the abdomen cavity, and this may lead to death. This case has no treatment or solution.
- Making a gap under hands of mare and placing amount of small stones may considered as a justification to prevent the hoof.

Treatment

-Professional veterinarians treated health problems of horses using spirit method, bleeding approach, cauterization and using trail mixture of plants.

-They treated using certain amounts of Silabi water, Sesam oil (Al-Sieraj), aloe and its glue for a purpose of treatment the liver disease.

-They treated the disease of epilepsy using mixture of the following substances: brain and gallbladder of owl, fat's eagle and the urine of hunting dogs.

They made some laxative fats excreted from the brain of cattle, eggs yolk, fat of sheep (tallow), yellow wax and Al-Washaq (type of glue characterized by a nice smell) all those can be mixed together, then exposed on the slight flam. This is considered as a useful method to laxative of papiloma and other conditions.

They treated using a certain diet, for example they do not provide a wheat for a ration used in prevention of winter fever (20).

They treated using a gentle walk during the period of the dusk in the morning for a purpose of spleen pain (21).

They treated the whiteness on hand using the method of cauterization They treated a whiteness on eyes using amounts of gallbladder of hyena, Silabi water, a pure honey without wax, all those materials mixed together then eyes wiped in prevention of unclear sight (23).

They may recommended on the writing the name discover of treatment, for e.g the treatment of headache was for Abi Yousef Bietar Al-Motawakel (24). Substances were used in the treatment are so many such as the plants of the bitter almand, Chinese Salat (Hindebaa), the Yemani wax, oil, fat of Seraj, Saffron, arsenic, tar, ambergris, honey bee and using cold water frequently such fever occurred in other season except winter season.

Horses Feeding

It was said in wisdoms: Feeding of animals is an indicator for a good health condition, that is meaning those animals which do not raise their heads from the feeder (25).

Also, it was said that horses are full feeding, If those have something of spring feeding, also they called on what remain on the animal teeth of feed and hay name of yellow, and if animal has isolated without feeding it means fearing and weakness (26).

The trail had guided them that the wheat should not offered for animals feed after stress, Also water should not be provided when animals feels tired. According the expression of some veterinarian profession that wisdom "broken donkeys" (27) this means an excessive carbohydrates on feed. They also recommended by non-allowing to offer green wheat in the beginning of the harvest season, this because the mentioned substance can be predisposing of cough (28).

As well as, they were a wearing that grained wheat is more digestible than non-grained wheat (29). It seems that feed is affected by the place, for example Indian people -as stated in some veterinary books- have a certain feed as a rise., This was cooked for animals using a soup and some spices were added for meat meals (30). Feed also can be affected the social life level of animals owners, for instance Saaleek Al-Jazera people were fed animals from the Al-Kadid which a kind fish protein, as far as they were drunk horses a wine and making an habit to eat bread or milk (as yogurt) and dates during the

summer season or milk alone, in believing somehow that these may decrease of their weight.

The feed of Nakhasin people who are the trade of horses- This can not free of cheating. Their purposes of feeding to quick the fat growth into animal, and this is fasten in increase of meat, and making the color of meat in the clear and purity shape. If wet feed decrease they run on the substance of Al-Saweeq (This is meaning as flour and grain), they may add to wheat little bit of Al-Halba (33).

Other Considerations

1. Arab people specify the horses in known names, as honor for those animals, the famous names of horses: Al-Dinary, Al-Awaj, Zo Al-Akal, Al-Asjadi, Laheq, Meias, Haddaj, Yahmoum and Halab. Some mares of great prophet are as follows: Al-Mortajez who bought by the prophet by 200 camels without hooves wearing, all were healthy and non-having any disorders.
2. Horses specified in names which indicated to their ages and parity ages, the foal male or female indicated for those birthed animals, Al-Faseel indicated for those animals who are isolated from their mothers, then name of Hawley indicated for one year age and Al-Jezah mean 2 years, Al-Thani mean 3 years old, Al-Robaa means 4 years old and so on...
3. It was observed 22 names of birds names which are called on members of mares as follows: Al-Asfoor: It is a bone which hair of neck are grown over. Al-Serdan: 2 nerves under tongue of mare, Al-Dikan: name of apparent bones back of ears. The remaining names are as follows: Al-Hama, Al-Zobab, Al-Farasha, Al-Yasoup, Al-Naheq, Al-Qoutat, Al-Gurab, eagles (Al-Nousor), Al-zarq (Blue), Al-Saqer, Al-Homer (Red ones), Al-Basheq, Al-Naama and Al-Salsal (36). If we know that Arab people were liked horses as buzzard in their running and attack (37), then we will be wearing the similarity in calling names of birds on those huge numbers of mares members.
4. Too many vocabularies which specified of horses are becoming strange and little use, for instance, characteristics of advantages horses as follows: Al-Tyraf: It is the great one, good in jumping, Al-Shyzam: It is the length of legs and rapid in the running and Precise sight, Al-Tamer: It is the old mouse.
5. Veterinary professional people were observing also, that the age of natural male horse of mare (her husband) is 83 years while the female is 40 years, They justified the decrease of male age than females that males smelled urine smell of females and jump on her, this can be a reasons for decreased horse male age.

Al-Byzara (Falconry):

Al- Byzara in the formal language: The profession of falconry, this is the trainer of prey animals and hunting animals. A-Byzara as terminology is: A science of Prey conditions in different sides such as health condition and Affecting the disease, knowing

the findings signs which are indicate to the strength in hunting or its weakness. This is science of veterinary field accounted as the animal medicine.

The Byzara word is a Persian origin, then it translated to Arabic language and called on the life of falcon bird and its rearing, As they called the person who is caring on the falcon, or owner of falcon as Byzar, then it was generalized this sign to refer to the science of prey life generally (39).

Nobody knows when the Byzara was established at the first time, but the Al-Masoudi said that Betlimous follow up the AL-Iskandar that he had a prey bird and play with and had welfare life with those birds. After him, too many kings of nations had played with those birds such those kings from Greek, Rome and Arabian kings. They may the first establishment of this science was in India. The most significant reporting that it is an old science and no one knows who the first person built the principle of this science (40).

Some books stated that numbers who were caring in hunting were loved this science such as Ismaeel Bin Ibrahim as prophets, and Hamza Bin Abed Al-Motaleb (The Blessed by the Lord) and Addey Bin Hatem Al-Taiy. And from the companion of the great prophet, Al-Abbas , Abo Alabbas Al-Safaah was interesting in the hunting during his youth and old ages. Al-Mohdey was caring in the hunting regularly and permanently, Mohammad Al-Amin was more interesting and caring of hunting hobbies, the most pomes of Abi Nawas was presenting in the prey animals and other birds of Al-Mohdy. Al-Motasem was the most lucky person in the hunting because he had a willpower on racing-horses. Also, Al-Motaded (41) had the same interest of Al-Motasem. Finally, it can be said that the Byzara became during the Arabian state the most interest and care of the state, this because was spend all their costs and running expensive from the house of money –fund which is representing the government at that time.

Al-Byzara was not a door of the welfare sides only, but it was a door to collect money. Al-Khalil Bin Ahmad Al-Farahidy was example of who had a falcon which was used for hunting. He was found all he needs unless dose not affect on the budget of kings. In some Byzara books, reported an interesting of hunting and whole advantages of hunting which can be one activities for vacancy and weekend times. Also, hunting was described the strength and the winner. Some wise people stated the benefits of hunting as they said, that who is caring of hunting permanently and look at large gardens then he was interesting in its nice sight (42). The hunting is the best food, this because there no meat more digested and good tastes than hunting meat which catches after hard hunting and running.

Vocabularies for AL Byzara Terminology:

Vocabularies which are indicated for the Byzara term, and all linked of this term in its rich, variety and precision, this indeed was given us surprising. If this indicated for availability on something, this would be refer to the deep reaction of Arab people with hunting. If the field in this side dose not allowing us to extended in the dialogue on the Byzara vocabularies, I would be satisfied on a little information which can be given an idea on much and much throughout the standing on the following features.

1 Prey animals

The most hunting used to catch birds and animals are as follows:

- Al-Bozat: The plural name of a single term of Al-Bazi, which is the prey bird, it is the clever prey animals and most quicker and the most beautiful in its sight and fasten messenger, soci-companion with people, and the most domestic for rearing (13).
- Al-Oqban: It is the greatest prey bird, there is no more eagle greater than it
- Buzzards: The single of buzzard, it is the most patient prey bird in its resistance for hot and cold weather. And most patient for dealing the food, the Arab people called it as Al-Ajdel and the plural is the Al-Ajdel and the call of Al-Qutami and Al-Quatami, if they described an intelligent man and a sharp in his thinking they like him as buzzard.
- Al-Shawaheen: The single word of this term is Shaheen, and the mentioned word is Persian and the word was translated into Arabic language, and the Arabic name is play-ground- with shadow (46). It was said to Shaheen also Al-Swozanq and Al-Swozniq.

Al-Bouasheq: and the single word of this term is Al-Basheq, it means thin (soft) which is not carrying the hot or cold with it, it is slow in learning the manner, no one can play with the bird except a person has understood behaviors and manner, this because the training required a person who has a good knowledge in the training and precision to deal with.

Al-Zrariq: The single word is Al-Zorraq, it liked Al-Bazi in his color and achievement, during his hunting known as the male of Al-Bazi, it was said that it is a white Bazi (49).

Al-Fowhwod: It is a beast of prey, it is used for hunting, and the plural is Afhad and Fohwod, the female is called Fahde, and in the wisdom, "It is more deep in the sleeping than Fahde" and Al-Fahhad: it is the owner, and the Al-Naeem is the voice of Al-Fahed (52),

Sluqi dogs: It belongs to Al-Sluqi as a village in the country of Yemen. Arab people belong those animals as belonging horses. It was in the Qabilat Tae 5 dogs that had a task to hunting deer.

Health problems of prey animals

It is the most health problem which affects prey animals are as follows:

Al-Zobah: It is a disorder affects the Basheq bird in his throat which obstructed the path through the throat. It was described Bazyar (expert in medical treatment) as he

said; it is an extended gland, as the lupine plant in its size and may be smaller than the piece of the plant slightly (57).

Al-Qarah: It is a disease affect the wing of bird.

Al-Bashem; It is meaning the hyper-nutrition, and disorder in the organ of abdominal cavity.

Al-Balgham (lymph): It is the focal of all prey animals.

Al-Askarum; There is no information on this disease, the only experience knowledge on this disease just that it is a disease which affects the prey animals, it is a similar of tuberculosis when occurs in the human being.

Al-Jass: It occurs as result of eating the pigeon and the cold meat (may be they mean Salmonellosis).

So far, other health problems which affect hunting dogs as scabies, hyper-pressure, gout, Tartar and one of them the rabies. It was identified the rabies disease by Al-Byzara books, that it is a severe disease , it caused a signs as which are seen when is affected by toxic case, it change the media of human being to the mode of the dog (58).

It was stated in some sources that Mr. AL-Swad Bin Aous, learned though Al-Najashi, the medication of rabies. He was treated some Arabian people during that time (59). As some Arabian people during the century of Al-Jahelia that if a man is affected by rabies, then it was bleeding a blood from one of legs of men who are from belonging to Qabila Maa Al-Samaa, his name Amer Bin Thalabaa Al-Azadi. After that they brought the mentioned blood and given to the sick man by rabies, this was giving a recovery result and healing from his suffering. This was mentioned from sayings of Abo Al-Beraj Bin Gassem Bin Jubil Al-Mary in his pomes:

(As roughly translation);

They are a generous people and are masters in their talking, Their blood can be recovered and healing from a rabies disease. (60)

Some professional people of veterinary are doubted in such of this treatment as they said, Arabian people thought that kings blood can be recovered from a disease rabies (61). We are not knowing what the modern science can be criticized. As according the treatment of health problems of prey animals, indeed who is reading much about that, he will wonder of the different and much methods which were used by the Byzara People (who are treated the prey animals), it dose not have only the joke as silly methods in sometimes. This may be referred to such some methods as follows:

-It was stated the meat of gazelle is analyzed to the lymph of living-being into the cavities of prey animals (62).

-And the swine meat is the best what had been used for treatment as result of the hard construction in its components (63).

- The skin screw if is affected the hand of prey animal, and the treatment of as surgical method or using the cauterization.

- The of treatment of Al-Qelaa (inflammation inside the mouth)-it is a disease affects the mouth- using the aloe and honey, or by using surgery method by making an injure inside the small abscess and fill by a small stone of the plant of Al-Kafour.

- The treatment of whiteness if the trainer of prey animals –using a drop of the gallbladder of the cock.

- There was a treatment for the infestation by worms parasites according to Al-Bazi (66). Also, the tartar had a treatment (67), as well as the color if the skin, and the cold or hot conditions had a treatment and other cases ...

some of materials which was used in the treatment was also: Butter, sugar, brain, legs of sheep, red arsenic, perfume, fat of the sawsan, the milk of the female of gazelle. Some of the professional people who are working in the Byzara profession made an attention on the amount of medication that must be given according to the size of prey animal, Al-Basheq for example is a small dose can be enough for the mentioned bird, because of the small size of the bird, while the bird of Al-Bazi may be require a larger dose because of the large size of that bird. The profession people of Byzara were wearing on the clinical indicators which were helped them in the diagnosis of the disease, and the event for that that somebody of them had said:

" I know that the feces of the prey animal as the same of the urine of human being, the practiced man indicates that the disease of prey animal can be known according the sign of the feces of the bird (69)".

Some of them stated that the signs of worms in the cavity of bird of Al-Bazi as he said: If you are seen Al Bazi bird pick up his feathers then you should know, that the mentioned condition is as result of the infestation of worms into the cavity for the bird (70). It should be mentioned that some signs can be understood that the prevention of the prey animals was the major target of the Byzara people, for example the good food should be distinguish from the harm one as somebody said:

"How the prey animal who has eaten the anasthetatics and bad food to able to be survived, both of these substances having a killing effective, and they both mix together with other hot, and sharp medications this will burn the livers of camels more than the livers of prey animals, this was reported in such books which are kept in the copy-board of kings" (71).

Quarries

It seems that the nature was full with available hunting, this indicates on the presence of too many mentioned quarries such as birds and wild animals including rabbits, deer and

gazelle and other types of birds such as Al-Habara, Al-Hajel and water birds and crow and so on... Al-Motaded was gone to hunt the wild animal, these were hunted until no one of these are remained (72).

As some one reported a useful point, that prey animals were fellow up different ways to hunting which are the most clever. As Mr. Bazyar reported that Al-Eqab may be hunted zebra, if they are seen zebra, they will jump through the air into water until their wings are becoming wet, After that they fall down on mud or sand and load some those materials with their wings, then they fly with an heavy weight until they fall down on the dorsal side of the zebra animal, they clap both wings with each other, their eyes are becoming full with mud, their eyes can be seen until they have their quarries (73).

In opposite side the quarries may have all the reason to prevention and caution themselves in order to avoid fallen by human hands. As crow was a precise caution, it was stated by somebody a story on the cheating of crow bird as they said, "It was reported on the crow that his father said to his son: if you have seen a man walking rotating with secure condition on the ground then know that he is picking a stone to catch you, son replay; if the stone is still by his hands what can we do?"

Kitab al-Siyasah fi 'ilm al-farasah wa-asha'ir al-khayl wa-ama'irha
(Management in Horsemanship and the Features and Chacteristics of the Horse)
attributed to 'Ali ibn Abi Talib (d. 661/40)

This treatise on the management and care of horses is falsely attributed to the Imam 'Ali ibn Abi Talib, the last of the Orthodox Caliphs.

	A page from the treatise on horsemanship titled Kitab al-Siyasah fi 'ilm al-farasah wa-asha'ir al-khayl wa-ama'irha and falsely attributed to the last of the Orthodox caliphs, 'Ali ibn Abi Talib (d. 661/40). A later owner, possibly a child, has put various doodlings, drawings, and jottings in the margins, such as this small human figure of a warrior
--	---

	<p>The final page of the treatise on horsemanship titled <i>Kitab al-Siyasah fi 'ilm al-farasah wa-asha'ir al-khayl wa-ama'irha</i> and falsely attributed to the last of the Orthodox caliphs, 'Ali ibn Abi Talib (d. 661/40). According to the colophon shown here, lines 11-15, the copy was completed on 29 Kanun al-thani 1830 (= 29 January 1830); the year is given according to the Western calendar. The copyist was a Christian named Hanna ibn Jurjis Saruf, who states that he worked in Damascus, Syria</p>
--	--

Kitab al-Sard fi 'ilaj al-dawabb wa-al-baqar wa-al-ghanam wa-adwiyatiha

(The Detailed Presentation on the Therapeutic Treatment of Beasts, Cattle, Sheep, and Goats, and their Medicaments)

attributed to Hunayn ibn Ishaq (d. 873/260 or 877/264)

Medieval biographical literature refers to a book on veterinary medicine (*Kitab al-Baytarah*) having been written by Hunayn ibn Ishaq al-'Ibadi, but this is generally thought to be his translation of the Greek treatise on hippiatrics by the 4th century Greek writer Theomnestus of Magnesia.

In the manuscript at NLM, Hunayn ibn Ishaq is repeatedly mentioned. He may be intended as the author or he may be a source from which information was compiled, along with Ibqarat (Hippocrates) and Falatis (Philotimos?), who are also cited. In any case, this manuscript does not consist of a translation of Theomnestus's Greek treatise. For the latter, see Robert Hoyland, "Theomnestus of Magnesia, Hunayn ibn Ishaq, and the Beginnings of Islamic Veterinary Science," in *Islamic Reflections: Studies in Honour of Professor Alan Jones*, ed. By Robert Hoyland and Philip Kennedy [Gibb Memorial Series] (Warminster: Aris & Philips).

	<p>The opening folio of <i>Kitab al-Sard fi 'ilaj al-dawabb wa-al-baqar wa-al-ghanam wa-adwiyatiha</i> (The Detailed Presentation on the Therapeutic Treatment of Beasts, Cattle, Sheep, and Goats, and their Medicaments) attributed to Hunayn ibn</p>
--	---

	Ishaq. The copy was completed toward the end (fi awakhir) of Rajab 1241 (= 11-21 March 1826) by the copyist Mahmud ibn Muhammad al-Ibi al-Hanafi. No other copy is recorded
--	---

Aqrabadhin al-khayl
(Formulary for the Horse)

Anonymous

This anonymous treatise on compound remedies and therapies for horses begins with a confused preface. In it, it is stated that the treatise was written originally in Armenian and was carried off to Egypt in 1266 by the Egyptian ruler al-Malik al-Zahir Rukn al-Din Baybars (ruled 1260-1277). It was then translated from Armenian into Arabic by Mahbub and Abu al-Faraj, and subsequently edited by one Muhammad ibn al-Khalifah Ya'qub with the assistance of a philosopher named Sa'd al-Din ibn Zahir al-'Ajami. No information is available on any of the figures named as translators or editors

Kitab Ma'rifat al-furusiyah
(Book of the Knowledge of Horsemanship)

Anonymous

This fragment consists of a table of contents (fihrist) only for a treatise titled Kitab Ma'rifat al-furusiyah. According to this table of contents, the treatise would have consisted of 75 sections.

Kitab Hayat al-hayawan
(The Life of Animals)

by Muhammad ibn Musá al-Damiri (d. 1405/808)

Muhammad ibn Musá al-Damiri completed his enormously popular encyclopedia of animal lore in 1372/773 in Cairo, where he spent most of his life. The treatise was arranged alphabetically by the name of the animal, with 1069 entries in total (though some animals are discussed several times under different names). Each entry would include a linguistic discussion of the origin and meaning of the name, a description of the animal and its habits, any accounts of the animal given in the literature concerned with the Prophet (hadith), a statement as to its appropriateness as food, proverbs relating to the animal, its medicinal and occult magical properties, and its significance when it appears in a dream. There were three versions that eventually circulated: a long one, a short one, and one of intermediate size.

	A sample page from the Hayat al-hayawan (The Life of Animals) by al-Damiri (d. 1405/808). This is an important copy,
--	--

	transcribed before the author's death. The copy was completed in the month of Sha'ban 805 (= February-March 1403). The copyist is not named
--	---

'Aja'ib al-makhluqat wa-ghara'ib al-mawjudat
(Marvels of Things Created and Miraculous Aspects of Things Existing)

Two zodiacal constellations, Capricorn above and Aquarius below. From 'Aja'ib al-makhluqat wa-ghara'ib al-mawjudat (Marvels of Things Created and Miraculous Aspects of Things Existing) by al-Qazwini (d. 1283/682). The copy was made in 1537/944, probably in western India. Neither the copyist nor illustrator is named

	A simurgh - a monstrous mythical bird with the power of reasoning and speech. From 'Aja'ib al-makhluqat wa-ghara'ib al-mawjudat (Marvels of Things Created and Miraculous Aspects of Things Existing) by al-Qazwini (d. 1283/682). The copy was made in 1537/944, probably in western India. Neither the copyist nor illustrator is named
--	---

	A bull waterbuffalo (jamus) with a bell round his neck and a ring (with attached lead) through his nose, and, below, a spotted, horned quadruped called simply 'a red animal'. From a copy of 'Aja'ib al-makhluqat wa-ghara'ib al-mawjudat (Marvels of Things Created and Miraculous Aspects of Things Existing) by al-Qazwini (d. 1283/682). Neither the copyist nor illustrator is named, and the copy is undated. The nature of paper,
--	---

	script, ink, illumination, and illustrations suggest that it was produced in provincial Mughal India, possibly the Punjab, in the 17th century.
--	---

	An Oryx, from a copy of ‘Aja’ib al-makhluqat wa-ghara’ib al-mawjudat (Marvels of Things Created and Miraculous Aspects of Things Existing) by al-Qazwini (d. 1283/682). Neither the copyist nor illustrator is named, and the copy is undated. The nature of paper, script, ink, illumination, and illustrations suggest that it was produced in provincial Mughal India, possibly the Punjab, in the 17th century.
--	---

Conclusion:

As we concluded in this quick background on some what is linking by veterinary and Byzara profession (science of prey animals), it seems that Arabic language is full with vocabularies which are belonging to veterinary medicine. As we are all aware on the importance of finding a civilization model in the veterinary medicine terminology. So I recommended that we should have benefit from our historical state of our Arabic language, even I aware that will be done only if we are guided to a benefit methods which can be to have utilization of the historical language by taken all what are valid to integrating during our new and modern form. There is no doubt that the first methods to reach to that path are the investigations on organizing continuously of scientific research which are based on completion with different sciences.

APPENDIXES OF THE RESEARCH

1. The tongue: (Bater)
2. Al-Modreaa the horn of bull, he wants to bit the quarry of dog, it is the meat which fear of the dog and so on, he save the quarry, and the brachium is the disease which affects in the brachium.
3. Statement of Al-Antaky 21.
4. See: Interpation of the foreign accent 12
5. Annes page 237.
6. Al-Anwar and the advantages vof pomes 31.
7. Al-Hazen: The hard ground which are full by stones.
8. Al-Jodd: The hard land.
9. Awon people of Al-Jahd 82
10. Al-EShtqaq (Derive from)
11. Awon people of Al-Jahd 145-146.
12. See: Awon people of Al-Jahd 134.
13. See: Awon people of Al-Jahd135.
14. See Privatization : 6/173-164
15. Specifications 6/142
16. Awon people of Al-Jahd 121
17. Awon people of Al-Jahd 120
18. Awon people of Al-Jahd 155
19. Awon people of Al-Jahd156-157
20. Awon people of Al-Jahd 161
21. Awon people of Al-Jahd 162
22. Awon people of Al-Jahd 170
23. Awon people of Al-Jahd 168
24. Awon people of Al-Jahd 159

25. Specifications 6/185
26. Specifications 6/185
27. Awon people of Al-Jahd 122
28. Awon people of Al-Jahd 123
29. Awon people of Al-Jahd 125
30. Specifications 6/185
31. Awon people of Al-Jahd 122
32. Awon people of Al-Jahd 123
33. Awon people of Al-Jahd 125
34. Al-Anouar and Advantages of pomes 278
35. Al-Anouar and Advantages of pomes 223
36. Awon people of Al-Jahd 70
37. Al-Anoura and Advantages of pomes 223
38. Awon people of Al-Jahd
39. See: science of Al-Byzara 04
40. See: Al-Byzara 04
41. See: Al-Byzara 40-46
42. Al-Byzara 24
43. Al-Byzara 24
44. See: Al-Anoura and Advantages of pomes 108 and Al-Byzara 49 and later said Baz and Baz and Bazi and Bazi
45. Al-Anoura and Advantages of pomes 0
46. Specifications Al-Anoura 6/149
47. Anoura and Advantages of pomes 2/214
48. Anoura and Advantages of pomes 2/236
49. Al-Anoura and Advantages of Al-Anour 2/205

50. See Specifications 149
51. See: AlByzara 108
52. Specification 8/72 and See Al-Berza 118.
53. Al-Anour AND Advantages of pomes 2/156
54. Al-Byzara 140 and complet verus : As the Lord says in the Holy Quraan as roughly translation: They ask you what are HALA to eat in Islam such as meat, say you all good foods and what you know from the prey animals { Al-Maada verus 4)
55. See Al-Byzara 39 and Al-Anour and the advantage of pomes 2/.101
56. Byzara 75
57. Byzara 146
58. See the derive from 225]
59. Derive from 20-21
60. Al-Byzara 146
61. Al-Byzara 86
62. Al-Byzara 876
63. Al-Byzara 89
64. Al-Byzara 91
65. Byzara 91
66. Byzara91
67. Byzara 62
68. Byzara 65
69. Byzara79
70. Byzara 91
71. Byzara76
72. Byzara46

73. Specifications 8/146

74. Al-Byzara 64

75. Al-Anour and the advantages of pomes 2/291