

List of Fruits and Nuts in the Zoroastrian Tradition: An Irano-Hellenic Classification*

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For Houšang A'lam

In Memoriam

Persian taste for the good things in life was well-known to the Greeks and the Romans. When it came to gastronomy Herodotus mentions that the Persians could become very fussy about eating (7.119). The order of seating and eating etiquette is amply mentioned by both foreign authors and the Persians themselves. This taste for the finer things in life is best evidenced in a Middle Persian text, *Xusrō ud Rēdag* (Xusrō and the Page),¹ where the best kinds of meats, desserts, wines and fruits are mentioned. It is this last group, namely the fruits, that is a point of study here which is dedicated to the Persian savant, Houšang A'lam whose work on flora and fauna in the *Encyclopaedia Iranica*² and the *Great Encyclopedia of Islam*³ is of immense importance.

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1. D. Monchi-Zadeh, "Xusrōv ī Kavātān ut Rētak," *G. Morgenstierne Monumentum*, Leiden, 1982, pp. 47-91.

2. For example, see H. A'lam, "Fruit," in E. Yarshater, ed., *Encyclopaedia Iranica*, Vol. X, New York, 2001, pp. 222-227 which is used in this article.

3. Many of A'lam's Persian entries in this encyclopedia has been conveniently gathered in H. A'lam, *Jostārḥāyī dar tārīkh-e 'ulūm dar dore-ye islāmī*, Tehran, 1381.

The Greeks and the Romans knew that certain fruits that had entered the Mediterranean world were Persian in origin or came via Persia. The most famous of these was the pistachio and a kind of walnut known as *Persicum* (Pliny xv.86). In late antiquity the peach was known to the Romans as *Amygdalus persica*, and its tree was known as *Melea persike* or simply *Persike* (Pliny xv.44).⁴ In fact, most European languages associate the peach with Persia. But these were only a few items of the fruity world of the Persians, and the Chinese also associated a large number of fruits with Persia or as coming from Persia. The earliest comprehensive list of fruits appears in late antiquity where a distinctive botanical classification emerged which was based on the Zoroastrian worldview. In this worldview the plants and fruits in their ideal and primeval state were without skin or a protective layer, or thorn, and were sweet. But the evil spirit, Ahreman, had attacked the world and contaminated the sweet and tasty fruits. This is the reason that some of the plants or fruits have poison and cause death now, as all that Ohrmazd has created is good and beneficent and can not cause harm to anyone. These matters can be understood by looking at the great Zoroastrian encyclopedic work, the *Bundahišn* which dedicates its sixteenth chapter to plants and fruits.

The classification of the fruits is very interesting in that they are divided in such a way that “there are 30 kinds of principal fruits” *mēwag (ī) mādagwar sīh ēwēnag*. The 30 kinds of fruits then are divided into three categories, where “10 kinds of which the inside and outside are edible” *dah ēwēnag andarōn ud bērōn šāyēd xwardan*; “10 are edible outside but not edible inside” *dah bērōn šāyēd xwardan ud andarōn nē šāyēd xwardan*; and “10 are edible inside and not edible outside” *dah ān ī andarōn šāyēd xwardan ud bērōn nē šāyēd xwardan* (XVI.26). This division has been pointed out by J. P. Asmussen to derive from the *Hexaëmeron* of Jacob of Edessa who lived in the late seventh century CE.⁵ This division may well be indicated by Jacob of Edessa, but it may very well be that the material here and that of the classification is much older than the seventh century CE. It is

4. O. Kurz, “Cultural Relations between Parthia and Rome,” in E. Yarshater, ed., *The Cambridge History of Iran*, Vol. 3(1), Cambridge, 1983, p. 565.

5. J. P. Asmussen, “The List of Fruits in the *Bundahišn*,” *Henning Memorial Volume*, London, 1970, p. 15, quoting A. Baumstark, *Geschichte der syrischen Literature*, Bonn, 1922, p. 255.

more probable that the Zoroastrians had already codified these matters well before the fall of the Sasanians, as Jacob of Edessa was living in a time of great turmoil in Persia (640-708 CE) and the Zoroastrian priests could not have worked on these matters then.

While the 30 kinds of fruit classification may be a late antique tradition, all of such classifications go back to much earlier period. It is Aristotle who classifies fruits as "some (fruits) have rind outside and flesh inside, others flesh outside and seed inside; in other ones comes immediately upon the seed with the envelope which encloses."⁶ Aristotle's pupil, Theophrastus, worked further on botany, publishing *De historia plantarum* (History of Plants) and *De causis plantarum* (The Reasons of Plant Growth). We know very little of the cultural and scientific contacts between Greece and Persia in the Hellenic age, but it is for certain that works in Greek were commissioned by the Arsacids (247 BCE-224 CE). We should not forget that another great botanist, Dioskoride had written an illustrated work on botany whose Arabic translation is in existence, but which could have reached Persia before the advent of Islam.

The streaming of Greek knowledge into Persia in late antiquity is well attested by the Zoroastrian tradition itself where works on astronomy (*star-ōšmārišn*),⁷ geometry (*zamīg paymānīh*), physics (*čīhr-šnāsīh*),⁸ philosophy (*fīlāsōfīh*),⁹ and probably botanical sciences (**urwar-šnāsīh*) were influenced by Greek, Indian and Chinese works.¹⁰ Where there are discrepancies between Greek and Zoroastrian doctrines in Middle Persian

6. For the text, see J. Bussemaker, *Aristotelis Opera Omnia*, Vol. iv, Paris, 1878, and translation by E. S. Forster, revised translation by J. Barnes, *The Complete Works of Aristotle, The Revised Oxford Translation*, Vol. 2, Bollingen Series lxxi.2.

7. W. B. Henning, "An Astronomical Chapter of the Bundahishn," *Journal of the Royal Asiatic Society*, 1942, pp. 229-248; and D. N. MacKenzie, "Zoroastrian Astrology in the Bundahishn," *Bulletin of the School of Oriental and African Studies* 27/3 (1964): 511-529.

8. H. W. Bailey, *Zoroastrian Problems in the Ninth Century Texts*, Oxford, 1971, pp. 82, 88.

9. M. Shaki, "Some Basic Tenets of the Eclectic Metaphysics of the Dēnkard," *Archiv Orientalní* 38 (1970): 277-312.

10. J. K. Choksy, "Incorporation of Medieval Science into Zoroastrian Scripture and Exegesis: Some Evidence from Dēnkard Book 4," in T. Daryaee and M. Omidsalar, eds., *Mēnōg ī Xrad: The Spirit of Wisdom, Essays in Memory of Ahmad Tafazzoli*, California, 2004, pp. 58-63.

texts, Zoroastrian logic and science always prevailed. This is due to the fact that Zoroastrianism demanded respect for religion first and foremost something found in other religious traditions as well.¹¹ What is impressive is that the Zoroastrians were able to somehow bring a *modus vivendi* among such topics as philosophy, science and religion, while in other religious traditions of Late Antiquity and the Medieval period this effort unraveled.

We can pinpoint the periods for intense contact between Greek and Persian culture mainly with Šābuhr I in the third century and Xusrō I in the sixth century CE. According to the fourth book of the *Dēnkard*¹² king Šābuhr had the following sciences collected:

*abar biziškīh ud star-gōwišnīh ud čandišn ud zamān ud gyāg ud gōhr ud
jahišn ud bawišn ud wināsišn ud jadag-wihērīh ud gōwāgīh ud abārīg
kīrrōgīh ud abzār andar hindōgān ud grōm ud abārīg-iz zamīgīhā pargandag
būd*

on medicine, astronomy, movement, time, space, substance, accident, becoming, decay, transformation, logic and other crafts and skill which were dispersed throughout India, Rome and other lands.¹³

Again during the rule of Xusrō I in the sixth century there was another and better documented effort to accumulate knowledge from outside of the Sasanian Empire. Emperor Justinian's zealotry forced some of the pagan philosophers to leave their homeland. These were not any ordinary philosophers, but the most prolific and important the Eastern Roman empire possessed. They included Damascius of Syria and his pupil Simplicius who was the most prolific Aristotelian commentator at this time,¹⁴ along with other scholars. King Xusrō Anōšag-ruwān was receptive of them and commissioned translations of philosophical works.¹⁵ One person above all,

11. Shaki 1970: 300.

12. Choksy 2004: 60.

13. M. Shaki, "The Dēnkard Account of the History of the Zoroastrian Scriptures," *Archiv Orientalní* 49 (1981): 116, 119.

14. J. Walker, "The Limits of Late Antiquity: Philosophy between Rome and Iran," *The Ancient World* 33/1 (2002): 57.

15. J.-F. Duneau, "Quelques aspects de la pénétration de l'hellénisme dans l'empire perse sassanide (IVe-VIIe siècles)," *Mélanges offerts à René Crozet*, Société d'Études Médiévales, 1966, Vol. 1, pp. 13-22.

namely Paul the Persian is important in this activity who translated Aristotelian works dedicated to the monarch,¹⁶ while another, Priscianus Lydus, wrote books on Aristotelian physics, theory of the soul, meteorology, and biology in Persia.¹⁷ It may be so that the philosophical material existing in the *Dēnkard* have their origins from this period.¹⁸ There are other materials that were brought to the Persian court at this time and the main reason for such an effort was that if there was to be a revitalized empire, it needed to be on par with its neighbors in terms of learning and the sciences.¹⁹ These matters appear to have very much occupied Xusrō I's mind and he took important actions to secure and rejuvenate the Sasanian Persian Empire.²⁰

The botanical classification of the *Bundahišn* may be part of this influence from the West. Below, the section on fruits will be transcribed and translated, followed by notes to clarify this part of the great Zoroastrian encyclopedic work. This section of the *Bundahišn* is found both in the Iranian (TD1 fols. 48r-v; TD2 fols. 61r-v; DH fols. 191r-v) and the Indian *Bundahišn* (66r) which is the sixteenth chapter of Anklesaria's translation,²¹ and F. Pakzad's critical edition of the text.²² J. P. Asmussen's English,²³ M. Bahar²⁴ and R. Behzādī's Persian translations²⁵ are compared and further suggestions given for the ambiguous readings.

16. D. Gutas, "Paul the Persian on the Classification of the Parts of Aristotle's Philosophy: A Milestone between Alexandria and Bagdād," *Der Islam* 6 (1983): 231-267.

17. Duneau 1966: 20; see also D. Gutas, *Greek Thought, Arabic Culture: The Greco-Arabic Translation Movement in Baghdad and Early 'Abbāsīd Society (2nd-4th / 8th-10th centuries)*, New York, 1998, pp. 25-26.

18. For the philosophical material, see M. Shaki, "A Few Philosophical and Cosmogonical Chapters of the *Dēnkart*," *Archiv Orientalni* 41 (1973): 133-164.

19. See T. Daryaee, "Mind, Body, and the Cosmos: Chess and Backgammon in Ancient Persia," *Iranian Studies* 35/4 (2002): 281-312.

20. T. Daryaee, "The Ideal King in the Sasanian World: Ardaxšīr ī Pābagān or Xusrō Anōšag-ruwān?," *Nāme-ye Irān-e Bāstān* 3/1 (2003): 33-45.

21. B. T. Anklesaria, *Zand-Ākāsīh, Iranian or Greater Bundahišn*, Bombay, 1956, pp. 150-151.

22. F. Pakzad, *Bundahišn: Zoroastrische Kosmogonie und Kosmologie*, Band I, Tehran, 2005, pp. 216-217.

23. Asmussen 1970: 15-17.

24. M. Bahār, *Bundahiš-e Farnbag-e Dādīg*, Tehran, 1369, p. 88.

25. R. Behzādī, *Bundahiš-e Hindī*, Tehran, 1368, pp. 59-60, 112.

mēwag (ī) mādagwar sīh ēwēnag aziš dah ēwēnag andarōn ud bērōn šāyēd xwardan čiyōn anjūr²⁶ ud sēb ud bēh²⁷ ud wādrang²⁸ ud angūr²⁹ ud tūt-bun³⁰ ud urmōd³¹ ud nūn any dah bērōn šāyēd xwardan ud andarōn nē šāyēd xwardan čiyōn xormā³² ud šiftālūg³³ ud zardālūg ud srinjad ī was-gōnag ud kunār³⁴ ud ālūg³⁵ ud sāl ud dah ān ī andarōn šāyēd xwardan ud bērōn nē šāyēd xwardan čiyōn gōz³⁶ ud wādām³⁷ ud anār³⁸ ud anārgēl³⁹ ud pondik⁴⁰ ud šāhbalūt⁴¹ ud wan⁴² ī gurgānīg kē pistag⁴³-iz xwānēnd

26. *Ficus carica*; Laufer has conjectured that the Chinese *a-zi* and **ā-žir* is derived from an Iranian word, compare Kurdish *hezīr* (without *n*). Strabo (II.1.14) mentions of the large yielding Hyracanian fig tree which gave one bushel and a half, see B. Laufer, *Sino-Iranica, Chinese Contributions to the History of Civilization in Ancient Iran with Special Reference to the History of Cultivated Plants and Products*, Taipei, 1919 (reprint 1967), pp. 410-412.

27. *Cydonia vulgaris*.

28. *Citrus Medica*.

29. *Vitis*.

30. *Morus alba*, here literally meaning “mulberry tree,” compare with Persian *xormā-bun* “palm tree.”

31. Also Persian *armūd*, *amrūd*.

32. *Pheonix dactylifera*; The Chinese were introduced to dates via the Sasanians known as *ts'ien nien tsao* “jujubes of thousand years,” and also known as Po-se tsao “Persian jujube.” The Persian word for date is also adopted in Greek *χορμιάς*; Albanian *korme*, but also eastward, Javanese *kurma*, Malayan, Dayak and Sunda *korma*, Laufer 1919: 385-386.

33. A Persian dictionary composed in China in the seventeenth century mentions *šafrang* where its various colors (here white) are noticed, H. Vafā'ī, *Farhang ī fārsī, Being an Old Persian Dictionary Compiled during the Early 16th Century in China*, ed. T. Huizhu, Tehran, 1374, p. 134.

34. *Ziziphus*.

35. *Prunus domestica*.

36. *Juglans*; another form of this fruit is known as *Juglans regia* “Royal walnut,” i.e., Persian walnut.

37. *Amygdalus communis*.

38. Asmussen has forgotten to transcribe the word and only mentions it in the translation and this is because it appears in the *Indian Bundahišn* and Pazand version, see Behzādī 1368: 189, n. 83.

39. *Cocos*; In Middle Persian it is also known as *gōz ī hindūg* “Indian walnut / nut,” see *Xusrō ud Rēdag* (50), Monchi-Zadeh 1982: 74.

40. Hazelnut; Persian “fundugh” has its origins in the West, probably from the Pontic region, hence Middle Persian *pondik* (Greek *ποντικόν*, Kurz 1983: 566.

41. *Castanea*; as opposed to *Castanea sativa* which is the European chestnut.

There are 30 kinds of principal fruits, ten kinds of which the inside and outside are edible: fig and apple and quince and Citrus medica and grapes and mulberry and pear and now another 10 are edible outside but not edible inside: date and peach and apricot and many kinds of oleaster and lote⁴⁴ and plum and jujube and 10 are edible inside and not outside: walnut and almond and pomegranate and coconut and hazelnut and chestnut and the Hyrcanian tree which is also called pistachio.

Commentary

-wādrang: This fruit was identified by Theophrastus in the fourth-third millennium BCE as *Citrus medica* "Median apple" and also as *mēlon persikon* "Persian apple," and by Pliny in his *Historia naturalis* as *malus mēdica*. In Persian the fruit is also known as *bāzrang* / *bādrang*, *wārang*, *bālang*, and *tōrang*, but the fruit appears to have come from India (compare Sanskrit *mātuluṅga*). It is from Persian *torang* that it has found its way into Arabic as *toranj*, *otranj*, and in Hebrew as *etroj*. Consequently in some medieval texts it is called *toffah ma'ī* which is a mistake based on Greek *mēlon medikon*, taking the region of Media (Mādī) as *ma'ī* and so imagined as "watery apple."⁴⁵ This fallacious idea has provided interesting traditions in the larger Iranian world, where for the Persian New Year celebration *beh* was placed in a water bowl and consequently called *sēb ī ābī*.

-nūn any: Asmussen conjectures *nūn any* "now other" which was based on H.W. Bailey's suggestion to him (private letter), or *nūm pas* "now onward" supported by TD1 and TD2 which is rendered by the *Indian Bundahišn* as *abārīg az ēn ēwēnag*.⁴⁶

-zardālūg ud srinjad ī was-gōnag: Asmussen has read the second word as *srinjad* / *sinjad* "jujube" which is the wrong translation. The Persians have been known to suck on this fruit *sinjid mekidan!* and it is not a

42. From *van-*, Persian *biun-*, Sogdian *wnh* and more interesting in this context Balōčī *gwan* "wild pistachio," H. W. Bailey, "Plant Names," in I. Gershevitch, ed., *The Cambridge History of Iran*, Vol. 2, 1985, p. 870.

43. Pistaca,

44. *Zizyphus spina-christi*, A'lam 2001: 222.

45. See the learned article by I. Pourdavud, "Toranj," *Hormazd-nāmeḥ*, Tehran, 1331, pp. 66-92; M. Sotudeh, "Sēb Mādī, na sēb-e mā'ī (ābī)," *Ayandeh* 10/1 (1363): 9; A'lam 1381: 33-38.

46. Asmussen 1970: 16, 14f.

jujube. As for first word *Zardālūg* it is certainly known as “apricot” (Arabic) *mešmeš*.⁴⁷ The *Indian Bundahišn* provides *spēd*⁴⁸ instead of *srinjad*. The problem is what to do with the next word *sywk / synk*?⁴⁹ Anklesaria has read the fruit as *zardālūg ī spēd sīnīg* “the small apricot of white-breast.”⁵⁰ One may follow Anklesaria’s suggestion in another manner. It is not uncommon in Middle Persian literature to identify a specific plant or fruit with a region to distinguish it from a similar fruit. For example “Chinese ginger” *sinjiwēl ī čīnīk* (46);⁵¹ and “Indian nut” *gōz ī hindūg* which refers to *anārgīl* (50).⁵² In Iran there is a fruit known as *zard alū-ye mančūrī* (*prunus mandshurica koehne*) “Manchurian apricot / peach,” which give us a further evidence for the fruit being mentioned.⁵³ This matter brings to mind E. H. Schafer’s important work entitled *The Golden Peaches of Samarkand*, which mentions the golden peaches sent to China (*sēn / sīn / čīn*) from Samarkand were considered the proxies of all exotic goods in medieval China.⁵⁴ One can take the fruit as *zardālūg ī spēd* “white apricot,” as we have various kinds of apricot attested in Iran. In the *Tārīkh-e Beyhaghī* we get such a list “red Persian apricot, white, bolbolī, sa’īdī, garmeh, bū’amari.”⁵⁵ But this is a secondary suggestion. After *zardālūg* one may be able to read the next two words as *srinjad ī was-gōnag* “many kinds of oleaster,” by minor emendation as Porouchani has done.⁵⁶ Indeed there are many kinds of *srinjad / sinjad* and in English it is known as Russian olive.⁵⁷

Classical Persian *hūlū* is a kind of (Middle Persian) *šaftālūg* (Persian)

47. H. A’lam, “Persian Medical Terminology of the *Agrāz al-Ṭebbīya* by Sayyed Esmā’īl Jorjānī,” in A.-A. Sadeghi, ed., *Tafazzoli Memorial Volume*, Tehran, 2001a, p. 7.

48. Behzādī 1368: 189, n. 81.

49. Pakzad’s reading as *sywk / sēnag*, 2005: 217, n. 225.

50. Anklesaria 1956: 150.

51. Monchi-Zadeh 1982: 73.

52. Monchi-Zadeh 1982: 74.

53. V.-A. Mozaffariān, *Farhang-e nāmā-ye gīyāhān-e Irān*, Tehran, 1375, p. 400.

54. E. H. Schafer, *The Golden Peaches of Samarkand*, Berkeley, Los Angeles, London, 1963, p. 117.

55. *Tārīkh-e Beyhaghī*, Tehran, 1317, p. 279.

56. I. Porouchani, “Concombre ou jujube? Xiyār yā onnāb?,” *Studia Iranica* 20 (1991): 214.

57. A’lam 2001: 222.

šaftālū which is also known as *šaftālū-ye ārdī*.⁵⁸ Here *ārdī* refers to the color “white” of the peach. It is interesting that before our fruit in question, which may very well be the famous Golden Peaches from Samarkand, *šaftālūg* is mentioned which may support my suggestion. Another, more remote possibility has to do with the region of Persia known as *sīnak* where its fruit is cherished in Persia, hence *šaftālū-ye sīnak / sīnakī*.

-sāl: This word is particularly difficult to interpret. Asmussen suggests that the word *ddar* could simply be a mistake for *adar*, i.e., *xyār* “cucumber.”⁵⁹ It is unlikely that cucumber, which should really be classified as a vegetable, is making its appearance here. Pakzad is also uncertain of the reading and leaves it as *shl / sgēl* or *sgēr* and we have to wait for his notes and translation.⁶⁰ If we look at the list we are dealing with they include plums, peaches and apricots. If we read the word as *s'l / sāl* it may be connected with the fruit known today as *zāl-zālak* (reduplicated *sāl*?) which is a kind of wild plum known as “hawthorn” or *crataegus oxyacantha* and sometimes categorized as an apple or plum⁶¹ which fits the context here in our passage. I still would take Porouchani’s suggestion that the word is *sāl* where in Hebrew *šāl* / Arabic *ḏāl* as “wild jujube” known in Persian as *onnāb-e barrī*.⁶²

wan ī gurgānīg / pistag: In the *Xusrō ud Rēdag* (51) it is mentioned as *bistag ī gurgānīg* “Hyrcanian pistachio.” This was the famous fruit which the Greeks were introduced to in the Hellenistic period and was first planted in Italy in the first century CE.

Conclusion

It appears that in the sixth century CE during the influx of information from India and the Eastern Roman empire a large amount of scientific information came into Iran. Under the patronage of Xusrō I a campaign of translation from Sanskrit and Greek into Middle Persian took place. One of these new scientific approaches was in regard to the classification of fruits and nuts, something that had begun with Aristotle in Greece and through the

58. *Borhān-e Qāte'*, ed. M. Mo'īn, Tehran, 1361, p. 2360.

59. Asmussen 1970: 16, n. 22.

60. Pakzad 2005: 217, n. 226.

61. M. Mo'īn, *Farhang-e fārsī*, Vol. 2, Tehran, 1371, p. 1713.

62. Porouchani 1991: 215.

Syriac intermediary it reached the Persian Zoroastrian priests and scholars. Consequently this Greek classification found its way in the *Bundahišn*. In many ways the Xusrō I model of a translation movement was copied in the 'Abbasid period where many of the works which existed in Middle Persian were translated into Arabic. In the Arabic sources there are a few references to *bayt al-ḥikma* (house of wisdom, i.e. library) which, according to Hamza al-Iṣfahānī, was the Sasanian term for library,⁶³ which may be rendered in Middle Persian as **handarz-xānag*. It was this *bayt al-ḥikma* which allowed for the seeping of Indic and more importantly Greek scientific knowledge into Sasanian empire.

This classification passed onto the Islamic world where according to Ṭabarī⁶⁴ and Mas'ūdī⁶⁵ these thirty kinds of fruits were given by God to Adam when he fell from paradise onto earth. These two Muslim Persian scholars provide a list of some of the fruits missing from the *Bundahišn* which thanks to A'lam have been identified as (I) melon *xarboza*; (II) fruit of doom palm *moql*; yellow plum *šāhlūj*; and (III) opium poppy capsule, acorn, and banana.⁶⁶ The Aristotelian classification persisted in Iran, but with an Islamic theological twist, and through the Zoroastrian Middle Persian intermediary.

63. Gutas 1998: 54.

64. *Kitāb akhbār al-rosol wa 'l-molūk*, ed. M. J. de Goeje *et al.*, 15 Vols., Leiden, 1879-1901, I, p. 128.

65. *Morūj al-dahab*, ed. Ch. Pellat, 7 Vols., Beirut, 1962-1979, I, p. 37.

66. A'lam 2001: 222.