

Utility and Aesthetics in the Gardens of al-Andalus: Species with Multiple Uses

Over the course of human history, the Mediterranean basin has been an area of cultural diffusion and exchange involving various peoples, representing the destination of numerous migrations. In the 7th century, this area experienced intense upheaval when the Muslims entered Syria and very rapidly incorporated Northern Africa, the Iberian Peninsula and the major islands and southern section of Italy, whereby all of these territories were united under a new language and a new religion. Islamic expansion, which integrated areas with diverse traditions and separate evolutions into a vast economic and cultural unit, created the conditions for profound agricultural reform, although revolution is a more accurate description, wherein irrigation played a key role. However, the cultivation of new plants from tropical and sub-tropical regions, which were gradually introduced into the drier and colder climates of the Near East and the Mediterranean, gave rise to the need to construct artificial ecosystems that would provide suitable conditions of humidity and temperature. Indeed, such requirements were doubly pressing given the scale of the cultivation in question. The new species could only take root as summer plants in irrigated areas, in other words, in small areas over an excessively short period of time. Hydraulic systems were quickly transformed and, via the invention of new techniques and the development and diffusion of existing techniques, the Muslims were able to create large areas of irrigated land in the territories in which they settled¹.

In comparison with other areas of the Islamic world, the advances made within this new agriculture were most conspicuous in al-Andalus², which may be attributed to the constant juxtaposition offered by the remainder of the Iberian Peninsula, for the most part unirrigated land. This agriculture is principally characterised by intensive irrigation of plots, largely involving smallholdings, wherein methodical and well distributed irrigation transformed previously uncultivated land or land with poor yields.

This method of structuring the landscape is clearly reflected in the agricultural treatises from the Andalusí period, which were written between the 10th and 14th centuries. The first treatise, which was Anonymous, was written at the end of the 10th century, followed by six of the eight known treatises, within the aforementioned period. The authors were Ibn Wāfid, Ibn Ḥajjāj, Ibn Baṣṣāl, Abū l-Khayr, al-Ṭighnārī and Ibn al-ʿAwwām respectively. Finally, Ibn Luyūn wrote an agricultural work in verse form in the middle of the 14th century. These texts enable discovery of the rich diversity of

¹ For further information on the causes of this agricultural revolution, the following works, amongst others, may be consulted: Andrew M. Watson, *Agricultural innovation in the early islamic world: the diffusion of crops and farming techniques, 700-1100* (Cambridge, Eng., 1983); Expiración García Sánchez, "Agriculture in Muslim Spain", in *The Legacy of Muslim Spain*, ed. Salma Khadra Jayyusi, Handbuch der Orientalistik. 1. Abteilung (Leiden-Cologne, 1992), pp. 987-999; Mohammed El Faïz, "L'apport des traités agronomiques hispano-arabes à l'histoire économique d'al-Andalus", in *Ciencias de la Naturaleza en al-Andalus. Textos y Estudios. III*, ed. Expiración García Sánchez (Granada, 1994), pp. 403-433.

² This area of the Iberian Peninsula was under Islamic control for almost eighth centuries, although the geographical boundaries of the region varied as a result of the incursions and retreat of the Christian kingdoms.

species, techniques and applications present at this time and, in short, allow us to envisage the landscape and flora of the Western Mediterranean in the medieval era³. Another important source for the knowledge of the cultivated and wild plants in al-Andalus is the so-called *‘Umdat al-tabīb*, attributed to the agronomist Abū l-Khayr, which is considered to be the most complete Andalusī botanical work to date⁴. FIG. 1

Plots in the periphery of the city: etymological interpretation and function

Irrigated areas are organised into two basic types of plots, *bustān* and *janna*, which represent the cornerstones of agricultural production in the periphery of the city in the al-Andalus period. However, not enough research has been carried out in relation to the meaning and function of these units.

In general, both of these Arabic terms are indiscriminately applied to the various types of garden found in the medieval period, particularly to those gardens that are predominantly or exclusively of an ornamental nature. However, general application is inappropriate as the concept of the “Islamic garden” or, more specifically, the “Arabic-Islamic garden”, is rather complex, given that it involves the influence of pre-existing concepts that were assimilated by the Arabs as they expanded into the Orient and Occident, as is the case with Arabic-Islamic culture on the whole. Thus, the primitive and commonly used Semitic term *janna* [orchard], as opposed to desert (*ṣahrāʾ*), came to incorporate, on the one hand, the oriental concept of *bustān* [garden], which is of Persian origin⁵, and on the other hand, the occidental concept of *hortus* [vegetable garden], which is of Graeco-Latin origin. All of these concepts developed along their own lines in the Islamic world during the first era, although they did not supplant certain tendencies that continued to be maintained in the areas where they originated, such as the Nilotic garden in Egypt or the Berber *agdal* in Morocco⁶.

At times, when translating these Arabic terms (*bustān* and *janna*) into European languages their original meaning is lost, or they are both indiscriminately identified with “garden” and “vegetable garden”. However, the meanings vary according to time and place and can not be applied synchronically, whereby, in most cases, it is difficult to distinguish between one term and the other.

³ For an overview of these treatises and the information they contain, see to the work carried out by J. Esteban Hernández Bermejo and Expiración García Sánchez. “Economic Botany and Ethnobotany in al-Andalus (Iberian Peninsula: Tenth-Fifteenth Centuries), an Unknown Heritage of Mankind”, *Economic Botany* 52 (1998), 15-26.

⁴ Abū l-Khayr al-Ishbīlī, *Kitāb ‘Umdat al-tabīb fī maʿrifat al-nabāt li-kull labīb. Libro base del médico para conocimiento de la botánica por todo experto*, eds. Joaquín Bustamante, Federico Corriente and Mohamed Tilmatine (Madrid, 2004), hereafter cited as *‘Umdat al-tabīb*.

⁵ In Persian, *bustān* literally means “place of aromas” and has traditionally been used by Arab writers to refer to a garden located within a patio, although subsequent changes in meaning arose.

⁶ In the Middle Ages, other Arabic terms were employed to refer to garden, such as *riyād*, which is most appropriately applied to an ornamental garden [the singular, *rawḍa*, is also used to refer to a cemetery], *ḥadīqa*, *ḥāʾit*, *ḥayr*, amongst others. See Expiración García Sánchez, “Cultivos y espacios agrícolas irrigados en al-Andalus”, in *Agricultura y regadío en Al-Andalus: síntesis y problemas*, ed. Lorenzo Cara Barrionuevo and Antonio Malpica Cuello (Almería-Granada, 1995), pp. 17-37.

Munya is another Arabic term that is closely related to the two previous terms and which has passed into Spanish as “*almunia*”. This term has also been subject to variations in terms of its philological interpretation and at times is employed as a synonym of *bustān*⁷.

In the Arabic-Latin lexicographical works written in the Iberian Peninsula between the end of the 7th century and the beginning of the 14th century, *bustān* is mainly used to refer to ornamental gardens, in keeping with its original meaning, whilst a wide variety of Arabic terms, including *janna* and *munya*, are applied to the agricultural areas in city peripheries, all of which are employed as synonyms of *hortus*. This is in keeping with the general tendency within Medieval Latin, particularly in the 13th century, to distinguish between *hortus* and *viridarium*, whereby the former has functional connotations and the latter is associated with leisure⁸.

Indeed, these terms can not be viewed as univocal and unchanging, as their function and the elements that configure and define them fluctuate on the basis of factors of time and space and, above all, in accordance with the textual sources that employ them and the type of property to which they are assigned. Therefore, in the majority of cases, defining the characteristics and function of the areas to which these terms make reference is no easy task.

Irrespective of the name applied to these areas, our main focus involves the plant elements included in these divisions, the manner in which they are integrated and the role that they play.

Royal Estates (*munya*, pl. *munà*)

In the early stages of al-Andalus, historic and geographical texts mention the existence of *almunias* or palatial residences in the area surrounding Cordoba, amongst which Arruzafa is the most famous and the first to be historically documented⁹. This residence was constructed at the behest of the first emir of the Umayyad dynasty, ‘Abd al-Raḥmān b. Mu‘āwiya (756-788), when he settled in al-Andalus subsequent to the massacre that led to the fall of the Umayyad caliphate in the East. He sought to emulate the favourite residence possessed by his grandfather, the caliph Hisham b. Abd al-Malik, in the desert of Syria, naming his own construction after this place. Existing documents relating to this cordovan *almunia* provide information on its edifications, gardens and exterior areas, along with details on the activities carried out in these spaces.

One of the most striking characteristics of Arruza, which bears special mention, involves the multiple functions assigned to the areas surrounding this construction: in addition to descriptions of magnificent buildings and gardens of a strictly ornamental nature, there are reports of certain activities relating to agricultural and botanical

⁷ In al-Andalus there was no clear separation between *munya* and *bustān* and both terms figure as synonyms in the texts. However, in certain periods the difference in meaning is more obvious and use fluctuates between one term and the other.

⁸ Medieval Latin distinguishes between *hortus* (“a small rural holding including homestead and kitchen garden”) and *viridarium* (“pleasure garden”). See Jan F. Niermeyer, *Mediae latinitatis lexicon minus*, 2 vols. (Leiden-Boston, 2002), 1:653 and 2:1446.

⁹ See Manuela Marín, “Ruṣāfa. In Muslim Spain”, in *Encyclopaedia of Islam*, new ed. (Leiden, 1995), 8:631-633.

experimentation, such as the introduction, acclimatisation and dissemination of new species imported from other areas of the Islamic world.

This *almunia*, owned by the sovereign of al-Andalus, demonstrates that it is possible to adopt multiple functions, wherein decorative elements, aimed purely at sensory pleasure, are combined with utilitarian activities: in short, the concepts of adornment and utility are not mutually exclusive in these garden areas, but rather may be, and indeed are, integrated.

Amongst other factors, the texts provide information on the property system, location, elements and functions of the residence, allowing us to identify a type of structure, present in the 8th century during the caliphal period, that would serve as a precursor for subsequent structures arising on the estates of governors and aristocrats, which would endure until the end of the Nasrid kingdom in Granada.

Arab documents are the source of a fascinating account of its construction and of the agricultural activities which took place there, with emphasis on its fundamental importance almost as an experimental garden:

“One of the great works that ‘Abd al-Raḥmān b. Mu‘āwiya had carried out at the beginning of his rule was the orchard of the Arruzafa ... He built a splendid royal palace, and laid out extensive gardens in which exotic plants and trees from all parts were planted. He ordered the planting of stones from special fruits, as well a rare seeds brought by Jazīd and Safar, his ambassadors in Syria, so that with the benevolence of destiny and careful cultivation, the surrounding gardens became the home of luxuriant trees producing exotic fruit, which shortly spread to all parts of al-Andalus, where the supremacy of these fruits over other varieties was soon recognized”¹⁰.

Thus, given its unusual characteristics, Arruzafa has been considered as the first botanical garden of the al-Andalus period, as it conforms to the variable, but nevertheless universal, definition of the botanical garden¹¹.

Other gardens with similar characteristics were found in various parts of the Islamic world (Baghdad, Zabid in Yemen, several in Egypt, etc) on which Arabic sources provide diverse information¹². In Europe, these types of gardens appeared later: the first European examples date back to the beginning of the 14th century and are connected with the Arabian tradition¹³.

However, Arruzafa can be described as a “botanical garden”, although information on the new species that were introduced is at times almost anecdotal. This is the case with certain varieties of pomegranate, including the *ja‘farī*, also known by names such as *safarī* [“traveller”] as a result of the tales surrounding its Eastern origin, arrival in al-Andalus and acclimatisation in the cordovan court of the emir ‘Abd al-Raḥmān I. Certain authors locate its origin in Baghdad, whilst other cite Medina, stating that it descended from the

¹⁰ Al-Maqqarī, *Nafh al-ṭīb min ghuṣn al-Andalus al-ratīb*, 8 vols., ed. Iḥsān ‘Abbās (Beirut, 1968), 1:466-467.

¹¹ Currently, the definition of a botanical garden could be expressed as follows: a place where it is possible to discover all at once, the transformation of the landscape, the ludic element, the experience of growing, the concept of collection, experimentation with and the introduction of new species and varieties and sensorial experiences, which, furthermore, represents a place dedicated to art and creativity.

¹² See Andrew M. Watson, “Botanical Gardens in the Early Islamic world”, in *Corolla Torontonensis. Studies in Honour of Ronald Morton Smith*, eds. E. Robbins and S. Sandahl (Toronto, 1994), pp. 105-111.

¹³ See John Harvey, *Mediaeval Gardens* (London, 1990), pp. 50-51.

variety that was planted in this city by the Prophet. All of this is described in minute detail by the agronomist al-Ṭighnārī and compiled by Ibn al-ʿAwwām¹⁴.

The characteristics used to describe Arruzafa are repeated in other royal estates that arose throughout the history of al-Andalus, although Medina Azahara, construct during the caliphate at the behest of ʿAbd al-Raḥmān III, is the most famous and best known example of the *almunia*¹⁵. FIG. 2

Very few texts have survived that make reference to the vegetable component of these gardens and the agricultural activities that were undoubtedly performed in these areas¹⁶, as had been the case with Arruzafa, which at this time was used as a residence for distinguished guests¹⁷.

As is the case with many other edifications, Arruzafa and Medina Azahara did not escape the devastating consequences of the *fitna* [uprising] of 1010 that marked the end of the caliphate.

During the period of the *taifas* [small separate kingdoms], which emerged in the aftermath of the fall of the caliphate, new experimental gardens arose in the courts of the various sovereigns. Whilst the term *bustān* is most frequently employed to refer to these new gardens, the term *munya* also continues to be applied.

Agronomists and botanists connected to the intellectual circles of the *taifa* courts, in particular the courts of Toledo and Seville, were both directly and indirectly responsible for these experimental processes, taking the theories expressed in their writings as a starting point.

It is well known that Ibn Wāfid, physician of the king of the *taifa* of Toledo, al-Maʿmūn, designed and was responsible for the so-called “Huerta de la noria” (*Bustān al-nāʿūra*, The Garden of the waterwheel). His pupil, the agronomist Ibn Baṣṣāl, continued

¹⁴ Muḥammad b. Mālik al-Ṭighnārī, *Kitāb Ṣuḥrat al-bustān wa-nuḥḥat al-adhhān. Esplendor del jardín y recreo de las mentes*, ed. Expiración García Sánchez (Madrid, 2006), pp. 150-151, hereafter cited as al-Ṭighnārī; Ibn al-ʿAwwām, *Kitāb al-Filāḥa. Libro de agricultura*, ed. and trans. Josef A. Banqueri, 2 vols. (1802, repr. Madrid, 1988), 1:273.

¹⁵ In the work carried out by M. Fierro, attention has been drawn to the similarities, including the decision taken by the emir ʿAbd al-Raḥmān I and the first caliph, ʿAbd al-Raḥmān III, to construct their palatial residences in the area surrounding Córdoba. See Maribel Fierro, “Por qué ʿAbd al-Raḥmān III sucedió a su abuelo el emir ʿAbd Allāh”, *Al-Qanṭara* 26/2 (2005), 357-369.

¹⁶ Even so, some contemporary writings contain considerable agricultural and botanical information which allow us to form a reasonable idea of the garden’s contents. See J. Esteban Hernández Bermejo, “Aproximación al estudio de las especies botánicas originariamente existentes en los jardines de Madīnat al-Zahrā”, *Cuadernos de Madīnat al-Zahrā*, 1 (1978), 61-80. There is also scarcity of archeological remains, as only the slightest part of the town has been excavated. See Enriqueta Martín-Consuegra, J. Esteban Hernández Bermejo and J. Luis Ubera, “Palinology of the Historical Period at the Madīnat al-Zahra Archaeological Site”, *Journal of Archaeological Science* 23 (1995), 249-62.

¹⁷ Medina Azahara is interpreted as a “paradise” in the detailed work carried out by Maribel Fierro, “Madīnat al-Zahrā, el paraíso y los fatimíes”, *Al-Qanṭara* 25/2 (2004), 299-327. However, D. Fairchild Ruggles (*Gardens, Landscape, and vision in the Palaces of Islamic Spain* (Pennsylvania, 2000), pp. 11 and 48-52) offers a different interpretation, which defends the view that the repeated use of vegetation in the wall decorations may have a political meaning relating to the garden and the distribution of cultivated areas.

his work and may have been responsible for similar activities in Seville, at one of the residences of al-Mu'tamid¹⁸. The agronomist Abū l-Khayr also carried out work in one of these gardens, *Hā'it al-sultān* (Huerta del sultán, The Garden of the Sultan), although the relevant texts fail to specify the garden in question¹⁹.

In another royal garden, in this case belonging to al-Ṣumādihiya, in the taifa of Almeria, al-Ṭighnārī, an agronomist and physician who had strong ties with the agronomists mentioned above, also carried out “experimental” work²⁰.

The same functions were performed in subsequent centuries by al-Idrisi (12th century) in the court of Roger II, the Norman king of Sicily, and Ibn al-Baytar (13th century), in the Ayyubid court in Egypt²¹.

A large number of *almunias*, owned by the royal family (*mustakhlas*, private property belonging to the sultan) and high-ranking court dignitaries, emerged in the Nasrid kingdom of Granada, amongst which the Generalife represents the most famous example²².

The exceptional dedication of these “naturalists” facilitated the introduction and acclimatisation of new species that were gathered on frequent journeys and herborisations into the Near and Far East²³, or obtained through embassies with various courts²⁴.

The motives that inspire rulers and illustrious figures to promote and stimulate the introduction and subsequent acclimatisation of new species, or the reestablishment or reintroduction of other species, are linked, to a certain extent, with the symbology of power. The interests that they pursue involve, first and foremost, the affirmation of their authority, accompanied by a desire for ostentation, which is a response to the yearning

¹⁸ Abū l-Khayr, *Umdat al-ṭabīb*, no. 2731 and 4969, pp. 308 and 566. In relation to al-Mu'tamid's palaces at Sevilla, see M. Jesús Rubiera, *La arquitectura en la literatura árabe*, 2th ed. (Madrid, 1988), pp. 135-137.

¹⁹ Abū l-Khayr, *Kitāb al-Filāḥa. Tratado de agricultura*, ed. and trans. Julia M. Carabaza Bravo (Madrid, 1991), p. 229.

²⁰ Al-Ṭighnārī, *Zuhrat al-bustān*, pp. 277-278.

²¹ Certain works refer to another “botanical garden” located in Guadix (Grenade), created by the physician Muhammad al-Shafrā', however none of the texts actually confirm the existence of this site. See Andrew M. Watson, *Agricultural innovation*, p. 119; Harvey, *Mediaeval Gardens*, p. 40.

²² See Expiración García Sánchez and Angel López, “The botanical gardens in Muslim Spain”, in *The Authentic Garden. A Symposium on Gardens*, eds. L. Tjon Sie Fat and E. de Jong (Leiden, 1991), pp. 165-176, specially pp. 173-174.

²³ This is the case of Ibn Baṣṣāl, who embarked upon a long journey into the East, possibly in order to select and gather seeds and exotic plants for the aforementioned garden of al-Ma'mūn, King of Toledo. Having stopped off in Sicily, he travelled on to Alexandria and, passing through Cairo, followed the course of the Nile until he reached Abyssinia, Yemen and the holy cities of Hijaz. He continued to Ascalon in Syria, Basra in Iraq, Iran, and Khorasan and even reached northern India, as detailed in his agricultural treatise and the botanical treatise written by Abū l-Khayr, *Umdat al-ṭabīb*.

²⁴ One of the most famous embassies, which had an enormous repercussion on the subsequent development of a school of “naturalists” in al-Andalus, occurred during the reign of the caliph Abd al-Rahman III and involved the procural of the original Greek version of Dioscorides' *De Materia Medica*, which was compared with the Arabic translation produced in Baghdad. See Julio Samsó, *Ciencias de los antiguos en al-Andalus* (Madrid, 1992), pp. 111-116.

to emulate, or indeed surpass, the refinement and progress displayed in the various courts within the Iberian Peninsula and in the East. Therefore, new varieties are not introduced in random fashion, but rather in accordance with a series of established criteria. Above all, these species arouse admiration as a result of their peculiar forms or other morphological characteristics (aroma, colour, etc), with the aim of producing sensory pleasure, that is, for exclusively hedonistic or aesthetic ends.

Other motives, which are not free of certain political overtones, include the possibility of displaying exotic varieties to distinguished guests and subsequently providing them with an attractive gift, although it should be borne in mind that the exchange of offerings between kings and illustrious figures is a commonplace historical occurrence. Thus, exoticism, an external appearance that is viewed as being rare or “strangely beautiful”, represents one of the most important factors to be considered when selecting new species.

An interesting and curious example, offered by Abū l-Khayr, in his botanical treatise entitled *‘Umdat al-ṭabīb*, which bears attention given its special characteristics, relates to a variety of cultivated asparagus (*hilyawn*)²⁵.

The text runs as follows:

“... As a culinary delight for the kings and lords and to the astonishment of guests, the gardens (*basātīn*) contain *hilyawn bustānī* [garden asparagus], in Latin *akantus*, known as *khashab al-ḥayya* [“serpent wood”]. I have seen it planted in the “Huerto del sultán” (*jannat al-sultān*, Garden of the sultan) by Ibn Baṣṣāl and I am acquainted with its form”²⁶.

Apart from the evident confusion of Abū l-Khayr, or the copyist of the manuscript, in relation to the Latin name of the plant, the special characteristics he attributes to the exterior of the plant and the exoticism are surprising and seem to correspond to a plant that was completely unknown in al-Andalus, which was not the case with asparagus. It could therefore be concluded that the text relates to another variety of asparagus, rather than common wild or cultivated species of this plant²⁷.

It is very difficult to identify this rare variety of asparagus, cited in the *‘Umdat al-ṭabīb* and unknown in al-Andalus, a problem that is exacerbated by the fact that the text not only correctly identifies wild asparagus, but goes on to differentiate several varieties of this plant. The synonym for *hilyawn*, *khashab al-ḥayya*, is itself an Arabic translation of the Persian *mār čūba*. The Persian term was commonly applied in Hamedan to *Asparagus*

²⁵ Whilst the term *hilyawn* was used in the East as a learned word, *isfāraj* and its variations (derived from the Greek ἔσπαργος) were more frequently used amongst the common people in al-Andalus and the Maghreb. See Federico Corriente, *A Dictionary of Andalusī Arabic* (Leiden-New York-Cologne, 1997), p. 551: “This word (*hilyawn*) might derive from Γῆλον “driving crazy” or εἶλον “idle”, on account of the popular belief attributing aphrodisias virtues to it”.

²⁶ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 4969, p. 566.

²⁷ The Latin term *akantus* does not refer, as it would appear, to acanthus (*Acanthus mollis*), which bears no resemblance to asparagus, but rather is an error of the copyist. The correct term is *mycanthus*, from the Greek μυκανθος-, which literally means “mouse spine”, referring to the pointed scales of the leaf bud and applied to wild asparagus (*Asparagus officinalis*, *A. aphyllus*, *A. acutifolius*). See Jacques André, *Les noms de plants dans la Rome antique* (Paris, 1985), p. 166.

adscendens Roxb., a plant with known aphrodisiacal properties, which may be the “exotic” variety referred to in the ‘*Umdat al-ṭabīb*’²⁸.

The *ward al-ḥimār*²⁹ is another example of an exotic species that was grown in royal gardens, in this case for decorative purposes and to create shaded areas. In relation to this plant, the *Umdat al-ṭabīb* states the following:

“... it is ‘*ayn al-thawr* [“eye of ox”]³⁰, ... there is another variety known as *shawkī* [“thorny”], which grows in Abyssinia and India, being of the size and reddish colour of the *ward al-zīna*, the tree of which is sufficiently large to create a shaded area. We obtained examples from the “Huerto del sultán” (*jannat al-sulṭān*, Garden of the Sultan) where I saw it...”³¹.

In addition to satisfying the desire to display power and self-assertion before the sovereigns of other courts, the acclimatisation of new species was also carried out for economic purposes (food, industry, medicine, ...), as is the case with rice, sugar cane, several citrus fruits, etc.

In short, reports on these gardens do not only refer to experimentation with and acclimatisation of hitherto unknown plants, but also to the improvement of the production and biodiversification of species that were already being cultivated. This can be described as “*acclimatation dirigée*”, in accordance with the definition offered by A. G. Haudricourt and L. Hédin when describing the role played by the royal parks and gardens created in France since the Renaissance³².

The testimonies provided by Arabic sources in relation to the acclimatised species in the botanical gardens of royal estates indicate that their cultivation was not unusual, experimental, sporadic or discontinuous, but rather that these new species were gradually incorporated into the agriculture of al-Andalus. Whilst the decisive support of the monarchs in relation to these activities may initially have stemmed from an affirmation of power and a fleeting desire for exoticism, the results were tangible and enduring.

Gardens in the Periphery of the City (*bustān*, pl. *basātīn*)

In addition to the *almunias*, extensive properties owned by the State or the aristocracy, the agricultural treatises mention other properties in private ownership, which varied in size and at times were divided into plots.

²⁸ See Maimónides, *Sharḥ asmā’ al-‘uqqār. L’explication des noms de drogues*, ed. Max Meyerhof (Cairo, 1940), p. 55.

²⁹ Literally, “donkey rose”, which should not be confused with *ward al-ḥamār* (peony, *Paeonia officinalis*).

³⁰ *Buḥḥalmum*; *Anthemis arvensis*.

³¹ It is not clear whether this “garden of the sultan” refers to the garden of al-Ma’mūn in Toledo or to the garden of al-Mu’tamid in Seville. Nor is it clear which variety of rose is being referred to, although it is not a variety of camomile as Abū l-Khayr indicates at the beginning of this text. See Abū l-Khayr, ‘*Umdat al-ṭabīb*, no. 5014, p. 575.

³² André G. Haudricourt and Louis Hédin, *L’homme et les plantes cultivées* (Paris, 1987), p. 226.

The various activities outlined above in relation to the estates owned by kings and illustrious figures can also be applied to the gardens owned by families in the periphery of the city³³.

However, despite the similarity, differences exist in terms of the motives behind the cultivation of certain plants in royal estates and gardens in the periphery of the city, and in terms of the utility and objectives ascribed to this cultivation in each type of property. The first question that must be addressed is whether the plants that were cultivated in these areas were differentiated on the basis of aesthetic and/or utilitarian criteria, or whether both concepts can be applied simultaneously, thereby identifying these areas as being of multiple use. In short, the issue is whether or not a clear distinction was made between utilitarian plants (vegetables) and decorative garden plants.

In order to answer this question, attention will focus on the agricultural treatises of the al-Andalus period, along with a botanical treatise (the aforementioned *‘Umdat al-ṭabīb*). These treatises make references to plants that could be defined as being of multiple use (decoration, food, medicine, industry, cosmetics, magic, etc), which “are planted in gardens and houses” (*fi l-basāʾin wa-l-dūr*) in order to be readily available for domestic use.

A chapter in the agricultural treatise by Ibn al-‘Awwām bears special attention as it deals with the “sowing of plants that are usually placed in gardens (*jannāt*) and which present different aspects to the viewer”, referring to species with a wide variety of uses.

In chapter XXVIII, along with species “traditionally” considered as being ornamental (violet (*banafṣaj*), German iris (*īrisā*), camomile (*babūnaḡ*), lavender (*juzāma*), marshmallow (*khitmi*), commom mallow (*jubbāzā*), mint / wild-thyme (*nammām*), ..., the authors include other examples which are no longer considered as serving this purpose, as the Indian hemp (*banj*), caper (*kabar*), sumach (*summāq*), rocket (*jirjīr*), etc³⁴.

We will now turn our attention to the most significant and noteworthy plants, according to the information obtained from these texts, in order to demonstrate that gardens in al-Andalus were not merely used as a source of agricultural produce, but rather, were frequented for recreational purposes, a facet that is associated with the decorative garden in its strictest sense of the term³⁵.

The agricultural treatises from the al-Andalus period broaden the concept of “ornamental” to take in other species found beyond the confines of the garden, and at

³³ Whilst the term *bustān* is most frequently used to designate these types of garden, at times the term *janna* (pl. *jannāt*, *jinnān*) is employed in order to establish a logical differentiation that is mainly based on the property regulations applied to each area. Nevertheless, “*janna*, whilst traditionally applied to a garden used to cultivate vegetables, is described as possessing fruit trees and white mulberry trees in certain Arabic documents dating from the 15th and 16th centuries”. See *Documentos árabes del Archivo Municipal de Granada [1481-1499]*, eds. and trans. Emilio Molina López and M. Carmen Jiménez Mata (Granada, 2004), p. 44.

³⁴ See Ibn al-‘Awwām, *Kitāb al-Filāḡa*, 2:300-326.

³⁵ Whilst the concept of the garden as an purely aesthetic abstraction arose in Europe during the Renaissance, in al-Andalus, as is the case in the rest of Islamic world during the medieval period, this concept varies. In order to obtain a brief overview of the transition from “vegetable plot” to “garden” in several European countries, may be consulted the work of Carmen Añón, “La literatura de jardines en el siglo XVI. Del Hortus al Jardín de las Delicias”, in *A propósito de la Agricultura de Jardines de Gregorio de los Ríos*, eds. Joaquín Fernández Pérez and Ignacio González Tascón (Madrid, 1991), pp. 81-101; Harvey, *Mediaeval Gardens*, pp. 134-142.

times the distinction between the concept of utilitarian and the concept of ornamental becomes blurred. The agronomist Ibn Luyūn provides one of the clearest and most eloquent definition of ornamental plants, to which he dedicates an entire chapter. Ibn Luyūn affirms that:

“a large number of plants are grown for the delight (*tasliya*) of the visual and olfactory senses, or to be used as an adornment (*li-l-zīna*)³⁶, the most notable (*ashar*) being those that are grown in the orchards (*basātīn*)”³⁷.

The very title of his work, “Book of Beauty and the Object of Knowledge”, adds further weight to this definition.

The remaining agronomists classify plants in accordance with the range of morphological similarities they present. The colour and form of the flowers also count amongst the characteristics that are most frequently alluded to, or appreciated, by the al-Andalus authors as distinctive features of herbaceous plants and shrubs, factors that are nearly always linked to aroma. Thus, we are always dealing with the satisfaction of two senses: sight and smell.

The botanical treatise *‘Umdat al-ṭabīb* provides few, although extremely significant, allusions to the ornamental characteristics and multiple uses of species, referring to varieties that are planted “in gardens and houses for decoration”. Such comments are the fruit of direct experience that reflect a reality that is close at hand and tangible, rather than mere literary information³⁸.

In terms of arboreal plants, certain specimens are classified as “ornamental” by direct reference, or as a result of their location in the garden. Trees are also classified by their ability to produce shade, the aroma they emit, their wood and their fruits, and often we are dealing with “multiple use” trees³⁹.

Throughout history, and with application to various cultures, very few trees have been evaluated in terms of their ornamental characteristics, being confined for the most part to plots dedicated to agricultural production. This fact is borne out by the aesthetic recommendations of Gregorio de los Ríos (16th century), when discussing those plants that should be included in the garden:

³⁶ The classical Arabic term *zīna* means something used for ornamentation, decoration or beauty, mainly referring to a decorative object. However, it also implies a figurative value, a physical, mental or social quality that beautifies or endows someone, in the widest sense of the word. See E. William Lane, *Arabic-English lexicon*, CD-ROM Edition (Vaduz, 2003).

³⁷ Ibn Luyūn, *Tratado de agricultura*, ed. and trans. Joaquina Eguaras Ibáñez, 2th ed. (Granada, 19988), p. 263.

³⁸ A detailed analysis of the concept of “ornamental” as defined by agronomists and botanists in the Andalusí period, along with a select catalogue of ornamental flora, is provided in the work of Expiración García Sánchez and J. Esteban Hernández Bermejo, “Ornamental Plants in Agricultural and Botanical Treatises from Al-Andalus”, in *Middle East Garden Traditions: Unity and Diversity*, ed. Michel Conan (Washington, 2007), pp. 75-93 (at the press).

³⁹ This paper will focus exclusively on those species that, in addition to being directly cited in the botanical and agricultural texts as “ornamental” plants, are most noteworthy on the basis of their rarity or as a result of the special properties or uses assigned to them in the treatises from the Andalusí period. Indeed, whilst herbaceous plants and shrubs form the main focus of these texts, trees are not excluded from the analysis of these authors.

“Fruit trees should not be planted, as we would no longer be dealing with a garden, but rather a vegetable plot or farm: gardens require trees that flower, with aroma and a pleasing form. In rare cases, orange trees, pomegranate trees, dwarf apple trees and quince trees may be planted, because any other varieties would represent a vulgar and even harmful element: trees destroy other plants with their shade and rob them of all the goodness of the soil”⁴⁰.

This fragment from the *Agricultura de jardines* [Agriculture of Gardens], written by the aforementioned Spanish author, highlights two questions that are entirely opposed to the spirit that pervades the works of the authors from the Andalusí period, establishing logical differences between incipient treatises dealing exclusively with gardening and the agricultural texts. In the first place, the strict separation made by G. de los Ríos between productive (fruit trees, with a few exceptions) and ornamental species could be considered as logical in view of the focus of each type of text. Secondly, G.R. dismisses the ornamental value of the shade provided by trees, which, in stark contrast, was an element that was highly appreciated by Arabic authors, from both an aesthetic and functional viewpoint.

Indeed, texts written in al-Andalus are entirely opposed to separation based on an antipodal division between ornamentality and utility. Moreover, trees were used to delimit boundaries, a practice that took place in royal *almunias* and the gardens of family homes, wherein both aesthetics and functionality played a part, and which involved fruit trees, trees with a long tradition within Mediterranean agriculture and recently acclimatised species. A highly explicit example is provided by the Arab historian Ibn Ṣāhib al-Ṣalāt (12th century) in relation to the garden and the edifications of the Bukhayra in Seville, the “*almunia*” that best represents the Andalusian Almohad period: the Caliph’s order for the design was entrusted to a *cadi*, and an imam who were experts in geometry, surveying and agronomy, and they marked out the land adjoining the palaces to “**embellish** them with the planting out of olives, vines, ornamental and fruit trees of all kinds”⁴¹.

The Arabic verb used to indicate the objective of these trees leaves no room for any doubt, *HASSANA* [to embellish, to beautify, to adorn]⁴².

Other species were planted with the objective of producing shade. This resulted in shaded avenues and walkways within and around the city such is the case of the tree-lined avenue (*ḥawr*) of Mu’ammal, constructed in Granada in the 11th century⁴³, or within gardens and plots. Descriptions of areas under the shade of tall trees and the sensation of coolness therein provided is vividly reflected in the poetry of the al-Andalus period, particularly the work of Ibn Khafāja (11th century). This poet, who above all focuses on the landscape, found greatest pleasure amongst trees and the shade they produced: flowers were an incidental element. Disregarding the idealisation present in this vision, it is illustrative of the importance placed on certain species of bush and tree within the garden or plot in terms of the shade that they afforded: in addition to providing those frequenting these areas with a sensation of coolness, they protected

⁴⁰ Gregorio de los Ríos, *Agricultura de jardines*, in *A propósito de la Agricultura de Jardines*, fol. 259v.

⁴¹ See Expiración García Sánchez and Angel López, “The botanical gardens”, p. 172.

⁴² E. William Lane, *Arabic-English lexicon*.

⁴³ Heri Pérès, *Esplendor de al-Andalus*, trans. Mercedes García-Arenal (Madrid, 1983), p. 192.

particularly vulnerable plants from the searing sun, such as certain recently introduced species.

Several varieties of tree, fully integrated in the landscape and agriculture of al-Andalus as a legacy of previous eras, are mentioned and defined as being of multiple use by agronomists and botanists. Such is the case of the pine (*ṣanawbar*)⁴⁴ and the cypress (*sarw*)⁴⁵. Following a tradition that already existed during the period of the Roman Empire, the ornamental character of the pine, which was planted in gardens next to fences and walls “in order to beautify them” and in other areas “where shade and vegetation were required”, is evident in various references made by Andalusī authors. A similar ornamental purpose and location within the garden are assigned to the cypress.

Mention is also made of the use of pine kernels in cookery, whilst al-Ṭighnārī, referring to the medical applications of this tree, states that if its bark is boiled with nigella (*shūnīz*) and applied as a bandage, it aids dental ailments⁴⁶.

In the case of the cypress, certain of the uses assigned to this tree aid the achievement of an ornamental ideal, whereby it acts as a base that improves other recreational elements: For example, its wood, given its insect-repellent properties, provides a perfect source from which to construct the trellis-work that lines the pathways of *almunias* and gardens⁴⁷.

Al-Ṭighnārī ascribes various medicinal properties to the cypress, involving the nuts, leaves and bark of this tree, which, amongst other functions, were used to treat skin infections, to dye the hair black and strengthen nails, as diuretics, as obstruction dissipators, as haemostatics and as a cure for intestinal and stomach ulcers⁴⁸.

In addition to the evident ornamental characteristics of the laurel (*rand, ghār*)⁴⁹, “a tree with a beautiful aspect”, that is particularly recommended in gardens containing myrtle and other aromatic species, the agricultural texts assign numerous uses to this plant, which is cited variously as an insecticide, a component in veterinary medicine, in edaphological applications, as a condiment and an ingredient of magic. In terms of magic, it is interesting to note that Ibn al-ʿAwwām makes reference to this plant as a cure for nervous children⁵⁰.

The European hackberry tree (*mays*)⁵¹ is also frequently mentioned in relation to royal estates and gardens⁵². FIG. 3

The agronomists draw attention to the virtues of this tree, planted extensively in boundary areas and close to fences, walls and water pipes, and valued not only for its shade, beauty and fruit, but also, most especially, for its elastic and flexible wood, which is excellent for application in turning, tough and resistant to rot. For all of these reasons this tree was highly valued as an element in various crafts, but above all in the

⁴⁴ *Pinus* sp, specially *P. Pinea*.

⁴⁵ *Cupressus sempervirens*.

⁴⁶ Al-Ṭighnārī, *Ṣuḥrat al-bustān*, p. 469. When focusing on the cultivation of each plant, this agronomist from the al-Andalus period includes a final section that deals with the properties and uses of the plant, particularly those of a medical nature. This is an unusual feature within the agricultural treatises.

⁴⁷ Julia M. Carabaza Bravo et al., *Árboles y arbustos*, pp. 26-29.

⁴⁸ Al-Ṭighnārī, *Ṣuḥrat al-bustān*, p. 250.

⁴⁹ *Laurus nobilis*.

⁵⁰ Ibn al-ʿAwwām, *Kitāb al-Filāḥa*, 1:245.

⁵¹ *Celtis australis*.

⁵² The Arabic term, *mays*, used to designate this tree has given rise to the Spanish term *almez*. See Federico Corriente, *A Dictionary of Andalusī Arabic*, p. 517.

manufacture of gallows, oars, wheels, buckets, earrings and engineering components used in mills and watermills⁵³.

The hackberry was one of the most highly valued trees in the gardens, farms and agricultural estates of the Andalusī period, indicating the passage of irrigation ditches and water courses and delimiting paths and boundaries⁵⁴.

Other, less known uses are also ascribed to this tree, such as the use of its ashes to dry and preserve grapes and the use of its fruit as a particularly potent aphrodisiac⁵⁵.

The elm tree olmo (*nasham*)⁵⁶ is one of the species that is assigned the greatest number of uses: it is attributed with ornamental functions, providing shade over wells, stone benches and irrigation ditches, planted close to garden walls and towards the north and at entrances, in order to avoid damage to garden trees and vegetables. It is also planted in humid areas and open spaces. The elm was also used to manufacture vine arbours and various utensils, given the quality of its wood. Lastly, the elm is cited as a result of its “numerous medicinal benefits”⁵⁷.

Its roots were crushed and applied via a compress in order to disperse tumours and alleviate fractures, pain in articulations and sprains, a method that also proved very effective in the process of accelerating pus drainage from an abscess. The liquid in which the roots were boiled provided very good results in the relief of ailments affecting sight and hearing⁵⁸.

Similarly, the wood of the white poplar (*hawar*)⁵⁹ was highly prized as a result of its multiple applications⁶⁰.

The pomegranate tree (*rummān*)⁶¹, a species that originated in the Near East, was cultivated and dispersed throughout the Mediterranean basin from a very early stage and numerous varieties of this plant now exist. This tree is highly venerated within Islamic tradition, representing one of the plants for which Mohammed expressed his admiration, stating: “the fruit of this tree dismisses all vestiges of rancour and envy”⁶². FIG. 4

The uses attributed to this tree by Andalusī agronomists are very similar to the current uses ascribed to the plant and include its employment as an ornamental feature and its use in hedge creation. In terms of the tree's medicinal uses (in addition to various others, including use in veterinary medicine, agriculture, etc.). Al-Ṭighnārī cites the following: the juice of the fruit, mixed with additional ingredients, is employed to treat eye conditions (particularly to remove corneal staining) and to combat infection. The syrup of the sweet variety is a remedy for coughs as it relaxes the chest and facilitates expectoration and the evacuation of the bowels, whilst the syrup produced from the acidic variety of pomegranate acts as a stomach tonic and eliminates bile. It is also used as a diuretic and to alleviate heart palpitations⁶³.

⁵³ Julia M. Carabaza Bravo et al., *Árboles y arbustos*, pp. 83-86.

⁵⁴ Pollen from the *Celtis* has been found in Medina Azahara and extremely old examples of this tree are currently growing in the gardens of the Generalife in Granada. See Enriqueta Martín-Consuegra et al., “Palinology”, p. 251.

⁵⁵ Abū l-Khayr, *Umdat al-ṭabīb*, no. 3135, p. 363.

⁵⁶ *Ulmus* sp., specially *Ulmus minor*.

⁵⁷ Abū l-Khayr, *Kitāb al-Filāḥa*, p. 255.

⁵⁸ Abū l-Khayr, *Umdat al-ṭabīb*, no. 3135, pp. 361-363.

⁵⁹ *Populus alba*.

⁶⁰ Julia M. Carabaza Bravo et al., *Árboles y arbustos*, pp. 110-111.

⁶¹ *Punica granatum*.

⁶² Ibn al-ʿAwwām, *Kitāb al-Filāḥa*, 1:279-280.

⁶³ Al-Ṭighnārī, *Ḥuḥrat al-bustān*, p. 142 and 156-157.

In addition to the aforementioned trees, which were known and used prior to the al-Andalus period, attention must also be drawn to improvements in the cultivation and the introduction of other species, amongst which the date palm (*nakhl*)⁶⁴ is the most representative example⁶⁵.

The date palm may well represent the cosmic tree of agronomic culture in al-Andalus, or at least, of Arabic culture, stretching from the East Mediterranean to the North of Africa during the period of Moorish occupation in Spain. In the agricultural texts, the palm is contemplated, analysed and conceived as a projection of man: sexuality, affinities with other trees, illnesses, stages of growth.... Al-Tignari goes so far as to explicitly state the similarity between the tree and people⁶⁶.

In terms of its utility, the date palm not only provides a source of food in the form of its fruit, which is eaten in various forms, but rather also provides a source of fibre, a material used in craftwork and construction, and shade, serving, in addition, as a decorative element in gardens. In short, the palm represents an entire culture and a way of life. In terms of the medicinal applications of the palm, as it is not a widespread species, very few curative properties are attributed to this plant, although attention should be drawn to the use of ground date stones in the preparation of eye drops⁶⁷.

Although we can not speak of a “jardin de santé” in the French understanding of the term, or other gardens of a similar nature that arose in Europe during the medieval period and which, likewise, were exclusively dedicated to the cultivation of medicinal plants, in the royal *almunias* certain plants with a marked medical application were introduced and acclimatised.

However, plants used for medicinal ends were not exclusive to royal estates (which would be logical, given the professional background and training of the individuals charged with creating the *almunias*), but rather were also present in domestic gardens. Indeed, domestic gardens often contained species with medicinal properties focused on the treatment of common ailments, a large portion of which were widespread and well-known food sources⁶⁸.

The *jullanār* (wild pomegranate, baluster, pomegranate flower) is the most eloquent example. The polysemous term *julla(i)nār*, of Persian origin, is used in Arabic to designate both the baluster and the wild pomegranate, literally meaning “rose of the pomegranate”. Currently, the Spanish terms “balausta” and “balaustra” are used indistinctly to refer to *Punica granatum*, whilst the former, “balausta” (derived from the

⁶⁴ *Phoenix dactylifera*.

⁶⁵ Certain authors suggest that the arrival of certain Eastern varieties in Arruzafa probably included the introduction of the date palm into the Iberian Peninsula, which prior to this time had existed in the form of an unproductive variety. See Andrew M. Watson, *Agricultural innovation*, p. 89.

⁶⁶ Al-Ṭighnārī, *Ṣuḥrat al-bustān*, p. 251-253.

⁶⁷ From an alimentary perspective, the Sevillian physician Avenzoar (12th century) states that dates are difficult to digest and harmful to the liver, whilst pointing out the aphrodisiacal qualities of the pith of the plant. See Ibn Zuhr, *Kitāb al-aghḏhiya. Tratado de los alimentos*, ed. and trans. Expiración García Sánchez (Madrid, 1992), p. 80.

⁶⁸ The inclusion of medicinal horticultural products in the domestic sphere recalls, or runs parallel to certain recipes that blurred divisions between medicine and cuisine, representing a frequent element in the Islamic world during the medieval period. See D. Waines, “Medicinal nutriments as home remedies: a case of convergence between the medieval Islamic culinary and medical traditions”, in *Actas del XVI Congreso UEAI*, eds. C. Vázquez de Benito and M. A. Manzano (Salamanca, 1995), pp. 551-558.

Greek term for the flower, βαλαύστιον) is now used as the technical term exclusively referring to fruit from the genus *Punica*. However, it may also be used to refer to *Punica granatum* var. *sylvestris*.

The *jullanar* is described in the *‘Umdat al-ṭabīb* as follows:

“The *jullanār* tree is the same as the pomegranate: they are identical, except for the fact that the pomegranate possesses sharp thorns and bears flowers and fruit, whilst the *jullanār* lacks thorns, and although it flowers, it bears no fruit, its rich red flower resembling that of the rose. It grows in abundance in Syria and we possess a sufficient number in al-Andalus for curative purposes, which are cultivated in the gardens”⁶⁹.

This description, in addition to making an allusion to the previously unmentioned, or little mentioned, functionality of the al-Andalus garden, which is envisaged as a “household pharmacological laboratory”, contains a fervent defence of local production, which, whilst scant in comparison to Syria, proved to be sufficient. It also serves as a discourse in favour of local produce over products imported from the East, particularly those products classified as *hindī* [from India]⁷⁰.

The al-Andalus pharmacologist Ibn al-Bayṭār (13th century) highlights the powerful haemostatic action of the juice of this plant, a property that is also cited by various other authors. Boiled with vinegar, it was also used as a mouthwash to treat bleeding gums⁷¹. Saffron (*zā‘farān*)⁷² may represent the plant that is attributed the greatest number of functions. The origin of this plant is uncertain, however its use is cited in relation to medicine, dyeing and seasoning from at least as far back as one thousand years B.C. Its use as an ornamental plant within the Islamic world is documented in the 9th century, in the garden of a palace close to Fustat, a property owned by the governor of Egypt, Jumarawayh Ibn Ṭūlūn (884-896). Amongst the reforms carried out in this garden, the pathways were placed at a higher level than the plant element, which, in addition to many other species, included saffron⁷³. FIG. 5

In Antiquity saffron was ascribed many medicinal virtues and is mentioned as an aperitive, an emmenagogue, as a stomachic agent, a diuretic, a hepatic, an ophtalmic, an antispasmodic and an expectorant, along with other stimulants, aphrodisiacs and psychotropics, all of which are catalogued in one form or another by the authors of the al-Andalus period. The use of saffron as a body paint in rituals and magic dates back to the pre-Islamic period and forms a widespread feature of Islamic society, particularly in Northern Africa, where it is associated with both pagan and religious rites⁷⁴.

⁶⁹ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 2151, pp. 224-225.

⁷⁰ It was usual to classify certain plants and drugs as *hindiyya* [from India], in reference to their supposed place of origin, which surrounded them with an aura of luxury and exoticism when compared to local produce.

⁷¹ Ibn al-Bayṭār, *Traité des simples*, trans. Lucien Leclerc, 3 vols. (Paris, 1990), no. 494, 1:358.

⁷² *Crocus sativus*.

⁷³ See M. Jesús Rubiera, *La arquitectura en la literatura árabe*, pp. 83-84.

⁷⁴ Françoise Aubaile-Sallénave, “Safran de joie, safran interdit. Une étude sociale et religieuse chez les Musulmans”, in *La ciencia en la España medieval*, eds. L. Ferre and M. J. Cano (Granada, 1992), pp. 39-64.

Despite the fact that it grew in abundance in al-Andalus, saffron was a luxury item rather than a common product of internal consumption, given that, as a result of its quality, it was exported in large quantities⁷⁵.

Wild varieties of commonly used garden plants present a special case. Given the levels of ignorance and the similarities between one variety and the other, it was not uncommon for people to mistakenly use wild varieties with hitherto unknown properties, as is the case with coriander. This spice, whilst not attaining the consideration of an exotic ingredient or luxury article (as was the case with cinnamon, pepper, ginger, ...), was widely used in the cuisine of al-Andalus and other parts of the Arabic world. It was not extensively produced in al-Andalus, and therefore it is understandable that the general population turned to the wild variety, which had grave consequences, as the text of the *‘Umdat al-ṭabīb* explains:

“The wild variety of coriander has two variations, the leaves of one of which have the same appearance as the domestic variety, although finer and smaller, and has the same aroma and bears seed of the same size, grouped together in twos... It grows abundantly in the area of Aljarafe and in the villages of the Guadalquivir and is used by the people as a substitute for common coriander in cookery, but at great peril that should be avoided as it causes the loss of voice, produces lethargy and impregnates the body of those that eat it with its smell, presenting an extremely harmful series of elements”⁷⁶.

Given that the concept of what constitutes an ornamental plant varies and involves various nuances, many vegetables are classified in this category and used exclusively for sensory pleasure:

“*Saysabān* ... is a vegetable that is grown from seed that is not present in winter, growing to the height of one cubit with leaves that resemble those of the oleander (*diflā*), although smaller and smoother, and fruit that resembles sesame pods (*simsim*), but of a lesser size, which, when almost dry, produce a droning sound when the wind blows through them. ... It is planted in gardens as a result of its beautiful aspect”⁷⁷.

The same sentence could be applied to certain vegetables that are now far removed from the concept of the aesthetic and the canons of garden plants, such as artichokes, aubergines, broad beans, etc, which are extolled by the Andalusí poets⁷⁸.

The asparagus that I L includes amongst "ornamental garden plants" bears special mention for various reasons, although it lacks the exoticism of the aforementioned acclimatised variety present in the “garden of the sultan”.

Whilst it is commonly held that cultivated asparagus (*Asparagus officinalis*) originally came from the Eastern Mediterranean or Eastern Europe, certain authors place its origins in Asia, stating that it was grown by the Egyptians thousands of years ago, that the Greeks were acquainted with it in antiquity and that it was introduced into Western Europe via Roman agriculture.

⁷⁵ Expiración García Sánchez, “Especias y condimentos en la sociedad andalusí: prácticas culinarias y aplicaciones dietéticas”, in *El sabor del sabor*, ed. Antonio Garrido Aranda (Córdoba, 2004), pp. 71-98.

⁷⁶ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 2573, p. 286.

⁷⁷ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 4526, p. 514. It is an *Euphorbiacea*, although it is difficult to identify this plant with exactitude.

⁷⁸ Henri Pérès, *Esplendor de al-Andalus*, pp. 186 and 199-200.

Asparagus is mentioned by the majority of the Greek and Roman agronomists and naturalists, although it is not certain that they are referring to *A. officinalis* in these cases. Both the cultivated and the wild variety were highly esteemed for their culinary contributions, although the cultivated variety, given its elevated price, was reserved for select tables⁷⁹.

References to asparagus gradually diminished to the point where, in the 6th century, the supposed garden variety had fallen into obscurity. Moreover, it appears that the wild variety fell into disuse in the Iberian Peninsula and was not recovered until the 9th century, according to the testimony of Ibn Ḥayyān. This historian from Córdoba (11th century) narrates an anecdote referring to the Iraqi musician Ziryāb, who he cites as being responsible for increasing awareness of asparagus in al-Andalus, “because prior to this the people of al-Andalus were not familiar with and did not harvest them [asparagus]”, at the same time disseminating various recipes for the preparation of this plant, whereby it was widely used by the aristocracy and the common people from this point onwards. The historian goes on to state that in addition to wild asparagus, the plant was also grown in gardens, as was the practice in the East. Ziryāb describes asparagus as “a delicious vegetable with tremendous properties: it is a diuretic, it cleans the urethra and the bladder, dissolves stones, balances the humours and acts as an aphrodisiac”⁸⁰.

However, despite the affirmation of Ziryāb, in al-Andalus the cultivated variety of the plant did not become widespread until a few centuries later (11th century): in the agricultural treatise of Ibn Baṣṣāl we find the description of a cultivated plant that is clearly identifiable as *A. officinalis*⁸¹.

With the publication of this work and in subsequent agronomical texts produced in al-Andalus -Ibn al-‘Awwām-, asparagus came to be viewed as a plant with multiple uses, recognised by authors as having ornamental value and use, whereby it is described as “one of the plants that is grown in gardens, presenting various aspects to the viewer”, also finding employment in delimiting garden boundaries as “the seeds of mature asparagus are left to soak with others and, having been mixed with dung, are spread along a cord that is buried around vineyards and gardens to form hedges”⁸².

Amongst the other plants used to delimit the boundaries of the gardens, including certain species of bushes and trees, we find a variety of sedge: “the most perfumed and with the most fragrant aroma [that] grows in the borders of garden partitions...”. The medicinal properties attributed to this plant include its ability to stimulate intelligence and its use as a carminative and a stomach tonic. It is also mentioned for its ability to provide the face with a healthy appearance, to alleviate haemorrhoids, to interrupt vomiting (used both externally and digested) and to scent the breath⁸³.

Another important example is provided by the mandrake:

⁷⁹ Jacques André, *L'alimentation et la cuisine à Rome* (Paris, 1981), pp. 22-23.

⁸⁰ Ibn Ḥayyān, *Crónica de los emires Alhakam I y Abdarraḥman II entre los años 796 y 847 [Almuqtabis II-I]*, trans. Maḥmūd ‘Alī Makkī and Federico Corriente (Zaragoza, 2001), p. 204.

⁸¹ Ibn Baṣṣāl, *Tratado de Agricultura*, eds. and trans. José M. Millás Vallicrosa and Mohammed Aziman (1955; repr. Granada, 1995), pp. 177-178.

⁸² Ibn al-‘Awwām, *Kitāb al-Filāḥa*, 2:322. The use of wild asparagus to create thorny hedges around gardens is also cited by Columela, see Lucio Junio Moderato Columela, *De los trabajos del campo*, ed. Antonio Holgado Redondo (Madrid, 1998), p. 227.

⁸³ Ibn al-Bayṭār, *Traité des simples*, no. 1186, 2:253.

“*Yabruh* [mandrake]: There are three varieties: the garden variety and two wild varieties. The former is grown in gardens as a result of the beauty and pleasing aspect of the plant and the aroma of its fruit, which are presented as gifts and eaten. Ibn Bassal showed me the species and told me that they had been brought from Syria, planted in Toledo and had prospered...”⁸⁴. FIG.6

The *‘Umdat al-ṭabīb* cites a further example of medicinal “garden” plant, with a marked “non-canonical” ornamental character, in the form of a variety of spurge:

“This species is grown in gardens and houses for its beauty and utility as a laxative. It possess the virtue of being useful against gout and joint pains, aids the flow of black bile and phlegm, but the shell should not be digested ... The leaves of this plant, cooked with beef or chicken, act as a laxative and the seeds are stronger than latex.”⁸⁵. FIG. 7

Amongst the specimens catalogued by Ibn Luṭyūn in the chapter on ornamental plants and those referred to in the *‘Umdat al-ṭabīb* as “grown in houses and gardens”, we encounter several type of mallow: certain types were used for culinary purposes, others in craftwork (mainly ropemaking) and certain types were used in medicine to eliminate kidney stones⁸⁶.

Garden cress (or watercress) is also mentioned, and its fruits were “used when cooking meat as a substitute for pepper”⁸⁷.

Others, such as rue, in addition to adornments (“it flowers resemble those of the jasmine ...”), were readily available as antidotes for poison or to exterminate venomous reptiles (“if the juice of the plant is poured onto a snake or scorpion, the animal dies immediately”)⁸⁸.

Finally, the plant (or rather various plants of the genus *Origanum*) referred to as *marw* in Arabic is attributed with a wide variety of uses:

“The so-called “old man’s basil” has five varieties, two of which are garden varieties, one of which is well known as it is commonly found in houses and gardens and does not go unnoticed ... If the juice of this plant is drunk with wine it relieves the sting of the scorpion and the bites of tarantulas and dogs, and has the same effect when boiled and applied to the skin. As a poultice with salt it reduces scrofulae and it is used to create an electuary to combat dyspnoea. Certain observers believe that the plant derives its name from its ability to awaken old men from drowsiness, whilst others believe that it produces drowsiness when smelled... When its leaves are crushed and applied via a bandage, it also has the property of curing migraines and headaches. Its smell warms the brain and its seeds, when ground and used as eyedrops, are useful for

⁸⁴ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 5123, p. 586.

⁸⁵ I believe that this text refers to *Euphorbia lathyris* L., “tartágo”. This name is applied in the Romance language: “Porque causan al purgar extraños accidentes, dixéronse tartagos en esp. quasi tartaros, por llamarse por otro n. ficus inferorum”. See D. S. de Covarrubias, *Tesoro de la lengua castellana*, 2 vols. (Madrid, 1674), 2:184.

⁸⁶ *Malva sylvestris*, *Malva rotundifolia*, *Althaea cannabina*, etc. See Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 1802, pp. 186-188.

⁸⁷ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 1662, pp. 169-170.

⁸⁸ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 4561, pp. 524-525.

treating those whose sight is afflicted by the appearance of what seems to be flies or mosquitoes. It is useful against tachycardia and is one of the best medicines for respiration. As a poultice, it alleviates tarantula bites and in a poultice with honey it reduces scrofulae and, in general, is useful against cold illnesses, against stomach pain produced by sticky phlegm and, when administered via the nose, it alleviates epilepsy”⁸⁹. FIG. 8

Conclusions

The gardens of al-Andalus are not merely production areas, but rather also serve ornamental functions via the introduction of plants with multiple uses. In small domestic gardens and larger properties, medicine and decoration are combined. Certain species that traditionally were considered as being exclusively ornamental (jasmine, myrtle, lilies, ...) are cited as being “grown in gardens and houses” in the *‘Umdat al-ṭabīb* and their aesthetic function is united with other utilitarian considerations, serving as readily available plants for the owners of domestic gardens and used as foods, medicine, components of domestic industry and agriculture, dyes, perfumes and cosmetics and, in addition, employed for their properties as aphrodisiacs or the ingredients of magic. All of these functions were combined with the use of the plant as an ornamental element, “to soothe and delight the spirit”, as illustrated in the title of the agricultural treatise by al-Ṭighnārī.

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⁸⁹ Abū l-Khayr, *‘Umdat al-ṭabīb*, no. 3023, pp. 341-342.