

Important Monumental Trees of Afyonkarahisar and Their Features

Süleyman Arı

Department of Biology, Faculty of Arts and Science, Afyon Kocatepe University, Afyonkarahisar, Turkey. * Corresponding author

Mehmet Temel

Department of Biology, Faculty of Arts and Science, Afyon Kocatepe University, Afyonkarahisar, Turkey

Mustafa Kargioğlu

Department of Biology, Faculty of Arts and Science, Afyon Kocatepe University, Afyonkarahisar, Turkey

ABSTRACT

Monumental trees are known as respected natural artefacts with their magnificent views. Since ancient times, they have been considered as an indicator of fame, honour, wealth and sublime and they have been the subject of mythology and epics. They are also important in terms of tourism. Monumental trees in Afyonkarahisar were observed, and photographed during floristic studies and diagnostics were made based on the study titled "Flora of Turkey and the East Aegean Islands". Also their localities, local names, estimated age measurements were performed. Within the province borders 11 taxon (*Tiliarubra* DC. subsp. *caucasica* (Rupr.) V. Engl., *Juniperus foetidissima* Willd., *Juniperus excelsa* M. Bieb. subsp. *excelsa*, *Cedrus libani* A. Rich. var. *libani*, *Pinus nigra* J. F. Arnold. subsp. *pallasiana* var. *pallasiana*, *Castanea sativa* Mill., *Quercus robur* L. subsp. *robur*, *Quercus cerris* L., *Quercus trojana* Webb subsp. *trojana*, *Corylus colurna* L., *Taxus baccata* L.) have been identified belonging to 6 families (*Tiliaceae*, *Cupressaceae*, *Pinaceae*, *Fagaceae*, *Betulaceae*, *Taxaceae*). Thanks to the detection of the presence of monumental trees in the region, it will be contributed to transfer this cultural heritage, have been transferred from our ancestors to the present day, carefully to future generations and it will contribute to the establishment of cultural communication between generations.

KEYWORDS : Monumental trees, Afyonkarahisar

Introduction

Monumental trees are known as respected natural heritage due to their magnificent view for the people living in the area. It has been observed that they have great influences for economic and cultural life of society in the historical process, from ancient times until today. It has been concerned that since ancient times they have been considered as an indicator of fame, honour, wealth and sublime and they have been the subject of mythology and epics; also they have been used on flags of some states in motifs, used as a symbol of reconciliation between states. Especially the case that they contribute to the place where they live in terms of tourism reveals their importance [1]. Monumental trees are trees with natural life that have been considered as a means which will provide cultural communication for the future as well as between past and present [2]. Monumental trees have been divided into four groups in accordance with the work of Genç and Güner [3]; Historic monumental trees, Folk monumental trees, Mystical monumental trees, Dimensional Monumental trees [3]. It is important to transfer the Monumental trees to the next generations that they should be recorded. In addition, in order to prevent the loss of this culture, it is necessary to record the Monumental trees [4]. Through our study, it is aimed to identify the natural monuments in the region and record their amounts, to ensure the protection and care, to notify the existence of these monuments, to contribute to this deep-rooted cultural heritage conscientiously transferred to future generations, to encourage the establishment of communication and dialogue between the generations.

Materials and Methods

Study Area

Afyonkarahisar is in 1034 m high from the sea level. It is located at the intersection of 38° 45' north latitude and 30° 32' east longitude on the surface of the Earth. The total area of Afyonkarahisar is 14 295 km² and it constitutes the 1.8% of Turkey's territory; it has borders with Eskisehir in the north, Kütahya in north west, Konya in the east, Isparta in the south, Uşak in the west, Denizli in the south west, and Burdur (Fig.1) [5]. Although Afyonkarahisar is located in the Aegean region, it has similar climate characteristics with the Central Anatolia region. Winters are cold and harsh, with heavy snowfall, summers are hot and dry; other spring and

autumn months it is rainy. Precipitation is in the form of rain in spring and autumn. The hottest month is July, with an average of 22.3 °C, the coldest month is January, with an average of 0, 2 °C. Only 16% of the annual rainfall can be observed in summer. Annual rainfall is 410-478 mm. Winds mostly blow from west [6]. According to Erinç (1984), it is seen that the index value of Afyonkarahisar is 23, 9 lm. As vegetation, it has "Park-looking dry forest vegetation". Vegetation in Afyonkarahisar is mixture of various plant species such as the cedar and larch as well as kinds of relic [6].

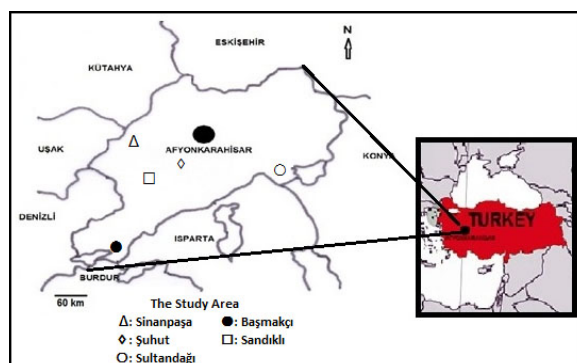


Fig. 1. The study area in Afyonkarahisar, Turkey

Information Collecting

Monumental trees that have been identified were photographed in the field operations (Fig.2). Local names were recorded by people living in the region where it is grown. Identification of monumental trees was made according to the study titled "Flora of Turkey and the East Aegean Islands" [7]. In determining the age of trees, calculating the age ring method, considering the sections taken by conventional augers, were preferred. However; it was impossible for some trees to calculate their ages because of the decay in the central parts. Therefore, the ages of the monumental trees were given approximately.

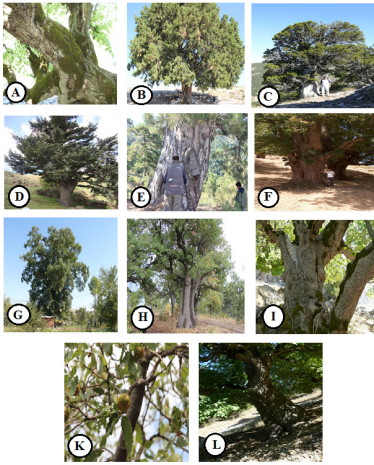


Fig. 2. Monumental trees of Afyonkarahisar; A: *Tiliarubra* subsp. *caucasica*, **B:** *Juniperus foetidissima*, **C:** *Juniperus excelsa* subsp. *excelsa*, **D:** *Cedrus libani* var. *libani*, **E:** *Pinus nigra* subsp. *pallasiana* var. *pallasiana*, **F:** *Castanea sativa*, **G:** *Quercus robur* subsp. *robur*, **H:** *Quercus cerris*, **I:** *Taxus baccata*, **K:** *Quercus trojana* subsp. *trojana*, **L:** *Corylus colurna*

Results and Discussion

In floristic and ethno-botanical field studies in Afyonkarahisar, in localities of some areas such as Sinanpaşa (Fındıklıtepe, Akharım), Central district (Belkaracaören, Kızıldağ), Değirmenayvalı, Sultandağ (Kapıkayası), Akdağ, Şuhut (Başören), Başmakçı (Çığrıköyü), we have found 11 monumental trees. The Latin name, family, local name, estimated age, locality, height, diameter and environment of the monumental trees were specified (Table 1).

Table 1. Some features of monumental trees in Afyonkarahisar

Latin name	Family	Local name	Estimated age	Height (m)	Diameter (cm)	Perimeter (cm)	Locality
<i>Tiliarubra</i> DC. subsp. <i>caucasica</i> (Rupr.) V. Engl.	Tiliaceae	İhlamur	550	12,5	175	550	Fındıklıtepe/Sinanpaşa
<i>Juniperus foetidissima</i> Willd.	Cupressaceae	Kokar ardiç	600	12,0	123	385	Belkaracaören
<i>Juniperus excelsa</i> M. Bieb. subsp. <i>excelsa</i>	Cupressaceae	Boz ardiç	930	10,0	100	315	Sultandağ
<i>Cedrus libani</i> A. Rich. var. <i>libani</i>	Pinaceae	Katran ağacı	670	15,0	140	440	Kızıldağ/ yayla
<i>Pinus nigra</i> J. F. Arnold. subsp. <i>pallasiana</i> var. <i>pallasiana</i>	Pinaceae	Kermes meşe	650	18,0	166	522	Akdağ
<i>Castanea sativa</i> Mill.	Fagaceae	Kestane	720	14,0	194	610	Şuhut/Başören
<i>Quercus robur</i> L. subsp. <i>robur</i>	Fagaceae	Saplı meşe	860	15,0	223	700	Değirmenayvalı
<i>Quercus cerris</i> L.	Fagaceae	Saçlı meşe	400	11,0	124	390	Akharım/Sinanpaşa
<i>Quercus trojana</i> Webb subsp. <i>trojana</i>	Fagaceae	Makedonya meşesi	450	13,0	83	260	Çığrıköyü/Başmakçı
<i>Taxus baccata</i> L.	Taxaceae	Porsuk	950	12,0	102	320	Kapıkayası/ Sultandağ
<i>Corylus colurna</i> L.	Betulaceae	Türk fıncığı	800	13,0	121	380	Kapıkayası/Sultandağ

Among the detected trees according to the age distribution *Taxus baccata* is the oldest one with 950 years; then respectively *Juniperus excelsa*, *Quercus robur*, *Corylus colurna*, *Castanea sativa*, *Cedrus libani*, *Pinus nigra*, *Juniperus foetidissima*, *Tiliarubra*, *Quercus trojana*, *Quercus cerris* (Fig. 3) are the other trees. The ranking from the most extensive to the narrow according to the environmental size is that *Pinus nigra*, *Cedrus libani*, *Taxus baccata*, *Castanea sativa*, *Corylus colurna*, *Juniperus foetidissima*, *Juniperus excelsa*, *Quercus cerris*, *Quercus trojana*, *Quercus robur*, *Tiliarubra* (Fig. 4).

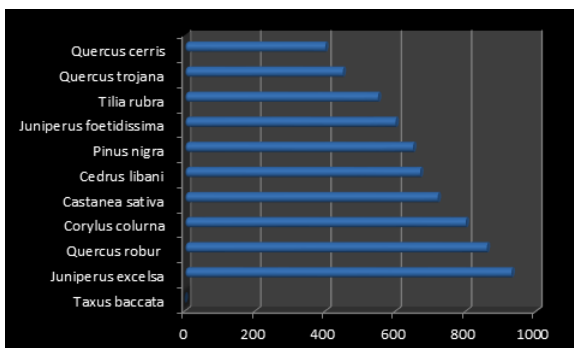


Fig. 3. The age distribution chart of the memorial tree

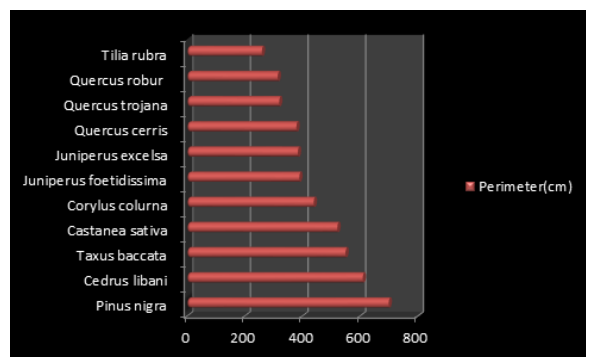


Fig. 4. According to the chart perimeter measurement of monumental trees

According to Anonymous (1999, 2005) studies, It was reported that in order to call a tree as a monumental tree, it is need to make different assessments, to make a combined assessment as the sizes are being different from the normal standards as well as its historical characteristics in particular [8,9]. Moreover, the mentioned monumental trees that are regarded as the cultural heritage of the area, are establishing a communication bridge between past and future [10]. These monumental trees which are observed in the study area reflect the region's cultural heritage very well. For example; *Pinus nigra* var. *pallasiana* is used as hemlock and by showing the tree

from past to present, the information is provided that this species was used with the aim of ethno-botanical, and utilized in the medical field by creating tar from this hemlock. In addition, by showing the *Coryluscolurna* tree, people state that the area has microclimate feature and this microclimate feature continues from the past to the present day. *Castaneasativa*, located in the area and considered as important and interesting in the Lakes Region, is reported that with its 207 cm diameter, a 350 year-old chestnut tree was found [1], and around Akseki, there are 544 year-old and 980 year-old chestnut trees [11]. It is seen that the chestnut tree observed in AfyonkarahisarŞuhut (Başören) is 720 years old and its diameter is around 610 cm. Başlar et al. (1998) in their study indicate that there is a *Pinusnigra* which is approximately more than 750 years, its perimeter is greater than 350 cm, its length is more than 20.05 m in Kartalgözü, Denizli and that there is another which is 770 years, its perimeter is 1000 cm, its length is 35 m in Murat Mountain of Bahadır village, Kütahya [12]. In Sütçüler, Isparta it was stated that there is a *Pinusnigra* that is 530 years old with its 420 cm perimeter, 35 m length, also there is another larch that is 540 years old with its 510 cm perimeter, 25.5 m in length [11]. It is seen that there is one that is 650 years with its 522 cm perimeter, 18 m in length. There is a *Cedruslibani* that is 550 years old with its 565 cm perimeter, 31.5 m in length in Tezli, Fethiye; and in KumlucaDibek, there is another *Cedruslibani* that is 2000 years old with its 740 cm perimeter, 26.2 m in length [1]. It was observed that there is one in Kızıldağ that is 670 years old with its 440 cm perimeter and 15 m in length. Also monumental trees are important means bringing history to the present day. The larch which is located in Dörmüvillage of Domanıç district in Kütahya and called as "Mızık tree" is approximately 870 years old, and it reveals its historical importance by associating with Osman Bey, the founder of the Ottoman Empire. It is thought that *Pinusnigra* of Akdağ that is about 650 years old, has some historical aspects. It should be noted that not only larch but all monumental trees may have historical importance and brought to the present day. We recommend that these historical trees which transfer of our cultural heritage between the past and future should be protected, the monumental trees which have not been taken under protection should be protected, the awareness of people should be increased and also being careful not to damage during the industrialization. We believe that by contributing to the cultural heritage of our province, it will shed light to the future.

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