

# An ethnobotanical study in Pöhrenk village (Çiçekdağı-Kırşehir province / Turkey)

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## ABSTRACT

**Background and Aims:** This article presents important ethnobotanical information obtained in Pöhrenk village (Çiçekdağı-Kırşehir) which has the experience of severe migration. The aim of this study is to gather traditional ethnobotanical knowledge of wild plants used in this village which is located in the Central Anatolia Region of Turkey, and to identify the uses and local names of these wild plants.

**Methods:** The ethnobotanical study was carried out in Pöhrenk village between July 2018 and June 2019. The information, including the traditional uses of wild plants, was obtained from local people through face to face interviews, and during this study, 36 people (25 female and 11 male) were interviewed. During this period, demographic characteristics of participants, names of the local plants, their utilized parts and preparation methods were investigated and recorded.

**Results:** A total of 51 wild taxa belonging to 23 families were collected. According to the obtained data, the plants are mostly used as food (32 taxa), traditional folk medicine (9 taxa), making goods (6 taxa) and fodder (4 taxa). Also, the most represented families are Rosaceae (21.56%), Asteraceae (15.68%), Lamiaceae (5.88%) and Fabaceae (5.88%). Furthermore, the study was compared with three ethnobotanical studies conducted in nearby regions.

**Conclusion:** The data obtained in this study provided clues to ethnobotanists (or botanists), pharmacologists, and perhaps future local development projects.

**Keywords:** Çiçekdağı, Ethnobotany, Kırşehir, Pöhrenk, Traditional knowledge

## INTRODUCTION

Since ancient times, the importance of plants in human life has been a known fact (Bulut, 2015). Traditional plant knowledge has always been verbally transmitted from generation to generation. This important information, compiled with ethnobotanical studies, is valuable for conservation, and the establishment of the local and indigenous plant usages has significant benefits (Söukand & Pieroni, 2016).

Detailed ethnobotanical studies in Turkey were started since the beginning of the 19<sup>th</sup> Century (Ertuğ, 2014). Turkey, with the number of taxa of around 12000, has a rich flora, and about 3,800 of these taxa are endemic. In addition to this, many different cultures also live together in Turkey (Güner, Aslan, Ekim, Vural, & Babaç, 2012). Therefore, it has a great wealth both in terms of traditional use of plants and local names of plants (Erik & Tarikahya, 2004). However, the traditional use of plants has been adversely affected due to migration from rural to urban areas and factors such as people's orientation to synthetic drugs.

Ethnobotanical studies and studies on folk medicinal plants were carried out in Kırşehir province and nearby regions (Ayandin, 2010; Han & Bulut, 2012; Şenkardeş, 2014; Vural, Karavelioğulları, & Polat, 1997). In addition, a previous ethnobotanical study on

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Çiçekdağı and the surroundings of Kırşehir was published (Vural et al., 1997). Although Pöhrenk village, which is our area of study, is located within the borders of Çiçekdağı, it does not cover this study due to its distance to the district.

The aim of this study is to conduct a detailed ethnobotanical study in Pöhrenk Village (Çiçekdağı / Kırşehir) to avoid the disappearance of ethnobotanical knowledge, to relay this knowledge to new generations and to provide resources for future scientific studies.

## MATERIALS AND METHODS

### Study area

This study was conducted in Pöhrenk village, in the Çiçekdağı district (Kırşehir Province), which is located in the Central Anatolia region of Turkey. Pöhrenk village is one of 44 villages in the Çiçekdağı district (Figure 1). This region belongs to the Irano-Turanian Plant Geography Region and falls within the B-5 grid square according to the Grid classification system, developed by Henderson (1961). The geographical location of the study area is 39°25'56.8"North and 34°27'14.18"East. Its altitude is approximately 1150 meters. The average annual temperature in the province is 10.2°C, and the annual rainfall is 420 mm (Climate Data, 2019).

Pöhrenk village is 60 kilometers away from the center of Kırşehir, and 22 kilometers from the center of Çiçekdağı (Çiçekdağı Governor, 2019). The village residents immigrated from Adiyaman (East of Turkey), by the Ottoman Empire settlement laws in 1865 (Yıldırım, Ceyhan Suvari, Işoğlu, & Bozkurt, 2006).

### Socio-economic structures

The economy of the region is based on agriculture and animal husbandry. Wheat, barley and sunflower are the most usual cultivated crops in the region (Kırşehir Governor, 2019). Additionally, sheep breeding is common due to the fact that the study area is a natural vegetation steppe (Çiçekdağı Governor, 2019). However, the unemployment rate has increased due to the decline in agriculture in recent years, and there has been a high volume of migration from the village to big cities in Turkey, such as Istanbul and Ankara, and to European countries, such as Germany and Austria.

### Interviews with native people

A total of 69.44% female and 30.56% male informants were interviewed. The informants had varying levels of education, with 29.87% having no education, 46.77% having a primary level, 15.53% having a secondary level and only 7.83% having a tertiary level of education.

The interviews were conducted with local people without much difficulty because one author (B.Ç.) is local to the area and has relations there. A questionnaire was administered to the local people through face-to-face interviews. Interviews were conducted in the fields and houses. We visited the fields during all seasons.

The International Society of Ethnobiology Code of Ethics was taken into account in the interviews (ISE, 2006).

### Plant materials

The field studies were carried out between May 2018 and August 2019. During this period, the collected plants were pressed

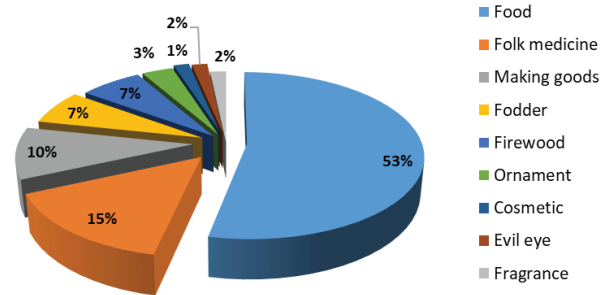


**Figure 1.** The location of Pöhrenk village in Turkey and Kırşehir.

in the field and prepared for identification. These specimens were initially identified with the help of the Flora of Turkey (Davis, 1965-1985; 1988; Güner, Özhatay, Ekim, & Başer, 2000), "A Checklist of the Flora of Turkey (Vascular Plants)" (Güner et al., 2012), "Illustrated Flora of Turkey Vol 1" (Güner et al., 2014) and "Illustrated Flora of Turkey Vol 2" (Güner et al., 2018) and "Türkiye'nin Doğal-Egzotik Ağaçları ve Çalıkları" (Akkemik, 2018), and then they were compared with specimens in the Herbarium of the Faculty of Pharmacy of Istanbul University (ISTE). The scientific names of the plant taxa were identified according to "A Checklist of the Flora of Turkey (Vascular Plants)" (Güner et al., 2012). The plants were kept in ISTE.

## RESULTS

The ethnobotanical knowledge about 51 taxa belonging 23 families was recorded. The local names of three taxa (*Verbascum cheiranthifolium* var. *cheiranthifolium*, *Salvia dichroantha*, *Lotus corniculatus* var. *corniculatus*) are unknown. The detailed knowledge including scientific name, voucher number, family name, life form, local name, used part(s), use, utilization method and preparation are summarized in Table 1. The most common families are Asteraceae (15.68%), Rosaceae (21.56%), Lamiaceae (5.88%) and Fabaceae (5.88%). The plants are used for food (32 taxa), traditional folk-medicine (9 taxa), making goods (6 taxa), fodder (4 taxa), firewood (4 taxa), ornament (2 taxa), cosmetic (1 taxon), fragrance (1 taxon) and evil eye (1 taxon). The percentages of plants' use are shown in Figure 2.



**Figure 2.** The percentages of plants' use in Pöhrenk village.

The edible plants are consumed eaten raw, prepared spice, soap, 'pilav' with bulgur, 'sarma', compote, marmalade, jam, 'şerbet' and tea, fried with onion or prepared as pancakes. Sarma is a cooked leaf rolled around a filling made from rice and/or minced meat (Doğan, Nedelcheva, & Pieroni, 2017). The use of the spice prepared with the leaves of *Mentha longifolia* is very common (Figure 3).

The most commonly used parts of plants are the aerial parts (19 taxa), fruits (11 taxa), leaves (8 taxa), flowers (4 taxa) and capitulum (2 taxa) (Figure 4). The aerial parts and leaves of raw consumed plants as food are usually collected in early April. Most of the plants whose fruits are consumed are in the Rosaceae family, and they are usually consumed raw or consumed as compote (Figure 5 and 6). The parts of all plants used as fodder are the aerial parts.

Additionally, the life forms of the used plants are herbs (68.62%), trees (19.60%) and shrubs (11.76%), in descending order. It was reported that the most important plants were *Polygonum cognatum*, *Teucrium polium*, *Malva neglecta*, *Mentha longifolia*, *Prunus cocomilia*, *P. divaricata* and *P. spinosa*.

Three of the collected taxa are endemic. These taxa are *Salvia dichroantha*, *Anchusa leptophylla* subsp. *incana* and *Crocus ancyrensis* (Figure 7).

## DISCUSSION

Ethnobotanical studies became widespread in Turkey at the beginning of the 90s, and more folk-medicinal uses were recorded in the studies conducted at that time. It is possible to observe the same feature in a previous study which was conducted in Çiçekdağı's center and its surroundings (Vural et al., 1997). When we compare our data with this study, 10 taxa (*Chenopodium album*, *Crataegus orientalis*, *Gundelia tournefortii*, *Peganum harmala*, *Polygonaum cognatum*, *Potentilla reptans*, *Pyrus elaeagnifolia*, *Rosa canina*, *R. hemisphaerica*, *Teucrium polium*) are common, and six of them (*Polygonaum cognatum*, *Chenopodium album*, *Peganum harmala*, *Rosa canina*, *R. hemisphaerica*, *Teucrium polium*) have the same use. Also, *Gundelia tournefortii*, *Peganum harmala*, *Polygonaum cognatum* and *Rosa canina* have the same local name. However, *Rosa canina*



**Figure 3.** The spice of *Mentha longifolia*, A) dried leaves of *M. longifolia*, B) Yoghurt soup with its spice.

**Table 1. The ethnobotanical uses of plants in Pöhrenk village (Çiçekdağı-Kırşehir).**

Scientific name, Voucher number	Family name	Life form	Local name	Use	Plant part used	Utilization method and preparation
<i>Amaranthus albus</i> L. ISTE 116220	Amaranthaceae	Herb	-	Fodder	Aerial parts	Directly
<i>Amygdalus orientalis</i> Miller. ISTE 116079	Rosaceae	Shrub	Acıbadem	Food	Seeds	Eaten raw
* <i>Anchusa leptophylla</i> Roem. & Schult. subsp. <i>incana</i> (Ledeb.) D.F. Chamb. ISTE 116035	Boraginaceae	Herb	Emzik, Sormuk, Timit	Food	Flowers	Its nectar sucked
<i>Anthemis cretica</i> L. subsp. <i>anatolica</i> (Boiss.) Grierson ISTE 116108	Asteraceae	Herb	Papatya	Medicinal	Aerial parts, Capitulum	Externally; decoction, for common cold. For infertility in women, boiled as a mixture with Arpa ( <i>Hordeum</i> sp.) and Totik ( <i>Malva neglecta</i> ) and then the woman sitting over steaming water. Internally; decoction as sedative, curing shortness of breath
<i>Artemisia absinthium</i> L. BÇ23	Asteraceae	Shrub	Hawşan	Fragrance Making goods	Aerial parts	Hung on the wall, Broom
<i>Capsella bursa-pastoris</i> (L.) Medik. ISTE 116029	Brassicaceae	Herb	Noncic	Food	Leaves	Eaten raw
<i>Chenopodium</i> sp. ISTE 116875	Chenopodiaceae	Herb	Silmastık	Food	Aerial parts	Fried with onion or prepared pancake with cheese
<i>Chenopodium album</i> L. subsp. <i>album</i> var. <i>album</i> ISTE 116072	Chenopodiaceae	Herb	Silmastık, Silmastıke toke	Food	Leaves	Fried with onion or prepared pancake with cheese
<i>Chenopodium botrys</i> L. ISTE 116073	Chenopodiaceae	Herb	Bostan güzeli, Yabani semiz	Food	Aerial parts	Preparing 'cacık' (with yogurt), pancake
<i>Cichorium intybus</i> L. ISTE 116089	Asteraceae	Herb	Çitlik, İstirye çavi zer	Medicinal, food, Making goods	Capitulum Leaves Aerial parts	Eaten directly for curing diabetes and for curing fatty liver Eaten raw, Broom (Şışın)
<i>Convolvulus arvensis</i> L. ISTE 116 099	Convolvulaceae	Herb	Sirmaşiğ, Sarmaşık	Fodder	Aerial parts	Fresh

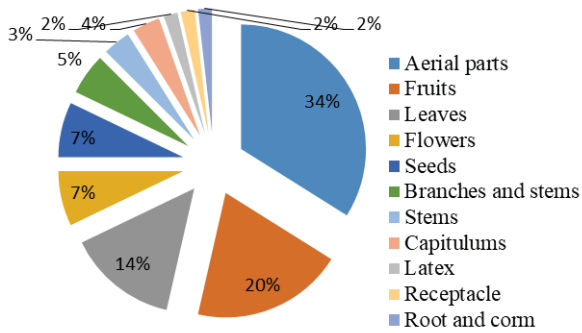
Species	Familia	Tree	Suruk	Food	Fruits	Eaten raw or as compote.
<i>Crataegus monogyna</i> var. <i>monogyna</i> Jacq. ISTE 116023	Rosaceae	Tree	Suruk	Food	Fruits	Eaten raw or as compote.
<i>Crataegus orientalis</i> subsp. <i>orientalis</i> Pallas ex M. Beib. ISTE 116075	Rosaceae	Tree	Gaheşik, Altı, Şilan	Medicinal food	Fruits	Internally; eaten as cardiogenic, decoction as diuretic Eaten raw or as compote
* <i>Crocus ancyrensis</i> (Herb.) Maw ISTE 116015	Iridaceae	Herb	Pivonk	Food	Corms flowers	Eaten raw
<i>Cyanus depressus</i> (M. Bieb.) Soják ISTE 116036	Asteraceae	Herb	Gökbaşı	Fodder	Aerial parts	Fresh
<i>Daucus carota</i> L. ISTE 116018	Apiaceae	Herb	Yabani havuç	Food	Roots	Eaten raw
<i>Echinops spinosissimus</i> Turra subsp. <i>bithynicus</i> (Boiss.) Greuter ISTE 116070	Asteraceae	Herb	Yabani ceviz, güz, sriye güz	Food	Receptacles	Eaten raw
<i>Eryngium campestre</i> L. var. <i>virens</i> Link ISTE 116038	Apiaceae	Herb	Noncüz,	Food	Stem	Young stems are eaten after peeling off the outer part
<i>Glaucium grandiflorum</i> Boiss. & A. Huetsubsp. <i>refractum</i> var. <i>refractum</i> (Nab.) Mory ISTE 116112	Papaveraceae	Herb	Gül, Gulasur	Food	Flowers	Preparing 'sherbet'
<i>Gundelia tournefortii</i> L. BÇ30	Asteraceae	Herb	Kenger	Medicinal	Latex	Chewing gum as digestive
<i>Juncus inflexus</i> L. ISTE 116031	Juncaceae	Herb	Kindirga	Making goods	Aerial parts	Baskets
<i>Lotus corniculatus</i> var. <i>corniculatus</i> L. ISTE 116110	Fabaceae	Herb	-	food	Seeds	Eaten raw
<i>Malva neglecta</i> Wallr. BÇ21	Malvaceae	Herb	Toluk, Ebegümeçi	Medicinal Food	Aerial parts	Externally: for infertility in women, boiled as mixture with Arpa ( <i>Hordeum</i> sp.) and Papatya ( <i>Anthemis cretica</i> subsp. <i>anatolica</i> ) then the woman sitting over steaming water. Externally: slopes prepared with cracked wheat is used for swelling of the skin. Internally: decoction, as an anti-inflammatory, intestinal cleanser. Eaten raw
<i>Medicago sativa</i> subsp. <i>sativa</i> L. ISTE 116105	Fabaceae	Herb	Fige bajı	Food	Seeds	Eaten raw

<i>Mentha longifolia</i> (L.) L. subsp. <i>typhoides</i> (Briq.) Harley ISTE 116039	Lamiaceae	Herb	Punk, Narpuz	Food	Leaves	As spice
<i>Onopordum turcicum</i> Danin. ISTE 116019	Asteraceae	Herb	Kangal	Food	Stems	Eaten raw as a snack after peeling off the outer part
<i>Peganum harmala</i> L. ISTE 116042	Zygophyllaceae	Herb	Üzerlik	Ornament evil eye	Dried aerial parts fruits seeds	Hanging on the wall as amulets, roasting on the fire
<i>Polygonum cognatum</i> Meissn. ISTE 116033	Polygonaceae	Herb	Madimalak, Mardimalak, Madimak	Food	Aerial parts	Fried with onion Prepared pancake Prepared 'pilav' with bulgur
<i>Potentilla reptans</i> L. ISTE 116 098	Rosaceae	Herb	Henna uçukan	Cosmetic	Aerial parts	as henna, crushing on stones (children)
<i>Prunus cocomilia</i> Ten. ISTE 116 028	Rosaceae	Tree	Heruge baji, Erik	Food	Fruits	Eaten raw or as compote
<i>Prunus divaricata</i> Ledeb. var. <i>pis-sardii</i> Ledeb. ISTE 116 027	Rosaceae	Tree	Erige baji, Sari erik	Food	Fruits	Eaten raw or as compote
<i>Prunus spinose</i> L. ISTE 116024	Rosaceae	Tree	Erige baji, Yaban erik	Food	Fruits	Eaten raw
<i>Pyrus elaeagnifolia</i> subsp. <i>elaeagnifolia</i> Pall. ISTE 116021	Rosaceae	Tree	Çortuk	Food	Fruits	Eaten raw
<i>Pyrus syriaca</i> subsp. <i>syriaca</i> Boiss. ISTE 116115	Rosaceae	Tree	Yabani çortuk	Food	Fruits	Eaten raw
<i>Rhamnus lycioides</i> L. subsp. <i>oleoides</i> (L.) Jahandiez & Maire ISTE 116030	Rhamnaceae	Shrub	Çalyeraş	Food	Fruits	Eaten raw
<i>Rosa canina</i> L. ISTE 116025	Rosaceae	Shrub	Kuşburnu, Şilan	Medicinal food	Fruits	Internally; decoction in the flu Jam, marmalade and tea
<i>Rosa hemisphaerica</i> J. Herrm. ISTE 116085	Rosaceae	Shrub	Kunpank	Food	Fruits	Jam, marmalade and tea
<i>Rumex crispus</i> L. ISTE 116097	Polygonaceae	Herb	Tırşigo, Efelik	Food	Leaves	Eaten raw or as a wrapping material for 'sarma'
<i>Salix alba</i> L. ISTE 116016	Salicaceae	Tree	Sogut, Sögüt	Firewood	Branches Stems	Walking stick Heating
<i>Salix excelsa</i> S.G. Gmelin ISTE 116017	Salicaceae	Tree	Sogut, Salkım söğüt	Firewood	Branches Stems	Walking stick Heating

* <i>Salvia dichroantha</i> Stapf. ISTE 116092	Lamiaceae	Herb	-	Food	Flowers	Its nectar sucked
<i>Scabiosa argentea</i> L.	Caprifoliaceae	Herb	Süpürge	Making goods	Aerial parts	Broom
<i>Sinapis arvensis</i> L. ISTE 116080	Brassicaceae	Herb	Xardal, Xardale zar	Food	Leaves	Eaten raw
<i>Tamarix parviflora</i> DC. ISTE 116109	Tamaricaceae	Shrub	Hawşan	Making goods Firewood	Aerial parts	Broom
<i>Taraxacum</i> sp. ISTE 116877	Asteraceae	Herb	Nancamus	Food	Aerial parts	Eaten raw
<i>Teucrium polium</i> L. ISTE 116041	Lamiaceae	Herb	Mirada	Medicinal	Aerial parts	Internally, decoction, treatment of allergy, the treatment of jaundice as incense for shortness of breath, appetizing
<i>Trifolium physodes</i> var. <i>physodes</i> Steven & M. Bieb. ISTE 116091	Fabaceae	Herb	Yonca	Fodder	Aerial parts	Fresh
<i>Typha domingensis</i> Pers. ISTE 116032	Typhaceae	Herb	Kamuş, Kemiş	Ornament	Aerial parts	Branches
<i>Ulmus minor</i> Miller ISTE 116100	Ulmaceae	Tree	Karaağaç	Making goods, firewood	Branches Stems	Walking stick Heating
<i>Verbascum cheiranthifolium</i> Boiss. var. <i>asperulum</i> (Boiss.) Murb. ISTE 116063	Scrophulariaceae	Herb	-	Medicinal	Leaves	Externally, for hemorrhoids, boiled then directly put on the wounds or the patient sitting over steaming water
<i>Verbascum cheiranthifolium</i> var. <i>cheiranthifolium</i> Boiss. ISTE 116064	Scrophulariaceae	Herb	-	Medicinal	Leaves	Externally, for hemorrhoids, boiled then directly put on the wounds or the patient sitting over steaming water

\*Endemic taxa.

is used for the treatment of flu in Pöhrenk, while it is used only as food and tea in the Çiçekdağı study. The use of *Teucrium polium* is, in general, the same in both regions, but differently, the plant is used for the treatment of jaundice in Pöhrenk. *Peganum harmala*, *Potentilla reptans* and *Pyrus elaeagnifolia* subsp. *elaeagnifolia* are used for medicinal purposes in Çiçekdağı, but these taxa are used for different purposes in Pöhrenk (Table 2).



**Figure 4.** The percentages of plants used parts in Pöhrenk.

The comparison of all the plants used in the present study with previous ethnobotanical studies (Ayandin, 2010; Han & Bulut, 2012; Şenkardeş, 2014; Vural et al., 1997) in the nearby regions is given in Table 3. *Anthemis cretica* subsp. *anatolica*, *Chenopodium botrys* and *Verbascum cheiranthifolium* are only used for medicinal purposes in Pöhrenk. Also, *Chenopodium botrys*, *Crocus ancyrensis*, *Glaucium grandiflorum* subsp. *refractum* var. *refractum*, *Lotus corniculatus* var. *corniculatus*, *Mentha longifolia* subsp. *typhoides*, *Prunus cocomilia*, *Prunus spinosa*, *Pyrus syriaca*, *Rhamnus lycioides* subsp. *oleoides* and *Salvia dichroantha* are only consumed as food in Pöhrenk. Additionally, the preparation of sherbet from *Glaucium grandiflorum* flowers is recorded only in Pöhrenk. However, *Teucrium polium* and *Rosa canina* are also used for medicinal purposes in nearby studies (Ayandin, 2010; Şenkardeş, 2014). *Chenopodium album*, *Polygonum cognatum* and *Rosa canina* are also consumed as food in tree nearby studies (Ayandin, 2010; Şenkardeş, 2014; Vural et al., 1997). Additionally, *Peganum harmala* is used for evil eye in both studies (Figure 8).



**Figure 5.** The fresh consumed fruits; A) *Pyrus syriaca* var. *syriaca*, B) *Pyrus elaeagnifolia* subsp. *elaeagnifolia*.



**Figure 6.** The compote of *Prunus cocomilia* and *P. divaricata* var. *divaricata*.



**Figure 7.** *Crocus ancyrensis*.



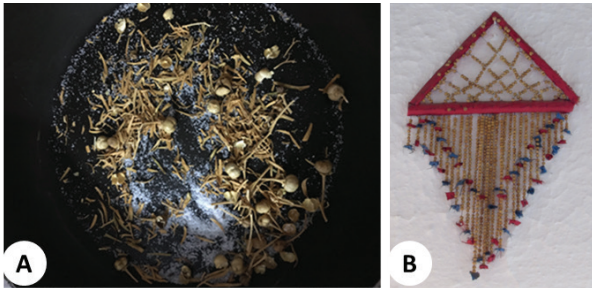
**Table 2. The comparison of the intended use of common plants in Pöhrenk Village and Çiçekdağı (Vural et al., 1997).**

Scientific name	Intended use in Pöhrenk	Intended use in Çiçekdağı
<i>Chenopodium album</i>	Food	Food
<i>Crataegus orientalis</i> subsp. <i>orientalis</i>	Medicinal (Cardiotonic and diuretic)	Food, medicinal (Antihypertensive)
<i>Peganum harmala</i>	Incense, evil eye, ornament	Medicinal (skin diseases, hemorrhoids), evil eye
<i>Polygonum cognatum</i>	Food	Food
<i>Potentilla reptans</i>	Cosmetic	Medicinal (antidiarrheal)
<i>Pyrus elaeagnifolia</i> subsp. <i>elaeagnifolia</i>	Food	Medicinal (blood purifier)
<i>Rosa canina</i>	Food, Medicinal (flu)	Food
<i>Rosa hemisphaerica</i>	Food	Food
<i>Teucrium polium</i>	Medicinal (allergy, appetizing, shortness of breath, jaundice)	Medicinal (appetizing, shortness of breath)

**Table 3. The comparison of the intended use of common plants in Pöhrenk Village and in Çiçekdağı (Kırşehir) (Vural et al., 1997), Kadışehri (Yozgat) (Han & Bulut, 2012), Nevşehir (Acıgöl, Derinkuyu, Gülşehir, Nevşehir-Merkez, Ürgüp) (Şenkardeş, 2014) and Polatlı (Ankara) (Ayandin, 2010).**

Scientific name	Pöhrenk (Kırşehir)	Çiçekdağı (Kırşehir)	Kadışehri (Yozgat)	Nevşehir	Polatlı (Ankara)
<i>Amaranthus albus</i>	Fodder	-	-	-	-
<i>Amygdalus orientalis</i>	Food	-	-	Food, medicinal	Food
* <i>Anchusa leptophylla</i> subsp. <i>incana</i>	Food	-	-	Food	Food
<i>Anthemis cretica</i> subsp. <i>anatolica</i>	Medicinal	-	-	-	-
<i>Artemisia absinthium</i>	Fragrance, making good	-	-	-	-
<i>Capsella bursa-pastoris</i>	Food	-	-	Food	-
<i>Chenopodium album</i>	Food	Food	-	Food, medicinal	Food, fodder
<i>Chenopodium botrys</i>	Food, medicinal, making good	-	-	-	-
<i>Cichorium intybus</i>	Medicinal	-	-	Food, medicinal	Making good
<i>Convolvulus arvensis</i>	Fodder	-	Medicinal	Fodder	Medicinal
<i>Crataegus monogyna</i>	Food	Food, medicinal	-	Food, medicinal, making good	-
<i>Crataegus orientalis</i>	Food, Medicinal	-	-	Food, medicinal, making good	Food, making good
* <i>Crocus ancyrensis</i>	Food	-	-	-	-
<i>Cyanus depressus</i>	Fodder	-	-	-	-
<i>Daucus carota</i>	Food	-	-	-	Food, fodder
<i>Echinops spinosissimus</i> subsp. <i>bithynicus</i>	Food	-	-	-	Fodder
<i>Eryngium campestre</i> var. <i>virens</i>	Food	-	Medicinal	Food, medicinal	Making good

<i>Glaucium grandiflorum</i> subsp. <i>refractum</i>	Food	-	-	-	-
<i>Gundelia tournefortii</i>	Medicinal	-	-	Food, medicinal	Food
<i>Juncus inflexus</i>	Making good	-	-	-	-
<i>Lotus corniculatus</i> var. <i>corniculatus</i>	Food	-	-	-	-
<i>Malva neglecta</i>	Food, medicinal	-	Medicinal	Food, medicinal, making good	Food
<i>Medicago sativa</i> subsp. <i>sativa</i>	Food	-	-	-	Fodder
<i>Mentha longifolia</i> subsp. <i>typhoides</i>	Food	-	-	Food, medicinal	-
<i>Onopordum turcicum</i>	Food	-	-	-	Food, fodder
<i>Peganum harmala</i>	Evil eye, ornament	Medicinal, evil eye	Medicinal	Medicinal, making good, evil eye	Evil eye
<i>Polygonum cognatum</i>	Food	Food	Medicinal	Food	Food
<i>Potentilla reptans</i>	Making good	Medicinal	-	-	-
<i>Prunus cocomilia</i>	Food	-	-	-	-
<i>Prunus divaricata</i> subsp. <i>divaricata</i>	Food	-	Medicinal	Food	-
<i>Prunus spinosa</i>	Food	-	Medicinal	-	-
<i>Pyrus elaeagnifolia</i>	Food	Medicinal	-	Food, making good	Food, medicinal
<i>Pyrus syriaca</i>	Food	-	-	-	-
<i>Rhamnus lycioides</i> subsp. <i>oleoides</i>	Food	-	-	-	-
<i>Rosa canina</i>	Food, medicinal	Food	Medicinal	Food, medicinal	Food, medicinal
<i>Rosa hemisphaerica</i>	Food	Food	-	Food, medicinal	Ornament
<i>Rumex crispus</i>	Food	-	Medicinal	Food, medicinal	-
<i>Salix alba</i>	Firewood	-	Medicinal	Medicinal, making good, fodder	Making good
<i>Salix excelsa</i>	Firewood	-	-	-	-
* <i>Salvia dichroantha</i>	Food	-	-	-	-
<i>Scabiosa argentea</i>	Making good	-	-	-	-
<i>Sinapis arvensis</i>	Food	-	-	Food, medicinal	Food, medicinal
<i>Tamarix parviflora</i>	Firewood, making good	-	-	Firewood	-
<i>Teucrium polium</i>	Medicinal	Medicinal	Medicinal	Medicinal	Making good
<i>Trifolium physodes</i> var. <i>physodes</i>	Fodder	-	-	-	-
<i>Typha domingensis</i>	Ornament	-	-	-	-
<i>Ulmus minor</i>	Making good	-	-	Medicinal	Evil eye, firewood
<i>Verbascum cheiranthifolium</i>	Medicinal	-	-	-	-



**Figure 8.** The use of *Peganum harmala*; A) Burning of *P. harmala* with salt to protect from evil eye, B) the ornament made of fruits of *P. harmala*.

Since the center of Çiçekdağı is close to the study area, it is expected that there will be more common plants compared to other regions, whereas fewer common plants are observed. The most common plants are observed in Nevşehir (24 taxa) and Polatlı (22 taxa).

## CONCLUSION

The traditional knowledge is no longer being passed down from older to younger generations in Pöhrenk, because most of the residents (generally only the middle-aged and elderly) of the Pöhrenk village spend only the summer months in the village. The compiling of traditional ethnobotanical knowledge in this area is critical. This reveals the importance of this study, and this study will close the gap about traditional ethnobotanical knowledge.

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## REFERENCES

- Akkemik, Ü. (2018). *Türkiye'nin doğal-egzotik ağaç ve çalları (Gymnospermler-Angiospermler)* [Turkey's natural-exotic trees and shrubs (Gymnospermae-Angiospermae)]. Ankara, Turkey: Orman Genel Müdürlüğü Yayınları.
- Ayandın, H. (2010). *Ethnobotanical characteristics in the region between Avşar, Şabanözü and Çile Mount (Polatlı/Ankara)* (Master of Science dissertation, Selçuk University, Institute of science, Konya). Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>.
- Bulut, G., & Tuzlacı, E. (2015). An ethnobotanical study of medicinal plants in Bayramiç (Çanakkale-Turkey). *Marmara Pharmaceutical Journal*, 19, 268–282.
- Merkel, A. (2019, May 15). *Climate-data*. Retrieved from <https://en.climate-data.org>.

- Davis, P. H. (Ed.) (1965-1985). *Flora of Turkey and the East Aegean Islands* (Vol. 1–9). Edinburgh: Edinburgh University Press.
- Davis, P. H., Mill, R. R., & Tan, K. (Eds.) (1988). *Flora of Turkey and the East Aegean Islands* (Vol. 10, Supplement I). Edinburgh: Edinburgh University Press.
- Doğan, Y., Nedelcheva, A., & Pieroni, A. (2017). The diversity of plants used for the traditional dish sarma in Turkey: Nature, garden and traditional cuisine in the modern era. *Emirates Journal of Food and Agriculture*, 29, 429–440.
- Erik, S., & Tarıkahya, B. (2004). Türkiye florası üzerine [About flora of Turkey]. *Kebikeç*, 17, 139–163.
- Ertuğ, F. (2014). Etnobotanik [Ethnobotany]. In A.Güner & T. Ekim (Eds.), *Resimli Türkiye florası* [Illustrated Flora of Turkey] (Vol. 1, pp. 319–380). Istanbul, Turkey: Ali Nihat Gökyiğit Vakfı, Flora Araştırmaları Derneği ve Türkiye İş Bankası Kültür Yayınları.
- Given, D. R., & Harris, W. (1994). *Techniques and methods of ethnobotany*. Lincoln: Commonwealth Secretariat.
- Güner, A., Özhatay, N., Ekim, T., & Başer, K. H. C. (Eds.). (2000). *Flora of Turkey and the East Aegean Islands* (Vol. 11 Supplement II). Edinburgh: Edinburgh University Press.
- Güner, A., Aslan, S., Ekim, T., Vural, M., & Babaç, M. T. (Eds.). (2012). *Türkiye bitkileri listesi (Damarlı bitkiler)* [Turkey plant list (Vascular plants)]. Istanbul, Turkey: Flora Araştırmaları Derneği ve Nezahat Gökyiğit Botanik Bahçesi Yayınları.
- Güner, A. (Ed.). (2014). *Resimli Türkiye Florası cilt 1* [Illustrated Flora of Turkey vol. 1]. Istanbul: Nezahat Gökyiğit Botanik Bahçesi, Flora Araştırmaları Derneği ve Türkiye İş Bankası Kültür Yayınları.
- Güner, A., Kandemir, A., Menemen, Y., Yıldırım, H., Aslan, S., Ekşi, G., Güner, I. & Çimen, A. Ö. (Eds.) (2018). *Resimli Türkiye florası* [Illustrated flora of Turkey] (Vol. 2). Istanbul, Turkey: Ali Nihat Gökyiğit Vakfı Nezahat Gökyiğit Botanik Bahçesi Yayınları.
- Han, M. I., & Bulut, G. (2012). The flok-medicinal plants of Kadışehri (Yozgat). *Acta Societatis Botanicorum Poloniae*, 84(2), 237–248.
- Henderson, D. M. (1961). Contribution to the bryophyte flora of Turkey, IV. *Notes from Royal Botanic Garden Edinburgh*, 23, 263–278.
- International Society of Ethnobiology. (2019, Nov 18). *The International society of ethnobiology code of ethics (with 2008 additions)*. Retrieved from <http://www.ethnobiology.net/code-of-ethics/>.
- Kendir, G., & Güvenç, A. (2010). Ethnobotany and an overview on the ethnobotanical studies carried out in Turkey. *Hacettepe Üniversitesi Eczacılık Fakültesi Dergisi*, 30(1), 49–80.
- Kırşehir Governor. (2019, May 15). Retrieved from <http://www.kirsehir.gov.tr>.
- Çiçekdağı Governor. (2019, May 20). Retrieved from <http://www.cicekdagi.gov.tr>.
- Sökand, R., & Pieroni, A. (2016). The importance of a border: Medical, veterinary, and wild food ethnobotany of the Hutsuls living on the Romanian and Ukrainian sides of Bukovina. *Journal of Ethnopharmacology*, 185, 17–40.
- Yıldırım, A., Ceyhan Suvari, Ç., İšoğlu, İ.M., Bozkurt, T. (2006). Artakalanlar: Anadolu'dan etnik manzaralar, [Residuals: Ethnic landscapes from Anatolia]. Istanbul, Turkey: E yayinevi.
- Şenkardeş, I. (2014). *Ethnobotanical researches in southern districts of Nevşehir (Acıgöl, Derinkuyu, Gülşehir, Nevşehir-Merkez, Ürgüp)* (Doctoral dissertation, Marmara University, Institute of Medical Sciences, Istanbul). Retrieved from <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>.
- Vural, M., Karavelioğulları, F. A., & Polat, H. (1997). Ethnobotanical properties of Çiçekdağı (Kırşehir) and surroundings. *Ot Sistematik Botanik Dergisi*, 4(1), 117–124.
- Yıldırım, A., Ceyhan Suvari, Ç., İšoğlu, İ.M., Bozkurt, T. (2006). Artakalanlar: Anadolu'dan etnik manzaralar, [Residuals: Ethnic landscapes from Anatolia]. Istanbul, Turkey: E yayinevi.