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

Berfin Çelik¹, Yeter Yeşil¹

¹Istanbul University, Faculty of Pharmacy, Department of Pharmaceutical Botany, Istanbul, Turkey

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 (Sõukand & Pieroni, 2016).

Detailed ethnobotanical studies in Turkey were started since the beginning of the 19th 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 (Ayandın, 2010; Han & Bulut, 2012; Şenkardeş, 2014; Vural, Karavelioğulları, & Polat, 1997). In addition, a previous ethnobotanical study on
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 Adıyaman (East of Turkey), by the Ottoman Empire settlement laws in 1865 (Yıldırım, Ceyhan Suvari, İşoğlu, & 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, Ozhatay, Ekim, & Bayrak, 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 Çalıları” (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 (Verbas - cum 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.

The edible plants are consumed 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 capitulums (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, Polygonum cognatum, Potentilla reptans, Pyrus elaeagnifolia, Rosa canina, R. hispithraecia, Teucrium polium) are common, and six of them (Polygonum cognatum, Chenopodium album, Peganum harmala, Rosa canina, R. hispithraecia, Teucrium polium) have the same use. Also, Gundelia tournefortii, Peganum harmala, Polygonum cognatum and Rosa canina have the same local name. However, Rosa canina...
| Scientific name, Voucher number | Family name | Life form | Local name | Use | Plant part used | Utilization method and preparation |
|--------------------------------|-------------|-----------|------------|-----|----------------|-----------------------------------|
| *Amaranthus albus* L. ISTE 116220 | Amaranthaceae | Herb | - | Fodder | Aerial parts | Directly |
| *Amygdalus orientalis* Miller. ISTE 116079 | Rosaceae | Shrub | Acı badem | Food | Seeds | Eaten raw |
| *Anchusa leptophylla* Roem. & Schult. subsp. *incana* (Ledeb.) D.F. Chamb. ISTE 116035 | Boraginaceae | Herb | Emzik, Sormuk, Timit | Food | Flowers | Its nectar sucked |
| *Anthemis cretica* L. subsp. *anatolica* (Boiss.) Grierson ISTE 116108 | Asteraceae | Herb | Papatyra | Medicinal | Aerial parts, Capitulums |Externally; decocion, for common cold. For infertility in women, boiled as a mixture with *Arpa* (*Hordeum* sp.) and *Tolik* (*Malva neglecta*) and then the woman sitting over steaming water. Internally; decocion as sedative, curing shortness of breath |
| *Artemisia absinthium* L. BC23 | Asteraceae | Shrub | Hawşan | Fragrance | Making goods | Aerial parts | Hung on the wall, Broom |
| *Capsella bursa-pastoris* (L.) Medik. ISTE 116029 | Brassicaceae | Herb | Noncic | Food | Leaves | Eaten raw |
| *Chenopodium* sp. ISTE 116875 | Chenopodiaceae | Herb | Sılmastık | Food | Aerial parts | Fried with onion or prepared pancake with cheese |
| *Chenopodium album* L. subsp. *album* var. *album* ISTE 116072 | Chenopodiaceae | Herb | Sılmastık, Sılmastıkte toke | Food | Leaves | Fried with onion or prepared pancake with cheese |
| *Chenopodium botrys* L. ISTE 116073 | Chenopodiaceae | Herb | Bostan güzeli, Yabani semiz | Food | Aerial parts | Preparing ‘cacık’ (with yogurt), pancake |
| *Cichorium intybus* L. ISTE 116089 | Asteraceae | Herb | Çıtlık, İstriye çavizzer | Medicinal, food, Making goods | Capitulums Leaves | Aerial parts | Eaten directly for curing diabetes and for curing fatty liver. Eaten raw, Broom (Şışın) |
| *Convolvulus arvensis* L. ISTE 116099 | Convolvulaceae | Herb | Sırmaşığ, Sarmaşık | Fodder | Aerial parts | Fresh |
| Family         | Common Name | Scientific Name                                      | Use/Region                          | Comment                                                                 |
|---------------|-------------|-----------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------|
| Rosaceae      | Crataegus   | *Crataegus monogyna* var. *monogyna* Jacq.          | Tree                                | Eaten raw or as compote.                                               |
|               |             |                                                     | Fruits                              |                                                                         |
|               |             |                                                     | Corms/flowers                       |                                                                         |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Roots                               |                                                                         |
|               |             |                                                     | Young stems are eaten after peeling off the outer part |                                                                         |
|               |             |                                                     | Food                                |                                                                         |
|               |             | *Crataegus orientalis* subsp. *orientalis* Pallas ex M. Beib. | Tree                                | Medicinal                                                              |
|               |             |                                                     | Food                                | Fruits                                                                 |
|               |             |                                                     | Preparing’s herbet                  | Chewing gum as digestive                                               |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Crocus ancyrensis* (Herb.) Maw                      | Tree                                | Food                                                                   |
|               |             |                                                     | Corms/flowers                       |                                                                         |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Cyanus depressus* (M.Bieb.) Sojak                   | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Daucus carota* L.                                  | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Echinops spinosissimus* Turra subsp. *bipinnatus* (Boiss.) Greuter | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Eryngium campestre* L. var. *virens*                | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Glaucium grandiflorum* Boiss. & A. Link             | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Gundelia tournefortii* L.                           | Herb                                | Medicinal                                                              |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Juncus inflexus* L.                                 | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Lotus corniculatus* var. *corniculatus*             | Herb                                | Medicinal                                                              |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
|               |             | *Medicago sativa* subsp. *salvija* L.                | Herb                                | Food                                                                   |
|               |             |                                                     | Flowers                             |                                                                         |
|               |             |                                                     | Aerial parts                        |                                                                         |
|               |             |                                                     | Seeds                               |                                                                         |
| Scientific Name                                      | Family         | Type     | Part Used             | Use                        |
|-----------------------------------------------------|----------------|----------|-----------------------|----------------------------|
| Mentha longifolia (L.) L. subsp. typhoides (Briq.) Harley | Lamiaceae      | Herb     | Leaves                | As spice                   |
| Onapordum turcicum Danin.                           | Asteraceae     | Herb     | Stems                 | Eaten raw as a snack after peeling off the outer part |
| Peganum harmala L.                                  | Zygophyllaceae | Herb     | Ornament evil eye      | Hanging on the wall as amulets, roasting on the fire |
| Polygonum cognatum Meissn.                          | Polygonaceae   | Herb     | Aerial parts           | Fried with onion Prepared pancake Prepared 'pilav' with bulgur |
| Potentilla reptans L.                                | Rosaceae       | Herb     | Cosmetic               | as henna, crushing on stones (children) |
| Prunus cocomilia Ten.                               | Rosaceae       | Tree     | Fruits                | Eaten raw or as compote    |
| Prunus divaricata Ledein. var. pis-sardii Ledein.    | Rosaceae       | Tree     | 'pilav' with bulgur    | Eaten raw or as compote    |
| Prunus spinose L.                                    | Rosaceae       | Tree     | Fruits                | Eaten raw                  |
| Pyrus elaeagnifolia subsp. elaeagnifolia Pal.        | Rosaceae       | Tree     | Fruits                | Eaten raw                  |
| Pyrus syriaca subsp. syriaca Boiss.                  | Rosaceae       | Tree     | Fruits                | Eaten raw                  |
| Rhamnus lycioides L. subsp. oleoides (L.) Jahandiez & Maire | Rhamnaceae    | Shrub    | Fruits                | Eaten raw                  |
| Rosa canina L.                                       | Rosaceae       | Shrub    | Fruits                | Internally; decoction in the flu Jam, marmalade and tea |
| Rosa hemisphaerica J. Herrm.                        | Rosaceae       | Shrub    | Fruits                | Jam, marmalade and tea     |
| Rumex crispus L.                                     | Polygonaceae   | Herb     | Leaves                | Eaten raw or as a wrapping material for ‘sarma’ |
| Salix alba L.                                        | Salicaceae     | Tree     | Firewood               | Walking stick Heating      |
| Salix excelsa S.G. Gmelin                           | Salicaceae     | Tree     | Firewood               | Walking stick Heating      |
| Salix excelsa S.G. Gmelin                           | Salicaceae     | Tree     | Firewood               | Walking stick Heating      |
| Taxon                        | Family            | Type    | Use                                    | Part          |
|------------------------------|-------------------|---------|----------------------------------------|---------------|
| *Salvia dichroantha* Stapf.  | Lamiaceae         | Herb    | Food                                   | Flowers       |
|                             |                   |         |                                        | Its nectar sucked |
| *Scabiosa argentea* L.      | Caprifoliaceae    | Herb    | Süpürge                                | Aerial parts  |
| *Sinapis arvensis* L.       | Brassicaceae      | Herb    | Xardal, Xardale zar                    | Leaves        |
|                             |                   |         |                                        | Eaten raw     |
| *Tamarix parviflora* DC.    | Tamaricaceae      | Shrub   | Hawşan                                 | Aerial parts  |
|                             |                   |         |                                        | Broom         |
| *Taraxacum* sp.             | Asteraceae        | Herb    | Nancamus                               | Aerial parts  |
|                             |                   |         |                                        | Eaten raw     |
| *Teucrium polium* L.        | Lamiaceae         | Herb    | Mirada                                 | Medicinal     |
|                             |                   |         |                                        | Aerial parts  |
| *Trifolium physodes* var.   | Fabaceae          | Herb    | Yonca                                  | Fodder        |
| *physodes* Steven & M. Beib.|                   |         |                                        | Aerial parts  |
|                             |                   |         |                                        | Fresh         |
| *Typha domingensis* Pers.   | Typhaceae         | Herb    | Kamuş, Kamiş                           | Ornament      |
|                             |                   |         |                                        | Aerial parts  |
|                             |                   |         |                                        | Branches      |
| *Ulmus minor* Miller        | Ulmaceae          | Tree    | Karaağaç                              | Making goods, |
|                             |                   |         |                                        | firewood      |
|                             |                   |         |                                        | Branches      |
|                             |                   |         |                                        | Walking stick |
|                             |                   |         |                                        | Heating       |
| *Verbascum cheiranthifolium*| Scrophulariaceae  | Herb    | -                                      | Medicinal     |
| *Boiss.* var. *asperulum* (Boiss.) Murb.| |         |                                        | Leaves        |
|                             |                   |         |                                        | Externally; for hemorrhoids, boiled then directly put on the wounds or the patient sitting over steaming water |
| *Verbascum cheiranthiflum* var. *cheiranthifolium* Boiss.| 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 Çiçekdağ 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 Çiçekdağ, but these taxa are used for different purposes in Pöhrenk (Table 2).

The comparison of all the plants used in the present study with previous ethnobotanical studies (Ayandın, 2010; Han & Bulut, 2012; Şenkardeş, 2014; Vural et al., 1997) in the nearby regions is given in Table 3. *Anthemis cretica* subsp. *ananalica*, *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. *typhoidea*, *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 (Ayandın, 2010; Şenkardeş, 2014). *Chenopodium album, Polygonum cognatum* and *Rosa canina* are also consumed as food in tree nearby studies (Ayandın, 2010; Şenkardeş, 2014; Vural et al., 1997). Additionally, *Peganum harmala* is used for evil eye in both studies (Figure 8).
### 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 |
|--------------------------------|-------------------------|--------------------------|
| Chenopodium album              | Food                    | Food                     |
| Crataegus orientalis subsp. orientalis | Medicinal (Cardiotonic and diuretic) | Food, medicinal (Antihypertensive) |
| Peganum harmala                | Incense, evil eye, ornament | Medicinal (skin diseases, hemorrhoids), evil eye |
| Polygonum cognatum             | Food                    | Food                     |
| Potentilla reptans             | Cosmetic                | Medicinal (antidiarrheal) |
| Pyrus elaeagnifolia subsp. elaeagnifolia | Food                     | Medicinal (blood purifier) |
| Rosa canina                    | Food, Medicinal (flu)   | Food                     |
| Rosa hemisphaerica             | Food                    | Food                     |
| Teucrium polium                | 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 (Acığöl, Derinkuyu, Gülşehir, Nevşehir-Merkez, Ürgüp) (Şenkardeş, 2014) and Polatlı (Ankara) (Ayandın, 2010).

| Scientific name                   | Pöhrenk (Kırşehir) | Çiçekdağı (Kırşehir) | Kadışehri (Yozgat) | Nevşehir | Polatlı (Ankara) |
|-----------------------------------|--------------------|---------------------|--------------------|----------|------------------|
| Amaranthus albus                  | Fodder             | -                   | -                  | -        | -                |
| Amygdalus orientalis              | Food               | -                   | -                  | Food, medicinal | Food             |
| *Anchusa leptophylla subsp. incana | Food               | -                   | -                  | Food     | -                |
| Anthemis cretica subsp. anatolica | Medicinal          | -                   | -                  | -        | -                |
| Artemisia absinthium              | Fragrance, making good | -                   | -                  | -        | -                |
| Capsella bursa-pastoris           | Food               | -                   | -                  | Food     | -                |
| Chenopodium album                 | Food               | Food                | -                  | Food, medicinal | Food, fodder     |
| Chenopodium botrys                | Food, medicinal, making good | -                   | -                  | -        | -                |
| Cichorium intybus                 | Medicinal          | -                   | -                  | Food, medicinal | Making good      |
| Convolvulus arvensis              | Fodder             | -                   | Medicinal          | Fodder   | Medicinal        |
| Crataegus monogyna                | Food               | Food, medicinal     | -                  | Food, medicinal, making good | -                |
| Crataegus orientalis              | Food, Medicinal    | -                   | -                  | Food, medicinal, making good | Food, making good |
| *Crocus ancyrensis                | Food               | -                   | -                  | -        | -                |
| Cyanus depressus                  | Fodder             | -                   | -                  | -        | -                |
| Daucus carota                     | Food               | -                   | -                  | -        | Food, fodder     |
| Echinops spinosissimus subsp. bithynicus | Food                | -                   | -                  | -        | Fodder           |
| Eryngium campestre var. virens    | Food               | -                   | Medicinal          | Food, medicinal | Making good      |
| Common Name                        | Type                          | Food | Medicinal | Making Good | Fodder | Firewood | Ornament | Evil Eye | Evil Eye, ornamen | Food, medicinal | Food, medicinal | Food, medicinal, making good | Food, medicinal | Food, medicinal, making good | Food, medicinal, evil eye | Food, medicinal, evil eye | Food, medicinal, evil eye | Making good, evil eye | Fodder | Making good | Firewood, making good | Firewood | Firewood |
|-----------------------------------|-------------------------------|------|-----------|-------------|--------|----------|----------|----------|----------|-----------------|----------------|----------------|---------------------------|----------------|---------------------------|--------------------------|--------------------------|--------------------------|------------------------|--------|----------------|--------------------------|---------|---------|
| Glaucium grandiflorum subsp. refractum | Food                          | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Gundelia tournefortii             | Medicinal                     | -    | -         | Food, medicinal | Food  | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Juncus inflexus                   | Making good                   | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Lotus corniculatus var. corniculatus | Food                          | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Malva neglecta                    | Food, medicinal               | -    | Medicinal | Food, medicinal, making good | Food  | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Medicago sativa subsp. sativa     | Food                          | -    | -         | -           | Fodder| -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Mentha longifolia subsp. typhoides | Food                          | -    | -         | Food, medicinal | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Onopordum turcicum                | Food                          | -    | -         | -           | -     | Food, fodder | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Peganum harmala                   | Evil eye, ornament            | Medicinal, evil eye | Medicinal | Medicinal, making good, evil eye | Evil eye | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Polygonum cognatum                | Food                          | -    | Food      | Medicinal | Food  | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Potentilla reptans                | Making good                   | -    | Medicinal | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Prunus cocomilia                  | Food                          | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Prunus divaricata subsp. divaricata | Food                          | -    | Medicinal | Food        | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Prunus spinosa                    | Food                          | -    | Medicinal | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Pyrus elaeagnifolia               | Food                          | -    | Medicinal | Food, making good | Food, medicinal | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Pyrus syriaca                     | Food                          | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Rhamnus lycioides subsp. oleoides | Food                          | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Rosa canina                       | Food, medicinal               | -    | Food      | Medicinal | Food, medicinal | -        | Medicinal | Food | Medicinal | Food, medicinal | Food, medicinal | Food, medicinal, making good | Food, medicinal | Food, medicinal | Food, medicinal, evil eye | Food, medicinal | Food, medicinal | Food, medicinal, evil eye | Making good | Evil eye, firewood | Making good | Firewood | -         |
| Rosa hemisphaerica                | Food                          | -    | Food      | -           | Food, medicinal | -        | Medicinal | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Rumex crispus                     | Food                          | -    | Medicinal | Food, medicinal | Food, medicinal | -        | Medicinal | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Salix alba                        | Firewood                      | -    | Medicinal | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Salix excelsa                     | Firewood                      | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| *Salvia dichroantha                | Food                          | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Scabiosa argentea                 | Making good                   | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Sinapis arvensis                  | Food                          | -    | -         | Food, medicinal | Food, medicinal | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Tamarix parviflora                | Firewood, making good         | -    | -         | Firewood    | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Teucrium polium                   | Medicinal                     | -    | Medicinal | Medicinal | Medicinal | -        | Medicinal | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Trifolium physodes var. physodes   | Fodder                        | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Typha domingensis                 | Ornament                      | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Ulmus minor                       | Making good                   | -    | Medicinal | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
| Verbascum cheiranthifolium        | Medicinal                     | -    | -         | -           | -     | -        | -         | -        | -        | -               | -               | -               | -                         | -               | -                         | -                        | -                        | -                        | -                     | -      | -           | -                       | -       | -        |
Since the center of Pöhrenk 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.

Peer-review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Conception/Design of Study- B.Ç., Y.Y.; Data Acquisition- B.Ç., Y.Y.; Data Analysis/Interpretation- B.Ç., Y.Y.; Drafting Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Final Approval and Accountability- B.Ç., Y.Y.; Technical or Material Support- B.Ç., Y.Y.; Manuscript- Y.Y.; Critical Revision of Manuscript- B.Ç., Y.Y.; Financial Disclosure: Authors declared no financial support.

REFERENCES

• Akkemik, Ü. (2018). Türkiye’nin doğal-egzotik ağaç ve çalılık (Gymnospermler-Angiospermler) [Turkey’s natural-exotic trees and shrubs (Gymnospermae-Angiospermae)]. Ankara, Turkey: Orman Genel Müdürlüğü Yayınları.
• Ayandin, H. (2010). Ethnobotanical characteristics in the region between Aşır, Şabanözü and Çile Mount (Polatlı/Ankara) (Master of Science dissertation, Selçuk University, Institute of science, Konya). Retrieved from https://tez.yok.gov.tr/UltusalTezMerkezi/tezSorguSonucYeni.jsp.
• Bulut, G., & Tuzlacı, E. (2015). An ethnobotanical study of medicinal plants in Bayramış (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.
• Eriç, S., & Tankahya, B. (2004). Türkiye florası üzerine (About flora of Turkey). Kebâke, 17, 139–163.
• Erşan, Y. (2013). Etik ve güvence standartları [Ethics and safety standards]. Istanbul: Yargı Tıp Ressamlar Derneğine ve Türkiye İly Bankası Kültür Yayınları.
• Güner, A. (2014). Resimli Türkiye Florası cilt 1 [Illustrated Flora of Turkey Vol.1]. Istanbul: Nezahat Gökyiğit Botanik Bahçesi Yayınları.
• Güner, A. & Çimen, A. Ö. (Eds.) (2018). Resimli Türkiye Florası cilt 2 [Illustrated Flora of Turkey Vol.2]. Istanbul: Nezahat Gökyiğit Botanik Bahçesi Yayınları.
• Güner, İ., & Çimen, A. Ö. (Eds.) (2019). Resimli Türkiye Florası cilt 4 [Illustrated Flora of Turkey Vol.4]. Istanbul, Turkey: Nezahat Gökyiğit Botanik Bahçesi Yayınları.